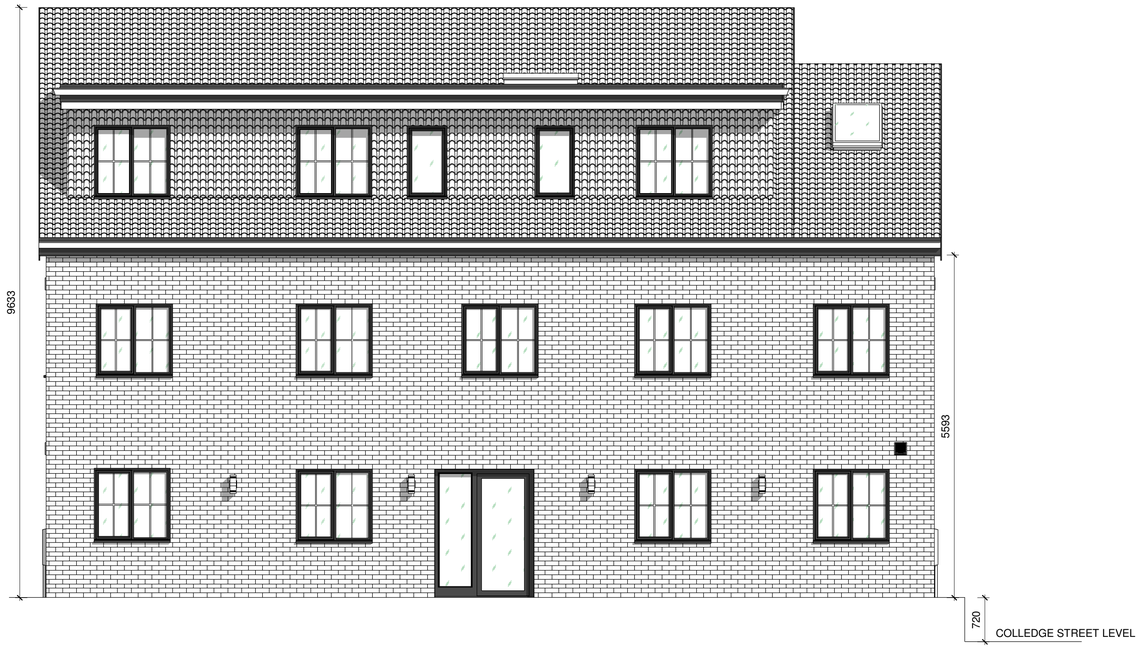
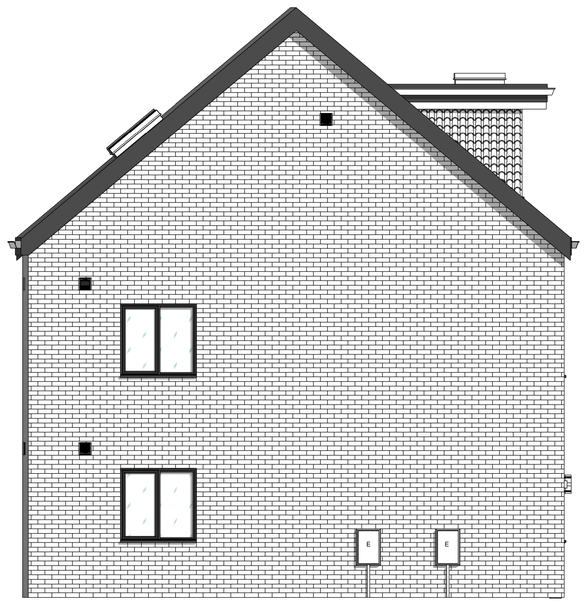


FRONT ELEVATION
1 : 50



SIDE ELEVATION 2
1 : 50

General

Drawings prepared for local authority. Any electrical, heating installation, joinery items, finishes, and fittings to be instructed by the client. The clients are to satisfy themselves that any buried private or public services will not affect the proposal.These drawings have been prepared on the understanding that work will not commence on site prior to the granting of planning permission and building reg approval. All drawings are copyrights and may not be used in conjunction with other projects

CDM REG 2015

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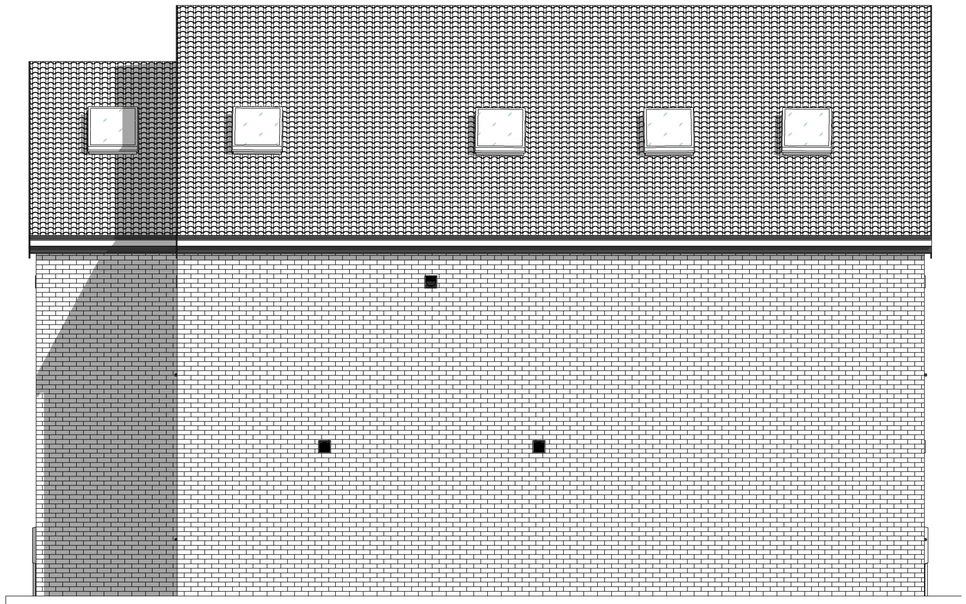
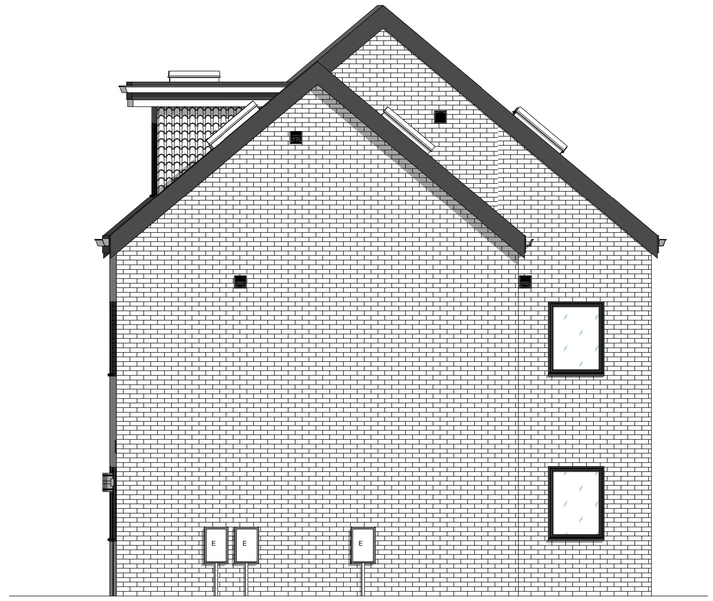


REAR ELEVATION
1 : 50



SIDE ELEVATION 1
1 : 50

Rev	Description	Date
A	Updated materials & change of dormer to one big dormer.	17/05/24

STATUS: PURPOSE OF ISSUE — BUIILDING REGULATIONS

INNOVATIVE DESIGN SOLUTION

STRUCTURAL DESIGN BY:

PROJECT

14 Greenhill Lane, Alfreton, DE55 4EX

TITLE

PROPOSED ELEVATIONS

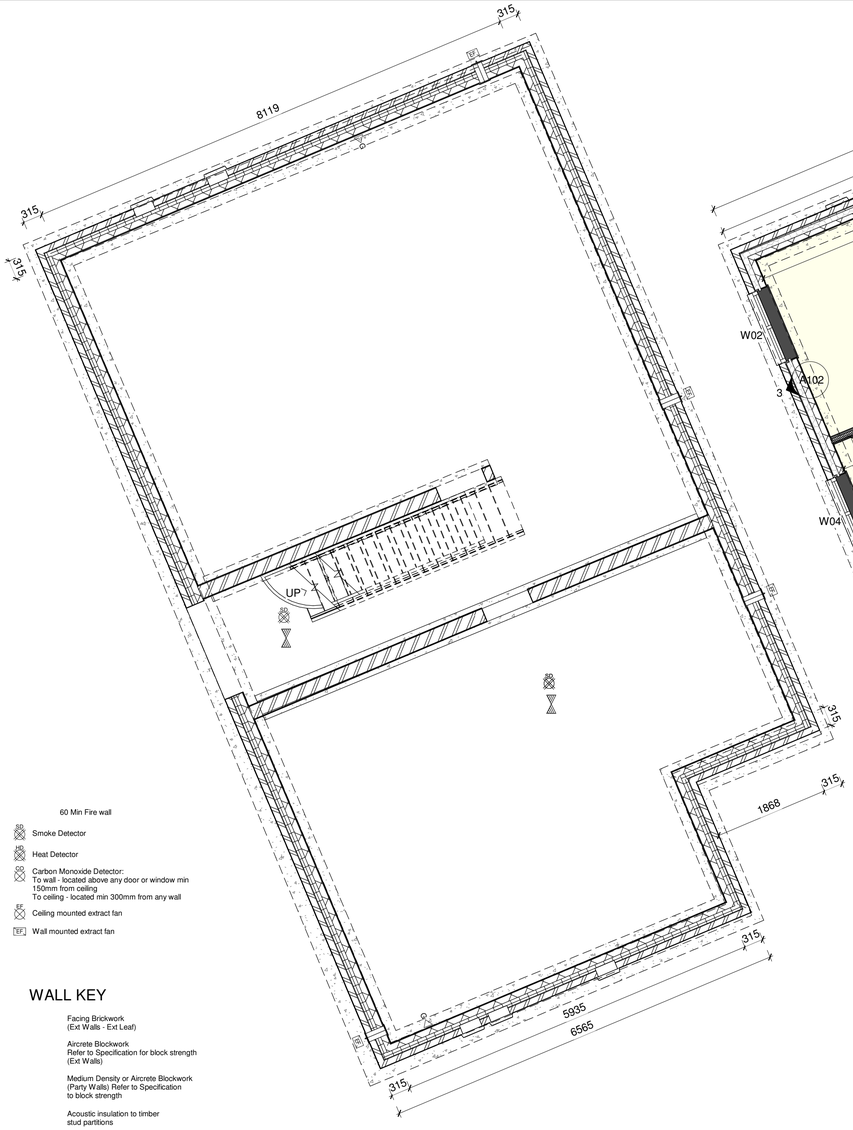
CLIENT

PETE TAYLOR

DRAWN BY	CHECKED BY	DATE
Author	Checker	17/05/24

SCALE (@ A1)	PROJECT NUMBER
1 : 50	0382

DRAWING NUMBER	REV
A102	A



60 Min Fire wall

Smoke Detector

Heat Detector

Carbon Monoxide Detector:
To wall - located above any door or window min 150mm from ceiling
To ceiling - located min 300mm from any wall

