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Main contractor responsible for site safety.

0m 1 2 3m
1:50 @ A1

ELECTRICAL & VENTILATION

All electrical and Mechanical ventilation and air-conditioning systems works are to be carried out by a 'competent person' who is registered with a Competent Person Scheme (CPS)

witnessing he/ they is/are qualified to carry out specific types of work following Building Regulations. They should notify the local authority of the work and issue you a certificate of compliance with the BR either directly or through their scheme operator.

If the client doesn't use an installer registered with a Competent Person Scheme, then they will have a building control person come and inspect the work.

ELECTRICAL

- 100% of installed new light fittings to be energy-efficient LED lights.

-Internal lighting: Any spotlights set into ceilings with floors/roof above to be Snaplite type or similar, to give 30 mins. fire protection. Number and locations to be agreed with the client.

- All electrical outlets, telephone/TV/internet points, and light switches are to be located between 450 and 1200 from the finished floor level and the position and further details are to be consulted with the client.

- The external lights to include a day/night sensor in the circuit.

VENTILATION

Mechanical ventilation:

- Bath/ Shower/ En-suite - EnviroVent silent 100 SELV version - IP57 rated (or Equiv.) with an adjustable Humidity Sensor. The level of humidity can be chosen from between 60% and 90% RH.

-Wall/ ceiling mounted fan operated with light fittings with 15mins.

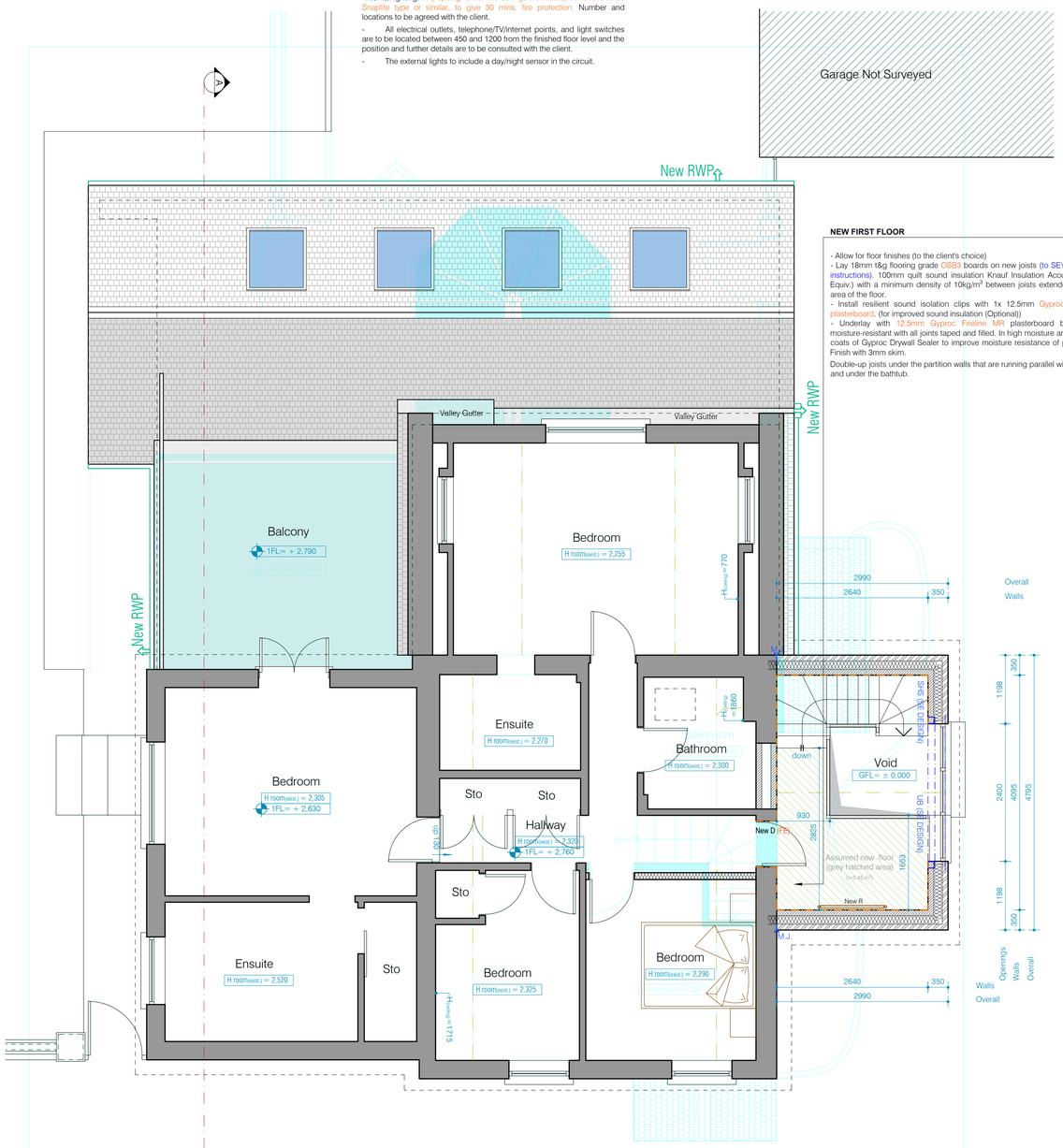
-Overrun period ducted through wall/ roof with flat ducts (or similar) connecting to the proprietary outlet.

-Use sound insulation for ducts.

The fan can be located in zones 1 & 2 of a bathroom but the circuit must be protected by a 30mA RCD. (airflow min. 15 L/sec)

Purge ventilation: provided by openable windows and doors.

Background ventilation: all homes are to meet minimum requirements for background ventilation through either mechanical ventilation with heat recovery (MVHR) or background ventilators (trickle vents) as per AD PART F, to comply with BR, 2010. (Client to be consulted).

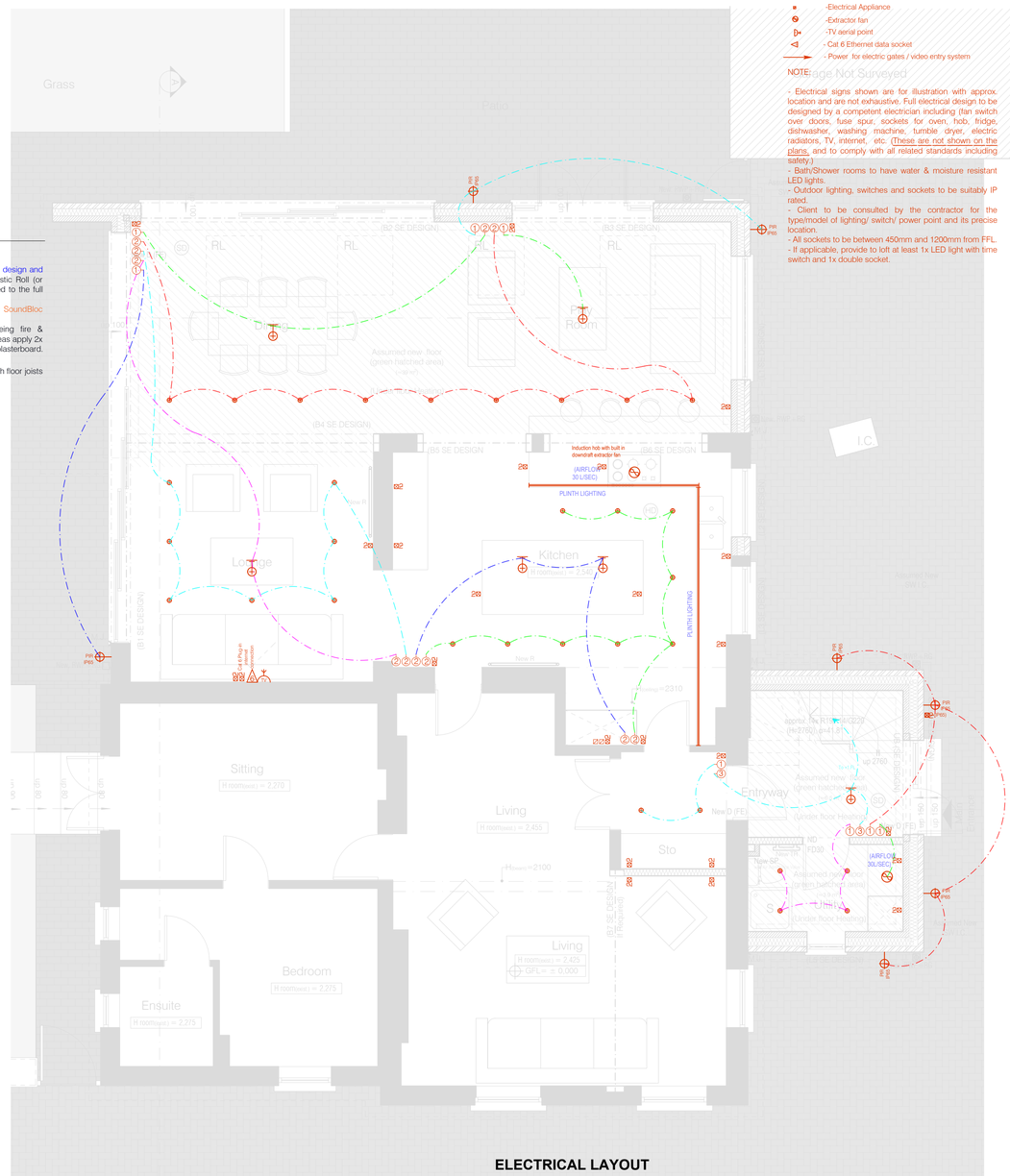


FIRST FLOOR PLAN AS PROPOSED
SCALE - 1:50@A1

NEW FIRST FLOOR

- Allow for floor finishes (to the client's choice)
- Lay 18mm t&g flooring grade OSB3 boards on new joists (to SE's design and instructions). 100mm quilt sound insulation Knauf Insulation Acoustic Roll (or Equiv.) with a minimum density of 10kg/m^3 between joists extended to the full area of the floor.
- Install resilient sound isolation clips with 1x 12.5mm Gyproc SoundBloc plasterboard, (for improved sound insulation (Optional))
- Underlay with 12.5mm Gyproc Fireline MR plasterboard being fire & moisture-resistant with all joints taped and filled. In high moisture areas apply 2x coats of Gyproc Drywall Sealer to improve moisture resistance of plasterboard. Finish with 3mm skim.

Double-up joists under the partition walls that are running parallel with floor joists and under the bathtub.



