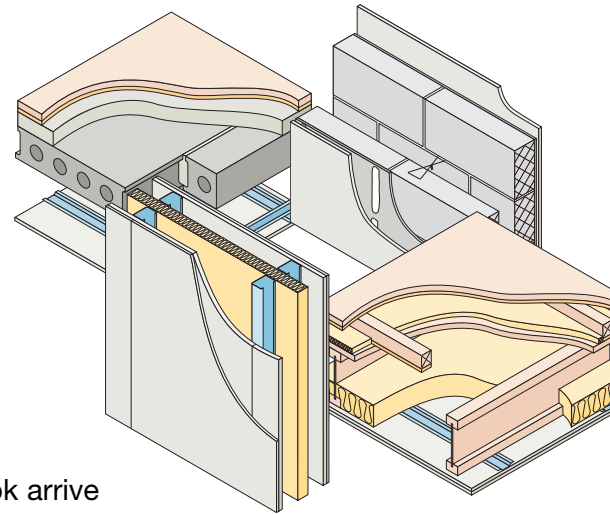


## February 2017 Update Pack



Dear Colleague,

Like buses, two updates to the Part E Robust Details Handbook arrive in quick succession.

In this update pack, we are pleased to include a further new wall/floor combination, **E-WS-5** and **E-FC-18** for use in reinforced concrete (RC) frame construction. Both of these have demonstrated consistent performance at 5 dB improvement on Building Regulations. Please see the ratings tables on our website.

Although issued as a matching wall and floor, they are interchangeable with the only other RC frame combination of E-WS-2 and E-FC-2. This means that both E-WS-2 and E-WS-5 can be used in conjunction with E-FC-2 or E-FC-18. Table 3c in the Introduction should be referred to.

These Details are both generic; however, the resilient layer used in the floor must be one of those listed in E-FC-18.

Don't forget that if you still have a hardcopy Handbook, please feel free to print off this pack (double-sided if you can), and insert the pages in your Handbook as described below.

### **Please update your January 2017, 4th Edition Handbook as follows:**

1. Remove and replace all pages of the Introduction.
2. Insert the new Robust Detail E-WS-5 to the end of the 'Separating Walls, Steel' section.
3. Insert the new Robust Detail E-FC-18 to the end of the 'Separating Floors, Concrete' section.

Yours sincerely

A handwritten signature in black ink, appearing to read 'John Tebbit', written over a horizontal line.

**John Tebbit**

Chief Executive,  
Robust Details Limited





## Changes to the fourth edition following February 2017 update

---

Section Page Amendment

### Introduction

Table 1	4	New Robust Detail separating wall E-WS-5 added.
Table 2	5	New Robust Detail separating floor E-FC-18 added.
Table 3b	7	New Robust Detail separating floor E-FC-18 added with relevant notes.
Table 3c	7	New Robust Details E-WS-5 and E-FC-18 added with valid combinations.
Table 4	8	New Robust Detail separating wall E-WS-5 added with relevant notes.
Table 5	8	New Robust Detail separating floor E-FC-18 added with relevant notes.
Table 6a	10	New Robust Detail wall E-WS-5 added with valid combinations.
Table 6b	11	New Robust Detail floor E-FC-18 added with valid combinations.

### Separating Wall – Steel

#### E-WS-5

---

All	1-12	New Robust Detail separating wall added – Twin metal frame for use in reinforced concrete frame construction.
-----	------	---

### Separating Floor – Concrete

#### E-FC-18

---

All	1-8	New Robust Detail separating floor added – Reinforced concrete slab with floating screed.
-----	-----	---



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**<sup>®</sup> 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**<sup>®</sup> 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](http://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 final page of each Robust Detail is a checklist, which should be photocopied and used by the site manager/supervisor to confirm that the separating wall/floor has been built correctly. The building control body may ask to see the checklist.

It is important that separating walls/floors and their associated junctions and flanking conditions are constructed entirely in accordance with the relevant Robust Detail; otherwise the building control body may require pre-completion testing to be carried out.

The tables on pages 5, 6 and 7 show which **robustdetails**<sup>®</sup> 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.

#### Terms and Conditions:

Please refer to [www.robustdetails.com](http://www.robustdetails.com) for full terms and conditions.

©: UK registered trade mark no. 2291665

© Robust Details Limited 2011. All rights reserved. No part of this Handbook (other than the checklists) may be reproduced in any material form or issued or communicated to the public (including photocopying or storing it in any medium by electronic means, and whether or not transiently or incidentally to some other use of this Handbook) without the prior written permission of Robust Details Limited except in accordance with the provisions of the Copyright, Designs and Patents Act 1988.

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.

Masonry walls	E-WM-1	Concrete floors	E-FC-1	
	E-WM-2		E-FC-2	
	E-WM-3		E-FC-4	
	E-WM-4		E-FC-5	
	E-WM-11		E-FC-6	
	E-WM-16		E-FC-8	
	E-WM-18		E-FC-9	
	E-WM-19		E-FC-10	
	E-WM-21		E-FC-11	
	E-FC-12			
	E-FC-13			
	E-FC-14			
Timber walls	E-WT-1			
	E-WT-2			
	E-WT-4			
Timber floors	E-FT-1			
	E-FT-2			
	E-FT-3			
	E-FT-5			
	E-FT-6			
Steel floors	E-FS-1			

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

E-WM-1	masonry – dense aggregate blockwork (wet plaster)
E-WM-2	masonry – lightweight aggregate blockwork (wet plaster)
E-WM-3	masonry – dense aggregate blockwork (render and gypsum-based board)
E-WM-4	masonry – lightweight aggregate blockwork (render and gypsum-based board)
E-WM-5	masonry – Besblock “Star Performer” cellular blockwork (render and gypsum-based board)
E-WM-6	masonry – aircrete blockwork (render and gypsum-based board)
E-WM-7	Suspended from further registrations
E-WM-8	masonry – lightweight aggregate blockwork Saint Gobain – Isover RD35 (gypsum-based board)
E-WM-9	masonry – solid dense aggregate blockwork (render and gypsum-based board)
E-WM-10	masonry – aircrete thin joint blockwork with specified wall ties (render and gypsum-based board finish)
E-WM-11	masonry – lightweight aggregate blockwork (render and gypsum-based board) with 100mm minimum cavity
E-WM-12	masonry – Plasmor “Aglite Ultima” lightweight aggregate blockwork (render and gypsum-based board)
E-WM-13	masonry – aircrete thin joint - untied blockwork (render and gypsum-based board)
E-WM-14	masonry – lightweight aggregate blockwork Saint Gobain - Isover RD35 (gypsum-based board) with 100mm minimum cavity
E-WM-15	masonry – aircrete blockwork Saint Gobain - Isover RD35 (gypsum-based board)
E-WM-16	masonry – dense aggregate blockwork (render and gypsum-based board) with 100mm minimum cavity
E-WM-17	masonry – lightweight aggregate blockwork Saint Gobain-Isover RD Party Wall Roll (gypsum-based board)
E-WM-18	masonry – dense aggregate blockwork (wet plaster) with 100mm minimum cavity
E-WM-19	masonry – dense or lightweight aggregate blockwork (render and gypsum-based board) with 100mm minimum cavity and MONARFLOOR® BRIDGESTOP® system
E-WM-20	masonry – lightweight aggregate blockwork Saint Gobain - Isover RD Party Wall Roll (gypsum-based board) with 100mm minimum cavity
E-WM-21	masonry – lightweight aggregate blockwork (wet plaster) with 100mm minimum cavity
E-WM-22	masonry – lightweight aggregate blockwork Knauf Earthwool Masonry Party Wall Slab or Superglass Party Wall Roll (gypsum-based board) with 100mm minimum cavity
E-WM-23	masonry – aircrete blockwork Superglass Party Wall Roll (gypsum-based board) with 100mm minimum cavity
E-WM-24	masonry – aircrete blockwork Saint Gobain-Isover RD Party Wall Roll (gypsum-based board) with 100mm minimum cavity
E-WM-25	masonry – Porotherm clay blockwork (Ecoparge and gypsum-based board) with 100mm minimum insulated cavity
E-WM-26	masonry – Besblock “Star Performer” cellular blockwork (gypsum-based board) with 100mm minimum insulated cavity
E-WM-27	masonry - lightweight aggregate blockwork Superglass Party Wall Roll (gypsum-based board) with minimum 75mm cavity
E-WM-28	masonry - lightweight aggregate blockwork Knauf Party Wall Wool (gypsum-based board) with minimum 100mm cavity
E-WM-29	masonry - Porotherm clay blockwork (Ecoparge and gypsum-based board) with 75mm minimum insulated cavity
E-WM-30	masonry - aircrete blockwork Knauf Party Wall Wool (gypsum-based board) with 100mm minimum cavity

See over for timber and steel frame walls

# Introduction

---

## List of Robust Details

Table 1 (continued) – Separating walls

E-WT-1	timber frame – without sheathing board
E-WT-2	timber frame – with sheathing board
E-WT-3	timber frame – Elecoframe prefabricated panels
E-WT-4	timber frame – Excel Industries Warmcell 500 insulation - with sheathing board
E-WS-1	steel frame – twin metal frame
E-WS-2	steel frame – British Gypsum Gypwall QUIET IWL
E-WS-3	steel frame – modular steel frame housing
E-WS-4	steel frame – twin metal frame - 250mm between linings
E-WS-5	steel frame – twin metal frame



# Introduction

## List of Robust Details

Table 2 – Separating floors

E-FC-1	precast concrete plank with directly applied screed and floating floor treatment
E-FC-2	in-situ concrete slab and floating floor treatment
E-FC-3	Suspended from further registrations
E-FC-4	precast concrete plank and Thermal Economics IsoRubber system and floating screed
E-FC-5	precast concrete plank and Cellecta Yelofon HD10+ system and floating screed
E-FC-6	beam and block with concrete topping Regupol E48 system and floating screed
E-FC-7	beam and block with concrete topping and floating floor treatment
E-FC-8	precast concrete plank with floating screed and bonded resilient floor covering
E-FC-9	precast concrete plank with directly applied screed and Thermal Economics IsoRubber top bonded resilient floor covering
E-FC-10	in-situ concrete slab with Thermal Economics IsoRubber top bonded resilient floor covering
E-FC-11	precast concrete plank and Icopal-MONARFLOOR® Tranquilt and floating screed
E-FC-12	precast concrete plank and Thermal Economics IsoRubber Base HP3 system and floating screed
E-FC-13	precast concrete plank and InstaCoustic InstaLay 65 system and floating screed
E-FC-14	precast concrete plank and Thermal Economics IsoRubber Code layer and floating screed
E-FC-15	precast concrete plank and Regupol Quietlay layer and floating screed
E-FC-16	precast concrete plank with directly applied screed and Thermal Economics IsoRubber CC3 bonded resilient floor covering
E-FC-17	precast concrete plank and Cellecta YELOfon® HD10+ system and floating screed and Cellecta ULTRA ceiling treatment
E-FC-18	in-situ concrete slab with floating screed
E-FT-1	timber I-joists and floating floor treatment
E-FT-2	timber solid joists and floating floor treatment
E-FT-3	MiTek Posi-Joist, Prestoplan PresWeb, WOLF easi-joist, ITW Gang-Nail Ecojoist or ITW Alpine SpaceJoist metal web timber joist and floating floor treatment
E-FT-4	timber Finnjoists with Finnforest Acoustic layer and Gyvlon screed
E-FT-5	Cellecta ScreedBoard® 28 system on timber I-joists
E-FT-6	Cellecta ScreedBoard® 28 system on metal web joists
E-FT-7	timber I-joists and FFT80 floating floor treatment
E-FT-8	timber solid joists and FFT80 floating floor treatment
E-FS-1	steel deck and in-situ concrete and floating floor treatment
E-FS-2	UltraBEAM metal joists and floating floor treatment
E-FS-3	Cellecta ScreedBoard® 28 system on metal joists

# Introduction

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

Separating walls		Separating floors					
		E-FC-1 E-FC-11 E-FC-12 E-FC-13	E-FC-14 E-FC-15 E-FC-16 E-FC-17	E-FC-4	E-FC-5	E-FC-6 E-FC-7	E-FC-8 E-FC-9 E-FC-10
E-WM-1	E-WM-16	✓		✓	✓	✓	✓
E-WM-3	E-WM-18						
E-WM-2	E-WM-20						
E-WM-4	E-WM-21						
E-WM-5	E-WM-26	✓		✓	✓	F	✓
E-WM-8	E-WM-27						
E-WM-11	E-WM-28						
E-WM-14							
E-WM-6	E-WM-23						
E-WM-10	E-WM-24	F		✓	✓ see note 1	F	✓
E-WM-13	E-WM-30						
E-WM-15							
E-WM-12		F		✓	F	F	F
E-WM-17	E-WM-22	✓ see note 2		✓	✓ see note 2	F	✓ see note 2
E-WM-25	E-WM-29	F		F	F	F	F

**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/m<sup>3</sup>).

**Combining robustdetails® loadbearing masonry walls and floors with robustdetails® 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 robustdetails® separating wall;
- the external (flanking) wall construction above the separating floor meets the requirements on page 2 of the relevant robustdetails® 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 robustdetails® 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**

Separating walls	Separating floors	
	E-FT-1 E-FT-2 E-FT-3 E-FT-4 E-FT-5 E-FT-6 E-FT-7 E-FT-8	E-FC-2 E-FC-18 E-FS-1
E-WT-1	✓	W see note 1
E-WT-2	✓	W see note 1
E-WT-3	F	W see note 1
E-WT-4	F	W see note 1

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

Separating walls	Separating floors					
	E-FC-2	E-FC-10	E-FC-18	E-FS-1	E-FS-2	E-FS-3
E-WS-1	W see note 1	W	W see note 1	W see note 1	✓	✓
E-WS-2	✓	W	✓	W	W	W
E-WS-3	W	W	W	W	W	W
E-WS-4	W see note 1	W	W see note 1	W see note 1	✓	✓
E-WS-5	✓	W	✓	W	W	W

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/m<sup>2</sup> (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.

