

Odour Assessment
Lawn Club, Spinningfields

Client: Spinningfields Estate Limited

Reference: 9329r2

Date: 18th June 2025



Report Issue

Report Title: Odour Assessment - Lawn Club, Spinningfields

Report Reference: 9329

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Executive Summary

Redmore Environmental Ltd was commissioned by Spinningfields Estate Limited to undertake an Odour Assessment in support of a retrospective planning application for a bar and restaurant known as The Lawn Club in Spinningfields, Manchester.

Odour emissions associated with the restaurant kitchen extraction system have the potential to cause impacts at sensitive locations in the vicinity of the site. As such, an Odour Assessment was undertaken in order to evaluate potential effects and identify the requirement for any additional mitigation measures to prevent adverse impacts.

An assessment using the standard industry methodology was undertaken to identify the odour risk associated with the proposals. This was based on a number of site-specific inputs.

The results of the assessment indicated the odour risk was classified as **very high**. This prediction does not infer that the proposed development would result in significant odour impact or affect local amenity levels. However, it does suggest that appropriate mitigation is required to reduce potential effects to an acceptable level.

The proposed odour mitigation scheme has been specified in line with the relevant guidance for kitchens with a **very high** risk of impact. It therefore follows that with this mitigation in place, potential odour impacts at nearby sensitive receptors would be reduced to an acceptable level.

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1.0 INTRODUCTION

1.1 Background

1.1.1 Redmore Environmental Ltd was commissioned by Spinningfields Estate Ltd to undertake an Odour Assessment in support of a retrospective planning application for a bar and restaurant known as The Lawn Club in Spinningfields, Manchester.

1.1.2 Odour emissions associated with the restaurant kitchen extraction system have the potential to cause impacts at sensitive locations in the vicinity of the site. As such, an Odour Assessment was undertaken in order to evaluate potential effects and identify the requirement for any additional mitigation to control potential impacts to an acceptable level.

1.2 Site Location and Context

1.2.1 The Lawn Club is located at Hardman Square, Spinningfields, Manchester, at approximate National Grid Reference (NGR): 383365, 398115. Reference should be made to Figure 1 for a map of the site and surrounding area.

1.2.2 The Lawn Club is a licensed all-day cocktail bar and restaurant, serving a variety of hot food including air-fried food, pizza, buns and salads. Cooking methods include an electric pizza oven, small air fryers and hotplates. No solid fuel or deep fat frying are used as part of food preparation. The premises are open 12:00 to 00:00 Monday to Thursday, 12:00 - 01:00 on Friday and 12:00 - 21:00 on Sundays.

1.2.3 The kitchen is situated within the eastern portion of the building. Emissions are extracted from the kitchen via a canopy above the food preparation area which is fitted with baffle filters for the removal of grease from the air stream. Air is then discharged to atmosphere horizontally below the ridge of the building. Reference should be made to Figure 2 for a site layout plan.

1.2.4 The Lawn Club is bordered to the north, south, east and west by commercial premises. The nearest residential dwellings are situated more than 100m from the site.

1.2.5 A retrospective planning application (reference: 142116/FO/2025) has been submitted to Manchester City Council (MCC) for the retention of the temporary pavilion building (Use Class E(b) and sui generis) and other associated works including the fume extraction system serving the restaurant kitchen for a three year period.

1.2.6 Emissions associated with the extraction system have the potential to cause odour impacts at sensitive locations in the vicinity of the site. An Odour Assessment¹ was therefore undertaken by Redmore Environmental to evaluate potential effects and identify the requirement for any additional mitigation to control impacts to an acceptable level.

1.3 **Report Amendments**

1.3.1 Following submission of the original Odour Assessment², the following comments were received from MCC:

"Following a review of the Redmore odour impact assessment dated 11th April, this includes a risk assessment and risk rating for the proposed kitchen extract which suggests the cooking requirements are more intensive regards to smoke and odour than previous comments in an earlier response and risk rates the kitchen within the high category.

However, there are closer premises that will need to be taken into account as the commercial premises are also receptors for this type of discharge so the risk rating will need to be revised accordingly. Based on the closer receptors the risk is likely to fall into the very high category and the proposals will need to be revised. UV Ozone would normally be required after the ESP unit for this category. We will need details of the fine filtration / filters to be installed prior to the ESP unit.

We will also need a diagram submitting to identify all the fume and odour abatement equipment, filters, fans and access hatches in the ductwork in relation to these components.

¹ Odour Assessment - Lawn Club, Manchester, 9329r1, Redmore Environmental, 11th April 2025.

² Odour Assessment - Lawn Club, Manchester, 9329r1, Redmore Environmental, 11th April 2025.

The maintenance schedule will need to confirm the cleaning / maintenance and replacement frequencies for the fume and odour abatement equipment."

- 1.3.2 An updated Odour Assessment has been undertaken to address the above comments. This is provided in the following report.

2.0 ODOUR BACKGROUND

2.1 Odour Definition

2.1.1 The Institute of Air Quality Management (IAQM) guidance³ defines odour as:

"[...] the human olfactory response (perception followed by psychological appraisal) to one, or more often a complex mixture of, chemical species in the air."

