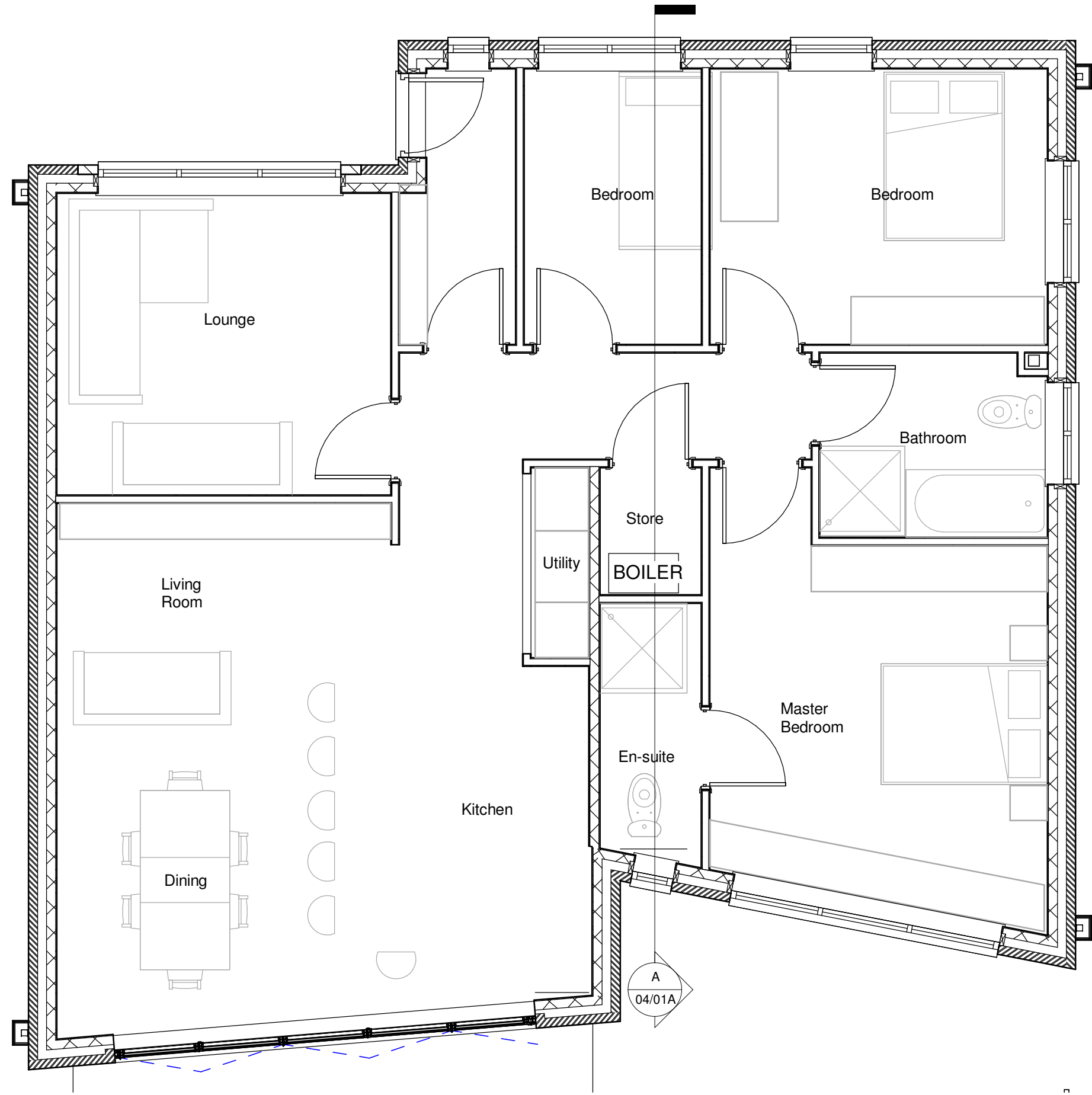
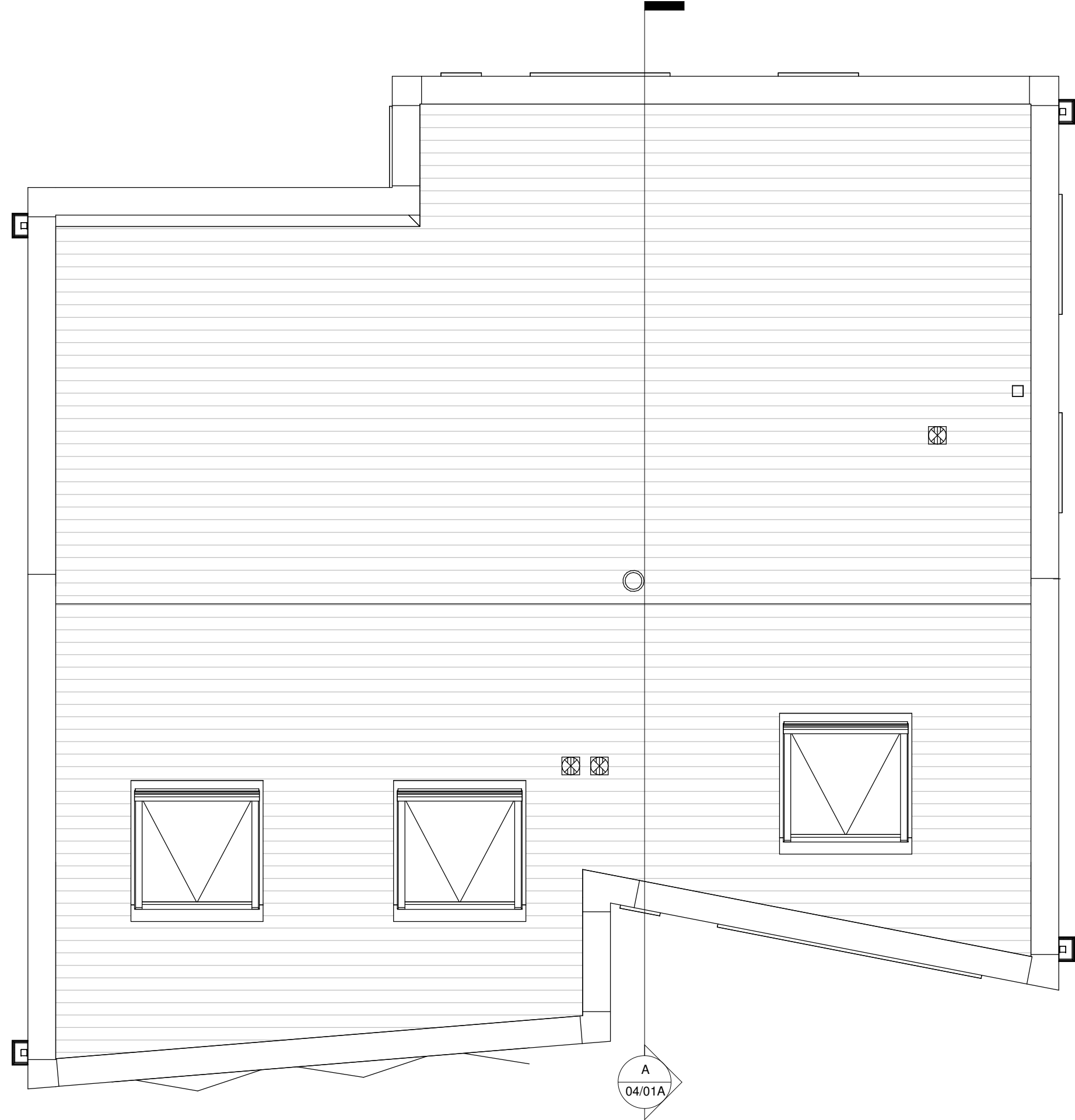
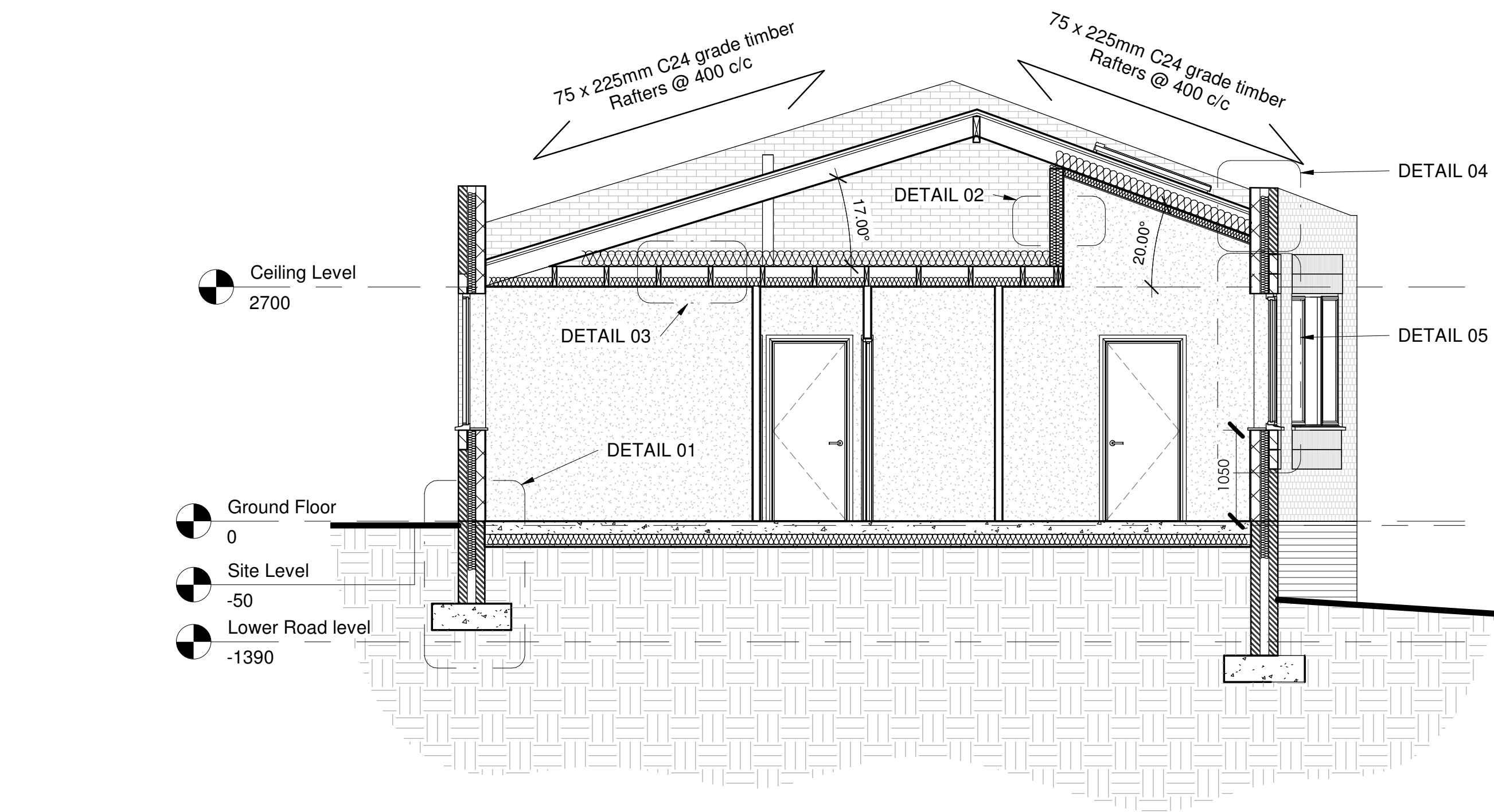
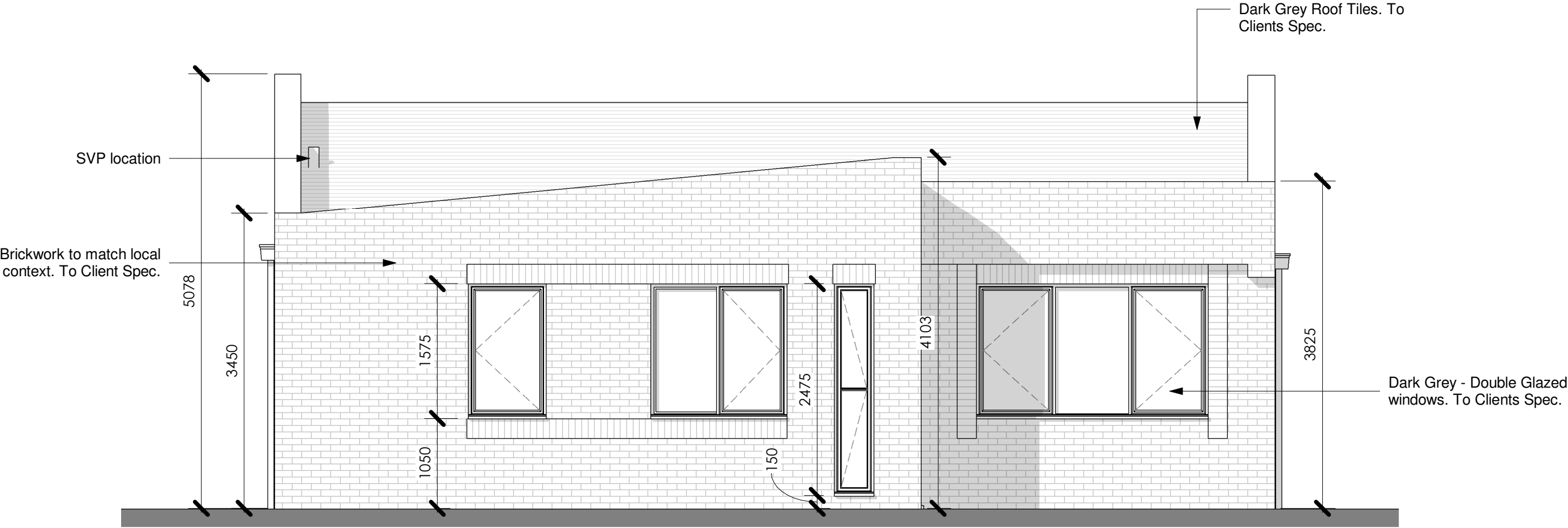
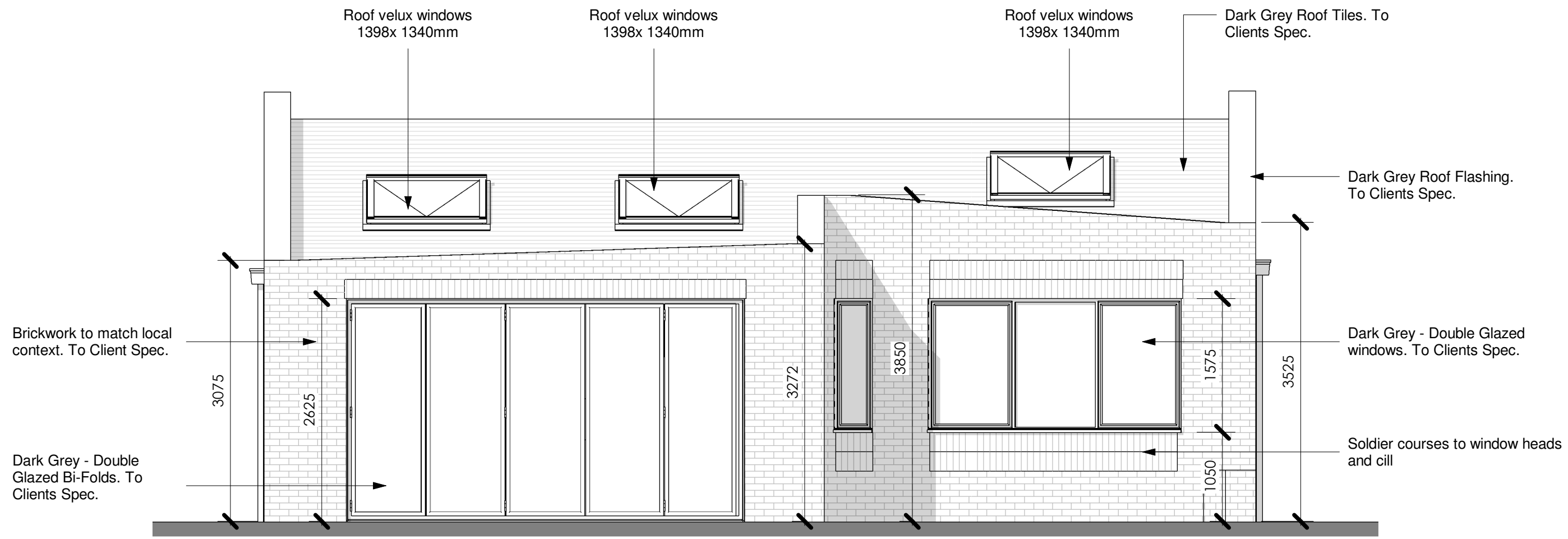