# Introduction

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

Loadbearing masonry			
E-WM-1	F1	E-WM-21	F1
E-WM-2	F1	E-WM-22	F1
E-WM-3	F1	E-WM-23	F1
E-WM-4	F1	E-WM-24	F1
E-WM-5	F1	E-WM-25	F1
E-WM-6	F1	E-WM-26	F1
E-WM-8	F1	E-WM-27	F1
E-WM-10	F1	E-WM-28	F1
E-WM-11	F1	E-WM-29	F1
E-WM-12	F1	E-WM-30	F1
E-WM-13	F1		
E-WM-14	F1		
E-WM-15	F1		
E-WM-16	F1		
E-WM-17	F1		
E-WM-18	F1		
E-WM-20	F1		

Timber frame		Light steel frame	
E-WT-1	F2	E-WS-1	F3
E-WT-2	F2	E-WS-2	F4
E-WT-3	F2	E-WS-3	F3
E-WT-4	F2	E-WS-4	F3
		E-WS-5	F4

- Key**
- F1** Only the separating floor requires pre-completion testing provided the floor 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 and the base of the wall is shielded by a floating floor treatment. Otherwise both the wall and floor need testing.

**Table 5 – Combining Robust Details separating floors with non-Robust Details separating walls in flats/apartments**

Loadbearing masonry			
E-FC-1	W1	E-FC-11	W1
E-FC-4	W2	E-FC-12	W1
E-FC-5	W2	E-FC-13	W1
E-FC-6	W1	E-FC-14	W1
E-FC-7	W1	E-FC-15	W1
E-FC-8	W2	E-FC-16	W1
E-FC-9	W2	E-FC-17	W1
E-FC-10	W2		

Timber frame		RC frame	
E-FT-1	W3	E-FC-2	W4
E-FT-2	W3	E-FC-10	W4
E-FT-3	W3	E-FC-18	W4
E-FT-4	W3		
E-FT-5	W3		
E-FT-6	W3		
E-FT-7	W3		
E-FT-8	W3		

Light steel frame			
		E-FS-1	W4
		E-FS-2	W5
		E-FS-3	W5

- Key**
- 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

		BRIDGESTOP® system	Smartroof system	Kingspan TEK	Prestoplan PresPeak 60	Wall Cap RDA2	RoofSpace I-Roof	Space4 system
Masonry walls	E-WM-1	✓				✓		
	E-WM-2	✓				✓		
	E-WM-3	✓	✓			✓	✓	
	E-WM-4	✓	✓			✓	✓	
	E-WM-5	✓	✓			✓	✓	
	E-WM-6		✓			✓	✓	
	E-WM-8	✓	✓			✓	✓	
	E-WM-9							
	E-WM-10		✓			✓	✓	
	E-WM-11	✓	✓			✓	✓	
	E-WM-12	✓	✓			✓	✓	
	E-WM-13		✓			✓	✓	
	E-WM-14	✓	✓			✓	✓	
	E-WM-15		✓			✓	✓	
	E-WM-16	✓	✓			✓	✓	
	E-WM-17	✓	✓			✓	✓	
	E-WM-18	✓				✓		
	E-WM-19	✓ see note 1						
	E-WM-20	✓	✓			✓	✓	
	E-WM-21	✓				✓		
	E-WM-22	✓	✓			✓	✓	
	E-WM-23	✓ see note 1	✓			✓	✓	
	E-WM-24	✓ see note 1	✓			✓	✓	
	E-WM-25					✓		
	E-WM-26	✓	✓			✓	✓	✓
	E-WM-27	✓	✓			✓	✓	
	E-WM-28	✓	✓			✓	✓	
	E-WM-29					✓		
	E-WM-30	✓ see note 1	✓			✓	✓	

### 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

		BRIDGESTOP® system	Smartroof system	Kingspan TEK	Prestoplan PresPeak 60	Wall Cap RDA2	RoofSpace I-Roof	Space4 system
Timber walls	E-WT-1		✓	✓	✓	✓	✓	
	E-WT-2		✓	✓	✓	✓	✓	✓
	E-WT-3		✓			✓	✓	
	E-WT-4		✓			✓	✓	
Steel walls	E-WS-1					✓		
	E-WS-2							
	E-WS-3							
	E-WS-4					✓		
	E-WS-5							

## Introduction

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

		BRIDGESTOP® system	Smartroof system	Kingspan TEK	Prestoplan PresPeak 60	Wall Cap RDA2	RoofSpace I-Roof	Space4 system
Concrete floors	E-FC-1					✓		
	E-FC-2							
	E-FC-4					✓		
	E-FC-5					✓		
	E-FC-6					✓		
	E-FC-7					✓		
	E-FC-8					✓		
	E-FC-9					✓		
	E-FC-10					✓ see note 1		
	E-FC-11					✓		
	E-FC-12					✓		
	E-FC-13					✓		
	E-FC-14					✓		
	E-FC-15					✓		
	E-FC-16					✓		
	E-FC-17					✓		
	E-FC-18							
	Timber floors	E-FT-1					✓	
E-FT-2						✓		
E-FT-3						✓		
E-FT-4						✓		
E-FT-5						✓		
E-FT-6						✓		
E-FT-7						✓		
E-FT-8						✓		
Steel-concrete and steel floors	E-FS-1							
	E-FS-2					✓		
	E-FS-3					✓		

Key

1 Applies only to loadbearing masonry constructions.

## Introduction

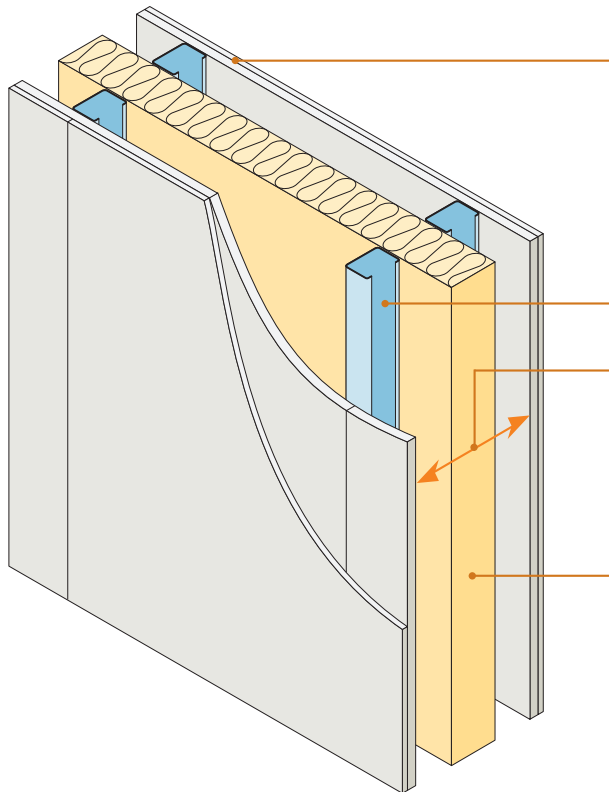
---

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

		British Gypsum GypFloor	Insumate insulation tray
Concrete floors	E-FC-1	✓	
	E-FC-2	✓	
	E-FC-4		
	E-FC-5		
	E-FC-6		
	E-FC-7	✓	
	E-FC-8		
	E-FC-9		
	E-FC-10		
	E-FC-11		
	E-FC-12		
	E-FC-13		
	E-FC-14		
	E-FC-15		
	E-FC-16		
	E-FC-17		
	E-FC-18		
	Timber floors	E-FT-1	
E-FT-2			✓
E-FT-3			✓
E-FT-4			
E-FT-5			
E-FT-6			
E-FT-7			✓
E-FT-8			✓
Steel-concrete and steel floors	E-FS-1	✓	
	E-FS-2		
	E-FS-3		

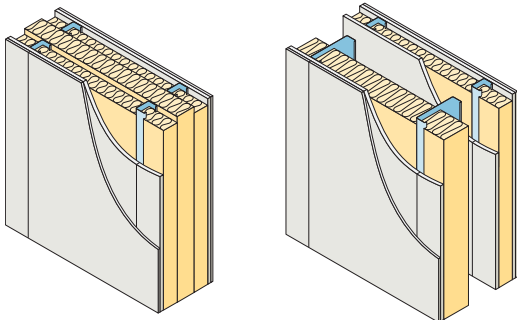


- Twin metal frames
- Use with reinforced concrete frame construction only
- Concrete slabs with flat soffits only - no profiled decking



<b>Wall lining</b>	- 2 or more layers of gypsum-based board (minimum total nominal mass per unit area 20 kg/m <sup>2</sup> ) both sides - all joints staggered
<b>Steel frame</b>	60mm (min) studs both sides
<b>Wall width</b>	230mm (min) between inner faces of wall linings, or 190mm (min) where service zones are used (see Section 8)
<b>Absorbent material</b>	One layer 75mm (min) unfaced mineral wool batts (density 10-40 kg/m <sup>3</sup> )
<b>External (flanking) wall</b>	See Sections 1 to 5

### Alternative higher-performance wall constructions (see Section 14)



### Alternative external (flanking) wall construction

Storey height glazing units are an acceptable alternative to the cavity walls illustrated:

- glazing units should not be continuous between storeys
- mullion or transom supports/framing should not be continuous between dwellings
- the sound insulation performance is improved where the junction between the separating wall and external (flanking) wall occurs at a concrete column position

### DO

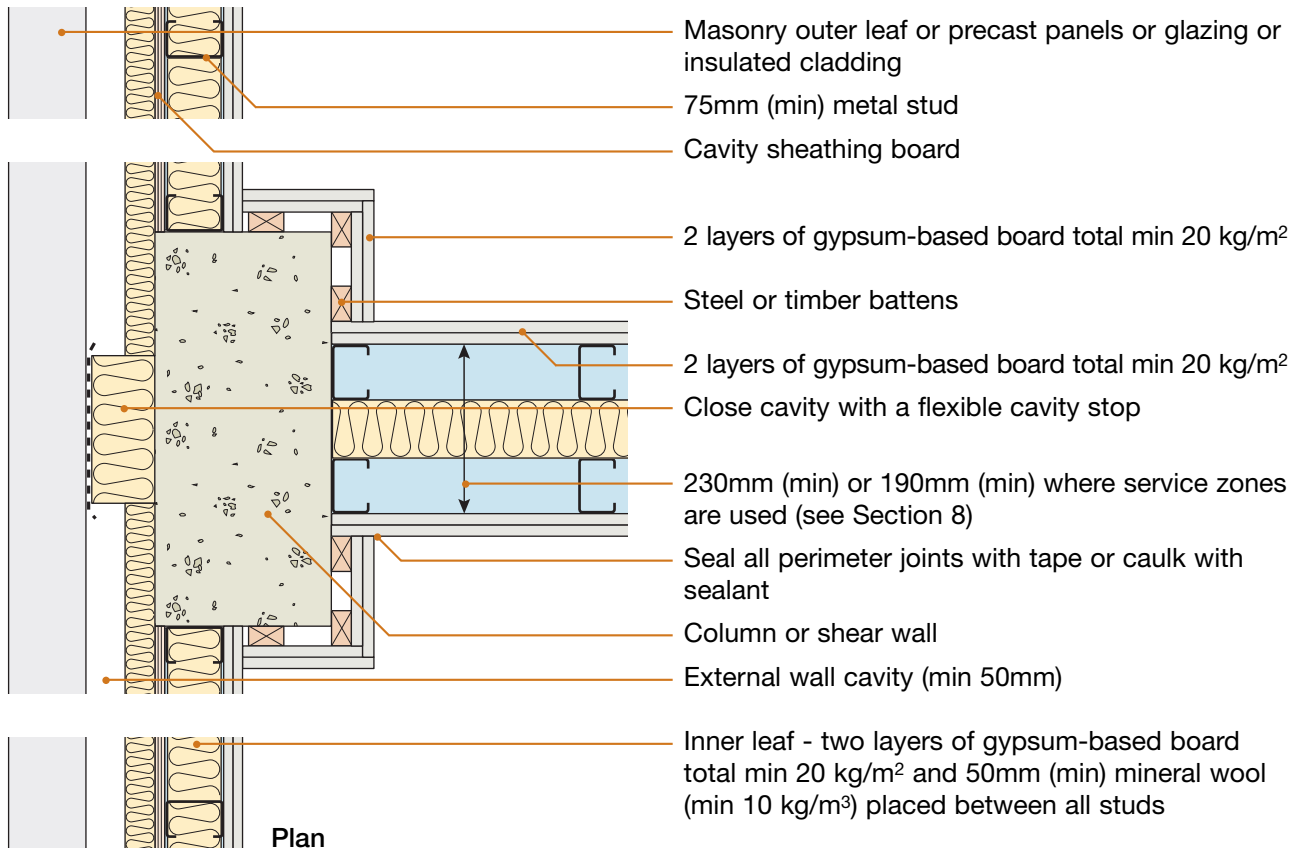
- Keep wall linings at least 230mm apart, or 190mm (min) where service zones are used (see Section 8)
- Ensure the batts cover whole wall area and are fitted together correctly and not tightly compressed between twin frames
- Ensure that all cavity stops/closers are flexible or are fixed to one frame only
- Make sure there is no connection between the two frames except where ties are necessary for structural reasons
- Stagger joints in wall linings to avoid air paths
- Seal all joints in outer layer with tape or caulk with sealant
- Refer to Appendix A

