## February 2015 Update Pack

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.
- 2. Remove and replace all pages of E-WM-9.
- 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-EC-14	E-EC-15	E-EC-16	

Please note that the trademark (<sup>™</sup>) has now been removed, so the new E-FC-1 is a direct replacement for the existing E-FC-1<sup>™</sup>, for example.

4. Remove and replace the existing Appendix A1.

Yours sincerely

John Tebbit Managing Director, Robust Details Limited



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## Changes to the fourth edition following February 2015 update

Introduct	ion	1
Contact details	1	Amended to show new address and contact numbers.
Separatir	ng V	Walls – Masonry
E-WM-9		
IMPORTANT box	1	Reworded to emphasise the block options available.
Separatir	ng l	Floors – Concrete
E-FC-1		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
E-FC-4		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
E-FC-5		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
E-FC-8		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
<u>E-FC-9</u>		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
E-FC-11		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
E-FC-12		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
E-FC-13		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
E-FC-14		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
		Ceiling insulation now specified generically.
Ceiling treatments	3	Ceiling insulation now specified generically.
Checklist	6	Ceiling insulation now specified generically.

Section

Page Amendment

Section	Page	Amendment
E-FC-15		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.
E-FC-16		
Isometric	1	Structural floor description reworded to clarify that the 300 kg/m <sup>2</sup> refers to the plank alone.

#### Appendix A1

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

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 **robust**details<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 **robust**details<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

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 robust details<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:**

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## 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-WM-21	E-FC-11
		_	E-FC-12
			E-FC-1
		_	E-FC-14
Timber walls	E-WT-1	_	
	E-WT-2	_	
	E-WT-4	_	
Timber floors	F-FT-1	_	

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.

## **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 cavit
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 minimun 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

#### 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

## **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-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, 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 <sup>®</sup> 28 system on timber I-joists
E-FT-6	Cellecta ScreedBoard <sup>®</sup> 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

## Introduction

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

				Separat	ing floors		
		E-FC-1					
		E-FC-11	E-FC-14				E-FC-8
Separa	ting walls	E-FC-12	E-FC-15			E-FC-6	E-FC -9
		E-FC-13	E-FC-16	E-FC-4	E-FC-5	E-FC-7	E-FC-10
E-WM-1	E-WM-16		/	~	~	V	~
E-WM-3	E-WM-18	~			<b>V</b>	•	
E-WM-2	E-WM-20						
E-WM-4	E-WM-21	<i>.</i>		~	~	F	~
E-WM-5	E-WM-26						
E-WM-8	E-WM-27			· ·			· ·
E-WM-11	E-WM-28						
E-WM-14							
E-WM-6	E-WM-15						
E-WM-10	E-WM-23	1	=	~	✓ see note 1	F	~
E-WM-13	E-WM-24						
	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	1	=	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 robust details® separating wall;

- the external (flanking) wall construction above the separating floor meets the requirements on page 2 of the relevant robustdetails<sup>®</sup> 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.

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

	Separating floors		
	E-FT-1		
	E-FT-2		
	E-FT-3		
	E-FT-4		
Separating walls	E-FT-5		
	E-FT-6		
	E-FT-7	E-FC-2	
	E-FT-8	E-FS-1	
E-WT-1	<b>~</b>	<b>W</b> see note 1	
E-WT-2	<ul> <li>✓</li> </ul>	W see note 1	
E-WT-3	F	<b>W</b> see note 1	
E-WT-4	F	<b>W</b> see note 1	

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

	Separating floors			
Separating walls	E-FC-2	E-FC-10	E-FS-1	E-FS-2
E-WS-1	W note 1	W	W see note 1	~
E-WS-2	~	W	W	W
E-WS-3	W	w	w	w
E-WS-4	W see note 1	W	W note 1	~

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.

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

Loadbearing n	nasonry	
E-WM-1	F1	
E-WM-2	F1	
E-WM-3	F1	
E-WM-4	F1	
E-WM-5	F1	
E-WM-6	F1	
E-WM-8	F1	
E-WM-10	F1	
E-WM-11	F1	
E-WM-12	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	

E-WM-21	F1
E-WM-22	F1
E-WM-23	F1
E-WM-24	F1
E-WM-25	F1
E-WM-26	F1
E-WM-27	F1
E-WM-28	F1

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

masonry		
W1	E-FC-11	W1
W2	E-FC-12	W1
W2	E-FC-13	W1
W1	E-FC-14	W1
W1	E-FC-15	W1
W2	E-FC-16	W1
W2		
W2		
	W1 W2 W2 W1 W1 W2 W2 W2	W1         E-FC-11           W2         E-FC-12           W2         E-FC-13           W1         E-FC-14           W1         E-FC-15           W2         E-FC-16

Timber frame	е	RC frame	
E-FT-1	<b>W</b> 3	E-FC-2	W4
E-FT-2	W3	E-FC-10	W4
E-FT-3	<b>W3</b>		
E-FT-4	<b>W3</b>		
E-FT-5	<b>W3</b>		
E-FT-6	<b>W</b> 3	Light steel fra	ame
E-FT-7	<b>W</b> 3	E-FS-1	W4
E-FT-8	<b>W</b> 3	E-FS-2	<b>W5</b>

# Timber frame Light steel frame E-WT-1 F2 E-WS-1 E-WT-2 F2 E-WS-2 E-WT-3 F2 E-WS-3 E-WT-4 F2 E-WS-4

## 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. Otherwise both the wall and floor need testing.

#### Key

F3

**F4** 

**F3** 

F3

- 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.

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

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

#### 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 togetherwith the proprietary flanking constructions contained in Appendix A2

		BRIDGESTOP <sup>®</sup> system	Smartroof system	Kingspan TEK	Prestoplan PresPeak 60	Wall Cap RDA2	RoofSpace I-Roof
Timber	E-WT-1		~	~	<b>v</b>	~	<b>v</b>
walls	E-WT-2		<b>v</b>	<b>v</b>	<b>v</b>	~	<b>v</b>
	E-WT-3		<b>v</b>			~	<b>v</b>
	E-WT-4		<b>v</b>			~	✓
Steel	E-WS-1					~	
walls	E-WS-2						
	E-WS-3						
	E-WS-4					~	

## Introduction

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

		BRIDGESTOP <sup>®</sup> system	Smartroof system	Kingspan TEK	Prestoplan PresPeak 60	Wall Cap RDA2	RoofSpace I-Roof
Masonry	E-FC-1					<b>v</b>	
floors	E-FC-2						
	E-FC-4					<b>v</b>	
	E-FC-5					<b>v</b>	
	E-FC-6					<b>v</b>	
	E-FC-7					<b>v</b>	
	E-FC-8					<b>v</b>	
	E-FC-9					<b>v</b>	
	E-FC-10					✔see note 1	
	E-FC-11					<b>v</b>	
	E-FC-12					<b>v</b>	
	E-FC-13					<b>v</b>	
	E-FC-14					<b>v</b>	
	E-FC-15					<b>v</b>	
	E-FC-16					<b>v</b>	
Timber	E-FT-1					<b>v</b>	
floors	E-FT-2					<b>v</b>	
	E-FT-3					<b>v</b>	
	E-FT-4					<b>~</b>	
	E-FT-5					<b>~</b>	
	E-FT-6					~	
	E-FT-7					~	
	E-FT-8					~	
Steel-concrete	E-FS-1						
and steel floors	E-FS-2					<b>v</b>	

Key

1 Applies only to loadbearing masonry constructions.

#### 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	E-FC-1	~	
floors	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		
Timber	E-FT-1		~
floors	E-FT-2		~
	E-FT-3		~
	E-FT-4		
	E-FT-5		
	E-FT-6		
	E-FT-7		~
	E-FT-8		~
Steel-concrete	E-FS-1	~	
and steel floors	E-FS-2		

## Separating Wall – Solid Dense Block Masonry

 $\square$ 

## **E-WM-9**

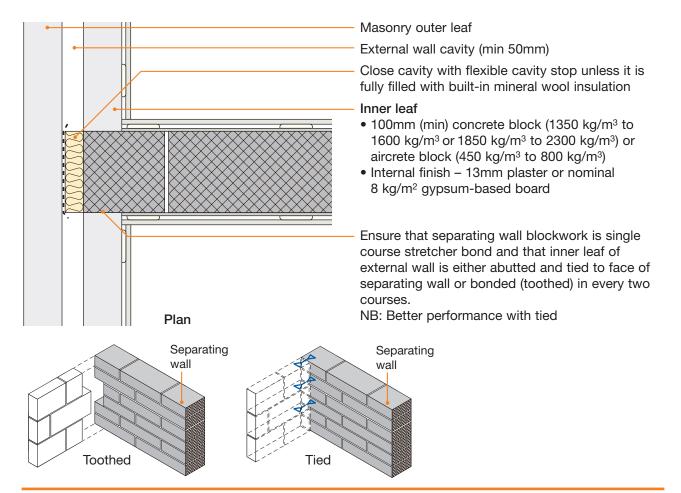
- Attached houses on raft foundations only
  - Dense aggregate blocks
- 13mm render and gypsum base board on dabs

	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/m <sup>2</sup> ) 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)			
DO V DO NOT X	External (flanking wall)	Masonry both leaves with 50mm (min.) cavity – clear, fully filled or partially filled with insulation.			
	DO				
Do use single course stretcher bondDo not use double coursing	-	s are laid on side for 215mm າ			
IMPORTANT	Ensure that be stretcher bor	olockwork is single course			
Only use blocks accepted by Robust Details	Ensure all join	nts are fully filled			
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.	Ensure inner leaf is either abutted and tied to face of separating wall or bonded in every two courses				
A current list of blocks and further information on block identification is available on the Robust Details website www.robustdetails.com	<ul> <li>Ensure no chasing occurs on face of separating wall</li> </ul>				
	13mm and a	r coat is a minimum of oplied to face of separating atch finish (it may be omitted			
	within the flo	or joist/beam zone)			

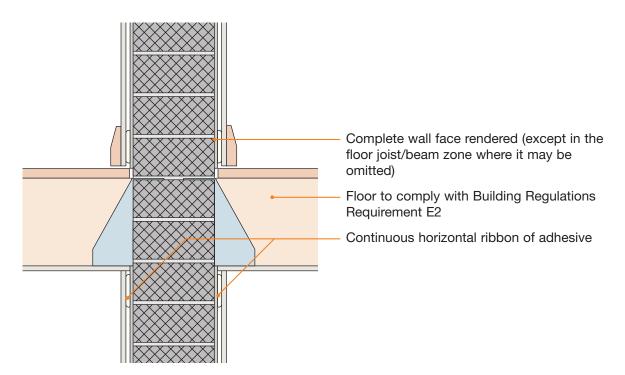
E-WM-9

Edition 4 February 2015 Update

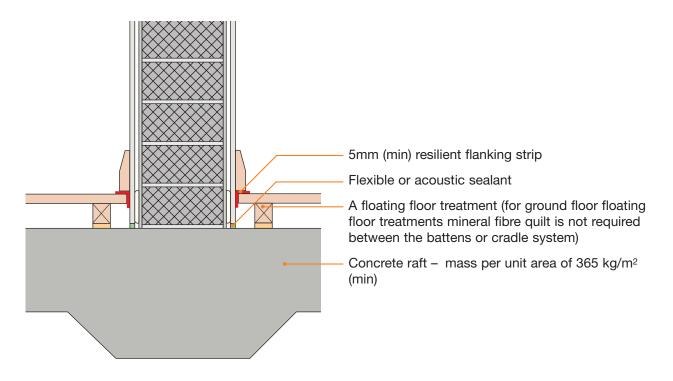
#### 1. External (flanking) wall junction



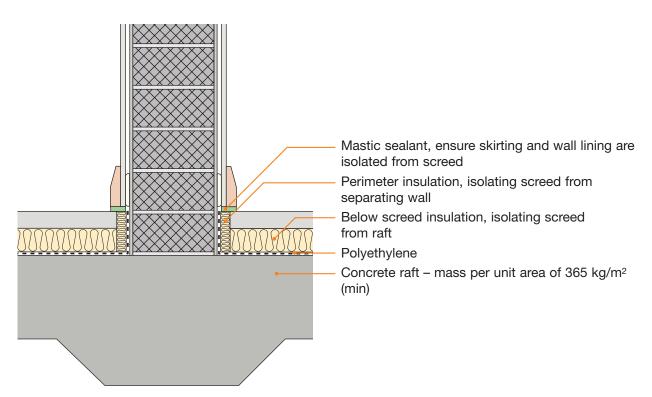
#### 2. Internal floor junction: timber floor supported on joists



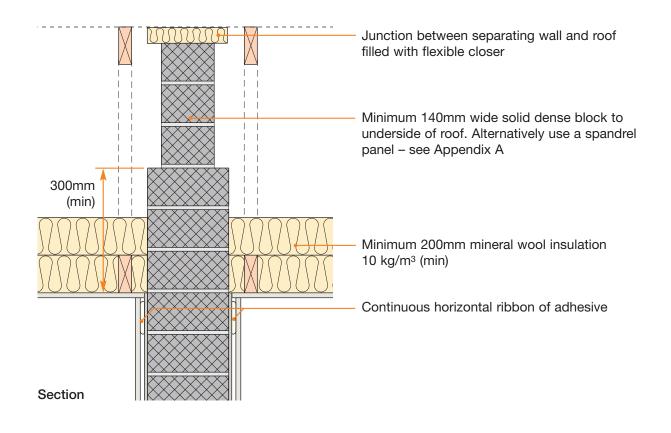
#### 3. Raft foundation with floating floor treatment



