

PROPOSED GROUND FLOOR PLAN

FOUNDATIONS

NOTE. It is recommended that a trial hole be dug on the site to determine the existing footing type and ground conditions. Where an existing single storey structure is to be built on top of or where a loft conversion is being carried out, the inspector will want to see the base of the existing footings to determine its suitability to carry additional loading. This will allow any design work to be done during the early stages of the application process, building control records may also assist with local area knowledge, e.g. shallow mining etc. Builder should initially allow for a strip footing of 900mm minimum dig, client should note that anything over this as required by the inspector will incur extra design and building costs. Please note that if there are trees nearby the depth of the foundation may need to comply with NHBC Guidance 'Building near trees'.

All Foundations to be excavated to a depth to satisfy building control inspector, any excavations within 1m of new or existing drains to be taken below invert level, any new or existing drains passing through substructure to be protected by bridging lintels. Footings to be traditional concrete strip type minimum dimension 600mm x 600mm thick and are not to be eccentrically loaded without further design work. Builder must check that footing type has been approved and no additional design work is required before pouring concrete. New walls to be built to ensure minimum 150mm toe to concrete footing each side.

STRUCTURE - CAVITY CONSTRUCTION - U-VALUE 0.18 W/m2k

Walls to be cavity construction throughout. Outer leaf to be of facing bricks to match existing, inner leaf to be Plasmor Fibolite 3.6N/7.2N or similar blockwork.

All cavity work to be tied with ties at rate of 5 per m2, minimum spacing of 450mm vertically and 900mm horizontally and at every course at openings. Ensure continuity of insulation between cavity wall and rafters.

In order to comply with building regulations Part L, insulate cavity wall using one of the 4 options below.

- 125mm cavity insulated with 75mm Kingspan TW50 Or Celotex CW4000 mechanically fixed to internal blockwork to ensure 50mm air gap between insulation board and external skin. Insulate internally with 32.5mm Kingspan K118 or similar insulated plasterboard.
- 100mm cavity insulated with 100mm Dritherm 32. Insulate internally with 52.5mm Kingspan K118 or similar insulated plasterboard.
- 100mm cavity can be used insulated with 90mm Celotex Thermaclass Cavity Wall 21 or Kingspan K106 mechanically fixed to internal Plasmor Fibolite 3.6N/7.2N or similar blockwork strictly in accordance with manufacturer's requirements. Ensure 10mm air gap between insulation board and external skin.
- 150mm cavity fully insulated with 150mm Dritherm 32 or similar.

External return corners always to be a minimum of 665mm or alternatively where this cannot be achieved ensure a 330mm x 1000mm solid brick pier. Cavity only to be closed at openings with insulated closer. Ensure all new work is tied to existing using proprietary galvanised jointing system or by bonding into existing and ensure saw cut with dpc between where new cavity meets existing structure. Cavity below ground level to be filled with weak mix concrete to within 150mm of ground level and dpc to be provided to both leaves at min 150 mm above ground level linked to dpm/radon barrier with appropriate cavity tray and weep holes, if a timber floor is used then a cavity tray should be used over the airbrick liners. Ensure blocks used below ground level are trench blocks.