### Sheathing

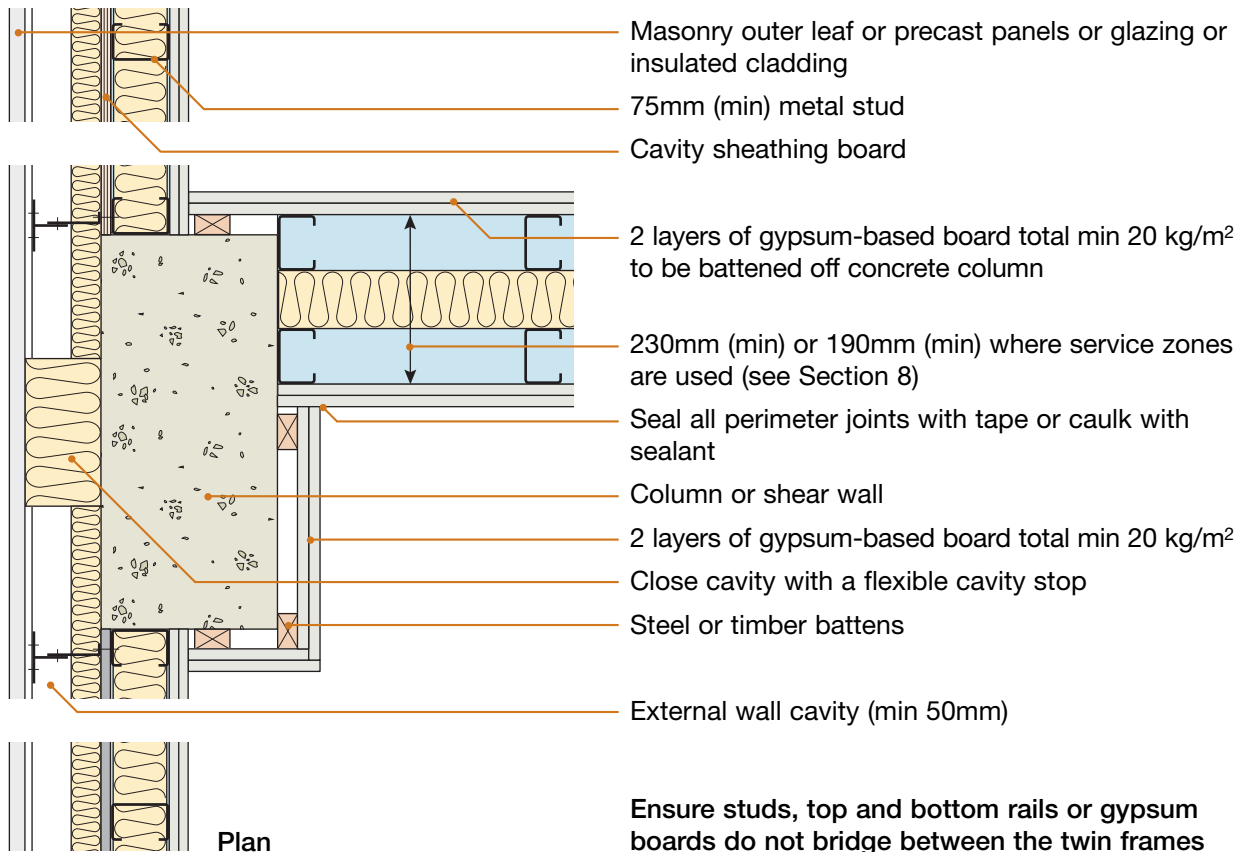
Where required for structural or security reasons, it is permissible to apply sheathing board to one frame of the separating wall (see Section 8)

## 1. External (flanking) wall junction – at column or shear wall position

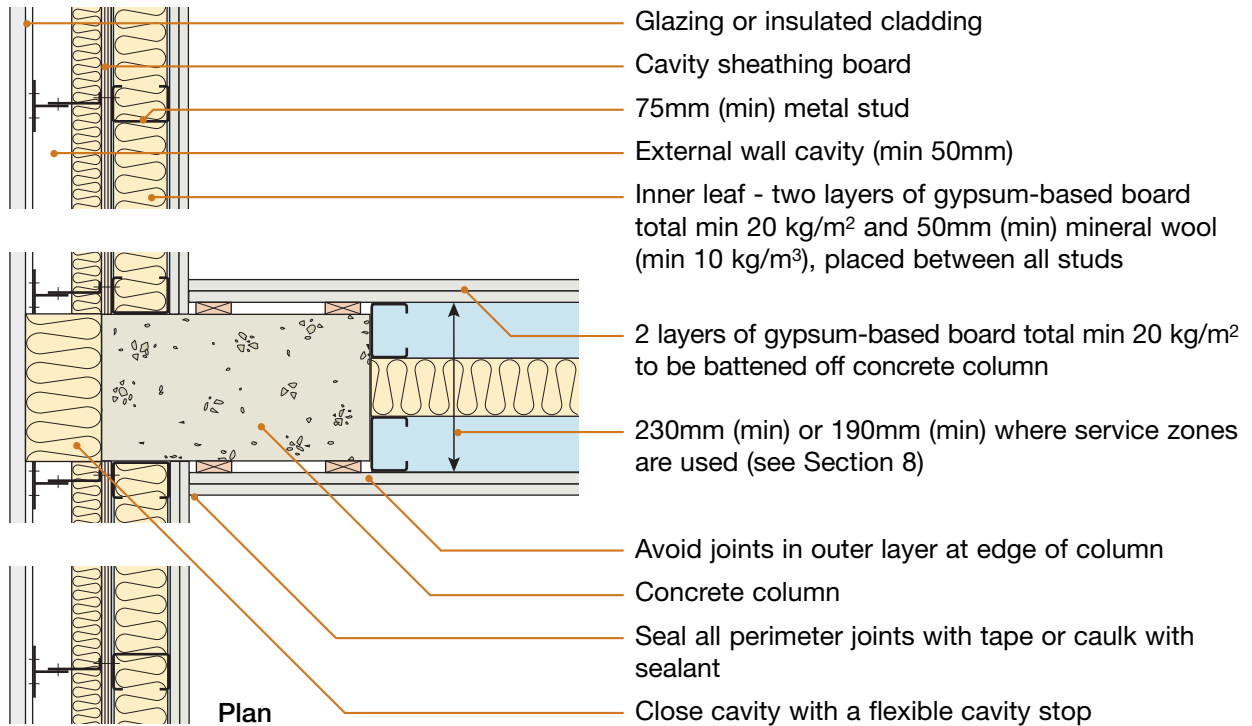
### 1.1 T-junction at column or shear wall



### 1.2 Junction offset from column or shear wall

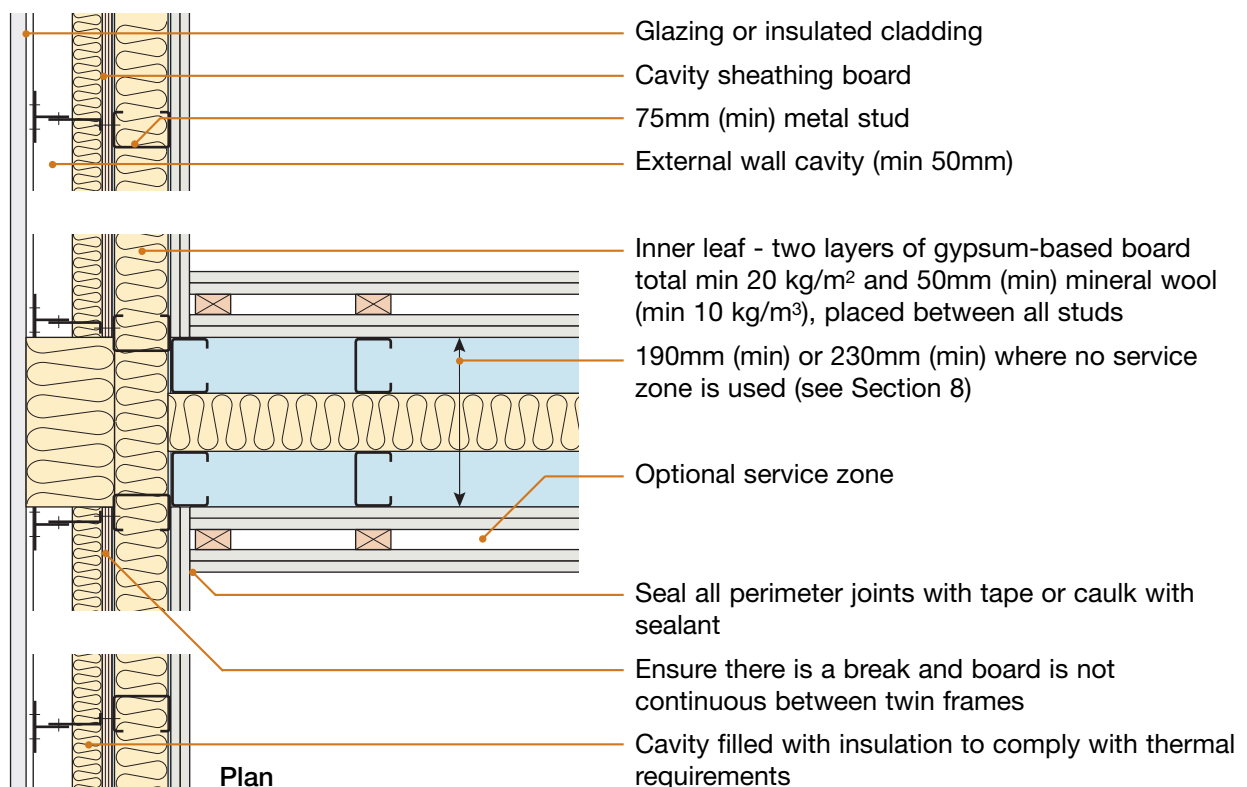


## 2. External (flanking) wall junction – with glazing or insulated cladding at concrete column position



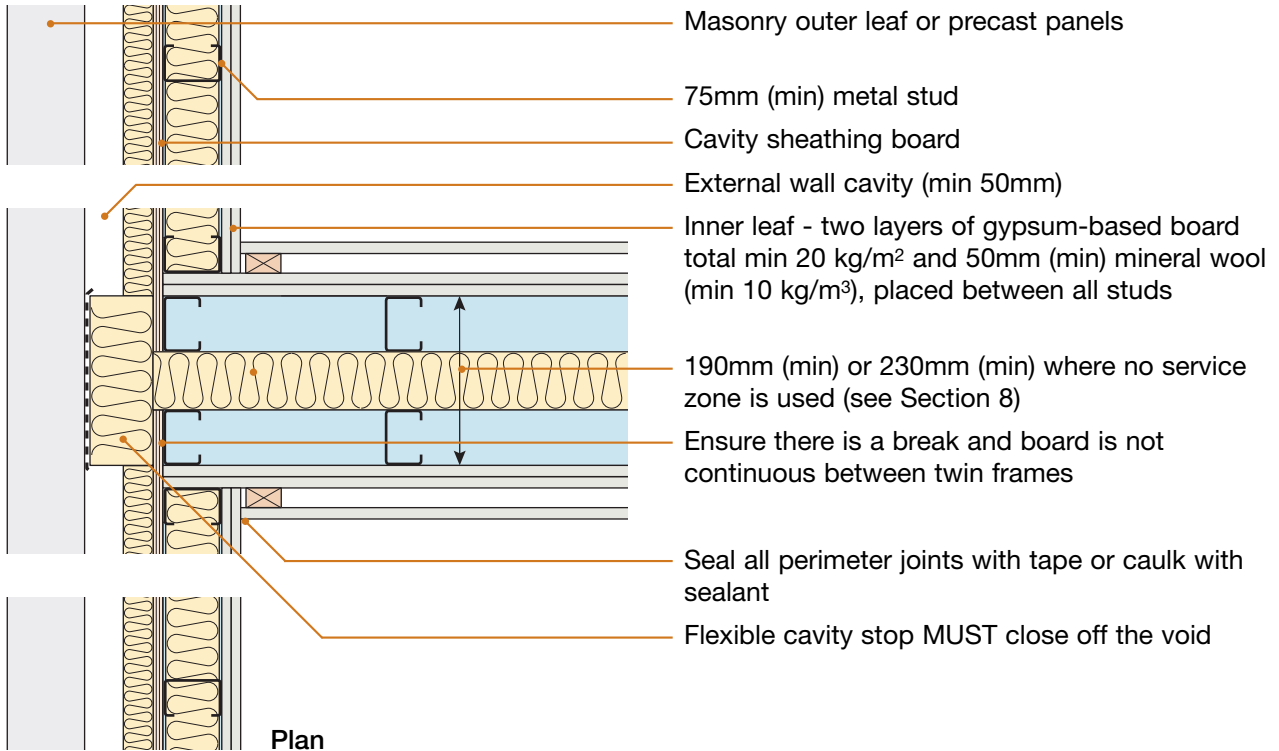
Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