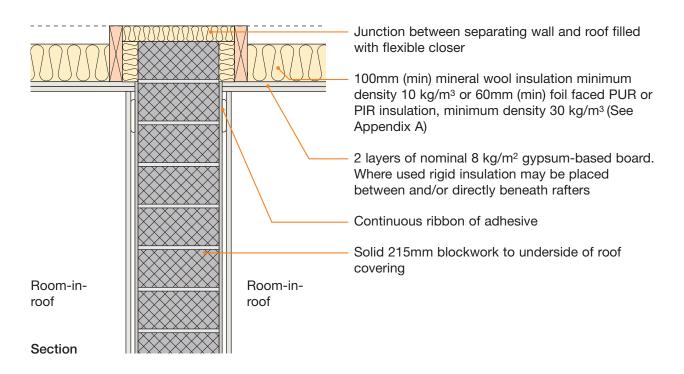
#### 4. Raft foundation with screed



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



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



E-WM-9

blank page See overleaf for checklist

**E-WM-9** 

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

Site:				
Plot:		Sita managar/gunaryisar:		
-101.		Site manager/supervisor:		 
Ref.	Item		Yes (✔)	 Inspected (initials & date)
l <b>.</b>		blocks dense aggregate ) as featured on the list of acceptable details.com)?		
2.	Are blocks laid for th (i.e. 215mm blocks l	ne full 215mm width of the wall aid on side)?		
3.	Is blockwork laid sir	gle course stretcher bond?		
4.		eaking the continuity of the inner leaf? e separating wall abutted and tied or er leaf)		
5.	Are cavity stops inst	alled?		
ô.	Are all joints fully fille	ed?		
7.		oat applied to the whole wall face? y be omitted between floor joists/beams)		
3.	Is render or parge co finished?	oat at least 13mm thick and scratch		
).	ls mass per unit are 12.5 kg/m²?	a of the gypsum based board at least		
10.	Are all junctions of v or caulked with seal	vall and ceiling boards sealed with tape ant?		
11.	Is separating wall sa	tisfactorily complete?		
No	tes (include details of	any corrective action)		

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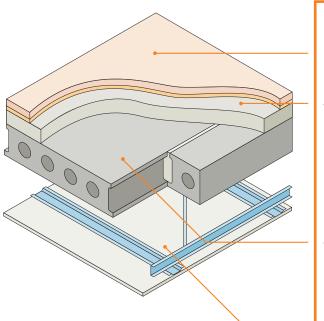
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## **Separating Floor – Concrete**

## E-FC-1

Precast concrete plank ■ Screed ■ E-FC-1



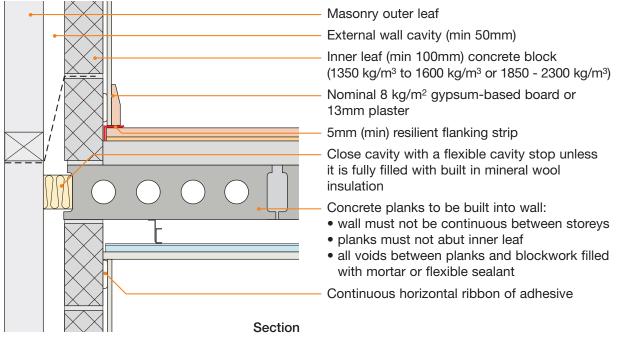
Sketch shows FFT5 type floating floor treatment and CT1 type ceiling treatment

-	Floating floor	See section 4 for suitable floating floor treatment
_	Screed	<ul> <li>40mm (min) screed directly applied to plank</li> <li>cement:sand or proprietary screed nominal 80 kg/m<sup>2</sup> mass per unit area, see Appendix A</li> </ul>
-	Structural floor	Precast concrete plank of 150mm (min) thickness and 300 kg/m <sup>2</sup> (min) mass per unit area
-	Ceiling	See section 3 for suitable ceiling treatment

## DO

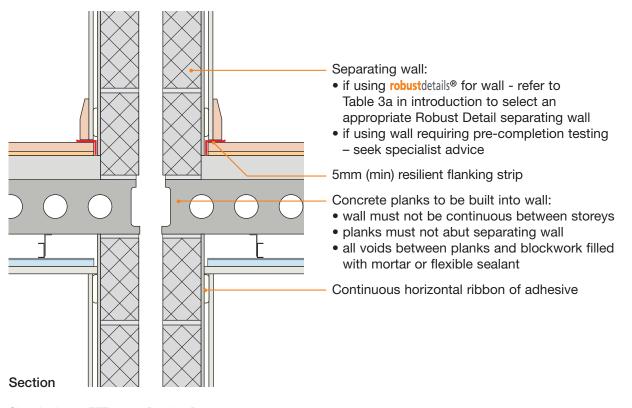
- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure floating floor treatment is suitable and install in accordance with the manufacturer's instructions
- Install flanking strips around the perimeter of the flooring board to isolate floor 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

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



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

#### 2. Separating wall junction



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.

100mm

(min)

100mm

(min)

75mm

(min)

65mm

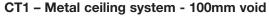
(min)

#### 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 2m<sup>2</sup> 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



- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m<sup>2</sup> gypsum-based board

#### CT2 – Timber battens and counterbattens

- 50 x 50mm softwood battens
- 50 x 50mm counterbattens
- one layer of 8 kg/m<sup>2</sup> gypsum-based board

#### CT3 – Metal ceiling system - 75mm void

- any metal ceiling system providing 75mm (min) ceiling void
- one layer of nominal 10 kg/m<sup>2</sup> 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/m<sup>2</sup> (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  $rd \Delta R_w + C_{tr} = 17 dB$  and  $rd \Delta L_w = 16 dB$ ) see Appendix E
- one layer of minimum nominal 10 kg/m<sup>2</sup> gypsum-based board

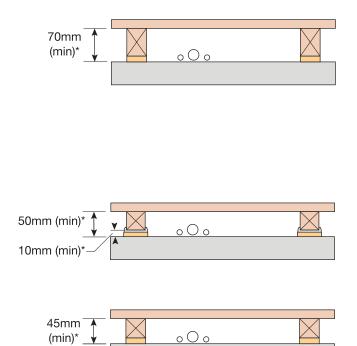




#### 4. Floating floor treatments for E-FC-1

All floating floor treatments :

- a) Must achieve a minimum laboratory performance of  $rd \Delta L_w = 17 dB$  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.



ჼჿჿჅ*ჽჅႧჿჿ*Ⴥ*ჽჅ*ჿჿჿჅ*ჽ*ჅჇჿჿჅ*ჽჅ*ჿჿჿჅ*ჽႦ*ჿჿჿჅ*ჽჅ*ჿჿჿჅ*ჽჅჿ*ჿჿჅ*ჽჅჿ*ჿჿჅ*ჽჅჿ*ჿჿჅ*ჽჅჿ*ჿჿჅ*ჽჅ*ჿჿჿჅ

## 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/m<sup>2</sup>.

#### FFT 1 – Resilient composite deep batten system

- 18mm (min) t&g flooring board
- resilient layer must be continuous and prebonded 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 prebonded 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

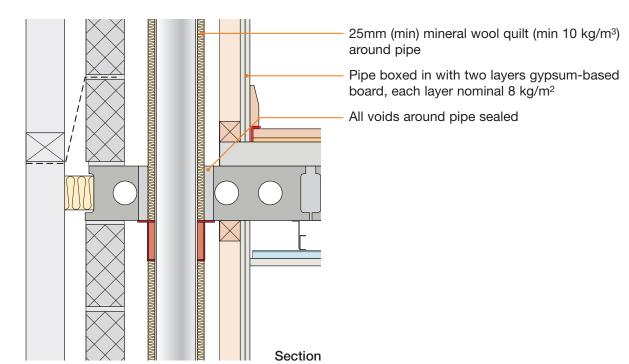
## FFT 4 – Resilient overlay platform floor system

- proprietary platform system inclusive of resilient layer greater than or equal to 16 kg/m<sup>2</sup> 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)

Corr	ipany:						
Site:							
Plot:	:	Site manager/supervisor:					
Ref.	Item		Yes No (✔) (✔)	Inspected (initials & date)			
1.		e planks 150mm (min) thick : area 300 kg/m² (min)?					
2.	Are inner leaves to e block density?	xternal (flanking) walls of the correct					
3.	Are joints between p	recast concrete planks grouted?					
4.	Are precast concrete	planks built into the masonry walls?					
5.	Is screed applied dir	ectly to the planks?					
6.		peen installed in accordance with the actions (where applicable)?					
7.	Are all ceiling board with sealant?	joints sealed with tape or caulked					
8.	Has floating floor tre with the manufacture	atment been installed in accordance er's instructions?					
9.	Have all resilient flan	king strips been fitted?					
10.		apped in quilt and boxed in with two layers ypsum-based board?					
11.	Is separating floor sa	atisfactorily complete?					
Not	<b>tes</b> (include details of	any corrective action)					
Site	e manager/supervisor	signature					

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## **Separating Floor – Concrete**

## E-FC-4

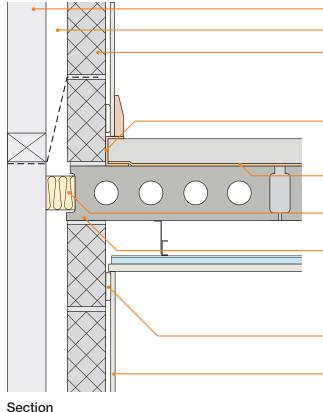
Precast concrete plank

Screed laid on Thermal Economics IsoRubber resilient layer

	- Screed	65mm (min) cement:sand screed or 40mm (min) proprietary screed of nominal 80 kg/m <sup>2</sup> 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/m <sup>2</sup> (min) mass per unit area				
Sketch shows CT0 type ceiling treatment	- Ceiling	See section 3 for suitable ceiling treatment which is dependent on floor plank depth and supporting wall density				
SYSTEM INSTALLATION	EM INSTALLATION DO					
The use of this screed resilient layer	Butt planks tig	Butt planks tightly together				
system <b>must</b> incorporate the following:	■ Grout all joints	<ul> <li>Grout all joints between planks</li> </ul>				
1) <b>6mm IsoRubber</b> (resilient layer to be		<ul> <li>Fill all voids between walls and floor</li> </ul>				
laid over entire floor area with minimum	■ Ensure 6mm I	<ul> <li>Ensure 6mm IsoRubber resilient layer is</li> </ul>				
50mm overlaps)	laid over the entire floor surface and has					
2) <b>IsoEdge</b> flanking strip	overlapped joints of 50mm sealed with					
3) All joints taped	tape. On no account should the screed					
		come into contact with the floor slab. (see Section 4 for 40mm proprietary screeds)				
IsoEdge Flanking Strip	<ul> <li>Ensure 6mm IsoRubber overlaps with</li> </ul>					
Min. 50mm All joints	IsoEdge flanking strip. On no account					
overlap taped	-	should screed come into contact with				
	floor slab or perimeter walls					
	Ensure the IsoEdge flanking strip isolates					
Floor slab	-	d wall linings. On no				
IsoEdge flanking strip to be installed at		account should screed come into contact with the wall lining and skirting				
all room perimeters. See manufacturer's	Ensure that or					
guidance.	used in the co	used in the construction of external				
See Section 4 for acceptable installation	(flanking) walls, unless specifically					
alternatives for 40mm proprietary screeds	referred to in the Handbook all blocks should be assumed to be solid (i.e. not					
From 1 January 2009, Robust Details Limited can only	hollow or cellu					
accept registration of this floor once the builder agrees	Make sure ceiling treatment is installed					
to receive training from Thermal Economics on the installation of the screed and resilient layer. Please	in accordance with the manufacturer's					
contact Robust Details Limited for further information.	instructions (where applicable)					

E-FC-4

#### 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 Aglite Ultima (1050 kg/m<sup>3</sup>) or aircrete block (450-800 kg/m<sup>3</sup>)

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

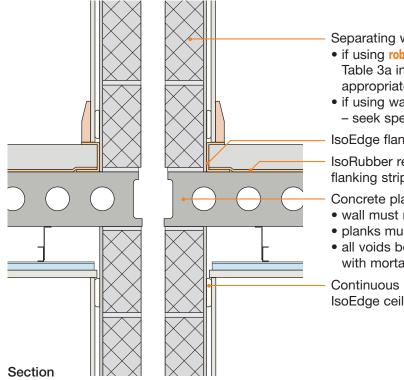
- Concrete planks must be built into walls:
- walls must not be continuous between storeys
- planks must not abut inner leaf
- all voids between planks and blockwork filled with mortar or flexible sealant

Continuous horizontal ribbon of adhesive or IsoEdge ceiling strip

Nominal 8 kg/m<sup>2</sup> gypsum-based board or 13mm plaster

Sketch shows CT0 type ceiling treatment

#### 2. Separating wall junction



Sketch shows CT0 type ceiling treatment

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

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

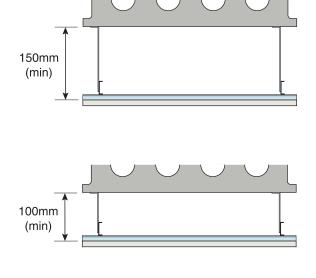
Continuous horizontal ribbon of adhesive or IsoEdge ceiling strip

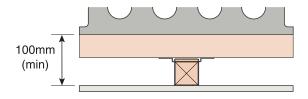
#### 3. Ceiling treatments for E-FC-4

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 2m<sup>2</sup> 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/m<sup>2</sup> gypsum-based board

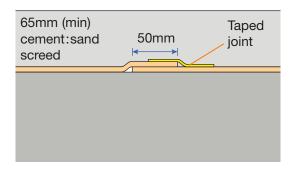
#### CT1 – Metal ceiling system - 100mm void Only to be used for 200mm (min) depth concrete planks

- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m<sup>2</sup> gypsum-based board

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

- 50 x 50mm softwood battens
- 50x50mm counterbattens
- Isosonic Hangers Type C
- one layer of nominal 8 kg/m<sup>2</sup> gypsum-based board

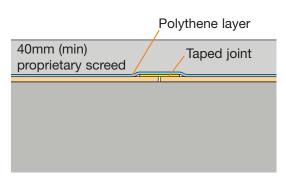
#### 4. Resilient layer installation for different screed types



#### 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

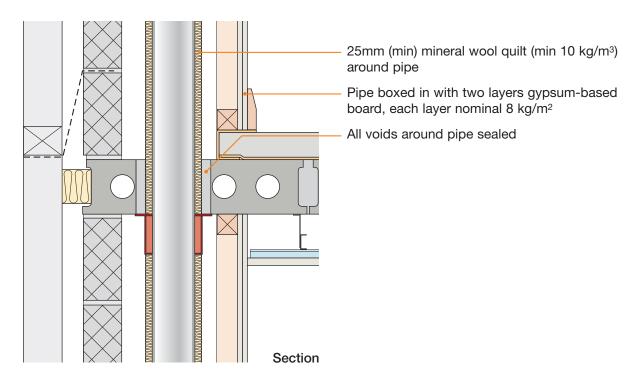
Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

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.

