

Report for:

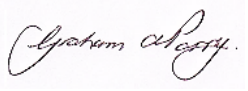
Greggs

Bury UA, Bell Lane, BL9 6BB

Odour Impact Assessment

Status: FINAL

Date: 03.02.2026

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Report For	Greggs plc Unit 3 Mill Farm Business Park, Millfield Road, Hounslow, TW4 5PY
Date	03.02.2026
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1. INTRODUCTION

ACCON UK Limited (ACCON) has been commissioned by JMS Planning on behalf of Greggs to carry out an odour assessment in respect of the proposed extract flue system at a new Greggs Unit at Bury UA, Bell Lane, BL9 6BB.

The purpose of the odour impact assessment is to determine the extent to which odour emanating from the extract flues/grilles from the proposed Greggs Unit at Bury UA, Bell Lane, BL9 6BB. would result in a likelihood of odour nuisance occurring at the existing residential properties in the vicinity of the proposed Greggs shop. The closest existing residential properties are located approximately 40m to the southeast of the proposed Greggs unit.

This odour assessment is required to support the planning application: 72665. The Bury Metropolitan Borough Council Environmental Health Commercial Team has recommended a Planning Condition, which states:

“No development shall commence unless and until a scheme for treating, diluting and dispersing fumes and odours has been submitted to and approved in writing by the Local Planning Authority. The scheme submitted shall include a written statement from a suitably qualified person who is a member of the Heating and Ventilation Contractors Association (HVCA) or an equivalent professional body, stating that the fume treatment to be installed complies with or exceeds the ‘Minimum Requirements For Odour Control’ provided by the Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems: DEFRA 2005 (or if applicable such superseding guidance as shall prevail at the time of commencement of the development).

The scheme to be submitted shall also include the relevant manufacturer and installer instructions for any associated equipment with details of maintenance requirements.

The scheme as approved shall be implemented, available for use and maintained in accordance with the approved scheme whilst it shall serve the development.”

The site location is identified in **Appendix 1.1**, and the general site layout is illustrated in **Appendix 1.2**. The site is located within the administrative boundary of the Bury Metropolitan Borough Council (BMBC).

2. ODOUR ASSESSMENT

2.1. Nature and Effect of Odour

Odour is perceived by our brains in response to chemicals present in the air we breathe. Odour is the effect that those chemicals have upon us. Humans have sensitive senses of smell, and they can detect odour even when chemicals are present in very low concentrations. Most odours are a mixture of many chemicals that interact to produce what we detect as an odour.

Different life experiences and natural variation in the population can result in different sensations and emotional responses by individuals to the same odorous compounds. Because the response to odour is synthesised in our brains, other senses such as sight and taste, and even our upbringing, can influence our perception of odour and whether we find it acceptable, objectionable or offensive.

2.2. Assessment Methodology

The assessment of odour takes on the following aspects:

- A qualitative assessment of existing odour emissions on the proposed residential development;
- An assessment taking into account the nature of the premises;
- The height of any existing flue;
- The approximate exit velocity from the existing flue; and
- The distance between the existing flue and the potential odorous emissions and the distance to the sensitive receptor.

2.2.1. Guidance on Control of Odours from Kitchens

The Department for Environment Food and Rural Affairs (DEFRA) originally published guidance¹ (now withdrawn) on the control of odours from kitchens. That guidance has been subsequently updated by Control of Odour and Noise from Commercial Kitchen Exhaust Systems 2022 EMAQ+ 2nd Edition².

Although the guidance is not statutory, it provides very useful information on best practice techniques for the minimisation of odour and noise nuisance from kitchen exhaust systems. This source of guidance and ACCON's own experience form the basis of the assessment to determine whether nearby occupiers of existing residential properties (located within a minimum distance of 200m in any direction) would consider that odour emanating from the kitchen extract flue is

¹ Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems. Report prepared by Netcen on behalf of Department for Environment, Food and Rural Affairs, January 2005

² Control of Odour and Noise from Commercial Kitchen Exhaust Systems prepared by EMAQ+ (May 2022)

acceptable or not or whether it would result in a loss of amenity to those occupiers of residential property.

2.2.2. General Principles in Controlling Odour

The guidance is generally used for premises where food is cooked for patrons on or off the premises and where a kitchen is used to prepare and cook food. In these instances, a kitchen canopy extract system, are invariably present.

The main purpose of a kitchen canopy is to extract excess heat, steam, fats, smoke and odour arising from cooking processes. Removal of these unwelcome by-products of kitchen activity helps to achieve a reasonably comfortable and safe working environment, protect the working environment, as well as preventing the spread of the products from the kitchen area to other parts of the building.

Odours from cooking are contained both within the solid, liquid and gaseous material which is extracted by the kitchen canopy, and these different phases generally require different abatement techniques to reduce levels of odour to those levels which are acceptable to those in the vicinity. The extent to which any odour mitigation is required is dependent on the type of foods being prepared and cooked.

Commonly, the kitchen extract canopy will contain the first line of odour control through the incorporation of coarse grease filters, which take out the largest grease particles from the extracted air stream. Such coarse grease filters tend to be a common feature of almost all kitchen canopy systems.

The type and levels of odour control required downstream of the canopy is very much dependent on a number of factors. The principal ones are:

- **Type of food prepared.** This is probably the most dominant factor as the type of food, and particularly any spices used, dictates the chemical constituents present in the exhaust air;
- **Size of the cooking facility.** The number of covers the facility is designed to handle affects the intensity of odour in the exhausted air, and the air volume throughput the system must be designed to achieve; and
- **Types of cooking appliances used.** This dictates the level of fat, water droplets and temperature within the ventilation air.

