MECHANICAL EXTRACTION SPECIFICATION: KITCHEN (COMPLIANT TO PART F)

1. **Extraction Rates & Hardware Standards**
   - **Cooker Hood Option**: Provide a mechanical cooker hood extracting directly to the external air, capable of extracting at a rate of not less than **30 litres per second (l/s)** when measured adjacent to the hob. Cooker hoods must be manufactured and tested to **BS EN 13141-3**.
   - **Remote Extract Fan Option**: Where extraction is provided via a wall or ceiling fan instead of a cooker hood, the system must achieve a minimum extraction rate of **60 litres per second (l/s)**. Intermittent extract fans must be manufactured and tested to **BS EN 13141-4**.
   - **Discharge**: All air must be discharged directly to the external air. Recirculating cooker hoods utilizing charcoal filters are **not compliant** as a primary source of mechanical extract ventilation under Part F.
2. **Open-Plan & Multi-Zone Considerations**
   - **Open-Plan Spaces**: Where the kitchen is integrated into an open-plan kitchen/diner or living room, the extraction rates specified above must still be achieved relative to the cooking zone layout.
   - **Backdraft Prevention**: The extraction ductwork must be fitted with a mechanical backdraft shutter or gravity-flap termination terminal to prevent the ingress of external cold air and moisture.
3. **Internal Air Circulation & Commissioning**
   - **Air Transfer (Door Undercut)**: To facilitate cross-ventilation and make-up airflow during fan operation, all internal access doors leading to the kitchen must feature a minimum **10mm clear gap** between the underside of the door leaf and the top of the finished floor covering.
   - **Testing & Commissioning**: All fixed mechanical ventilation systems must be fully tested using a calibrated airflow hood upon completion. A formal **Ventilation Commissioning Notice** must be completed, signed off, and submitted to the Building Control Body within 5 days of testing.
   - **Workmanship Compliance**: All mechanical plant installation, duct routing, structural core drilling, and perimeter weather-sealing must be executed strictly to **BS 8000 Part 15** (Services).

MECHANICAL EXTRACTION SPECIFICATION: SHOWER ROOM (COMPLIANT TO PART F)

1. **Extraction Rates & Operation**
   - **Intermittent Extraction Rate**: Provide a mechanical extract fan to the shower room capable of extracting at a continuous rate of not less than **15 litres per second (l/s)**.
   - **Overrun Mandate**: The fan must be wired to the local light switch circuit and feature a **minimum 15-minute overrun timer**. This overrun function is legally required for all bathing/showering spaces, irrespective of the presence of openable windows.
   - **Standards Compliance**: All intermittent extract fans must be manufactured and tested in strict accordance with **BS EN 13141-4**.
2. **System Resistance & Ducting**
   - **Ducting Geometry**: Ductwork must be routed to the external air via the shortest, most direct path possible. Flexible ducting must be pulled taut to prevent air resistance loops.
   - **Fan Selection**: Where the duct run exceeds 1.5 metres or includes multiple bends, a high-pressure **centrifugal or mixed-flow fan** must be specified instead of a standard axial fan to overcome airflow resistance.
   - **External Terminal**: Provide a gravity-flap louvre or weatherproof wall terminal to prevent wind backdrafts into the building envelope.
3. **Internal Air Circulation & Commissioning**
   - **Air Transfer (Door Undercut)**: To facilitate replacement airflow during fan operation, the internal access door must feature a minimum **10mm clear gap** between the underside of the door leaf and the top of the finished floor covering.
   - **Testing & Commissioning**: All fixed mechanical ventilation systems must be fully tested using a calibrated hood/anemometer upon completion. A formal **Ventilation Commissioning Notice** must be completed and submitted to the Building Control Body within 5 days of testing.
   - **Workmanship Compliance**: All mechanical plant installation, duct sealing, and electrical connections must be executed strictly to **BS 8000 Part 15** (Services).

