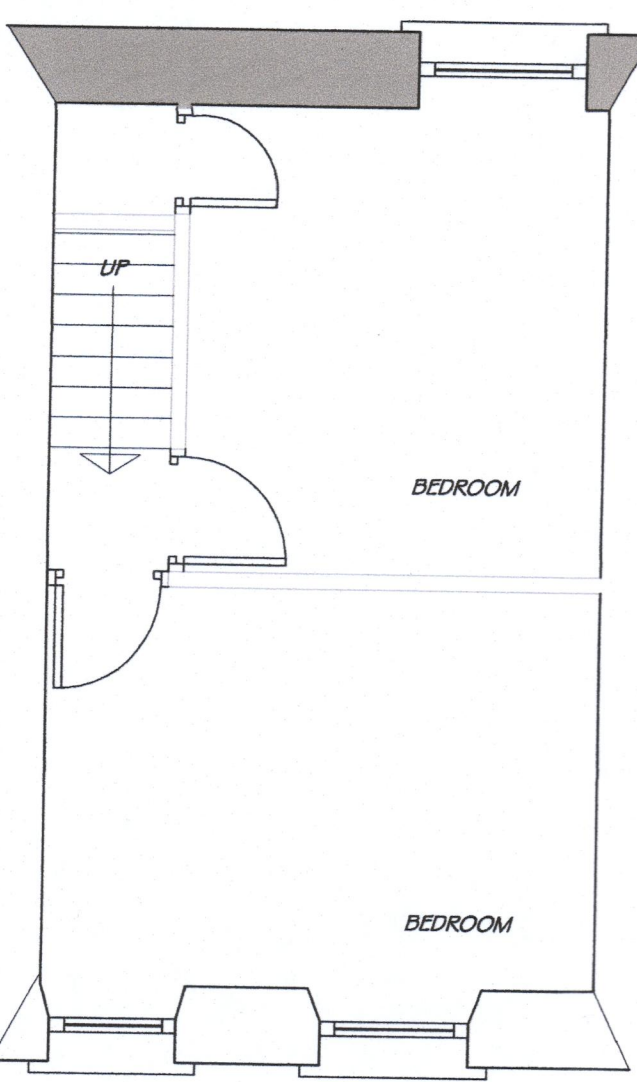


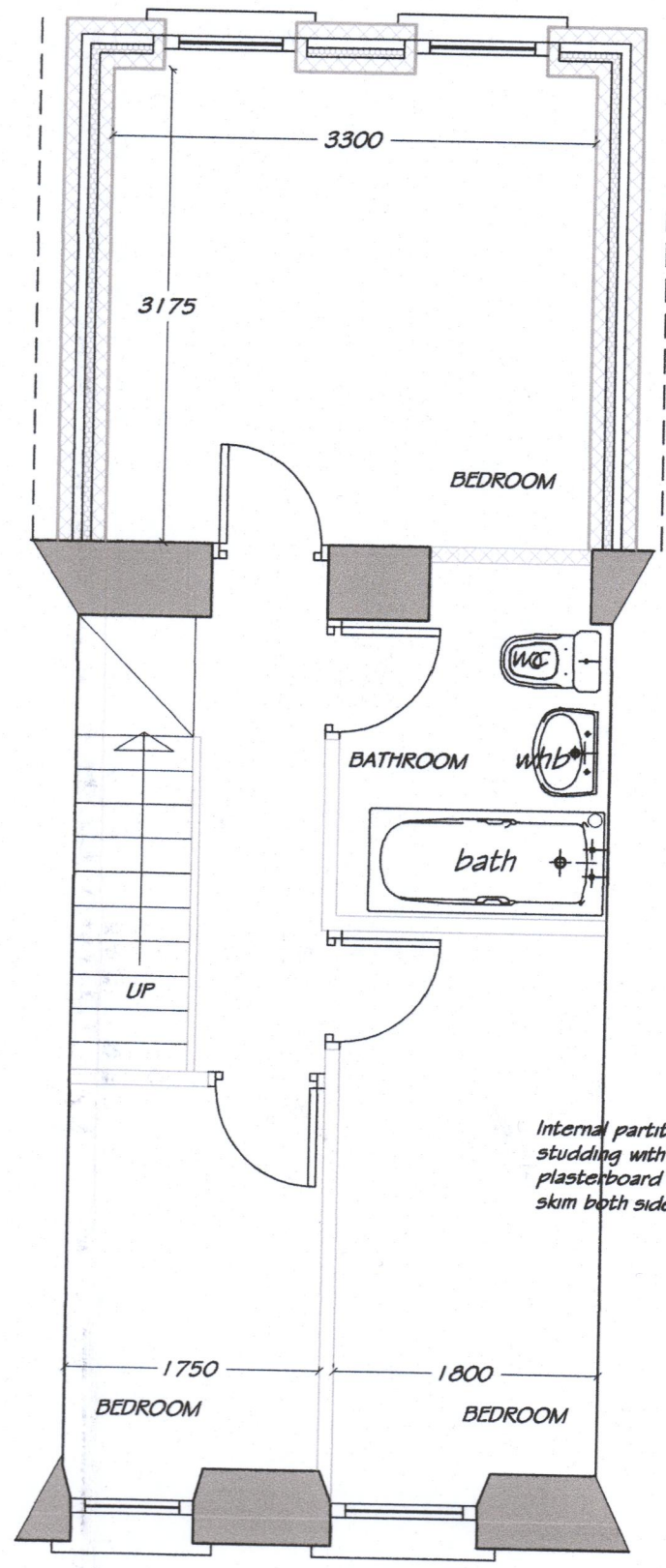
ABOVE GROUND DRAINAGE

Appliance	Minimum trap size and seal depths for appliances are as per the following table:
Wash-hand	40mm
Shower	35mm
WC	100mm

