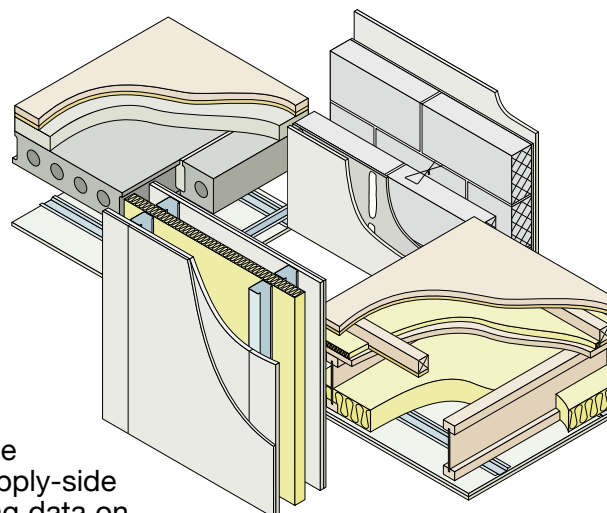


February 2025 Update Pack



Dear Colleague,

Thank you for downloading this February 2025 update.

As robustdetails® are implemented, designers need to consider the wider context of other interrelated Building Regulations and supply-side test evidence. We acknowledge feedback and review monitoring data on options that are not deployed in sufficient quantities to give reliable performance monitoring data. Floating floor treatments over timber or steel joists using a generic gypsum board (previous options within FFT1) and Ceiling Treatments beneath these floors using twin layers of 10mm plasterboard (CT3) have been removed to consolidate the options to those more widely supported and deployed in the industry in this update. Proprietary floating floor treatments remain available for timber and steel joisted floors.

A minor amendment removes the restriction preventing the use of Celcon Vertical Wall Panels (E-WM-31) being used in Flats under the scheme standards, although it is important to note that any floors used in combination with these walls would need to be subject to pre-completion testing.

The specific flanking condition in Appendix A2 for the Smartroof Room-in-Roof panel system has been amended to reflect additional testing undertaken with spandrel panels without a gypsum board overlap onto masonry separating walls beneath.

Please update your July 2024, 4th Edition Handbook as follows:

1. Remove and replace **page 5/6** of the Introduction.
2. Remove and replace **page 1/2** of E-WM-31.
3. Remove and replace **page 3/4** of E-WT-1.
4. Remove and replace **page 3/4** of E-WT-2.
5. Remove and replace **page 3/4** of E-WS-4.
6. Remove **all pages** of E-FT-1 and replace with new **pages 1-8**.
7. Remove **all pages** of E-FT-3 and replace with new **pages 1-10**.
8. Remove **all pages** of E-FS-2 and replace with new **pages 1-6**.
9. Remove and replace **page 3/4** of Appendix A1.
10. Remove and replace **page 3/4** and **11/12** of Appendix A2.
11. Remove and replace **both pages** of Appendix C.

Yours sincerely

John Thompson

Chief Executive,
Robust Details Limited



Changes to the fourth edition following February 2025 update

Section Page Amendment

Introduction

Table 3a 6 E-WM-31 included in compatibility table with concrete floors subject to testing of floors.

Separating Wall – Masonry

E-WM-31

Bullet points 1 Restriction to attached houses only removed.

Separating Wall – Timber

E-WT-1

4. Separating Floor Junction 3 Floating floor depicted at separating floor junction amended to accord with FFT2 (FFT1 removed).

E-WT-2

4. Separating Floor Junction 3 Floating floor depicted at separating floor junction amended to accord with FFT2 (FFT1 removed).

Separating Wall – Steel Frame

E-WS-4

3. Separating Floor Junction 3 Floating floor depicted at separating floor junction amended to show proprietary treatments only.

Separating Floor – Timber

E-FT-1

All All FFT1 using Gypsum Plank and CT3 using 2 layers of 10mm gypsum board removed.

E-FT-3

All All FFT1 using Gypsum Plank and CT3 using 2 layers of 10mm gypsum board removed.

Separating Floor – Metal Joists

E-FS-2

All All FFT1 using Gypsum Plank and CT3 using 2 layers of 10mm gypsum board removed.

Section Page Amendment

Appendix A1

Internal floor joists/floor beams and masonry separating walls. 3 Simplified guidance for sealing of joist bearings in separating walls.

Appendix A2

SmartRoof Room in Roof Panel System 3 Need for 100mm overlap of board finishes onto separating wall removed.

Concrete Separating Floors flanked by Private Stairs 12 Notes prohibiting the soffit of stair passing over a “habitable room” replaced with “outside of an enclosure” for clarity. No change to the standard.

Appendix C

All 1-2 Performance requirement described under Section C.5 in place of description within E-FT-1 and E-FT-3.

Introduction

List of Robust Details

Table 2 – Separating floors

E-FC-1	precast concrete plank with directly applied screed and floating floor treatment
E-FC-2	in-situ concrete slab and floating floor treatment
E-FC-3	Suspended from further registrations
E-FC-4	precast concrete plank and Thermal Economics IsoRubber Base system and floating screed
E-FC-5	precast concrete plank and Cellecta Yelo ^{fon} 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 Base system and floating screed
E-FC-15	precast concrete plank and Regupol Quietlay layer and floating screed
E-FC-16	precast concrete plank with directly applied screed and Thermal Economics IsoRubber CC3 bonded resilient floor covering
E-FC-17	precast concrete plank and Cellecta YELO ^{fon} ® HD10+ system and floating screed and Cellecta ULTRA ceiling treatment
E-FC-18	in-situ concrete slab with floating screed or bonded resilient floor covering
E-FC-19	precast concrete plank and Cellecta RUBBER ^{fon} Impact 6 system and floating screed
E-FT-1	timber I-joists and floating floor treatment
E-FT-2	Suspended from further registrations
E-FT-3	MiTek Posi-Joist, WOLF easi-joist, ITW Gang-Nail Ecojoist or ITW Alpine SpaceJoist metal web timber joist and floating floor treatment
E-FT-4	Suspended from further registrations
E-FT-5	Cellecta ScreedBoard® 28 system on timber I-joists
E-FT-6	Cellecta ScreedBoard® 28 system on metal web joists
E-FT-7	Suspended from further registrations
E-FT-8	Suspended from further registrations
E-FS-1	steel deck and in-situ concrete and floating floor treatment
E-FS-2	UltraBEAM metal joists and floating floor treatment
E-FS-3	Cellecta ScreedBoard® 28 system on metal joists

Introduction

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

Separating walls		Separating floors					
		E-FC-1	E-FC-15				
		E-FC-11	E-FC-16				
		E-FC-12	E-FC-17				E-FC-8
		E-FC-13	E-FC-19			E-FC-6	E-FC-9
		E-FC-14		E-FC-4	E-FC-5	E-FC-7	E-FC-10
E-WM-1	E-WM-16	✓		✓	✓	✓	✓
E-WM-3	E-WM-18						
E-WM-2	E-WM-22						
E-WM-4	E-WM-26						
E-WM-5	E-WM-27	✓		✓	✓	F	✓
E-WM-11	E-WM-28						
E-WM-20	E-WM-32						
E-WM-21	E-WM-33						
E-WM-6	E-WM-23						
E-WM-10	E-WM-24						
E-WM-13	E-WM-30	F		✓	✓ see note 1	F	✓
E-WM-35							
E-WM-12	E-WM-34	F		✓	F	F	F
E-WM-17		✓ see note 2		✓	✓ see note 2	F	✓ see note 2
E-WM-25	E-WM-29						
E-WM-31		F		F	F	F	F

Key

F Only the separating floor requires pre-completion sound testing.

1 Where this combination is selected, 200mm (min) thick precast concrete planks and ceiling treatment CT5 must be used.

2 This combination can only be selected where the separating wall construction does not include Plasmor Aglite Ultima blocks (1050 kg/m³).

Combining robustdetails® loadbearing masonry walls and floors with robustdetails® lightweight framed separating walls

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

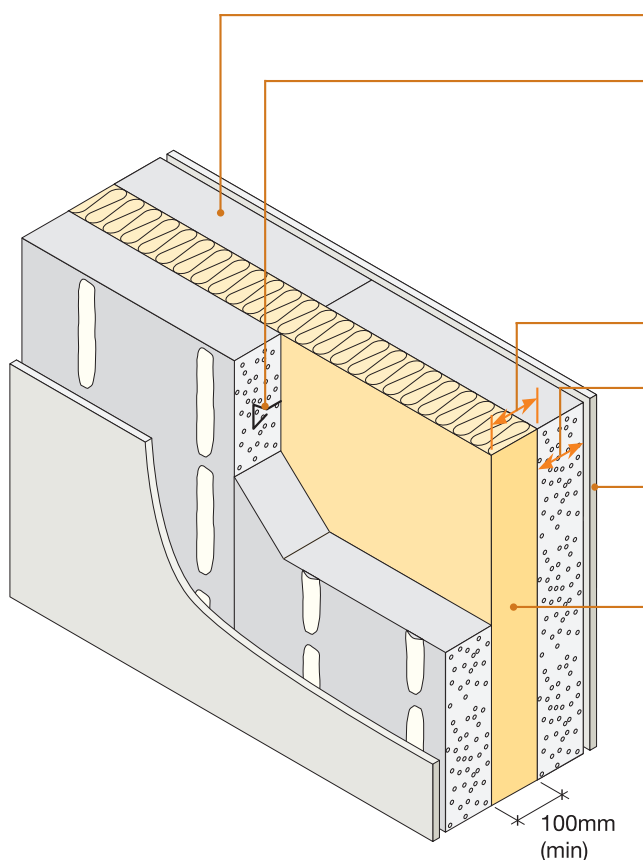
The lightweight separating walls built directly off the uppermost concrete separating floors may be registered as Robust Details provided:

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

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

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

H+H - Celcon Vertical Wall Panels - thin joint ■
 Gypsum-based board (nominal 8 kg/m²) on dabs ■
 Used with 'RoofSpace I-House System' ■

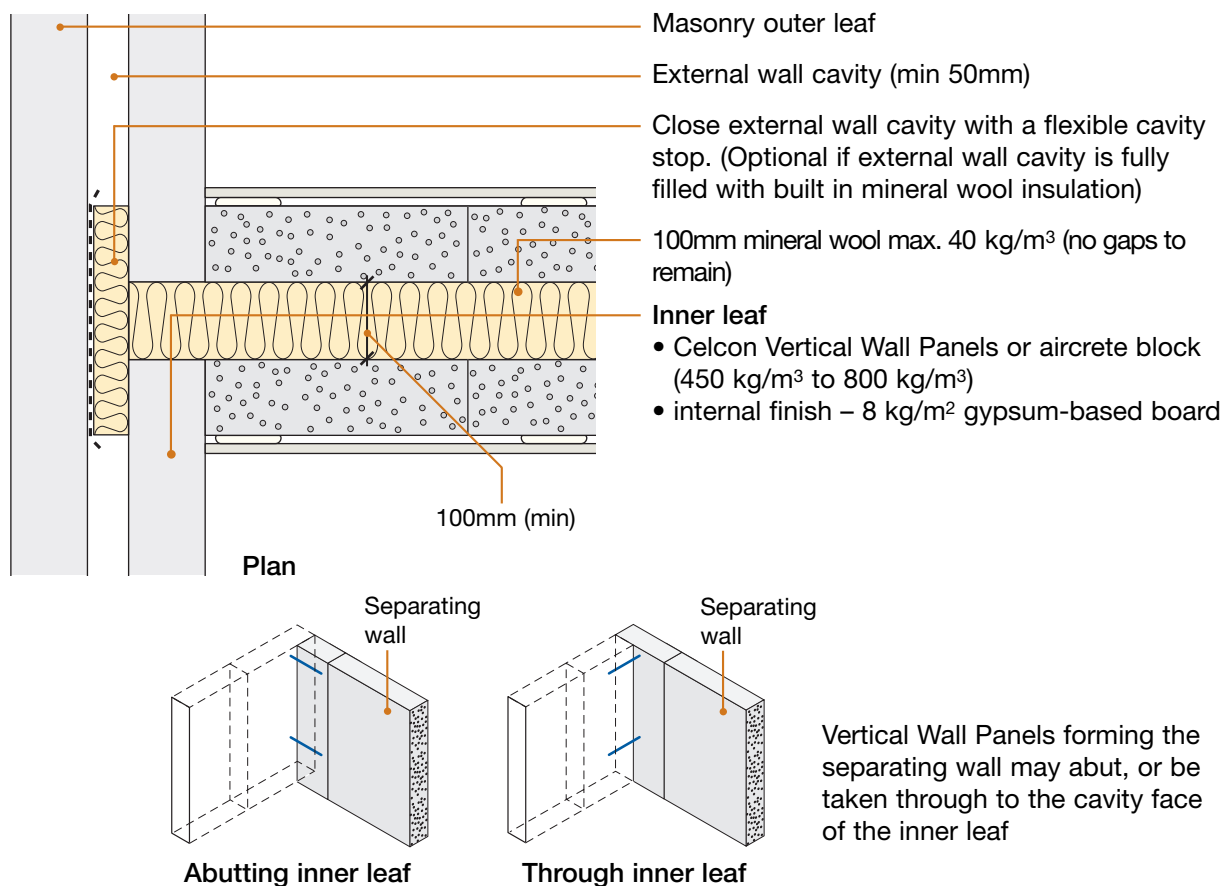


Panel density	575 kg/m ³
Wall ties	Wall ties must be Vista VE4, Ancon Building Products Staifix HRT4 or Clan PWT4 installed at no more than 3 ties per storey height (see section 3)
Cavity width	100mm (min)
Panel thickness	100mm (min), each leaf
Wall finish	Gypsum-based board (nominal 8 kg/m ²) mounted on dabs
Insulation	100mm mineral wool maximum density 40 kg/m ³
External (flanking) wall	Celcon Vertical Wall Panels or aircrete (450-800 kg/m ³) 50mm (min) cavity – clear, fully filled or partially filled with insulation – and masonry outer leaf

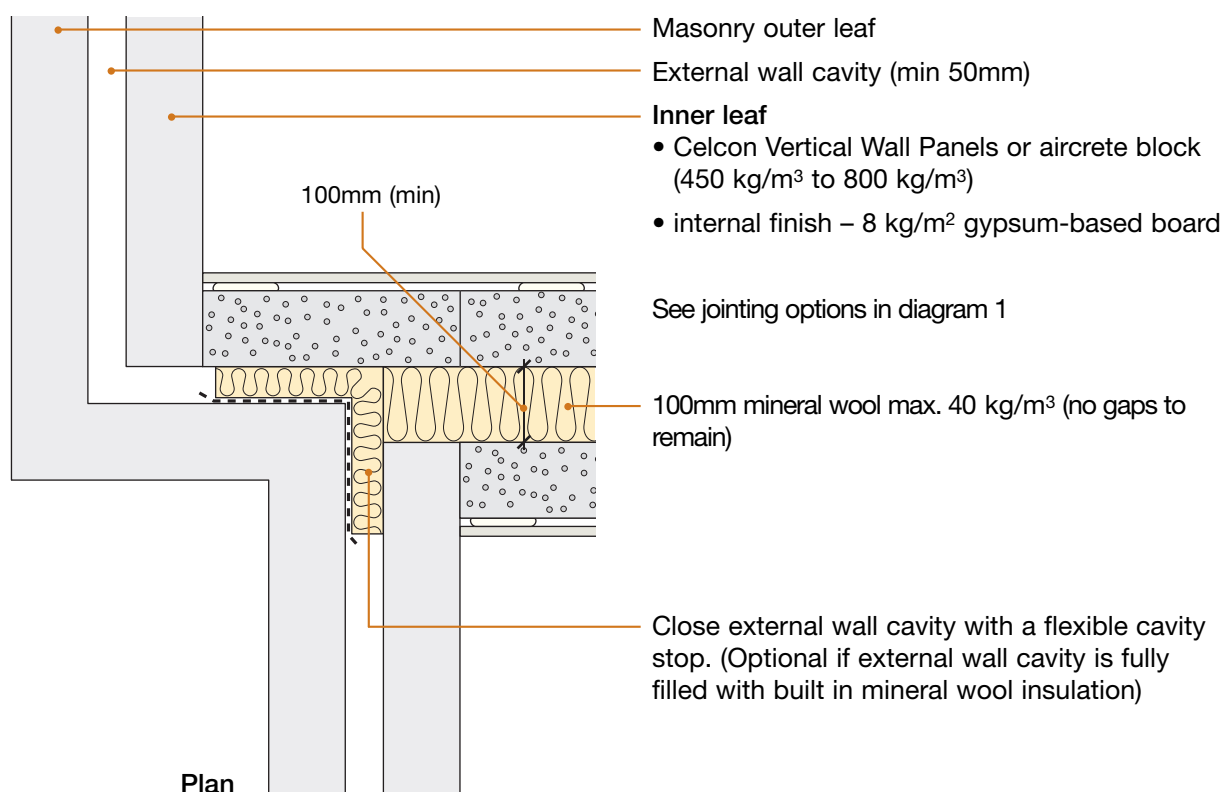
DO

- Keep cavity, insulation and wall ties free from debris
- Fully fill all joints
- Make sure there is no connection between the two leaves except for wall ties, insulation and foundation
- Ensure all insulation sections are tightly butted together and half cuts are made with a clean sharp knife and are installed in accordance with the manufacturer's instructions
- Keep any chases for services to a minimum and fill well with mortar. Stagger chases on each side of the wall to avoid them being back to back
- Refer to Appendix A

