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DRAINAGE.
Lay new drains as required using 100mm diameter Hepworth Supasleeve pipes with flexible collar joints. The pipes are to be laid to a gradient of 1 in 40 and bedded in pea gravel bed and backfill. Where any new or old drain passed below the new extension the drain is to be protected with a 150mm concrete wrapp surround. Where any drain passes through or below a wall the foundation strip is to be taken below the drain invert and concrete lintels inserted in the walls above the drains. The penetration of the wall fabric is to be closed with foam fill and a flexcell board each side. Soil vent pipes are to connect to 100mm diameter slow bends connecting to new drain runs, rainwater pipes are to discharge into vertical back inlet gullies below the grate level.
Access to ther drains to be provided by Hepworth poly chambers with medium duty cover and frames at intervals on the drainage system.
FOUNDATIONS.
Form concrete strip foundations min' 700mm wide x 150mm thick set a minimum of 900mm below external ground level, The foundations are to be sat onto load bearing strata and are to be inspected and passed by the Building Inspector before the pouring of any concrete.
FLOOR SLAB.
Lay 150mm thick concrete slab over 1200 guage Visqueen D.P.M., which is to be joined to D.P.C. of cavity wall. D.P.M. laid over Celotex GA4000 insulation 150mm thick with a 25mm thick upstand to the perimeter of the floor to prevent cold bridging. The insulation is to be over a sand blinding and 150mm consolidated hardcore.
EXTERNAL WALLS.

The external walls are to be cavity walls with an external skin of coursed stone 100mm thick with a cavity 120mm wide and an inner skin of 100mm thick Thermolite Solar Block or similar. The inner and outer skin of the cavity wall ate to be tied together by galvanized metal cavity ties set at 750mm horizontal centres and 450mm vertical centres in a staggered pattern, The cavity is to be insulated with Celotex Insulation CW3000 70mm thick held in place against the inner skin of the cavity wall by a retaining collar on the cavity ties.
All openings in the cavity wall are to be formed with a Catnic Steel insulated Intel over with 150mm end bearing. The cavity around the openings is to be closed with an insulated cavity closer and integral vertical and horizontal damp proof courses.
The internal surface of the wall is to be lined with insulated plasterboard sheets 50mm thick. The the external skin is to be stone to match the existing dwelling.
The cavity walls are to incorporate a damp proof course to each skin of the cavity wall set 150mm above external ground level. the d.p.c. of the inner skin of the cavity wall is to be joinde to the d.p.m. of the floor construction to form a complete damp barrier.
LATERAL RESTRAINT: provided by 30x5mm galvanized mild steel straps at 1200mm c trs fixed to joists for 1200mm and turned down cavity 400mm. Where joists are parrrallel to walls the straps are to fixed accross 3no joists.
INSULATION: The floor is to be insulated with CELOTEX GA4000 150mm thick between the floor joists. The floor is also to have underfloor heating with pipes set on the insulation set above the CELOTEX and fixed in position and finished with a 70mm granite screed.
The floor U-Value will be 0.20W m2
ROOF CONSTRUCTION.

Formed with 200x50mm timber joists @ 400mm ctrs fixed to 220x76mm wall plate and sat into metal joist shoes, also sat onto a 100x50mm wall plate . Joists secured to wall plate with Catnic TC50 clips to each joist end. The joists are to be braced at mid and quarter spans. The roof joists are to be over laid with a Tyvek breather membrane over joists and secured by treated slate battens and covered with PLANUM Roof Tiles finish. Where mono pitch roof abutts to existing wall the roof is to be sealed with code 4 lead flashings and soakers with a cavity tray inserted into existing wall complete with weep holes. The roof eaves is to be fitted with soffit construction with a continuous strip vent inserted into soffit.
The head of the roof slope is to be vented with vent slates at 800mm ctrs. THE ROOF PITCH IS TO BE 10 DEGREES
Where Velux roof windows (PK06 1178 x 942mm) are fitted they are to be supported on doubled joists bolted together each side of the window, trimmer joists are to be formed using doubled joists bolted together with toothed plate connectors between and trimmers are to be formed at the top and bottom of the window frames to carry the roof joists above and below the opening which are to be fitted to the trimmers with metal joist shoes. PLANUM interlocking roof tiles are specifiicall designed for a shallow roof pitch of 10 degrees
LATERAL RESTRAINT TO ROOF