ELECTRICAL LAYOUT

FIRST FLOOR PLAN AS PROPOSED
SCALE - 1:50@A1

Electrical key:

PIR	PIR
	- Recessed Spotlights/ Downlights
	- Ceiling Light
	- Wall Light
	- Pendant Light
	-Single LED batten
	-1 way switch
	-2 way switch
	-3 way switch
	-Door bell push
	-Door bell chime
	-Shaver socket (All bath/shower/En-suite rooms)
	-Double socket
	-Double socket, IP65 RATING
	-Electrical Appliance
	-Extractor fan
	-TV aerial point
	- Cat 6 Ethernet data socket
	- Power for electric gates / video entry system

NOTE:

- Electrical signs shown are for illustration with approx. location and are not exhaustive. Full electrical design to be designed by a competent electrician including (fan switch over doors, fuse spur, sockets for oven, hob, fridge, dishwasher, washing machine, tumble dryer, electric radiators, TV, internet, etc. (These are not shown on the plans, and to comply with all related standards including safety).
- Bath/Shower rooms to have water & moisture resistant LED lights.
- Outdoor lighting, switches and sockets to be suitably IP rated.
- Client to be consulted by the contractor for the type/model of lighting/ switch/ power point and its precise location.
- All sockets to be between 450mm and 1200mm from FFL.
- If applicable, provide to loft at least 1x LED light with time switch and 1x double socket.

General key:

- Existing structures
- Demolished / As existing underlay
- New structures
- Approx. Boundary line
- Structural engineers notes (SE) notes

Drainage key:

I.C.	- Inspection chamber
R.G.	- Roddable gully
AAV/ Durgo	- Durgo air admittance valve
SP /SVP	- Soil pipe / Soil vent pipe
	- Proposed FW (foul water) drains
RWP+RG	- Rain water pipe + Roddable gully
	- Proposed RW (rain water) drains

Heating key:

- Radiator / Towel rail

Fire strategy key:

- min. 30 mins. fire resistant plasterboard/ board
- SD HD - exist./new Smoke / Heat detector (approx. position)
- Provide Carbon monoxide detector to rooms with fire burning appliance if any
- ND (FD30) / ND - New fire door / New door
- NW (FE) / NW - New window (Fire Escape type) / New window

List of Abbreviations:

SE..... Structural Engineer
BR..... Building Regulations
AD..... Approved Document

PRELIMINARY DRAWINGS

Rev.	Date	Revisions
	18/03/26	First Issue

PSK architect
Your Home Extension Specialists
PSK Cheltenham Ltd
Unit C1
Staverton Technology Park
Staverton
Herrick Way
GL51 6TQ
Tel. 01242 304477

DESCRIPTION

Single Storey Extension and Carport

Building Regulations (General Plans) as Proposed

DATE	SCALE
18/03/26	As noted @ A1
DRAWN	CHECKED
EM	PSK

1183-BR02

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0m 1 2 3m
1:50 @ A1

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List of Abbreviations:
- SE..... Structural Engineer
- BR..... Building Regulations
- AD..... Approved Document

STRUCTURAL WORKS

The structural elements shown in blue are only indicative.
Please refer to the structural engineer's details for clarification of all structural works.

The contractor is responsible for setting out the works and checking the position of structural steels and supports before ordering any steels.

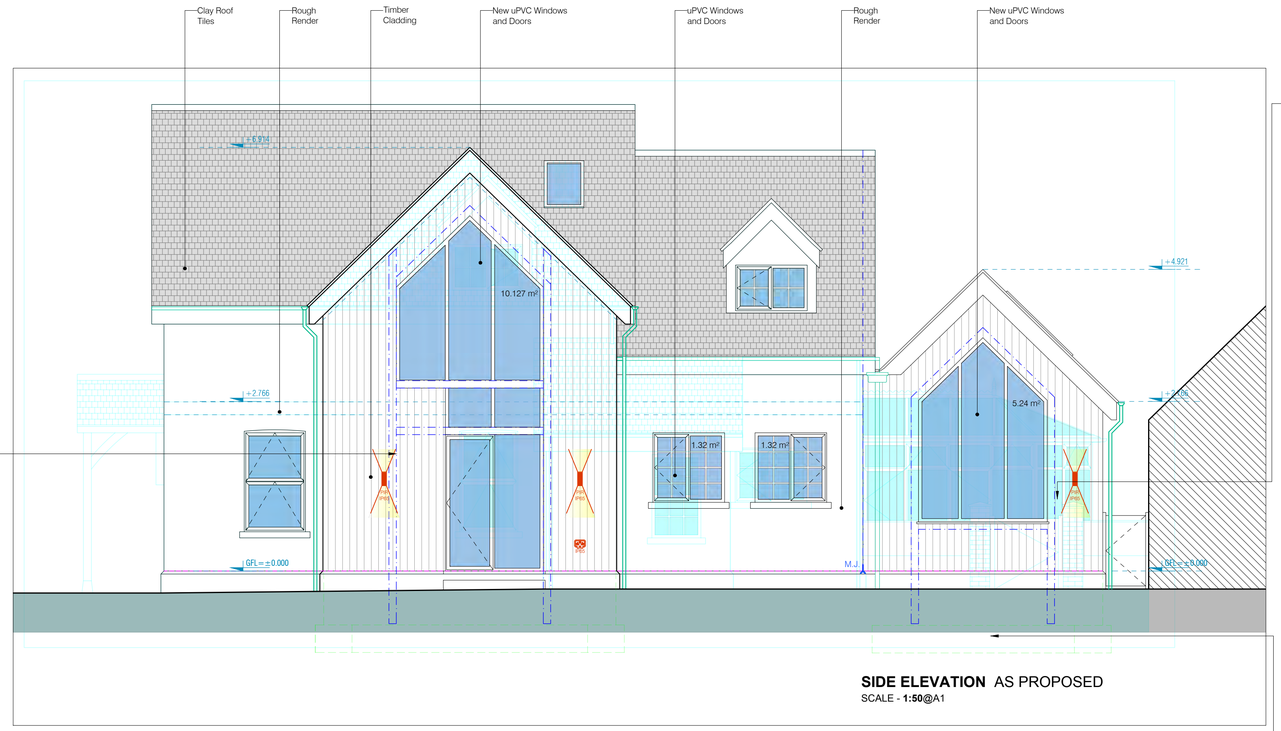
LINTELS

- All to SE design, instructions and details. Catnic (or Equiv.) lintels and galvanised steel beams with min. 150mm (or as specified by SE) end bearing on concrete padstones.
- use thermally broken Catnic lintels in exterior walls otherwise, if the lintel/ beam has a continuous baseplate, then underlay it with 37.5mm insulated foil-backed plasterboard internally. Provide plastering mesh or tape, as applicable, between different materials.
- Weep holes @ 450mm c/c or min. 2 No. per lintel.
- Provide additional Ruberoid tray over lintels in external walls.
- All Installed as per manufacturer's instructions.
- Where forming new openings, allow all temporary support where inserting new lintel (to SE detail) and make good all disturbed surfaces to match existing.

NEW PITCHED ROOF

Clay roof tiles (to client's choice) and to suit pitch on battens on breathable felt Tyvek 'Supro' (or Equiv.) protected by protector trays at eaves with over fascia ventilator (or Equiv.) on rafters/ roof trusses (refer to SE design and instructions). If applicable, take site dimensions before ordering trusses.
- Eaves to be filled with insulation and to have a rafter ventilator (to preserve ventilation).
- Insulation between and under rafters:
Actis Hybris 125mm (or Equiv.) rigid insulation boards are to be laid between rafters/ties. Underlay rafters/ties with min. 70mm Foil Faced Rigid PIR Insulation Boards (or Equiv.), Vapour Control Layer with joints taped and 12.5mm Gyproc Fireline plasterboard (Gyproc FRMR fire & moisture resistant type in Bath/Shower/En-suite/Utility/Kitchen) with all joints taped and filled. In high moisture areas apply 2x coats of Gyproc Drywall Sealer to improve moisture resistance of plasterboard. Finish with 3mm skim.
Proposed roof approx. U=0.15W/m²/K - ✓complies (required for extensions to an existing building: $U_{maximum}$=0.15 W/m²/K)
- Eaves and ridge ventilation with insect protector to be provided, maintain min. 50mm air gap throughout for ventilation.
- Provide vertical strapping of rafters in compliance with Approved Document A. (Subject to SE)
- Provide lateral support with noggings between 3 rafters at the gable and provide its strapping to the wall @ max. 2m c/c following Approved Document A. (Subject to SE)
- Wall plates 50x100mm strapped @ max. 2m c/c and min. 1m long straps in compliance with Building Regulations.
- (B3) Close cavity at wallplate level with non-combustible material.

- Pitched Roof side - Wall abutment: Provide a 150mm upstand with lead Code 4 soakers, Code 5 flashing with a breathable membrane to be turned up behind the flashing, and a cavity tray to suit the wall condition with weep vents.



SIDE ELEVATION AS PROPOSED
SCALE - **1:50@A1**

TIMBER CLADDING ON NEW SUBSTRATE (CAVITY MASONRY WALLS)

- *specialist design*

If the timber cladding boards are installed vertically (overlapping or interlocked), vertical counter battens should be used to ensure there is a ventilated and drained cavity behind the horizontal batten. *(Refer to fig. 1-3)*
A continuous airflow from bottom to top is vital for long-term durability.

External Cladding material is to be treated to ensure an appropriate fire performance of Class B-s3, d2 as a minimum as per AD B, 2019.

New Cavity Wall substrate:
The provision of a breather membrane - is optional, but recommended.

Existing Solid Walls substrate:
If the existing walls are solid, then:

A waterproof coating or a breathable membrane must be fitted.

NEW SUBSTRATE: EXTERNAL CAVITY WALLS

Construction has approx. U=0.18W/m²K = complies
with external walls on extensions: required max. U=0.18 W/m²K, (as per Approved Document L 2021 in England).

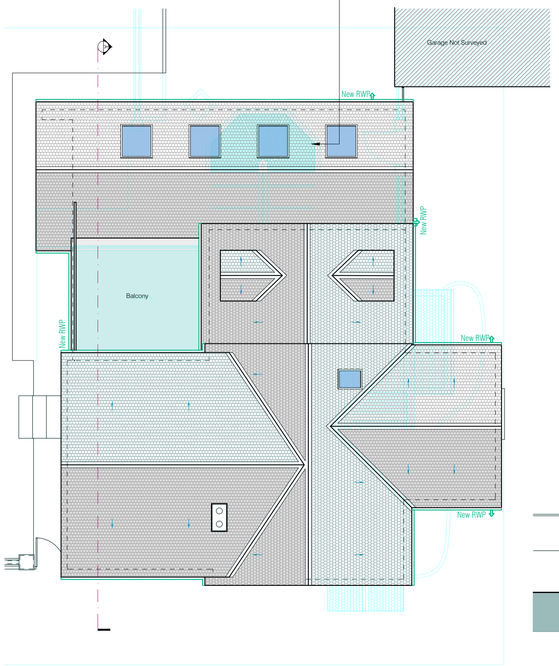
Outer leaf : from 100 to 140 mm (SE design) concrete blocks.

