ROOF - U VALUE - 0.14 W/m2K (unless noted otherwise)

*Note roof pitch is 'low pitch' designation therefore roof build-up to be installed strictly in accordance with Weinerberger Sandtoft installation guide for low pitch roofs.
Weinerberger Sandtoft 2020 Plain Tiles in Tuscan (Suitable for roof pitch to 15 deg) laid at minimum 100mm headlap.
Tiles to be installed as per manufacturers details/instruction for low pitch installations.
The roof tiles must be laid and fixed to comply with BS 5534: the British Standard Code of practice for slating and tiling, and BS 8000: Part 6: the British Standard Code of practice for workmanship on building sites.
Flush SVP and extractor tile vents - refer to services plan for any locatioins. - svps tiles must terminate min 900mm above opening windows.

HIPS/RIDGE
New clay hip tiles to be fully bedded in 1:3 mortar mix and mechanically fixed to comply with BS5534.

25 x 50mm sw pressure treated tiling battens s/s nail fixed. Fix tile battens over the counterbattens, nailing using 65 x 3.35mm smooth round steel nails.
Joints should be square cut; butted centrally on counterbattens and must not occur more than once in any group of four battens on any one rafter.

Counterbattens - 38 x 50 sw pressure treated fixed over. Sandtoft butyl nail tape over the underlay, coinciding with the rafters and any other fixing points.
Remove backing tape then fix counterbattens over the nail tape and rafters, fixing at maximum 300mm centres.

Sandtoft butyl nail tape

Lay Sandtoft VPM Super underlay (Product Ref: 6100028) horizontally over the rafters with a 10mm drape between each rafter.
Allow a minimum 150mm horizontal lap between courses and minimum 100mm vertical laps. If necessary, increase the horizontal lap to coincide with
a tile batten. Ensure there are no cuts, tears or perforations generally in the underlay.
Repair any that do occur using Sandtoft Multi-tape (Product Ref: 6180006) or discard and replace as necessary.
Seal all laps using Sandtoft double-sided tape (Product Ref: 6180008). Seal all roof junctions using Sandtoft Multi tape.
All nail hole penetrations should be protected by laying Sandtoft
butyl nail tape over the underlay, coinciding with all rafters and any other fixing points, prior to fixing the battens or counterbattens.

Sandtoft Eaves ventilation pack comprising over fascia 25mm eaves vent. Sandtoft Underlay support tray fitted to support breather membrane to gutter.

Feature truss design by structural engineer. Drawings and calculations to be submitted to building control for approval.
Truss to be clad in American White Oak furniture board *TBC by client

Holding down straps and bracing to engineers details (And adapted for exposed brick walls internall) but generally-
50x100mm sw wall plate fully bedded onto wall, Galvanised 30mm x 5mm x1200mm long holding down straps to be fixed at maximum 1.2m centres.
*BRICK EXPOSED INTERNALLY SO HD STRAPS WOULD BE VISIBLE

30x5mm galvanised gable wall lateral restraint straps to be installed at max 1.8m centres along roof slope, install noggins between trusses. straps to lay over min 3 trusses. Build straps into wall.

Mild steel straps and fixings should be protected against corrosion in accordance with Tables 1 and 14 of BS 5628 : Part 3.

Pitched cut roof insulation:
150mm Recticel Eurothane GP insulation or similar approved 0.022 W/mk PIR insulation friction fitted between the rafters flush with bottom face rafters- maintain 50mm air space at top rafters. The insulation to be pushed / cut over the wall plate at the eaves to link up with the wall insulation - ensure 20mm breather drape down zone is achieved.
9mm WBP sheathing or 9.5mm Type 2 OSB to underside rafters (as required by the engineers details)
50mm Recticel Eurothane GP or similar approved 0.022 W/mk PIR insulation. screwed fixed to the underside roof structure. Ensure all boards are close abutted and spray foamed where required, foil tape all joints.

Min. 1000 gauge polythene vapour/air barrier installed continuous to underside of roof structure with min. 150mm laps and double sided Defa VCL tape to ensure air tight construction. Lap and tape to wall plate. Seal around all penetrations through the ceilings (roof lights, pipes services etc) to ensure air tightness.

25 x 50 batten space for service void where deemed required to accomodate lighting scheme at ceiling level *TBC by client or service routes at high level.

12.5mm british gypsum plasterboard, scrim tape all joints, finished using standard skim drylining techniques. Use moisture resistant plasterboard in bathrooms and ensuites.

NEW EXTERNAL CAVITY WALLS
200mm cavity areas - 0.15 U value W/m2K
150mm cavity areas - 0.19 U value W/m2K
100mm cavity areas - 0.26 U value W/m2K (below sill level under W01 & W02 only)

Contractor to provide 1m square sample panel of facing brick & mortar pointing on site for inspection by Local Planning authority (As required under planning conditions) for approval prior to works.

Facing Bricks = Imperial Bricks Ltd - metric size brick - Heritage Soft Orange

Outer brick skin: Facing brickwork, - bonding and diapering as indicated on elevations.
(F2/S2 grade below DPC & to 2 courses below ground level). OR
Flint blocks panels as 'Pocket Block' concealed joint block system contact: sales@maceybp.com.
website: https://pocketblock.co.uk/pocketBlock.php
100 x 440 pre cast flint blocks built into out leaf masonry.

Mortar mix below DPC and in chimney breasts to be 3:1 (Sand:Cement), class ii. Mortar mix to walls above DPC to be 4.5:1 (sand:cement) class iii. All as NHBC table 6.1C. Use white cement for all walls to imitate lime mortar.

Inner skin: 100mm Thermalite Aircrete High Strength 7 blockwork (Compressive strength: 7N/mm2, thermal conductivity: 0.18 W/m.K) or similar approved (strength to be confirmed by structural engineer), All masonry fully pointed to inside and outside face.
Refer to engineers drawings for windposts, movement joints and masonry bed joint reinforcement requirements.

Visqueen High performance dpc min 150mm above finished ground level to external leaf.
Build in Visqueen Zedex HP DPC strip on internal leaf, lapped min 150mm and taped to floor dpm with Zedex jointing tape, dress under block and up wall, build dpc into wall above external dpc level. All joints to be lapped and taped to manufacturers details.

Blockwork below ground to be Min 7N medium dense concrete (1500kg/m3).

Refer to engineers drawings for windposts, movement joints
and masonry bed joint reinforcement requirements.

Wall ties to be Ancon Teplo ties to suit 200mm & 150mm cavities. Ties to be spaced 450mm c/c's vertically and 900mm c/c's horizontally. At reveals of openings increase to 225mm c/c's horizontally and vertically and in accordance with engineers specific details. No Ties on external DPC courses.

200mm, 150mm & 100mm cavities fully filled with insulation:
Above slab level - 2 layers of 100mm or 1 layer 150mm Knauf Earthwool Dritherm 32 'ultimate' Cavity Slab insulation or similar with maximum thermal conductivity of 0.032W/mk. Ensure all slabs are close abutted.
Below DPC level - Extruded Polystyrene rigid insulation board to enable support to DPM lapped to top of slab. top cut to fall to outer leaf. Keep cavitys clear of debris. Install in accordance with manufacturers details. Insulation to be installed on an initial row of wall ties at max 600mm horizontal c/c.

Reinforced concrete lintels as supplied by Pheonix Building Products Ltd with brick solider slips to face over W01 & W02 to inner & our masonry.
OR where recessed brick reveal not applicable-
Catnic thermally broken lintels (max psi 0.05 W/mK). Refer to engineers drawings for sizes & loadings. Lintels to be installed as per manufacturers instructions / technical data sheets.

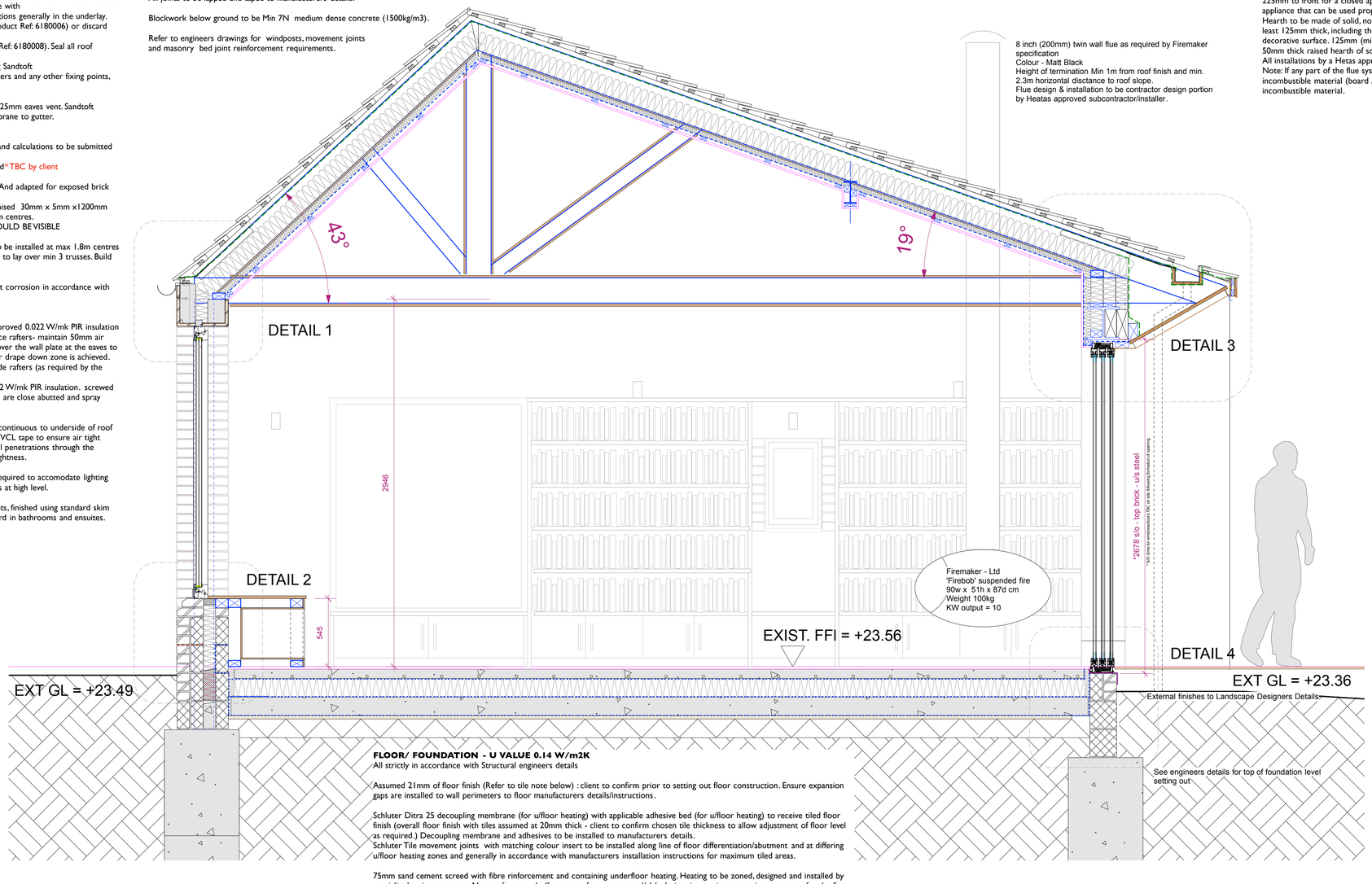
Cavity closers to jambs and cills: Kingspan Thermabate cavity closers or similar approved - size to suit cavity or reduced cavity window detail.

Windows and doors to overlap cavity closers and lintels within insulated cavity zone by min 30mm.

Zedex CPT cavity tray with stop ends to be dressed over external lintel. built into internal leaf, Rytons Rytweep proprietory weephole vents @ 450mm c/c's (min 2 no per opening) . Ensure insulation is packed around cavity trays.

Gypsum plaster to blockwork finish inner leaf. Facing masonry as indicated on plan to inner leaf to North & West walls. Use moisture resistant plasterboard in bathrooms and ensuites and Gyproc tile backer board in wet areas (bath and shower areas). Gyproc sealant to bottom of plasterboard to floor deck

NB: All penetrating services through wall to be sealed with rubber grommets e.g. Pro Clima and sealed to wall using Tescon Vana adhesive tape to ensure airtight seal (or as recommended by manufacturer for grommet application).



FLOOR/ FOUNDATION - U VALUE 0.14 W/m2K
All strictly in accordance with Structural engineers details

Assumed 21mm of floor finish (Refer to tile note below) : client to confirm prior to setting out floor construction. Ensure expansion gaps are installed to wall perimeters to floor manufacturers details/instructions.

Schluter Ditra 25 decoupling membrane (for u/floor heating) with applicable adhesive bed (for u/floor heating) to receive tiled floor finish (overall floor finish with tiles assumed at 20mm thick - client to confirm chosen tile thickness to allow adjustment of floor level as required.) Decoupling membrane and adhesives to be installed to manufacturers details.
Schluter Tile movement joints with matching colour insert to be installed along line of floor differentiation/abutment and at differing u/floor heating zones and generally in accordance with manufacturers installation instructions for maximum tiled areas.

75mm sand cement screed with fibre rinforcement and containing underfloor heating. Heating to be zoned, designed and installed by specialist heating company. Note: refer to underlfoor manufacturers screed/slab drying times prior to turning on system for the first time. Expansion sleeves to UF pipes as required across day joint/movement joint locations.

Layer of min 1000 gauge Polythene Vapour control separating layer between screed & insulation.

150mm Recticel Eurothane GP PIR insulation layers with 50mm Recticel eurothane GP or similar approved PIR external perimeter wall insulation upstand to full height of screed to underside of wall insulation (close abutt joint and foam spray joints, Run foil tape strip between plinth perimeter and wall insulation. At door thresholds and stud partitions install 50mm or similar approved PIR perimeter insulation.

Min 2000 gauge DPM e.g Visqueen High performance DPM laid over structural floor, fully tape and lap up walls to perimeter DPC strips (see details). All joints lapped minimum 150mm with proprietary compatible double sided jointing tape and sealed with single sided proprietary compatible double sided jointing tape all to manufacturers instructions.. Install DPM Top hat sections to all pipe and steelwork penetrations through floor dpm, tape seal to pipes/steels.
All steelwork below ground to have bitumen paint finish.

Concrete reinforced slab to engineers details. All dayworks & expansion joints in structural slab to engineers details allowing for drying shrinkage.

1200 gauge Visqueen curing membrane as required by engineers details

25mm continuous sand blinding.

Min 150mm min well compacted layers of MOT Type 1 on levelled ground to be confimed by engineer details.

MULTI FUEL STOVES
Family : Fire MAker 'Firebob' stove. 90cm option. 10kw output

See Firemaker 'Firebob' specification document for all flue clearance dimensions and flue specifications.

All to fully comply with Building Regulations Part J.
Multi fuel burner and all associated materials and components to form an operational installation are to be supplied and installed by the Contractor's Hetas approved installer.
Twin walled insulated flue to be colour black where exposed internally and externally.
Multi fuel burner to be room sealed, with fire resisting hearth construction all as Part J.
Room-sealed multi fuel burner: combustion system is sealed from the room in which the appliance is located and which obtains air for combustion directly from the open air outside the building and which vents the products of combustion directly to open air outside the building. Supply air route installed within ground floor insulation zone ducted to outside, with air brick / sleeving through wall.
Additional permanent ventilation openings to room may also be required, subject to multi fuel burner / building control requirements *ventilation to be compatible with mvhr system.
Installation plate to be displayed in room. All installed by Hetas approved installer. Carbon monoxide detector in all rooms with solid fuel burning appliance.
Air supply to be sized by supplier and installed accordingly.
Twin walled insulated flue with outlet positions and dimensions to comply fully with Building Regulations Part J to ensure sufficient draught is achieved. Supplier / installer to provide information to confirm compliance,to approval of Building Control.
Where flue passes through roof structure, opening to be trimmed in accordance with structural engineers details and lined with 9mm Enviroboard Fire protection board (60 minutes fire protection).
Multi fuel burner and hearth as diagrams 24 - 27 of part J. 150mm clear from rear of multi fuel burner to a suitably heat resistant (incombustible e.g. tiles / stone faced) wall. 150mm either side of multi fuel burner to edge of hearth / to face of incombustible material. 225mm to front for a closed appliance to front edge of hearth (300mm for a closed appliance that can be used properly with its front open).
Hearth to be made of solid, non-combustible material, such as concrete or masonry, at least 125mm thick, including the thickness of any non- combustible floor and/or decorative surface. 125mm (min thickness) comprised of 75mm floor screed + at least 50mm thick raised hearth of solid mortar bedded stone / concrete slabs.
All installations by a Hetas approved installer.
Note: If any part of the flue system is uninsulated (e.g. connecting pipes) and faces incombustible material (board / tiles) there must be a min 12mm air gap behind the incombustible material.

General Notes

1. This drawing is to be read in conjunction with other engineers, designers, subcontractors and specialists drawings and any associated specifications and details. Any discrepancies are to be reported to the CA/client or relevant project manager before proceeding with the works.

2. All workmanship and materials are to be carried out in accordance with current British Standards, Codes of Practice and good building practice.

3. All work to be to the satisfaction of the Building Control checking authority.

4. Do not scale this drawing. All dimensions to be as noted. Contractor to check all dimensions on site before carry out works.

5. Where existing elements are exposed or investigated during the building works and are found to be not as assumed then contractor to confirm and notify CA/design team/client as applicable before proceeding with works.

6. The contractor is responsible for site health & safety including taking all necessary precautions to ensure stability of both existing and proposed structures at all times during construction. Contractor to contact structural engineer immediately where any doubts arise on site.

7. All services/utilities are to be located and protected as necessary by the contractor prior to the commencement of the works.

8. This drawing is for the private and confidential use of the client for whom it was undertaken and it should not be reproduced in whole or in part or relied upon by third parties for any use without the express written authority of Beech Architects Limited.

RESIDUAL RISK TO HEALTH & SAFETY

Whilst we have made every attempt to design out risk associated with our design some risks may remain. Significant residual risks relating to our design are detailed below with our assessment of how these may be managed. The contractor remains responsible for identifying and managing risk associated with construction processes and site safety and these risks should be identified within the contractor's Construction Health & Safety Plan all operations carried out in accordance with HSE requirements, Current Code of Practice and compliance with CDM 2015 regulations.

Numbered triangles further highlight specific locations where residual risks remain:

- Access equipment for cleaning and maintenance will be required and works undertaken by qualified and competent person.

- The risks associated with working at height should be reduced by using appropriate scaffold, platforms, mobile elevating equipment, safety nets or fall arrest systems as deemed appropriate by the contractors review and assessment of the construction methodology & process.

- The locations of all existing services and utilities must be confirmed prior to commencement of the works.

- The engineer must be contacted immediately where unsure or concern raised regarding the stability of any structure. 1

- Glazed roof to link poses fragile surface (not for foot traffic) and require cleaning maintenance via secure ladder

- Works to Well structure - deep structure/water filled - protection from falling required & covering replaced when works not in progress. 2

D. 21.05.22 Amended with engineers details - new floor structure - flue notes addded for planning condition
C. 28.04.22 Amended with engineers details
B. 13.04.22. Updated for Bregs notes
A. 05.03.22. Updated for Bregs notes
Rev

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DRAWING
SECTION A - A

SCALE	DATE	DRAWN BY	CHECKED
1:20 @ A1	MAY 2021		

DRAWING NUMBER	JOB NUMBER	STATUS	REV
WD05	571	Not For Construction	D