

BUILDING SPECIFICATION

**PROPOSED NEW DWELLING - LAND AT THE JUNCTION OF BROADWAY / PETERBOROUGH ROAD,
CROWLAND, Lincs**



PREAMBLE

Construction of a detached 3 bed dwelling with attached garage.

LOCAL AUTHORITY BUILDING CONTROL

No work is to commence on site without the benefit of a Full Plans (Building Regulation) approval. All approved works are to be notified to the Building Control Officer on commencement.

CERTIFICATES AND DECLARATIONS

All work carried out under Part L & Part P of the Building Regulations must be done so by suitably qualified persons and suitable "commissioning certificates" should be completed.

SAP RATING

A SAP Rating for the new dwelling shall be calculated and displayed as DETR Circular No 07/2000 on completion of the dwelling. Energy Performance Certificates are to be provided upon completion.

ACCREDITED CONSTRUCTION DETAILS

The design stage SAP calculation relies on the use and implementation of accredited construction details to ensure compliance with the Building Regulations. The accredited details are included at the rear of this document and are scheduled below:

MCI-GF-02 – Ground Floor
MCI-IF-01 – Concrete Intermediate Floor
MCI-IF-02 – Timber Intermediate Floor
MCI-IW-01 – Masonry Separating Wall
MCI-IW-02 – Masonry Separating Wall Head
MCI-IW-05 – Timber Stud Partition Wall
MCI-IW-06 – Timber Stud Partition Wall Head
MCI-RE-06 – Pitched Roof
MCI-WD-01 – Steel Lintels
MCI-WD-03 – Other Lintels
MCI-WD-04 – Cills
MCI-WD-05 – Jambs

It is the Builders / Contractor's responsibility to ensure the building is constructed in accordance with these details and will be required to sign the details for the as built SAP and EPC.

AIR TESTING

Air permeability and pressure testing to be carried out in accordance with Approved Document L1A. The Builder / Contractor is to arrange for air tightness testing to be carried out by 'BSRIA Air tightness'. A Design Air Permeability of 5 is to be achieved.

The Builder / Contractor is to refer to GPG 224 'Improving Air tightness in Dwellings' as a reference point for areas within the new dwellings that require detailed attention to limit the air leakage. These areas include foundation, ground floor, doors and windows openings, intermediate floors, eaves and service penetration. The builder / contractor is responsible for carrying out all the necessary sealant work. Sealants available include membranes, expanded foam sealants, gun-applied sealants, tapes and fillers.

FOUNDATIONS

Morton & Hall consulting engineers ground investigation report recommends:

The sand and gravel soils encountered should give reasonable bearing to strip foundations at a minimum depth of 0.8m below ground level.

Where light brown clay soils are encountered, these should be excavated through so that foundations bear onto the underlying sands and gravels.

Based on the proposed plans, footings of 600mm width by 225mm minimum thickness should be sufficient to maintain safe bearing pressures up to 100kN/m². C25/C30 concrete to BS:8500 should be adopted.

EXTERNAL WALLS BELOW DPC

External cavity walls below DPC to be constructed from load bearing blockwork both internally and externally. Concrete blocks to have a compressive strength not less than 7N/mm². Cavities filled with lean mix concrete within 225mm below lowest DPC. External skin to have a min. of 3 courses of Class B brickwork below finished ground level. All mortar below ground level to be sulphur resistant.

DAMP PROOF COURSES

'Ruberoid Hyload' or similar DPC is to be provided a minimum 150mm above ground level to all external walls. Proprietary insulated cavity closers are to be provided to the perimeter of openings with integral DPC.

Cavity trays with stop ends are to be provided over all lintels. Proprietary stepped cavity trays are to be provided at edge abutments, installed as manufacturer's recommendations.

GROUND FLOOR FLOOR CONSTRUCTION – (0.09 W/m² K U-Value)

The site is to be cleared and weed-killer applied. 75mm reinforced 1:4 cement / sand screed with underfloor heating, over min. 500 gauge polythene separation layer/vapour barrier, turned up at walls with all service entries and joints sealed, over 150mm Kingspan K103 insulation board (insulation is to include a 25mm continuous strip to the perimeter of the screed) with a GWP of less than 5, installed as manufacturer's recommendations on suspended precast concrete block and beam floor, designed and manufactured by specialist manufacturer in accordance with BS8110.

Cross ventilation to be provided by proprietary telescopic vents at a rate of minimum 1500mm² per m run, at a maximum 2m centres and within 450mm of each end of wall. Void under floor to be minimum 225mm.

EXTERNAL WALLS – (0.18 W/m² K U-Value)

100mm Tarmac Hemelite standard 7.3N medium density block (inner leaf).
150mm Cavity with full fill Earthwool Dritherm32 Ultimate insulation.
100mm Tarmac Hemelite standard 7.3N medium density block (Outer leaf).
20mm through colour white rendered finish.

Walls to be finished internally with 12.5mm Gypsum Wallboard on Drilyner Basic or similar and 3mm skim finish.

Wall ties to be stainless steel type. Ties are to be installed at min 750mm horizontal centres and 450mm vertical centres, laid in staggered pattern. Spacing of ties is to be increased to 225mm vertical centres at corners and perimeter of openings etc.

Expansion joints to be installed as per Morton & Hall consulting engineers drawing.

CAVITIES

Close all cavity walls at jambs and cills with Thermabate or similar approved Insulated cavity closers fitted strictly in accordance with manufacturer's instructions. Secure with the proprietary clips provided at maximum 500mm centres. Ensure that closers fit tightly to each other and to the lintel. The closer at the jamb must completely lap the closer at the cill.

LINTELS

All lintels to be Catnic or equivalent galvanised mild steel – refer to drawings. All lintels are to be installed as manufacturer's recommendations with min 150mm end bearing. Heavy duty lintels are to be provided

where recommended by lintel manufacturer.

STEEL BEAMS

Steel beams to be installed as per Morton & Hall consulting engineers drawing. Steel beams to be provided with 1 coat of Highbuild zinc phosphate primer and 1 coat of bituminous paint to beams supporting cavity walls or 1 coat of red oxide or chromate primer to beams in floors of roofs.

