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The Cathedral Hotel, Salisbury

Kitchen Odour Risk Assessment

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1. Introduction

1.1 Overview

Ramboll UK Limited (Ramboll) was commissioned by Larasian Limited (the 'Applicant') to undertake a kitchen odour risk assessment of the proposed redevelopment of The Cathedral Hotel in Salisbury (the 'Site').

The proposed redevelopment includes the creation of a new roof top bar, extension of the ground floor of the hotel at its rear to provide new kitchen and servery accommodation to service a new restaurant and repurposing of the rear courtyard to create outdoor eating and drinking space.

A pre-application meeting was held with Wiltshire Council in relation to the proposed development, their response references odour from the proposed kitchen refurbishment:

- *If the kitchen and extract system are to be replaced, the applicant should also submit a scheme containing full details of arrangements for internal air extraction, odour control and discharge to atmosphere from cooking operations, including the location and appearance of any external ducting and flues. The scheme must include full technical details and a risk assessment in accordance with Appendix 2 and 3 respectively of the EMAQ "Control of odour and noise from commercial kitchen exhaust systems" Guidance (Gibson, 2018). We recommend the applicant ensures that the ventilation system discharges vertically at a height of at least 1m above the height of any nearby sensitive buildings or uses, and not less than 1m above the eves.*

Appendix 2 of the EMAQ guidance¹ contains the type of information that should be provided to the Local Authority to allow them to assess the suitability of the proposed ventilation scheme.

Appendix 3 of the guidance outlines the requirements of the odour risk assessment used to determine odour control requirements.

1.2 Key factors Influencing Odour Control from Commercial Kitchens

Factors that influence odour from commercial kitchens include:

- Size of the cooking facility which influence the intensity of the odour and volume of ventilation air to be handled.
- Type of food prepared with affects the chemical constituents in the ventilation air.
- Type of cooking appliances used which dictates the level of fat, water droplets and temperature within the ventilation air.

1.3 Scope of Assessment

This report considers the dispersion of odour emissions, the proximity of receptors, the size of kitchen and type of food prepared to identify the level of odour risk and odour control requirements for the proposed kitchen. Information is provided on the design of the odour control for the kitchen in line with the requirements of Appendix 2 of the EMAQ guidance.

¹ Dr Nigel Gibson, 5.9.2018, EMAQ Control of Odour and Noise from Commercial Kitchen Exhaust Systems.

2. Site and Proposed Kitchen Premises

2.1 Site Location

The Site is located within Salisbury City Centre within the administrative boundary of Wiltshire Council (WC). The proposed redevelopment is located along Milford Street, a predominantly commercial area comprising of restaurants, retailers, and other hotels, with The Red Lion directly south of the redevelopment. Adjoining to the east of the development is a newsagent with a single residential flat; 11 Milford Street, located above. The site location is presented in Figure 2.1.

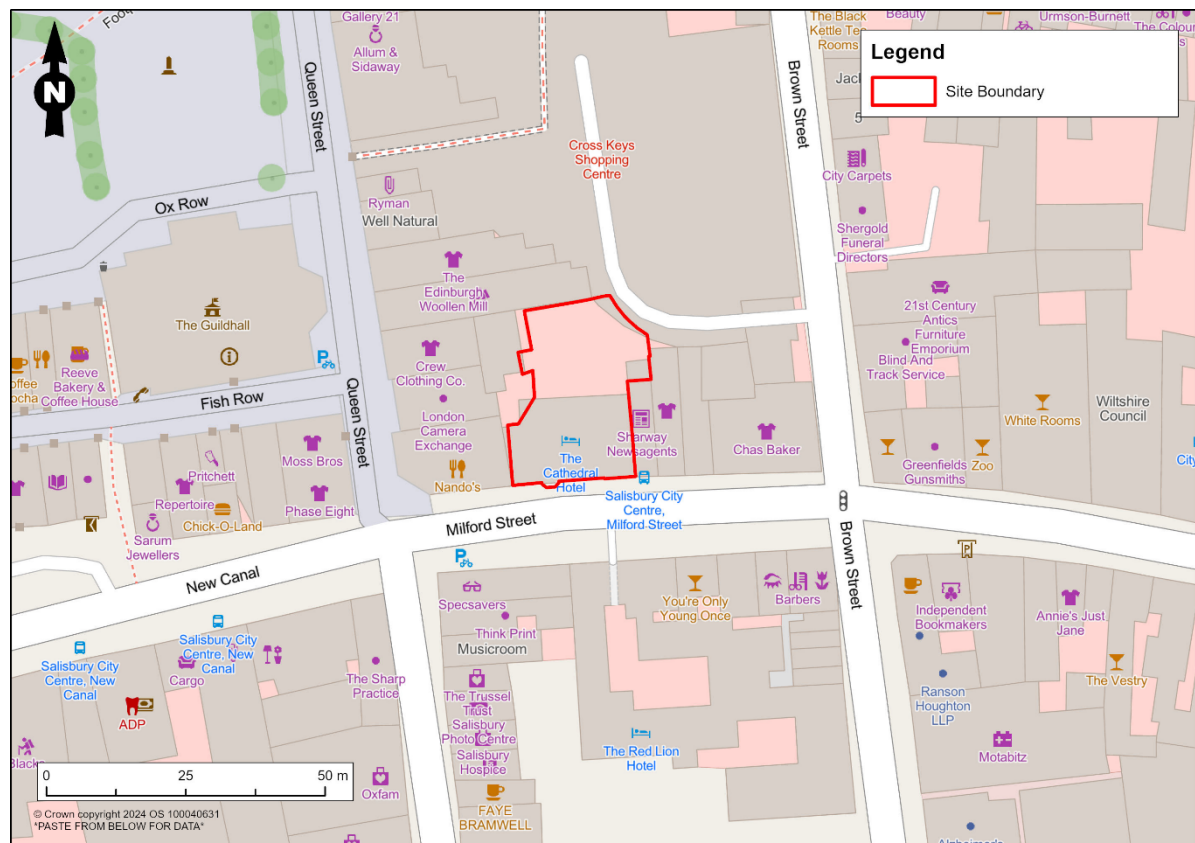


Figure 2.1 Site Location

2.2 Existing Site

There is an existing grade II listed building onsite which is four storey 22-bedroom hotel 'The Cathedral Hotel', with restaurant and bar accommodation at ground floor level providing a total of 109 covers.

