

## INTRODUCTION

The details in this section have been developed for a range of partial and fully filled cavity wall constructions. The Introduction document "Limiting Thermal Bridging and Air Infiltration Acceptable Construction Details" provides practical information with regards to implementation of these details onsite. This guide should be read in conjunction with these details. Details are given for the junctions with a range of roof, ground floor and internal floor types, as well as at external wall opes.

The details are indicative. They focus on the issues of thermal performance and air tightness. Other issues are not considered fully. Insulation thicknesses for the main building elements have not been provided, as these depend on the thermal properties of the materials chosen, as well as on the desired U-value.

Masonry materials shown on the drawings are blocks and bricks. Other masonry materials, including precast and insitu concrete, may be substituted without loss of thermal performance or increased technical risk. The use of thermally resistant materials, beyond that depicted, will naturally increase the thermal performance of the building fabric.

All materials and workmanship are to be installed to Technical Guidance Document D "Materials and workmanship."

The suitability of full fill cavity construction depends on the site exposure and the nature of the outer leaf. For further information, see BR 262 "Thermal Insulation: Avoiding Risks", Homebond Housebuilding Manual and relevant Irish Agrément Board certificates.

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

Where cavity insulation is used with internal insulation the combination of both sets of details should be used which will provide the best limitation of thermal bridging and ensure air tightness.

## ACCEPTABLE CONSTRUCTION DETAILS - SECTION (I)

- I-01a Ground Floor - Insulation above slab
- I-01b Ground Floor - Insulation above slab
- I-02a Ground Floor - Insulation below slab
- I-02b Ground Floor - Insulation below slab
- I-03 Timber Suspended Ground Floor
- I-04 Concrete Intermediate Floor
- I-05 Timber Intermediate Floor
- I-06 Masonry Separating Wall (plan)
- I-07 Masonry Partition Wall (plan)
- I-08 Stud Partition Wall (plan)
- I-09 Eaves - Ventilated roof space
- I-10 Eaves - Unventilated roof space
- I-11 Eaves - Ventilated - Insulation between and under rafters - Dormer
- I-12 Eaves - Unventilated - Insulation between and under rafters - Dormer
- I-13 Eaves - Ventilated - Insulation between and under rafters - Pitched ceiling
- I-14 Eaves - Ventilated - Insulation between and over rafters - Dormer
- I-15 Ventilated Roof - Attic Floor Level
- I-16 Gable - Insulation between and under rafters - Ventilated Rafter Void
- I-17 Gable - Insulation between and under rafters - Unventilated Rafter Void
- I-18 Gable - Insulation between and over rafters - Unventilated Rafter Void
- I-19 Flat Roof - Eaves
- I-20 Flat Roof - Parapet
- I-21 Ope - Steel lintel
- I-22 Ope - Perforated steel lintel
- I-23 Ope - Prestressed concrete lintels
- I-24 Ope - Jamb with closer block
- I-25 Ope - Jamb with proprietary cavity closer
- I-26 Ope - Concrete Forward Sill

### The details in this section should also be read with Section G: General Details

- G-01 Masonry Separating Wall Head - Section
- G-02 Masonry Partition Head - Section
- G-03 Timber Stud Partition Head - Section
- G-04 Metal Stud Partition Head - Section

To limit the air permeability to a reasonable level as defined in Part L of the Building Regulations a high degree of attention to detail, good workmanship and appropriate site procedures are required. For further information see introductory document.

THERMAL PERFORMANCE

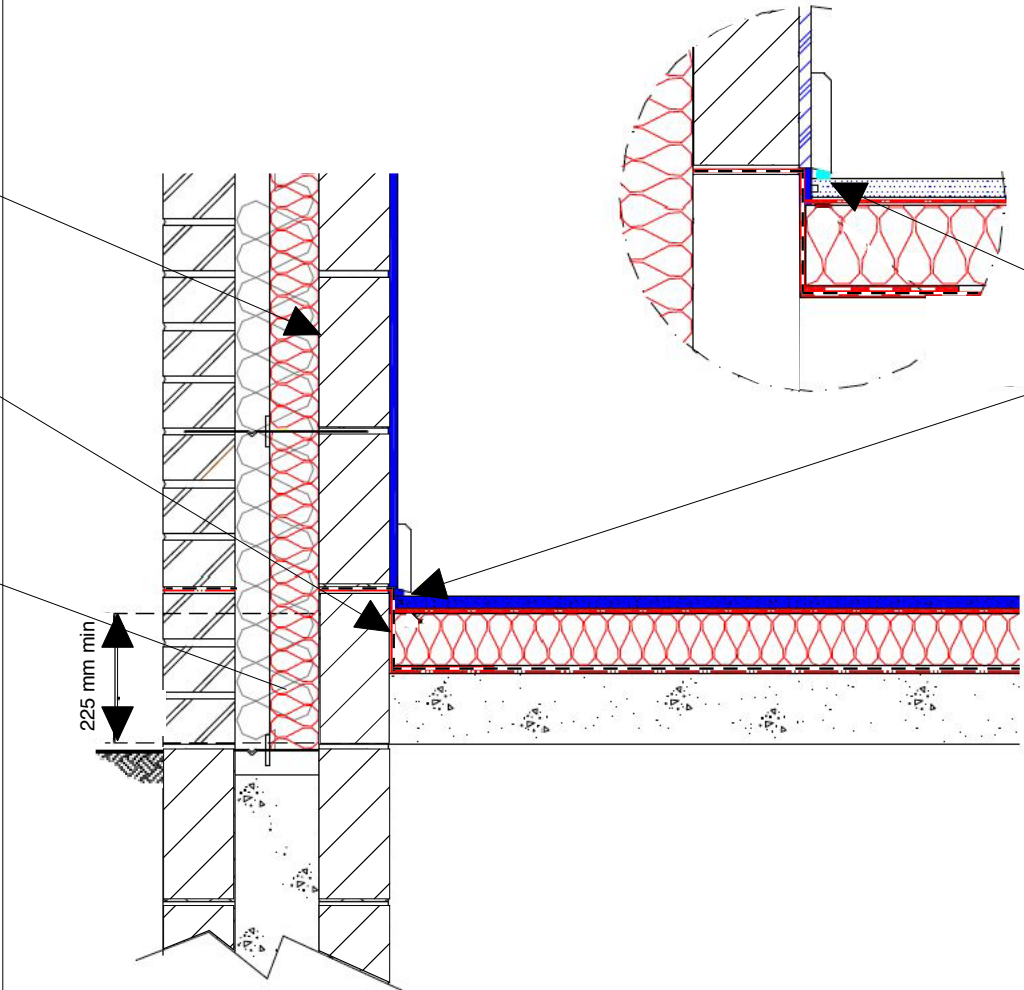
CHECKLIST (TICK ALL)

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

Floor insulation to tightly abut blockwork wall

Ensure wall insulation is installed at least 225 mm below top of floor insulation

225 mm min



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

Seal between wall and floor air barrier with a flexible sealant OR seal gap between skirting board and floor with a flexible sealant

Seal all penetrations through air barrier using a flexible sealant

Complying with checklist qualifies builder to claim  $\psi$  value in Appendix 2 of Acceptable Construction Details document

Complying with checklist will help achieve design air permeability

GENERAL NOTES

The wall insulation installed below the wall DPC must be fit for purpose with regards to water absorption

Keep cavities clean of mortar snots and other debris during construction

Detail applicable:- Ground-bearing floor; raft foundation; in-situ suspended ground floor slab; pre-cast suspended ground floor. Insulation above slab, with timber floor finish

Where blocks with a maximum Thermal Conductivity of .20 W/mK are being used consideration should be given to avoid cracking in plaster due to drying of mortar

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

Airtightness membrane and tapes

THERMAL PERFORMANCE

CHECKLIST (TICK ALL)

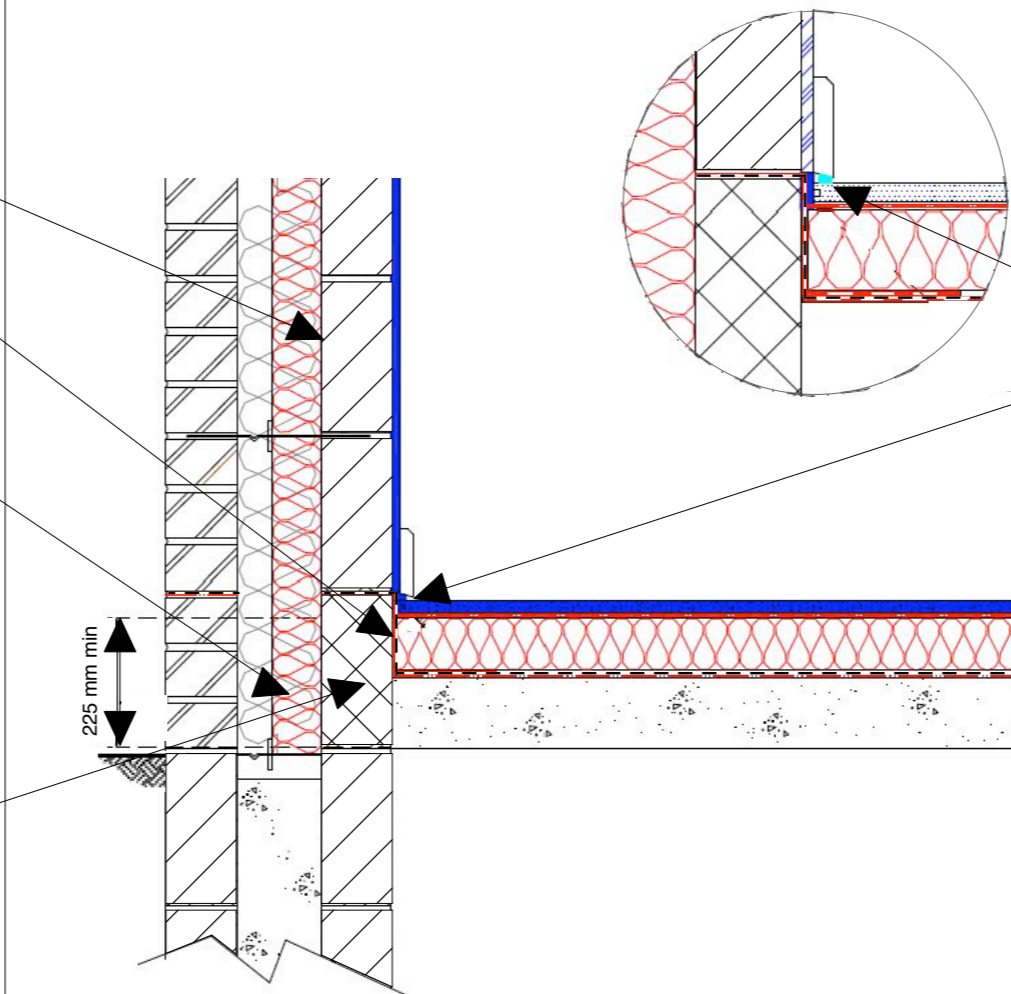
Ensure partial fill insulation is secured firmly against inner leaf of cavity wall