150 mm full-fill masonry cavity wall with DriTherm® Cavity Slab 32 (or Equiv.)

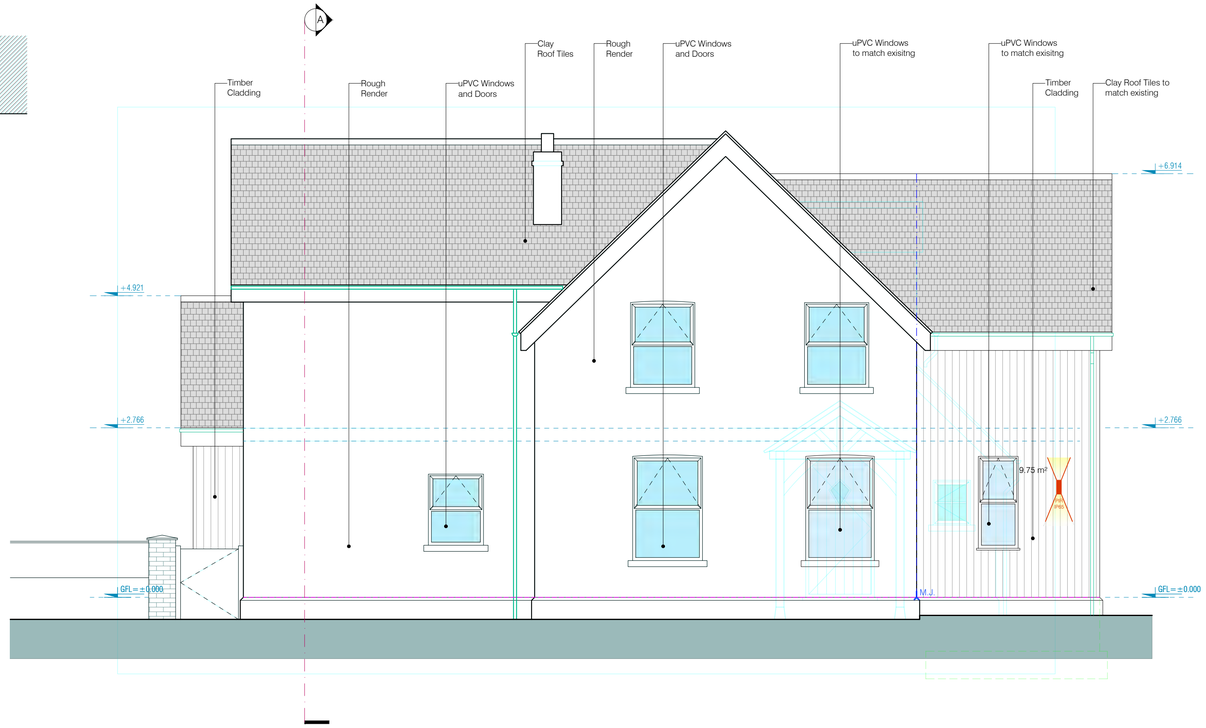
Inner leaf: 100mm Thermalite Shield (or Celcon or Equiv.) lightweight blockwork (subject to SE).

Finish externally: HOUSE: - vertical timber cladding (to the client's choice) on battens and counter battens on the breathable membrane on concrete blocks. External Cladding material is to be treated to ensure an appropriate fire performance of Class B-s3, d2 as a minimum as per AD B, 2019.
Maintain min. 25mm ventilated air void between battens and provide insect protectors to all open edges of the cladding.
Finish internally: with 13mm lightweight plaster.
Wall ties to be spaced:
- in general wall area - max. 900mm horizontally and max. 450mm vertically.
- at jamb openings, movement joints, parallel to the top of the gable walls,
Below DPC level and in parapet wall:
- if using concrete blocks, use frost-resistant blocks.
- if using bricks, use either engineering or frost-resistant bricks F2/S2 to BS EN 771-1.
Use frost resistant brick F2/S2 category:
- below ground level DPC, sills, coping/cappings, beneath cappings, in projecting details (e.g., plinths, cornice,) in exposed site locations, retaining walls, fence wall, and chimney above the roof line.
Damp proofing of the wall where in contact with the soil including junctions:
- to specialist design.

Vertical movement joints should be provided to the outer leaf of cavity walls (SE design).
Wall ties should be provided at 300mm maximum vertical spacing on either side of the expansion joint and within 225mm horizontal spacing of the movement joint. Compressible filler, such as polyurethane foam, should form the joint and be sealed to prevent water penetration.
Movement joints are to be considered for the internal leaf of cavity walls for spaces with unbroken wall lengths above 6m (SE design).



ROOF PLAN AS PROPOSED
SCALE - **1:100@A1**



FRONT ELEVATION AS PROPOSED
SCALE - **1:50@A1**

FOUNDATIONS/ MASS FILL AND STRIP

- Foundations are shown only as indicative. "PSK does not specify foundations – All foundations and sub-structure to be designed by a structural engineer".
- Proposed are Mass Fill and Strip type of foundations (subject to SE design).
- Mass Fill and Strip foundation design must be supported by structural calculations provided by an SE.
- Duty-holders will ensure that design and construction follow BS 8004:2015 Code of Practice for foundations (+A1:2020).
- The depth of all foundations should be determined by specific site conditions.
- Constructed to a depth which will not be affected by nearby drainage or other services.
All as per the Structural Engineer's details, design and specifications. SE to confirm that the structure has been designed to take into consideration ground conditions and surrounding trees.
- Any trees within 20m of the new foundations to be identified and the impact of the depth and type of foundations should be considered before commencing any work. Arboricultural Impact Assessment to be provided where requested by BCO. Designed to suit soil conditions and to conform to NHBC practice, Note 4.2 'Building Near Trees'. All are subject to BCO.

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Building Regulations (Elevations) as Proposed

DATE	SCALE
18/03/26	As noted @ A1
DRAWN	CHECKED
EM	PSK

1183-BR03

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0m 1 2 3m
1:50 @ A1

General key:
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- New structures
- Approx. Boundary line
- Structural engineers notes (SE) notes

Drainage key:
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- R.G. - Roddable gully
- AAV/ Durgo - Durgo air admittance valve
- SP /SVP - Soil pipe / Soil vent pipe
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TIMBER CLADDING ON NEW SUBSTRATE (CAVITY MASONRY WALLS)
- specialist design

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A continuous airflow from bottom to top is vital for long-term durability.

External Cladding material is to be treated to ensure an appropriate fire performance of Class B-s3, d2 as a minimum as per AD B, 2019.

New Cavity Wall substrate:
The provision of a breather membrane - is optional, but recommended.

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If the existing walls are solid, then:

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with external walls on extensions: required max. U=0.18 W/m²K, (as per Approved Document L 2021 in England).

Outer leaf : from 100 to 140 mm (SE design) concrete blocks.

150 mm full-fill masonry cavity wall with DriTherm® Cavity Slab 32 (or Equiv.)

Inner leaf: 100mm Thermalite Shield (or Celcon or Equiv.) lightweight blockwork (subject to SE).

Finish externally: HOUSE: - vertical timber cladding (to the client's choice) on battens and counter battens on the breathable membrane on concrete blocks. External Cladding material is to be treated to ensure an appropriate fire performance of Class B-s3, d2 as a minimum as per AD B, 2019.
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Finish internally: with 13mm lightweight plaster.
Wall ties to be spaced:
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Below DPC level and in parapet wall:
- if using concrete blocks, use frost-resistant blocks.
- if using bricks, use either engineering or frost-resistant bricks F2/S2 to BS EN 771-1.
Use frost resistant brick F2/S2 category:
- below ground level DPC, sills, coping/cappings, beneath cappings, in projecting details (e.g., plinths, cornice,) in exposed site locations, retaining walls, fence wall, and chimney above the roof line.
Damp proofing of the wall where in contact with the soil including junctions:
- to specialist design.

Vertical movement joints should be provided to the outer leaf of cavity walls (SE design).
Wall ties should be provided at 300mm maximum vertical spacing on either side of the expansion joint and within 225mm horizontal spacing of the movement joint. Compressible filler, such as polyurethane foam, should form the joint and be sealed to prevent water penetration.
Movement joints are to be considered for the internal leaf of cavity walls for spaces with unbroken wall lengths above 6m (SE design).

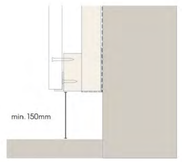


Fig. 1 - Install detail above ground level

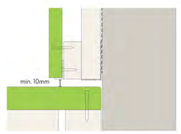
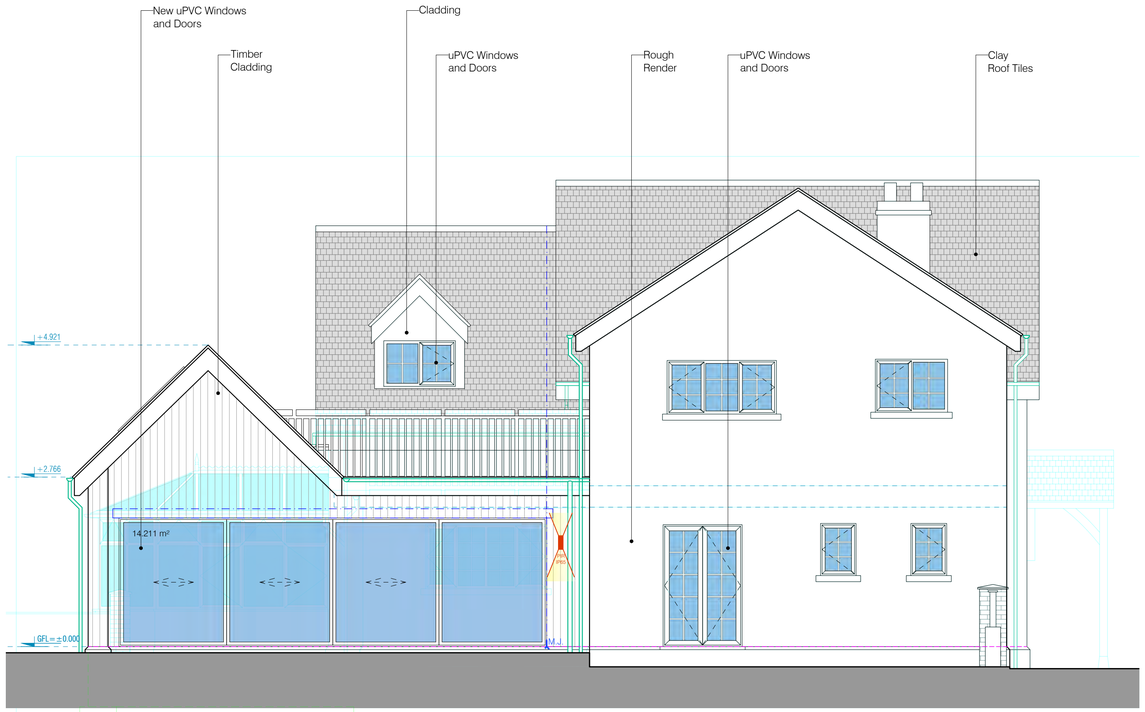