All structural steelwork to be half hour fire protected, 1 hour if supporting a floor, within floor construction to be painted with intumescent paint or provided with half hour fire board protection.

INTERNAL PARTITIONS – STUDWORK

Internal partitions to be formed with 100mm treated SW studs generally at max. 600mm centres finished with 1 layer of 12.5mm plasterboard to both sides. Within bathrooms, noggins or 18mm moisture resistant plywood prior to plasterboard to allow for the fixing of grab handles/support aids. Walls to have a min. of 100mm Isowool APR 1200 insulation between studs.

FIRST FLOOR

First Floor to comprise specialist manufactured Attic trusses. Layout and details to be confirmed by specialist manufacturer. Additional support to be provided under bath and first floor partitions as per Trada recommendations in Table 4.2 (Eurocode 5 span tables). Lateral restraint straps to be galvanised mild steel at max 2000mm centres taken across minimum three joists supported with noggins or as attic truss manufacturers recommendations.

Floor finish to be min. 22mm thick moisture resistant grade III tongue & grooved chipboard fixed with glue and screwed. Place 100mm quilt insulation between the joists. Ceilings to be 12.5mm Gyproc 'Wallboard' or similar approved taped and jointed or 3mm skim finish.

All structural timbers are to be FSC or PEFC certified and pressure impregnated.

EXPOSED FIRST FLOOR (BEDROOM 2 OVER PORCH) – (0.22 W/m² K U-Value)

Exposed First Floor to comprise of 2 layers of 12.5mm plasterboard under 150mm beam and block with 80mm of Kingspan Kooltherm K2 roofboard over to meet underside of attic truss. 22mm thick moisture resistant grade III tongue & grooved chipboard fixed with glue and screwed over attic truss to form first floor.

EXPOSED FIRST FLOOR (BEDROOM 1 OVER GARAGE) – (0.26 W/m² K U-Value)

Exposed First Floor to comprise of 2 layers of 12.5mm plasterboard to garage ceiling, a 200mm ceiling void between attic truss joists and garage plasterboard ceiling. Place 150mm mineral wool batt insulation between attic truss joists with 22mm thick moisture resistant grade III tongue & grooved chipboard fixed with glue and screwed over attic truss to form first floor.

ROOF OVER FIRST FLOOR – (0.10 W/m² K U-Value)

Ceiling to be insulated between attic trusses with 100mm Rockwool Loftroll insulation with 2 layers of 150mm Rockwool Loftroll insulation laid at right angles over (400mm Overall).

Loft hatch not required.

SLOPING ROOF – (0.16 W/m² K U-Value)

Where the ceilings are sloping, insulate with 100mm Celotex GA4000 cut between the attic rafters with a minimum air gap of 50mm over. Ceilings are to be lined with 62.5mm Celotex PL3050 insulated plasterboard. Insulation is to be unbroken with wall insulation to prevent cold bridging (As robust details). Ensure a 50mm min. clear ventilation gap at the eaves. Insulation and membrane to be installed as recommended by manufacturer.

5x30mm lateral restraint straps to be provided at verge of gable walls at max. 2m centres. Straps to be fixed to blockwork and screwed to 3 trusses with noggin under.

5x30mm fixing down straps (1.0m long) to be provided to the external walls at max. 2m centres. Straps to be fixed to blockwork and screwed to wall plate.

ROOF COVERING:

Sandtoft Calderdale Grey Roof tiles on treated softwood battens with all overlaps and fixings as recommended by manufacturer over Kingspan Nilvent breathable underlay lapped into gutter laid horizontally across rafters as manufacturer's recommendations. At exposed locations felt to be to BS747 Class 5U. Additional high strength underlay Hyload 150E or other equal and approved, minimum 500mm wide, is to be provided at eaves. Code 5 Lead flashings to abutments and flashings generally.

STRUCTURAL TIMBER TREATMENT

All new structural timber to be C24 Grade to BS4978: 1988 unless otherwise specified and pressure impregnated with preservative in accordance with BS4027:1974. All exposed timbers to be treated with preservative complying with BS1282:1975.

FLASHINGS

All lead flashings to comply with BSEN 12588: 1999 and are to be installed and detailed as in the Pocket Guide for Installers of Rolled Lead Sheet published by the Lead Sheet Association.

Provide Code 4 stepped lead flashing where roof meets brickwork. All flashings are to be folded into mortar joints where applicable and all necessary wedges are to be included.

RAINWATER

150mm half round Black or Grey plastic gutters on rise and fall brackets and 110mm diameter downpipes discharging to drains with direct connections. Downpipe locations as shown on drawings.

Black or Grey PVC-U fascia and soffit boards.

WINDOWS & GLAZED DOORS

Windows and doors with over 50% glazed area to have a U-value of min. 1.2 W/m²K. Windows to be dual glazed casement type. The bottom of openings to be maximum 1100mm above finished floor level. Safety glass to BS6206 is to be used in all windows where the cill is within 800mm of finished floor level and to all sidelight's adjacent doors.

Trickle vents, evenly between windows and doors to achieve minimum total area of 5000mm² in habitable rooms with 2500mm² equivalent area in each wet room. The total background ventilation area for the dwelling is to be 92500mm² in accordance with Table 5.2A of Approved Document F.

Habitable rooms to have fire escape windows with a locking system capable of emergency release. Gaskets to be black. Windows to have locks with a high security shoot bolt system, fitted as suppliers' recommendations. Handles, which are to be metal and no greater than 1200mm above finished floor level, are to be locked with push button operation with key operation on ground floor only.

All windows are to have silicone sealant pointing internally and externally.

All windows to be designed to PAS24:2012.

Velux Rooflights to be manually controlled, centre pivoted and double glazed with toughened outer pane and laminated inner pane. 2 No. rafters each side and trimmers or as attic truss supplier recommends.

Install with proprietary flashings, collars, gutter and vapour barrier. Proprietary insulation to gap between

frame and battens/rafters Insulate reveals with at least 20mm Celotex TB4000 Proprietary lining to reveal or 15mm British Gypsum plasterboard and skim.

