Dear Colleague,

Thank you for subscribing to receive updates to the Part E Robust Details Handbook.

In response to feedback from users of the scheme, this first update to the Edition 4 Handbook includes amendments to the wording of parts of the specifications to further improve clarity of the requirements.

Also, Robust Details Limited has now relocated to Bletchley Park - ‘Home of the Codebreakers’, so please refer to page 1 of the Introduction in this pack to see our new address and contact telephone numbers.

Please update your October 2014 4th Edition Handbook as follows:

1. Remove and replace the existing Introduction.
3. Remove and replace all pages of the concrete separating floors:
   - E-FC-1
   - E-FC-4
   - E-FC-5
   - E-FC-8
   - E-FC-9
   - E-FC-11
   - E-FC-12
   - E-FC-13
   - E-FC-14
   - E-FC-15
   - E-FC-16
   Please note that the trademark (™) has now been removed, so the new E-FC-1 is a direct replacement for the existing E-FC-1™, for example.
4. Remove and replace the existing Appendix A1.

Yours sincerely

John Tebbit
Managing Director,
Robust Details Limited
# Changes to the fourth edition following February 2015 update

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td>1</td>
<td>Amended to show new address and contact numbers.</td>
</tr>
<tr>
<td><strong>Separating Walls – Masonry</strong></td>
<td>E-WM-9</td>
<td>Reworded to emphasise the block options available.</td>
</tr>
<tr>
<td><strong>Separating Floors – Concrete</strong></td>
<td>E-FC-1</td>
<td>Structural floor description rewored to clarify that the 300 kg/m² refers to the plank alone.</td>
</tr>
<tr>
<td></td>
<td>E-FC-4</td>
<td>Structural floor description rewored to clarify that the 300 kg/m² refers to the plank alone.</td>
</tr>
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<td></td>
<td>E-FC-5</td>
<td>Structural floor description rewored to clarify that the 300 kg/m² refers to the plank alone.</td>
</tr>
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<td>E-FC-8</td>
<td>Structural floor description rewored to clarify that the 300 kg/m² refers to the plank alone.</td>
</tr>
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<td></td>
<td>E-FC-9</td>
<td>Structural floor description rewored to clarify that the 300 kg/m² refers to the plank alone.</td>
</tr>
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<td></td>
<td>E-FC-11</td>
<td>Structural floor description rewored to clarify that the 300 kg/m² refers to the plank alone.</td>
</tr>
<tr>
<td></td>
<td>E-FC-12</td>
<td>Structural floor description rewored to clarify that the 300 kg/m² refers to the plank alone.</td>
</tr>
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<td></td>
<td>E-FC-13</td>
<td>Structural floor description rewored to clarify that the 300 kg/m² refers to the plank alone.</td>
</tr>
<tr>
<td></td>
<td>E-FC-14</td>
<td>Structural floor description rewored to clarify that the 300 kg/m² refers to the plank alone. Ceiling insulation now specified generically.</td>
</tr>
<tr>
<td></td>
<td>Ceiling treatments</td>
<td>Ceiling insulation now specified generically.</td>
</tr>
<tr>
<td></td>
<td>Checklist</td>
<td>Ceiling insulation now specified generically.</td>
</tr>
</tbody>
</table>

**Appendix A1**

Spandrel panels 5 Penultimate paragraph of the section rewored to clarify cavity requirement when using twin panels.
Introduction

This Handbook contains the separating wall and separating floor constructions that have achieved the status of Robust Details for Part E of the Building Regulations (England and Wales) and Part G of the Building Regulations (Northern Ireland), “Resistance to the passage of sound”.

The Robust Details have undergone an extensive sound insulation testing regime, robust design analysis and independent audit and have satisfied the Robust Details Limited Management Board that they should provide a level of sound insulation compliant with Part E (England and Wales) and Part G (Northern Ireland).

The use of the robustdetails® scheme provides an alternative to pre-completion testing for demonstrating compliance with the performance standards for new build dwellings. Every dwelling built using the robustdetails® scheme needs to be registered with Robust Details Limited and a plot registration fee paid. Further information on the scheme (including how to apply for new Robust Details) is available on the Robust Details Limited web site at: www.robustdetails.com

or from:
Robust Details Limited
Block E
Bletchley Park Science and Innovation Centre
Milton Keynes
Buckinghamshire
MK3 6EB
Telephone: 03300 882140 - Technical
03300 882141 - General
Fax: 01908 363433

Each Robust Detail includes materials and construction details for the separating wall/floor and its key interfaces with other elements and should be read in conjunction with Appendix A.

The tables on pages 5, 6 and 7 show which robustdetails® separating floors and walls can be used in flats/apartments.

Note:
The contents of this Handbook relate only to compliance with specific aspects of Part E (England and Wales) and Part G (Northern Ireland). Building work will also have to comply with all other relevant legislation and Parts of the Building Regulations.

Where sound testing is required on a wall or floor, the user should seek expert acoustic advice prior to construction commencing.

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Warning: the doing of an unauthorised act in relation to a copyright work may result in both a civil claim for damages and criminal prosecution.
**Introduction**

**Special note for Robust Details constructed in Northern Ireland**

Members of an expert panel convened to advise NI Government on the subject, consider that the following Robust Details will integrate most readily with NI standards and methods of construction.

Other Robust Details may be suitable for use in NI, however, it is recommended that Building Control be consulted to ensure full compatibility with other NI Regulations and Standards.

<table>
<thead>
<tr>
<th>Masonry walls</th>
<th>Concrete floors</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-WM-1</td>
<td>E-FC-1</td>
</tr>
<tr>
<td>E-WM-2</td>
<td>E-FC-2</td>
</tr>
<tr>
<td>E-WM-3</td>
<td>E-FC-4</td>
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<td>E-WM-4</td>
<td>E-FC-5</td>
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<td>E-WM-11</td>
<td>E-FC-6</td>
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<td>E-WM-18</td>
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<tr>
<td></td>
<td>E-FC-13</td>
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<tr>
<td></td>
<td>E-FC-14</td>
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<table>
<thead>
<tr>
<th>Timber walls</th>
<th>Steel floors</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-WT-1</td>
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<tr>
<td>E-WT-2</td>
<td></td>
</tr>
<tr>
<td>E-WT-4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Timber floors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>E-FT-1</td>
<td></td>
</tr>
<tr>
<td>E-FT-2</td>
<td></td>
</tr>
<tr>
<td>E-FT-3</td>
<td></td>
</tr>
<tr>
<td>E-FT-5</td>
<td></td>
</tr>
<tr>
<td>E-FT-6</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

Refer to Tables 3a, 3b and 3c in the Introduction for valid combinations of the Robust Details walls and floors.
# Introduction

## List of Robust Details

### Table 1 – Separating walls

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-WM-1</td>
<td>masonry – dense aggregate blockwork (wet plaster)</td>
</tr>
<tr>
<td>E-WM-2</td>
<td>masonry – lightweight aggregate blockwork (wet plaster)</td>
</tr>
<tr>
<td>E-WM-3</td>
<td>masonry – dense aggregate blockwork (render and gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-4</td>
<td>masonry – lightweight aggregate blockwork (render and gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-5</td>
<td>masonry – Besblock “Star Performer” cellular blockwork (render and gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-6</td>
<td>masonry – aircrete blockwork (render and gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-7</td>
<td>Suspended from further registrations</td>
</tr>
<tr>
<td>E-WM-8</td>
<td>masonry – lightweight aggregate blockwork Saint Gobain – Isover RD35 (gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-9</td>
<td>masonry – solid dense aggregate blockwork (render and gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-10</td>
<td>masonry – aircrete thin joint blockwork with specified wall ties (render and gypsum-based board finish)</td>
</tr>
<tr>
<td>E-WM-11</td>
<td>masonry – lightweight aggregate blockwork (render and gypsum-based board) with 100mm minimum cavity</td>
</tr>
<tr>
<td>E-WM-12</td>
<td>masonry – Plasmor “Aglite Ultima” lightweight aggregate blockwork (render and gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-13</td>
<td>masonry – aircrete thin joint - untied blockwork (render and gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-14</td>
<td>masonry – lightweight aggregate blockwork Saint Gobain - Isover RD35 (gypsum-based board) with 100mm minimum cavity</td>
</tr>
<tr>
<td>E-WM-15</td>
<td>masonry – aircrete blockwork Saint Gobain - Isover RD35 (gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-16</td>
<td>masonry – dense aggregate blockwork (render and gypsum-based board) with 100mm minimum cavity</td>
</tr>
<tr>
<td>E-WM-17</td>
<td>masonry – lightweight aggregate blockwork Saint Gobain-Isover RD Party Wall Roll (gypsum-based board)</td>
</tr>
<tr>
<td>E-WM-18</td>
<td>masonry – dense aggregate blockwork (wet plaster) with 100mm minimum cavity</td>
</tr>
<tr>
<td>E-WM-19</td>
<td>masonry – dense or lightweight aggregate blockwork (render and gypsum-based board) with 100mm minimum cavity and MONAFLOOR® BRIDGESTOP® system</td>
</tr>
<tr>
<td>E-WM-20</td>
<td>masonry – lightweight aggregate blockwork Saint Gobain - Isover RD Party Wall Roll (gypsum-based board) with 100mm minimum cavity</td>
</tr>
<tr>
<td>E-WM-21</td>
<td>masonry – lightweight aggregate blockwork (wet plaster) with 100mm minimum cavity</td>
</tr>
<tr>
<td>E-WM-22</td>
<td>masonry – lightweight aggregate blockwork Knauf Earthwool Masonry Party Wall Slab or Superglass Party Wall Roll (gypsum-based board) with 100mm minimum cavity</td>
</tr>
<tr>
<td>E-WM-23</td>
<td>masonry – aircrete blockwork Superglass Party Wall Roll (gypsum-based board) with 100mm minimum cavity</td>
</tr>
<tr>
<td>E-WM-24</td>
<td>masonry – aircrete blockwork Saint Gobain-Isover RD Party Wall Roll (gypsum-based board) with 100mm minimum cavity</td>
</tr>
<tr>
<td>E-WM-25</td>
<td>masonry – Porotherm clay blockwork (Ecoparge and gypsum-based board) with 100mm minimum insulated cavity</td>
</tr>
<tr>
<td>E-WM-26</td>
<td>masonry – Besblock “Star Performer” cellular blockwork (gypsum-based board) with 100mm minimum insulated cavity</td>
</tr>
<tr>
<td>E-WM-27</td>
<td>masonry - lightweight aggregate blockwork Superglass Party Wall Roll (gypsum-based board) with minimum 75mm cavity</td>
</tr>
<tr>
<td>E-WM-28</td>
<td>masonry - lightweight aggregate blockwork Knauf Party Wall Wool (gypsum-based board) with minimum 100mm cavity</td>
</tr>
</tbody>
</table>

See over for timber and steel frame walls
## Introduction

### List of Robust Details

**Table 1 (continued) – Separating walls**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-WT-1</td>
<td>timber frame – without sheathing board</td>
</tr>
<tr>
<td>E-WT-2</td>
<td>timber frame – with sheathing board</td>
</tr>
<tr>
<td>E-WT-3</td>
<td>timber frame – Elecoframe prefabricated panels</td>
</tr>
<tr>
<td>E-WT-4</td>
<td>timber frame – Excel Industries Warmcell 500 insulation - with sheathing board</td>
</tr>
<tr>
<td>E-WS-1</td>
<td>steel frame – twin metal frame</td>
</tr>
<tr>
<td>E-WS-2</td>
<td>steel frame – British Gypsum Gypwall QUIET IWL</td>
</tr>
<tr>
<td>E-WS-3</td>
<td>steel frame – modular steel frame housing</td>
</tr>
<tr>
<td>E-WS-4</td>
<td>steel frame – twin metal frame - 250mm between linings</td>
</tr>
</tbody>
</table>
## Introduction

### List of Robust Details

Table 2 – Separating floors

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-FC-1</td>
<td>precast concrete plank with directly applied screed and floating floor treatment</td>
</tr>
<tr>
<td>E-FC-2</td>
<td>in-situ concrete slab and floating floor treatment</td>
</tr>
<tr>
<td>E-FC-3</td>
<td>Suspended from further registrations</td>
</tr>
<tr>
<td>E-FC-4</td>
<td>precast concrete plank and Thermal Economics IsoRubber system and floating screed</td>
</tr>
<tr>
<td>E-FC-5</td>
<td>precast concrete plank and Collecta Yelowon HD10+ system and floating screed</td>
</tr>
<tr>
<td>E-FC-6</td>
<td>beam and block with concrete topping Regupol E48 system and floating screed</td>
</tr>
<tr>
<td>E-FC-7</td>
<td>beam and block with concrete topping and floating floor treatment</td>
</tr>
<tr>
<td>E-FC-8</td>
<td>precast concrete plank with floating screed and bonded resilient floor covering</td>
</tr>
<tr>
<td>E-FC-9</td>
<td>precast concrete plank with directly applied screed and Thermal Economics IsoRubber top bonded resilient floor covering</td>
</tr>
<tr>
<td>E-FC-10</td>
<td>in-situ concrete slab with Thermal Economics IsoRubber top bonded resilient floor covering</td>
</tr>
<tr>
<td>E-FC-11</td>
<td>precast concrete plank and Icopal-MONAFLOR® Tranquilt and floating screed</td>
</tr>
<tr>
<td>E-FC-12</td>
<td>precast concrete plank and Thermal Economics IsoRubber Base HP3 system and floating screed</td>
</tr>
<tr>
<td>E-FC-13</td>
<td>precast concrete plank and InstaCoustic InstaLay 65 system and floating screed</td>
</tr>
<tr>
<td>E-FC-14</td>
<td>precast concrete plank and Thermal Economics IsoRubber Code layer and floating screed</td>
</tr>
<tr>
<td>E-FC-15</td>
<td>precast concrete plank and Regupol Quietlay layer and floating screed</td>
</tr>
<tr>
<td>E-FC-16</td>
<td>precast concrete plank with directly applied screed and Thermal Economics IsoRubber CC3 bonded resilient floor covering</td>
</tr>
<tr>
<td>E-FT-1</td>
<td>timber I-joists and floating floor treatment</td>
</tr>
<tr>
<td>E-FT-2</td>
<td>timber solid joists and floating floor treatment</td>
</tr>
<tr>
<td>E-FT-3</td>
<td>MiTek Posti-Joist, Prestoplan PresWeb, WOLF easi-joist, Gang Nail ecojoist or ITW Alpine SpaceJoist metal web timber joist and floating floor treatment</td>
</tr>
<tr>
<td>E-FT-4</td>
<td>timber Finnjoists with Finnforest Acoustic layer and Gylvon screed</td>
</tr>
<tr>
<td>E-FT-5</td>
<td>Collecta ScreedBoard® 28 system on timber I-joists</td>
</tr>
<tr>
<td>E-FT-6</td>
<td>Collecta ScreedBoard® 28 system on metal web joists</td>
</tr>
<tr>
<td>E-FT-7</td>
<td>timber I-joists and FFT80 floating floor treatment</td>
</tr>
<tr>
<td>E-FT-8</td>
<td>timber solid joists and FFT80 floating floor treatment</td>
</tr>
<tr>
<td>E-FS-1</td>
<td>steel deck and in-situ concrete and floating floor treatment</td>
</tr>
<tr>
<td>E-FS-2</td>
<td>UltraBEAM metal joists and floating floor treatment</td>
</tr>
</tbody>
</table>
### Introduction