0	0	0

#### 6. Services - Service pipes through separating floor



Sketch shows CT0 type ceiling treatment

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

Corr	npany:			
Site:	:			
Plot:	:	Site manager/supervisor:		
Ref.	Item		Yes No (✔) (✔)	Inspected (initials & date)
1.	Has training been re	ceived from Thermal Economics?		(initials & date)
2.		e planks 150mm (min) thick t area 300 kg/m² (min)?		
3.	Are inner leaves to e block density?	external (flanking) walls of the correct		
4.	Are joints between p	recast concrete planks grouted and sealed	?	
5.	Are precast concrete	e planks built into the masonry walls?		
6.	Is the IsoEdge flanking strip installed for all room perimeters?			
7.	Are the IsoRubber jow with tape?	ints overlapped by 50mm and sealed		
8.	Is the IsoRubber lay	er overlapping the IsoEdge flanking strip?		
9.	Are the skirting boar flanking strip?	ds isolated from the screed by the IsoEdg	e	
10.	Are all ceiling board sealant?	joints sealed with tape or caulked with		
11.		apped in quilt and boxed in with two layers lypsum-based board?		
12.	Is separating floor sa	atisfactorily complete?		
	ntact details for technical ephone: 01582 54425	assistance from Thermal Economics, manufacture <b>Fax: 01582 429305</b> E-mail: teo		
	,	any corrective action)		

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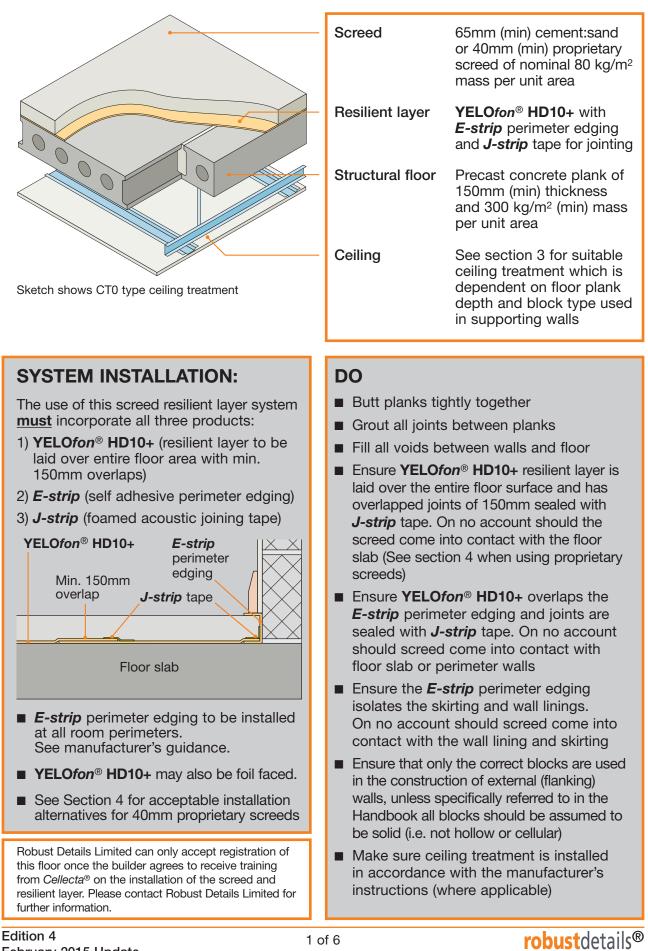
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## E-FC-5

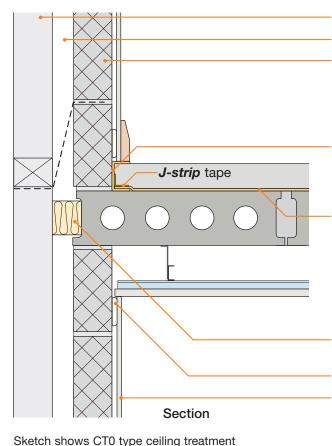
Precast concrete plank

Screed laid on Cellecta<sup>®</sup> YELOfon<sup>®</sup> HD10+ resilient layer system ■



E-FC-5

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



Masonry outer leaf

External wall cavity (min 50mm)

Inner leaf (min 100mm) aggregate concrete block (1350-1600 kg/m<sup>3</sup> or 1850-2300 kg/m<sup>3</sup>) or aircrete block (450-800kg/m<sup>3</sup>).

*E-strip* perimeter edging must be overlapped by YELOfon<sup>®</sup> 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:

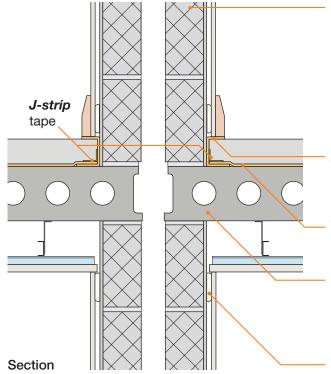
- walls must not be continuous between storeys
- planks must not abut inner leaf
- all voids between planks and blockwork filled with mortar or flexible sealant

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/m<sup>2</sup> gypsum-based board or 13mm plaster

#### 2. Separating wall junction



Separating wall:

- if using robustdetails<sup>®</sup> 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

NOTE: aircrete block separating wall requires 200mm (min) planks and ceiling treatment CT5 (Refer to section 3)

*E-strip* perimeter edging must be overlapped by YELOfon<sup>®</sup> 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

Sketch shows CT0 type ceiling treatment

### 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.

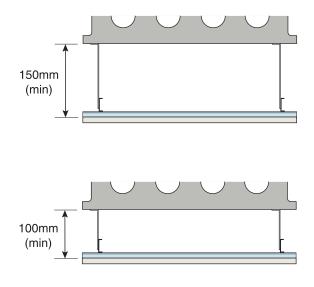
#### Downlighters and recessed lighting

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 2m<sup>2</sup> 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

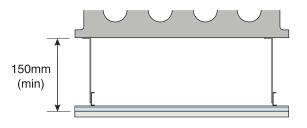
Particular attention should also be paid to Building Regulations Part B - Fire Safety

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



# CT5 ceiling treatment MUST be used when flanking AND separating walls are constructed in <u>aircrete blocks</u>.

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



#### 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/m<sup>2</sup> gypsum-based board

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

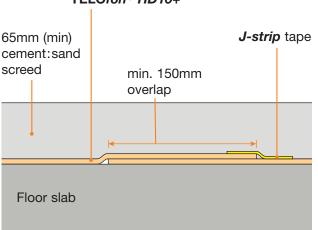
- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m<sup>2</sup> gypsum-based board

#### 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/m<sup>2</sup> gypsum-based board



### 4. Resilient layer installation for different screed types

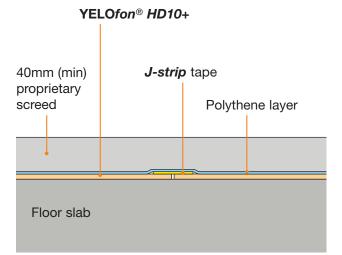


### YELOfon® HD10+

#### 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<sup>®</sup> HD10+ resilient layer to be butt jointed.
- YELOfon<sup>®</sup> 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.

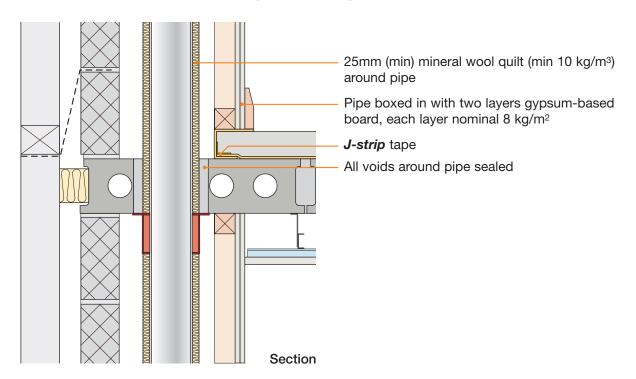
Underfloor heating systems which have a supporting layer/board may be laid on top of the **YELOfon® HD10+**.

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



Sketch shows CT0 type ceiling treatment

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

Com	pany:				
Site:					
Plot:		Site manager/supervisor:			
Ref.	Item			Yes No (✔) (✔)	Inspected (initials & date)
1.	Has training been re-	ceived from Cellecta®?			(initialo a dato)
2.	-	e planks 150mm (min) thick t area 300 kg/m² (min)?			
3.		xternal (flanking) walls of the cor ppropriate for precast concrete p g treatment?			
4.	Are joints between p	recast concrete planks grouted ar	nd sealed?		
5.	Are precast concrete	e planks built into the masonry w	alls?		
6.	perimeter walls (inclu	eter edging installed around all rouding door openings, cupboards wall recesses) and service pipes ape?	across		
7.		<b>0+</b> resilient layer joints formed as 4 and sealed with <b>J-strip</b> tape?			
8.		resilient layer overlapping the <b>E-</b> d joints sealed with <b>J-strip</b> tape?			
9.	Are the skirting boar perimeter edging?	ds isolated from the screed by th	ne <b>E-strip</b>		
10.	Is appropriate ceiling	g treatment used to suit wall bloc	k type?		
11.	Are all ceiling board sealant?	joints sealed with tape or caulke	d with		
12.		apped in quilt and boxed in with t ypsum-based board?	wo layers		
13.	Is separating floor sa	atisfactorily complete?			
	tact details for technical a	assistance from <i>Cellecta®</i> , manufacture 4 Fax: 08456 717172	er of YELO <i>fon®</i> E-mail: techr		
Not	es (include details of	any corrective action)			
Site	manager/supervisor	signature		•	

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# **Separating Floor – Concrete**

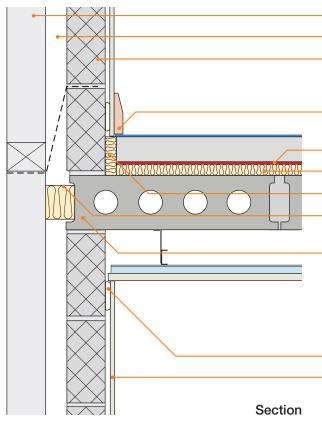
# E-FC-8

- 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/m <sup>2</sup> (min) mass per unit area		
	Isolating layer (1)	5mm foamed polyethylene layer 30-36 kg/m <sup>3</sup>		
	Isolating layer (2)	25mm mineral wool batt 140 kg/m <sup>3</sup> (min), 25mm EPS (flooring grade SD) or extruded polystyrene insulation		
	Structural floor	Precast concrete plank of 150mm (min) thickness and 300 kg/m <sup>2</sup> (min) mass per unit area		
	Ceiling	See section 3 for suitable ceiling treatment which is dependent on floor plank depth		
IMPORTANT	DO			
Bonded resilient floor coverings must be tested in accordance with Appendix G.	Butt planks tig	htly together		
See section 4 for performance requirements	Grout all joints	between planks		
and edge detail installation options. Polyethylene foams may not be used for	Fill all voids be	between walls and floor		
bonded resilient floor coverings. The resilient floor covering material must		Install the 5mm and 25mm isolating layers with staggered joints		
be overprinted with wording prohibiting its removal.	<ul> <li>Make sure ceiling treatment is installed</li> </ul>			
Bonded resilient floor covering should be suitably resistant to site and removals		th the manufacturer's here applicable)		
traffic.		ating edge strip is 25mm		
	mineral wool b expanded (SD polystyrene ins	grade) or extruded		

 Ensure resilient floor cover is bonded using only suppliers' recommended adhesives, and is not readily removable

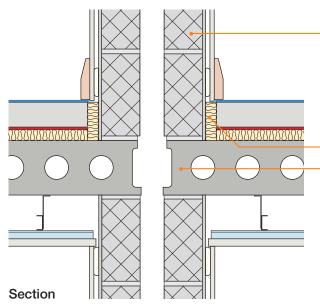
### 1. External (flanking) wall junction



Sketch shows CT0 type ceiling treatment

Alternative detail





Separating wall:

plaster

Masonry outer leaf

5mm isolating layer (1)

25mm isolating layer (2)

External wall cavity (min 50mm)

or aircrete block (600-800 kg/m<sup>3</sup>)

25mm (min) isolation edge strip

Inner leaf (min 100mm) aggregate concrete block (1350 kg/m<sup>3</sup> to 1600 kg/m<sup>3</sup>) or (1850 - 2300 kg/m<sup>3</sup>)

Bonded resilient floor cover installed between skirting and screed (see section 4 for installation options)

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

• all voids between planks and blockwork filled

Nominal 8kg/m<sup>2</sup> gypsum-based board or 13mm

Mastic sealant ensures skirting and wall lining are isolated from screed

planks must not abut separating wall

with mortar or flexible sealant Continuous ribbon of adhesive

- if using robustdetails<sup>®</sup> 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 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

Sketch shows CT0 type ceiling treatment

### 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:

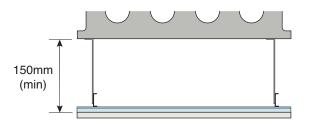
- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- if resilient hangers are used.