Floor insulation to tightly abut blockwork wall

Ensure wall insulation is installed at least 225 mm below top of floor insulation

Ensure block with a maximum Thermal Conductivity of .20 W/mK in the direction of heat flow is used and that block is suitable for use in foundations in all conditions. Block is to be installed so to avoid any effect of moisture on Thermal Conductivity

Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

Seal between wall and floor air barrier with a flexible sealant OR seal gap between skirting board and floor with a flexible sealant

Seal all penetrations through air barrier using a flexible sealant

Complying with checklist will help achieve design air permeability

GENERAL NOTES

The wall insulation installed below the wall DPC must be fit for purpose with regards to water absorption

Keep cavities clean of mortar snots and other debris during construction

Detail applicable:- Ground-bearing floor; raft foundation; in-situ suspended ground floor slab; pre-cast suspended ground floor. Insulation above slab, with timber floor finish

Where blocks with a maximum Thermal Conductivity of .20 W/mK are being used consideration should be given to avoid cracking in plaster due to drying of mortar

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

Airtightness membrane and tapes

THERMAL PERFORMANCE

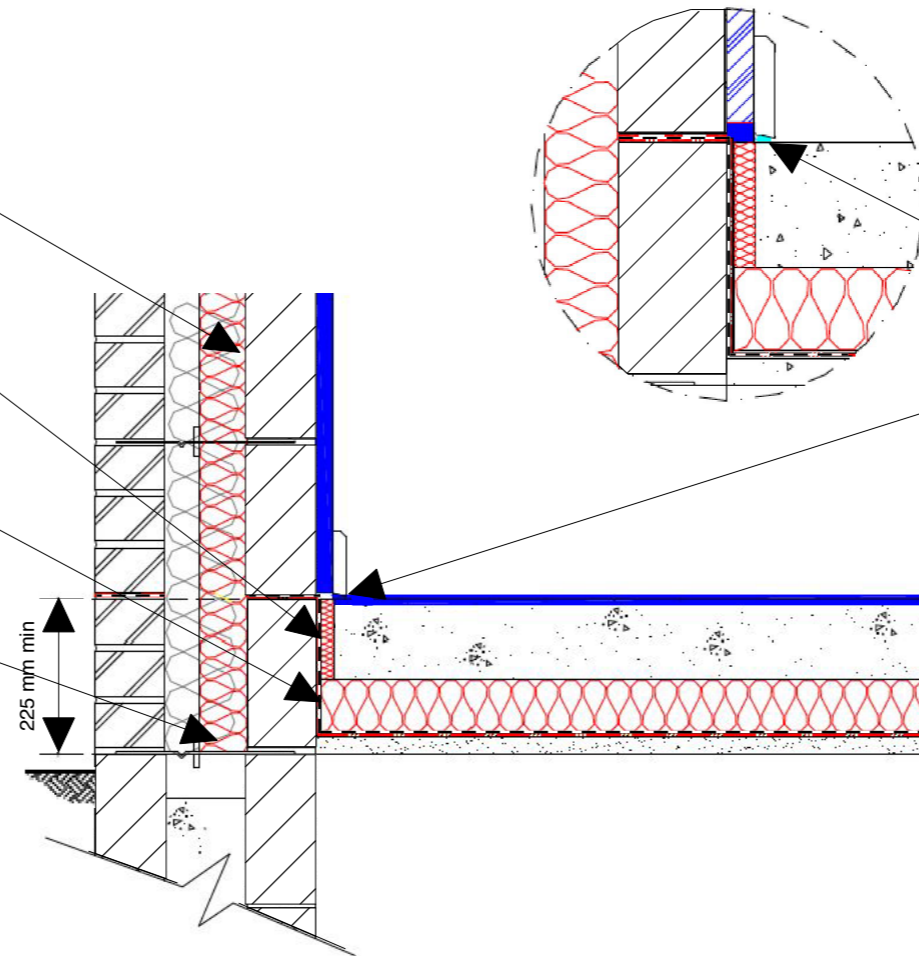
CHECKLIST (TICK ALL)

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

Install perimeter insulation with a min. R-value of .75 m<sup>2</sup> K/W

Floor insulation to tightly abut blockwork wall

Ensure wall insulation is installed at least 225 mm below top of floor



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

Seal between wall and floor air barrier with a flexible sealant OR seal gap between skirting board and floor with a flexible sealant

Seal all penetrations through air barrier using a flexible sealant

Complying with checklist qualifies builder to claim  $\Psi$  value in Appendix 2 of Acceptable Construction Details document

Complying with checklist will help achieve design air permeability

GENERAL NOTES

The wall insulation installed below the wall DPC must be fit for purpose with regards to water absorption

Keep cavities clean of mortar snots and other debris during construction

Detail applicable:- Ground-bearing floor; raft foundation; in-situ suspended ground floor slab; pre-cast suspended ground floor; concrete and screed. Insulation below slab

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

Airtightness membrane and tapes

THERMAL PERFORMANCE

CHECKLIST (TICK ALL)

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

Install perimeter insulation with a min. R-value of .75 m<sup>2</sup> K/W

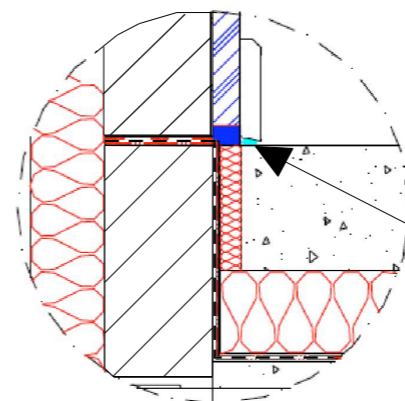
Floor insulation to tightly abut blockwork wall

Ensure wall insulation is installed at least 225 mm below top of floor

Ensure block with a maximum Thermal Conductivity of .20 W/mK in the direction of heat flow is used and that block is suitable for use in foundations in all conditions. Block is to be installed so to avoid any effect of moisture on thermal conductivity.

225 mm min

Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1106 and Table K1 of DEAP 2006



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

Seal between wall and floor air barrier with a flexible sealant OR seal gap between skirting board and floor with a flexible sealant

Seal all penetrations through air barrier using a flexible sealant

Complying with checklist will help achieve design air permeability

GENERAL NOTES

The wall insulation installed below the wall DPC must be fit for purpose with regards to water absorption

Keep cavities clean of mortar snots and other debris during construction

Detail applicable:- Ground-bearing floor; raft foundation; in-situ suspended ground floor slab; pre-cast suspended ground floor; concrete and screed. Insulation below slab

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

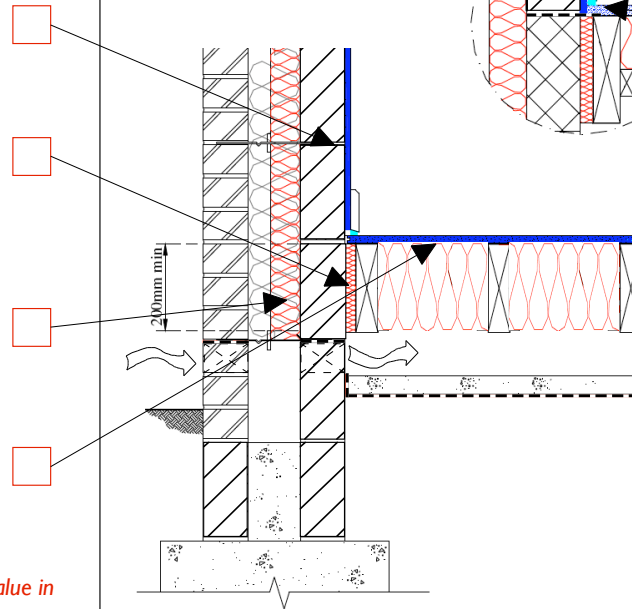
Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

Airtightness membrane and tapes

THERMAL PERFORMANCE

CHECKLIST (TICK ALL)

- Secure partial fill insulation firmly against inner leaf
- Pack gap between floor joist and blockwork wall with compressible insulation if over 25mm; otherwise inject approved insulating expanding foam
- Ensure wall insulation is installed at least 200 mm below top of floor insulation
- Ensure insulation is in contact with the underside of timber flooring



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

- Seal between wall and floor air barrier with a flexible sealant OR seal gap between skirting board and floor with a flexible sealant
- Seal joints in timber floor with suitable glue. Fully support and fix any square edge joints in the decking to the joists
- Seal all penetrations through air barrier using a flexible sealant
- Provide similar air seals at all internal partitions

Complying with checklist will help achieve design air permeability

Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006

GENERAL NOTES

Thermal performance of junction can be improved significantly by using blockwork with a thermal conductivity of  $\leq 0.20$  W/mK in direction of heat flow in foundation internal wall or alternatively by extending depth of insulation in cavity

The wall insulation installed below the wall DPC must be fit for purpose with regards to water absorption

Keep cavities clean of mortar spots and other debris during construction

If installing compressible insulation, use netting to ensure full insulation depth between joists

If injecting expanding foam between joist and external wall, take care to avoid bridging wall dpc

Where different block materials are being used consideration should be given to avoid cracking in plaster at the junction between the block materials