2.1.2 The stated definition is considered to be relevant in the context of this assessment.

2.2 Odour Impacts

2.2.1 The magnitude of odour impact depends on a number of factors and the potential for complaints varies due to the subjective nature of odour perception. The **FIDOL** acronym, is a useful reminder of the factors that will determine the degree of odour pollution. These are described by the IAQM⁴ as follows:

- **F**requency - how often an individual is exposed to odour;
- **I**ntensity - the individual's perception of the strength of the odour;
- **D**uration - the overall duration that individuals are exposed to an odour over time;
- **O** odour unpleasantness - odour unpleasantness describes the character of an odour as it relates to the 'hedonic tone' (which may be pleasant, neutral or unpleasant) at a given odour concentration/ intensity. This can be measured in the laboratory as the hedonic tone, and when measured by the standard method and expressed on a standard nine-point scale it is termed the hedonic score; and,
- **L**ocation - the type of land use and nature of human activities in the vicinity of an odour source. Tolerance and expectation of the receptor. The 'Location' factor can be considered to encompass the receptor characteristics, receptor sensitivity, and socio-economic factors.

³ Guidance on the Assessment of Odour for Planning v1.1, IAQM, 2018.

⁴ Guidance on the Assessment of Odour for Planning v1.1, IAQM, 2018.

2.2.2 It is important to note that even infrequent emissions may cause loss of amenity if odours are perceived to be particularly intense or offensive.

2.2.3 The **FIDOL** factors can be further considered in relation to the following and the potential for an odour emission to cause loss of amenity, annoyance or nuisance:

- The rate of emission of the compound(s);
- The duration and frequency of emissions;
- The time of the day that this emission occurs;
- The prevailing meteorology;
- The sensitivity of receptors to the emission i.e. whether the odorous compound is more likely to cause an impact, such as the sick or elderly, who may be more sensitive;
- The odour detection capacity of individuals to the various compound(s); and,
- The individual perception of the odour (i.e. whether the odour is regarded as unpleasant). This is greatly subjective and may vary significantly from individual to individual. For example, some individuals may consider some odours as pleasant, such as petrol, paint and creosote.

2.3 **Legislative Control**

2.3.1 The main requirement with respect to odour control from premises not controlled under the Environmental Permitting (England and Wales) Regulations (2016) and subsequent amendments, such as commercial kitchens, is that provided in Section 79 of Part III of the Environmental Protection Act (1990). The Act defines nuisance as:

"Any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance."

2.3.2 Enforcement of the Act, in regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the Local Authority is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of the Environmental Protection Act (1990). The only defence is to show that the process to which the nuisance has been attributed and its operation are being controlled according to best practicable means.

2.3.3 The legislative controls described above were considered as necessary throughout the undertaking of the assessment.

2.4 National Planning Policy

2.4.1 The revised National Planning Policy Framework⁵ (NPPF) was published in December 2024 and updated in February 2025. The document sets out the Government's planning policies for England and how these are expected to be applied.

2.4.2 The purpose of the planning system is to contribute to the achievement of sustainable development. In order to ensure this, the NPPF recognises three overarching objectives including the following of relevance to odour:

"c) An environmental objective - to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

2.4.3 Chapter 12 of the NPPF details objectives in relation to achieving well-designed place. It states that:

"Planning policies and decisions should ensure that developments:

[...]

f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesions and resilience."

2.4.4 The implications of the NPPF have been considered throughout this assessment.

⁵ NPPF, Ministry of Housing, Communities and Local Government, 2025.

2.5 Local Planning Policy

2.5.1 The Core Strategy⁶ was adopted by MCC on 11th July 2012. A review of the Core Strategy indicated the following policy of relevance to this assessment:

"Policy DM1 - Development Management

All development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document:

[...]

- Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation [...]."

2.5.2 The above policy was taken into consideration throughout the undertaking of the assessment.

2.5.3 The Places for Everyone Plan (PfEP)⁷ was produced by the nine Greater Manchester Combined Authorities (GMCAs), Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan, and became part of the statutory development plan for each of the councils on 21st March 2024. Review of the PfEP was undertaken. No policies of relevance were identified for use in this assessment.

⁶ Core Strategy Development Plan Document, MCC, 2012.

⁷ PfEP, GMCA, 2024.

3.0 **METHODOLOGY**

3.1 **Introduction**

3.1.1 The proposals have the potential to cause odour impacts as a result of emissions from cooking processes. An assessment has therefore been undertaken in accordance with guidance document 'Control of Odour and Noise from Commercial Kitchen Exhaust Systems' prepared by EMAQ+ for the Department for Environmental, Food and Rural Affairs (DEFRA)⁸. This document provides an update to the 2005 guidance⁹ produced by DEFRA.

3.1.2 The relevant process is summarised in the following Sections.

3.2 **EMAQ+ and DEFRA Methodology**

3.2.1 The EMAQ+ and DEFRA methodology provides an approach for identifying the risk of odour impact associated with food preparation premises and defining an appropriate level of mitigation to control potential effects to an acceptable level.

3.2.2 The first stage in the process is to score the proposed premises in accordance with the criteria outlined in Table 1.

Table 1 Risk Scoring 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 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	Closest sensitive receptor less than 20m from kitchen discharge

⁸ Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2022.

⁹ Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems, DEFRA, 2005.

