

Design and Installation Specification -
Mechanical Ventilation with Heat Recovery

The installation has been designed and must be installed following the following:

- Domestic Ventilation Compliance Guide 2010 Edition
- CIBSE B: Heating, ventilation, air conditioning and refrigeration, 2005.
- Building regulations, Approved Document F: Ventilation, Approved Document L1: Conservation of fuel and power in dwellings, Approved Part B: Fire Safety
- The relevant British Codes of Practice include:
- BS 5925: Code of Practice for ventilation principles and designing for natural ventilation.
- Manufacturer's installation instructions.
- HVCA DW/154 specification of plastics ductwork, 2000

Mechanical Ventilation with Heat Recovery System and Installation Notes:

1. System

1.1 The system has been designed to provide the minimum whole-house ventilation rate.

1.2 The system utilises a semi-rigid Comfortube and a manifold system.

1.3 MVHR system should be installed before any other service to ensure optimum layout.

1.4 MVHR system to be used and installed in conjunction with a space heating system; although up to 70% of the heat energy in stale air can be recovered, this is not to be used as an alternative to a central heating system. A space heating system is still required, and MVHR will contribute significantly to its economic use.

1.5 When MVHR System is installed, trickle vents to windows are not required.

1.6 If a cooker hood is to be installed, it will need to be set in re-circulation mode.

1.7 This system has been designed to comply with all relevant and current Building Regulations.

2. Condensate drain

2.1 The MVHR unit should incorporate a condensate drain, which should be connected to the nearest waste water network. Where units are sited in a position that makes the connection of piping to allow a fall, a condensate pump may be incorporated as part of the installation

2.2 The condensate drain & hose are to be connected to a self-sealing waste valve (i.e. HepV0 or similar approved trap - supplied by others) and run to the nearest soil and vent pipe (SVP). All condensation pipework to have a fall of a minimum of 10°. Pipe to be located below roof insulation where possible; otherwise, insulation is to be provided to pipe in unheated areas (cold loft/void spaces).

3. Ducting and MVHR Unit

3.2 Where ducting passes through a fire-resisting wall or fire compartment, the required measures to ensure compliance with Part B of the building regulations must be taken. If it is not shown on this drawing , fire collars/sleeves are not required.

3.3 This design assumes that the ceiling void spaces are sufficient to allow for the MVHR Unit and ducting and assumes there are clear paths through the ceiling/floor voids.

3.4 Ducting to tile vents and any ducting outside the insulated envelope needs to be insulated; we have available pre-insulated ducting, but this has not been quoted for. Should you require us to do this, we will be pleased to re-quote you.

3.5 Vertical ducts should be located away from any fixings for radiators and shower doors.

4. Floor and Roof

4.1 Floor joists and roof trusses should be set out to avoid vertical runs wherever possible and follow the manufacturer's design

4.2 Any holes within floor decking, ceiling, and walls to be sealed using a flexible sealant

4.3 If terminating to a tile vent, consideration should be paid to the effective equivalent area of the terminal to ensure that this does not adversely

5. Electrical

5.1 A hard-wired boost switch should be provided locally to each wet room, as the plans indicate.

5.2 A power supply to be located within one meter of the unit, for example, isolating fused spur (3 Amp).

5.3 We have not quoted for any controllers. However, Part F, 2010 Edition, states Any manual boost controls should be provided locally to the spaces being served, e.g. bathrooms and kitchen...

5.4 WARNING: Class 11 appliances must be earthed. All wiring must conform with BS7671: IEE Wiring Regulations. The installation must be carried out by a qualified electrician following prevailing regulations.