STRUCTURAL CHANGES

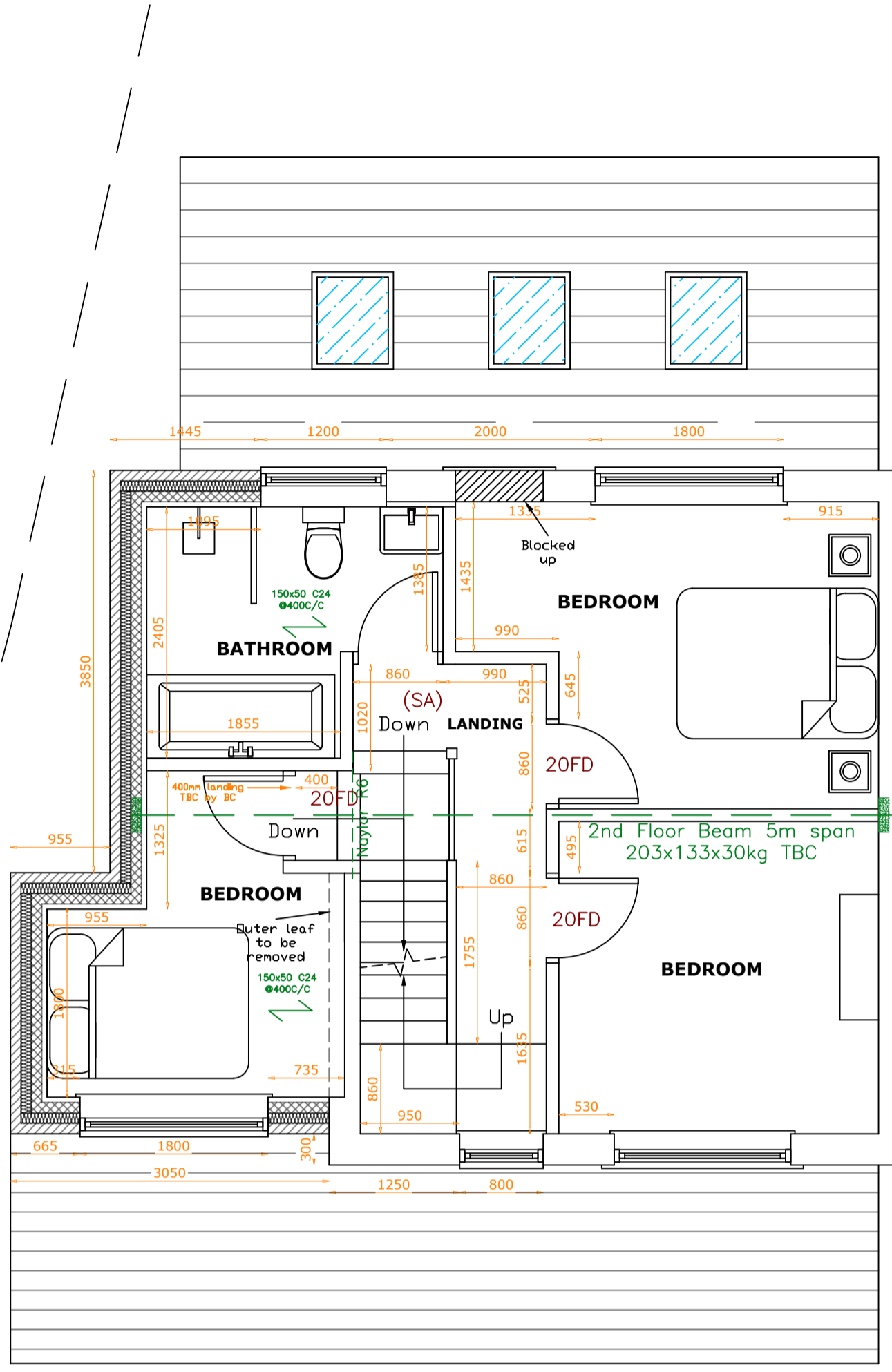
Any structural work is to be to structural engineer's details for foundations, retaining walls, roof timbers, beams, padstones and support nibs to ensure overall stability and work should not commence until these have been specifically approved. Builder should check with agent that calculations have been approved before altering room layouts or ordering steels. All steelwork is to receive ½ hour fire protection and any beams above 3m span should be bolted together at either end and mid-span. Provide all necessary temporary supports when demolishing walls and check for any services which should be made safe. Steels should be placed as high as possible subject to direction of first floor joists and always be a minimum of 2000mm finished headroom. Any concrete lintels or cantic lintels should be installed in accordance with manufacturer's instructions and have minimum 150mm bearing each side. If an angle is proposed above an external opening, it should be propped at mid span for a minimum of 2 weeks whilst mortar sets to ensure optimal strength and integrity. Where a portal frame is to be used the builder must ensure the steels, connection details and pad foundations are strictly to the engineer's design provided. Calculations will be submitted a minimum of 14 days prior to installation of steels and builder should contact agent in time to allow this.

GROUND FLOOR - TIMBER - U-VALUE 0.18 W/m2k

The whole of the ground floor extension footprint is to receive a 2000-gauge membrane to act as a radon barrier taken across the cavity below ground level laid on sand blinding on well compacted hardcore followed by oversite concrete minimum 100mm. Ensure minimum 150mm void above concrete before floor timbers to ensure adequate sub floor ventilation. Oversite concrete must not be lower than the surrounding external ground level. If it is then concrete floor may be a better option or the entirety of the sub-floor must be tanked by providing a 2000 gauge membrane under the oversite, up the cavity behind the inner blockwork and back on to the inner wall under the bearing of the floor joists. Any joints need to be taped.

Knock through any existing ventilation grates to improve air flow. Use 225mm x 150mm air grates at 1.8m centres

Use a 150mm x 50mm C24 timber suspended floor at 400mm centres with mid-span strutting (do not exceed 3m span) with Kingspan Kooltherm K103 Floorboard insulation board, minimum 130mm suspended between the joists or Celotex XR4000 140mm. Finish with 18mm moisture resistant T&G chipboard.



