

Risk Assessment for Odour

Analysis and report into the impact of odours from a commercial kitchen environment and the mitigating odour control measures

Eastleigh Lounge

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EMAQ+ Control of Odour and Noise from Kitchen Extract Systems 2018



Appendix 3 – Risk assessment for odour

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 10m/s
	Moderate	10	Discharging 1m above eaves at 10-15m/s
	Good	5	Discharging 1m above ridge at 15m/s
Proximity of Receptors	Close	10	Closes 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
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 20 covers or small take away
Cooking Type (odour and grease loading)	Very High	10	Pub (high level of fried food), fried chicken, burgers or fish & chips. Turkish, Middle Eastern or any premises cooking with solid fuel
	High	7	Vietnamese, Thai, Indian, Japanese, Chinese, Steakhouse
	Medium	4	Cantonese, Italian, French, Pizza (gas fired)
	Low	1	Most pubs (no fried food), mainly reheating and sandwiches etc.), Tea rooms

Impact Risk	Odour Control Requirement	Significance Score*
Low to Medium	Low Level Odour Control	Less than 20
High	High Level Odour Control	20 – 35
Very High	Very High Level of Odour Control	More than 35

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

Odour impact risk for the proposed commercial kitchen and discharge location

Dispersion	10
Proximity of Receptors	10
Size of Kitchen	5
Cooking Type	7
Significance Score	32
Impact Risk	High

Proposed System Design

In line with EMAQ+ guidance for the above calculated Impact Risk categorisation, the below listed odour control measures will be installed into the extraction system to mitigate the risk of odour nuisance.

1. Grease separators baffle filter with >50% efficiency
2. UV Ozone mixed into airstream at the point of extraction
3. G4 panel filter rated to suit airflow duty
4. Activated carbon rated to suit airflow duty with a dwell time of 0.13s
5. Vertical discharge with a velocity of 15m/s 1000mm above first set of eaves

All filtration and mechanical plant items are to be located internally in the mothball space with the duct running externally up the rear elevation of the building with the extract discharging 1000mm above the first set of eaves with a vertical high velocity discharge, with an efflux velocity of 15m/s (see image 1 below).

Attenuation is to be installed to main kitchen extract and supply systems on the atmosphere side of the fans to reduce noise levels to nearby receptors.

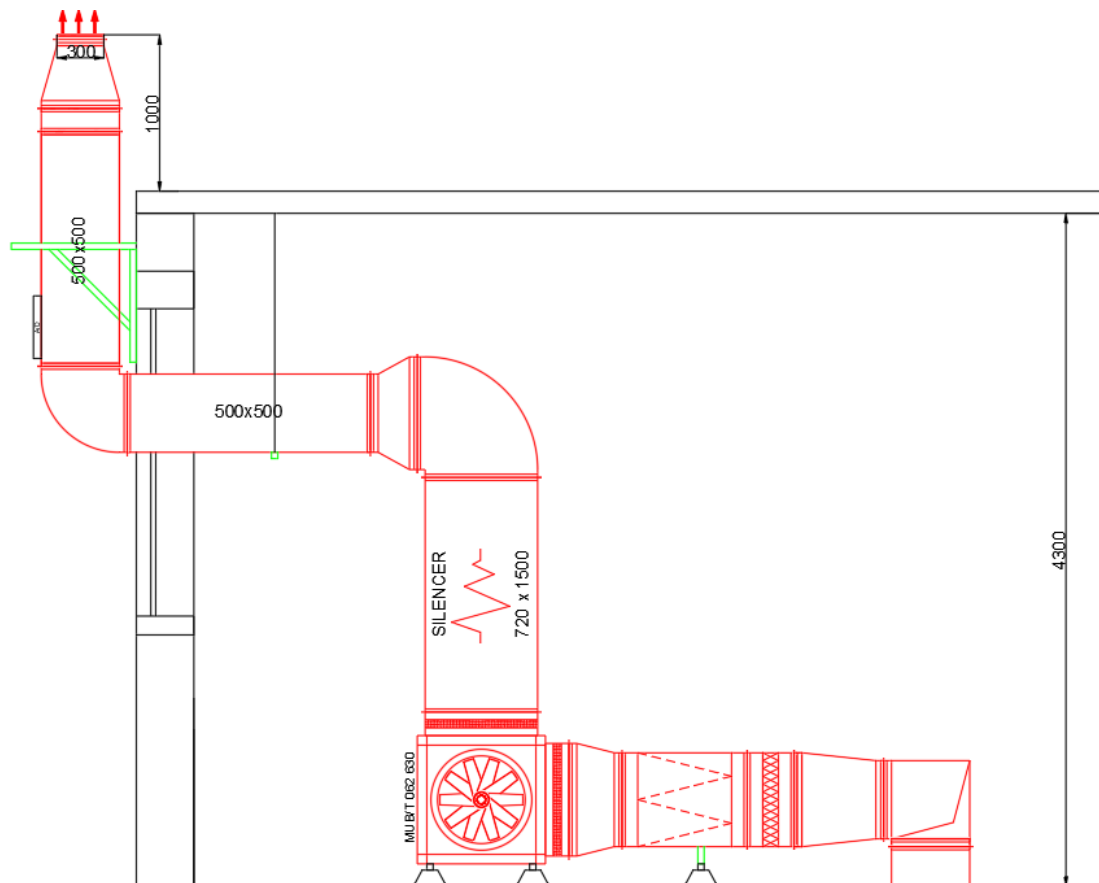


Image 1. Rear elevation with vertical discharge termination