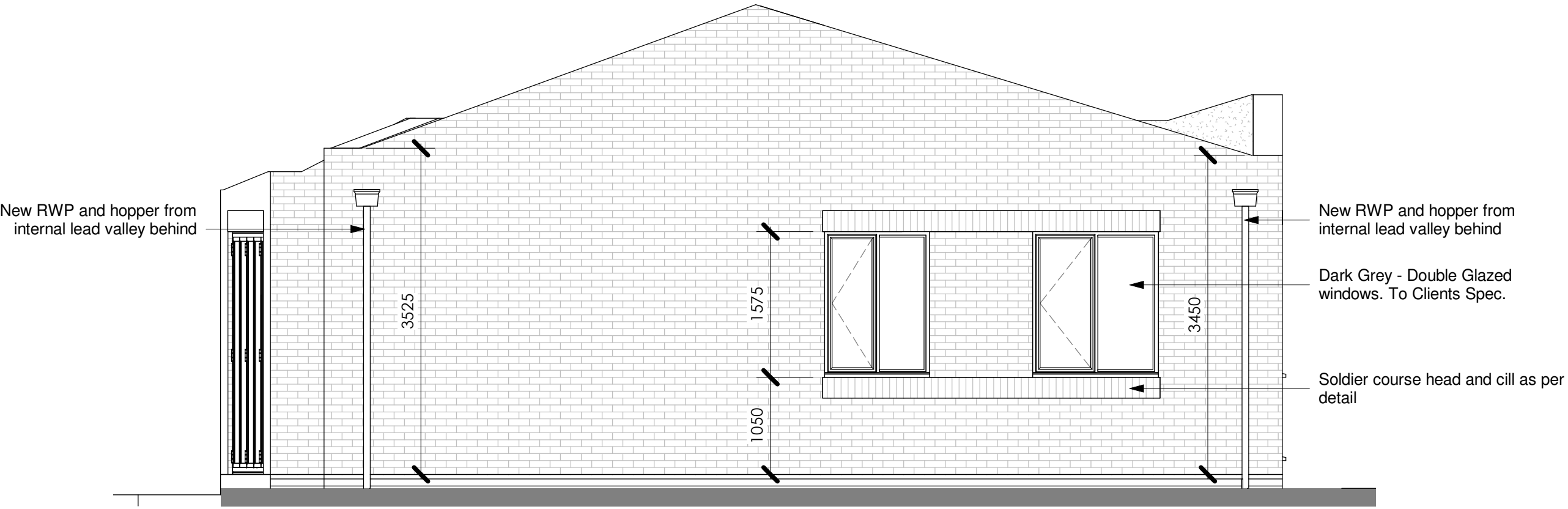


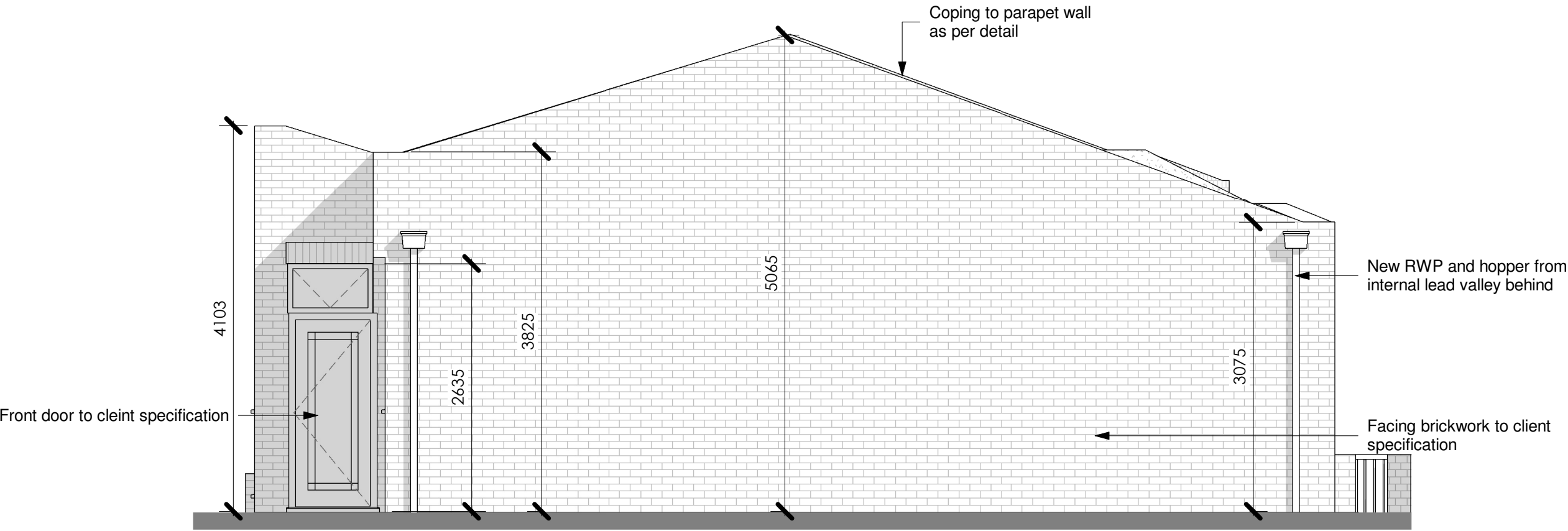


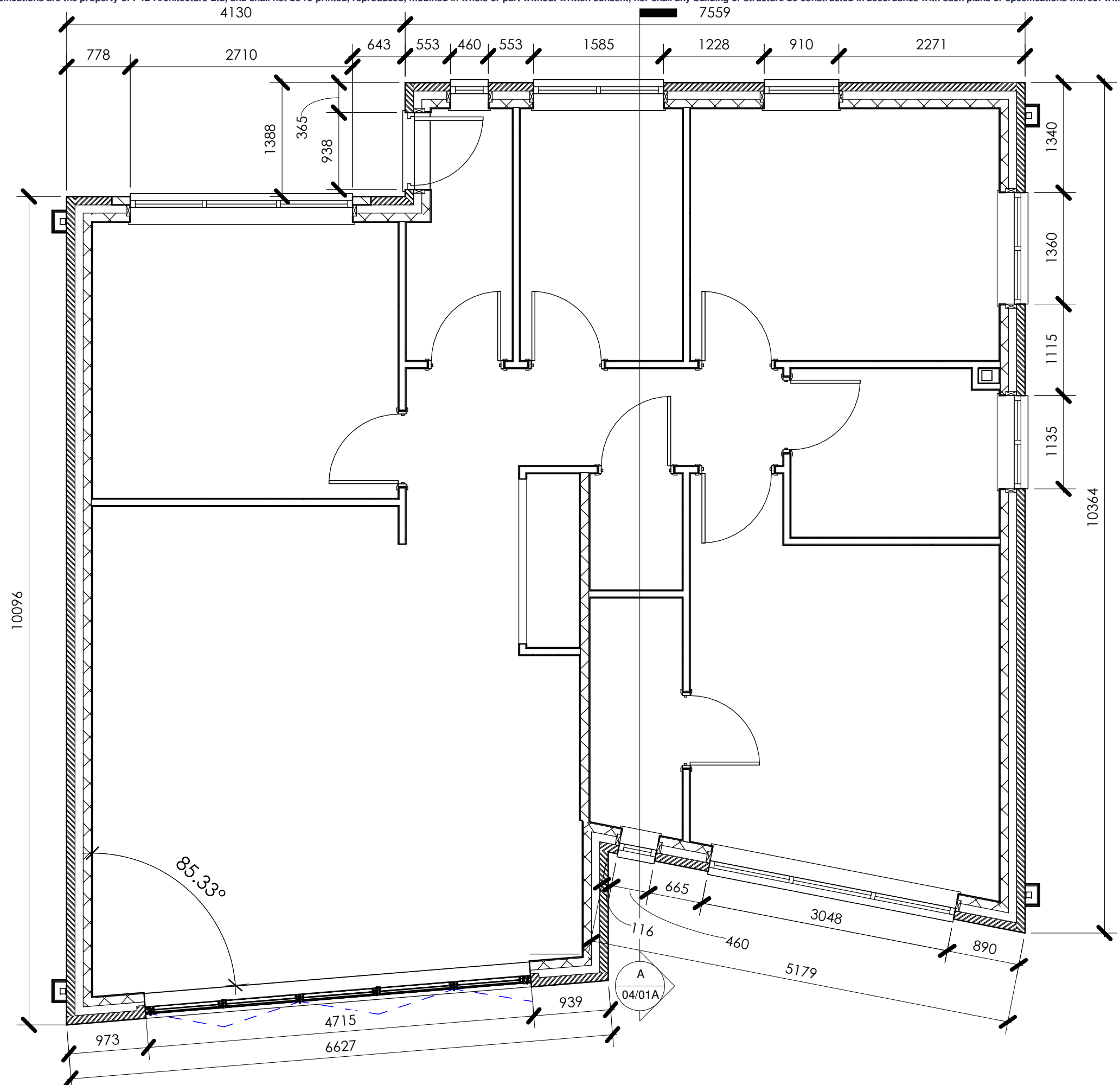


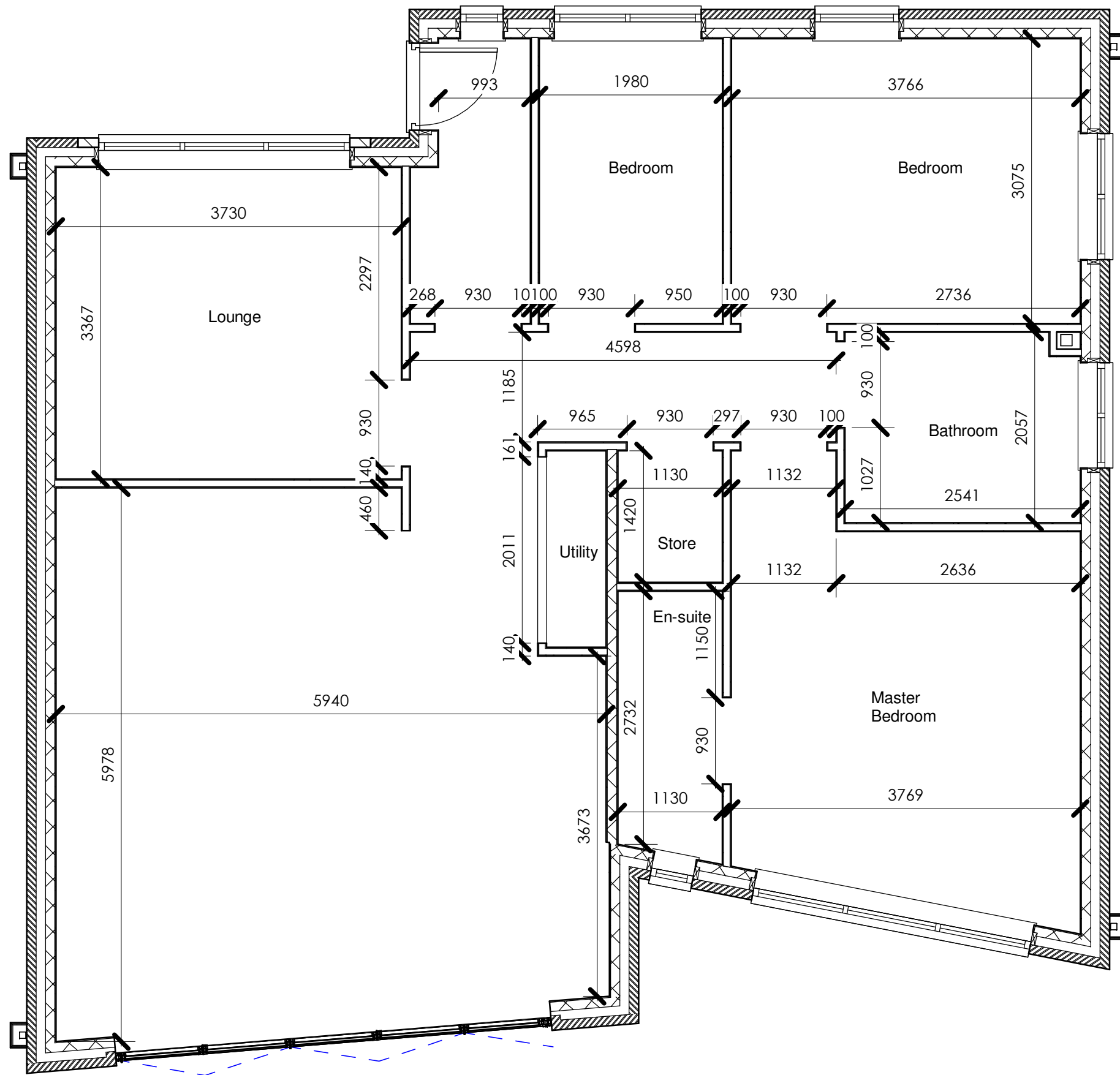


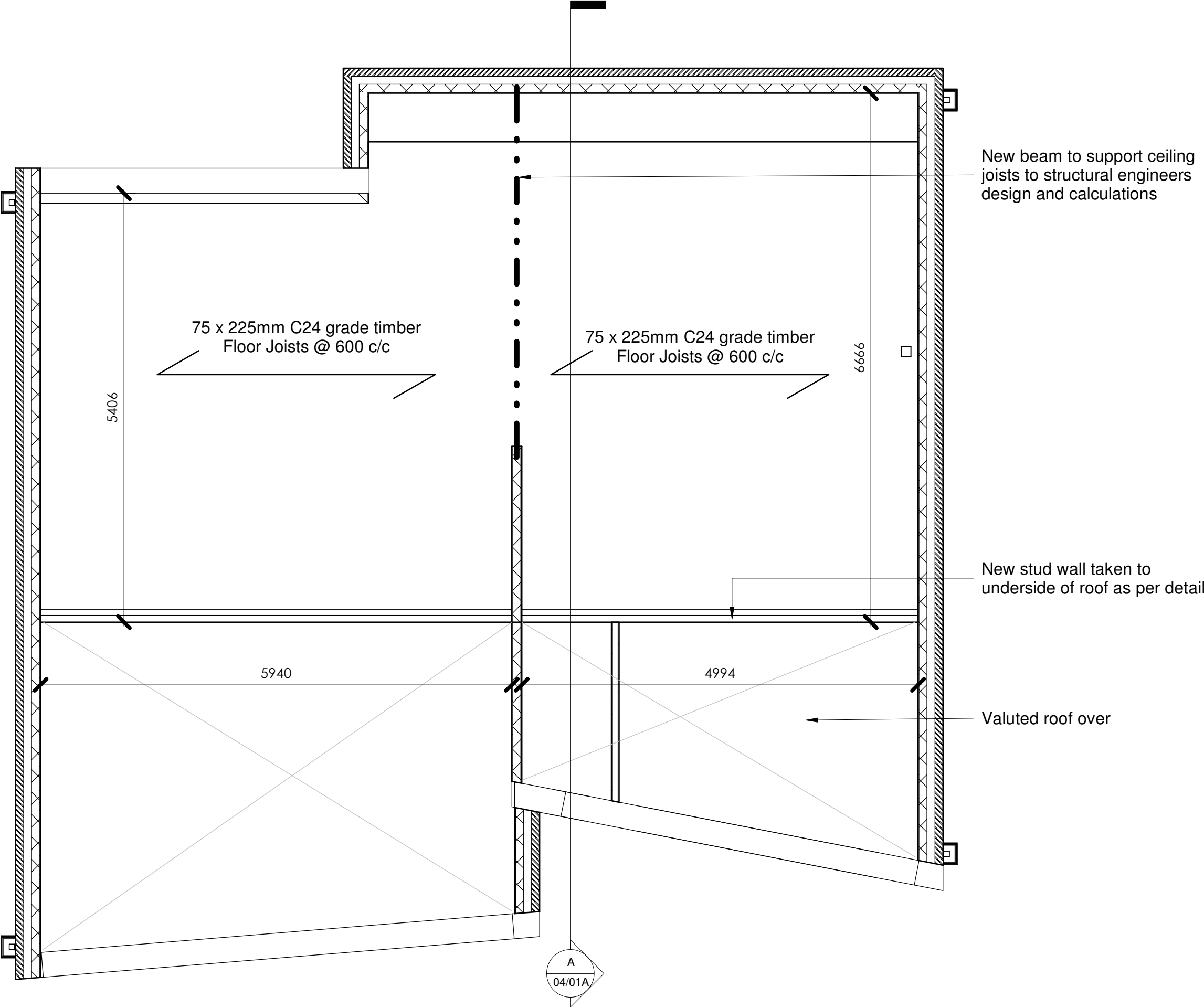


