INTRODUCTION

The details in this section have been developed for a range of partial and full fill cavity wall construction to support TGD L 2021. 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 material 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 in-situ 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 construction depends on the site exposure and nature of the outer leaf. Further information is given in the BR 262 "Thermal Insulation: Avoiding Risks" 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.

This set of details shows cavity wall insulation used in combination with internal insulation. The cavity wall details can also be used without the addition of internal insulation to achieve the construction described in Table D1. The air barrier detail apply in all cases.

In these details red insulation hatch pattern indicates partial and/or internal insulation and the gray insulation hatch pattern indicates full fill insulation as appropriate.

Insulation hatching is indicative and represents appropriate insulation materials depending on location and application as specified.

Where these details are used for the Target U-values and construction described in Table D1 of TGD L 2021 the psi values published in Table D1 may be used to calculate the actual Thermal Bridging heat loss for a dwelling for the key thermal bridging junctions in that dwelling.

Technical Guidance Document B and Supplementary Guidance to TGD B provides guidance in relation to the provision of cavity barriers in air cavities, cavity barriers within combustible insulation layers and fire protection of structural elements.

The 2021 edition of the ACDs updates the drawings in the 2011 ACDs to include internal insulation which was previously provided for in the text. The performance requirements of the 2021 ACDs remain the same as for the 2011 edition.
### Section 1 - Cavity Wall Insulation

<table>
<thead>
<tr>
<th>Junction detail</th>
<th>U-value = 0.18 W/m²K, 150mm full-fill or partial fill cavity, 200mm full-fill or partial fill cavity, W/m²K</th>
<th>U-value = 0.15 W/m²K, 150mm full-fill or partial fill cavity, 200mm full-fill or partial fill cavity, W/m²K</th>
<th>Target U-values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U-value (W/m²K)</td>
<td>ψ-value (W/m²K)</td>
<td>U-value (W/m²K)</td>
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</table>

### Appendix 2 Details

1. ψ values for a Target U-value for the wall of 0.18 W/m²K for the construction type specified. The U-values of the flanking elements to the wall can vary from the flanking element target U-value as follows: Pitched roof insulation on slope, insulation on ceiling = 0.13 to 0.16 W/m²K; Flat Roof = 0.16 to 0.20 W/m²K; Ground Floor = 0.16 to 0.21 W/m²K.

2. ψ values for a Target U-value for the wall of 0.15 W/m²K can be used for a range of U-values from 0.12 W/m²K to 0.17 W/m²K for the construction type specified. The U-values of the flanking elements to the wall can vary from the flanking element target U-value as follows: Pitched roof insulation on slope, insulation on ceiling 0.11 to 0.16 W/m²K; Flat Roof = 0.11 to 0.17 W/m²K; Ground Floor = 0.12 to 0.18 W/m²K.

3. Where two building elements have one U-value above its target while the other is below its target U-value, the aggregate percentage change from the respective target U-values in the table should not exceed ±20 % for the Ψ (ψ) value to be valid, i.e. if for the 0.15 U-value wall, if the U-value was increased by 10 % above the wall target U-value (from 0.15 to 0.165), then the roof U-value could be at most 10 % below the roof target U-value (from 0.14 to 0.126), because the aggregate change would then be 20 %.

4. This is an externally supported balcony (the balcony slab is not a continuation of the floorslab) where the wall insulation is continuous and not bridged by the balcony slab.

5. Value of Ψ is applied to each dwelling.

6. Psi value is for whole junction. Half the value should be applied to each dwelling on either side of the junction.
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

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

Refer to Technical Guidance Document Part C for details on radon protection

<table>
<thead>
<tr>
<th>OPTION (TICK ONE)</th>
<th>AIR BARRIER - OPTIONS</th>
</tr>
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<tbody>
<tr>
<td>□ Masonry inner leaf with wet-finish plaster, or</td>
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<tr>
<td>□ Masonry inner leaf with scratch coat, and finished with plasterboard, or</td>
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<tr>
<td>□ Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or</td>
<td></td>
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<tr>
<td>□ Airtightness membrane and tapes</td>
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</tbody>
</table>