To be provided to the timber roof joists by 30x5mm galv' m s straps fixed to the side of the joists 1200mm and turned down into the cavity of the wall 400mm, these stargs are to be max' 1200mm ctrs. Where the joists run parallel to walls the straps are to be fixed across 3no joists and turned down the cavity 400mm.
The lateral restaraint to the roof joists is provided by 30x5mm galv' m s straps screwed to the side of rge trusses for 1200mm and turned down the cavity.
Where the joists run parallel to walls the straps are to be fixed across 3no joists along the top for 1800mm and turned down the cavity 400mm. The wallplates are to be bedded and strapped down with 30x5mm galv' m s straps set at 1200mm ctrs screwed to the wallplate and the wall.
ROOF INSULATION.

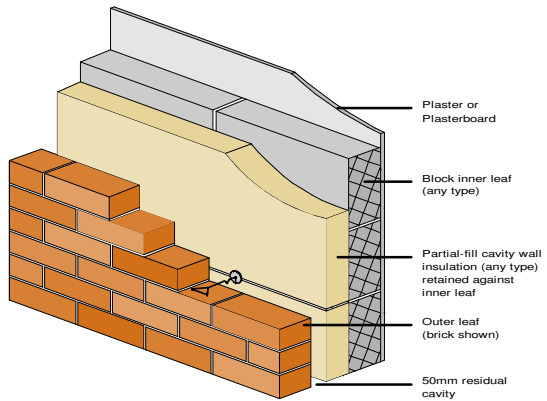
The roof joists is to be insulated as follows:- The insulation of Celotex GA4000 150mm thick is to be fitted between the joists and underlined with CELOTEX GA4000 50mm thick and underlined with 12mm plaster boards with bonded Urathene below the joists and skim finish. Roof U-value = 0.12
VENTILATION

The kitchen is to be ventilated with a 150mm dia Venta Axia extract fan capable of extracting 30litres per sec. The fan is to be ducted to external air.
GLAZING

The glass in the doors and associated side panels is to be toughened Safety Glass double glazed units wuth the BS kite mark etched into each panel. The double glazing is ti be minimum 'C' rated on the WER rating scheme.
All double glazed units are ti have 20mm gap between panes filled with Argon inert gas and to have a U-value of 1.3W m2K
ELECTRICS

ALL the electrical installation is to be designed installed by a competant contractor registered to an approved scheme and the extended system is to be certified on completion and copies deposited with building control and the client. All electrical work is to comply with current approved document of Building Regulations.