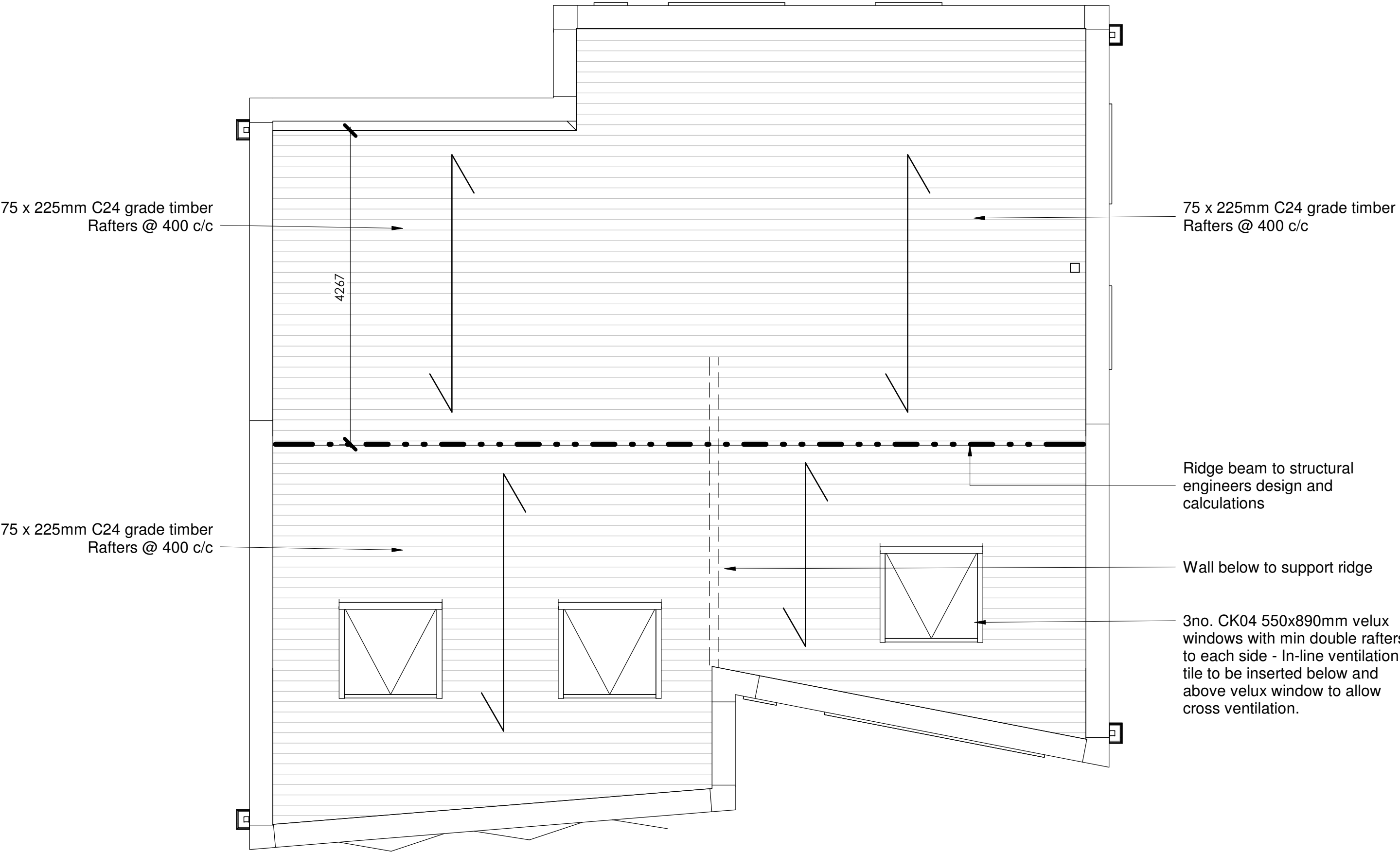


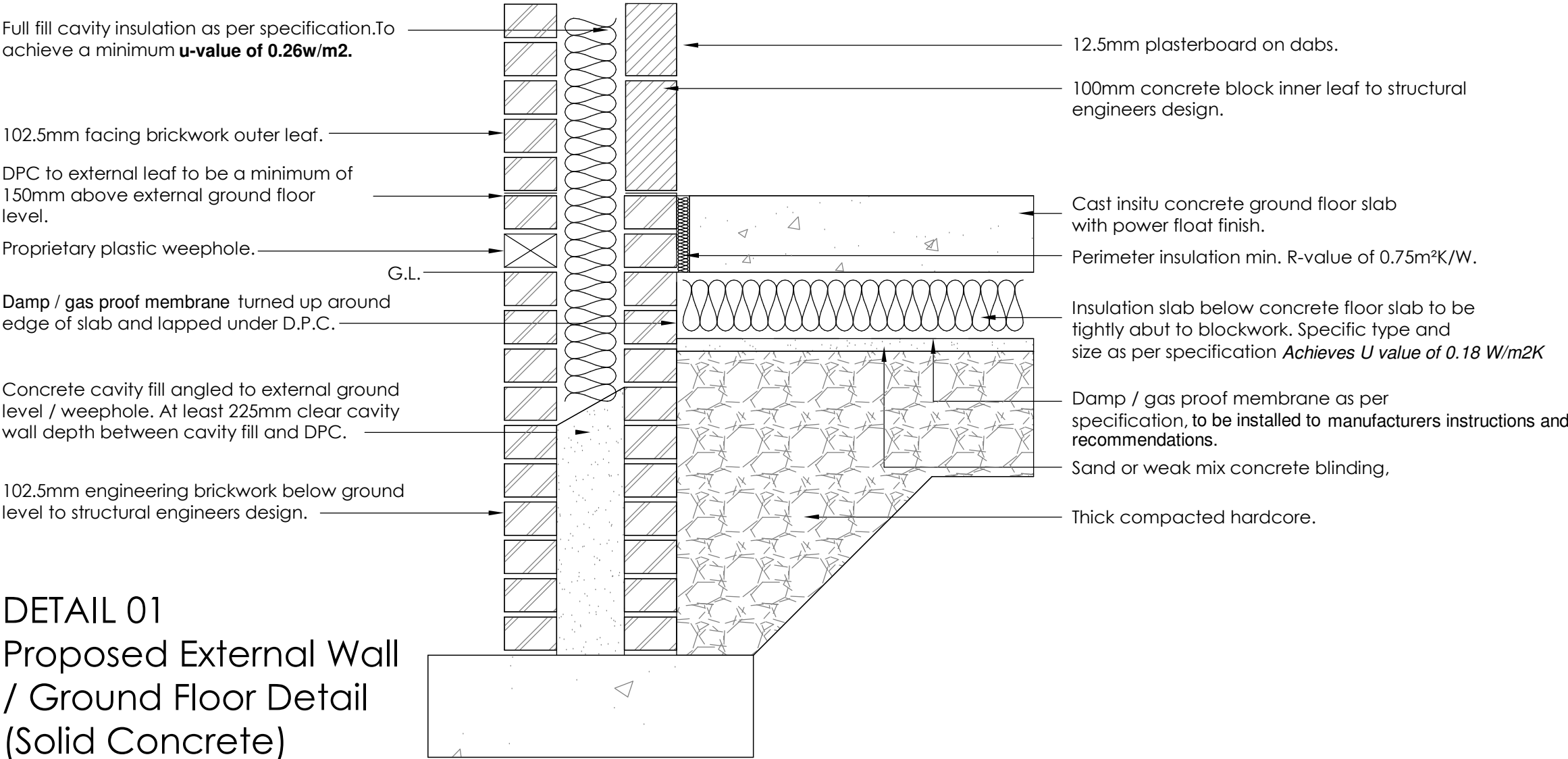




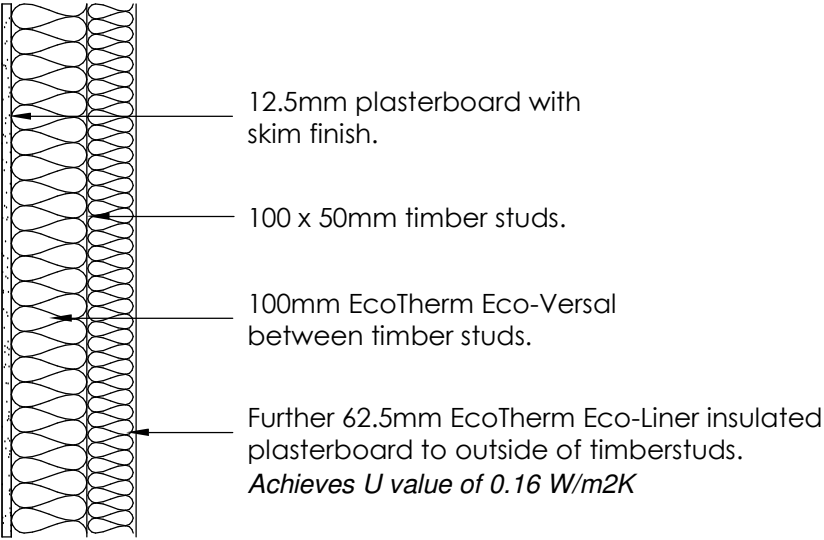




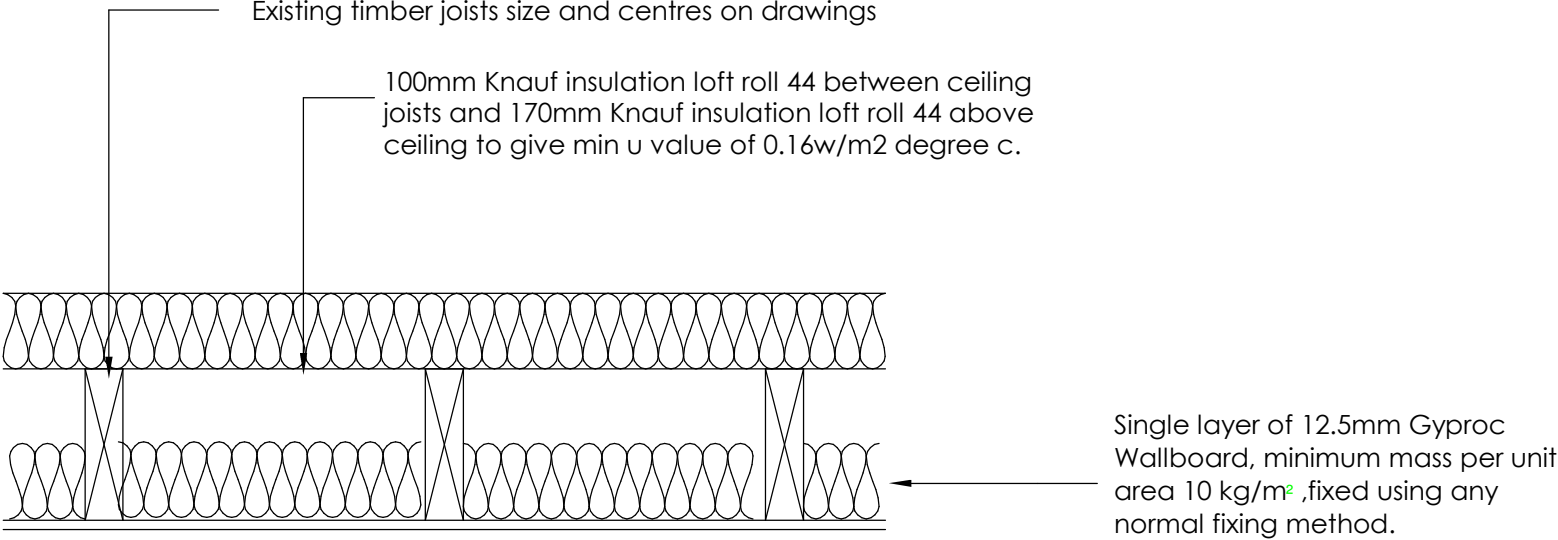