Complying with checklist will help achieve design air permeability
**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 block with a maximum Thermal Conductivity of 0.20 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 as to avoid any effect of moisture on Thermal Conductivity
- 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 barriers with suitable air tightness tape or a flexible sealant
- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant

**GENERAL NOTES**

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

Refer to Technical Guidance Document Part C for details on radon protection

**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
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive 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 minimum R-value of 1.0 m²K/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 barriers with suitable air tightness tape or a flexible sealant
- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant

**GENERAL NOTES**

- The wall insulation installed below the wall DPC must be fit for purpose with regards to water absorption
- Refer to Technical Guidance Document Part C for details on radon protection

**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
  Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes
### THERMAL PERFORMANCE

- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall
- Install perimeter insulation with a minimum R-value of 1.0 m²K/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 0.20 W/mK in the direction of heat flow is used and that block is suitable for use in foundations

### AIR BARRIER - CONTINUITY

- Seal between wall and floor air barriers with suitable air tightness tape or a flexible sealant
- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant

### GENERAL NOTES

- The wall insulation installed below the wall DPC must be fit for purpose with regards to water absorption
- Refer to Technical Guidance Document Part C for details on radon protection

### OPTION (TICK ONE)

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

### AIR BARRIER - OPTIONS

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive 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)**

1. Secure partial fill insulation firmly against inner leaf
2. Pack gap between floor joist and blockwork wall with compressible insulation with a minimum R-value of 0.63 m²/KW
3. Ensure wall insulation is installed at least 200 mm below top of floor insulation
4. Ensure insulation is in contact with underside of timber flooring. Fix with netting, breather membrane or retaining batten below floor insulation

### AIR BARRIER - CONTINUITY
**CHECKLIST (TICK ALL)**

1. Seal between wall and floor air barriers with suitable air tightness tape or a flexible sealant
2. Seal joints in timber floor with suitable glue. Fully support and fix any square edge joints in the decking to the joists
3. Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant
4. Provide similar air seals at all internal partitions

### GENERAL NOTES
- Thermal performance of junction can be improved significantly by using blockwork with a thermal conductivity of \( \leq 0.20 \text{ W/mK} \) 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
- Refer to Technical Guidance Document Part C for details on sub-floor ventilation

### AIR BARRIER - OPTIONS
**OPTION (TICK ONE)**

1. Masonry inner leaf with wet-finish plaster, or
2. Masonry inner leaf with scratch coat, and finished with plasterboard, or
   - Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
3. Airtightness membrane and tapes

Complying with checklist will help achieve design air permeability
### 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.

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### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**

- Seal between the wall air barrier and the top and underside of the floor slab with suitable airtightness tape or a flexible sealant. (Dotted blue line is notional, to depict the air barrier continuity through floor zone)
- Ensure continuous mortar bed between floor slab and top of blockwork wall
- Seal all penetrations through air barrier with suitable airtightness tape, grommets or flexible sealant

**Complying with checklist will help achieve design air permeability**

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### GENERAL NOTES

**OPTION (TICK ONE)**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
  - Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes
### THERMAL PERFORMANCE

**CHECKLIST**

<table>
<thead>
<tr>
<th>THERMAL PERFORMANCE</th>
<th>AIR BARRIER - CONTINUITY</th>
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<tbody>
<tr>
<td>Ensure partial fill insulation is secured firmly against inner leaf of cavity wall</td>
<td>Seal between the wall air barrier and the top and underside of the floor slab with suitable airtightness tape or a flexible sealant. (Dotted blue line is notional, to depict the air barrier continuity through floor zone)</td>
</tr>
<tr>
<td>Continue cavity wall insulation across floor abutment zone. (Use appropriate material where cavity barrier or full-fill insulation is employed)</td>
<td>Ensure continuous mortar bed between floor slab and top of blockwork wall</td>
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<td>Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant</td>
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</table>

### GENERAL NOTES

- Refer to Technical Guidance Document E for guidance on sound insulation in separating floors
- Refer to Technical Guidance Document Part B for guidance on cavity barriers

### OPTION

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes
(1) WALLS: INSULATION IN CAVITY

Timber Intermediate Floor Within A Dwelling

DETAIL 1.05, 2021

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.

