HAVERSTOCK HILL

VENTILATION INTENT

P2404

P2404-MEP-S3-VENTILATION INTENT

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1.00 INTRODUCTION

1.01 General

This document has been produced to outline the Ventilation intent for the development.

1.02 Outline information

This document shall outline the following:

- Commercial unit Ventilation provision
- Apartment Ventilation provision
- Plant Room Ventilation provision

This report does not cover the following at this stage:

- 0.4m2 Lobby ventilation as required by the fire strategy
- 0.2m2 Lobby ventilation as required by the fire strategy
- Any smoke ventilation to areas currently undefined (including common corridors)

2.00 COMMERCIAL UNITS

2.01 General

There are three number Retail spaces located at ground floor. Each retail unit shall be treated as a shell and core space. The provision for the future fit out of services shall be provided.

Future provision shall for ventilation shall be provided to each space.

At this stage ventilation shall be allowed for on the basis of potential occupancy levels with the intended use of Retail space.

The occupancy levels are based on BSRIA Rules of thumb and ventilation rates per person based on Building regulations and industry guidance. The resultant free area of louvre are summarised below:

	m2	m2 louvre
Retail A	93.1	0.21
Retail B	73.7	0.17
Retail C	92	0.21

Each unit shall be provided with a supply louvre and an extract louvre. In order to meet BREEAM requirements and noting site constraints it is intended to keep the louvres a minimum of 10m apart. The street façade shall be avoided where possible.

It should be noted that it is not anticipated for the units to be fit out as restaurants or cooking facilities.

A markup indicating the proposed routes has been included in the appendices.

3.00 APARTMENT VENTILATION

Each apartment shall be provided with a Mechanical Ventilation with Heat Recovery (MVHR) system.

The system shall be designed and installed inline with Approved Document Part F Volume 1 Dwellings.

3.01 Requirements

Approved document Part F requires the following ventilation rates to be met:

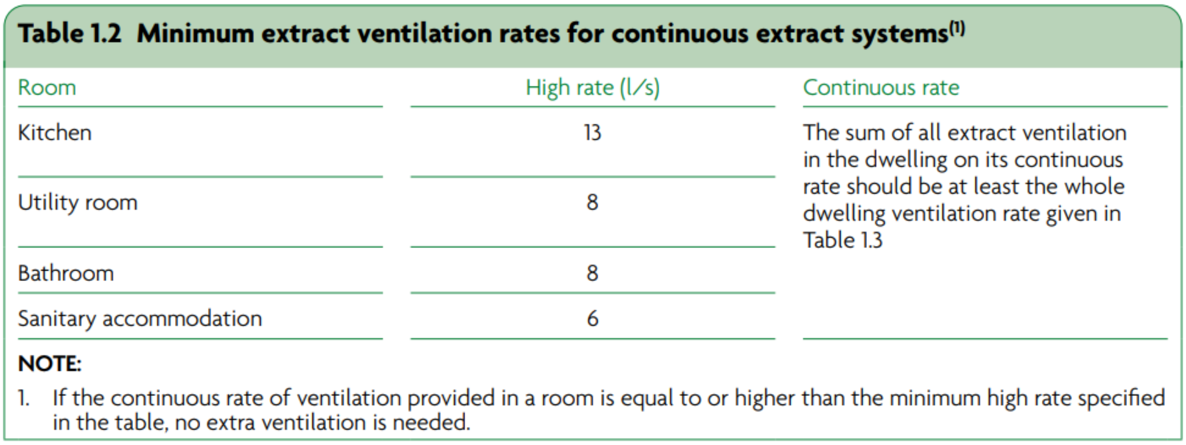
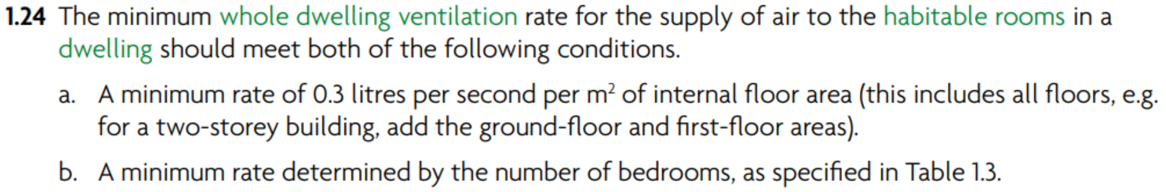


