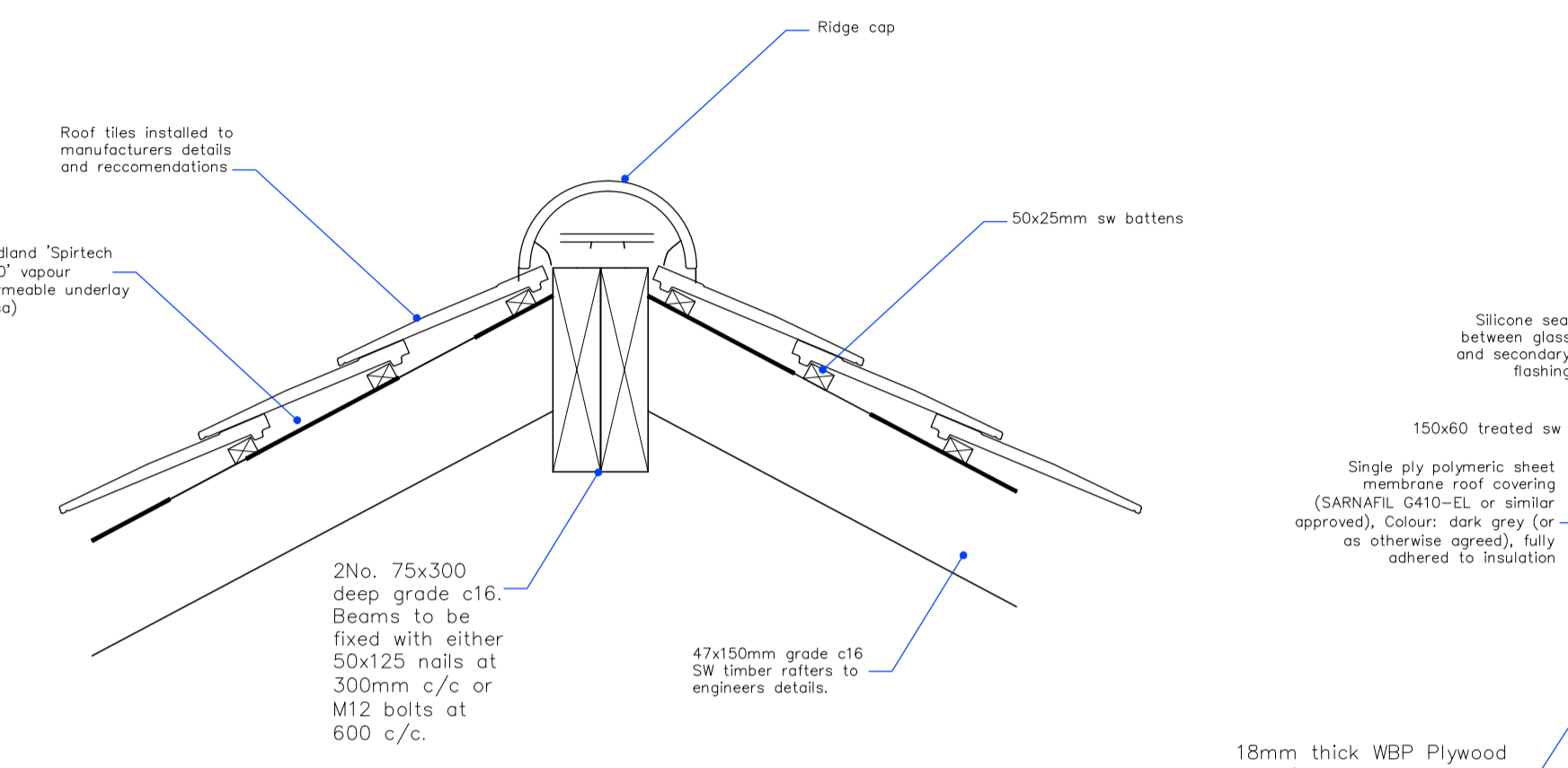