AIR BARRIER - CONTINUITY

CHECKLIST
(TICK ALL)

Seal between the wall air barrier with suitable air tightness tape, above and below the floor assembly

Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant

Mortar joints around built-in joists should be carefully pointed with flexible sealant or

Joists may be fitted with proprietary shoes as they are installed. Seal shoe to blockwork face with a flexible sealant

Note: Dotted blue line is notional, to depict continuity of air barrier through floor

Complying with checklist will help achieve design air permeability

GENERAL NOTES

Timber floor joist may be laid in joist hangers rather than built in

Where wall supports joist, 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.)

Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures

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

Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or

Airtightness membrane and tapes
### TIMBER SEPARATING FLOOR BETWEEN DWELLINGS

#### THERMAL PERFORMANCE

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<tbody>
<tr>
<td>Ensure partial fill insulation is secured firmly against inner leaf of cavity wall</td>
</tr>
<tr>
<td>Continue cavity wall insulation across floor abutment zone. (Use appropriate material where cavity barrier or full-fill insulation is employed)</td>
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</tbody>
</table>

#### AIR BARRIER - CONTINUITY

<table>
<thead>
<tr>
<th>CHECKLIST (TICK ALL)</th>
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<tbody>
<tr>
<td>Seal between the wall air barrier with suitable air tightness tape, above and below the floor assembly</td>
</tr>
<tr>
<td>Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant</td>
</tr>
<tr>
<td>Mortar joints around built-in joists should be carefully pointed with flexible sealant or joists may be fitted with proprietary shoes as they are installed. Seal shoe to blockwork face with a flexible sealant</td>
</tr>
</tbody>
</table>

#### GENERAL NOTES

- Timber floor joists may be laid in joist hangers rather than built in
- Where wall supports joist, thermal performance and airtightness of junction can be improved significantly by using joist hangers with shoes standing off the wall face
- Refer to Technical Guidance Document E for guidance on sound insulation in separating floors
- 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.)
- Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures

#### OPTION (TICK ONE)

<table>
<thead>
<tr>
<th>AIR BARRIER - OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masonry inner leaf with wet-finish plaster, or</td>
</tr>
<tr>
<td>Masonry inner leaf with scratch coat, and finished with plasterboard, or</td>
</tr>
<tr>
<td>Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or</td>
</tr>
<tr>
<td>Airtightness membrane and tapes</td>
</tr>
</tbody>
</table>

Complying with checklist will help achieve design air permeability
### (1) WALLS: INSULATION IN CAVITY

**Masonry Solid and Cavity Separating Wall**

**DETAIL 1.06.1 + 106.2, 2021**

**THERMAL PERFORMANCE**

**CHECKLIST**

(Tick All)

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

- 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 with suitable air tightness tape, grommets or flexible sealant

- Continue air barrier on separating wall

**Complying with checklist will help achieve design air permeability**

**GENERAL NOTES**

Refer to Technical Guidance Document E for guidance on sound insulation

Refer to Technical Guidance Document B for guidance on cavity barriers

Read this detail in conjunction with detail G.01.1 and G.01.2, 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

- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or

- Airtightness membrane and tapes
THERMAL PERFORMANCE

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

Continue cavity wall insulation across abutment zone

AIR BARRIER - CONTINUITY

Seal between air barrier on external wall and the blockwork, to the partition wall with suitable airtightness tape. (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 with suitable air tightness tape, grommets or flexible sealant

GENERAL NOTES

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

AIR BARRIER - OPTIONS

Masonry inner leaf with wet-finish plaster, or

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

Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or

Airtightness membrane and tapes
**THERMAL PERFORMANCE**

<table>
<thead>
<tr>
<th>CHECKLIST (TICK ALL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure partial fill insulation is secured firmly against inner leaf of cavity wall</td>
</tr>
<tr>
<td>Continue cavity wall insulation across abutment zone</td>
</tr>
</tbody>
</table>

