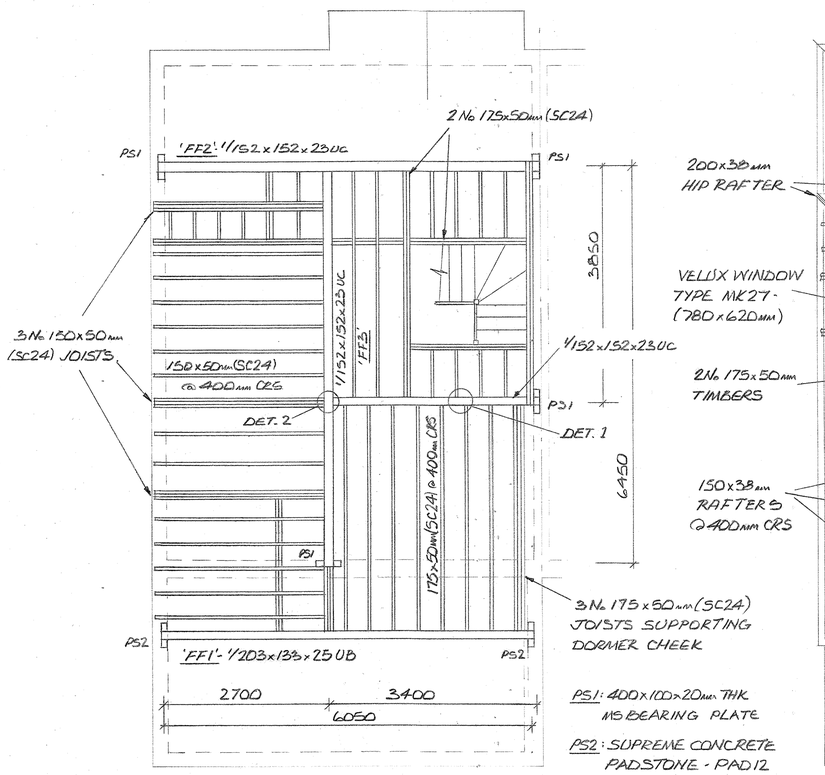
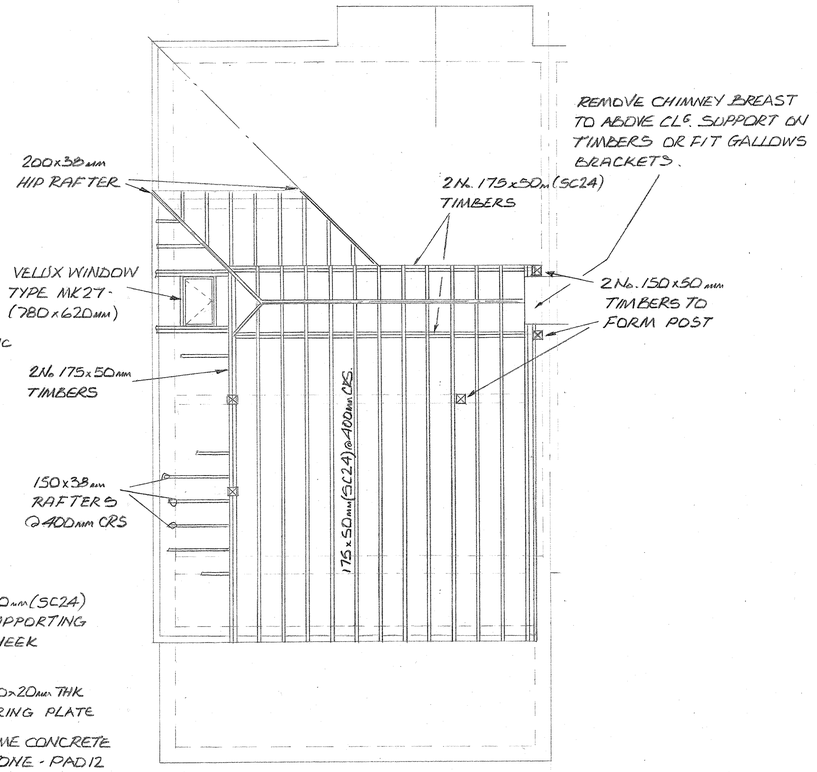
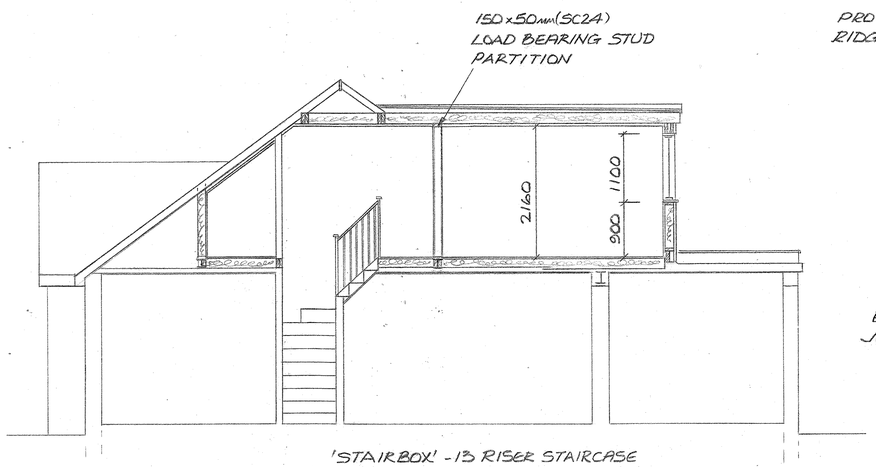


