

Proposal for New Extraction System

Unit 3 Eastern Avenue
Gloucester, GL4 3DP

The following guidance outlines effective design features. You should assess existing and planned systems to make sure they meet these ventilation objectives.



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Made 2 Shine LTD
Unit 21 Poplar Road Business Centre
Cleethorpes DN35 8BL

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www.made2shineuk.com

What the law says

The Workplace (Health, Safety and Welfare) Regulations 1992

These Regulations require that employers provide effective and suitable ventilation in every enclosed workplace. This includes kitchens, which need ventilation to create a safe and comfortable working environment. Catering and cooking can produce significant amounts of fumes and vapours, as well as large amounts of heat. Mechanical extraction, via a canopy hood installed over the cooking appliances, can remove these fumes and vapour and discharge them to a safe location.

The Health and Safety at Work etc Act 1974

The Act places duties on anyone in control of premises who makes them available as a place of work for others to take reasonable measures to ensure, so far as reasonably practicable, that the premises, plant and equipment are safe and without risks to health.

Cooling air

Balancing incoming cool air and extracted hot air effectively should help prevent the kitchen becoming too hot. For mechanical make-up air systems, direct the cooler air towards hot work positions. Otherwise, consider air conditioning or fixed fans that do not affect the efficiency of fume extraction. Local freestanding fans may cause air currents or turbulence, affecting the efficiency of fume extraction. They are not normally an effective way to provide make-up air. They may also introduce other hazards, such as tripping and electric shock hazards from the trailing cable.

Discharge

High-level discharge of extracted air is often needed to prevent nuisance to neighbouring properties. Avoid rain caps and other devices that impede upward vertical velocity. Never use devices that direct the discharge downward as they encourage down draught and re-entry of fumes into the building. Fume discharge should also be away from wet cooling towers.

New ventilation systems

The caterer

The caterer will need to provide detailed information for the competent advisor, designer and installer, including the following information:

- Maximum demands likely to be placed on the ventilation (eg to cope with peaks of activity)
- Amount and type of kitchen equipment
- The menu
- Number of meals
- Number of staff

Advisors, suppliers and installers should be competent and have knowledge of industry practice and relevant health and safety guidance and legislation.

The caterer should consult with the safety or employee representatives in good time about any significant changes. Keeping records of design criteria, commissioning performance, maintenance requirements and of tests and inspections will enable maintenance, modification and testing against the original specification.

The building owner or manager

The owner or manager of the building may provide facilities such as equipment and ventilation. In these cases, they should follow the advice here. Providing adequate ventilation will require the owner to obtain information on probable kitchen usage from the caterer.

The designer/design team

The 'design team' means the various interested parties (owner, caterer, designer, supplier and installer). They need to discuss their respective information needs and what information each should supply.

The ventilation design engineer will need to take into account:

- the presence of gas appliances subject to the Gas Safety (Installation and Use) Regulations 1998 – in particular, the requirement for an adequate supply of air for combustion and flueing arrangements;
- kitchen usage information from the caterer;
- equipment information from the caterer or supplier, eg cleaning requirements, the amount of air required for complete combustion and the performance of the existing installation;
- the requirements or specifications for the air cleaning system, eg for grease removal at the canopy and also before final discharge outside;
- the limitations of the building, eg the available room may influence the sites and routes for air inlets or discharges;
- food hygiene requirements, eg identify a suitable source for clean make-up air; prevent pest entry; avoid grease accumulation and ensure easy cleaning of the system;
- heat control.

Assess the need for interlocking the ventilation power supply to the gas supply and take appropriate action. This decision should be based on a competent person's assessment of the risks associated with the use of the gas appliance. Further guidance for designers is available from industry-produced technical guidance, for example guidance from the Chartered Institution of Building Services Engineers (CIBSE) and the Building Engineering Services Association (BESA). See Further information.

Proposal for extraction system

The new extraction system will include (*1):

Commercial Kitchen Canopy:

Our canopies are designed for small and medium size commercial kitchens.

All our instructions and recommendations are based on canopies being fitted with a maximum of 12 meters of duct work, and two 90 degree bends.



The canopies are manufactured from high quality stainless steel and contain a bank of baffle filters that are easily removed for cleaning. Will also include plenum grease trays and will have no sharp edges.

The canopy will be installed with fire proof insulation as regulation requirements.

Extractor fan:

56JM Flakt Woods CASED AXIAL

The fan performance which 1.11 m³/h @ free air.

The performance peaks at 0.55m³/h @ 350Pa.

Moderate level noise 83.1 dB(A)

Weight: 25kg



Silencers:

These attenuators or *'silencers' are suitable for temperatures up to 200°C and a maximum pressure of 1500 pascals.

Excellent sound absorbing properties.