Table 3a – Combinations of Robust Details separating walls and floors for flats/apartments in loadbearing masonry constructions

<table>
<thead>
<tr>
<th>Separating walls</th>
<th>Separating floors</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-FC-1</td>
<td>E-FC-11 E-FC-14</td>
</tr>
<tr>
<td>E-FC-13 E-FC-16</td>
<td>E-FC-4 E-FC-5</td>
</tr>
<tr>
<td>E-FC-8</td>
<td>E-FC-9</td>
</tr>
<tr>
<td>E-FC-12 E-FC-15</td>
<td>E-FC-6 E-FC-7</td>
</tr>
<tr>
<td>E-FC-13 E-FC-16</td>
<td>E-FC-4 E-FC-5</td>
</tr>
<tr>
<td>E-FC-14 E-FC-8</td>
<td>E-FC-9</td>
</tr>
</tbody>
</table>

**Key**

- **F** Only the separating floor requires pre-completion sound testing.
- **1** Where this combination is selected, 200mm (min) thick precast concrete planks and ceiling treatment CT5 must be used.
- **2** This combination can only be selected where the construction does not include Plasmor Aglite Ultima blocks (1050 kg/m²).

**Combining robust® loadbearing masonry walls and floors with robust® lightweight framed separating walls**

Upper storeys of blocks of flats may be constructed using lightweight steel or timber frame, where the lower storeys are loadbearing masonry.

The lightweight separating walls built directly off the uppermost concrete separating floors may be registered as Robust Details provided:

- the lightweight walls are in vertical alignment with the masonry walls below, such that they can follow the principles of the ground floor junction shown for the relevant robust® separating wall;
- the external (flanking) wall construction above the separating floor meets the requirements on page 2 of the relevant robust® separating wall, and has 2 layers of gypsum-based board;
- the junction between the bottom rail (or sole plate) is well sealed;
- all other relevant requirements in the Handbook are strictly followed.

The separating floor may be registered as a Robust Detail provided:

- the floor is constructed in accordance with the requirements of the published Detail;
- the external (flanking) wall below the precast concrete floor satisfies the requirements of detail 1 on page 2 of the relevant robust® separating floor;
- all other relevant requirements in the Handbook are strictly followed.
Introduction

Table 3b – Combinations of Robust Details separating walls and floors for flats/apartments in timber frame constructions

<table>
<thead>
<tr>
<th>Separating floors</th>
<th>Separating walls</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-FT-1</td>
<td>E-FT-5</td>
</tr>
<tr>
<td>E-FT-2</td>
<td>E-FT-6</td>
</tr>
<tr>
<td>E-FT-3</td>
<td>E-FT-7</td>
</tr>
<tr>
<td>E-FT-4</td>
<td>E-FT-8</td>
</tr>
</tbody>
</table>

Key for Table 3b and Table 3c:
- **F** Only the separating floor requires pre-completion sound testing.
- **W** Only the separating wall requires pre-completion sound testing.
- **1** Lightweight steel and timber frame walls may be constructed above in-situ poured concrete floors.
  - The lightweight walls built directly off the concrete floors may be registered as Robust Details provided:
  - they meet all other requirements of the Robust Detail, including flanking constructions;
  - the principles of the raft foundation junction are followed. As such, the concrete of the floor must have a mass of 365 kg/m² (min), and a floating floor treatment must be provided;

Walls constructed to the soffit of in-situ poured concrete floors cannot be registered as Robust Details and may be subject to pre-completion sound testing.

See also notes relating to Combining loadbearing masonry and lightweight framed separating walls included under Table 3a.

Table 3c – Combinations of Robust Details separating walls and floors for flats/apartments in reinforced concrete and steel frame constructions

<table>
<thead>
<tr>
<th>Separating floors</th>
<th>Separating walls</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-FC-2</td>
<td>E-FC-10</td>
</tr>
<tr>
<td>E-FC-10</td>
<td>E-FS-1</td>
</tr>
<tr>
<td>E-FS-2</td>
<td>E-FS-1</td>
</tr>
</tbody>
</table>

See also notes relating to Combining loadbearing masonry and lightweight framed separating walls included under Table 3a.
Introduction

Table 4 – Combining Robust Details separating walls with non-Robust Details separating floors in flats/apartments

<table>
<thead>
<tr>
<th>Loadbearing masonry</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>E-WM-1</td>
<td>F1</td>
</tr>
<tr>
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<td>F1</td>
</tr>
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<td>E-WM-3</td>
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<tr>
<td>E-WM-4</td>
<td>F1</td>
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<td>F1</td>
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<td>E-WM-28</td>
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Table 5 – Combining Robust Details separating floors with non-Robust Details separating walls in flats/apartments

<table>
<thead>
<tr>
<th>Loadbearing masonry</th>
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</thead>
<tbody>
<tr>
<td>E-FC-1</td>
<td>W1</td>
</tr>
<tr>
<td>E-FC-4</td>
<td>W2</td>
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<tr>
<td>E-FC-5</td>
<td>W2</td>
</tr>
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<td>E-FC-6</td>
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<td>E-FC-7</td>
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<td>W2</td>
</tr>
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<td>E-FC-9</td>
<td>W2</td>
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<tr>
<td>E-FC-10</td>
<td>W2</td>
</tr>
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</table>

Timber frame

| E-FT-1             | W3 |
| E-FT-2             | W3 |
| E-FT-3             | W3 |
| E-FT-4             | W3 |
| E-FT-5             | W3 |
| E-FT-6             | W3 |
| E-FT-7             | W3 |
| E-FT-8             | W3 |

RC frame

| E-FC-2             | W4 |
| E-FC-10            | W4 |

Light steel frame

| E-FS-1             | W4 |
| E-FS-2             | W5 |

Key

F1 Only the separating wall requires pre-completion testing provided the wall does not bridge the separating wall cavity. Otherwise both the wall and floor need testing.

F2 Only the separating floor requires pre-completion testing provided the floor is timber-based and does not bridge the separating wall cavity. Otherwise both the wall and floor need testing.

F3 Only the separating floor requires pre-completion testing provided the wall is being used in a lightweight steel frame flat/apartment and the floor does not bridge the separating wall cavity. Otherwise both the wall and floor need testing.

F4 Only the separating floor requires pre-completion testing provided the wall is being used in a concrete frame building. Otherwise both the wall and floor need testing.

W1 Only the separating wall requires pre-completion testing provided the wall is constructed using aggregate blocks specified for the inner leaf in the floor Robust Detail. Otherwise both the floor and wall need testing.

W2 Only the separating wall requires pre-completion testing provided the wall is constructed using blocks specified for the inner leaf in the floor Robust Detail. Otherwise both the floor and wall need testing.

W3 Only the separating wall requires pre-completion testing if used with timber frame supporting walls and twin leaf timber frame separating walls. Otherwise both the floor and wall need testing.

W4 Only the separating wall requires pre-completion testing provided the external wall meets the specification given in the separating floor Robust Detail. Otherwise both the floor and wall need testing.

W5 Only the separating wall requires pre-completion testing if used with steel frame supporting walls and twin leaf steel frame separating walls. Otherwise both the floor and wall need testing.

For any construction that requires a separating element to be tested, the user should seek expert acoustic advice on the design and potential acoustic performance.
# Introduction

Table 6a – Robust Detail separating walls which can be used together with the proprietary flanking constructions contained in Appendix A2

<table>
<thead>
<tr>
<th>Masonry walls</th>
<th>BRIDGESTOP® Smartroof system</th>
<th>Kingspan TEK</th>
<th>Prestoplan PresPeak 60</th>
<th>Wall Cap RDA2</th>
<th>RoofSpace I-Roof</th>
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</tbody>
</table>

**Key**

1 When constructing these walls off raft foundations, the raft must have insitu concrete with 150mm minimum thickness.

See over for timber and steel frame walls
**Introduction**

Table 6a (continued) – Robust Detail separating walls which can be used together with the proprietary flanking constructions contained in Appendix A2

<table>
<thead>
<tr>
<th>BRIDGESTOP® system</th>
<th>Smartroof system</th>
<th>Kingspan TEK</th>
<th>Prestoplan PresPeak 60</th>
<th>Wall Cap RDA2</th>
<th>RoofSpace I-Roof</th>
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Introduction

Table 6b – Robust Detail separating floors which can be used together with the proprietary flanking constructions contained in Appendix A2

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<th>Masonry floors</th>
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<td>Timber floors</td>
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<table>
<thead>
<tr>
<th>Steel-concrete and steel floors</th>
<th>E-FS-1</th>
<th>E-FS-2</th>
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</table>

Key
1 Applies only to loadbearing masonry constructions.
### Introduction

Table 7 – Robust Detail separating floors which can be used together with alternative products contained in Appendix A3

<table>
<thead>
<tr>
<th></th>
<th>Concrete floors</th>
<th>Timber floors</th>
<th>Steel-concrete and steel floors</th>
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</thead>
<tbody>
<tr>
<td><strong>British Gypsum GypFloor</strong></td>
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<td>E-FT-1 ✔️</td>
<td>E-FS-1 ✔️</td>
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<td>E-FC-2 ✔️</td>
<td>E-FT-2 ✔️</td>
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</tbody>
</table>

**Note:** The table above lists the robust details that can be used separately or in combination with alternative products as described in Appendix A3.
Separating Wall – Solid Dense Block Masonry

Attached houses on raft foundations only
- Dense aggregate blocks
- 13mm render and gypsum base board on dabs

**Block density** 1850-2300 kg/m³

**Block thickness** 215mm wide, full block laid on its side, single course, stretcher bond

NB: mortar beds may be 10-15mm thick to permit coursing to junction with inner leaf

**Wall finish** Gypsum-based board (nominal mass per unit area 12.5 kg/m²) mounted on dabs, on cement: sand render (nominal 15mm, minimum 13mm) with scratch finish. Typical render mix must not be stronger than the background (see Appendix A)

**External (flanking wall)** Masonry both leaves with 50mm (min.) cavity – clear, fully filled or partially filled with insulation.

**DO**
- Ensure blocks are laid on side for 215mm full wall width
- Ensure that blockwork is single course stretcher bond
- Ensure all joints are fully filled
- Ensure inner leaf is either abutted and tied to face of separating wall or bonded in every two courses
- Ensure no chasing occurs on face of separating wall
- Ensure render coat is a minimum of 13mm and applied to face of separating wall with scratch finish (it may be omitted within the floor joist/beam zone)
- Refer to Appendix A

**DO NOT**
- Do not use double coursing

**IMPORTANT**

Only use blocks accepted by Robust Details Limited as providing a suitable method of identifying on both faces of the wall, by manufactured mark or feature, that the constructed wall has used dense aggregate blocks.

A current list of blocks and further information on block identification is available on the Robust Details website [www.robustdetails.com](http://www.robustdetails.com)
Separating Wall – Solid Dense Block Masonry

1. External (flanking) wall junction

- Masonry outer leaf
- External wall cavity (min 50mm)
- Close cavity with flexible cavity stop unless it is fully filled with built-in mineral wool insulation
- Inner leaf
  - 100mm (min) concrete block (1350 kg/m³ to 1600 kg/m³ or 1850 kg/m³ to 2300 kg/m³) or aircrete block (450 kg/m³ to 800 kg/m³)
  - Internal finish – 13mm plaster or nominal 8 kg/m² gypsum-based board

Ensure that separating wall blockwork is single course stretcher bond and that inner leaf of external wall is either abutted and tied to face of separating wall or bonded (toothed) in every two courses.