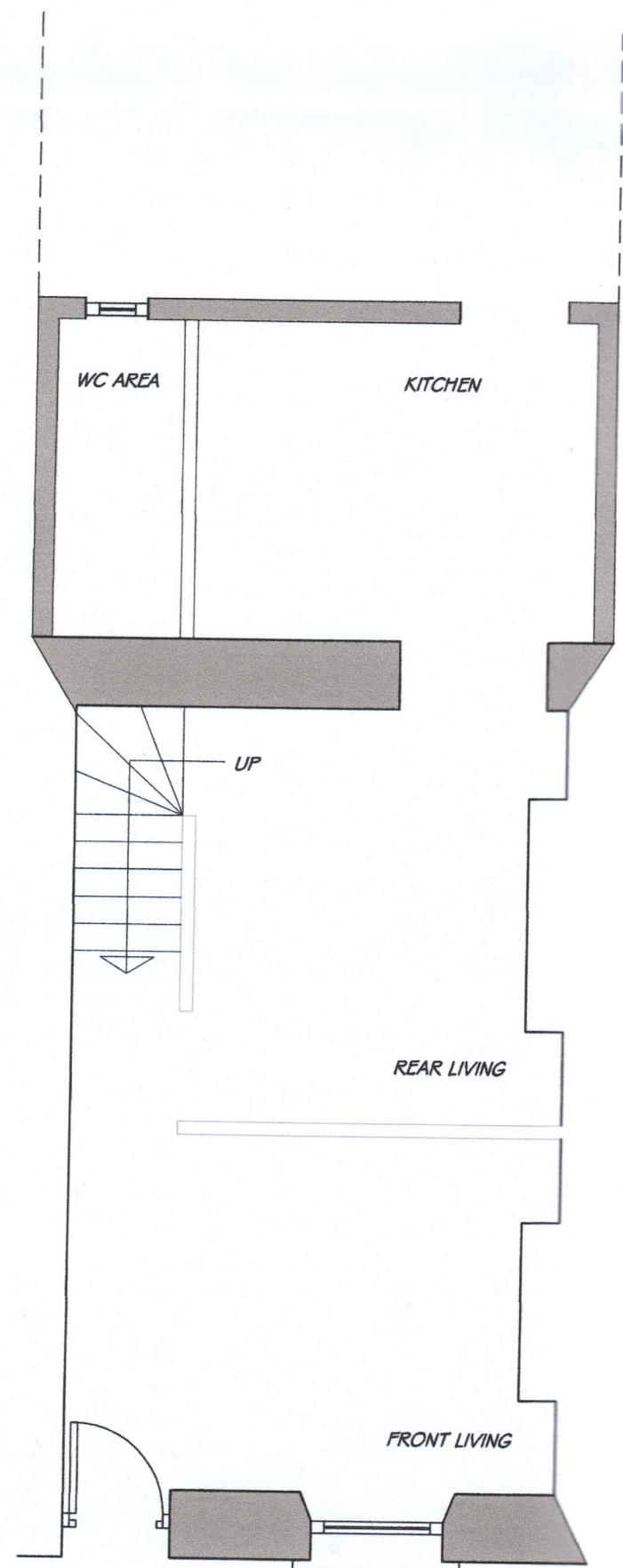
Where the length of branch exceeds 3m for a sink, bath or a shower, install an 'air-vac' vent or increase the pipe diameter from 40mm to 50mm.
Where the length of branch exceeds 1.7m for a wash-hand basin, install same 'air-vac' vent or increase the pipe diameter from 35mm to 40mm.
If the larger branch pipe runs any other way than the sink or wash-hand basin, then the diameter of the trap need not be increased, but the fall of the trap should be 30mm long before connecting the branch.
The soil and vent pipe is to be 100mm diameter PVC-U or similar, fitted with a 200mm internal diameter root head which must discharge at least 300mm 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 vented cover fitted.
Rainwater downpipes and gutters are to be PVC-U firmly supported without restricting thermal movement. Use 75mm dia downpipes and 100mm half round gutters.