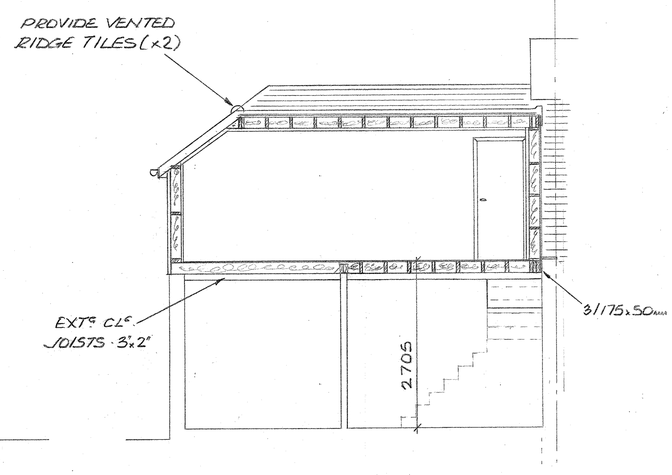
STRUCTURAL FLOOR PLAN



ROOF PLAN



SECTION 'A-A'



SECTION 'B-B'

CONSTRUCTION NOTES

1. **Floor to Loft Room** – New floor joists to be 47 x 175mm & 47 x 150mm(C24) @ 400mm crs. with herringbone strutting between joists to prevent twisting. Set new floor above the existing ceiling joists, with a min 50mm space between the bottom of the joist and the existing plasterboard ceiling. Joists are to be supported from steel beams with speedy girder truss shoes. Double up and bolt together floor joists below stud walls and to frame staircase opening. Provide 100mm thk mineral quilt insulation between the existing ceiling joists. Finish floor level with 19mm flooring grade chipboard (22mm, waterproof in en-suite), screwed to joists. Provide 100mm Knauf Crown Acoustic joist roll suspended on 25mm chicken wire mesh stapled between joists to provide both acoustic insulation and 30min fire resistance to the floor. ***No load to be appled to the existing ceiling structure***

2. **Dormer Cheeks** – Externally provide vertical hung tiles on battens and impermeable roof membrane (Tyvek), on OSB3 (9mm) sheeting, screw fixed through 150 x 50mm studs and cripple studs @ 400mm crs. At flank side to adjoining property, provide counter battens and 10mm Superlux between plywood. Internally provide 'Kingspan' PIR insulation, type K7 (120mm thk), between studs and insulated board type K118 (40 + 12.5mm) internally, skim with 7mm gypsum plaster, to achieve on overall u-value of 0.17 W/m²K. At window and door openings provide 2 No.47 x 150mm SW timbers to act as lintels, the window jambs are to be rebated to receive the lintels. Provide zinc flashing at the junction with the existing pitched roof, with min 450mm upturn of roofing felt.