Ceiling mounted extract fan

EF Wall mounted extract fan

WALL KEY

Facing Brickwork
(Ext Walls - Ext Leaf)

Aircrete Blockwork
Refer to Specification for block strength
(Ext Walls)

Medium Density or Aircrete Blockwork
(Party Walls) Refer to Specification
to block strength

Acoustic insulation to timber
stud partitions

12.5mm plasterboard, 21mm Fininish Conifer Plywood, 63 x 38mm timber studs C16 grade at max. 450mm c/c's,12.5mm plasterboard
(structural walls - refer to drawings for accoustic insulation)





00 FOUNDATION PLAN
1 : 50

00 DETAIL GROUND FLOOR PLAN
1 : 50

01 DETAIL FIRST FLOOR
1 : 50

Boiler flue outlet to be min 300mm from Door/Window opening.
Stair balustrade to be min 900mm above F.F.L
SVP boxed with 2No. layers 12.5mm plasterboard. Void to be packed with fibre quilt insulation.
Principle Front and Alternative Rear Entrance Doors Min. clear opening 850mm for Approved Document Part M Category 2.
1200 x 1200mm Min. Level platform to Front Principle or Rear Alternative (where step free approach cannot be reasonably acheived to Principle Entrance)
Entrances with accessible thresholds with max. 15mm upstands (refer to standard detail). Weather protection provided by Canopy over (Min. Canopy width of 900mm and Min. depth. of 600mm).
Approach route min.900mm width (max. gradient 1 in 20). to comply with Approved Document Part M Category 2.
Sockets, switches, stop cocks, radiator valves and controls to be positioned a minimum of 300mm from an internal corner.
Extract fan locations drawn to comply with zero-plotting, where HTs are not zero-plotted extracts should be taken through wall or shortest route.
Stairs with store under - Stairs underdrawn with 15mm wallboard fixed at strings and batten at centre of stairs
Additional sealed floor gully to be provided in W.C. for future installation of shower.
Kitchen to be ventilated by wall mounted extract vent providing intermittent ventilation rate of 60l/s.
W.C. extract ducted through floor zone to external wall above centre line of D2.
W.C. to be ventilated by extract vent providing intermittent ventilation of 15l/s minimum, switched with light with 15 minute overrun.
Electric and Gas Meter box to be wall mounted.
RWP positions may differ from that shown. For actual location refer to site specific drainage layout.
Acoustic insulation provided within timber stud partitions between wet rooms and living areas.

GENERAL NOTE
ALL MATERIALS AND COMPONENTS MUST BE SUITABLE FOR THEIR INTENDED PURPOSE AND LOCATION AND MUST BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH ALL RELEVANT, CURRENT BRITISH STANDARDS AND CODES OF PRACTICE, NHBC REQUIREMENTS AND MANUFACTURER'S SPECIFICATION.
Any reference to an Approved Document in this Specification relates to the relevant Approved Document of the Building Regulations.
The building as a whole must comply with Approved Document L1A using the DER (Dwelling Emission Rate) and the TER (Target Emission Rate).
For additional information refer to Trade Specifications, Finishing Specifications, Part L SAP Specification, Project Specific Working Drawings, Standard Details and Construction Best Practice Guide.

FOUNDATIONS
Generally Grade Gen 1 concrete strip foundations all in accordance with Approved Document A Section 2.E. - depth below ground level subject to proximity of drains and local site conditions.
All foundations and concrete mixes to be agreed with NHBC Engineer/Local Authority Building Inspector.
See Consulting Engineer's details for any site-specific special foundations.
Reinforced concrete foundations designed by a structural engineer must have a minimum cover to the reinforcement as shown in the design. Reinforced concrete foundations not designed by a structural engineer must have a minimum of 75mm cover to the reinforcement. All in accordance with NHBC Standards Chapter 3.1.
Foundations must be designed and constructed to suit line and point loads received from the timber frame supplier Systems for the specific apartment design.

DRAINAGE
Work to be in accordance with BS 8301, Approved Document H and engineering drawings.
All private drains to be in uPVC or vitrified clay with flexible joints and fittings conforming to BS EN 295 or BS 4660
All drains under and within 1m of a building to be encased in minimum 150mm concrete with joints remaining flexible. Rocker pipes with flexible joints to be provided through walls. Where drains pass through walls; bridge with a concrete lintels and seal. All drain trenches within 1m of any foundation to be bedded and surrounded and trench backfilled with concrete.
All drain trenches more than 1m from any foundation and deeper than the foundation to be bedded and surrounded and trench backfilled with concrete.
Drains under building to have 100mm minimum surround of granular fill bedding factor to pipe manufacturer's specification.
Where flat drainage connections are made connections are made via Y-junctions access to the run must be provided by roddable gullies or SVPs access points.

Note:
Sewers serving more than one property should be kept as far as is practicable (preferably min. 5m) away from any building where a future extension is likely e.g. to rear or side of building.
For actual line and fall of drains see Site Layout - all to Local Authority Approval.
All pipe work in flexible jointed plastic or other approved, laid on approved bed.
Drains serving more than one property should be kept as far as practicable (5 metres) away from the point on a building where a future extension is likely. (e.g. rear or sides of dwellings).
All external surfaces are to be fully drained (e.g. paths, patio, drives).

Drains with less than 1200mm cover under Highways/Pavement to be encased in 22.5/20kN/m2 concrete minimum 150mm thick.
All concrete encasements to have expansion joints at intervals not exceeding 9m maximum.
Manholes/Inspection chambers in 225mm Class 'B' engineering bricks laid in water bond in cement mortar on minimum 15mm concrete base: or other approved system.

Internal Dimensions			Cover Sizes	
Depth	Width	Length	W	L
0-600	450	450	450	450
600-1m	700	720600mm dia.	450	450
Over 1m	750 1	200	600	600

WATER SERVICES
Cold-water rising-main to enter via insulated sleeve min. 750mm deep.
ACCESS TO AND INTO THE COMMUNAL AREA
At least one entrance into the communal area must be designed as the 'Principal Entrance' to which must be provided a level, stepped or ramped approach all in accordance with Approved Document M

A level platform must be provided immediately outside the principal entrance door at the top of the approach - platform to be min. 1200mm long measured in the direction of the ramp or flight of steps. Part M4 Category 2 requires a 1500 x 1500mm platform for communal entrances.
Where possible the level platform is to only extend for the principal access doorway, as the timber frame must be 150mm above FGL.
Where this is not possible the overlap of timber frame and platform must be minimised, with drainage incorporated along the whole opening and the hard standing sloping away from the building. To be agreed with NHBC on a site by site basis.

FOUNDATIONS
Generally Grade Gen 1 concrete strip foundations all in accordance with Approved Document A Section 2.E. - depth below ground level subject to proximity of drains and local site conditions.
All foundations and concrete mixes to be agreed with NHBC Engineer/Local Authority Building Inspector. See Consulting Engineer's details for any site-specific special foundations.
Reinforced concrete foundations designed by a Structural Engineer must have a minimum cover to the reinforcement as shown in the design. Reinforced concrete foundations not designed by a Structural Engineer must have a minimum of 75mm cover to the reinforcement. All in accordance with NHBC Standards Chapter 3.1.

GROUND FLOOR – U Value 0.13W/m2K to 0.18W/m2K
Unless site conditions dictate otherwise, ground floor construction to be in accordance with NHBC Standards Section 5.2 and agreed with NHBC Engineer/Local Authority Building Inspector.
In-situ 140mm Suspended Reinforced Concrete Ground Floor Slabs
Ground floor slabs to be reinforced concrete suspended between walls - see Engineer's details for location and sizes of reinforcement meshes. Max cover of 20mm to be maintained to reinforcement mesh. Slab to be laid on 1200 gauge polythene dpm (dressed under wall DPC with sealed joints and 300mm laps, on 150mm (unless stated otherwise – see types listed below) Thermal Economics Platinum rigid insulation (TC value) - 0.030W/mK. (See National Supplier Agreements), on sand blinding. (Insulation may be laid directly under slab on Top of dpm if preferred) achieving a U Value of 0.13W/m2K to 0.18W/m2K (dependant on configuration and perimeter to floor area ratio).
Aircrete block (Conductivity 0.11 W/mK) MUST be used for course directly below slab. Cavity wall insulation must Continue down to at least the bottom of this course of blockwork.
Concrete surface to be finished by power-floating. See Standard Details for edge details of reinforced in-situ slabs.
Where Radon and Methane Gas Control Measures are necessary, details to be in accordance with BRE Guidelines and to NHBC Approval – See Standard Details

DPC
Horizontal DPC's to be minimum 150mm above adjacent ground level and to be 500 microns black polythene (2000g) to BS 6515: 1984. DPC to be stepped up as necessary to maintain 150mm clearance above entrance ramp or level platform adjacent to principal entrance door – See Standard Details. Proprietary cavity closers to be installed around perimeters of all external openings. Platinum board cavity wall insulation to be butted up to cavity closer (see 'EXTERNAL WALLS Cavity' section below).