2.3 Proposed Kitchen Premises

The proposed redevelopment proposes transforming the existing hotel, presently offering 22 beds, into a premium 5-star hotel featuring 13 bedrooms. The redevelopment includes the addition of a rooftop bar and an expanded ground floor at the back of the hotel to accommodate a fresh kitchen and servery area, dedicated to a new restaurant, the current rear courtyard will be repurposed to create outdoor eating and drinking space. The proposed redevelopment layout for the ground floor and rooftop are shown in

Figure 2.2 and Figure 2.3 respectively.

The redevelopment will provide 109 covers: 31 in the restaurant towards the back of the hotel and 25 in the bar area and 53 in the courtyard. The method(s) of preparation and cooking are outlined below. The proposed kitchen layout is shown in Appendix 1.

Table 2-1: Cooking and preparation methods.

Item	Dimensions (w x d x h)	Manufacturer	Model Number
Cooking equipment			
Twin Basket, Single Tank Fryer with Oil Pump Filtration	400 x 786 x 990	Falcon	E3040FX
Single Basket, Single Tank Fryer	300 x 786 x 990	Falcon	E3830
Chargrill	600 x 760 x 587	Falcon	E3625
Wall Mounted Salamander Grill	785 x 360 x 325	Falcon	E3532
Induction Boiling Top	-	Falcon	Accessory
6 Grid Electric Combination Oven	850 x 842 x 1064	Rational	ICC61-ELEC
10 Grid Electric Combination Oven (Pro)	850 x 842 x 1064	Rational	ICP101-ELEC
Preparation			
Wall Mounted Hand wash basin	300 x 320 x 160	Mechline	BSX-300-KVS
S/S Wall table	600 x 800 x 900	Holmes	Fabrication
S/S Two tier Wall Shelving	1450 x 300	Holmes	Fabrication
Saladette Counter Fridge	1225 x 760 x 920/1097	Polar	GD882
S/S Two tier wall shelving	1400 x 300	Holmes	Fabrication
S/S Corner Wall Table	1000 x 800 x 900	Holmes	Fabrication
Two Tier Wall shelving	1200 x 300	Holmes	Fabrication
Wall table with part void	1950 x 750 x 900	Holmes	Fabrication
Two tier wall shelving	1200 x 300	Holmes	Fabrication
Undercounter Single Door Fridge	600 x 595 x 855	Polar	CD080
Countertop Sous Vide	375 x 465 x 415	Instanta	SV25
Upright Freezer	680 x 815 x 2000	Polar	G593
Upright Freezer	680 x 815 x 2000	Polar	G593