Criteria	Score	Score	Details
	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 takeaway
	Medium	3	Between 30 and 100 covers or medium sized takeaway
	Small	1	Less than 30 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 or steakhouse
	Medium	4	Cantonese, Italian, French, Pizza (gas fired)
	Low	1	Most pubs (no fried food, mainly reheating and sandwiches etc) or Tea rooms

3.2.3 The score obtained using the values shown in Table 1 is subsequently used to define the associated risk and odour control requirement. The relevant criteria are summarised in Table 2.

Table 2 Odour Control Requirement

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

3.2.4 A suitable odour control system can then be identified from the techniques summarised in the EMAQ+ and DEFRA guidance¹⁰.

¹⁰ Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2022.

4.0 ASSESSMENT

4.1 EMAQ+ and DEFRA Risk Assessment

4.1.1 The odour risk associated with the proposals was rated in accordance with the EMAQ+ and DEFRA methodology¹¹. The results are summarised in Table 3.

Table 3 Odour Risk

Criteria	Score	Score	Notes
Dispersion	Very poor	20	Emissions are extracted from the hot food preparation area within the kitchen via a dedicated canopy containing baffle filters for grease filtration. Air is then exhausted to atmosphere horizontally below the ridge of the associated building. A score of 'very poor' has therefore been applied in accordance with the EMAQ+ and DEFRA guidance criteria
Proximity of receptors	Close	10	There are commercial premises, which would be considered sensitive receptors, less than 20m from the kitchen discharge location. As such, a score of 'close' has been applied in accordance with the EMAQ+ and DEFRA guidance
Size of kitchen	Medium	3	Review of the scale of the development indicated that a score of 'medium' is appropriate in line with the EMAQ+ and DEFRA guidance
Cooking type (odour and grease loading)	Medium	4	The cooking methods include an electric pizza oven, small air fryers and hotplates. No solid fuel or deep fat frying are used during food preparation. As such, a score of 'medium' for odour and grease loading was applied in accordance with the EMAQ+ and DEFRA criteria

4.1.2 As shown in Table 3, the odour risk for the proposed development was scored as 37. The risk was therefore classified as **very high**, in accordance with the EMAQ+ and DEFRA criteria.

¹¹ Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2022.

4.2 Odour Control

4.2.1 Based on the assessment results, the kitchen requires mitigation suitable for a **very high** level of odour risk. There are a number of options for abatement identified within the EMAQ+ and DEFRA guidance¹² that provide this level of control. These include:

- Emission collection - Odour should be collected via extraction hoods situated above the hot food preparation area;
- Grease filtration system - Mesh type grease filters, such as baffle or cartridge filters, should be included for the purpose of grease filtration. Alternatively, Electrostatic Precipitators (ESPs) may be used;
- Fine dust filter - Bag, fan or High-Efficiency Particulate Arrestance (HEPA) filters. Alternatively, ESPs may be used; and,
- Gaseous phase - An activated carbon filter rated with a 0.4 - 0.8 second residence time should be included for odour removal. Alternatively, an oxidation system such as ultraviolet (UV) light or ozone may be used.

4.2.2 As stated previously, emissions associated with food preparation activities within the kitchen are removed via a canopy containing baffle filters for grease filtration. Air is then discharged to atmosphere horizontally below the ridge of the building.

4.2.3 Consultation was undertaken with Purified Air, specialist suppliers of kitchen extraction and emission control systems, in order to identify a suitable odour abatement strategy that provides a higher level of odour control to mitigate the existing dispersion arrangements, as recommended within the EMAQ+ and DEFRA guidance¹³. The following specific mitigation scheme will be included as part of the proposals:

- Grease and fine filtration - Baffle filters within the existing extract canopy will continue to be used for primary grease filtration. However, it is proposed to install a Purified Air ESP3000 unit for the further removal of grease and fine particles prior to gaseous phase treatment; and,

¹² Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2022.

¹³ Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2022.

- Gaseous phase treatment - Two Purified Air MFU 1200 A1 (c) units will be utilised for the removal of odorous compounds prior to discharge to atmosphere. These will incorporate carbon filters to achieve a 0.4s dwell time.

4.2.4 The stated emission control arrangements have been specified in line with the EMAQ+ and DEFRA guidance criteria for kitchens with a **very high** level of odour risk, as well as to account for the existing extraction system dispersion arrangements. As such, they are considered appropriate for inclusion at the development.

4.2.5 It should be noted that the EMAQ+ and DEFRA guidance indicates that carbon filters with a 0.4 - 0.8 second residence time can be used exclusively for gaseous phase treatment of emissions associated kitchens with a **very high** level of odour risk. As stated above, the Purified Air MFU 1200 A1 (c) units will incorporate carbon filters to achieve a 0.4s dwell time. As such, the EMAQ+ and DEFRA guidance requirements for gaseous phase abatement have been addressed without inclusion of additional UV or ozone treatment.

4.2.6 Reference should be made to Appendix 1 for technical specifications for the stated Purified Air systems, as well as the specification for the canopy which incorporates baffle filters for the initial removal of grease from the system.