General
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Window Schedule			
Mark	Level	Height	Width
W01	00 GROUND FLOOR	1210	1250
W02	00 GROUND FLOOR	1210	1250
W03	00 GROUND FLOOR	1210	1250
W04	00 GROUND FLOOR	1210	1250
W05	00 GROUND FLOOR	1210	1250
W06	00 GROUND FLOOR	1210	910
W07	01 FIRST FLOOR	1210	1250
W08	01 FIRST FLOOR	1210	1250
W09	01 FIRST FLOOR	1210	1250
W10	01 FIRST FLOOR	1210	1250
W11	01 FIRST FLOOR	1210	1250
W12	01 FIRST FLOOR	1210	910
W13	01 FIRST FLOOR	1210	1250
W19	02 SECOND FLOOR	1210	1250
W20	02 SECOND FLOOR	1210	1250
W21	02 SECOND FLOOR	1210	1250
W25	02 SECOND FLOOR	1200	650
W26	02 SECOND FLOOR	1200	650
W28	02 SECOND FLOOR	800	1200
W14	EAVES	980	780
W15	EAVES	980	780
W16	EAVES	980	780
W22	EAVES	980	780
W23	EAVES	980	780
W27	EAVES	980	780

Rev	Description	Date

STATUS	PURPOSE OF ISSUE BUILDING REGULATIONS

INNOVATIVE DESIGN SOLUTION

STRUCTURAL DESIGN BY:

PROJECT
14 Greenhill Lane, Alfreton, DE55 4EX

TITLE
WORKING DRAWING

CLIENT
PETE TAYLOR

DRAWN BY	CHECKED BY	DATE
Author	Checker	12/20/23

SCALE (@ A1)	PROJECT NUMBER
1 : 50	0382

DRAWING NUMBER	REV
A106	



02 DETAIL SECOND FLOOR

1 : 50

MASONRY IN GENERAL
BLOCKS AND K RENDER throughout to be manufactured in accordance with BS EN 771-1 with minimum water absorption 7-12%. Where a projecting brick feature is utilised a mortar haunch should be provided at the head of the projection to maximise water run-off. Mortar shall be of the mix proportions necessary to achieve adequate strength and durability in accordance with NHBC Standards 6.1.14.
Strength Class M6 required in areas of severe/very severe exposure. Concrete blocks throughout to be solid, manufactured in accordance with BS EN 771-3/771-4 and designated by the manufacturer as suitable for their intended location. All blocks must be below 20kg in weight to comply with the HSE requirement for repetitive one man lift.
Provided that ALL the specified structural, thermal and acoustic requirements are met blocks may be aerated concrete, lightweight aggregate or medium dense.

EXTERNAL WALLS – U Value 0.18W/m2K

Overall cavity wall thickness (excluding external render and internal finish) 315mm.
To be utilised in areas up to severe exposure to wind driven rain only as per NHBC standards section 6.1. Site
specific calculations to BS 8104 required for use in areas of very severe exposure.
External walls generally to comprise Facing Brick , 90 RIDGED BOARD secured to internal leaf using special wall ties, 100mm aircrete concrete block inner leaf (Min.CS 3.2N/mm to manufacturing category 1 standard 2.5mm plasterboard on approved adhesive dabs achieving a U Value

PLASTERBOARD TYPES AND FIXINGS
All internal blockwork to be dry-lined to BS 1230, BS EN 13963 and BS 8212 generally (see Notes 1 & 2 below) with 12.5mm 'British Gypsum Gyproc Wallboard' on 'Gyproc Dri-Wall' adhesive dabs. All perimeters of plasterboard on external walls, including around service entries, to be sealed with continuous band (ie not individual dabs) of adhesive. Plasterboard to walls and ceilings throughout may either be finished with plaster skim coat or prepared for direct decoration with the decorative face and tapered-edges facing the room and with the joints taped and filled all as per
manufacturer's recommendations.

CAST STONE WALLING
Forticrete Ltd Anstone cast stone masonry shall be used, constructed to an acceptable standard, including the performance standards for brick and block where applicable. Walls shall be capable of supporting the intended loads And have appropriate resistance to the adverse effects of freeze/thaw as PD 6697:2010. All masonry should be in accordance with manufacturer's specification (Forticrete Ltd) and designated by the
manufacturer as suitable for their intended location. All blocks must be below 20kg in weight to comply with the HSE requirement for repetitive one man lift. Anstone manufactured stone blockwork to conform with NHBC Standards Section 6.1.10, BS EN 771-5. Mortar shall be of the mix proportions necessary to achieve adequate strength and durability in accordance with NHBC Standards 6.1.14.
Strength Class M6 required in areas of severe/very severe exposure.

MOVEMENT JOINTS
Unless otherwise stated, movement joints shown on housetype drawings are for non-staggered terraces of up to 4 Units.
Movement joints to be formed vertically at locations shown on drawings provided that terrace configuration matches NHBC Type Approved drawings - such locations are indicative only and the location and width of movement joints in all external masonry panels (including freestanding external boundary walls) should be assessed having regard to the geometry of each particular terrace or wall configuration in accordance with BS 5628, Part 5, 1985 and
brick/block manufacturer's recommendations.

Joints in external leaf to be filled with cellular polyethylene or foam rubber and sealed with an appropriate gunapplied sealant to match colour of facing bricks/render coating as closely as possible. Wherever possible, joints should be located behind rainwater pipes

LOAD-BEARING PARTITIONS
Generally built in 100mm medium-dense concrete blocks to BS EN 771-3/771-4 (Min.CS 3.6 N/mm²) - constructed blockwork must achieve min. mass of 120kg/m² excluding wall finish or be supported by B.B.A. or other independent Certification acceptable to the NHBC - consult block manufacturer if in doubt about suitability of proposed block.
Note:
Refer to floor-plans for localised areas of masonry having special strength requirements in accordance with Structural Engineer's design.
Blockwork to be finished both sides with plasterboard as described earlier.
Unless otherwise stated, vertical joints to be formed at junctions between all dissimilar masonry materials - except at DPC locations, joints tied at 225mm vertical c/s with 400mm long stainless-steel expanded metal mesh.
DPC to be located under all ground floor walls and partitions.

UPPER FLOORS – TIMBER I-BEAMS

22mm T&G moisture resistant P5 flooring grade chipboard or other approved decking material to comply with NHBC Section 6.4 and to meet the structural requirements of BS EN 1995-1-1 on engineered joists between 400mm and 600mm max centres designed and supplied by specialist joist fabricators and installed exactly in accordance with manufacturer's instructions and BBA Certificate. An additional joist must be provided under first floor buttress walls when running parallel with span of joists. Spans over 3000mm to be restrained to walls by galvanised ms straps at 2000mm max. c/s spanning over 3No. Joists. Horizontal pipe runs within floor void to be wrapped in min 25mm sound deadening quilt. Floor achieves 40dB sound reduction for Part E – see Test Report L 03-282.
End Caps supplied with floors to be used to aid detailing and airtightness at I-beam ends.

EXTERNAL WALL FIRE STOPPING
All cavity barriers, horizontal and vertical must be fixed to solid timber studs or joists within the wall panels, and should generally be TCB polythene wrapped mineral wool, except around windows and doors.
Cavity barriers around windows and doors to be preservative treated timber battens; minimum size 38mm x 63mm with DPC between the face of the timber and back of the external brick or block and render. Refer to timber frame specific details.
Cavity barriers for timber frame apartments are required at the following locations:
- Around all door and window openings in external walls
- Around meter boxes
- Horizontally at compartment floor junctions with external walls for separating floors
- Vertically at separating wall junctions with external walls
- Continuous along top of external wall at eaves and verge to ridge
- Horizontally at top of upper floor walls, Vertically and max 10M centres

LINTELS/BEAMS
Proprietary lintels/steel beams to be provided over all structural openings including meter boxes in accordance with drawings and schedules.
Lintel references are generally those of I.G. or Catnic Lintels Ltd for use in timber frame and denote pressed-steel type lintels designed in accordance with BS 5977-2, galvanised to BS EN 10346 and satisfying NHBC Technical Requirement R5.
Any alternatives must be approved and satisfy all of the above requirements.
Where I.G. or Catnic references are not given lintels to be as detailed in Structural Engineer's calculations.

Cavity trays/damp proof protection must be provided over all external openings either separately or as a combined part of the lintel to the satisfaction of NHBC.
Minimum 2 No. weep holes per opening to be provided spaced at maximum 450mm centres. Use Rytons Flyscreened Slim Vent Minor (colour to suit brickwork) as per Ground Level Perimeter Vents.
Manufacturer's recommendations for providing adequate fire resistance should be followed.
Lintel manufacturer's installation instructions must be followed, generally all timber frame lintels must be installed with:
- Restraining clips fixed to the timber frame structure by 3.3mm x 50mm galvanised nails. Allowance should be made for the movement of the timber frame structure due to settlement and shrinkage. Lateral restraint clip should be placed at 500mm centres each side of, and at mid span.
- A timber pinch batten to be installed to prevent rotation of the lintel during construction.
- Propping may be used to facilitate speed of construction.

Cold bridge paths should be avoided and adequate insulation measures incorporated, depending upon lintel profile, in accordance with manufacturer's specification and NHBC requirements.
Steel beams to be zinc-coated and painted with bitumen.

CAVITY TRAYS AND FLASHINGS
Flashings generally to be in milled lead sheet to BS EN 12588 - proprietary flashings must satisfy NHBC Technical Requirement R3.
Proprietary lead attached cavity trays to be utilised as standard, available through Group Supplier Agreements from Cavity Trays limited.
Code 4 lead flashings (stepped where necessary) to be provided where roofs abut brickwork.
All flashings to be dressed up wall min. 75mm above surface of tile.
Cavity trays to be linked to flashings in all cases and stepped in the case of a stepped flashing.
Cavity trays must rise minimum 140mm across cavity.
Horizontal fire stopping must be protected by a cavity tray. Cavity to be vented at each compartment floor by Rytons flyscreened slim vent minor (220mm² free flow). To be positioned every other brick horizontally to achieve 650mm² 'open area' every 1.2m.
Code 4 lead soakers to be provided at each tile overlapped by flashing.
Valleys to be lined with prefabricated GRP.
Cavity tray stop end (90 degree) must be installed as per approved Manufacturer's instructions

Weep holes between lintel stop ends. (Colour to suit brickwork). Use Rytons Flyscreened Slim Vent Minor as per Ground Level Perimeter and compartment floor vents.
To have a continuous mastic seal applied to all edges abutting the external wall. Standard for all sites but critically important on severe and very severely exposed sites.
Leadwork to be stepped and tucked a minimum of 25mm into mortar bed, dressed up wall a minimum of 150mm above surface of flat roof abutment and finished as per the image below. Chase is to be pointed in with Lead Mate sealant not Silo mortar. Standard for all sites but critically important on severe and very severely exposed sites.