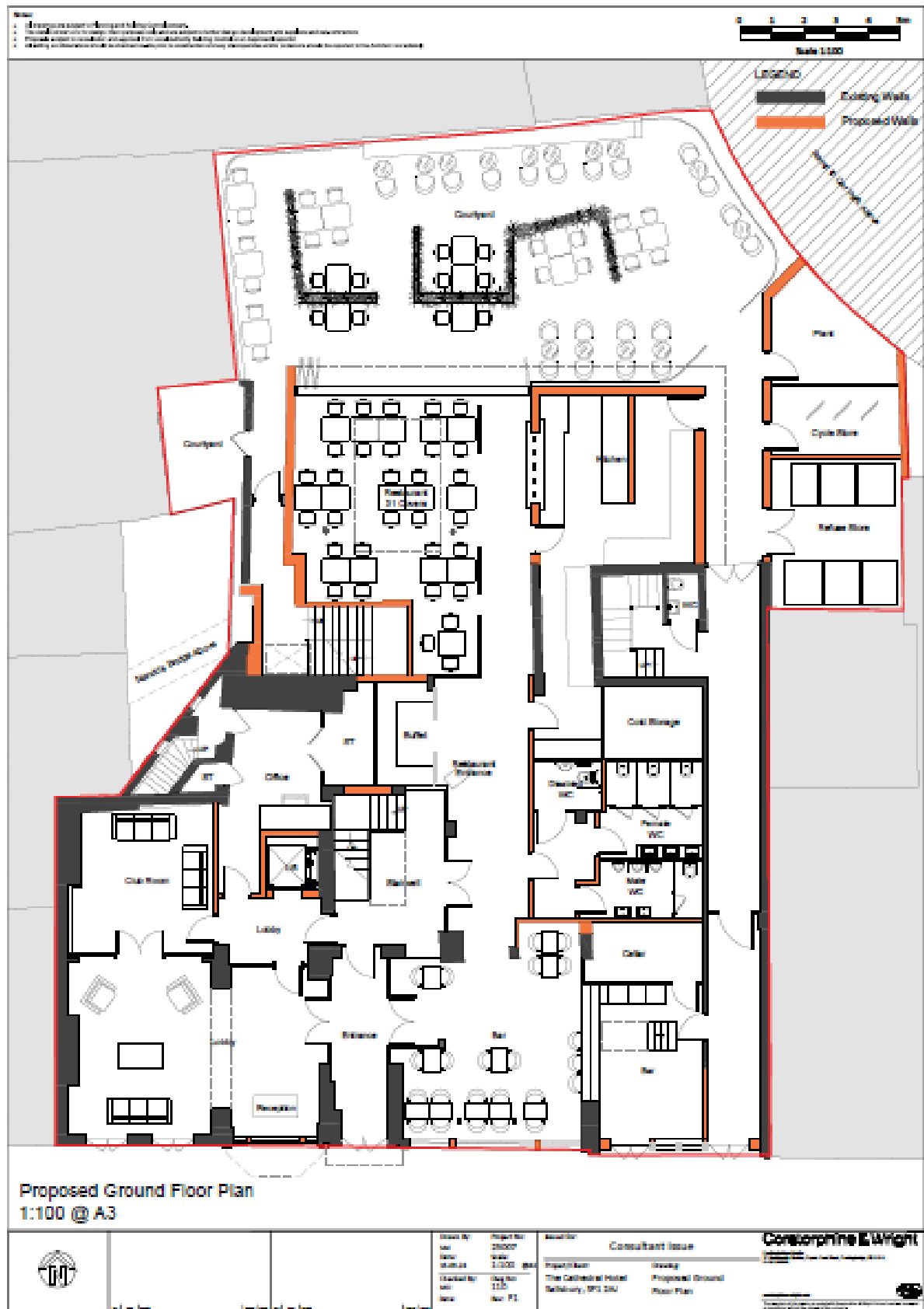


Figure 2.2: Proposed Ground Floor

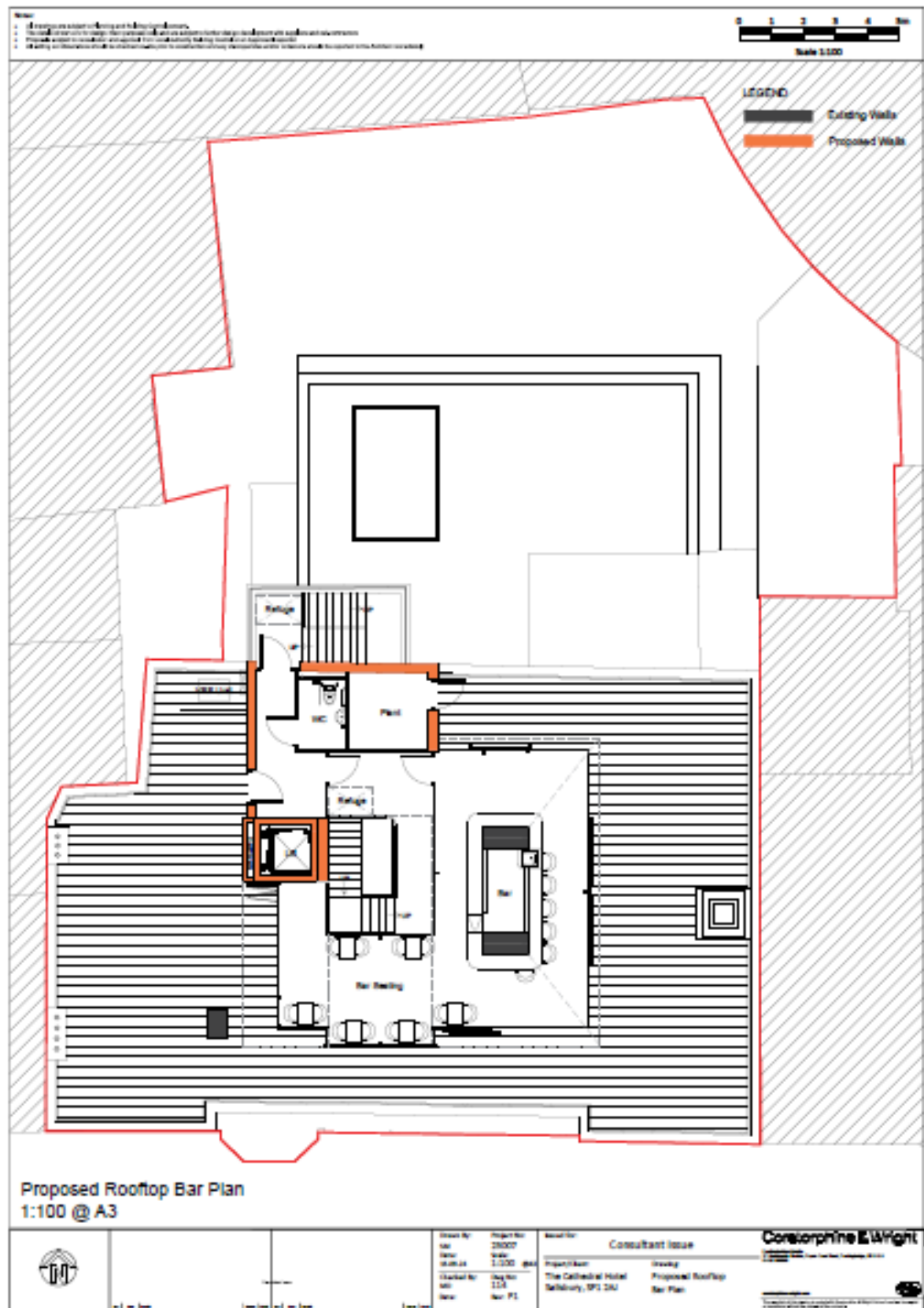


Figure 2.3: Proposed Rooftop

3. Legislation and Policy

3.1 Introduction

There is no legislation directly governing the design and performance of commercial kitchen ventilation systems, however other regulations protecting the health and safety of employees, food safety and local amenity exist¹. Relevant legislation is summarised in the following sections.

3.2 The Building Regulations, 2000

The Building Regulations 2000² which have been updated several times since their introduction are divided into several parts each addressing different aspects of building construction and performance. The most recent amendments were made in 2022.

Approved Document F: Ventilation³, includes provisions relevant to kitchen ventilation in commercial settings. It specifies that any new kitchen, utility room, bath/shower room, or WC with no openable window should be provided with a mechanical extract fan to reduce condensation and remove smells. The performance of these extract fans is normally measured in litres per second (l/s), and for kitchens, the requirement is 30l/s if placed over the hob and 60l/s if placed elsewhere.

3.3 Environmental Protection Act 1990

There are many activities which result in odour release and many of these odours have the potential to result in a loss of amenity for affected receptors (e.g. nearby residents, schools or places of work) or in some cases a statutory nuisance. It is up to the local authority to decide whether odorous emissions constitute a statutory nuisance. Section 79 of the Environmental Protection Act 1990 defines statutory nuisance as:

*"(c) fumes or gases emitted from premises so as to be prejudicial to health or a nuisance;
(d) any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance;"*

The Environmental Protection Act 1990 specifies that:

"[...] it shall be the duty of every local authority to cause its area to be inspected from time to time to detect any statutory nuisances which ought to be dealt with under section 80 [which specifies that a local authority shall serve an abatement notice on statutory nuisance to impose various requirements] below and, where a complaint of a statutory nuisance is made to it by a person living within its area, to take such steps as are reasonably practicable to investigate the complaint".

² Secretary of State, 2000, The Building Regulations 2000, Statutory Instrument No. 2531, HMSO

³ HM Government, 2021, The Building Regulations 2010 Ventilation Approved Document F, Volume 2: Buildings other than dwellings

4. Methodology

The odour risk assessment has been undertaken based on the sum of the contributions from dispersion, the proximity of receptors, the size of the kitchen and cooking type in accordance with EMAQ Guidance '*Control of odour and Noise from Commercial Kitchen Exhaust Systems*'.

The total 'significance score' is used to determine the recommended odour control measures and techniques to be applied according to the severity of risk.

Table 4-1: Odour Risk Severity Assessment

Impact Risk	Odour Control Requirement	Significance Score ¹
Low to Medium	Low Level of odour control	Less than 20
High	High Level of odour control	20 - 35
Very High	Very high level of odour control	More than 35

¹ Based on the sum of contributions from dispersion, proximity of receptors, size of kitchen and cooking type.

Criteria and scoring details used in the risk assessment are presented in Table 4-2 with the scores for each criterion added together to give the significance score.

Table 4-2 Odour assessment criteria

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. Turkish, Middle Eastern or any premises cooking with solid fuel.