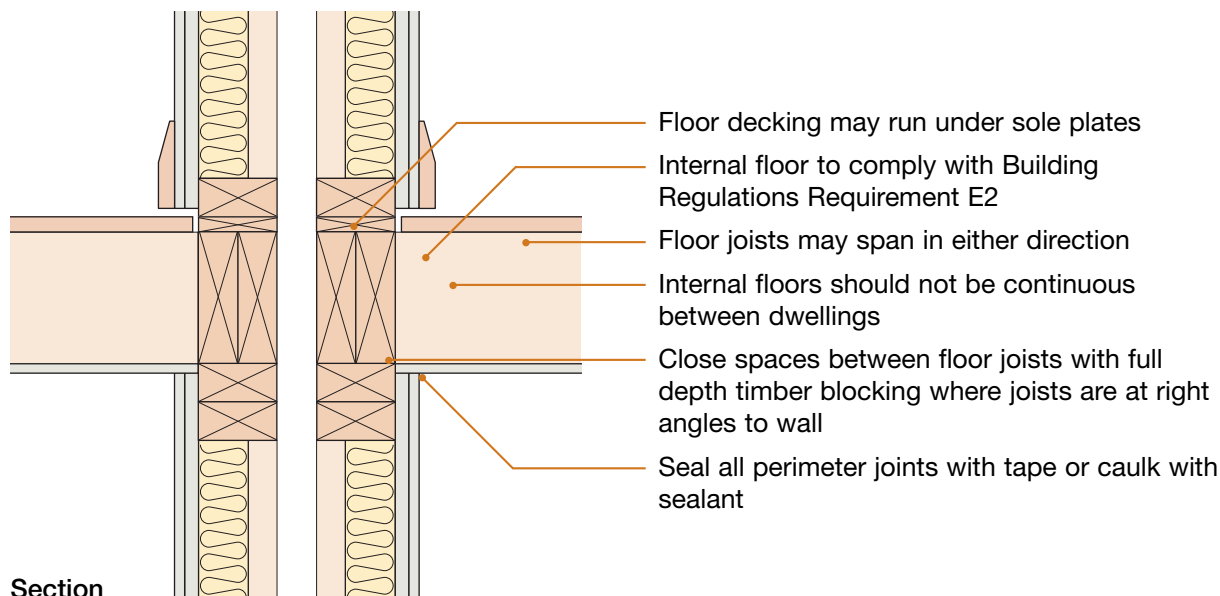
1. External (flanking) wall junction



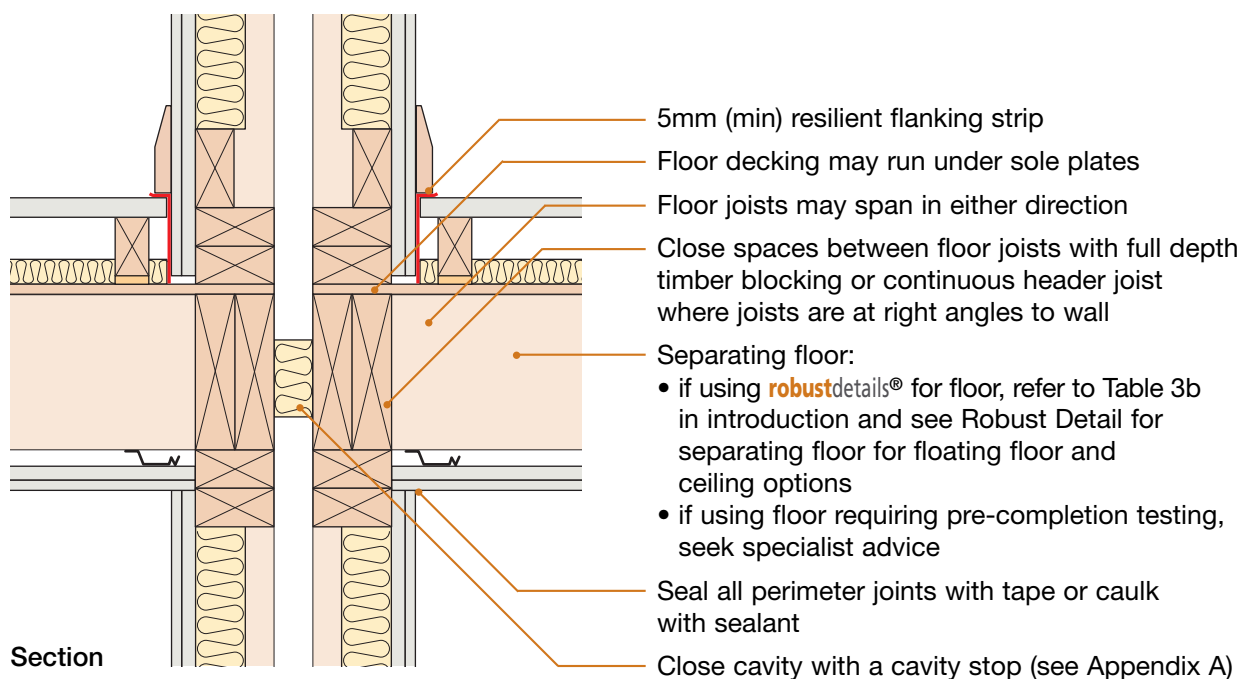
2. Staggered external (flanking) wall junction



3. Internal floor junction

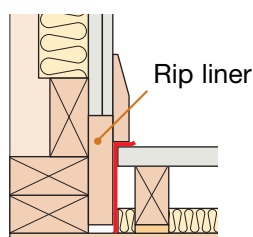


4. Separating floor junction

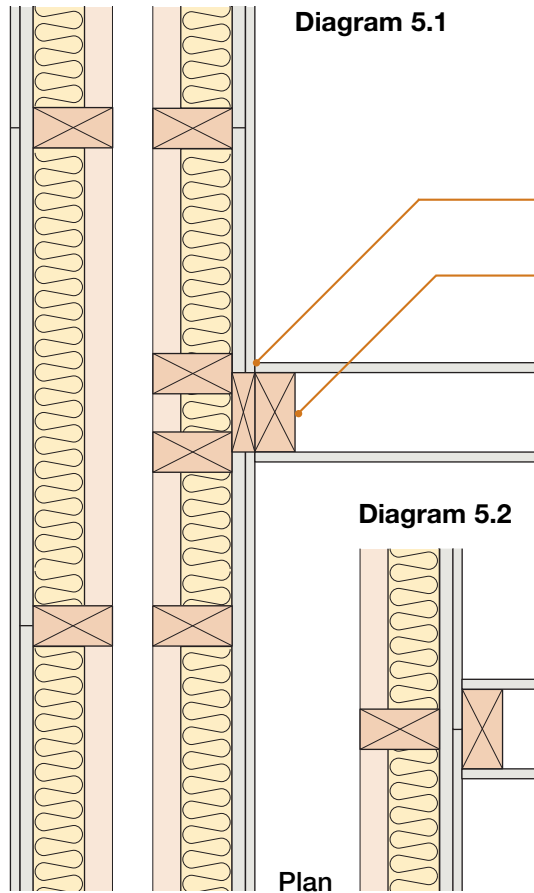


Sketch shows E-FT-1 type separating floor

Alternative detail



5. Internal wall junction



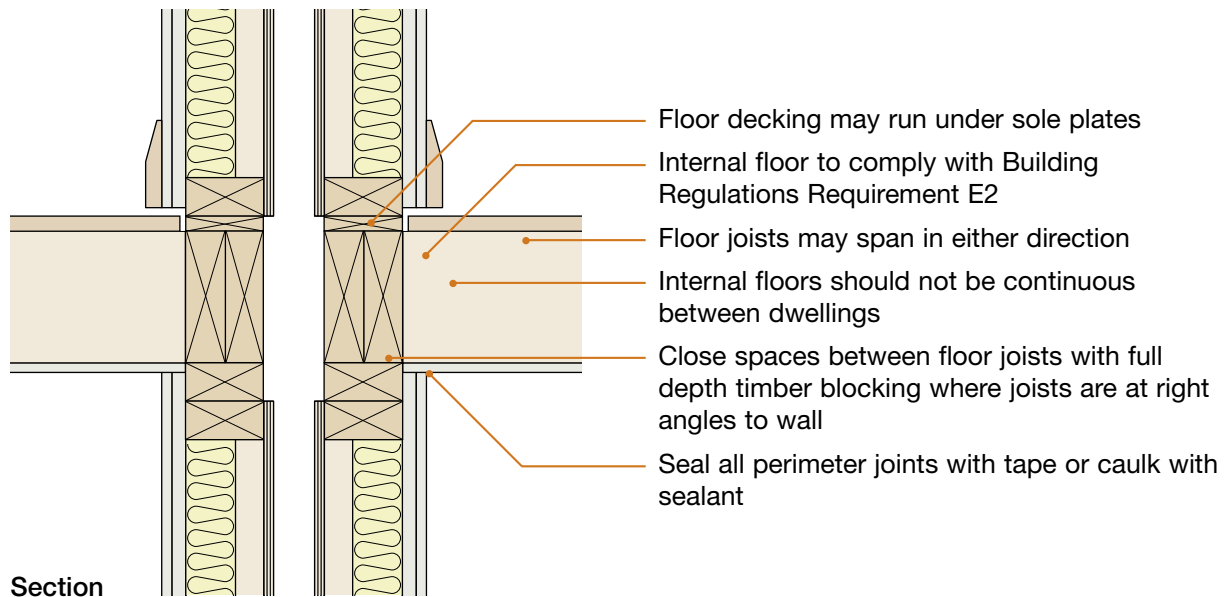
Seal all perimeter joints with tape or caulk with sealant

Where required internal wall to comply with Building Regulations Requirement E2

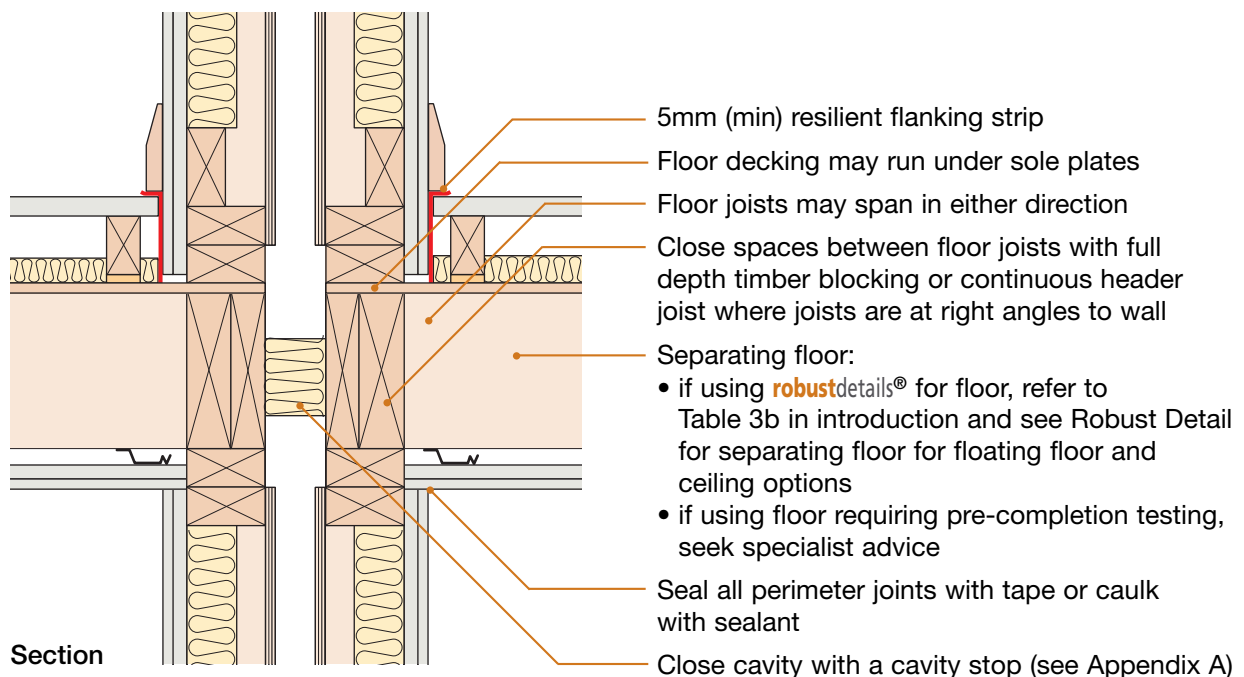
Diagram 5.1 shows junction detail where the internal wall is fixed through the separating wall lining; other junction details are acceptable provided all joints are sealed with tape or caulked with sealant

Diagram 5.2 shows junction where the separating wall lining is continuous

3. Internal floor junction

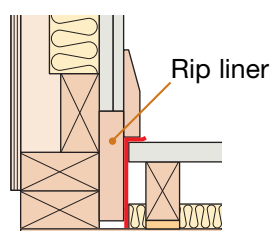


4. Separating floor junction

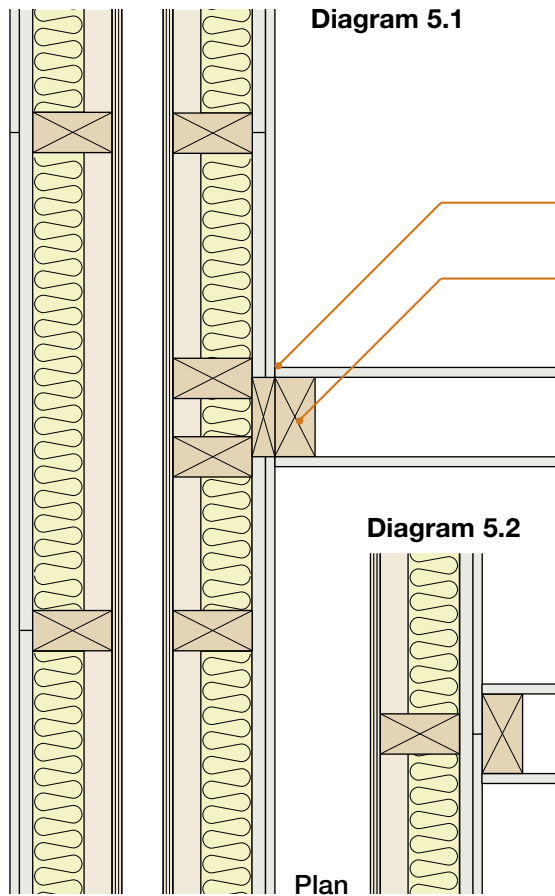


Sketch shows E-FT-1 type separating floor

Alternative detail



5. Internal wall junction



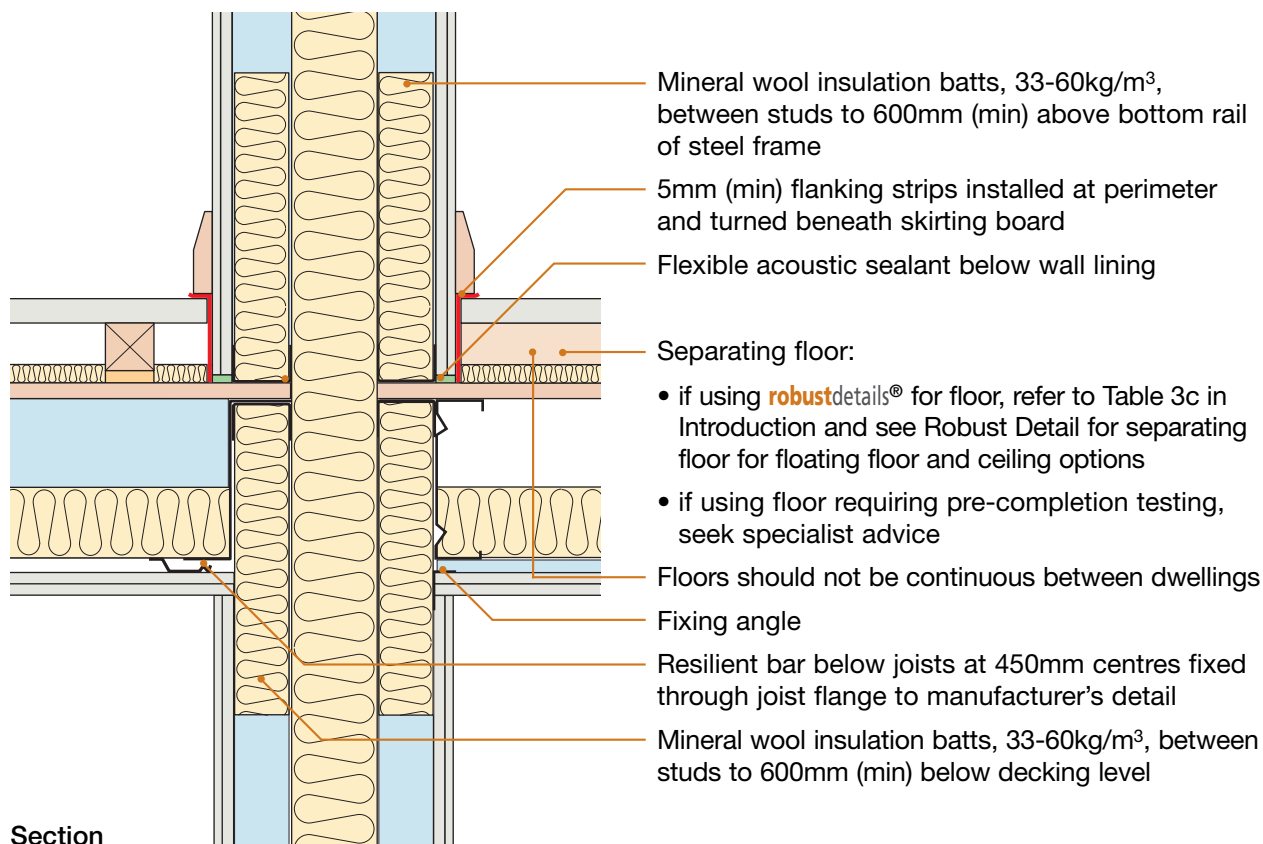
Seal all perimeter joints with tape or caulk with sealant

Where required internal wall to comply with Building Regulations Requirement E2

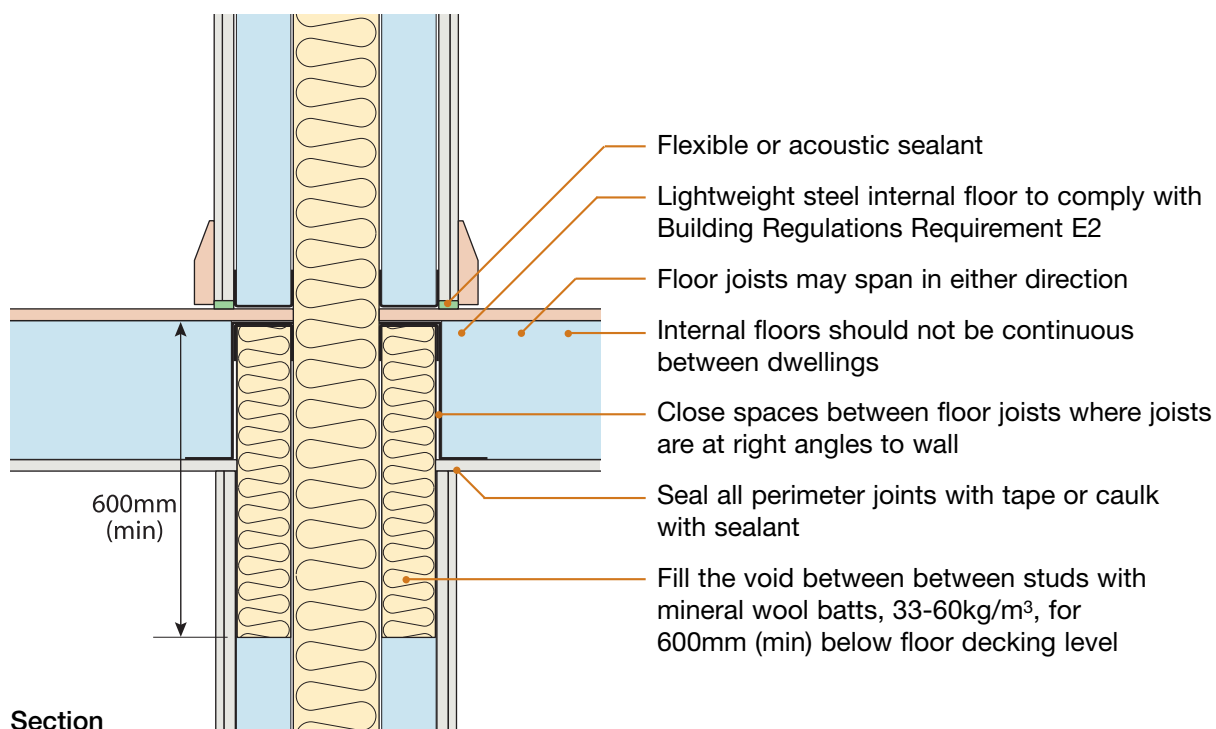
Diagram 5.1 shows junction detail where the internal wall is fixed through the separating wall lining; other junction details are acceptable provided all joints are sealed with tape or caulked with sealant