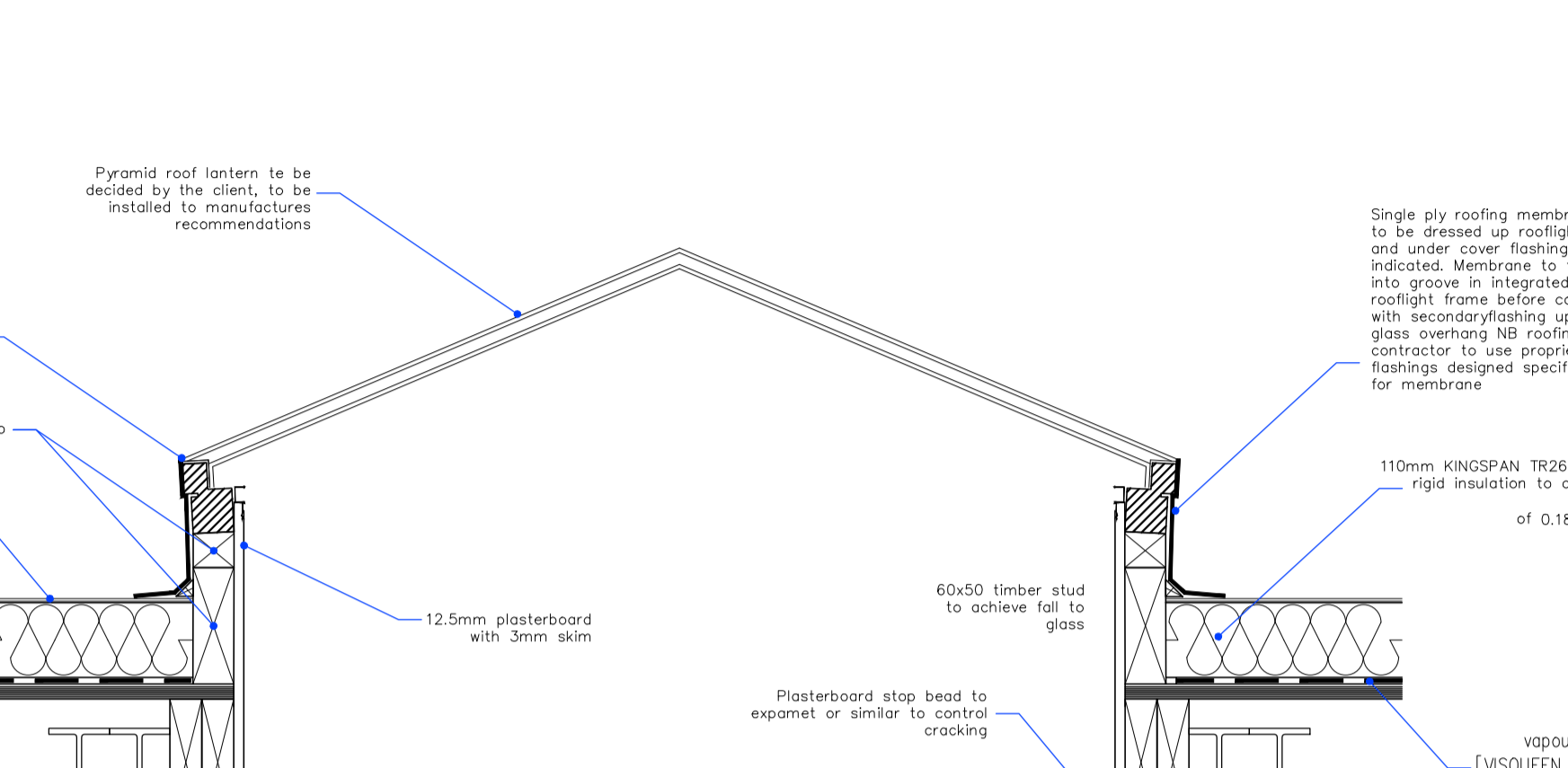