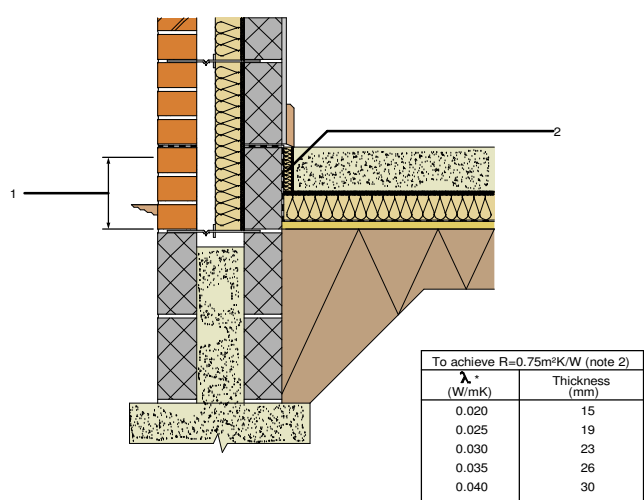
4.00 Introduction



The Robust Details shown here have been developed for a range of partially filled cavity wall constructions. For this form of construction, details are given for the junctions with a range of roof, ground floor and internal floor types. In addition to details shown within drawings etc. Details that apply to all wall types and guidance on air leakage are included in section 8: 'General Arrangements'. There are many types of insulating materials and masonry products and the details have therefore been assessed for any combination of insulation and masonry type which meet the calculated U-values given in section 3.2. U-values otherwise listed on the particular detail. Any type of concrete block or thermal insulation material can be used providing they are suitable for their intended purpose. Insulation thicknesses for main building elements have not generally been provided as these depend on the thermal properties of the materials chosen. Together with the proposed U-value, which may vary by the chosen material of construction, is one listed. For calculation of U-values, applicants should refer to the Approved Document L1 or manufacturer's latest published figures and literature, or other authoritative guidance. All details are shown with a brick outer leaf for simplicity. However, other types of masonry can be used as a substitution, such as stone or weather boarding, without any loss of thermal performance or intended structural life.

Masonry: Cavity Wall Insulation: Partial-Fill robust details

4.14 Ground bearing floor. Insulation below slab.



Notes
1. Continue wall insulation at least 150mm below top of perimeter insulation and support on row of ties.
2. Perimeter insulation with minimum R-value of 0.75m²K/W - see table.
Any screed must have perimeter insulation with a minimum R-value of 0.75m²K/W (not shown).

Masonry: Cavity Wall Insulation: Partial-Fill robust details

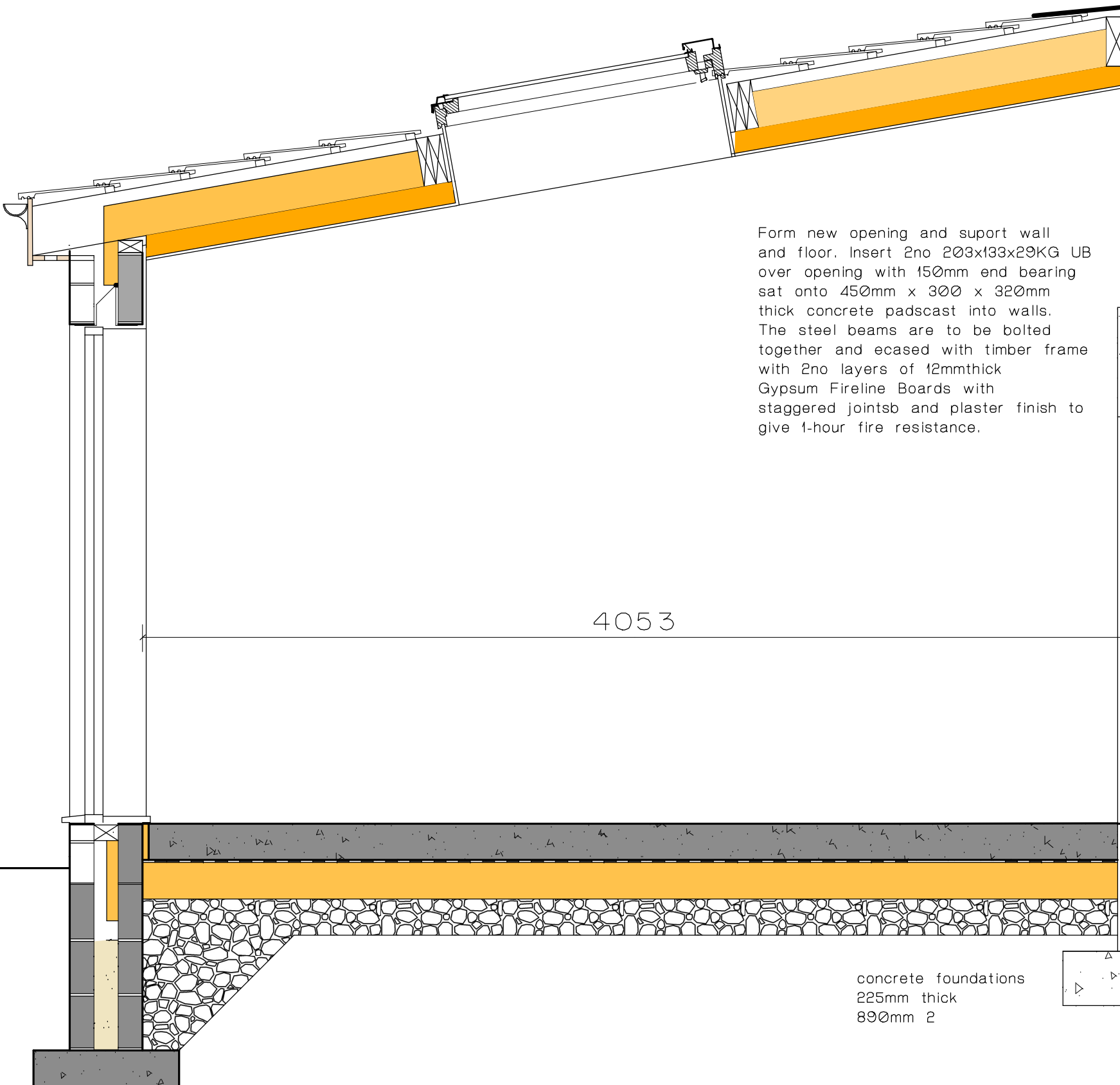
100mm half round gutter
Ventilated soffit board
Insulated lintel over opening with 150mm end bearing