## 3. External (flanking) wall junction – with glazing or insulated cladding without concrete column



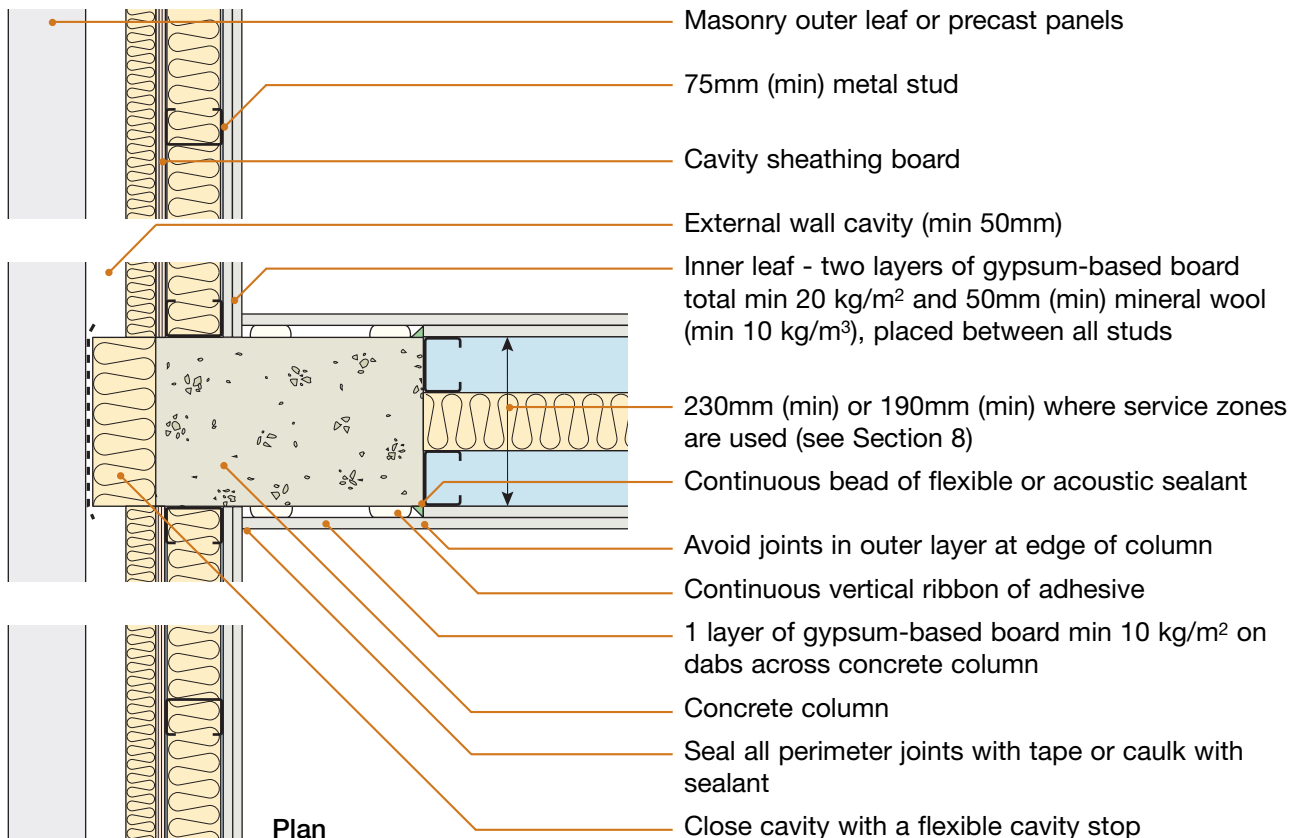
Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

## 4. External (flanking) wall junction – using external sheathing board and brick/ precast panel outer skin without concrete column



Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

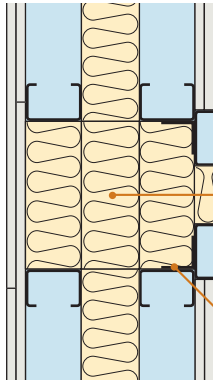
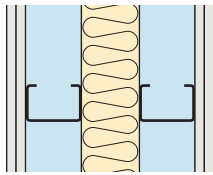
## 5. External (flanking) wall junction – with concrete column



Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

## 6. Separating wall to separating wall junction

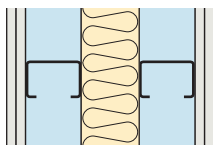
6.1



Seal all perimeter joints with tape or caulk with sealant

Fully fill void with mineral wool quilt or batt (min 10 kg/m<sup>3</sup>)

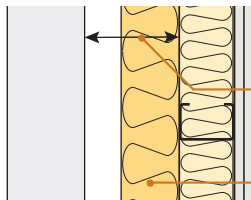
Internal fixing angle (if required)



Plan

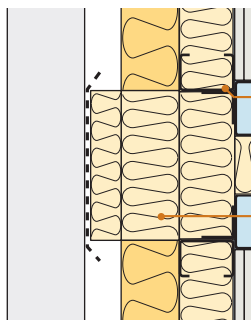
Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

## 6.2 where separating wall meets lift shaft wall or other such structure



50mm (min) between studs and shear wall/lift shaft wall

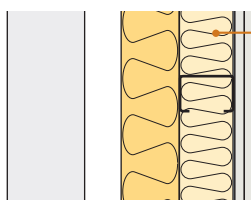
Additional insulation for thermal requirements is permitted



Internal fixing angle (if required)

Fully fill void with mineral wool quilt or batt (min 10 kg/m<sup>3</sup>)

Seal all perimeter joints with tape or caulk with sealant



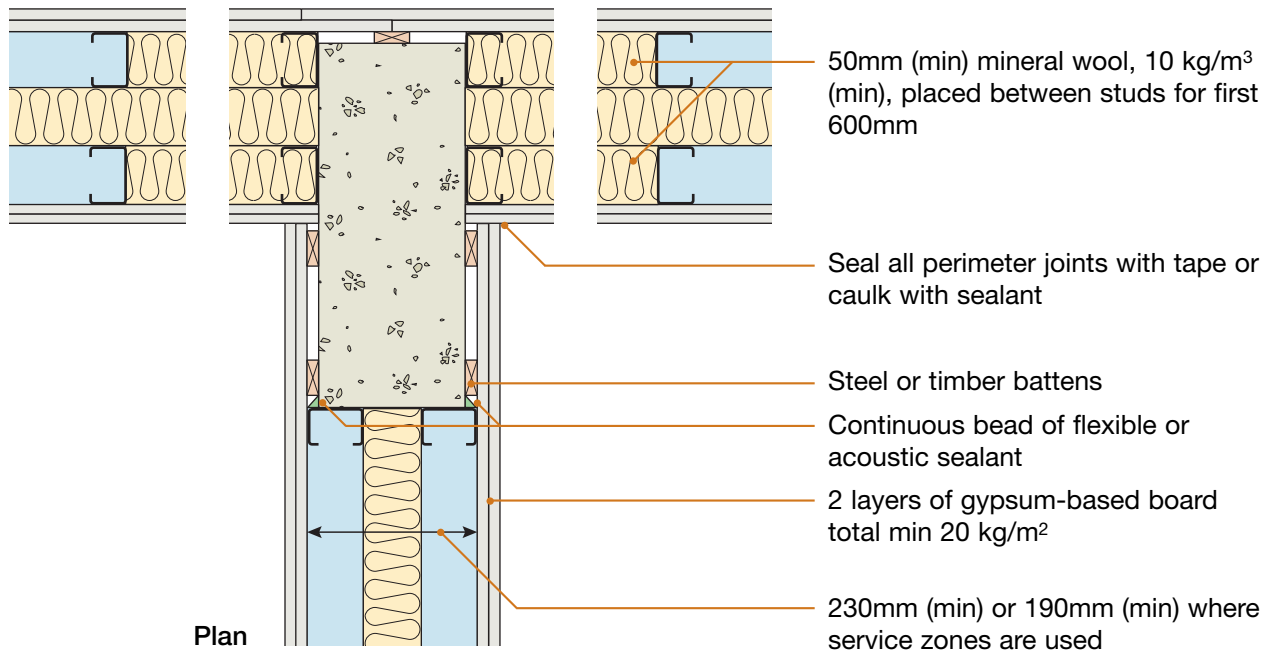
Plan

Inner leaf - two layers of gypsum-based board total min 20 kg/m<sup>2</sup> and 50mm (min) mineral wool (min 10 kg/m<sup>3</sup>), placed between all studs

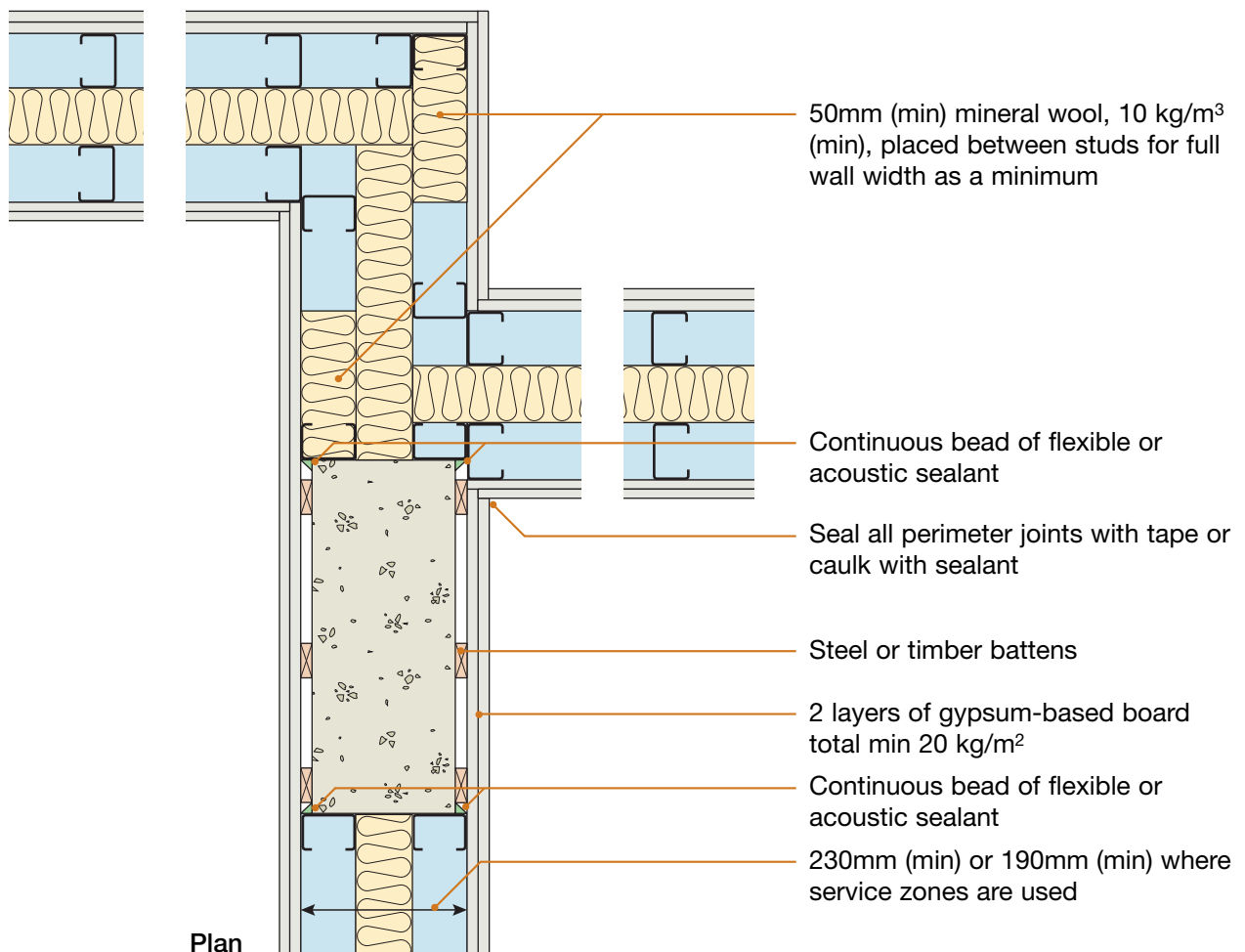
Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

## 7. Separating wall to separating wall junction with column/shear wall

### 7.1 T-junction at column or shear wall



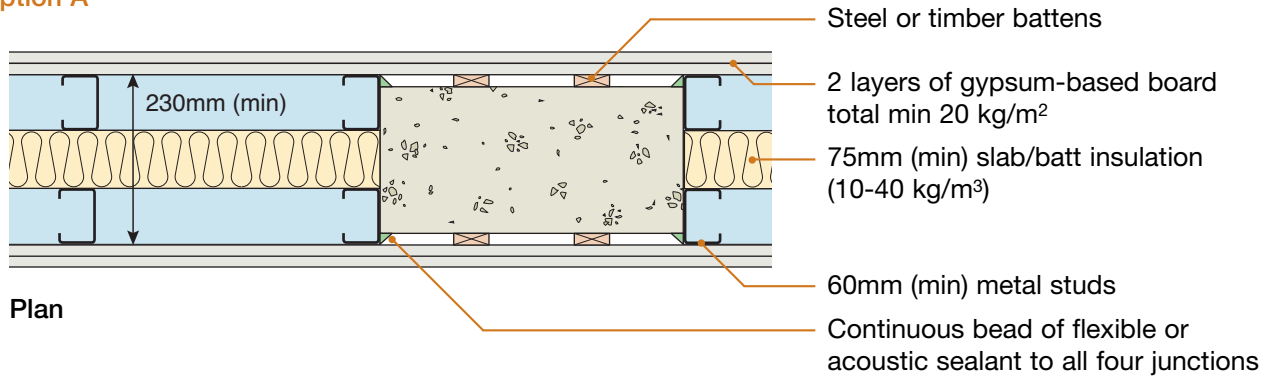
### 7.2 Junction offset from column or shear wall