DOORS

Doors are to have laminated glass (minimum 6.4mm thick) externally and toughened glass internally.

External doorsets to be 1000mm wide with a minimum clear opening of 800mm. All external doors to be supplied with weather strip to suit level access threshold max 15mm high.

All internal doors to be 4 or 6 pressed panel smooth painted finish. Internal doorways to provide 750mm minimum clear opening.

Any glazing up to a height of 800mm above finished floor level or 1500mm in the case of a door or side panel is to be of laminated or toughened glass or other approved impact resistant material. Glazing below a height of 1500mm in doors and windows adjacent to doors to be Class B in accordance with BS 6206 if over 900mm wide or Class C if less than 900mm wide.

All external doors are to have silicone sealant pointing internally and externally.

All external doors to be designed to PAS24:2012.

SANITARYWARE

WC's: To be washdown glazed vitreous china with glazed vitreous china 4/6 dual flush cisterns. Plastic seats with wrap over type covers are to be provided with metal hinge fixings.

WHB: Shall be 550mm x 400mm (minimum dimensions) glazed vitreous china with pedestal. Securely fixed to wall and floor, mastic joint basin. WHB to have taps with flow restrictors to ensure water efficiency flow rate is not exceeded.

Bath: To be 1700 long x 800mm wide, Acrylic (min 5mm thick) with bath panel to the sides, integral overflow, plug and mixer tap. Max overflow capacity defined under water efficiency and must not be exceeded.

Shower: to be 800mm x 800mm + 1400 X 800 shower trays. Thermostatic showers must not exceed the max flow rate defined under water efficiency.

The hot water temperature to the bath outlet is to be limited to a maximum of 48°C by the use of an in-line blending valve to BS EN 1111:1999 or BS EN 1287:1999. The valve should not be easily altered by the building user and the length of the pipes between the valve and outlets should be kept to a minimum.

WASTE PLUMBING

All waste plumbing is to be carried out in accordance with BS5572. Stub stacks (indicated SS) are to be 100mm diameter terminating with an air admittance valve. Air admittance valves must be installed on a soil pipe at least 200mm above the highest water entry point on the system.

WC waste to be 100mm diameter, WHB to be 36mm diameter, to be fitted with Anti syphon trap where 1.7m away from SVP or stub stack. Bath, sink and shower waste to be 40mm. Anti-vac traps to bath. All wastes to connect separately to stack and to be provided with 75mm deep traps. Access to soil stacks to be via MDF access panel in boxing with access fitting in stack located above flood level line. Soil Stack boxings are to be filled with glass fibre quilt insulation.

DRAINAGE

To BS8301, lay 110mm dia. PVCU foul drain runs @ 1:60 fall & 110mm dia. PVCU storm drain runs @ 1:80 fall – refer to drainage layout drawing for designed gradients. All PVCU pipes and fittings to comply with

BS4660 to be laid on 100mm pea gravel bed. Back fill drain excavation with pea gravel to a level of 100mm above the pipe. Where pipes pass through external walls provide 100mm x 65 mm pre-stressed concrete lintels to support walls above. Provide minimum 50mm clearance all-round the pipe and mask the open rigid sheet material. Provide where indicated on plans 450mm nominal diameter PVCU inspection chamber complete with blanking pieces to unused connections as required. Bed inspection chamber on 100mm pea gravel and surround with grade C20P concrete, 100mm thickness. Cover to comprise 450mm internal diameter BS497 grade 'B' cast iron cover and frame bedded in cement mortar. Drain runs serving gullies to have a minimum fall of 1:40.

Inspection chambers with less than 1m invert to have an internal dimension of 450mm. All light weight manhole covers are to be screwed down.

Where new pipework is subject to vehicular loading and pass under the floor, the pipes are to be encased with C30 concrete with 1 layer of A142 mesh top and bottom. Wrap pipe joints using 100mm thick quilt insulation to create movement joints.

SOAKAWAYS

Surface water to be discharged to new crate soakaways. – Refer to drainage layout for size and position.

Soakaway crates to be wrapped in geotextile membrane with 150mm compacted sand / gravel base, side and top fill. Soakaway crates to be min. 5m from building 2.5m from boundary.

FIRE DETECTION/ FIRE PROTECTION

Provide Carbon Monoxide Detectors and Smoke Detectors in all positions as shown on the drawings. Smoke detectors are to be mains operated with a battery backup and are to be designed to conform BS EN 14606. The smoke detector electrical circuit is to be fused independently.

Where more than one alarm is to be provided all alarms are to be interconnected. Smoke detectors are to be fixed to the ceiling at least 300mm from any wall or light fitting. All smoke detectors are to be positioned where they are easily accessible for safe testing, cleaning and maintenance. The manufacturer's instructions containing the operation, testing and maintenance of the unit is to be passed to the occupier of the dwelling.

Soil pipe boxing to be encased in 2 layers of 12.5mm plasterboard.

ELECTRICAL

All electrical sockets and switches are to be positioned (centre line) between 450mm and 1200mm above Finished Floor Level and not within 300mm from any internal corner. In kitchens, sockets are to be a minimum of 750mm from the corner of rooms when over worktops. Sockets on the ground floor are to be RCD protected. The consumer unit is to be located under the ground floor stairs at a height of 1200mm.

100% of all light fittings to be installed within buildings are to be dedicated low energy LED light.

The external lighting is to be low energy LED fittings with internally operated isolated switches.

A 12V operated door bell is also to be provided.

All electrical installations are to be tested and left in full working order at handover. NICEIC electrical installation completion certificates are to be provided.

EXTRACT FANS

Extractor fans are to be installed in accordance with the following: -

15 litres/sec to bathroom (minimum)

60 litres/sec to kitchen (30 litres/sec if above hob) (minimum)

Fans are to be ducted through external wall; if this is not possible it is to be ducted through the roof space and is to be fitted with insulation, condensation traps and a condensate overflow pipe. Duct runs to be as short as possible to avoid condensation problems. Where duct runs are greater than 1.5m the extractor capacity is to be increased to 30 litres/sec. All fans to have a 15 minute over run where there is no window and internal doors are to be undercut by 10mm.