3. **Pitched Roof, Rear & Internal Wall** – Continue pitch line of the existing roof with 150 x 38mm rafters @ 400mm crs. Fix 47 x 47mm counter battens below existing rafters to pitched section, ensuring a 50mm ventilated cavity is maintained between rafters and construct a pitched roof with 'Kingspan' roof board type K7 (120mm thk), between rafters and type K118, (40 + 12.5mm) below. Form rear wall with 47 x 150mm timbers and sole plate, supported from new steel beam and triple timber joist beam. Insulate as per roof section. Ensure that all joints are sealed with self adhesive foil tape, mastic seal all perimeter abutments and finish with 7mm layer of gypsum plaster to give an overall U-value of 0.17W/m²K. The insulation to the remaining roof area not covered by the new floor is to be upgraded to a U-value of 0.16W/m²K, by providing 100mm thk Rockwool insulation between joists and 170mm thk insulation over the joists.

   Note: Ensure a continuous soffit and tile vents are installed otherwise the pitch to the front of the property is to remain as existing. Within the front pitch, provide a Velux flexible roof tunnel (TWF 0K 2010), to above the stairway. Within the flank pitch provide vented ridge tiles and a Velux roof window type MK27, (780 x 620mm, U-value of 1.0W/m²k). Ensure that flashings are provided and fitted as per manufacturer's instructions to window openings. Double up and bolt together rafters on either side, as well as timbers to the top and bottom of the window openings.

4. **Flat Roof** - Provide 47 x 175mm roof joists (C24) @ 400mm crs, with firring pieces to provide fall of 1:60. Provide 38 x 19mm cross battens and form roof deck with 18mm OSB3, (ensure 50mm air gap above cold deck). Form upstand and edging to 19 x 200mm fascia and seal the roof deck with a single ply membrane system such as "Cure It" GRP. Insulate new roof with 'Kingspan' roof board type K7, (120mm thk) insulation board between joists and type K118 (40 + 12.5mm) under. Provide 1200g polythene vapour barrier and tape joints to achieve a vapour control. Finish with 7mm layer of gypsum plaster, to achieve an overall rating of 0.15W/m²K. Ensure cross ventilation with the pitched roof at the ridge, by providing a roll out dry vent system such as 'Manthorpe' with concrete ridge tiles, (5000mm²/m or a continuous gap of 5mm). Leave soffit open min 25mm for through ventilation.

5. **Staircase** - Provide a 'Stairbox' - 13 tread closed plan winder staircase, with 208.1 riser and tread depth of 231mm, with a maximum pitch of 42°. The staircase is to have a minimum internal tread width of 50mm, with the winders having an equal going. Hand rail is to be min 900mm / max 1000mm above the pitch, constructed with a clear unobstructed width of 750mm (min 600mm). Balustrade staircase guarding designed to prevent a 100mm diameter sphere passing through the balustrades, which are to be vertical and at 100mm centres. Maintain a min of 2000mm headroom to new staircase. Provide two way switches at both top and bottom of new staircase. Provide multiple joists as trimmers, connected top and bottom and staggered at 1000mm crs, with M10 bolts and 50mm timber connectors. Posts connected top and bottom within two directions with T-L-Gripp connectors. Overall dimensions 2274 x 1575mm with a floor to floor dimension of 2705mm.

6. All new lighting units provided, will be rated as energy efficient, (45 lumens per circuit-watt, provided per 25m² of extension or part thereof).

7. All existing structural elements, which may be subjected to increased loads will be exposed on site and repaired or replaced if necessary, as directed by LA Building Inspector.

8. Construct load bearing stud wall from steel beam and triple joist timbers, with 47 x 150mm timbers @ 400mm crs. All other internal stud walls to be constructed with 47 x 100mm timbers ansd built off double joists. All walls to be packed with rock wool insulation for sound insulation and faced both side with 12.5mm plasterboard, set with gypsum plaster.