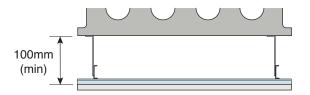
#### Downlighters and recessed lighting

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 2m<sup>2</sup> 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





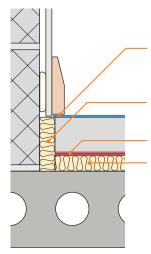
#### CT0 – Metal ceiling system - 150mm void To be used for 150mm (min) depth concrete planks

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

### 4. Isolating layers installation, edge strip and bonded resilient floor cover



Bonded resilient floor cover installed between skirting and screed 25mm (min) isolation edge strip

5mm isolating layer (1)

25mm isolating layer (2)

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

**OPTION A** 

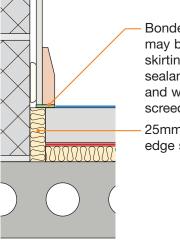
#### Isolating layer (1)

• 5mm (min) foamed polyethylene

#### Isolating layer (2) and isolating edge strip

- 25mm (min) thick
- may be mineral wool batt (min 140 kg/m<sup>3</sup>) or expanded (SD grade) or extruded polystyrene insulation board

(Note: joints for isolating layers 1 and 2 should be staggered)



Bonded resilient floor may be installed up to skirting provided mastic sealant isolates skirting and wall lining from screed

25mm (min) isolation edge strip

#### OPTION B

#### Bonded resilient floor cover

- min 4.5mm thickness and must be bonded
- must be capable of supporting carpet and wood finishes in habitable rooms
- Laboratory testing performance must be undertaken directly on the resilient cover, and with a wood floor finish as outlined in Appendix G (min∆L<sub>w</sub> 17 dB without timber board overlay; min rd∆L<sub>w</sub> 17 dB with timber board overlay)

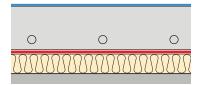
#### 5. Underfloor heating systems within screeds

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.

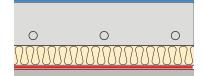
Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.

**Note:** If required it is permissible to have the 5mm layer installed as the lower secondary isolating layer (as shown in Option B).

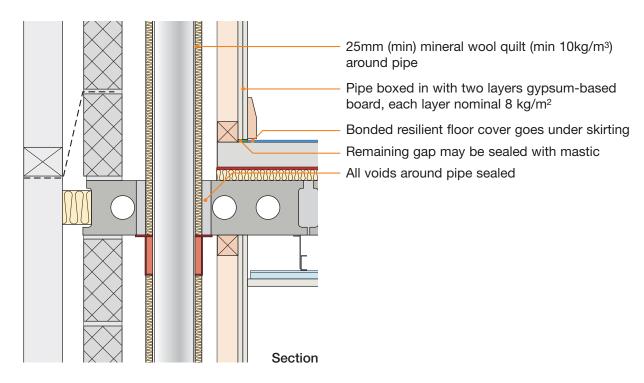
#### **OPTION A**



#### **OPTION B**

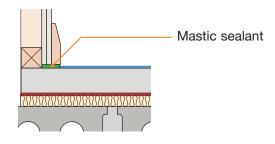


### 6. Services - Service pipes through separating floor



Sketch shows CT0 type ceiling treatment

Alternative detail



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

Com	npany:			
Site:				
Plot:		Site manager/supervisor:		
Ref.	Item		Yes No (✔) (✔)	Inspected (initials & date)
1.		e planks 150mm (min) thick t area 300 kg/m² (min)?		(initials & date)
2.	Are joints between p sealed?	precast concrete planks grouted and		
3.	Are precast concrete	e planks built into the masonry walls?		
4.	Has the 25mm edge perimeters?	e strip been installed for all room		
5.	Are both isolating la	yers each fully covering the floor slab?		
6.	Is the resilient floor of to the screed?	cover fully covering, and fully bonded		
7.	Are the skirting boar resilient floor cover	rds isolated from the screed by the or flexible sealant?		
8.	Are all ceiling board sealant?	joints sealed with tape or caulked with		
9.		apped in quilt and boxed in with two layers yypsum-based board?		
10.	Is separating floor s	atisfactorily complete?		
No	<b>tes</b> (include details of	any corrective action)		
Site	e manager/superviso	signature		

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# **Separating Floor – Concrete**

# E-FC-9

### 3mm Thermal Economics IsoRubber Top ■

Precast concrete plank

Screed

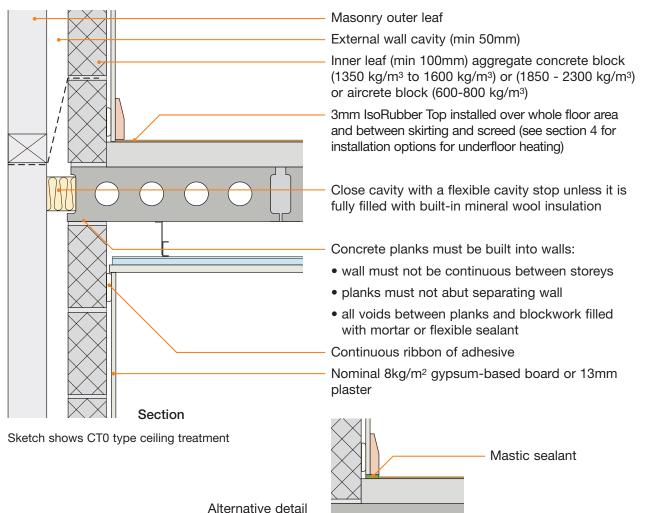
Floor covering	3mm Thermal Economics IsoRubber Top (bonded with IsoBond adhesive)
Screed	65mm (min) sand cement screed, or 40mm proprietary screed, 80 kg/m <sup>2</sup> (min) mass per unit area
Structural floor	Precast concrete plank of 150mm (min) thickness and 300 kg/m <sup>2</sup> (min) mass per unit area
Ceiling	See section 3 for suitable ceiling treatment which is dependent on floor plank depth
Structural floor	screed, or 40mm proprietary screed, 80 kg/m <sup>2</sup> (min) mass per unit area Precast concrete plank of 150mm (min) thickness and 300 kg/m <sup>2</sup> (min) mass per unit area See section 3 for suitable ceiling treatment which is dependent on floor plank

E-FC-9

### DO

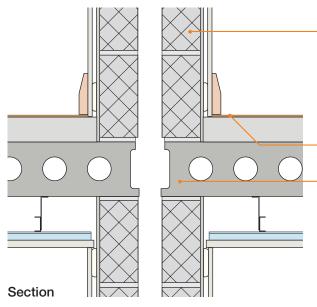
- Butt planks tightly together
- Grout all joints between planks
- Fill all voids between walls and floor
- Ensure IsoRubber Top fully covers floor area
- Make sure ceiling treatment is installed in accordance with the manufacturer's instructions (where applicable)
- Ensure IsoRubber Top is bonded to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

### 1. External (flanking) wall junction



Alternative deta

### 2. Separating wall junction



Separating wall:

- if using robustdetails<sup>®</sup> 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 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

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:

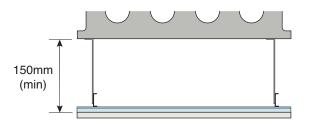
- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- if resilient hangers are used.

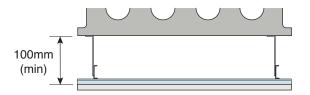
#### Downlighters and recessed lighting

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 2m<sup>2</sup> 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/m<sup>2</sup> 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/m<sup>2</sup> gypsum-based board

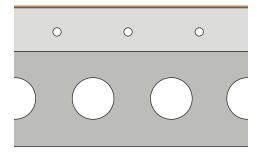
#### 4. Underfloor heating systems within screeds

Underfloor heating systems may be installed within the screed.

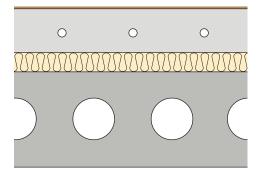
Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.

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

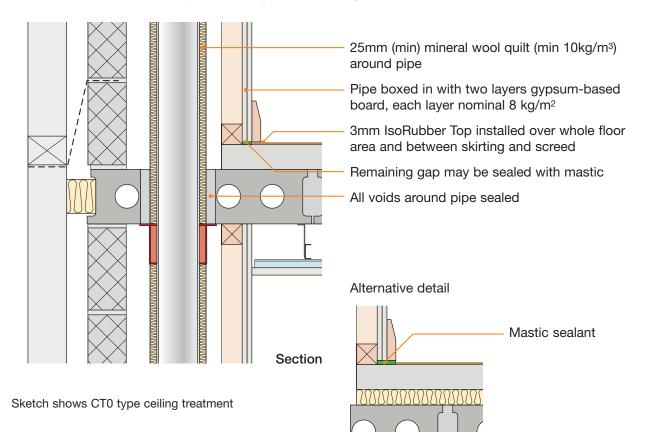
#### **OPTION A**



#### **OPTION B**



### 5. Services - Service pipes through separating floor



blank page See overleaf for checklist

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

Plot		Site manager/supervisor:		
Ref.	Item		Yes No (✔) (✔)	Inspected (initials & date
•	-	te planks 150mm (min) thick it area 300 kg/m² (min)?		(initiale of duris)
-	Are joints between sealed?	precast concrete planks grouted and		
5_	Are precast concre	te planks built into the masonry walls?		
	Is IsoBond adhesiv	e being used?		
5_	Is the IsoRubber To screed?	p fully covering and fully bonded to the		
).	Are the skirting boa floor cover or flexib	rds isolated from the screed by the resilient le sealant?		
-	Is the correct ceilin plank thickness?	g type being used for precast concrete		
-	Are all ceiling board sealant?	I joints sealed with tape or caulked with		
)_		rapped in quilt and boxed in with two layers gypsum-based board?		
0.	Is separating floor	satisfactorily complete?		

Notes (include details of any corrective action)				
Site manager/supervisor signature				

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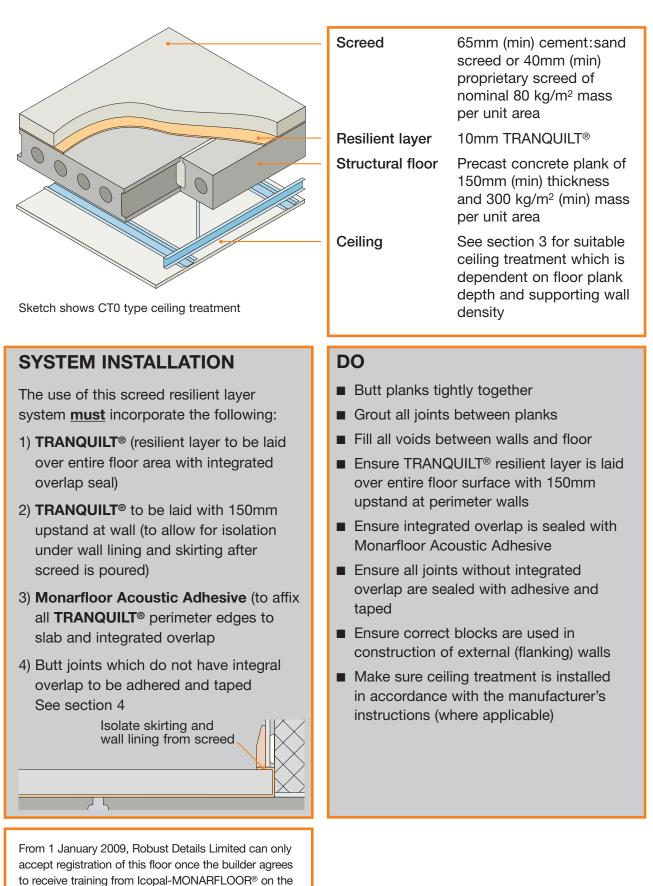
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# E-FC-11

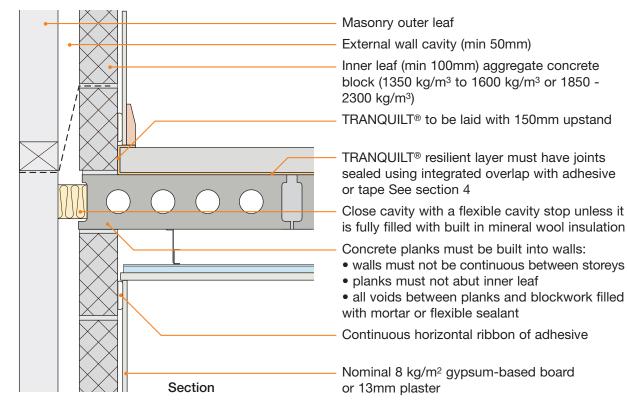
Precast concrete plank

Screed laid on Icopal-MONARFLOOR® TRANQUILT® resilient layer



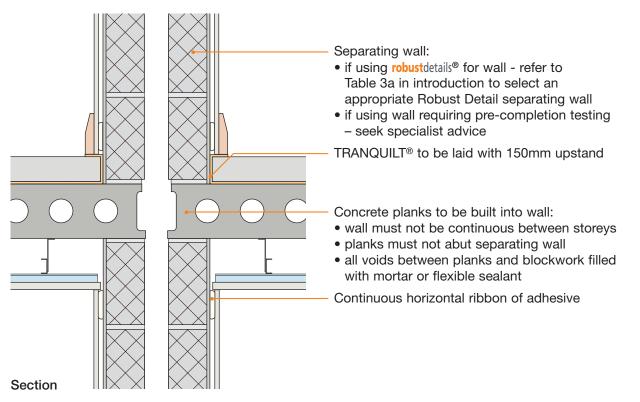
installation of the screed and resilient layer. Please contact Robust Details Limited for further information.