NB: Better performance with tied

Floor to comply with Building Regulations Requirement E2

Complete wall face rendered (except in the floor joist/beam zone where it may be omitted)

Continuous horizontal ribbon of adhesive

2. Internal floor junction: timber floor supported on joists
3. Raft foundation with floating floor treatment

- 5mm (min) resilient flanking strip
- Flexible or acoustic sealant
- A floating floor treatment (for ground floor floating floor treatments mineral fibre quilt is not required between the battens or cradle system)
- Concrete raft – mass per unit area of 365 kg/m² (min)

4. Raft foundation with screed

- Mastic sealant, ensure skirting and wall lining are isolated from screed
- Perimeter insulation, isolating screed from separating wall
- Below screed insulation, isolating screed from raft
- Polyethylene
- Concrete raft – mass per unit area of 365 kg/m² (min)
**Separating Wall – Solid Dense Block Masonry**

5. Roof junction – pitched roof without room-in-roof

- Junction between separating wall and roof filled with flexible closer
- Minimum 140mm wide solid dense block to underside of roof. Alternatively use a spandrel panel – see Appendix A
- Minimum 200mm mineral wool insulation 10 kg/m³ (min)
- Continuous horizontal ribbon of adhesive

6. Roof junction – pitched roof with room-in-roof

- Junction between separating wall and roof filled with flexible closer
- 100mm (min) mineral wool insulation minimum density 10 kg/m³ or 60mm (min) foil faced PUR or PIR insulation, minimum density 30 kg/m³ (See Appendix A)
- 2 layers of nominal 8 kg/m² gypsum-based board. Where used rigid insulation may be placed between and/or directly beneath rafters
- Continuous ribbon of adhesive
- Solid 215mm blockwork to underside of roof covering
blank page
See overleaf for checklist
### CHECKLIST (to be completed by site manager/supervisor)

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Inspected (initials &amp; date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Are separating wall blocks dense aggregate (1850 to 2300 kg/m²) as featured on the list of acceptable blocks (<a href="http://www.robustdetails.com">www.robustdetails.com</a>)?</td>
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</tr>
<tr>
<td>2</td>
<td>Are blocks laid for the full 215mm width of the wall (i.e. 215mm blocks laid on side)?</td>
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</tr>
<tr>
<td>3</td>
<td>Is blockwork laid single course stretcher bond?</td>
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</tr>
<tr>
<td>4</td>
<td>Is separating wall breaking the continuity of the inner leaf? (i.e. is the face of the separating wall abutted and tied or bonded into the inner leaf)</td>
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<td></td>
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</tr>
<tr>
<td>5</td>
<td>Are cavity stops installed?</td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>Are all joints fully filled?</td>
<td></td>
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<tr>
<td>7</td>
<td>Is render or parge coat applied to the whole wall face? (except where it may be omitted between floor joists/beams)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Is render or parge coat at least 13mm thick and scratch finished?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Is mass per unit area of the gypsum based board at least 12.5 kg/m²?</td>
<td></td>
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<tr>
<td>10</td>
<td>Are all junctions of wall and ceiling boards sealed with tape or caulked with sealant?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11</td>
<td>Is separating wall satisfactorily complete?</td>
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</tr>
</tbody>
</table>

**Notes** (include details of any corrective action)

Site manager/supervisor signature: 

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Separating Floor – Concrete

**Precast concrete plank**

**Screed**

**Floating floor**
See section 4 for suitable floating floor treatment

**Screed**
- 40mm (min) screed directly applied to plank
- cement:sand or proprietary screed
  - nominal 80 kg/m² mass per unit area, see Appendix A

**Structural floor**
Precast concrete plank of 150mm (min) thickness and 300 kg/m² (min) mass per unit area

**Ceiling**
See section 3 for suitable ceiling treatment

**DO**
- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure floating floor treatment is suitable and install in accordance with the manufacturer’s instructions
- Install flanking strips around the perimeter of the flooring board to isolate floor from walls and skirtings
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)
- Ensure that only the correct blocks are used in the construction of external (flanking) walls, unless specifically referred to in the Handbook all blocks should be assumed to be solid (i.e. not hollow or cellular)
- Refer to Appendix A

Sketch shows FFT5 type floating floor treatment and CT1 type ceiling treatment
Separating Floor – Concrete

1. External (flanking) wall junction

Masonry outer leaf
External wall cavity (min 50mm)
Inner leaf (min 100mm) concrete block
(1350 kg/m³ to 1600 kg/m³ or 1850 - 2300 kg/m³)
Nominal 8 kg/m² gypsum-based board or
13mm plaster
5mm (min) resilient flanking strip
Close cavity with a flexible cavity stop unless
it is fully filled with built in mineral wool
insulation
Concrete planks to be built into wall:
• wall must not be continuous between storeys
• planks must not abut inner leaf
• all voids between planks and blockwork filled
  with mortar or flexible sealant
Continuous horizontal ribbon of adhesive

Sketch shows FFT5 type floating floor treatment
and CT1 type ceiling treatment

2. Separating wall junction

Separating wall:
• if using robustdetails® for wall - refer to
  Table 3a in introduction to select an
  appropriate Robust Detail separating wall
• if using wall requiring pre-completion testing
  – seek specialist advice
5mm (min) resilient flanking strip
Concrete planks to be built into wall:
• wall must not be continuous between storeys
• planks must not abut separating wall
• all voids between planks and blockwork filled
  with mortar or flexible sealant
Continuous horizontal ribbon of adhesive

Sketch shows FFT5 type floating floor treatment
and CT1 type ceiling treatment
3. Ceiling treatments for E-FC-1

All ceiling treatments must be installed in accordance with the manufacturer’s instructions. All ceiling joints must be sealed with tape or caulked with sealant.

The maximum load on resilient bars shall not exceed that specified in the manufacturer’s instructions.

Note: the sound insulation performance of all ceiling treatments is increased if:
- 25mm (min) mineral wool quilt is placed in the ceiling void, and/or
- resilient hangers are used.

**Downlighters and recessed lighting**
Provided there is a minimum ceiling void of 75mm downlighters or recessed lighting may be installed in the ceiling:
- in accordance with the manufacturer’s instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

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**CT1 – Metal ceiling system - 100mm void**
- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

**CT2 – Timber battens and counterbattens**
- 50 x 50mm softwood battens
- 50 x 50mm counterbattens
- one layer of 8 kg/m² gypsum-based board

**CT3 – Metal ceiling system - 75mm void**
- any metal ceiling system providing 75mm (min) ceiling void
- one layer of nominal 10 kg/m² gypsum-based board

**CT4 – Timber battens and metal resilient bars**
*Only suitable for use in conjunction with 200mm (min) precast concrete floor plank of mass per unit area 300 kg/m² (min).*
- 50 x 50mm softwood battens
- metal resilient ceiling bars mounted at right angles to the battens (bars must achieve a minimum laboratory performance of $\Delta R_w + C_T = 17\text{dB}$ and $\Delta L_{w} = 16\text{dB}$) - see Appendix E
- one layer of minimum nominal 10 kg/m² gypsum-based board
4. Floating floor treatments for E-FC-1

All floating floor treatments:

a) Must achieve a minimum laboratory performance of $r_d \Delta L_w = 17$ dB - see Appendix D.

b) Must be installed in accordance with the manufacturer’s instructions.

c) Require 5mm (min) resilient flanking strips around the perimeter of the flooring board to isolate floor from walls and skirting.

d) For further guidance on floating floor treatments and flanking strips, please refer to Appendix A.

*Note - void dimensions indicated are when floor is loaded to 25 kg/m².

**FFT 1 – Resilient composite deep batten system**
- 18mm (min) t&g flooring board
- resilient layer must be continuous and pre-bonded to batten
- resilient composite deep battens
- ensure any services do not bridge the resilient layer
- battens may have the resilient layer at the top or the bottom

**FFT 2 – Resilient cradle and batten system**
- 18mm (min) t&g flooring board
- cradle and batten
- ensure any services do not bridge the resilient layer

**FFT 3 – Resilient composite standard batten system**
- 18mm (min) t&g flooring board
- resilient layer must be continuous and pre-bonded to batten
- resilient composite standard battens
- ensure any services do not bridge the resilient layer
- battens may have the resilient layer at the top or the bottom

**FFT 4 – Resilient overlay platform floor system**
- proprietary platform system inclusive of resilient layer greater than or equal to 16 kg/m² mass per unit area
- no services to be installed in floor system

**FFT 5 – Resilient overlay shallow platform floor system**
- 9mm (min) t&g flooring board
- resilient layer pre-bonded to flooring board
- no services to be installed in floor system
5. Services – Service pipes through separating floor

Sketch shows FFT5 type floating floor treatment and CT3 type ceiling treatment.
**CHECKLIST** (to be completed by site manager /supervisor)

Company: 

Site: 

Plot: Site manager/supervisor: 

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Inspected (initials &amp; date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>Are inner leaves to external (flanking) walls of the correct block density?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td>Are joints between precast concrete planks grouted?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4.</td>
<td>Are precast concrete planks built into the masonry walls?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Is screed applied directly to the planks?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6.</td>
<td>Has ceiling system been installed in accordance with the manufacturer’s instructions (where applicable)?</td>
<td></td>
<td></td>
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<tr>
<td>7.</td>
<td>Are all ceiling board joints sealed with tape or caulked with sealant?</td>
<td></td>
<td></td>
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<tr>
<td>8.</td>
<td>Has floating floor treatment been installed in accordance with the manufacturer’s instructions?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9.</td>
<td>Have all resilient flanking strips been fitted?</td>
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<tr>
<td>10.</td>
<td>Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m² gypsum-based board?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11.</td>
<td>Is separating floor satisfactorily complete?</td>
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</tr>
</tbody>
</table>

**Notes** (include details of any corrective action)

Site manager/supervisor signature .................................

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Separating Floor – Concrete

**SYSTEM INSTALLATION**

The use of this screed resilient layer system **must** incorporate the following:

1) **6mm IsoRubber** (resilient layer to be laid over entire floor area with minimum 50mm overlaps)
2) **IsoEdge** flanking strip
3) All joints taped

**DO**
- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure 6mm IsoRubber resilient layer is laid over the entire floor surface and has overlapped joints of 50mm sealed with tape. On no account should the screed come into contact with the floor slab. (see Section 4 for 40mm proprietary screeds)
- Ensure 6mm IsoRubber overlaps with IsoEdge flanking strip. On no account should screed come into contact with floor slab or perimeter walls
- Ensure the IsoEdge flanking strip isolates the skirting and wall linings. On no account should screed come into contact with the wall lining and skirting
- Ensure that only the correct blocks are used in the construction of external (flanking) walls, unless specifically referred to in the Handbook all blocks should be assumed to be solid (i.e. not hollow or cellular)
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)

**From 1 January 2009, Robust Details Limited can only accept registration of this floor once the builder agrees to receive training from Thermal Economics on the installation of the screed and resilient layer. Please contact Robust Details Limited for further information.**

**E-FC-4**

**Screed**
- 65mm (min) cement:sand screed or 40mm (min) proprietary screed of nominal 80 kg/m² mass per unit area

**Resilient layer**
- 6mm IsoRubber layer with IsoEdge flanking strip

**Structural floor**
- Precast concrete plank of 150mm (min) thickness and 300 kg/m² (min) mass per unit area

**Ceiling**
- See section 3 for suitable ceiling treatment which is dependent on floor plank depth and supporting wall density

Sketch shows CT0 type ceiling treatment
1. External (flanking) wall junction

Masonry outer leaf  
External wall cavity (min 50mm)  
Inner leaf (min 100mm) aggregate concrete block (1350 kg/m³ to 1600 kg/m³ or 1850 - 2300 kg/m³) or Plasmor Aglute Ultima (1050 kg/m³) or aircrete block (450-800 kg/m³)  
IsoEdge flanking strip must overlap with IsoRubber resilient layer and isolate screed from perimeter walls and skirtings  
IsoRubber resilient layer must have 50mm (min) overlapped joints and be sealed with tape  
Close cavity with a flexible cavity stop unless it is fully filled with built in mineral wool insulation  
Concrete planks must be built into walls:  
• walls must not be continuous between storeys  
• planks must not abut inner leaf  
• all voids between planks and blockwork filled with mortar or flexible sealant  
Continuous horizontal ribbon of adhesive or IsoEdge ceiling strip  
Nominal 8 kg/m² gypsum-based board or 13mm plaster  
Sketch shows CT0 type ceiling treatment

2. Separating wall junction

Separating wall:  
• if using robustdetails® for wall - refer to Table 3a in introduction to select an appropriate Robust Detail separating wall  
• if using wall requiring pre-completion testing – seek specialist advice  
IsoEdge flanking strip  
IsoRubber resilient layer to overlap IsoEdge flanking strip  
Concrete planks to be built into wall:  
• wall must not be continuous between storeys  
• planks must not abut separating wall  
• all voids between planks and blockwork filled with mortar or flexible sealant  
Continuous horizontal ribbon of adhesive or IsoEdge ceiling strip  
Sketch shows CT0 type ceiling treatment
3. Ceiling treatments for E-FC-4

All ceiling treatments must be installed in accordance with the manufacturer’s instructions. All ceiling joints must be sealed with tape or caulked with sealant.

Note: the sound insulation performance of all ceiling treatments is increased if:
- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- resilient hangers are used.

**Downlighters and recessed lighting**

Provided there is a minimum ceiling void as stated below for CT0, CT1 or CT2, downlighters or recessed lighting may be installed in the ceiling:
- in accordance with the manufacturer’s instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

**CT0 – Metal ceiling system - 150mm void**

To be used for 150mm (min) depth concrete planks
- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

**CT1 – Metal ceiling system - 100mm void**

Only to be used for 200mm (min) depth concrete planks
- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

**CT2 – Timber battens and counterbattens with IsoSonic Hangers Type C. Only to be used for 200mm (min) depth concrete planks**
- 50x50mm softwood battens
- 50x50mm counterbattens
- IsoSonic Hangers Type C
- one layer of nominal 8 kg/m² gypsum-based board
Separating Floor – Concrete

4. Resilient layer installation for different screed types

<table>
<thead>
<tr>
<th>SCREED TYPE</th>
<th>65mm (min) cement:sand screed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ISO Rubber joints to be overlapped by 50mm (min)</td>
</tr>
<tr>
<td></td>
<td>Upper ISO Rubber edge joints to be sealed by tape</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCREED TYPE</th>
<th>40mm (min) proprietary screed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ISO Rubber joints to be butt jointed</td>
</tr>
<tr>
<td></td>
<td>ISO Rubber joints to be sealed by tape</td>
</tr>
<tr>
<td></td>
<td>Polythene layer to be laid over whole floor overlapping joints</td>
</tr>
</tbody>
</table>

5. Underfloor heating systems within screeds

Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

Underfloor heating systems which have a supporting layer/board may be laid on top of the ISO Rubber.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.
6. Services – Service pipes through separating floor

- 25mm (min) mineral wool quilt (min 10 kg/m³) around pipe
- Pipe boxed in with two layers gypsum-based board, each layer nominal 8 kg/m²
- All voids around pipe sealed

Sketch shows CT0 type ceiling treatment
# CHECKLIST
(to be completed by site manager/supervisor)

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Item</th>
<th>Yes ✓</th>
<th>No ☑</th>
<th>Inspected (initials &amp; date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Has training been received from Thermal Economics?</td>
<td></td>
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<tr>
<td>2.</td>
<td>Are precast concrete planks 150mm (min) thick</td>
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<td></td>
<td>and of mass per unit area 300 kg/m² (min)?</td>
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<td>3.</td>
<td>Are inner leaves to external (flanking) walls of the correct</td>
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<td></td>
<td>block density?</td>
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<tr>
<td>4.</td>
<td>Are joints between precast concrete planks grouted and sealed?</td>
<td></td>
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<tr>
<td>5.</td>
<td>Are precast concrete planks built into the masonry walls?</td>
<td></td>
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<tr>
<td>6.</td>
<td>Is the IsoEdge flanking strip installed for all room perimeters?</td>
<td></td>
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<tr>
<td>7.</td>
<td>Are the IsoRubber joints overlapped by 50mm and sealed with tape?</td>
<td></td>
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<tr>
<td>8.</td>
<td>Is the IsoRubber layer overlapping the IsoEdge flanking strip?</td>
<td></td>
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<tr>
<td>9.</td>
<td>Are the skirting boards isolated from the screed by the IsoEdge</td>
<td></td>
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<td></td>
<td>flanking strip?</td>
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<tr>
<td>10.</td>
<td>Are all ceiling board joints sealed with tape or caulked with</td>
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<td>sealant?</td>
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<tr>
<td>11.</td>
<td>Are service pipes wrapped in quilt and boxed in with two layers of</td>
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<td></td>
<td>nominal 8 kg/m² gypsum-based board?</td>
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<tr>
<td>12.</td>
<td>Is separating floor satisfactorily complete?</td>
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</tbody>
</table>

