

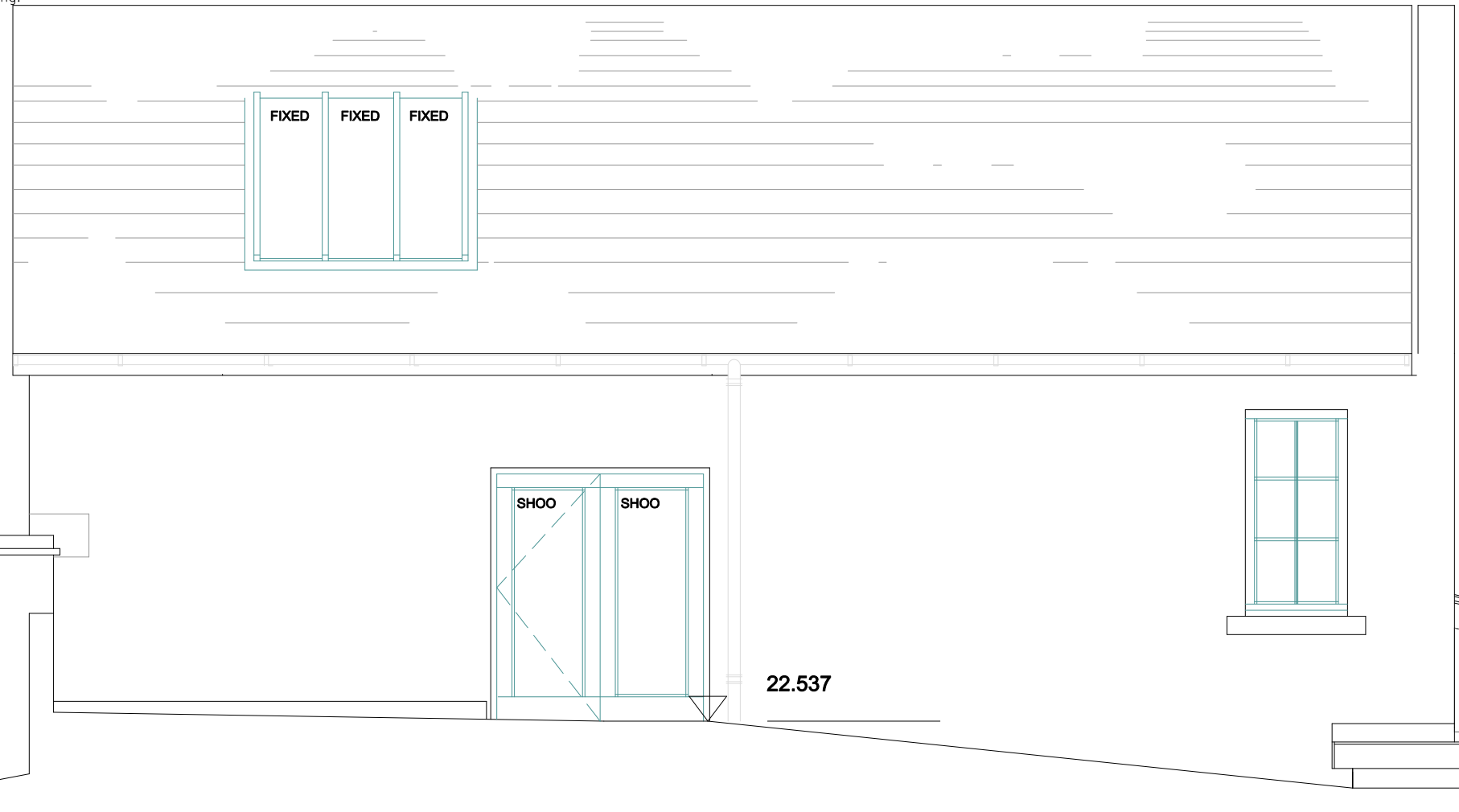
Roof:
Roof finish to be STEADMAN'S standing seam, pre-weathered metal profiled roofing, at 430mm centres, on 50x50mm battens and counter battens on breathable type membrane on 18mm Marine quality plywood used as sarking boards.
Plywood fixed on 200x50mm rafters in order to provide 50mm clear ventilation cavity under sarking.
Battens laid on breathable Tyvek Supro roof underlay fixed to top of rafters.
Rafters to be insulated using 100mm Kooltherm K107 and 60mm Earthwool framether 40 insulation