External and Load Bearing Walls (Inc. Room in Roof Gable and Dwarf Spandrels):
All external and load bearing wall panels to be finished to the timber frame inner leaf with 2 x 12.5mm BRITISH GYPSUM Wallboard internally (nominal 8kg/m² mass each layer), with each layer fixed at max 300mm centres to perimeter and intermediate studs, and with all board joints staggered). The first layer of plasterboard should be fixed with min 40mm drywall screws, and the second with min 55mm drywall screws. Perimeters of plasterboard to all external walls, including around service entries, and skirtings to be sealed. Plasterboard to run from structural floor to the underside of the double plasterboard ceiling.
All plasterboard to be joined on timber studs, noggins or drylining flat strap.
On External Walls (Inc. Room in Roof Gable and Dwarf Spandrels) 1 x 12.5mm BRITISH GYPSUM Wallboard Duplex (nominal 8kg/m² mass) covered with 1 x 12.5mm BRITISH GYPSUM Wallboard (nominal 8kg/m² mass) may be utilised instead of 2 layers plasterboard and a separate Vapour Control Layer. Each layer to be fixed at max 300mm centres to perimeter and intermediate studs, and with all board joints staggered). The first layer of plasterboard should be fixed with min 40mm drywall screws, and the second with min 55mm drywall screws. Perimeters of plasterboard to all external walls, including around service entries, and skirtings to be sealed. Plasterboard to run from structural floor to the underside of the double plasterboard ceiling.
Where fixing brackets are utilised around windows and doors, the spaces between brackets must be packed with 6mm OSB to ensure plasterboard can be installed plumb.
For acoustic requirements to internal load bearing walls refer to Note 1 and Note 2 at the end of this section.

Communal Area Stairwells:
Walls to be finished following relevant external wall and party wall specifications. Plasterboard must be continuous behind stair strings. Movement Joints to be considered at compartment floor lines internally within stairwells covering multiple floors.

Note 1 – Partitions between bedrooms and WC:
Partitions forming bedrooms and partitions forming any room containing a W.C. are required to provide 40dB sound insulation.
This may be achieved by installing 50mm min thickness mineral fibre quilt between the studs and using a 12.5mm 'BRITISH GYPSUM Wallboard' (8.0 kg/m² board weight).
Load bearing partitions require 2 x 12.5mm 'BRITISH GYPSUM Wallboard' with all service outlets sealed with Rockwool FirePro Intumescent Putty Pads or similar approved.
The sound insulation requirement does not apply to any partition containing a door which includes the partition between an En-Suite Bathroom and the associated Bedroom.

Note 2 - Partitions around showers and baths:
Partitions forming shower enclosures and also at the head of and alongside baths to have studs at max 400mm centres and be finished with moisture-resistant plasterboard - where the partition is also required to provide 40dB sound insulation (see individual apartment-type plans) 12.5mm 'BRITISH GYPSUM Soundbloc MR' (10.6 kg/m² board weight) to be used - elsewhere, 12.5mm 'BRITISH GYPSUM Wallboard MR' may be used.

Door Schedule			
Mark	Level	Height	Width
D1	00 GROUND FLOOR	2110	810
D2	00 GROUND FLOOR	2110	810
D3	00 GROUND FLOOR	2110	810
D4	00 GROUND FLOOR	2110	810
D5	00 GROUND FLOOR	2110	810
D6	00 GROUND FLOOR	2110	810
D7	00 GROUND FLOOR	2110	810
D8	00 GROUND FLOOR	2110	1610
D9	00 GROUND FLOOR	2110	810
D10	00 GROUND FLOOR	2110	810
D11	00 GROUND FLOOR	2110	810
D12	00 GROUND FLOOR	2110	810
D13	01 FIRST FLOOR	2110	810
D14	01 FIRST FLOOR	2110	810
D15	01 FIRST FLOOR	2110	810
D16	01 FIRST FLOOR	2110	810
D17	01 FIRST FLOOR	2110	810
D18	01 FIRST FLOOR	2110	810
D19	01 FIRST FLOOR	2110	810
D20	01 FIRST FLOOR	2110	810
D21	01 FIRST FLOOR	2110	810
D22	01 FIRST FLOOR	2110	810
D23	01 FIRST FLOOR	2110	810
D36	02 SECOND FLOOR	2110	810
D38	02 SECOND FLOOR	2110	810
D40	02 SECOND FLOOR	2110	810
D43	02 SECOND FLOOR	2110	810
D44	02 SECOND FLOOR	2110	810
D45	02 SECOND FLOOR	2110	810
D46	02 SECOND FLOOR	2110	810
D47	02 SECOND FLOOR	2110	810
D48	02 SECOND FLOOR	2110	810
D49	02 SECOND FLOOR	2110	710
D50	02 SECOND FLOOR	2110	810

Window Schedule			
Mark	Level	Height	Width
W01	00 GROUND FLOOR	1210	1250
W02	00 GROUND FLOOR	1210	1250
W03	00 GROUND FLOOR	1210	1250
W04	00 GROUND FLOOR	1210	1250
W05	00 GROUND FLOOR	1210	1250
W06	00 GROUND FLOOR	1210	910
W07	01 FIRST FLOOR	1210	1250
W08	01 FIRST FLOOR	1210	1250
W09	01 FIRST FLOOR	1210	1250
W10	01 FIRST FLOOR	1210	1250
W11	01 FIRST FLOOR	1210	1250
W12	01 FIRST FLOOR	1210	910
W13	01 FIRST FLOOR	1210	1250
W19	02 SECOND FLOOR	1210	1250
W20	02 SECOND FLOOR	1210	1250
W21	02 SECOND FLOOR	1210	1250
W25	02 SECOND FLOOR	1200	650
W26	02 SECOND FLOOR	1200	650
W28	02 SECOND FLOOR	800	1200
W14	EAVES	980	780
W15	EAVES	980	780
W16	EAVES	980	780
W22	EAVES	980	780
W23	EAVES	980	780
W27	EAVES	980	780

General
Drawings prepared for local authority. Any electrical, heating installation, joinery items, finishes, and fittings to be instructed by the client. The clients are to satisfy themselves that any buried private or public services will not affect the proposal.These drawings have been prepared on the understanding that work will not commence on site prior to the granting of planning permission and building reg approval. All drawings are copyrights and may not be used in conjunction with other projects

CDM REG 2015
These drawings have been prepared on the understanding that work will not commence on site prior to the granting of planning permission and building Reg approval. At this point the designers work is complete; hence the designer of this drawing will not be acting as the principle designer in terms of health and safety. Under the new regulations, both the client and the building contractor will have health and safety responsibilities and will need to prepare a construction phase plan for the scheme. the construction phase plan for the scheme should include risk assessment and method statements for elements of the works such as excavations, buried services, risk of electrocution, working at height, lifting and handling, etc. should you require guidance, please see HSE website.

Rev	Description	Date
A	Updated materials & change of dormer to one big dormer.	17/05/24
B	Window sizes changed to1210/1250, and door opening	21/11/24

STATUS
PURPOSE OF ISSUE
BUIILDING REGULATIONS

INNOVATIVE DESIGN SOLUTION

STRUCTURAL DESIGN BY:

PROJECT
14 Greenhill Lane, Alfreton, DE55 4EX

TITLE
WORKING DRAWINGS 2

CLIENT
PETE TAYLOR

DRAWN BY	CHECKED BY	DATE
Author	Checker	12/20/23

SCALE (@ A1)	PROJECT NUMBER
1 : 50	0382

DRAWING NUMBER	REV
A108	B

SEPARATING FLOORS
Separating Floor to be constructed in accordance with the Robust Detail (RD) E-FT-5 as described below. Consideration must be given to service requirements and joist positions.
Wall plasterboard to run from structural floor to double plasterboard ceiling. Consideration must be given to on site sequencing and provision of staggered ripliners with all horizontal joints backed below the double plasterboard ceiling.
E-FT-5 with electric and plumbing services in suspended ceiling feeding apartment beow.
Min 240mm I-Joists, with min 100mm mineral fibre quilt insulation (10-33kg/m³) laid between joists. 18mm OSB structural deck pre-fitted to joists as floor cassettes, continuous under all external, load bearing and party wall soleplates. 28mm Cellecta Screedboard 28 on top of 18mm OSB sub-deck to form floor.
Ceiling treatment to consist of resilient bars and 2 layers of plasterboard as noted in the 'SEPARATING FLOOR PLASTERBOARD TYPES AND FIXINGS' section, with a metal frame ceiling service zone (Note:- Ceiling Treatments 1 and 2 require a 150mm service zone) and finishing layer of minimum 12.5mm plasterboard. (Wall plasterboard to run from structural floor to double plasterboard ceiling.)
A suspended ceiling, fixed only to the resilient bars must be formed for all ceiling mounted service runs, ventilation or down-lighters feeding the apartment below with no services run horizontally within the I-Joist zone.

Ceiling Treatment 1/2 – 495/496.5mm (including mandatory 150mm service zone.)
When utilising E-FT-5 Ceiling Treatment 1 and 2; 16mm (min) metal resilient ceiling bars mounted at right angles to the joists at 400mm centres fitted perpendicular to the joists.
Ceiling Treatment 3 – 428.5mm minimum based on 346mm + minimum 90mm service zone (75mm zone + minimum 12.5mm board plasterboard.)
When utilising E-FT-5 Ceiling Treatment 3; Cellecta® HP30 30mm deep metal resilient bar must be used, fixed perpendicular to floor joists at 600mm (max) centres fitted perpendicular to the joists.
All vertical pipe and duct service penetrations through floor treatment to be firestopped. Plastic pipes to be firestopped with pipe collars as specified by the current Fire Stopping Trade Specification and Project Specific Fire Stopping Checklist and installed by a certified installer.