Construction

Casing:

Galvanised mild steel (BS2989)

Inner Lining:

Perforated galvanised mild steel (BS2989).

Sound Absorbing Material:

Mineral fibre slabs faced with glass tissue.

Each reduces a fan noise level by 7-10dB (A)

Weight: 10,8kg/piece



Anti-vibration supports – Anti-Vibration Mounts KSE-45

Rubber anti vibration mounts are used in conjunction with fan mounting feet and flanges.

They absorb vibration and attenuate fan noise.

Weight: 0,13kg/piece



Mounting Foot

Mounting Foot, used to fit directly to the fan as part of a full Ancillary package. Can be used to mount the fan in the horizontal or vertical position.

Used in conjunction with Anti Vibration Mounts and Durodyne (flexible duct connector) reduce at minimum the vibration from extractor fan towards wall and duct system.

Weight: 1,2 kg/piece.



Flame Resistant Flexible Duct Connectors DuroDyne Duct Connector

All Duct installations for HVAC systems in Commercial, Industrial & Residential premises are attached to mechanical equipment containing a fan or blower which generate & transmit Vibrations, Noises & rattles in the entire metal duct work.



Design Features:

Duct connector consisting of a flame retardant fabric, secured to the galvanised sheet metal on either side by a double lock seam is inserted between the equipment/air duct & the ductwork to provide a wear resistant Airtight flexible connection to eliminate vibrations, noise & rattles.

Weight: 0,55 kg/piece.

Power jet cowl:

Zinc-plated mild steel

Jet cowls offer an advantage over standard round cowls in that expelled air is directed vertically rather than laterally - as is common with most roof terminations. This decreases the possibility that exhaust fumes present a nuisance to neighbouring buildings. Using a jet cowl often means a vertical duct can be shorter than it would otherwise need to be with a standard cowl.

Rainwater is caught in a dish within the cowl and is fed out through a drainage tube.

Weight: 13kg



**Grease filter box:
Filter Boxes FILB**

Includes EU3 filter element

The duct mounted filter box is manufactured from galvanised sheet steel and is fitted with two spigots, so to fit directly with spiral wound ducting.

A lift off door offers simple access for changing or maintaining the Panel Filter.

- *To fit standard spiral wound duct work
- *Removable lid complete with closed cell gasket
- *Can provide side or top access for air filter change
- *Alternative Air Filter Grades upon request.

Weight: 2.3kg (excluding filters)

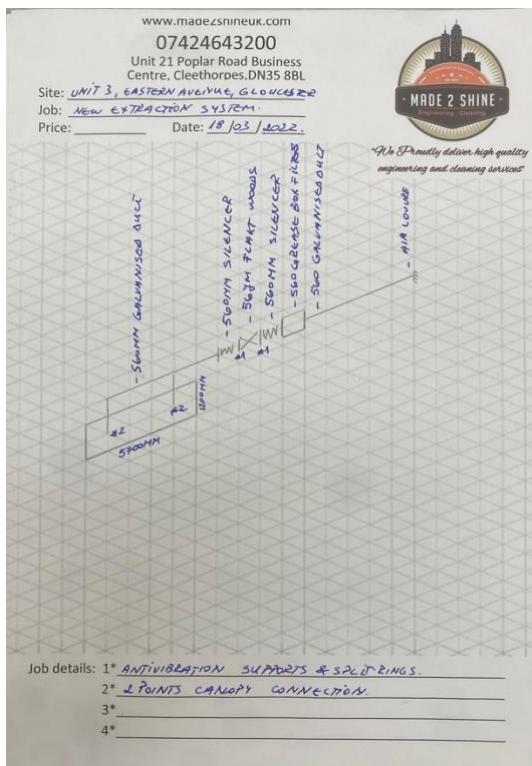


Speed controller:

The M2S SCR1.3 genuine range of SCR Electronic fan speed controllers. This range of fan speed controllers can be used in conjunction with Gas Interlock Systems and with any Fan / Motor which is single phase – 240 volts and fan speed controllable using either 2 or 3 wire control (+earth).



*2



*3

No vibration will be transmitted through the building due to antivibration supports and Durodine - splitrings.

The fan noise level will result in ± 62 dB at 1.5 meter from the fan and the air flow in the canopy plenum will result at minimum 1.3 m³/s.

*1 All the details above have an informational purpose, the fittings may be different as colour, format or size without changing the main usage or functionality.

*2*3 The drawings or blueprints have just an informational purpose and may not represent the actual building or place for which the proposal is intended. Will be used just as an example for a better understanding of our new extraction system proposal.