Insulation - 500 Gauge Visqueen vapour barrier vapour barrier to underside of rafter. The rafters are to be lined with 12.5mm plasterboard securely fixed to the battens.
50mm air gap is to be left between the top of the insulation and the underside of the cladding

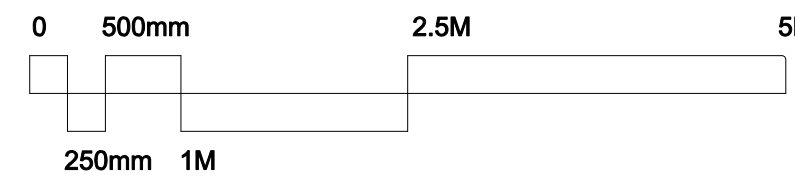
- General Requirements
- Structural steel hot rolled sections to be to BS EN 10055, BS EN 10056 and BS EN 10210 as appropriate with surface free from pitting, rust, burrs, sharp edges and flame cutting.
 - Steel primer to be zinc phosphate modified Alkyd.
 - Steel galvanising to BS EN ISO 1461.
 - Detail specification for all structural steel, purfins and related materials by Structural Engineer.

Eaves and Fascia:
The fascia to be formed in metal flashing to match roof.
Gutters and Downpipes

Gutters to be formed in proprietary black UPVC deep flow gutters to discharge into 110mm diameter black UPVC downpipes, all securely fixed in accordance with the manufacturers instructions and recommendations. All stormwater is to discharge into adjoining burn with inspection hoses provided just above ground level to facilitate cleaning. All drainage is to be installed and tested to ensure the satisfaction of the local authority with the complete installation.



PROPOSED ELEVATION EAST FACING 1 : 50



Surface water drainage:
Surface water drainage to be formed in deep flow UPVC gutters with 100mm dia UPVC downpipes to discharge into existing burn.
All gutters and downpipes to be fitted in accordance with the Manufacturers instructions and recommendations.
All surface water drainage to discharge in a new soakaway located a minimum 5m from the building.
All drainage to be 110mm UPVC installed in accordance with the Manufacturers instructions and recommendations.
Drainage system outside building to comply with BS EN 752-3:1997 (amend) BS EN 752-4:1998 and BS EN 1610:1998

INNER LEAF OF RETAINING WALL:
NON STRUCTURAL PARTITION
The internal leaf of the external wall to be formed with 100mm blockwork lined internally with 25x50mm timber battens at 600mm centres to form 25mm cavity for application of 100mm Kingspan Kooltherm K118 insulation
The insulation backed plasterboard is to be securely fixed to studwork with all ends fully supported on either intermediate noggins or studwork.
The internal face of the Kooltherm is to be taped and filled to form a smooth, even and level surface for paint finish to architects detail specification.
U value for the external wall construction: U=0.18W/m²K