Table 1.2 Minimum extract ventilation rates for continuous extract systems[1]

Room	High rate (l/s)	Continuous rate
Kitchen	13	The sum of all extract ventilation in the dwelling on its continuous rate should be at least the whole dwelling ventilation rate given in Table 1.3
Utility room	8	
Bathroom	8	
Sanitary accommodation	6	

NOTE:

1. If the continuous rate of ventilation provided in a room is equal to or higher than the minimum high rate specified in the table, no extra ventilation is needed.



1.24 The minimum whole dwelling ventilation rate for the supply of air to the habitable rooms in a dwelling should meet both of the following conditions.

a. A minimum rate of 0.3 litres per second per m^2 of internal floor area (this includes all floors, e.g. for a two-storey building, add the ground-floor and first-floor areas).

b. A minimum rate determined by the number of bedrooms, as specified in Table 1.3.

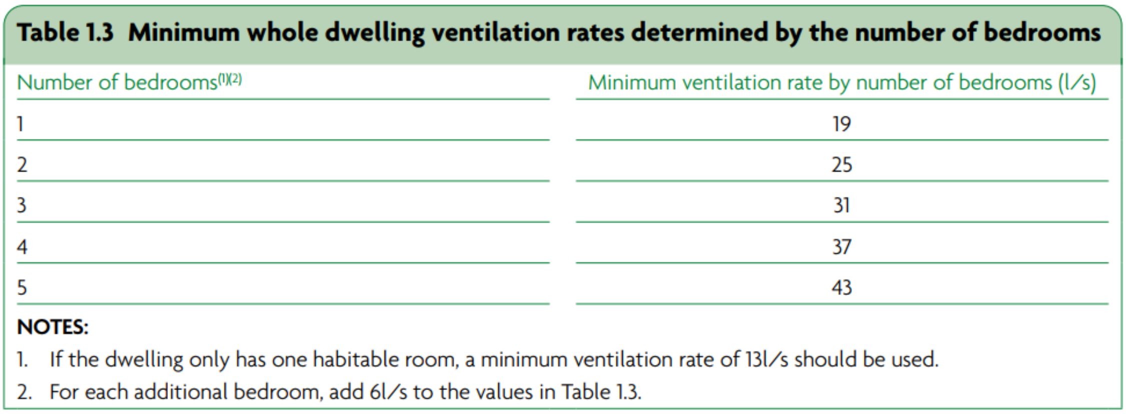


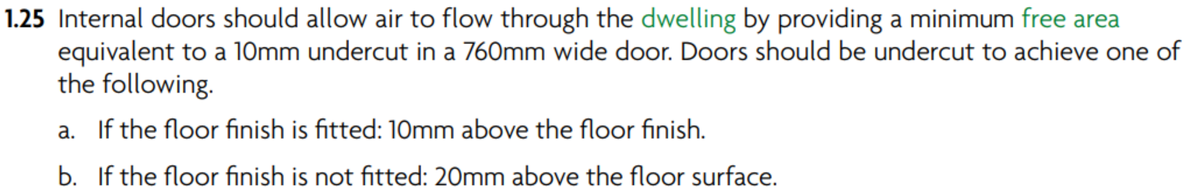
Table 1.3 Minimum whole dwelling ventilation rates determined by the number of bedrooms

Number of bedrooms[1][2]	Minimum ventilation rate by number of bedrooms (l/s)
1	19
2	25
3	31
4	37
5	43

NOTES:

1. If the dwelling only has one habitable room, a minimum ventilation rate of 13l/s should be used.
2. For each additional bedroom, add 6l/s to the values in Table 1.3.

The architect shall note that doors must be undercut within dwellings to meet the following requirements:



1.25 Internal doors should allow air to flow through the dwelling by providing a minimum free area equivalent to a 10mm undercut in a 760mm wide door. Doors should be undercut to achieve one of the following.

a. If the floor finish is fitted: 10mm above the floor finish.

b. If the floor finish is not fitted: 20mm above the floor surface.

