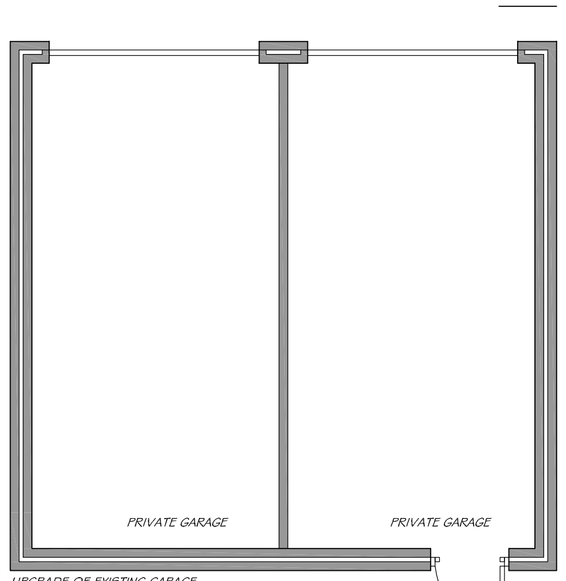


UPGRADE OF EXISTING GARAGE

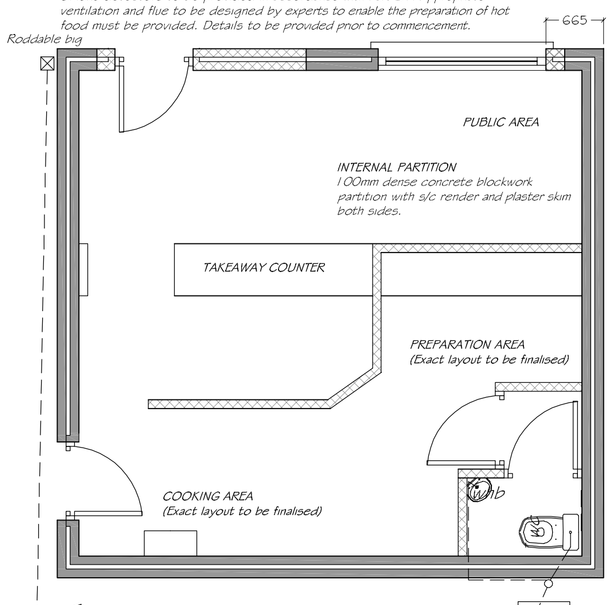
WALLS:
Fix 75mm insulated plasterboard to the internal side of the existing 250mm cavity wall. (Internal skin 100mm dense concrete, 50mm cavity and external skin 100mm brickwork.) 5mm plaster skim to the attached boards.

FLOOR:
100mm 'Kingspan' or similar approved insulation and 75mm s/c screed.

ROOF SPACE:
Provide 300mm thick quilt insulation the the existing roof space. Ensure through ventilation by providing 25mm insulation gap at soffit level.

