INTRODUCTION

The details in this section relate to partitions and separating or party walls. 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. They are applicable to all types of external wall construction.

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

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

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

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.

Technical Guidance Document B and Supplementary Guidance to TGD B provide guidance in relation to the provision of cavity barriers, fire stopping within combustible insulation layers and fire protection of structural elements.
1. $\psi$ values for a Target $U$-value for the wall of 0.18 \( \text{W/m}^2\text{K} \) 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 \( \text{W/m}^2\text{K} \); Flat Roof = 0.16 to 0.20 \( \text{W/m}^2\text{K} \); Ground Floor = 0.16 to 0.21 \( \text{W/m}^2\text{K} \).

2. $\psi$ values for a Target $U$-value for the wall of 0.15 \( \text{W/m}^2\text{K} \) can be used for a range of $U$-values from of 0.12 \( \text{W/m}^2\text{K} \) to 0.17 \( \text{W/m}^2\text{K} \) 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 \( \text{W/m}^2\text{K} \); Flat Roof = 0.16 to 0.20 \( \text{W/m}^2\text{K} \); Ground Floor = 0.16 to 0.21 \( \text{W/m}^2\text{K} \).

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

### Table: General Details - Target $U$-values

<table>
<thead>
<tr>
<th>Junction detail identifier</th>
<th>General Details</th>
<th>Target $U$-values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U-value = 0.18 ( \text{W/m}^2\text{K} ), 150mm full-fill or partial fill cavity ( ^1,^2 ) (roof $U$ = 0.16) (floor $U$ = 0.18)</td>
<td>$\psi$-value (W/mK)</td>
</tr>
<tr>
<td></td>
<td>U-value = 0.15 ( \text{W/m}^2\text{K} ), 150mm full-fill or partial fill cavity and internal insulation ( ^1,^3 ) (roof $U$ = 0.14) (floor $U$ = 0.15)</td>
<td>$\psi$-value (W/mK)</td>
</tr>
<tr>
<td></td>
<td>U-value = 0.15 ( \text{W/m}^2\text{K} ), 200mm full-fill or partial fill cavity ( ^1,^3 ) (roof $U$ = 0.14) (floor $U$ = 0.15)</td>
<td>$\psi$-value (W/mK)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section G General Details</th>
<th>$\psi$-value (W/mK)</th>
<th>$\psi$-value (W/mK)</th>
<th>$\psi$-value (W/mK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.01.1 Masonry Separating (cavity) Wall Head - Section 3</td>
<td>0.511</td>
<td>0.484</td>
<td>0.484</td>
</tr>
<tr>
<td>G.01.2 Masonry Separating (solid) Wall Head - Section 3</td>
<td>0.488</td>
<td>0.458</td>
<td>0.458</td>
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<tr>
<td>G.05.1 Solid Masonry Separating Wall through ground floor 3</td>
<td>0.201</td>
<td>0.240</td>
<td>0.240</td>
</tr>
<tr>
<td>G.05.2 Solid Masonry (narrow) Partition Wall through ground floor</td>
<td>0.138</td>
<td>0.150</td>
<td>0.150</td>
</tr>
</tbody>
</table>
(G) GENERAL DETAILS
Masonry Separating Wall Head - Section
DETAIL G.01.1 & G.01.2, 2021

THERMAL PERFORMANCE
CHECKLIST (TICK ALL)

Provide compressible insulation with an R-value of 2.50 m²K/W to a depth of 100mm minimum from top of attic insulation

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

Pack compressible insulation between last truss/joist and separating wall. Minimum R-value of 2.50 m²K/W

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 suitable airtightness tape or flexible sealant

GENERAL NOTES
Read this detail in conjunction with:-
Details 1.06, 2.05, 3.06: Masonry Separating Wall - plan

Thermal performance of junction can be improved by running insulation of an R-Value of 1.5 m²K/W vertically up internal face of party wall to a height of 450 mm above ceiling level

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 insulation

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

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

☐ Airtightness membrane and tapes
**Thermal Performance**

<table>
<thead>
<tr>
<th>Checklist (Tick All)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure full insulation depth between and over trusses/joists extends over head of partition</td>
</tr>
</tbody>
</table>

**Air Barrier - Continuity**

<table>
<thead>
<tr>
<th>Checklist (Tick All)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fix ceiling first and seal between ceiling and masonry wall with suitable airtightness tape, adhesive or flexible sealant. (Dotted blue line depicts continuity of air barrier through the head of the partition blockwork)</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 1.07, 2.06, 3.07: Masonry Partition Wall - Plan

**Air Barrier - Options**

<table>
<thead>
<tr>
<th>Tick One</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasterboard ceiling taped and jointed, or</td>
</tr>
<tr>
<td>Airtightness membrane and tapes</td>
</tr>
</tbody>
</table>
### THERMAL PERFORMANCE CHECKLIST (TICK ALL)

Ensure full insulation depth between and over trusses/joists extends over head of partition

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

Fix ceiling first and seal between ceiling and masonry wall air barriers with suitable airtightness tape or flexible sealant before installing partition linings. (Dotted blue line depicts continuity of air barrier through the head of the stud member)

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

### GENERAL NOTES

Read this detail in conjunction with:-
Details 1.08, 2.07, 3.08, 4.08: Lightweight Partition Wall - Plan

Airtightness can be improved by providing airtight membrane over head of partition wall, taped to membranes above each ceiling

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

- Plasterboard ceiling taped and jointed, or
- Airtightness membrane and tapes
### THERMAL PERFORMANCE

**CHECKLIST (TICK ALL)**

Ensure full insulation depth between and over trusses/joists extends over head of partition

### 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 before installing internal linings. (Dotted blue line depicts continuity of air barrier through the partition head plate)

Fix timber head plate to underside of ceiling joists/noggins to take metal channel

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

### GENERAL NOTES

Read this detail in conjunction with:- Details 1.08, 2.07, 3.08, 5.06: Lightweight Partition Wall - Plan

### AIR BARRIER - OPTIONS

**OPTION (TICK ONE)**

- Plasterboard ceiling taped and jointed, or
- Airtightness membrane and tapes

Complying with checklist will help achieve design air permeability.
**Masonry Separating Wall Through Ground Floor**

### THERMAL PERFORMANCE

- **CHECKLIST (TICK ALL)**
  - Install perimeter insulation with a minimum R-value of 1.14 m²K/W
  - Floor insulation to tightly abut blockwork wall

### AIR BARRIER - CONTINUITY

- **CHECKLIST (TICK ALL)**
  - Seal between wall and wall air barrier with suitable airtightness tape

### GENERAL NOTES

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

### AIR BARRIER - OPTIONS

- **OPTION (TICK ONE)**
  - Airtightness membrane and tapes
### THERMAL PERFORMANCE

**CHECKLIST (TICK ALL)**

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

### AIR BARRIER - CONTINUITY

**CHECKLIST (TICK ALL)**

- Seal between wall and wall air barrier with suitable airtightness tape

### GENERAL NOTES

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

Airtightness can be improved by providing airtight membrane connecting floor slabs on either side of partition wall.

### AIR BARRIER - OPTIONS

**OPTION (TICK ONE)**

- Airtightness membrane and tapes