Fig. 2 - Install detail above deck



SIDE ELEVATION AS PROPOSED
SCALE - **1:50**@A1

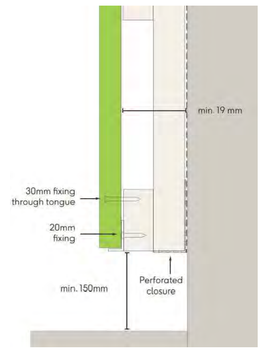
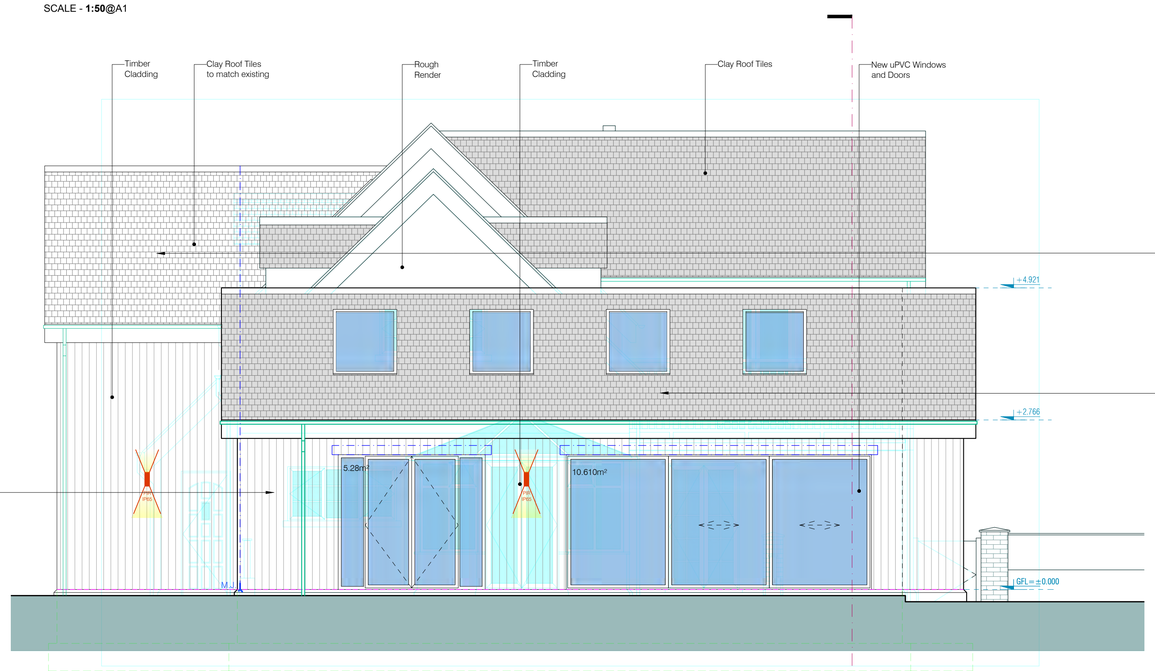


Fig. 3 - Top and bottom of cladding detail



REAR ELEVATION AS PROPOSED
SCALE - **1:50**@A1

NEW PITCHED ROOF

Clay roof tiles (to client's choice) and to suit pitch on battens on breathable felt Tyvek 'Supro' (or Equiv.) protected by protector trays at eaves with over fascia ventilator (or Equiv.) on rafters/ roof trusses (refer to SE design and instructions). If applicable, take site dimensions before ordering trusses.
- Eaves to be filled with insulation and to have a rafter ventilator (to preserve ventilation).
- Insulation between and under rafters:
Actis Hybris 125mm (or Equiv.) rigid insulation boards are to be laid between rafters/ties. Underlay rafters/ties with min. 70mm Foil Faced Rigid PIR Insulation Boards (or Equiv.), Vapour Control Layer with joints taped and 12.5mm Gyproc Fireline plasterboard (Gyproc FRMR fire & moisture resistant type in Bath/Shower/En-suite/Utility/Kitchen) with all joints taped and filled. In high moisture areas apply 2x coats of Gyproc Drywall Sealer to improve moisture resistance of plasterboard. Finish with 3mm skim.
Proposed roof approx. U=0.15W/m²K - ✓complies (required for extensions to an existing building: $U_{max(roof)}$=0.15 W/m²K)
- Eaves and ridge ventilation with insect protector to be provided, maintain min. 50mm air gap throughout for ventilation.
- Provide vertical strapping of rafters in compliance with Approved Document A. (Subject to SE)
- Provide lateral support with noggings between 3 rafters at the gable and provide its strapping to the wall @ max. 2m c/c following Approved Document A. (Subject to SE)
- Wall plates 50x100mm strapped @ max. 2m c/c and min. 1m long straps in compliance with Building Regulations.
- (B3) Close cavity at wallplate level with non-combustible material.

- Pitched Roof side - Wall abutment: Provide a 150mm upstand with lead Code 4 soakers, Code 5 flashing with a breathable membrane to be turned up behind the flashing, and a cavity tray to suit the wall condition with weep vents.

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DESCRIPTION

Single Storey Extension

Building Regulations (Elevations) as Proposed

DATE	SCALE
18/03/26	As noted @ A1
DRAWN	CHECKED
EM	PSK

1183-BR04

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SUMMARY OF NOTES:

BUILDING CONTROL

The Building Control Officer (BCO) is to provide clients, architects, engineers and contractors with advice on building regulations during the design and development of a building project.

BCO is to advise/ inform the architect during Building Regulations if the proposed development is near a public sewer, in a contaminated or radon area, in a flood zone, in an extremely windy area or if any other special design is required, for the proposed development that is characteristic/ necessary in the local area.

The Amendments in Building Regulations England (2023), provide building control authorities with powers to require a person to carry out reasonable tests, for the purposes of ascertaining whether building work complies with BR.

GENERAL NOTES

- The contractors are responsible for checking all information and dimensions on site before placing any orders and/or commencement of construction work.
- All foundations to Structural Engineer's (SE) design and details. Foundation details are subject to site findings.
- All concrete work to SE design and details.
- Structural stability of the building to SE design and details.
- All steelwork to SE design and details. Steelwork sub-contractor to be responsible for taking all necessary site measurements before fabrication to ensure the correct fit of the new works on site. All structural steelwork is to be dry fire-cased to comply with the latest Building Regulations. Where concrete encasement is required the steelwork is not to be painted.
- All structural timbers to SE design and details.
- All load-bearing masonry to SE design and details.
- All structural elements are shown indicatively, so refer to SE details for setting out.
- Refer to the Structural Engineer's design, details, specifications and calculations.
- Contractor to verify all levels and setting out and to determine all dimensions and relationships on site before fabrication commences.
- Contractor to be responsible for the design and supply of all temporary works. (i.e. bracing, propping, shoring, tying, etc.) and the security, stability and safety of the building during work.
- Contractors and tradesmen are responsible for site safety and all *Health and Safety* (H&S) requirements and should be able to provide COSHH certificates where required.

CONSTRUCTION DESIGN & MANAGEMENT CDM REGULATIONS 2015:

'Principle Contractor' deemed to be responsible for H&S on site, undertaking all duties on behalf of the 'Client'.
If applicable, the contractor is to organise the F10 form and submit it before commencing work on site. H&S file to be available at all times with all necessary Risk Assessments in place and for appointed sub-contractors.

QUALITY OF WORK

All materials and workmanship shall be in accordance with the latest BR Approved Documents, the latest BS, and to the satisfaction of the Building Inspector.
- The works must be carried out in accordance with all relevant planning conditions.
- All proprietary products and materials are to be installed, fitted and used in accordance with the manufacturer's details, instructions, recommendations and advice. The designer is to be advised of any conflict identified before work proceeds.
- Contractors for structural elements should always refer to the SE drawings. Architect's drawings show structural elements/plans for illustration only.
- All timber is to be pressure treated with preservative and cut ends and comply with BS 8417:2011+A1:2014.
- Contractor to form openings for all works existing and proposed windows and doors. The contractor is to make good all impacted areas following the completion of the works.
- Top of all cavities to be closed with non-combustible material.
- Use moisture-resistant type plasterboard in high moisture areas e.g. Bath/ Shower/ En-suite/ Utility/ Kitchen/ Laundry) with all joints taped and filled and apply 2x coats of Gyproc Drywall Sealer to improve the resistance of plasterboard.

DEMOLITION WORKS

Locate and secure all services. Disconnect, seal and remove all redundant pipes, cables, conduits, etc. Protect all remaining services throughout the contract. Remove all walls, fixtures and fittings as shown, providing temporary support and bracing as required.
NOTE:Contractor to check all setting out dimensions before work commences. Dimensions if mentioned to be read not scaled.

FOUNDATIONS/ MASS FILL AND STRIP

- Foundations are shown only as indicative. "PSK does not specify foundations – All foundations and sub-structure to be designed by a structural engineer".
- Proposed are Mass Fill and Strip type of foundations (subject to SE design).
- Mass Fill and Strip foundation design must be supported by structural calculations provided by an SE.
- Duty-holders will ensure that design and construction follow BS 8004:2015 Code of Practice for foundations (+A1:2020).
- The depth of all foundations should be determined by specific site conditions.
- Constructed to a depth which will not be affected by nearby drainage or other services.
All as per the Structural Engineer's details, design and specifications. SE to confirm that the structure has been designed to take into consideration ground conditions and surrounding trees.
- Any trees within 20m of the new foundations to be identified and the impact of the depth and type of foundations should be considered before commencing any work. Arboricultural Impact Assessment to be provided where requested by BCO. Designed to suit soil conditions and to conform to NHBC practice, Note 4.2 'Building Near Trees'. All are subject to BCO.