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

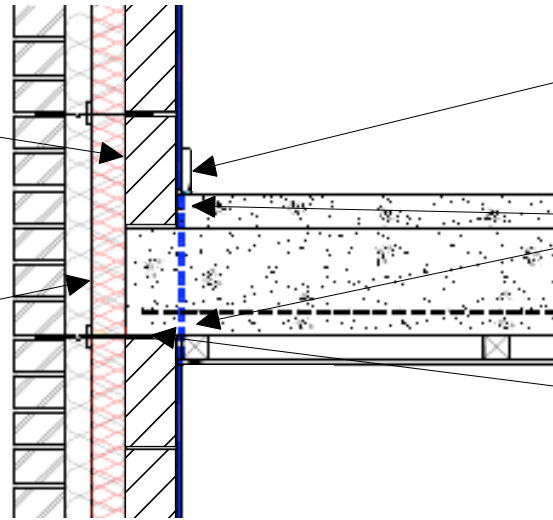
**THERMAL PERFORMANCE**

CHECKLIST  
(TICK ALL)

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

Continue cavity wall insulation across floor abutment zone

*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*



**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

Seal gap between skirting board and floor with a flexible sealant

Seal between the wall air barrier and the top and underside of the floor slab. (Dotted blue line is notional, to depict air barrier continuity through floor zone)

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

Seal all penetrations through air barrier using flexible sealant

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Keep cavities clean of mortar snots and other debris during construction

Detail is diagrammatic only. Where floor is a separating floor, acoustic insulation should be provided. See TGD-E

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

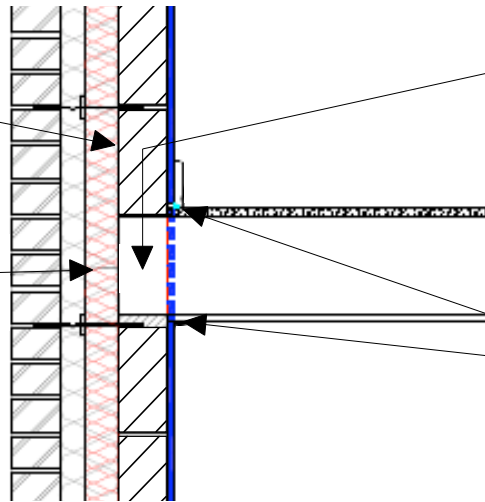
- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

**THERMAL PERFORMANCE**

CHECKLIST  
(TICK ALL)

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

Continue cavity wall insulation across floor abutment zone



*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*

**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

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. Seal shoe to blockwork face with a flexible sealant. (Dotted blue line is notional, to depict continuity of air barrier through floor zone)

Seal between wall air barrier and blockwork, above and below the floor assembly

Seal all penetrations through air barrier using a flexible sealant

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Keep cavities clean of mortar spots and other debris during construction  
Suspended timber floors may be laid in joist hangers rather than built in

Where wall supports joists, thermal performance and airtightness of junction can be improved significantly by using joist hangers with shoes standing off the wall face

For timber engineered joists, proprietary filler pieces must be fitted on both sides of the web between top and bottom flanges. (See manufacturer's details.)

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

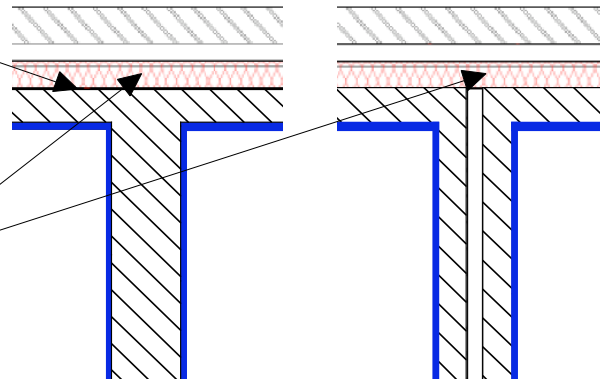


THERMAL PERFORMANCE

CHECKLIST (TICK ALL)

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

Continue cavity wall insulation across abutment zone. (Use appropriate material where cavity barrier or full-fill insulation is employed)



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

Complying with checklist will help achieve design air permeability

GENERAL NOTES

Keep cavities clean of mortar snots and other debris during construction

See TGD-B for guidance on fire safety and TGD-E for guidance on sound insulation

Read this detail in conjunction with detail G-01, Masonry Separating Wall Head

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

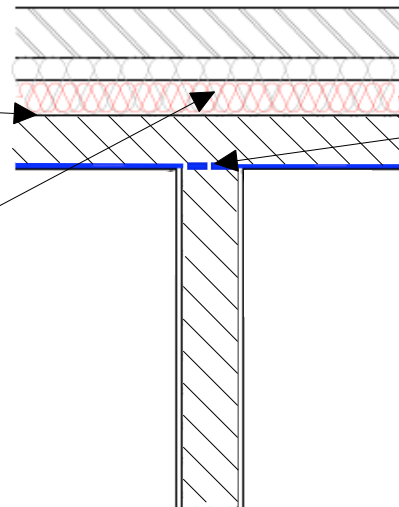
Airtightness membrane and tapes

THERMAL PERFORMANCE

CHECKLIST  
(TICK ALL)

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

Continue cavity wall insulation across abutment zone



AIR BARRIER - CONTINUITY

CHECKLIST  
(TICK ALL)

Seal between air barrier on external wall and the blockwork, to the partition wall. (Dotted blue line is notional, to depict air barrier continuity through partition, depending on whether partition toothed into external wall or braced with ties)

Seal all penetrations through air barrier using a flexible sealant

Complying with checklist will help achieve design air permeability

GENERAL NOTES

Keep cavities clean of mortar snots and other debris during construction

Read this detail in conjunction with detail G-02, Blockwork Partition Head

OPTION  
(TICK ONE)

AIR BARRIER - OPTIONS

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

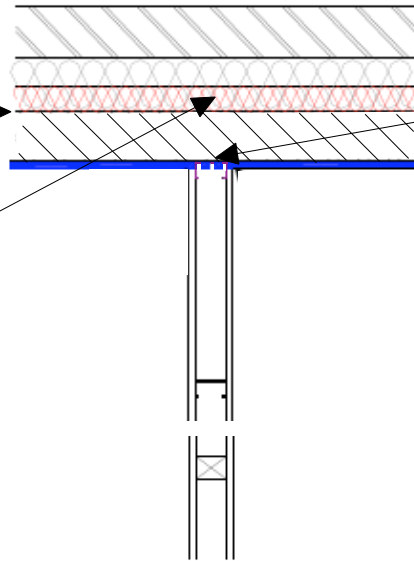
Airtightness membrane and tapes

**THERMAL PERFORMANCE**

CHECKLIST  
(TICK ALL)

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

Continue cavity wall insulation across abutment zone



Detail applicable to timber stud and metal stud partitions

**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

Install external air barrier before stud; or install barrier before partition lining and seal all gaps between air barrier and stud with flexible sealant. (Dotted blue line depicts air barrier continuity through partition stud member)

Seal all penetrations through air barrier using a flexible sealant

Complying with checklist will help achieve design air permeability

**GENERAL NOTES**

Keep cavities clean of mortar snots and other debris during construction

Read this detail in conjunction with details G-03, Timber Stud Partition Head, or G-04, Metal Stud Partition Head as appropriate

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

THERMAL PERFORMANCE

CHECKLIST (TICK ALL)

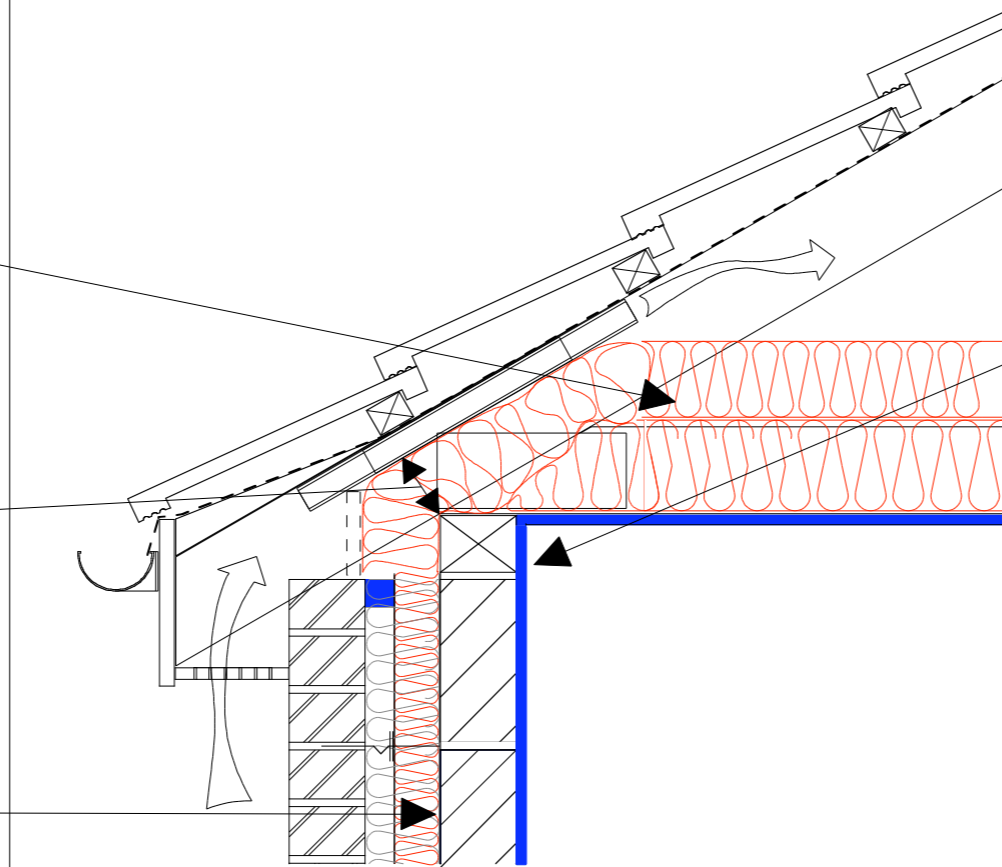
Ensure continuity of insulation throughout junction