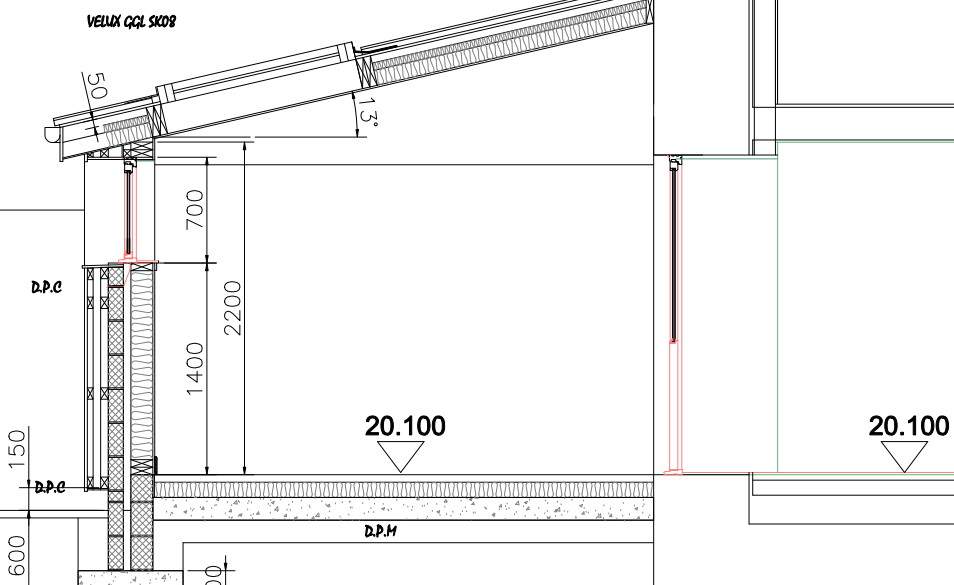
TIMBER CLAD WALL: 140mm studwork
TIMBER KIT:
The internal leaf of external wall is to be formed with ex. 150 x 50mm preservative treated softwood at 600mm centres as designed and specified by proprietary timber frame manufacturer to the entire satisfaction of the consultant structural engineer. External face of studwork is to be clad with an unbreakable building paper either low E TF200 Thermo breather membrane by Tyvek or a minimum of 9mm sheathing quality plywood securely nailed to studwork with galvanised nails with intermediate noggins inserted as required to support board ends. All nailing should be in accordance with manufacturers nailing schedule approved by the architects and consultant structural engineers. Building paper should be taped to a minimum of 150mm at all junctions to ensure the continuous unbroken membrane required is formed. Particular care should be taken in the handling of the breather type building paper to ensure that no rips, tears or other damage is sustained.
The space between the studs is to be packed with 120mm Kingspan Kooltherm K112 insulation with Protect VC Foil faced vapour barrier to the warm face of the insulation for application of

12.5mm taper edged plasterboard securely fixed to studwork with all ends fully supported on either intermediate noggins or studwork.
The internal face of the plasterboard is to be taped and filled to form a smooth, even and level surface for paint finish to architects detail specification.
U value for the external wall construction: U=0.20 W/m²K

(Note: add 25mm thermalboard to window and door ingoos linings in place of service zone and wallboard.)

Important Note: High Moisture Areas:
The internal lining shall be Moisture resistant gypsum wallboard and in shower cubicles shall be 12mm Fermacel board in place of gypsum wallboard.

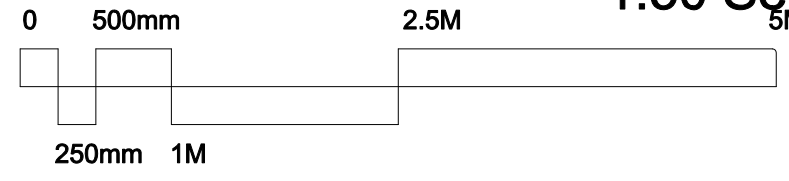
FIRE STOPS AND CAVITY BARRIERS
Openings: non-combustible fire cavity barriers to be fitted to jambs, head and sill around all windows and external doors.
Cavity Barrier and Fire stops:
50 x 50mm dressed preservative treated softwood cavity closers faced with d.p.c. membrane are to be formed at all jambs and heads of openings and at every floor level and at 8m centres maximum with cavity barriers and firestops to comply with the requirements of the Building Standards (Scotland) Regulations 2010 and are to be formed to ensure they close the cavity.



Damp proof courses shall comply with BS743 and be lapped a minimum of 150mm at angles and joints and laid on a level bed of cement mortar.
Tray d.p.c.'s shall be formed below all sills and thresholds turned up at the read and securely held in place prior to the insertion of window or door frames.
Vertical d.p.c.'s shall be inserted at all cavity jambs to ensure no possibility of water penetration with a final mastic seal formed at the junction with the wall.
Cavities are to be filled with weak cement mortar to the external ground level with 150mm below this level in any circumstance.