**AIR BARRIER - CONTINUITY**

<table>
<thead>
<tr>
<th>CHECKLIST (TICK ALL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install external air barrier before stud; or install barrier before partition lining and seal all gaps between air barrier and stud with suitable airtightness tape. (Dotted blue line depicts air barrier continuity through partition stud member)</td>
</tr>
<tr>
<td>Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant</td>
</tr>
</tbody>
</table>

**GENERAL NOTES**

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)**

<table>
<thead>
<tr>
<th>AIR BARRIER - OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masonry inner leaf with wet-finish plaster, or</td>
</tr>
<tr>
<td>Masonry inner leaf with scratch coat, and finished with plasterboard, or</td>
</tr>
<tr>
<td>Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or</td>
</tr>
<tr>
<td>Airtightness membrane and tapes</td>
</tr>
</tbody>
</table>
Eaves - Unventilated Attic

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 vapour permeable underlay is completely filled with insulation having a minimum R-value across the insulation thickness of 3.00 m²K/W
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall.

Note: Detail is indicative for thermal purposes. Where continuity of insulation is maintained throughout the junction, alternative structural design may be used.

AIR BARRIER - CONTINUITY

CHECKLIST
(TICK ALL)

- Fix ceiling first and seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant
- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant

Complying with checklist will help achieve design air permeability

GENERAL NOTES

Use of over joist insulation eliminates the cold bridge caused by the joist
Use vapour permeable roof underlay in accordance with third party certification
Eaves insulation must not hinder free water drainage below the tiling battens
Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures
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
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive 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 minimum R-value across the insulation thickness of 3.00 m²K/W
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall.

**Note:** Detail is indicative for thermal purposes. Where continuity of insulation is maintained throughout the junction, alternative structural design may be used.

### GENERAL NOTES

- Thermal performance of junction can be improved by incorporating an eaves wind barrier (plywood, OSB, softboard or other suitable material) shown dotted
- Use of over joist insulation eliminates the cold bridge caused by the joist
- Use a proprietary eaves ventilator to ensure ventilation in accordance with Technical Guidance Document F. Installation of the eaves ventilator must not prevent free water drainage below the tiling battens
- Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures
- Read this detail in conjunction with detail 1.15, Roof at Attic Floor Level

### AIR BARRIER - CONTINUITY

#### CHECKLIST (TICK ALL)

- Fix ceiling first and seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant
- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant
- Bed wall plate on continuous mortar bed

Complying with checklist will help achieve design air permeability

### AIR BARRIER - OPTIONS

#### (TICK ONE)

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes
1.11.1 Unventilated Eaves

1.11.2 Unventilated Dormer

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

Use of over joist and under rafter insulation eliminates the cold bridge caused by the joist/rafter.

Ensure gap between wall plate and vapour permeable underlay is completely filled with insulation having a minimum R-value across the insulation thickness of 4.0 m²K/W.

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

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

Ensure continuity of insulation throughout junction.

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

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

Read this detail in conjunction with detail 1.16, Gable - Unventilated Rafter Void.

**GENERAL NOTES**

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

Installation of the eaves insulation must not prevent free water drainage below the tiling battens.

Use of over joist and under rafter insulation eliminates the cold bridge caused by the joist/rafter.

Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures.

An effective vapour control layer, which may serve as an air barrier, should be provided on the warm side of the insulation in accordance with Appendix B of Technical Guidance Document L.

Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures.

**OPTION (TICK ONE)**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

**AIR BARRIER - OPTIONS**

- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant
- Seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant
- Full-depth nogging installed between ceiling joists to carry air barrier through ceiling zone, sealed to air barrier in roof with flexible sealant or airtight tape
- Complying with checklist will help achieve design air permeability
### THERMAL PERFORMANCE

- Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation.
- Ensure continuity of insulation throughout junction.
- Ensure gap between wall plate and proprietary eaves vent is completely filled with insulation having a minimum R-value across the insulation thickness of 4.00 m²K/W.
- Ensure full depth of insulation between and over joists abuts eaves insulation.
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall.

### GENERAL NOTES

Thermal performance of junction can be improved by incorporating an eaves wind barrier (plywood, OSB, softboard or other suitable material).

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

Use of over joist and under rafter insulation eliminates the cold bridge caused by the joist/rafter.

