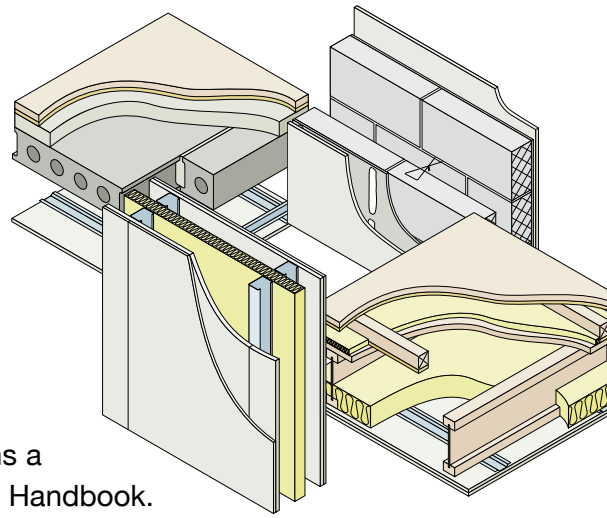
October 2021 Update Pack



Dear Colleague,

Thank you for downloading this October update, which contains a significant new Robust Detail as well as a new Appendix to the Handbook.

The new Robust Detail is for full factory-built volumetric houses using light-steel frame. This is just the second of its kind in the Handbook, and has arrived in the midst of the renewed push for MMC.

Appendix H has been added to give the testing methodology to prove the acoustic suitability of putty pads and other proprietary switch and socket protection, to allow their use in light frame robustdetails® walls. A note has been added to the services section of the relevant walls.

Please update your June 2021, 4th Edition Handbook as follows:

1. Remove and replace the Contents page.
2. Remove and replace **page 3/4** of the Introduction.
3. Remove and replace **page 7/8** of E-WT-1.
4. Remove and replace **pages 5/6 and 7/8** of E-WT-2.
5. Remove and replace **page 5/6** of E-WT-4 and E-WS-1.
6. Remove and replace **page 7/8** of E-WS-2.
7. Remove and replace **page 5/6** of E-WS-4.
8. Remove and replace **page 9/10** of E-WS-5.
9. Remove and replace **pages 13-16** of Appendix A2.
10. Insert the new **E-WS-6** to the end of the Separating Walls, Steel Frame section.
11. Insert the new **Appendix H** to the end of the Handbook.

Yours sincerely

John Thompson

Chief Executive,
Robust Details Limited

Changes to the fourth edition following October 2021 update

Section	Page	Amendment
Contents		
Appendices	2	New Appendix H added.
Introduction		
Table 1	4	New wall type E-WS-6 added.
Separating Wall – Timber		
E-WT-1		
Services and sockets	7	Note added regarding the use of putty pads.
E-WT-2		
Services and sockets	7	Note added regarding the use of putty pads.
E-WT-4		
Services and sockets	6	Note added regarding the use of putty pads.
Separating Wall – Steel		
E-WS-1		
Services and sockets	6	Note added regarding the use of putty pads.
E-WS-2		
Services and sockets	7	Note added regarding the use of putty pads.
E-WS-4		
Services and sockets	6	Note added regarding the use of putty pads.
E-WS-5		
Services and sockets	10	Note added regarding the use of putty pads.
E-WS-6		
All	1-6	New detail added – steel frame volumetric housing.
Appendix A2		
Private stairs	13-15	Notes added to confirm when floating screed system must be installed. Notes added to clarify that independent leaf and bonded resilient layer is optional for cavity masonry constructions.
Appendix H		
All	1	New appendix added – Test requirements for putty pads and other proprietary switch and socket box protection.