Movement joint between the existing and proposed foundation.
The Proposed Foundation to be taken to the existing depth if greater than 600mm

1:50 Section B-B As Proposed



WINDOWS & DOORS

- D.P.C.'s must be installed correctly and should project 25mm into the cavity.
- External door and window frames to be fixed securely, level and plumb with fixings not more than 600mm apart and not more than 150mm from top and bottom, to form frame against d.p.c.
 - Hinges and other ironmongery should be housed neatly flush with the surface, with a full complement of mounting screws properly screwed home.
 - Screw and nail holes should be plugged or hard stopped as required to present a smooth, even and level surface.
 - On completion of building operations and after shrinkage of timber frame, the mastic seal shall be inspected and made good as required round all window and door openings.
 - All window sills are to be formed in grey finished Rotional Auro wood or similar.
 - All window sills are to be provided with permanent ventilators inserted at heads or all windows, to provide fresh of ventilation 12000 cfm as required by the standards as set out in the Building Standards (Scotland) Regulations 2010.

- External Leaf of external Walls:
General Requirements:
a) Code of Practice: comply with BS5628 Part 3 "Use of Masonry" subject to any qualifications with any requirements of the consultant structural engineer.
b) Comply with BS6673 for reconstituted stone blockwork.

Code of Practice - structural design should be in accordance with BS5628 and in accordance with BS 7671, 2018 and current IEE Regulations (17th Edition) or current edition. The whole of the wiring shall be earthed in conformity with all distribution boards located in the meter room at ground floor level to the satisfaction of the Electricity Board. The main supply is to be introduced to terminate in an external meter box located in an easily accessible location with the installation in accordance with the recommendations of Scottish Power. Internal wiring shall be carried out using sheathed wiring with all joints formed at main switches, distribution boards, ceiling boxes, socket outlets, lighting points and switch boxes only. All cables must be spaced at least 300mm from any hot water pipework. All light fittings should be positioned approximately as shown on the drawings with all external light fittings suitable for this application. Cables should as far as possible be run through floor and ceiling voids parallel to walls and joints and not run diagonally. They should also not be imbedded in insulation and be provided with 250mm minimum clearance from hot water pipes. On completion of the works all required tests including any local supply authority tests should be carried out and certified.

- Exposure. The following aspects of detail must be carefully adhered to, to reduce the risk of rain penetration.
- The retention of a minimum clear cavity of 50mm
 - render carefully formed on skin to brickwork with no cracking or crazing.
 - All mortar joints thoroughly filled.
 - Ensure that cavities are not bridged in any circumstances
 - Rebates are formed to the reveals of all openings in the external skin
 - All cills, copings and the like should be weathered and throated

Materials Specifications:
Clay bricks to BS3921 with design strength of bricks to BS5628 with brick dimensions 215 x 102.5 x 65mm designed.
Mortar - ordinary Portland Cement to BS12 or BS146 white Portland cement may be used as specified. Sulphate resisting cement to BS 4207. Sand and aggregates to BS 6999 and BS 1200.
Ready mixes mortars should comply with BS4721 air entraining and set retarding admixtures should comply with BS4887.

DPC Materials - the following materials are acceptable for use as d.p.c.'s

- DPC to BS743
- Bitumulous to BS6398
- Polyethylene to BS6505

Wall ties - wall ties shall be in accordance with BS1243 and be appropriate to cavity width and formed in stainless steel as specified.

Wall ties shall be in accordance with BS1243 in stainless steel. Wall ties shall be formed to slope downwards towards the outer skin and shall be kept clear of mortar droppings at all times.
Wall ties to timber construction should be formed to slope down towards the outer leaf and should be formed at a maximum spacing of 600mm horizontally and 450mm vertically with additional wall ties at openings within 150mm of opening horizontally and 300mm vertically.

Lintols. Steel and concrete lintols should comply with BS5977. Cavity trays may be required over the lintols depending on location and detail. A minimum of 100mm end bearing should be provided to all lintols with preferable 200mm for lintols over 1200mm span.
Lintols shall be of a type and dimension appropriate to their position within the structure and shall be as specified by the engineer where required.