Contact details for technical assistance from Thermal Economics, manufacturer of IsoRubber resilient layer system:

- **Telephone:** 01582 544255
- **Fax:** 01582 429305
- **E-mail:** technical@thermal-economics.co.uk

# Notes
(include details of any corrective action)

Site manager/supervisor signature ..............................
Separating Floors – Concrete

E-FC-5

Pre-cast concrete plank
Screed laid on Cellecta® YELOfon® HD10+ resilient layer system

System Installation:
The use of this screed resilient layer system must incorporate all three products:
1) YELOfon® HD10+ (resilient layer to be laid over entire floor area with min. 150mm overlaps)
2) E-strip (self adhesive perimeter edging)
3) J-strip (foamed acoustic joining tape)

DO
- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure YELOfon® HD10+ resilient layer is laid over the entire floor surface and has overlapped joints of 150mm sealed with J-strip tape. On no account should the screed come into contact with the floor slab (See section 4 when using proprietary screeds)
- Ensure YELOfon® HD10+ overlaps the E-strip perimeter edging and joints are sealed with J-strip tape. On no account should screed come into contact with floor slab or perimeter walls
- Ensure the E-strip perimeter edging isolates the skirting and wall linings. On no account should screed come into contact with the wall lining and skirting
- Ensure that only the correct blocks are used in the construction of external (flanking) walls, unless specifically referred to in the Handbook all blocks should be assumed to be solid (i.e. not hollow or cellular)
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)

Robust Details Limited can only accept registration of this floor once the builder agrees to receive training from Cellecta® on the installation of the screed and resilient layer. Please contact Robust Details Limited for further information.
### Separating Floor – Concrete

#### 1. External (flanking) wall junction

- Masonry outer leaf
- External wall cavity (min 50mm)
- Inner leaf (min 100mm) aggregate concrete block (1350-1600 kg/m³ or 1850-2300 kg/m³) or aircrete block (450-800kg/m³).

**E-strip** perimeter edging must be overlapped by **YELOfon® HD10+** resilient layer with joints sealed with **J-strip** tape to isolate screed from perimeter walls and skirtings.

**YELOfon® HD10+** resilient layer must have 150mm (min) overlapped joints and be sealed with **J-strip** tape.

Concrete planks must be built into walls:
- walls must not be continuous between storeys
- planks must not abut inner leaf
- all voids between planks and blockwork filled with mortar or flexible sealant

Close cavity with a flexible cavity stop unless it is fully filled with built in mineral wool insulation

Continuous horizontal ribbon of adhesive

Nominal 8 kg/m² gypsum-based board or 13mm plaster

#### 2. Separating wall junction

Separating wall:
- if using robustdetails® for wall - refer to Table 3a in introduction to select an appropriate Robust Detail separating wall
- if using wall requiring pre-completion testing – seek specialist advice

**E-strip** perimeter edging must be overlapped by **YELOfon® HD10+** resilient layer with joints sealed with **J-strip** tape to isolate screed from perimeter walls and skirtings.

**YELOfon® HD10+** resilient layer must have 150mm (min) overlapped joints and be sealed with **J-strip** tape.

Concrete planks to be built into wall:
- wall must not be continuous between storeys
- planks must not abut separating wall
- all voids between planks and blockwork filled with mortar or flexible sealant

Continuous horizontal ribbon of adhesive
3. Ceiling treatments for E-FC-5

All ceiling treatments must be installed in accordance with the manufacturer’s instructions. All ceiling joints must be sealed with tape or caulked with sealant.

Note: the sound insulation performance of all ceiling treatments is increased if:
- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- resilient hangers are used.

**Downlighters and recessed lighting**

Provided there is a minimum ceiling void as stated below for CT0, CT1 or CT5, downlighters or recessed lighting may be installed in the ceiling:
- in accordance with the manufacturer’s instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

**CT0 and CT1 ceiling treatments can only be used when separating walls are constructed in aggregate blocks.**

**CT0 – Metal ceiling system - 150mm void**

To be used for 150mm (min) depth concrete planks
- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

**CT1 – Metal ceiling system - 100mm void**

Only to be used for 200mm (min) depth concrete planks
- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

**CT5 ceiling treatment MUST be used when flanking AND separating walls are constructed in aircrete blocks.**

This can also be used with concrete aggregate walls if required.

**CT5 – Metal ceiling system - 150mm void**

Only to be used for 200mm (min) depth concrete planks
- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 10 kg/m² gypsum-based board
4. Resilient layer installation for different screed types

**SCREED TYPE**
65mm (min) cement:sand screed

- YELOfon® HD10+ resilient layer must have 150mm (min) overlapped joints and be sealed with *J-strip* tape.
- *E-strip* perimeter edging must be overlapped by YELOfon® HD10+ resilient layer with joints sealed with *J-strip* tape to isolate screed from perimeter walls and skirtings.
- *E-strip* perimeter edging to be installed at all perimeter walls (including door openings, wall recesses) and service pipes. See manufacturer’s guidance.

**SCREED TYPE**
40mm (min) proprietary screed

- YELOfon® HD10+ resilient layer to be butt jointed.
- YELOfon® HD10+ joints to be sealed with *J-strip* tape.
- Polythene layer to be laid over whole floor, with joints overlapped.

5. Underfloor heating systems within screed

Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

Underfloor heating systems which have a supporting layer/board may be laid on top of the YELOfon® HD10+.

YELOfon® HD10+ may also be foil faced.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.
6. Services – Service pipes through separating floor

- 25mm (min) mineral wool quilt (min 10 kg/m³) around pipe
- Pipe boxed in with two layers gypsum-based board, each layer nominal 8 kg/m²
- J-strip tape
- All voids around pipe sealed

Sketch shows CT0 type ceiling treatment
# Checklist (to be completed by site manager/supervisor)

**Company:**

**Site:**

**Plot:**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Inspected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Has training been received from Collecta®?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Are inner leaves to external (flanking) walls of the correct block density and appropriate for precast concrete plank thickness and ceiling treatment?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Are joints between precast concrete planks grouted and sealed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Are precast concrete planks built into the masonry walls?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Is the <em>E-strip</em> perimeter edging installed around all room perimeter walls (including door openings, cupboards, across thresholds and into wall recesses) and service pipes and joints sealed with <em>J-strip</em> tape?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Are <em>YELOfon®</em> HD10+ resilient layer joints formed as described in Section 4 and sealed with <em>J-strip</em> tape?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Is <em>YELOfon®</em> HD10+ resilient layer overlapping the <em>E-strip</em> perimeter edging and joints sealed with <em>J-strip</em> tape?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Are the skirting boards isolated from the screed by the <em>E-strip</em> perimeter edging?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Is appropriate ceiling treatment used to suit wall block type?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Are all ceiling board joints sealed with tape or caulked with sealant?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m² gypsum-based board?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Is separating floor satisfactorily complete?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Contact details for technical assistance from Collecta®, manufacturer of *YELOfon®* HD10+ resilient layer system:**

- **Telephone:** 08456 717174
- **Fax:** 08456 717172
- **E-mail:** technical@cellecta.co.uk

**Notes** (include details of any corrective action)

**Site manager/supervisor signature**

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Warning: the doing of an unauthorised act in relation to a copyright work may result in both a civil claim for damages and criminal prosecution.
Separating Floor – Concrete

**E-FC-8**

- Precast concrete plank
- Screed laid on resilient layers
- Bonded resilient floor cover

**Floor covering**
4.5mm (min) bonded resilient floor covering (see section 4)

**Screed**
65mm (min) sand cement screed, or 40mm proprietary screed, 80 kg/m² (min) mass per unit area

**Isolating layer (1)**
5mm foamed polyethylene layer 30-36 kg/m³

**Isolating layer (2)**
25mm mineral wool batt 140 kg/m³ (min), 25mm EPS (flooring grade SD) or extruded polystyrene insulation

**Structural floor**
Precast concrete plank of 150mm (min) thickness and 300 kg/m² (min) mass per unit area

**Ceiling**
See section 3 for suitable ceiling treatment which is dependent on floor plank depth

**IMPORTANT**

Bonded resilient floor coverings must be tested in accordance with Appendix G.

See section 4 for performance requirements and edge detail installation options.

Polyethylene foams may not be used for bonded resilient floor coverings.

The resilient floor covering material must be overprinted with wording prohibiting its removal.

Bonded resilient floor covering should be suitably resistant to site and removals traffic.

**DO**

- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Install the 5mm and 25mm isolating layers with staggered joints
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)
- Ensure the isolating edge strip is 25mm mineral wool batt (min 140 kg/m³) or expanded (SD grade) or extruded polystyrene insulation board
- Ensure resilient floor cover is bonded using only suppliers’ recommended adhesives, and is not readily removable
Separating Floor – Concrete

1. External (flanking) wall junction

- Masonry outer leaf
- External wall cavity (min 50mm)
- Inner leaf (min 100mm) aggregate concrete block (1350 kg/m³ to 1600 kg/m³) or (1850 - 2300 kg/m³) or aircrete block (600-800 kg/m³)
- Bonded resilient floor cover installed between skirting and screed (see section 4 for installation options)
- 5mm isolating layer (1)
- 25mm isolating layer (2)
- 25mm (min) isolation edge strip
- Close cavity with a flexible cavity stop unless it is fully filled with built in mineral wool insulation
- Concrete planks must be built into walls:
  - wall must not be continuous between storeys
  - planks must not abut separating wall
  - all voids between planks and blockwork filled with mortar or flexible sealant
- Continuous ribbon of adhesive
- Nominal 8kg/m² gypsum-based board or 13mm plaster

Alternative detail

Mastic sealant ensures skirting and wall lining are isolated from screed

2. Separating wall junction

- Separating wall:
  - if using robustdetails® for wall – refer to Table 3a in introduction to select an appropriate Robust Detail separating wall
  - if using wall requiring pre-completion testing - seek specialist advice
- 25mm (min) isolation edge strip
- Concrete planks to be built into walls:
  - wall must not be continuous between storeys
  - planks must not abut separating wall
  - all voids between planks and blockwork filled with mortar or flexible sealant
3. Ceiling treatments for E-FC-8

All ceiling treatments must be installed in accordance with the manufacturer’s instructions. All ceiling joints should be sealed with tape or caulked with sealant.

Note: the sound insulation performance of all ceiling treatments is increased if:

- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- if resilient hangers are used.

**Downlighters and recessed lighting**

Provided there is a minimum ceiling void, as stated below for CT0 and CT1, downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer’s instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

---

**CT0 – Metal ceiling system - 150mm void**

To be used for 150mm (min) depth concrete planks

- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 10 kg/m² gypsum-based board

**CT1 – Metal ceiling system – 100mm void**

Only to be used for 200mm (min) depth concrete planks

- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 10 kg/m² gypsum-based board
4. Isolating layers installation, edge strip and bonded resilient floor cover

<table>
<thead>
<tr>
<th>Isolating layer (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 5mm (min) foamed polyethylene</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isolating layer (2) and isolating edge strip</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 25mm (min) thick</td>
</tr>
<tr>
<td>• may be mineral wool batt (min 140 kg/m³) or expanded (SD grade) or extruded polystyrene insulation board</td>
</tr>
</tbody>
</table>

(Note: if required, it is permissible to have the 5mm polyethylene installed as the lower secondary isolating layer)

5. Underfloor heating systems within screeds

Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the isolating layers or bridge the screed to the slab. Isolating layers with preformed surface indent channels, for the heating elements, may be used provided the material meets the specification for Isolating layer (2) above.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.

Note: If required it is permissible to have the 5mm layer installed as the lower secondary isolating layer (as shown in Option B).
6. Services – Service pipes through separating floor

- 25mm (min) mineral wool quilt (min 10kg/m³) around pipe
- Pipe boxed in with two layers gypsum-based board, each layer nominal 8 kg/m²
- Bonded resilient floor cover goes under skirting
- Remaining gap may be sealed with mastic
- All voids around pipe sealed

Sketch shows CT0 type ceiling treatment

Alternative detail

Mastic sealant
CHECKLIST (to be completed by site manager /supervisor)

Company:  
Site:  
Plot: Site manager/supervisor:  

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Inspected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Are joints between precast concrete planks grouted and sealed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Are precast concrete planks built into the masonry walls?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Has the 25mm edge strip been installed for all room perimeters?</td>
<td></td>
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<tr>
<td>5.</td>
<td>Are both isolating layers each fully covering the floor slab?</td>
<td></td>
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</tr>
<tr>
<td>6.</td>
<td>Is the resilient floor cover fully covering, and fully bonded to the screed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Are the skirting boards isolated from the screed by the resilient floor cover or flexible sealant?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Are all ceiling board joints sealed with tape or caulked with sealant?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9.</td>
<td>Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m² gypsum-based board?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>10.</td>
<td>Is separating floor satisfactorily complete?</td>
<td></td>
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</tr>
</tbody>
</table>

Notes (include details of any corrective action)

Site manager/supervisor signature ........................................