4.2.7 The following maintenance schedule has been identified for the proposed arrangements in order to ensure that optimal performance and an acceptable level of odour control is achieved during the operational phase of the scheme:

- The ESP3000 will be serviced at intervals between one and three months, dependant on usage. The cell within the unit will be replaced in situ and the housing and inside of the casing will be cleaned;
- The carbon filters within the MFU 1200 A1 (c) units will be replaced annually;
- A visual inspection of the ventilation system will be carried out at least once per week to check for grease build up and any evidence of damage which requires remedial action;
- Cooker hoods and grease filters will be cleaned on a daily basis; and,
- All fans will be maintained on a regular basis and in accordance with manufacturer's recommendations to ensure correct operation.

4.2.8 The proposed maintenance schedule has been specified in line with the EMAQ+ and DEFRA guidance¹⁴. As such, it is considered appropriate for implementation at the development.

¹⁴ Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+, 2022.

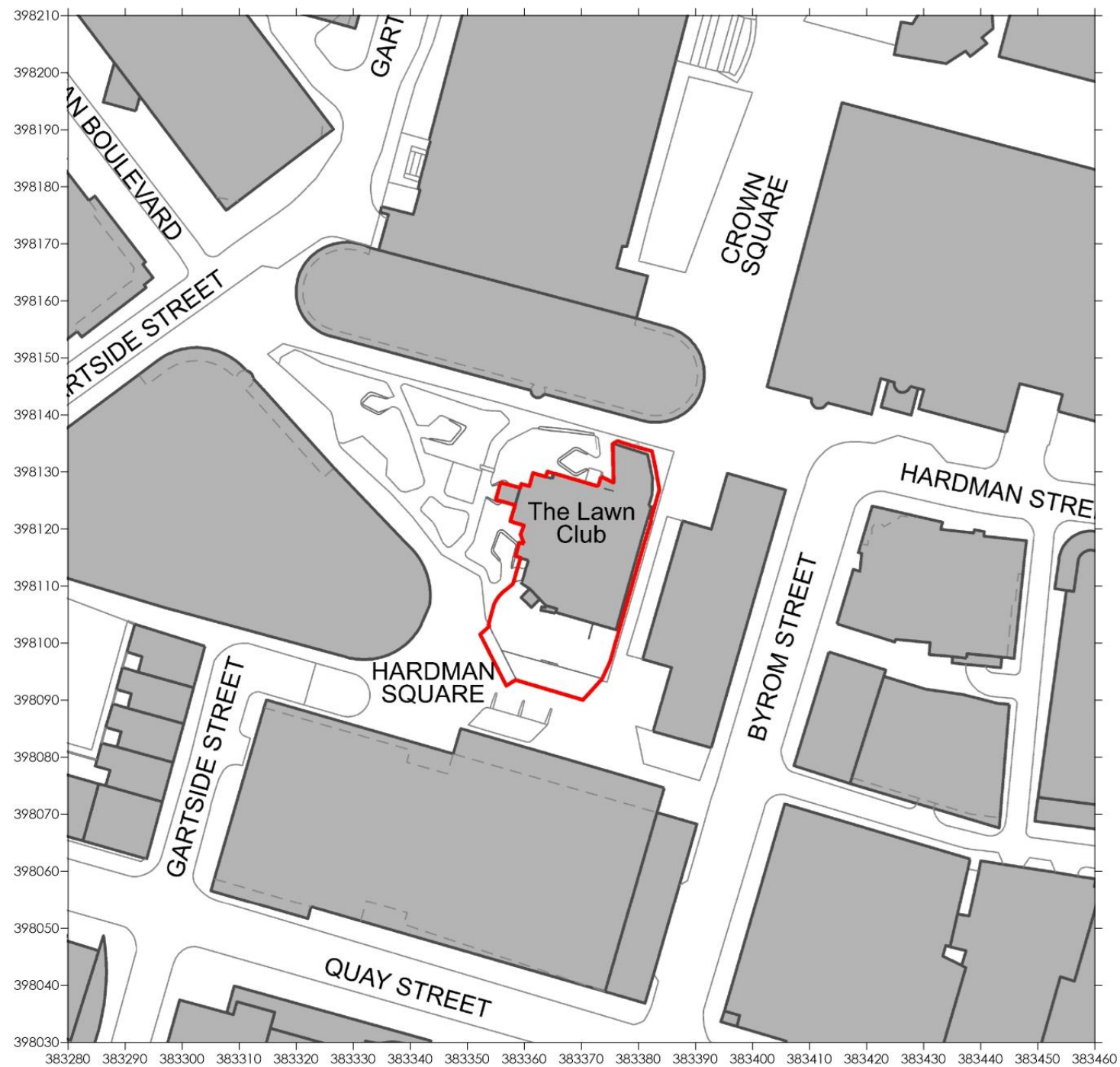
5.0 CONCLUSION

- 5.1.1 Redmore Environmental Ltd was commissioned by Spinningfields Estate Ltd to undertake an Odour Assessment in support of a retrospective planning application for a bar and restaurant known as The Lawn Club in Spinningfields, Manchester.
- 5.1.2 Odour emissions associated with the restaurant kitchen extraction system have the potential to cause impacts at sensitive locations in the vicinity of the site. As such, an Odour Assessment was undertaken in order to evaluate potential effects and identify the requirement for any additional mitigation to control emissions to an acceptable level.
- 5.1.3 The results of the assessment indicated the odour risk was classified as **very high**. This prediction does not infer that the proposed development would result in significant odour impact or affect local amenity levels. However, it does suggest that appropriate mitigation options are required to reduce potential effects to an acceptable level.
- 5.1.4 The proposed odour abatement strategy for the extraction system has been specified in line with the EMAQ+ and DEFRA guidance for kitchens with a **very high** risk of impact. It therefore follows that with this mitigation in place, potential odour impact at nearby sensitive receptors would be reduced to an acceptable level.