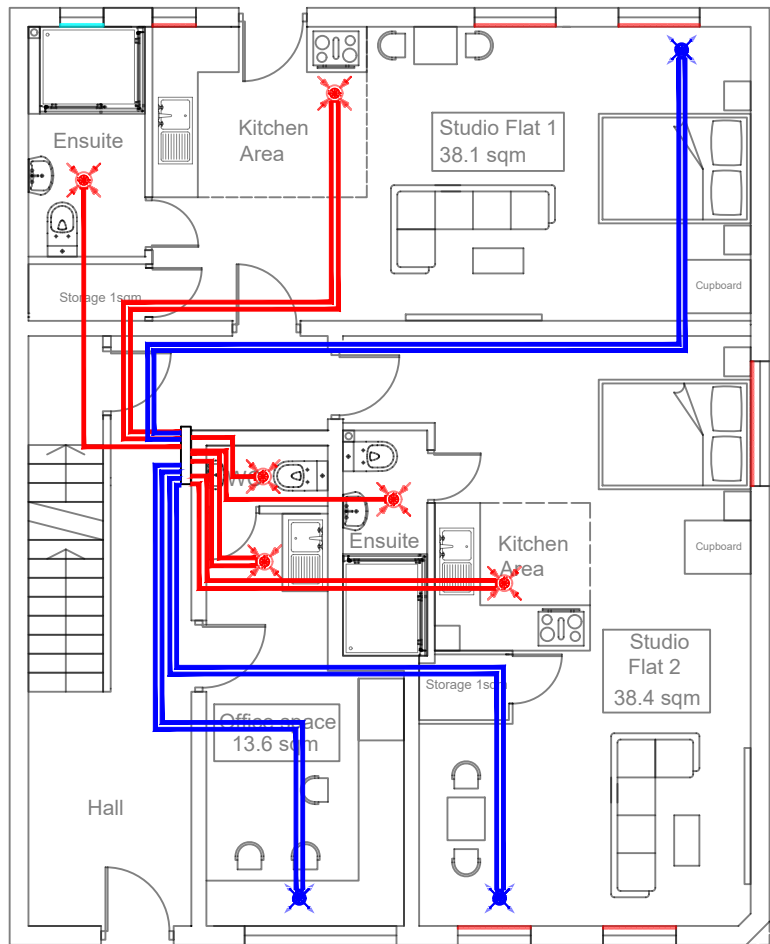
6. Ordering

6.1 Please refer to the materials schedule for all specific ducting models and products before ordering.

The product manual and user manual are supplied with the unit.

Please leave the product manual with the unit.

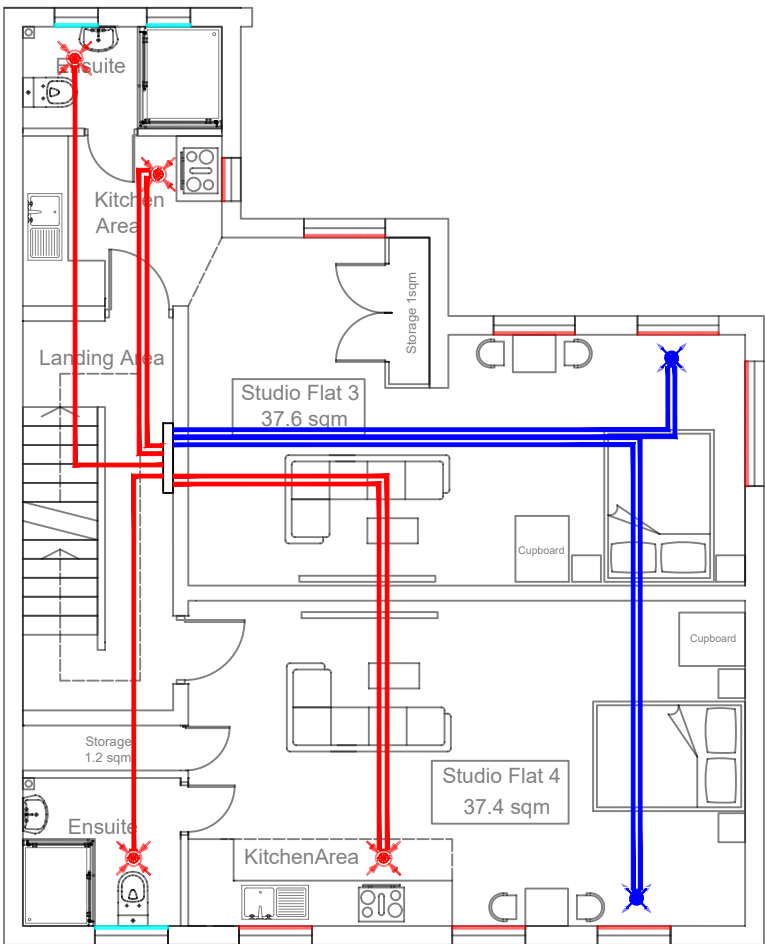
Please read additional notes on MVHR Design for specific design details.



6 x 90mm supply drop from above
9 x 90mm extract rise to above.

