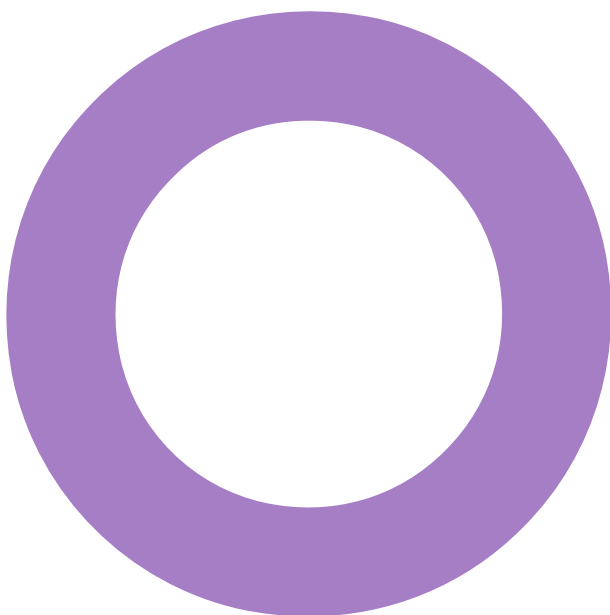


Proposed Hotel Development, Hosier Street. Reading. Moorgarth.

MEP ENGINEERING

VENTILATION AND EXTRACTION STATEMENT

REVISION 04 – 16 NOVEMBER 2018



Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
01	16/10/2018	Issued for Planning.	EG	IH	EG
02	29/10/2018	DP9 comments incorporated.	EG	IH	EG
03	16/11/2018	Updated to latest architectural information.	EG	NN	EG
04	16/11/2018	Updated to latest architectural elevations	EG	NN	EG

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Project number: 04/05887

Document reference: REP-0405887-08-EG-20181016-Ventilation and Extraction Statement-Rev04.docx

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Executive summary

This ventilation and extraction statement has been prepared to support the planning application for a proposed hotel development located adjacent to Broad Street Mall on Hosier Street, Reading.

The proposed development will comprise the demolition of existing unoccupied buildings on site and the construction of a part seven and part eight-storey hotel. The scheme comprises a 101-bedroom hotel with ground floor shell area for restaurant/bar fit out.

This statement outlines the ventilation proposals for the hotel and restaurant/bar elements.

Hotel Accommodation

Heating & Cooling

The guest bedrooms will be heated and cooled using a VRF (Variable Refrigerant Flow) system. The indoor fan coil units shall be void mounted units suspended from the u/s of the floor slab above with suitable anti-vibration hangers/mounts. The indoor fan coil units shall be concealed ducted void mounted units sized to meet the heating and cooling requirements of each individual room to which the unit is to be installed. Branch control units will be installed within Linen stores at each level, and external condensers are located at Roof Level (08).

The ground floor reception and office areas identified on the drawings will be heated and cooled by means of separate localised VRF systems.

Domestic Water Services

Domestic hot water is generated by Air Source Heat Pumps (ASHPs) located at Roof Level 01 which pre-heat the water, with gas fired water heaters providing the remaining heating required for storage/distribution of the hot water. Flues from the gas fired water heaters route through an internal riser, terminating at roof level.

Ventilation

Guest bedrooms

Air shall be extracted from each guest bath/shower room at the recommended (Approved Document F of the building regulations) flow rate by utilising individual heat exchange units to each room.

A bedroom/bathroom ventilation heat exchange unit will be installed within each bedroom entrance lobby bulkhead complete with internal supply and extract fan/s, plate heat exchanger, condensate tray and drain, acoustic lining, filter on the air intake side and controls. Supply air is provided to the bedroom with extract air taken from the bathroom.

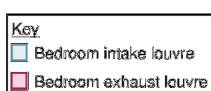
The unit shall operate constantly (24/7) at 8 l/s (trickle) supply and extract. The boost mode will operate via the bathroom light switch. When the light switch has been on for more than 2 minutes, the duty will increase to boost at 25 l/s. When the light switch is 'off' the unit will return to providing 8l/s.