6.0 **ABBREVIATIONS**

DEFRA	Department for Environment, Food and Rural Affairs
ESP	Electrostatic Precipitators
HEPA	High-Efficiency Particulate Arrestance
GMCA	Greater Manchester Combined Authority
IAQM	Institute of Air Quality Management
MCC	Manchester City Council
NGR	National Grid Reference
NPPF	National Planning Policy Framework
PfEP	Places for Everyone Plan
UV	Ultraviolet

Figures



Legend



Site Boundary

Title

Figure 1 - Site Location Plan

Project

Odour Assessment
Lawn Club, Spinningfields

Project Reference

9329

Client

Spinningfield Estate Limited

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Appendix 1 - Technical Specifications

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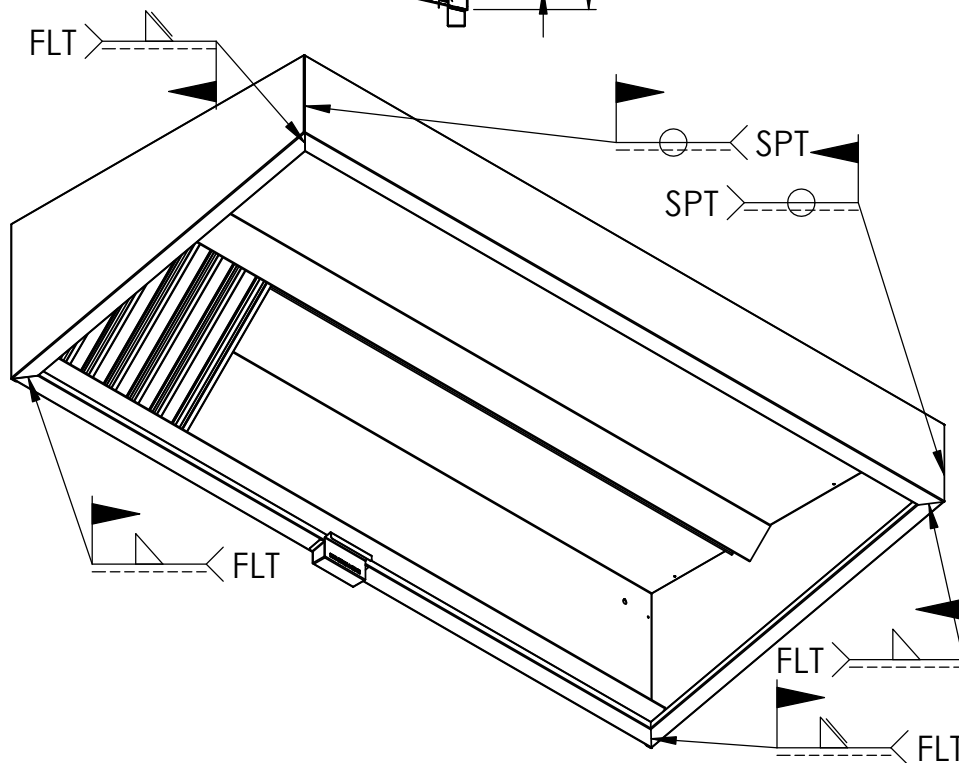
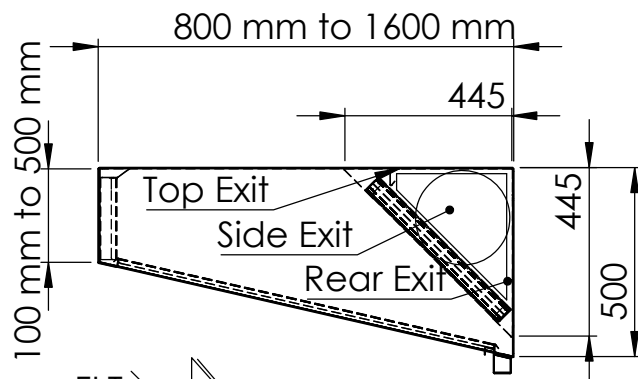
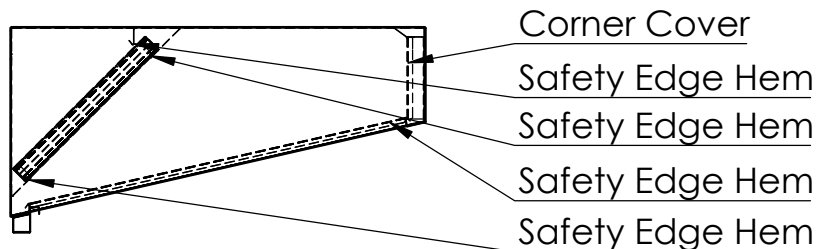
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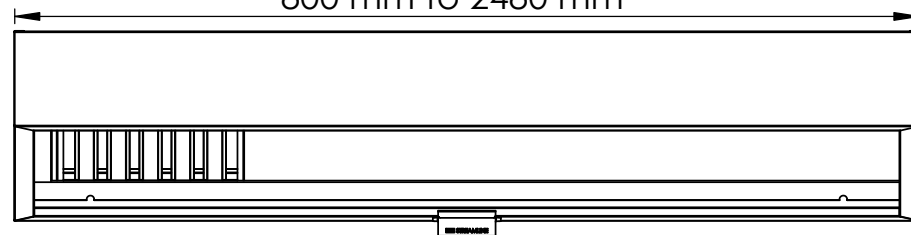
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2