Criteria	Score	Score	Details
	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.

5. Odour Risk Assessment

5.1 Dispersion

The chosen extract system is the Systemair 062 560 D4 Fan system with a flow rate of 2.3 m³/s or 9.2 m/s. Air will be extracted from the kitchen via a stainless steel L-shaped canopy, and discharged vertically via a single high velocity terminal located approximately 1.4m above the flat roof located in the courtyard, approximately 4.16m in height. As the discharge will be below the height of the surrounding buildings and within a partially enclosed courtyard space associated with the hotel, the risk rating for dispersion is described as very poor with a score of 20.

5.2 Proximity of Receptors

The risk rating for proximity to receptors relates to the distance between the point of discharge of kitchen emissions and the nearest sensitive receptor locations. Sensitive receptor locations may be residential properties, commercial premises or frequently used public open spaces.

The nearest human health receptor is located adjacent to the hotel at 11 Milford Street, located above the adjacent newsagents on the 2nd floor. As such the risk is classified as close, less than 20m from the kitchen discharge with a score of 10.

5.3 Size of Kitchen

The risk rating for size of kitchen relates to the volume of food prepared by the kitchen and is described in terms of the capacity of the restaurant. The redevelopment proposes 109 covers across the bar, restaurant, and courtyard. As such, the number of covers at the restaurant classifies it as a large sized kitchen with a score of 5.

5.4 Cooking Type

The risk rating for cooking type and grease loading relates to the type of cooking methods employed in the kitchen and the type of food prepared.

The food type is likely to be varied given that it is to serve a 5 star hotel and the range of cooking appliances to be provided in the kitchen. As such, the risk would be classified as medium (French/Italian cooking) with a score of 4.

5.5 Odour Risk

The score for the proposed kitchen using the EMAQ guidance criteria given in summarised in Table 5-1 is below. It is anticipated that the restaurant will offer pub like food and as such, this will result in high level odours, in line with the EMAQ guidance and will require odour abatement measures.

The EMAQ Guides state:

'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. The odour control requirements considered here are consistent with the performance requirements listed in this report.'

Table 5-1 Cathedral Hotel Restaurant Kitchen Odour Risk Assessment Summary

Criteria	Score	Score	Details
Dispersion	Very poor	20	Low level discharge, discharge into courtyard or restriction on stack.
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from kitchen discharge.
Size of kitchen	Large	5	More than 100 covers or large sized take away.
Cooking type (odour and grease loading)	Medium	4	Similar to Cantonese, Italian, French, Pizza (gas fired).
Total		39	

The scoring system results in an overall odour risk rating of 'very high', with a recommended very high level of odour control minimise the risk of odour impacts.

6. Proposed Odour and Grease Abatement Measures

This section of the report describes the proposed odour control measures for this restaurant in terms of the information requirements listed in Appendix 2 of the EMAQ guidance. The design of the kitchen ventilation system has been undertaken by a specialist contractor (BW Fabrications Ltd) in line with the guidance.

A very high Level of odour abatement will be provided with the use of canopy grease baffle filters, electrostatic precipitation (ESP) filters and ozone/UV light.

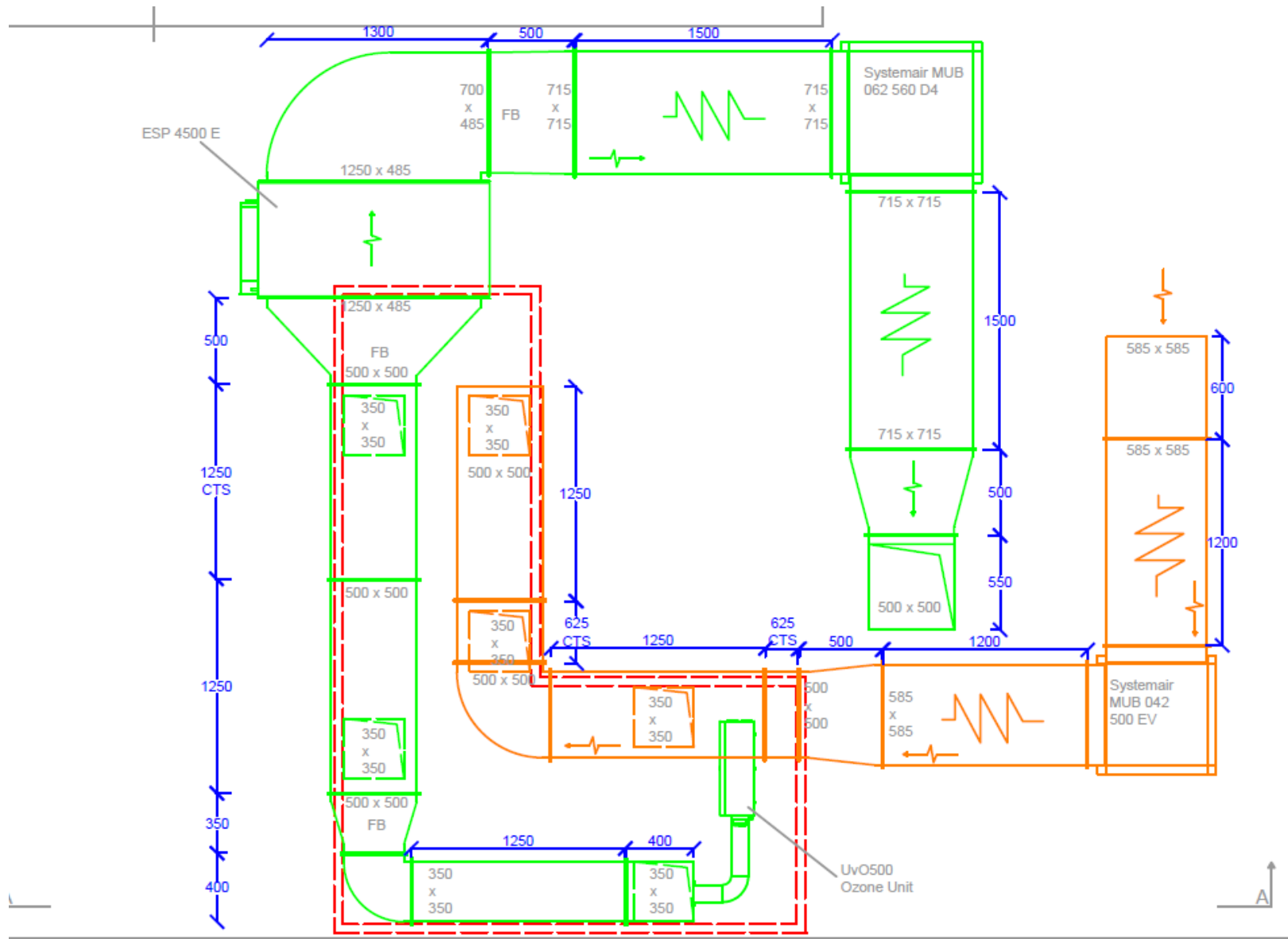
Table 6-1 Appendix 2 Information Requirements