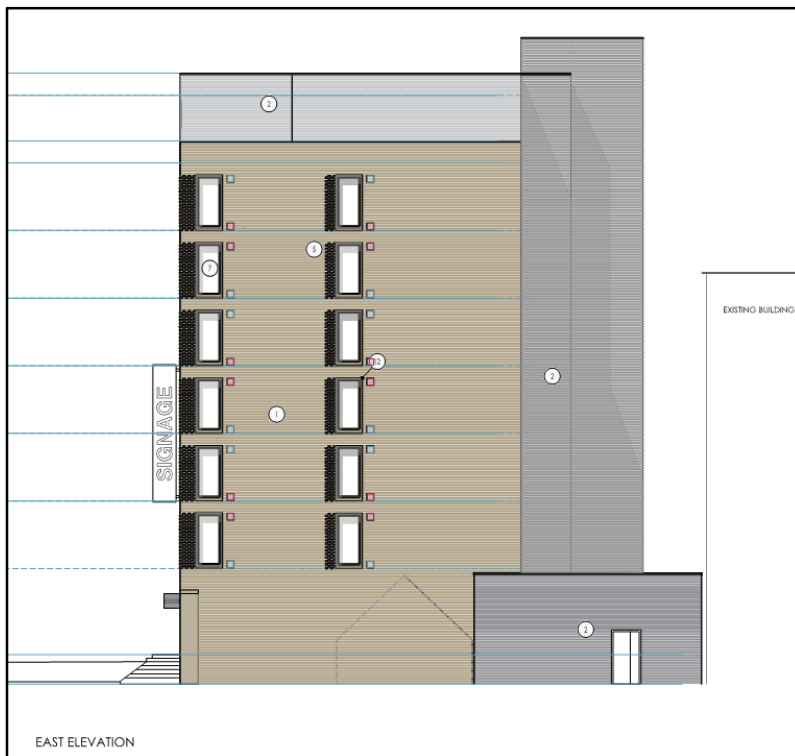
Within the bathroom a ceiling mounted extract air valve will be provided complete with a filter which is to be easily accessible and removable. A linear supply grille is provided in the face of the bedroom bulkhead.

A filter box is to be fitted on the air inlet connection to the heat recovery unit, located within the dropped bulkhead.

The duct work shall be routed to the external elevation via the ceiling void. At the external wall the exhaust shall terminate at high level and the intake at low level via a suitable external air brick/s or wall grille. To avoid cross contamination the systems in the bedroom above and below shall have the intake and exhaust termination points 'alternated' i.e. the intake at high level and the exhaust at low level. The location of air intakes/exhausts are shown on the following elevation mark ups.

The system installed shall meet the requirements of Approved Document L and F of the Building Regulations.







General

The ground floor office, reception, luggage room and linen marshalling room will be provided with a heat recovery ventilation unit comprising inlet/outlet dampers, inlet panel filter grade F7, extract panel filter grade G4, heat recovery plate heat exchanger, supply fan, extract fan, inverter speed drives, distribution ductwork, ductwork fittings, ductwork accessories, ventilation grilles, louvres, attenuators and associated controls with the intake/exhaust at ground floor level. The MVHR will be located within the Ground Floor Plantroom.