An effective vapour control layer, which may serve as an air barrier, should be provided on the warm side of the insulation in accordance with Appendix B of Technical Guidance Document L.

Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures.

Read this detail in conjunction with detail 1.17, Gable - Ventilated Rafter Void.

### AIR BARRIER - CONTINUITY

- Full-depth nogging installed between ceiling joists to carry air barrier through ceiling zone, sealed to air barrier in roof with flexible sealant or airtight tape.
- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant.
- Seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant.

Complying with checklist will help achieve design air permeability.

### AIR BARRIER - OPTIONS

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes.
Thermal performance of junction can be improved by incorporating an eaves wind barrier (plywood, OSB, softboard or other suitable material) shown dotted.

**Eaves - Insulation Between and Under Rafters - Ventilated Rafter Void - Pitched Ceiling**

**THERMAL PERFORMANCE**

- Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation
- Ensure continuity of insulation throughout junction
- 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 minimum R-value across the insulation thickness of 4.0 m²K/W
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall.

**AIR BARRIER - CONTINUITY**

- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant
- Seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant

**GENERAL NOTES**

Thermal performance of junction can be improved by incorporating an eaves wind barrier (plywood, OSB, softboard or other suitable material) shown dotted.

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

An effective vapour control layer, which may serve as an air barrier, should be provided on the warm side of the insulation in accordance with Appendix B of Technical Guidance Document L.

Use of over joist and under rafter insulation eliminates the cold bridge caused by the joist/rafter.

Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures.

Read this detail in conjunction with detail 1.17, Gable - Ventilated Rafter Void.

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes
### Eaves - Insulation Between and Over Rafters - Unventilated Rafter Void - Dormer

**THERMAL PERFORMANCE**

- Ensure continuity of insulation throughout junction
- Ensure insulation is installed tightly between rafters and is in contact with over-rafter insulation
- Ensure gap between wall plate and vapour permeable underlay is completely filled with insulation having a minimum R-value across the insulation thickness of 4.0 m²K/W
- Ensure full depth of insulation between and over rafters abuts eaves insulation
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall.

**AIR BARRIER - CONTINUITY**

- Full-depth nogging installed between ceiling joists to carry air barrier through ceiling zone, sealed to air barrier in roof with flexible sealant or airtight tape
- Seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant
- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant

**GENERAL NOTES**

- Vapour permeable roof underlay to be used in accordance with approved third party certification
- Use of over rafter insulation eliminates the cold bridge caused by the rafter
- Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures
- An effective vapour control layer, which may serve as an air barrier, should be provided on the warm side of the insulation in accordance with Appendix B of Technical Guidance Document L
- Read this detail in conjunction with detail 1.18, Gable - Insulation Between and Over Rafters - Unventilated Rafter Void

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes
**Ventilated Roof - Attic Floor Level**

**THERMAL PERFORMANCE**

- Continue wall insulation 1 meter above ceiling level.
- 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. Minimum R-value of 1.5 m$^2$K/W.
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall.

**AIR BARRIER - CONTINUITY**

- Fix ceiling first and seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant.
- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant.

**GENERAL NOTES**

Thermal performance of junction can be improved significantly by using blockwork with a thermal conductivity of ≤ 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 m$^2$K/W vertically up internal face of gable wall to a height of 450mm above ceiling level.

Use of over joist insulation eliminates the cold bridge caused by the joist.

Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures.

Read this detail in conjunction with details 1.09, Eaves - Ventilated Attic, or 1.10, Eaves - Unventilated Attic, as appropriate.