The guidance includes two **Tables** which classify the odour and grease content of extract air according to the general cooking type and equipment used. These are reproduced in **Appendix 3 (Table 1 and Table 2)**. The information, in **Appendix 4**, has been used in this report to carry out the odour risk assessment in respect of the consented change of use development.

2.3. Odour Impact Assessment

Based on previous odour assessments which ACCON has provided for Greggs, between 2018 and 2021, ACCON were provided with the standard odour controls applied to a standard Greggs shop

and were able to determine the extent to which odour, such as to constitute a nuisance or a loss of amenity, is likely to occur.

Sniff tests were previously carried out at two existing Greggs shops (Reading and Bracknell) by ACCON personnel who have had their odour acuity tested and both of them tested within the prescribed range for 'sniff testing' assessments.

The potential source of odour at both shops was due to the following cooking methods:

- Final baking / cooking of bread baguettes, pasties, sausage rolls and sausages in standard convection ovens.
- The cooking of bacon in standard convection ovens during the morning breakfast period.
- The warming of sausages, bacon and omelettes in gastronome pots on hot plates during the morning breakfast period.
- The rapid warming up of sandwiches, baguettes and wraps in turbo ovens.
- Preparation of coffees using commercial coffee machines.
- No frying or open grilling is undertaken in the shops.

2.4. Risk Assessment

The guidance identified at **Section 2.3.1** provides a means of risk assessing the impact of any catering establishment and consented and existing uses. The key elements of the method are reproduced in **Appendix 4**. The method relies on scoring the proposal on four different aspects:

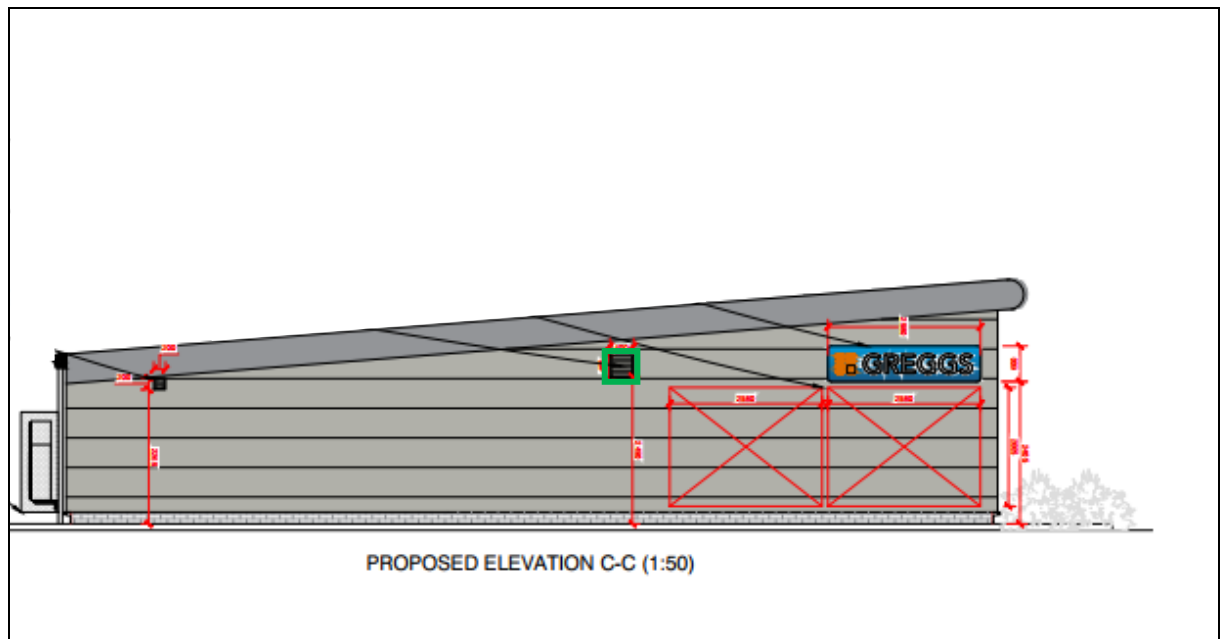
- **Dispersion** – where the extract vents to atmosphere are in relation to the building to which the vent is attached;
- **Proximity of receptors** – the location of the nearest residents;
- **The kitchen size** – number of covers, i.e. level of activity; and
- **Cooking type** – based on grease and odour loading.

The level of odour which is created by a premises will depend on the size of kitchen and type of cooking. These can be determined using categories which have been set out in the guidance and are replicated in **Appendix 3**.

The scores for each aspect are summed to derive an overall significance score, an impact risk, and a statement about the odour control requirement.

The proposed extract system at the proposed Greggs unit at Bell Lane will be at the side of the proposed shop on the north facade. The extract will be from a grille located in the area identified in **green** on **Figures 2.1**. The proposed main extract ducting grille would be located on the north façade at ground floor level, facing towards an existing car park. The closest residential properties at Back Street are located approximately 56m to the southeast of the proposed grille. The grille will be installed at the ground floor level, approximately 0.8m below the eaves of the roof.

Figure 2.1: Plan of the South Elevation



The level of odour which is created by a premises will depend on the size of kitchen and type of cooking. These can be determined using categories which have been set out in “Control of Odour and Noise from Commercial Kitchen Exhaust Systems” (Ricardo EMAQ+, May 2022) and are replicated in **Appendix 3**

The initial risk assessment is provided in **Table 2.1**. The results of the assessment are potentially a **High Risk**.