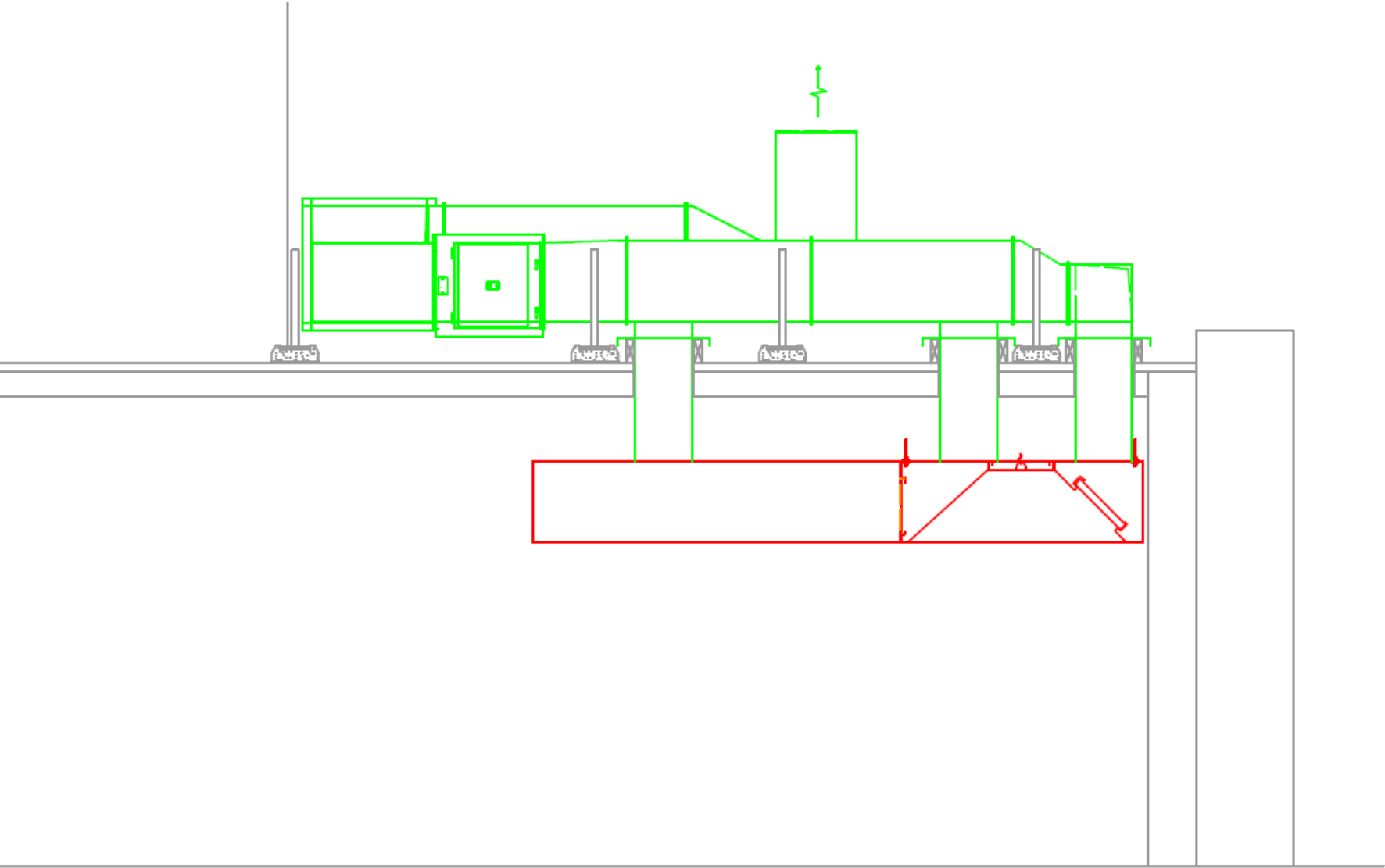
Information Requirement	Response
Information on premises	The restaurant size is provided in Section 2 of this report in terms of the number of covers. Food preparation and meals will be varied consistent with a 5-star hotel. The kitchen incorporates fryers, chargrill, grill, oven and induction boiling equipment. Operation will be consistent with hotel use; i.e. breakfast, lunch and dinner. The risk assessment is included in Section 5 of this report.
Plans and drawings	Provided in Appendix 1. Green: Extract system Orange: Supply system Red: Canopy
Prefilters	Each item of cooking equipment has local fume extraction by means of the extract canopy with fire suppression and nine 400 x 400 Longar Type 2 stainless steel 430 polished finish baffle filters. Specification is provided in Appendix 2 along with cleaning frequency guidance for the complete system.
ESP	Purified Air ESP 4500. Dimensions and technical specification in Appendix 2, up to 98% removal efficiency of oil, grease and particles. Recommended maintenance schedule: cleaning the outside of the unit with mild detergent every 6 months, check the door seal every 12 months, cleaning the inside of the unit to remove dust/grease once a week to once every 3 months depending on loading; cleaning the mesh pre-filter, ESP collector cell and mesh post-filter and check for damage once a week to once every 3 months depending on loading.
Carbon filters	None.
Odour counteractant or neutralising system	None.
UV-C system	Purified Air UvO 500. Dimensions and technical specification in Appendix 2, up to 90% odour removal. Ozone generation is based on anticipated odour generation rate and flowrate through the system. Dwell time 2.03 seconds based on 13m of 600 x 660 duct. Maintenance recommendations include cleaning UV lamps every 2 months and replacing them every 12 months. Cleaning the inside of the unit to remove dust/grease every 3 months.
Cooker hood	Dimensions are shown in Appendix 1. Minimum 300mm overhang to fryers. Face velocity at extraction 1.59 m/s. 400 x 400 baffle entries to cooker hood.
System operation	Extract rate 2.3 m ³ /s, volume of kitchen 64 m ³ , efflux velocity 9.2 m/s.