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes.
<table>
<thead>
<tr>
<th>THERMAL PERFORMANCE CHECKLIST (TICK ALL)</th>
<th>AIR BARRIER - CONTINUITY CHECKLIST (TICK ALL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fit insulation over top of wall within gable ladder with a minimum R-value of 4.35 m²K/W</td>
<td>Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant</td>
</tr>
<tr>
<td>Ensure insulation continuity throughout junction</td>
<td>Seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant</td>
</tr>
<tr>
<td>Ensure top of wall is levelled with mortar to correct pitch, and that wall insulation is taken up level with wall top</td>
<td>Complying with checklist will help achieve design air permeability</td>
</tr>
<tr>
<td>Pack gap between rafter and wall with compressible insulation</td>
<td></td>
</tr>
<tr>
<td>Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation</td>
<td></td>
</tr>
<tr>
<td>Ensure partial fill insulation is secured firmly against inner leaf of cavity wall</td>
<td></td>
</tr>
</tbody>
</table>

**GENERAL NOTES**

Use vapour permeable roof underlay in accordance with third party certification

Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures

An effective vapour control layer, which may serve as an air barrier, should be provided on the warm side of the insulation in accordance with Appendix B of Technical Guidance Document L

Read this detail in conjunction with detail 1.11, 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
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes
**Gable - Insulation Between and Under Rafters**

- **Ventilated Rafter Void**

Use of under rafter insulation eliminates the cold bridge caused by the rafter.

Read this detail in conjunction with details 1.12, Eaves - Ventilated Rafter Void, or 1.13, Eaves - Ventilated Rafter Void - Pitched Ceiling, as appropriate.

### THERMAL PERFORMANCE

**CHECKLIST (TICK ALL)**

- Fit insulation over top of wall within gable ladder with a minimum R-value across the thickness of 4.35 m²K/W
- Maintain 50mm ventilated void above insulation
- Ensure insulation continuity throughout junction
- Ensure top of wall is levelled with mortar to correct pitch, and that wall insulation is taken up level with wall top
- 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 with suitable airtightness tape, grommets or flexible sealant
- Seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant

### AIR BARRIER - OPTIONS

**OPTION (TICK ONE)**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

### GENERAL NOTES

- Use a proprietary eaves ventilator to ensure ventilation in accordance with Technical Guidance Document F. Installation of the eaves ventilator must not prevent free water drainage below the tiling battens
- An effective vapour control layer, which may serve as an air barrier, should be provided on the warm side of the insulation in accordance with Appendix B of Technical Guidance Document L
- Use of under rafter insulation eliminates the cold bridge caused by the rafter
- Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures
- Read this detail in conjunction with details 1.12, Eaves - Ventilated Rafter Void, or 1.13, Eaves - Ventilated Rafter Void - Pitched Ceiling, as appropriate

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*Complying with checklist will help achieve design air permeability*
**THERMAL PERFORMANCE CHECKLIST (TICK ALL)**

- Fit insulation over top of wall within gable ladder with a minimum R-value across the thickness of 2.17 m²K/W
- 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
- 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

**GENERAL NOTES**

- Vapour permeable roof underlay to be used in accordance with approved third party certification
- Use of over rafter insulation eliminates the cold bridge caused by the rafter
- An effective vapour control layer, which may serve as an air barrier, should be provided on the warm side of the insulation in accordance with Appendix B of Technical Guidance Document L
- Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures
- Read this detail in conjunction with detail 1.14, Eaves - Insulation between and over rafters - Unventilated Rafter Void

**OPTION (TICK ONE)**

- Masonry inner leaf with湿-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

**AIR BARRIER - CONTINUITY CHECKLIST (TICK ALL)**

- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant
- Seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

**Complying with checklist will help achieve design air permeability**
(1) WALLS: INSULATION IN CAVITY

**THERMAL PERFORMANCE**

**CHECKLIST (TICK ALL)**

- Ensure full depth of over deck insulation extends to roof edge
- Fully fill void between top of wall and underside of roof deck with a minimum R-value across the thickness of 5.00 m²K/W
- 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

**AIR BARRIER - CONTINUITY**

**CHECKLIST (TICK ALL)**

- Fix ceiling first and seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant
- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant

**COMPLIANCE**

Complying with checklist will help achieve design air permeability

**GENERAL NOTES**

BS 5250:2011 + A1:2016 provides for a high performance vapour barrier to be laid above the deck, turned up at perimeter of the insulation and sealed to weathering membrane.