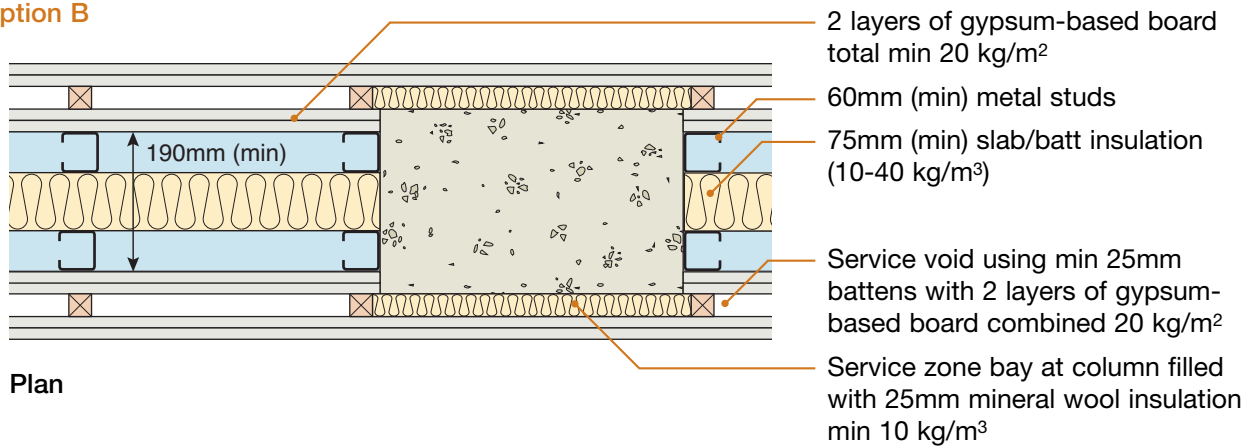
Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

## 8. Service zone and wall options for in-line concrete columns

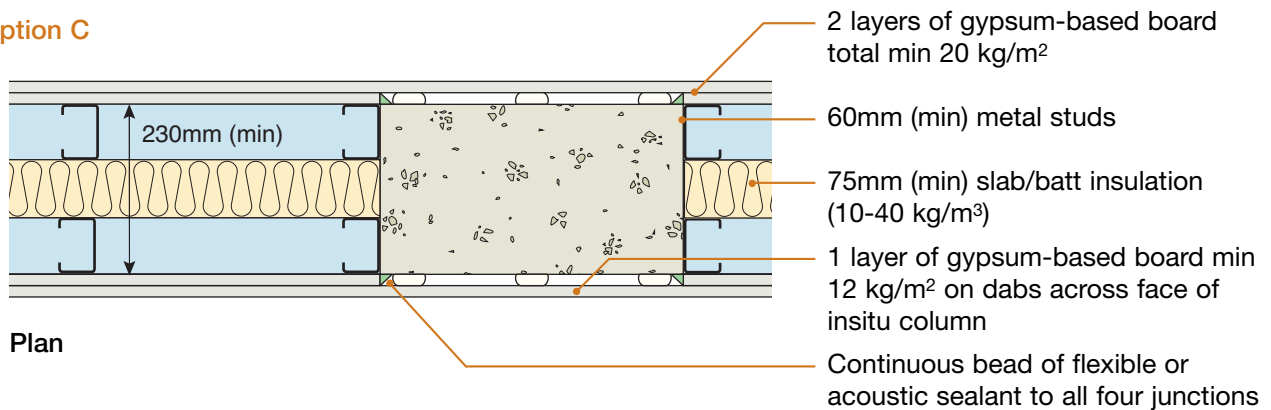
### Option A



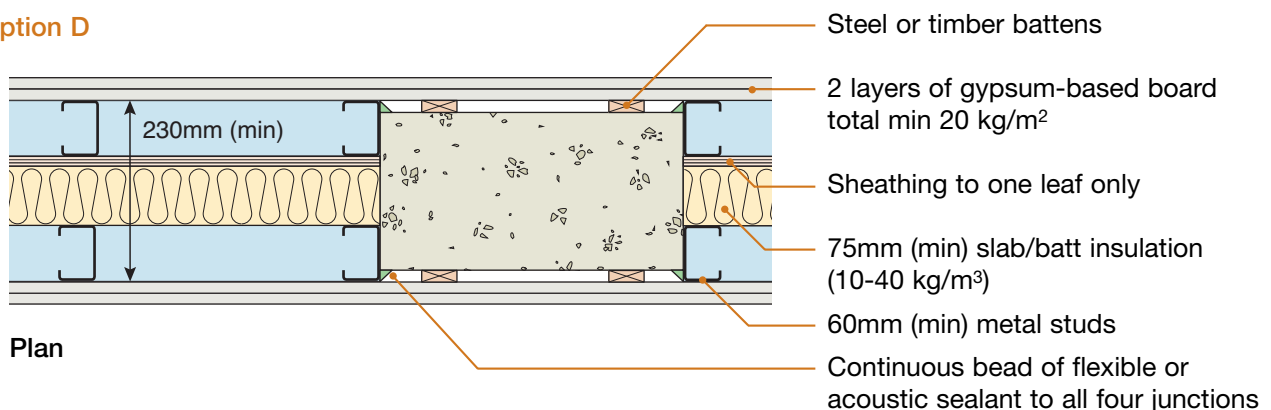
### Option B



### Option C



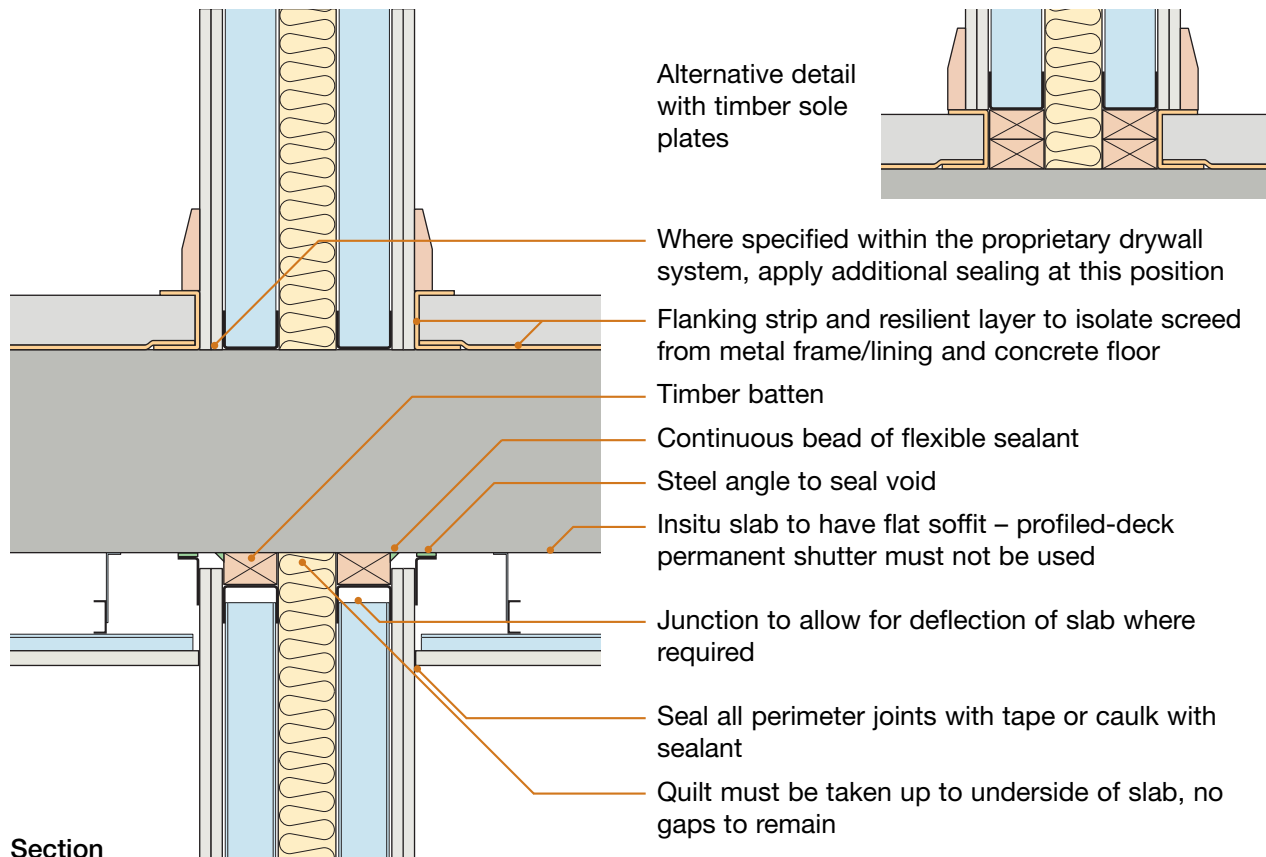
### Option D



Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

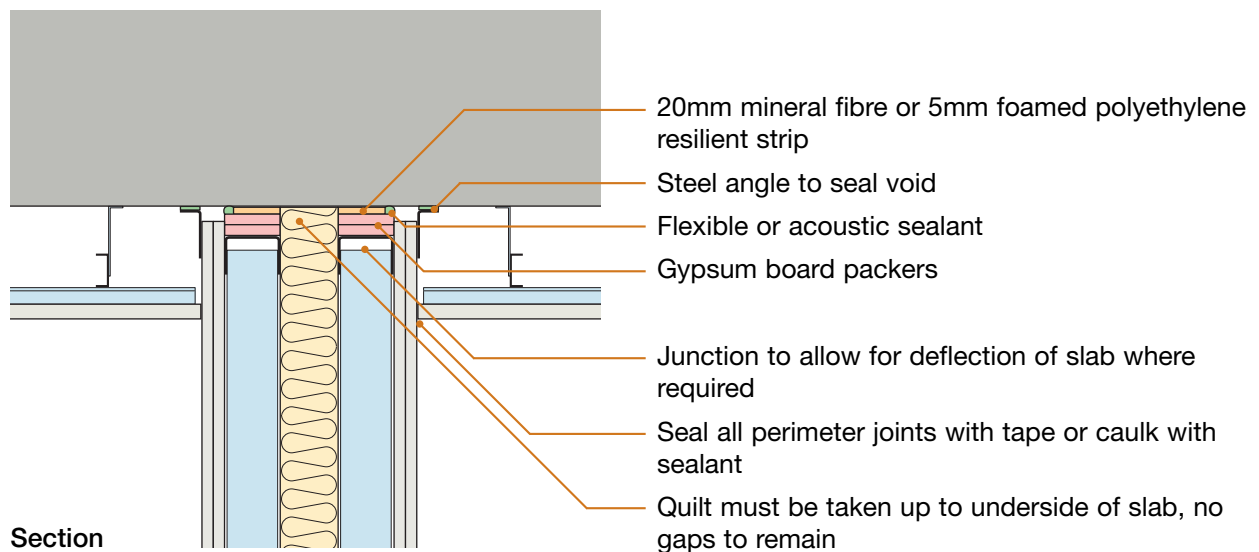


## 9. Separating floor junction – in-situ concrete floor E-FC-18



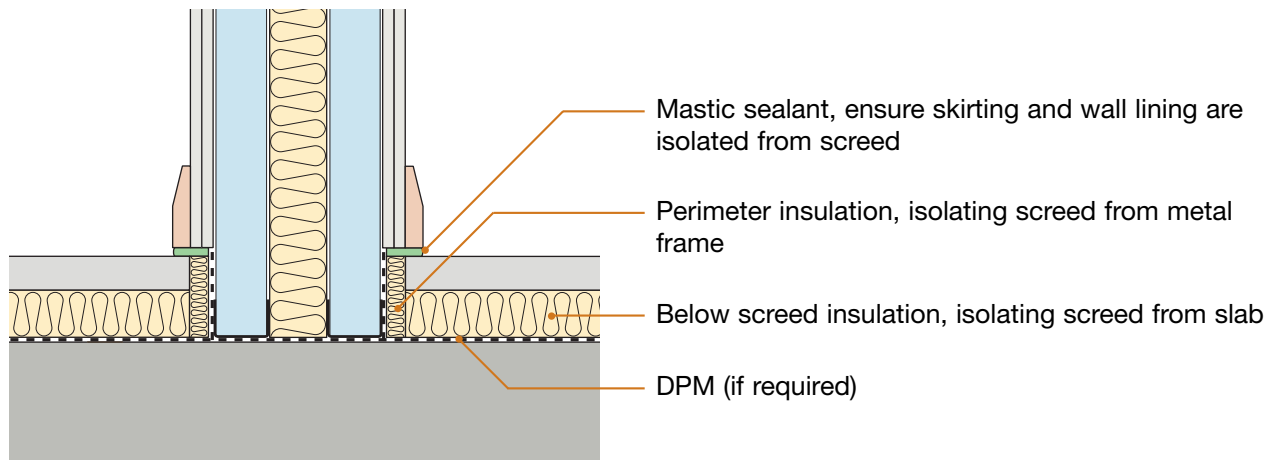
An alternative deflection head detail is shown below