Diagram 5.2 shows junction where the separating wall lining is continuous

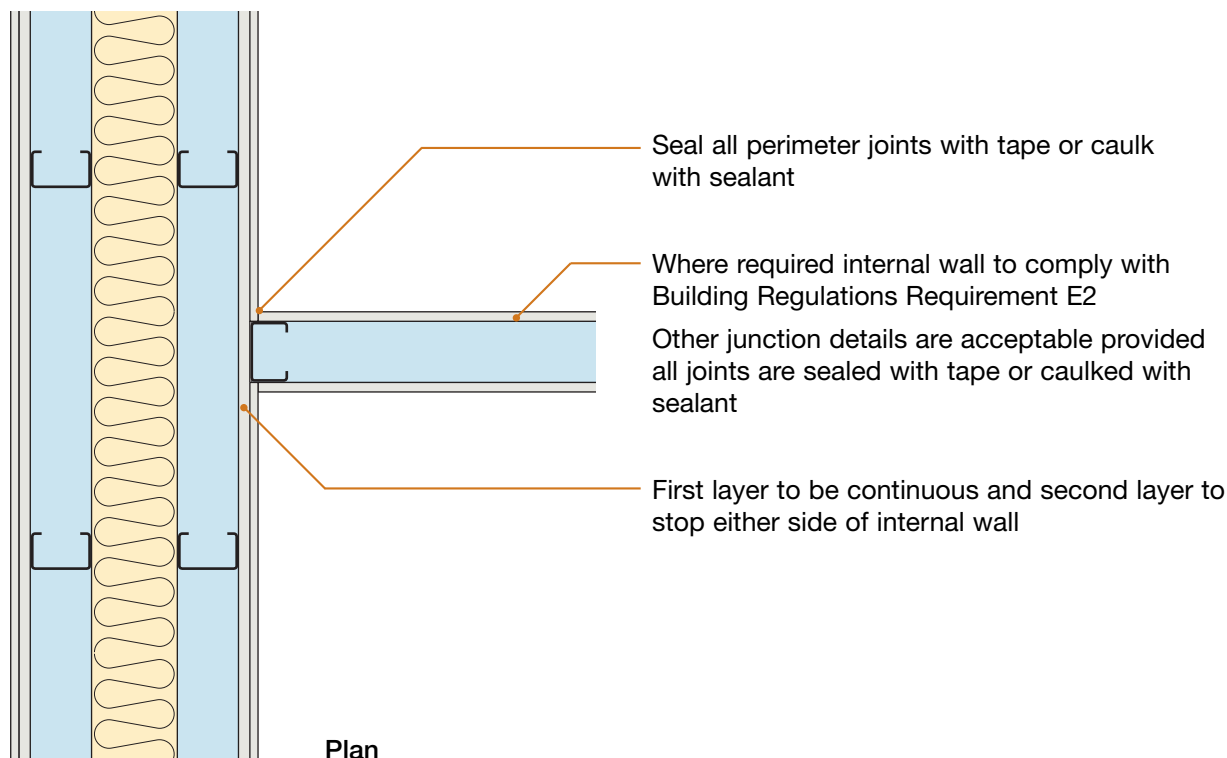
3. Separating floor junction



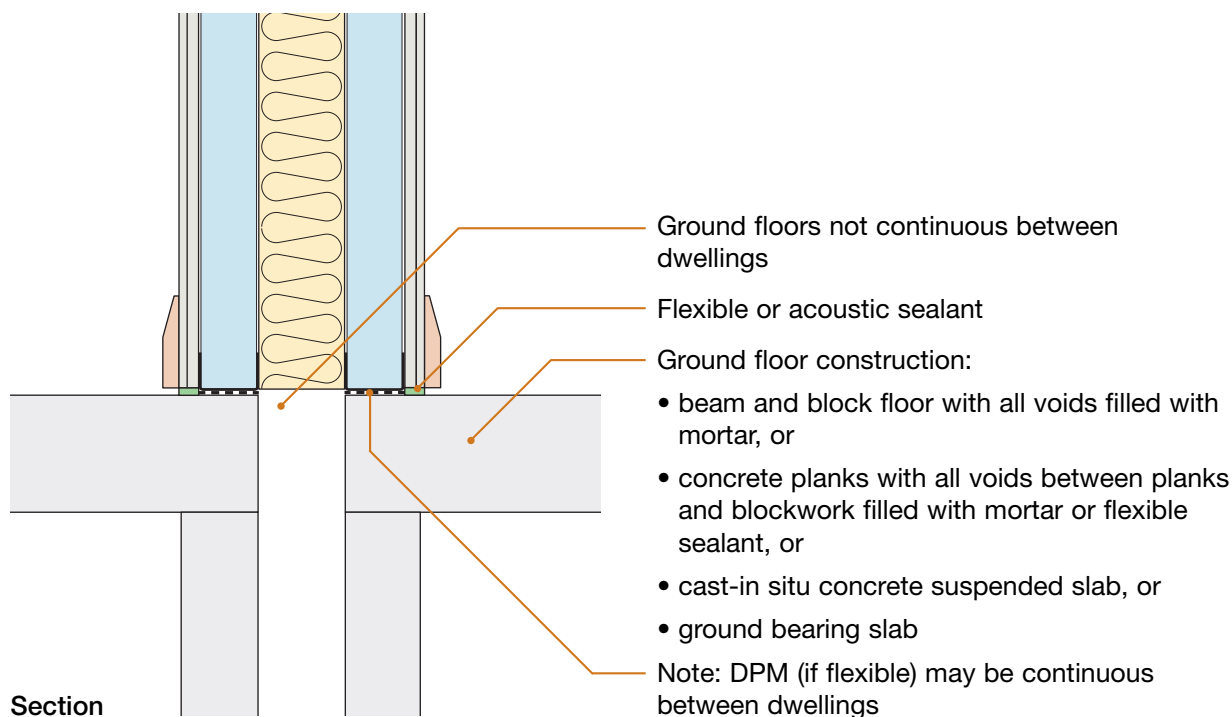
4. Internal floor junction



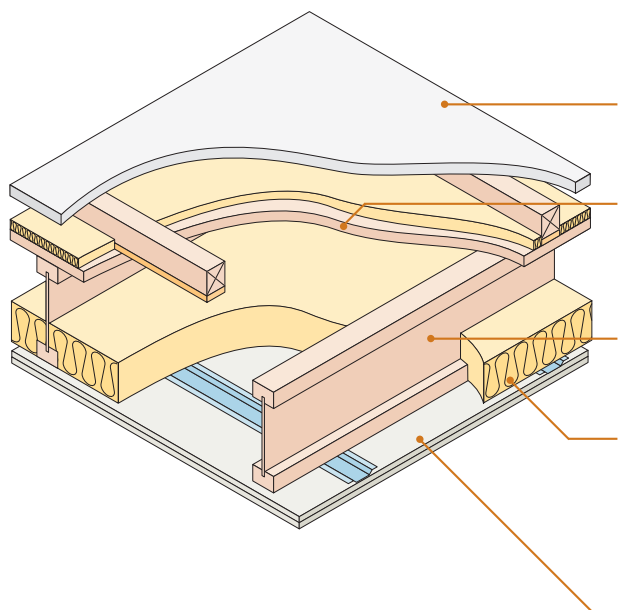
5. Internal wall junction



6. Ground floor junction: beam and block, precast concrete plank, cast-in situ concrete suspended slab or ground bearing slab



Timber I-Joists ■
Use with timber frame walls only ■



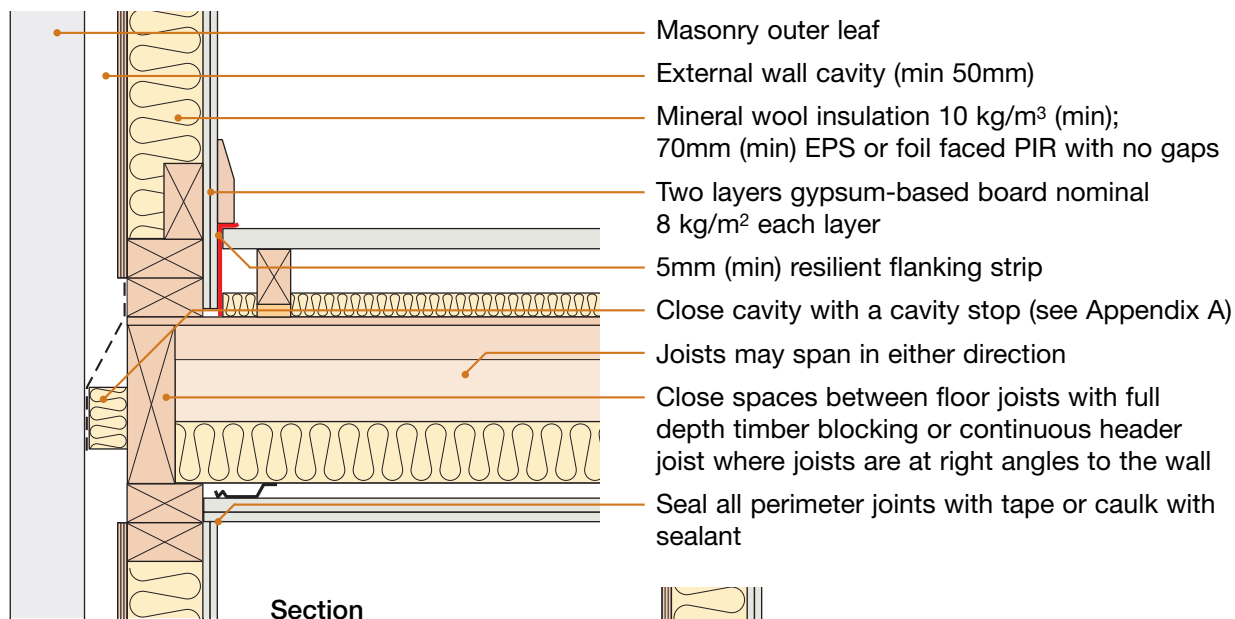
Floating floor	See section 6 for suitable floating floor treatment
Floor decking	15mm thick (min) wood based board, density 600 kg/m ³ (min)
Joists	235mm (min) timber I-Joists
Absorbent material	100mm (min) mineral wool quilt insulation (10–36 kg/m ³) or Collecta MICRO 50 between joists
Ceiling	See section 5 for suitable ceiling treatment

Note: Structural framing details may vary slightly between different manufacturers and this is permitted, however, all dimension specifications within this Robust Detail must be adhered to.

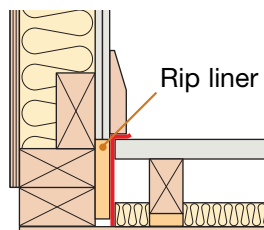
DO

- Lay quilt between all joists, including doubled up I-joists, ensuring no gaps remain
- Ensure floating floor treatment is suitable and is installed in accordance with the manufacturer's instructions
- Ensure quilt is laid between and not under flooring battens
- Install flanking strips around the perimeter of the flooring board to isolate floor from walls and skirtings
- Ensure resilient ceiling bars are fixed at right angles to the joists
- Ensure timber floor ceiling treatment is either CT1 or CT2 and is fixed correctly (see page 4)
- Stagger joints in ceiling layers
- Refer to Appendix A

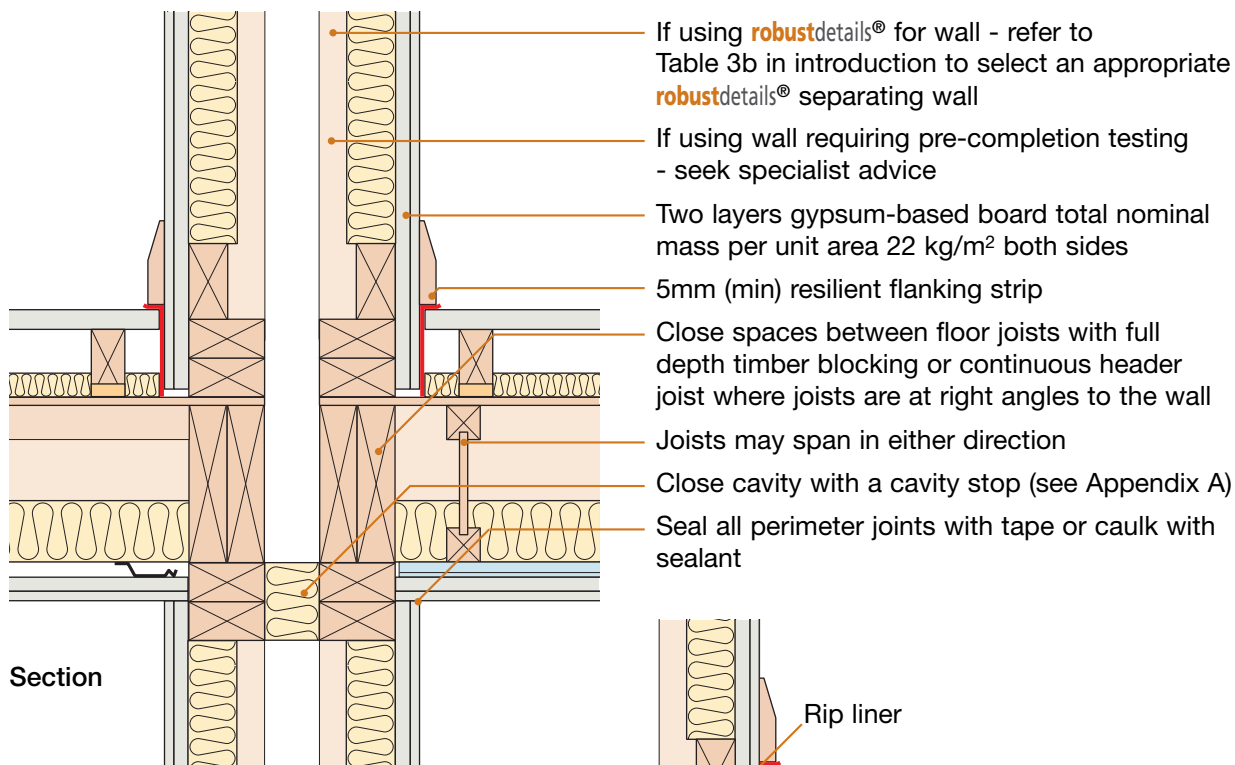
1. External (flanking) wall junction



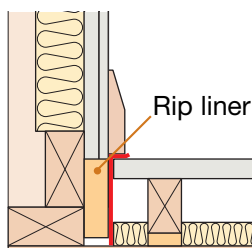
Alternative detail



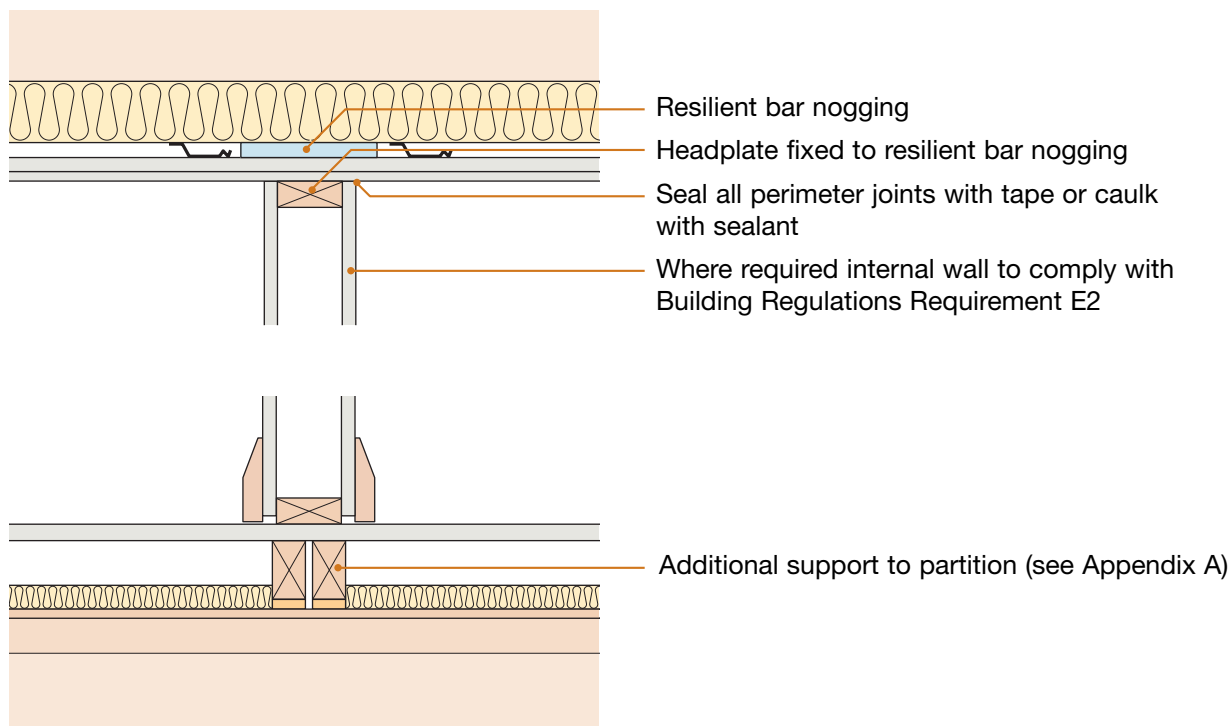
2. Separating wall junction



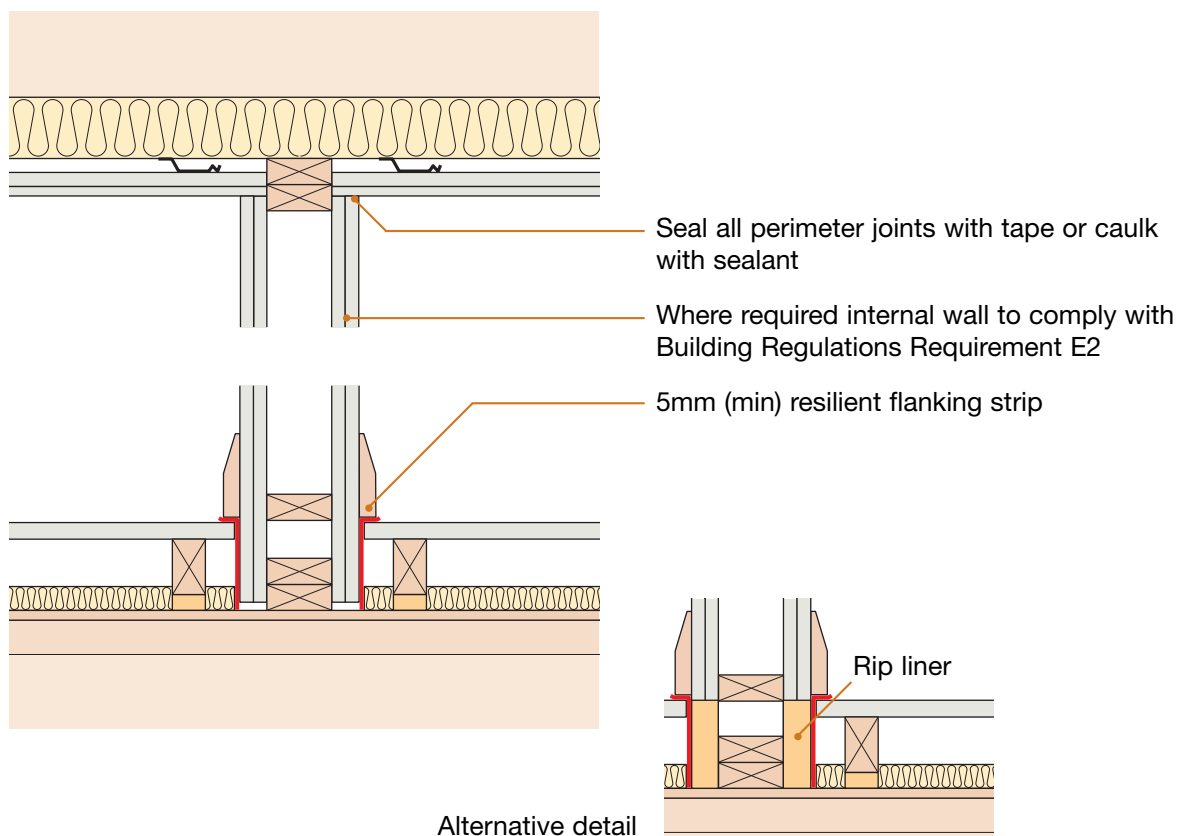
Alternative detail



3. Internal wall junction (non loadbearing)



4. Internal wall junction (loadbearing)



5. Ceiling treatment for E-FT-1

Timber floor ceiling treatment must be either CT1 or CT2 (see below). All joints to outer layers of ceiling must be sealed with tape or caulked with sealant.