Contents

Introduction

Special note for Robust Details constructed in Northern Ireland

List of Robust Details

- Table 1 – Separating walls
- Table 2 – Separating floors
- Tables 3a, 3b and 3c
  – robustdetails® separating walls and floors which can be used together in flats/apartments
- Table 4 – robustdetails® separating walls which can be used together with non-robustdetails® separating floors in flats/apartments
- Table 5 – robustdetails® separating floors which can be used together with non-robustdetails® separating walls in flats/apartments
- Tables 6a and 6b
  – robustdetails® separating walls and floors which can be used together with the proprietary flanking constructions contained in Appendix A2
- Table 7 – robustdetails® separating floors which can be used together with alternative products contained in Appendix A3

Robust Details

Separating walls

- Masonry
- Timber
- Steel

Separating floors

- Concrete
- Timber
- Steel-concrete composite

Contents

Appendices

Appendix A1	Additional guidance
Appendix A2	Specific flanking constructions
Appendix A3	Specific proprietary products
Appendix B	Glossary
Appendix C	Determination of the acoustic performance requirements for floating floor treatments used with robustdetails® timber frame separating floors
Appendix D	Determination of the acoustic performance requirements for floating floor treatments used with robustdetails® concrete and steel-concrete composite separating floors
Appendix E	Determination of the acoustic performance requirements for resilient bars used on ceilings
Appendix F	Determination of the acoustic performance of downlighters and recessed lighting in lightweight separating floors
Appendix G	Determination of the acoustic performance for bonded floor coverings used with robustdetails® concrete separating floor E-FC-8.
Appendix H	Determination of the acoustic performance for “putty pads” and other proprietary socket or switch box liners, or proprietary backboxes used with robustdetails® light frame separating walls.

Introduction

List of Robust Details

Table 1 – Separating walls

E-WM-1	masonry – dense aggregate blockwork (wet plaster)
E-WM-2	masonry – lightweight aggregate blockwork (wet plaster)
E-WM-3	masonry – dense aggregate blockwork (render and gypsum-based board)
E-WM-4	masonry – lightweight aggregate blockwork (render and gypsum-based board)
E-WM-5	masonry – Besblock “Star Performer” cellular blockwork (render and gypsum-based board)
E-WM-6	masonry – aircrete blockwork (render and gypsum-based board)
E-WM-7	Suspended from further registrations
E-WM-8	masonry – lightweight aggregate blockwork Saint Gobain – Isover RD35 (gypsum-based board)
E-WM-9	masonry – solid dense aggregate blockwork (render and gypsum-based board)
E-WM-10	masonry – aircrete thin joint blockwork with specified wall ties (render and gypsum-based board finish)
E-WM-11	masonry – lightweight aggregate blockwork (render and gypsum-based board) 100mm minimum cavity
E-WM-12	masonry – Plasmor “Aglite Ultima” lightweight aggregate blockwork (render and gypsum-based board)
E-WM-13	masonry – aircrete thin joint - untied blockwork (render and gypsum-based board)
E-WM-14	masonry – lightweight aggregate blockwork Saint Gobain – Isover RD35 (gypsum-based board) with 100mm minimum cavity
E-WM-15	masonry – aircrete blockwork Saint Gobain - Isover RD35 (gypsum-based board)
E-WM-16	masonry – dense aggregate blockwork (render and gypsum-based board) with 100mm minimum cavity
E-WM-17	masonry – lightweight aggregate blockwork Saint Gobain-Isover RD Party Wall Roll (gypsum-based board)
E-WM-18	masonry – dense aggregate blockwork (wet plaster) with 100mm minimum cavity
E-WM-19	masonry – dense or lightweight aggregate blockwork (render and gypsum-based board) with 100mm minimum cavity and MONARFLOOR® BRIDGESTOP® system
E-WM-20	masonry – lightweight aggregate blockwork Saint Gobain – Isover RD Party Wall Roll (gypsum-based board) with 100mm minimum cavity
E-WM-21	masonry – lightweight aggregate blockwork (wet plaster) with 100mm minimum cavity
E-WM-22	masonry – lightweight aggregate blockwork – Knauf Earthwool Masonry Party Wall Slab or Superglass Party Wall Roll or URSA Cavity Batt 35 or URSA PARTY WALL ROLL (gypsum-based board) with 100mm minimum cavity
E-WM-23	masonry – aircrete blockwork Superglass Party Wall Roll (gypsum-based board) 100mm min cavity
E-WM-24	masonry – aircrete blockwork Saint Gobain – Isover RD Party Wall Roll (gypsum-based board) with 100mm minimum cavity
E-WM-25	masonry – Porotherm clay blockwork (Ecoparge and gypsum-based board) with 100mm minimum insulated cavity
E-WM-26	masonry – Besblock “Star Performer” cellular blockwork (gypsum-based board) with 100mm minimum insulated cavity
E-WM-27	masonry – lightweight aggregate blockwork Superglass Party Wall Roll (gypsum-based board) with minimum 75mm cavity
E-WM-28	masonry – lightweight aggregate blockwork Knauf Supafil® Party Wall (gypsum-based board) with minimum 100mm cavity
E-WM-29	masonry – Porotherm clay blockwork (Ecoparge and gypsum-based board) with 75mm minimum insulated cavity
E-WM-30	masonry – aircrete blockwork Knauf Supafil® Party Wall (gypsum-based board) with 100mm min cavity
E-WM-31	masonry – H+H – Celcon Elements (gypsum-based board) with 100mm minimum insulated cavity
E-WM-32	masonry – lightweight aggregate blockwork Knauf Earthwool Masonry Party Wall Slab (gypsum-based board) with minimum 75mm cavity
E-WM-33	masonry – lightweight aggregate blockwork Superglass Superwhite 34 (gypsum-based board) with 100mm minimum cavity
E-WM-34	masonry – Plasmor “Aglite Ultima’ lightweight aggregate blockwork (render and gypsum-based board) with full-fill cavity insulation

