INTRODUCTION

The details within this section are valid for a range of timber frame wall thicknesses. Details are given for the junctions with a range of roof, ground floor and internal floor types, as well as at external wall opes.

A variety of structural forms can be adopted, with variables such as stud centres, double or single head plates. The form of structure influences thermal performance, and must be taken into account when using these details.

Insulation thicknesses for the main elements have not been provided as these depend on the thermal properties of the materials chosen together with the proposed U-value. Further variables are insulation and sheathing types, plasterboard type and thickness, internal linings and external cladding. Details are shown with a masonry outer leaf for simplification. Other cladding may be used without loss of thermal performance or increased technical risk subject to suitable detail. All materials and workmanship are to be installed to Technical Guidance Document D "Materials and workmanship".

These diagrams illustrate good practice for design and construction of interfaces only in respect to ensuring thermal performance and air barrier continuity. Other issues are not considered fully. The guidance must be implemented with due regard to all other Building Regulations requirements.

Where these details are used for the Target U-values and constructions described in Table D4 of TGD L 2021 the psi values published in Table D4 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.

Refer to I.S. 440 for requirements for materials, design, manufacture, construction details, site work and quality control for platform timber frame construction.

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.
### (4) TIMBER FRAME

**Table D4 - Section 4 - Timber Frame Construction vs Target U-values**

<table>
<thead>
<tr>
<th>Junction detail Identifier</th>
<th>Junction detail</th>
<th>U-value = 0.18 W/m²K. Insulation between studs 2, 3 (roof U = 0.16) (floor U = 0.18)</th>
<th>U-value = 0.15 W/m²K. Insulation between studs and internal insulation 2, 3 (roof U = 0.14) (floor U = 0.15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.051 0.021</td>
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<td></td>
<td></td>
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<tr>
<td>0.063 0.046</td>
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<td></td>
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<tr>
<td>-0.004 -0.015</td>
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<td>0.130 0.080</td>
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<td>0.193 0.132</td>
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<tr>
<td>0.118 0.149</td>
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<td></td>
</tr>
<tr>
<td>0.074 0.096</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 Psi (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.
**Ground Floor - Insulation Above Slab**

### THERMAL PERFORMANCE

**CHECKLIST (TICK ALL)**

- Floor slab perimeter insulation with a minimum R-value of 1.14 m²K/W
- Floor insulation must tightly abut sole plate inner face

### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**

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

### GENERAL NOTES

- 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
- If sole plates are packed to level, ensure any gaps are sealed
- Refer to Technical Guidance Document Part C for details on radon protection

### OPTION (TICK ONE)

**AIR BARRIER - OPTIONS**

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard

Complying with checklist will help achieve design air permeability.
**Ground Floor - Insulation Below Slab**

### THERMAL PERFORMANCE

- Floor slab perimeter insulation with a minimum R-value of 1.14 m²K/W
- Floor insulation must tightly abut concrete block inner face

### GENERAL NOTES

- 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
- If sole plates are packed to level, ensure any gaps are sealed
- Refer to Technical Guidance Document Part C for details on radon protection

### AIR BARRIER - OPTIONS

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard

### AIR BARRIER - CONTINUITY

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

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

Ensure insulation is in contact with underside of timber flooring. Fix with netting, breather membrane or retaining batten below floor insulation.

AIR BARRIER - CONTINUITY

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

GENERAL NOTES

If installing compressible insulation, provide full insulation depth between joists.
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.
Refer to Technical Guidance Document Part C for details on sub-floor ventilation.

AIR BARRIER - OPTIONS

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard.
### General Notes

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.

### Airtightness Membrane and Tapes, or

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
<table>
<thead>
<tr>
<th>THERMAL PERFORMANCE CHECKLIST (TICK ALL)</th>
<th>AIR BARRIER - CONTINUITY CHECKLIST (TICK ALL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install insulation with a combined minimum R-value of 3.50 m²K/W horizontally through junction</td>
<td>Seal all penetrations through air barriers with suitable air tightness tape, grommets or a flexible sealant</td>
</tr>
<tr>
<td>Ensure air barrier continuity between upper and lower walls. (If routed outside structure, use breathable membrane)</td>
<td></td>
</tr>
</tbody>
</table>

**GENERAL NOTES**

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**

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard

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

Install insulation with a combined minimum R-value of 3.50 m²K/W horizontally through junction

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

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

### GENERAL NOTES

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

Refer to Technical Guidance Document E for guidance on sound requirements

### OPTION (TICK ONE)

- Airtightness membrane and tapes, or

- Internal lining, for example, plasterboard
**THERMAL PERFORMANCE**

- Pack between external wall studs with suitable firestopping insulation with a minimum R-value of 5.23 m²K/W
- Ensure insulation is tucked into corner studs

**AIR BARRIER - CONTINUITY**

- Ensure air barrier continuity between internal linings at corners
- Seal all penetrations through air barriers with suitable air tightness tape, grommets or a flexible sealant