1



800 mm to 2480 mm



Taper Wall Canopy Hood

- Canopy Hood is built in accordance with UK building regulations PART F, B&ES DW/172, B&ES DW/144, HSE CAIS 10 & 23
- Standard Kitchen Canopy Hood is manufactured from 430 grade stainless steel, and 0.9mm thick
- All joints are laser welded, to reduce distortion and precipitation of inhibitors.
- All joints are fully sealed and liquid tight to ensure no leaks.
- Grease filters are standard 495mm x 495mm x 48mm achieving and exceeding a 0.5m³/s per filter and are non-clogging
- A full length grease collection channel runs the width of the hood.
- We can supply a drain valve - for easy cleaning and draining.
- We can supply a grease collection drawer.
- Canopy Hoods do not come with any spigot connection holes.

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3343 LIMITED
eCanopy
COMMERCIAL KITCHEN EXTRACTION
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COMMERCIAL KITCHEN CANOPY

TITLE:

TAPER WALL CANOPY HOOD
Length: 800mm to 2400mm
Depth: 800mm to 1600mm
Height: 100mm to 500mm

DWG NO.

24-3-10-R6DT

A4

SCALE 1:20

SHEET 1 OF 1

6

5

4

3

2

1



Specification & EMAQ Report

Project Name:
Lawn Club, Manchester

Quotation Reference: N/A

Prepared for: Milly McDermott (Zerum)

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**AIR FILTRATION
EXPERTS**



**MARKET LEADERS
S I N C E
1984**

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INTRODUCTION

Interpretation of Requirements

Following our conversation today I am pleased to provide an equipment selection for an odour control solution.

As with any project we get involved in we always recommend to our clients that they should closely follow the EMAQ guide for guidance on odour control equipment selection.

This ensures that what they propose will be in line with local authority's requirements and if the system is maintained correctly, they will not exhaust nuisance odours leading to complaints from nearby residents.

With this in mind I carried out a risk assessment as detailed in Appendix 3 of the EMAQ Guide.

Taking into consideration the level of discharge, proximity of receptors, size of kitchen and cooking type your project requires a high level of odour control to comply.

We have scored as below and as taken from Appendix 3: Risk Assessment for Odour;

Risk	Score
Dispersions	20
Proximity Of Receptors	1
Size Of Kitchen	3
Cooking Type	7
Total Score	31

The type of odour abatement system that complies is as below, taken directly from the EMAQ Guide and must be to a **high level of control**.

Odour arrestment plant performance

Low level of odour control may include:

1. Fine Filtration or ESP followed by carbon filtration (carbon filters rated with a 0.1 second residence time).
2. Fine filtration followed by counteractant/neutralising system to achieve the same level of control as point 1.

PRODUCT OVERVIEWS

High level odour control may include:

1. **Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.2 – 0.4 second residence time).**
2. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as point 1.

Very high level of odour control may include:

1. Fine filtration or ESP followed by Carbon filtration (carbon filters rated with a 0.4 – 0.8 second residence time).
2. Fine filtration or ESP followed by carbon filtration and counteractant/neutralising system to achieve the same level of control as point 1.
3. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as point 1.
4. Fine filtration or ESP followed by wet scrubbing to achieve the same level of control as point 1.

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 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 Receptor	Close	10	Closest sensitive receptor between 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 30 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. <i>Turkish, Middle Eastern or any other premises cooking with solid fuel</i>
	High	7	Vietnamese, Thai, Indian, <i>Japanese, Chinese, steakhouse.</i>
	Medium	4	Cantonese, <i>Italian, French, Pizza (gas fired)</i>
	Low	1	Most pubs (<i>no fried food, mainly reheating and sandwiches etc.</i>), <i>Tea rooms.</i>

PRODUCT OVERVIEWS

The System

The kitchen extraction flow rate is 1.04m³/s, based on this we would recommend on installing 1No ESP 3000 unit followed by 1No MFU 1800 unit to achieve a 0.3s dwell time.

ESP



Key Features

Eliminates up to 98% of oil, grease and smoke particles

Filters particles down to sub-micron levels

Produces Ozone to help reduce malodours

Designed with an integral sump

As our ESP's have been specifically designed for kitchen extract and not modified from industrial use, they have integral sumps to collect the oil, grease and smoke particles filtered out of the exhaust; this not only simplifies servicing but eradicates potentially dangerous spillage from the bottom of the units and greatly cuts down on flammable build-ups within the duct run.

The ionisation voltage has been designed to run at a negative potential which enhances the ionisation of particles and also produces more Ozone which is helpful in reducing odours in kitchen applications.

Our ESP units fit in-line with the kitchen ducting and can be configured modularly to cope with all extract volume requirements.