HEATING/HWS/CWS

The heating system is to incorporate underfloor heating and be designed to achieve the following room temperatures when the outside temperature is -1 C:- Bathrooms 22°C Living and dining rooms 21°C, all other rooms 18°C.

Ideal vogue C40 Gen 2 Gas condensing Combi boiler as designed and detailed by specialist manufacturer/installer.

- Time, temperature and zone controls - Primary pipework to be insulated - Water heating timed separately - Pump to be located in heated space - Interlock and weather compensator to be fitted. - MCS certification is required - Radiators throughout - Time and temperature zone controls to be provided.

Boiler to incorporate temperature control device limiting water temperature to 60 degrees.

On completion of the heating/HWS/CWS installation the installers shall commission the system and certify the work to the LA building control officer. The installer shall also provide the building occupier a full set of operation manuals.

Hot water pipework is to be insulated as the recommendations of BS 5422: 2001. The pipework and ductwork is to be unobtrusive and installed in an economic layout. All valves, stopcocks etc. are to be clearly labelled to show their function. All sanitary appliances and sinks are to have isolating valves (ballofix or similar).

The hot and cold-water system is to be designed to avoid the risk of microbial contamination in line with best practice guidance.

STAIRS

New timber treated softwood staircase to be 905mm overall width with 14 No. risers at 200.28mm and 13 No. treads at 220mm. (Floor to floor heights are to be checked on site prior to the ordering and manufacturer of the staircase). The minimum headroom is to be 2.0m above pitch line. Handrail to be hardwood, height to be between 905mm and 1000mm measured to the top of the handrail from the pitch line or floor, landing balustrade height 1100mm. Provide handrail both sides of staircase and around the winders with the greatest going. The handrail should be continuous from the top to the bottom of the stair. Stair to have a maximum pitch of 42 degrees.

Balustrade construction should be such that a 100mm sphere cannot pass through any openings in the guarding and that children will not readily be able to climb the guarding.

KITCHEN

Layout shown indicatively, kitchen manufacturer to provide detailed layout drawing.

Base units are to be 600mm deep and wall units 300mm deep. Stainless steel sink is to be installed, cut into worktop with edges sealed. Chrome mixer tap required and waste kit. Sink drainer (if applicable) to be supported underneath worktop with a timber batten.

The cooker space is to have an electric cooker point. The washing machine space is to have hot and cold-

water services with suitable connectors/stop valves and necessary waste outlet. Ends of worktops to be protected with aluminium strips. The underside of the wall units are to be 450mm above worktops. The contractor is to carefully drill 50mm Ø hole at the top of the base unit for washer waste and hot/cold feeds.

DECORATION

All decoration is to be applied as manufacturer's instructions including all preparation, knotting solution, primers, undercoats and top coats.

Internal Joinery - Softwood and MDF to be prepared and decorated with an oil-based gloss paint.

Walls to be decorated with matt emulsion. Colours to be chosen by the Client.

Ceilings to be decorated with white matt emulsion.

GENERAL FITTINGS

9 x 100mm moulded softwood skirting boards

19x50mm moulded softwood architraves

25mm thick mdf window boards with 50mm returned all exposed edges to have bullnosed moulding.

HARD SURFACES

Permeable block paving to entrance footpath (1575mm wide) and permeable Tarmac to primary drive. Slabs to rear garden – Refer to drawings.

SERVICES

All external services and builders work in connection therewith are to be carried out fully in accordance with the relevant Statutory Authorities and Undertakings' requirements.

FURNITURE

Sufficient space has been allowed for three wheeled bins (240 litres) supplied by LA to meet all recycling needs. Access to bins is fully accessible for disabled people i.e. low/level threshold, max. 15mm with a 900mm min. wide footpath.

ACCESS FOR DISABLED PERSONS

All access and facilities for disabled persons to comply with the Building Regulations Approved Document M 2015 edition.

Entrance footpath to be 900mm minimum width and is to be constructed with a hard-finished surface laid at finished floor level height adjacent the front entrances and ramped to the parking spaces at a gradient not exceeding 1:40 fall. All ramped approaches to external doors are to include a 1.2 x 1.2m landing area.

WATER EFFICIENCY

WC's to be dual flush 4 / 6 Litre flush volume (4.67 litres).

https://www.screwfix.com/p/fluidmaster-universal-dual-flush-siphon-179mm/3224p#product_additional_details_container

Bathroom basin mixer taps to not exceed 4 litres/minute flow rate.

https://www.screwfix.com/p/watersmith-heritage-clyde-basin-mono-mixer-tap-with-clicker-waste/5618p#product_additional_details_container

Bath mixer tap to not exceed 15 litres/ minute flow rate.

https://www.screwfix.com/p/watersmith-heritage-clyde-bath-mixer-tap/7974p#product_additional_details_container

Bath capacity to overflow to not exceed 207 litres.

Thermostatic showers to not exceed 5 litres/minute flow rate.

Kitchen / Utility mixer taps to not exceed 7 litres/minute flow rate.

9/13/2020

The Water Calculator

The Water Calculator



<http://www.thewatercalculator.org.uk/>

Congratulations

Crowland

You are within your target maximum consumption of potable water (125 litres per person per day).