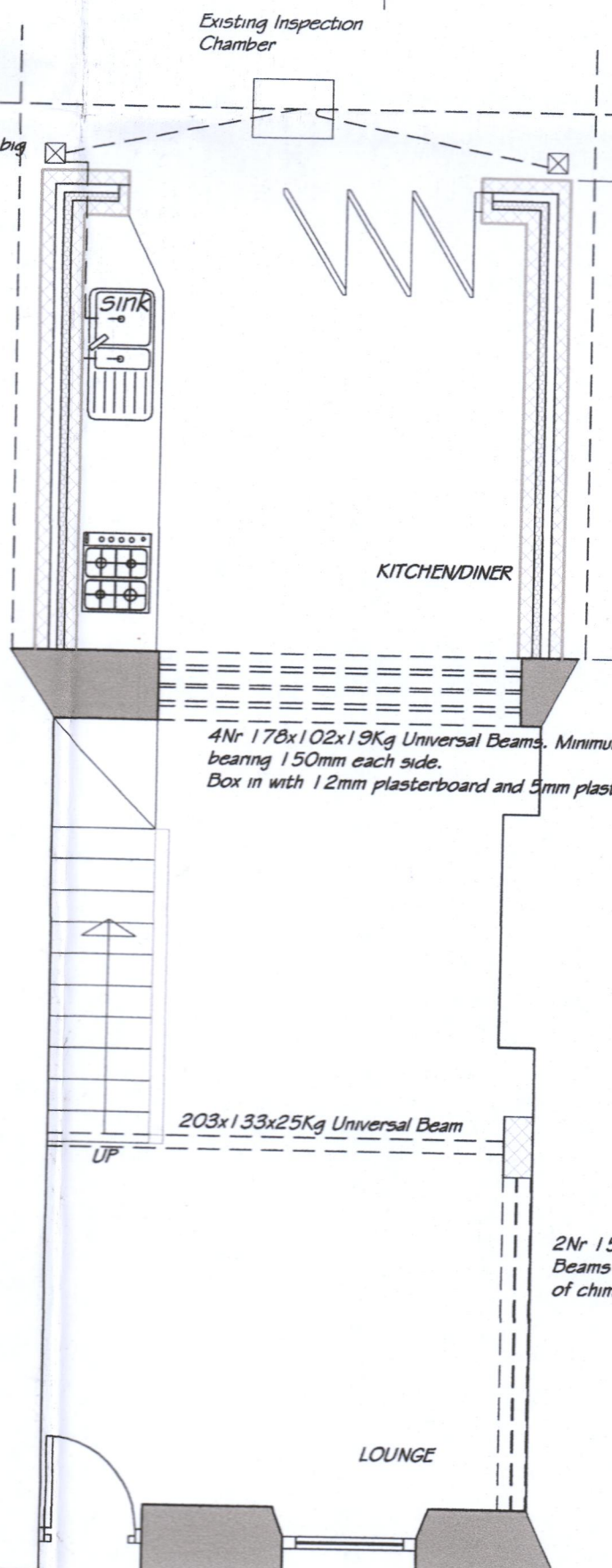
EXISTING FIRST FLOOR PLAN 1:50



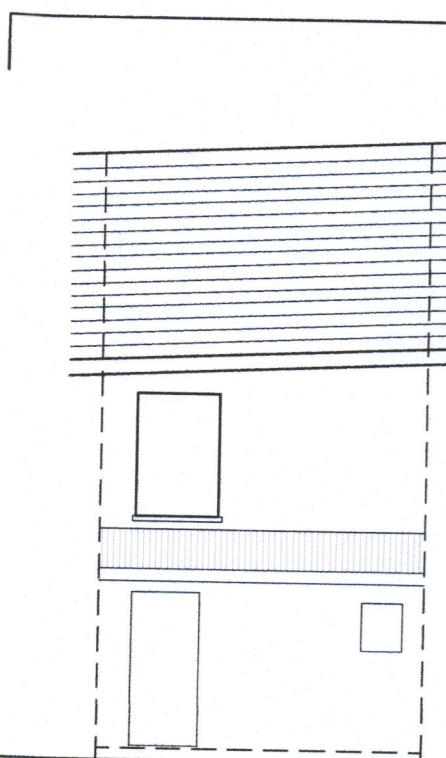
PROPOSED FIRST FLOOR PLAN 1:50



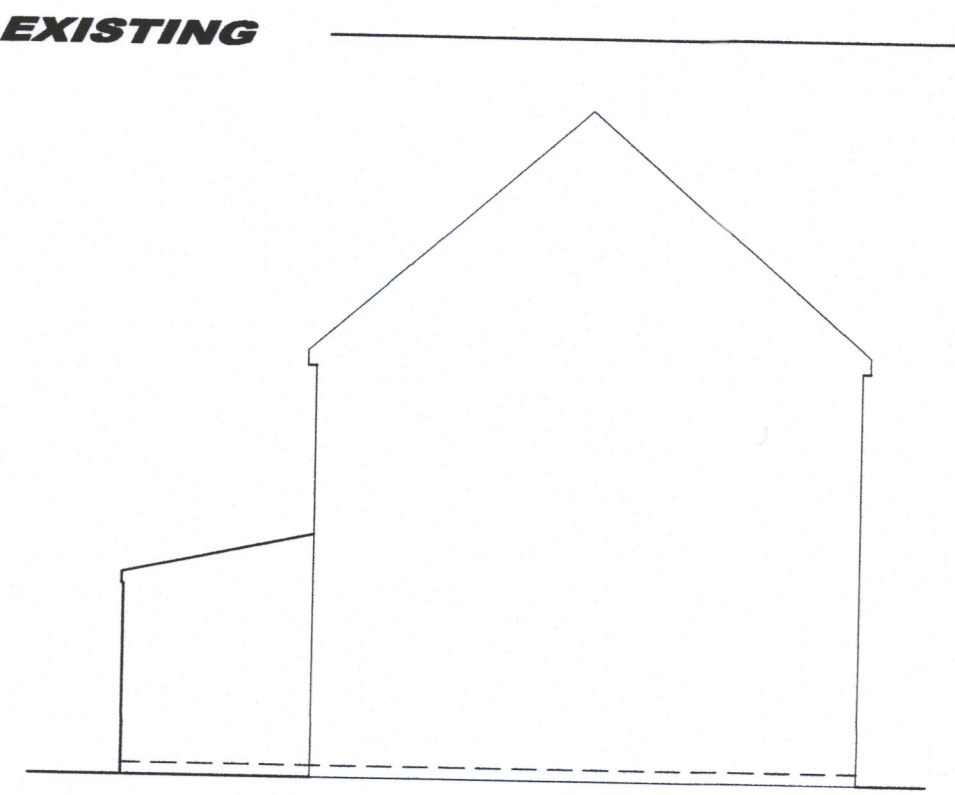
EXISTING GROUND FLOOR PLAN 1:50



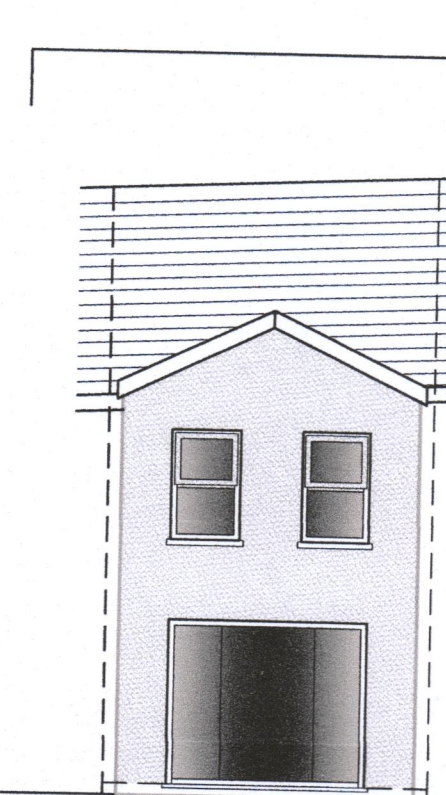
PROPOSED GROUND FLOOR PLAN 1:50



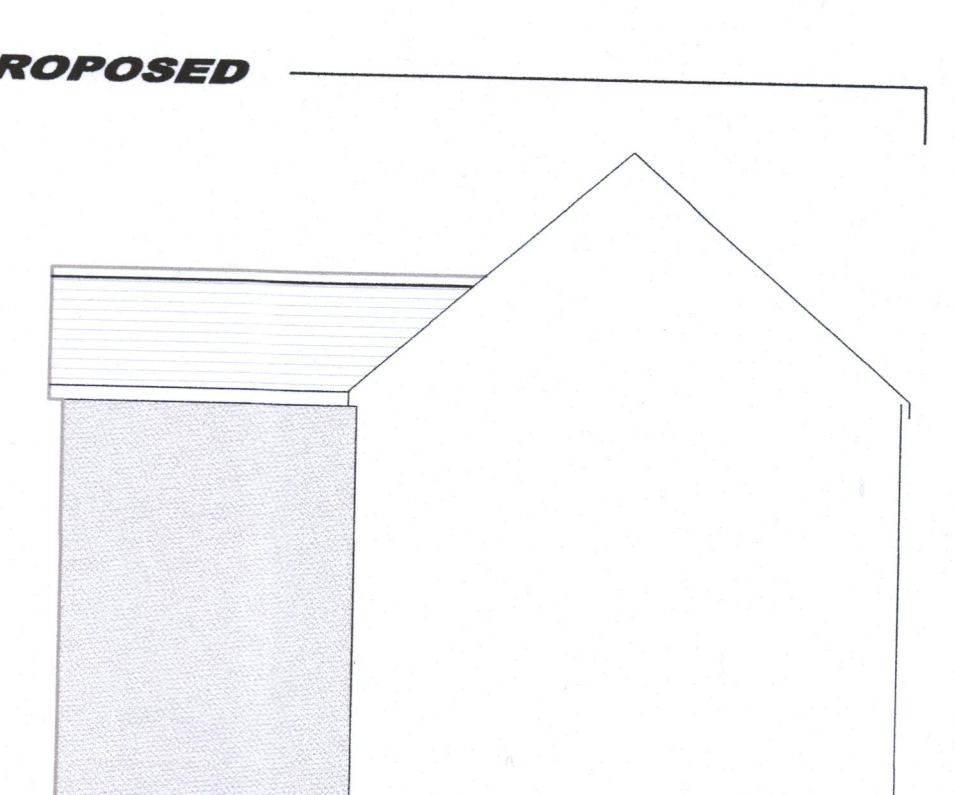
REAR ELEVATION 1:100



SIDE ELEVATION 1:100



REAR ELEVATION 1:100



SIDE ELEVATION 1:100

VENTILATION
Habitable Rooms
For rapid ventilation each proposed habitable room must have an openable area of at least 1/20th of the floor area of the room served, with some part of the opening at least 1.7m above ground level.
In addition background ventilation must be provided having an openable area of not less than 0.0002m². The openable area should be controllable, secure and located to avoid under draughts or triple ventilation.
Kitchen