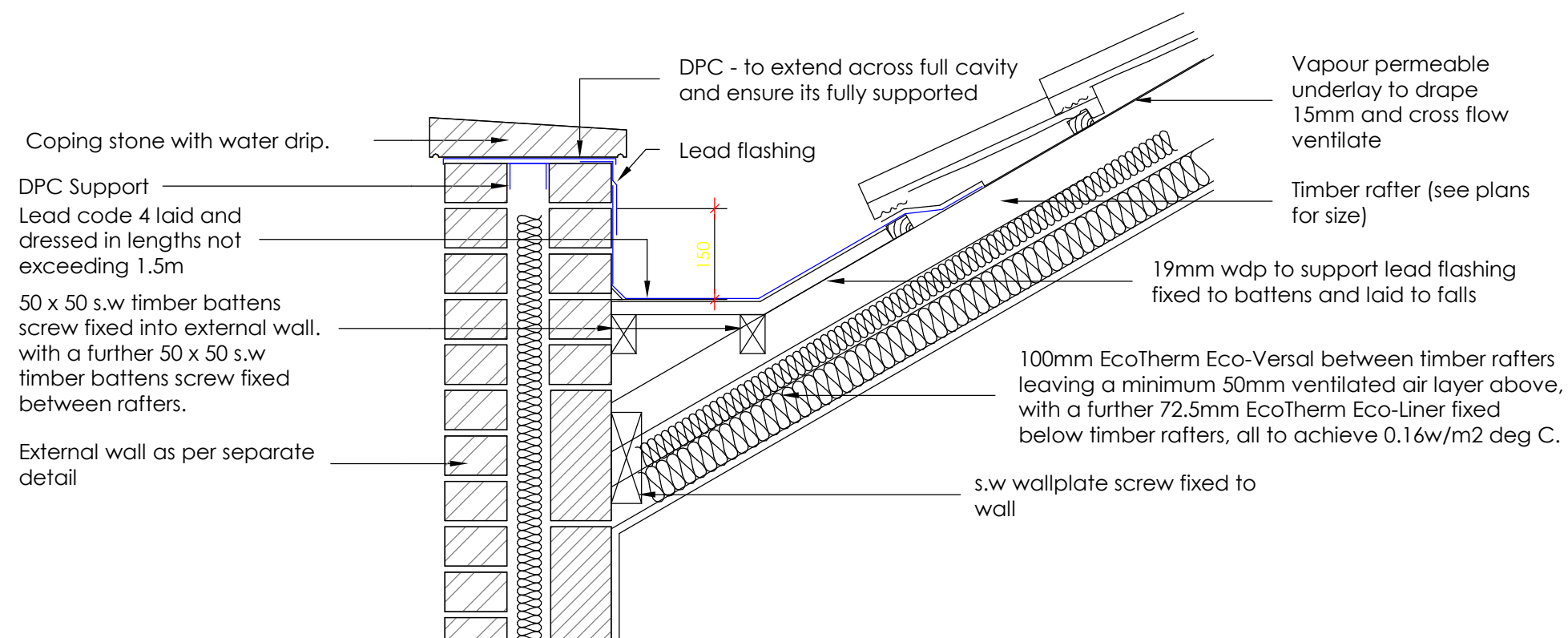
DETAIL 01
Proposed External Wall
/ Ground Floor Detail
(Solid Concrete)



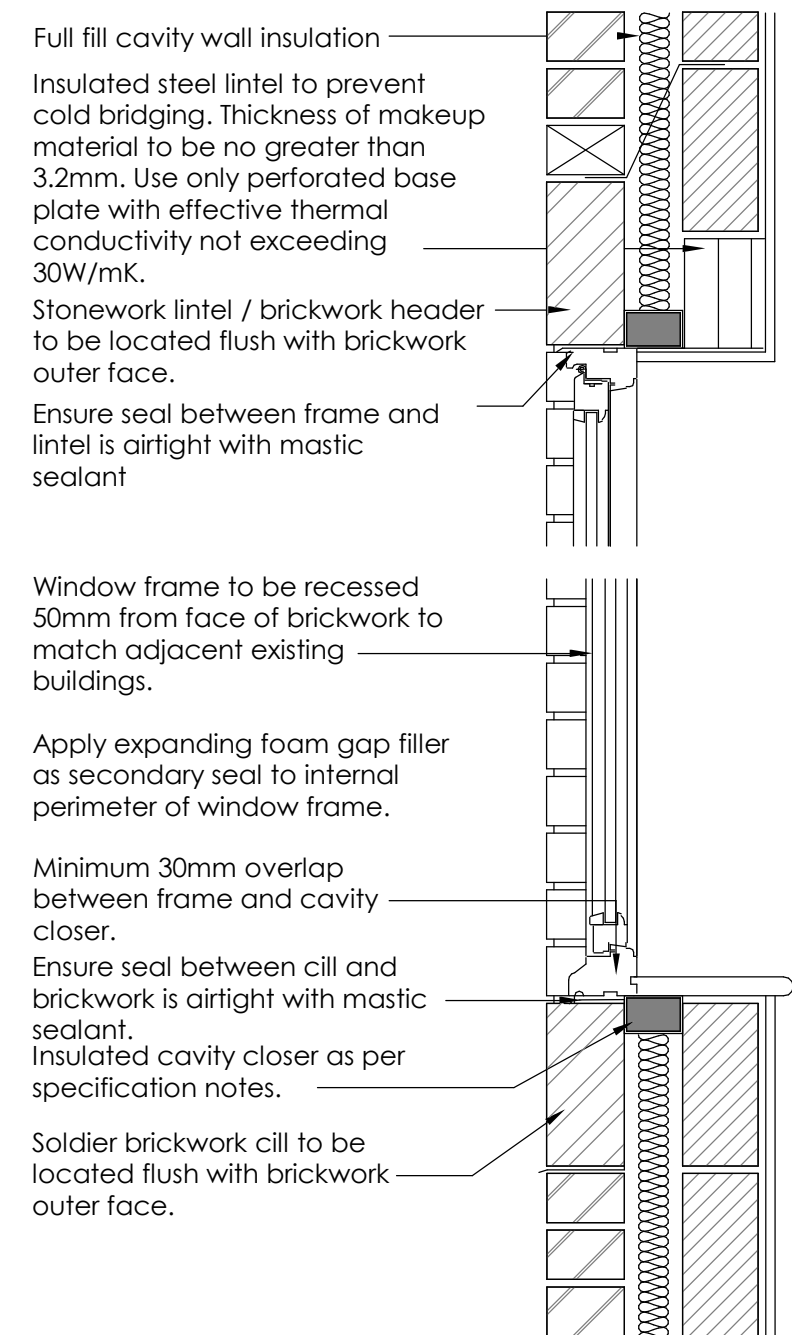
DETAIL 02
Insulated Loft Dwarf Wall Detail