## 10. Slab junction (with alternative deflection head detail)



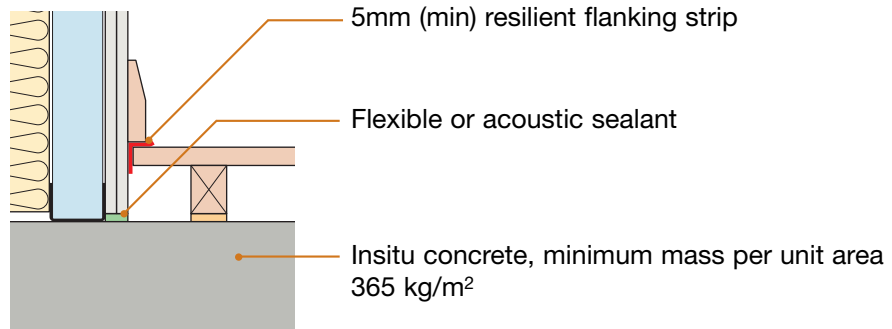


## 11. Ground floor junction

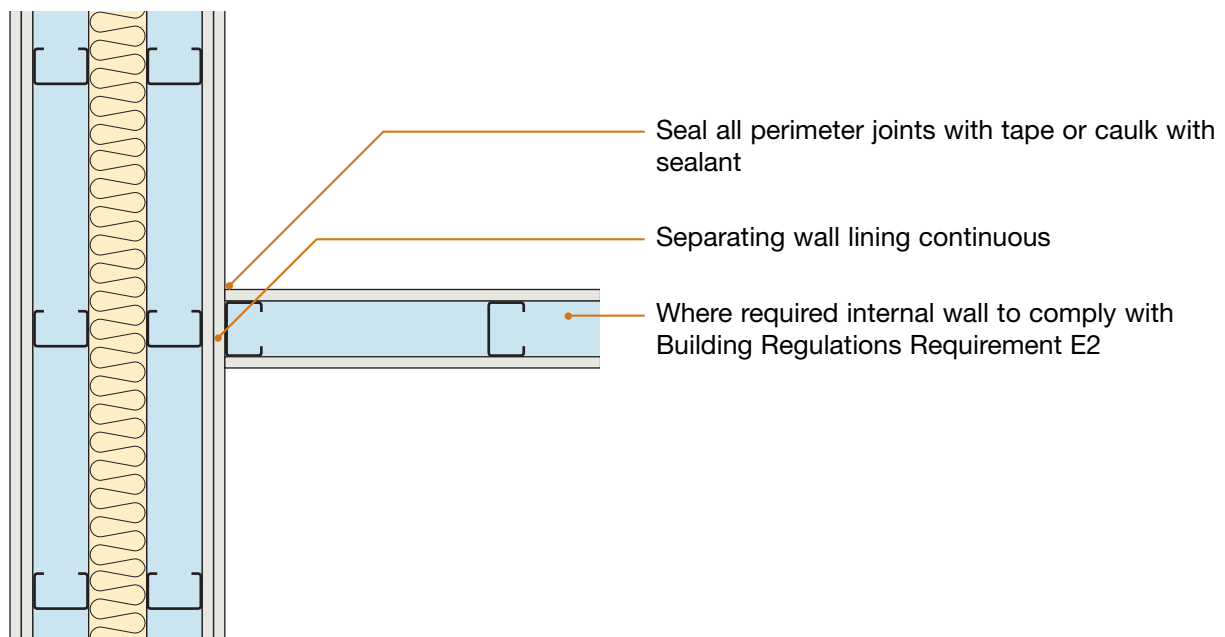


Section

Alternative detail with timber floating floor finish



## 12. Internal wall junction

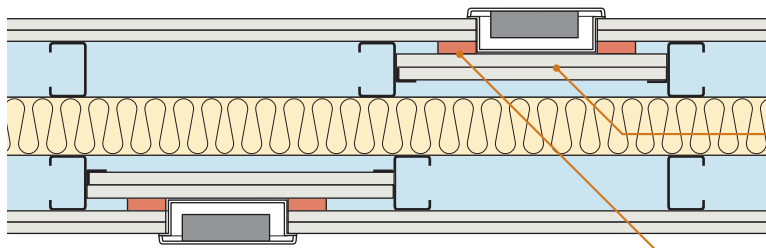


Plan

Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

## 13. Services and sockets in the separating wall

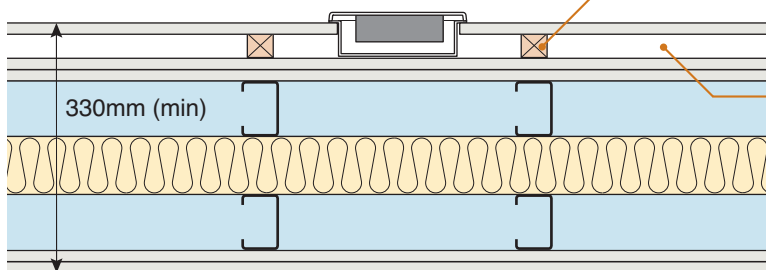
### 13.1 Electrical sockets, switches etc



Plan

- Stagger sockets, switches, etc. on each side of the wall such that they are not positioned in opposite bays
- Provide two or more layers of gypsum-based board (total nominal mass per unit area 20 kg/m<sup>2</sup>) to enclose electrical boxes
- Fire resistant seal where required by Part B of the Building Regulations

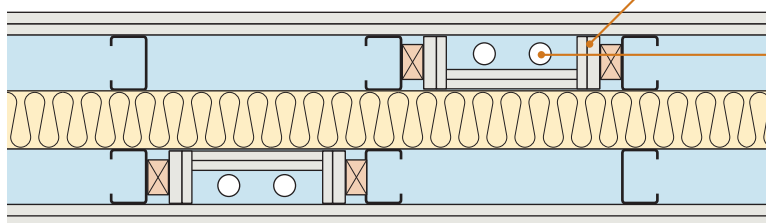
### 13.2 Electrical sockets and switches in service void



Plan

- Service void using min 25mm battens or steel studs with 2 layers of gypsum board
- Service void on surface of separating wall. This is the preferred method where more than one socket, switch, etc. are close together, e.g. in a kitchen
- Studs or battens used to create the service zone should be securely fixed back to the separating wall structure

### 13.3 Piped services located within wall



Plan

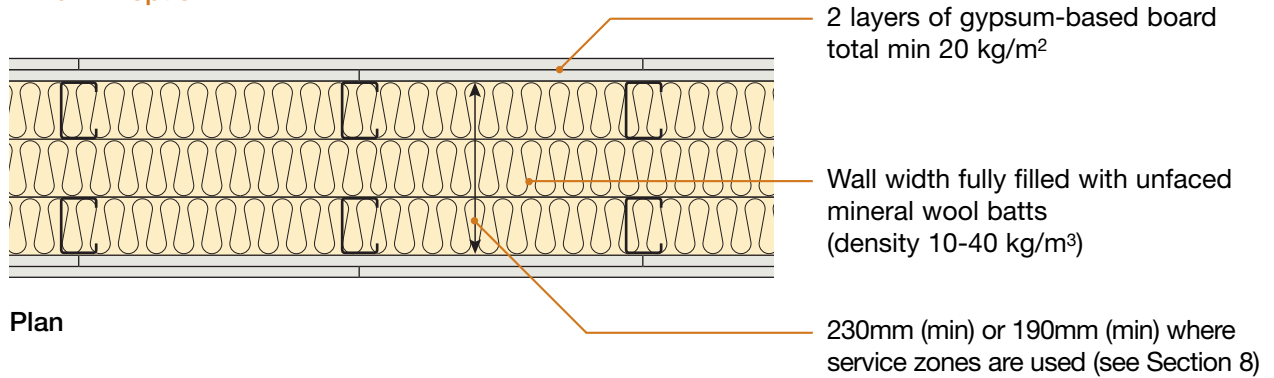
- Provide two or more layers of gypsum-based board (total nominal mass per unit area 20 kg/m<sup>2</sup>) to enclose pipes
- Stagger services on each side of the wall such that they are not positioned in opposite bays
- Note: this detail is not applicable for SVPs or gas pipes

Ensure studs, top and bottom rails or gypsum boards do not bridge between the twin frames

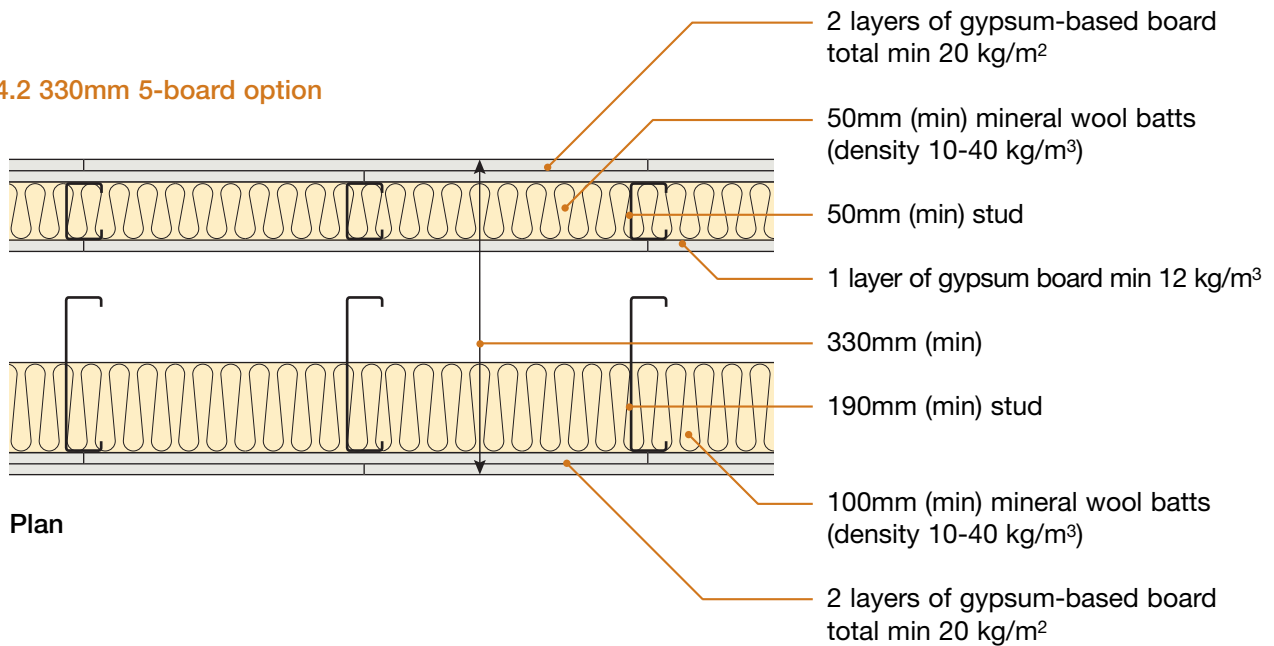
## 14. Higher performing wall constructions

The sound insulation performance can be increased by using the following:

### 14.1 Full-fill option



### 14.2 330mm 5-board option



CHECKLIST (to be completed by site manager/supervisor)

Company: \_\_\_\_\_

Site: \_\_\_\_\_

Plot: \_\_\_\_\_ Site manager/supervisor: \_\_\_\_\_

Table with 5 columns: Ref., Item, Yes (✓), No (✓), Inspected (initials & date). Contains 8 checklist items regarding wall linings, acoustic isolation, and cavity sealing.

Notes (include details of any corrective action)

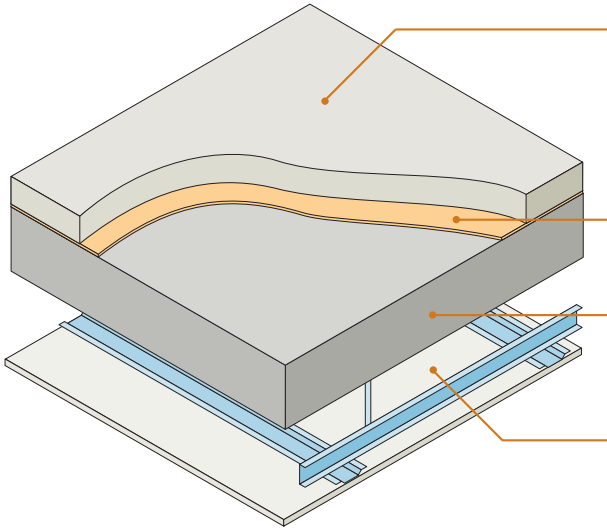
Site manager/supervisor signature .....

©: UK registered trade mark no. 2291665

© Robust Details Limited 2011. All rights reserved. No part of this Handbook (other than the checklists) may be reproduced in any material form or issued or communicated to the public...

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.

- Insitu concrete slab with flat soffit
- For use in reinforced concrete frame construction
- Screed laid on resilient layer system



<b>Screed</b>	65mm (min) cement:sand screed on 40mm (min) proprietary screed of nominal 80 kg/m <sup>2</sup> mass per unit area
<b>Resilient layer</b>	See list below and section 6
<b>Structural floor</b>	225mm (min) insitu concrete floor slab, 2400 kg/m <sup>3</sup> (min) density without screed
<b>Ceiling</b>	Suspended metal frame ceiling system: 150mm (min) void, 1 layer nominal 10 kg/m <sup>2</sup> gypsum-based board

## Reinforced concrete frame construction - alternative external (flanking) wall construction

Storey height glazing units and external insulated cladding panels an acceptable alternative to the cavity walls illustrated:

- Glazing units should not be continuous between storeys
- Mullion or transom supports/framing should not be continuous between dwellings
- Refer to Appendix A