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

Ensure ceiling layers have staggered joints.

Services must not puncture ceiling linings (except cables, which should be sealed around with flexible sealant)

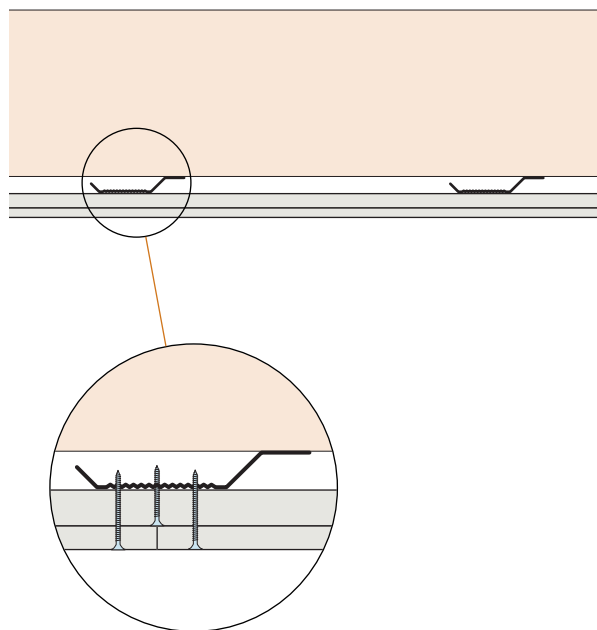
Downlighters and recessed lighting

Downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer's instructions
- at no more than one light per 2m² of ceiling area in each room unless the use of a greater density of light fittings is supported by testing undertaken in accordance with 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

Note: Only downlighters which have been satisfactorily assessed in accordance with the procedure described in Appendix F “*Determination of the acoustic performance of downlighters and recessed lighting in timber separating floors*” are acceptable.



CEILING BOARD FIXINGS MUST NOT PENETRATE OR TOUCH JOISTS

16mm (min) resilient bars with CT1 and CT2

16mm (min) metal resilient ceiling bars mounted at right angles to the joists at 400mm centres (bars must achieve a minimum laboratory performance of $rd\Delta R_w + C_{tr} = 17\text{dB}$ and $rd\Delta L_w = 16\text{dB}$) – see Appendix E.

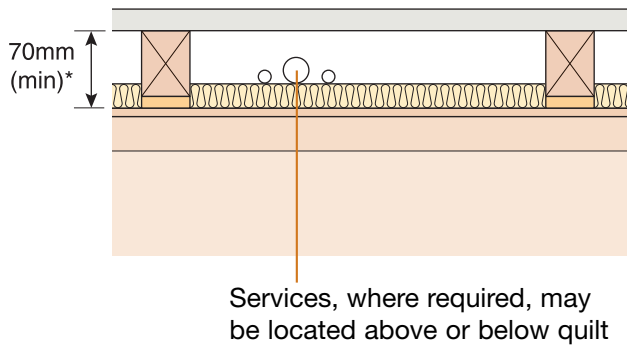
Ceiling treatment CT1

Two layers of gypsum-based board, composed of 19mm (nominal 13.5 kg/m²) fixed with 32mm screws, and 12.5mm (nominal 10 kg/m²) fixed with 42 mm screws.

Ceiling treatment CT2

Two layers of gypsum-based boards composed of 15mm (nominal 12.5 kg/m²) fixed with 25mm screws and second layer of 15mm gypsum-based board (nominal 12.5 kg/m²) fixed with 42mm screws.

6. Floating floor treatment for E-FT-1



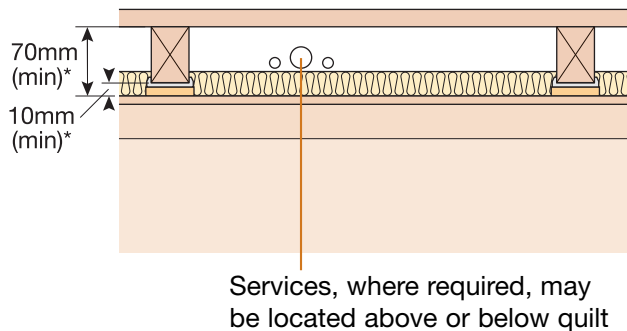
Appendix A3 – Resilient composite deep batten system for E-FT-1

Collecta HiDECK Structural system

- refer to Appendix A3

JCW Soundboard One system

- refer to Appendix A3



FFT2 – Resilient cradle and batten system for E-FT-1

Ensure cradles are aligned over joist positions

- 18 mm (min) t&g flooring board
- cradle and batten – refer to Appendix C for performance requirement
- mineral wool quilt laid between battens
 - 13mm (min) 33-36 kg/m³, or
 - 25mm (min) 10-36 kg/m³
- or Collecta MICRO 15
- ensure any services do not bridge the resilient layer

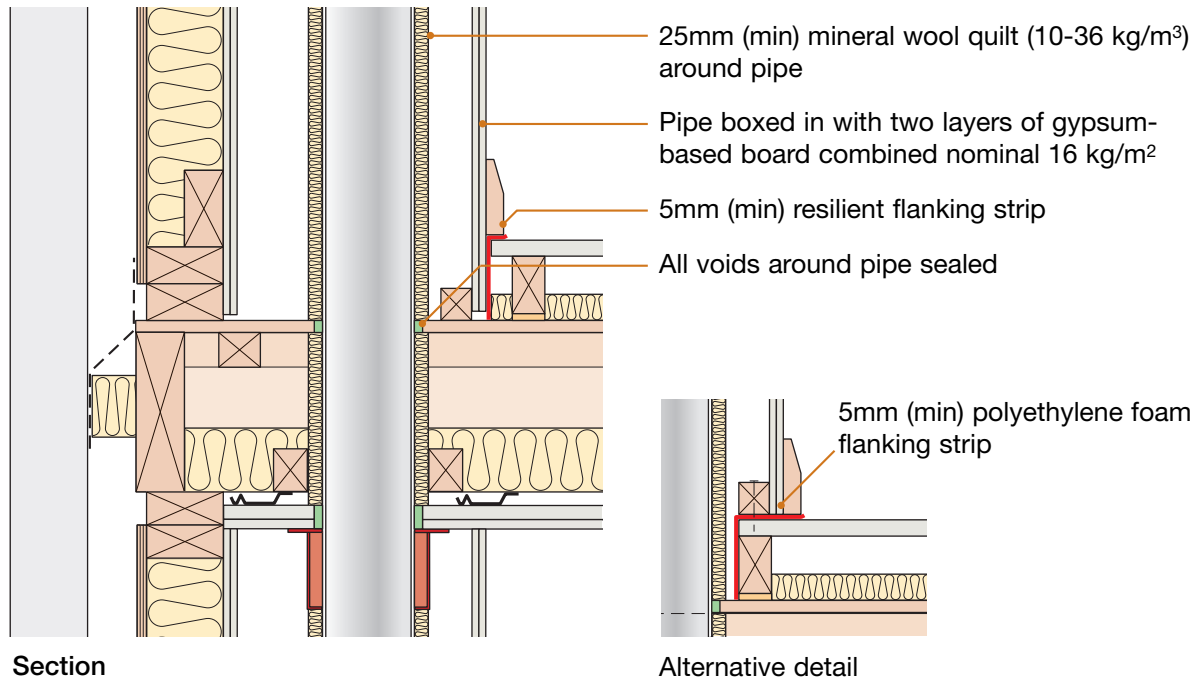
Collecta HiDECK Structural system

- refer to Appendix A3

JCW Soundboard One system

- refer to Appendix A3

7. Services – pipes through separating floor



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See overleaf for checklist

CHECKLIST (to be completed by site manager/supervisor)

Company: _____

Site: _____

Plot: _____

Site manager/supervisor: _____

Ref.	Item	Yes (✓)	No (✓)	Inspected (initials & date)
1.	Are timber I-Joists at least 235mm deep?	☐	☐	
2.	Has the specified quilt been fitted between the joists?	☐	☐	
3.	Are resilient ceiling bars fitted at right angles to the joists?	☐	☐	
4.	Has ceiling system been fitted in accordance with the manufacturer's instructions?	☐	☐	
5.	Has floating floor treatment been fitted in accordance with the manufacturer's instructions?	☐	☐	
6.	Has the specified quilt been fitted between the floor battens?	☐	☐	
7.	Is ceiling treatment CT1 or CT2 fixed to the resilient bars with correct screws, such that the screws do not touch or penetrate the joists?	☐	☐	
8.	Are all joints sealed with tape or caulked with sealant?	☐	☐	
9.	Are vertical service pipes wrapped in quilt and boxed in with two layers of gypsum-based board combined nominal mass per unit area of 16 kg/m ² ?	☐	☐	
10.	Have all resilient flanking strips been fitted?	☐	☐	
11.	Is separating floor satisfactorily complete?	☐	☐	

Notes (include details of any corrective action)

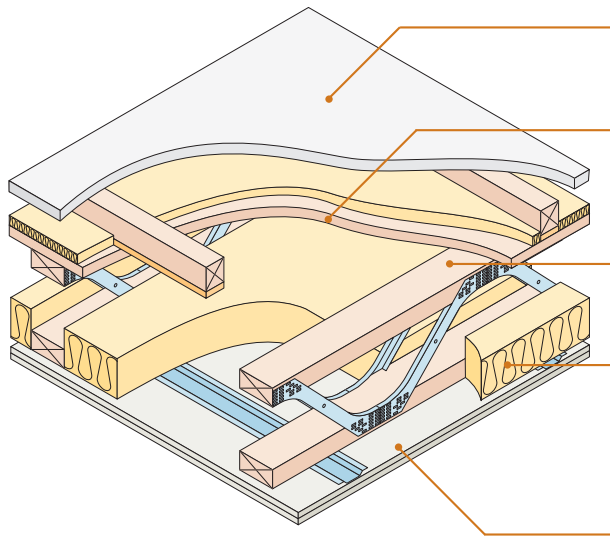
Site manager/supervisor signature

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Timber flange and metal web joists ■
Use with timber frame walls only ■



Floating floor	See section 10 for suitable floating floor treatment
Floor decking	18mm thick (min) wood based board, density min 600 kg/m ³
Joists	253mm (min) metal web joists (see joist type below)
Absorbent material	100mm (min) mineral wool quilt insulation (10–36 kg/m ³) or Collecta MICRO 50 between joists
Ceiling	See section 9 for suitable ceiling treatment

Joist type

IMPORTANT

Only the following metal web joists may be used in E-FT-3:

- MiTek Posi-Joist
- WOLF easi-joist
- ITW Gang-Nail Ecojoist
- ITW Alpine SpaceJoist

Notes:

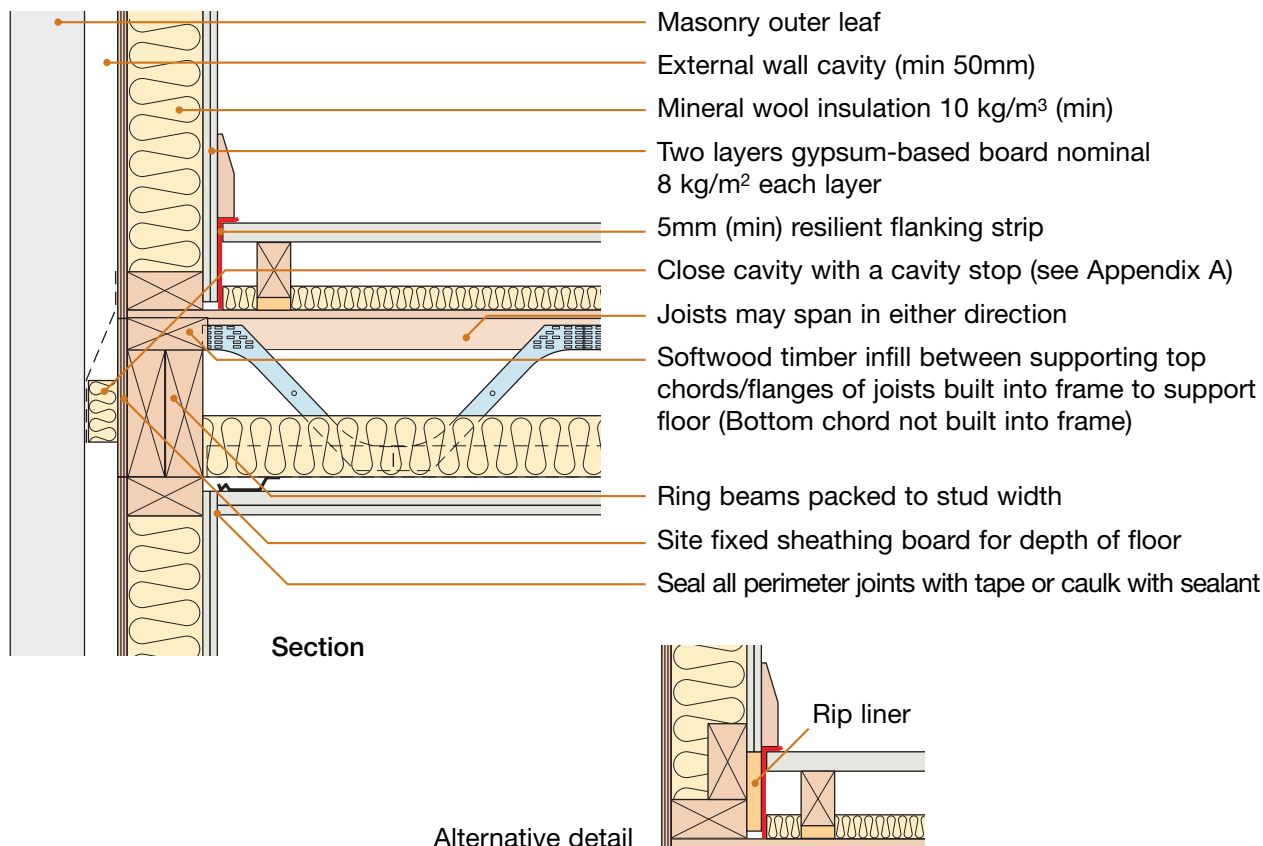
Although single header and sole plates are indicated, increasing the number of header and sole plates would be acceptable, however, all dimension specifications within this Robust Detail must be adhered to.

Metal web joists can be **top chord/flange** supported or **fully built-in** and supported on the panel and this is permitted, however, all dimension specifications within this Robust Detail must be adhered to.

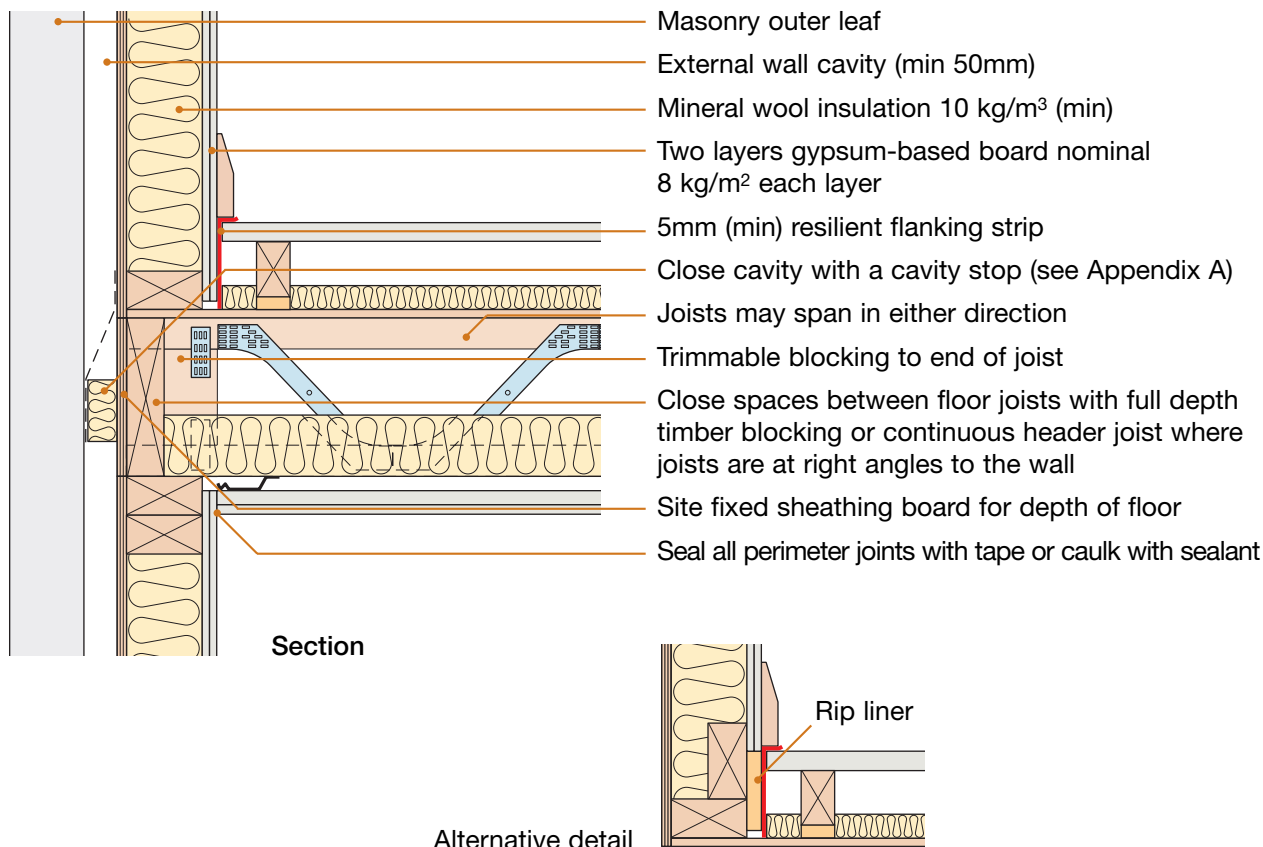
DO

- Ensure correct metal web joists are being used (see joist type)
- Lay quilt between joists ensuring no gaps remain
- Ensure floating floor treatment is suitable and is installed in accordance with the manufacturer's instructions (See page 7)
- Ensure quilt within floating floor is laid between and not under flooring battens
- Install resilient flanking strips around the perimeter of the flooring board to isolate floor from walls and skirtings
- Ensure resilient ceiling bars are fixed at right angles to the joists
- Ensure timber floor ceiling treatment is fixed correctly (see page 6)
- Stagger joints in ceiling layers
- Refer to Appendix A