**GENERAL NOTES**

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

Refer to Technical Guidance Document E for guidance on sound requirements

Read this detail in conjunction with detail 4.07, Separating Wall (section)
### THERMAL PERFORMANCE

**CHECKLIST (TICK ALL)**

1. Ensure full depth of insulation between, over (or below) joists extends to wall face

2. Pack compressible firestopping insulation between wall head members with a minimum R-value of 2.50 m²K/W

### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**

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

2. Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier

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### GENERAL NOTES

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

Refer to Technical Guidance Document E for guidance on sound requirements

Read this detail in conjunction with detail 4.06, Separating Wall (plan)

### OPTION (TICK ONE)

**AIR BARRIER - OPTIONS**

1. Airtightness membrane and tapes, or

2. Internal lining, for example, plasterboard
**THERMAL PERFORMANCE CHECKLIST (TICK ALL)**

Ensure insulation is tucked into the corner

**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 through partition wall zone

**GENERAL NOTES**

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 G.03, Partition Wall (head)

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

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
Eaves - Unventilated Roof Space

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

Ensure continuity of insulation throughout junction

Ensure gap between wall plate and vapour permeable underlay is completely filled with insulation having a minimum R-value across the insulation thickness of 2.00 m²K/W

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

Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier

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

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

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

Refer this detail in conjunction with detail 4.15, Gable - Attic Floor Level

Complying with checklist will help achieve design air permeability

OPTION

AIR BARRIER - OPTIONS

Airtightness membrane and tapes, or

Internal lining, for example, plasterboard
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 2.00 m K/W

Ensure continuity of insulation throughout junction

Airtightness membrane and tapes, or

Internal lining, for example, plasterboard

Complying with checklist will help achieve design air permeability

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

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 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

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 4.15, Gable - Attic Floor Level
Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation

Ensure full depth of insulation between and over joist abuts eaves 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 3.90 m²K/W

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

Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier

Full-depth nogging installed between ceiling joists to carry air barrier through ceiling zone, sealed to air barrier in roof with flexible sealant and airtight tape

Complying with checklist will help achieve design air permeability

Airtightness membrane and tapes, or

Internal lining, for example, plasterboard

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

Use a proprietary eaves ventilator to ensure ventilation in accordance with Technical Guidance Document F. Installation of 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

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 4.15, Gable - Attic Floor Level, and 4.17, Gable - Insulation between and under rafters - Ventilated Rafter Void
### Eaves - Insulation Between and Under Rafters - Unventilated Rafter Void - Dormer

**THERMAL PERFORMANCE**

- Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation
- Ensure full depth of insulation between and under rafter abuts eaves insulation
- Ensure continuity of insulation throughout junction
- Ensure gap between wall plate and vapour permeable underlay is completely filled with insulation having a minimum R-value across the insulation thickness of 3.90 m²K/W

### AIR BARRIER - CONTINUITY

- Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant
- Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier
- Full-depth nogging installed between ceiling joists to carry air barrier through ceiling zone, sealed to air barrier in roof with flexible sealant and airtight tape

### GENERAL NOTES

- 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
- Eaves insulation must not hinder free water drainage below 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
- 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 4.15, Gable - Attic floor level, and 4.17, Gable - Insulation Between and Under Rafters - Unventilated Rafter Void

### OPTION

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
**THERMAL PERFORMANCE**

<table>
<thead>
<tr>
<th>CHECKLIST (TICK ALL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation</td>
</tr>
<tr>
<td>Ensure continuity of insulation throughout junction</td>
</tr>
<tr>
<td>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</td>
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</tbody>
</table>

**AIR BARRIER - CONTINUITY**

<table>
<thead>
<tr>
<th>CHECKLIST (TICK ALL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant</td>
</tr>
<tr>
<td>Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier</td>
</tr>
</tbody>
</table>

**AIR BARRIER - OPTIONS**

<table>
<thead>
<tr>
<th>OPTION (TICK ONE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airtightness membrane and tapes, or</td>
</tr>
<tr>
<td>Internal lining, for example, plasterboard</td>
</tr>
</tbody>
</table>

**GENERAL NOTES**

- Thermal performance of junction can be improved by incorporating an eaves wind barrier (plywood, OSB, softboard or other suitable material).
- Use of under rafter insulation eliminates the cold bridge caused by the rafter.
- Use a proprietary eaves ventilator to ensure ventilation in accordance with Technical Guidance Document F. Installation of 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.
- 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 4.15, Gable - Attic Floor Level, and 4.16, Gable - Insulation between and under rafters - Ventilated Rafter Void.
**Eaves - Insulation Between and Over Rafters - Unventilated Rafter Void - Dormer**

### THERMAL PERFORMANCE

- Ensure insulation is installed tightly between rafters and is in contact with over-rafter insulation
- Ensure continuity of insulation throughout junction
- Ensure gap between top of wall plate and over rafter insulation is completely filled with insulation having a minimum R-value across the insulation thickness of 3.00 m²K/W

### AIR BARRIER - CONTINUITY

- Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant
- Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier
- Full-depth nogging installed between ceiling joists to carry air barrier through ceiling zone, sealed to air barrier in roof with flexible sealant and airtight tape

### 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 4.18, Gable - Insulation between and over rafters

### AIR BARRIER - OPTIONS

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
**THERMAL PERFORMANCE**

**CHECKLIST**

(TICK ALL)

Ensure full depth of insulation between and over ceiling joists extends to sheathing board

---

**GENERAL NOTES**

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

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 details 4.09, Ventilated Attic, or 4.10, Eaves - Unventilated Attic, as appropriate.