Information Requirement	Response
Flue design	1.4m above kitchen roof, 9.2 m/s discharge velocity vertically.
Noise	The noise information is provided in Appendix 3. A separate report has been prepared by Clarke Saunders.
Maintenance	The maintenance and cleaning schedule will be in accordance with the manufacturer's recommendations for the equipment outlined above. Where frequencies are variable according to the loading of the system then they will be appropriately adjusted following the initial period of operation to maintain odour removal performance.
Additional notes for guidance	Inlet air supply is 1.95 m ³ /s via Systemair MUB 042 500 EV fan as shown on the system layout drawings in Appendix 1.

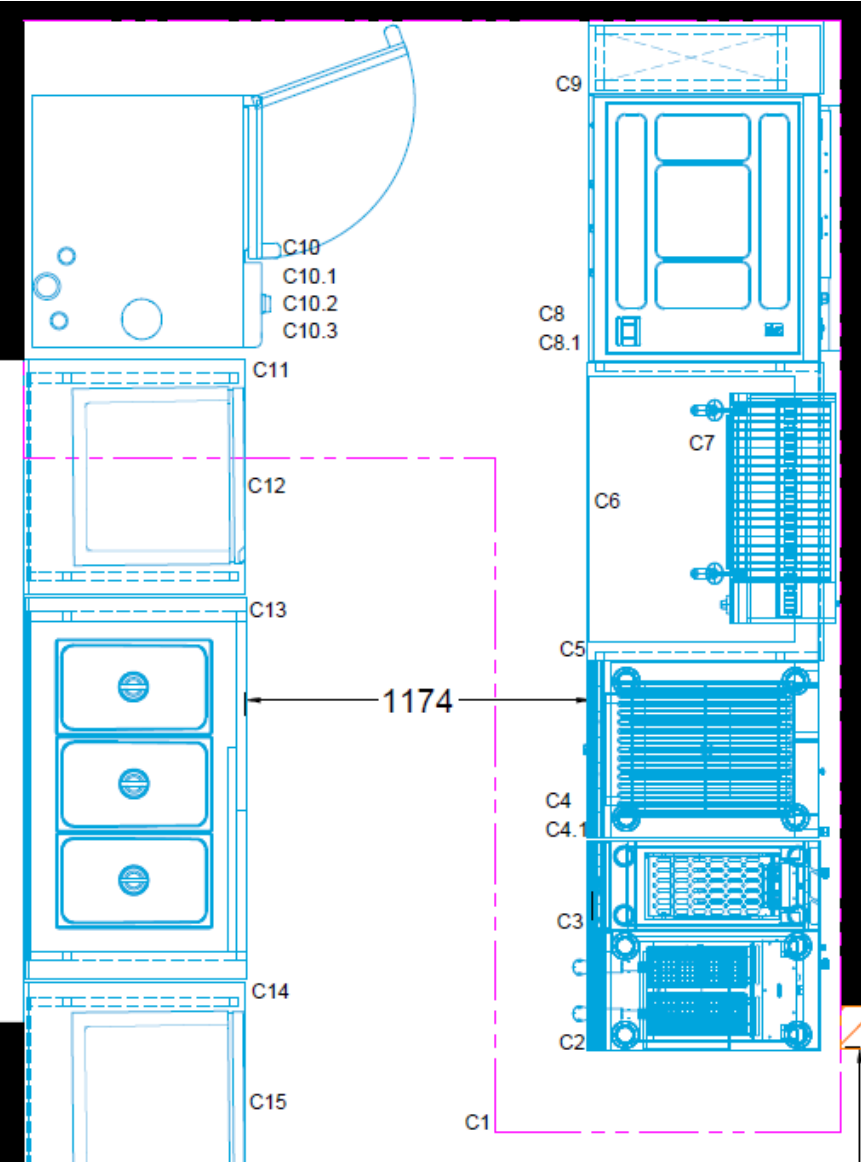
Appendix 1

Proposed Kitchen Abatement Layout





Section BB - showing extract only



COOKLINE AND PASS				
C1	1	"L" SHAPED EXTRACTION CANOPY WITH FIRE SUPPRESSION	3770/2768 x 1170/1490	BY SPECIALIST
C2	1	TWIN BAKET, SINGLE TANK FRYER WITH OIL PUMP FILTRATION	400 x 786 x 990	FALCON
C3	1	SINGLE BASKET, SINGLE TANK FRYER	300 x 786 x 990	FALCON
C4	1	CHARGRILL	600 x 787 x 530	FALCON
C4.1	1	STAND FOR CHARGRILL	600 x 760 x 587	FALCON
C5	1	S/S WALL TABLE WITH VOID UNDER	1000 x 800 x 900	HOLMES
C6	1	UNDERCOUNTER REFRIGERATED DRAWER	905 x 700 x 870	POLAR
C7	1	WALL MOUNTED SALAMANDER GRILL	785 x 360 x 325	FALCON
C8	1	INDUCTION BOILING TOP	900 x 500 x 1800	FALCON
C8.1	1	STAND FOR INDUCTION BOILING TOP	-	FALCON
C9	1	CORNER INFILL TABLE WITH UPSTAND TO THE REAR AND LHS.	250 x 800 x 900	HOLMES
C10	1	6 GRID ELECTRIC COMBINATION OVEN (PRO)	850 x 842 x 804	RATIONAL
C10.1	1	STACKING KIT FOR COMBINATION OVENS	-	RATIONAL
C10.2	1	10 GRID ELECTRIC COMBINATION OVEN (PRO)	850 x 842 x 1064	RATIONAL
C10.3	1	MOBILE STAND FOR COMBINATION OVENS	883 x 769 x 699	RATIONAL
C11	1	S/S WALL TABLE WITH VOID UNDER	800 x 750 x 900	HOLMES
C12	1	UNDERCOUNTER FRIDGE	600 x 595 x 855	POLAR
C13	1	S/S HOTCUPBOARD WITH INSET 3GN BAIN MARIE, UPSTAND TO THE REAR	1300 x 750 x 900	HOLMES
C14	1	S/S WALL TABLE WITH VOID UNDER	800 x 750 x 900	HOLMES
C15	1	UNDERCOUNTER FRIDGE	600 x 595 x 855	POLAR
C16	1	TWO TIER HEATED HATCH PASS.C/W S/S HATCH SURROUND	2450 x 400	HOLMES

Appendix 2
Proposed Kitchen Equipment Data Sheets

TECHNICAL SPECIFICATION

	ESP 1500	ESP 3000	ESP 4500	ESP 6000
Supply	220-240 V 50-60HZ	220-240 V 50-60HZ	220-240 V 50-60HZ	220-240 V 50-60HZ
Power Consumption	20 _W	30 _W	40 _W	50 _W
Maximum Airflow	0.7 M³/SEC (UP TO)	1.4 M³/SEC (UP TO)	2.1 M³/SEC (UP TO)	2.8 M³/SEC (UP TO)
Dimensions (mm)	W 450 H 630 D 640	W 900 H 630 D 640	W 1350 H 630 D 640	W 1800 H 630 D 640
Weight	55 _{KG}	85 _{KG}	118 _{KG}	153 _{KG}

Please note: This equipment needs to be interlocked with the extract fan.