3.02 Proposal

Based on the above each apartment what be calculated to determine the flow rates required for each individual dwelling requirement. This shall be determined as the design progresses.

At this stage it is proposed to provide a single MVHR unit within each utility cupboard for each individual dwelling. The MVHR shall be provide with antivibration mounts and a condensate line. The MVHR unit shall be installed in a location where filters are easily removed to be cleaned.

Each dwelling shall be provided with the following:

- Intake Louvre / Grille – 155cm2
- Exhaust Louvre / Grille – 155cm2

The intake and exhaust shall be a minimum of 1m apart to prevent cross flow. Where located in balcony soffits they shall be a minimum of 2m apart to prevent cross flow.

4.00 PLANT ROOM VENTILATION

The Plant rooms are generally all inbound of the development with no access to the external façade. It is therefore proposed to introduce mechanical supply and extract ventilation to each plant room.

There are no products of combustion involved with the scheme as the main heating source is air source heat pumps. It is therefore proposed to provide 3 ach of air movement within each plant space. The system shall be split local to each plant room set as per the following proposal:

- Heating Plant room:
    - Supply ventilation rate 0.12 m3/s
    - Supply louvre 0.06 m2 FA
    - Extract Ventilation rate 0.12 m3/s
    - Extract louvre 0.06 m2 FA
- Water tank and sprinkler tank room:
    - Supply ventilation rate 0.19 m3/s
    - Supply louvre 0.09 m2 FA
    - Extract Ventilation rate 0.19 m3/s
    - Extract louvre 0.09 m2 FA

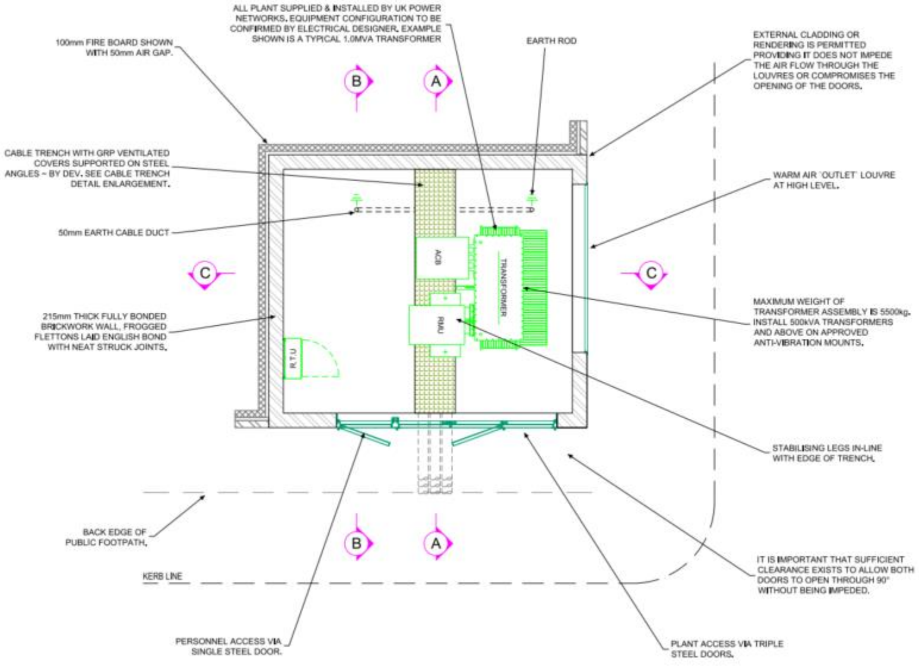
Please refer to the mark up in the appendices. It is proposed to keep intakes and exhausts a minimum of 10m Apart where possible.

5.00 BIN STORE VENTILATION

It is intended that the bin stores are naturally ventilated via louvred access doors. It should be noted that wash down provision shall be provided. It is anticipated that bins are washed down on a regular basis in order to minimise risk of odours from the bin stores.

6.00 SUBSTATION VENTILATION

Inline with typical UKPN details the substation shall be ventilated by louvred doors and cross ventilation. The cross ventilation is indicated on the plant room mark ups provided. Below is the UKPN standard detail which provides the free area requirement of the vents and doors.



SUBSTATION ~ GENERAL ARRANGEMENT PLAN