Double Glazed window unit with d.p.c. to opening and thermal cavity closers

Cavity wall insulated with 50mm Celotex CW4000 insulation held against inner skin

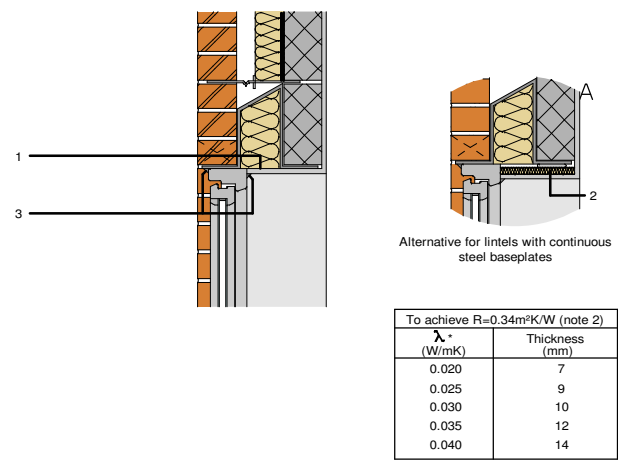
Damp Proof Course tied to 1200 gauge Visqueen D.P.M. of floor construction

Cavity grout fill
600x150mm concrete strip foundations



Section Thro' 1;20

4.10 Windows and doors.Folded Lintel.



Notes
1. No insulation or perforated boardplate with effective conductivity not exceeding 0.05W/m²K (manufacturer's certified data).
2. For heads with continuous solid steel boardplate suitably shaped for head with insulation of minimum R-value of 0.35m²K/W (see table).
3. Sealants to front and back of frame.
Separate cavity trays may be required depending on exposure and lintel specification.

Masonry: Cavity Wall Insulation: Partial-Fill robust details

Timber tilt fillet with code 4 lead flashing over and chased into brick wall
220x16 timber wallplate bolted to wall with resin anchor bolts @ 450mm ctrs with metal joist shoes for roof joists.

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26. Coplow View.
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project

Proposed extension at rear of
26 Coplow View.
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title

Section, Specification & Details

scale 1:20 drawn AF date 18/02/23
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