DETAIL 03
Ceiling Detail



DETAIL 04
Proposed Lead Valley Detail + Coping
detail



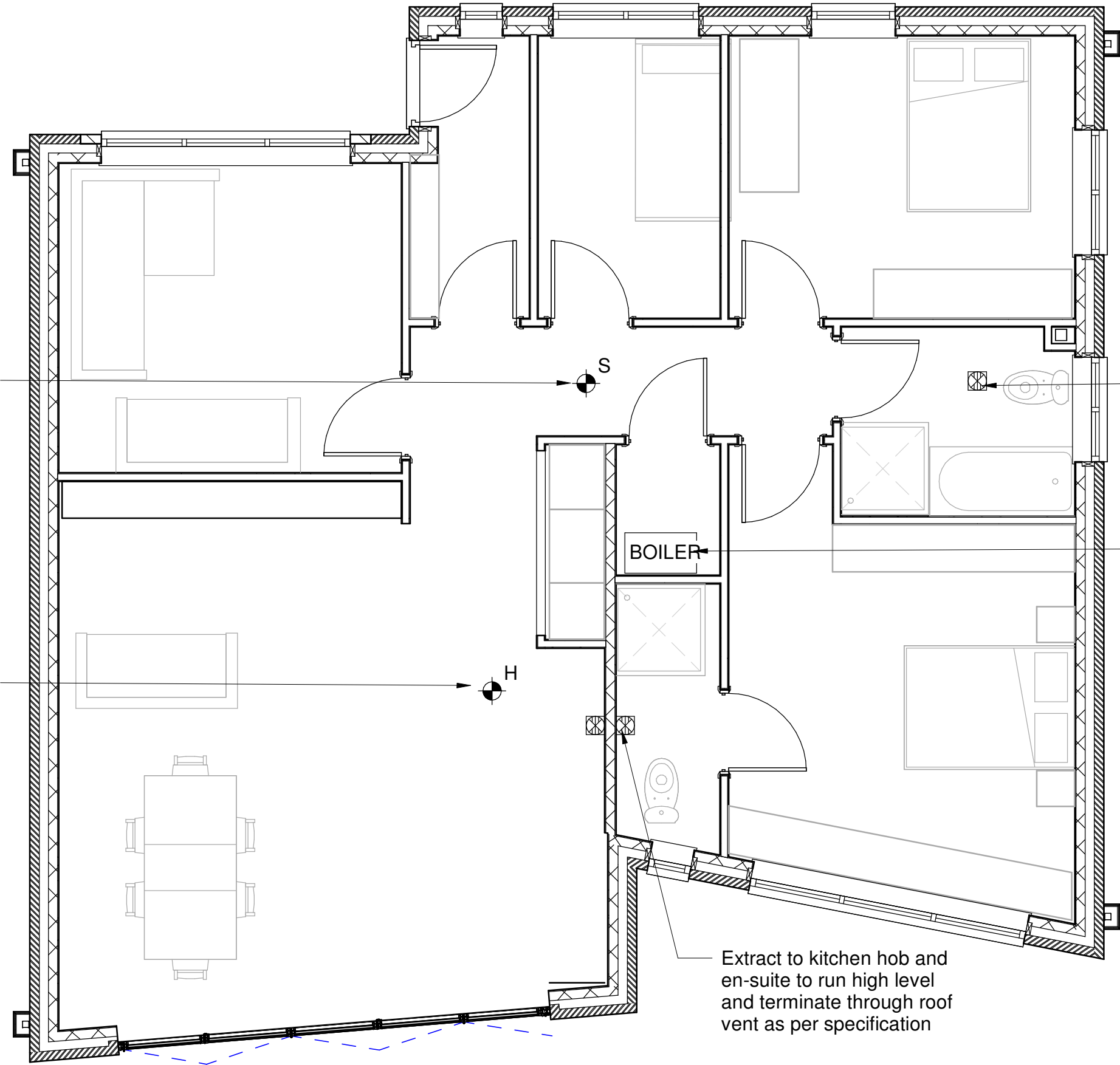
DETAIL 05

Proposed Window Head and Sill -
Stonework (Scale - NTS)