Table 2.1: Odour Risk Assessment

	Descriptor	Score	Impact Risk	Odour Control Requirement
Dispersion	Very Poor	15*	High Risk	High level of odour control required
Proximity of Receptors	Medium	5		
Size of kitchen/food cooking area	Medium	3		
Cooking Type (Odour & grease loading)	Low	1**		
TOTAL		24		

*The proposed vent discharges below the eaves and is located on the north facade and will have a minimum discharge velocity of 12.8m/s, which will result in a very poor level of dispersion due to its location.

**Final cooking of frozen part cooked goods using standard convection ovens.

2.5. The Odour Control Scheme

Based on the information provided and identified in **Appendix 2**, the proposed Greggs shop will utilise:

- 315mm diameter ductwork;
- ELTA Mixed Flow Fan, SEL355/2-1AC (Single Phase);
- Longar, Type 4 GLV 44444445 Galvanised Mesh Filter to be cleaned at least 3 times a year;
- Longar, Type 21 F67MM500 C-Cell Card Cased Filter to be checked 3 times a year and replaced if necessary; and
- Longar, Type 8 GLC Custom, Galv LGR201 Activated Carbon Filters to be replaced only if odour increases.

These systems will provide a high level of odour control by dispersion and arrestment for the type of cooking which will be undertaken in a typical Greggs shop and will minimise the potential for complaints.

From the information provided in the data sheets for the fan, a minimum exit velocity for the extract grille will be approximately 12.8m/s.

It should be noted that it is important that these abatement systems should be regularly cleaned and maintained in order to ensure they work at their optimum capacity and to reduce any likelihood of nuisance complaints from nearby residential receptors.

3. RECOMMENDATIONS

This report has reviewed the available guidance on cooking odours and its control. The risk assessment method from the guidance has been used to classify the potential odour impact from the proposed Greggs Unit at Bury UA, Bell Lane, BL9 6BB.

The result is that the proposed extract system without mitigation would represent a potentially 'high' risk of impact if no odour control was implemented in the extraction system. However, a high level of odour mitigation is proposed as identified in **Section 2.5**, such that a good level of odour control should be achieved which will ensure that complaints from occupiers of residential properties in respect of odour do not occur.

4. CONCLUSIONS

With respect to odour, it has been identified that with the currently proposed mitigation in the form of the extract system and maintenance schedule, included for this Greggs shop, with the proposed level of ventilation and odour control, odour will be low risk, which will not result in a nuisance at the nearest residential properties. Therefore, compliance with the recommended planning condition has been achieved.

Appendix 1

Site Location Plan

Appendix 1.1: Site Location Plan



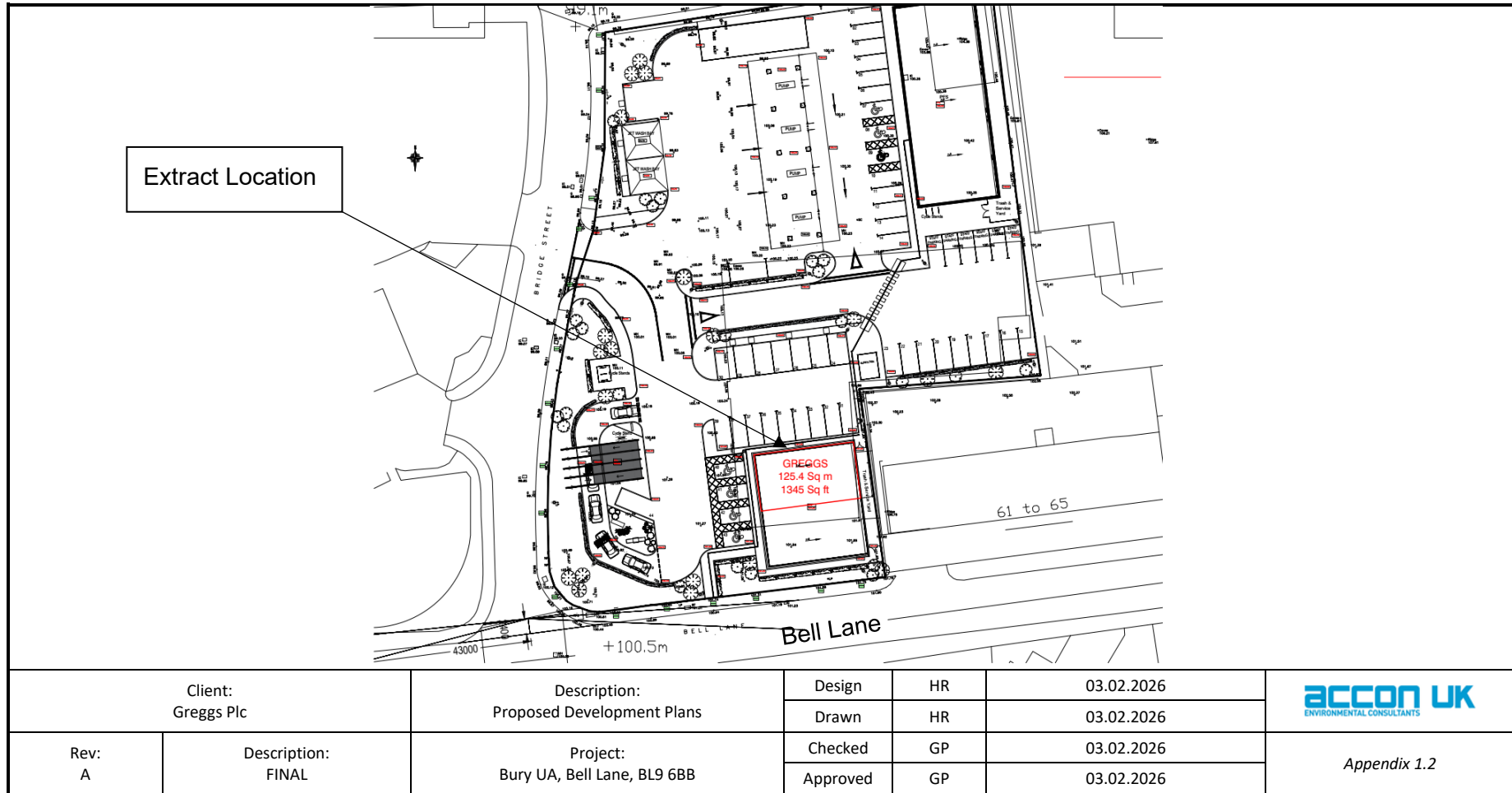
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Appendix 1.2: Proposed Development Plans