Ensure full depth of insulation between and over joists abuts eaves insulation

Ensure gap between wall plate and proprietary eaves vent is completely filled with insulation having a min. R-value across the insulation thickness of 1.2 m<sup>2</sup>K/W

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

Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

Bed wall plate on continuous mortar bed

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

Seal all penetrations through air barrier using a flexible sealant

Complying with checklist will help achieve design air permeability

GENERAL NOTES

Thermal performance of junction can be improved by incorporating an eaves wind barrier (plywood, OSB, softboard or other suitable material) around insulation to be sealed to connect with the ventilator strip thereby mitigating wind chill from the vent inlet in the eaves  
Keep cavities clean of mortar snots and other debris during construction  
Use of over joist insulation is considered best practice, as it eliminates the cold bridge caused by the joist  
Use a proprietary eaves ventilator to ensure ventilation in accordance with BS5250. Installation of the eaves ventilator must not prevent free water drainage below the tiling battens  
Ensure cavity is closed with firestopping insulant or proprietary cavity barrier  
Read this detail in conjunction with detail I-15, Roof at Attic Floor Level

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

THERMAL PERFORMANCE

CHECKLIST (TICK ALL)

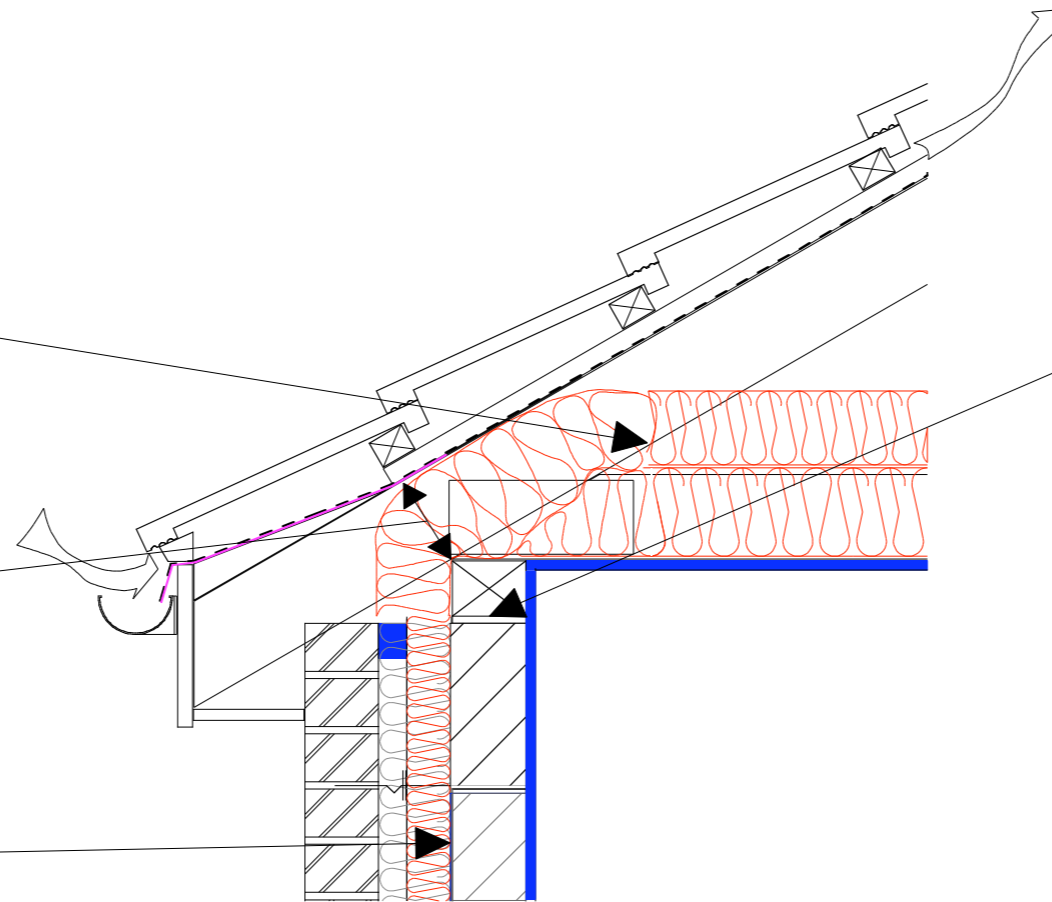
Ensure continuity of insulation throughout junction

Ensure full depth of insulation between and over joists abuts eaves insulation

Ensure gap between wall plate and proprietary eaves vent is completely filled with insulation having a min. R-value across the insulation thickness of 1.2 m<sup>2</sup>K/W

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

*Complying with checklist qualifies builder to claim ψ value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

Bed wall plate on continuous mortar bed

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

Seal all penetrations through air barrier using a flexible sealant

*Complying with checklist will help achieve design air permeability*

GENERAL NOTES

Keep cavities clean of mortar snots and other debris during construction  
Use of over joist insulation is considered best practice, as it eliminates the cold bridge caused by the joist

Use vapour permeable roof underlay in strict accordance with third party certification

Eaves insulation must not hinder free water drainage below the tiling battens

Ensure cavity is closed with firestopping insulant or proprietary cavity barrier  
Read this detail in conjunction with detail 1-15, Roof at Attic Floor Level

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

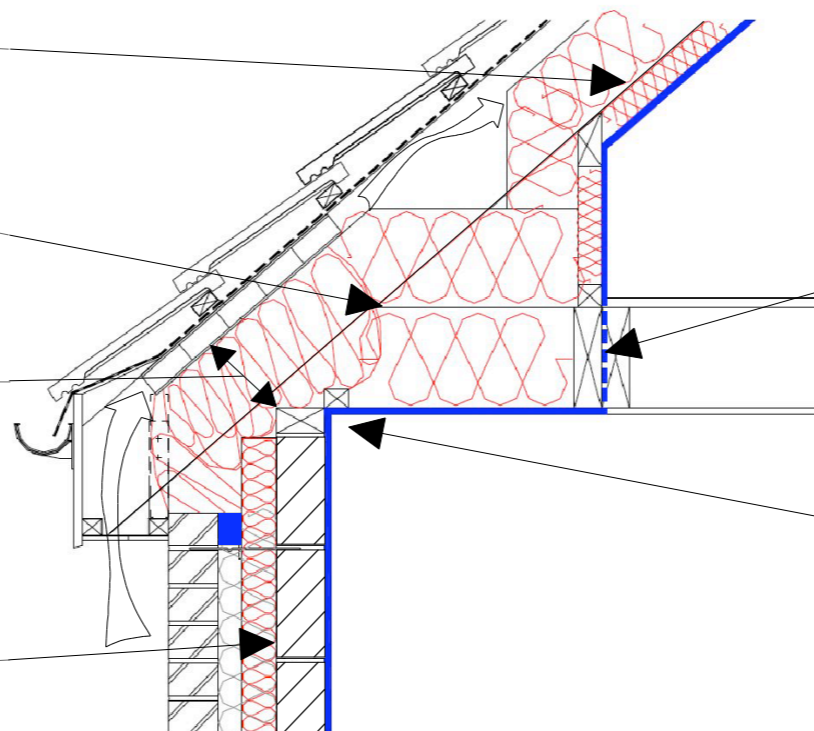
Airtightness membrane and tapes

## THERMAL PERFORMANCE

CHECKLIST  
(TICK ALL)

- Ensure continuity of insulation throughout junction
- Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation
- Ensure full depth of insulation between and over joists abuts eaves insulation
- Ensure gap between wall plate and proprietary eaves vent is completely filled with insulation having a min. R-value across the insulation thickness of 1.2 m<sup>2</sup>K/W
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall. If using partial fill insulation, tuck compressible insulation down into head of cavity

*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*



## AIR BARRIER - CONTINUITY

CHECKLIST  
(TICK ALL)

- Bed wall plate on continuous mortar bed
- Install double, full depth timber nogging between floor joists, and seal between nogging, ceiling and upper stud wall with a flexible sealant. (Dotted blue line is notional, to depict air barrier continuity through noggings.)
- Fix ceiling first, and seal all gaps between ceiling and masonry wall with either plaster, adhesive or flexible sealant
- Seal all penetrations through air barrier using a flexible sealant

*Complying with checklist will help achieve design air permeability*

## GENERAL NOTES

Thermal performance of junction can be improved by incorporating an eaves wind barrier (plywood, OSB, softboard or other suitable material) around insulation to be sealed to connect with the ventilator strip thereby mitigating wind chill from the vent inlet in the eaves

Keep cavities clean of mortar snots and other debris during construction

Use a proprietary eaves ventilator to ensure ventilation in accordance with BS5250. Installation of the eaves ventilator must not prevent free water drainage below the tiling battens

If required by BS5250, use vapour control plasterboard or separate vapour control layer behind plasterboard

Use of over joist and under rafter insulation is considered best practice, as it eliminates the cold bridge caused by the joist/rafter

Ensure cavity is closed with firestopping insulant or proprietary cavity barrier

Read this detail in conjunction with detail 1-16, Gable - Ventilated Rafter Void

OPTION  
(TICK ONE)

## AIR BARRIER - OPTIONS

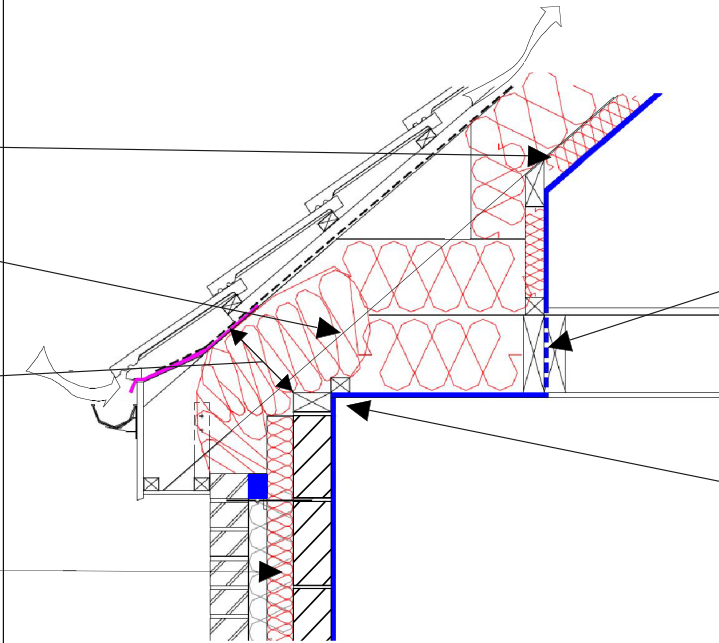
- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