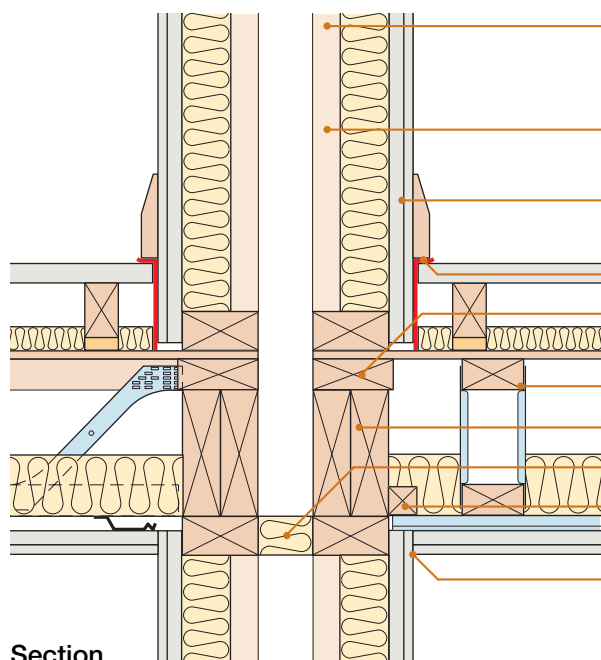
1. External (flanking) wall junction (top chord supported)



2. External (flanking) wall junction (fully built-in)

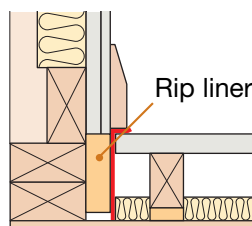


3. Separating wall junction (top chord supported)



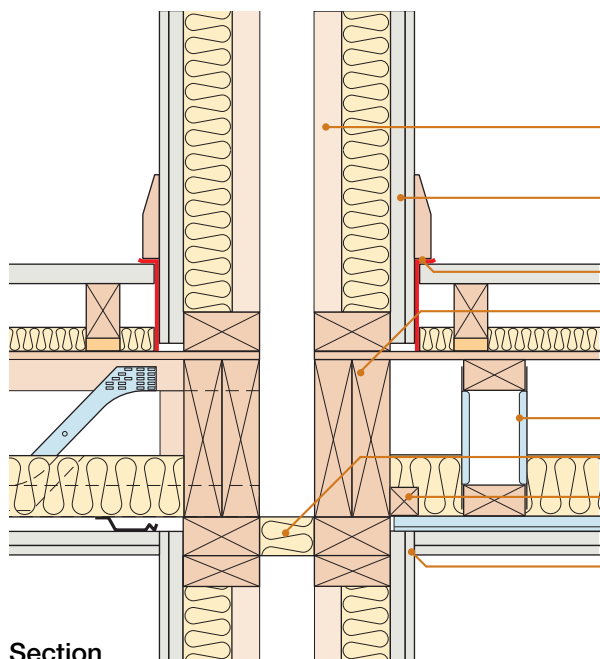
Section

- If using **robustdetails**® for wall - refer to Table 3b in introduction to select an appropriate **robustdetails**® separating wall
- If using wall requiring pre-completion testing - seek specialist advice
- Two layers gypsum-based board total nominal mass per unit area 22 kg/m² both sides
- 5mm (min) resilient flanking strip
- Softwood timber infill between supporting top chords/flanges of joists
- Joists may span in either direction
- Ring beams packed to stud width
- Close cavity with a cavity stop (see Appendix A)
- Softwood timber nogging for resilient bar support (leave a small gap at end of resilient bar)
- Seal all perimeter joints with tape or caulk with sealant



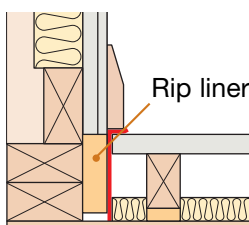
Alternative detail

4. Separating wall junction (fully built-in)



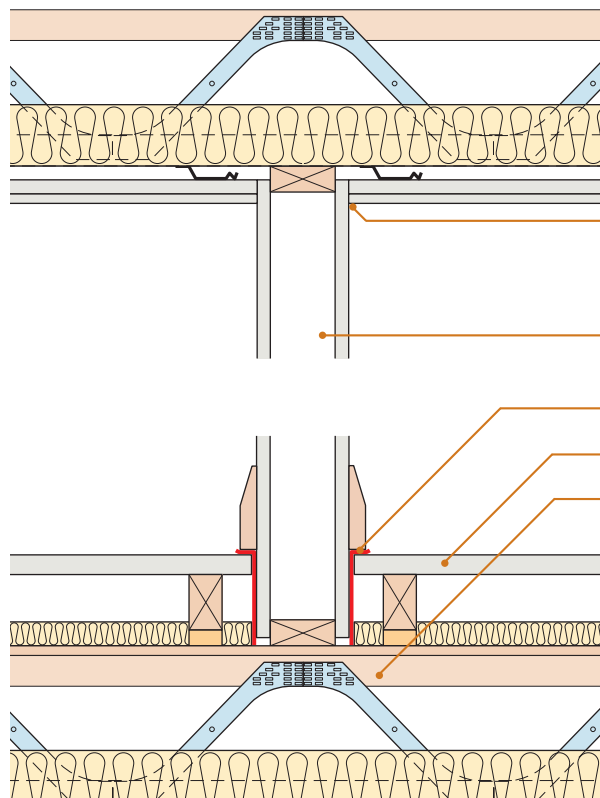
Section

- If using **robustdetails**® for wall - refer to Table 3b in introduction to select an appropriate **robustdetails**® separating wall
- If using wall requiring pre-completion testing - seek specialist advice
- Two layers gypsum-based board total nominal mass per unit area 22 kg/m² both sides
- 5mm (min) resilient flanking strip
- Close spaces between floor joists with full depth timber blocking or continuous header joist where joists are at right angles to the wall
- Joists may span in either direction
- Close cavity with a cavity stop (see Appendix A)
- Softwood timber nogging for resilient bar support (leave a small gap at end of resilient bar)
- Seal all perimeter joints with tape or caulk with sealant



Alternative detail

5. Non loadbearing internal wall perpendicular to joists



Seal all perimeter joints with tape or caulk with sealant

Where required internal wall to comply with Building Regulations Requirement E2

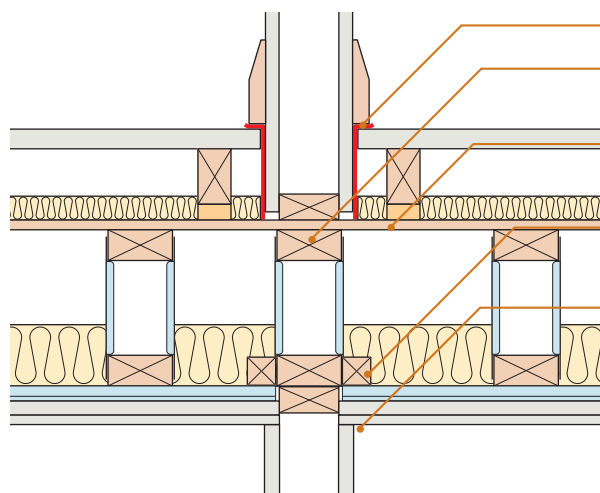
5mm (min) resilient flanking strip

Floating floor

Metal web joist (see joist type, page 1)

*Note - non loadbearing partitions may also be taken directly off the floating floor treatment, check with manufacturer's instructions for installation (see Appendix A)

6. Non loadbearing internal wall parallel to joists



5mm (min) resilient flanking strip

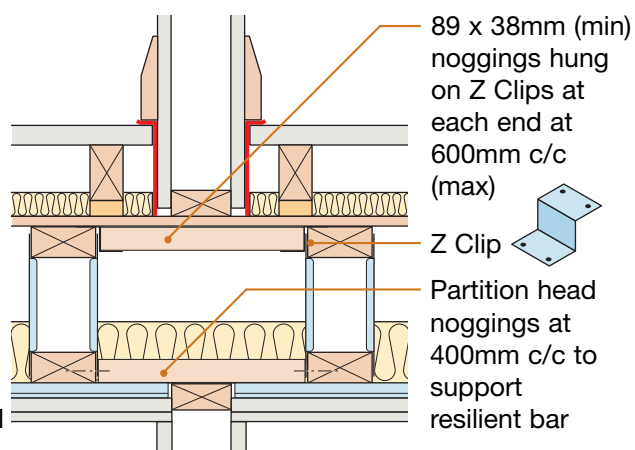
Extra metal web joist (see joist type, page 1) under internal wall

Floor decking

Softwood timber noggings for resilient bar support (leave a small gap at end of resilient bar)

Seal all perimeter joints with tape or caulk with sealant

*Note - non loadbearing partitions may also be taken directly off the floating floor treatment, check with manufacturer's instructions for installation (see Appendix A)



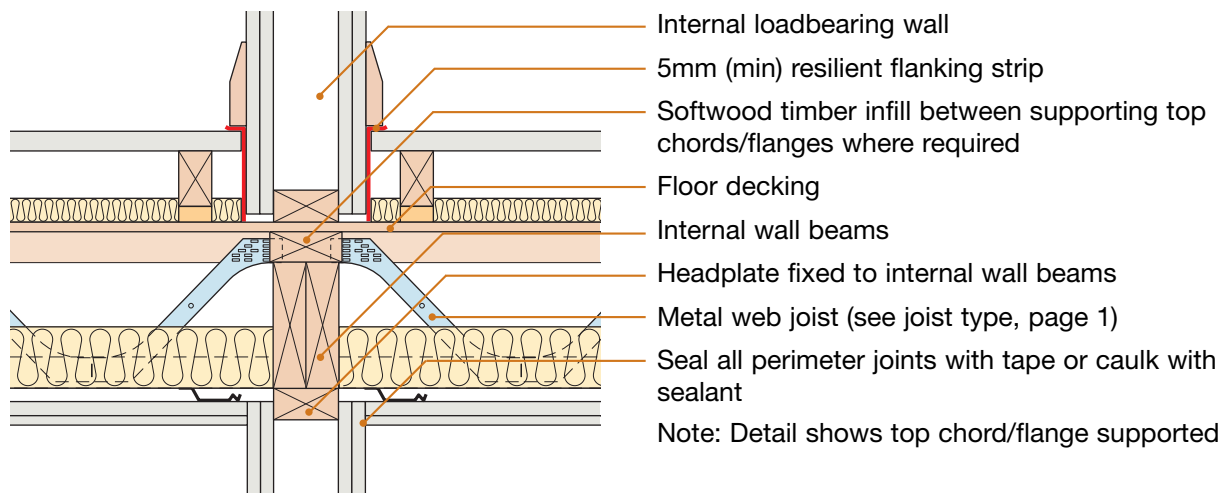
89 x 38mm (min) noggings hung on Z Clips at each end at 600mm c/c (max)

Z Clip

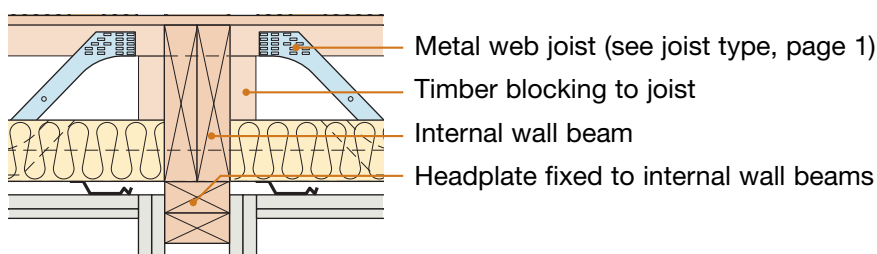
Partition head noggings at 400mm c/c to support resilient bar

Alternative detail

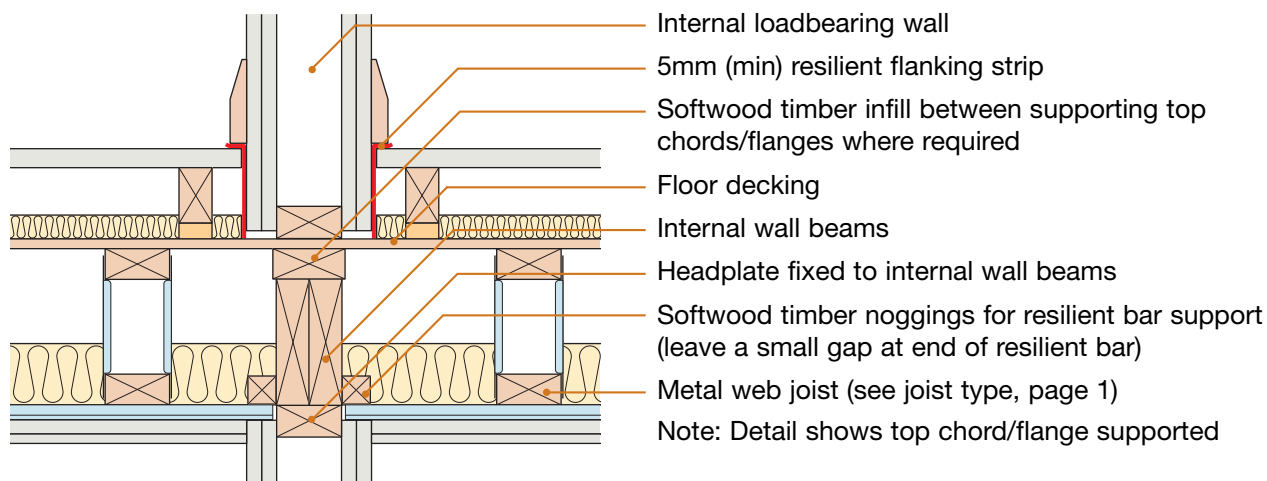
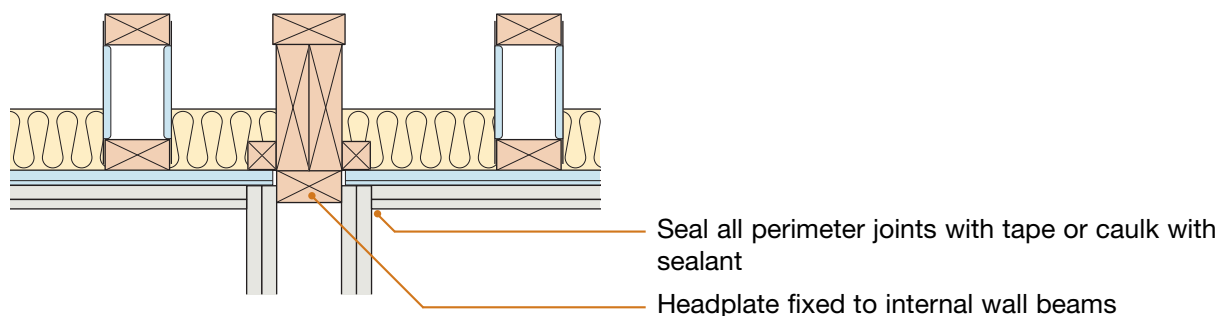
7. Loadbearing internal wall perpendicular to joists



Alternative detail



8. Loadbearing internal wall parallel to joists



9. Ceiling treatment for E-FT-3

Timber floor ceiling treatment must be either CT1 or CT2 (see below). All joints to outer layers of ceiling must be sealed with tape or caulked with sealant.

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

Ensure ceiling layers have staggered joints.

Services must not puncture ceiling linings (except cables, which should be sealed around with flexible sealant)

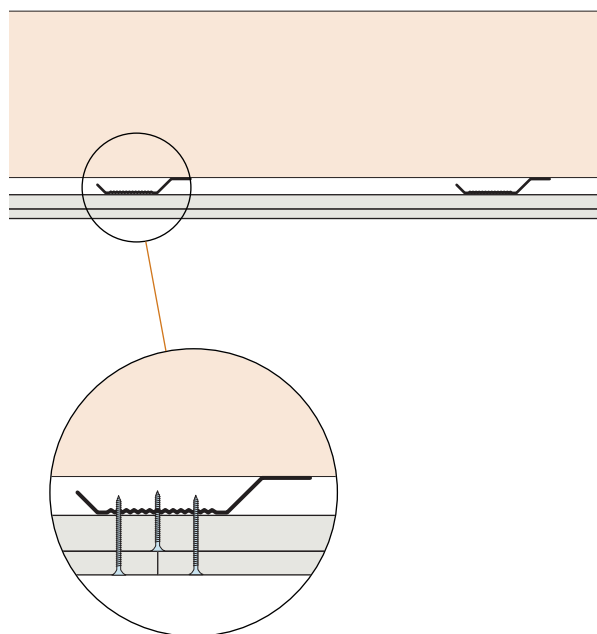
Downlighters and recessed lighting

Downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer's instructions
- at no more than one light per 2m² of ceiling area in each room unless the use of a greater density of light fittings is supported by testing undertaken in accordance with 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

Note: Only downlighters which have been satisfactorily assessed in accordance with the procedure described in Appendix F "Determination of the acoustic performance of downlighters and recessed lighting in timber separating floors" are acceptable.