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# Separating Floor – Concrete

<table>
<thead>
<tr>
<th><strong>Floor covering</strong></th>
<th>3mm Thermal Economics IsoRubber Top (bonded with IsoBond adhesive)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screed</strong></td>
<td>65mm (min) sand cement screed, or 40mm proprietary screed, 80 kg/m² (min) mass per unit area</td>
</tr>
<tr>
<td><strong>Structural floor</strong></td>
<td>Precast concrete plank of 150mm (min) thickness and 300 kg/m² (min) mass per unit area</td>
</tr>
<tr>
<td><strong>Ceiling</strong></td>
<td>See section 3 for suitable ceiling treatment which is dependent on floor plank depth</td>
</tr>
</tbody>
</table>

**DO**
- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure IsoRubber Top fully covers floor area
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)
- Ensure IsoRubber Top is bonded to screed with IsoBond adhesive
1. **External (flanking) wall junction**

Masonry outer leaf

External wall cavity (min 50mm)

Inner leaf (min 100mm) aggregate concrete block (1350 kg/m³ to 1600 kg/m³) or (1850 - 2300 kg/m³) or aircrete block (600-800 kg/m³)

3mm IsoRubber Top installed over whole floor area and between skirting and screed (see section 4 for installation options for underfloor heating)

Close cavity with a flexible cavity stop unless it is fully filled with built-in mineral wool insulation

Concrete planks must be built into walls:
- wall must not be continuous between storeys
- planks must not abut separating wall
- all voids between planks and blockwork filled with mortar or flexible sealant

Continuous ribbon of adhesive

Nominal 8kg/m² gypsum-based board or 13mm plaster

Sketch shows CT0 type ceiling treatment

**Alternative detail**

Mastic sealant

2. **Separating wall junction**

Separating wall:
- if using robust details® for wall - refer to Table 3a in introduction to select an appropriate Robust Detail separating wall
- if using wall requiring pre-completion testing - seek specialist advice

3mm IsoRubber Top installed over whole floor area and between skirting and screed

Concrete planks to be built into walls:
- wall must not be continuous between storeys
- planks must not abut separating wall
- all voids between planks and blockwork filled with mortar or flexible sealant

Sketch shows CT0 type ceiling treatment
3. Ceiling treatments for E-FC-9

All ceiling treatments must be installed in accordance with the manufacturer's instructions. All ceiling joints should be sealed with tape or caulked with sealant.

Note: the sound insulation performance of all ceiling treatments is increased if:
- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- if resilient hangers are used.

**Downlighters and recessed lighting**
Provided there is a minimum ceiling void, as stated below for CT0 and CT1, downlighters or recessed lighting may be installed in the ceiling:
- in accordance with the manufacturer's instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

**CT0 – Metal ceiling system - 150mm void**
To be used for 150mm (min) depth concrete planks
- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

**CT1 – Metal ceiling system – 100mm void**
Only to be used for 200mm (min) depth concrete planks
- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board
4. Underfloor heating systems within screeds

Underfloor heating systems may be installed within the screed.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.

Note: If required it is permissible to have an insulation layer between screed and plank (as shown in Option B).

5. Services – Service pipes through separating floor

- 25mm (min) mineral wool quilt (min 10kg/m²) around pipe
- Pipe boxed in with two layers gypsum-based board, each layer nominal 8 kg/m²
- 3mm IsoRubber Top installed over whole floor area and between skirting and screed
- Remaining gap may be sealed with mastic
- All voids around pipe sealed

Sketch shows CTO type ceiling treatment

Mastic sealant
Separating Floor – Concrete

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See overleaf for checklist
## CHECKLIST (to be completed by site manager /supervisor)

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Item</th>
<th>Yes</th>
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<th>Inspected</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Are joints between precast concrete planks grouted and sealed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Are precast concrete planks built into the masonry walls?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Is IsoBond adhesive being used?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Is the IsoRubber Top fully covering and fully bonded to the screed?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6.</td>
<td>Are the skirting boards isolated from the screed by the resilient floor cover or flexible sealant?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Is the correct ceiling type being used for precast concrete plank thickness?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8.</td>
<td>Are all ceiling board joints sealed with tape or caulked with sealant?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m² gypsum-based board?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Is separating floor satisfactorily complete?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Contact details for technical assistance from Thermal Economics, manufacturer of IsoRubber Top:

- **Telephone:** 01582 544255
- **Fax:** 01582 429305
- **E-mail:** technical@thermal-economics.co.uk

### Notes (include details of any corrective action)

Site manager/supervisor signature: .................................................................
**Separating Floor – Concrete**

**SYSTEM INSTALLATION**

The use of this screed resilient layer system *must* incorporate the following:

1) **TRANQUILT®** (resilient layer to be laid over entire floor area with integrated overlap seal)
2) **TRANQUILT®** to be laid with 150mm upstand at wall (to allow for isolation under wall lining and skirting after screed is poured)
3) **Monarfloor Acoustic Adhesive** (to affix all **TRANQUILT®** perimeter edges to slab and integrated overlap)
4) Butt joints which do not have integral overlap to be adhered and taped

**DO**

- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure **TRANQUILT®** resilient layer is laid over entire floor surface with 150mm upstand at perimeter walls
- Ensure integrated overlap is sealed with Monarfloor Acoustic Adhesive
- Ensure all joints without integrated overlap are sealed with adhesive and taped
- Ensure correct blocks are used in construction of external (flanking) walls
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)

**From 1 January 2009, Robust Details Limited can only accept registration of this floor once the builder agrees to receive training from Icopal-MONARFLOOR® on the installation of the screed and resilient layer. Please contact Robust Details Limited for further information.**
Separating Floor – Concrete

1. External (flanking) wall junction

- Masonry outer leaf
- External wall cavity (min 50mm)
- Inner leaf (min 100mm) aggregate concrete block (1350 kg/m³ to 1600 kg/m³ or 1850 - 2300 kg/m³)
- TRANQUILT® to be laid with 150mm upstand
- TRANQUILT® resilient layer must have joints sealed using integrated overlap with adhesive or tape See section 4
- Close cavity with a flexible cavity stop unless it is fully filled with built in mineral wool insulation
- Concrete planks must be built into walls:
  - walls must not be continuous between storeys
  - planks must not abut inner leaf
  - all voids between planks and blockwork filled with mortar or flexible sealant
- Continuous horizontal ribbon of adhesive
- Nominal 8 kg/m² gypsum-based board or 13mm plaster

Sketch shows CT0 type ceiling treatment

2. Separating wall junction

- Separating wall:
  - if using robustdetails® for wall - refer to Table 3a in introduction to select an appropriate Robust Detail separating wall
  - if using wall requiring pre-completion testing – seek specialist advice
- TRANQUILT® to be laid with 150mm upstand
- Concrete planks to be built into wall:
  - wall must not be continuous between storeys
  - planks must not abut separating wall
  - all voids between planks and blockwork filled with mortar or flexible sealant
- Continuous horizontal ribbon of adhesive

Sketch shows CT0 type ceiling treatment
3. Ceiling treatments for E-FC-11

All ceiling treatments must be installed in accordance with the manufacturer's instructions. All ceiling joints must be sealed with tape or caulked with sealant.

Note: the sound insulation performance of all ceiling treatments is increased if:

- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- resilient hangers are used.

Downlighters and recessed lighting

Provided there is a minimum ceiling void as stated below for CT0, CT1 or CT2, downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer's instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

CT0 – Metal ceiling system - 150mm void
To be used for 150mm (min) depth concrete planks

- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

CT1 – Metal ceiling system - 100mm void
Only to be used for 200mm (min) depth concrete planks

- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board
4. Resilient layer installation for different screed types

- Affix TRANQUILT® perimeter with Monarfloor Acoustic Adhesive
- Seal integrated overlap with Monarfloor Acoustic Adhesive

- Use Monarfloor Acoustic Adhesive to seal butt joints (where integrated overlap is not present)

5. Underfloor heating systems within screeds

Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

Underfloor heating systems which have a supporting layer/board may be laid on top of the TRANQUILT®.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.
6. Services – Service pipes through separating floor

- 25mm (min) mineral wool quilt (min 10 kg/m³) around pipe
- Pipe boxed in with two layers gypsum-based board, each layer nominal 8 kg/m²
- All voids around pipe sealed

Sketch shows CT0 type ceiling treatment
# CHECKLIST (to be completed by site manager/supervisor)

Company: ______________________________

Site: ______________________________

Plot: ______________________________ Site manager/supervisor: ______________________________

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Inspected (initials &amp; date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Has training been received from Icopal-MONARFLOOR®</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?</td>
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</tr>
<tr>
<td>5</td>
<td>Are precast concrete planks built into the masonry walls?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Is the 10mm TRANQUILT® covering the whole floor slab?</td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td>Is the TRANQUILT® taken 150mm up the wall?</td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>Are the integrated overlaps sealed with Monarfloor Acoustic Adhesive?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>Are the skirting boards and wall linings isolated from the screed by the TRANQUILT®?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Has the installation been signed off by Icopal-MONARFLOOR® prior to pouring the screed?</td>
<td></td>
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<tr>
<td>11</td>
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</tbody>
</table>

Contact details for technical assistance from Icopal-MONARFLOOR® TRANQUILT®, manufacturer of TRANQUILT® resilient layer system:

- **Telephone:** 0161 866 6540
- **Fax:** 0161 866 6527
- **E-mail:** acoustics.uk@icopal.com

**Notes** (include details of any corrective action)

Site manager/supervisor signature: ______________________________
**SYSTEM INSTALLATION**

The use of this screed resilient layer system must incorporate the following:

1) **3mm IsoRubber Base HP3** (resilient layer to be laid over entire floor area with minimum 50mm overlaps)
2) **IsoEdge flanking strip**
3) All joints taped

**IsoEdge Flanking Strip**

- Min. 50mm overlap
- All joints taped

- **IsoEdge** flanking strip to be installed at all room perimeters. See manufacturer’s guidance.
- See Section 4 for acceptable installation alternatives for 40mm proprietary screeds

---

**DO**

- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure 3mm IsoRubber Base HP3 resilient layer is laid over the entire floor surface and has overlapped joints of 50mm sealed with tape. On no account should the screed come into contact with the floor slab. (see Section 4 for 40mm proprietary screeds)
- Ensure 3mm IsoRubber Base HP3 overlaps with IsoEdge flanking strip. On no account should screed come into contact with floor slab or perimeter walls
- Ensure the IsoEdge flanking strip isolates the skirting and wall linings. On no account should screed come into contact with the wall lining and skirting
- Ensure that only the correct blocks are used in the construction of external (flanking) walls, unless specifically referred to in the Handbook all blocks should be assumed to be solid (i.e. not hollow or cellular)
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)
Separating Floor – Concrete

1. External (flanking) wall junction

- Masonry outer leaf
- External wall cavity (min 50mm)
- Inner leaf (min 100mm) aggregate concrete block (1350-1600 kg/m³ or 1850-2300 kg/m³) or aircrete block (450-800 kg/m³)
- IsoEdge flanking strip must overlap with IsoRubber resilient layer and isolate screed from perimeter walls and skirtings
- IsoRubber resilient layer must have 50mm (min) overlapped joints and be sealed with tape
- Concrete cavity with a flexible cavity stop unless it is fully filled with built in mineral wool insulation
- Concrete planks must be built into walls:
  - walls must not be continuous between storeys
  - planks must not abut inner leaf
  - all voids between planks and blockwork filled with mortar or flexible sealant
- Continuous horizontal ribbon of adhesive or IsoEdge ceiling strip
- Nominal 8 kg/m² gypsum-based board or 13mm plaster

Sketch shows CT1 type ceiling treatment

2. Separating wall junction

Separating wall:
- if using robustdetails® for wall - refer to Table 3a in introduction to select an appropriate Robust Detail separating wall
- if using wall requiring pre-completion testing – seek specialist advice
- IsoEdge flanking strip
- IsoRubber resilient layer to overlap IsoEdge flanking strip
- Concrete planks to be built into wall:
  - wall must not be continuous between storeys
  - planks must not abut separating wall
  - all voids between planks and blockwork filled with mortar or flexible sealant
- Continuous horizontal ribbon of adhesive or IsoEdge ceiling strip

Sketch shows CT1 type ceiling treatment
3. Ceiling treatments for E-FC-12

All ceiling treatments must be installed in accordance with the manufacturer’s instructions. All ceiling joints must be sealed with tape or caulked with sealant.

Note: the sound insulation performance of all ceiling treatments is increased if:

- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- resilient hangers are used.

**Downlighters and recessed lighting**

Provided there is a minimum ceiling void as stated below for CT0, CT1 or CT2, downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer’s instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

**CT0 – Metal ceiling system - 150mm void**

To be used for 150mm (min) depth concrete planks

- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

**CT1 – Metal ceiling system - 100mm void**

Only to be used for 200mm (min) depth concrete planks

- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

**CT2 – Timber battens and counterbattens with IsoSonic Hangers Type C. Only to be used for 200mm (min) depth concrete planks**

- 50x50mm softwood battens
- 50x50mm counterbattens
- IsoSonic Hangers Type C
- one layer of nominal 8 kg/m² gypsum-based board
Separating Floor – Concrete

4. Resilient layer installation for different screed types

**SCREED TYPE**
65mm (min) cement:sand screed
- IsoRubber joints to be overlapped by 50mm (min)
- Upper IsoRubber edge joints to be sealed by tape

**SCREED TYPE**
40mm (min) proprietary screed
- IsoRubber joints to be butt jointed
- IsoRubber joints to be sealed by tape
- Polythene layer to be laid over whole floor overlapping joints

5. Underfloor heating systems within screeds

Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

Underfloor heating systems which have a supporting layer/board may be laid on top of the IsoRubber.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.
6. Services – Service pipes through separating floor

- 25mm (min) mineral wool quilt (min 10 kg/m³) around pipe
- Pipe boxed in with two layers gypsum-based board, each layer nominal 8 kg/m²
- All voids around pipe sealed

Sketch shows CT1 type ceiling treatment
# Separating Floor – Concrete

**CHECKLIST** (to be completed by site manager/supervisor)

<table>
<thead>
<tr>
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<td>2.</td>
<td>Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?</td>
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<td>6.</td>
<td>Is the IsoEdge flanking strip installed for all room perimeters?</td>
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<tr>
<td>7.</td>
<td>Are the IsoRubber joints overlapped by 50mm and sealed with tape?</td>
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<tr>
<td>8.</td>
<td>Is the IsoRubber layer overlapping the IsoEdge flanking strip?</td>
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<tr>
<td>9.</td>
<td>Are the skirting boards isolated from the screed by the IsoEdge flanking strip?</td>
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<tr>
<td>10.</td>
<td>Are all ceiling board joints sealed with tape or caulked with sealant?</td>
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</table>

Contact details for technical assistance from Thermal Economics, manufacturer of IsoRubber resilient layer system:

**Telephone:** 01582 544255  **Fax:** 01582 429305  **E-mail:** technical@thermal-economics.co.uk

**Notes** (include details of any corrective action)

Site manager/supervisor signature .................................
**Separating Floor – Concrete**

**SYSTEM INSTALLATION**

The use of this screed resilient layer system must incorporate the following:

1) **InstaLay 65** (resilient layer to be laid over entire floor area with minimum 50mm overlaps)