PROPOSED FIRST FLOOR PLAN

GROUND FLOOR - CONCRETE - - U-VALUE 0.18 W/m2k

Alternatively, the floor is to be a well compacted hardcore at least 150mm thick, followed by sand blinding then a 2000 gauge visqueen dpm/radon barrier linked to the dpc which should be taken across the cavity and a cavity tray with weep holes used to the whole perimeter.

Use 100mm Kingspan Kooltherm K103 Floorboard or similar insulation followed by a polythene separating layer and then 25mm perimeter edge insulation around concrete sub floor base 150mm thick. Ensure sub floor ventilation is maintained to any existing timber floor using plastic pipe ducting.

FIRST FLOOR - TIMBER - U-VALUE 0.18 W/m2k (Area above garage)

Use a 150mm x 50mm C24 timber suspended floor at 400mm centres spanning left to right between side walls, with mid-span strutting

Fix straps to sides of joists at 2m centres to provide lateral restraint to the side wall at first floor level.

Insulate between joists where above habitable spaces using 100mm mineral wool sound proofing of minimum 10kg/m3 density followed by 18mm moisture resistant T&G flooring grade chipboard. Insulate between joists where above garage/storage area using minimum Celotex XR4000 140mm.

Finish above using 18mm or 22mm moisture resistant tongue and groove flooring grade chipboard.

Use pink fireline board to ceiling of garage/storage area.

ROOF - SINGLE STOREY LEAN TO (FRONT & REAR EXTENSIONS) - U-VALUE 0.15 W/m2k

Form new roof using 150mm x 50mm C24 Grade rafters at 450mm centres which should be doubled up at sides of velux windows ensuring that each rafter is mechanically fixed top and bottom. Use a 150mm x 50mm timber wall plate bolted to the rear wall with M10 anchor bolts at 600mm centres. Use a 100mm x 75mm timber wall plate bedded on cement:sand mortar on the inner leaf and held down with 30mm x 5mm x 1m long galvanized straps plugged and screwed to blockwork at a maximum of 2m centres. Ensure a good birds mouth cut to the rafters over the top and bottom wall plates and mechanical fixings.

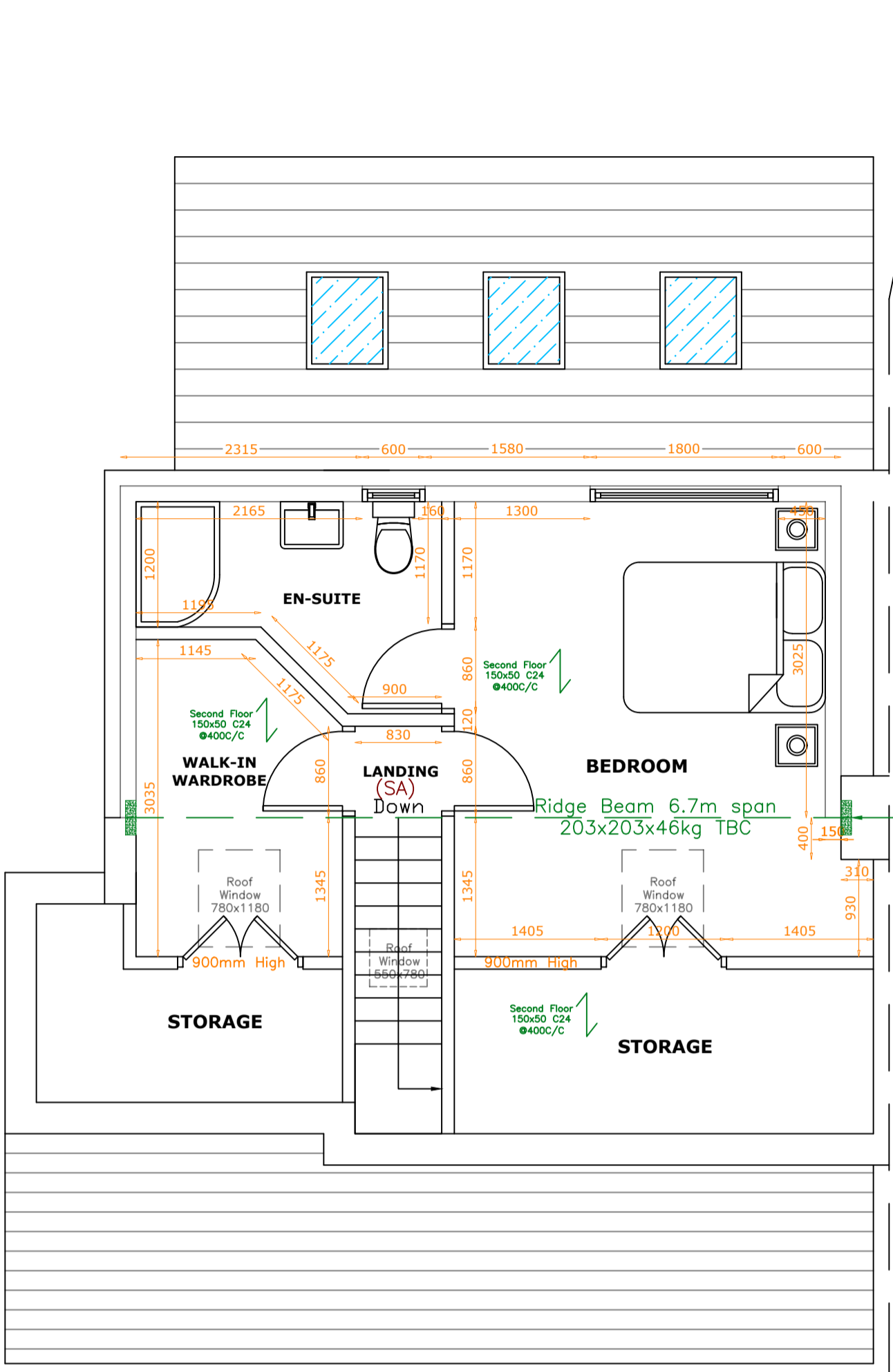
Fix noggins where possible between rafters at gable ends to hold straps to retain brickwork verge, straps to be fixed to noggins and turned down cavity two per end elevation.