## Resilient layer systems

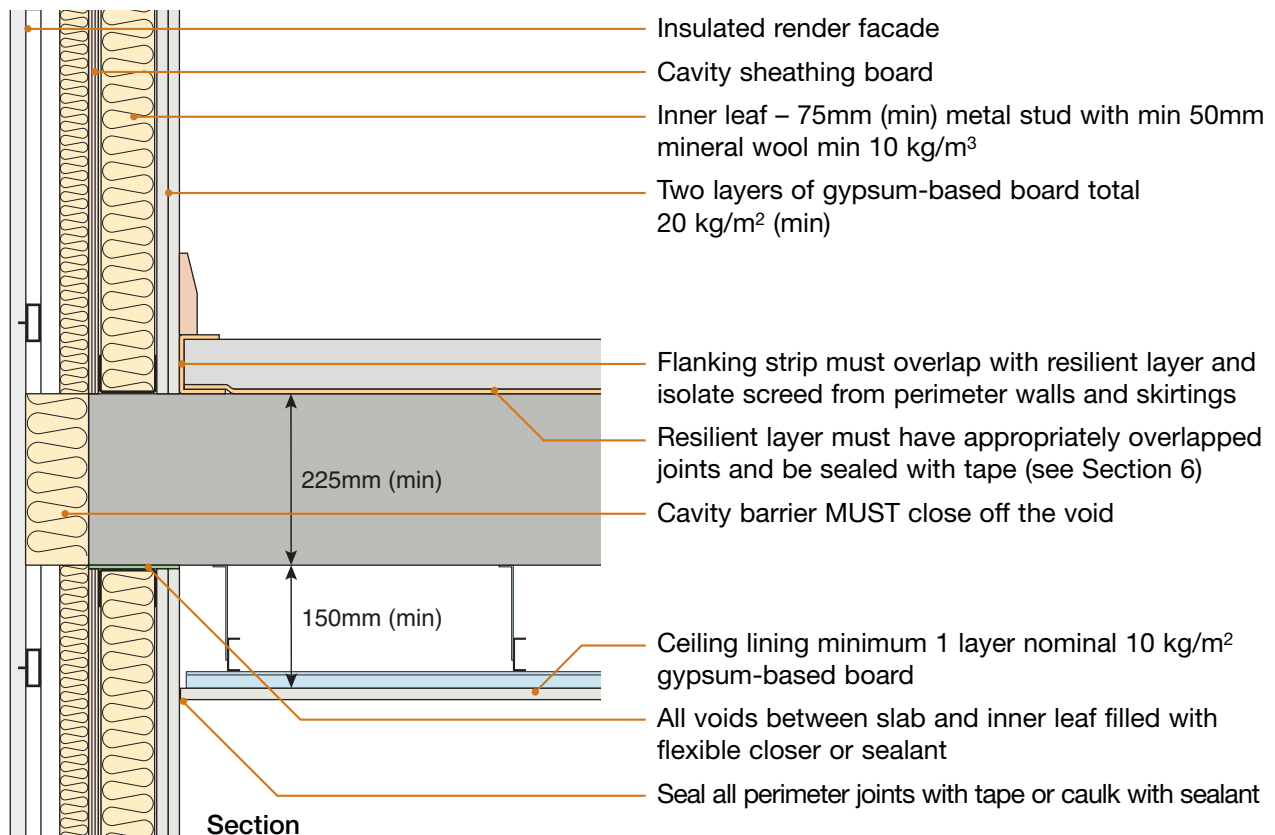
Only the following Resilient Layer systems may be used on E-FC-18 (see also Section 6):

- Thermal Economics 6mm Iso Rubber and IsoEdge
- *Cellecta*® YELOfon® HD10+ and E-strip
- Icopal-MONARFLOOR® TRANQUILT® system
- Thermal Economics IsoRubber Base HP3 and IsoEdge
- InstaCoustic InstaLay 65
- Thermal Economics Iso Rubber Code and IsoEdge 6/260
- Regupol Quietlay

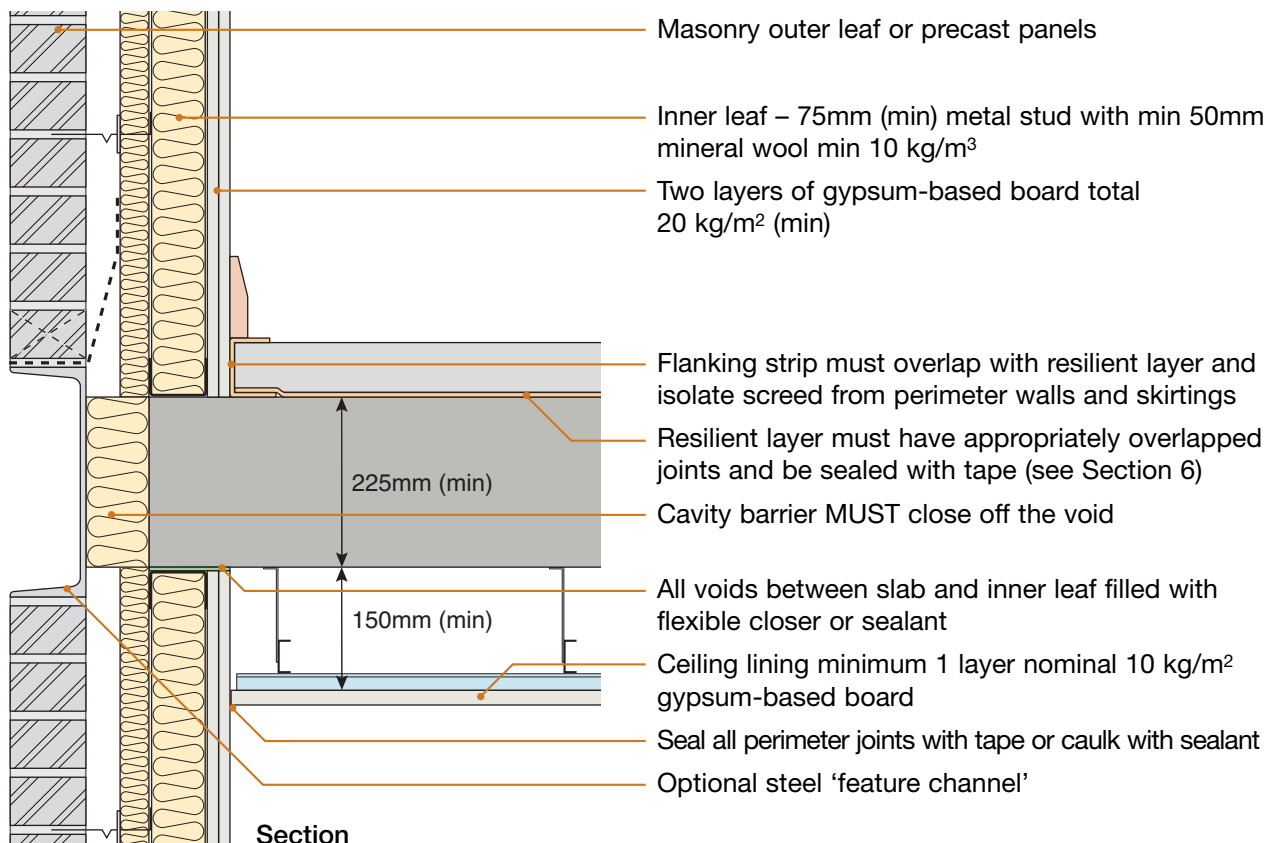
## DO

- Ensure resilient layer is laid over the entire floor surface and has overlapped joints appropriately sealed with tape (see Section 6). On no account should the screed come into contact with the floor slab. (See Section 6 for 40mm proprietary screeds)
- Ensure resilient layer overlaps with flanking strip and is taped and sealed at joints. On no account should the screed come into contact with the floor slab or perimeter walls
- Ensure the flanking strip isolates the skirting and wall linings. On no account should the screed come into contact with the wall lining and skirting
- Make sure ceiling treatment is installed in accordance with the manufacturer's instructions (where applicable)
- Refer to Appendix A

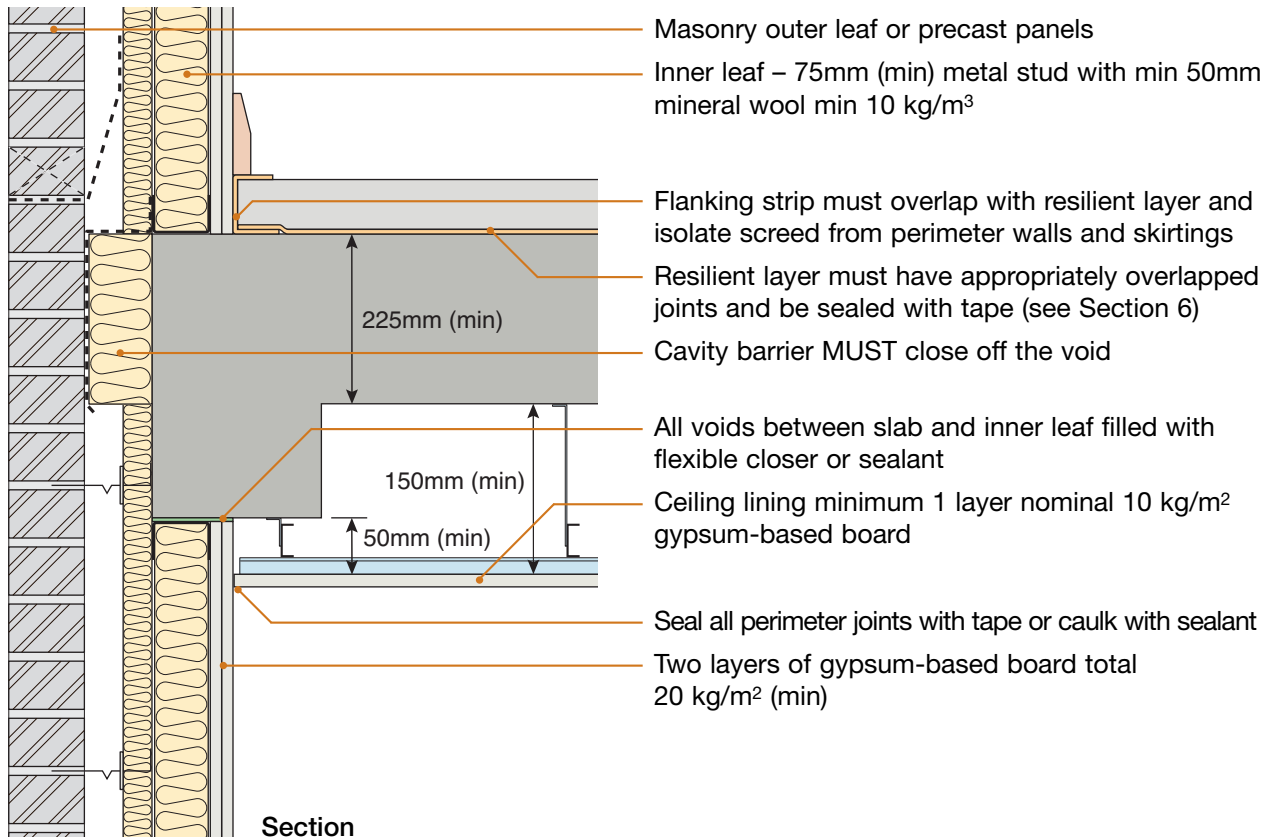
## 1. External (flanking) wall junction – insulated cladding



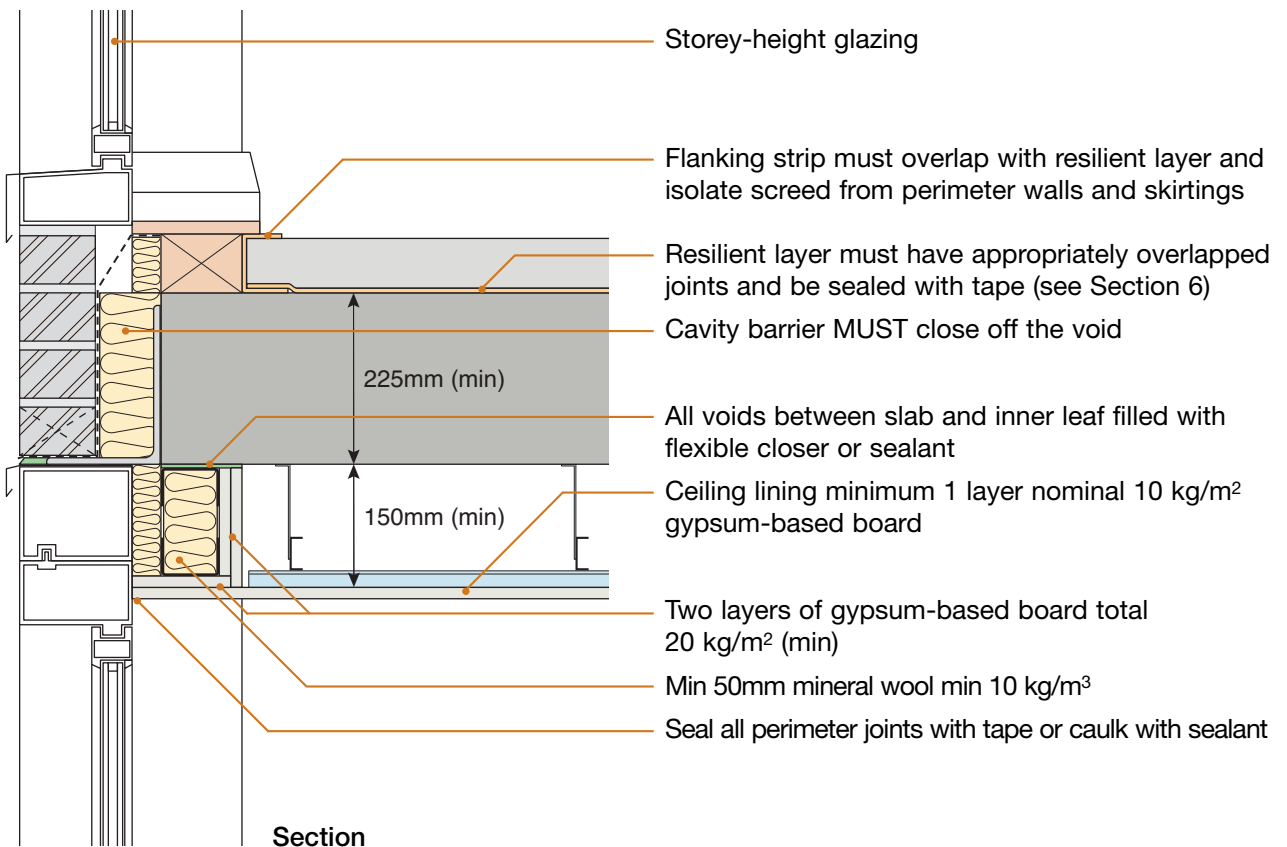
## 2. External (flanking) wall junction – masonry outer leaf