EXTERNAL LEAF:
The external leaf of external cavity walls is to be formed in 100mm brickwork/blockwork to the design strength as specified with all joints fully bedded with solid mortar beds and joints. Damp proof courses shall be lapped to a minimum of 150mm at angles and joints and laid on a level bed of cement mortar. Rep holes should be formed above all cavity trays spaced at 600mm intervals with proprietary weep trays inserted to prevent water or vermin intrusion. Tray d.p.c.'s shall be formed below all cills and thresholds and turned up at the rear and secured held in place against window and door frames. Vertical d.p.c.'s shall be inserted at all cavity jambs to ensure no possibility of water penetration with a final mastic seal formed at the junction with the wall finish. Gutters are to be fitted with weak cement mortar to the external ground level with weep holes provided above with the damp proof course positioned not less than 150mm above this level in any circumstance.

Wall ties to the cavity walling shall comply with BS1243 formed in stainless steel, sloping towards the outer face and spaced at a maximum of 600mm centres horizontally and 450mm centres vertically with extra ties inserted at any openings or junctions in the brickwork. Movement joints are to be positioned as indicated by the consultant structural engineer.

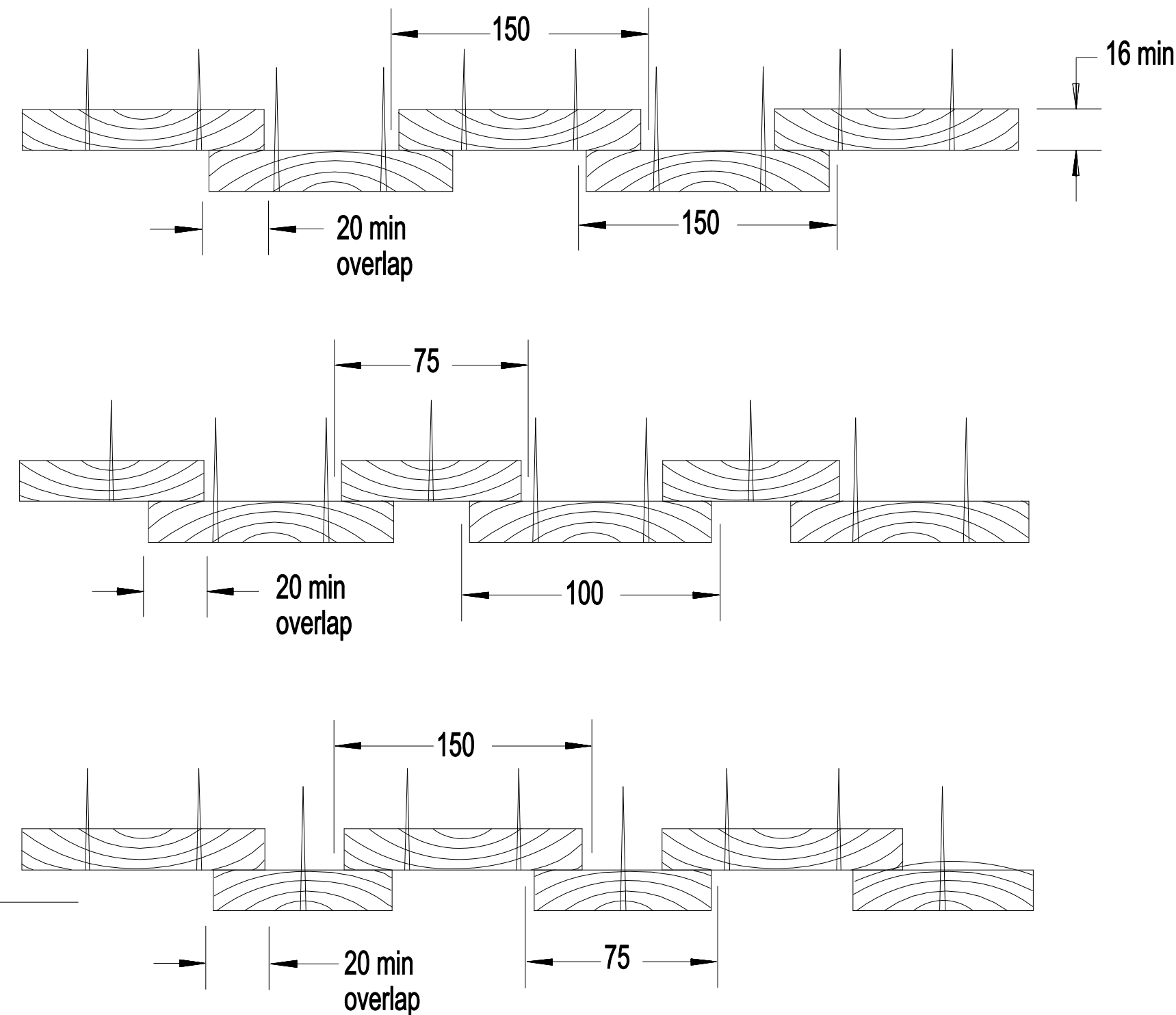
Timber cladding to external wall:
Cladding to all elevations:
25 x 50mm treated softwood vertical and horizontal battens fixed to timber frame studs with 200mm skewed coachscrews into timber kit / 50mm ventilated cavity. Vertical off soam lapped boarding cladding for natural stain finish to client specification.
Cavity Ventilation cavity vented through continuous gaps formed in the vertical cladding overlap at bottom of wall and above window and door openings.
(Note: add 25mm thermalboard to window and door ingoos linings in place of service zone and wallboard.)