### 1. External (flanking) wall junction



Sketch shows CT0 type ceiling treatment

### 2. Separating wall junction



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:

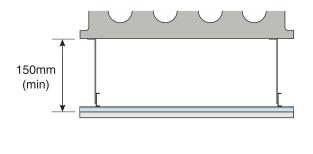
- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- resilient hangers are used.

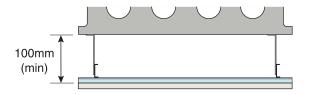
#### Downlighters and recessed lighting

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 2m<sup>2</sup> 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





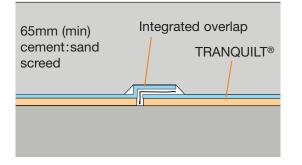
#### CT0 – Metal ceiling system - 150mm void To be used for 150mm (min) depth concrete planks

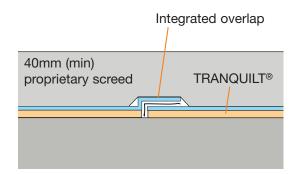
- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m<sup>2</sup> gypsum-based board

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

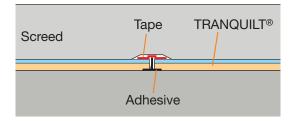
- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m<sup>2</sup> gypsum-based board

#### 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

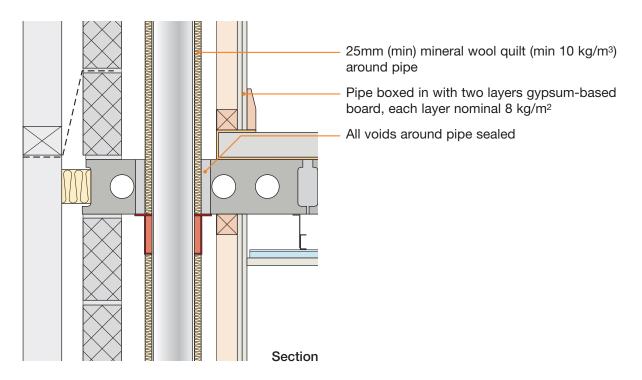
Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

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

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

0	0	0

### 6. Services - Service pipes through separating floor



Sketch shows CT0 type ceiling treatment

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

Site:	ipany:		
Plot:			
Ref.	Item	Yes No	
۱.	Has training been received from Icopal-MONARFLOOR®	( <b>v</b> ) ( <b>v</b> )	(initials & date)
<u>).</u>	Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m <sup>2</sup> (min)?		
3.	Are inner leaves to external (flanking) walls of the correct block density?		
4.	Are joints between precast concrete planks grouted and sealed?		
5.	Are precast concrete planks built into the masonry walls?		
<b>)</b> .	Is the 10mm TRANQUILT <sup>®</sup> covering the whole floor slab?		
7.	Is the TRANQUILT <sup>®</sup> taken 150mm up the wall?		
3.	Are the integrated overlaps sealed with Monarfloor Acoustic Adhesive?		
).	Are the skirting boards and wall linings isolated from the screed by the TRANQUILT®?		
10.	Has the installation been signed off by Icopal-MONARFLOOR® prior to pouring the screed?		
1.	Are all ceiling board joints sealed with tape or caulked with sealant?		
2.	Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m <sup>2</sup> gypsum-based board?		
13.	Is separating floor satisfactorily complete?		
	ntact details for technical assistance from Icopal-MONARFLOOR® TRANQ lient layer system:	UILT®, manufa	cturer of TRANQUILT®
Tele	ephone: 0161 866 6540 Fax: 0161 866 6527 E-mail: acou	stics.uk@ico	pal.com
Not	tes (include details of any corrective action)		
¢i+,	e manager/supervisor signature		
One	- managor, supervisor signature	••	

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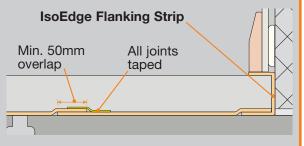
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Separating Floor – Concrete

Sketch shows CT1 type ceiling treatment

The use of this screed resilient layer system **<u>must</u>** 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 to be installed at all room perimeters. See manufacturer's guidance.
- See Section 4 for acceptable installation alternatives for 40mm proprietary screeds

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.



Screed laid on Thermal Economics IsoRubber Base HP3 resilient layer

**Resilient** layer

Structural floor

Screed

# 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)

65mm (min) cement:sand screed or 40mm (min) proprietary screed of nominal 80 kg/m<sup>2</sup> mass

3mm IsoRubber Base HP3 layer with IsoEdge flanking

Precast concrete plank of 150mm (min) thickness and 300 kg/m<sup>2</sup> (min) mass

See section 3 for suitable

per unit area

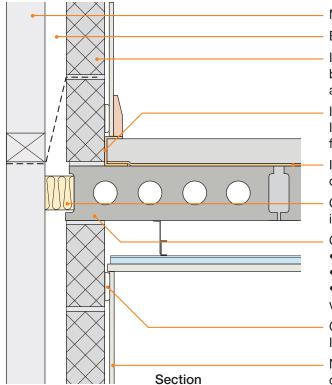
per unit area

ceiling treatment

strip

E-FC-12

### 1. External (flanking) wall junction



Masonry outer leaf

External wall cavity (min 50mm)

Inner leaf (min 100mm) aggregate concrete block (1350-1600 kg/m<sup>3</sup> or 1850-2300 kg/m<sup>3</sup>) or aircrete block (450-800 kg/m<sup>3</sup>)

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

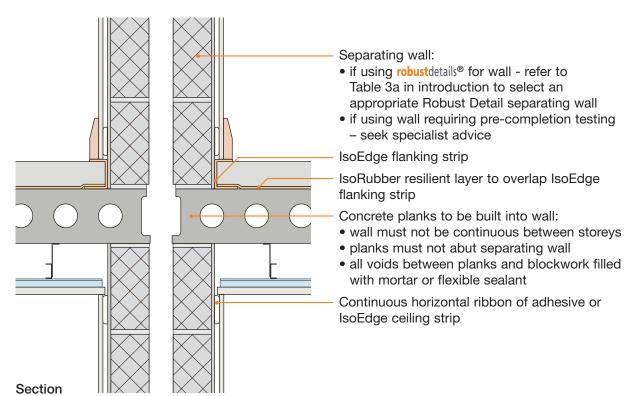
• all voids between planks and blockwork filled with mortar or flexible sealant

Continuous horizontal ribbon of adhesive or IsoEdge ceiling strip

Nominal 8 kg/m<sup>2</sup> gypsum-based board or 13mm plaster

Sketch shows CT1 type ceiling treatment

### 2. Separating wall junction



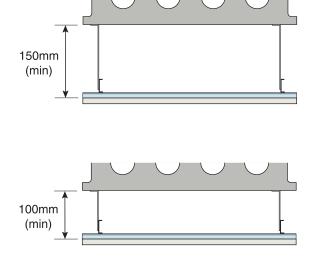
Sketch shows CT1 type ceiling treatment

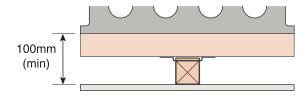
### 3. Ceiling treatments for E-FC-12

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 2m<sup>2</sup> 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/m<sup>2</sup> gypsum-based board

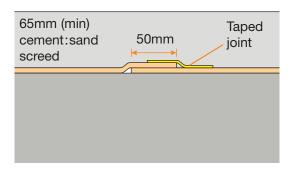
#### CT1 – Metal ceiling system - 100mm void Only to be used for 200mm (min) depth concrete planks

- any metal ceiling system providing 100mm (min) ceiling void
- one layer of nominal 8 kg/m<sup>2</sup> gypsum-based board

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

- 50 x 50mm softwood battens
- 50x50mm counterbattens
- Isosonic Hangers Type C
- one layer of nominal 8 kg/m<sup>2</sup> gypsum-based board

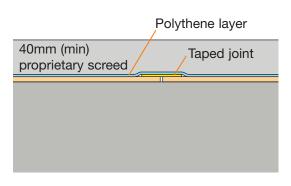
#### 4. Resilient layer installation for different screed types



#### 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

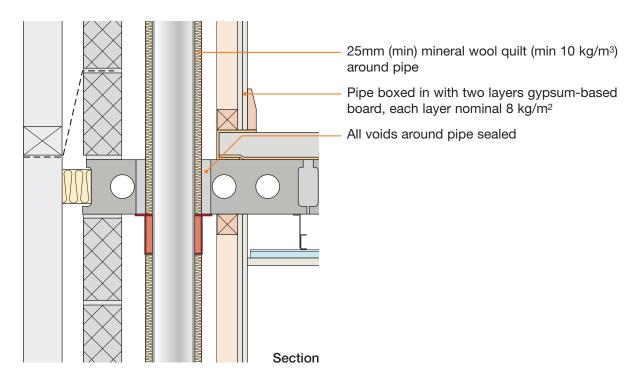
Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

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.

0	0	0

### 6. Services - Service pipes through separating floor



Sketch shows CT1 type ceiling treatment

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

Com	npany:			
Site:	:			
Plot:	:	Site manager/supervisor:		
Ref.	Item		Yes No (✔) (✔)	Inspected (initials & date)
1.	Has training been re	ceived from Thermal Economics?		(initials & date)
2.		e planks 150mm (min) thick : area 300 kg/m² (min)?		
3.	Are inner leaves to e block density?	xternal (flanking) walls of the correct		
4.	Are joints between p	recast concrete planks grouted and sealed?		
5.	Are precast concrete	planks built into the masonry walls?		
6.	Is the IsoEdge flanki	ng strip installed for all room perimeters?		
7.	Are the IsoRubber jow with tape?	ints overlapped by 50mm and sealed		
8.	Is the IsoRubber lay	er overlapping the IsoEdge flanking strip?		
9.	Are the skirting boar flanking strip?	ds isolated from the screed by the IsoEdge		
10.	Are all ceiling board sealant?	joints sealed with tape or caulked with		
11.		apped in quilt and boxed in with two layers ypsum-based board?		
12.	Is separating floor sa	atisfactorily complete?		
Tel	ephone: 01582 54425	assistance from Thermal Economics, manufacturer of <b>5 Fax: 01582 429305 E-mail: tech</b> any corrective action)		
Site	e manager/supervisor	signature		

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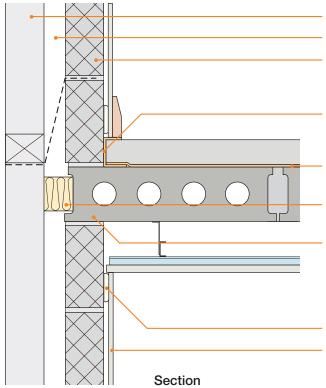
# E-FC-13

Precast concrete plank

Screed laid on InstaCoustic InstaLay 65 resilient layer ■

	- Screed	65mm (min) cement:sand screed	
	- Resilient layer	InstaLay 65 layer with InstaLay 65 edge strip	
	- Structural floor	Precast concrete plank of 150mm (min) thickness and 300 kg/m <sup>2</sup> (min) mass per unit area	
Sketch shows CT0 type ceiling treatment	- Ceiling	See section 3 for suitable ceiling treatment which is dependent on floor plank depth	
SYSTEM INSTALLATION	DO		
The use of this screed resilient layer	Butt planks tig	ghtly together	
system <b><u>must</u></b> incorporate the following:	Grout all joints between planks		
1) InstaLay 65 (resilient layer to be laid	Fill all voids between walls and floor		
over entire floor area with minimum	Ensure InstaLay 65 resilient layer is laid		
50mm overlaps)	over the entire floor surface and has overlapped joints of 50mm sealed with		
2) InstaLay 65 edge strip	tape. On no a	ccount should the screed	
3) All joints taped		tact with the floor slab.	
InstaLay 65 edge strip		ay 65 overlaps with	
Min. 50mm All joints overlap taped	should screed	dge strip. On no account I come into contact with perimeter walls	
		staLay 65 edge strip	
	no account sh	kirting and wall linings. On hould screed come into he wall lining and skirting	
■ InstaLay 65 edge strip to be installed at		nly the correct blocks are	
all room perimeters. See manufacturer's guidance.	used in the co (flanking) wall referred to in t	onstruction of external s, unless specifically the Handbook all blocks sumed to be solid (i.e. not	
Robust Details Limited can only accept registration of	hollow or cell	Υ.	
this floor once the builder agrees to receive training from		iling treatment is installed	
InstaCoustic on the installation of the screed and resilient layer. Please contact Robust Details Limited for further information.		e with the manufacturer's where applicable)	