(Detail to be constructed in accordance with
'Accredited Construction Details' published by BRE)

Ceiling mounted smoke
detaector as per
specification notes

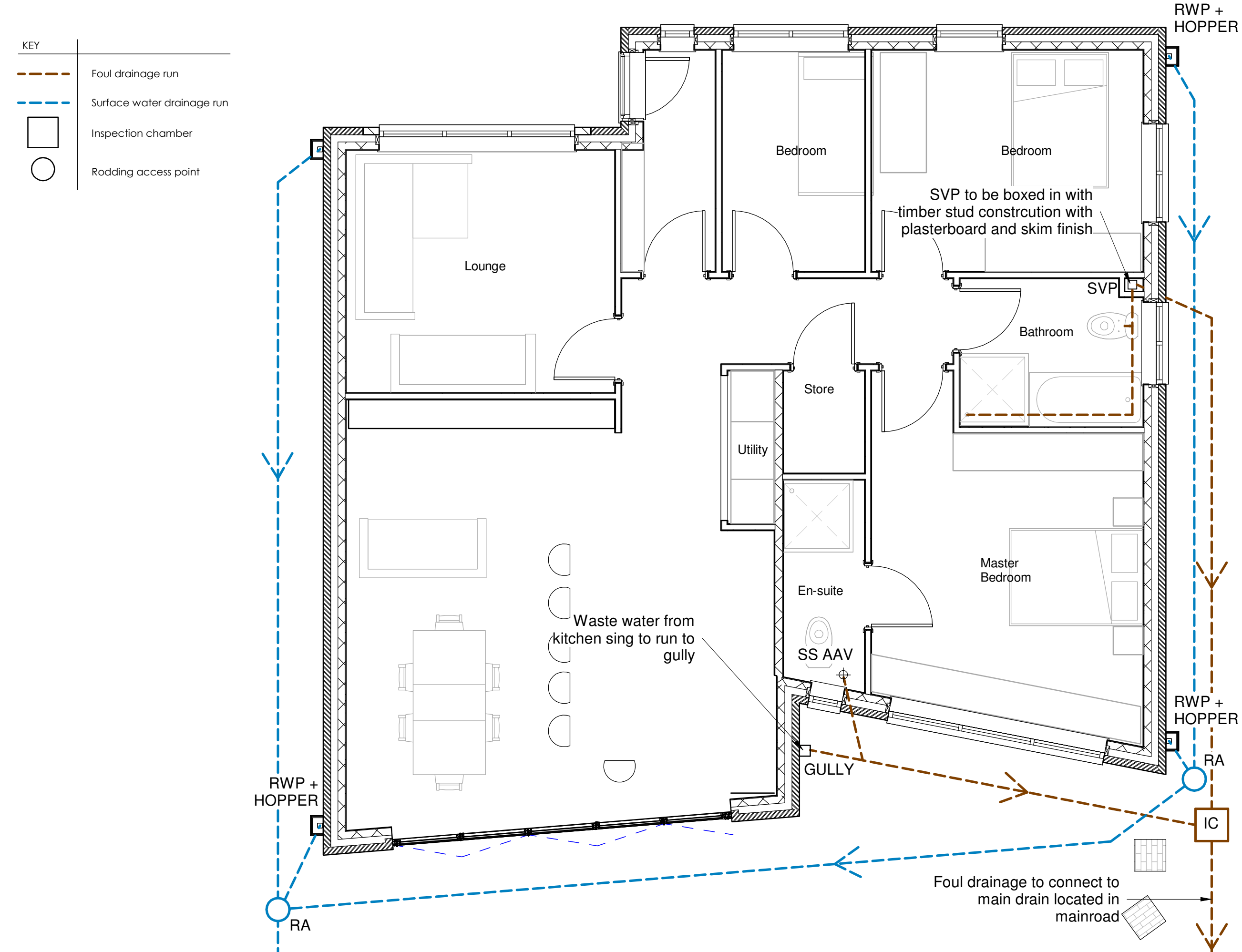
Ceiling mounted heat
detaector as per
specification notes

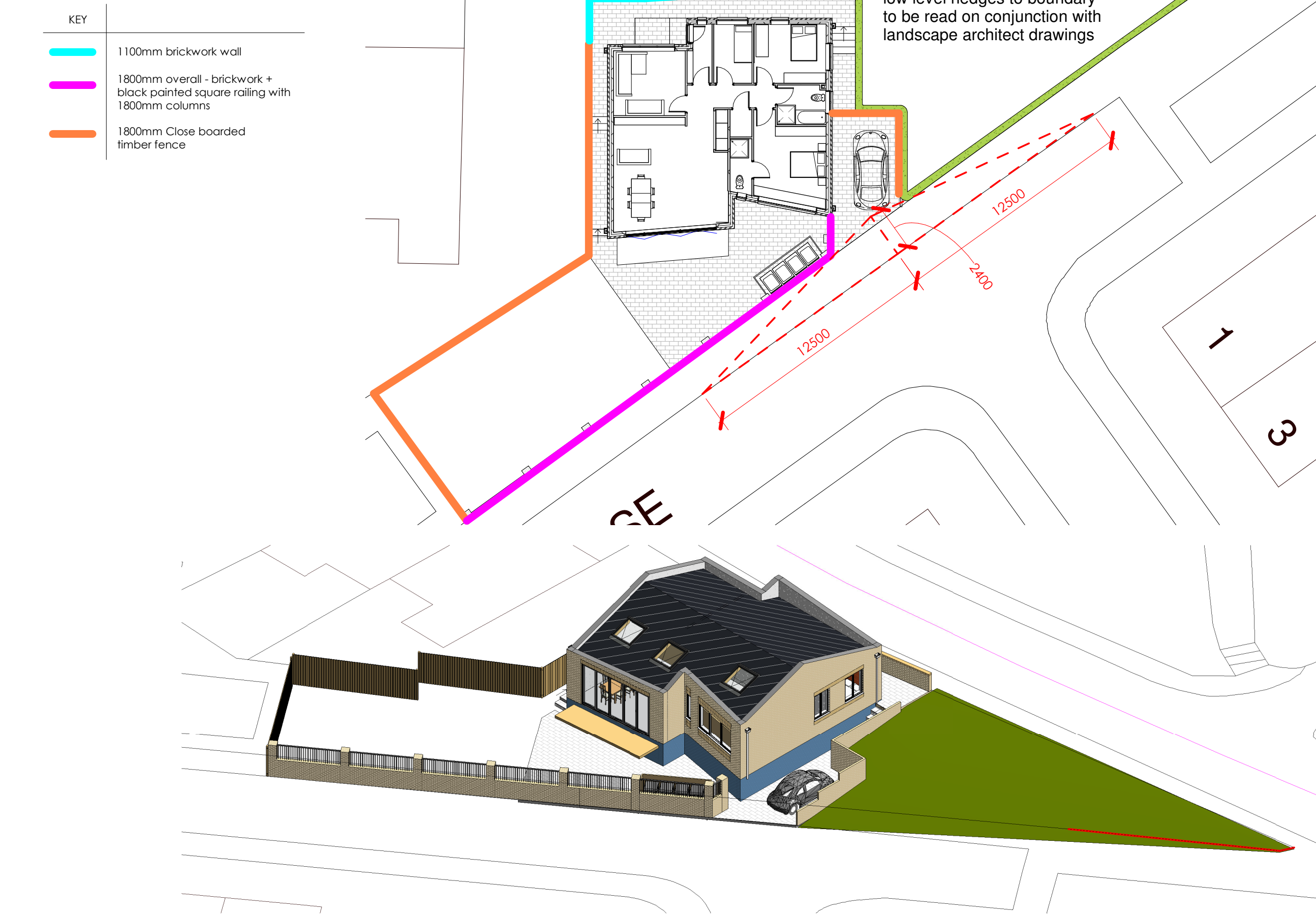


Extract to terminate
through roof vent as per
specification

New condensing boiler to be fitted
by specialist subcontractor. See
specification. Flue to run u through
roof void and termainte through roof

Extract to kitchen hob and
en-suite to run high level
and terminate through roof
vent as per specification





GENERAL NOTES

CLIENT

Client must have received written approval from both the local authority, planning and building control departments before instruction or commencement of any building works on the relevant site. Client to obtain written permission from all relevant bodies for any encroachment / boundary issues whatsoever. Kitchens, bathrooms and utility layouts on these drawings are indicative only and it is the responsibility of the client to instruct a specialist supplier to design and supply products from actual site dimensions and in line with client requirements.

CONTRACTOR

These drawings are for the purpose of achieving local authority planning and building regulations plans approval only and should not be used as a working drawings for building construction. However, should the contractor choose to use these drawings at their own risk as a guide during the building construction then the following must be followed as a minimum: Contractor to visit site prior to commencement of work and check all aspects of the existing property including drainage systems, proposed build, dimensions and familiarise himself with the site conditions. This drawing must then be checked and verified by the contractor prior to work commencing on site.It is the contractors responsibility to discuss and agree with building control any construction details / methods arising on site which are not covered on these drawings. The contractor shall take into account everything necessary for the proper execution of the works, to the satisfaction of the building control whether or not indicated on the drawings. All workmanship, materials and construction to comply with Building Regulations, British Standards, Codes of Practice requirements whether or not specifically stated on these drawings. All materials to be fixed, applied or mixed in accordance with manufacturers instructions or specifications. All materials shall be suitable for their purpose. Sample of external materials to be submitted to local authority for approval prior to use. Where additional load is to be applied over existing openings, lintels to be exposed and checked for structural stability to the satisfaction of the building control officer.

CONSTRUCTION DESIGN MANAGEMENT REGULATIONS 2015

P4B Architecture Ltd has not been appointed to produce construction phase design drawings, however, please be aware that if the project proceeds to construction phase the client will be required to comply with the requirements of the construction design management regulations 2015. Please visit HSE website for further information or contact a construction health and safety advisor.

SITE WORKS BELOW GROUND

No information available at time of design for below ground services and other hazards within the site boundary. Therefore all works below ground must comply with 'Safe Working Practices HSG47'. For works below ground outside of the site boundary the contractor must contact the relevant mains supplier for further information prior to site commencement.

SOUND INSULATION TESTING (New Build / Material Change Of Use)

'Pre-completion testing' (sound insulation testing) should be carried out on site by the contractor as part of the construction process to demonstrate compliance with the building regulations Part E - Requirement E1. The contractor is responsible for any cost and to ensure that appropriate sound insulation testing is carried out to the satisfaction of the local authority building control officer. Testing should be carried out for (a) purpose built dwelling-houses and flats; (b) dwelling-houses and flats formed by material change of use; (c) purpose built rooms for residential purposes; (d) rooms for residential purposes formed by material change of use.