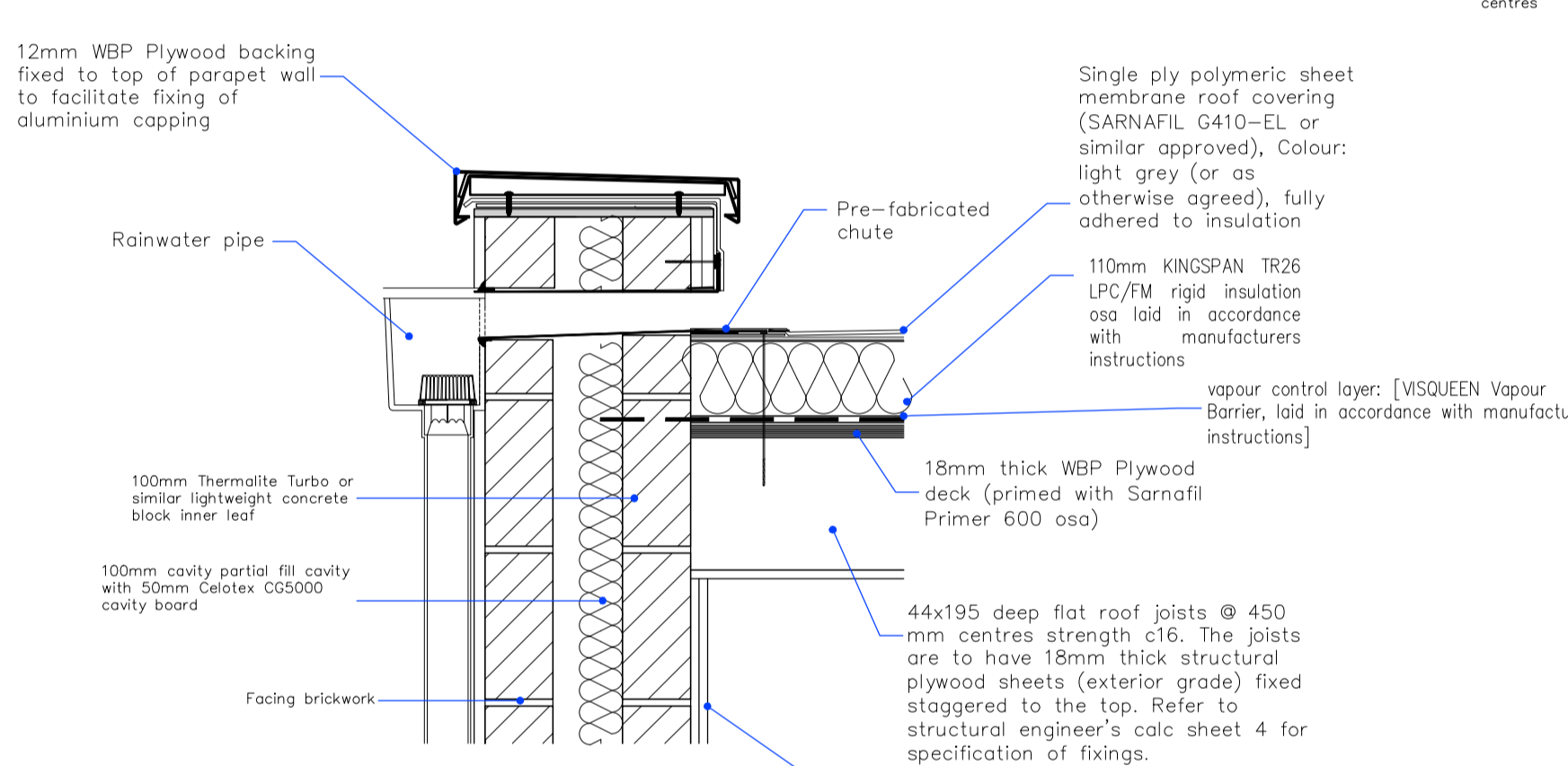
Rev/No	Revision note	Date	Signature	Checked