**THERMAL PERFORMANCE**

**CHECKLIST (TICK ALL)**

- Ensure continuity of insulation throughout junction
- Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation
- Ensure full depth of insulation between and over joists abuts eaves insulation
- Ensure gap between wall plate and proprietary eaves vent is completely filled with insulation having a min. R-value across the insulation thickness of 1.2 m<sup>2</sup>K/W
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall. If using partial fill insulation, tuck compressible insulation down into head of cavity

*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*



**AIR BARRIER - CONTINUITY**

**CHECKLIST (TICK ALL)**

- Bed wall plate on continuous mortar bed
- Install double, full depth timber nogging between floor joists, and seal between nogging, ceiling and upper stud wall with a flexible sealant. (Dotted blue line is notional, to depict air barrier continuity through noggings.)
- Fix ceiling first, and seal all gaps between ceiling and masonry wall with either plaster, adhesive or flexible sealant
- Seal all penetrations through air barrier using a flexible sealant

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Keep cavities clean of mortar snots and other debris during construction  
 Vapour permeable roof underlay to be used in strict accordance with approved third party certification  
 Installation of the eaves insulation must not prevent free water drainage below the tiling battens  
 If required by BS5250, use vapour control plasterboard or separate vapour control layer behind plasterboard  
 Use of over joist and under rafter insulation is considered best practice, as it eliminates the cold bridge caused by the joist/rafter  
 Ensure cavity is closed with firestopping insulant or proprietary cavity barrier  
 Read this detail in conjunction with detail 1-17, Gable - Unventilated Rafter Void

**OPTION (TICK ONE)**

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

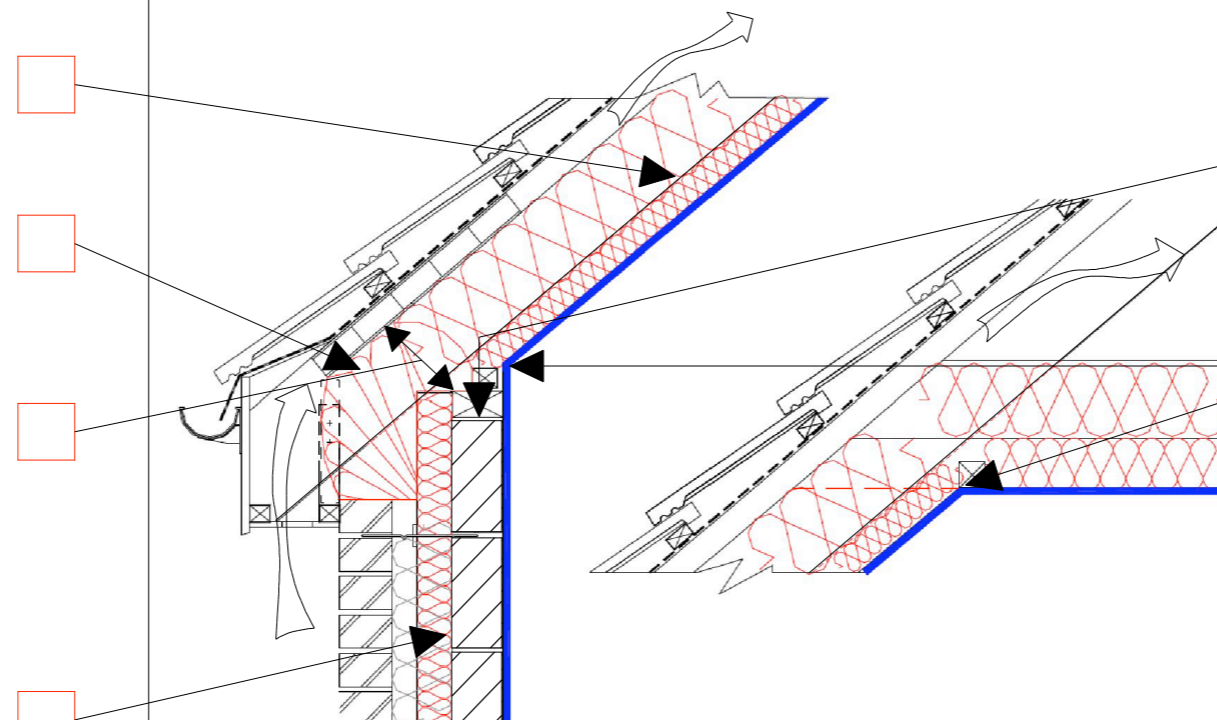
ACCEPTABLE CONSTRUCTION DETAIL

**THERMAL PERFORMANCE**

**CHECKLIST  
(TICK ALL)**

- Ensure continuity of insulation throughout junction
- Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation
- Ensure full depth of insulation between and under rafters abuts eaves insulation
- Ensure gap between wall plate and proprietary eaves vent is completely filled with insulation having a min. R-value across the insulation thickness of 1.2 m<sup>2</sup>K/W
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall. If using partial fill insulation, tuck compressible insulation down into head of cavity

*Complying with checklist qualifies builder to claim ψ value in Table 3 of IP 1106 and Table K1 of DEAP 2006*



**AIR BARRIER - CONTINUITY**

**CHECKLIST  
(TICK ALL)**

- Bed wall plate on continuous mortar bed
- Fix ceiling first, and seal all gaps between ceiling and masonry wall with either plaster, adhesive or flexible sealant
- Seal all penetrations through air barrier using a flexible sealant

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Thermal performance of junction can be improved by incorporating an eaves wind barrier (plywood, OSB, softboard or other suitable material) around insulation to be sealed to connect with the ventilator strip thereby mitigating wind chill from the vent inlet in the eaves

Keep cavities clean of mortar spots and other debris during construction

Use a proprietary eaves ventilator to ensure ventilation in accordance with BS5250. Installation of the eaves ventilator must not prevent free water drainage below the tiling battens

If required by BS5250, use vapour control plasterboard or separate vapour control layer behind plasterboard

Use of over joist and under rafter insulation is considered best practice, as it eliminates the cold bridge caused by the joist/rafter

Ensure cavity is closed with firestopping insulant or proprietary cavity barrier

Read this detail in conjunction with detail I-16, Gable - Ventilated Rafter Void

**OPTION  
(TICK ONE)**

**AIR BARRIER - OPTIONS**

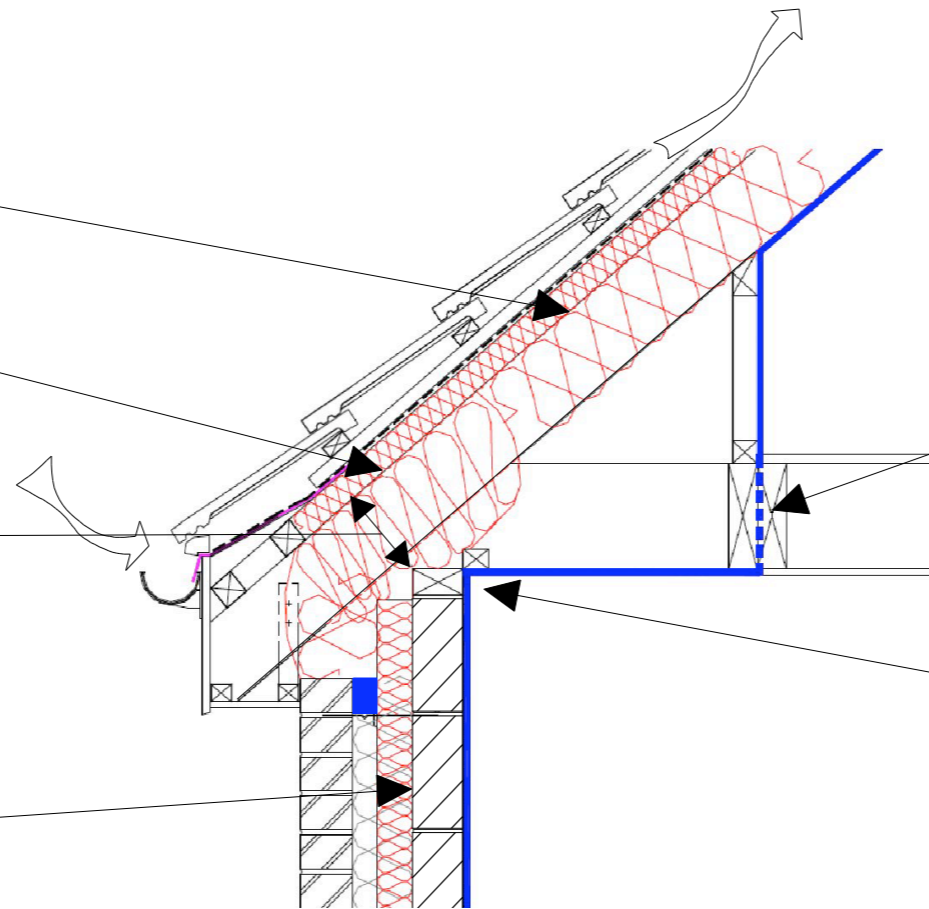
- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes



THERMAL PERFORMANCE

CHECKLIST (TICK ALL)

- Ensure continuity of insulation throughout junction
- Ensure insulation is installed tightly between rafters and is in contact with over-rafter insulation
- Ensure full depth of insulation between and over rafters abuts eaves insulation
- Ensure gap between wall plate and over rafter insulation is completely filled with insulation having a min. R-value across the insulation thickness of 1.2 m<sup>2</sup> K/W
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall. If using partial fill insulation, tuck compressible insulation down into head of cavity



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

- Bed wall plate on continuous mortar bed
- Install double, full depth timber nogging between floor joists, and seal between nogging, ceiling and upper stud wall with a flexible sealant. (Dotted blue line is notional, to depict air barrier continuity through noggings.)
- Fix ceiling first, and seal all gaps between ceiling and masonry wall with either plaster, adhesive or flexible sealant
- Seal all penetrations through air barrier using a flexible sealant

Complying with checklist will help achieve design air permeability

GENERAL NOTES

Keep cavities clean of mortar snots and other debris during construction

Vapour permeable roof underlay to be used in strict accordance with approved third party certification

If required by BS5250, use vapour control plasterboard or separate vapour control layer behind plasterboard.