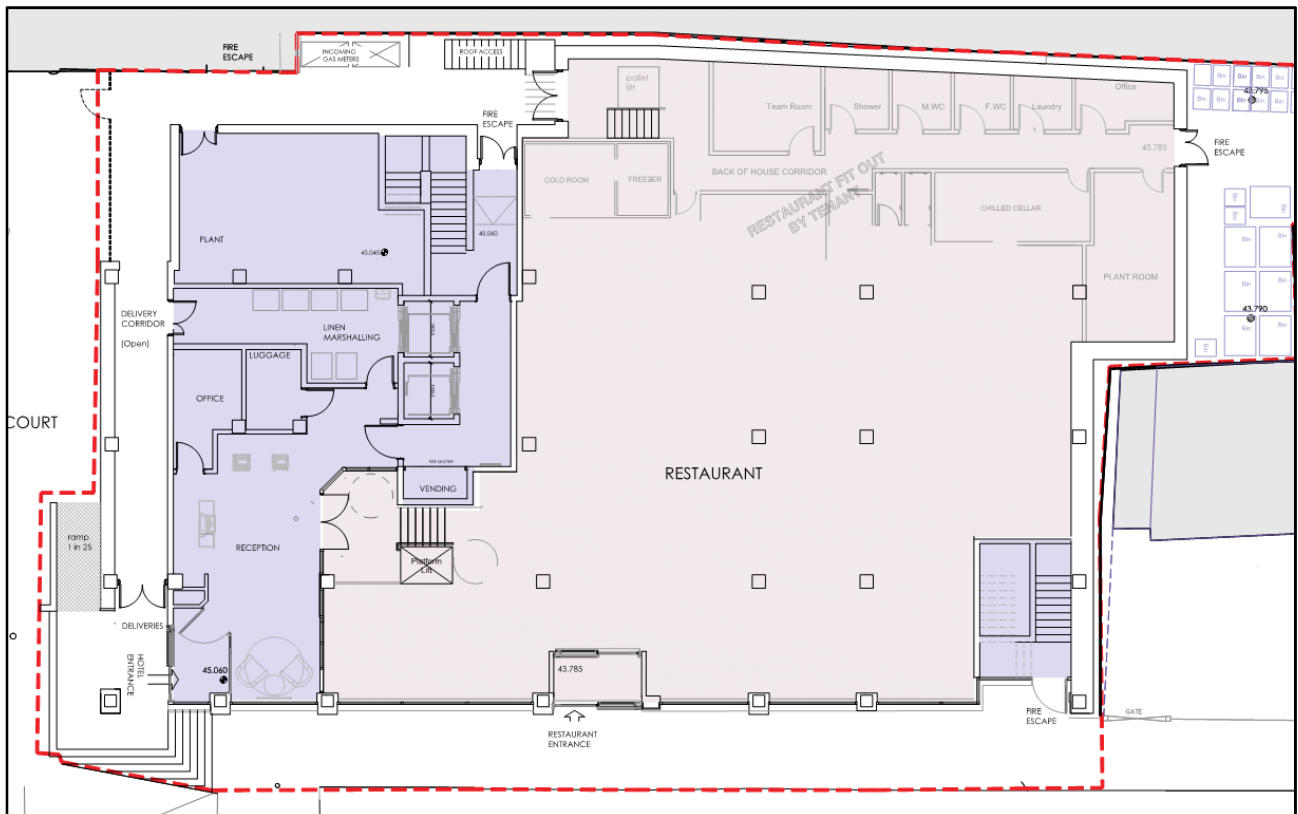
Linen/Team rooms at upper floors will each be provided with a heat recovery ventilation unit comprising inlet/outlet dampers, inlet panel filter grade F7, extract panel filter grade G4, heat recovery plate heat exchanger, supply fan, extract fan, inverter speed drives, distribution ductwork, ductwork fittings, ductwork accessories, ventilation grilles, louvres, attenuators and associated controls. These MVHRs will be located within the ceiling void of each Linen/Team room.

Restaurant

The restaurant area (demarcated in pink on the Ground Floor Plan below) is allocated for tenant fit out.

Supply and extract systems, as well as systems to provide heating and cooling will be installed by the tenant as part of their fit out works.

In order to facilitate the tenant fit out, plant space and air intake/exhaust openings will be provided as part of the landlords shell & core works (refer to elevation mark ups above)



Kitchen/Wash Up

Kitchen/wash up ventilation plant will be located at roof level (Level 08). Area has been allocated for the plant associated with the restaurant, and access to the roof can be gained by the staircore.

A ductwork route has been identified within the hotel demise to route kitchen/wash up ductwork to the roof top plant area, as identified in red below.



General

Where general supply/extract or toilet extract fans are required, these will be installed by the tenant within the restaurant demise.

The restaurant operator will provide sound attenuation to all plant to meet the recommendations detailed within the Hoare Lea Acoustic Report (REP-1010530-LR-20181016-Acoustic planning report-rev03) and the requirements of the restaurant operator specification.