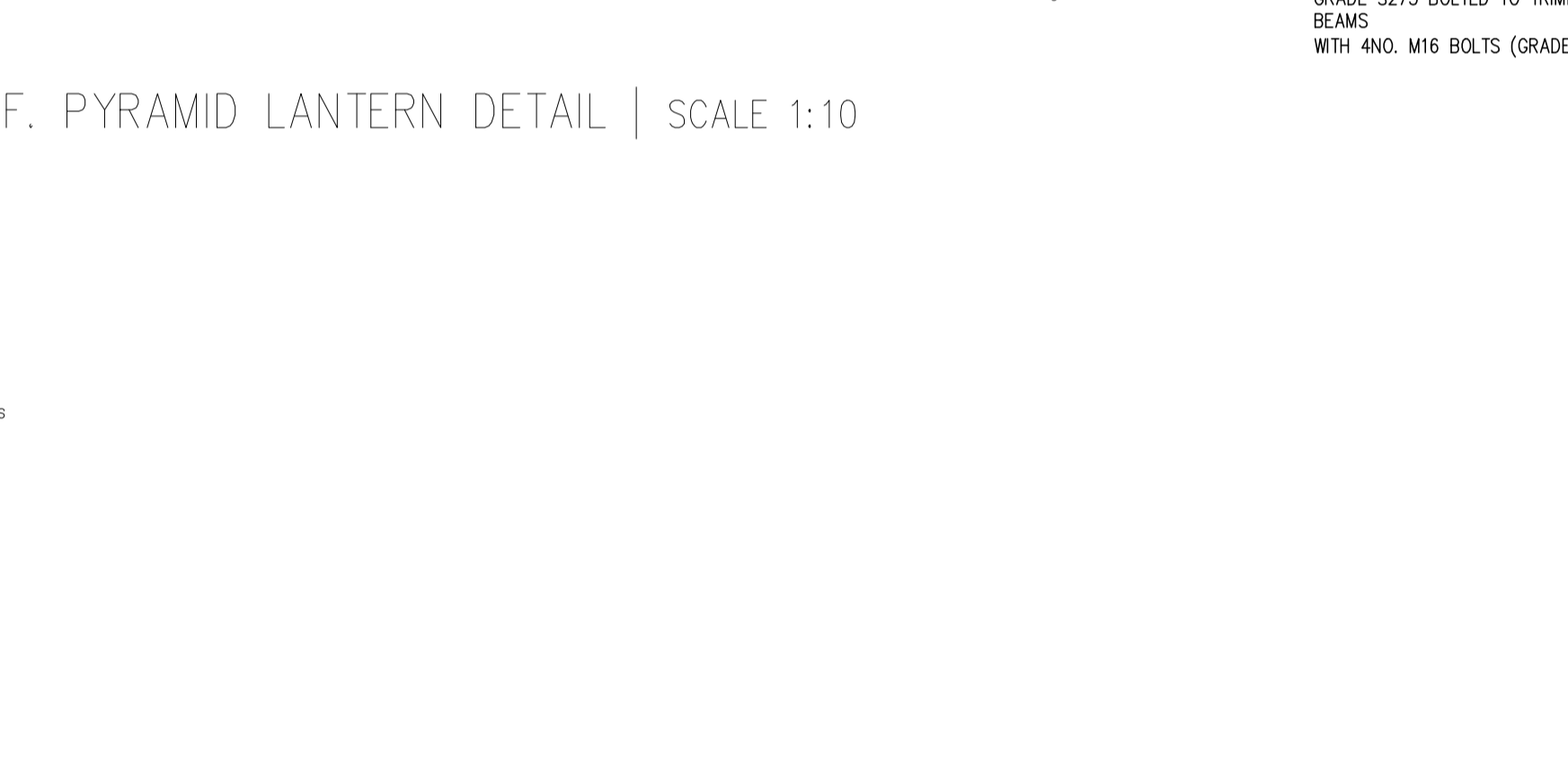
C. RIDGE DETAIL | SCALE 1:10



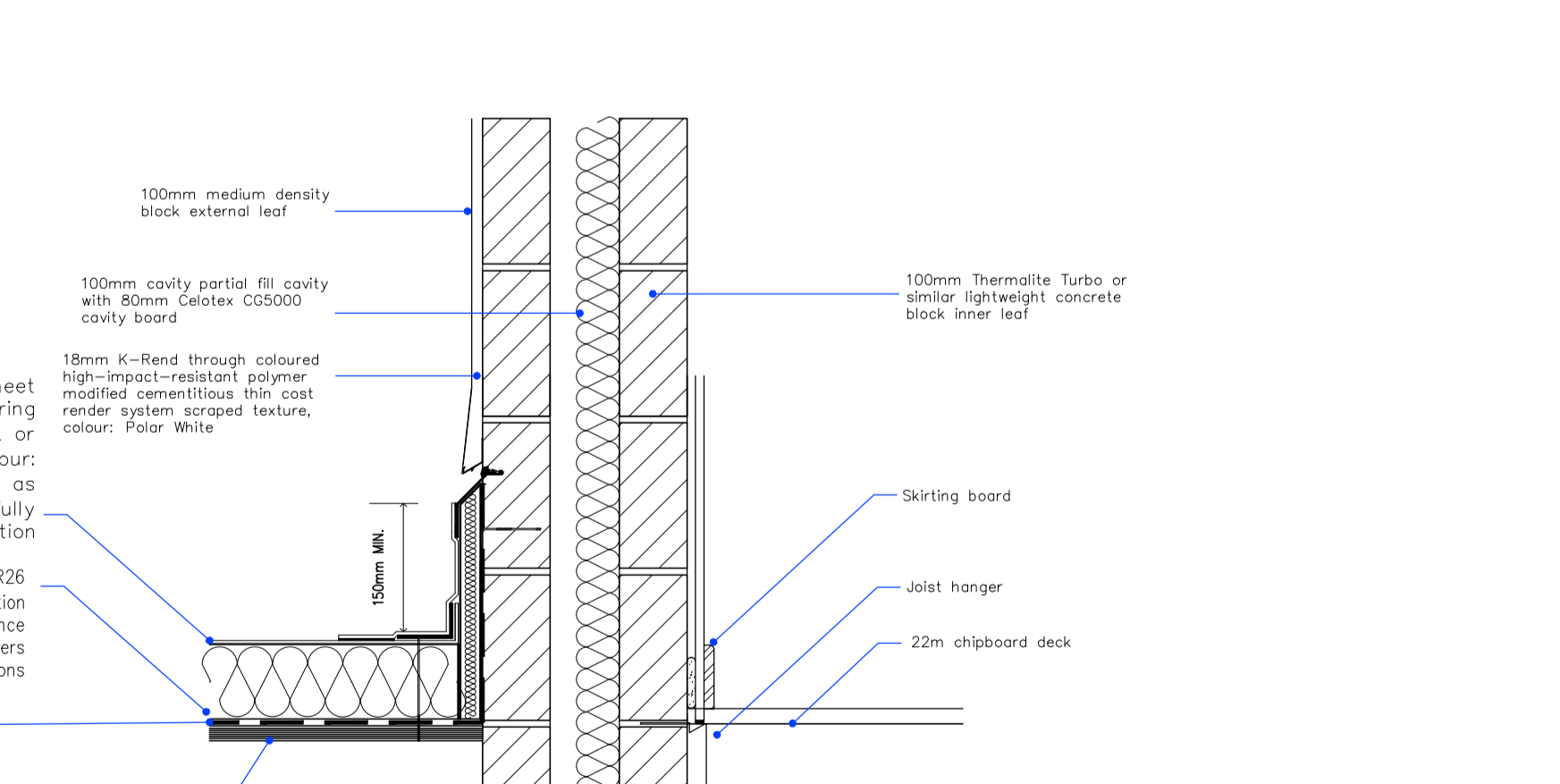
F. PYRAMID LANTERN DETAIL | SCALE 1:10



D. PARAPET DETAIL | SCALE 1:10



G. ROOFLIGHT DETAIL | SCALE 1:10



E. STEEL BEAM DETAIL | SCALE 1:10

General Notes

- All dimensions and details shall be checked on site by the contractor prior to commencing work. Any error must be brought to the attention of the Architect. All dimensions are in millimetres. No scaling of drawings is permitted.
- All work is to be carried out to the satisfaction of the Building Control Authority / LABC Officer, and in full accordance with the latest amendments to the Building Regulations and Approved Documents. A Building Control completion certificate shall be issued on completion. Any deviation from the Approved Documents must have prior consent of the controlling authority (i.e. LABC or Approved Inspector, as appropriate), and be confirmed as such in writing.
- All materials used must be of an approved quality, and upon request, samples submitted to and approved by the local authority in writing prior to construction commencing. Full verification of quality of materials to be submitted to the client upon request.
- All services installed strict accordance with relevant statutory authorities recommendations and bye laws etc.
- The foundation design/size and depth must be agreed on site between the builder / principal contractor and the Building Control Authority / LABC Officer.
- All new manhole positions to be agreed on site between the builder / principal contractor and the Building Control Officer / Approved Inspector (as appropriate). All new and repositioned drainage gullies are to be connected to the existing main drainage runs, unless otherwise stated, to the satisfaction of the Building Control Officer / Approved Inspector.
- Specification Notes
- Foundations & Slab**
- Provide 600mm/450mm min wide x 300mm min depth concrete strip foundation to all masonry construction as specified on drawing / or in accordance with Engineers Specification. Foundations are to suite site conditions and adjoin existing footings as applicable, design and depth to be agreed on site with the Area Building Control Officer.
- Concrete shall be ready-mixed Portland Cement to BS12 with specified strength GEN1 C28/35 mix in accordance with BS5528 delivered to the site by nearest supplier. Excavation for foundations to be stored on site and backfill with best of excavation material. To be inspected by the Building Control Officer before fill. All necessary formwork to be securely fixed, and taken down to adequate firm support by competent builder.
- All foundation brickwork up to dpc level shall be either clay common brickwork to BS 3921 / EN 1996 or where visible, Class B engineering brick (FZ/S2), minimum compressive strength to be not less than 20.5N/mm². Durability designation: FL; water absorption less than 7%.