VENTILATION

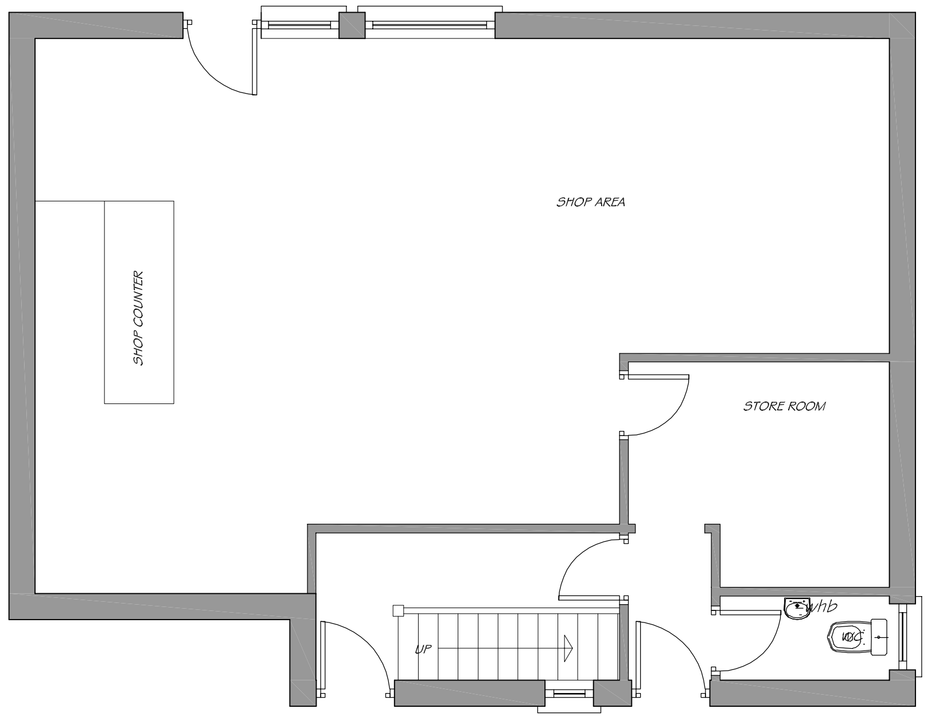
WC AREA
Provide a mechanical extractor fan capable of extracting 15 litres/ second plus a secure vent having a minimum area of 4000mm2.
Smoke detectors to be provided in accordance with Part B1. Appropriate ventilation and flue to be