Mechanical extractor fan capable of extracting 30litres/sec if the fan is located in a cooler hood or is located in the ceiling within 300mm of the centre line of the hood, otherwise a fan capable of extracting 60litres/sec should be provided. Also provide trickle ventilation via a secure opening of min area 0.0002m².
Smoke detectors to be provided in accordance with Part B1.

EXTERNAL WALLS
Below Ground
These are to consist of a 350mm cavity wall construction comprising of 100mm concrete block, 150mm cavity with galvanneal or stainless steel wall ties spaced at 750mm 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 7.4N/mm². The cavity is to be filled to a height of 225mm below the dpc with weak ver cement. The dpc is to be a minimum of 150mm above ground level.
Above Ground
These are to consist of a 350mm cavity wall construction comprising of an external skin of 100mm blockwork, 150mm cavity with 100mm Kingspan insulation fixed to the warm side of the cavity using proprietary clips. Galvanneal 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 skin. Close cavity air cavity with Styrofoam or similar. External finish s/c render with glass finish to match existing.
The Thermal Transmittance (U-value) of the cavity wall construction is to be 0.16W/m²K. It is recommended that the U-value at heads, sills and unobstructed joints does not exceed 1.2 W/m²K. This can be achieved by using 'thermafix' cavity closure system or other methods described in BR 143 Thermal insulation.
The wall ties at unobstructed joints are to be placed at a maximum of 300mm vertically and 150mm maximum horizontally from the unobstructed joint.
All lintels are to be taken from the 'Catalogue' or 'i.c.' standard ranges with a minimum bearing of 150mm. Size and type to be verified by manufacturer.
TYPICAL
Where new walls are to be built to existing, they are to be mechanically fixed using a proprietary building profile system, e.g. 'Nufix', 'Sulfix' or similar. The system must be fixed in strict accordance with manufacturers written specification.