Total water consumption from your calculation

107.86

litres per person per day

Total including external water use
(17 K Compliance [Building Regulations Part G])

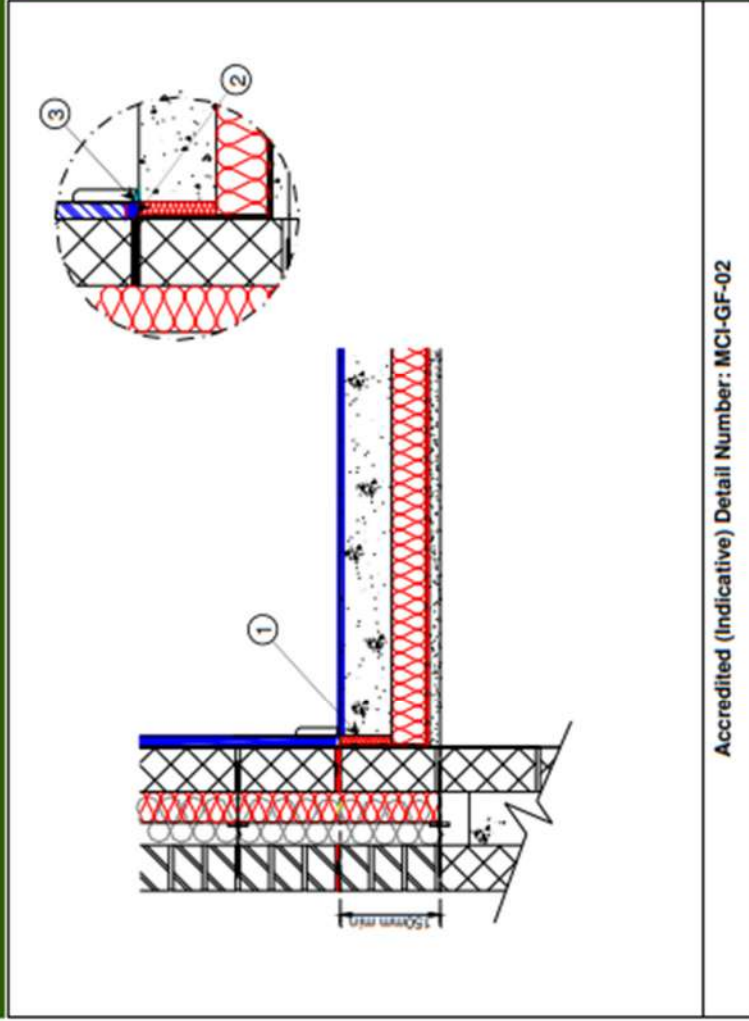
112.86

litres per person per day

This calculator is intended to inform design choices by demonstrating the likely impact of specification changes on total water consumption. Results can only be used to demonstrate compliance with Building Regulations when the calculations have been verified by a Building Control Officer.

Calculation summary

Installation type	Unit of measure	Capacity / flow rate	Use factor	Fixed use	Litres / person / day
WCs (single flush)	Flush volume (litres)		4.42	0	20.64
WCs (dual flush)	Average effective flushing volume (litres)	4.67			
Taps (excl. kitchen/utility room)	Flow rate (litres / minute)	10.5	1.58	1.58	18.17
Bath (shower also present)	Capacity to overflow (litres)	207	0.11	0	22.77
Shower (bath also present)	Flow rate (litres / minute)	5	4.37	0	21.85
Kitchen/utility room sink taps	Flow rate (litres / minute)	7	0.44	10.36	13.44
Washing machine	Litres / kg dry load	8.17	2.1	0	17.16
Dishwasher	Litres / place setting	1.25	3.6	0	4.5
Waste disposal unit	Litres / use	☐	3.08	0	
Water softener	Litres / person / day	☐	1	0	
Contribution from Grey Water					undefined
Contribution from Rain Water					undefined
Normalisation factor					$\Sigma \times 0.91$



GENERAL NOTES

- Ensure that cavities are kept clean of mortar snots or other debris during construction.
- The wall insulation installed below the wall DPC must be fit for purpose with regards to water absorption.

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

CHECKLIST (TICK)

- ☐
- ☐
- ☐
- ☐

THERMAL PERFORMANCE OF JUNCTION

- Install perimeter insulation with a min. R-value of 0.75 m²K/W. ①
- Ensure wall insulation is installed at least 150mm below the top of floor insulation.
- Floor insulation must tightly abut the blockwork wall.
- Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall.
- Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

CHECKLIST (TICK)

- ☐
- ☐

AIR BARRIER CONTINUITY

- Seal between the wall and floor air barrier with a flexible sealant ② **OR** seal the gap between the skirting board and the floor using a flexible sealant. ③
- Seal all penetrations through air barrier using a flexible sealant.
- Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

OPTION (TICK)

- ☐
- ☐
- ☐

AIR BARRIER OPTIONS

- Plaster coat, or
- Blockwork inner leaf/parging coat applied to internal face of inner leaf with plasterboard over, or
- Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners.

SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:

MCI-GF-02 Ground Bearing Floor/ Raft Foundation/ In-situ Suspended Ground Floor Slab/ Pre-cast Suspended Ground Floor/Concrete and Screed. Insulation Below Slab.

Masonry Cavity Wall Insulation

Accredited (Indicative) Detail Number: MCI-IF-01

GENERAL NOTES

- Ensure that cavities are kept clean of mortar snots or other debris during construction.
- This detail is diagrammatic only. Where the floor is a separating floor, this would normally have an acoustic ceiling and further treatments would be provided. See requirements of Approved Document E.

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

MCI-IF-01 Concrete Intermediate Floor.

CHECKLIST (TICK)

☐ Continue wall insulation across the floor abutment zone.

☐ Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall.

THERMAL PERFORMANCE OF JUNCTION

Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

CHECKLIST (TICK)

☐ Ensure a continuous mortar bed between floor slab and top of blockwork wall.

☐ Seal between the wall air barrier and the top and underside of the floor slab. ① (The dotted blue line depicts the continuity of the air barrier through the floor zone)

☐ Seal the gap between the skirting board and floor using a flexible sealant.

☐ Seal all penetrations through air barrier using a flexible sealant.

AIR BARRIER CONTINUITY

Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

OPTION (TICK)

☐ Plaster coat, or

☐ Blockwork inner leaf/parging coat applied to internal face of inner leaf with plasterboard over

☐ Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners.