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**AIR BARRIER - CONTINUITY**

**CHECKLIST**

(TICK ALL)

- Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant
- Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier

Complying with checklist will help achieve design air permeability

---

**OPTION**

(TICK ONE)

**AIR BARRIER - OPTIONS**

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
**THERMAL PERFORMANCE CHECKLIST (TICK ALL)**

- Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation
- Ensure insulation continuity throughout junction
- Fit insulation over top of wall within gable ladder
- Ensure wall insulation is taken up level with top of wall

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

- Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant
- Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier

**GENERAL NOTES**

- Vapour permeable roof underlay to be used in accordance with approved third party certification
- 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 4.12, Eaves - Insulation Between and Under Rafters

**OPTION (TICK ONE)**

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
Gable - Insulation Between and Under Rafters
- Ventilated Rafter Void

Ensure insulation is installed tightly between rafters and is in contact with under-rafter insulation
Maintain 50 mm ventilated void above top of insulation
Fit insulation over top of wall within gable ladder
Ensure wall insulation is taken up level with top of wall
Ensure insulation continuity throughout junction

AIR BARRIER - CONTINUITY
Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant
Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier

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
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 4.11, Eaves - Insulation Between and Under Rafters

Airtightness membrane and tapes, or Internal lining, for example, plasterboard
### Gable - Insulation Between and Over Rafters - Unventilated Rafter Void

#### Thermal Performance Checklist

- Ensure insulation is installed tightly between rafters and is in contact with over-rafter insulation
- Install insulation with a minimum R-value 1.09 m²K/W over rafters
- Ensure insulation continuity throughout junction
- Fully fill void between outer leaf and top of rafter with compressible insulation
- Ensure wall insulation is taken up level with top of wall

#### Air Barrier - Continuity Checklist

- Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant
- Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier

### General Notes

- Vapour permeable roof underlay to be used in strict 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
- Refer to detail 4.14, Eaves - Insulation Between and Over Rafters

#### Option (Tick One)

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
### THERMAL PERFORMANCE

**CHECKLIST (TICK ALL)**

- Ensure wall insulation is installed level with, or above, top of roof insulation
- Ensure roof insulation tightly abuts inner face of the parapet wall

### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**

- Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant
- Ensure air barrier continuity between ceiling and wall vapour control layer/air barrier

### GENERAL NOTES

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

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
<table>
<thead>
<tr>
<th>THERMAL PERFORMANCE CHECKLIST (TICK ALL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure insulation with a minimum R-Value of 0.65 m²K/W returns into reveal</td>
</tr>
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<th>AIR BARRIER - CONTINUITY CHECKLIST (TICK ALL)</th>
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<tr>
<td>Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant</td>
</tr>
<tr>
<td>Ensure air barrier continuity between the window/door frame and the wall air barrier</td>
</tr>
</tbody>
</table>

**GENERAL NOTES**

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**

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard

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

**CHECKLIST (TICK ALL)**

Ensure insulation with a minimum R-Value of 0.65 m²K/W returns into reveal

### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**

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

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

### GENERAL NOTES

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**

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
**THERMAL PERFORMANCE CHECKLIST (TICK ALL)**

- Ensure insulation with a minimum R-Value of 0.65 m²K/W under window board
- Ensure insulation brought tight to underside of sill plate

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

- Seal all penetrations through air barrier with air tightness tape, grommets or a flexible sealant
- Ensure air barrier continuity between the window frame and the wall air barrier
- Apply external flexible seal around frame

**GENERAL NOTES**

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

Refer to I.S 440 for guidance on differential movement.

**OPTION (TICK ONE)**

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
**THERMAL PERFORMANCE**

Install edge insulation with a minimum R-value of 1.14 m²K/W

**GENERAL NOTES**

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

Refer to Technical Guidance Document E for guidance on sound requirements

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

**AIR BARRIER - CONTINUITY**

Complying with checklist will help achieve design air permeability

**AIR BARRIER - OPTIONS**

- Airtightness membrane and tapes, or
- Internal lining, for example, plasterboard
### Timber Frame Partition Wall Through Ground Floor

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

#### THERMAL PERFORMANCE

**CHECKLIST (TICK ALL)**
- Install edge insulation with a minimum R-value of 1.14 m²K/W

#### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**
- Ensure air barrier continuity between floor air barriers

#### AIR BARRIER - OPTIONS

**OPTION (TICK ONE)**
- Airtightness membranes and tapes, or
- Internal lining, for example, plasterboard