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PROPOSED: NORTH (REAR) ELEVATION

Unit 3, Northbrook Road, Eastern Avenue, Gloucester, GL4 3DP



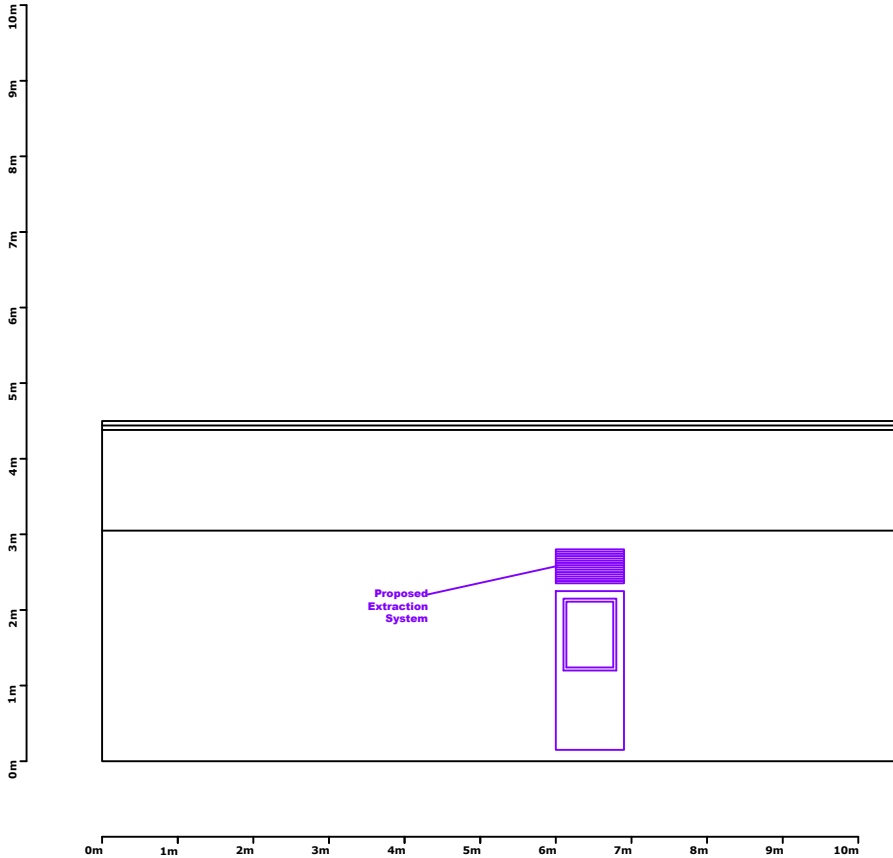
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The Maltings
Princes Street
Ipswich
Suffolk
IP1 1SB