- External DPC [VISOQUEEN or similar approved] to be minimum 150mm above external ground level except where level access thresholds are required. Refer to specified construction detail for these situations. NB, ensure DPC is well lapped and sealed with DPM.
- Ground Floor construction to comprise of: 65mm sand and cement screed on 150 thick concrete slab (Grade C28/35 - Gen 1) reinforced with one layer of A142 mesh to top (40 cover) on visqueen 1000 gauge DPM on 70mm CELTOX G44000 floor board insulation with 25mm upstand to full perimeter, on 120mm gauge DPM on 50mm sand blinding on a MOT type 1 sub-base compacted in layers of 150mm as required to the satisfaction of the Local Building Inspector. The new slab is to be doweled to the existing slab with 16 dia. mild steel dowel bars x 400 long at 300c/c resin anchored into existing slab. The length of the bar in the slab is to be deboned. Detail of existing slab to be confirmed prior to installing the new slab. A 225mm compacted hard-core sub-base. All to the approval of the Building Control Inspector. Ground Floor construction to achieve an elemental U value of 0.18 W/m²K.
- Walls
- External wall to be 300mm cavity construction consisting of: 10mm K-Rend through coloured high-impact-resistant polymer modified cementitious thin coat render system scraped texture, colour: Polar White, 100mm blockwork external leaf, (7N/mm²), 100mm Thermolite Turbo or similar lightweight concrete block inner leaf, laid in 1:6 cement sand mortar secured with 225mm long stainless steel Ancon StalFix RT2 general purpose wall ties to have minimum 50mm embedment laid in mortar joint at 750mm c/c horizontal & 450mm c/c vertically. Securely fix new walls to existing main structure with s/s crocodile wall connector with adjustable anchor ties in compliance with BS149 P1 2 & BS1243 with 10mm movement joint with Fosroc Epanadfoam filler and pointed with Fosroc Thioflex One polysulphide sealant. Construct 10mm wide movement joint to position identified on drawings with stainless steel Ancon movement ties and debonding sleeves laid in mortar joint with 100mm embedment, apply Fosroc Epanadfoam filler and pointed with Fosroc Thioflex One polysulphide sealant. Blockwork to receive 12.5 mm plasterboard internally with 3mm skim finish to BS1191: Part 1, Class B to provide min 1/2 hour rated fire protection.
- To have 50mm wide clear cavity with 'Thermabate', or similar approved pvc-u box section cavity closures to the required width, fixed to horizontal & vertical window and door openings. 50mm thick Celotex C5000 partial fill insulation boards is to be secured with batts over wall ties at specified spacing. All works to cavity to comply with BS5628 Pt 3 & BS2520n (condensation) and to achieve Target "U" Value 0.24 W/m²K.