9. Exposed brickwork at the party wall is to be either faced with 'Kingspan' insulation board, type K118 (40 +12.5mm thk) and set with gypsum plaster. Or studded out with 47 x 100mm timbers and faced with the same, to achieve a U value of 0.26W/m²K

10. All doors to habitable rooms that enclose the means of escape passageway, to be solid FD20 rated and fitted with a min 3 steel hinges. Provide either intumescent strips/smoke seals to top and side edges, or 25mm doorstops, glued and screwed to the frame at a max of 225mm.

11. **Ventilation** -The ventilation to the new rooms is to comply with the approved document to regulation 'F' of the Building Regulations 2010.
    Bedroom - min background ventilation 8000²mm.
    En-Suite - min background ventilation 4000²mm. Provide extract fan with min 15 litres/sec moisture extraction, operated from light switch with 2min over run.

12. All new work to comply with the provision of approved document to part 'L' of the Building Regulations 2013.

13. **Drainage** - Provide new S&VP and connect waste from new en-suite. Locate and run new 100mm PVC soil pipe to existing I.C. Pipe to be laid at 1:40 surrounded with 150mm pea shingle. All new waste plumbing to be 50, 40 & 32mm diameter in PVC to BS4514 & BS5255, with common waste pipes a min of 50mm dia. Rodding eyes to be provided at bends and WC branches. No connection to S&VP within 200mm of WC branch.

14. All new electrical work must comply with Part P and be completed by an electrical technician registered with one of the Part P self-certification schemes listed in Schedule 3. On completion of the work a copy of the electrical completion certificate is to be deposited with the L.A

15. Heating pipe work in exposed areas or under floors are to be lagged with suitably approved material. All new radiators are to be fitted with thermostatic radiator valves.

16. All new guttering to be 112mm with 65mm dia. downpipes. If possible connect to the existing surface water drainage system, alternatively, construct a new soakaway, min of 5m from the rear of the property constructed of stein brickwork or plastic cells wrapped in geotech material.

17. Provide combined heat & smoke detectors with battery backup and interlinked to meet BS5839 Part 6, positioned a min of 300mm from a wall or light fitting, in the kitchen (heat detector) and at the ground, first floor levels of the staircase, (smoke detectors),connected to the mains supply. On completion of the system, an installation and commissioning certificate, (if required, provided to the local authority), together with full written documentation on the use and maintenance of the fire alarm system to provided to the occupier.

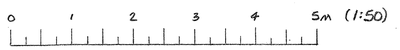
18. **Steelwork** - ***Refer to details provided by structural engineer, before commencing any work on site.***

    Beam GF1: 179 x 102 x 19UB **Beam FF1:** 203 x 133 x 25UC **Beam FF2 & FF3:** 152 x 152 x 23UC

    All steelwork is to be treated with ASTRO ISS paint, conforming to BS476 Part 21: as an intumescent coating, to provide 60min fire protection. Before application the steelwork should be free from rust and primed with ASTRO HBP (high build primer), or another primer compatible with intumescent paints.
    All dimensions are to be confirmed on site before order is placed for fabrication.

19. All new windows and doors are to be 'A' rated with a thermal transmittance of 1.3 - 1.4W/m²k, in PVCu frame, fitted with trickle ventilators and doubly draught proofed.All glass in critical areas (below 1500mm in doors & 800mm in windows) must comply with the Class A requirements of BS6206, for tempered safety glass. The openable area of all windows is to be min.1/20th of floor area.

20. Unless stated otherwise, all timber to be C24 graded and treated with preservative. Timber connectors to be M12 coach bolts with tooth and dog grip connectors between timbers, square washers under nut and bolt heads. Ensure galvanised restraint straps are provided in the direction of the span and at right angles to all ceiling and floor joists @1200mm max CRS, secured to the brickwork. Straps at right angles to the joists spanning and secured to 3 joists, (use type HD1100B100 – 27.5mm x 5mm). See the "Expamet" trade brochure, for all references to builder's metalwork products.



SCALE BAR

DRAWN: JAC DATE: 28/06/21 ISSUE: 1	PROPOSED FIRST FLOOR LOFT EXTENSION AT 42 RENTON DRIVE, CHELSFIELD, KENT, BR5 4HH FOR MR. P. MARSH	
	SCALE 1:50	SHEET 2 OF 2