FOUNDATIONS/ MASS FILL AND STRIP

- Foundations are shown only as indicative. "PSK does not specify foundations – All foundations and sub-structure to be designed by a structural engineer".
- Proposed are Mass Fill and Strip type of foundations (subject to SE design).
- Mass Fill and Strip foundation design must be supported by structural calculations provided by an SE.
- Duty-holders will ensure that design and construction follow BS 8004:2015 Code of Practice for foundations (+A1:2020).
- The depth of all foundations should be determined by specific site conditions.
- Constructed to a depth which will not be affected by nearby drainage or other services.
All as per the Structural Engineer's details, design and specifications. SE to confirm that the structure has been designed to take into consideration ground conditions and surrounding trees.
- Any trees within 20m of the new foundations to be identified and the impact of the depth and type of foundations should be considered before commencing any work. Arboricultural Impact Assessment to be provided where requested by BCO. Designed to suit soil conditions and to conform to NHBC practice, Note 4.2 'Building Near Trees'. All are subject to BCO.

FW DRAINS (Foul Water)

- Contractor to check the feasibility of the proposed drainage system at a very early stage, prior to commencement of work.
- Contractors to investigate existing below and above-ground drainage at an early stage, before work commencement to check existing drainage arrangement. Any discrepancy or irregularity is to be reported to the architect and SE.
- Proposed above and below-ground drainage system to be discussed and agreed upon with the client (subject to findings).
- Proposed drainage system to be agreed upon, checked and approved by the Building Control Officer (BCO) on site.
- Contractors to fully design new above and below-ground proposed drainage system and connections with existing drainage system following the latest BR (Part H) along with the SE drawings and local water board conditions.
- Trace existing and remove/ grub-up or seal as required redundant drainage.
- At the commencement of works the invert of the existing I.C.s is to be established and the invert of new I.C.s is to be determined. The contractor is to check and agree on drainage inverts with the BCO before starting drainage work.
- Position of all new sanitaryware appliances which require a water supply and waste connection to be discussed, agreed and confirmed on site between contractors and client before drainage first fix.
- All below-ground pipes to be min 100mm in diameter, underground plastic drains, have access points for rodding and laid to min. 1:40 fall (or 1:80 where serves one or more WC) surrounded with 150mm suitable granular material and with a concrete cover where positioned under the building and hard surfaces or when in shallow depth, by Diagram 7 of Approved Document H.
- Provide concrete lintels over drains where passing through walls, (AD H).
- Drainage installations and alterations shall follow AD H guidance.
- New 450 mm diameter I.C. as shown on plans. Proprietary cover.
- SVP to terminate min. 900mm above any opening within 3m.
- Base of SVP to have rodding access.

RW DRAINS (Rain Water) and SOAKAWAY

- To be designed by the contractor and approved by BCO.
- Either connect to existing (subject to BCO approval) or provide a new soakaway min. 5m from any building - subject to soil type, all designed following BRE Digest 365. Use pre-fab geocellular crates wrapped in geotextile and surrounded by hardcore. Use a silt filter trap before discharging to the soakaway. The contractor is to carry out a soil percolation test to determine design and depth. The best route and location to be identified on-site by contractors and discussed and agreed upon with the client. The proposed layout and design of the soakaway are to be approved by BCO before construction.
- SW ground pipes to be min 100mm dia, underground plastic drains, have access points for rodding and laid to min. 1:100 fall (or 1:150 for 150mm dia) surrounded with 150mm suitable granular material and with a concrete cover over where under the building and hard surfaces or when in shallow depth following Diagram 7 of Approved Document H.
If GFL(Ground Floor Level) is less than 150mm above the finished ground level:
- Provide ACO drain externally along the wall.
- DPC to be 150mm above finished ground level.
- Cavity Tray with weep vents.
- Internal floor DPM to wrap internal leaf block through the outside and to be lapped with DPC/DPM, joints taped.
Rainwater parapet discharge:
Use prefab RW parapet outlet. Install additional warning/overflow pipe outlet.

GROUND FLOOR

Ground Bearing Slab:

75mm sand/cement concrete screed (subject to SE design) with incorporated under-floor heating on 500 Gauge polythene separation membrane on 25mm perimeter insulation and 150mm Celotex XR4000(or Equiv.) insulation boards tightly butt jointed over DPM on 1200 Gauge polythene DPM, tide into DPC and lapped with existing DPM on concrete slab and granular infill (all to SE design).The thickness of gravel infill max. 600mm altogether, otherwise use Beam&Block.
- Allow for floor finishes. New and existing floor levels to align.
- Cavity insulation to extend below DPC level by min. 150mm (optimum 300mm).
- Minimum 225mm cavity clearance below DPC.
- Proposed approx. U=0.13W/m²K ✓ complies
Limiting U-values for new fabric elements (RE: Floors) in existing dwellings $U_{maximum}$=0.18 W/m²K (see Table 4.2, AD L, 2021).

DPCS AND CAVITY TRAYS

- DPC to be min. 150mm above finished ground level and to be well lapped, where meeting horizontal existing/ new DPM. Provide a Cavity tray with weep vents over DPC.
- Thermabate insulated cavity closer (or Equiv.) to all opening reveals.
- Insulated foil-backed plasterboard (moisture resistant in wet rooms) to window/door reveals in external solid walls.
- Cavity trays over where cavity bridged with weep vents (eg. external lintels, stone/concrete/brick window sills, gas/ electric meters, etc.)

TIMBER CLADDING ON NEW SUBSTRATE (CAVITY MASONRY WALLS)
+ specialist design

If the timber cladding boards are installed vertically (overlapping or interlocked), vertical counter battens should be used to ensure there is a ventilated and drained cavity behind the horizontal batten. *(Refer to fig. 1-3)*
A continuous airflow from bottom to top is vital for long-term durability.

External Cladding material is to be treated to ensure an appropriate fire performance of Class B-s3, d2 as a minimum as per AD B, 2019.

New Cavity Wall substrate:
The provision of a breather membrane - is optional, but recommended.

Existing Solid Walls substrate:
If the existing walls are solid, then:

A waterproof coating or a breathable membrane must be fitted.

NEW SUBSTRATE: EXTERNAL CAVITY WALLS

Construction has approx. U=0.18W/m²K = complies
with external walls on extensions: required max. U=0.18 W/m²K, (as per Approved Document L 2021 in England).

Outer leaf : from 100 to 140 mm (SE design) concrete blocks.

150 mm full-fill masonry cavity wall with DriTherm® Cavity Slab 32 (or Equiv.)

Inner leaf: 100mm Thermalite Shield (or Celcon or Equiv.) lightweight blockwork (subject to SE).

Finish externally: HOUSE: - vertical timber cladding (to the client's choice) on battens and counter battens on the breathable membrane on concrete blocks. External Cladding material is to be treated to ensure an appropriate fire performance of Class B-s3, d2 as a minimum as per AD B, 2019.
Maintain min. 25mm ventilated air void between battens and provide insect protectors to all open edges of the cladding.
Finish internally: with 13mm lightweight plaster.
Wall ties to be spaced:
- in general wall area - max. 900mm horizontally and max. 450mm vertically.
- at jamb openings, movement joints, parallel to the top of the gable walls,
Below DPC level and in parapet wall:
- if using concrete blocks, use frost-resistant blocks.
- if using bricks, use either engineering or frost-resistant bricks F2/S2 to BS EN 771-1.
Use frost resistant brick F2/S2 category:
- below ground level DPC, sills, coping/cappings, beneath cappings, in projecting details (e.g., plinths, cornice,) in exposed site locations, retaining walls, fence wall, and chimney above the roof line.
Damp proofing of the wall where in contact with the soil including junctions:
- to specialist design.

Vertical movement joints should be provided to the outer leaf of cavity walls (SE design).
Wall ties should be provided at 300mm maximum vertical spacing on either side of the expansion joint and within 225mm horizontal spacing of the movement joint. Compressible filler, such as polyurethane foam, should form the joint and be sealed to prevent water penetration.
Movement joints are to be considered for the internal leaf of cavity walls for spaces with unbroken wall lengths above 6m (SE design).

INTERFACE WITH EXISTING STRUCTURE, EXPANSION JOINTS

Where new walls abut existing: Allow expansion joints, fully fixed following the manufacturer's instructions.
Mastic seals externally and plaster beads on either side of the joint internally.
- Where the new cavity wall abuts the existing wall; cut the existing wall vertically and insert insulated DPC.
- Movement joint to start from the top of foundations and run the full height of the superstructure masonry wall.
Additional expansion joints:
(1) if DPC is less than 600mm above ground level - movement joint to start from DPC level.
(2) if DPC is more than 600mm above ground level - movement joint to start from the top of the foundations.
(3) if a major change in foundations, between foundations of different designs, at the variation of the height of the building/ walls - movement joint to start from the top of foundations.
(4) if SE designed a movement joint in the foundations then this movement joint is to be continued up through the superstructure.
Material of expansion joint:
- to perform effectively a sealant in a movement joint should be applied against a suitable debonding joint filler/backing rod so that the sealant adheres only to the two opposing masonry faces.
Width of joints:
For masonry (concrete, stone, etc.) = 10mm

FIRE ESCAPE ROUTE

- Maintain existing/create new protected fire escape route at the main stairs/hallway/landing at each floor level to achieve min. 30mins fire resistance throughout, extending to the final exit.
Staircase/Hallway/Landing Walls - to be of masonry or stud walls. - Laid both sides with 12.5mm Gyproc Fireline MR plasterboard being fire and moisture-resistant with all joints taped and filled.
Staircase/Hallway/Landing Ceiling - 12.5mm Gyproc Fireline MR
Staircase/Hallway/Landing Internal Doors - All doors to the escape route are to be fire-proof providing integrity for 30 minutes and they are to the approval of the Building Inspector.
Staircase/Hallway/Landing glazing - Any glazing creating part of the protected route is to be minimally 30 minutes fire resistant.
Staircase soffit - to be cladded with 12.5mm Gyproc Fireline MR plasterboard being fire & moisture-resistant with all joints taped and filled where located within any accessible room and in high moisture areas.

INTERNAL TIMBER STUDS PARTITIONS

- 50x75mm or 50x100mm sw studs @ max. 600mm c/c lined each face with a 12.5mm plasterboard. Use 12.5mm Gyproc Fireline MR plasterboard being fire & moisture-resistant.
- All joints taped and filled. In high moisture areas, apply 2x coats of Gyproc Drywall Sealer to improve moisture resistance. Finish with 3mm skim.
- 75 mm quilt sound insulation Knauf Insulation Acoustic Roll (or Equiv.) between studs.
- Add additional noggings to support radiators, cabinets or other heavy features.

NOTE:

Existing internal wall(s) may be load-bearing and support the ceilings and existing roof structure above. – All internal wall(s) are to be checked by the contractor *and/or* SE before the internal wall(s) are removed.
The contractor is to ensure wall(s) and ceiling(s) are supported before commencing work.

