



Ramsden House

Ventilation Statement

Columbia Threadneedle

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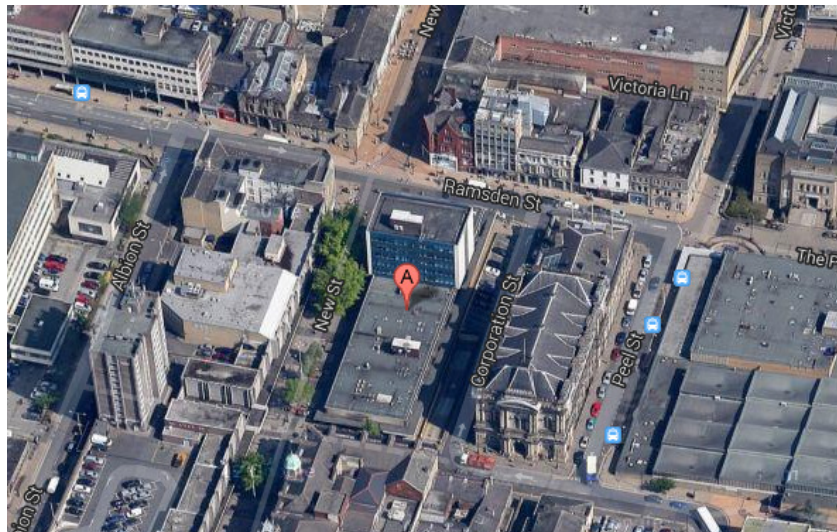
1.0

Ventilation & Extract Statement

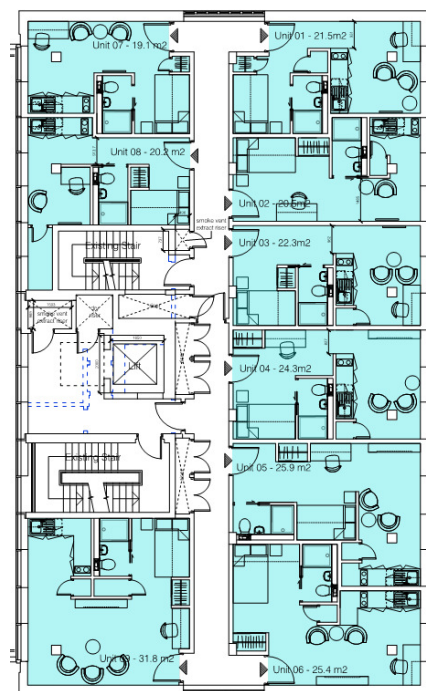
1.0 Ventilation & Extract Statement

1.1 Introduction

Ramsden House is an existing 1960's office building located within the centre of Huddersfield. The Current proposals include a change of use from office accommodation to student residential use. The project involves converting the office accommodation on level 2 to 6.



Location of Ramsden House Huddersfield (image courtesy of Google Maps)



Typical Floor Plan, showing Architects proposed layout and service riser locations for M&E services

1.2 General Principles of the Ventilation Strategy

The ventilation strategy of Ramsden House includes the use of purge ventilation via the existing openable windows with the provision of a mechanical supply and extract ventilation system for back ground ventilation to provide a comfortable internal environment. The existing (and retained) façade has no background ventilation devices. The mechanical supply and extract ventilation system will be operated continuously.

2.0

Ventilation Systems

2.0 Ventilation Systems

The following section provide a description of each proposed ventilation system.

2.1 Apartment Ventilation

2.1.1 System Description

To comply with The Building Regulations Approved Document Part F Ventilation 2010 the building will be provided with a central supply and extract ventilation system. In addition to the ventilation system each apartment will also use the existing openable windows for purge ventilation.

A ductwork distribution system will be provided to serve the apartments located on levels 2 to 6 of the building. The distribution system will connect to an air handling unit on the roof which will temper the supply and extract air. Generally, the supply air will be provided to the living areas in each apartment with the extract being taken from the bathroom.

The existing windows will be retained and re-used. The area of the openable of the windows has been verified and provides (as a minimum) 1/20th of the floor area as openable area which complies with The Building Regulation Approved Document Part F requirements for purge ventilation.

In addition to the mechanical ventilation, a re-circulating cooker hood will be provided over each electric cooking hob within each apartment.

The Building Regulations Approved Document Part F requires the following ventilation flow rates to adequately ventilate the apartment space.

- Bathrooms (Table 5.1a, continuous extract) @ 13l/s
- Kitchens (Table 5.1a, continuous extract) @ 8l/s

Therefore, the total flow rate per apartment (applicable to both supply and extract) is 21l/s

Additional checks have been completed in relation to the requirements of Table 5.1b;

- Single bedroom dwelling minimum ventilation rate @ 13l/s – the above calculated flow rate is in excess and therefore complies.

- Subject to a minimum of 0.3l/s per m². The largest apartment is 31.8m² and therefore the minimum should be no less than 9.54l/s. The above calculated flow rate is in excess of this minimum figure and therefore complies.

2.1.2 Maintenance

The Facilities Team will maintain plant in accordance with the manufacturer's requirements.

2.2 Corridor Ventilation

The central circulation route will be ventilated via the existing openable windows at either end of the corridor.

2.3 Fire Fighting Lobby Ventilation

At present the final decision on the ventilation of the fire lobbies is to be finalised. At present there are currently two options;

Natural Ventilation

A natural ventilation option may be adopted. This will comprise of;

- Automatically opening vents in the lift lobby at 1.5m² free area
- Automatically opening vents at each end of the central circulating corridor at 1.5m² of free area.
- Automatically opening vents at the head of the escape stair of at 1.0m² of free area

Mechanical Ventilation

A mechanical ventilation option may be adopted. This will comprise of;

- A fire rated builders work shaft of 0.8m² with automatic opening vents at each level in the lift lobby
- A fire rated builders work shaft of 0.8m² with automatic opening vents at each level in the central circulating corridor
- Automatically opening vents at the head of the escape stair of 1.0m²

Each shaft would be supplied with a fire rated extract fan at roof level. The fans would be provided with diverse power supplies.

In both options the system would operate under the dictates of the fire alarm system.

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