The Electrostatic Precipitator is a very efficient means for separating the particulate phase; operating efficiency when clean can be as high as 98% at particle sizes down to 0.01 micron.

The Electrostatic Precipitator does not present a high-pressure loss (90PA approx. dependant on air flow). This gives a specific advantage in that most standard Kitchen extractor fans will have the capability of overcoming this small differential.

This is advantageous when it is considered that if the pressure loss were high larger noisier fans would be necessary resulting in potential noise pollution.

PRODUCT OVERVIEWS

MFU



Key Features

Modular in design

Endless combinations of passive filtration

Multiple configurations

Built for stock / No lead times

Our MFUs are designed explicitly for kitchen extract systems; they collect the oil, grease and smoke particles filtered out of the exhaust through a combination of passive air filters, including panel, bag, HEPA and carbon. The high-quality unit can house multiple filter combinations and is effortlessly serviced, replaced or even re-configured to provide continually effective and affordable kitchen extract particulate control. Additionally, the units help reduce grease build-up within the ducting and reduce odours.

Its modular design means units can be configured in various ways to handle any required flow rate, providing effective and efficient kitchen extract filtration.

Carbon Filters

We manufacture Site Safe carbon filters, these innovative carbon units measure 594x196x597mm, three combining to 594x594x597mm, directly replacing our original carbon blocks whilst providing exactly the same filter performance as an existing full size cell.

Their advantage is that they only weigh 18kg each against the 68kg of our original blocks. This takes the strain out of fitting and servicing, allowing only one engineer to complete the task where two had been previously required.

Our Site Safe carbon filters use panels of activated carbon to remove the malodorous gases within the commercial kitchen extract duct through the process of chemical adsorption. By installing our ESP units before our Site Safe filters, the carbon life span is greatly increased, allowing it to nullify malodours at optimum efficiency for much longer.

As you can see the system that has been specified is in line with EMAQ guidance.

TECHNICAL SPECIFICATIONS (per unit)

1No. ESP 3000E Unit.	
Air Volume Max	1.4m ³ /s
Electrical Supply	220/240V 50Hz 1ph
Power Consumption	50 W
Weight each	85kg
Min/Max Working Temperature	4/56°C
Max Relative Humidity	75%

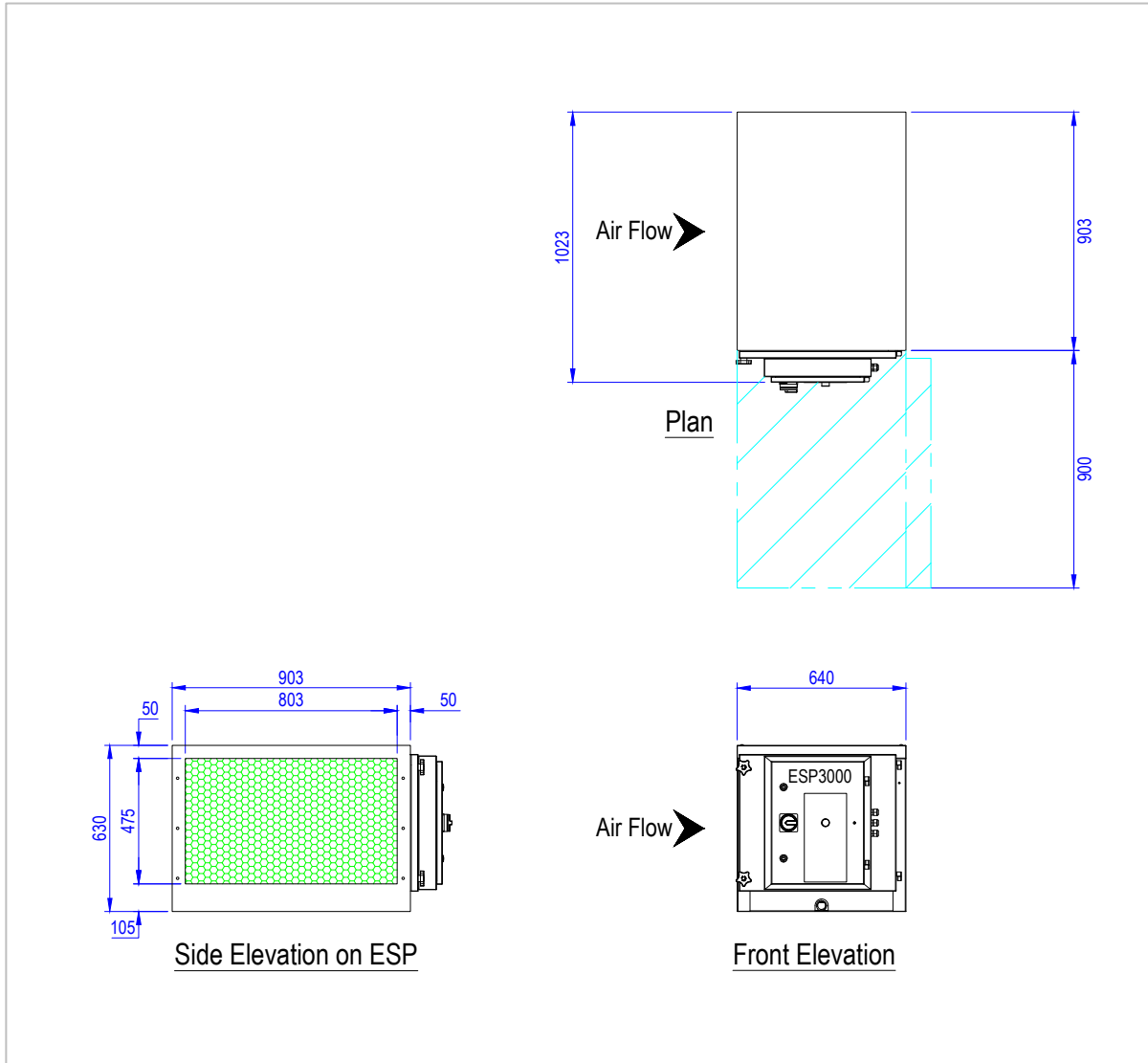
1No. MFU 1800 (Casing Only)	
Width	1885mm
Height	630mm
Depth	925mm
Weight	133.5kg

