

Project: 2537 – New care home – Felbridge Manor,
Turners Hill Road, Crawley Down, Crawley,
RH10 3EP (Barchester healthcare).

Dated: 19.01.26

Ref: Planning Conditions Tracker – Kitchen Information Rev P02

Introduction

Harniss Contracting Ltd have been appointed to carry out MEP design and installation of the proposed Felbridge Manor Residence Care Home on behalf of Horizon Construction Ltd.

This report has been prepared to provide information on the control of fumes and smells from the kitchen equipment as noted within the Planning Conditions Tracker. This is to be read in conjunction with the 2000 series Harniss Contracting Ventilation Layout drawings.

General Ductwork Design

The Kitchen Supply & Extract ductwork from the kitchen canopy will traverse across the kitchen ceiling void and is to terminate through the roof above second floor to atmosphere. Harniss Contracting Ltd can confirm the kitchen ventilation system will be designed in accordance with the relevant regulations and design criteria as listed below:

Building Regulations Part F

DW 172 Kitchen Ventilation

TR19 – Fire Risk Management of Grease Accumulation in Kitchen Extraction Systems.

Odour Control

To prevent any detrimental effects on nearby residents, Harniss Contracting Ltd will terminate the Kitchen Extract through the roof as per the below sketch, in line with DW 172 – Kitchen Specification for Ventilation Systems.



The guidance states that a high velocity jet cowl should be used, and this will be positioned a minimum of 1m above the roof line. It is to be noted that the nearest expected receptor are residential properties circa 50-60m away.

In reference to the kitchen system example in the DW172 guidance, it states that it is normal to utilise either a carbon filter or high velocity discharge as odour control, not usually both.

Update: Following feedback from environmental health officer (06.01.26) and since review with the appointed kitchen specialist designer, there shall be an Ozone Xtract 2100 Plus unit installed within the kitchen space (see data sheet included within submission) that connects into the kitchen extract ductwork as soon as practicably possible. This will now provide the requested particulate and odour control requested along side the vertical jet cowl which provides vertical stack dispersion.

The ductwork arrangements shall be installed to ensure that a dwell time of 2 seconds is achieved as required in the technical literature.

Please see attached odour risk assessment carried out for the project:

Westminster City Council Guidelines for the Control of Odour from commercial kitchen extract ventilation systems - March 2021

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Annex C: Risk Assessment for Odour -

Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems, 2005, DEFRA:

Odour control must be designed to prevent odour nuisance in a given situation. The following score methodology is suggested as a means of determining odour control requirements using a simple risk assessment approach.

Impact Risk	Odour Control	Significance Score*
Low to Medium	Low level of odour control	Less than 20
High	High level of odour control	20 to 35
Very High	Very high Level of odour	more than 35

* based on the sum of contributions from dispersion, proximity of receptors, size of kitchen & cooking

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 below 10m/s.
	Moderate	10	Discharging 1m above eaves at 10-
	Good	5	Discharging 1m above ridge at 15m/s.
Proximity of Receptors	Close	10	Closest sensitive receptor less than 20m from kitchen discharge.
	Medium	5	Closest sensitive receptor between 20 & 100m from kitchen discharge.
	Fair	1	Closest sensitive receptor more than 100m from kitchen discharge.
Size of Kitchen	Large	5	More than 100 covers or large sized takeaway
	Medium	3	Between 30 & 100 covers or medium sized takeaway
	Small	1	Less than 30 covers or small takeaway
Cooking Type (odour & grease Loading)	Very High	10	Pub (high level of fried food), fried chicken, burgers or fish and chips.
	High	7	Kebab, Vietnamese, Thai or Indian.
	Medium	4	Cantonese, Japanese or Chinese.
	Low	1	Most Pubs, Italian, French, Pizza or Steak House.

19

Total Score for project

Summary:

As the project has a significance score of 19, this therefore indicates a low level of odour control is required.

A vertical discharge 1m above roof level should satisfy the requirements as assessed above.

Additionally, Harniss Contracting Ltd will ensure the exhaust discharge velocity is in between 12-15m/s. This will ensure the air is projected up into the atmosphere away from any nearby residents.

See below DW-172 Duct Velocity Recommendations:

Table 11 Duct Velocities		
	Supply	Extract
Main Runs	6-8 ms ⁻¹	6-9 ms ⁻¹
Branch Runs	4-6 ms ⁻¹	5-7 ms ⁻¹
Spigots	3-5 ms ⁻¹	5-7 ms ⁻¹

Maintenance

In line with the recommendations below as set out in TR19, it clearly states the cleaning frequency schedule.

For this project, the frequency will be in line with 'light use' criteria, therefore the kitchen ventilation and equipment including filters will be maintained annually.

Frequency of Cleaning

7.35 The need for specialist cleaning of extract systems will depend on the level of usage of the cooking equipment, types and quantity of cooking and other risk factors such as vulnerability of the system to ignition and of the building and its occupant/users to system fire, hygiene, vermin and mechanical hazards. Typical cleaning intervals are shown in Table 11:

Table 11: Frequency of Cleaning		
Heavy Use	12-16 hours per day	- 3 monthly
Moderate Use	6-12 hours per day	- 6 monthly
Light Use	2-6 hours per day	- 12 monthly

End.