

# Appendix AQ5

## stack requirements: large-scale fuel burning appliances

**AQ5.1** The discharge into air from any large scale fuel burning appliance must after the date of notification of this plan be via an emission stack where:

- a) the discharge point is at least 12.5 metres above ground level, or
- b) the discharge point is 2.5 metres higher than the apex of any building, tree, slope or other structure within a horizontal radius of 2.5 times the stack height (whichever discharge point a) or b) is the higher), and
- c) the exhaust gases are directed vertically into air and the exhaust gases are not impeded by any obstruction that would lower the velocity of the exhaust gases.

**AQ5.1A** AQ5.1 does not apply to the discharge under rule AQr.28 to 31 from any mobile source, if:

- a) the maximum heat output of the device does not exceed 120kW, and
- b) the discharge point for contaminants is at least 3 metres above ground level, and
- c) the device does not discharge on any one location for more than 2 hours in any 24 hour period, and
- d) not more than 16 litres of fuel is burnt per hour.

### Explanatory Note

**AQ5.2** To ensure that the plume released from the stack is not affected by building downwash effects, therefore creating high ground level concentrations, the stack must be at least 2.5 metres higher than the tallest building or obstacle within the vicinity of the stack (meaning within a circle drawn around the stack with a radius 2.5 times the height of the stack). For example, in a building that has a stack 10 metres high relative to ground level, there would be a 25 metre radius around the stack of potential down wash effects. The discharge point would have to be 2.5 metres higher than any obstacle within this circle in order to achieve good dispersion of emissions from the stack.

**AQ5.2A** For mobile external combustion devices such as road seal coat sprayers and road tankers supplying bitumen, an exemption has been provided from the provisions of AQ5.1. Such devices include a burner unit to keep the bitumen in a liquid state for application at sites some distance from the dispatch point. For mobile sources there are difficulties complying with the stack height requirements in AQ5.1, since the minimum stack height is 12.5 metres, or determined in relation to nearby structures, trees or topography, which will change with location. The exemptions apply to diesel, gas or kerosene burners and with the conditions under AQ5.1A will ensure the environmental effects are no more than minor.