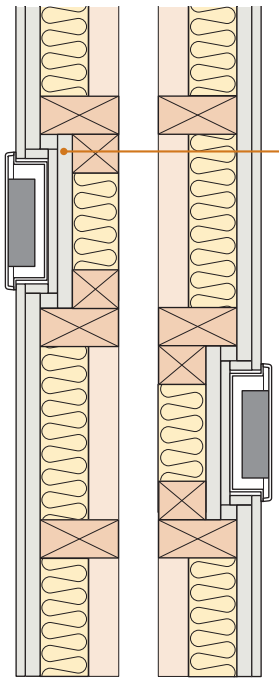
See over for timber and steel frame walls

List of Robust Details

Table 1 (continued) – Separating walls

E-WT-1	timber frame – without sheathing board
E-WT-2	timber frame – with sheathing board
E-WT-3	timber frame – Elecoframe prefabricated panels
E-WT-4	timber frame – Excel Industries Warmcell 500 insulation - with sheathing board
E-WS-1	steel frame – twin metal frame
E-WS-2	steel frame – British Gypsum Gypwall QUIET IWL
E-WS-3	steel frame – modular steel frame housing
E-WS-4	steel frame – twin metal frame - 250mm between linings
E-WS-5	steel frame – twin metal frame
E-WS-6	steel frame – modular steel frame volumetric housing

10. Services and sockets in the separating wall



Plan

10.1 – electrical sockets, switches, etc.

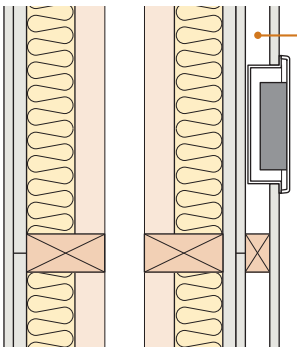
Provide two or more layers of gypsum-based board (total nominal mass per unit area 22 kg/m²) to enclose electrical boxes

Stagger sockets, switches, etc. on each side of the wall such that they are not positioned in opposite bays

Alternatively, fire resistant putty pads or other proprietary liner may be used with sockets, provided:

a) They achieve a laboratory performance of no worse than $\mathbf{rd}\,\Delta R_w + C_{tr}$ = −1dB - see Appendix H