An effective vapour control layer, which may serve as an air barrier, should be provided on the warm side of the insulation in accordance with Appendix B of Technical Guidance Document L

Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures

**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
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes
(1) WALLS: INSULATION IN CAVITY

**Flat Roof - Parapet**

**THERMAL PERFORMANCE**

**CHECKLIST (TICK ALL)**

- Insulation upstand having a minimum R-value of 1.10 m²K/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 with suitable air tightness tape, grommets or flexible sealant
- Fix ceiling first and seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant

**GENERAL NOTES**

- BS 5250:2011 + A1:2016 provides for a high performance vapour barrier to be laid above the deck, turned up at perimeter of the insulation and sealed to weathering membrane
- An effective vapour control layer, which may serve as an air barrier, should be provided on the warm side of the insulation in accordance with Appendix B of Technical Guidance Document L
- Refer to Technical Guidance Document B and Supplementary Guidance to TGD B for guidance on cavity barriers and fire protection of structures

**OPTION (TICK ONE)**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

**AIR BARRIER - OPTIONS**

- Complying with checklist will help achieve design air permeability
### (1) WALLS: INSULATION IN CAVITY

#### THERMAL PERFORMANCE

- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall
- Continue insulation to width of the cavity
- Stainless Steel angle to support outer leaf

#### AIR BARRIER - CONTINUITY

- Seal all penetrations through air barriers with suitable air tightness tape, grommets or a flexible sealant
- Ensure air barrier continuity between the window/door frame and the wall air barrier

### GENERAL NOTES

#### OPTION

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive 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 insulation to width of the cavity
- Stainless steel lintel with perforated base plate. Base plate thermal conductivity not exceeding 7 W/mK. Thickness of lintel material no more than 3mm

**AIR BARRIER - CONTINUITY CHECKLIST (TICK ALL)**

- Seal all penetrations through air barriers with suitable air tightness tape, grommets or a flexible sealant
- Ensure air barrier continuity between the window/door frame and the wall air barrier

**GENERAL NOTES**

**AIR BARRIER - OPTIONS**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

Complying with checklist will help achieve design air permeability.
Ensure partial fill insulation is secured firmly against inner leaf of cavity wall

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

Install proprietary cavity closer with path of minimum thermal resistance through the closer of not less than 4.29 m²K/W (manufacturers certified data)

THERMAL PERFORMANCE CHECKLIST (TICK ALL)

1. Ensure partial fill insulation is secured firmly against inner leaf of cavity wall.
2. Ensure all gaps around and between lintels are tightly packed with insulation.
3. Install proprietary cavity closer with path of minimum thermal resistance through the closer of not less than 4.29 m²K/W (manufacturers certified data).

AIR BARRIER - CONTINUITY

Seal all penetrations through air barriers with suitable air tightness tape, grommets or a flexible sealant.

Ensure air barrier continuity between the window/door frame and the wall air barrier.

Complying with checklist will help achieve design air permeability.

GENERAL NOTES

Masonry inner leaf with wet-finish plaster, or

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

Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or

Airtightness membrane and tapes.

AIR BARRIER - OPTIONS

(TICK ONE)

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes.

DETAIL 1.23.1 + 1.23.2, 2021

Ope - Pre-stressed Concrete Lintels
### 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 2.40 m²K/W (manufacturers certified data)

### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**

- 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 airtightness tape between the cavity closer and blockwork wall
- Ensure air barrier continuity between the window/door frame and the wall air barrier
- Seal all penetrations through air barriers with suitable airtightness tape, grommets or a flexible sealant

### GENERAL NOTES

**OPTION (TICK ONE)**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
  Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

Complying with checklist will help achieve design air permeability.
(1) WALLS: INSULATION IN CAVITY

**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 4.30 m²K/W (manufacturers certified data).

**AIR BARRIER - CONTINUITY**

**CHECKLIST (TICK ALL)**

- Ensure air barrier continuity between the window/door frame and the wall air barrier.
- Seal all penetrations through air barriers with suitable air tightness tape, grommets or a flexible sealant.

**GENERAL NOTES**

**OPTION (TICK ONE)**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
  - Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes.

