

## EXTRACTOR FLUE & AC UNIT TECHNICAL SPECIFICATION

Site: Lantern Courtyard  
The Barn, The Street  
Bramley  
RG26 5DE

Client: Mr Albayrak

### ▪ **1.0 INTRODUCTION**

#### **1.1 Overview**

This statement outlines Kitchen Extractor Flue and Air Conditioner Outdoor Units.

The site (The Barn) is located to the south west of Bramley within a conservation area and outside any Settlement Policy Boundary. It is a commercial property and an adjacent to the offices to the west. The site access and parking front onto The Street Road.

#### **1.2 Kitchen Extractor**

The kitchen canopy will be located in the existing kitchen area and will be small in scale due the nature of the food being prepared and served by the bistro.

It is proposed to insert a small extractor flue to the front (east) elevation roof. The round ducting will go through the roof and covered by tiles to matching existing roof material. There will not a commercial flue looks. There are already others chimney surrounding of the property. The proposed flue will not be higher than these flues and will not affect the existing appearance.

The kitchen extractor will include filter, fan and speed control. It will also has removable grease filter and a replaceable carbon filter which can be changed regularly. The extractor will be switched off when cooking in not in progress or the bistro is shut.

Technical details are below:

- Kitchen canopy type: Stainless steel wall type canopy
- Kitchen canopy dimension: 900mm D x 2400mm W x 500mm H
- Kitchen canopy material: Manufacture entirely from high quality 304/430 stainless steel
- Kitchen canopy air floor pressure & air flow volume: 100Pa & 1050m<sup>3</sup>/hr
- Kitchen canopy sound pressure level: 60 dB(A)



Internal Unit :

Extraction Hood - Canopy with  
Filters 2400mm Wide

- The canopy is to extend over the full length of the cooking equipment and overhanging the appliances by minimum of 300mm in accordance with DW172 regulations.
- LED Lighting to give 500 LUX at work surface.
- Round Duct
- Baffle grease filters (comply with the DW172 standard) are to be provided inside the canopy.
- Filters are to be replaced in accordance with the manufacturers' recommendations.
- Carbon filters are to be incorporated into the extract ducting with a grade of carbon suitable to ensure enhanced elimination of cooking odours.
- The speed controller

#### Cleaning & Maintenance:

The DEFRA document "Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems – January 2005" gives very detailed guidance on the maintenance and cleaning of ventilation systems including suggested maximum limits for surface contaminants of 0.2 mm (mean average) or 0.5mm (any single measurement). It is recommended that the following cleaning period should be followed;

- A visual inspection of the ventilation system should be carried out at least once a week. All metal surfaces should be checked to ensure that there is no accumulation of grease or dirt and that there is no surface damage.
- Canopies and grease filters should be cleaned on a daily basis.
- Baffle-type self-draining grease filters and their grease collection drawers (containers) should be cleaned at least once a week (more often in kitchens that operate for more than 12 hours a day).
- Extract ductwork should be cleaned regularly as follow;

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	Annually

According to the EMAQ guidance, the recommended cleaning period for grease extract ductwork system is;

Grease loading		Daily Usage	Cleaning
Heavy Use	Heavy/continuous grease production	6-12 hours 12-16 hours	3 - 6 Months 2 - 3 Months
Moderate Use	Moderate grease production	6-12 hours 12-16 hours	6 - 12 Months 3 - 4 Months
Light Use	No significant grease production	6-12 hours 12-16 hours	12 Months 6 Months

Recommendations for maintenance of odour control system include:

- o System employing fine filtration and carbon filtration
  - Change fine filters every two weeks.
  - Change carbon filters every 4 to 6 months.

### 1.3 Air Conditioner Outdoor Unit

The proposed design includes 3 small air conditioner outdoor units that will be positioned on the ground of the east of the building. From the exterior, these three units will be very small additions. They will be covered with wood decorative panels to match existing façade. They will not have negative visual affects.

AC Outdoor units have silent operation which control the sound by 3Db(A) to ensure a quiet environment. There will be anti-vibration mounting blocks to stop vibration. The air conditioners will only be operational whilst the business is open and if required. Therefore, they ensure no impact for surrounding.

Technical details are below:

- Outdoor Unit: DAIKIN, RXM20R9

Outdoor Units			RXM20R9
Dimensions	Height x Width x Depth	mm	550 x 765 x 285
Weight		kg	32
Electrical Details	Power Supply		1ph
	Maximum Input Current (MCA)	A	8.93
	Max Fuse Size	A	10
Interconnection Wiring	Core / Cable size		3+E / 1.5
Piping Connections	Liquid / Gas	inches (mm)	1/4 (6.4) /
			3/8 (9.5)
Pipework	Maximum Length	m	20
	Maximum Vertical Rise	m	15
	Precharged to	m	10
	Additional Charge	g/m	20
	Holding Charge	kg	0.76
Sound Pressure (Cooling)	Nominal	dB(A)	46
Sound Pressure (Heating)	Nominal	dB(A)	47
Sound Power (Cooling)		dB(A)	59
Operating Range (Cooling)	Min / Max	°CDB	-10 / 50
Operating Range (Heating)	Min / Max	°CWB	-21 / 18
Air Flow Rate (Cooling)	Nominal	m <sup>3</sup> /sec	0.600
Meets ETL criteria			•



Outdoor unit, RXM20R9

The proposed Daikin air conditioner has outdoor unit silent operation which control the sound of the outdoor unit by 3dB(A) to ensure a quiet environment. The position of the outdoor AC units has been carefully considered. The unit will only be in use during working hours and not in use overnight.

▪ **2.0 JUSTIFICATION**

The proposed flue and air conditioner units are small in scale and will not be used all the time. Due to the nature of the equipment, they will generate minimal noise and will be switched off when not in use and the bistro is closed. Furthermore, there are not residential property in very close proximity, so there will be no adverse impact on the resident's amenity.

Whilst the property is within the Conservation Area, the proposed extractor flue and AC outdoor units are very small in scale, therefore not being visible from The Street or any other views from or within the Conservation Area. It is therefore considered that the proposals will not lead to any adverse impacts on the character or appearance of area or the Conservation Area, thereby according with the NPPF, Policies EM10 and EM11 of the Local Plan and M1 of SPD.

▪ **3.0 CONCLUSION**

This report has identified the anticipated requirements for extraction system and AC outdoor units. The proposals fully accord with national and local planning policies and we respectfully request that planning permission is granted.

Your sincerely,

*Seyma Dilber*

Design Director