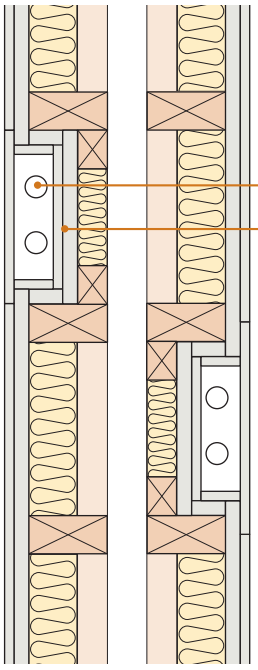
b) They are installed in accordance with the manufacturer's instructions



Plan

Alternatively provide a service void on surface of separating wall. This is the preferred method where more than one socket, switch, etc. are close together, e.g. in a kitchen.

Studs or battens used to create the service zone should be securely fixed back to the separating wall structure



Plan

10.2 – piped services

Service duct within separating wall

Provide two or more layers of gypsum-based board (total nominal mass per unit area 22 kg/m²) to enclose pipes

Stagger services on each side of wall such that they are not positioned in opposite bays

Note: this detail is not applicable for SVPs or gas pipes.

CHECKLIST (to be completed by site manager/supervisor)

Company:

Site:

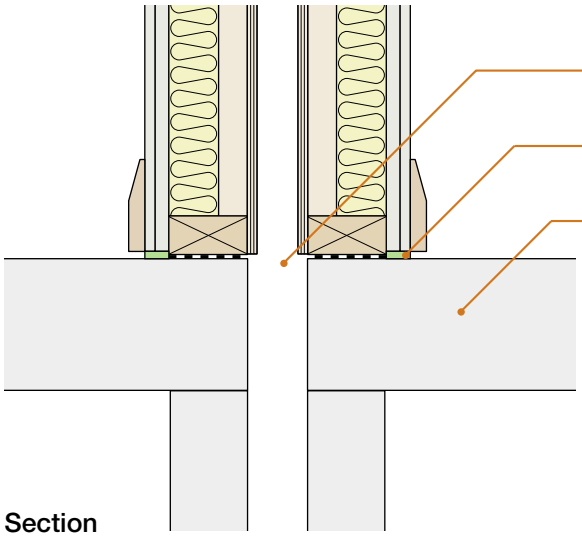
Plot: Site manager/supervisor:

Ref.	Item	Yes (✔)	No (✔)	Inspected (initials & date)
1.	Are wall linings at least 240mm apart?			
2.	Is absorbent material at least 60mm thick?			
3.	Does absorbent material cover whole lining area except above ceiling line in roof void zone?			
4.	Are all joints in wall lining staggered?			
5.	Is separating wall lining correct mass per unit area on both sides?			
6.	Are all joints sealed with tape or caulked with sealant?			
7.	Are services installed in accordance with sketches 10.1 and 10.2?			
8.	If there is a separating floor (e.g. in flats/apartments) has the resilient flanking strip been provided?			
9.	Is separating wall satisfactorily complete?			

Notes (include details of any corrective action)

Site manager/supervisor signature . . . . . .

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



Section

*Note – Ensure substructure masonry is correctly set out to enable timber frame to achieve the required gap between wall panels

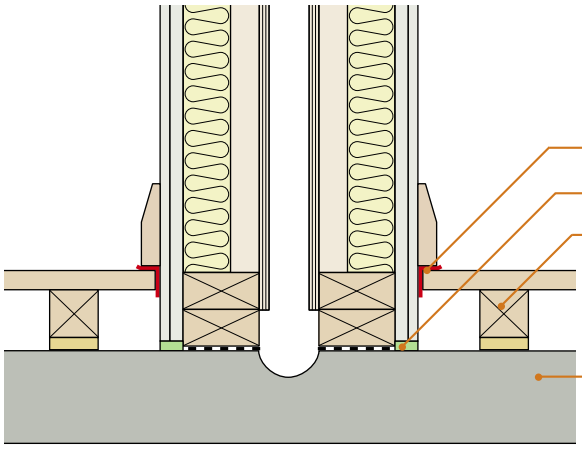
Ground floors not continuous between dwellings