1.8 Technical Specifications

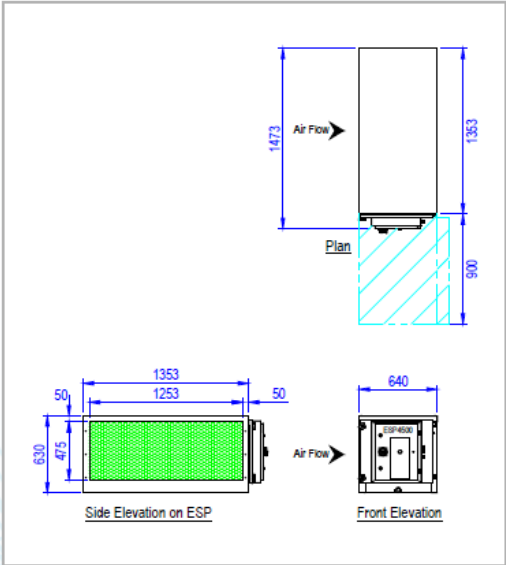
There are currently four models in the range:

- ESP 1500EI, which contains a single ESP Collector Cell.
- ESP 3000EI, which contains two ESP Collector Cells.
- ESP 4500EI, which contains three ESP Collector Cells.
- ESP 6000EI, which contains four ESP Collector Cells.

The specification of each model is detailed below:

	ESP 1500EI	ESP 3000EI	ESP 4500EI	ESP 6000EI
Power consumption	20 Watts	30 Watts	40 Watts	50 Watts
Maximum air handling capacity	Up to 0.7m³/ sec	Up to 1.4m³/ sec	Up to 2.1m³/ sec	Up to 2.8m³/ sec
Dimensions	W 450mm H 630mm D 640mm	W 900mm H 630mm D 640mm	W 1350mm H 630mm D 640mm	W 1800mm H 630mm D 640mm
Weight	55kg	85kg	118kg	153kg
Power supply	220/240V 50Hz 1ph	220/240V 50Hz 1ph	220/240V 50Hz 1ph	220/240V 50Hz 1ph
Filter efficiency	Up to 98%	Up to 98%	Up to 98%	Up to 98%
Housing	Epoxy-coated galvanised steel	Epoxy-coated galvanised steel	Epoxy-coated galvanised steel	Epoxy-coated galvanised steel

ESP 4500



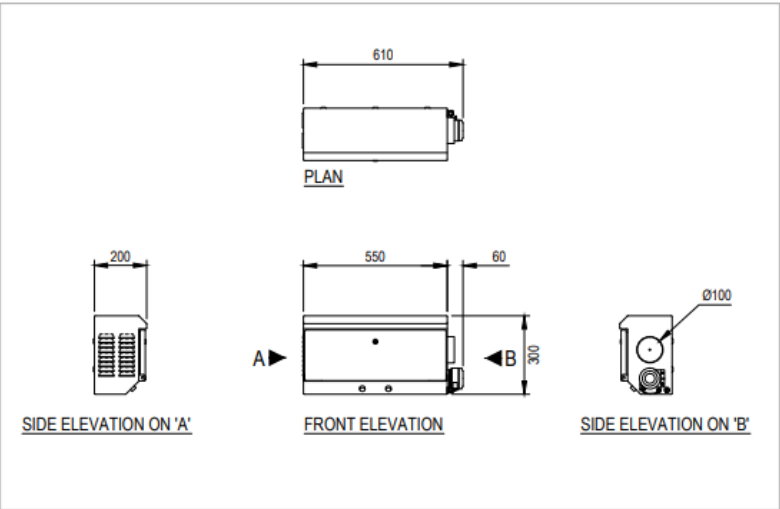
TECHNICAL SPECIFICATION

	UV-O 500	UV-O 1000
Supply	220-240 V 50-60HZ	220-240 V 50-60HZ
Power Consumption	140 _W	640 _W
Maximum Airflow	1.5 _{M³/SEC} (UP TO)	2.5 _{M³/SEC} (UP TO)
Dimensions (mm)	W 610 H 300 D 200	W 1521 H 350 D 404
Weight	10.5 _{KG} (APPROX)	50 _{KG} (APPROX)

Please note: This equipment needs to be interlocked with the extract fan.

DRAWINGS

UV-O 500



UV-O TECHNOLOGY

The UV-O range uses UV-C technology which is based on the synergy of oxygen and ultraviolet light to produce ozone. The ozone acts on the gases by changing their molecular structure, reduce the smells and breaking down odours in the ductwork ready for extraction.

Unlike other UV-C systems, our UV-O units are located outside of the kitchen extract duct and are connected via a spigot and small diameter ducting.

Although it is widely accepted that the best way to apply UV-C light is directly in-line with the air stream itself, performance will be impacted as the lamps get dirty.

With our UV-O units the air flow does not come from the exhaust duct but from the ambient air around the unit, which is filtered on entry. This means that it is able to provide a uniform supply of ozone and hydroxyl free radicals into the extract system with an extremely low pressure loss.

For optimum performance we would recommend between 2 & 6 seconds of dwell time to allow the ozone to work effectively upon the malodorous gasses within the duct.

LONGAR® Type 2

Premium Baffle Filter



LONGAR® TYPE 2 FEATURES:

- 100% Flame barrier protection to DIN 18869-5.
- Cutsafe safety edges.
- Fully welded construction – all stainless steel construction.
- Meets insurance requirements.
- Meets HVCA DW172 requirements.
- Folding handles and drainholes as standard.
- Robust baffle filter construction – built to last.
- Tested & certified to European standard DIN 18869-5.
- Tested & certified to American standard UL1046.
- Tested & certified to ASTM2519.

APPLICATIONS

- Commercial kitchens
- Water mist separation
- Spark arrestors
- Sand filtration
- Grease filtration

LONGAR® TYPE 2 PREMIUM BAFFLE FILTER

For use in commercial kitchens and ventilation to extract grease laden air and act as a fire barrier. Fire barriers prevent any cooking flames traveling past the extract canopy. The new Type 2 is a development of customers requesting certain attributes for the baffle filter, the main ones being safety edges on frame and blades. LONGAR® Type 2 is available in standard depths of 20mm and 45mm depths, this is required for the filter to operate at a constant efficiency and to protect the system as a flame barrier as tested to European Standard DIN 18869-5 and American Standard UL1046. Custom sizes are available on request.