designed by experts to enable the preparation of hot food must be provided. Details to be provided prior to commencement.



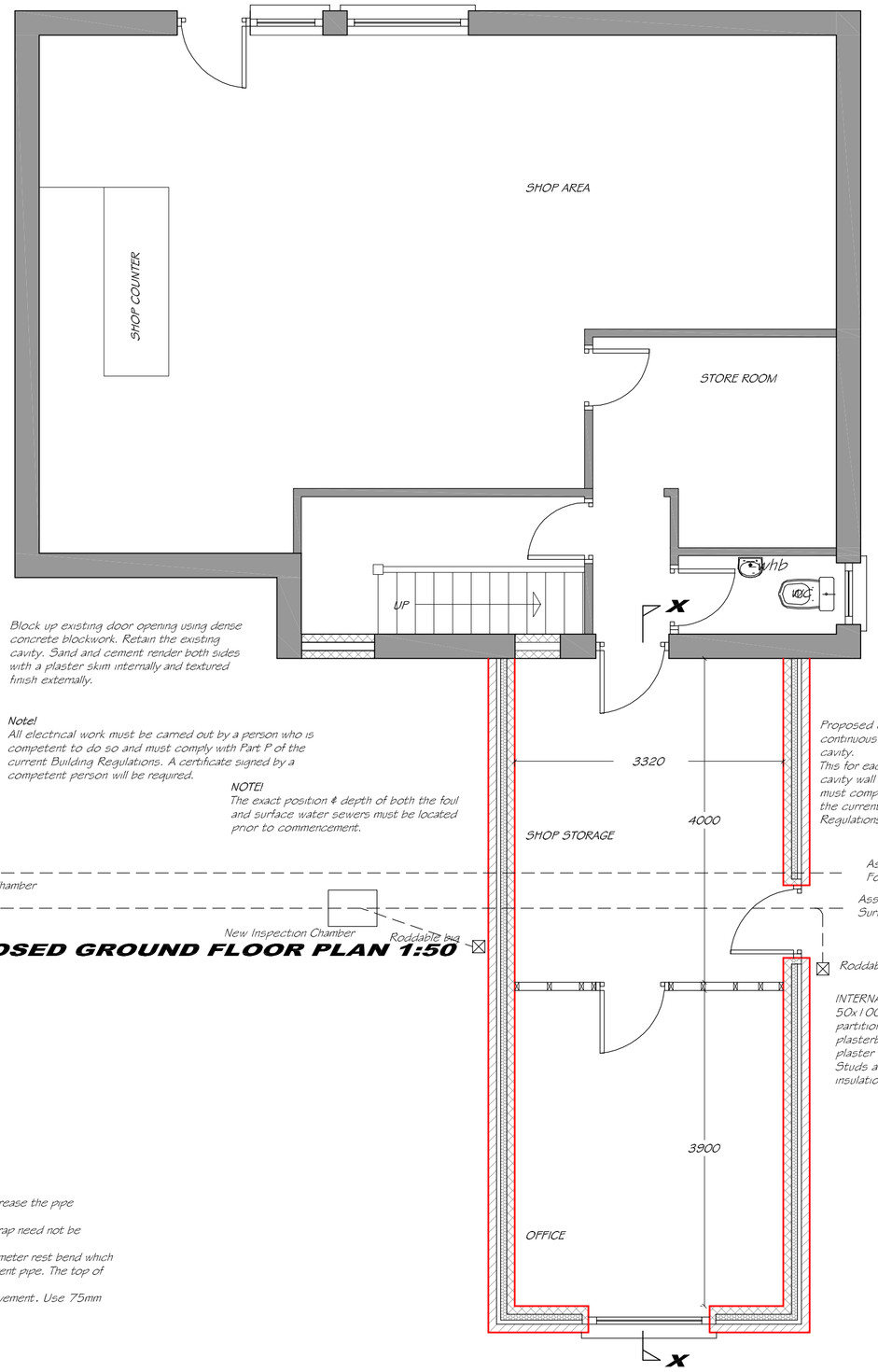
ABOVE GROUND DRAINAGE FOR TAKEAWAY
The minimum trap sizes and seal depths for appliances are as per the following table:-