CEILING BOARD FIXINGS MUST NOT PENETRATE OR TOUCH JOISTS

16mm (min) resilient bars with CT1 and CT2

16mm (min) metal resilient ceiling bars mounted at right angles to the joists at 400mm centres (bars must achieve a minimum laboratory performance of $rd\Delta R_w + C_{tr} = 17\text{dB}$ and $rd\Delta L_w = 16\text{dB}$) – see Appendix E

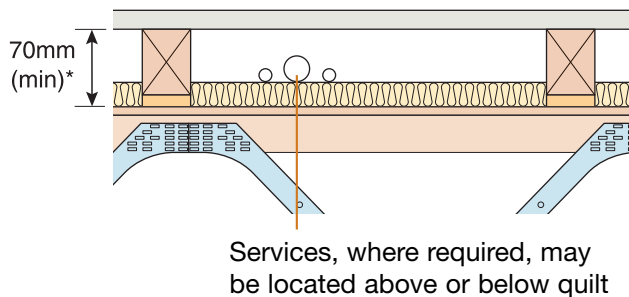
Ceiling treatment CT1

Two layers of gypsum-based board, composed of 19mm (nominal 13.5 kg/m²) fixed with 32mm screws, and 12.5mm (nominal 10 kg/m²) fixed with 42 mm screws

Ceiling treatment CT2

Two layers of gypsum-based boards composed of 15mm (nominal 11.7 kg/m²) fixed with 25mm screws and second layer of 15mm gypsum-based board (nominal 11.7 kg/m²) fixed with 42mm screws

10. Floating floor treatment for E-FT-3



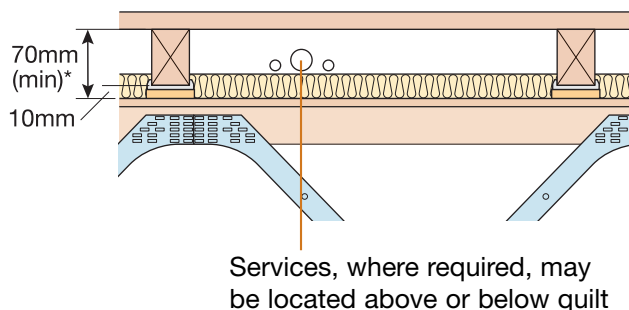
Appendix A3 – Resilient composite deep batten system for E-FT-3

Collecta HiDECK Structural system

- refer to Appendix A3

JCW Soundboard One system

- refer to Appendix A3



FFT2 – Resilient cradle and batten system for E-FT-3

Ensure cradles are aligned over joist positions

- 18 mm (min) t&g flooring board
- cradle and batten – refer to Appendix C for performance requirement
- mineral wool quilt laid between battens
 - 13mm (min) 33-36 kg/m³, or
 - 25mm (min) 10-36 kg/m³
- or Collecta MICRO 15
- ensure any services do not bridge the resilient layer

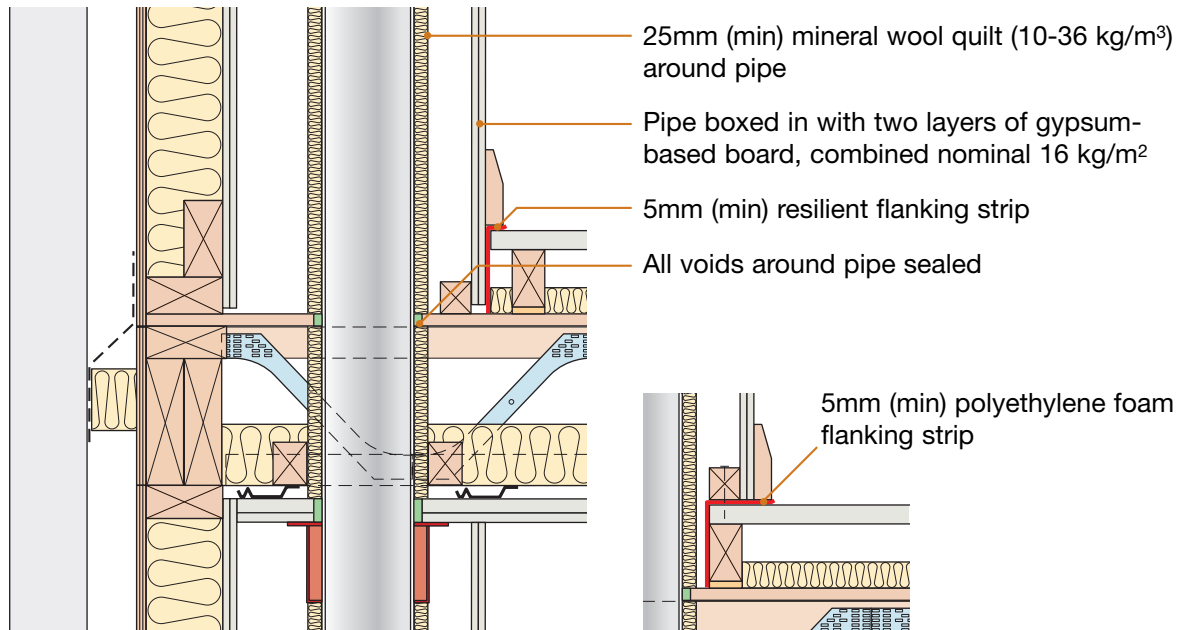
Collecta HiDECK Structural system

- refer to Appendix A3

JCW Soundboard One system

- refer to Appendix A3

11. Services – pipes through separating floor



Section

Sketch shows top chord supported external (flanking) wall junction detail, for fully built-in arrangement see section 2

Alternative detail

blank page
See overleaf for checklist

CHECKLIST (to be completed by site manager/supervisor)

Company: _____

Site: _____

Plot: _____

Site manager/supervisor: _____

Ref.	Item	Yes (✓)	No (✓)	Inspected (initials & date)
1.	Are correct metal web joists being used (see page 1 of Robust Detail)?	☐	☐	
2.	Which of the permitted metal web joist types are being used?			
3.	Are joists at least 253mm deep?	☐	☐	
4.	Has the specified quilt been fitted between the joists?	☐	☐	
5.	Are resilient ceiling bars fitted at right angles to the joists?	☐	☐	
6.	Has ceiling system been fitted in accordance with the manufacturer's instructions?	☐	☐	
7.	Has floating floor treatment been fitted in accordance with the manufacturer's instructions?	☐	☐	
8.	Has the specified quilt been fitted between the floor battens?	☐	☐	
9.	Is ceiling treatment CT1 or CT2 fixed to the resilient bars with correct screws such that the screws do not touch or penetrate the joists?	☐	☐	
10.	Are all joints to gypsum-based boards sealed with tape or caulked with sealant?	☐	☐	
11.	Are vertical service pipes wrapped in quilt and boxed in with two layers of gypsum-based board combined nominal mass per unit area of 16 kg/m²?	☐	☐	
12.	Have all resilient flanking strips been fitted?	☐	☐	
13.	Is separating floor satisfactorily complete?	☐	☐	

Notes (include details of any corrective action)

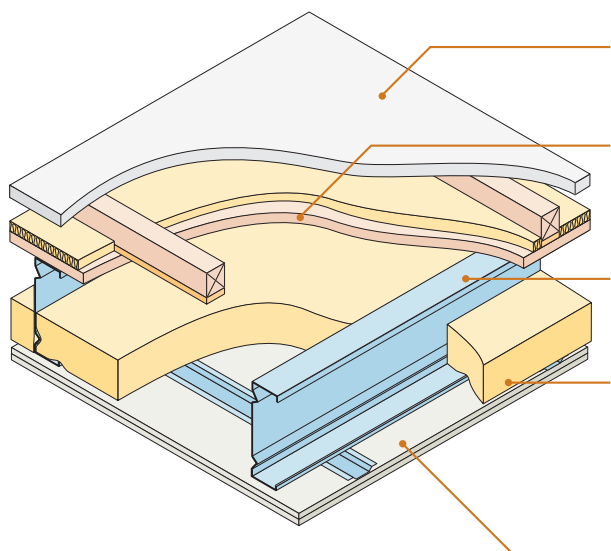
Site manager/supervisor signature

® UK registered trade mark no. 2291665

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Hadley Group UltraBEAM Metal Joists ■
Use with lightweight metal frame walls only ■

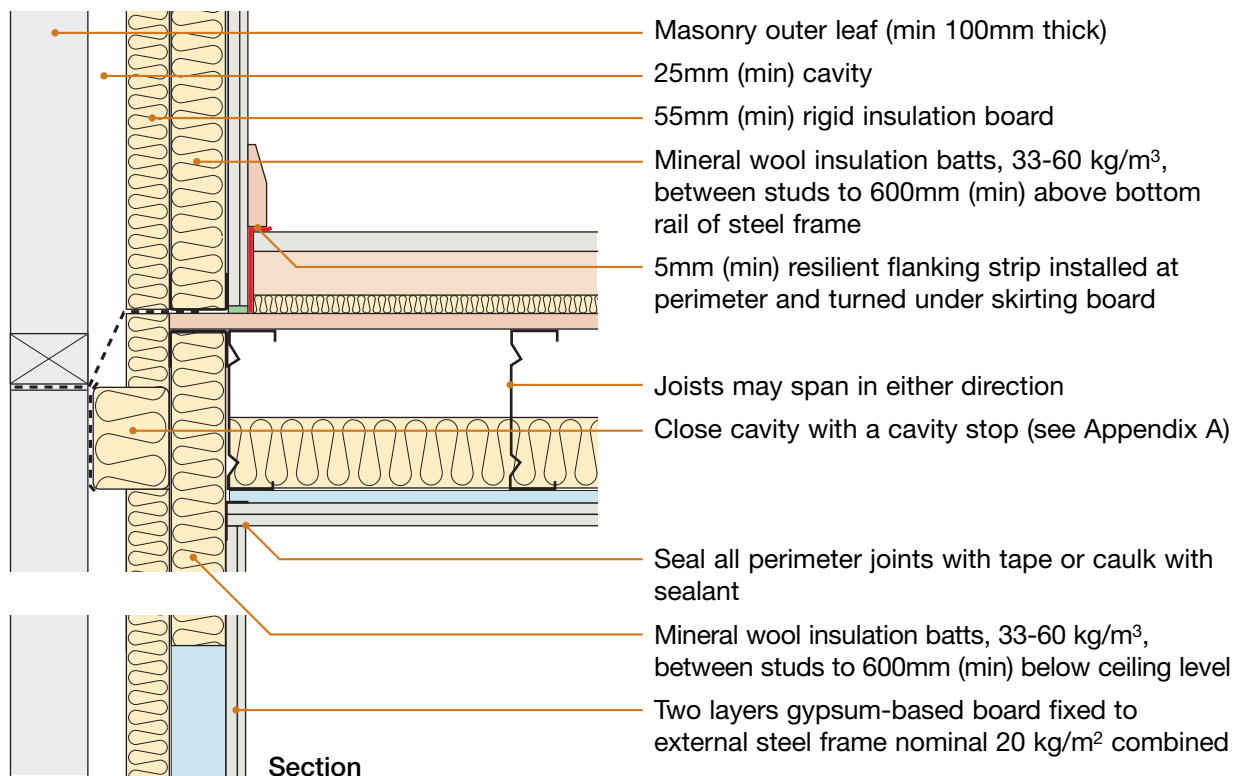


Floating floor	See section 6 for suitable floating floor treatment
Floor decking	22mm thick (min) wood based board, density 600 kg/m ³ (min)
Joists	225mm (min) deep UltraBEAM metal joists
Absorbent material	100mm (min) mineral wool quilt insulation (10–36 kg/m ³) or Collecta MICRO 50 between joists
Ceiling	See section 5 for suitable ceiling treatment

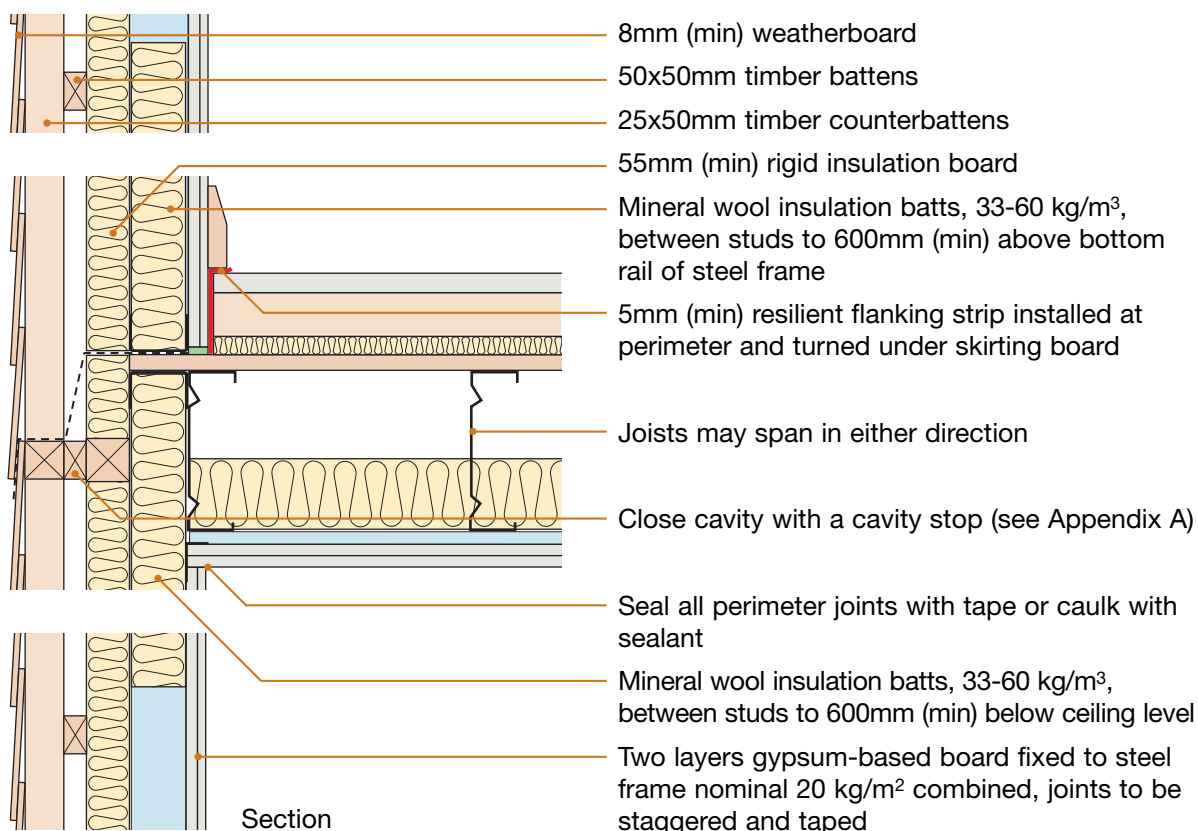
DO

- Lay quilt between all joists, including doubled up joists, ensuring no gaps remain
- Ensure floating floor treatment is suitable and is installed in accordance with the manufacturer's instructions
- Ensure quilt is laid between and not under flooring battens
- Install flanking strips around the perimeter of the flooring board to isolate floor from walls and skirtings
- Ensure resilient ceiling bars are fixed at right angles to the joists
- Ensure ceiling treatment is fixed correctly (see page 4)
- Stagger joints in ceiling layers
- Refer to Appendix A

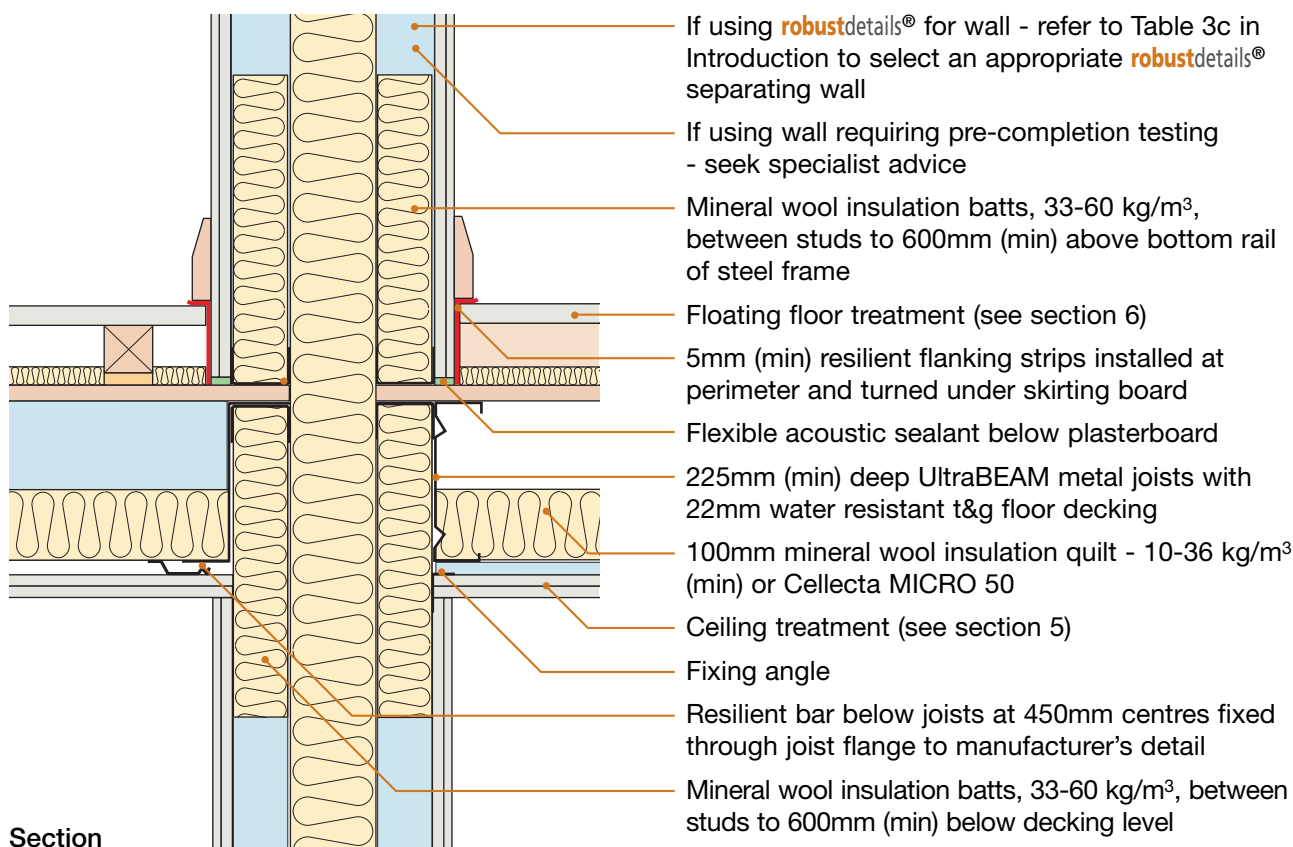
1. External (flanking) wall junction – masonry outer leaf



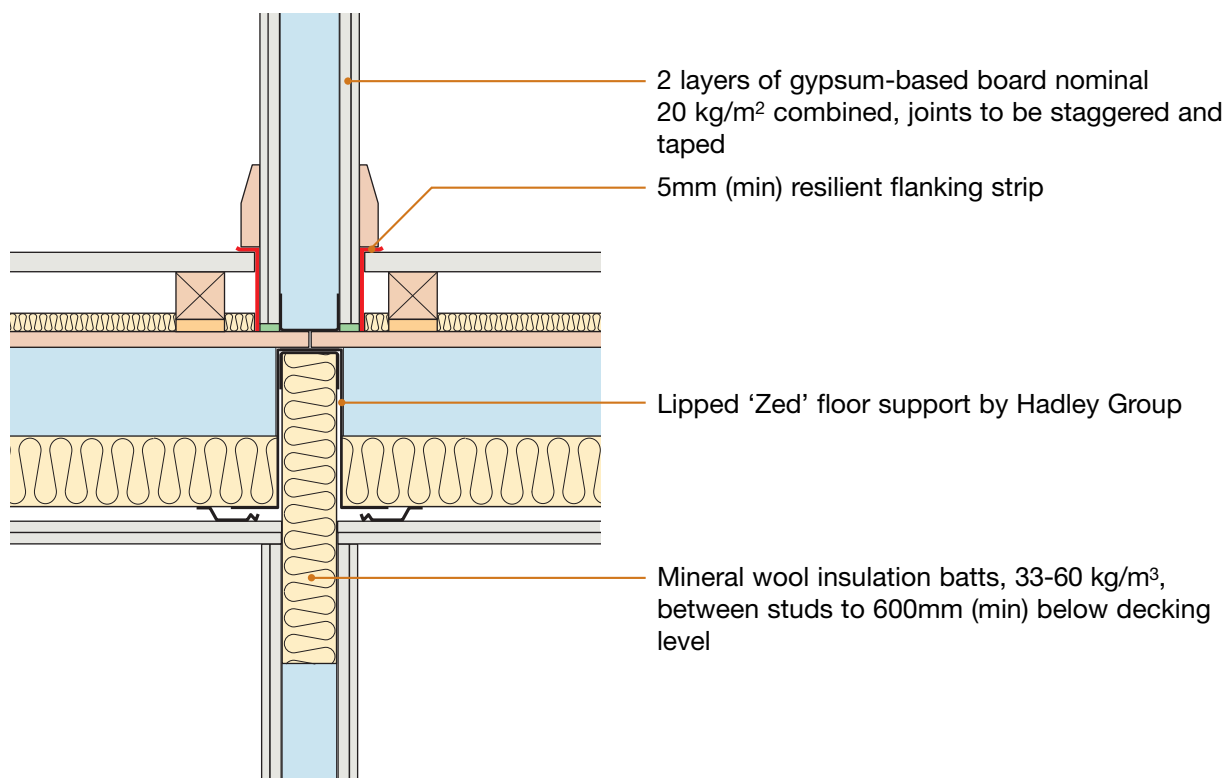
2. External (flanking) wall junction – timber cladding outer leaf



3. Separating wall junction



4. Internal wall junction



5. Ceiling treatment for E-FS-2

Metal floor ceiling treatment must be as shown below. All joints to outer layers of ceiling must be sealed with tape or caulked with sealant.