- Cavity ties to be aesthetic stainless steel double triangle Type 4. Housing Cavity Wall Tie (Expatm P1250 or similar) in accordance with BS1 DD 140; Part 2 and set out at maximum 800mm centres horizontally and 450mm centres vertically (density of 2.5 ties/m²), laid staggered, with additional fixings at corners, openings, movement joints and roof verges, i.e. ties positioned no further than 225mm away horizontally and spaced not more than 300mm apart vertically. If required, vertical movement joints to be introduced in accordance with the requirements of BS 5628-3. Shear resistance to be provided through use of suitable masonry movement ties with debonding sleeves.
- VISOQUEEN ZEXEX CPT high performance(or similar) dpc's shall be installed a minimum 150mm above external ground level and lapped a minimum 100mm with new and /or existing, and sealed.
- Any weak mix cavity fill shall finish 225mm below dpc level and be sloped towards the external leaf.
- The tops of all new cavity walls are to be sealed. Horizontal and vertical insulated dpc's to be installed around all openings in external walls. All dpc's to be VISOQUEEN ZEXEX CPT (s.s.a.) high performance damp proof courses, installed to manufacturer's recommendations and in accordance with normal good practice for the detailing of damp proof courses as set out in the relevant clauses of BS 5628: Part 3: 2001, BS 8000: Part 3: 2001 and BS 8215: 1991.
- All external window and door openings to have dpc's to all jambs, sills and heads. All cavity tray dpc's over window and door lintels shall be one single length application with stop ends and protrude a minimum of 150mm past the end of the lintel into the cavity, protrude beyond the vertical jamb dpc by at least 25mm, and be provided with stop ends. Vertical dpc's to be provided via installation of Kingspan KOOLTHERM 100 cavity closers (which form an integral dpc) or similar.
- Internal stud partition walls where specified are to be constructed full height & fixed to underside of roof with 89x38mm timber studding 400c/c vertically and 450c/c horizontally with 50mm rockwool flexi insulation between framework. To be clad both sides with 12.5mm thick plasterboard having a minimum density of 10kg/m³ (unless otherwise stated) Plasterboard to bathroom walls to be 12.5mm moisture resistant plasterboard all plaster skimmed to BS1191: Part 1, Class B to provide min 1/2 hour rated fire protection. All lintels in external walls to be standard pre-insulated IG 11/5 100 or similar with dpc over end, in accordance with BS 5628: Part 3: 2001 / EN 1996 ud to engineers details unless stated otherwise.
- Ordinarily, weepholes should be provided in the external leaf immediately above the dpc @ maximum 900mm centres, with not less than two weep holes provided over any door or window.