2) **InstaLay 65** edge strip

3) All joints taped

**InstaLay 65** edge strip  
Min. 50mm overlap  
All joints taped

**InstaLay 65** edge strip to be installed at all room perimeters. See manufacturer’s guidance.

**DO**

- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure InstaLay 65 resilient layer is laid over the entire floor surface and has overlapped joints of 50mm sealed with tape. On no account should the screed come into contact with the floor slab.
- Ensure InstaLay 65 overlaps with InstaLay 65 edge strip. On no account should screed come into contact with floor slab or perimeter walls
- Ensure the InstaLay 65 edge strip isolates the skirting and wall linings. On no account should screed come into contact with the wall lining and skirting
- Ensure that only the correct blocks are used in the construction of external (flanking) walls, unless specifically referred to in the Handbook all blocks should be assumed to be solid (i.e. not hollow or cellular)
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)

Robust Details Limited can only accept registration of this floor once the builder agrees to receive training from InstaCooustic on the installation of the screed and resilient layer. Please contact Robust Details Limited for further information.
Separating Floor – Concrete

1. External (flanking) wall junction

- Masonry outer leaf
- External wall cavity (min 50mm)
- Inner leaf (min 100mm) aggregate concrete block (1350 kg/m³ to 1600 kg/m³ or 1850 - 2300 kg/m³) or aircrete block (450-800 kg/m³)
- InstaLay 65 edge strip must overlap with InstaLay 65 resilient layer and isolate screed from perimeter walls and skirtings
- InstaLay 65 resilient layer must have 50mm (min) overlapped joints and be sealed with tape
- Close cavity with a flexible cavity stop unless it is fully filled with built in mineral wool insulation
- Concrete planks must be built into walls:
  - walls must not be continuous between storeys
  - planks must not abut inner leaf
  - all voids between planks and blockwork filled with mortar or flexible sealant
- Nominal 8 kg/m² gypsum-based board or 13mm plaster

2. Separating wall junction

- Separating wall:
  - if using robustdetails® for wall - refer to Table 3a in introduction to select an appropriate Robust Detail separating wall
  - if using wall requiring pre-completion testing – seek specialist advice
- InstaLay 65 edge strip
- Concrete planks to be built into wall:
  - wall must not be continuous between storeys
  - planks must not abut separating wall
  - all voids between planks and blockwork filled with mortar or flexible sealant
- Continuous horizontal ribbon of adhesive
3. Ceiling treatments for E-FC-13

All ceiling treatments must be installed in accordance with the manufacturer’s instructions. All ceiling joints must be sealed with tape or caulked with sealant.

Note: the sound insulation performance of all ceiling treatments is increased if:

- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- resilient hangers are used.

**Downlighters and recessed lighting**

Provided there is a minimum ceiling void as stated below for CT0 or CT1, downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer’s instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

**CT0 – Metal ceiling system - 150mm void**

To be used for 150mm (min) depth concrete planks

- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

**CT1 – Metal ceiling system - 100mm void**

Only to be used for 200mm (min) depth concrete planks

- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board
4. Resilient layer installation

**SCREED TYPE**
65mm (min) cement: sand screed

- InstaLay 65 resilient layer must have 50mm (min) overlapped joints and be sealed with jointing tape
- InstaLay 65 edge strip must be overlapped by InstaLay 65 resilient layer with joints sealed with jointing tape to isolate screed from perimeter walls and skirtings
- InstaLay 65 edge strip to be installed at all perimeter walls (including door openings, wall recesses) and service pipes. See manufacturer’s guidance

5. Underfloor heating systems within screeds

Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

Underfloor heating systems which have a supporting layer/board may be laid on top of the InstaLay 65.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.
6. Services – Service pipes through separating floor

- 25mm (min) mineral wool quilt (min 10 kg/m³) around pipe
- Pipe boxed in with two layers gypsum-based board, each layer nominal 8 kg/m²
- All voids around pipe sealed

Sketch shows CT0 type ceiling treatment
## CHECKLIST (to be completed by site manager/supervisor)

**Company:**  
**Site:**  
**Plot:**  
**Site manager/supervisor:**

<table>
<thead>
<tr>
<th>Ref.</th>
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Contact details for technical assistance from InstaCoustics, manufacturer of InstaLay 65 resilient layer system:  
**Telephone:** 0118 973 9560  
**Fax:** 0118 973 9547  
**E-mail:** sales@instacoustic.co.uk

**Notes** (include details of any corrective action)

Site manager/supervisor signature  

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Separating Floor – Concrete

Screed laid on Thermal Economics IsoRubber Code layer

**SYSTEM INSTALLATION**

The use of this screed resilient layer system **must** incorporate the following:

1) **6mm IsoRubber Code layer**
   (resilient layer to be laid over entire floor area with minimum 50mm overlaps)

2) **IsoEdge 6/260** flanking strip

3) All joints taped

**IsoEdge 6/260** flanking strip

- Min. 50mm overlap
- All joints taped

- **IsoEdge 6/260** flanking strip to be installed at all room perimeters. See manufacturer’s guidance.

- See Section 4 for acceptable installation alternatives for 40mm proprietary screeds

**DO**

- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure 6mm IsoRubber resilient layer is laid over the entire floor surface and has overlapped joints of 50mm sealed with tape. On no account should the screed come into contact with the floor slab. (see Section 4 for 40mm proprietary screeds)
- Ensure 6mm IsoRubber overlaps with IsoEdge flanking strip. On no account should screed come into contact with floor slab or perimeter walls
- Ensure the IsoEdge flanking strip isolates the skirting and wall linings. On no account should screed come into contact with the wall lining and skirting
- Ensure that only the correct blocks are used in the construction of external (flanking) walls, unless specifically referred to in the Handbook all blocks should be assumed to be solid (i.e. not hollow or cellular)
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions

Robust Details Limited can only accept registration of this floor once the builder agrees to receive training from Thermal Economics on the installation of the screed and resilient layer. Please contact Robust Details Limited for further information.

**Screed**

- 65mm (min) cement:sand screed or 40mm (min) proprietary screed of nominal 80 kg/m² mass per unit area

**Resilient layer**

- 6mm IsoRubber Code layer with IsoEdge 6/260 flanking strip

**Structural floor**

- Precast concrete plank of minimum 150mm thickness and 300 kg/m² (min) mass per unit area

**Ceiling**

- See section 3 for suitable ceiling treatment

**Absorbent material**

- 50mm (min) mineral wool quilt insulation 10 kg/m³ (min)
1. External (flanking) wall junction

- Masonry outer leaf
- External wall cavity (min 50mm)
- Inner leaf (min 100mm) aggregate concrete block (1350 kg/m³ to 1600 kg/m³ or 1850 - 2300 kg/m³) or aircrete block (450-800 kg/m³)
- IsoEdge 6/260 flanking strip must overlap with IsoRubber resilient layer and isolate screed from perimeter walls and skirtings
- IsoRubber Code layer must have 50mm (min) overlapped joints and be sealed with tape
- Close cavity with a flexible cavity stop unless it is fully filled with built in mineral wool insulation
- Concrete planks must be built into walls:
  - walls must not be continuous between storeys
  - planks must not abut inner leaf
  - all voids between planks and blockwork filled with mortar or flexible sealant
- Isosonic ceiling strip
- Continuous horizontal ribbon of adhesive
- Nominal 8 kg/m² gypsum-based board or 13mm plaster

2. Separating wall junction

- Separating wall:
  - if using robustdetails® for wall - refer to Table 3a in introduction to select an appropriate Robust Detail separating wall
  - if using wall requiring pre-completion testing – seek specialist advice
- IsoEdge 6/260 flanking strip
- IsoRubber Code layer to overlap IsoEdge flanking strip
- Concrete planks to be built into wall:
  - wall must not be continuous between storeys
  - planks must not abut separating wall
  - all voids between planks and blockwork filled with mortar or flexible sealant
- Isosonic ceiling strip
- Continuous horizontal ribbon of adhesive
3. Ceiling treatments for E-FC-14

All ceiling treatments must be installed in accordance with the manufacturer’s instructions. All ceiling joints must be sealed with tape or caulked with sealant.

Ensure Isosonic cleats are fitted with the pads against the concrete planks

**Downlighters and recessed lighting**

Provided there is a minimum ceiling void as stated below for CT0, CT1 or CT2, downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer’s instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

**CT0 – Metal ceiling system - 150mm void**

To be used for 150mm (min) depth concrete planks

- any metal ceiling frame, suspended from Isosonic cleats
- 50mm (min) mineral wool quilt insulation 10 kg/m³ (min)
- one layer 15mm (nominal 10 kg/m²) gypsum-based board

**CT1 – Metal ceiling system - 100mm void**

Only to be used for 200mm (min) depth concrete planks

- any metal ceiling frame, suspended from Isosonic cleats
- 50mm (min) mineral wool quilt insulation 10 kg/m³ (min)
- one layer 15mm (nominal 10 kg/m²) gypsum-based board

**CT2 – Timber battens and counterbattens with IsoSonic Hangers Type C**. Only to be used for 200mm (min) depth concrete planks

- 50x50mm softwood battens
- 50x50mm counterbattens
- IsoSonic Hangers Type C
- 50mm (min) mineral wool quilt insulation 10 kg/m³ (min)
- one layer 15mm (nominal 10 kg/m²) gypsum-based board
4. Resilient layer installation for different screed types

**SCREED TYPE**

- **65mm (min) cement:sand screed**
  - IsoRubber Code layer joints to be overlapped by 50mm (min)
  - Upper IsoRubber Code layer edge joints to be sealed by tape

**SCREED TYPE**

- **40mm (min) proprietary screed**
  - IsoRubber Code layer joints to be butt jointed
  - IsoRubber Code layer joints to be sealed by tape
  - Polythene layer to be laid over whole floor overlapping joints

5. Underfloor heating systems within screeds

Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

Underfloor heating systems which have a supporting layer/board may be laid on top of the IsoRubber.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.
6. Services – Service pipes through separating floor

- 25mm (min) mineral wool quilt (min 10 kg/m³) around pipe
- Pipe boxed in with two layers gypsum-based board, each layer nominal 8 kg/m²
- All voids around pipe sealed
- Isosonic ceiling strip

Sketch shows CT0 type ceiling treatment
CHECKLIST (to be completed by site manager/supervisor)

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<td>Is the IsoEdge 6/260 flanking strip installed for all room perimeters?</td>
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<tr>
<td>7.</td>
<td>Are the IsoRubber Code layer joints overlapped by 50mm and sealed with tape?</td>
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<td>8.</td>
<td>Is the IsoRubber Code layer overlapping the IsoEdge 6/260 flanking strip?</td>
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<td>9.</td>
<td>Are the skirting boards isolated from the screed by the IsoEdge 6/260 flanking strip?</td>
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<tr>
<td>10.</td>
<td>Are the Isosonic cleats installed with the pads against the precast planks?</td>
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<td>11.</td>
<td>Is Isosonic ceiling strip installed at ceiling perimeters?</td>
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<td>12.</td>
<td>Is 50mm (min) mineral wool quilt insulation 10 kg/m³ (min) installed in the ceiling void?</td>
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<tr>
<td>13.</td>
<td>Are all ceiling board joints sealed with tape or caulked with sealant?</td>
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<tr>
<td>14.</td>
<td>Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m³ gypsum-based board?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Is separating floor satisfactorily complete?</td>
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<td></td>
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</tbody>
</table>

Contact details for technical assistance from Thermal Economics, manufacturer of IsoRubber resilient layer system:

Telephone: 01582 544255   Fax: 01582 429305   E-mail: technical@thermal-economics.co.uk

Notes (include details of any corrective action)

Site manager/supervisor signature: ________________________________

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**Separating Floor – Concrete**

**SYSTEM INSTALLATION**

The use of this screed resilient layer system **must** incorporate the following:

1) **Regupol Quietlay** (resilient layer to be laid over entire floor area)

2) **Regupol Quietlay** to be laid with min 100mm upstand at wall (to allow for isolation under wall lining and skirting after screed is poured)

3) All joints taped with Regupol Tape only

**DO**

- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure resilient layer is laid over entire floor surface with min 100mm upstand at perimeter walls
- Ensure that ‘Regupol’ is printed on the resilient layer material
- Ensure all joints are taped with Regupol Tape
- Ensure correct blocks are used in construction of external (flanking) walls
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)

**Robust Details Limited**

Robust Details Limited can only accept registration of this floor once the builder agrees to receive training from CMS Danskin on the installation of the screed and resilient layer. Please contact Robust Details Limited for further information.
Separating Floor – Concrete

1. External (flanking) wall junction

Masonry outer leaf
External wall cavity (min 50mm)
Inner leaf (min 100mm) aggregate concrete block (1350 kg/m³ to 1600 kg/m³ or 1850 - 2300 kg/m³)
Regupol Quietlay to be laid with min 100mm upstand
Regupol Quietlay resilient layer must have joints taped with Regupol Tape. See section 4
Close cavity with a flexible cavity stop unless it is fully filled with built in mineral wool insulation
Concrete planks must be built into walls:
- walls must not be continuous between storeys
- planks must not abut inner leaf
- all voids between planks and blockwork filled with mortar or flexible sealant
Continuous horizontal ribbon of adhesive
Nominal 8 kg/m² gypsum-based board or 13mm plaster

Sketch shows CT0 type ceiling treatment

2. Separating wall junction

Separating wall:
- if using robustdetails® for wall - refer to Table 3a in introduction to select an appropriate Robust Detail separating wall
- if using wall requiring pre-completion testing - seek specialist advice
Regupol Quietlay to be laid with min 100mm upstand
Concrete planks to be built into wall:
- wall must not be continuous between storeys
- planks must not abut separating wall
- all voids between planks and blockwork filled with mortar or flexible sealant
Continuous horizontal ribbon of adhesive

Sketch shows CT0 type ceiling treatment
3. Ceiling treatments for E-FC-15

All ceiling treatments must be installed in accordance with the manufacturer’s instructions. All ceiling joints must be sealed with tape or caulked with sealant.

Note: the sound insulation performance of all ceiling treatments is increased if:

- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- resilient hangers are used.