STEELWORK

All steelwork to SE design, details and instructions. Fire protection to steelwork supporting roof and floors to consist of 1 layer 12.5mm Gyproc Fireline MR board, all fixed following manufacturer's instructions, to give min 30 mins. fire resistance.
- fill structural steel beams and columns with Rock Mineral Wool Slabs to increase their fire resistance.
- if feasible, construct flush ceilings.

NEW PITCHED ROOF

Clay roof tiles (to client's choice) and to suit pitch on battens on breathable felt Tyvek 'Supro' (or Equiv.) protected by protector trays at eaves with over fascia ventilator (or Equiv.) on rafters/ roof trusses (refer to SE design and instructions).
- Eaves to be filled with insulation and to have a rafter ventilator (to preserve ventilation).
- Insulation between and under rafters:
Actis Hybris 125mm (or Equiv.) rigid insulation boards are to be laid between rafters/ties. Underlay rafters/ties with min. 70mm Foil Faced Rigid PIR Insulation Boards (or Equiv.), Vapour Control Layer with joints taped and 12.5mm Gyproc Fireline plasterboard (Gyproc FRMR fire & moisture resistant type in Bath/Shower/En-suite/Utility/Kitchen) with all joints taped and filled. In high moisture areas apply 2x coats of Gyproc Drywall Sealer to improve moisture resistance of plasterboard. Finish with 3mm skim.
Proposed roof approx. U=0.15W/m²K - ✓complies (required for extensions to an existing building: $U_{maximum}$=0.15 W/m²K)
- Eaves and ridge ventilation with insect protector to be provided, maintain min. 50mm air gap throughout for ventilation.
- Provide vertical strapping of rafters in compliance with Approved Document A. (Subject to SE)
- Provide lateral support with noggings between 3 rafters at the gable and provide its strapping to the wall @ max. 2m c/c following Approved Document A. (Subject to SE)
- Wall plates 50x100mm strapped @ max. 2m c/c and min. 1m long straps in compliance with Building Regulations.
- (B3) Close cavity at wallplate level with non-combustible material.

- Pitched Roof side - Wall abutment: Provide a 150mm upstand with lead Code 4 soakers, Code 5 flashing with a breathable membrane to be turned up behind the flashing, and a cavity tray to suit the wall condition with weep vents.

NEW ROOFLIGHTS (SKYLIGHTS)

- Sizes are indicated on drawings.
- Client to be consulted for type, operation and further details.
- Double-glazed roof windows fitted and installed following the manufacturer's details and instructions.
- in Conversions/Extensions: required max. U=2.2 W/m²K, as per Table 4.2 of the Approved Document L Volume 1, 2021 (AD L1, a) to comply with BR, 2010.

- Double-up and/or triple-up joists/rafters as trimmers to rooflights (see SE drawings).
- Allow for proprietary flashing etc.
- Line internally with 25mm Celotex insulation, Vapour Control Layer and Gyproc FireLine MR 12.5mm plasterboard with all joints taped and filled.
Gyproc FireLine MR 12.5mmin - is a fire and moisture-resistant plasterboard that improves fire safety while protecting boards from water damage in bath/shower/en-suite/utility/kitchen). In high moisture areas apply 2x coats of Gyproc Drywall Sealer to improve moisture resistance of plasterboard. Finish with 3mm skim.

CHECK BOILER & CENTRAL HEATING

Heating design by a specialist.

- Boiler and water tank to be checked and if necessary replaced. If new provide a Gas-fired wall-mounted boiler with an unvented hot water tank to a fan-assisted balanced flue outlet through the roof/ wall. Condensing overflow from the boiler to be connected to the waste system.
Boiler to have a seasonal efficiency of at least 89.5%. SEDBUK and an ErP (Energy-rated performance) of at least 92%.
- Location of outlets from flues per manufacturer's instructions and Diagram 34 of Approved Document J, 2023.
- All pipework to be insulated within 150mm of fittings. System to have programmer, timer and thermostat.
- System to be installed by Gas Safe registered competent person. Installation certificate to be issued upon completion, a copy to be provided to Building Control. Operating and maintenance instructions are to be provided to the occupier.
- Provide a Carbon monoxide detector to the room with a gas-burning appliance.

PLUMBING

All above-ground waste plumbing is to be constructed and installed under the recommendations in BS EN 12056-2:2000.
The SANITARY PIPEWORK to follow Diagram 3 of the Approved Document H Section 1, 2021 (AD H1), to comply with BR, 2010.
WC - 100mm dia (run for up to max. 6m for single WC)
Sinks, Baths, Showers - 40mm dia (run for up to 3m), 50mm dia (run for up to 4m), 50mm dia with AAV vent (run for up to 10m)
Hand basins - 32mm dia (run for up to1.7m), 40mm dia (run for up to 3m), 50mm dia (run for up to 4m)
Hot water is to be controlled by a thermostatic mixer to prevent scolding. Hot water supply temperature to baths and showers will be limited to 48°C by use of an inline blending valve or other appropriate temperature control device with a maximum temperature stop.
Water supply pipes to be insulated.
Rodding points are to be provided at bends. Waste pipes are to be boxed in. Deep seal traps to all appliances (except WCs).
If an AAV vent is used then provide for sufficient income of air.
All work is to be carried out by a qualified plumber.

AD Part G (Sanitation, hot water safety and water efficiency) provides practical guidance on ways of complying with Requirements G1 to G6 and regulations 7 and 36 of the BR 2010.

Requirement G2 applies only when a dwelling is-- (a) erected, or (b) formed by a material change of use of a building within the meaning of regulation 5(a) or (b). (BR, 2010). Therefore, it applies to the proposed work in the loft of the existing dwelling.

Following the fittings approach as recommended in AD G based on the water efficiency calculator methodology, the water consumption of the fittings provided must not exceed the values below.

Where the fittings approach is used, the notice given under regulation 37 should state "Less than 125 litres/person/day using fittings approach".

WC	- max.6/4 litres dual flush or 4.5 litres single flush
Shower	- max. 10 l/ minute
Bath	- max. 185 litres
Basin taps	- max. 6 l/ minute
Sink taps	- max. 8 l/ minute
Dishwasher	- max. 1.25 l/ place setting
Washing machine	- max. 8.17 l/ kilogram

ELECTRICAL & VENTILATION

All electrical and Mechanical ventilation and air-conditioning systems works are to be carried out by a 'competent person' who is registered with a Competent Person Scheme (CPS)
witnessing he/ they is/are qualified to carry out specific types of work following Building Regulations. They should notify the local authority of the work and issue you a certificate of compliance with the BR either directly or through their scheme operator.

If the client doesn't use an installer registered with a Competent Person Scheme, then they will have a building control person come and inspect the work.

ELECTRICAL

- 100% of installed new light fittings to be energy-efficient LED lights.
-Internal lighting: Any spotlights set into ceilings with floors/roof above to be Graphite type or similar, to give 30 mins. fire protection. Number and locations to be agreed with the client.
- All electrical outlets, telephone/TV/internet points, and light switches are to be located between 450 and 1200 from the finished floor level and the position and further details are to be consulted with the client.
- The external lights to include a day/night sensor in the circuit.

VENTILATION

Mechanical ventilation:
- Bath/ Shower/ En-suite - EnviroVent silent 100 SELV version - IP57 rated (or Equiv.) with an adjustable Humidity Sensor. The level of humidity can be chosen from between 60% and 90% RH.
-Wall/ ceiling mounted fan operated with light fittings with 15mins.
-Overrun period ducted through wall/ roof with flat ducts (or similar) connecting to the proprietary outlet.
-Use sound insulation for ducts.
The fan can be located in zones 1 & 2 of a bathroom but the circuit must be protected by a 30mA RCD. (airflow min. 15 L/sec)
Purge ventilation: provided by openable windows and doors.
Background ventilation: all homes are to meet minimum requirements for background ventilation through either mechanical ventilation with heat recovery (MVHR) or background ventilators (trickle vents) as per AD PART F, to comply with BR, 2010. (Client to be consulted).

SMOKE, HEAT DETECTORS

- Provide a new heat or smoke detector as indicated in the plans. The location on the plans is shown illustratively. To be fitted and positioned following the manufacturer's instructions.
- Existing system to be checked, and if necessary, replaced with new fire detection/alarm system.
- To be Grade D1/D2 as per BS 5839-6:2019+A1:2020
- To be mains operated and interlinked with battery back-up and sited min. 300mm from any light fitting/ wall corners.

PARTY WALL ACT 1996

Any work that affects any neighbouring structure (Party wall, fence etc.) or excavation work close to a boundary may require you to give notice of your intentions as defined by The Party Wall etc. Act 1996. A plain guide to your obligations under the Act is available to view on the Planning Portal.

http://www.planningportal.gov.uk/buildingregulations/-buildingpolicyandlegislation/currentlegislation/partywallact

NON-ENCROACHMENT

No part of the works, temporary or permanent, shall encroach upon any neighbouring property unless otherwise agreed with them. Pay particular attention to scaffoldings, excavations, foundations, roof overhangs, gutters, etc. Ensure that any new excavation or foundation neither undermines nor surcharges any existing structure or service.

FINISHES

- Finishes to follow the Approved Planning Drawings.
- Refer to the Client for all finishes and details of floor, wall, and ceiling finishes, including tiling, skirting, window/ door type and handles, cabinets, fittings, landscape layout, electrical lighting and switches, etc., and their location.

RW GOODS, SOFFITS/ FASCIAS/ RWDPs and GUTTERING

Material and colour to match existing.

NEW SUBSTRATE: EXTERNAL CAVITY WALLS

Construction has approx. U=0.18W/m²K = complies
with external walls on extensions: required max. U=0.18 W/m²K, (as per Approved Document L 2021 in England).

Outer leaf : from 100 to 140 mm (SE design) concrete blocks.

150 mm full-fill masonry cavity wall with DriTherm® Cavity Slab 32 (or Equiv.)

Inner leaf: 100mm Thermalite Shield (or Celcon or Equiv.) lightweight blockwork (subject to SE).

Finish externally: HOUSE: - vertical timber cladding (to the client's choice) on battens and counter battens on the breathable membrane on concrete blocks. External Cladding material is to be treated to ensure an appropriate fire performance of Class B-s3, d2 as a minimum as per AD B, 2019.
Maintain min. 25mm ventilated air void between battens and provide insect protectors to all open edges of the cladding.
Finish internally: with 13mm lightweight plaster.
Wall ties to be spaced:
- in general wall area - max. 900mm horizontally and max. 450mm vertically.
- at jamb openings, movement joints, parallel to the top of the gable walls,
Below DPC level and in parapet wall:
- if using concrete blocks, use frost-resistant blocks.
- if using bricks, use either engineering or frost-resistant bricks F2/S2 to BS EN 771-1.
Use frost resistant brick F2/S2 category:
- below ground level DPC, sills, coping/cappings, beneath cappings, in projecting details (e.g., plinths, cornice,) in exposed site locations, retaining walls, fence wall, and chimney above the roof line.
Damp proofing of the wall where in contact with the soil including junctions:
- to specialist design.