Carbon Filter	
Providing a 0.3s dwell time	
9No. 594 x 196 x 597 Site Safe Carbon Filters	

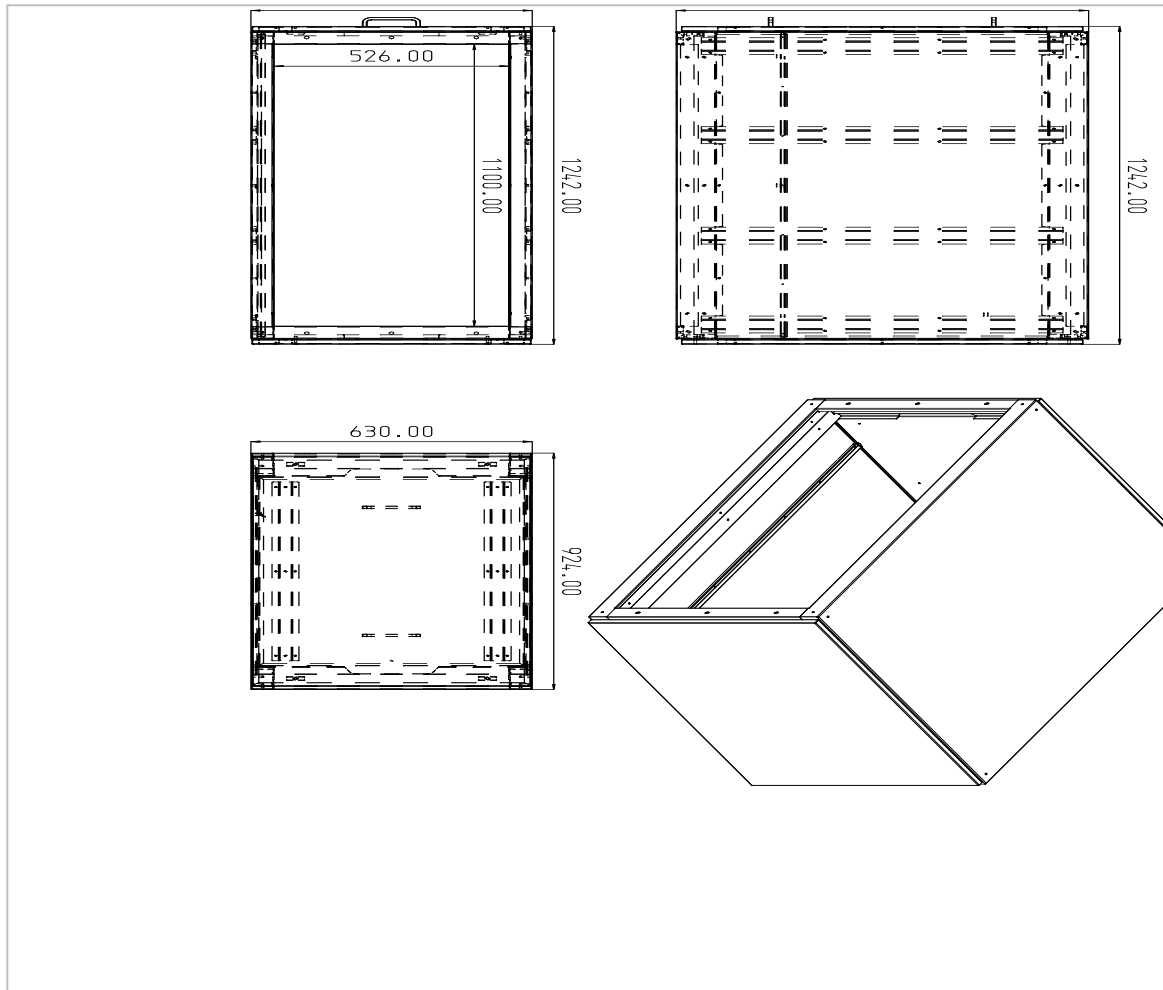
Based on a flow rate of 1.04m³/s the pressure resistance for this equipment will be 150Pa

TECHNICAL DRAWINGS

ESP 3000



MFU 1800





ACCREDITED AND CERTIFIED BY



Thank you for the opportunity to provide the specification and EMAQ report. Should you have any questions or queries please get in touch.

Emrys Hughes

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