

PLANNING STATEMENT

Project: **Proposed Care Home,
Broadwater Road, Welwyn
Garden City**

Project No.: **1293**

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PLANNING STATEMENT – KITCHEN VENTILATION

This document has been prepared to provide a statement of the proposed kitchen ventilation and extraction principles for the proposed care home development at Broadwater Road, Welwyn Garden City.

Betton Consulting have undertaken a review of the proposed kitchen ventilation strategy for the above building in line with our experience of the client and similar buildings of this type. All information and final details will be verified as part of the detailed design as it develops through the following stages.

System Description

The main kitchen shall be provided with an independent supply and extract ventilation system.

Air shall be extracted via a ventilation canopy within the kitchen, which shall be provided as part of the kitchen equipment package and located directly above the cook line. The canopy shall incorporate integral lighting and grease filtration.

Design and installation of the ventilation to the kitchen shall be in accordance with all relevant standards including CIBSE Guides, Approved Document Part F, Statutory and Local Authority Regulations and in particular BESA Design Guide DW172 and including the recommendations with the EMAQ+ Control of Odour and Noise from Commercial Kitchen Exhaust Systems, 2018.

The extract ventilation system shall be designed to suit the equipment installed to the requirements of the kitchen specialist.

The extract ventilation shall incorporate an extract fan which shall discharge at roof level via a high velocity termination to aid dispersal and avoid the spread of cooking smells or re-entrainment back into the building.

Kitchen make up supply shall incorporate a supply fan, an accessible filter element and LTHW heating coil.

Where the kitchen extract ductwork leaves the kitchen fire compartment, the ductwork shall be suitably fire rated for stability, integrity and insulation with appropriate supports suitable for the specified fire rating of the ductwork.

Any attenuators utilised in the kitchen ventilation system shall be Melinex lined (and fire rated as appropriate),.

Odour Risk Assessment

An odour risk assessment has been prepared in accordance with the EMAQ+ document "Control of Odour and Noise from Commercial Kitchen Exhaust Systems 2018" Appendix C. With reference to this guidance document, a risk assessment has been completed following the procedure dictated, the assessment criteria and results of which are extracted below for information:

Criteria	Score	Score	Details
Dispersion	Very poor	20	Low level discharge, discharge into courtyard or restriction on stack.
	Poor	15	Not low level but below eaves, or discharge at below 10 m/s.
	Moderate	10	Discharging 1m above eaves at 10 -15 m/s.
	Good	5	Discharging 1m above ridge at 15 m/s.
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from kitchen discharge.
	Medium	5	Closest sensitive receptor between 20 and 100m from kitchen discharge.
	Far	1	Closest sensitive receptor more than 100m from kitchen discharge ¹ .
Size of kitchen	Large	5	More than 100 covers or large sized take away.
	Medium	3	Between 30 and 100 covers or medium sized take away.
	Small	1	Less than 30 covers or small take away ¹ .
Cooking type (odour and grease loading)	Very high	10	Pub (high level of fried food), fried chicken, burgers or fish & chips. <i>Turkish, Middle Eastern or any premises cooking with solid fuel</i>
	High	7	<i>Vietnamese, Thai, Indian, Japanese, Chinese, steakhouse</i>
	Medium	4	<i>Cantonese, Italian, French, Pizza (gas fired),</i>
	Low	1	<i>Most pubs (no fried food, mainly reheating and sandwiches etc), Tea rooms¹</i>

Figure 1 – Extract from EMAQ+ Guidance

The risk assessment for the scheme is as follows:

- Dispersion – 5: Good, discharge at roof level with appropriate high velocity terminal
- Proximity of Receptors – 5: Medium risk given position of discharge to nearest receptor.
- Size of Kitchen – 3: Medium, less than 100 covers in any one sitting.
- Cooking type – 1 to 4: Low to Medium. Reheated food with a modest amount of Italian, French and pizza.

The total risk score on the basis of the above is 14 to 17, indicating a low to medium risk based on the criteria within the document.

Given the nature of the cooking facilities, roof level discharge and general strategy of low odour meals prepared within the facility it is proposed that no additional odour control measures are provided. This is typical of other existing care home stock, with no adverse odour issues reported or brought to our attention elsewhere.

Kitchen Ventilation Cleaning and Maintenance

In accordance with BESA Kitchen Ventilation Systems DW172, the kitchen ventilation systems will be fully cleanable and maintainable to minimise harm to the amenity, ensure food hygiene and minimise the risk of fire. The Operation and Maintenance Manuals will detail the required cleaning and periodic plant and equipment maintenance schedule to ensure continued good performance of the system operation and good hygiene.

The ductwork system will be fully accessible. All interior surfaces will be accessible for cleaning and inspection purposes with access doors being installed at 2m centres with grease tight heat proof gaskets allowing for full cleaning without manned entry. Canopy removable baffles will be cleaned in accordance with the manufacturers cleaning instructions and will only be removed after the system has been shut-down to avoid grease contaminated air depositing on internal surfaces of ductwork. A visual inspection of the ventilation system will be carried out at least once a week and all metal surfaces should be checked to ensure that there is no accumulation of grease or dirt and that there is no surface damage. Self-draining filters and collection drawers will be cleaned weekly as a minimum (mesh filters at least twice a week). The system has been identified as Moderate Use and therefore the ductwork system should be cleaned every 6 months.