- Movement Tolerances:
Allowances for movement are to be provided in accordance with the design and specifications of the consultant structural engineer. Allowance will be required at:
a) The eaves.
b) Around joinery rigidly fixed to the timber frame.
c) Around joinery rigidly fixed to the masonry walling.

All movement joints should be in accordance with the British Standards and appropriate Codes of Practice.
The contractor must allow for a re-application of the mastic seal round all window and door openings after timber frame shrinkage has taken place (approximately 12 months). This may necessitate cutting out initial seal prior to re-application.

Ceilings
Ceilings at first floor are to be formed in 1 layer 12.5mm taper edged gyp soundboard securely fixed to ceiling joists and intermediate noggins as required to ensure adequate support and no possibility of movement or deflection. Ceilings at ground floor are to be formed with 2 layers 15mm wallboard. All nail holes and joints are to be filled and topped to provide a smooth, even and level surface for final decoration by client. Openings in plasterboard for services should be accurately cut and any gaps in vapour checks topped and sealed and fire stopped as required. A Gypce Classical Cymo Reverse Profile cornice by British Gypsum is to be carefully formed at ground floor with concealed flush jointing for final decoration to the clients specification or cornice to clients final specification.

Skirtings and Facings:
All skirtings and facings are to be formed in REDIPNE or MDF to the clients specifications to a minimum dimension of ex 150mm x 90mm, facings to a minimum dimension of ex 75 x 90mm both formed to terminate on a base block of ex 160 x 85 x 22mm approximately. Skirting and facing prepared and made good for final finish to clients specification. Skirtings and facings are to be fixed at centres not greater than 600mm with all corners and joints carefully mitred and sanded down with 120 grit sandpaper and nail holes hand stopped or plugged as required to ensure that a level smooth surface is formed for final decoration. No finished timbers should be positioned until all walls are finished and all wet finishes where appropriate are thoroughly dried out with skirtings formed with a clearance from the floor level to allow for minor movement.



