



VENTILATION & EXTRACTION STATEMENT
UNIT 1-3 NORTH STREET ARCADE, HAVANT, HAMPSHIRE

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Application Site

Unit 1-3 North Street Arcade

Havant

Hampshire

PO9 1PX

Application Details:

CHANGE OF USE FROM TWO A1 UNITS AND ONE A2 TO AN A3 RESTAURANT

APP/14/01036

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1.0 INTRODUCTION

The planning application to which this Ventilation and Extraction Statement relates is for the change of use of the retail unit (No 1 -3) which has been recently formed within the alteration and conversion existing units at the North Street Arcade, Havant.

The statement looks to address the obvious concerns regarding the control of noise, odour and fumes from the premises into the environs and in particular with reference to the adjacent existing first floor dwellings.

Whilst it is appreciated that more comprehensive mechanical information will need to be confirmed when all the operational details have been established (subject to planning consent being granted) it is hoped that this statement will set out the key principles and show the commitment to provide adequate and suitable equipment to prevent possible nuisance.

2.0 KITCHEN VENTILATION/EXTRACTION

It is anticipated that the kitchen will be preparing fine cuisine with cooking methods probably including charcoal grill, griddle, oven etc.

The final cooking line has not yet been determined but the performance characteristics of the extract system will be in accordance with HVCA Standard DW172 and DEFRA Guidance on control of odour and noise for commercial kitchens.

The detailed design and installation of the ventilation system is to be undertaken by a suitably qualified specialist consultant and/or contractor familiar with the requirements of commercial kitchens. We have entered into discussion with Salix and attach their initial plans for information.

The system performance is to be such that the extract rate of air from the kitchen always results in there being a negative pressure created within the bar/restaurant and waiting areas.

Incoming fresh air is always to be sufficient to replace that displaced by extraction so that fumes and smells are evacuated through the specifically designed and controlled extraction system rather than via window and door openings.

Anti vibration mountings are to be utilised on the fixings of all plant and equipment to prevent possible transfer of structure borne sound to adjacent retail and residential properties.

A provisional route for the extract ducting is shown on the proposed Salix plan but this is subject to later confirmation.

Cooker Hood

An extraction canopy is to extend over the full length of the various cooking equipment and over-hanging the appliances by a minimum of 250mm. The dimensions of the requisite opening of the cooker hood will be determined when definitive catering equipment layouts are finalised. The canopy is to be fitted with gas interlock system as necessary, solenoid and air differential switches.

Ductwork

All kitchen extract ductwork is to be 2mm thick steel with continuously welded joints throughout and no flanges or bolts. All ductwork within the ceiling void and risers is to be insulated with 25mm aluminium foil faced mineral fibre fleece with a minimum density of 16Kg/m³ fixed to the ductwork with adhesive and taped with 50mm galvanised wire netting with joints sealed with adhesive tape as Gyplas DR16A or similar approved. It is not likely that ductwork will pass through floors or adjacent fire compartments and fire dampers therefore have not been considered.

It is anticipated that the mechanical extraction equipment will be “in-line” centrifugal fan (supplied by Helios or similar) within the ductwork and the whole fixed to the structure via suitable anti-vibration mountings on a big foot system.

Extract ducts are to be sized in accordance with the velocity reduction method (9.2 m/s); all elbows are to have a radius equal to 1.5 times the duct width at its centre line. Suitably sized access doors are to be provided within the ductwork to ensure that internal cleaning can be effected throughout.

Filters

Primary and grease baffle filters are to be provided at the hood opening and an additional secondary grease baffle filter at the neck. A bag particle filter and odour

control counteractant is to be fitted between the secondary grease filter and the fan. Filters are to be cleaned and/or replaced in accordance with the manufacturers' recommendations. Carbon filters (supplied by Jasun Filtration PLC or similar) are to be incorporated into the extract ducting with a grade of carbon suitable to ensure enhanced elimination of cooking odours.