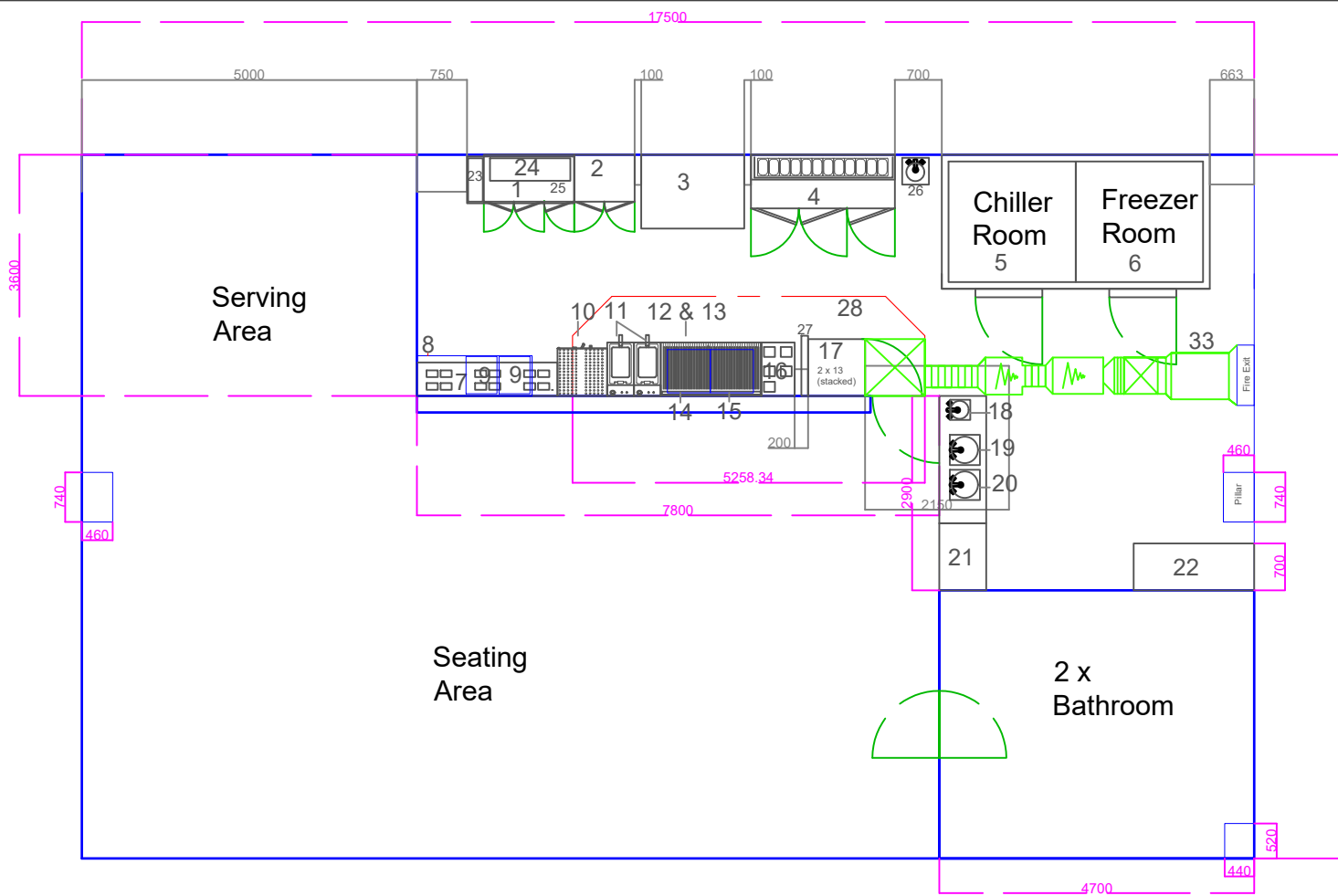
[Redacted]
w: planningdirect.co.uk

TITLE: Proposed: North (Rear) Elevation		
DATE: 28/03/22		
REF: 0898	DRAWING: 08	REVISION: 1
SCALE: 1:100	SHEET SIZE: A4	
DRAWN BY: SH	CHECKED BY: HW	
CONTACT:	[Redacted]	

CLIENT: THE LADZ
APPLICATION SUMMARY: Change of use from Takeaway (Sui Generis) to Restaurant (Class E)

NOTES:





THE Ladz, Gloucester
www.theladz.co.uk

CaterFix
SALES, REPAIR & SERVICE OF CATERING EQUIPMENT

Products			
Item	Qty	Kitchen Equipment Description	WDH (mm)
1	1	3 Door Chiller Counter Top	1350 x 900
2	1	2 Door Chiller Counter Top	900 x 900
3	1	Pizza Oven	1537 x 900
4	1	3 Door Pizza Prep Chiller	2150 x 900
5	1	Chiller Room	2m x 2m
6	1	Freezer Room	2m x 2m
7	1	Double Heated Gantry, 500mm to first shelf plus 400mm to second shelf, 8 x 300w lamps per shelf	2100 x 900
8	1	Work-top with shelves under, top shelf for microwave (19) and under shelf for storage	1720 x 600 x 1000
9	2	Samsung microwave	464 x 557
10	1	Chip Dumb	750 x 900
11	2	Twin Basket Fryer	800 x 900
12 & 13	2	Gas Grill on stand	1500 x 800
14 & 15 (Under)	2	2 x Atlasham draws with castors	642 x 657
16	1	Stainless Steel Table	400 x 800
17	2	6 Grid Rational Icombi on stand (2 x stacked)	850 x 850
18	1	Staff Hand Wash Basin with taps and and 400mm high splashback	300 x 300 with 400mm high splashback
19 & 20	2	Double Sink both with 400mm high splashback, one with set of taps and shelf under	45 x 450 x 300 bowl depth with 400 splashback
21	1	Stainless Steel table with 400mm high splashback and shelf under	1000 x 700
22	1	Chest Freezer	1800 x 700
23	1	Vertical Bun Toaster on stainless steel table	648 x 219
24	1	Prep Chiller on Stainless Steel table	1200 x 335
25	1	Worktop with void for 3 door chiller	1600 x 700 x 1000
26	1	Staff Hand Wash Basin with taps and 400mm high splashback	400 x 400 with 400mm high splashback
27	1	Divider for Rational	100 x 900
28	1	Canopy above Chip Dump, Fryers, Grill on stand and Rationals	TBD: 5258.34 x 1486
29	1	Robot Coupe CL50 (not shown on drawing)	350 x 320
30	2	Grease Pack (not shown on drawing)	N/A
31	3	Tissue Roll Holders (not shown on drawing)	N/A
32	1	Printer Shelf above item 8 (not shown on drawing)	N/A
33	1	Extraction Unit	

Client

The Ladz
Gloucester

Project

Main Kitchen

CAD Title

CFXLADZGLOU04

Date Drawn

17/03/2022

Drawn By