FOUNDATIONS (New Build)

New foundation design to structural engineers details and calculations. Provide 750mm minimum cover to all new foundations. Foundations to be taken down to level below invert of any adjacent drainage. Foundations to suit conditions to the satisfaction of the Local Authority building control officer. Alternative foundations to specialist details. Adjacent boundary fence foundations to be constructed the same level as proposed building foundation to prevent overloading.

WALLS BELOW DPC

"Approved" foundation grade block work/common brick below ground level. Lean mix cavity fill up to 225mm below d.p.c. 4 courses min facing brick below d.p.c. to outer leaf of external walls.

ACCESS (New Build)

A 'level' or ramped approach to the dwelling is to be provided with a firm and even surface ,900mm wide minimum and a gradient not exceeding 1 in 12 (landings to ramps to be min 1.2m in length). Access door at head of ramp to have cill of maximum height 15mm and to have a minimum clear width 755mm.

D.P.C.

Horizontal d.p.c.'s to b.s. 743 to walls positioned 150mm min above finished ground level. Thermate or (similar approved) insulated vertical d.p.c. / cavity closer to all window and door jambs.

GROUND FLOOR – SOLID CONCRETE (New Build)

Minimum 65mm sand/cement screed on 150mm thick insitu concrete slab reinforced with1/2 layers of A393 mesh fabric generally in bottom of slab, but in top and bottom over internal walls, Celotex GA4000 100mm thermal insulation slab on 2000 gauge visqueen dpm on 25mm sand blinding on min. 150mm consolidated hardcore. Dpm taken up edge of slab and lapped under dpc. Min. 25mm insulation upstand to edge of slab to prevent cold bridging. Combined construction is to achieve a minimum 0.18w/m2 deg C 'U' value. Alternative floor to specialist detail.

EXTERNAL WALLS CAVITY – Brick / Block

Outer leaf "approved" facing brickwork, 100mm cavity partially filled with 50mm EcoTherm Eco-Cavity and 100mm Thermalite Aircrete load bearing concrete block with thermal conductivity 0.15 W/mK, Density 600 kg/m³. All blockwork walls spanning in excess of 6m must have expansion joints in accordance with the structural engineers design. The overall combined wall construction must achieve a maximum 'U' value of 0.26 W/m²K. All new wall constructions to be bonded into existing, leaving a continuous clear cavity.

WEEPHOLES

Provide proprietary plastic weep vents at approximately 450mm centres to brick course immediately above all external openings and lean to roofs with cavity trays and with a minimum of two weep holes per opening.

CAVITY WALL TIES

Catnic BW2/200 (Type 2 classification) stainless steel wire wall ties for 75mm cavity to BS 5628. Tie size 3.3 x 200mm designed for use up to 3 storeys and up to 15m. BW2 ties to be installed at a minimum density of 2.47 ties per square metre (450 mm vertical and 750 mm horizontal spacing). Ties may be positioned centrally or offset in the cavity provided that they are embedded a minimum of 50 mm in both leaves. Additional ties at 300mm centres vertically adjacent to openings.

CAVITY CLOSER

Cavity Trays 75mm wide Type 'V' Contract Closer to used at all openings within external walls.

LINTELS

- To be insulated combined steel 'IG Lintels' as follows:-
- Lintels over openings in 275mm cavity external walls to be 'L1/S75'.
 - Lintels over openings in 100mm masonry internal walls to be 'BOX75/100/140'
 - Lintels over openings in 102mm masonry external walls to be 'L10'
 - Lintels over garage door openings in 215mm external walls to be 'L9'.

All lintels to have minimum end load bearing as specified by manufacturer or 150mm min. All lintels to be encased to give min half hour fire resistance. Provide cavity tray above all lintels within external walls. Provide pre-cast concrete lintels over service ducts passing through foundation walls. Provide secondary s.w. batten. Brickwork not to overhang lintel by more than 25mm. Openings within internal studwork walls to form part of the walls primary frame to manufacturers instructions and recommendations.

WINDOWS

Standard double glazed UPVC frames with side hung casement openings hermetically sealed with integrated draught seals. 150mm wide d.p.c. to B.S. 743 to perimeter of frame prior to fixing. Window face area to be no more than 25% of the associated rooms floor area. Provide proprietary mastic sealant to all external frame / wall junctions. Trickle vents to head of frames. See 'Ventilation'. Habitable opening windows (all rooms except kitchens, bathrooms, en-suites, wc's and utilities) providing emergency escape must have a minimum of 0.33m² opening area, providing unobstructed opening of 850 x 500mm wide (min 800mm & max 1100mm above floor) to comply with emergency egress within building regulations as an alternative means of escape.

EXTERNAL DOORS

LEVEL ACCESS

All external entrance doors with level access to achieve a 964mm structural opening (775mm minimum clear opening width and level thresholds to be no more than 15mm total height)

STEPPED ACCESS

- All external entrance doors with stepped access to achieve a 1014mm structural opening with an 850mm minimum clear opening width and must comply with the following:
- External level landing must have a minimum width & depth of 1200mm.
 - The landing is covered for a minimum width of 900mm & 1200mm depth
 - Lighting must be provided using fully diffused luminaries and activated by either a dusk-to-dawn timer or motion sensor.
 - If double doors are used, the main leaf must provide the required clear opening width.
 - A minimum 300mm nib is to be provided to the leading edge of the door, the additional width created is to be maintained for a minimum of 1200mm beyond it.
 - The depth of the reveal internally is a maximum of 200mm.
 - Where a lobby or porch is created, there is a 1500mm minimum distance between doors and door swings.

The minimum clear opening height of external doors is to be 2000mm. Provide integrated draught seals, 150mm wide d.p.c to B.S. 743 to the perimeter of the frame, prior to fixing and propriety mastic sealant to external frame/wall junctions. All external garage doors to client specification. All doors must comply with Approved Document M of the Building Regulations and any discrepancies between dimensions on drawings and the above specification must be reported to the architect/designer prior to any construction or manufacture.

INTERNAL DOORS

Propriety internal door leaf size and structural opening to achieve minimum clear door opening width, based on corridor width as shown below:	
<u>Doorway clear opening width</u>	<u>Corridor clear passageway width</u>
750mm or wider	900mm (When approached head-on)
750mm	1200mm (When approach is not head-on)
775mm	1050mm (When approach is not head-on)
800mm (930mm structural opening)	900mm (When approach is not head-on)

The minimum clear opening height of internal doors is to be 2000mm. Fire doors between the garage and dwellinghouse to have a minimum fire resistance of 30 minutes with smoke seals and be fitted with a self-closing device. All doors must comply with Approved Document M of the Building Regulations and any discrepancies between dimensions on drawings and the above specification must be reported to the architect/designer prior to any construction or manufacture.

GLAZING - General

Provide toughened or laminated safety glass to panels with glazing below 800mm from floor level (1500mm in a door or side panel) or glazing wider than 250mm. All glazing within external walls must be 'Low E' type - Pilkington 'K' glass with 16mm Air or Argon Gas-Filled Cavity. Combined to achieve 'U' value 1.4W/m²K.

VENTILATION
Habitable rooms or sanitary accommodation (without mechanical extract) to have provision for rapid ventilation by opening windows with a total area of at least 1/20th of the floor area of the room. All other rooms to have provision for rapid ventilation by opening windows (no minimum size). Background ventilation of 8000mm² achieved by trickle ventilators (or similar approved method) located to top frame of windows to habitable rooms and 4000mm² to other. Manually operated mechanical extraction to be provided within utility rooms and kitchens adjacent to hob at achieve 30 litre / second, or 60 litre / second elsewhere. To all bathrooms provide a mechanical extract capable of extracting at a rate of 15 litre / second with fifteen minutes overrun, controlled automatically or manually. Continuous roof ventilation provided by Klobber Permo Forte Vapour permeable underlay maintaining a 15mm drape / cross flow ventilation gap. Cross flow ventilation maintained over roof insulation with 'Glidevale' RV601 rafter ventilator or similar and approved.

INTERNAL WALLS – Blockwork
100mm wide "Approved" load bearing, high insulating, concrete blockwork (minimum mass 120kg/m²) finished with 13mm lightweight plaster or drylined with 12.5mm plasterboard on dabs to give half hour fire resistance.

INTERNAL WALLS – Stud Partition
Proprietary system or 70mm wide Gyproc metal studs with 12.5mm plasterboard either side (minimum mass per unit area of 10kg/m sq) to give half hour fire resistance in accordance with British Gypsum white book. Provide sound insulation of 25mm thick (minimum density 10kg/m cu) fixed within wall construction. All internal drainage pipework to be encased in 2 layers 12.5mm plasterboard on stud (minimum mass per unit area of 10kg/m sq). 25mm thick Isowool General Purpose Roll (minimum density 10 kg/m³) fixed around pipe.

PITCHED ROOF CONSTRUCTION (insulation at ceiling level)
TRADITIONAL TIMBER CONSTRUCTION (New Build)
"Approved" Interlocking concrete roof tiles to manufacturers instructions and reccomendations on 50 x 25mm tanalised sw battens on Klobber Permo Forte Vapour permeable on sw rafters (timber section size indicated on drawing) at min 600mm cts to be designed, constructed, fixed and braced in accordance with b.s. 5268 pt3 1985, including water tank stillage. 100 x 75mm sw wall plate strapped to wall at eaves at max 1800cts, using 30 x 5mm galvanised ms straps. 75 x 50mm sw blocking noggins under straps.
4 no. 1000 x 30 x 5mm galvanised mild steel straps securing roof at each gable at ceiling and rafter level across minimum three rafters. Hipped roof areas formed with infill timbers of SC16 grade to manufacturers design and details. Dragon tie fixed from timber hip to timber angle tie fixed across wall plates at foot of hip. Valleys formed with 175 x 32 mm valley layboard. Fibreglass valley trough. Form 700 x 500mm roof access hatch using 100 x 50mm sw trimmers. Provide 38 x 38mm plasterboard edge support if necessary at roof perimeter. Ceiling joists to be under drawn with foil-backed 12.5mm thick plasterboard ceiling. Fix 100mm Knauf insulation loft roll 44 between ceiling joists and 170mm Knauf insulation loft roll 44 above ceiling to give min u value of 0.16w/m2 degree c. 6mm external quality plywood soffit on 38 x 38mm sw framing to eaves and verges. Provide lead flashings and cavity tray to all wall and roof abutments. The roof construction to be designed by roof truss manufacturer and calculations submitted to the relevant L.A. for approval prior to manufacture.