Use 38mm x 25mm tanalised battens and a breathable felt such as Tyvek followed by roof tiles to match suitable for the pitch and exposure conditions. A minimum of 15 degrees must be achieved where Velux roof windows are being used. If this cannot be achieved than a low pitch roof tile and special roof window should be used. For example, but not specifically, Planum low pitch clay roof tile using 180g/m2 air permeable membrane, 100mm headlap and tile clips to manufacturers instruction and specification, and low pitch Velux or Fakro roof window fitted in accordance with manufacturers details.

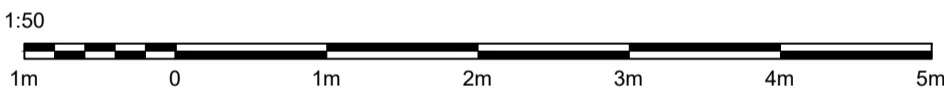
Use a code 4 lead flashing with minimum 150mm upstand and lead wedge into brick joint with sand:cement pointing.

Insulate all rafters with 100mm Kingspan K107 Pitched Roof Board between the rafters fixed to warm side with 50mm ventilation void to cold side. Insulate across rafters with Kingspan K118 57.5mm rigid insulated plasterboard. Ensure continuity of insulation between cavity wall and rafters.

NOTE: INSULATION MUST BE KINGSPAN K107 AND K118 ANY OTHER FOR EXAMPLE CELOTEX XR4000 AND PL4050 WILL REQUIRE MORE INSULATION TO ACHIEVE REQUIRED 0.15 U-VALUE.



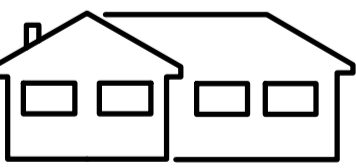
PROPOSED SECOND FLOOR PLAN



DO NOT SCALE FROM DRAWING, ALL DIMENSIONS TO BE CHECKED ON SITE.

ANY STEELWORK SHOWN IS INDICATIVE AND SHOULD ALWAYS BE CONFIRMED WITH ENGINEER'S DETAILS.

IT IS IMPERATIVE THAT WE ARE INFORMED AT LEAST 4 WEEKS BEFORE BUILDING WORKS ARE DUE TO START ON SITE SO THAT WE CAN SUBMIT THE BUILDING CONTROL APPLICATION AND ENSURE THAT ALL NECESSARY DOCUMENTATION HAS BEEN PROVIDED



The Old Co-op Building
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Sheffield S13 9AG
neil@plansforextensions.com
07756495241

Plans For Extensions

PROPOSED DOUBLE STOREY SIDE SINGLE STOREY FRONT AND REAR EXTENSIONS WITH A LOFT CONVERSION

FOR HOLLY HAIGH

25 WORSBROUGH VIEW TANKERSLEY BARNSELY S75 3AH

DRAWING 4 OF 5 PROPOSED FLOOR PLANS

SCALE 1:50 AT A1 DATE: NOVEMBER 2023