Flue

The proposed flue has been located in the position where a chimney breast already exists which provides the most suitable location for this to be distanced from the adjacent windows for visual and acoustic reasons. The flue is to be mounted on the existing gable wall running vertically to above eaves level to give a high level exit point above the nearby windows at first floor.

All fixings are to have anti-vibration mountings.

3.0 BAR/RESTAURANT AREA

Heating is to be provided to the bar/restaurant and server area using concealed ceiling air conditioning units, all subject to design by a suitably qualified installer.

The casual heat gain component will be calculated on the basis of a maximum occupancy of 60 persons, following completion of the lighting design scheme.

Fresh air is to be provided at a rate of 30m³/hour/person. It is anticipated that for premises of this size, natural ventilation will be sufficient in conjunction with the replacement air provision for the kitchen.

Supply air for the mechanical extract system is to be provided via openable windows/louvres/grilles to the front of the unit to encourage a through flow of air and a negative pressure across the café /restaurant area.

The heating system is to be controlled via suitably positioned room mounted thermostats.

4.0 ACCESSIBLE WC

The WC extract ductwork is to be entirely separate from the main kitchen and

bar/restaurant extract systems elsewhere within the premises. The system is to comply with the minimum standards set out in BS5720 (1979) Code of Practice for Mechanical Ventilation and current Building Regulations.

The WC exhaust outlet is to be positioned remote from the fresh air intakes for adjacent areas such as the kitchen and café /restaurant systems elsewhere within the premises and the system is to be suitably balanced to ensure that a negative pressure to the kitchen is maintained. A minimum of 20 air changes/hour is to be provided within the WC area.

The requisite extract fan will discharge to outside air via ducting routed at high level through the adjacent store as indicated on the ground floor plan.

5.0 SYSTEM PERFORMANCE SPECIFICATION

The volume of the kitchen including preparation and cooking areas is likely to be in the region of 25m³. The extraction velocity of the air leaving the ventilation system is to be a minimum of 9.2 m/s The time gases remain in the carbon filtration zone is to be between 0.3 and 0.6 seconds.

6.0 PASSIVE VENTILATION

It is envisaged that no mechanical ventilation will be necessary and natural fresh air replacement will be provided via the openings within the shop-front area to moderate internal conditions.

7.0 VISUAL IMPACT

Pending final design of the kitchen area and its associated equipment, it may be appropriate to compare the requirements of this unit with those of the adjacent Dominos Pizza outlet based in the adjacent unit.

Whilst the operation proposed for this unit is clearly larger in scale, it is recognised that additional filtration and cleaning will be necessary, but it is considered unlikely that any external ductwork would need to be any greater in size than that on Dominos Pizza.

Due to the proposed use and potential cooking aromas there is a need to ensure that fumes are extracted and discharged to outside air at high level where they can be

properly diluted and dispersed with minimal risk of nuisance to adjacent properties.

It is noted also that the adjacent residential units have been constructed with non-opening windows facing onto the internal North Street Arcade further mitigating the need for onerous measures.

Recognising the likely prominent position of this flue on approach to the site from the north, it is suggested that this could be concealed within a suitably designed enclosure to reduce the impact but at this stage this has not been addressed pending further dialogue with the Authority.

In the event that plant or equipment is required to be mounted on the flat roof then suitable screening will be considered, although at present it is not envisaged that this will be necessary.

8.0 NOISE SUPPRESSION

Recognising the potential for vibration from the extract fan and ductwork, it is proposed that suitable proprietary anti-vibration mountings be utilised on all fixings to the structure to reduce the risk of transmission of sound into adjoining properties. Fan selection will generally be made to suit the performance required but this will be balanced against the possibility of using a more powerful fan working at a reduced level should this prove to be beneficial. Any fan selected is to have suitable attenuation to meet the requisite acoustic requirements.

Flexible joints are to be provided between fan and ductwork to reduce the likelihood of transferred vibration and noise.

9.0 HOURS OF OPERATION

Although the working hours have yet to be considered and confirmed, it is anticipated that the business will look to operate throughout the day and into the evening to cater for the different peak demands for trade.

The ventilation and extraction system will not be operated outside agreed opening hours.