Roof

Pitched Roof

- Rafters to be designed by engineer and securely fixed at maximum 400mm centres on 100 x 75mm treated timber wall plate with truss clips, wall plate to be secured with vertical s/s anchor straps minimum 1200mm long to internal wall face at 1000mm centers. All bracing to comply with BS 5268 part 3 1985, & to be fixed with 75mm galv wire nails for longitudinal & 63mm for diagonal. Provide 50mm continuous air gap between rafters and underside of roof covering and fix pvcu continuous ventilator at eaves to rafters @ 600mm c/c with fascia and soffit having continuous 10mm wide strip air fix to ventilate roof space. Lay roof tiles over 50 x 38mm tonalised swd battens and Redland 'Spirtech 250' vapour permeable underlay (laid in accordance with manufacturers specification to correct overlap gauge. Provide soffit s lead flashings at junctions, valley details and chimney aprons, dressed to chase cut in brickwork mortar bed joints as required. Lay 270mm (100+170) RockwoolRoll over 47x120mm ceiling joists and plasterboard below all to manufacturers instructions to provide Target U-Value of 0.18W/m²K.

Vaulted Roof

- Vaulted roof construction at rear to consist of: Roof tiles laid in accordance with manufacturers details and recommendations, secured to 50 x 25mm pre-treated tonalised SW battens on Redland 'Spirtech 250' vapour permeable underlay (laid unsupported with a slight sag [10mm] and not pulled taut) oad, on grade C18 timber rafters 47x150mm @400mm centres to engineers design and specifications with 100mm Kingspan K7 sw joists @400mm c/c to engineers details, finished with 12.5mm pre-treated timber wall plate securely fixed to head of internal leaf of masonry. Ceiling finished 37.5mm Kingspan K18 insulated plasterboard oad with 3mm skim. Roof construction to provide a performance U-value of 0.18 W/m²K or better.

Flat Roof

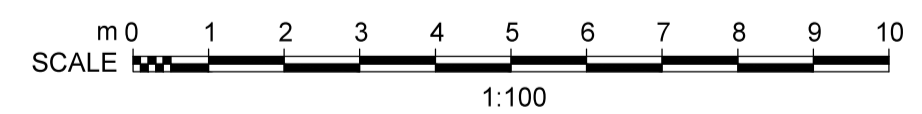
Roof covering to be single ply uPVC membrane [TROCAL or SARNAFIL or similar approved] or to be lapped into coping of parapet and fully adhered to the substrate. LPC/FM rigid insulation on vapour control layer: [VISOQUEEN Vapour Barrier, laid in accordance with manufacturers instructions], on 22mm WBP plywood deck with staggered joints on either 47x195mm treated sw joists @400mm c/c to engineers details, finished with 12.5mm plasterboard fixed to battens with 3mm skim coat finish. Overall construction to achieve U-value of 0.18W/m²K.

Rafter layout shown on the drawings is indicative only.

- Wall plate galvanised steel anchor straps to be a minimum 30 x 5mm and installed @ 2m centres. Lateral restraint straps shall be installed at the pitch of the roof @ max. 2m centres to provide lateral restraint support to all flanking walls / gables.
- Battens:** Sawn softwood, species to BS 5334: 2003 Code of practice for slating and tiling, Clause 11.3. Size: 50 x 25mm for rafters/supports not exceeding 450mm. Each batten to be fixed to each support using spiky nailing at ends with 65 x 3.35mm galvanised smooth round nails, grading to BS 4976. Preservative treatment: OS double vacuum suitable for timbers in Hazard Class 1 or 2, as Section 212 of the NBS and WPA Commodity Specification C6. For additional guidance, refer also to BS 8417: 2003. No batten to be less than 1200mm long.
- New Code 5 lead flashings shall be formed in full accordance with the manufacturer's recommendations and in accordance with The Lead Development Association detailing. All new lead shall be coated with patination oil to prevent staining.
- New tastic / soffit boarding to be UPVC or other agreed with client.
- Roof insulation is to lap over the wall plate to align with the cavity wall insulation, providing a continuous thermal envelope in order to prevent cold bridging.
- Windows & Doors
- Unless a higher standard of thermal performance is requested by the client, all new glazing shall be 28mm thick sealed double glazed units comprising 6mm float glass outer pane / 16mm cavity, argon gas filled / 6.4mm laminated low emissivity inner pane to achieve a maximum centre pane U-value of 1.2 W/m²K. New windows to be fitted with trickle ventilators fitted within the head frame equivalent to 8000mm³.
- Area of new glazing to be no greater than the sum of the area of existing glazing (structural openings) to be lost as a result of the construction of the extension, plus 25% of the floor area of the new extension.
- Opening ventilation to habitable rooms to be not less than 1/20th of floor area.
- All new window frames to grey UPVC to be confirmed by client.
- All windows and external doors to be replaced.
- All new windows to habitable rooms shall incorporate within the fenestration design an opening light providing a clear opening of at least 0.3m² for the purposes of emergency escape. The opening light is to have minimum clear opening dimensions of at least 450mm in width x 450mm in height, with the bottom edge of the opening between 800mm and 1100mm above the finished floor level.
- As per AD Part L1B Conservation of fuel and power (Existing Dwellings), minimum standards for controlled fittings are as follows (area-weighted average values):
Windows and rooflights = 1.60 W/m²K
Doors = 1.80 W/m²K