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Brighton Office Tel: 01273 573 814

Appendix 2

Odour Control Specification

MULTIFLOW SEL

Mixed Flow Fan

>> **Select** models available for next day delivery

ELTA



MULTIFLOW SEL

Product Overview

- 9 standard sizes from 250mm to 710mm
- Air volume flow rates up to 5.67 m³/s (AC)
- Static pressures up to 1290 Pa (AC) / 1400 Pa (EC)
- Suitable for operating temperatures up to +80°C
- Extensive stock range available
- Available in **AC** and **EC**



The Multiflow SEL is a duct mounted mixed flow fan incorporating state of the art impeller and guide vane design to provide very high performance and efficiency.

Intelligent Design

3D stator guide vanes are used to recover dynamic pressure loss which results in turbulent pressure being turned into useful pressure. This is coupled with optimum tip clearance between the impeller and case to maximise flow rate creating improved efficiencies.

Easy Installation

Fans are supplied with an integral IP44 terminal box. An integral mounting bracket allows quick installation.

Space Saving

Outstanding design allows for smaller diameter units to be utilised whilst still achieving the same required airflow. The range is perfect for projects where space is at a premium through the use of smaller ducting, reducing overall system costs.

Efficient Performance

The high efficiency diagonal mixed flow impeller delivers maximum efficiency and operational performance offering a significant reduction in the running costs against a comparable centrifugal fan.

Weather Resistance

Weatherproofed to IPX4.

Warranty

Each SEL has a 12 month warranty.

Construction

Manufactured from all weather galvanised steel, heat resistant plastic or seawater resistant aluminium (sizes over 400mm).

Motor

AC induction motor is suitable for speed control via transformer. Each motor has integral thermal overload protection.

Impeller

The innovative mixed flow impeller provides lower noise levels than can be achieved with comparative centrifugal fans.

Typical Applications

- Airport Terminals
- Changing Rooms
- Commercial Kitchens
- Factories
- Gymnasiums
- Hotels
- Sports Centres
- Squash Courts
- Warehousing and Stores

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Product Coding

Code	Reference
SEL	Product Range
250	Diameter (250/315/355...)
/	
2	Number of Poles (2/4/6)
-	
1	Voltage Supply (Single Phase / Three Phase)
AC	Motor Type (AC/EC)
A - Z	Additional Coding (A - Z) Product Variants
e.g.	SEL250 / 2-1AC