Use of over rafter insulation is considered best practice, as it eliminates the cold bridge caused by the joist/rafter

Ensure cavity is closed with firestopping insulant or proprietary cavity barrier

Read this detail in conjunction with detail 1-18, Gable - Insulation between and over rafters - Unventilated Rafter Void

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

THERMAL PERFORMANCE

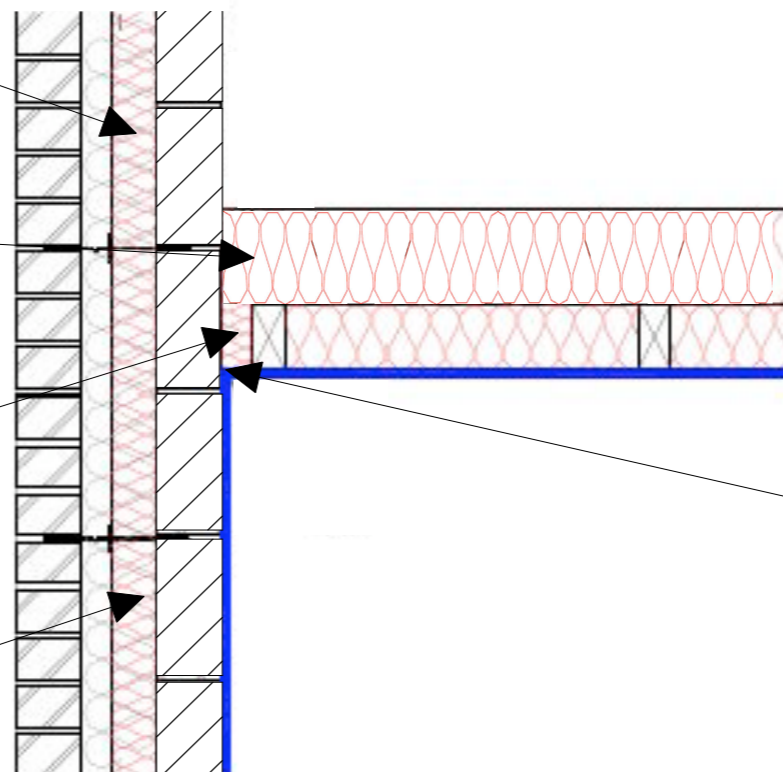
CHECKLIST (TICK ALL)

Continue wall insulation a minimum of 250 mm over top of attic insulation

Ensure full depth of insulation between and over joists extends to inner edge of wall

Pack compressible insulation between last truss or joist, and gable wall

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



AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

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

Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006

Complying with checklist will help achieve design air permeability

GENERAL NOTES

Thermal performance of junction can be improved significantly by using blockwork with a thermal conductivity of  $\leq 0.20$  W/mK in direction of heat flow in external wall at attic floor level or alternatively by running insulation of R-value  $1.5 \text{ m}^2\text{K/W}$  vertically up internal face of gable wall to a height of 450 mm above ceiling level

Keep cavities clean of mortar snots and other debris during construction

Use of over joist insulation is considered best practice, as it eliminates the cold bridge caused by the joist

Cavity must be closed along the verge

Read this detail in conjunction with details I-09: Eaves - Ventilated Attic, or I-10: Eaves - Unventilated Attic, as appropriate

Where different block materials are being used consideration should be given to avoid cracking in plaster at the junction between the block materials

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

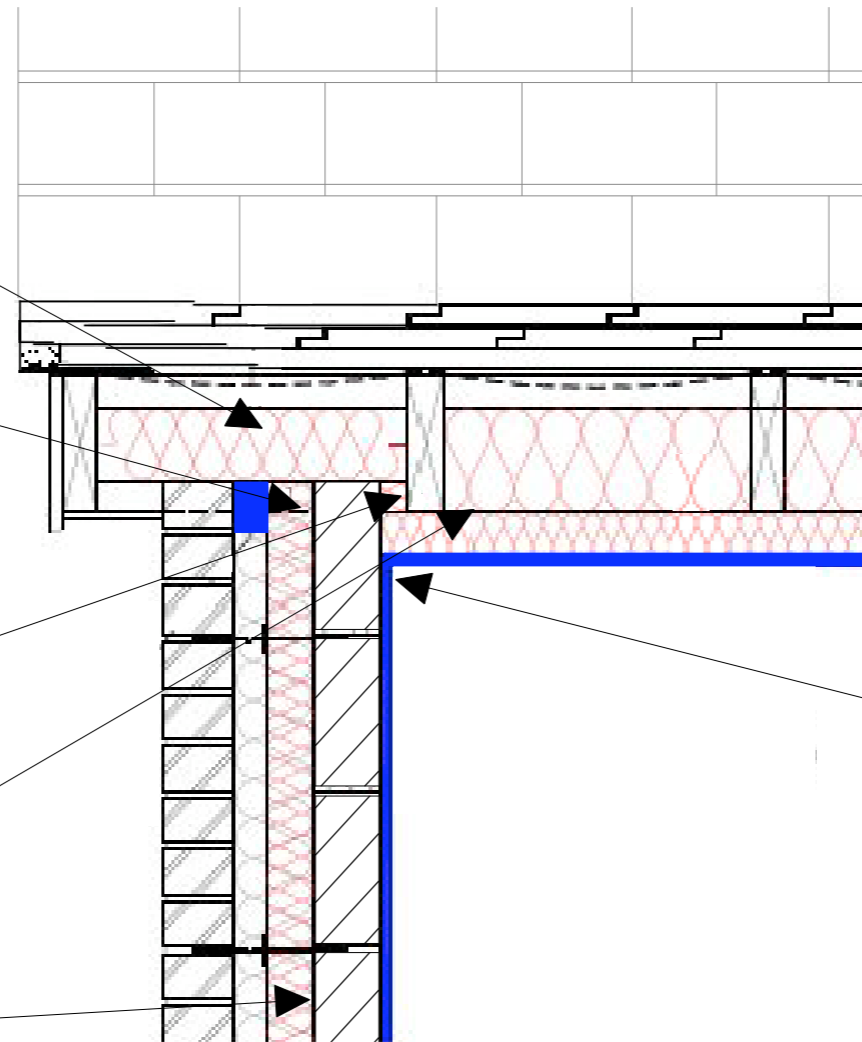
Airtightness membrane and tapes

#### THERMAL PERFORMANCE

##### CHECKLIST (TICK ALL)

- Fit insulation over top of wall within gable ladder. Fully fill void unless underlay requires to be draped, when 25 mm void must be maintained
- Ensure top of wall is levelled with mortar to correct pitch, and that wall insulation is taken up level with wall top
- Ensure insulation continuity throughout junction
- Ensure full depth of insulation between and under rafters extends to wall. Pack gap between rafter and wall with compressible insulation
- Ensure insulation is installed tightly between rafters and is in contact with under rafter insulation
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall

*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*



#### AIR BARRIER - CONTINUITY

##### CHECKLIST (TICK ALL)

- Seal all penetrations through air barrier using a flexible sealant
- Fix ceiling first, and seal all gaps between ceiling and masonry wall with either plaster, adhesive or flexible sealant

*Complying with checklist will help achieve design air permeability*

#### GENERAL NOTES

- Keep cavities clean of mortar snots and other debris during construction
- Ventilate roof build-up in accordance with BS5250
- If required by BS 5250, use vapour control plasterboard or separate vapour control layer behind plasterboard
- Use of under rafter insulation is considered best practice, as it eliminates the cold bridge caused by the rafter
- Ensure cavity is closed with firestopping insulant or proprietary cavity barrier
- Read this detail in conjunction with details 1-11: Eaves - Ventilated Rafter Void, or 1-13: Eaves - Ventilated Rafter Void - Pitched ceiling, as appropriate

##### OPTION (TICK ONE)

#### AIR BARRIER - OPTIONS

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

## THERMAL PERFORMANCE

CHECKLIST  
(TICK ALL)

Fit insulation over top of wall within gable ladder. Fill void unless underlay requires to be draped, when 25 mm void must be maintained

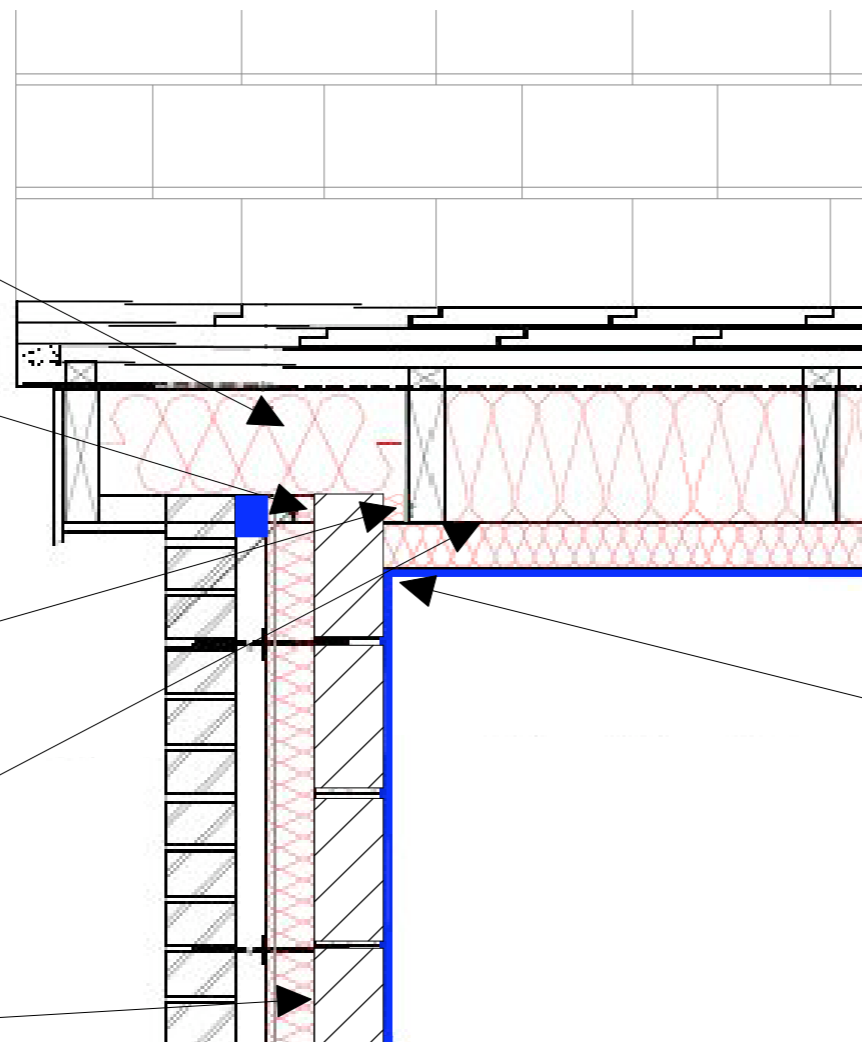
Ensure top of wall is levelled with mortar to correct pitch, and that wall insulation is taken up level with wall top