AIR BARRIER OPTIONS

SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:

CHECKLIST
(TICK)

- | | |
|--------------------------|--|
| ☐ | Continue cavity wall insulation across the floor abutment zone. |
| ☐ | Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall. |
| ☐ | Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005. |

AIR BARRIER CONTINUITY

CHECKLIST
(TICK)

Mortar joints around built-in joists should be recessed or struck and carefully pointed with flexible sealant. Alternatively, joists may be fitted with proprietary shoes as they are installed. The shoe should be sealed to the face of the blockwork with a flexible sealant. ① (The dotted blue line depicts the continuity of the air barrier through the floor zone)

- | | |
|--------------------------|---|
| ☐ | Seal between the wall air barrier and blockwork above and below the floor assembly. (2) |
| ☐ | Seal all penetrations through air barrier using a flexible sealant. |

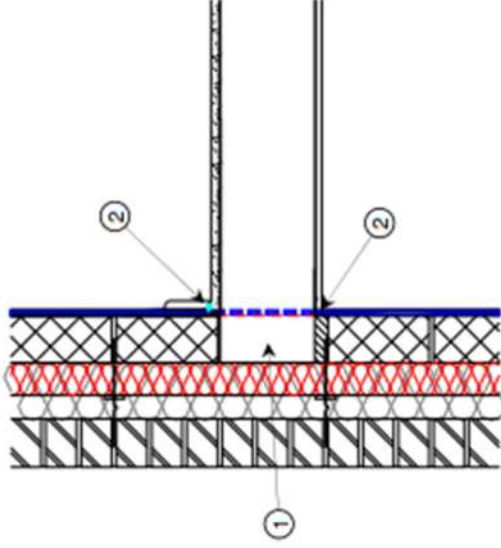
Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

AIR BARRIER OPTIONS

OPTION
(TICK)

- | | |
|--------------------------|--|
| ☐ | Plaster coat, or |
| ☐ | Blockwork inner leaf/parging coat applied to internal face of inner leaf with plasterboard over, or |
| ☐ | Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners. |

SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:



Accredited (Indicative) Detail Number: MCI-IF-02

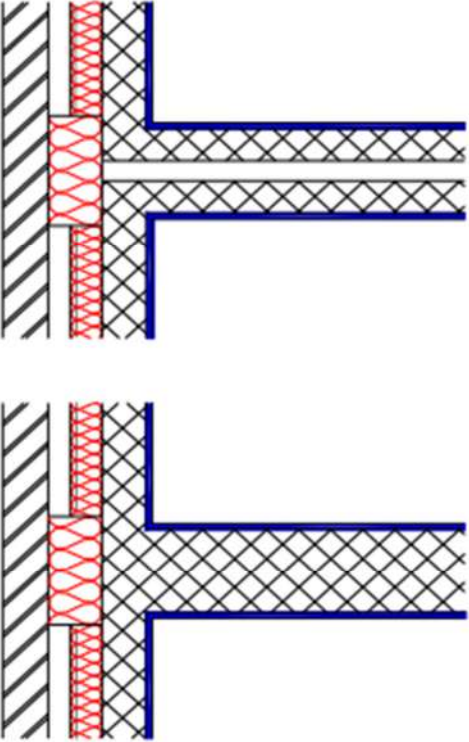
GENERAL NOTES

- Ensure that cavities are kept clean of mortar spouts or other debris during construction.
- Suspended timber floors may be laid in joist hangers rather than built-in.
- For timber engineered joists, proprietary filler pieces must be fitted on both sides of the web between the top and bottom flanges. (See manufactures details.)

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

MCI-IF-02 Timber Intermediate Floor.

Masonry Cavity Wall Insulation



Accredited (Indicative) Detail Number: MCI-IW-01

GENERAL NOTES

- Ensure that cavities are kept clean of mortar snots or other debris during construction.
- Refer to Approved Document B for fire safety requirements and to Approved Document E for sound insulation requirements.
- This detail to be read in conjunction with detail No: MCI-IW-02.

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

CHECKLIST
(TICK)

THERMAL PERFORMANCE OF JUNCTION

Continue cavity wall insulation across the abutment zone.

Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall.

Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

CHECKLIST
(TICK)

AIR BARRIER CONTINUITY

Seal all penetrations through air barrier using a flexible sealant.

Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

OPTION
(TICK)

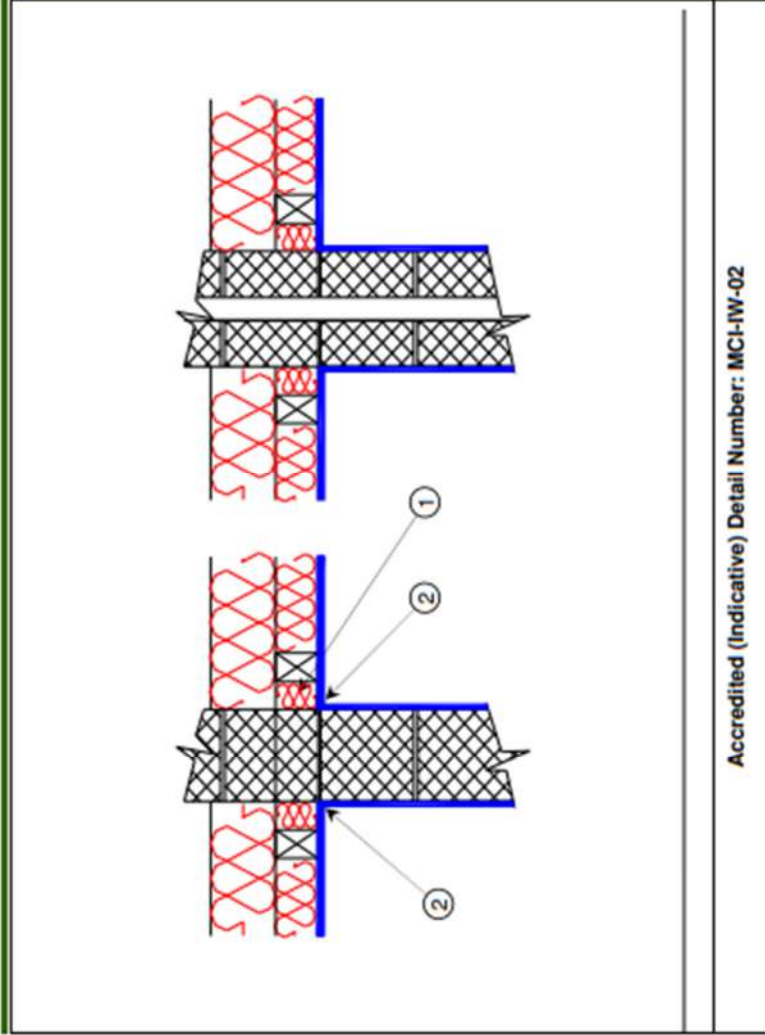
AIR BARRIER OPTIONS

Plaster coat, or

Blockwork inner leaf/parging coat applied to internal face of inner leaf with plasterboard over

Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners.

SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:



GENERAL NOTES

- Refer to Approved Document B for fire safety requirements and to Approved Document E for sound insulation requirements.
- This detail to be read in conjunction with detail No: MCI-IW-01.

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

THERMAL PERFORMANCE OF JUNCTION

- Pack compressible insulation between last truss/ joist and separating wall. ①
- Ensure that the full depth of insulation between and over the joists extends to the inner face of the wall.
- Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

CHECKLIST
(TICK)

☐ ☐

AIR BARRIER CONTINUITY

- Fix ceiling first and seal all gaps between the ceiling and masonry wall with either adhesive or flexible sealant. ②
- Seal all penetrations through air barrier using a flexible sealant.
- Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

CHECKLIST
(TICK)

☐ ☐

AIR BARRIER OPTIONS

- Plaster coat, or
- Blockwork inner leaf/parging coat applied to internal face of inner leaf with plasterboard over
- Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners.

OPTION
(TICK)

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SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:

Accredited (Indicative) Detail Number: MCI-IW-05

GENERAL NOTES

- Ensure that cavities are kept clean of mortar snots or other debris during construction.
- This detail to be read in conjunction with detail No: MCI-IW-06.

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

CHECKLIST
(TICK)

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Thermal Performance of Junction

Continue cavity wall insulation across the abutment zone.

Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall.

Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

CHECKLIST
(TICK)

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Air Barrier Continuity

Install external air barrier prior to the partition lining and seal all gaps between the air barrier and timber stud with flexible sealant. ① (The dotted blue line depicts the continuity of the air barrier through the partition stud member)

Seal all penetrations through air barrier using a flexible sealant.

Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

OPTION
(TICK)

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Air Barrier Options

Plaster coat, or

Blockwork inner leaf/parging coat applied to internal face of inner leaf with plasterboard over, or

Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners.

SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:

MCI-IW-05 Timber Stud Partition Wall/ External Wall Abutment.

Masonry Cavity Wall Insulation

Accredited (Indicative) Detail Number: MCI-IW-06

GENERAL NOTES

- This detail to be read in conjunction with detail No: MCI-IW-05.

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

MCI-IW-06 Timber Stud Partition Wall Head.

THERMAL PERFORMANCE OF JUNCTION

Ensure that the full depth of insulation between and over the joists extends over the head of the wall.
Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

CHECKLIST (TICK)

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AIR BARRIER CONTINUITY

Fix ceiling first and seal all gaps between the ceiling and head member of partition with flexible sealant prior to installing partition linings. ① (The dotted blue line depicts the continuity of the air barrier through the head stud member)
Seal all penetrations through air barrier using a flexible sealant.
Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

CHECKLIST (TICK)

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AIR BARRIER OPTIONS

Plasterboard ceiling

OPTION (TICK)

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SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:

CHECKLIST
(TICK)

☐ ☐ ☐ ☐ ☐

THERMAL PERFORMANCE OF JUNCTION

Ensure the gap between the wall plate and the proprietary eaves ventilator is completely filled with insulation having a min. R-value across the thickness of the insulation of 1.2 m².K/W. ①

Ensure continuity of the insulation throughout the junction.

Ensure that the full depth of insulation between and under the rafters abuts the eaves insulation.

Ensure that the insulation is installed tightly between the rafters and is in contact with the under rafter insulation. ②

Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall. If using partial fill insulation, tuck compressible insulation down into head of cavity.

Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

CHECKLIST
(TICK)

☐ ☐ ☐

AIR BARRIER CONTINUITY

Bed the wall plate on a continuous mortar bed.

Fix ceiling first and seal all gaps between the ceiling and masonry wall with either plaster, adhesive or flexible sealant. ③

Seal all penetrations through air barrier using a flexible sealant.

Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

OPTION
(TICK)

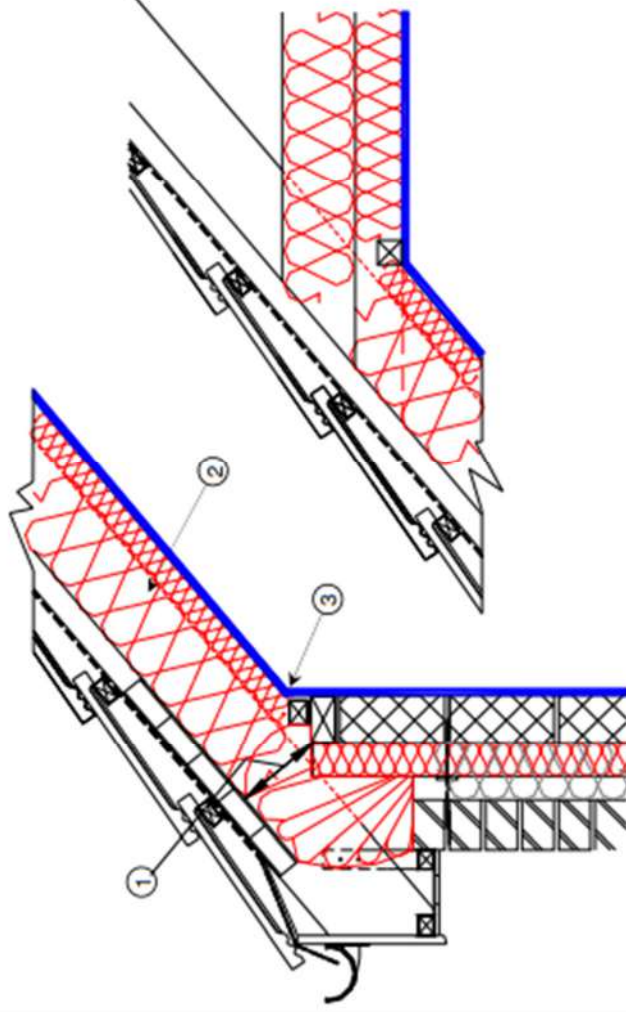
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AIR BARRIER OPTIONS

Plaster coat, or

Blockwork inner leaf/parging coat applied to internal face of inner leaf with plasterboard over

Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners.