Vertical board-on-board cladding

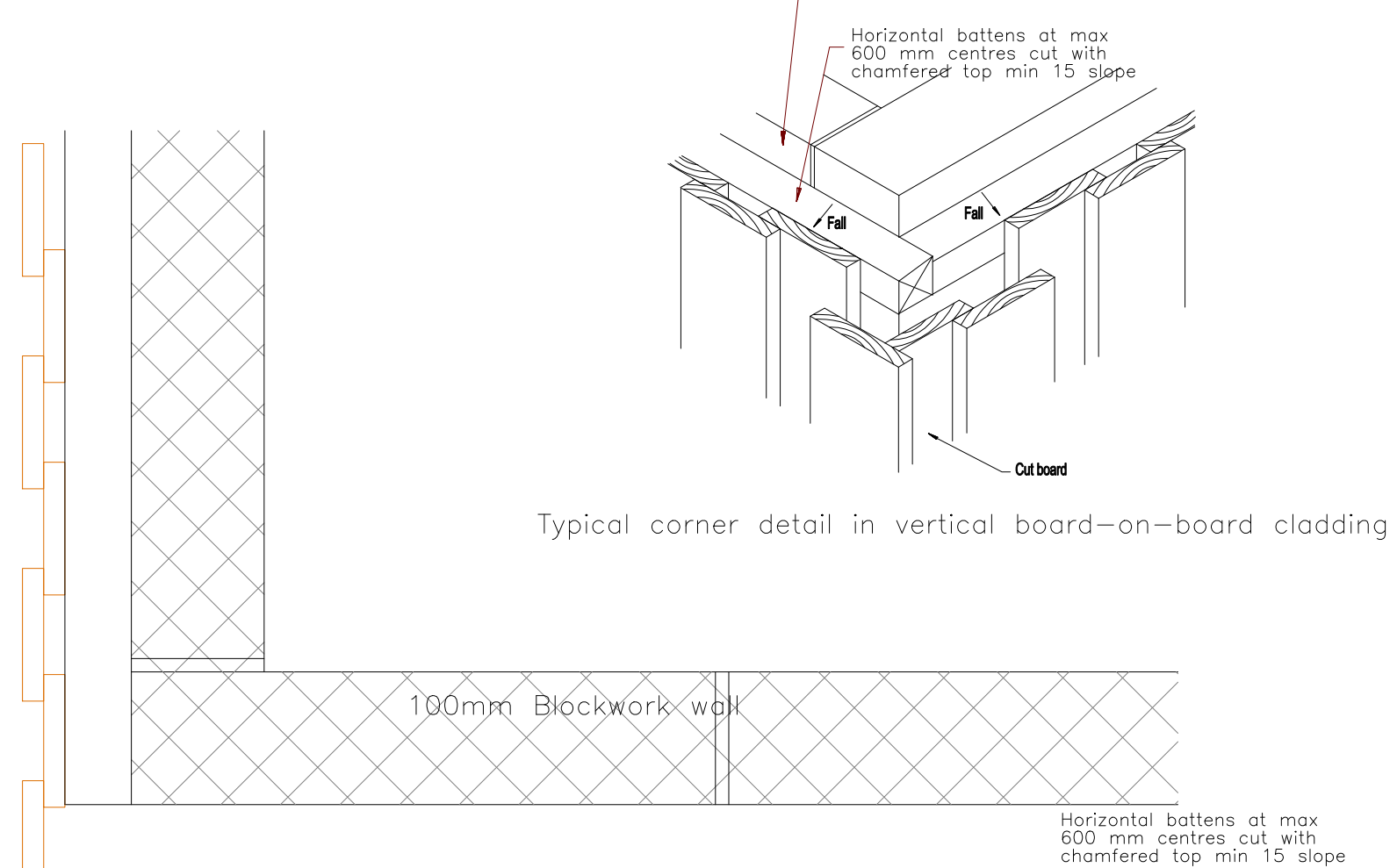
DAMP PROOF COURSES
D.P.C.'s to be installed minimum of 150mm above finished external ground level and separating all timber from contact with concrete as per Architects details. D.P.C.'s to be installed around all window and door frames.

GROUND FLOOR
Ground floor to be formed with finish to Client specification bonded to 50mm concrete screed

The concrete screed is to be formed with a strip of 25mm edge insulation placed vertically around perimeter on a 500mm Gauge polythene sheet laid on Kingspan Kooltherm K3 insulation or similar rigid underfloor insulation batts to a minimum depth of 100mm to provide a 'U' value in excess of 0.18W/M² Sq. M. Insulation batts to be formed on 150mm concrete slab on 1200 Gauge Visqueen D.P.M on 50mm minimum sand blined layer on well compacted and thoroughly blined chemically inert 150mm hardcore - sand blined - to provide a sound and level base. Damp proof membrane to be carried up to bond into damp proof course to ensure no possibility of water ingress.