Ensure insulation continuity throughout junction

Ensure full depth of insulation between and under rafters extends to wall. Pack gap between rafter and wall with compressible insulation

Ensure insulation is installed tightly between rafters and is in contact with under rafter insulation

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



## AIR BARRIER - CONTINUITY

CHECKLIST  
(TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

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

*Complying with checklist will help achieve design air permeability*

## GENERAL NOTES

Keep cavities clean of mortar snots and other debris during construction

Use vapour permeable roof underlay in strict accordance with third party certification

Ensure cavity is closed with firestopping insulant or proprietary cavity barrier  
Read this detail in conjunction with detail 1-12: Eaves - Insulation between and under rafters - Unventilated Rafter Void

OPTION  
(TICK ONE)

## AIR BARRIER - OPTIONS

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

**THERMAL PERFORMANCE**

**CHECKLIST  
(TICK ALL)**

Fit insulation over top of wall within gable ladder. Fully fill void between wall head and over-rafter insulation



Ensure top of wall is levelled with mortar to correct pitch, and that wall insulation is taken up level with wall top



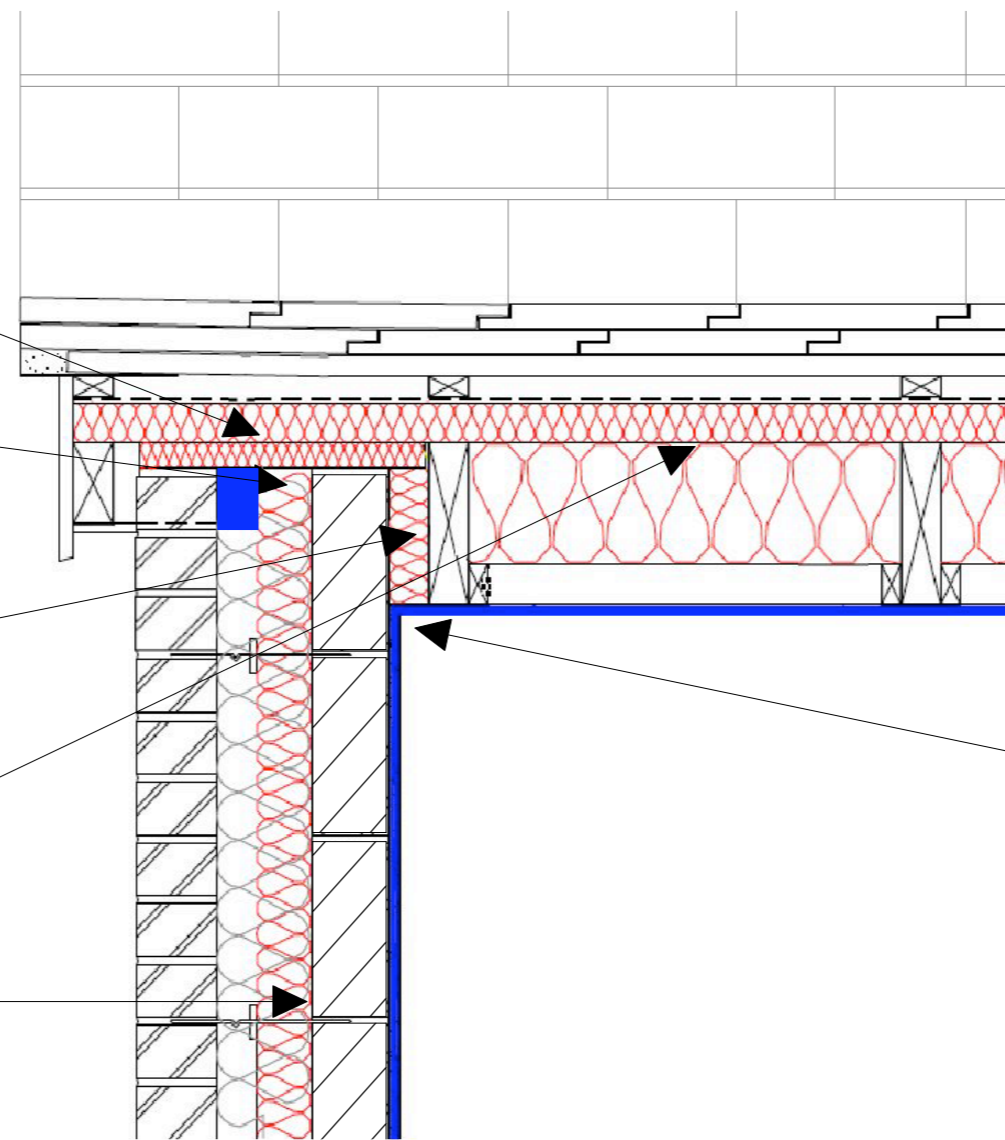
Ensure full depth of insulation between and over rafters extends to wall. Pack gap between rafter and wall with compressible insulation



Ensure insulation is installed tightly between rafters and is in contact with over-rafter insulation



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



**AIR BARRIER - CONTINUITY**

**CHECKLIST  
(TICK ALL)**



Seal all penetrations through air barrier using a flexible sealant



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

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Keep cavities clean of mortar snots and other debris during construction

Vapour permeable roof underlay to be used in strict accordance with approved third party certification

If required by BS 5250, use vapour control plasterboard or separate vapour control layer behind plasterboard

Use of over rafter insulation is considered best practice, as it eliminates the cold bridge caused by the rafter

Ensure cavity is closed with firestopping insulant or proprietary cavity barrier

Read this detail in conjunction with detail I-14: Eaves - Insulation between and over rafters - Unventilated Rafter Void

**OPTION  
(TICK ONE)**

**AIR BARRIER - OPTIONS**



Masonry inner leaf with wet-finish plaster, or



Masonry inner leaf with scratch coat, and finished with plasterboard, or



Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or



Airtightness membrane and tapes

THERMAL PERFORMANCE

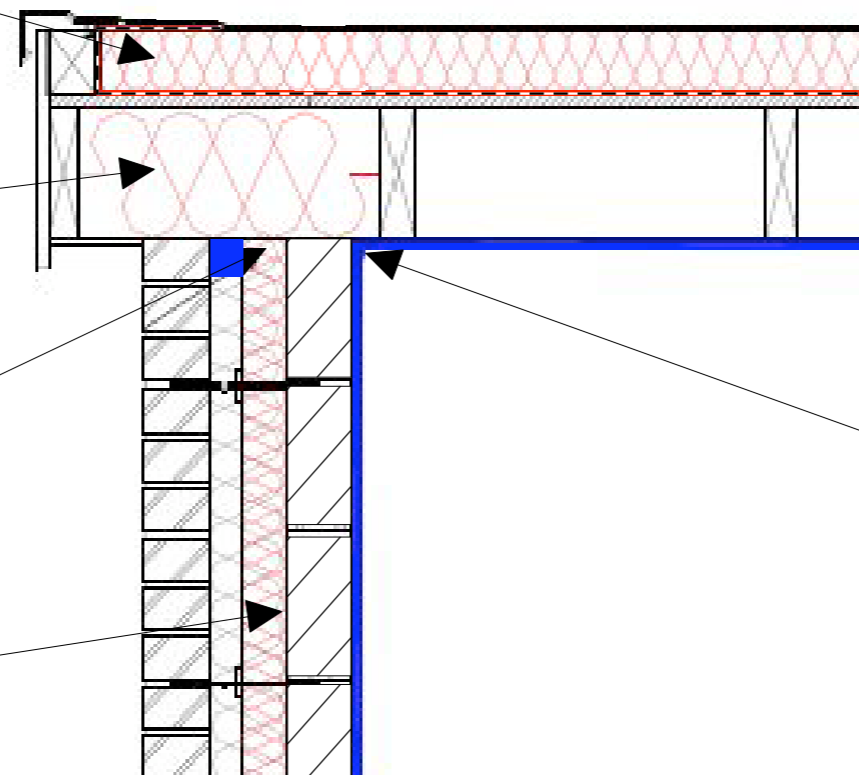
CHECKLIST (TICK ALL)

Ensure full depth of over roof insulation over joists extends to roof edge

Fit insulation over wall top within gable ladder. Fully fill void, ensuring that insulation is installed tightly between joists and is in contact with roof deck

Ensure wall top is level and that wall insulation is taken up level with wall top

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



Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1106 and Table K1 of DEAP 2006

AIR BARRIER - CONTINUITY

CHECKLIST (TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

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

Complying with checklist will help achieve design air permeability

GENERAL NOTES

Keep cavities clean of mortar snots and other debris during construction

BS5250 requires vapour control layer to be installed between deck and insulation

Turn up vapour control layer at edge of roof insulation, lap with roof waterproofing layer, and seal

Ensure cavity is closed with firestopping insulant or proprietary cavity barrier

OPTION (TICK ONE)