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27/08/26

FIRE DETECTION & ALARM SYSTEM SPECIFICATION (COMPLIANT TO PART B)

1. **System Classification & Standards**
   - **System Grade**: Provide a mains-powered, interlinked fire detection and alarm system designed and installed in strict accordance with **Approved Document B (Volume 1)** and the system recommendations of **BS 5839-6**.
   - **Hardware Profiles**:
     - **Owner-Occupier**: Minimum **Grade D2** (mains-powered with user-replaceable standby battery backup).
     - **Rented/HMO Property**: Minimum **Grade D1** (mains-powered with a tamper-proof, sealed-in 10-year lithium standby battery backup).
   - **Manufacturing Standards**: All smoke alarms must be certified to **BS EN 14604**. All dedicated heat alarms must be certified to **BS 5446-2**.
2. **System Category & Device Placement (Category LD2 / LD3)**
   - **Circulation Spaces**: Position optical smoke alarms on all ceiling levels within circulation paths (hallways and landings) forming part of the escape route. Devices must be located within 7.5 metres of the door to any habitable room.
   - **Principal Living Space**: Install an interlinked optical smoke alarm in the main habitable living room.
   - **Kitchen Area**: Install an interlinked **heat alarm** directly inside the kitchen zone. This heat alarm is legally mandatory if the kitchen shares an open-plan layout or is unseparated by a fire door from the stairway/circulation space.
3. **Geometric Structural Constraints**
   - **Ceiling Clearances**: All ceiling-mounted alarm heads must be positioned at a minimum distance of **300mm away from any vertical walls**, structural beams, or decorative light fittings.
   - **Apex Placements**: For pitched or sloped ceilings, alarms must be located within 600mm of the highest roof ridge point.
   - **Interconnection**: All units within the dwelling must be physically hardwired or wirelessly linked via secure radio frequency (RF) loops so that activation of any single detector triggers all system alarms simultaneously.
4. **Electrical Supply & Workmanship**
   - **Circuit Source**: The mains electricity supply must be derived from a single common source, wired either as a single independent circuit at the main distribution board or as a securely unswitched connection off a regularly utilized local lighting circuit.
   - **Workmanship Compliance**: All electrical first-fix wiring, device mounting, and system pairing loops must be executed and certified strictly to **BS 7671 (IET Wiring Regulations)** and **BS 8000 Part 15** (Services).

PITCHED ROOF VENTILATION SPECIFICATION (COMPLIANT TO BS 5250 & PART F)

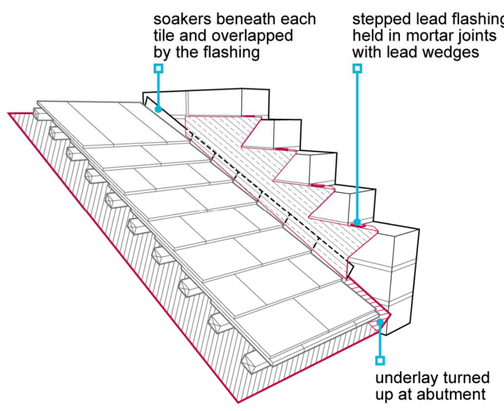
1. **Void Clearance & Airflow Paths**
   - **The 50mm Air Gap**: A minimum **50mm continuous, unobstructed air gap** must be maintained between the top of the insulation layer and the underside of the roof underlay/sarking material across the entire roof slope.
   - **Insulation Restraint**: Install proprietary **eaves ventilation rafter roll panels** (e.g., Manthorpe Cross Flow Panels) between rafters at the eaves. This mechanical restraint prevents quilted insulation or loose-fill materials from bowing upward and compressing the 50mm legal airflow core.
2. **Low-Level (Eaves) Ventilation Requirements**
   - **Standard Pitches (>15°)**: Provide permanent, continuous low-level ventilation openings along both opposing eaves lines equal to a continuous strip **10mm wide** (equivalent to 10,000mm² per linear metre).
   - **Shallow Pitches (≤15°)**: For low-pitch or mono-pitch configurations, increase the continuous eaves openings to a strip **25mm wide** (equivalent to 25,000mm² per linear metre).
3. **High-Level (Ridge) Ventilation Requirements**
   - **Ridge Ventilation Mandate**: To promote positive cross-ventilation stack effect and eliminate trapped dead-air pockets, provide high-level ventilation at or near the ridge equal to a continuous strip **5mm wide** (equivalent to 5,000mm² per linear metre) on both sides of the ridge line.
   - **Execution**: This must be achieved via a dry-ridge system or a series of proprietary high-level tile/slate ventilation units spaced strictly in accordance with manufacturer spacing models.
4. **Interstitial Vapour Control**
   - **Air & Vapour Control Layer (AVCL)**: Install a continuous polythene air and vapour control layer (minimum 500g) directly behind the internal ceiling plasterboard lining on the warm side of the insulation layer. All membrane overlaps, perimeter junctions, and structural penetrations (such as light cables or pipes) must be hermetically sealed with gas-proof foil tape to restrict internal moisture migration into the cold roof core.

Workmanship Compliance: All structural timber layout adjustments, fascia/soffit ventilation installations, and dry-fix roofing elements must be executed strictly to **BS 8000 Part 6** (Roof slating and tiling).

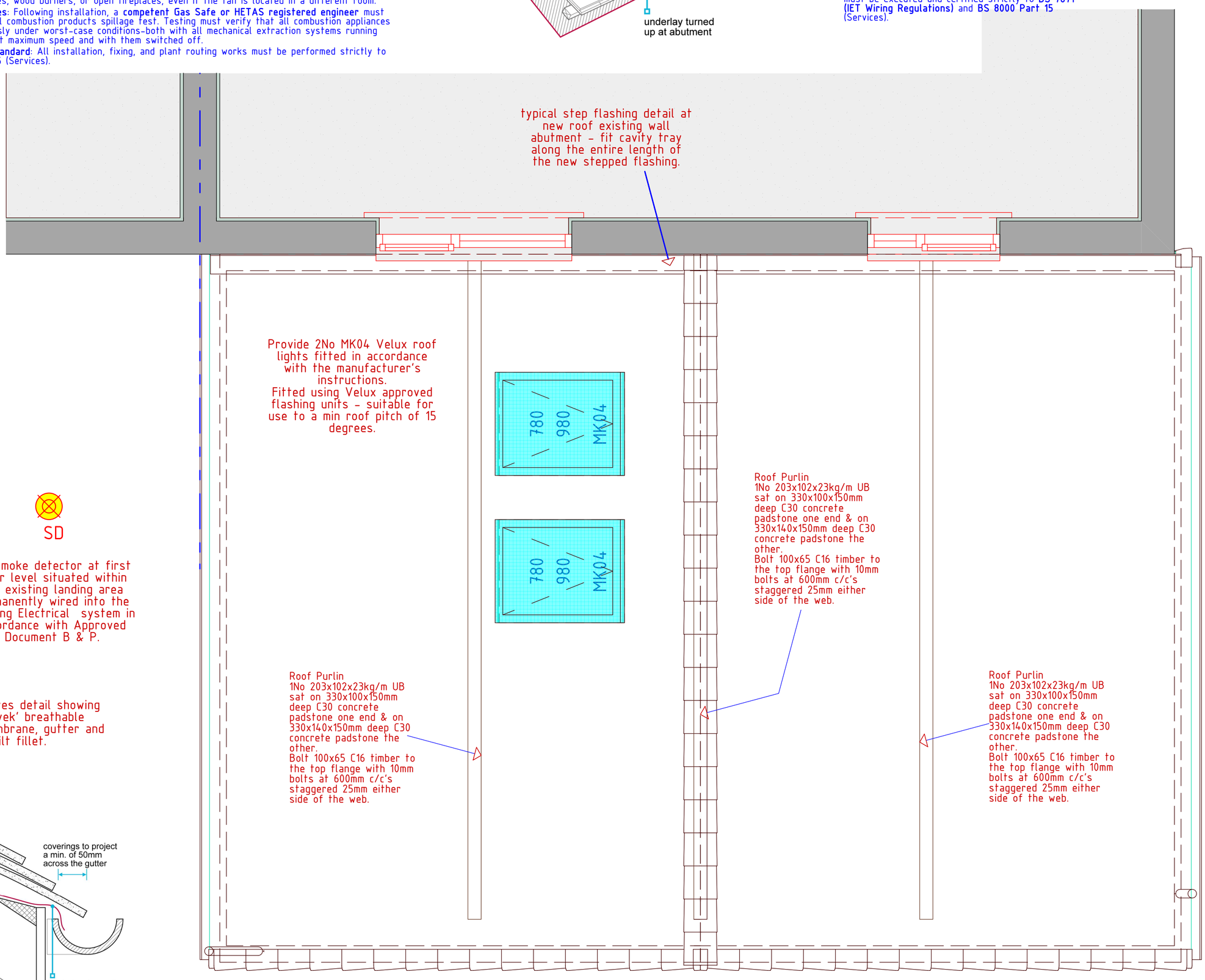
IMPORTANT VENTILATION INSTALLATION NOTES (COMPLIANT TO PART F & J)

1. **Accessibility & Component Positioning**
   - **Maintenance Access**: All extraction fans, mechanical units, and controls must be positioned to be fully accessible for routine maintenance, filter replacement, and repairs.
   - **Fan Height**: Wall or ceiling-mounted extract terminals must be placed as high as practically possible, and ideally within 400mm of the ceiling level.
   - **Cooker Hood Clearance**: Kitchen cooker hoods must be installed at a clearance height of between 650mm and 750mm above the hob surface, or strictly to the manufacturer's specified dimensions.
2. **Ductwork Integrity & Performance Limitations**
   - **Ducting Geometry**: All ductwork must be laid as straight as possible with minimal shallow bends. Flexible ducts must be pulled fully taut to prevent ripples, kinks, and sags, and must **never** be squashed or flattened within structural voids.
   - **System Resistance & Run Limits**: Duct runs must be designed to minimize airflow resistance. Standard axial fans must not exceed 1.5m of ducting. Where a duct path exceeds 1.5m or introduces multiple 90-degree bends, a **centrifugal or mixed-flow high-pressure fan** must be utilized. The ultimate layout must be proven to achieve legal extraction rates during commissioning.
   - **Terminals & Grilles**: Extract and discharge grilles must have an unrestricted free area equivalent to at least 85% of the internal duct area and be fitted with an active backdraft shutter device.
3. **Environmental & Condensation Control**
   - **Duct Insulation**: All ventilation ducts passing through unheated voids (such as cold roof spaces, floor voids, or service chases) must be **continuously thermally insulated** to prevent condensation forming inside the duct profile.
   - **Drainage & Traps**: Vertical duct runs discharging through the roof must be fitted with an approved inline condensation trap, with an insulated drain path routed to the external building face. Horizontal ducts must be laid at a slight downward slope away from the fan unit toward the external terminal.
4. **Statutory Combustion Safety Warning (Approved Document J)**
   - **Spillage Hazard Warning**: Mechanical extraction equipment can depressurize a building envelope and cause the dangerous spillage of lethal combustion products (such as Carbon Monoxide) from open-flued heating appliances, wood burners, or open fireplaces, even if the fan is located in a different room.
   - **Testing Mandates**: Following installation, a **competent Gas Safe or HETAS registered engineer** must perform a formal combustion products spillage test. Testing must verify that all combustion appliances function flawlessly under worst-case conditions-both with all mechanical extraction systems running simultaneously at maximum speed and with them switched off.
   - **Workmanship Standard**: All installation, fixing, and plant routing works must be performed strictly to **BS 8000 Part 15** (Services).

typical step flashing detail at new roof existing wall abutment - fit cavity tray along the entire length of the new stepped flashing.



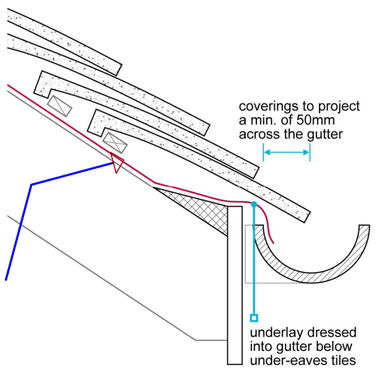
'Tyvek' roofing membrane.



SD

Fit Smoke detector at first floor level situated within the existing landing area permanently wired into the existing Electrical system in accordance with Approved Document B & P.

typical eaves detail showing the 'Tyvek' breathable roofing membrane, gutter and tilt fillet.



Proposed Large 1st Floor Layout

2

1:20

All dims are to be checked and confirmed on site by builder.

CLIENT :
FATIMA ALI ABANUR
16 Clinton Avenue Fallowfield
Manchester M14 7LW
THE CONSTRUCTION OF A SINGLE STOREY EXTENSION AT THE REAR OF THE EXISTING DWELLING HOUSE + EXTERNAL & INTERNAL ALTERATIONS.

All new doors in the dwelling are to be min 35mm thick solid timber doors as agreed with the client. Builder to allow for £200 for unit cost of door before cost of hanging and furniture etc...,
CONFIRM ALL DOOR TYPES WITH CLIENT PRIOR TO ORDERING.

Each door to be hung with 3No 100mm ball bearing brushed steel hinges

'Carlisle Brass Moreno- Serozzetta 2 Lever on Round Rose' through Union Mortice Latch 2677
Case Sizes : 76mm.
Suitable for use with mortice knobs and unsprung lever handles.
CONFIRM ALL DOOR LEVERS WITH CLIENT PRIOR TO ORDERING.

All Skirting boards are to be softwood 175mm deep x 25mm wide.
Confirm type with owner prior to final quotation.



Typical Door Selection Detail.

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