Provisional

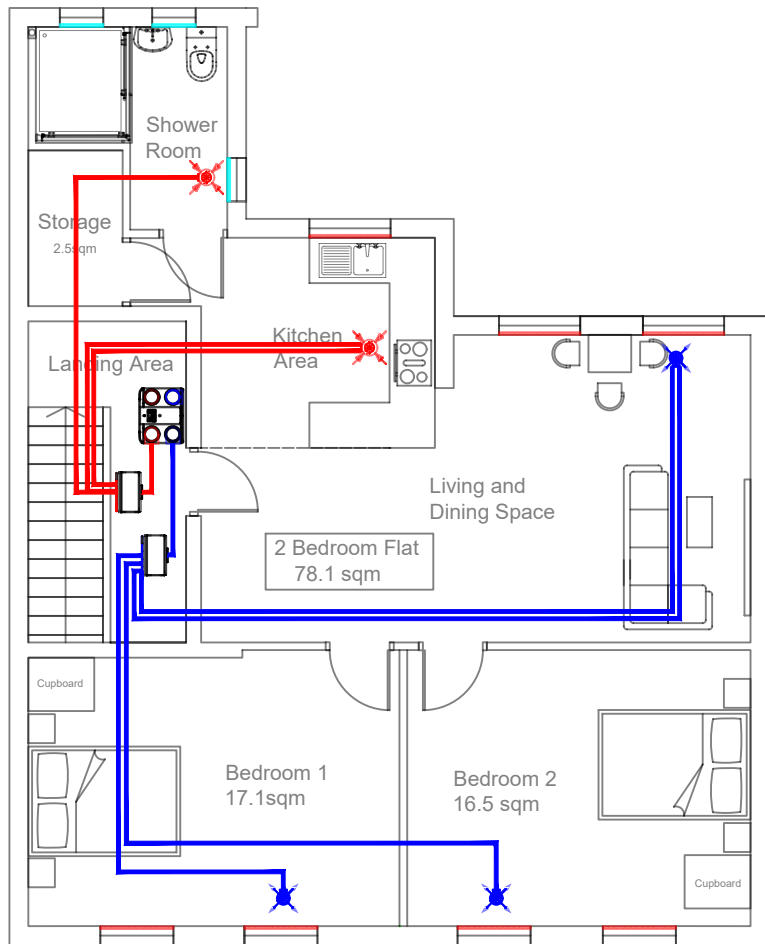
Ground Floor



4 x 90mm supply drop from above
6 x 90mm extract rise to above.

Provisional

First Floor



4 x 90mm supply drop from above
3 x 90mm extract rise to above.

Provisional

Second Floor

Specific Design Details

Ducting may be subject to change on site, as we are not aware of exact joist layouts.

To be read in conjunction with Specification page and installed to manufacturer's instructions.

CAQ450 MVHR unit positioned in loft. Switched fused spur for MVHR to be located adjacent to the unit. Condensate drain to be connected to SVP. Ø180mm insulated Intake & Extract through roof, terminating a min. 1000mm apart. 2 No Comfowell CW-M 520 10 Port Manifolds, providing 9 x 90mm Comfortubes each for both Supply & Extract.

CAQ450 MVHR unit positioned in loft. Switched fused spur for MVHR to be located adjacent to the unit. Condensate drain to be connected to SVP. Ø180mm insulated Intake & Extract through roof, terminating a min. 1000mm apart. 2 No Comfowell CW-M 520 10 Port Manifolds, providing 9 x 90mm Comfortubes each for both Supply & Extract.

Kitchen extract to be min. of 600mm
4 x 90mm extract rise to above away from the edge of the hob. If a cooker hood is installed, it must be set to re-circulation mode.

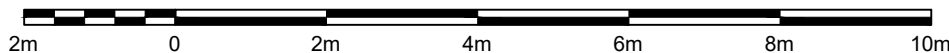
5 x 90mm supply drop to below
1 x 90mm extract rise from below.
Ducting to be concealed in suitable boxing.

4 x 90mm extract rise from below,
concealed in suitable boxing.

All ducting in cold roof space to be insulated.



1:100



31.05 RevA - Revised floor plan layout

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Planning		
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90 London Street, Reading Change of Use - Listed Building Consent		
Title		
Proposed Detailed Floor Plans		
Drawn	Date:	Scale (at A2)
KO	March 2023	1:100
Dwg no.		Revision No.
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