Vertical movement joints should be provided to the outer leaf of cavity walls (SE design).
Wall ties should be provided at 300mm maximum vertical spacing on either side of the expansion joint and within 225mm horizontal spacing of the movement joint. Compressible filler, such as polyurethane foam, should form the joint and be sealed to prevent water penetration.
Movement joints are to be considered for the internal leaf of cavity walls for spaces with unbroken wall lengths above 6m (SE design).

EXTERNAL CAVITY WALL AT EAVES LEVEL

Cavity must be a concealed space in accordance with AD B, Volume 1.

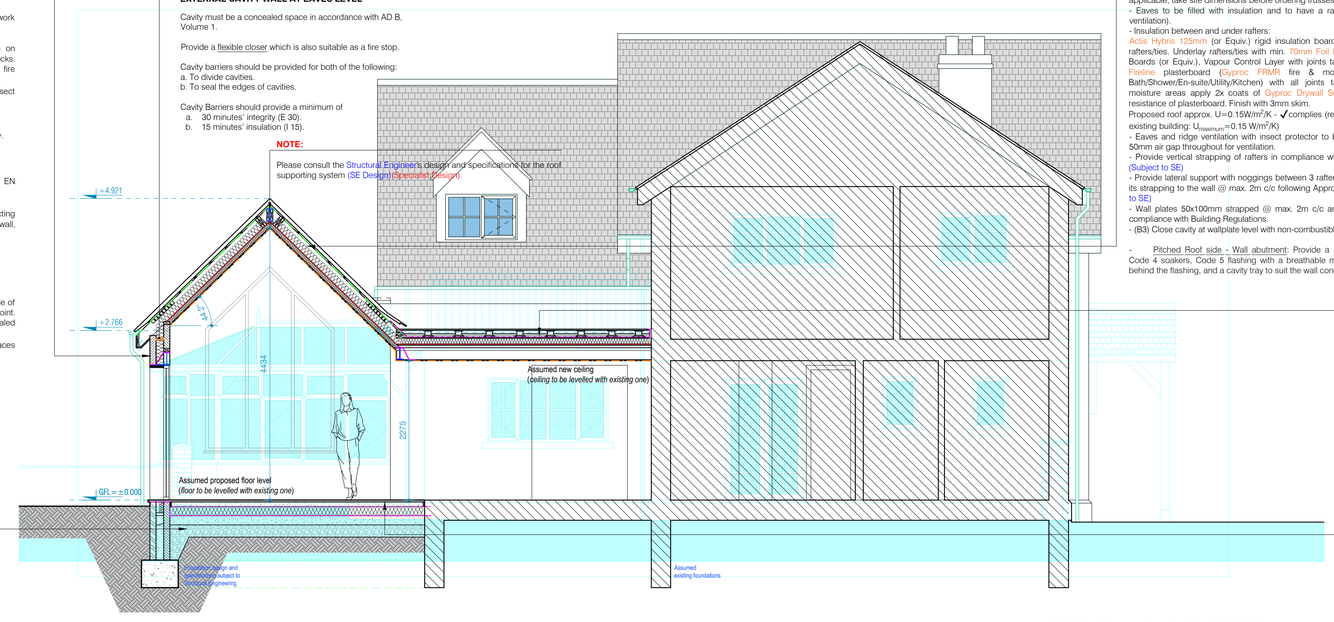
Provide a flexible closer which is also suitable as a fire stop.

Cavity barriers should be provided for both of the following:
a. To divide cavities.
b. To seal the edges of cavities.

Cavity Barriers should provide a minimum of
a. 30 minutes' integrity (E 30).
b. 15 minutes' insulation (I 15).

NOTE:

Please consult the Structural Engineer's design and specifications for the roof supporting system (SE Design) (Specialist Design).



SECTION (A-A) AS PROPOSED
SCALE - **1:50@A1**

NEW PITCHED ROOF

Clay roof tiles (to client's choice) and to suit pitch on battens on breathable felt Tyvek 'Supro' (or Equiv.) protected by protector trays at eaves with over fascia ventilator (or Equiv.) on rafters/ roof trusses (refer to SE design and instructions). If applicable, take site dimensions before ordering trusses.
- Eaves to be filled with insulation and to have a rafter ventilator (to preserve ventilation).
- Insulation between and under rafters:
Actis Hybris 125mm (or Equiv.) rigid insulation boards are to be laid between rafters/ties. Underlay rafters/ties with min. 70mm Foil Faced Rigid PIR Insulation Boards (or Equiv.), Vapour Control Layer with joints taped and 12.5mm Gyproc Fireline plasterboard (Gyproc FRMR fire & moisture resistant type in Bath/Shower/En-suite/Utility/Kitchen) with all joints taped and filled. In high moisture areas apply 2x coats of Gyproc Drywall Sealer to improve moisture resistance of plasterboard. Finish with 3mm skim.
Proposed roof approx. U=0.15W/m²K - ✓complies (required for extensions to an existing building: $U_{maximum}$=0.15 W/m²K)
- Eaves and ridge ventilation with insect protector to be provided, maintain min. 50mm air gap throughout for ventilation.
- Provide vertical strapping of rafters in compliance with Approved Document A. (Subject to SE)
- Provide lateral support with noggings between 3 rafters at the gable and provide its strapping to the wall @ max. 2m c/c following Approved Document A. (Subject to SE)
- Wall plates 50x100mm strapped @ max. 2m c/c and min. 1m long straps in compliance with Building Regulations.
- (B3) Close cavity at wallplate level with non-combustible material.

- Pitched Roof side - Wall abutment: Provide a 150mm upstand with lead Code 4 soakers, Code 5 flashing with a breathable membrane to be turned up behind the flashing, and a cavity tray to suit the wall condition with weep vents.

NEW TERRACE, WARM FLAT ROOF (no ventilation required)

Proposed roof approx. U=0.14W/m²/K - ✓complies (required for extensions to an existing building: (Roofs- $U_{maximum}$=0.15 W/m²/K)
(Refer to table 4.2 of the Approved Document L Volume 1, 2021 (AD L1, a).

Raised and drained paving slabs on adjustable pedestals on:

- ClassicBond 1.2mm EPDM on 18mm SterlingOSB Zero OSB3 boards (BBA-approved product) on firrings on joists, to SE design.
- 150 mm *Celotex XR4000* (or Equiv.) PIR rigid insulation boards between joists, tightly butt jointed with gaps filled with expanding spray foam on self-adhesive Visqueen Fully Bonded Vapour Barrier (or Equiv.) taken up and adhered to walls/edges on 18mm OSB3 boards (or plywood to BS EN 636, Class 3) on firrings on joists (to SE design).

- Underlay joists with 12.5mm Gyproc Fireline MR plasterboard being fire & moisture-resistant with all joints taped and filled. In high moisture areas apply 2x coats of Gyproc Drywall Sealer to improve moisture resistance of plasterboard. Finish with 3mm skim.

Roof covering to ensure that roof construction is classified within the European system as B_{ROOF}(t4), C_{ROOF}(t4), D_{ROOF}(t4), E_{ROOF}(t4) or F_{ROOF}(t4) in accordance with BS EN 13501-5.

- Roof laid to min. Falls of 1/80.
- Flat Roof/side - Wall abutment: min. 150mm insulated (25mm Celotex) upstand.

Code 5 lead flashing with cavity tray to suit wall condition with weep vents.

GROUND FLOOR

Ground Bearing Slab:

75mm sand/cement concrete screed (subject to SE design) with incorporated under-floor heating on 500 Gauge polythene separation membrane on 25mm perimeter insulation and 150mm Celotex XR4000(or Equiv.) insulation boards tightly butt jointed over DPM on 1200 Gauge polythene DPM, tide into DPC and lapped with existing DPM on concrete slab and granular infill (all to SE design).The thickness of gravel infill max. 600mm altogether, otherwise use Beam&Block.
- Allow for floor finishes. New and existing floor levels to align.
- Cavity insulation to extend below DPC level by min. 150mm (optimum 300mm).
- Minimum 225mm cavity clearance below DPC.
- Proposed approx. U=0.13W/m²K ✓ complies
Limiting U-values for new fabric elements (RE: Floors) in existing dwellings $U_{maximum}$=0.18 W/m²K (see Table 4.2, AD L, 2021).

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DRAFT

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0m 1 2 3m
1:50 @ A1

General key:
- Existing structures
- Demolished / As existing underlay
- New structures
- Approx. Boundary line
- Structural engineers notes (SE) notes

Drainage key:
- I.C. - Inspection chamber
- R.G. - Roddable gully
- AAV/ Durgo - Durgo air admittance valve
- SP /SVP - Soil pipe / Soil vent pipe
- Proposed FW (foul water) drains
- RWP+RG - Rain water pipe + Roddable gully
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Heating key:
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Fire strategy key:
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List of Abbreviations:
SE..... Structural Engineer
BR..... Building Regulations
AD..... Approved Document

PRELIMINARY DRAWINGS

Rev.	Date	Revisions
	18/03/26	First Issue

PSK architect
Your Home Extension Specialists
PSK Cheltenham Ltd
Unit C1
Staverton Technology Park
Staverton
Herrick Way
GL51 6TQ
Tel. 01242 304477

DESCRIPTION
Two Storey Extension
Building Regulations (Section) as Proposed

DATE	SCALE
18/03/26	As noted @ A1
DRAWN	CHECKED
EM	PSK

1183-BR05

GROUND FLOOR

Ground Bearing Slab:

75mm sand/cement concrete screed (subject to SE design) on 500 Gauge polythene separation membrane on 25mm perimeter insulation and 150mm Celotex XR4000(or Equiv.) insulation boards tightly butt jointed over DPM on 1200 Gauge polythene DPM, tide into DPC and lapped with existing DPM on concrete slab and granular infill (all to SE design).The thickness of gravel infill max. 600mm altogether, otherwise use Beam&Block.
- Allow for floor finishes. New and existing floor levels to align.
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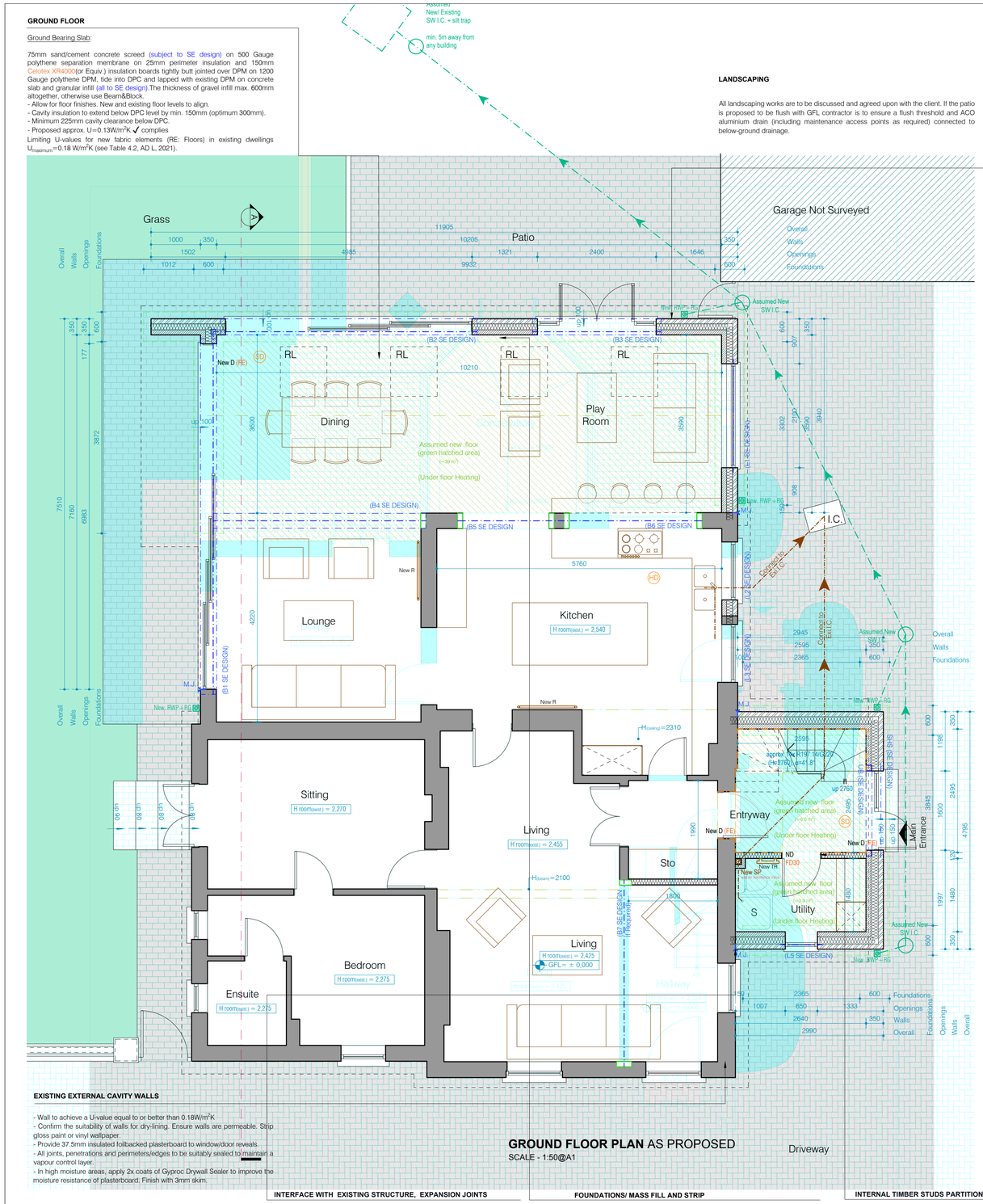

LANDSCAPING

All landscaping works are to be discussed and agreed upon with the client. If the patio is proposed to be flush with GFL contractor is to ensure a flush threshold and ACO aluminium drain (including maintenance access points as required) connected to below-ground drainage.

TIMBER CLADDING ON NEW SUBSTRATE (CAVITY MASONRY WALLS)

- specialist design

If the timber cladding boards are installed vertically (overlapping or interlocked), vertical counter battens should be used to ensure there is a ventilated and drained cavity behind the horizontal batten. (*Refer to fig. 1-3*)
A continuous airflow from bottom to top is vital for long-term durability.

External Cladding material is to be treated to ensure an appropriate fire performance of Class B-s3, d2 as a minimum as per AD B, 2019.

New Cavity Wall substrate:
The provision of a breather membrane - is optional, but recommended.

Existing Solid Walls substrate:
If the existing walls are solid, then:

A waterproof coating or a breathable membrane must be fitted.

STRUCTURAL WORKS

The structural elements shown in blue are only indicative.
Please refer to the structural engineer's details for clarification of all structural works.

The contractor is responsible for setting out the works and checking the position of structural steels and supports before ordering any steels.

Fig. 2 - Install detail above deck

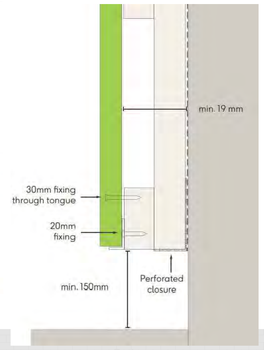

Fig. 3 - Top and bottom of cladding detail

NEW SUBSTRATE: EXTERNAL CAVITY WALLS

Construction has approx. U=0.18W/m²K = complies
with external walls on extensions: required max. U=0.18 W/m²K, (as per Approved Document L 2021 in England).

Outer leaf : from 100 to 140 mm (SE design) concrete blocks.

150 mm full-fill masonry cavity wall with DriTherm® Cavity Slab 32 (or Equiv.)

Inner leaf: 100mm Thermalite Shield (or Celcon or Equiv.) lightweight blockwork (subject to SE).

Finish externally: HOUSE: - vertical timber cladding (to the client's choice) on battens and counter battens on the breathable membrane on concrete blocks. External Cladding material is to be treated to ensure an appropriate fire performance of Class B-s3, d2 as a minimum as per AD B, 2019.
Maintain min. 25mm ventilated air void between battens and provide insect protectors to all open edges of the cladding.
Finish internally: with 13mm lightweight plaster.
Wall ties to be spaced:
- in general wall area - max. 900mm horizontally and max. 450mm vertically.
- at jamb openings, movement joints, parallel to the top of the gable walls,

Below DPC level and in parapet wall:
- if using concrete blocks, use frost-resistant blocks.
- if using bricks, use either engineering or frost-resistant bricks F2/S2 to BS EN 771-1.
Use frost resistant brick F2/S2 category:
- below ground level DPC, sills, coping/cappings, beneath cappings, in projecting details (e.g., plinths, cornice,) in exposed site locations, retaining walls, fence wall, and chimney above the roof line.
Damp proofing of the wall where in contact with the soil including junctions:
- to specialist design.

Vertical movement joints should be provided to the outer leaf of cavity walls (SE design).
Wall ties should be provided at 300mm maximum vertical spacing on either side of the expansion joint and within 225mm horizontal spacing of the movement joint. Compressible filler, such as polyurethane foam, should form the joint and be sealed to prevent water penetration.
Movement joints are to be considered for the internal leaf of cavity walls for spaces with unbroken wall lengths above 6m (SE design).

EXISTING EXTERNAL CAVITY WALLS

- Wall to achieve a U-value equal to or better than 0.18W/m²K
- Confirm the suitability of walls for dry-lining. Ensure walls are permeable. Strip gloss paint or vinyl wallpaper.
- Provide 37.5mm insulated foilbacked plasterboard to window/door reveals.
- All joints, penetrations and perimeters/edges to be suitably sealed to maintain a vapour control layer.
- In high moisture areas, apply 2x coats of Gyproc Drywall Sealer to improve the moisture resistance of plasterboard. Finish with 3mm skim.

GROUND FLOOR PLAN AS PROPOSED
SCALE - 1:50@A1

INTERFACE WITH EXISTING STRUCTURE, EXPANSION JOINTS

Where new walls abut existing: Allow expansion joints, fully fixed following the manufacturer's instructions.
Mastic seals externally and plaster beads on either side of the joint internally.
- Where the new cavity wall abuts the existing stone wall; cut the existing solid vertically and insert insulated DPC.
- Movement joint to start from the top of foundations and run the full height of the superstructure masonry wall.

Additional expansion joints:
(1) if DPC is less than 600mm above ground level - movement joint to start from DPC level.
(2) if DPC is more than 600mm above ground level - movement joint to start from the top of the foundations.
(3) if a major change in foundations, between foundations of different designs, at the variation of the height of the building/ walls - movement joint to start from the top of foundations.
(4) if SE designed a movement joint in the foundations then this movement joint is to be continued up through the superstructure.

Material of expansion joint:
- to perform effectively a sealant in a movement joint should be applied against a suitable debonding joint filler/backing rod so that the sealant adheres only to the two opposing masonry faces.

Width of joints:
- For masonry (concrete, stone, etc.) = 10mm

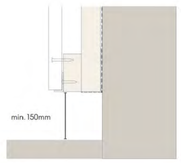

Fig. 1 - Install detail above ground level

FOUNDATIONS/ MASS FILL AND STRIP

- Foundations are shown only as indicative. "PSK does not specify foundations – All foundations and sub-structure to be designed by a structural engineer".
- Proposed are Mass Fill and Strip type of foundations (subject to SE design).
- Mass Fill and Strip foundation design must be supported by structural calculations provided by an SE.
- Duty-holders will ensure that design and construction follow BS 8004:2015 Code of Practice for foundations (+A1:2020).
- The depth of all foundations should be determined by specific site conditions.
- Constructed to a depth which will not be affected by nearby drainage or other services.

All as per the Structural Engineer's details, design and specifications. SE to confirm that the structure has been designed to take into consideration ground conditions and surrounding trees.
- Any trees within 20m of the new foundations to be identified and the impact of the depth and type of foundations should be considered before commencing any work. Arboricultural Impact Assessment to be provided where requested by BCO. Designed to suit soil conditions and to conform to NHBC practice, Note 4.2 'Building Near Trees'. All are subject to BCO.

INTERNAL TIMBER STUDS PARTITIONS

- 50x75mm or 50x100mm sw studs @ max. 600mm c/c lined each face with a 12.5mm plasterboard. Use 12.5mm Gyproc Fireline MR plasterboard being fire & moisture-resistant.
- All joints taped and filled. In high moisture areas, apply 2x coats of Gyproc Drywall Sealer to improve moisture resistance. Finish with 3mm skim.
- 75 mm quilt sound insulation Knauf Insulation Acoustic Roll (or Equiv.) between studs.
- Add additional noggings to support radiators, cabinets or other heavy features.

NOTE:

Existing internal wall(s) may be load-bearing and support the ceilings and existing roof structure above. – All internal wall(s) are to be checked by the contractor *and/or* SE before the internal wall(s) are removed.
The contractor is to ensure wall(s) and ceiling(s) are supported before commencing work.

ELECTRICAL LAYOUT

GROUND FLOOR PLAN AS PROPOSED
SCALE - 1:50@A1

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Building Regulations (General Plans) as Proposed

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1183-BR01