**Downlighters and recessed lighting**

Provided there is a minimum ceiling void as stated below for CT0 or CT1, downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer’s instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

---

CT0 – Metal ceiling system - 150mm void
To be used for 150mm (min) depth concrete planks

- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board

CT1 – Metal ceiling system - 100mm void
Only to be used for 200mm (min) depth concrete planks

- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m² gypsum-based board
Separating Floor – Concrete

4. Resilient layer installation for different screed types

<table>
<thead>
<tr>
<th>SCREED TYPE</th>
<th>65mm (min) cement: sand screed</th>
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<tbody>
<tr>
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<td>50mm</td>
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<td></td>
<td>Taped joint</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>SCREED TYPE</th>
<th>40mm (min) proprietary screed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Polythene layer</td>
</tr>
<tr>
<td></td>
<td>Taped joint</td>
</tr>
</tbody>
</table>

65mm (min) cement: sand screed
- Regupol Quietlay joints to be overlapped by 50mm (min)
- Regupol Quietlay edge joints to be sealed by tape

40mm (min) proprietary screed
- Regupol Quietlay joints to be butt jointed
- Regupol Quietlay joints to be sealed by tape
- 500 gauge (min) polythene layer to be laid over whole floor overlapping joints

5. Underfloor heating systems within screeds

Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

Underfloor heating systems which have a supporting layer/board may be laid on top of the Regupol Quietlay.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.
6. Services – Service pipes through separating floor

- 25mm (min) mineral wool quilt (min 10 kg/m³) around pipe
- Pipe boxed in with two layers gypsum-based board, each layer nominal 8 kg/m²
- All voids around pipe sealed

Sketch shows CT0 type ceiling treatment
**CHECKLIST** (to be completed by site manager/supervisor)

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Item</th>
<th>Yes (✓)</th>
<th>No (✗)</th>
<th>Inspected (initials &amp; date)</th>
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<tr>
<td>1.</td>
<td>Has training been received from CMS Danskin</td>
<td></td>
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<tr>
<td>2.</td>
<td>Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?</td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td>Are inner leaves to external (flanking) walls of the correct block density?</td>
<td></td>
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<tr>
<td>4.</td>
<td>Are joints between precast concrete planks grouted and sealed?</td>
<td></td>
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<tr>
<td>5.</td>
<td>Are precast concrete planks built into the masonry walls?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Is the Regupol Quietlay covering the whole floor slab?</td>
<td></td>
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<tr>
<td>7.</td>
<td>Is the Regupol Quietlay taken min 100mm up the wall?</td>
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<tr>
<td>8.</td>
<td>Are all joints taped with Regupol Tape?</td>
<td></td>
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</tr>
<tr>
<td>9.</td>
<td>Are the skirting boards and wall linings isolated from the screed by the Regupol Quietlay?</td>
<td></td>
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</tr>
<tr>
<td>10.</td>
<td>Are all ceiling board joints sealed with tape or caulked with sealant?</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>11.</td>
<td>Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m² gypsum-based board?</td>
<td></td>
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</tr>
<tr>
<td>12.</td>
<td>Is separating floor satisfactorily complete?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contact details for technical assistance from CMS Danskin, supplier of Regupol Quietlay resilient layer system:

- **Telephone:** 01925 577711
- **Fax:** 01925 577733
- **E-mail:** info@cmsdanskin.co.uk

**Notes** (include details of any corrective action)

Site manager/supervisor signature .................................

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Separating Floor – Concrete E-FC-16

3mm Thermal Economics IsoRubber CC3

- Precast concrete plank
- Screed

Floor covering: 3mm Thermal Economics IsoRubber CC3 (bonded with IsoBond adhesive)

Screed: 65mm (min) sand cement screed

Structural floor: Precast concrete plank of 150mm (min) thickness and 300 kg/m² (min) mass per unit area

Ceiling: See section 3 for suitable ceiling treatment which is dependent on floor plank depth

DO

- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure IsoRubber CC3 fully covers floor area
- Make sure ceiling treatment is installed in accordance with the manufacturer’s instructions (where applicable)
- Ensure IsoRubber CC3 is bonded to screed with IsoBond adhesive
Separating Floor – Concrete

1. External (flanking) wall junction

- Masonry outer leaf
- External wall cavity (min 50mm)
- Inner leaf (min 100mm) aggregate concrete block (1350 kg/m³ to 1600 kg/m³) or (1850 - 2300 kg/m³) or aircrete block (600-800 kg/m³)
- 3mm IsoRubber CC3 installed over whole floor area and between skirting and screed (see section 4 for installation options for underfloor heating)
- Close cavity with a flexible cavity stop unless it is fully filled with insulation
- Concrete planks must be built into walls:
  - wall must not be continuous between storeys
  - planks must not abut separating wall
  - all voids between planks and blockwork filled with mortar or flexible sealant
- IsoSonic ceiling strip
- Continuous ribbon of adhesive
- Nominal 8kg/m² gypsum-based board or 13mm plaster

2. Separating wall junction

- Separating wall:
  - if using robust details® for wall - refer to Table 3a in introduction to select an appropriate Robust Detail separating wall
  - if using wall requiring pre-completion testing - seek specialist advice
- 3mm IsoRubber CC3 installed over whole floor area and between skirting and screed
- Concrete planks to be built into wall:
  - wall must not be continuous between storeys
  - planks must not abut separating wall
  - all voids between planks and blockwork filled with mortar or flexible sealant
- IsoSonic ceiling strip
3. Ceiling treatments for E-FC-16

All ceiling treatments must be installed in accordance with the manufacturer’s instructions. All ceiling joints should be sealed with tape or caulked with sealant.

Note: the sound insulation performance of all ceiling treatments is increased if:
- 25mm (min.) mineral fibre quilt is placed in the ceiling void.

**Downlighters and recessed lighting**
Provided there is a minimum ceiling void, as stated below for CT0 and CT1, downlighters or recessed lighting may be installed in the ceiling:
- in accordance with the manufacturer’s instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B - Fire Safety

**CT0 – Metal ceiling system - 150mm void**
To be used for 150mm (min) depth concrete planks
- any metal ceiling frame, suspended from Isosonic cleats
- one layer of nominal 9.8 kg/m² gypsum-based board

**CT1 – Metal ceiling system – 100mm void**
Only to be used for 200mm (min) depth concrete planks
- any metal ceiling frame, suspended from Isosonic cleats
- one layer of nominal 9.8 kg/m² gypsum-based board
4. Underfloor heating systems within screeds

Underfloor heating systems may be installed within the screed.

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.

Note: If required it is permissible to have an insulation layer between screed and plank (as shown in Option B).

5. Services – Service pipes through separating floor

Sketch shows CT0 type ceiling treatment
blank page

See overleaf for checklist
# CHECKLIST (to be completed by site manager /supervisor)

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Inspected (initials &amp; date)</th>
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<tbody>
<tr>
<td>1.</td>
<td>Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Are joints between precast concrete planks grouted and sealed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Are precast concrete planks built into the masonry walls?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Is IsoBond adhesive being used?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Is the IsoRubber CC3 fully covering and fully bonded to the screed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Are the skirting boards isolated from the screed by the resilient floor cover or flexible sealant?</td>
<td></td>
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</tr>
<tr>
<td>7.</td>
<td>Is the correct ceiling type being used for precast concrete plank thickness?</td>
<td></td>
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</tr>
<tr>
<td>8.</td>
<td>Are the Isosonic cleats installed with the pads against the precast planks?</td>
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<tr>
<td>9.</td>
<td>Is Isosonic ceiling strip installed at all ceiling perimeters?</td>
<td></td>
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</tr>
<tr>
<td>10.</td>
<td>Are all ceiling board joints sealed with tape or caulked with sealant?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m² gypsum-based board?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Is separating floor satisfactorily complete?</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Contact details for technical assistance from Thermal Economics, manufacturer of IsoRubber CC3:

**Telephone:** 01582 544255  
**Fax:** 01582 429305  
**E-mail:** technical@thermal-economics.co.uk

**Notes** (include details of any corrective action)

Site manager/supervisor signature: ________________________________

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Appendix A1 – Additional Guidance

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Wall ties in cavity masonry separating walls

Only “type A” wall ties are suitable for use with masonry cavity separating wall Robust Details.

Approved Document E clause 2.19 describes the requirements for Tie Type A (separating walls) as follows:

**Tie type A**

Connect the leaves of a masonry cavity wall only where necessary by butterfly ties as described in BS 1243: 1978 Metal ties for cavity wall construction, and spaced as required for structural purposes (BS 5628-3: 2001 Code of practice for use of masonry. Materials and components, design and workmanship, which limits this tie type and spacing to cavity widths of 50mm to 75mm with a minimum masonry leaf thickness of 90mm). Alternatively, use wall ties with an appropriate measured dynamic stiffness for the cavity width. The specification for wall ties of dynamic stiffness, $k_{X\text{mm}}$ in MN/m with a cavity width of $X$ mm and $n$ ties/m² is $n.k_{X\text{mm}}<4.8$ MN/m³.

When using wall ties for masonry separating walls the specifier should ensure that the wall tie manufacturer has a test report that demonstrates compliance with the required ADE criteria.

Wall ties in cavity masonry external walls

In relation to the wall tie requirements for external walls tie “Type A” may be used if it satisfies the requirements of Building Regulation Part A – Structure. However, where tie “Type A” does not meet these requirements for external walls tie “type B” wall ties should be used.

Approved Document E clause 2.20 describes the requirements for Tie Type B (external walls) as follows:

**Tie type B**

Connect the leaves of a masonry cavity wall only where necessary by double-triangle ties as described in BS 1243: 1978 Metal ties for cavity wall construction, and spaced as required for structural purposes (BS 5628-3: 2001 Code of practice for use of masonry. Materials and components, design and workmanship, which limits this tie type and spacing to cavity widths of 50mm to 75mm with a minimum masonry leaf thickness of 90mm). Alternatively, use wall ties with an appropriate measured dynamic stiffness for the cavity width. The specification for wall ties of dynamic stiffness, $k_{X\text{mm}}$ in MN/m with a cavity width of $X$ mm and $n$ ties/m² is $n.k_{X\text{mm}}<113$ MN/m³.
Appendix A1 – Additional Guidance

Cavity stops
The flexible cavity stops at the junction of the separating wall and the external (flanking) wall are shown in the Robust Details as a single piece of material (diagram a). It is acceptable for these to be provided as two separate pieces (diagram b), or three separate pieces (diagram c).

Diagram a
Diagram b
Diagram c

The following types of cavity stop may be used:
- single mineral wool batt cavity stops
- dual rigid cavity stops on either side of the external wall cavity (not for masonry separating walls)
- single rigid cavity stop attached to one leaf of the separating wall only (not for masonry separating walls)
- flexible single cavity stop such as the mineral wool “tubular style”
- flexible double cavity stops such as the mineral wool “tubular style” where one is fitted in line with each leaf of the separating wall.

Single rigid cavity stops which structurally couple both leaves of the separating wall are not permitted.

Separating walls with a gypsum-based board finish
Where possible, movement joints should be avoided in separating walls with a gypsum-based board finish. Where they are essential, they should be formed as follows:

Separating walls with wet plaster finish
Movement joints are not acceptable in robustdetails® separating walls with a wet plaster finish unless they are strategically placed behind internal wall junctions or service pipe casings.

Cavity trays
The cavity trays shown above the cavity stops are included for illustrative purposes only and not for acoustic reasons.

Movement joints in cavity masonry separating walls

Separating walls with a gypsum-based board finish
Where possible, movement joints should be avoided in separating walls with a gypsum-based board finish. Where they are essential, they should be formed as follows:

Separating walls with wet plaster finish
Movement joints are not acceptable in robustdetails® separating walls with a wet plaster finish unless they are strategically placed behind internal wall junctions or service pipe casings.

Partial fill insulation should be installed up to the cavity stop.

Diagram d

Flexible cavity stop
External (flanking) wall with partial fill insulation

Diagram e

Minimum 1.0m
20mm (min) deep flexible polysulphide sealant

Diagram f

The movement joints must also be staggered and spaced not less than 1m apart, as shown in Diagram d above.
Appendix A1 – Additional Guidance

**Bed joint reinforcement**

It is acceptable to install masonry reinforcement within the horizontal bed joints of the cavity masonry separating provided:

- the masonry reinforcement is contained wholly within the mortar bed joint of each individual leaf of masonry
- the masonry reinforcement does not connect the two leaves of the cavity walls together or bridge the cavity in any way

**Internal floor joists/floor beams and masonry separating walls**

Internal floor joists at right angles to the separating wall may be supported by metal joist hangers or be built into the wall.

The acoustic performance of separating walls is adversely affected by any gaps in the masonry as these provide a direct sound transmission path. **It is essential that joists and beams are built in only if a high standard of workmanship can be guaranteed.**

**Solid timber joists**

Solid timber joists may be built into the separating wall, provided that:

- the mortar joints around each joist perimeter are recessed or struck, and
- the joint between the masonry and the timber is carefully pointed with silicone sealant.

![Diagram of bed joint reinforcement](image)

In circumstances where the joist end cap is larger than the depth of the joist, such that there is a gap between the top of the joist and the joist end cap, this should be filled with mineral wool or other suitable material such that the acoustic performance of the wall is maintained.

**Metal web joists**

Metal web joists may be built into the separating wall following the guidance for solid timber joists above. Metal web joists must have solid ends.

**Timber I-Joists**

Timber I-joists may be built into the separating wall, provided that:

- proprietary filler pieces are fitted on both sides of the web between the top and bottom flanges. These filler pieces must not damage the joist flanges - their depth should be slightly less than the dimension between the joist flanges to achieve a “loose fit”.
- the mortar joints around each joist perimeter are recessed or struck, and
- the joint between the masonry and the timber and any other air paths are carefully pointed with silicone sealant.

Alternatively, proprietary joist caps/ends designed to satisfy the air leakage requirements of Approved Document L1 may be used. They should be installed in accordance with the manufacturer’s instructions. In circumstances where the joist end cap is larger than the depth of the joist, such that there is a gap between the top of the joist and the joist end cap, this should be filled with mineral wool or other suitable material such that the acoustic performance of the wall is maintained.

Alternatively, proprietary joist caps/ends designed to satisfy the air leakage requirements of Approved Document L1 may be used. They should be installed in accordance with the manufacturer’s instructions. In circumstances where the joist end cap is larger than the depth of the joist, such that there is a gap between the top of the joist and the joist end cap, this should be filled with mineral wool or other suitable material such that the acoustic performance of the wall is maintained.
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Steel beams
Steel beams may be built into the separating wall, provided that all voids around the beam ends are filled with mortar or flexible sealant.

Flues in separating walls
Flue blocks may not be built into the separating wall where the finish is wet plaster. Flue blocks may only be built into the normal width of a separating wall where a diagram is included in the Robust Details.