First Floor

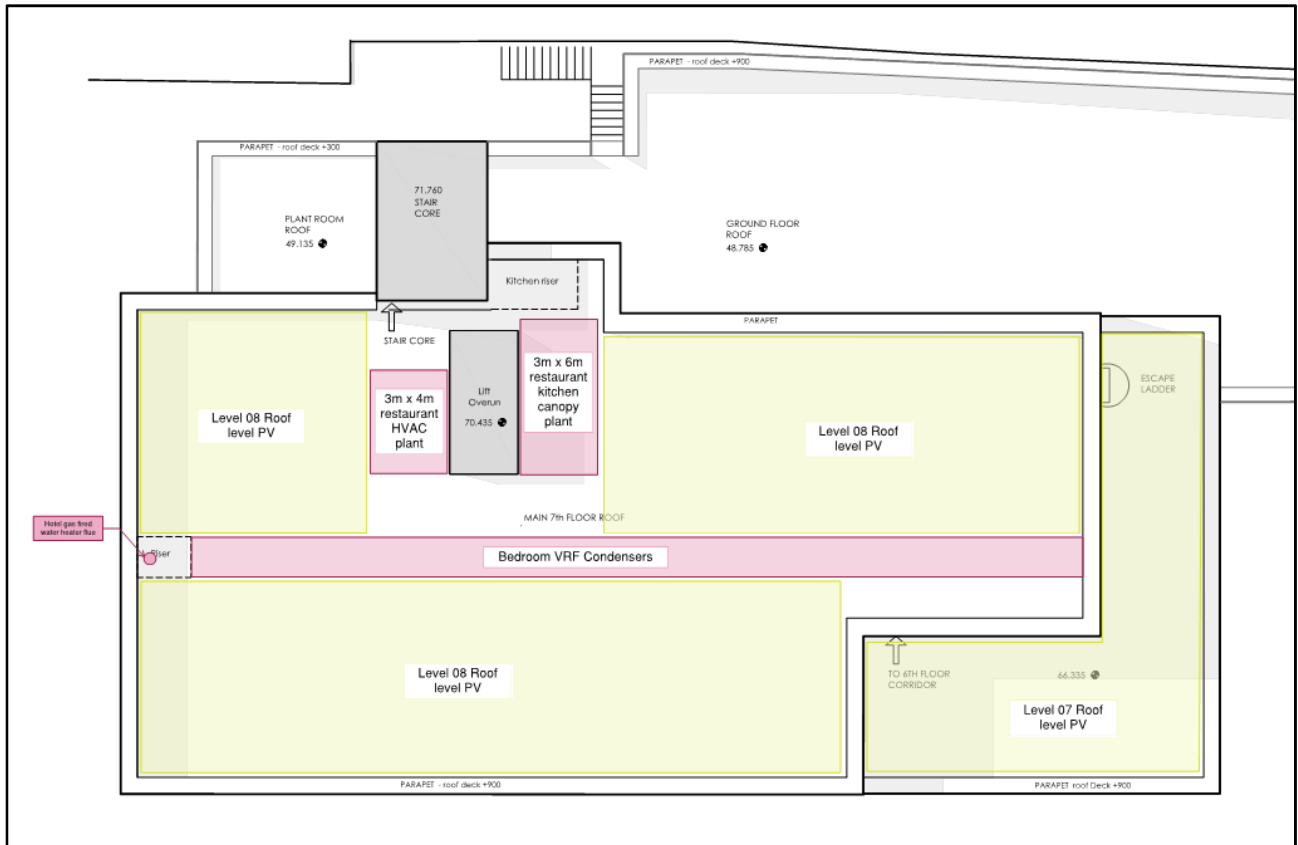
The plant area at first floor roof level will house the condensers associated with the Air Source Heat Pump for generation of hot water.



Roof Level

Plant associated with the kitchen/wash-up is located at roof level.

The remaining roof area (above bedrooms) will be used to accommodate a PV array and condensers associated with bedroom systems.





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