AIR BARRIER - OPTIONS

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

**THERMAL PERFORMANCE**

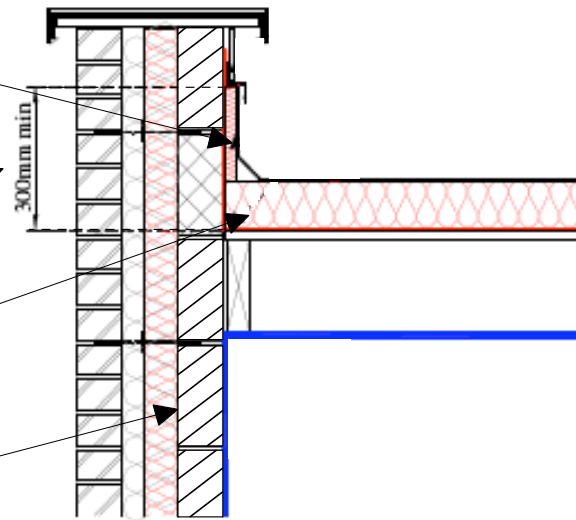
CHECKLIST  
(TICK ALL)

Insulation upstand having a minimum R-value of 0.75 m<sup>2</sup> K/W (in heat flow direction perpendicular to wall surface) around parapet

300 mm minimum between top of insulation upstand and bottom of horizontal roof insulation

Ensure roof insulation tightly abuts inner face of parapet wall

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



**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

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

*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Thermal performance of junction can be improved significantly by using blockwork with a thermal conductivity of  $\leq 0.20$  W/mK in direction of heat flow in external wall at roof level or alternatively by extending insulation vertically up internal face of parapet wall to a height of 450 mm.

Keep cavities clean of mortar snots and other debris during construction BS5250 requires vapour control layer to be installed between deck and insulation

Turn up vapour control layer at edge of roof insulation, lap with roof waterproofing layer, and seal

Where different block materials are being used consideration should be given to avoid cracking in plaster at the junction between the block materials

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

Airtightness membrane and tapes

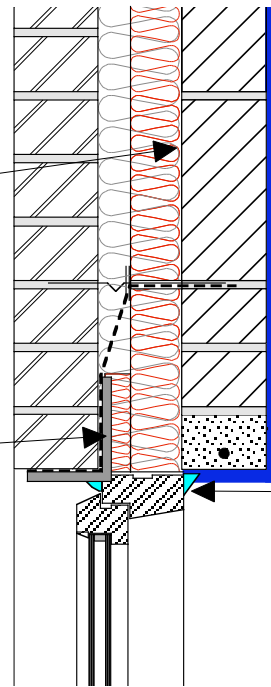
**THERMAL PERFORMANCE**

CHECKLIST  
(TICK ALL)

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

Stainless Steel angle to support outer leaf

*Complying with checklist qualifies builder to claim  $\psi$  value in Appendix 2 of Acceptable Construction Details Introduction document*



**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

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

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Keep cavities clean of mortar snots and other debris during construction

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes



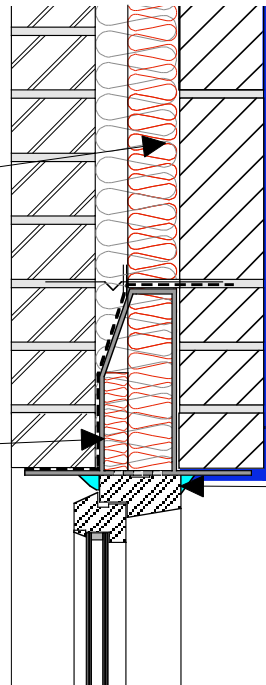
**THERMAL PERFORMANCE**

CHECKLIST  
(TICK ALL)

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

Stainless steel lintel with perforated base plate. Base plate thermal conductivity not exceeding 30 W/mK. Thickness of lintel material no more than 3mm

*Complying with checklist qualifies builder to claim  $\psi$  value in Appendix 2 of Acceptable Construction Details Introduction document*



**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

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

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Keep cavities clean of mortar spots and other debris during construction

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

**THERMAL PERFORMANCE**

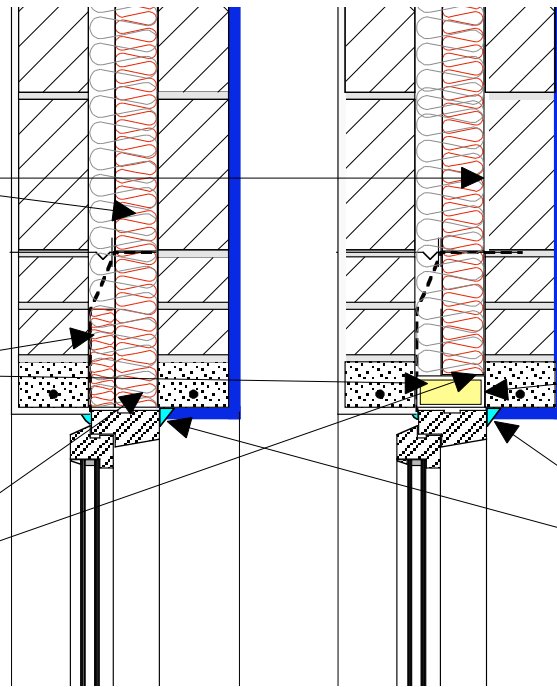
CHECKLIST  
(TICK ALL)

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

Install proprietary cavity closer or block of insulation with path of minimum thermal resistance through the closer of not less than 0.45 m<sup>2</sup> K/W (manufacturers certified data)

Ensure all gaps around and between lintels are tightly packed with insulation

*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*



**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

If forming the air barrier to the walls with a blockwork inner leaf or a scratch coat on blocks, install a flexible sealant between the cavity closer and blockwork wall

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

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Keep cavities clean of mortar snots and other debris during construction

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

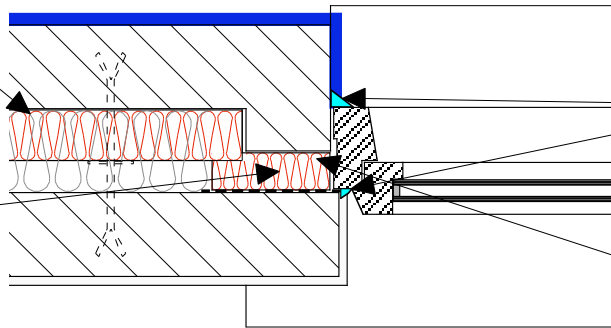
Airtightness membrane and tapes

**THERMAL PERFORMANCE**

CHECKLIST  
(TICK ALL)

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

Install proprietary cavity closer or block of insulation with path of minimum thermal resistance through the closer of not less than 0.45m<sup>2</sup> K/W (manufacturer's certified data)



**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

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

If a proprietary cavity closer is used, when forming the air barrier to the walls with a blockwork inner leaf or a scratch coat on blocks, install a flexible sealant between the cavity closer and blockwork wall

*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Keep cavities clean of mortar snots and other debris during construction

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

Masonry inner leaf with wet-finish plaster, or

Masonry inner leaf with scratch coat, and finished with plasterboard, or

Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or

Airtightness membrane and tapes

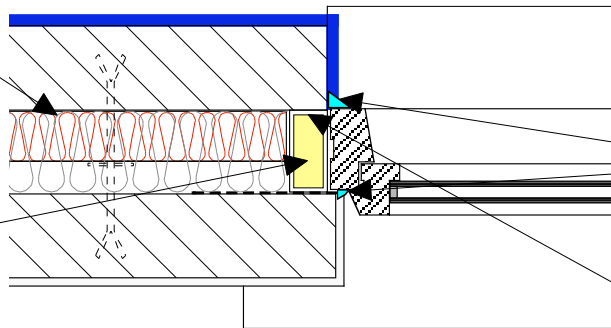
**THERMAL PERFORMANCE**

CHECKLIST  
(TICK ALL)

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

Install proprietary cavity closer or block of insulation with path of minimum thermal resistance through the closer of not less than 0.45m<sup>2</sup> K/W (manufacturer's certified data)

*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*



**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

Seal all penetrations through air barrier using a flexible sealant

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

If forming the air barrier to the walls with a blockwork inner leaf or a scratch coat on blocks, install a flexible sealant between the cavity closer and blockwork wall

*Complying with checklist will help achieve design air permeability*

**GENERAL NOTES**

Keep cavities clean of mortar spots and other debris during construction

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes

**THERMAL PERFORMANCE**

CHECKLIST  
(TICK ALL)

Install proprietary cavity closer or block of insulation with path of minimum thermal resistance through the closer of not less than 0.45m<sup>2</sup> K/W (manufacturer's certified data)

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

*Complying with checklist qualifies builder to claim  $\psi$  value in Table 3 of IP 1/06 and Table K1 of DEAP 2006*

**AIR BARRIER - CONTINUITY**

CHECKLIST  
(TICK ALL)

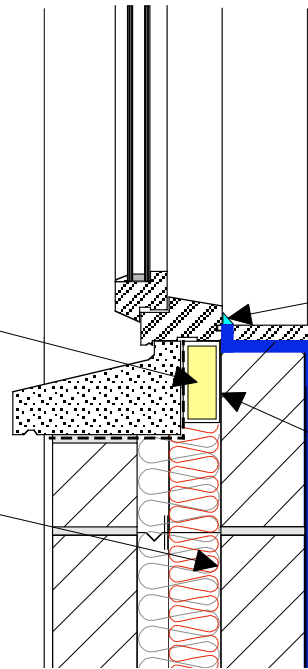
Seal all penetrations through air barrier using a flexible sealant

Apply flexible sealant to junctions between plaster/plasterboard and sill board, and between sill board and window frame

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

If forming the wall air barrier with a blockwork inner leaf or with scratch coat on blockwork, install a flexible sealant between the cavity closer and blockwork wall

*Complying with checklist will help achieve design air permeability*



**GENERAL NOTES**

Keep cavities clean of mortar snots and other debris during construction

OPTION  
(TICK ONE)

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Inner leaf with plasterboard on dabs, with continuous ribbon of adhesive tape around all openings, along top and bottom of wall, and at internal and external corners, or
- Airtightness membrane and tapes