PITCHED ROOF CONSTRUCTION (insulation at roof level)
TRADITIONAL TIMBER CONSTRUCTION (New Build)
"Approved" Interlocking concrete roof tiles to manufacturers instructions and reccomendations on 50 x 25mm tanalised sw battens on Klobber Permo Forte Vapour permeable underlay on sw timber rafters at 600mm centres. Rafters birdsmouthed and clipped to 100 x 75mm sw wall plate strapped to wall at eaves at max 1800cts, using 30 x 5mm galvanised ms straps. 75 x 50mm sw blocking noggins under straps. 4 no. 1000 x 30 x 5mm galvanised mild steel straps securing roof at each gable at ceiling and rafter level across minimum three rafters. Valleys formed with 175 x 32 mm valley layboard. Fibreglass valley trough. Form 700 x 500mm roof access hatch using 100 x 50mm sw trimmers. Provide 38 x 38mm plasterboard edge support if necessary at roof perimeter. Fix 100mm EcoTherm Eco-Versal between timber rafters leaving a minimum 50mm ventilated air layer above, with a further 72.5mm EcoTherm Eco-Liner fixed below timber rafters, all to achieve 0.16w/m2 deg C. Minimum 15mm air gap over to allow Klobber Permo Forte Vapour permeable underlay to drape and cross flow ventilate. 6mm external quality plywood soffit on 38 x 38mm sw framing to eaves and verges. Provide lead flashings and cavity tray to all wall and roof abutments.

FLASHINGS
Provide Code 4 stepped lead flashings, with stepped cavity trays at all roof / wall abutments. All lead flashings to have a minimum of 150mm upstand at abutments.

DRAINAGE - RAINWATER
Provide 100mm dia. half round, deep flow black upvc gutters, with 68mm dia. rainwater pipes discharging into new trapped gulley with rodding access, connected to 100mm diameter clay pipe laid to a minimum fall of 1 in 80, and to connect into existing system. To be approved on site with Building Inspector.
125mm H.R. mm UPVC gutters laid to fall of 1 in 600 to outlet with 68mm dia. UPVC rainwater pipes.

DRAINAGE - FOUL WATER
All drainage to be 'supersleve' or 'hepsleve' pipes laid and bedded in accordance with manufacturers' instructions and recommendations. Inspection chambers to be 'hepworth' type polypropylene installed according to manufacturers' specification. Manholes to be constructed in 225mm class 'b' engineering brickwork or proprietary concrete rings on 150mm thick sulphate resisting concrete base with step irons to b.s. 539 - 150mm average benching laid to falls.
Below ground 100mm dia. soil pipes laid at 1:80 minimum gradient. Soil pipes and accessories to B.S. 4514, 100mm dia. soil and vent pipes to be positioned externally with mesh covered outlet positioned 900mm above any opening light. SVP to discharge directly into inspection chamber via 100mm dia. rest bend. SVP to be encased in sound insulated duct (see internal wall spec.) where it passes through living room or bedroom if internally located. Include lead slate and saddle where SVPs pass through the roof.
Sink, Bath, Bidet & Shower = 76mm deep seal trap, 40mm dia. UPVC waste pipe @ 18 to 90mm/m fall.
WC = 50mm deep seal trap, 100mm dia. UPVC waste pipe @ 18mm/m min. fall connected directly to SVP.
Washbasin = 76mm deep seal trap, 32mm dia. UPVC waste pipe @ 20 to 120mm/m fall. Provide anti-syphonic traps & 50mm dia. UPVC waste pipes where pipe run exceed 2.0m. Where common waste pipe is used for one or more appliances it must be a minimum of 50mm diameter and connected to SVP or back inlet gully. Rodding eyes to be provided at head of all drains. All gullies and SVP's to have rodding access. All stub stacks to have an AAV (Air Admittance Valve) fitted and rodding access.

DRAINAGE – GENERAL
All new drainage to route and connect into existing drainage runs and to be approved on site with Building Inspector. All below ground drain pipes should have minimum of 150mm cover below slab level and be encased in 100mm minimum of concrete. All drains passing under buildings to be tested and approved by building inspector and bridged over (see lintel spec.) where passing through walls. All existing drainage lines shown on drawings are assumed and must be checked / verified on site by contractor prior to commencement of works / new drainage construction.

ELECTRICAL INSTALLATIONS
All switches and socket outlets for lighting and other equipment in habitable rooms to be located at appropriate heights between 450mm and 1200mm from finished floor level. In the areas affected by building work, provide fixed energy efficient light fittings that number not less than the greater of: one per 25m² of dwelling floor area (excluding garages) or, 1 per 4 fixed light fittings. External lighting to be fitted with a lamp capacity not exceeding 150 Watts per fitting with light and motion sensors. All electrical work must be designed, installed, inspected and tested by a competent professional to comply with I.E.E regulations, Part P of the building regulations and Electrical Safety, Quality and Continuity Regulations 2005. All fittings to comply with British Standards. Quantity, quality and position of fittings in accordance with N.H.B.C. requirements. Prior to completion the local authority must be satisfied that either:-
An electrical installation certificate issued under a competent person scheme has been issued; or Appropriate certificates and forms defined in BS 7671 (as amended) have been submitted that confirm that the work has been inspected and tested by a competent person. A competent person will have a sound knowledge and experience, relevant to the nature of the work undertaken and to the technical standards set down in BS7671, be fully versed in the inspection and testing procedures contained within the building regulations and employ adequate testing equipment.

BOILER
Gas or Oil Boiler = Condensing, SEDBUK Rating Band A or B (90% or higher), Council "Approved", wall mounted, gas fired, room sealed combi appliance, with balanced flue fitted with durable, non combustible guard, controlled by full zone control with weather compensation. Provide high level gas and power points where applicable. Flue to be positioned min 300mm from any opening.

HEATING SYSTEM INSTALLATIONS
All installations to be carried out by a 'Corgi' registered professional to comply with Part J of the building regulations. All fittings to comply with British Standards. Heating and hot water services should be installed in accordance with NDHCV Guide. All new space and hot water heating systems to have full zone control, thermostats, timers and thermostatic radiator valves fitted in accordance with manufacturers instructions and recommendations. 'Corgi' registered professional to fit all relevant notice tags and issue all relevant certificates on completion of works.

FLUES
Any new heating appliance to be installed by a Corgi registered professional checking the following:-
- Prior inspection and approval of flue with J4 notice.
- Heating appliance specification approved for acceptable use with flue.
- Flue flow and spillage test executed and submitted.

GAS FIRES - FLUE BLOCKS
Dunbrik Mini Clearflow gas flue block system. Gas fires suitable for "pre-cast flues" to be fitted with a domestic gas fire rating of up to 7kW heat input and minimum efficiency of 63%. The gas flue blocks are to be built into and bonded with the inner leaf blockwork of the outer wall. The flue outlet to be through a twin-wall flue pipe in the roof space to a ridge vent. The gas flue blocks with tongue and socket detail to be used which provides a tight concrete-to-concrete internal joint and an external compressive seal using Dunbrik 1581 silicone sealant, allowing approximately 7 joints per cartridge. The bonding nib has a 10mm cut-out to assist coursing with the adjacent blockwork. The concrete flue blocks must comply with British Standards BS1289 Part 1. The flue way to be rectangular 185mm by 90mm giving a flue cross sectional area of 16,650 sq. mm. At least three 2M straight gas flue blocks to be used above the gather block before any 3ME lateral offset blocks. Offsets should be used as high in the flue run as possible. Blakbord insulation panel to be inserted in reduced with cavity to external wall to prevent cold bridging and damp penetration.

SERVICES (Dwelling Extension + New Build)
All work and installations to comply with the regulations and recommendations of the respective "BOARD" or "AUTHORITY" to the satisfaction of the "Inspector". Any meters being relocated to new position must be executed by a registered specialist subcontractor.

COMMISSIONING CERTIFICATES / OPERATIONS AND MAINTENANCE INSTRUCTIONS (New Build)
Copies of the commissioning certificates for the heating and hot water systems are to be submitted to the Local Authority on completion. Operating and maintenance instructions for the heating and hot water systems should be given to the owner and / or occupier of each dwelling.

STANDARD ASSESSMENT PROCEDURE (SAP) ENERGY RATINGS SAP (New Build)
SAP calculations will be required for each dwelling and should be prominently displayed within each dwelling as soon as is practicable. An air permeability and pressure test should be carried out on each dwelling, or dwelling type in compliance with Approved Document Part L and in conjunction with the local building control officer. Dwellings should be constructed using 'Acredited Construction Details' as published by BRE. The Local Authority should be given notice of the SAP energy ratings for each house at least five days prior to the occupation of each dwelling.

SMOKE / HEAT DETECTION
Smoke detectors installed at ground & first floor in hall & landing, both detectors to be permanently wired in on a separately fused circuit with a secondary battery backup. Where more than one smoke alarm is installed they should be linked so that the detection of smoke by one unit operates the alarm signal in all of them. The manufacturers instructions about the maximum number of units that can be linked should be observed. Alarms to be positioned 7m max from kitchen or lounge doors & max 3m from bedroom doors, minimum 300mm from any wall or light fitting. Where a kitchen is not separated from the stairway or circulation space by a door, there should be a compatible interlinked heat detector or heat alarm in the kitchen in addition to whatever smoke alarms have been specified.

STEELWORK
All to structural engineers design, details and Laid / supported on 2 no. Course deep concrete padstones. To be encased in Fireline board with all joints staggered and taped to achieve 1 hour fire resistance, all to manufacturers instructions and recommendations.

STRUCTURAL ENGINEER
All calculations provided to be based on full survey carried out by structural engineer.

SMOKE / HEAT DETECTION (New Build + HMO + FMO)
Grades of automatic fire detection and
warning systems as specified in BS 5839: part 6
(2004)

Gas Safety (Installation and Use) Regulations 1998
The Gas Safety (Installation and Use) Regulations 1998 require all landlords to ensure that gas appliances, fittings and flues provided for tenants' use are safe. As a landlord, you have a duty to ensure:

- Gas fittings (appliances, pipework) and flues are maintained in a safe condition;
- All installation, maintenance and safety checks are carried out by a Gas Safe registered

Installer;

- Every 12 months carry out a safety check on each gas appliance/flue. This check is to be done by a Gas Safe registered Installer;
- A record of each safety check is kept for two years;
- A copy of the current safety check record is issued to each existing tenant within 28 days of the check being completed, or to any new tenant before they move in (in certain cases the record can be displayed).

Electrical Safety
The electrical installation in the property should be installed and maintained in accordance with a recognised standard, such as the current edition of the Institute of Electrical Engineers (IEE) Wiring Regulations. Certification should be provided to confirm that the installation is safe. Every 5 years the electric installation should be retested and certified; or each time any alterations or extensions to the system are made. All work to the electrical installation should be carried out and certified by a NICEIC (National Inspection Council for Electrical Installation Contracting) member or approved body or competent person. All electrical work must be carried out in accordance with Part P of the Building Regulations.

Fire Safety
Fire alarms should be tested and maintained in accordance with BS5839. They should be tested regularly and inspected at least once a year to ensure the system responds to smoke. The annual test is usually carried out be a specialist alarm engineer under a maintenance contract. The results of all tests and inspections should be recorded in the log book with an inspection and test certificate issued. Fire extinguishers should be checked periodically to make sure they are in place and available to use. Extinguishers should be tested and maintained on an annual basis in accordance with BS 5306- 3 and with the manufacturer's instructions. Emergency escape lighting should be tested and maintained on an annual basis in accordance with BS 5266-8 (BSEN 50172). Testing to be done by a competent person, usually a lighting engineer under a maintenance contract. The results of the test should be recorded in the log book with a periodic inspection and test certificate issued.