CONSTRUCTION / MATERIAL SPECIFICATIONS

As standard all baffles are manufactured with Stainless Steel 430 polished finish. (Other finishes and materials are available). Maximum Operating temperature 400C or 750F.

FITTING INSTRUCTIONS

- Fit products, handles in direction of air in.
- Product vertical in air stream.

HANDLING

- Handle with care when unpacking.
- Store in dry and frost protected place.

MAINTENANCE

- All maintenance should be carried out in accordance with the planned maintenance set by installation contractor.
- When handling any components suitable PPE should be used - gloves, eye protection and access equipment.
- Filters should be cleaned by a trained operative either daily for heavy use or weekly for light use.
- For more exact guide to cleaning you should contact a cleaning specialist.

PACKAGING

- All units are packaged in double wall boxes with separators for standard sizes, glued closed for protection whilst in transit against contamination.

FILTER CLASSIFICATION:

- Filter Class G2
- UL Class 2

TESTED TO:

- DIN 18869-5
- UL 1046
- ASTM 2519

MANUFACTURED TO:

- DW172
- ISO9001



1) EXTRACT DUCTWORK CLEANING

It is not possible to provide an absolute rule for the frequency of ductwork cleaning required because of the variation in hours of usage and level of contamination in the system. We recommend that a regular inspection is made and a risk assessment is made to determine the ongoing cleaning frequency (See Table 1 below). Further guidance is available in TR/19: Guide to Good Practice – Internal Cleanliness of Ventilation Systems published by the BESA (www.thebesa.org.uk).

Key to determining the required frequency of cleaning is the grease wet film thickness test. TR 19 recommends that the system should be completely cleaned if when tested, the grease wet film thickness exceeds 200 µm (micrometre) on average or 500 µm in any particular place. When a professional kitchen ventilation system cleaning company is engaged, they will measure grease thickness before they start cleaning. If either the 200 µm or 500 µm recommended limits are exceeded then the frequency should be increased until grease thickness can always be maintained at below the limits.

Note – Any ponding of grease deposits is evidence that the thickness limits have been very far exceeded and cleaning is very urgently overdue.

2) GENERAL FREQUENCY OF CLEANING.

The cleaning frequency needed for specialist cleaning of extraction 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. The wet field thickness method described in section 6 provides accurate determination of required cleaning frequency. If this is not possible then the below general guidelines based on TR19 should be used.

Note – the classification of usage (light, med or heavy) should be based on cooking type just as much as cooking duration per day.

NOTE – FAILURE TO MAINTAIN ANY PART OF THE SYSTEM IN LINE WITH TR19 GUIDANCE MAY VOID BWF WARRANTY



Table 1: Typical Cleaning Frequencies for Extraction System Components at Different Usage Levels

SYSTEM COMPONENT	LIGHT USAGE 2–6 Hours/day	MEDIUM USAGE 6–12 Hours / day	HEAVY USAGE 12–16 Hours / day
CANOPY (clean accessible internal and external surfaces, check collection trays)	Every 2–3 weeks	Weekly	Twice weekly
GREASE FILTERS (clean)	Weekly	Twice Weekly	Daily
ODOUR CONTROL SYSTEMS* (check and replace as necessary) Carbon filters Pre-Filters ESP / UV units (specialist cleaning as per manufacturer's instructions attached where relevant)	12 monthly 4 monthly Minimum 12 monthly specialist clean	6 monthly 2 monthly 2 monthly recommended check and adjust frequency as necessary	3 monthly 2 monthly 2 monthly recommended check and adjust frequency as necessary
FANS (check and clean as necessary)	12 monthly	6 monthly	3 Monthly
FRESH AIR FILTERS (check and clean as necessary)	6 monthly	4 monthly	3 Monthly
EXTRACT DUCTWORK (check and clean as necessary)	12 monthly	6 monthly	3 Monthly

* Refer to manufacturers' guidance for UV/ESP/Ozone Systems

*B W Fabrications can procure replacement filters, offering a supply and installation, as well as a supply only service. Please contact B W fabrications on the details below.

Please refer to TR/19: Guide to Good Practice – Internal Cleanliness of Ventilation Systems (The BESA www.hvca.org.uk) for more information.

Appendix 3
Noise Data

Predicted Noise Level using CIBSE Guide Methodology

Note - The figures provided can only be taken as estimates. A more accurate prediction will require input from a specialist acoustic engineer and will usually be based on achievement of a target noise level based on a background noise survey.

Site

The Cathedral Hotel, Salisbury

Extract System

Fan Size and type

Systemair MUB 062 560

Attenuator Type and size

Acoustica R-02 6, 715 x 715 x 1500

Predicted Noise Level at NSR

6 metres away

Number of bends

2 bends

Length of Duct Before Outlet

2 metres

		Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	
		63	125	250	500	1k	2k	4k	8k	dB(A)
Fan Lw at face of fan		53	72	76	79	81	78	76	68	84.9
Attenuation from duct	metres	-1.4	-1.4	-0.6	-0.4	-0.4	-0.4	-0.4	-0.4	
Attenuation from square bends	bends	-2	-2	-2	-2	-2	-2	-2	-2	
Directivity										
Distance attenuation		-22	-22	-22	-22	-22	-22	-22	-22	
Insertion loss from attenuator		-5	-8	-19	-33	-39	-39	-25	-17	
Net		22.6	38.6	32.4	21.6	17.6	14.6	26.6	26.6	31.8

Supply Air System

Fan Size and type

Systemair MUB 062 560

Attenuator Type and size

Acoustica R-02 6, 715 x 715 x 1500

Predicted Noise Level at NSR

6 metres away

Number of bends

2 bends

Length of Duct Before Outlet

2 metres

		Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	
		63	125	250	500	1k	2k	4k	8k	dB(A)
Fan Lw at face of fan		50	69	71	76	81	80	76	68	85.2
Attenuation from duct	metres	-1.4	-1.4	-0.6	-0.4	-0.4	-0.4	-0.4	-0.4	
Attenuation from square bends	bends	-2	-2	-2	-2	-2	-2	-2	-2	
Directivity										
Distance attenuation		-22	-22	-22	-22	-22	-22	-22	-22	
Insertion loss from attenuator		-4	-7	-15	-26	-29	-32	-20	-14	
Net		20.6	36.6	31.4	25.6	27.6	23.6	31.6	29.6	35.9