



WILLIAM MORRIS

Legal & Corporate Communications

Ventilation & Extraction Statement

Applicant:

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Application Site

11-19 Bolton Street,
Bury,
BL9 0EY

Application Details:

Second floor/roof extension to form 9 no. apartments and increase in retail space to ground floor (02955E)

This report takes into account the particular
Instructions and requirements of our client.
It is not intended for and should not be relied
Upon by any third party and no responsibility
Is undertaken to any third party.

Job number 137742-00

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1.0 Introduction

Planning permission is sought in relation to a Second floor/roof extension to form 9 no. apartments and increase in retail space to ground floor. The site is currently a two storey building with 5 no. retail/commercial units at ground floor. The property is set back from Bolton Street, with a flat roof canopy projecting towards the adopted highway and public forecourt underneath.

To the rear the property there is a single storey flat roof element that can be accessed via Parks yard. The existing floor plans submitted do not include any room uses at first floor or ground floor however it was confirmed in our meeting that the first floor use used for storage. There are also flues on the top of the existing single storey element that do not appear to have the benefit of planning permission.

A front door access, to the first floor is also shown on the existing plans. This access also does not appear to have the benefit of planning permission.

The site is located within Bury Town Centre Conservation Area. The site is also located within Bury Town Centre Shopping Area as identified under UDP Policy S1/1 and is classified as a Secondary Shopping Area and Frontage under UDP Policy S2/3

2.0 Kitchen Ventilation Extraction

It is anticipated that the commercial kitchen on ground floor will be preparing predominantly grilled 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. This statement sets out the performance objectives of the system, namely that the ventilation and extraction system are to ensure that there is no disturbance, nuisance, or loss of amenity to nearby premises as a result of fumes, odour, food particles or noise.

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 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 ground floor 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.

The canopy will be mounted on the back wall with galvanised ducting off the left hand side plenum housing, through internal wall to a 500mm axial fan complete with speed controller mounted below false ceiling, which is to be boxed in by the client, transposing to 450mm galvanised spiral ducting turning ninety degrees and rising above false ceiling and running to the side rear of the building, through external wall and rising to terminate one metre above the ridge with a high velocity cowl c/w bird guard.

All brackets mounted on rubber anti-vibration mounts and flexible joints before and after the fan to eliminate any vibration transmitting through the building.

The fan specified is a Woods 500mm axial fan, 1420rpm, 240/50/1 ph. 500mm Woods Axial: Noise level 56dba at 2 metres in duct.

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.

Ductwork will pass through floors so fire dampers therefore have to be considered during installation. If the final design scheme from the manufacturer states that such will be necessary then a 1 hour fire resistant cladding is to be applied also. Where ductwork passes into another fire rated compartment the ductwork is to have the same fire rating as the area it is passing through and must have been tested in accordance with BS 476 Part 24 1987.

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. 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.

Ducts should not contain any obstructions except as required by the Local Authority. 1 Hour fire rated access doors are to be fitted at each bend and change in direction in the ductwork. Elbows are to have a radius of 1.5 times the duct width at its centre line. The size and location of the access doors is to allow for internal cleaning of the ductwork in all positions.

Externally the duct will be concealed in a 750mm x 750mm enclosure constructed of render on lath on metal framing. The enclosure will be fixed to the face of the building and will be painted a colour to match the existing facing brickwork found on the building. The will end in the location and appearance of the extract duct and its enclosure being unobtrusive and not cause annoyance to the occupants of all neighbouring properties.

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 counteracting 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 Jason 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 extract flue indicated on the drawings has been located as far as possible from neighbouring buildings. The final discharge is to be vertical with no obstructing cowl. The flue will not disperse 1m above the ridge (front elevation) as this does not provide the most suitable location due to purposes of planning. Due to the nature of the small takeaway vertical extraction is deemed to be enough for this size of kitchen especially given its current opening hours and footfall. An efflux velocity of a minimum of 9.0 m/s should ensure effective dispersion and dilution of odours.

All fixings are to have anti-vibration mountings.

3.0 Café / Restaurant / Hot food area

Heating is to be provided to the café/restaurant and servery area using either a gas fired boiler system with radiators or electrical panel heaters, 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 25 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 System Performance Specification

The volume of the kitchen including preparation and cooking areas is likely to be in the region of 65m³.

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.

5.0 Passive

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.

6.0 Visual Impact

Pending planning approval of the overall proposal, it may be appropriate to compare the requirements of the proposal with those of the recently refurbished eateries on near by.

Whilst the operation proposed this property is clearly smaller 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 present within the area.

Due to the proposed limited and minimal use and potential cooking aromas (fried chips only) 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.

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

7.0 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.

8.0 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 working day only and to cater for the different peak demands for “eat-in” and “takeaway” trade.

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

9.0 Conclusion

The proposal does not have any adverse impact on the character of the area or the existing building itself. The attenuated noise levels from the extractor are designed to be very low and will be further attenuated by the building itself. The high level of odour control was proposed in line with defra guidance.