Hardcore:
Fill: Granular material, free from harmful matter or excessive dust or clay
- well graded all pieces less than 75mm in any direction
- in any layer only one of the following:
Crushed hardcore or quarry waste free from plaster.
Gravel or hoggin
BLINDING TO HARDCORE:
Surfaces to receive sheet overlays or concrete blind with:
Concrete or sand - fine gravel or other fine material

Foundations - Workmanship
Workmanship
Foundations are to comply with BS5970 and shall be dimensioned in accordance with the engineers recommendations, specifications and detail drawings. The foundation design in steeply sloping areas should be exactly in accordance with the engineers design and recommendations. All materials used in the construction of the foundation shall comply with BS882 and be uncontaminated in any way. All soft spots to foundation trench bottoms should be excavated and backfilled in weak concrete with the trench bottom being kept free of soft mud or loose material at all times. Foundations should be formed as soon after excavation as possible and prior to any water penetration into the trench bottom. All finished concrete foundations should be kept clean until the brickwork is taken up above ground level and should be backfilled as soon thereafter as possible. Where new drainage runs or incoming services are covered by the foundation these should be adequately protected and haunched in concrete to ensure no possibility of movement, deflection or damage. All foundations not formed on rock or adequate bearing material to the engineers satisfaction should be constructed according to the engineers specification and detail drawings. All soft areas or signs of vegetation or roots are to be removed and replaced with lean mix concrete. All foundation formation levels are to be protected from the effects of water to comply with the Engineers requirements and the engineer should be allowed the opportunity to inspect the foundation trenches prior to the concrete foundations being formed. The Department of Building Control should also be informed at this stage to allow inspection as required.



Typical corner detail in vertical board-on-board cladding

Vertical board-on-board cladding

1:5 External wall corner detail.

NOTES

DRAWING TO BE READ IN CONJUNCTION WITH SPECIFICATIONS AND ENGINEERS DRAWINGS.
ALL DIMENSIONS ARE IN MILLIMETRES
ALL DRAINAGE TO BE TO SATISFACTION OF LOCAL AUTHORITY.
ALL ELECTRICAL WORK TO COMPLY WITH I.E.E REGULATIONS 18th EDITION.
ALL ELECTRICAL WORK TO COMPLY WITH B.S. 7671 : 2018.
ALL DIMENSIONS TO BE VERIFIED BY CONTRACTOR ON SITE PRIOR TO FABRICATION OR ERECTION.
ANY DISCREPANCIES ON THIS DRAWING OR BETWEEN DRAWINGS SHOULD BE REPORTED TO THE ARCHITECT AND CLARIFICATION REQUESTED PRIOR TO PROCEEDING WITH WORK.

The contractor must note that prior to the start of site operations covered by a Building Warrant they should ensure that the required Start Notice has been issued by either the Architect or the Employer, and at the stages of formation of the foundations and open track drains test the Department of Building Standards must be informed to allow any necessary inspection.

The contractor must note that even if the works are not F10 notifiable to the Health and Safety Executive all work must be completed in accordance with all current Health and Safety Regulations and Recommendations C.D.M. Guidance

1. Working at Height
Use scaffolding, towers or work platforms.
Reduce use of ladders.
Form staircases as early in construction as possible. Identify risks from fragile materials.
Guard openings with railings to prevent falls.

2. Risk Controls
Reduce use of noisy and high vibration equipment. Control dust generation and use dust extraction. Control use of hazardous materials. Provide mechanical handling for heavy materials. Remove debris and surplus materials regularly. Store materials in an orderly manner. Avoid trailing cables and leads, loose materials. Keep walkways and platforms as clear as possible. Provide adequate lighting natural or artificial.

2. Site Management
Ensure a competent, trained person controls site. Provide adequate training, P.P.E. and risk assessments. Check sub-contractors risk assessments and method statements. Ensure safety of the public especially children. Control site access at all times. Control vehicular movement into and around site. Provide guidance on fire risk and escape measures.
DO NOT SCALE THIS DRAWING.

- FOR DISCUSSION
- BUILDING WARRANT
- DRAFT
- TENDER
- PLANNING
- CONSTRUCTION

DATE	DESCRIPTION	REVISION



CLIENT
Miss. KATE STOCKWELL

PROJECT
PROPOSED STORAGE EXTENSION THE MILL HOUSE THORNHILL, FK8 3QJ

DRAWING
SECTION ELEVATION AS PROPOSED

DATE NOVEMBER 2023	DRAWN BY	SCALE AS SHOWN
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DRAWING N.
A2327D/04

REVISION