

# Appendix AQ2A

## emission requirements: small-scale pellet burning appliances

### AQ2A.1 Small-scale pellet burning appliances

Small scale pellet burning appliances must:

- a) emit no more than 0.8 grams of total suspended particulate per hour on average, calculated by averaging the total suspended particulate emissions for high, medium and low burn rates, when tested in accordance with the functional equivalent of AS/NZS4012:1999 and AS/NZS4013:1999 for non-batch fed appliances, and using wood pellets meeting the standard set out in AQ2A.2 below, and
- b) have a thermal efficiency, for space heating only, as described by AS/NZS 4013:1999, of 70% or greater, and
- c) have an authorisation or approval number assigned by Nelson City Council, or Canterbury Regional Council, operating as Environment Canterbury, or the Ministry for the Environment, and
- d) contain the following information on a label permanently attached to the device and placed in a position which is clearly visible after installation of the device:
  - i) the authorisation or approval number assigned by Nelson City Council, Canterbury Regional Council, operating as Environment Canterbury, or the Ministry for the Environment, and
  - ii) the statement “Performance may vary from test values depending on actual operating conditions”, and
  - iii) the approval fuel for use in the device, and
  - iv) the measured particulate emission rate in grams per hour (g/hr), and
  - v) the percentage measure of thermal efficiency (for appliances used for space heating only), and
  - vi) the range of heat output tested (e.g. low, medium and high burner rates), and
  - vii) a space to allow the installer to place the date of installation of the device.
- e) not be modified in any way so as to alter the specifications of the heating device from those tested and stated in a) and b), and
- f) be maintained in good operational order and operated in accordance with the manufacturer’s instructions (so long as those do not mandate operation that would lead to output that does not comply with a)), and
- g) be capable of being operated on a high, medium and low burn rate.

## AQ2A.2 Wood pellets

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**AQ2A.2.1** Wood pellets used in any small-scale pellet burning appliance shall not use any wood treated with preservatives or impregnated with chemicals, and must comply with the following standards:

Average moisture content (as delivered)	4 – 8% (of wet mass)
Ash	not more than 0.5% (oven dry basis)
Gross calorific value (as delivered)	18 to 20 MJ/kg
Diameter	not more than 10mm
Length	not more than 38mm
Bulk density	not less than 640 kg/m <sup>3</sup>

## AQ2A.3 List of Authorised Appliances

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**AQ2A.3.1** Nelson City Council will maintain a 'List of Authorised Small-scale Pellet Burning Appliances' that comply with conditions AQ2A.1a) and b), or which have been approved by resource consent as being authorised. The list may be updated without further formality, and will be held at the Council offices and on its website ([www.nelsoncitycouncil.co.nz](http://www.nelsoncitycouncil.co.nz)), and will detail the following:

- i) the appliance make and model, and
- ii) the authorised fuel for that appliance, and
- iii) whether or not the appliance was tested and approved with a water heating unit (wet-back) fitted, and
- iv) the particulate emission rate, grams of total suspended particulate burnt per hour on average, and
- v) the space heating efficiency, where applicable, and
- vi) the authorisation number, and
- vii) the date when the authorisation expires, if relevant, and
- viii) any other relevant information.

**AQ2A.3.2** Any pellet burning appliance that appears on the on the list of approved solid fuel burners maintained by Canterbury Regional Council operating as Environment Canterbury, or any such list maintained by the Ministry for the Environment, provided the particulate emission rate and the space heating efficiency listed comply with conditions AQ2A.1a) and b) above, is deemed to meet the requirements of this Plan,

## AQ2A.4 Information to be provided for authorisation of small scale pellet burning appliances

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Applications to authorise the use of small scale pellet burning appliances must include the following information:

- a) a letter requesting authorisation of the appliances (specifying the models to be included in the application), and
- b) design details and/or an accurate description of the device tested, and
- c) current brochures used for selling the device, and
- d) installation and operation instructions, including information about the type of fuel proposed for use in the device, and
- e) proposed label in accordance with the requirements listed above, and
- f) emission test reports and results, and

- g) clearance test reports and results, and
- h) location of a shop floor model that can be viewed (if possible), and
- i) any other information which, in the opinion of Nelson City Council, is necessary or desirable to assess the small scale pellet burning appliance.