	Diameter of trap	Depth of seal
Wash-hand	32mm	75mm
WC	100mm	75mm

Where the length of branch exceeds 1.7m for a wash-hand basin, install same "anti-vac" valve or increase the pipe diameter from 32mm to 40mm.
If the larger branch pipe sizes are used for the sink or wash-hand basin, then the diameter of the trap need not be increased, but the tail of the trap should be 50mm long before increasing the diameter.
The soil and vent pipe is to be 100mm diameter PVC.u or similar, fitted with a 300mm internal diameter rest bend which must discharge at least 900mm above any openable area which is less than 3m from the soil and vent pipe. The top of the soil and vent is to have a cage or perforated cover fitted.
Rainwater down-pipes and gutters are to be PVC.u firmly supported without restricting thermal movement. Use 75mm dia down-pipes and 100mm half round gutters.



EXISTING GROUND FLOOR PLAN 1:50



Block up existing door opening using dense concrete blockwork. Retain the existing cavity. Sand and cement render both sides with a plaster skim internally and textured finish externally.

Note!
All electrical work must be carried out by a person who is competent to do so and must comply with Part P of the current Building Regulations. A certificate signed by a competent person will be required.

NOTE!
The exact position & depth of both the foul and surface water sewers must be located prior to commencement.

Proposed cavity to be continuous with the existing cavity.
This for each area where new cavity wall abuts the existing, must comply with Part C of the current Building Regulations.

Assumed line of existing Foul Water Sewer.

Assumed line of existing Surface Water Sewer.

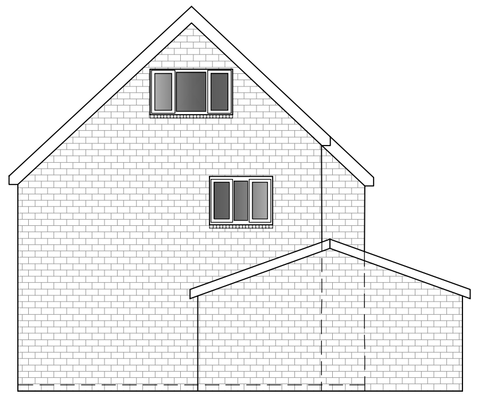
Roddable bug

INTERNAL PARTITION
50x100mm C16 timber stud partition with 12mm plasterboard and 5mm plaster skim both sides. Studs at 400mm c/c.Provide insulation between studs.