Drainage & Plumbing

- Generally, below ground drainage shall be installed to BS 8301 and above ground drainage to BS 5572. Contractor to assess existing drainage layout and provision on site, both above and below ground, and agree the new layout / amendments to existing layout with the architect / client / structural engineer / BCO as appropriate.
- New SVP's / stub stacks with air admittance valves are to be a minimum 100mm diameter PVCu to BS EN 1329-1: 2000, with all connections to be off-set. Small pipes - 110mm diameter, large pipes - 200mm diameter SVP's shall terminate 900mm above openings within 3m and are to be fitted with proprietary perforated cowls allowing free ventilation.
- Rodding access to be provided at all bends.
- WC wastes to be 100mm diameter. WC connections to be connected directly to the branch at 45 degrees or 25mm sweeping radius on a 100mm diameter pipe @ 10mm/m fall with minimum 75mm deep water trap and maximum 6m branch from SVP. Sinks, WHB's, baths and showers are to connect via 38mm diameter pipes with anti-siphon traps with maximum branch of 3m from SVP and fall of 45mm/m.
- All rainwater goods to be UPVC to match existing. New gutters and downpipes to be deep capacity type with 75mm diameter being the minimum size of pipe. Pipes and gutters to be fixed in strict accordance with the manufacturer's details. Hopper locations are on drawings, new gullies and downpipe locations to be agreed on site between the contractor and Building Control Officer / Approved Inspector to best suit the existing / amended drainage layout. The contractor shall allow for all modification works to allow new connections to existing drainage, as required.
- All drainage and connections should be to the complete satisfaction of the district building surveyor.
- Existing heating system to be assessed for capacity and extended as necessary.
- The heating and hot water systems are to be commissioned so that at completion the systems and their controls are left in the intended working order and can operate efficiently for the purposes of conservation of fuel and power.
- Design and installation of new and extended LPHW heating systems and the like are to be undertaken by a CORG registered contractor.
- Pipe work should be insulated in all voids within the building envelope and within spaces normally heated if those spaces may be maintained at temperatures different to those maintained in other zones.
- New radiators shall be fitted in new rooms with thermostatic valves to allow for local control. Existing radiators are to be fitted with TRVs if they do not currently have them.
- Electrical
- All electrical installations / alterations must be designed and installed to BS 7671:2008 Requirements for electrical installations, IEE Regulations, 17th Edition (formerly IEE/BSI Requirements for electrical installations), and be undertaken by a registered electrician, ECA member or similar.
- All new electrical fittings shall comply the British Standard Approved Kite symbol and MEI Shield of Approval.
- All electrical work is required to meet the requirements of the latest revisions to Part P of the Building Regulations, and must be designed, installed, inspected and tested by a person competent to do so, i.e. a competent person, registered under a self-certification scheme for electrical installation as detailed in Appendix E of the Approved Document.
- On completion, an appropriate BS 7671 electrical installation certificate must be issued for the work by a person competent to do so.
- All internal partitions to be built up to the underside of the structural roof or floor over and fire stopped with mineral wool insulation and fire resistant seal to achieve ½ hour fire resistance.
- Structural details to be in strict accordance with the Structural Engineers calculations.
- Where steelwork member bear onto concrete pad stones, refer to structural engineers details and calculations.
- Structural steelwork and metalwork to be thoroughly clean and free from scale, rust and dust. Where not embedded into in concrete it should have one layer of red oxide paint immediately before fixing.
- All elements of structure to have a minimum ½ hour fire resistance.
- Thermal Performance
- As per AD Part L1B Conservation of fuel and power (Existing Dwellings), minimum standards for new thermal elements are as follows (area-weighted average values):
Walls = 0.25 W/m²K
Pitched Roofs (insulation @ rafter level) = 0.18 W/m²K
Flat Roofs = 0.18 W/m²K
Floors = 0.22 W/m²K



PARLE MUNN DESIGNS

PROJECT: 53 BOWRING PARK AVENUE
CHILDWALL
LIVERPOOL

CLIENT: MR IAN HOLT

Drawing Title: CONSTRUCTION DETAILS

Drawing No: C105
Date: JAN 2018
Scale: 1:50 @ A1
Revision:

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Issue: CONSTRUCTION STATUS