### 1. External (flanking) wall junction



Sketch shows CT0 type ceiling treatment

2. Separating wall junction

Masonry outer leaf

External wall cavity (min 50mm)

Inner leaf (min 100mm) aggregate concrete block (1350 kg/m<sup>3</sup> to 1600 kg/m<sup>3</sup> or 1850 -2300 kg/m<sup>3</sup>) or aircrete block (450-800 kg/m<sup>3</sup>)

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

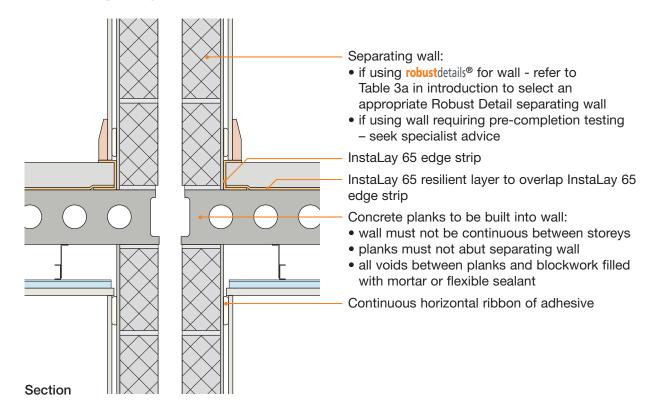
Concrete planks must be built into walls:

- 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

Continuous horizontal ribbon of adhesive

Nominal 8 kg/m<sup>2</sup> gypsum-based board or 13mm plaster



Sketch shows CT0 type ceiling treatment

## **robust**details<sup>®</sup>

### 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:

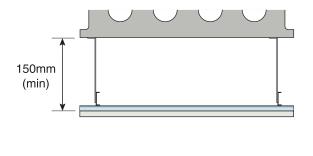
- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- resilient hangers are used.

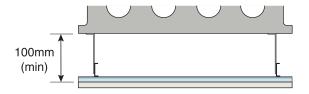
#### Downlighters and recessed lighting

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 2m<sup>2</sup> 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





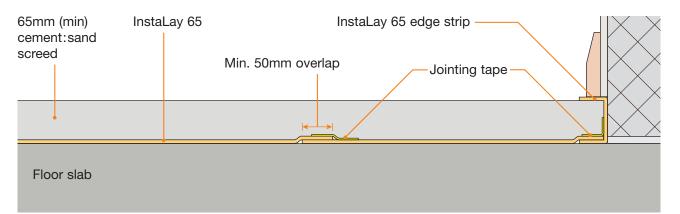
#### CT0 – Metal ceiling system - 150mm void To be used for 150mm (min) depth concrete planks

- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m<sup>2</sup> 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/m<sup>2</sup> gypsum-based board

### 4. Resilient layer installation



#### SCREED TYPE

#### 65mm (min) cement:sand screed

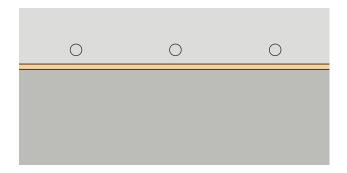
- InstaLay 65 resilient layer must have 50mm (min) overlapped joints and be sealed with jointing tape
- InstaLay 65 edge strip must be overlapped by InstaLay 65 resilient layer with joints sealed with jointing tape to isolate screed from perimeter walls and skirtings
- InstaLay 65 edge strip to be installed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

### 5. Underfloor heating systems within screeds

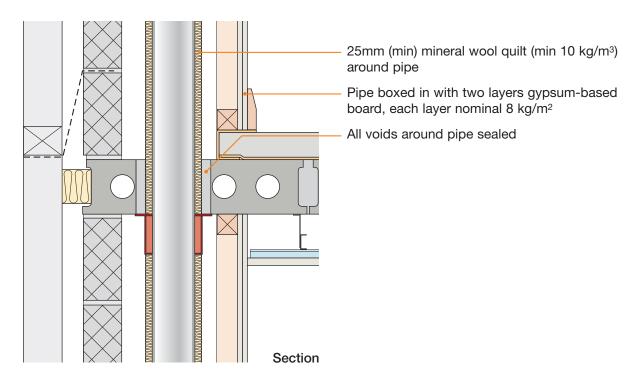
Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

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



Sketch shows CT0 type ceiling treatment

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

Corr	ipany:			
Site:				
Plot:		Site manager/supervisor:		
Ref.	Item		Yes No (✔) (✔)	Inspected (initials & date)
1.	Has training been re	ceived from InstaCoustics?		(initials & date)
2.	•	e planks 150mm (min) thick t area 300 kg/m² (min)?		
3.	Are inner leaves to e block density?	xternal (flanking) walls of the correct		
4.	Are joints between p	recast concrete planks grouted and sealed?		
5.	Are precast concrete	e planks built into the masonry walls?		
6.	Is the InstaLay 65 ed	dge strip installed for all room perimeters?		
7.	Are the InstaLay 65 with tape?	oints overlapped by 50mm and sealed		
8.	Is the InstaLay 65 lay	ver overlapping the InstaLay 65 edge strip?		
9.	Are the skirting boar InstaLay 65 edge str	ds isolated from the screed by the ip?		
10.	Are all ceiling board sealant?	joints sealed with tape or caulked with		
11.		apped in quilt and boxed in with two layers ypsum-based board?		
12.	Is separating floor sa	atisfactorily complete?		
Cor	ntact details for technical	assistance from InstaCoustics, manufacturer of Insta	aLay 65 resilient	t layer system:
Tel	ephone: 0118 973 95	60 Fax: 0118 973 9547 E-mail: sale	s@instacoust	tic.co.uk
No	<b>tes</b> (include details of	any corrective action)		
Site	e manager/supervisor	signature		
L				

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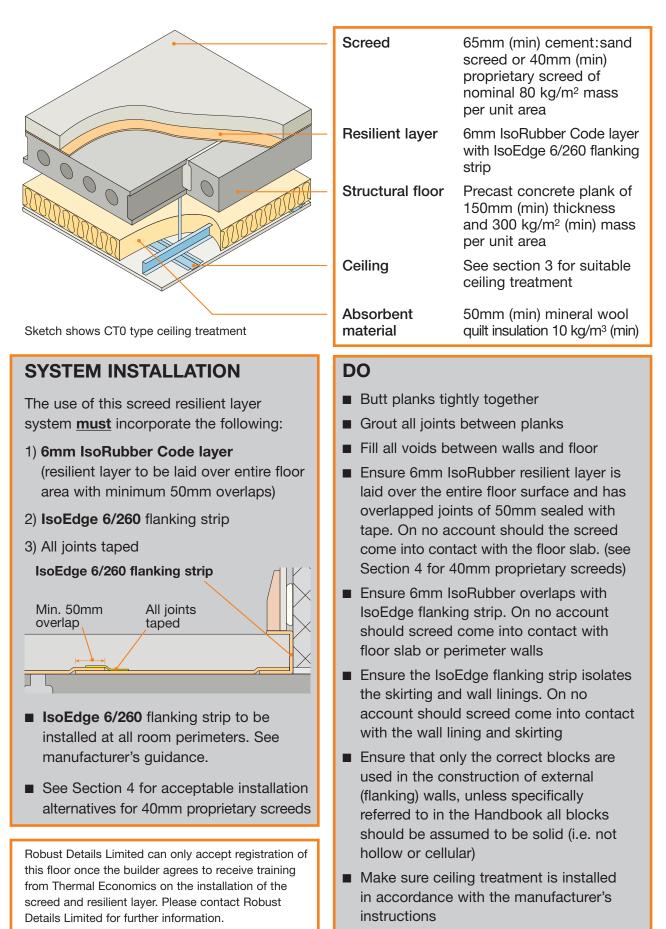
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# **Separating Floor – Concrete**

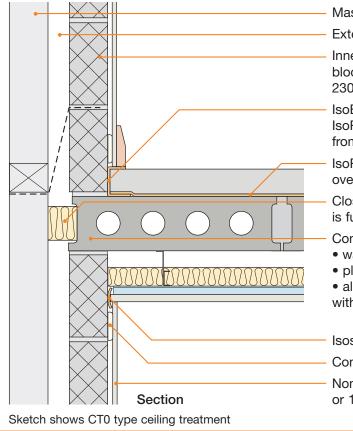
# E-FC-14

- Precast concrete plank
- Screed laid on Thermal Economics IsoRubber Code layer



E-FC-14

### 1. External (flanking) wall junction



Masonry outer leaf

External wall cavity (min 50mm)

Inner leaf (min 100mm) aggregate concrete block (1350 kg/m<sup>3</sup> to 1600 kg/m<sup>3</sup> or 1850 -2300 kg/m<sup>3</sup>) or aircrete block (450-800 kg/m<sup>3</sup>)

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

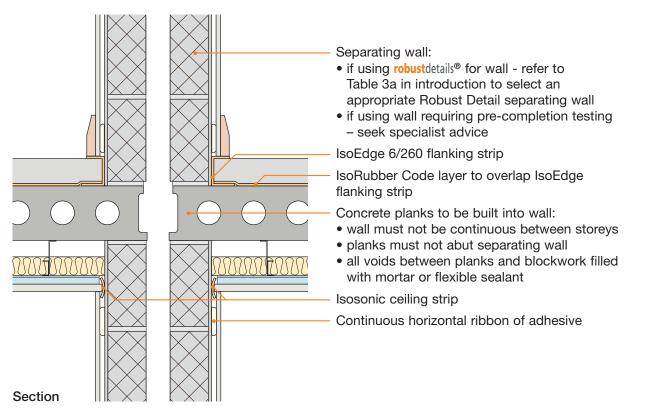
• all voids between planks and blockwork filled with mortar or flexible sealant

Isosonic ceiling strip

Continuous horizontal ribbon of adhesive

Nominal 8 kg/m<sup>2</sup> gypsum-based board or 13mm plaster

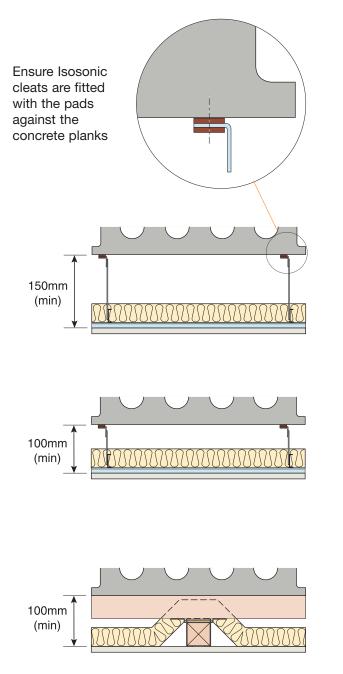
### 2. Separating wall junction



Sketch shows CT0 type ceiling treatment

## 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.



#### 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 2m<sup>2</sup> 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/m<sup>3</sup> (min)
- one layer 15mm (nominal 10 kg/m<sup>2</sup>) gypsumbased board

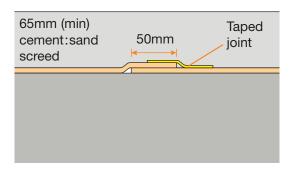
#### CT1 – Metal ceiling system - 100mm void Only to be used for 200mm (min) depth concrete planks

- any metal ceiling frame, suspended from Isosonic cleats
- 50mm (min) mineral wool quilt insulation 10 kg/m<sup>3</sup> (min)
- one layer 15mm (nominal 10 kg/m<sup>2</sup>) gypsumbased board

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

- 50 x 50mm softwood battens
- 50x50mm counterbattens
- Isosonic Hangers Type C
- 50mm (min) mineral wool quilt insulation 10 kg/m<sup>3</sup> (min)
- one layer 15mm (nominal 10 kg/m<sup>2</sup>) gypsumbased board

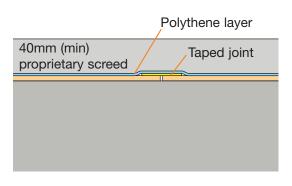
### 4. Resilient layer installation for different screed types



## 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

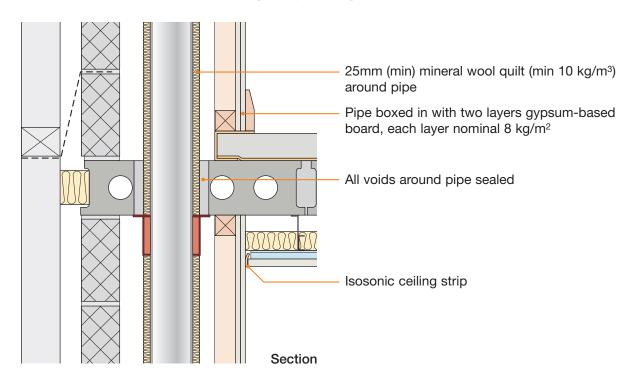
Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

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.