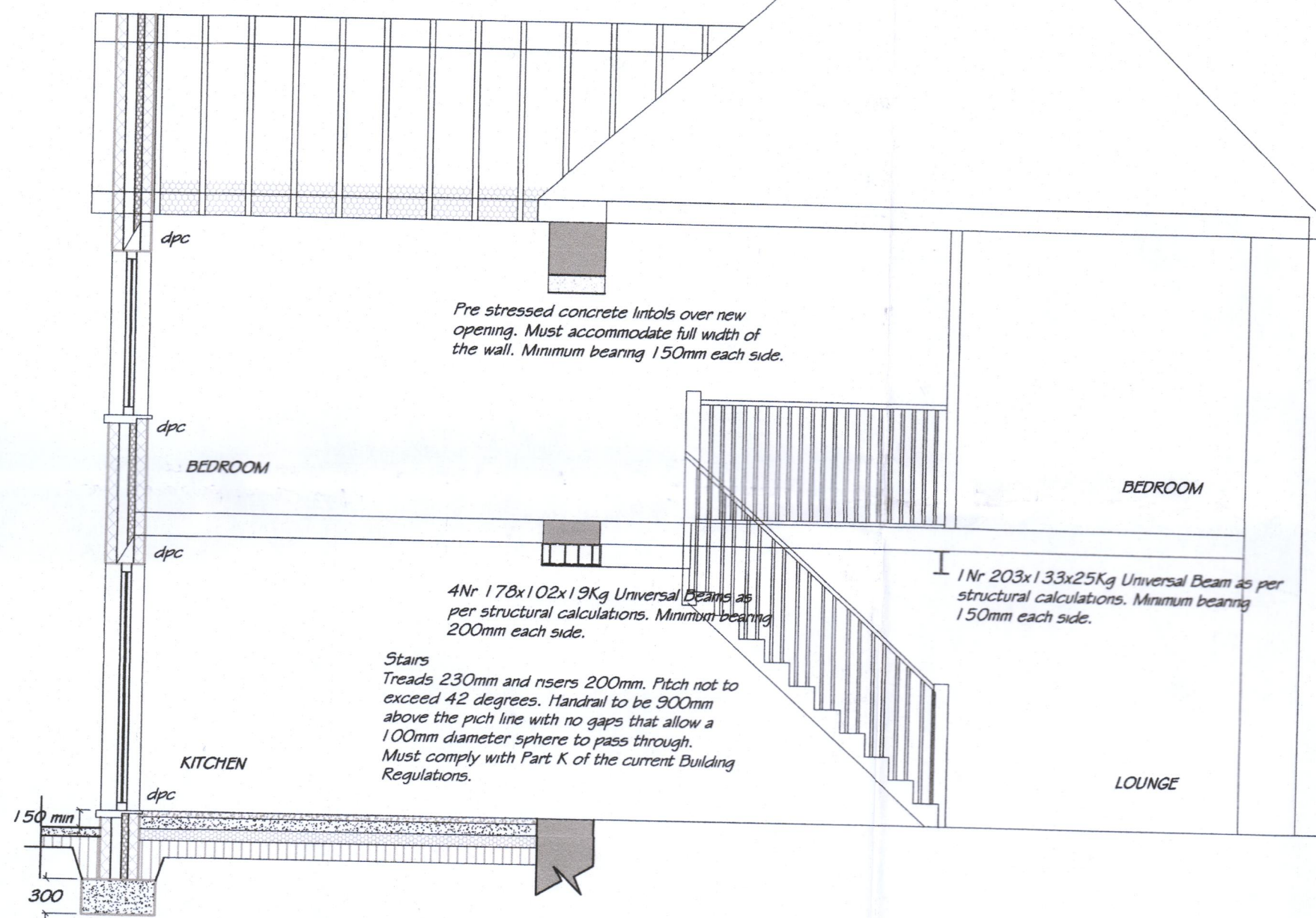
GROUND FLOOR CONSTRUCTION
This is to comprise of 50mm thick 1:3 sand and cement screed on 100mm C20 concrete. Kingspan or similar approved insulation is to be placed below the overhead concrete in the form of 75mm thick Kingspan or similar approved 2400 x 1200 mm rigid slabs with a maximum U-value of 0.032 W/m²K, laid directly on 2 layers of 200 gauge virgin polypropylene damp-proof membrane laid continuous with the horizontal dpc. Joints between membrane must be sealed to produce an air-tight joint. The double dpc is laid on 150mm minimum compacted grade 1 sub-base hardcore. (Brid 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. The thermal transmittance (U-value) of the floor construction is to be a maximum of 0.16 W/m²K.