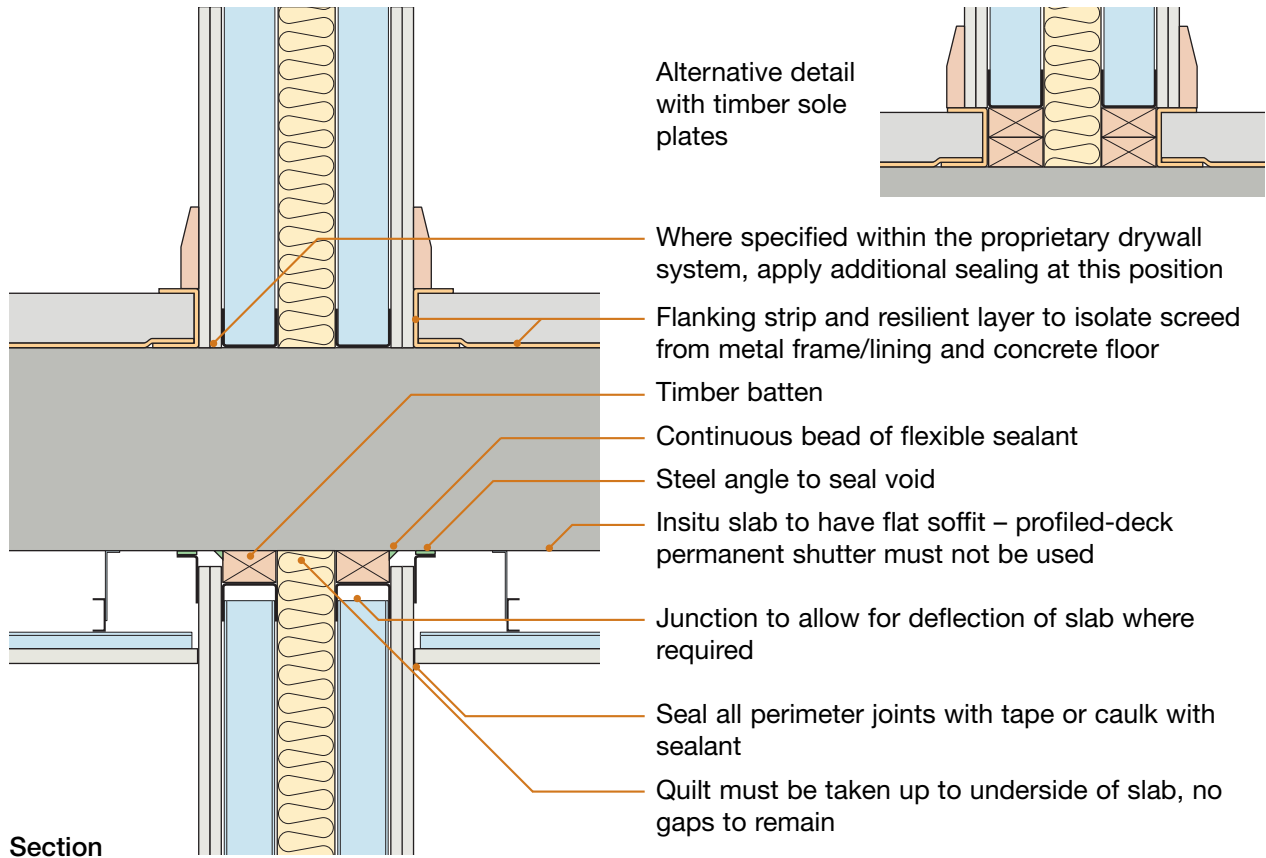
3. External (flanking) wall junction – with concrete downstand beam



4. External (flanking) wall junction – storey-height glazing

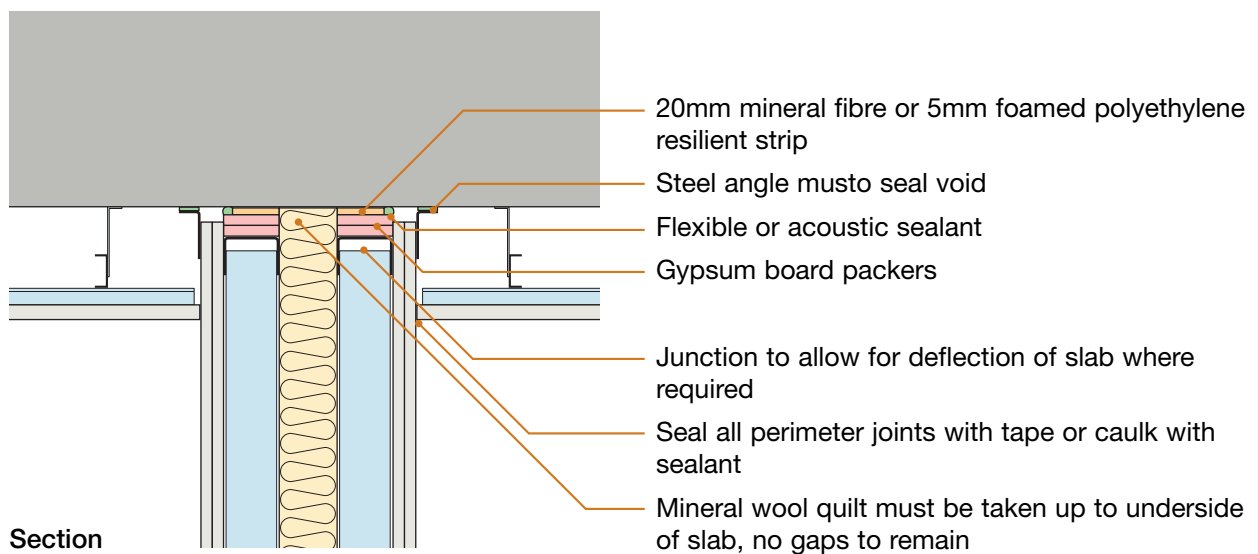


5. Separating wall junction



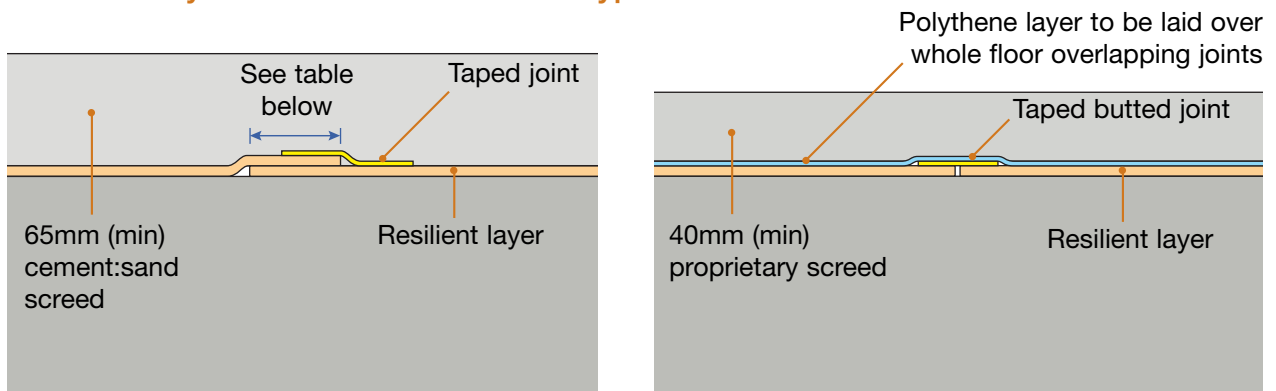
An alternative deflection head detail is shown below

6. Slab junction (with alternative deflection head detail)





## 7. Resilient layer installation and screed types



Resilient layer system	Minimum overlap	Jointing method
Thermal Economics 6mm Iso Rubber & IsoEdge	50mm	Generic tape
Collecta® YELOfon® HD10+ and E-strip	150mm	J-strip
Icopal-MONARFLOOR® TRANQUILT® system	Integrated	Monarfloor Acoustic Adhesive
Thermal Economics IsoRubber Base HP3 & IsoEdge	50mm	Generic tape
InstaCoustic InstaLay 65	50mm	Generic tape
Thermal Economics Iso Rubber Code & IsoEdge 6/260	50mm	Generic tape
Regupol Quietlay	50mm	Regupol tape

## 8. Ceiling treatments for E-FC-18

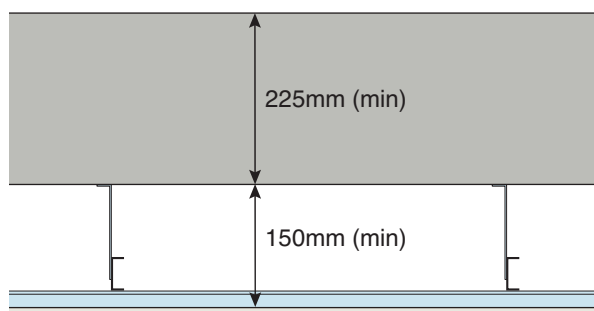
Ceiling treatments must be installed in accordance with the manufacturer’s instructions.

All ceiling joints must be sealed with tape or caulked with sealant.

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

Note: the sound insulation performance of 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 150mm downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer’s instructions
- into openings not exceeding 100mm diameter or 100x100mm

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

### Any ceiling system – 150mm (min) void

- any timber or metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 10 kg/m<sup>2</sup> gypsum-based board

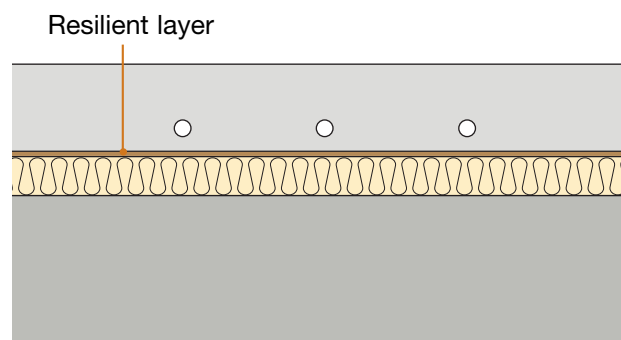
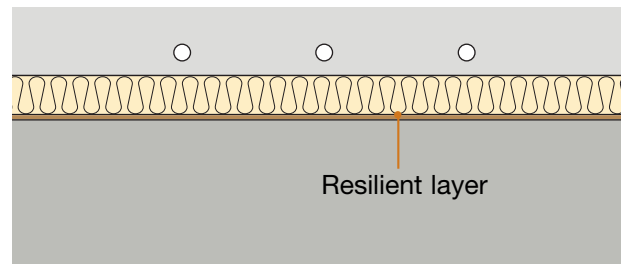
## 9. Underfloor heating systems within screeds

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

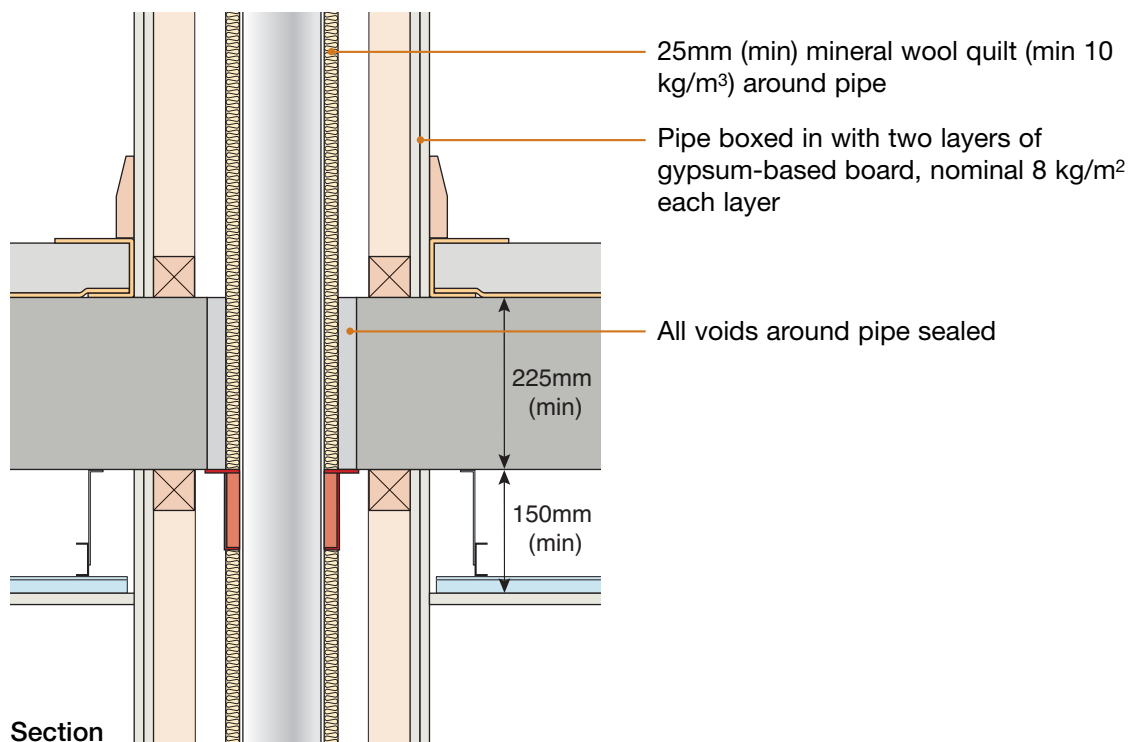
Underfloor heating systems which have a supporting layer/board may be laid on top of the resilient layer.

An insulation layer may be positioned on top of, or beneath, the resilient layer.

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



## 10. Services – service pipes through separating floor



blank page  
See overleaf for checklist

CHECKLIST (to be completed by site manager/supervisor)

Company:

Site:

Plot: Site manager/supervisor:

Table with 4 columns: Ref., Item, Yes (✓), No (✓), Inspected (initials & date). Rows 1-11 list various construction checks for a separating floor.

Notes (include details of any corrective action)

Site manager/supervisor signature .....

©: UK registered trade mark no. 2291665

© Robust Details Limited 2011. All rights reserved. No part of this Handbook (other than the checklists) may be reproduced in any material form or issued or communicated to the public...

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.