0	0
	0

## 6. Services - Service pipes through separating floor



Sketch shows CT0 type ceiling treatment

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

Plot:	Site manager/supervisor:			
Ref.	Item	Yes (✔)	-	Inspected (initials & date
1.	Has training been received from Thermal Economics?			
2.	Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m <sup>2</sup> (min)?			
3.	Are inner leaves to external (flanking) walls of the correct block density?			
4.	Are joints between precast concrete planks grouted and sealed?			
5.	Are precast concrete planks built into the masonry walls?			
6.	Is the IsoEdge 6/260 flanking strip installed for all room perimeters?			
7.	Are the IsoRubber Code layer joints overlapped by 50mm and sealed with tape?			
8.	Is the IsoRubber Code layer overlapping the IsoEdge 6/260 flanking strip?			
9.	Are the skirting boards isolated from the screed by the IsoEdge 6/260 flanking strip?			
10.	Are the Isosonic cleats installed with the pads against the precast planks?			
11.	Is Isosonic ceiling strip installed at ceiling perimeters?			
12.	Is 50mm (min) mineral wool quilt insulation 10 kg/m <sup>3</sup> (min) installed in the ceiling void?			
13.	Are all ceiling board joints sealed with tape or caulked with sealant?			
14.	Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m <sup>2</sup> gypsum-based board?			
15.	Is separating floor satisfactorily complete?			
Cor	ntact details for technical assistance from Thermal Economics, manufacturer of	of IsoRu	bber res	ilient layer system:
Tel	ephone: 01582 544255 Fax: 01582 429305 E-mail: tech	nical@	therma	I-economics.co.uk

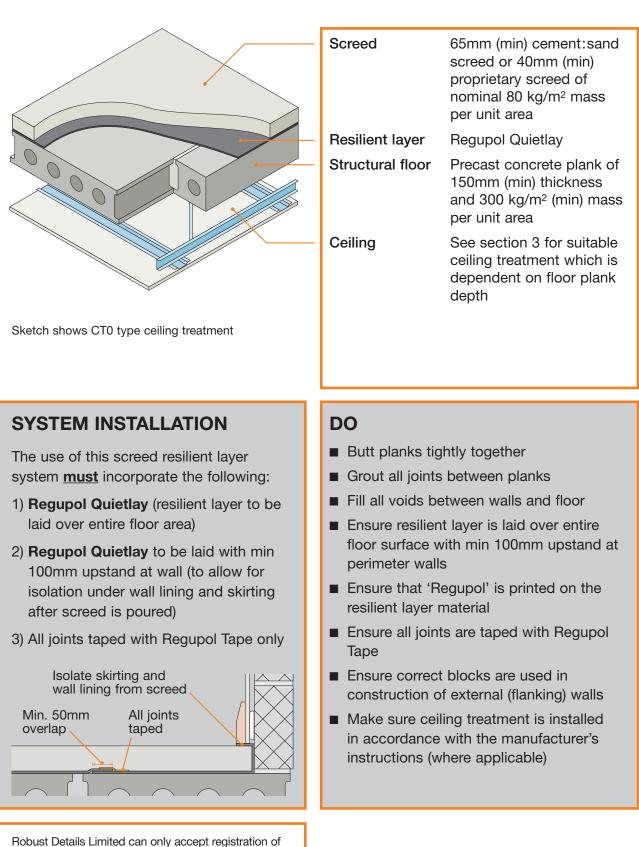
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## E-FC-15

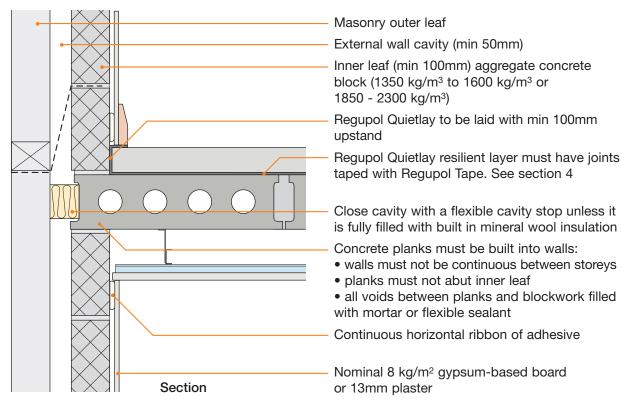
Precast concrete plank

## Screed laid on Regupol Quietlay resilient layer



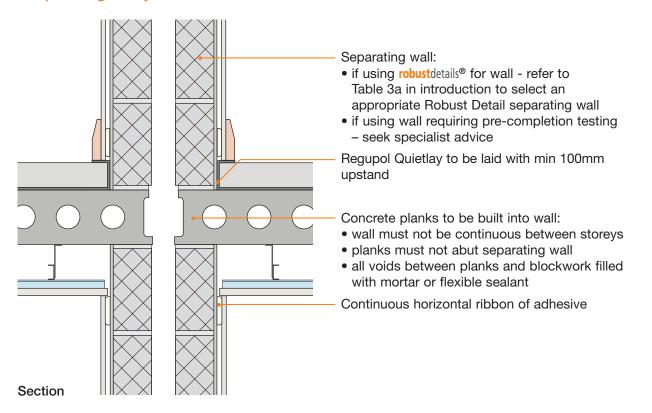
this floor once the builder agrees to receive training from CMS Danskin on the installation of the screed and resilient layer. Please contact Robust Details Limited for further information.

## 1. External (flanking) wall junction



Sketch shows CT0 type ceiling treatment

## 2. Separating wall junction



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:

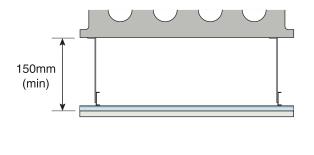
- 25mm (min.) mineral fibre quilt is placed in the ceiling void, and/or
- resilient hangers are used.

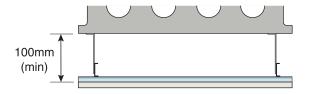
#### Downlighters and recessed lighting

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 2m<sup>2</sup> 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





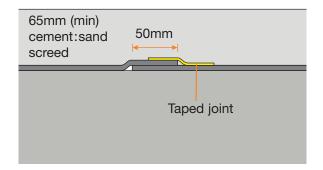
#### CT0 – Metal ceiling system - 150mm void To be used for 150mm (min) depth concrete planks

- any metal ceiling system providing 150mm (min) ceiling void
- one layer of nominal 8 kg/m<sup>2</sup> 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/m<sup>2</sup> gypsum-based board

### 4. Resilient layer installation for different screed types



#### SCREED TYPE

#### 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	Polythene layer
	Taped joint

#### SCREED TYPE

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

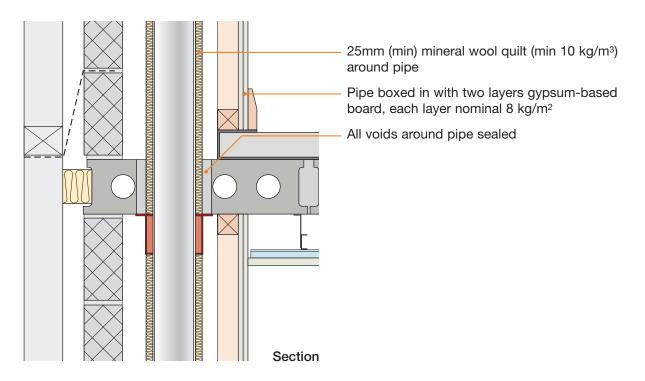
Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

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.

		0
0	0	0

## 6. Services - Service pipes through separating floor



Sketch shows CT0 type ceiling treatment

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

Com	ipany:				
Site:					
Plot:		Site manager/supervisor:			
Ref.	Item		Yes No (✔) (✔)	Inspected (initials & date)	
1.	Has training been re	ceived from CMS Danskin		(initialo di dato)	
2.		e planks 150mm (min) thick t area 300 kg/m² (min)?			
3.	Are inner leaves to e block density?	external (flanking) walls of the correct			
4.	Are joints between p	recast concrete planks grouted and sealed?			
5.	Are precast concrete	e planks built into the masonry walls?			
6.	Is the Regupol Quiet	tlay covering the whole floor slab?			
7.	Is the Regupol Quiet	tlay taken min 100mm up the wall?			
8.	Are all joints taped v	vith Regupol Tape?			
9.	Are the skirting boar screed by the Regu	ds and wall linings isolated from the ool Quietlay?			
10.	Are all ceiling board sealant?	joints sealed with tape or caulked with			
11.		apped in quilt and boxed in with two layers ypsum-based board?			
12.	Is separating floor sa	atisfactorily complete?			
	ntact details for technical ephone: 01925 57771	assistance from CMS Danskin, supplier of Regupol ( <b>1 Fax: 01925 577733 E-mail: info</b>	Quietlay resilient @cmsdanskin		
		any corrective action)			
Site	e manager/supervisor	signature			

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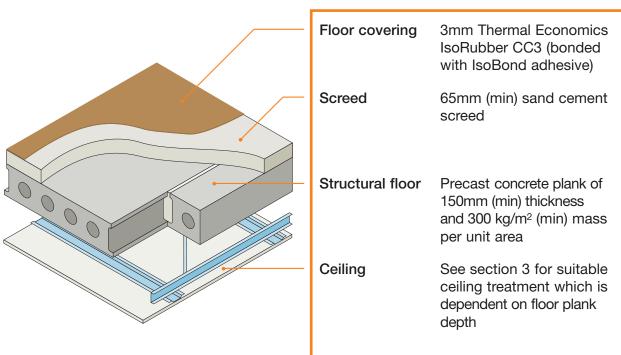
## **Separating Floor – Concrete**

## E-FC-16

3mm Thermal Economics IsoRubber CC3 ■

Precast concrete plank

Screed



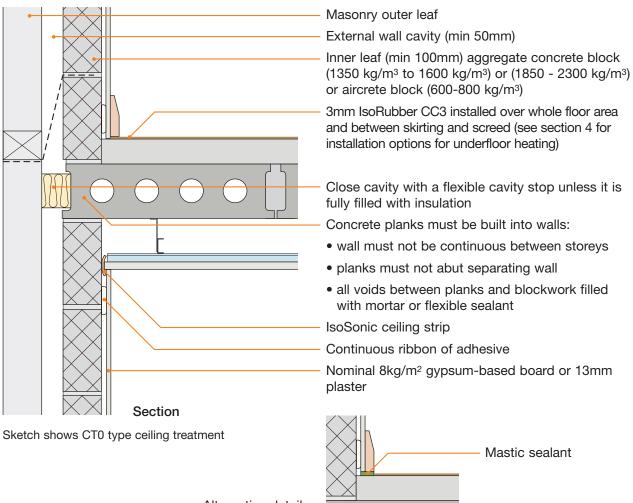
E-FC-16

## 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

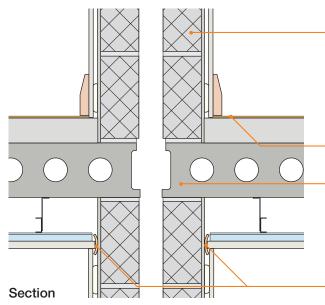


## 1. External (flanking) wall junction



Alternative detail

## 2. Separating wall junction



Sketch shows CT0 type ceiling treatment

Separating wall:

- if using robustdetails<sup>®</sup> 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:

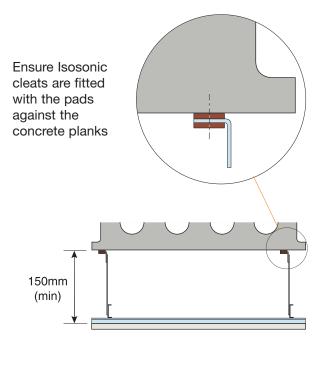
- wall must not be continuous between storeys
- planks must not abut separating wall
- all voids between planks and blockwork filled with mortar or flexible sealant
- IsoSonic ceiling strip

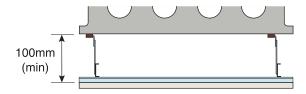
## 3. Ceiling treatments for E-FC-16

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 2m<sup>2</sup> 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 lsosonic cleats
- one layer of nominal 9.8 kg/m<sup>2</sup> 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/m<sup>2</sup> gypsum-based board

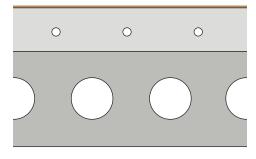
### 4. Underfloor heating systems within screeds

Underfloor heating systems may be installed within the screed.

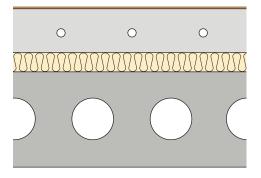
Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.