Accredited (Indicative) Detail Number: MCI-RE-06

GENERAL NOTES

- Ensure that cavities are kept clean of mortar spots or other debris during construction.
- If required by BS5250 use a vapour control plasterboard or a separate vapour control layer behind the plasterboard.
- Use a proprietary eaves ventilator to ensure ventilation in accordance with BS5250.
- The use of over joist and under rafter insulation is considered best practice as it eliminates the cold bridge caused by the joist/rafter.
- The installation of the eaves ventilator must not prevent free water drainage below the tiling battens.
- This detail to be read in conjunction with detail No: MCI-RG-03.

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

**MCI-RE-06 Pitched Roof. Between & Under Rafter Insulation.
Ventilated Rafter Void. Storey and a Half.**

SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:

Masonry Cavity Wall Insulation

Accredited (Indicative) Detail Number: MCI-WD-01

GENERAL NOTES

- Ensure that cavities are kept clean of mortar spots or other debris during construction.

THERMAL PERFORMANCE OF JUNCTION

CHECKLIST (TICK)

☐ Ensure thickness of lintel material is no more than 3.2mm. ①

☐ Use only perforated base plate with an effective thermal conductivity not exceeding 30W/mK. ②

☐ Minimum frame overlap to be 30mm ③

☐ Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall.

Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

AIR BARRIER CONTINUITY

CHECKLIST (TICK)

☐ Apply flexible sealant to all interfaces between the internal air barrier and the window/ door frame members. ④

☐ Seal all penetrations through air barrier using a flexible sealant.

Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

AIR BARRIER OPTIONS

OPTION (TICK)

☐ Plaster coat, or

☐ Blockwork inner leaf/parging coat applied to internal face of inner leaf with plasterboard over, or

☐ Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners.

SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

THERMAL PERFORMANCE OF JUNCTION

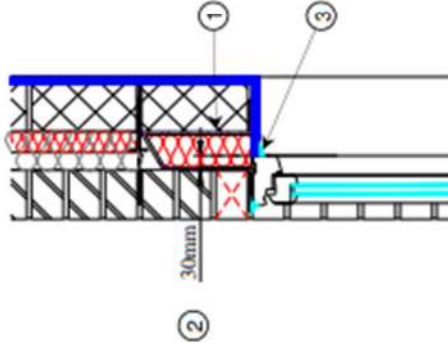
- | | |
|--------------------------|--|
| ☐ | Ensure thickness of lintel material is no more than 3.2mm. ① |
| ☐ | Ensure lintel is fully insulated and does not have a base plate. |
| ☐ | Minimum frame overlap to be 30mm ② |
| ☐ | Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall. |

AIR BARRIER CONTINUITY

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|--------------------------|---|
| ☐ | Apply flexible sealant to all interfaces between the internal air barrier and the window/ door frame members. ③ |
| ☐ | Seal all penetrations through air barrier using a flexible sealant. |
| | <i>Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.</i> |

AIR BARRIER OPTIONS

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|--------------------------|--|
| ☐ | Plaster coat, or |
| ☐ | Blockwork inner leaf/parging coat applied to internal face of inner leaf with plasterboard over |
| ☐ | Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners. |



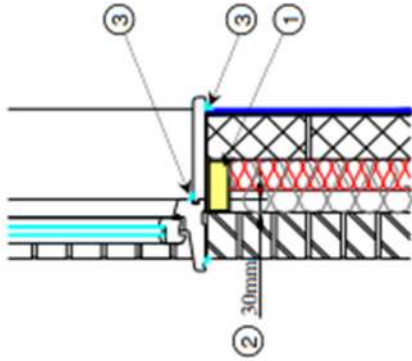
Accredited (Indicative) Detail Number: MCI-WD-03

GENERAL NOTES

- Ensure that cavities are kept clean of mortar snots or other debris during construction.

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:



Accredited (Indicative) Detail Number: MCI-WD-04

GENERAL NOTES

- Ensure that cavities are kept clean of mortar snots or other debris during construction.

The above indicative guidance illustrates good practice for the design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. The above guidance must be implemented with due regard to all other requirements imposed by the Building Regulations.

THERMAL PERFORMANCE OF JUNCTION

Install a proprietary cavity closer having a path of minimum thermal resistance path through the closer of not less than 0.45m²K/W (manufacturers certified data). ①

Minimum frame overlap to be 30mm ②

Ensure that partial fill insulation is secured firmly against the inner leaf of the cavity wall.

Complying with the above checklist items qualifies the builder to claim the ψ value given in Table 3 of IP 1/06 and Table K1 of SAP 2005.

CHECKLIST (TICK)

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AIR BARRIER CONTINUITY

Ensure air barrier continuity between the window and the wall air barrier line.

If forming the air barrier to the walls with the blockwork inner leaf or a parge coat on blocks, a flexible sealant should be installed between the cavity closer and blockwork wall.

Flexible sealant should be applied to the junction between the plaster/plasterboard and cill board and between the cill board and window frame member. ③

Seal all penetrations through air barrier using a flexible sealant.

Complying with all of the above checklist items will help achieve the design air permeability and may effect a reduced testing regime.

CHECKLIST (TICK)

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AIR BARRIER OPTIONS

Plaster coat, or

Blockwork inner leaf/parge coat applied to internal face of inner leaf with plasterboard over, or

Plasterboard on dabs with continuous ribbon of adhesive around all openings, along the top and bottom of the wall, and at internal and external corners.

OPTION (TICK)

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SITE MANAGER/ SUPERVISOR:	SITE NAME:	PLOT No:	DATE:

