New leaf of 100mm PLASMOR Stranlite 4.2N/mm blockwork secured to existing wall with ANCON Staifix Cavity Starter Ties with internal finish of CELOTEX PL4000 board on dabs (65mm insulation thickness + 12.5mm board thickness) with all joints to be filled, taped, and skimmed to achieve an overall U value of 0.25W/m2K. Use thinner (same type) insulation board at window reveals.

Opening to remain but to be set lower down (see elevation). 178x102x19kg/m UB spreader beam over opening

Beam connection detail by Consulting Engineer

Additional worktop/breakfast bar

Low level exposed brick Wall 670mm high

Construct new full height pier against existing wall in same brick toothed in every course

Leave approx 75mm wide gap between existing wall and new blockwork leaf

Kitchen extractor fan ducted out to tile vent

Kitchen waste pipes taken at low level behind appliances to discharge into soil pipe

MVHR plant likely to be located within Pantry but exact location TBC

Certain internal walls in non-loadbearing block built off floor slab shown thus

Wet Room extractor fan ducted out to tile vent

Form wet room sloping floor within screed thickness

Take soil pipe through roof and vent to external air via tile vent.

Leave approx 75mm wide gap between existing wall and new blockwork leaf

Provide level access to entrance door in accordance with Approved Document M with 1200mm square level landing immediately outside. Construct double dpc detail around entrance area where ground level is less than 150mm below FL. Entrance door to have 15mm maximum compressible threshold strip and provide min clear opening between latch side to door face of 775mm when open at 90°.

WC & Utility extractor fans ducted out to wall vents

Soil pipe within Study taken up to serve Ensuite above.

Certain internal walls to be non-loadbearing blockwork built off floor slab

WC extractor fan ducted out to wall vent

Finished Floor Level 134.00m

Finished Floor Level 133.60m

Kitchen waste pipes taken at low level behind appliances to discharge into gully

Utility waste pipes taken at low level behind appliances to discharge into back inlet gully

All internal walls in 100mm thick PLASMOR STRANLITE 4.2N/mm2 blockwork to receive 15mm GYPROC WallBoard on dabs with skim finish.

Utility waste pipes taken at low level behind appliances to discharge into back inlet gully

Provide level access to entrance door in accordance with Approved Document M with 1200mm square level landing immediately outside. Construct double dpc detail around entrance area where ground level is less than 150mm below FL. Entrance door to have 15mm maximum compressible threshold strip and provide min clear opening between latch side to door face of 775mm when open at 90°.

NOTE- All overall dimensions are approximate and subject to on-site tolerances

203x133x25kg/m UB with 6mm plate welded to bottom flange with stiffeners at third points all bearing on 2 course blue brick padstone.

External walls around Garage to be un-insulated. Walls between Garage & Sauna are to be insulated to same spec as the external walls

Insulate this ceiling with 165mm CELOTEX XR4100 rigid insulation board between floor joists to achieve a U value of 0.16W/m2K. Install 2 layers 15mm thick GYPROC Fireline board with staggered joints + skim finish to achieve 30 minutes fire protection.

Boiler flue to run horizontally in Garage then vertically through Bedroom above.

* denotes laminated glass to BS 6206 1981 & BS EN 12600:2002

Provide level access to entrance door in accordance with Approved Document M with 1200mm square level landing immediately outside. Construct double dpc detail around entrance area where ground level is less than 150mm below FL. Entrance door to have 15mm max compressible threshold strip and provide min clear opening between latch side to door face of 775mm when open at 90°.

Use salvaged bullnose bricks either side of this opening

In Barn 3 certain structural internal walls are to be built in 140mm thick PLASMOR STRANLITE 4.2N/mm2 blockwork to receive 15mm GYPROC WallBoard on dabs with skim finish.

All extractor fans ducted out to wall vents

Utility waste pipes taken at low level behind appliances to discharge into Cloaks soil pipe.

Kitchen waste pipes taken at low level in island to discharge into back inlet gully.

Use salvaged bullnose bricks either side of this opening

203x133x30kg/m UB with 6mm plate welded to bottom flange with stiffeners at third points all bearing on 2 course blue brick padstone. Overall length of beams here to be 3m to allow for future provision of Sun Lounge.

High level window 3.22 to be a fixed light

Snug gable end wall to comprise outer leaf in 103mm salvaged facing brick, 50mm clear cavity, partial Fill CELOTEX CW4000 insulation 75mm thick secured using their proprietary clips, and inner leaf in 103mm salvaged facing brick to achieve a U value of 0.22W/m2K. Construct to same specification as main external walls.

Log burner supplied & fitted by clients on hearth constructed by contractor.

Each 152x152x23kg/m UC ridge beam bolted to 2 course blue brick padstone. Connection details provided by Consulting Engineer.

Utility waste pipes taken at low level behind appliances to discharge into back inlet gully

All internal walls in 100mm thick PLASMOR STRANLITE 4.2N/mm2 blockwork to receive 15mm GYPROC WallBoard on dabs with skim finish.

Utility extractor fan ducted out to tile vent

NOTE- All overall dimensions are approximate and subject to on-site tolerances

Where denoted E-E the opening should have an unobstructed openable area that is at least 0.33m2 and at least 450mm high and 450mm wide. The bottom of the openable area should be not more than 1100mm above the floor.

Electrically operated VELUX CK02 550x780mm (or equal approved by clients) rooflights installed in locations shown in accordance with their recommendations using proprietary flashing kits. Rooflights to not project beyond plane of roof.

* denotes laminated glass to BS 6206 1981 & BS EN 12600:2002

Any sections of existing barn wall deemed to be structurally unsafe are to be carefully demolished with bricks salvaged for re-use. New external wall then to be constructed off new foundation with structural opening sizes to match the existing exactly.

Half-height window set in existing opening with Fixed treated softwood panel below sill.

Locate soil pipe carefully where adjacent to beams

Kitchen extractor fan ducted out to wall vent

* denotes laminated glass to BS 6206 1981 & BS EN 12600:2002

2 No. 203x102x23kg/m UBs bolted together at third points with M10 bolts & spacer tubes bearing on 225mm wide 2 course blue brick padstone.

MVHR plant in Barn 2 likely to be located within Cyl. but exact location TBC

Internal wall between house & garage to comprise outer leaf in 100mm PLASMOR Stranlite 4.2N/mm blockwork, 50mm clear cavity, partial fill CELOTEX CW4000 insulation 75mm thick secured using their proprietary clips, and inner leaf in 103mm salvaged facing brick to achieve a U value of 0.22W/m2K. Construct to same specification as main external walls.

Ventilation duct within floor

Exposed brickwork leaf

STOVAX Elise 540 inset stove supplied & fitted by clients. Flue to run from stove vertically through garage. Build full height exposed brick surround for inset stove. See detail on this drawing sheet.

Half-height window with fixed treated softwood panel below sill.

Double doors centrally located

140mm internal block wall

Beam over

Universal beams as trimmers

Universal beam over opening

Half-height window with fixed treated softwood panel below sill.

Half-height window with fixed treated softwood panel below sill.

Vaulted ceiling over single storey area

Exposed brickwork leaf

Universal beam over opening

GENERAL CONSTRUCTION SPECIFICATION

EXISTING EXTERNAL WALLS:
Rake out all existing mortar joints in brickwork walls and repoint. Carefully remove all internal timber lintels and replace with PCC Stressline lintels on engineering brick padstones. Needle and prop around lintel as necessary. Construct new leaf of 100mm PLASMOR Stranlite 4.2N/mm blockwork secured to existing wall with ANCON Staifix Cavity Starter Ties with internal finish of CELOTEX PL4000 board on dabs (65mm insulation thickness + 12.5mm board thickness) with all joints to be filled, taped, and skimmed to achieve an overall U value of 0.25W/m2K. Use thinner (same type) insulation board at window reveals.

NEW BUILD EXTERNAL WALLS:
To be 303mm sealed cavity construction comprising 103mm outerleaf of facing brick (see below for areas) in 1:1:6 cement:limesand mortar, 100mm cavity with stainless steel vertical twist wall ties at 450mm c/c vertically, 750mm c/c horizontally and staggered. Decrease vertical c/c to 225mm at reveals. Fully fill cavity with 100mm EARTHWOOL DriTherm Cavity Slab 32 glass fibre cavity wall batts closely butt jointed. Cavities and ties must be clear of all mortar snots or droppings and closed at reveals using proprietary insulated cavity closer system. Inner leaf of 100mm PLASMOR STRANLITE 4.2N/mm2 blockwork to receive 15mm GYPROC WallBoard lining on dabs with all joints to be filled, taped, and skimmed. Windows to be built in with 12mm overlap to inner face of brick outer skin with insulated closers acting as dpm at the reveals. This wall specification will achieve a U value of 0.26W/m2K. External walls of Barn 3 to be demolished with bricks salvaged and cleaned ready to supplement areas of Barns 1 and 2 as necessary. Rebuild external walls of Barn 3 using Furness Weathered Red facing brick.

NEW SEPARATING/PARTY WALL BETWEEN BARN 1 & 2:
Build in accordance with Robust Detail E-WM-27 to achieve min 45dB airbourne sound insulation. 300mm thick overall wall construction width to comprise 2 No. leaves of 440x215x100mm thick PLASMOR STRANLITE 4.2N/mm2 blockwork (density 1375-1400kg/m3) coursed at 225mm. Provide 100mm cavity between tied with Type A butterfly wall ties as described in BS 1243: 1978 at 750mm horizontal and 450mm vertical centres. Fully fill cavity with 100mm thick SUPERGLASS Party Wall Roll. Line internally with 15mm thick GYPROC Wallboard mounted on dabs + skim finish.

NEW SEPARATING/PARTY WALL BETWEEN BARN 2 & 3 (ground floor only):
Exposed brickwork face to Barn 2 Living Room, 100mm cavity (tied as above) fully filled with GYPROC Cladding Roll 40 acoustic quilt, and 100mm leaf against Barn 3 Sauna in PLASMOR STRANLITE 10.4N/mm2 blockwork (density 1425-1450kg/m3) coursed at 225mm. Line Sauna side with 8mm cement:sand render (1:1:6 mix) parge coat with scratch finish and final finish of 15mm thick GYPROC Wallboard mounted on dabs + skim finish.

Take both constructions up to ridge and firestop with mineral fibre quilt and/or intumescent foam filler. Where party walls meet the external cavity wall, ensure fully filled cavity of mineral wool insulation batts is complete. Provide vertical dpc extending 25mm beyond each side. The clear cavity in the party wall should continue for at least 225mm below the floor slab. Floor joists to both sides of party walls can be built into the leaf with voids filled with mortar. Avoid forming chases for electrical sockets/switches etc back to back in party wall.

Allow for sound testing for each dwelling to be carried out prior to completion.

PARTY FLOOR OVER SAUNA:
22mm treated sw floor boards (screwed to joists to prevent creaking) secured on TJI joists as main spec.
Secure GYPFRAME RB1 Resilient Bars underside of existing joists at 450mm c/c to receive a finish of 2 layers of GYPROC Soundbloc board 15mm thick (fixed into bars only) + skim.
Lay 100mm ISOWOOL General Purpose Roll in floor void.
This system achieves an estimated 54dB airborne, 60 dB impact insulation, and 60 minutes fire protection.
Allow for sound testing to be carried out prior to completion.

FIRST FLOOR:
to achieve min. 45dB airborne 62 dB impact sound insulation.
22mm nom flooring grade C2 T+G chipboard sheeting (moisture resistant to wet areas) having a minimum mass of 15kg/m2 on preservative treated LATTICE type TJI joists 241mm deep.
Refer to manufacturer's specification and design drawings for spans, centres, restraint strap locations.
Provide strutting at perimeter/board joint noggins in treated softwood.
Lay 100mm mineral wool insulation quilt (minimum density 10kg/m3) between floor joists with 15mm GYPROC wallboard ceilings.

STEELWORK:
Insert universal beams (Grade S355) where indicated all as designed by Consulting Structural Engineer with minimum 150mm end bearing each side onto padstones as specified. Where at ridge level top flange of beam to have holes drilled at 600c/c (staggered about the web) to receive M10 bolts to locate timber wall plate to receive rafter ends. Clad in 2 layers GYPROC 15mm thick Fireline board with skim finish to provide 30 minutes fire protection.

LINTELS:
Folded and insulated steel OR precast concrete Stressline lintels with minimum 150mm end bearing and cavity tray above to all external openings as sized by manufacturer. Provide weepholes at max. 450mm c/c with at least 2 no. per opening. Internal openings within block walls to have IG box lintels as sized by manufacturer. Soffits of all beams/lintels to external wall openings should be lined with insulated plasterboard (minimum R value of 0.34m2K/W) with sealant bead to front and back of frame below lintel soffit.

INTERNAL WALLS:
To achieve minimum 40dB airbourne sound insulation.
Certain walls where shown constructed in 100 or 140mm thick PLASMOR STRANLITE 4.2N/mm2 blockwork to receive 15mm GYPROC WallBoard on dabs with skim finish.
All other walls generally constructed using 90mm CLS treated sw studs at 450mm centres with similarly sized sole and head plates. Studs to be braced at 900mm centres with timber noggings. 15mm GYPROC WallBoard screwed to studs & skim both sides - fully sealed at perimeters. 85mm thick EARTHWOOL DriTherm cavity batts secured between studs.

WINDOWS:
All windows to be painted softwood double glazed draught sealed units with DURABOARD/sw window boards internally and external cill cut to suit.
Style to be as indicated on elevations with opening lights to be at least 5% of floor area - part of which must be at least 1.75m above floor level.
Where denoted E-E the window should have an unobstructed openable area that is at least 0.33m2 and at least 450mm high and 450mm wide. The bottom of the openable area should be not more than 1100mm above the floor.