MULTIFLOW SEL

Performance, SFP & Electrical Data



Single Phase 220V to 240V / 50Hz

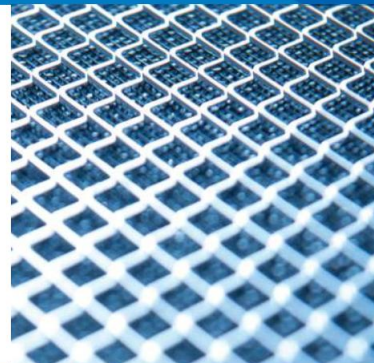
Product Code	Speed r/min	Airflow SFP	Airflow m³/s @static Pressure Pa												At Best Efficiency Point			Electrical Data		dBA @ 3m	
			0	25	50	75	100	150	200	250	300	350	400	500	Overall Eff %	FMEG N	Input kW	Peak Amps			
SEL250/2-1AC	2684	m³/s	0.453	0.442	0.431	0.419	0.407	0.380	0.350	0.313	0.108	0.064	0.031	-	46.9	65.7	0.162	0.70	Inlet	51	
		W/(L/s)	0.33	0.34	0.35	0.37	0.38	0.42	0.47	0.52	1.14	2.07	4.48	-					Outlet	53	
	2435	m³/s	0.402	0.388	0.370	0.350	0.329	0.290	0.245	0.109	0.054	-	-	-	40.9		0.114	0.80	Inlet	50	
		W/(L/s)	0.31	0.31	0.33	0.36	0.40	0.46	0.52	0.88	1.98	-	-	-					Outlet	53	
	2100	m³/s	0.317	0.300	0.259	0.231	0.211	0.172	0.093	-	-	-	-	-	28.5		0.107	0.90	Inlet	40	
		W/(L/s)	0.33	0.33	0.40	0.46	0.50	0.57	0.90	-	-	-	-	-					Outlet	42	
	1490	m³/s	0.197	0.166	0.128	0.105	0.074	-	-	-	-	-	-	-	12.3		0.068	0.90	Inlet	31	
		W/(L/s)	0.35	0.41	0.53	0.63	0.88	-	-	-	-	-	-	-					Outlet	38	
SEL315/2B-1AC	2776	m³/s	0.975	0.963	0.951	0.938	0.924	0.894	0.862	0.828	0.791	0.750	0.703	0.230	52.7	66.2	0.515	2.40	Inlet	55	
		W/(L/s)	0.50	0.51	0.52	0.53	0.54	0.57	0.60	0.63	0.67	0.71	0.76	1.66					Outlet	61	
	2540	m³/s	0.892	0.875	0.857	0.838	0.819	0.778	0.735	0.691	0.642	0.582	0.485	0.160	46.3		0.422	2.80	Inlet	52	
		W/(L/s)	0.48	0.49	0.51	0.52	0.54	0.58	0.63	0.68	0.74	0.79	0.86	2.18					Outlet	56	
	2295	m³/s	0.765	0.745	0.720	0.690	0.657	0.593	0.534	0.475	0.404	0.294	0.159	-	34.2		0.338	2.90	Inlet	48	
		W/(L/s)	0.51	0.51	0.53	0.56	0.60	0.69	0.77	0.83	0.90	1.07	1.96	-					Outlet	52	
	1760	m³/s	0.534	0.501	0.453	0.403	0.363	0.298	0.233	0.011	-	-	-	-	17.7		0.264	2.90	Inlet	40	
		W/(L/s)	0.55	0.57	0.65	0.74	0.82	0.95	1.13	24.88	-	-	-	-					Outlet	48	
SEL315/2A-1AC	2819	m³/s	0.654	0.644	0.633	0.621	0.608	0.579	0.545	0.506	0.459	0.388	0.150	0.067	50.8	67.4	0.263	1.20	Inlet	54	
		W/(L/s)	0.39	0.40	0.40	0.42	0.43	0.46	0.50	0.55	0.60	0.66	1.36	4.03					Outlet	58	
	2640	m³/s	0.609	0.597	0.583	0.569	0.552	0.516	0.474	0.425	0.354	0.161	0.100	-	47.7		0.219	1.30	Inlet	52	
		W/(L/s)	0.36	0.37	0.38	0.40	0.42	0.46	0.51	0.56	0.63	1.07	1.80	-					Outlet	56	
	2425	m³/s	0.541	0.523	0.502	0.476	0.448	0.393	0.335	0.260	0.151	0.075	0.001	-	36.9		0.173	1.50	Inlet	33	
		W/(L/s)	0.38	0.39	0.41	0.44	0.47	0.54	0.61	0.68	1.03	2.30	130.61	-					Outlet	49	
	1895	m³/s	0.387	0.355	0.315	0.272	0.236	0.177	0.102	-	-	-	-	-	19.7		0.134	1.40	Inlet	30	
		W/(L/s)	0.39	0.42	0.48	0.55	0.61	0.77	1.32	-	-	-	-	-					Outlet	31	
SEL355/2-1AC	2776	m³/s	1.372	1.358	1.344	1.330	1.315	1.283	1.250	1.215	1.177	1.137	1.093	0.988	50.5	61.2	0.955	4.30	Inlet	59	
		W/(L/s)	0.64	0.65	0.66	0.67	0.68	0.70	0.73	0.77	0.81	0.85	0.89	0.99					Outlet	63	
	2530	m³/s	1.253	1.233	1.213	1.192	1.171	1.129	1.085	1.040	0.991	0.939	0.877	0.636	45.5		0.765	4.80	Inlet	56	
		W/(L/s)	0.59	0.60	0.61	0.63	0.64	0.68	0.72	0.77	0.82	0.88	0.94	1.12					Outlet	60	
	2295	m³/s	1.119	1.093	1.063	1.032	0.999	0.932	0.865	0.797	0.724	0.634	0.493	0.211	34.5		0.613	5.10	Inlet	59	
		W/(L/s)	0.58	0.59	0.61	0.63	0.66	0.73	0.81	0.88	0.96	1.04	1.17	2.51					Outlet	63	
	1825	m³/s	0.827	0.790	0.750	0.704	0.652	0.544	0.448	0.362	0.267	0.011	-	-	20.2		0.446	4.90	Inlet	44	
		W/(L/s)	0.59	0.61	0.64	0.69	0.76	0.91	1.05	1.24	1.61	41.54	-	-					Outlet	49	

Data provided is at standard air density of 1.2 kg/m³.
Data in accordance with ErP 327/2011 of the European Parliament. Measurement category used to determine energy efficiency: A.
Peak Amps @ 230V / 1PH / 50Hz.
The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

Elta-UK Limited has a policy of continuous product development and improvement and therefore reserves the right to supply products which may differ from those illustrated and described in this publication.
Confirmation of dimensions and data will be supplied on request.