Complying with checklist will help achieve design air permeability.
### 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 2.90 m²K/W (manufacturers certified data)
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall

### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**

- Ensure air barrier continuity between the window and the wall air barrier line
- Seal all penetrations through air barriers with suitable air tightness tape, grommets or a flexible sealant

### GENERAL NOTES

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
- Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

Complying with checklist will help achieve design air permeability.
### (1) WALLS: INSULATION IN CAVITY

**Corner / Inverted Corner**

**DETAIL 1.27.1 + 1.27.2, 2021**

#### THERMAL PERFORMANCE

**CHECKLIST (TICK ALL)**

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

#### AIR BARRIER - OPTIONS

**OPTION (TICK ONE)**

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
  - Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

#### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**

Seal all penetrations through air barriers with suitable air tightness tape, grommets or a flexible sealant

#### GENERAL NOTES

Refer to Technical Guidance Document E for guidance on sound insulation

Refer to Technical Guidance Document B for guidance on cavity barriers

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

Complying with checklist will help achieve design air permeability
### Galvanised Steel Top Hat Lintel Detail
Bridging Masonry Cavity Wall

#### THERMAL PERFORMANCE

<table>
<thead>
<tr>
<th>Checklist (Tick All)</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure partial fill insulation is secured firmly against inner leaf of cavity</td>
<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>Ensure thickness of lintel material is not more than 3.2mm</td>
<td></td>
</tr>
<tr>
<td>Ensure lintel is fully insulated and does not have a base plate</td>
<td></td>
</tr>
</tbody>
</table>

#### AIR BARRIER - CONTINUITY

<table>
<thead>
<tr>
<th>Checklist (Tick All)</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure air barrier continuity between the window/door frame and the wall air barrier</td>
<td><img src="image" alt="Diagram" /></td>
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#### AIR BARRIER - OPTIONS

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<tr>
<th>Option (Tick One)</th>
<th>Diagram</th>
</tr>
</thead>
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<td>Masonry inner leaf with wet-finish plaster, or</td>
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</tr>
<tr>
<td>Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or</td>
<td></td>
</tr>
<tr>
<td>Airtightness membrane and tapes</td>
<td></td>
</tr>
</tbody>
</table>

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*Complying with checklist will help achieve design air permeability*
**Concrete Back Sill Detail (Insulation Below Wood Sill Section)**

### THERMAL PERFORMANCE CHECKLIST (TICK ALL)

- Install insulation under sill with a minimum R-value of 0.65 m²K/W
- Install perimeter insulation with a minimum R-value of 1.09 m²K/W
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall
- Install internal wall insulation with a minimum R-Value of 1.74 m²K/W

### AIR BARRIER - CONTINUITY CHECKLIST (TICK ALL)

- Ensure air barrier continuity between the window and the wall air barrier line
- Seal all penetrations through air barriers with suitable air tightness tape, grommets or a flexible sealant

### CHECKLIST (TICK ONE)

- **Masonry inner leaf with wet-finish plaster, or**
- **Masonry inner leaf with scratch coat, and finished with plasterboard, or**
  - Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- **Airtightness membrane and tapes**

### GENERAL NOTES

Complying with checklist will help achieve design air permeability.
### THERMAL PERFORMANCE

**CHECKLIST**
*(TICK ALL)*

- Ensure continuity of insulation throughout junction
- Ensure gap between wall plate and proprietary eaves vent is completely filled with insulation having a minimum R-value across the insulation thickness of 3.00 m²K/W
- Ensure full depth of insulation between and over joists abuts eaves insulation
- Ensure partial fill insulation is secured firmly against inner leaf of cavity wall.

*Note: Detail is indicative for thermal purposes. Where continuity of insulation is maintained throughout the junction, alternative structural design may be used.*

### GENERAL NOTES

- Masonry inner leaf with wet-finish plaster, or
- Masonry inner leaf with scratch coat, and finished with plasterboard, or
  - Insulated plasterboard system sealed to achieve appropriate air tightness, bedded on dabs and mechanically fixed, with continuous ribbon of adhesive around all openings, along top and bottom of wall and at internal and external corners, or
- Airtightness membrane and tapes

### AIR BARRIER - CONTINUITY

**CHECKLIST**
*(TICK ALL)*

- Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant
- Fix ceiling first and seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant

*Complying with checklist will help achieve design air permeability*