Any of the robustdetails® masonry separating walls with gypsum-based board on dabs finish, may use the following alternative detail:

Separating walls should not be constructed off steel beams.

Structural steelwork in masonry separating walls
Steel columns built into masonry separating walls are not permitted.

Separating walls should not be constructed off steel beams.

Concrete beam and block ground and internal floors
Concrete beam and block floors may be built into the separating wall, provided:
- all voids are carefully filled with mortar
- the floor does not bridge the cavity leaves.

Coursing in blockwork separating walls
For the purposes of adjusting coursing it is permissible to use smaller units of robustdetails® separating wall material (e.g. brick sized), provided the density of the smaller units is at least the same as the separating wall material.

Internal render
Some of the Robust Details for masonry separating walls indicate the use of an internal render (parge) coat prior to the application of dry lining. Where a cement:sand render coat is used it should not be float or skim finished but preferably applied in an uneven manner with a trowel (or equivalent) and scratch finished.

Internal render may be omitted from the following locations:
- wall surfaces not facing into a room
- floor joist/beam zone
- roof space (where there are no rooms in the roof)
- staircases may be installed prior to the application of render, and the render and gypsum-based board are not required behind the stair string.

Mixes quoted are for cement, lime and sand by volume based on damp sand. Mixes made with cement, sand and plasticiser are also acceptable.
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**Spandrel panels**

Where stated in the Robust Detail spandrel panels are an acceptable alternative to building the cavity separating wall in the roof space (without room-in-roof).

When adopting spandrel panels particular attention should be paid to Building Regulations Part B - Fire Safety, the dimensions given below are the minimum required to maintain only the acoustic integrity.

The supporting blockwork should extend at least 300mm above the finished ceiling layer. The top of the cavity wall should be closed with a cavity stop. The junction between the spandrel panel and supporting blockwork should be sealed with flexible or acoustic sealant. The spandrel panel may be mounted on a mineral fibre panel.

The spandrel panel should consist of:

2 layers of gypsum-based board lining each side of a minimum 35x45mm timber frame, each layer to be a nominal 8 kg/m². Alternatively, framing can be formed from lightweight steel instead of timber.

![Spandrel panel diagram](image)

Two panels may be adopted provided a minimum 50mm cavity is maintained between the opposing sheathing faces, or to the stud frame where no sheathing is fitted.

Wall cavities must be maintained within roof voids. Linking of wall leaves by spandrel panels is not permitted.

**Services and chases in separating walls**

Where possible, services should not be built into the separating wall.

However, where chasing is permitted in the Detail, they should be kept to a minimum. Chases must not be located back to back. Care must be taken to ensure all voids are fully filled with mortar. Where conduits or cappings are used they should not be in contact with the gypsum-based board.

The Robust Details for timber and steel framed walls show how services should be built in.

**Room-in-roof – requirements for gypsum-based boards**

Room-in-roof constructions are permitted only where stated in the Robust Detail. Where the ceiling to the room is directly beneath the roof structure, typically the sloping areas, two layers of gypsum-based board are required, as per the relevant room-in-roof detail for the adopted separating wall. A single layer of gypsum-based board may be adopted in other areas.

200mm (min) mineral wool to horizontal ceiling when using robustdetails® timber frame separating walls

![Section through room-in-roof](image)

**Gypsum-based board**

Gypsum-based boards may be either plaster gypsum-based or cement gypsum-based.

The mass per unit area or surface density specified is a nominal minimum value in kilograms per square metre (kg/m²): the use of a higher density board will increase the sound insulation performance.

Boards should be abutted and all joints sealed with tape or caulked with sealant. Where two or more layers of gypsum-based board are required on separating walls or ceilings all joints should be staggered, and only the outer layer boards need to be sealed with tape or caulked with sealant. The order in which boards are fitted and lapped is not critical provided the overall mass per unit area is maintained. The same applies to combined render/plaster finishes.

Boards fitted to steel and timber frame separating walls should be mounted in accordance with the manufacturer’s instructions – some boards may need to be mounted horizontally.

Thermal laminate boards may be used as the wall finish to masonry walls, provided the nominal mass per unit area indicated in the Robust Detail is maintained - seek advice from the manufacturer.

An acceptable alternative to caulkng or sealing the joint between the wall and the ceiling is to use gypsum coving.
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Cavity masonry separating walls – staggered external (flanking) wall junction
As an alternative to the junction shown in the Robust Detail, it is acceptable for the inner leaf blockwork to extend to the inner face of the external wall cavity, as shown below.


Masonry construction
Lateral restraint straps may be used at floor junctions, roof level and other junctions, if necessary to meet the requirements of Part A, provided they do not bridge the cavity separating wall leaves and that no voids remain at the mortar joints.

Internal walls (minimum mass requirements)

Junctions with cavity masonry separating walls
• masonry internal walls where there is no separating floor (e.g. houses) – no restrictions
• masonry internal walls where there is a separating floor (e.g. flats/apartments) – internal wall should have a minimum mass per unit area of 120 kg/m² (including the finish) OR at least that of the approved flanking wall inner leaf, if this is less.
• timber frame and steel frame internal walls – no restrictions.

Junctions with timber and steel frame separating walls
No minimum mass requirements.

Junctions with concrete or steel-concrete composite separating floors
• masonry internal walls – internal wall should have a minimum mass per unit area of 120 kg/m² (including the finish) OR at least that of the approved flanking wall inner leaf, if this is less.
• timber frame and steel frame internal walls – no restrictions.

Junctions with timber or light steel separating floors
No minimum mass requirements.

Junctions between internal partition walls and concrete separating floors
The junction between internal partition walls and concrete separating floors should be formed as follows:

1. Install internal lightweight stud partitions either up to the ceiling lining or through the ceiling lining, provided the head channel of metal stud partitions or timber frame, as appropriate, fully seals the void between the wall linings, such that there are no air paths from the ceiling void to the partition void.
2. Install loadbearing masonry internal partition walls up to the underside of the floor, provided the floor is continuous over the wall and the wall has a minimum mass per unit area of 120kg/m² (including the finish) OR at least that of the approved flanking wall inner leaf, if this is less.
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3. Construct the internal wall directly off core floor with the floating floor treatment (FFT) or screed installed around the internal walls, provided:
   • the 5mm (min) resilient flanking strip or isolating edge strip, as appropriate for the Robust Detail adopted, is correctly installed to all perimeters of the FFT or screed to isolate the floor from all the walls and skirtings

4. Construct the internal wall off the floating floor treatment flooring board or screed, provided:
   • the floating floor treatment is installed in accordance with the manufacturer's instructions, including the provision of additional battens to support the internal walls if necessary

Subfloor ventilation
Where possible it would be preferable to avoid providing ventilation for the sub floor void through the separating walls.

However, where necessary, the ventilation of the sub floor void of Part E Robust Detail separating walls may be achieved through the installation of ducts through the separating wall, provided:
   • the top of the duct is at least 300mm below the finished floor surface of the ground floor structure
   • the number of ducts passing through the separating wall is kept to the minimum necessary.

Radon and methane barriers
It is acceptable to install a radon or methane barrier and comply with the Robust Details. The ground floor junction detail would need to follow that described in the Robust Detail and as such the 225mm (min) clear cavity indicated in the ground floor junction to masonry separating walls would need to be maintained. Alternatively, refer to Appendix A2.

Ground floor junctions
5mm (min) flanking strips are recommended to isolate floating floor finishes, where provided, from walls and skirtings.

Screed thickness
The screed thickness stated is the minimum thickness at any point and a greater thickness should be specified to take account of deviations in the finished levels of the surfaces of bases and any reinforcement provided.

Precast concrete plank separating floors with steel beams
In some situations precast concrete planks may require intermediate support by steel beams supported on masonry.
   • cavity masonry separating walls must not be built off steel beams – where necessary, external cavity walls may be built off steel beams
   • all voids between the steel beam and the slabs should be fully filled with grout or concrete, and
   • the supports for the ceiling treatment and the ceiling lining should not come into contact with the steel beam, and
   • the depth of the ceiling void from the underside of the plank should be as shown in the following diagrams and in accordance with the corresponding separating floor Robust Detail
   • mineral wool quilt should be provided if shown in the following diagrams
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Ducting which drops from the ceiling void needs to be enclosed in boxing of gypsum-based board of the same composition and mass per unit area as the relevant Robust Detail treatment.

It is permissible to install services within the screed of concrete floors, provided that:

- the minimum thickness and mass per unit area of the screed is maintained as detailed in the relevant Robust Detail
- the minimum cover on services is maintained
- the services do not break into or bridge the resilient layer(s). In the case of floors which also have a floating timber floor treatment (FFT), it is permissible for services to rise vertically out of the screed and through the FFT, provided the FFT flooring boards do not touch the services and the gaps around the services are sealed with a flexible sealant.

Separating walls should not be constructed off steel beams.

Ducting which drops from the ceiling void needs to be enclosed in boxing of gypsum-based board of the same composition and mass per unit area as the relevant Robust Detail treatment.

It is permissible to install services within the screed of concrete floors, provided that:

- the minimum thickness and mass per unit area of the screed is maintained as detailed in the relevant Robust Detail
- the minimum cover on services is maintained
- the services do not break into or bridge the resilient layer(s). In the case of floors which also have a floating timber floor treatment (FFT), it is permissible for services to rise vertically out of the screed and through the FFT, provided the FFT flooring boards do not touch the services and the gaps around the services are sealed with a flexible sealant.

Services may be installed within a secondary ceiling lining system that is only supported from the resilient bars of a ceiling treatment, provided:

- the resilient bars can support the full load;
- the resilient bars achieve the minimum laboratory performance of Appendix E.

Particular attention should also be paid to Building Regulations Part B – Fire Safety. Secondary ceilings to timber floors may also be supported by perimeter channels.

Underfloor heating systems in separating floors

With timber floating floor treatments

Underfloor heating may be used with timber floating floor treatments FFT1, FFT2 and FFT3. Underfloor heating may not be used with FFT4 or FFT5.

Where underfloor heating is supported by mineral wool or foil-wrapped quilt, this may be used in place of the mineral wool that is specified between the battens on certain floors. Where underfloor heating is supported on rigid insulation (e.g. polystyrene), this may be used in addition to the mineral wool specified on certain floors. If this results in the batten void being filled, a polythene layer should be included to prevent direct contact with the underside of the floating deck. On floors where no mineral wool is specified, rigid insulation may be used alone, provided it does not bridge the resilient layer by providing a connection between the structural floor and any of the floating elements.

With floating screed floors

If underfloor heating systems are required to be installed within the screed they must not penetrate through the resilient layers and must avoid bridging the screed to the slab. Where rigid insulation
Appendix A1 – Additional Guidance

boards are used which have surface indents for the heating conduits to be situated within, this is acceptable. For floors that incorporate an insulation layer, such indented boards may be used as part of the resilient layers, provided they are of an appropriate type of material, and that the minimum thickness of the resilient layer is maintained.

Resilient bars
When using resilient bars the specifier should ensure that the resilient bar manufacturer has a laboratory sound test report (as outlined in Appendix E) that demonstrates compliance with the robustdetails® performance criteria.

Timber floating floor treatments
When using timber floating floor treatments (e.g. battens, cradles, platforms) the specifier should ensure that the floating floor treatment manufacturer has a laboratory sound test report (as outlined in Appendix C or D) that demonstrates compliance with robustdetails® performance criteria.

It may be necessary for battens to be installed at closer centres or for additional support to be provided under heavy loads from internal walls, sanitary ware and kitchen units, etc. in accordance with the manufacturer’s instructions.

Rigid insulation boards (e.g. expanded, extruded or bead polystyrene) are not acceptable for use as the resilient layer or as a flanking strip with a floating floor treatment where the walking surface is board based.

Mineral wool may not be used as a resilient flanking strip. See Appendix B, Glossary, for definition of a resilient flanking strip.

Floating Floor Treatments in kitchens and bathrooms
It is permissible to install kitchen units and appliances along with bathroom sanitary fittings directly onto the sub floor construction. In all cases it is recommended that you contact the manufacturer directly to seek their advice relating to the specific FFT.

Laminated or ceramic flooring on separating floors
In principle it is acceptable to install laminate timber floor finishes on top of the timber floating floor treatments (FFT’s) indicated in Part E Robust Details, provided:

• the manufacturer of the FFT system confirms that the performance of the FFT will not be affected;

any specific guidelines, regarding the installation of such finishes, stipulated by the manufacturer of the FFT system are strictly followed;

the laminate timber floor finish does not bypass the isolation provided by the flanking strips at the perimeters of the FFT by being in direct contact with the wall or skirting;

In the case of the Part E Robust Details with floating screed, it would also be acceptable in principle to provide a laminate timber floor finish, provided:

• the laminate timber floor finish does not bypass the isolation provided by the isolating edge strips at the perimeters of the screed by being in direct contact with the wall or skirting;

Screed floating floor treatments
Where screeds are separated from the core floor by resilient layers the screed must be fully isolated from the floor slabs, perimeter walls and skirtings and must not come into direct contact with these areas. The resilient layer(s) should completely cover the core floor surface and be wrapped round the edge of the screed to isolate the screed from the perimeter walls and skirtings.

Masonry angle supports
The masonry outer leaf of external walls used with robustdetails® concrete or steel-concrete composite separating floors, may be supported on suitable proprietary masonry angle supports that are fixed to the edge of the separating floors.

Full height glazing units junction with robustdetails® separating floor
If referred to in the detail, full height glazing units may be used. Where there is no inner leaf and a full height glazing unit, the core floor slab must break the vertical continuity of the glazing facade, as shown below.
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Specification requirements

Where details have “minimum” in their specification, it indicates that the value should not be lower than that stated. It does not preclude the use of higher values.

For example, where a 75mm (min) cavity size is specified, it does not preclude the use of wider cavities. Similarly, a reference to a wall finish with 8 kg/m² gypsum-based board does not preclude the use of boards with a greater mass per unit area.

Lifting holes in cassette floors

The required acoustic performance of any of the robust details® timber or steel frame separating floors would not be affected if lifting holes within the sub-deck remain untreated, provided:

- each lifting hole is no larger than 120mm in diameter
- mineral wool quilt, of the appropriate specification as indicated in the relevant separating floor specification, is provided covering the whole area of the floor, between the joists/battens, in both the structural floor void and the floating floor void
- all other relevant requirements are strictly followed.

Lifting holes that are larger than 120mm in diameter should be sealed or covered with a board or panel of similar or greater density than the sub-deck board.