5

LONGAR® Type 4 Mesh Filter



LONGAR® TYPE 4 FEATURES:

- The LONGAR® Type 4 Mesh filter is manufactured using a patented expanded mesh, this offers a unique design based on many years of R&D. This results in a mesh that delivers greater air or grease arrestance, integral strength and low pressure loss.
- Comes with a safety edge channel to offer greater strength and safety over conventional products available on the market place.
- Using an Expanded metal multi-layer pad we are able to offer a panel with greater rigidity and importantly the pad cannot migrate particles, which can be found in 'knit mesh' filters, these types of panels can be hazardous where strands can break away from the filter.
- Due to the nature of the material that we use, its integral strength means when it comes to cleaning it will stand up well, and outlast panels of lesser constructions.
- Tested to Eurovent 4/5.
- Handles and drain holes are available.
- Available in Galvanised Steel, Stainless Steel and Aluminium.

APPLICATIONS

- Primary air filtration G2/G3
- Kitchens
- Cooker hoods
- All types of grease extraction
- General heating and ventilation pre-filtration

LONGAR® TYPE 4 MESH FILTER

The LONGAR® Type 4 Mesh filter is the result of years of experience in the manufacture and development of filters for the HEVAC world. With over 40 years of manufacturing experience the products brought to the market place today are clearly world class in price and product.

The LONGAR® Type 4 is a superior grease filter, available in a large selection of sizes and materials options.

Our Mesh filters are of robust construction and are used for a variety of applications, grease and air or dust collection applications, coalescer and spark arrestance, ideal as a prefilter for large particle contaminants and widely used in high air volume applications.

CONSTRUCTION DETAILS / MATERIAL SPECIFICATION

Media: Expanded metal patented design to aid filtration, available in stainless steel, galvanised steel, and aluminium.

Frame: U shaped section supplied with safety edge, available in stainless steel, galvanised steel and aluminium.

Filter thickness: Filter panels are available in actual thicknesses of: 8,10,12,20,25,40,45,50 and 95mm. Other sizes available on request.

Support mesh: Our own Q14 mesh is used in the grease filter as the support mesh.

Handles and drain holes: Folding handles and drain holes can be supplied as an option when required. They are fitted by default to the short dimension, unless otherwise stated by the customer at the time of ordering.

Housings: We can supply front withdrawal housings where required, see separate data sheet.

For technical specifications, part numbers and ordering information, please see overleaf.

Longar Industries Limited, Unit 25, Glenmore Business Park, Colebrook Way Weyhill Road, Andover, Hampshire SP10 3GZ United Kingdom
T +44 (0)1264 332 993 F +44 (0)1264 332 994 E info@longarind.com W www.longarind.com

LONGAR® Type 4 Mesh Filter

FITTING INSTRUCTIONS

- Fit products, handles in direction of air in.
- Product vertical in air stream.
- Drain holes lower edge to exit into drip tray if installed.

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.

TECHNICAL SPECIFICATIONS

Tested to Eurovent 4/5
Fire rating = UL Class 2
100% relative humidity

Longar specifies the Grease Filter as height x width x thickness. The handles are fixed to the height and drain holes punched on the width.
Please ensure correct orientation is given when ordering.

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)			
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight
ALIGLV49524145	241 x 495 x 45mm	254 x 508 x 50mm	1.58kgs
	9.49 x 19.49 x 1.77"	10 x 20 x 2"	3.48lbs
ALIGLV39439445	394 x 394 x 45mm	406 x 406 x 50mm	1.90kgs
	15.51 x 15.51 x 1.77"	16 x 16 x 2"	4.18lbs
ALIGLV49539445	394 x 495 x 45mm	406 x 508 x 50mm	2.39kgs
	15.51 x 19.49 x 1.77"	16 x 20 x 2"	5.26lbs
ALIGLV44444445	444 x 444 x 45mm	457 x 457 x 50mm	2.43kgs
	17.48 x 17.48 x 1.77"	18 x 18 x 2"	5.35lbs
ALIGLV49549545	495 x 495 x 45mm	508 x 508 x 50mm	2.92kgs
	19.49 x 19.49 x 1.77"	20 x 20 x 2"	6.42lbs
ALIGLV59759745	597 x 597 x 45mm	609 x 609 x 50mm	3.90kgs
	23.50 x 23.50 x 1.77"	24 x 24 x 2"	8.58lbs
FINAL RECOMMENDED PRESSURE DROP: 200 PASCALS			

Pressure drop and airflow information available on request.



LONGAR INDUSTRIES

FILTERS AND FABRICATIONS FOR A CLEANER ENVIRONMENT

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LONGAR™ TYPE 2I

Compact Mini Pleat Panel Filter



LONGAR™ TYPE 2I FEATURES

- M6 to F9 grades EN779:2012.
- Choice of card case /galvanised steel/stainless steel.
- Strong, robust construction.
- Extended surface area means increase airflow.
- High dust holding capacity.
- Micro fine glass fibres.
- High compressive strength in the airflow direction

APPLICATIONS

- Pharmaceutical
- Hotels
- Offices
- Food Industry
- Data Centres
- Hospitals

LONGAR™ TYPE 2I COMPACT CELL PANEL FILTER

Compact cell filters are used in a variety of HEVAC applications where a medium to high level of filtration as well as a good dust holding capacity. They offer a stronger alternative to Bag Filters and are ideally suited to applications where depth is limited and airflows are high.

FITTING INSTRUCTIONS

- When fitting products observe the direction of airflow indicator.

HANDLING

- Handle with care when packing.
- Store in a dry and frost protected area.

MAINTENANCE

- All Maintenance and replacement schedules will be set by the original equipment installer.
- When handling any components suitable PPE should be used – gloves, eye protection and access equipment should be used where required.
- Filters should not be cleaned but replaced when required in accordance with maintenance schedule set by the installation contractor.