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

Ensure ceiling layers have staggered joints.

Services must not puncture ceiling linings (except cables, which should be sealed around with flexible sealant)

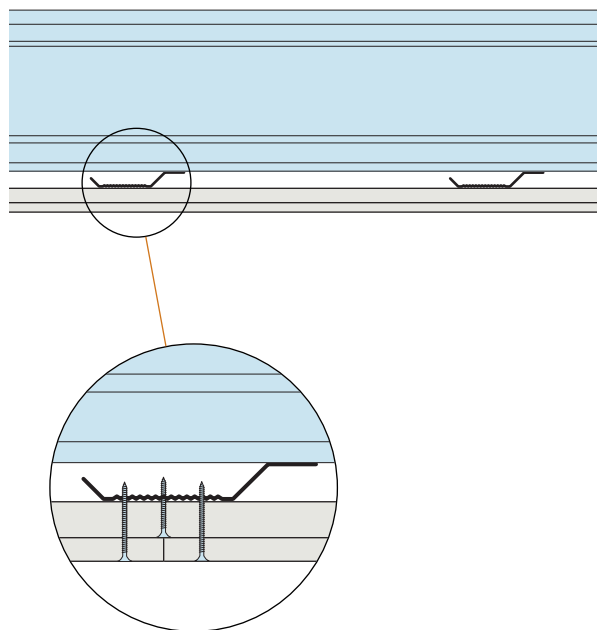
Downlighters and recessed lighting

Downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer's instructions
- at no more than one light per 2m² of ceiling area in each room unless the use of a greater density of light fittings is supported by testing undertaken in accordance with 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

Note: Only downlighters which have been satisfactorily assessed in accordance with the procedure described in Appendix F “*Determination of the acoustic performance of downlighters and recessed lighting in lightweight separating floors*” are acceptable.



CEILING BOARD FIXINGS MUST NOT PENETRATE OR TOUCH JOISTS

16mm (min) resilient bars with CT1 and CT2

16mm (min) metal resilient ceiling bars mounted at right angles to the joists at 450mm centres (bars must achieve a minimum laboratory performance of $rd\Delta R_w + C_{tr} = 17\text{dB}$ and $rd\Delta L_w = 16\text{dB}$) – see Appendix E

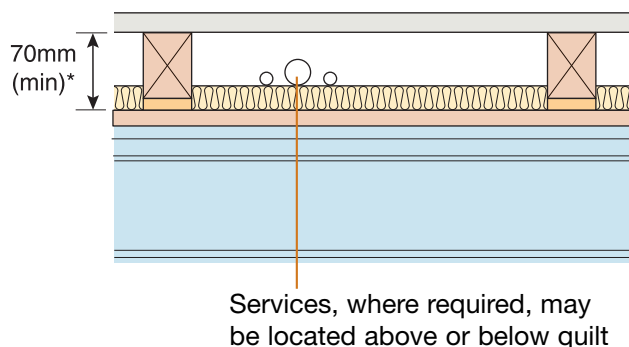
Ceiling treatment CT1

Two layers of gypsum-based board, composed of 19mm (nominal 13.5 kg/m²) fixed with 32mm screws, and 12.5mm (nominal 10 kg/m²) fixed with 42 mm screws

Ceiling treatment CT2

Two layers of gypsum-based boards composed of 15mm (nominal 12.5 kg/m²) fixed with 25mm screws and second layer of 15mm gypsum-based board (nominal 12.5 kg/m²) fixed with 42mm screws

6. Floating floor treatment for E-FS-2



Appendix A3 – Resilient composite deep batten system

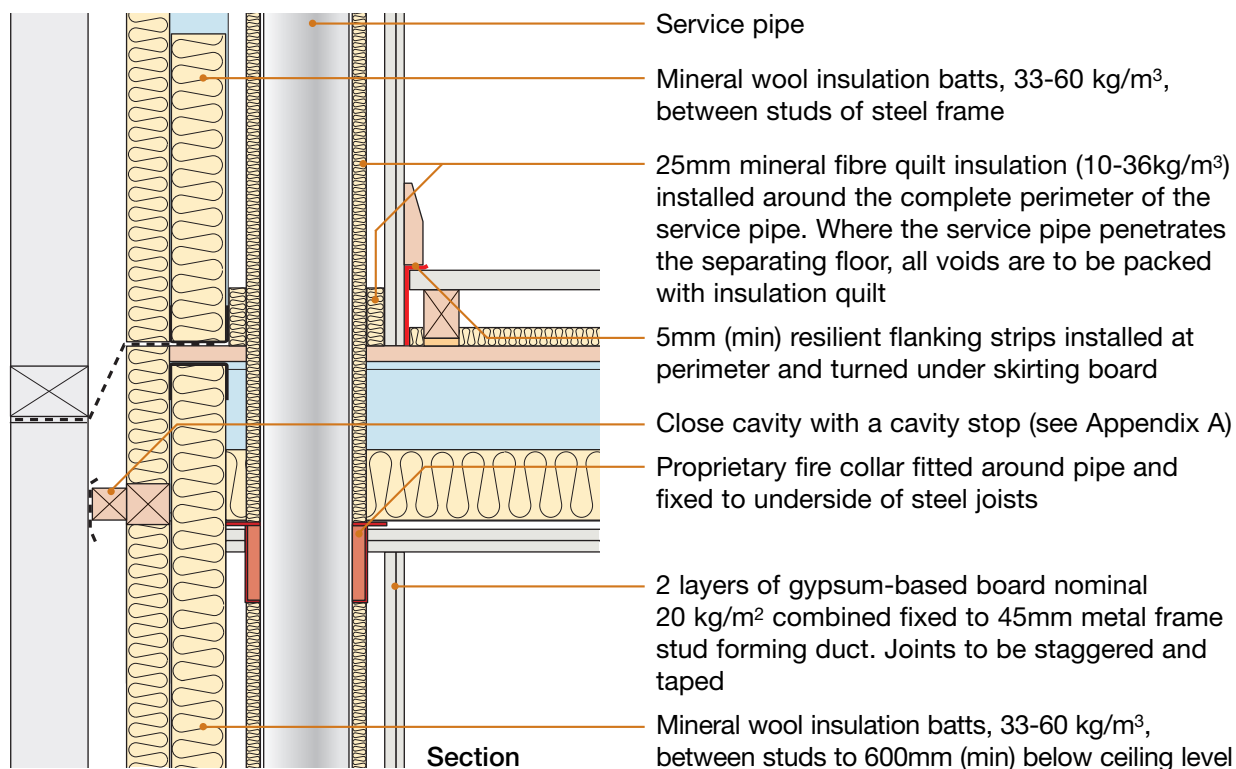
Collecta HiDECK Structural system

- refer to Appendix A3

JCW Sounboard One system

- refer to Appendix A3

7. Services – pipes through separating floor



CHECKLIST (to be completed by site manager/supervisor)

Company: _____

Site: _____

Plot: _____ Site manager/supervisor: _____

Ref.	Item	Yes (✓)	No (✓)	Inspected (initials & date)
1.	Are UltraBEAM metal joists at least 225mm deep?	☐	☐	
2.	Has the specified quilt been fitted between the joists?	☐	☐	
3.	Are resilient ceiling bars fitted at right angles to the joists?	☐	☐	
4.	Has ceiling system been fitted in accordance with the manufacturer's instructions?	☐	☐	
5.	Has floating floor treatment been fitted in accordance with the manufacturer's instructions?	☐	☐	
6.	Has the specified quilt been fitted between the floor battens?	☐	☐	
7.	Is ceiling treatment fixed to the resilient bars with correct screws?	☐	☐	
8.	Are all joints sealed with tape or caulked with sealant?	☐	☐	
9.	Are vertical service pipes wrapped in quilt and boxed in with two layers of gypsum-based board combined nominal mass per unit area of 20 kg/m ² ?	☐	☐	
10.	Have all resilient flanking strips been fitted?	☐	☐	
11.	Is separating floor satisfactorily complete?	☐	☐	

Contact details for technical assistance from Hadley Group, manufacturer of UltraBEAM metal joists:

Telephone: 0121 555 1300

Fax: 0121 555 1301

E-mail: info@hadleygroup.co.uk

Notes (include details of any corrective action)

Site manager/supervisor signature

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

Appendix A1 – Additional Guidance

Bed joint reinforcement

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

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

Internal floor joists/floor beams and masonry separating walls

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

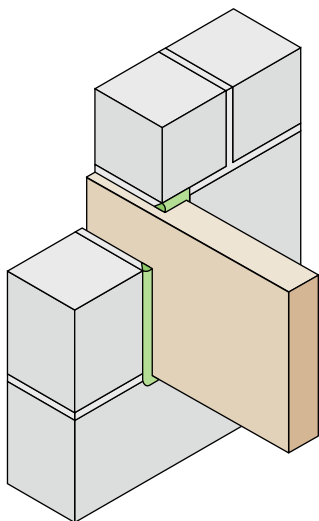
The acoustic performance of separating walls is adversely affected by any gaps in the masonry as these provide a direct sound transmission path.

It is essential that joists and beams are built in only if a high standard of workmanship can be guaranteed.

Solid timber joists

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

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

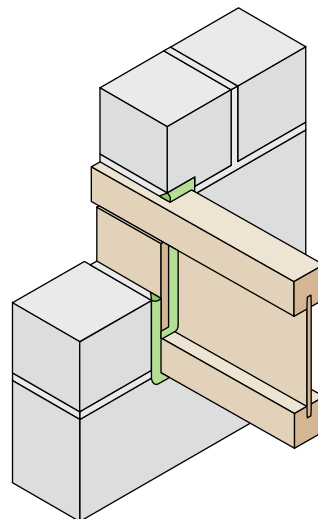


In circumstances where the joist end cap is larger than the depth of the joist, such that there is a gap between the top of the joist and the joist end cap, this should be filled with mineral wool or other suitable material such that the acoustic performance of the wall is maintained.

Engineered metal web joists and Timber I-Joists

Engineered joists may be built into the separating wall provided these are fully sealed at the joint between the masonry and the joist.

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

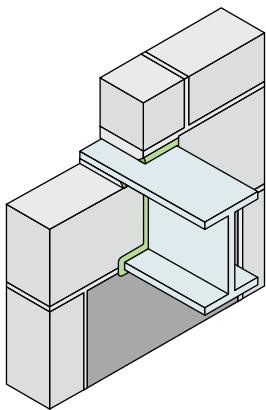


Alternatively, proprietary joist caps/ends designed to satisfy the air leakage requirements of Approved Document L1 may be used. They should be installed in accordance with the manufacturer's instructions.

Appendix A1 – Additional Guidance

Steel beams

Steel beams may be built into the leaf of a cavity 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

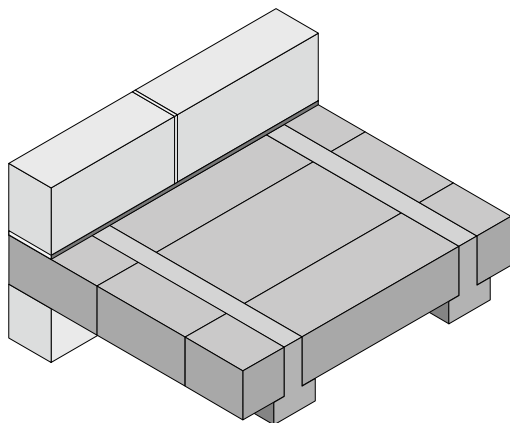
Steel columns built into masonry separating walls are not permitted.

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.



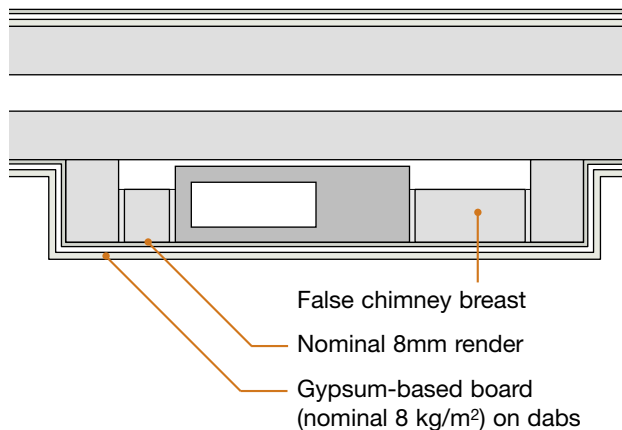
Coursing in blockwork separating walls

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

Flues in separating walls

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

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



Internal render and finishes

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.

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

Internal render, gypsum-based board and wet plaster 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 gypsum-based board or wet plaster are not required behind the stair string.

Services and chases in separating walls

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

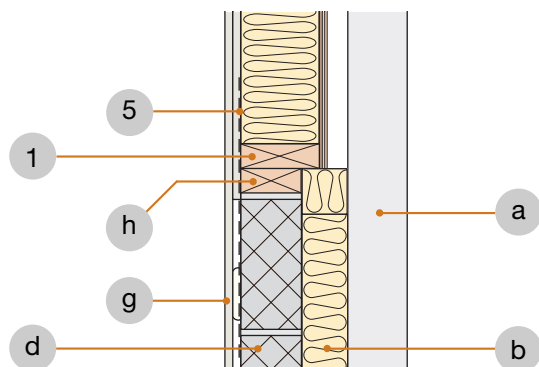
However, where chasing is permitted in the Detail, they should be kept to a minimum. Chases must not be located back to back. Care must be taken to ensure all voids are fully filled with mortar. Where conduits or cappings are used they should not be in contact with the gypsum-based board.

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

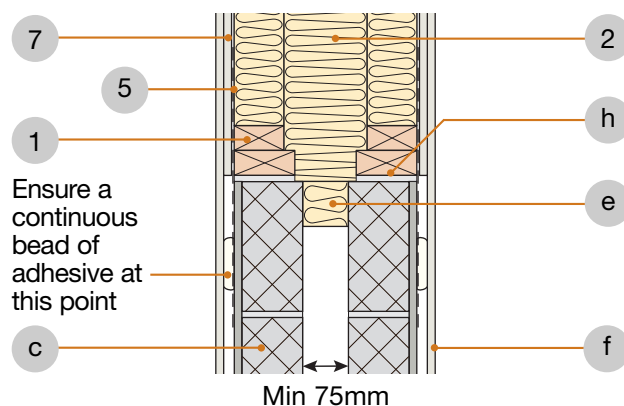
Appendix A2 – Specific Flanking Conditions

Smartroof complete “room-in-roof” panel system using **robustdetails®** timber or masonry cavity walls. Refer to Table 6 in Introduction.

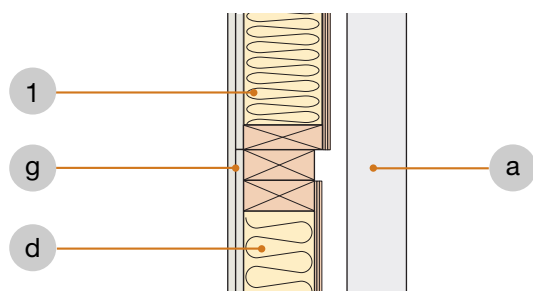
1. Gable flanking junction – masonry



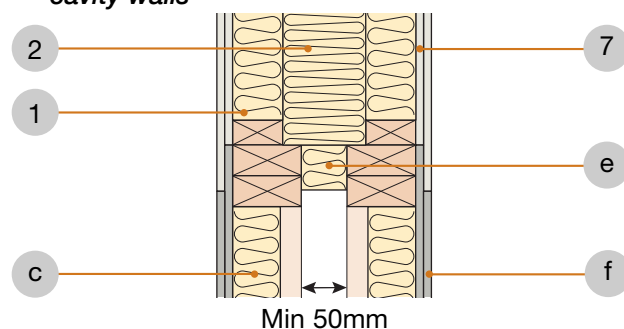
2. Room-in-roof junction with masonry cavity walls



3. Gable flanking junction – timber frame



4. Room-in-roof junction with timber frame cavity walls

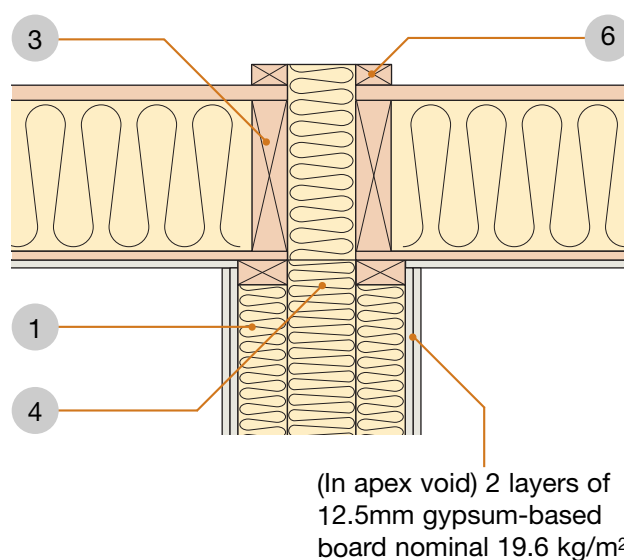


Key

- 1 Smartroof panel.
- 2 Breather membrane-encased insulation cushion, fully filling the cavity.
- 3 Smartroof roof panel.
- 4 125x265mm flexible cavity closer by Smartroof.
- 5 Vertical metal straps by Smartroof.
- 6 25x50mm counterbattens by Smartroof.
- 7 2 layers min.12.5mm gypsum-based board total 19.6 kg/m² to cover spandrel and wall plate.