Flexible or acoustic sealant (may be omitted when timber ground floor is used)

Ground floor construction:

- timber floor joists:
  - may span in either direction
  - floor decking may run under sole plates
  - close spaces between floor joists with full depth timber blocking where joists are at right angles to wall, or
- beam and block floor with all voids filled with mortar, or
- precast concrete planks with all voids between planks and blockwork filled with mortar or flexible sealant, or
- cast in-situ concrete suspended slab, or
- ground bearing slab

7. Raft foundation



Section

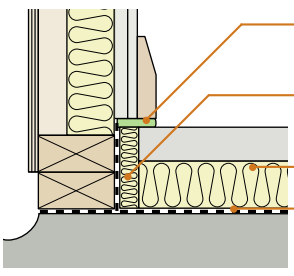
5mm (min) resilient flanking strip

Flexible or acoustic sealant

A floating floor treatment must be used (for ground floor floating floor treatments mineral fibre quilt is not required between the battens or cradle system)

Concrete raft - mass per unit area of 365 kg/m^2 (min)

Alternative detail with screed finish



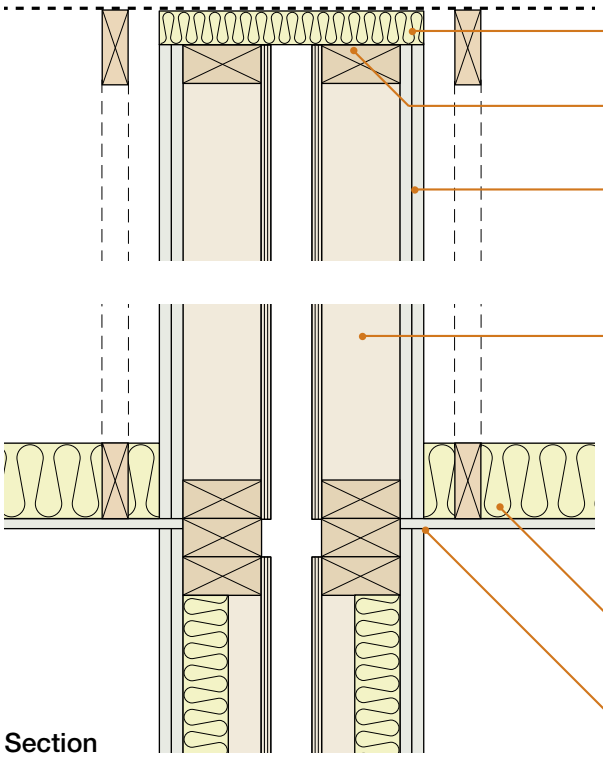
Mastic sealant, ensure skirting and wall lining are isolated from screed

Perimeter insulation, isolating screed from timber frame

Below screed insulation, isolating screed from raft

Polyethylene

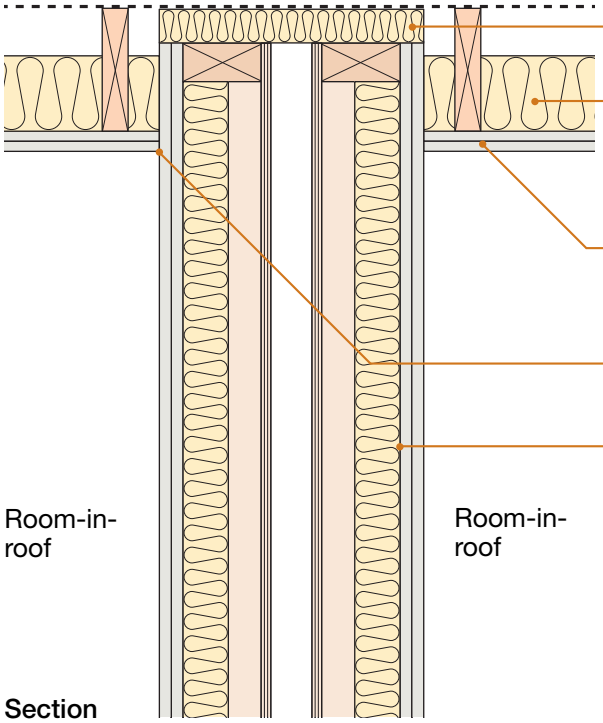
8. Roof junction - pitched roof with no room-in-roof