PACKAGING

All Filters are packaged in double wall boxes, glued closed for protection whilst in transit against contamination.

CONSTRUCTION/MATERIAL SPECIFICATIONS

Available with either a metal frame or card case. The pleated media is made from water resistant micro-fibre media pleated and separated by thermos plastic separators, that are fire retardant to class I FR and pleated to 45 Pleats per foot. Optional foam gasket seal available.

- Temperature resistant up to 80°C.
- Meets DIN53438-3 fire class IFR.
- Humidity resistant up to 100% R.H.
- Metal or card frame availability.
- Tested according to EN779:2012.

LONGAR™ TYPE 2I

Compact Mini Pleat Panel Filter

FILTER PERFORMANCE

FILTER SIZE	Pressure Drop (Pascals) to Airflow (M ³ /hour)											
	Airflow (M ³ /hour)			Pressure Drop (Pascals) to Airflow (M ³ /hour)								
	Low	Medium	High	F6 Grade 65% MERV 11			F7 Grade 85% MERV 13			F9 Grade 95% MERV 15		
				Low	Medium	High	Low	Medium	High	Low	Medium	High
592x592x96mm	1700	2550	3400	36	58	89	46	76	114	71	119	173
592x292x96mm	850	1275	1700	36	58	89	46	76	114	71	119	173
592x490x96mm	1400	2100	2800	36	58	89	46	76	114	71	119	173
592x1200x96mm	3400	5100	6800	36	58	89	46	76	114	71	119	173
592x592x48mm	1700	2550	3400	38	66	109	64	114	183	86	155	236
592x292x48mm	850	1275	1700	38	66	109	64	114	183	86	155	236
592x490x48mm	1400	2100	2800	38	66	109	64	114	183	86	155	236
592x1200x48mm	3400	5100	6800	38	66	109	64	114	183	86	155	236

Recommended final resistance: 375 Pa

Maximum pressure drop: 450 Pa



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LONGAR® Type 8 Activated Carbon Filters



LONGAR® TYPE 8 FEATURES:

- High grade carbon / High carbon content / Low pressure loss
- Robust modular construction
- Carbon Unit or panel format / Standard and Custom sizes available
- CNC manufactured / Precision products every time

APPLICATIONS

- Reduction of Cooking Odours
- Removal of Kerosene Exhaust Fumes
- General Odour Reduction
- Neutralisation of Ammonia and its Derivatives
- Removal of Formaldehyde
- Removal of Airborne Pollutants and Contaminants
- Removal of Acid Gases (please enquire as to specific contaminant)

LONGAR® TYPE 8 ACTIVATED CARBON FILTERS

Activated carbon has for many years been used to remove airborne noxious fumes and gases. Its origins date back to the First World War, when gas masks were first filled with Activated carbon to remove chlorine gas. Today Longar produces a wide range of carbon filters to deal with a variety of air pollution scenarios.

There are many situations where carbon filtration is used to eliminate toxic or offensive odours, some of these are sewage works, hospitals, slaughterhouses, restaurant kitchens, airports, toilets, wash rooms, laboratories, and office blocks.

PRE FILTRATION

Carbon filters are designed to remove fumes and odours, they are not suitable for removing dust and fine particles. If left unprotected, the life of the carbon product is severely reduced. To protect the filters use the correct pre filtration. If you are unsure please enquire for further information.

LONGAR® TYPE 8 ACTIVATED CARBON PANELS

The Activated carbon panel are sealed into a galvanised steel frame; a scrim is then added to protect the carbon surface from dust contamination. Sealing the carbon panel stops any air by-pass; our panels are manufactured using CNC technology to ensure precision manufacture with exact tolerances.

Our panels are the strongest on the market place with a wide range of standard sizes available, custom sizes are also available on request.

LONGAR® TYPE 8 ACTIVATED CARBON UNITS (ACU)

For a modular approach to fume removal the ACU is the ideal solution. The ACU unit is manufactured from a number of carbon panels held in place by a CNC made corrosion proof metal casing. The carbon panels inside the units are 25mm thick, sealed into the frames using polymer which eliminates the possibility of any air by-pass around the carbon.

LONGAR® TYPE 8 CYLINDRICAL FILTER

These are constructed from perforated galvanised steel then formed into cylindrical cartridges containing high grade or impregnated carbon. The cylinders have a bayonette fit into the filter mounting plate.

All cylinders have a unique feature of having the option to replace any spent carbon and then refill with new replenished carbon.

For technical specifications, part numbers and ordering information, please see overleaf.

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LONGAR® Type 8 Activated Carbon Filters

FITTING INSTRUCTIONS

- Fit products in accordance with installation contractor's specifications.
Observe direction of airflow.

HANDLING

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

MAINTENANCE

- Carbon filters cannot be cleaned upon reaching the end of their service life. They must be replaced.
- All maintenance and replacement schedules will be set by the original equipment installer. Please refer to this for more information.
- When handling any components suitable PPE should be used – gloves, eye protection and access equipment.
- Carbon filters may be recycled.

PACKAGING

All units are packaged in double wall boxes, stapled closed for protection whilst in transit against contamination.