- a Outer leaf of external wall.
- b Continue cavity batts up to gable end if required.
- c Refer to relevant **robustdetails®** separating wall.
- d Inner leaf dependent on Robust Detail being used.
- e Flexible cavity closer.
- f Gypsum-based board(s) as specified on **robustdetails®** separating wall.
- g Gypsum-based board nominal 8 kg/m². 2 layers required where separating floors are used (refer to **robustdetails®** separating floor).
- h 100x50mm wall plate on nominal 10mm mortar bed. Ensure no gaps remain.

5. Separating wall – roof



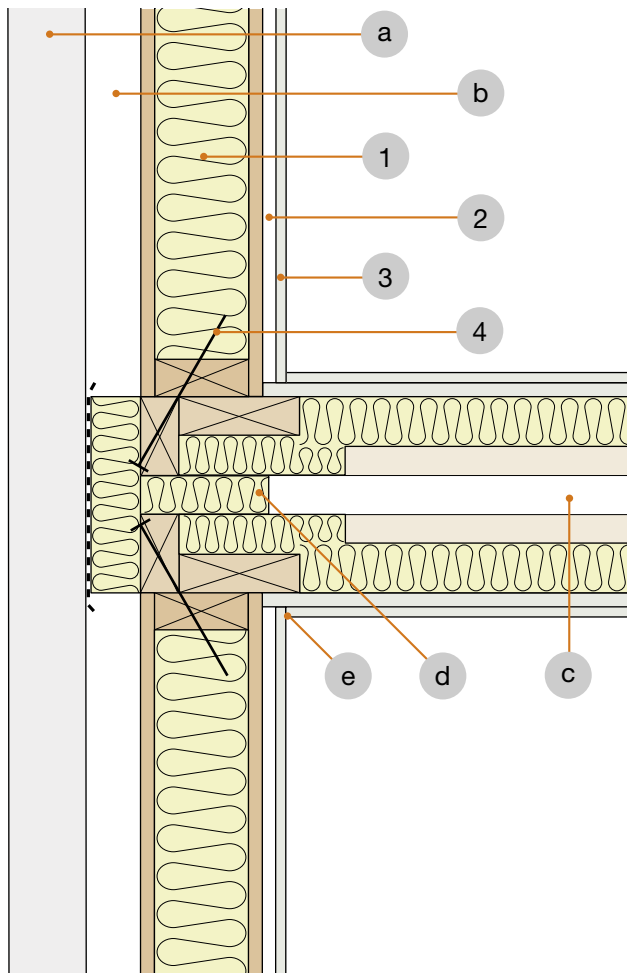
Contact details for Smartroof Limited:

Telephone: 01283 200 199
E-mail: info@smartroof.co.uk
Web: www.smartroof.co.uk

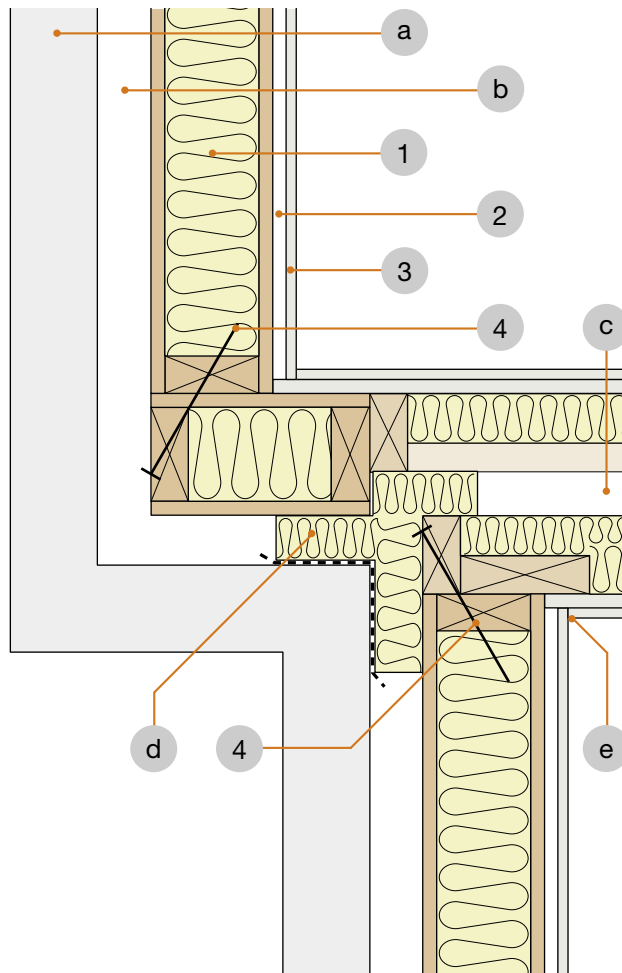
Appendix A2 – Specific Flanking Conditions

Kingspan TEK inner leaf flanking condition for **robustdetails®** timber separating walls. Refer to Table 6 in Introduction. *Currently when used with separating floors in apartments, separating floors will require pre-completion testing.*

1. External (flanking) wall junction



2. Staggered external (flanking) wall junction



Key

- 1 Kingspan TEK – 142 Panel.
- 2 Service void (if required).
- 3 One layer of gypsum-based board nominal 8 kg/m² on inner leaf where there is no separating floor, e.g. for houses.
Two layers of gypsum-based board nominal 8 kg/m² each on inner leaf where there is a separating floor (non-**robustdetails®** floor), e.g. for flats and apartments.
- 4 Approved fixings to TEK BBA Cert No. 02/S029.

- a Masonry outer leaf (min 100mm thick).
- b External wall cavity (min 50mm).
- c **robustdetails®** timber frame separating wall. (Refer to Table 6 in Introduction and relevant timber frame Robust Details in Handbook).
- d Close cavity with flexible cavity stop (see Appendix A).
- e Seal all joints with tape or caulk with sealant.

Contact details for Kingspan TEK,
Kingspan Insulation Limited:

Telephone: 01544 387382

Fax: 01544 387482

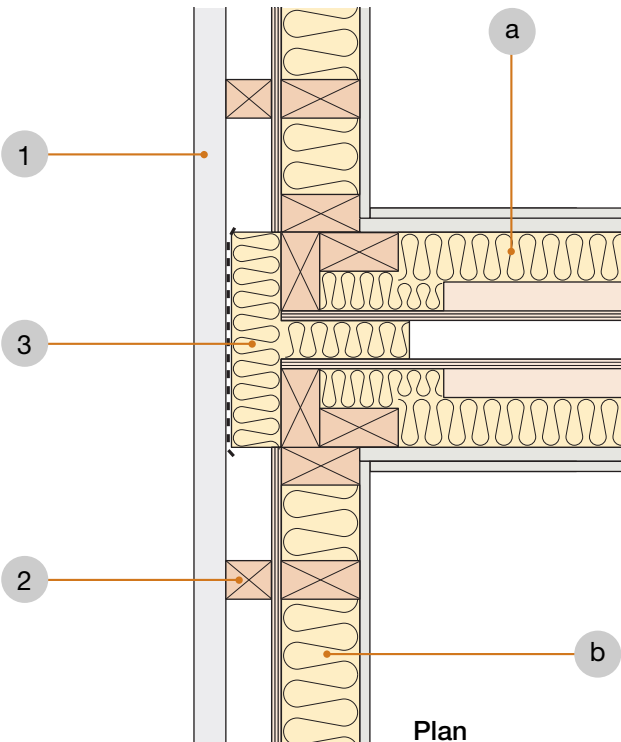
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Appendix A2 – Specific Flanking Conditions

Lightweight external cladding treatments for **robustdetails®** timber separating walls. Refer to Table 6 in Introduction. *Currently when used with separating floors in apartments, separating floors will require pre-completion testing.*

External (flanking) wall junction



Key

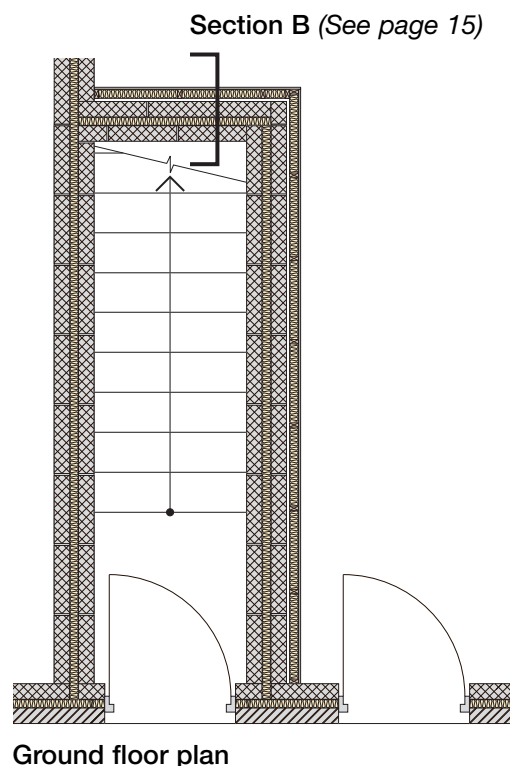
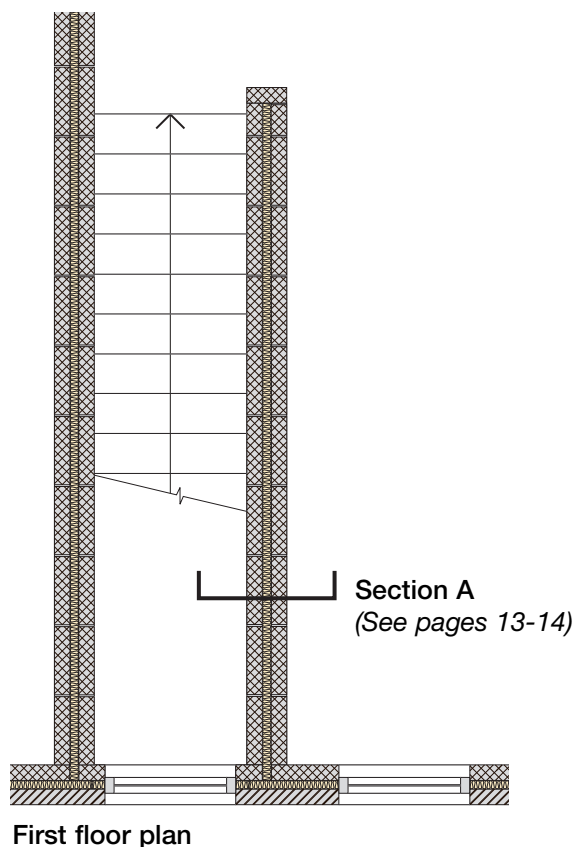
- 1 Cladding system (see Table below).
- 2 Cladding support rails (timber or metal).
Horizontal rails fixed directly to the wall structure must not be continuous across the separating wall.
- 3 Flexible cavity closer to fully close the cavity behind the cladding.
- a Separating wall. See chosen Robust Detail for specification.
- b Inner leaf of external wall. See chosen Robust Detail for specification.

Acceptable cladding types	
Render board	Systems having minimum 9mm rigid render board with minimum mass per unit area of 12.4 kg/m². It is acceptable to have multiple board layers.

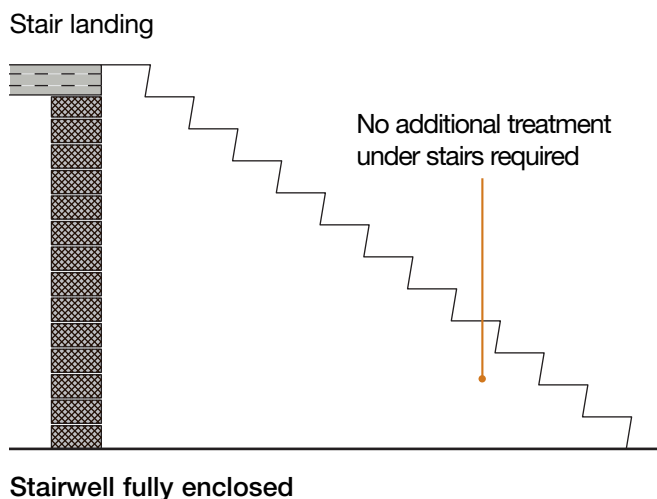
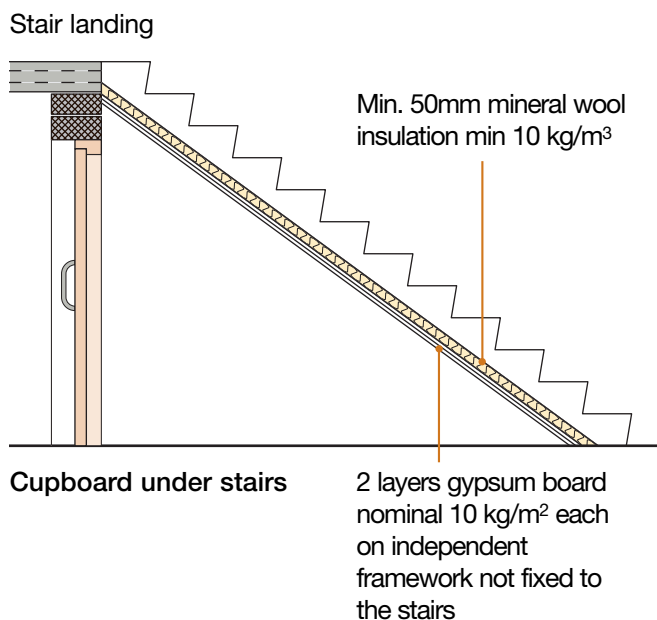
Appendix A2 – Specific Flanking Conditions

Flanking construction guidance for **robustdetails®** precast concrete separating floors around private stairs, where there are two flats (one above the other) and where stairs being open to the upper flat prevents the flanking condition published in the floor Robust Detail from being fully constructed. See Table 6b in the Introduction.

Typical stair arrangement



Stair soffit treatment - applies to both timber and concrete stairs



The area under the stairs must either form a cupboard or be fully enclosed. It is not acceptable to have the stairs soffit within the lower flat outside of an enclosure or cupboard.

Appendix C

Determination of the acoustic performance requirements for floating floor treatments used with robustdetails® timber separating floors

To determine the acoustic performance of floating floor treatments on robustdetails® timber separating floors airborne and impact measurements should be undertaken in an acoustic test laboratory. The following test procedure may be used for robustdetails® timber separating floors with floating floor treatments. The following sections C.1 to C.4 outline the measurement and performance rating criteria.

C.1 Test Laboratory Requirements

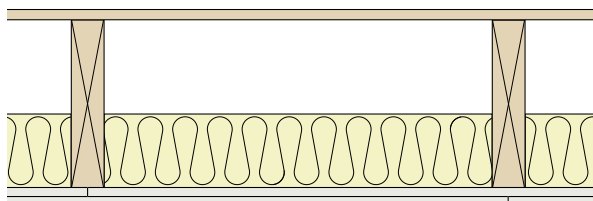
The test facility must have UKAS Accreditation (or EC equivalent) for the measurement of sound insulation in the laboratory, for both airborne sound insulation and impact sound transmission. The test measurement should be undertaken in accordance with BS EN ISO 10140-2, BS EN ISO 10140-3 and BS EN ISO 10140-4 and the performance of each measurement rated in accordance with BS EN ISO 717 (Parts 1 & 2). The measurements should be undertaken in a laboratory with suppressed flanking transmission and in accordance with BS EN ISO 10140-5.

The $R'_{\max}$ value of the laboratory test facility shall be at least 15 dB greater than the sound insulation value of the structure under test.

C.2 Core (or base) Timber Floor and Floating Floor Treatment

Testing should be undertaken on a core (or base) floor which consists of the following construction specification:

Floor Decking	18mm OSB timber decking board (or equivalent timber based board) with mass per unit area of 10-11 kg/m ²
Joists	235mm x 50mm solid timber joists C16 grade timber
Insulation	100mm glass based mineral wool insulation with a density of 10-11 kg/m ³
Ceiling	Two layers of gypsum-based board with an overall mass per unit area of 23-25 kg/m ² .



Laboratory Test Core Floor Construction

The timber joists should be mounted on joist hangers at 450mm centres and the 100mm (deep) glass based mineral wool insulation should be placed in the cavities between the joists and also between cavities formed between the joists and the test aperture border. The floor decking should be mounted on the timber joists with screws at 300mm centres. All junctions between the floor surface perimeter and test aperture should be sealed with a flexible or acoustic sealant.

The ceiling layers should be mounted with joints staggered and the first layer (inner layer) should be fixed to the underside of the joists with screws, at 300mm centres within the field of the boards and at 150mm centres at the board ends. The second layer (outer layer) should be fixed with screws, at 230mm centres within the field of the boards and at 150mm centres at the board ends. The perimeter of the ceiling should be sealed with flexible or acoustic mastic sealant and all joints and screwheads taped with self-adhesive tape

Floating Floor Treatment

The floating floor treatment should cover the entire test area of the core floor surface and should be constructed in accordance with the manufacturer's instructions. All robustdetails® floating floor treatments require a flanking strip to isolate the edge of the floorboard from the perimeter walls. As such the manufacturer should also use the flanking strip, which they would normally use on site, in the laboratory measurements.

C.3 Testing Required

For the purposes of evaluating the performance of a floating floor treatment for Robust Details involving timber separating floors four different measurements are required (2 airborne and 2 impact measurements). The following measurements are required:

Airborne

- Test 1 Determination of $R_w + C_{tr}$ for the core (or base) timber floor.
- Test 2 Determination of $R_w + C_{tr}$ for the core (or base) timber floor with the floating floor treatment applied to the core floor surface.

Impact

- Test 3 Determination of $L_{n,w}$ for the core (or base) timber floor.
- Test 4 Determination of $L_{n,w}$ for the core (or base) timber floor with the floating floor treatment applied to the core floor surface.

Note: Testing of floating floor treatments done in accordance with previous versions of this Appendix C, will still be valid.

Appendix C

C.4 Expression of Performance

The airborne sound insulation performance of the floating floor treatment should be expressed as the improvement in airborne sound insulation ($rd\Delta R_w + C_{tr}$) as a result of the application of the floating floor treatment to the core floor ($rd\Delta R_w + C_{tr}$ = Test 2 - Test 1).

The impact sound transmission performance of the floating floor treatment should be expressed as the reduction in impact sound transmission ($rd\Delta L_w$) as a result of the application of the floating floor treatment to the core floor ($rd\Delta L_w$ = Test 3 - Test 4).

C.5 Performance Requirement

The floating floor treatment:

- a) Must achieve a minimum laboratory performance of $rd\Delta R_w + C_{tr} = 13\text{dB}$ and $rd\Delta L_w = 15\text{dB}$.
- b) Must be installed in accordance with the manufacturer's instructions.
- c) Requires 5mm (min) resilient flanking strips around the perimeter of the flooring board to isolate floor from walls and skirting.

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

*Note – void dimension indicated is when floor is loaded to 25 kg/m²