New Inspection Chamber

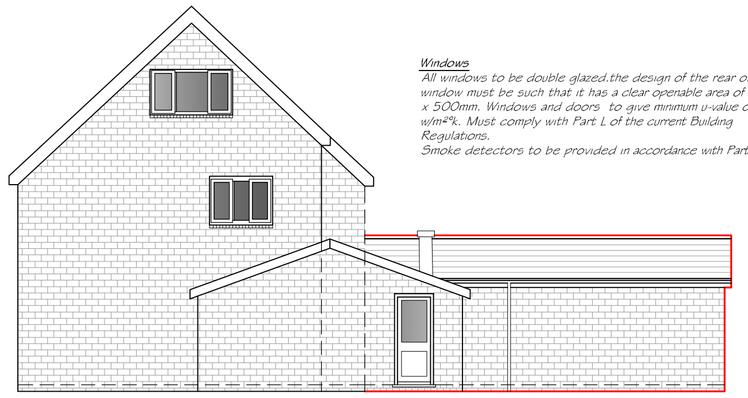
Roddable bug

PROPOSED GROUND FLOOR PLAN 1:50



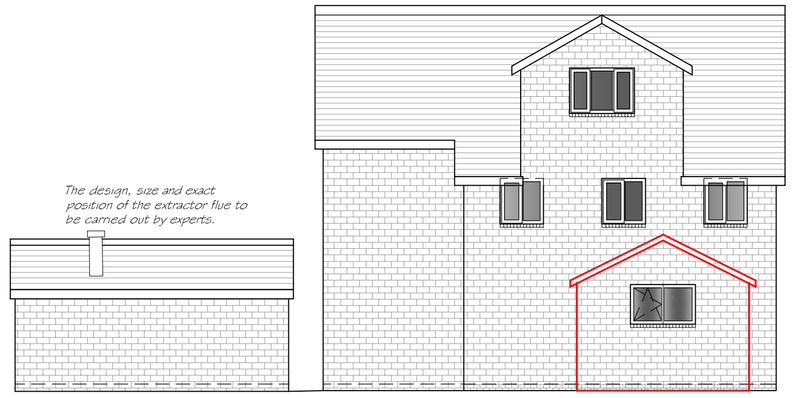
EXISTING SIDE ELEVATION 1:100

EXISTING REAR ELEVATION 1:100

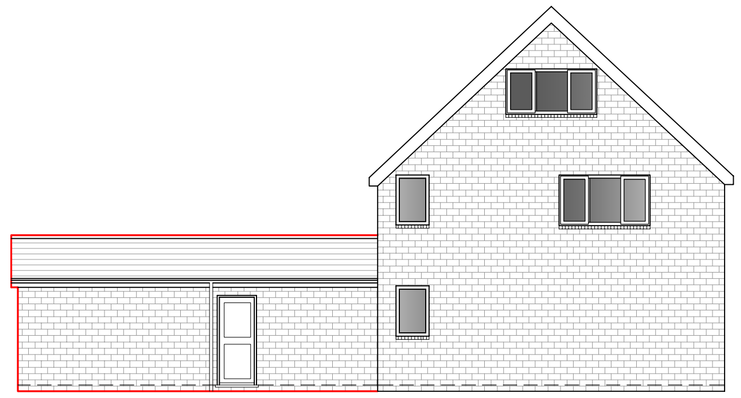


PROPOSED SIDE ELEVATION 1:100

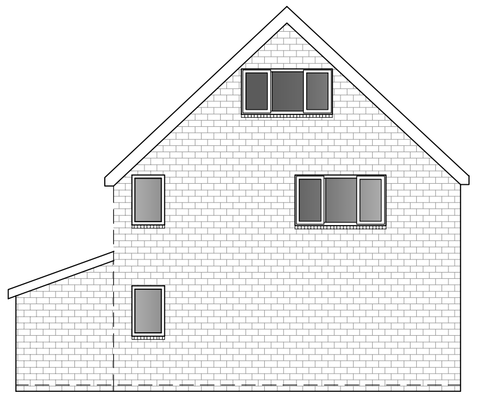
Windows
All windows to be double glazed,the design of the rear office window must be such that it has a clear openable area of 850 x 500mm. Windows and doors to give minimum u-value of 1.6 w/m²k. Must comply with Part L of the current Building Regulations.
Smoke detectors to be provided in accordance with Part B1.



PROPOSED REAR ELEVATION 1:100



PROPOSED SIDE ELEVATION 1:100



EXISTING SIDE ELEVATION 1:100

EXISTING FRONT ELEVATION 1:100

Commercial Extractor Hood
Dimensions:
1800mm (L) x 1100(D) x 500mm(Back Height) / 250mm (Front Height)
3 off Stainless Steel Baffle Filters

Fan Motor
355 Fan motor 2285m3/h Fan motor flanges
3 Amp electronic speed controller

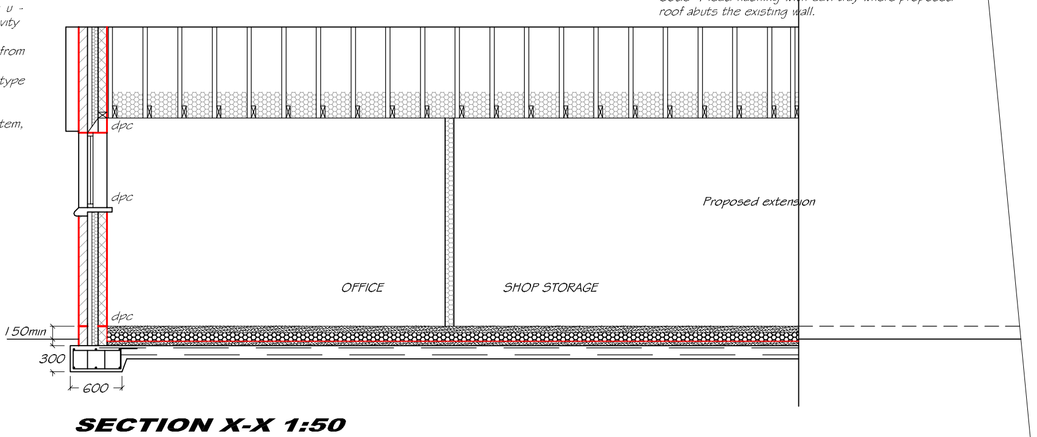
Ductwork
Spigot connection
1 off metre 355mm ducting
Fan motor connection
Roof cowl