TECHNICAL SPECIFICATIONS

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)					
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Airflow M³/SEC @0.12 Contact	Pressure Loss Pascals
CARBONCUBE242424	597 x 597 x 597mm	609 x 609 x 609mm	60.00kgs	1.00	97
	23.50 x 23.50 x 23.50"	24 x 24 x 24"	132.00lbs		
CARBONCUBE242418	597 x 597 x 450mm	609 x 609 x 457mm	44.00kgs	0.75	97
	23.50 x 23.50 x 17.72"	24 x 24 x 18"	96.80lbs		
CARBONCUBE241824	597 x 450 x 597mm	609 x 457 x 609mm	46kgs	0.75	97
	23.50 x 17.72 x 23.50"	24 x 18 x 24"	101.20lbs		
CARBONCUBE182424	450 x 597 x 597mm	457 x 609 x 609mm	46kgs	0.75	97
	17.72 x 23.50 x 23.50"	18 x 24 x 24"	101.20lbs		
CARBONCUBE242416	597 x 597 x 395mm	609 x 609 x 406mm	40.00kgs	0.67	97
	23.50 x 23.50 x 15.55"	24 x 24 x 16"	88.00lbs		
CARBONCUBE242412	597 x 597 x 292mm	609 x 609 x 305mm	33.00kgs	0.50	97
	23.50 x 23.50 x 11.50"	24 x 24 x 12"	72.60lbs		
CARBONCUBE241224	597 x 297 x 597mm	609 x 304 x 609mm	32.00kgs	0.50	97
	23.50 x 11.69 x 23.50"	24 x 12 x 24"	70.40lbs		
CARBONCUBE24824	597 x 197 x 597mm	609 x 203 x 609mm	19.00kgs	0.33	97
	23.50 x 7.76 x 23.50"	24 x 8 x 24"	41.80lbs		
CARBONCUBE202018	495 x 495 x 445mm	508 x 508 x 457mm	36kgs	0.52	97
	19.49 x 19.49 x 17.52"	20 x 20 x 18"	79.20lbs		
CARBONCUBE181818	450 x 450 x 450mm	457 x 457 x 457mm	28.00kgs	0.42	97
	17.72 x 17.72 x 17.72"	18 x 18 x 18"	61.60lbs		
FINAL RECOMMENDED PRESSURE DROP: 450 PASCALS					

Pressure drop and airflow information available on request.



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Appendix 3

Classification of Odour and Grease Content of Extract Air from Commercial Kitchens

Table 1: Odour and Grease Characteristics Arising from a Range of Commercial Kitchen

Catering Establishment	Description	Odour Potential ¹				Grease Content				Smoke Content			
		Low	Moderate	High	Very High	Low	Moderate	High	Very high	Low	Moderate	High	Very high
Tea shop		□				□				□			
Café serving all day breakfasts	Oil, cooking meat		□					□			□		
Pizza restaurant gas or electric cooking	Herb		□				□			□			
Pizza Restaurant wood fired cooking ²	Herbs / garlic / wood			□			□					□	
Steakhouses	Fat		□				□					□	
French	Herbs/garlic		□				□				□		
Italian	Herbs/garlic		□				□					□	
Most pubs	Fat		□				□				□		
Chinese	Ginger, spices, oil		□					□			□		
Japanese	Spices, oil		□					□			□		
Cantonese	Spices, oil		□					□			□		
Indian	Spices, oil			□				□			□		
Thai	Spices, oil			□				□				□	
Turkish Restaurant	Fat, cooking meat, spices			□				□					□
Vietnamese	Spices, oil			□				□			□		
Kebab houses	Fat, cooking meat			□				□					□
Fried chicken	Oil, cooking meat				□				□		□		
Pubs (large turnover of deep-fried food)	Oil, cooking meat				□				□		□		
Fish and chips	Oil,				□				□	□			
Fast food/burger	Oil, cooking meat				□				□		□		
Casual Dining – Burgers/ Chicken	Fat, cooking meat, spices			□				□					□

Note (1) the odour potential is made up of the odour concentration and a measure of its annoyance potential

(2) Solid fuel ovens that are Defra approved appliances "exempt" for use in a smoke control area under the Clean Air Act 1993 should have a lower smoke content when operated with appropriate fuels and in accordance with the instructions of use

Table 2: Moisture and grease/smoke characteristics of various cooking appliances

Cooking Appliance	Particulate (Grease/Smoke) Loading			Moisture Content		
	Light	Medium	Heavy	Light	Medium	Heavy
Cooking pots	☐					☐
Bain Maries	☐					☐
Steam ovens	☐					☐
Pizza ovens		☐			☐	
Bratt pans		☐				☐
Oven ranges		☐			☐	
Flat top grills		☐			☐	
Chip fryers		☐			☐	
Salamanders		☐			☐	
Charcoal			☐		☐	
Gas fired open grills			☐		☐	
Char broilers			☐		☐	
Chinese wok ranges			☐			☐
Smokers			☐		☐	
Wood Fired Pizza Ovens ¹			☐	☐		

Note: (1) Solid fuel ovens that are Defra approved appliances "exempt" for use in a smoke control area under the Clean Air Act 1993 should have a lower smoke content when operated with appropriate fuels and in accordance with the instructions of use

Appendix 4

Ricardo EMAQ+ Odour Impact Risk Assessment Methodology

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 here are consistent with the performance requirements listed in this report.

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

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

Criteria	Descriptor	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 is less than 20 m 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 restaurant
	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 and chips. <i>Turkish, Middle Eastern or any premises cooking with solid fuel.</i>
	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 ¹

¹ A planner may take a pragmatic view when assessing whether certain low risk kitchens require any odour abatement to be fitted. In reaching this decision the Planner may consider the nature of the food being cooked and/or the size of the kitchen and/or its location.

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