



Local Government Air Quality Toolkit

# Odour from food outlets visual guide

Visual examples to help council officers when investigating air emissions complaints about food outlets

## Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the Traditional Custodians of the lands where we work and live.

We pay our respects to Elders past, present and emerging.

This resource may contain images or names of deceased persons in photographs or historical content.

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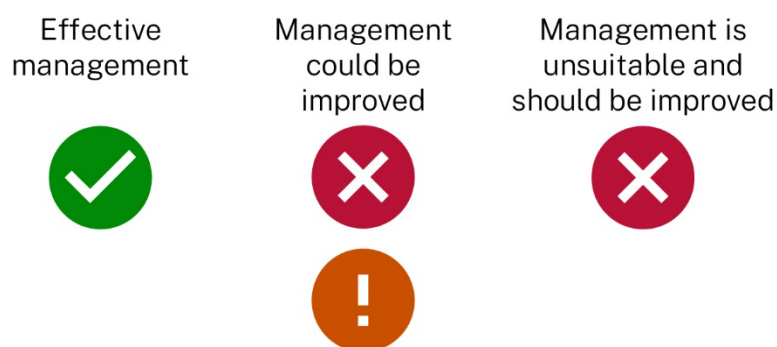
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# Introduction

This visual guide provides information to assist council officers when investigating odour / smoke complaints from local residents related to food outlets operating nearby. The guide provides visual examples for several issues related to odour and particulates from food outlets.

Refer to the Local Government Air Quality Toolkit – *Food outlets guidance note* for further information about good design and management practices to reduce air emissions from food outlets.

The images in this visual guide are labelled with traffic light symbols indicating the effectiveness or otherwise of management of odour and particulate issues (Figure 1).



**Figure 1** Key to traffic light symbols

Chapter 2 of the Local Government Air Quality Toolkit – *Resource pack* includes a checklist for conducting a site inspection for odour generating activities and investigating odour-related complaints.



# Stack design and height

Air impurities emitted from food outlets should be discharged from a point source (e.g. a stack or vent) to help with dispersion of particulates and, in particular, odour.

Figure 2 shows the location of a stack above the roof level of all nearby buildings, allowing for adequate dispersion of cooking emissions.



**Figure 2** Well designed stack above the roof level of nearby buildings

Source: Damon Roddis/Zephyr Environmental

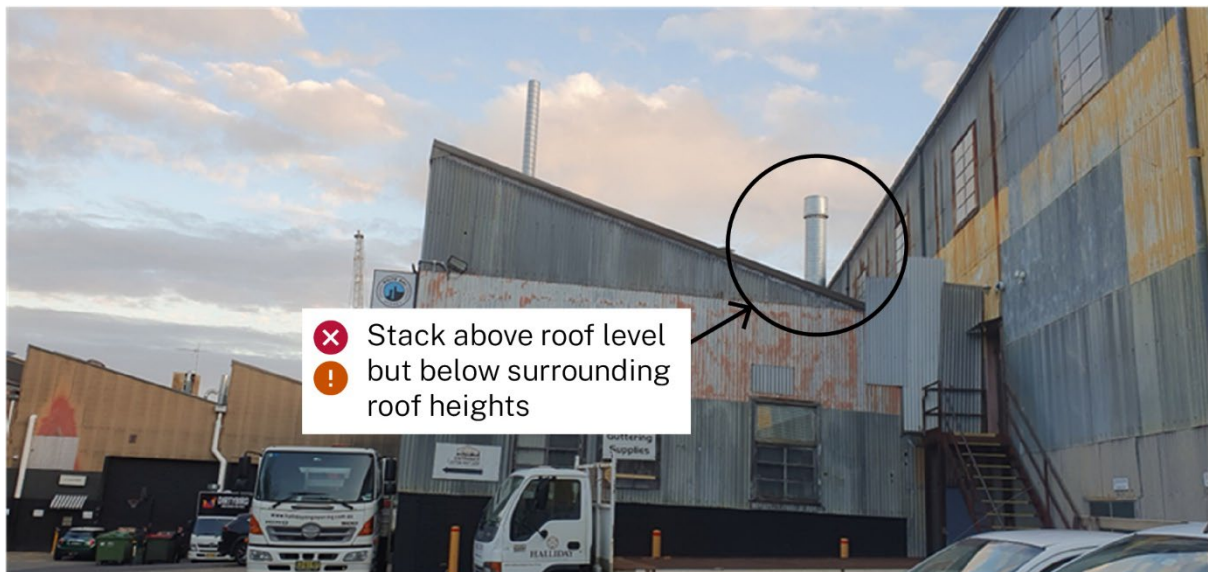
Figure 3 shows a stack located above the roof level but air quality management could be improved as it is still below the height of surrounding buildings, which could affect dispersion. Good features are that the stack has been located at a distance from the surrounding buildings, and the ducting extends the emission point from the ground level window to above the roof.



**Figure 3** Stack located away from nearby buildings but below their roof levels  
Source: Russ Francis/Zephyr Environmental



Similarly, Figure 4 shows a craft brewery boil kettle stack above the roof of the building where it is located, but it is still below the height of surrounding buildings. This could adversely affect dispersion and lead to local odour complaints.



**Figure 4** High stack is still below the roof level of nearby buildings

Source: Damon Roddis/Zephyr Environmental

As mentioned above, a well designed and located stack should be clear of the building's roof level and of the roof levels of surrounding buildings. Typically, if a food outlet stack extends 3 m or more above all surrounding roof ridge heights, its height is considered optimal.

Figure 5 shows 2 different stacks. The stack on the left is appropriately designed and located. By contrast, the stack on the right is poorly designed and located, with part of the ductwork angled down, and the top of the outlet well below the adjacent building height. This location has resulted in the stained/blackened bricks from particulate matter (or soot) released from the stack.



**Figure 5** Two stacks, one well designed and one poorly designed and located

Source: Russ Francis/Zephyr Environmental



# Mobile food trucks

Food trucks are often located next to craft (micro) breweries, at community events, concerts, sporting events and business parks. Without adequate exhaust (vertical release from an exhaust stack on the roof of the food truck), cooking odours from food trucks can cause an issue when odours emanate from the open windows and doors of the truck. This results in poor dispersion and potentially high odour concentrations in the vicinity.

The location of the food truck is important, as there is potential for odour issues if it is underneath or near residential properties.

Figure 6 shows an exhaust stack on top of a food truck, which is parked close to a micro brewery. The presence of the exhaust stack should improve the dispersion of odours.



**Figure 6** Exhaust stack on a mobile food truck to improve the dispersion of odours  
Source: Damon Roddis/Zephyr Environmental