ROOFLIGHTS:
Electrically operated VELUX CK02 550x780mm (or equal approved by clients) rooflights installed in locations shown in accordance with their recommendations using their proprietary flashing kits. Double-up rafters either side and trim around.
The roof lights are not to project beyond the plane of the roof.

DOORS:
Doors to be in painted softwood in a profile to match the windows.
Provide level access to entrance door in accordance with Approved Document M with 1200mm square level landing immediately outside.
Construct double dpc detail around entrance area where ground level is less than 150mm below FL. Entrance door to have 15mm maximum compressible threshold strip and provide min clear opening between latch side to door face of 775mm when open at 90°.

GLAZING:
All glazing to achieve a U value of 1.1W/m2K to be achieved using 4mm outer pane of Pilkington Optifloat, 16mm argon filled air gap, and 4mm inner pane of Pilkington Optitherm S3 sealed unit or similar approved.
Provide laminated or toughened safety glass as indicated with asterisk in accordance with Building Regulations Part N 1998 to entrance & french doors and all room glazed doors below 1500mm and to windows below 800mm generally to BS 6206 1981 & BS EN 12600:2002.

STAIRCASES:
Treated softwood strings, 22mm thick MDF treads and 9mm thick plywood risers, with 90mm x 90mm pine stub newel posts with decorative finials.
Minimum width over strings of 860mm with 890mm width overall newel.
Generally stairs to provide 13 No. risers at 205mm finished with goings of 250mm as indicated on Sections to give a pitch of 39°.
Alterations to these specifications must not exceed a pitch of 42°.
Ensure minimum headroom of 2m measured vertically above pitch line.
50mm dia. oak handrail with height to be minimum 900mm maximum 1000mm above pitch line, and landing handrail to be minimum 900mm high on oak balusters set at maximum 100mm centres such that a 100mm dia sphere cannot pass through them & such that they cannot be easily climbed by children.
Balusters to be capable of resisting a 0.36KN per metre squared lateral thrust.
Ensure that the goings measured along the centreline of the winder box will be consistent and that there is a minimum 50mm width of on the winder treads at their narrowest ends.

Contractor to include for Air Leakage Test and Sound Testing upon completion.

ground floor plans

CLIENT	MR R WHITE & MRS. H METCALFE
ADDRESS	HILL TOP - MINK FARM HAYES LANE - SWANWICK
PROJECT	PROPOSED BARN CONVERSIONS
DRAWING	PRODUCTION DRAWING - gf plan
SCALE	1:50
DATE	JUNE 2016
DWG No.	PA/15-010 AL (2-) 02 E

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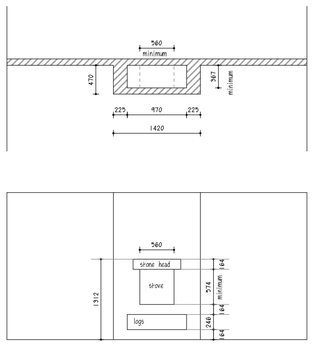
This drawing is copyright
Contractors must check all dimensions on site, working only from grid & figure dimensions.
Discrepancies must be reported to the designer before work is done.

REVISIONS	DATE
A Spec added for Sauna & Garage ceilings, Smoke detector locations denoted.	22/06/2016
B New-build external walls denoted, General spec changes, Structural Engineer's info added, Barn 1 staircase design corrected	31/01/2017
C Lattice type TJI joists specified, Section lines added generally. Barn 1 note added re MVHR plant location, extra worktop shown, WC/Coats layout corrected, Cylinder cupboard added. Barn 2 soil pipes & gullies added, Facing brick internal wall shown, Dining window width reduced, RWPs added, Living Room wall altered to facing brick so new Party Wall spec added, Kitchen & Utility layouts added, Store added below stairs, Entrance door handed, Stove moved. Barn 3 internal door alterations, Garage depth increased to 7m, facing brick internal wall shown, Living Room windows altered, Sauna layout added	23/05/2017
D Barn 3 layout altered & door/windows moved to suit, non-standard external wall construction spec added locally, internal 140mm thick walls denoted, bullnose bricks denoted for Doors 3.17 & 3.29, Cloaks layout altered, Kitchen & Utility layouts added, Snug opening altered to receive future Sun Lounge, Engineer's information added, Floor joists spans denoted, General notes added. All plots - airbricks removed, Opening references added	29/09/2017
E Openings 3.28 & 3.33 altered to 1080mm wide, Window 3.22 added, Location & width of opening 3.15 altered, Construction details for inset stove in Barn 3 added	16/11/2017



Floor Plan & Elevation of feature fireplace wall

Dimensions (except where denoted as minimum) are approximate and subject to brick size