When utilising E-FT-5 Ceiling Treatment 1 and 2;
16mm (min) metal resilient ceiling bars mounted at right angles to the joists at 400mm centres fitted perpendicular to the joists.
To be finished with 1 x 19mm BRITISH GYPSUM Gyproc plank (nominal 15kg/m² mass) and 1 x 12.5mm BRITISH GYPSUM Wallboard (nominal 8kg/m² mass), or alternatively 2 x 15mm BRITISH GYPSUM Soundbloc (nominal 2 x 12.6 kg/m² mass).

When utilising E-FT-5 Ceiling Treatment 3;
Cellecta® HP30 30mm deep metal resilient bar must be used, fixed perpendicular to floor joists at 600mm (max) centres fitted perpendicular to the joists.
To be finished with 2 x 15mm BRITISH GYPSUM Soundbloc (nominal 2 x 12.6 kg/m² mass).
Resilient bars to be fixed to joists with min 32mm drywall screws, with first layer of plasterboard fixed with min 32mm drywall screws, and the second with min 45mm drywall screws, taking care the all plasterboard fixings are only fixed to the resilient bars with no direct contact to the underside of the joists. Each layer of ceiling plasterboard fixed at max 230mm centres to perimeter and intermediate joists, and with all board joints staggered.
Uppermost ceiling to be finished with 1 x 15mm BRITISH GYPSUM (nominal 9.8 kg/m² mass) Wallboard to the underside of the roof trusses, fixed with min 40mm drywall screws at max 230mm centres.
A suspended ceiling for service circulation will be required dimensions as indicated on working drawings. For further information see 'SEPARATING FLOORS.' This is to be finished with a minimum of 1 x 12.5mm BRITISH GYPSUM Wallboard (nominal 8kg/m² mass).

COMMUNAL STAIRCASES
To be in accordance with Approved Document M Section 2.
Maximum step rise 170mm. Minimum step going 250mm. Maximum pitch of flight 34°.
Min. width of staircase to be 1000mm clear between balustrade and finished wall surface.
All timber stair cases within timber frame apartments to be constructed using min C24 grade timber with a minimum density of 47kg/m3.
Stringers and treads to be min 44mm thick, with min 14mm thick plywood risers. Stair to be constructed using thermosetting glue (D4 or cascamite), and be coated with a Class-O fire treatment post manufacture. The underside of the stair flight to be boarded with 1 x 12.5mm BRITISH GYPSUM Fireline plasterboard.
For further information, please refer to NHBC Building Control, Use of Timber Stairs in New Build Residential Buildings Exceeding Three Storeys guidance note.
Handrails to stairs to be located both sides of flights and to be fixed to balusters or wall 900mm vertically above pitch-line, maintaining min. 25mm clear between handrail and finished wall surface.
Handrails to extend continuously around half-landings and 300mm horizontally beyond first riser at each floor level on one side only and to be fixed 1000mm above finished floor level.
Timber painted balustrades and fixing system to be provided to all stair, landing and balcony edges not abutting walls with balusters at max. 100mm centres.
Where applicable, windows adjacent to staircases to be protected by additional balustrading fixed at the appropriate height to the wall within the window reveal.
All floors (including stairs) within Communal Areas, to be covered with sound absorbent material which meets or exceeds Class C as defined in BS EN ISO 11654:1997. This can be achieved using 'BRITISH GYPSUM Arteco ceiling system comprising Gyptone Quattro 41 or45 acoustic ceiling boards to 50% of calculated communal area. Boards secured using Gypliner Universal or Casoline MF ceiling lining system.
Ceiling to communal areas to be finished with screwed 15mm thick plasterboard with joint and tape finish for fire proofing prior to fixing of Gyptone ceiling system.
NOTE: - There is a 3-Day lead-time for the Gyptone Quattro boards.
(Acoustics - Sound Absorbers for use in buildings - Rating of sound absorption) as per Approved Document E Section 7.

GLAZING
U Value 1.41W/m2K; g factor 0.71
All doors and windows to be double-glazed with windows giving a 'U' value of 1.41 W/m2K (g factor 0.71) backed up by manufacturers test certification. Styles to be in accordance with apartment type elevations and schedules.
Windows to be fixed behind line of back of brickwork to allow for differential movement (Window must not be within brickwork opening).
Cavity Barriers around windows and doors to be preservative treated timber battens; minimum size 38mm × 63mm.

All Rooflights to be double-glazed with windows giving a 'U' value of **1.50 W/m2K** backed up by manufacturers test certification.
Obscure glazing to front door, Bathroom, En-suite and Cloakroom windows and also landing window if directly overlooking an adjacent window within 13 metres.
In accordance with Approved Document Part K 2013 (Part N1 1998 still applicable to Wales) all glazing below 1500mm above finished floor level in both doors and sidelights within 300mm of door jamb and all other areas of glazing below 800mm above finished floor level must be either

a. toughened or laminated and break safely to BS EN 12600
or
b. robust i.e. 8mm annealed glass in panes not exceeding 1.1m in both height and width

or
c. 6mm annealed glass in small panes (i.e. maximum width 250mm and area 0.5m²).
In accordance with Approved Document Part K 2013 fixed glazing below 800mm from finished floor level (FFL) should be able to provide containment from a person falling against it, backed up by manufacturers test certification, or a barrier should be provided to resist the horizontal forces in accordance with BS EN 1991-1-1 and BS EN 1991-1-7.
All upper floor opening lights located above ground floor projections (e.g. projecting Hall, Porch, Bay) and all windows at second floor level to be fitted with EASY-CLEAN hinges to permit cleaning of glass from inside.
ALL opening lights at second floor to be fitted with suitable restrictors to prevent the opening of the window by more than 100mm - restrictors to be easily by-passed by an adult without use of tools and located out of reach of small children.

EMERGENCY EGRESS WINDOWS
Any reference to an 'Emergency Egress Window' relates to a window in a room that will be subject to the requirements of Building Regulations Approved Document B Paragraphs 2.7 & 2.8 and must comply with the requirements of Paragraph 2.11 i.e. it should have an unobstructed opening that is at least 0.33m² in area, at least 450mm high and at least 450mm wide and the bottom of the window opening should be not more than 1100mm above the floor.
In practice this requirement will generally apply to habitable rooms (this does not include kitchens) at first floor level in 2-storey housing.
The requirement will also apply to habitable rooms at ground floor level where the room does not open directly onto a Hall leading to an exit.
The requirement does not apply to 3-storey housing where fire doors necessarily separate habitable rooms from the protected escape route i.e. Hall/Landing/Stairwell.
Emergency Egress Windows to be fitted with locking window handles with a removable key.
Note: All upper floor windows to be provided with lockable window handles on non-Secured by Design sites.

FIRE RESISTANT INTERNAL DOORS
Fire doors to be provided as specified at locations defined on apartment working drawings and related schedules, including Apartment Entrances, Internal Lobby and Meter Cupboards.
Flat entrance fire doors should have test evidence demonstrating they meet the performance requirement required by Building Regulations guidance for fire resistance and smoke control from both sides.
Test evidence used should be carefully checked to ensure it is to the same specifications of the doorsets being installed. This should confirm that the door set has been tested in accordance with Approved Document B and in particular that both sides of the door(s) have been exposed to fire. If this evidence is not available this may affect the issue of the Building Control Final Certificate
Apartment Front Doors must not be GRP.
All fire doors to be fitted with positive self-closing devices - rising butt hinges are not acceptable.
All fire door frames MUST be filled with a mineral wool or intumescent mastic paste as per BS 8214:1990
All fire doors to be contained within frames incorporating appropriate intumescent strips.
Fire resistant glazed screens to communal staircases/landings to be constructed in accordance with detailed drawings and to provide 30 minutes fire resistance in terms of integrity.

All entrance doors to individual apartments to be fitted with lock/latch mechanism openable from the inside by means of a bolt or catch - key operation from inside apartment is not acceptable.

ROOF STRUCTURE
To be supplied by Timber Frame manufacturer. All external timber to be pressure-impregnated with preservative prior to delivery to site in accordance with NHBC Standard 2.1. Structural timber to be to BS EN 1995-1-1.
Size of tiling battens to be in accordance with NHBC Standard 7.2.
Reinforced waterproof flexible sheet covering to be to Type 1F to BS EN 13707 and NHBC section 7.2.14 generally with Type 5U (fixed as a 1m strip) where directly exposed to weather (e.g. where felt is dressed into gutters).
UPVC fascias, bargeboards and soffit boards throughout all as indicated on elevations.
686x562mm roof-space access hatch on minimum 38x89mm timbers in trimmed opening to be provided - hatch to be insulated and fitted with perimeter draught-seal.
Trussed rafter roof to be fully braced with 100x25mm s.w. bracing twice nailed to each truss, in accordance with Roof Design by Specialist and NHBC requirements.

Vertical restraint:
Trusses to be secured to wallplate (headbinder) using proprietary truss clips fixed on the inside face of the wall-plate and around the bottom chord of the truss with nails fixed through each available hole. This head-binder is fixed into the wall panel below.
Horizontal restraint:
Trusses are secured against horizontal wind load and restrained by way of the longitudinal timber bracing that is fixed through the roof trusses, being continued to and fixed into the triangular spandrel panels

ROOF COVERING
Unless otherwise specified on individual apartment type 'Elevation' drawing, through-coloured concrete interlocking or plain roof tiles to BS EN 490 and BS EN 491.
Roof tile profile to be suitable for specified pitch (as per manufacturer's specification). Tile installation to be in accordance with BS 5534 and BS 8000 on treated s.w. battens on reinforced bituminous felt or similar approved underlay to BS EN 13707:2013, laid to fall to gutters on proprietary licensed manufacturer's prefabricated trussed rafters at pitches as indicated on drawings and maximum 600mm centres to BS 5268-3.
All roofs to porches and hall/cloaks projections at ground floor to be finished in plain tiles to BS EN 490 and BS EN 491 except where roof pitch is below 35° or where continuous with garage roof.

ROOF VENTILATION
Soffit board to be provided with fly screen protected ventilation equivalent in area to a continuous gap along both sides of roof of 10mm (25mm for roofs 15 degrees or less). Where the insulation follows the slope of the roof, provide the equivalent of a 5mm wide continuous gap at ridge level and 25mm wide at the eaves. Proprietary eaves vent system to achieve min 50mm air gap above insulation.
'MANTHORPE' propriety profiled ventilator trays (generally G503 – 800mm dependent on insulation depth) to be installed between trusses above head of external wall to maintain free flow of ventilation into roof-space, equivalent to a 10mm gap.
High-level ventilation equivalent to a 5mm continuous slot to be provided to heads of all mono-pitch roofs.
Where the roof pitch is 35° or greater or the truss span exceeds 10m, it is recommended that high-level ventilation, equivalent to a continuous 5mm opening, be used in addition to eaves ventilation.
Cold roofs where the pitch exceeds 35 degrees OR where the span exceeds 10m requires a vent equivalent to a continuous 5mm gap at the ridge. See NHBC standards section 7.2.15.
Ventilation to small bay roofs and porches to be to satisfaction of NHBC.

RAINWATER GOODS
All rainwater goods to be in accordance with Approved Document H and NHBC Standards Section 7.2.22 must be provided for all roofs greater than 6m² in area to NHBC satisfaction.
All down pipes connected directly to storm water sewers, to Local Authority approval.
Refer to site drainage layout for exact position of connections.
Refer to Working Drawing for gutter specification, to be either;
- Pre-finished in half round black - PVCu (112mm diameter) approved section uPVC rainwater gutters to discharge into 68mm dia. down pipes (maximum roof area 37m² per outlet - Approved Document H3).

or
- Pre-finished in half round black – PVCu 'Deepflow' (117mm x 75mm) gutters required where shown on working drawings to discharge into 68mm dia. down pipes (maximum roof area 53m² per outlet - Approved Document H3).

- All gutter brackets to be installed at 600mm centres maximum.
Downpipe - Pre-finished in round black - PVCu (68mm diameter)

FIRE RESISTANCE
All steel beams to be encased or treated with intumescent paint to provide 60 minute fire protection for all apartments.
75mm thick mineral wool cavity barrier to be provided within boxed eaves in line with party wall.
Tightly packed fire rated mineral wool fire-stop to be provided under roof covering at top of party walls above and below the roof membrane.
Similar fire-stop to be provided over walls between Bin Store and single storey accommodation where wall is to be built up to roof level.
Fire-stops to be provided where fire resisting walls and floors are perforated by holes for pipes, ducting and flues.
All pipes or ductwork (including rising mains and SVP's) passing through timber upper floors to be contained within boxing formed from 2 x 12.5mm plasterboard, joints staggered, taped and filled fixed over s.w. framing. Provide appropriate fire resisting collars to pipe/timber floor junctions fitted in accordance with manufacturer's details. Ensure all pipes to be fitted with fire resisting pipe collars have a minimum 30 mm clearance all round to permit fitting of fire collars. Fire Collars generally require solid timber grounds for fixing. Fire Collars must be fitted by certified installers.
Where meter boxes are situated internally within communal areas, they are to be non-combustible (min 30 minute fire resistance) locked and fully sealed.
When the outer leaf is 102.5mm brickwork, and the cavity insulation is classed as combustible; cavity barriers/fire stopping are required to ventilation ducts in timber frame structures as per NHBC Technical Extra 22 April 2017 'Service Penetrations through external wall constructions of residential buildings'.

All cavity barriers for timber frame are required to provide 30 minute fire protection. Appropriate cavity barrier/fire rated duct bore to suit duct diameter and to be fitted in line with manufacturer's instructions. Correctly installed, the use of a fire-rated duct or sleeve (Rockwool Fire Tube/Pipe Sleeve or similar approved, or generally steel of a minimum of 0.5mm of an appropriate) will maintain the compartmentation between the room and the cavity. Operating temperatures of ducts to be considered.
All horizontal and vertical cavity barriers must be fixed to solid timber studs or joists within the wall panels, and should generally be TCB polythene wrapped mineral wool, except around windows and doors.
- TCB polythene wrapped mineral wool cavity barriers, typically 75 x 75mm for a 65mm cavity.
- Cavity Barriers around windows and doors to be preservative treated timber battens; minimum size 38mm × 63mm with DPC between the face of the timber and back of the external brick or block and render.

All vertical pipe, ducting and electrical service penetrations through fire rated walls and doors to be firestopped. This includes compartment floors, party walls and load bearing wall. Plastic pipes to be firestopped with pipe collars as specified by the current Fire Stopping Trade Specification and Project Specific Fire Stopping Checklist and installed by a certified installer.

VENTILATION TO APARTMENTS WITH FRONT AND SIDE (DUAL) ASPECT
Compliance with Approved Document F1 will be achieved using System 1 which is a combination of background ventilators and intermittent extract fans.
Extract ventilation to outside is required in each kitchen, utility room, WC without windows, and bathroom. The extract fans will be intermittent (manually operated) and in internal rooms with door but no window the fans will be fitted with 15 minute overrun facility and in the case of rooms with no natural light fans will be switched with the light.
Minimum extract airflow rates in litres/second are as follows:-
Kitchens - 60l/s or 30l/s if incorporated within cooker hood
Utility Rooms - 30l/s
Bathrooms/Shower Rooms - 15l/s
W.C. - 6l/s (where applicable)
Adequate replacement air is to be available to all rooms via 25mm gap under doors.

SANITARY GOODS
All waste fittings to have 75mm deep seal traps and separate connections to SVPs and to be installed in accordance with BS5572.
Baths and showers on joisted floors to have flexible joint to wall.
Wastes to wash-hand basins to be 32mm diameter for runs not exceeding 1.7m and 40mm diameter for runs up to 3m.
Baths and showers to have 40mm diameter trap for runs up to 3m length.
Washing machine and (where applicable) Dishwasher spaces to be plumbed-in.
All exposed pipework to be boxed-in.

SOIL AND VENT PIPES
110mm diameter PVC-U soil and vent pipes to BS 5572 to discharge either via ridge vent or proprietary ventilation tile.
Provisions to be made for access to svp at each floor level.
SVP's within internal plasterboard ducts to be surrounded with 25mm thick unfaced mineral wool throughout their length, and boarded with 2 layers BRITISH GYPSUM 12.5mm plasterboard.
Vertical soil vent pipes to allow for the vertical settlement of the timber frame, utilising a joint in the pipe at each floor level which is fitted with min 10mm compression gap left to allow the pipe to move with the timber frame.
Soil vent pipes to be terminated internally should be fitted with an air admittance valve (AAV) complaint with NHBC Standards Chapter 8.1, Building Regulations Approved Document H: Section 1 and BS EN 12380:2002.

HEATING & HOT WATER
All heating schemes to be in accordance with Heating Consultant's drawings and specification and in compliance with Approved Document L1A and The Domestic Heating Compliance Guide.
All heating schemes are to be designed based on an external temperature of -3□C.
Where running within external walls all heating services to be installed within the insulation, fixed to the centre of studs.
Care must be taken to ensure vapour control layer, fire protection and acoustic ratings are maintained around services.
Rockwool FirePro Intumescent Putty Pads or similar approved to be utilised.
Heating systems to be controlled via individual time and temperature controls on each heating zone and either a 3-port or twin 2-port zone valves. (See design drawings prepared by Heating Consultant).
Room thermostat must be located as shown on Heating Consultant's drawings.
Combi boiler heating system to generally be used in apartments. Where apartment has a bathroom and an en-suite, an electric shower must be fitted in the en-suite only. Apartments with 1 bathroom only to have a thermostatic shower fitted over the bath which is directly fed from the combi boiler system.
Thermal conductivity of pipework insulation not to exceed 0.045 W/mK.
Domestic hot water cylinder to be supplied with factory-applied polyurethane foam insulation in accordance with the standard heat loss value shown in the SAP calculation provided by Thermal Economics and zero ozone depletion potential.
Primary pipework to be insulated in accordance with Approved Document L1A - generally in unheated areas and for the first metre run of pipework from the domestic hot water cylinder.
Where necessary, pipes and hot water storage vessels are to be thermally insulated to comply with Approved Document L1, Section 1.
All heating and hot water horizontal pipe runs feeding the apartment below to be installed in the ceiling service zone below double plaster boarded layers. No services to be run horizontally within the I-Joist zone. To be finished with a suspended ceiling.

GAS FLUES
Gas appliance flue outlets to be provided with guards.
Position of flue to be in accordance with Approved Document J (Diagram 3.4).
NB: flue terminals to be min 300mm from wall corner, plot boundary, window opening light and extract fan terminals (extract anti-backdraught devices no longer acceptable). Note terminals facing a boundary to be min 600mm away from the boundary. Refer to manufacturer's installation instructions.
Where flue terminal is within 850mm of a gutter or 450mm of a painted eaves a 750mm long aluminium shield must be fitted to the gutter/eaves underside.
Opening cut in timber frame for a flue must be at oversized by at least 7mm per floor to allow for differential movement, be min 75mm bigger than balanced flue size. Settlement gap between underside of flue and brickwork to be incorporated as per DB-SD09-TA606. Flue must not pass through structural studs.
Boiler flues must not be sealed into walls, ceilings or floors with mastic, plaster or cement or any compound that hinders movement of the flue.
Where required, boiler flues to be firestopped with appropriate Firesleeve, of appropriate bore to suit flue outside diameter and fitted to manufacturer's instructions. Reference standard detail DB-SD09-TA606

GAS SERVICES
Gas layouts are schematic only - completed installation must comply with BS6891, IGEM IGE/UP/7, Gas Safe and all relevant Codes Of Practice.
To achieve 2013 Building Regulations, it is likely that apartments will require the incorporation of a gas powered heating and hot water system. Refer to SAP and Specialist design.
Vertical gas risers to be run externally to point of entry into relevant apartment. The simplest way to incorporate vertical gas risers is to fix the gas pipe directly to the external brickwork with Munsen rings, although it is critical to ensure ventilation and vertical settlement of the timber frame are allowed for where gas pipes pass through the external wall into each apartment.

ELECTRICAL SERVICES
All Electrical work to meet Part P. To be designed, installed and inspected by a competent person.
Prior to completion the Approved Inspector has to be satisfied that Part P has been complied with. The Electric Installation Certificate is to be issued for the work by a person competent to do so.
Electrical layouts are schematic only - completed installation must comply with the relevant I.E.T. Regulations and all relevant Codes Of Practice. Any new sites tendered after 1st January 2019 will have to comply with BS7671:2018 (18th Edition) until any further updates are issued.
Where running within external walls electrical services to be designed for installation within insulation (de-rated), and located centrally within the timber stud. If 50mm separation from back of OSB and plasterboard cannot be achieved a metal plate must be used.
Care must be taken to ensure vapour control layer, fire protection and acoustic ratings are maintained around services. Rockwool FirePro Intumescent Putty Pads or similar approved to be utilised.
All electrical cabling runs, ventilation (except when passing directly through an external wall) or down-lighters feeding the apartment below to be installed in the ceiling service zone below double plaster boarded layers. No services to be run horizontally within the I-Joist zone. To be finished with a suspended ceiling.

Particular attention is drawn to the requirements of BS 7671 regarding the locations of electrical components within rooms containing baths and/or showers - all fans and light fittings in these rooms to be rated IP44. Lights must be drum-type (not batten) fittings featuring horizontally mounted lamps.
Fans and light fittings MUST NOT be located immediately above baths and shower trays. Where fan is indicated immediately adjacent to bath or shower tray, the fan must be located within the wall construction and together with the grille kit must be of a type approved for this location

SMOKE ALARMS
Apartments must either be protected by an automatic fire detection and alarm system min Grade 'D' category LD3 to be installed as per BS:5839 Part 6: 2013 (mains powered smoke alarms with battery back up) or be provided with a suitable number of mains-operated self-contained smoke alarms to BS 5446: Part 1.
Apartments which meet the guidance in AD Part B would only require smoke detection to each individual apartment. There is no requirement for a common alarm system in the common areas although there may be a need for smoke detection to trigger Automatic Opening Vent's (AOV) etc. Where the design moves away from ADB then there may be a need for enhanced detection etc. depending on the risk associated with the departure.
AOV to be operated on activation of the automatic fire detection and alarm system. Test switch to be located on ground floor and labelled for 'Fire Service Use'.
Mains units with secondary power supply are acceptable. They should be permanently wired to a separately fused circuit at the distribution board, and may operate at a lower voltage via a mains transformer. Wiring must be in accordance with I.E.T. Regulations but need have no special fire surviving properties.
AOV to be minimum 1m2 opening area and installed higher than door heads on uppermost floor. Where installed in a pitched roof 1m2 to be measured at flat ceiling level.

All smoke detection, alarm, AOV and other systems to be installed to manufacturer's instructions in line with their relevant BBA certificate.
Alarms must be located within 7.5m of doors to habitable rooms - for the purposes of this requirement, kitchens ARE habitable rooms.
Where more than one alarm is fitted, they should be interconnected, in accordance with manufacturer's instructions.
Smoke alarms fixed to ceilings should be located minimum 300mm from any wall or electrical fitting.
A central position is preferable.
Units designed for wall mounting should be fixed 150-300mm below ceiling.
Smoke alarms should not be fixed over staircases for ease of maintenance.

CARBON MONOXIDE (CO) DETECTORS
Use Honeywell XC70 CO Detector Trade Box battery operated unit, which can be fixed within the property. These are sealed units, which have a life span of six years. The batteries in the units do not require replacing. Each unit carries specific user instructions including details of the helpline if required. Refer to individual working drawings for exact position.
CO Alarms should be fixed:
- 1-3m horizontally from the appliance. **It is preferable to locate the Alarm on walls 150mm vertically down from the ceiling above an internal door.**
- Above the height of any doors or windows.
- Within any room where a concealed flue in a void travels to an outside wall.

Alarms must not be located:
- In an enclosed space i.e. cupboard.
- Directly above a sink.
- Next to a door or window.
- Next to an extract fan or vent.

- In a damp or humid location.
- In the immediate vicinity of a cooking appliance.

COMMUNAL AREAS AND SERVICE DISTRIBUTION
All services to be installed in line with AD requirements.
To follow manufacturer's instructions, be correctly fire stopped and consider future maintenance.
Refer to 'SMOKE ALARMS' for further information.
Meter Cupboards
The meter cupboards should be provided with 60 minutes fire resistance. On the wall behind the service cable, service termination and meter a steel sheet of at least 1mm thickness should be pre-installed to the wall in front of the required double plasterboard finish. The steel sheet should be connected to the main earth terminal by the electrical contractor. This is to protect persons from electric shock, if they should drill through the wall behind the electric service equipment.
Door Entry System
Legrand Bticino Range of Door Entry System with tradesmen access with timer to be provided. Refer to Finishing Specification and Group Agreements for further details.
Dry Risers
If 45m maximum distance from fire service vehicle to furthest point within the apartments is not achieved dry risers will be required. Dry Risers to be designed and installed in line with BS 9990:2015.
Lightning Conductors
Specialist consultant to complete BS EN 62305 risk assessment to ensure the right level of protection is provided against the risk of a potential lightning strike.
If a Lightning Protection System is installed on the given building then the aerial mount should be connected to the protective strip by use of proper LPS equipment and installed by a competent person.
Post Boxes
Refer to Finishing Specification and Group Agreements for further details.

TV Distribution
Aerials –
Single Communal Aerial to provide all apartments in block with access to all standard free to air broadcast stations.
Aerial to be installed within communal loft space, or where necessary, to ensure a good signal, mounted on a pole.
Satellite Dishes –
Single Communal Satellite Dish to provide all apartments in block with access to all standard free to air satellite stations and the option of receiving Sky, Sky Plus, Sky Q, or similar.
Dish to be provided to an external wall or mounted on a pole ensuring it is positioned with a clear un-obstructed view of the satellites in space. Generally, to be South facing. Avoid positioning with trees, buildings or temporary structures in the way. Consider the full site plan when positioning.
Communal Cabling provision –
Aerial and Satellite dish to be wired with CT100 to centralised distribution system located in communal area store or communal loft area powered by the landlord's electric supply. If installed in communal loft space, future access for maintenance must be considered.
Apartment Cabling provision –
Two CT100 cables to be wired from the centralised distribution system to each apartment's living room media socket to facilitate both terrestrial TV and Freesat, and the option of receiving Sky, Sky Plus, Sky Q or similar.
Virgin Media (Only for sites where Virgin Media is specified) –
Virgin Media (VM) require a completely separate system to the above with independent cabling etc. VM will generally free issue cable, housing units and blanking plates. VM also require a minimum of two points per apartment e.g. Living Room and Master Bedroom.

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LIMITATION OF THERMAL-BRIDGING AND AIR-LEAKAGE
Air leakage requirement – 5.01m3/(h.m2) @50Pa
Thermal bridging is calculated from linear thermal transmittances for each junction from the Standard Details.
Air Permeability and Pressure Testing
Apartments are to be constructed in accordance with the Group Standard Details on 'Thermal Bridging and Air Permeability'.
AIR TIGHTNESS TESTING
In order to comply with the 2010 and 2013 Building Regulations for Parts F and L air tightness testing should be carried out on 100% of apartments. The design air permeability used in the Group SAP calculations is set at 5.01 and to negate 100% testing a score of 3 and 4 would be required. This is considered impractical and unlikely to be achieved and taking into account the +2 rule and the lower threshold of 3 it is reasonable to accept that 100% testing will be required.
MENU OF SITE BASED OPERATIONS FOR ENSURING HIGH PERFORMANCE LEAKAGE TEST RESULTS
All openings on external walls including around door/window openings, around electrical socket and switch outlets, and vertical studs are to be sealed.
VAPOUR CONTROL LAYERS – When considering a separate VCL or duplex plasterboard, air tightness must be considered, as a separate VCL is likely to provide lower air tightness scores.
SKIRTINGS to have a continuous bead of silicone sealant applied to the rear to top edge and underside.
Top and bottom of SOIL AND VENT PIPE BOXINGS to be closed off and sealed.
KITCHENS AND BATHROOMS/EN-SUITES etc., are to be fully finished with dry lining and skirtings before commencing fitting of vanity/kitchen units/appliances.

DAMAGE TO WALLS while fitting the above must be kept to a minimum and made good/sealed afterwards.
All SERVICE ENTRY POSITIONS are to be fully sealed and areas under baths/kitchen units etc. must be inspected before sealing up with finished panels etc. Services are to include gas, electric and incoming water entry positions.
All WASTE PIPES/PLUMBING PIPES carried through external walls or into stud walls internally are to be fully finished off and sealed. All holes must be kept to the minimum size required.
MECHANICAL EXTRACTOR FANS are to have the complete housing perimeter sealed to the wall finish. The opening through the external wall is to be made good and sealed using silicone mastic beads.

Rev	Description	Date

STATUS	PURPOSE OF ISSUE BUIILDING REGULATIONS

INNOVATIVE DESIGN SOLUTION

STRUCTURAL DESIGN BY:

PROJECT
14 Greenhill Lane, Alfreton, DE55 4EX

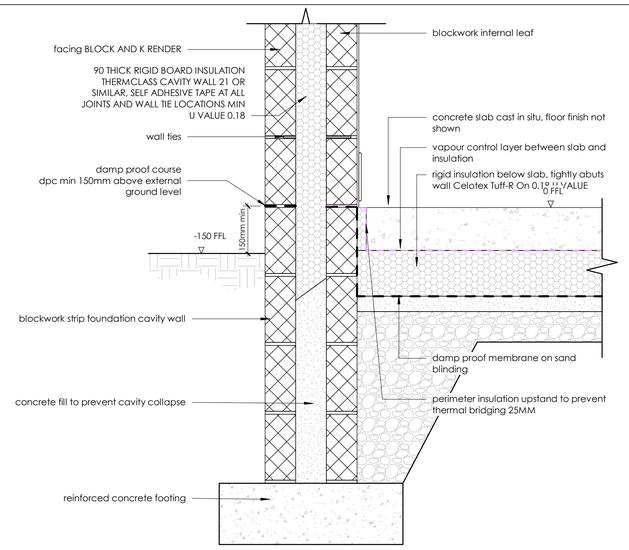
TITLE
WORKING DRAWINGS 3

CLIENT
PETE TAYLOR

DRAWN BY	CHECKED BY	DATE
Author	Checker	12/20/23

SCALE (@ A1)	PROJECT NUMBER
	0382

DRAWING NUMBER	REV
A109	

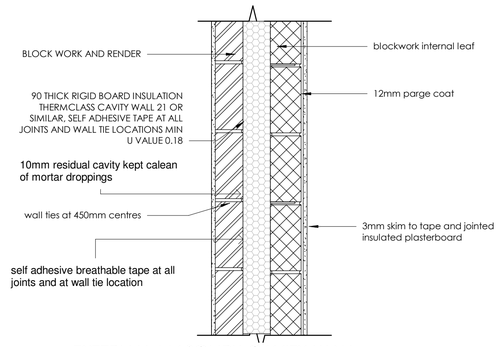


EXTERNAL MASONRY CAVITY WALL, GROUND BEARING CONCRETE SLAB, INSULATION BELOW SLAB, CAVITY FOUNDATION WALL

Ground floor to meet min. U-Value 0.18 W/m²K. Perimeter strip of insulation abuts concrete slab and blockwork wall.
Concrete slab ready to receive floor finish.

FOUNDATION DETAIL

1 : 10

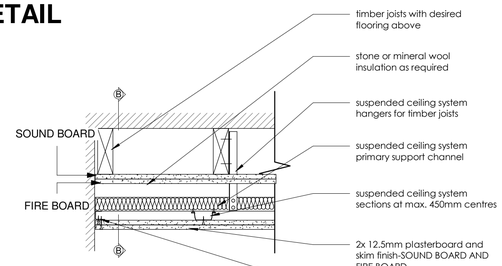


EXTERNAL MASONRY CAVITY WALL, Full fill, insulated plasterboard

External wall to meet min. U-Value 0.18 W/m²K. Insulation thickness and specification according to project requirements. Concrete block thickness, density and tie requirements are project specific and should be specified by the structural engineer.
Parge coat thickness and specification in accordance with manufacturers recommendations.

WALL DETAIL

1 : 10



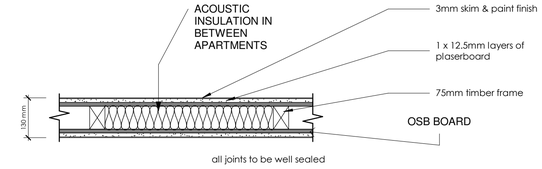
Suspended ceiling system for timber joist structure perimeter section A

Detail Notes:

Adjust plasterboard and insulation based on fire and acoustic requirements

DROP DOWN CEILING

1 : 10

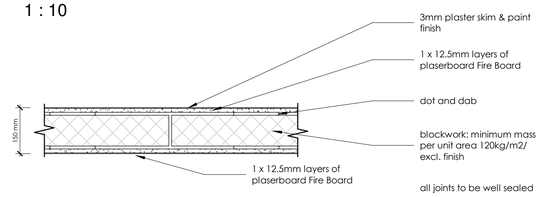


130mm Double plasterboard and timber framed wall - part E minimum compliant internal partition

Detail Notes: Part E minimum compliant internal partition wall shown. . the drawing shows 2 x 12.5mm layers of plasterboard to assist in meeting fire and acoustic requirements, however higher graded plasterboard can achieve the same requirements.

STUD WALL

1 : 10

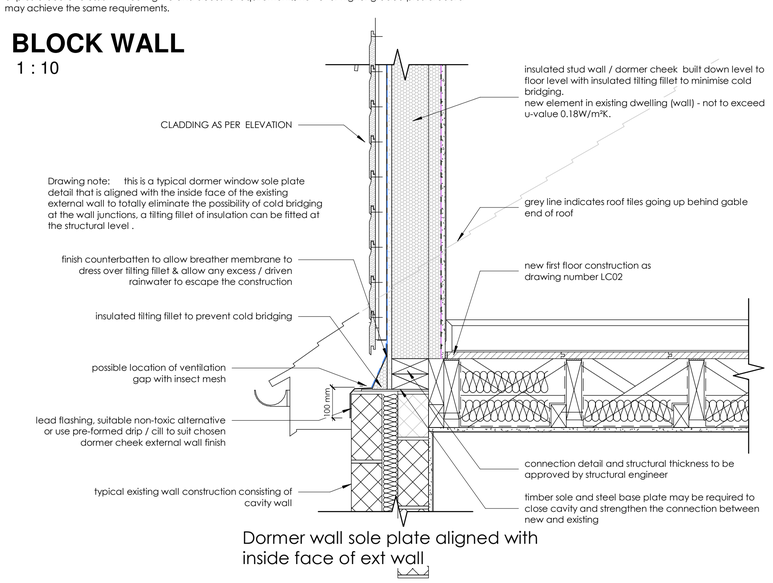


150mm plasterboard blockwork wall - part E minimum compliant internal partition

Detail Notes: Part E minimum compliant internal partition wall shown. . the drawing shows 1 x 12.5mm layers of plasterboard to assist in meeting fire and acoustic requirements, however higher graded plasterboard may achieve the same requirements.

BLOCK WALL

1 : 10

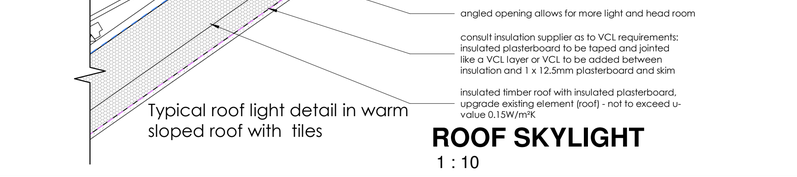


Drawing note: this is a typical dormer window sole plate detail that is aligned with the inside face of the existing external wall to totally eliminate the possibility of cold bridging at the wall junctions, a tilting fillet of insulation can be fitted at the structural level .

Dormer wall sole plate aligned with inside face of ext wall

DORMER WALL CONSTRUCTION

1 : 10



Underdraw detail / landing trimmer

Drawing note:
this is a typical detail of a new staircase upto the loft conversion which shows that the stairs & floor when moving into a 3rd storey of a dwelling require 1/2Hr. min. fire protection - usually achieved by using a mineral wool insulation to provide both fire & sound protection alongside the existing plasterboard ceiling / new plasterboard to ensure an adequate amount of fire protection.
note the double joist trimmer at the top of the stairs; sometimes this will need to be calculated by structural engineer dependant on the span of the trimmer & if any additional loads are to be transferred on to them

STAIRS

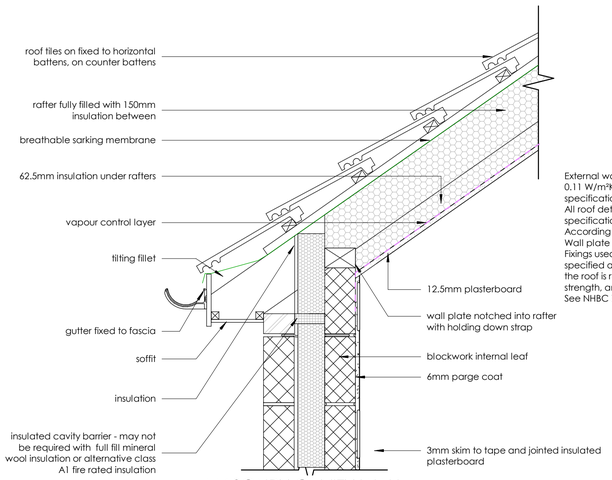
1 : 10

Typical roof light detail in warm sloped roof with tiles

Drawing note: this is a typical rooflight detail that can be used with multiple new and retrofitroof build up options, consult manufacturers for further options - important factors to be aware of with this detail are to ensure that adequately sized roof timbers are used to trim-out the rooflight opening, & that if is fitted with a full weather-proofing kit that is supplied with the rooflight to ensure it has a watertight fit, this is particularly important in highly exposed areas that are subject to heavy winds. a loft conversion must have a rooflight / window that is positioned as a means of escape window once you move into a 3rd storey, it must meet the following criteria (bungalow loft conversions which extend into a 2nd storey have different criteria to meet under Building Regulations):- have an unobstructed openable area that is at least 0.33m² or greater with the least dimension of the opening either in width or height (but not both) should be 450mm or greater, with an opening light with a clear opening of 450 x 750mm, with the lowest edge of the opening 900mm from finished floor level, & be positioned 1.7m max. up the roof slope from eaves level for escape by an inclined ladder supported on the eaves.

ROOF SKYLIGHT

1 : 10



MASONRY CAVITY WALL
EAVES DETAIL -
Insulation between and under rafters

External wall to meet min. U-Value 0.18 W/m²K, roof to meet min. U-Value 0.11 W/m²K. Insulation thickness adjustable according to insulation specification and project requirements.
All roof details to be designed in accordance with the Structural Engineers specification and connections.
According to NHBC:
Wall plate bedded to line and level, fixed using nails or straps.
Fixings used to connect the roof structure to the wall plate should be specified according to the roof construction and exposure of the site. Where the roof is required to resist uplift, skew nailing is unlikely to provide sufficient strength, and appropriate metal straps should be used.
See NHBC 7.2.6 for full Wall plate fixing information.

EVE DETAIL

1 : 10

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Rev	Description	Date

STATUS	PURPOSE OF ISSUE
	BUIILDING REGULATIONS

INNOVATIVE DESIGN SOLUTION

STRUCTURAL DESIGN BY:

PROJECT

14 Greenhill Lane, Alfreton, DE55 4EX

TITLE

DETAIL DRAWING

CLIENT

PETE TAYLOR

DRAWN BY	CHECKED BY	DATE
Author	Checker	12/20/23
SCALE (@ A1) 1 : 10	PROJECT NUMBER 0382	
DRAWING NUMBER A110		REV