PROPOSED FRONT ELEVATION 1:100

EXTERNAL WALLS
BELOW GROUND
These are to consist of a 325mm cavity wall construction comprising of 100mm concrete block, 125mm cavity with galvanised or stainless steel wall ties spaced at 900mm c/c horizontally and 450mm c/c vertically and staggered. The internal skin is to be 100mm concrete block. All blocks used below ground must have a minimum compressive strength of 7N/mm2. The cavity is to be filled to a height of 225mm below the dpc with weak mix cement. The dpc is to be a minimum of 150mm above ground level.
ABOVE GROUND
These are to consist of a 325mm cavity wall construction comprising of an external skin of 100mm brickwork to match existing, 125mm cavity with 75mm 'kingspan' insulation fixed to the warm side of the cavity using proprietary clips. Galvanised or stainless steel wall ties of appropriate length spaced at 750mm horizontally and 450mm vertically and staggered. The internal skin is to be 100mm dense concrete blockwork finished with two coats of sand and cement render and plaster skim. close cavity at eaves with 'supertex' or similar.
The thermal transmittance (u - value) of the cavity wall construction is to be 0.21w/m²k. It is recommended that the u - value at heads, cills and unbonded jambs does not exceed 1.2 w/m²k. This can be achieved by using 'thermabate' cavity closure system or other methods described in BR 143 thermal insulation; avoiding risks.
The wall ties at unbonded jambs are to be placed at a maximum of 300mm vertically and 150mm maximum horizontally from the unbonded jamb.
All lintels are to be taken from the "Catnic" or "I.G." standard range, with a minimum end bearing of 150mm. Size and type to be verified by manufacturer.
TYING-IN
Where new walls are to be tied to existing, they are to be mechanically fixed using a proprietary building profile system, e.g. "furfix", "catnic" or similar. The system must be fixed in strict accordance with manufacturers written specification.

ROOF CONSTRUCTION
This will comprise of concrete interlocking tiles to match existing fixed in accordance with manufacturers' instructions. These to be secured to 50 x 25mm tanalised roofing battens over breathable roof felt to BS5534 on 47x150mm C16 rafters at 400mm c/c. 50 x 100mm softwood wall-plate secured using 30 x 5 x 1200mm durable mild steel straps at intervals not exceeding 2metres. Ridge board 25x175mm C16 timber.
The ceilings are to be 9.5mm plasterboard and 5mm plaster skim finish on 47x145mm C16 timber joists at 400mm c/c.
Provide 300mm thick quilt or similar approved insulation laid between joists and 150mm over joists and over the wall plate to avoid cold bridging. Must give a minimum thermal transmittance (u-value) of 0.15W/m²k.
Provide ventilation to roof space by means of a 25mm air gap at soffit with fly-proof mesh and proprietary vent tiles to ensure through ventilation.

Code 4 lead flashing with cavi-tray where proposed roof abuts the existing wall.



SECTION X-X 1:50

GROUND FLOOR CONSTRUCTION
This is to comprise of 75mm thick 1:3 sand and cement screed on insulation in the form of 75mm thick 2400 x 1200 mm rapid slabs with a maximum k-value of 0.026 w/mk. Use 50mm sand make-up laid on foundation slab. 1200 gauge visqueen damp-proof membrane laid directly on sand and continuous with the horizontal dpc on proposed raft foundation slab.
The raft foundation is to be laid on 150mm minimum compacted Grade 1 sub-base hardcore. Blind with sand. Connect membrane to dpc. The hardcore should be compacted in layers of 100mm with the maximum depth of hardcore not to exceed 600mm. Thermal transmittance (u-value) of the floor construction is to be a maximum of 0.18 w/m²k.
Refer to Structural Calculations.

BELOW GROUND DRAINAGE
All new drains are to be 100mm diameter pvc.u, poly-pipe or similar with flexible joints laid to falls on a granular bed. minimum fall 1:40.
Where pipes pass under the building they must be encased with 150mm mn C20 grade concrete.
All back inlet gullies and rainwater gullies must have roddable access.
All new manholes are to be constructed of Class B engineering bricks to BS 3921 (1985) and laid in english bond with 1: 3 sand cement mortar to BS 5628, on a 150mm mn C20 concrete base. All entries to the manhole are to be formed using 3/4 section channels. Inspection chambers are to be fitted with light weight galvanised cover and frame. If the manhole is to be internal use double sealed bolted down type.
Notel all works must comply with BS 8301.

Client:	Project:	Drawing Title:	Date:
MR MICHAEL EVANS	PROPOSED REAR SINGLE STOREY EXTENSION & TAKEAWAY CONVERSION AT: 'PREMIER' SHOP. TWYNCARMEL, MERTHYR TYDFIL	PROPOSED PLANS, SECTION & ELEVATIONS	SEPTEMBER 2020