FOUNDATIONS
The foundations for the proposed retaining walls that carry the cavity wall construction are to be C20 grade concrete strip foundations 600 x 300mm. They are to be taken down to a minimum depth of 750mm, however the actual depth will be dependent upon the actual depth sound bearing strata and is subject to a site inspection by the local Authority building control department. Where a drainage trench is within one metre of the building, the trench must be filled to a depth level with the underside of proposed foundation. Where the trench is more than one metre from the building, it must be filled with concrete to a depth of not less than 150mm below the underside of the proposed foundation.

ROOF CONSTRUCTION
The wall comprise of concrete interlocking tiles to match existing fixed in accordance with manufacturers' instructions. These to be secured to 50 x 25mm sandbashed roofing battens over battens fixed to G55534 on 47x195mm C16 rafters at 400mm c/c. 50 x 100mm soffited wall-plate secured using 30 x 5 x 1200mm durable mild steel straps at intervals not exceeding 900mm. Ridge board 25x75mm C16 timber. 25x175mm C16 timber valley boards with code 4 lead. The rafters are to be 25mm plasterboard and 5mm plaster skim finish on 47x195mm C16 timber joists at 400mm c/c. The ceiling joists to be supported using 75x195mm C16 timber hangers, suspended from apex. Provide 300mm thick gull or similar approved insulation laid between joists and 150mm over joists and over the wallplate to avoid cold bridging. Must give a minimum thermal transmittance (U-value) of 0.19W/m²K. Provide ventilation to roof space by means of a 25mm air gap at soffits with fly-proof mesh and proprietary vent-fans to ensure through ventilation.

NOTES
1. If there is no loft insulation (or less than 200mm thick) then the existing must be increased to a thickness of 250mm min. If the existing has un-insulated or partially insulated cavity walls, fit with insulation where suitable.
Also, if a water cylinder is evident, upgrade the insulation as follows:
2. If the un-insulated cylinder is 100mm thick, add a further 100mm insulated jacket to achieve a total thickness of 160mm.
3. If the cylinder has factory fitted solid foam insulation less than 25mm thick, add an 80mm insulated jacket.

WINDOWS
All windows to be double glazed. The design of all first floor windows, new and existing, must be such that they have a clear openable area of 550 x 500mm. Use 4-panes to give minimum U-value of 1.6 W/m²K.
NOTES
The lowest point of opening must be less than 1100mm above floor level.
NOTES
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.



SECTION X-X 1:50

FIRST FLOOR CONSTRUCTION
100mm floor grade screed on 47 x 195mm C16 timber floor joists at 400mm c/c. Fix to existing wall and rear extension walls using 50x195mm battens with galvanneal steel bangers secured. Ceiling to be 12mm plasterboard with 5mm plaster skim. 100mm thickness all-round mineral wool insulation with a minimum density of 10kg/m³ to be laid between joists to comply with part E of current Building Regulations. Provide lateral support at first floor level to those walls running parallel to the floor joists and at soffit level to those walls parallel to the ceiling joists/rafters or at each location if necessary.
NOTES
Double joists under first floor partition between the bedrooms in the extension.



LOCATION PLAN 1:1250

Client: **MR MIKE REGAN**

Project: **PROPOSED TWO STOREY EXTENSION AT: 7, FAIRVIEW TERRACE, CEFN COED, MERTHYR TYDFIL**

Drawing Title: **PROPOSED & EXISTING PLANS & ELEVATIONS**

Date: **FEBRUARY 2024**