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

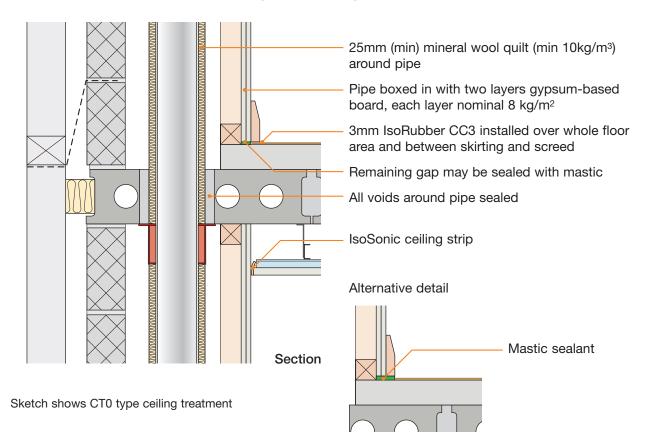
#### **OPTION A**



### **OPTION B**



## 5. Services - Service pipes through separating floor



blank page See overleaf for checklist

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

Site:       Plot:       Site manager/supervisor:         Ref.       Item       Yes No (r) (r)       Inspected (initials & date)         1.       Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?       Image: Site manager/supervisor       Image: Site manager/supervisor         2.       Are precast concrete planks built into the masonry walls?       Image: Site manager/supervisor signature       Image: Site manager/supervisor signature         3.       Are precast concrete planks built into the masonry walls?       Image: Site manager/supervisor signature       Image: Site manager/supervisor signature       Image: Site manager/supervisor signature         4.       Is IsoBond adhesive being used?       Image: Site manager/supervisor signature       Image: Site manager/supervisor signature       Image: Site manager/supervisor signature         5.       Is the IsoRhubber CC3 fully covering and fully bonded to the screed?       Image: Site manager/supervisor signature       Image: Site manager/supervisor signature         6.       Are the skirting boards isolated from the screed by the resilient floor cover or flexible sealant?       Image: Site manager/supervisor signature       Image: Site manager/supervisor signature         9.       Is Isosonic ceiling strip board joints sealed with tape or caulked with sealant?       Image: Site manager/supervisor signature       Image: Site manager/supervisor signature         11.       Are service pipes wrapped in quilt an	Corr	ipany:				
Ref. Item       Yes No (r) (r)       Inspected (initials & date)         1. Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m <sup>2</sup> (min)?       Inspected (r) (r)         2. Are joints between precast concrete planks grouted and sealed?       Image: Concrete planks grouted and sealed?         3. Are precast concrete planks built into the masonry walls?       Image: Concrete planks built into the masonry walls?         4. Is IsoBond adhesive being used?       Image: Concrete planks built into the screed by the resilient floor cover or flexible sealant?         7. Is the correct celling type being used for precast concrete plank thickness?       Image: Concrete planks?         8. Are the Isosonic cleats installed with the pads against the precast planks?       Image: Concrete planks?         9. Is Isosonic celling strip installed at all celling perimeters?       Image: Concrete plank kg/m <sup>2</sup> gypsum-based board?         11. Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m <sup>2</sup> gypsum-based board?       Image: 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	Site:					
1. Are precast concrete planks 150mm (min) thick and of mass per unit area 300 kg/m² (min)?       Image: concrete planks grouted and sealed?         2. Are joints between precast concrete planks grouted and sealed?       Image: concrete planks built into the masonry walls?         3. Are precast concrete planks built into the masonry walls?       Image: concrete planks built into the masonry walls?         4. Is IsoBond adhesive being used?       Image: concrete planks built into the masonry walls?         5. Is the IsoRubber CC3 fully covering and fully bonded to the screed?       Image: concrete planks built into the screed by the resilient floor cover or flexible sealant?         7. Is the correct ceiling type being used for precast concrete plank thickness?       Image: concrete planks?         8. Are the Isosonic cleats installed with the pads against the precast planks?       Image: concrete?         9. Is Isosonic ceiling strip installed at all ceiling perimeters?       Image: concrete?         10. Are all ceiling board joints sealed with tape or caulked with sealant?       Image: concrete?         11. Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m² gypsum-based board?       Image: conomics.co.uk         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	Plot:	:	Site manager/supervisor:			
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floor cover or flexible sealant?         7. Is the correct ceiling type being used for precast concrete plank thickness?         8. Are the Isosonic cleats installed with the pads against the precast planks?         9. Is Isosonic ceiling strip installed at all ceiling perimeters?         10. Are all ceiling board joints sealed with tape or caulked with sealant?         11. Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m² gypsum-based board?         12. Is separating floor satisfactorily complete?         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	5.		3 fully covering and fully bonde	d to the		
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<ul> <li>10. Are all ceiling board joints sealed with tape or caulked with sealant?</li> <li>11. Are service pipes wrapped in quilt and boxed in with two layers of nominal 8 kg/m<sup>2</sup> gypsum-based board?</li> <li>12. Is separating floor satisfactorily complete?</li> <li>Contact details for technical assistance from Thermal Economics, manufacturer of IsoRubber CC3:</li> <li>Telephone: 01582 544255 Fax: 01582 429305 E-mail: technical@thermal-economics.co.uk</li> <li>Notes (include details of any corrective action)</li> </ul>	8.		ats installed with the pads agair	ist the		
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Telephone: 01582 544255       Fax: 01582 429305       E-mail: technical@thermal-economics.co.uk         Notes (include details of any corrective action)	12.	Is separating floor sa	atisfactorily complete?	[		
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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, kxmm in MN/m with a cavity width of X mm and *n* ties/m<sup>2</sup> is  $n.k_x$ mm < 4.8 MN/m<sup>3</sup>.

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<sub>X</sub>mm in MN/m with a cavity width of X mm and n ties/m<sup>2</sup> is n.kxmm<113 MN/m<sup>3</sup>.

## **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).

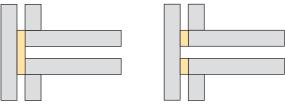
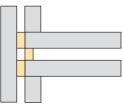


Diagram a

Diagram b

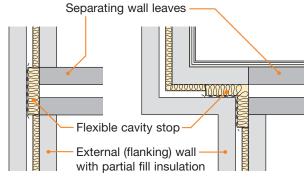


#### Diagram c

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.



#### Diagram d

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

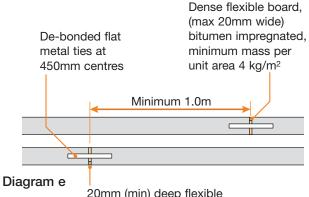
## **Cavity trays**

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:

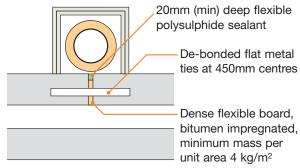


20mm (min) deep flexible polysulphide sealant

Where possible, movement joints should be located in bathrooms or other minor rooms or behind cupboards, etc.

#### Separating walls with wet plaster finish

Movement joints are not acceptable in **robust**details<sup>®</sup> separating walls with a wet plaster finish unless they are strategically placed behind internal wall junctions or service pipe casings.



#### Diagram f

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

## 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.

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

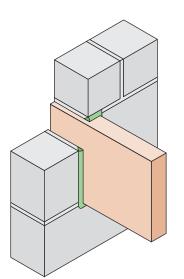
Metal web joists may be built into the separating wall following the guidance for solid timber joists above. Metal web joists must have solid ends.

#### Timber I-Joists

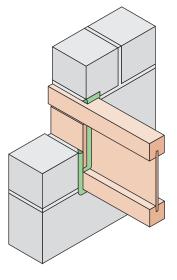
Timber I-joists may be built into the separating wall, provided that:

- 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



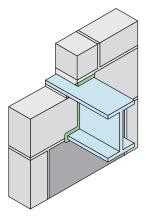
Alternatively, proprietary joist caps/ends designed to satisfy the air leakage requirements of Approved Document L1 may be used. They should be installed in accordance with the manufacturer's instructions.



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.

#### 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.



Separating walls should not be constructed off steel beams.

## Structural steelwork in masonry separating walls

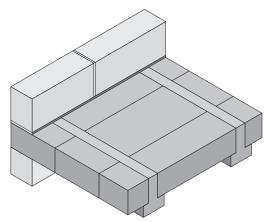
Steel columns built into masonry separating walls are not permitted.

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.



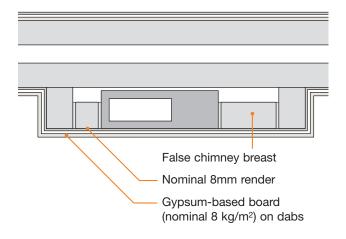
#### Coursing in blockwork separating walls

For the purposes of adjusting coursing it is permissible to use smaller units of **robust**details<sup>®</sup> separating wall material (e.g. brick sized), provided the density of the smaller units is at least the same as the separating wall material.

#### 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 **robust**details<sup>®</sup> masonry separating walls with gypsum-based board on dabs finish, may use the following alternative detail:



#### 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.

## Spandrel panels

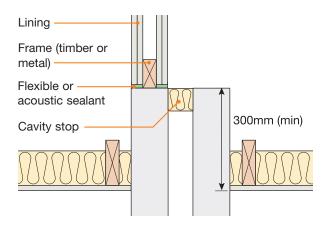
Where stated in the Robust Detail spandrel panels are an acceptable alternative to building the cavity separating wall in the roof space (without room-in-roof).

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/m<sup>2</sup>. Alternatively, framing can be formed from lightweight steel instead of timber.



Two panels may be adopted provided a miniumum 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

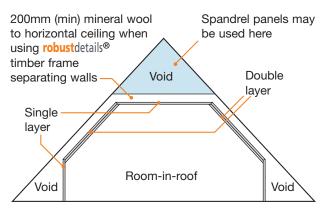
Where possible, services should not be built into the separating wall.

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 gypsumbased 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.



Section through room-in-roof

## 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/m<sup>2</sup>): 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.

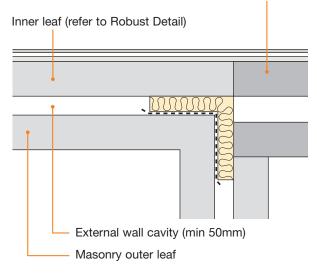
Thermal laminate boards may be used as the wall finish to masonry walls, provided the nominal mass per unit area indicated in the Robust Detail is maintained - seek advice from the manufacturer.

An acceptable alternative to caulking or sealing the joint between the wall and the ceiling is to use gypsum coving.

## 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.

Separating wall leaf (refer to Robust Detail)

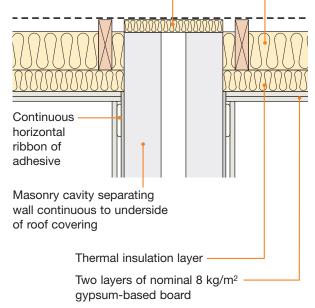


## Roof junctions – thermal insulation

Additional layers of thermal insulation may be added as follows:

100mm (min) mineral wool insulation minimum density 10 kg/m<sup>3</sup> or 60mm (min) foil faced PUR or PIR insulation, minimum density 30 kg/m<sup>3</sup>

Junction between separating wall and roof filled with flexible closer



# Building Regulations Part A (2004) – disproportionate collapse

#### 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/m<sup>2</sup> (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/m<sup>2</sup> (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/m<sup>2</sup> (including the finish) OR at least that of the approved flanking wall inner leaf, if this is less.

- 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**

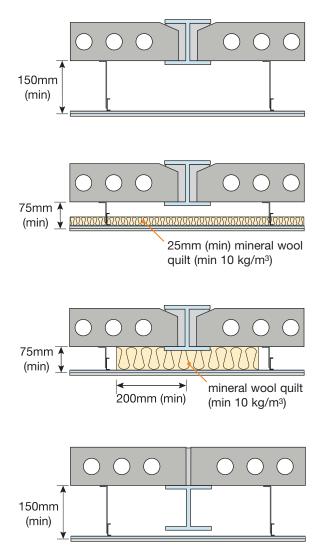
The screed thickness stated is the minimum thickness at any point and a greater thickness should be specified to take account of deviations in the finished levels of the surfaces of bases and any reinforcement provided.

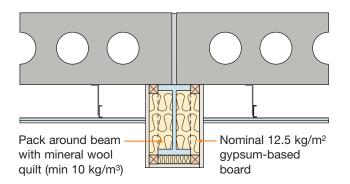
Cement:sand screed should be at least 50mm to comply with BS 8204. Concrete screed is acceptable.

# Precast concrete plank separating floors with steel beams

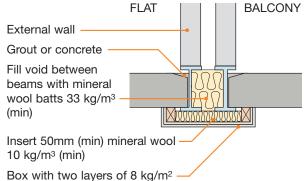
In some situations precast concrete planks may require intermediate support by steel beams supported on masonry.

- 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





An alternative detail where two steel beams are required to support the external cavity wall is as follows:



gypsum-based board for each layer

Separating walls should not be constructed off steel beams.

## Services in separating floors

#### Downlighters or recessed lighting

Where possible, downlighters or recessed lighting should not be built into the separating floor. If they must be built in, they should be kept to a minimum and the guidance included in the Robust Detail followed. For timber separating floors, see Appendix F also.

Particular attention should also be paid to Building Regulation Part B – Fire Safety.

#### Other services

Electrical and plumbing services may be installed in the separating floor. All penetrations through the ceiling lining, floor decking and flooring board should be cut carefully. The gap around the service should be carefully sealed with flexible sealant.

Where services are installed within a floating floor treatment, the manufacturer's instructions should be followed. It is acceptable to leave a gap of up to 50mm in the batten to allow services to cross at right angles.

Ducts for extract ventilation, etc. may run within the separating floor, provided the acoustic integrity is maintained. 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 ceiling 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 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 **robust**details<sup>®</sup> 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 robust details® 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

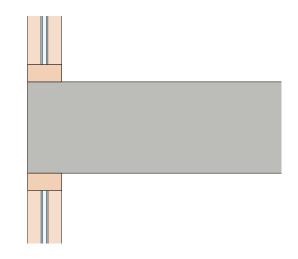
Where screeds are separated from the core floor by resilient layers the screed must be fully isolated from the floor slabs, perimeter walls and skirtings and must not come into direct contact with these areas. The resilient layer(s) should completely cover the core floor surface and be wrapped round 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 **robust**details<sup>®</sup> 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 robust details® 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.



## **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/m<sup>2</sup> 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<sup>®</sup> 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.