Section

- Junction between separating wall and roof filled with flexible closer
- Cavity separating wall continuous to underside of roof
- Wall lining above ceiling – 2 or more layers of gypsum-based board (minimum total nominal mass per unit area 16 kg/m²), both sides, all joints staggered
- Absorbent material not required in separating wall above ceiling
  Alternatively use spandrel panel - see Appendix A
- External wall cavity closed at eaves level with a suitable flexible material (e.g. mineral wool).
  If a rigid material is used, then it should only be bonded to one leaf
- 100mm (min) mineral wool insulation, 10 kg/m³ (min), between ceiling joists
- Seal all perimeter joints with tape or caulk with sealant

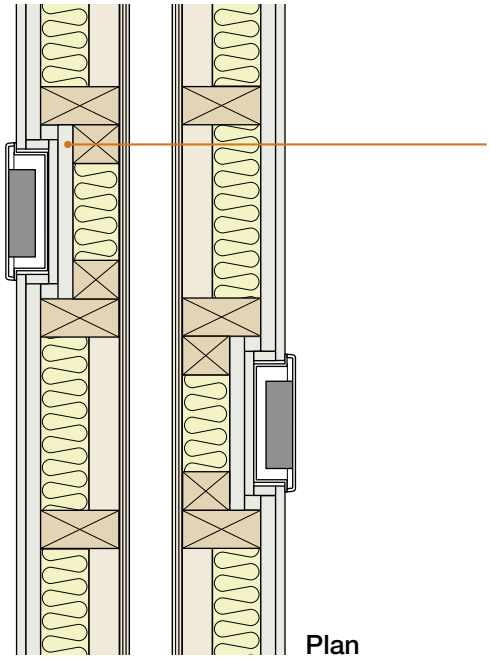
9. Roof junction - pitched roof with room-in-roof



Section

- Junction between separating wall and roof filled with flexible closer
- 100mm (min) mineral wool insulation minimum density 10 kg/m³ or 60mm (min) foil faced PUR or PIR insulation, minimum density 30 kg/m³ (See Appendix A)
- 2 layers of nominal 8 kg/m² gypsum-based board. Where used, rigid insulation may be placed between and/or directly beneath rafters
- Seal all perimeter joints with tape or caulk with sealant
- Cavity timber separating wall continuous to underside of roof covering
- External wall cavity closed at eaves level with a suitable flexible material (e.g. mineral wool). If a rigid material is used, then it should only be bonded to one leaf

10. Services and sockets in the separating wall



Plan

9.1 – electrical sockets, switches, etc.

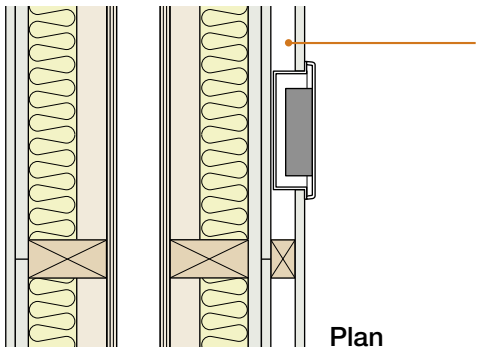
Provide two or more layers of gypsum-based board (total nominal mass per unit area 22 kg/m²) to enclose electrical boxes

Stagger sockets, switches, etc. on each side of the wall such that they are not positioned in opposite bays

Alternatively, fire resistant putty pads or other proprietary liner may be used with sockets, provided:

a) They achieve a laboratory performance of no worse than $\mathbf{rd}\,\Delta R_w + C_{tr} = -1$dB - see Appendix H

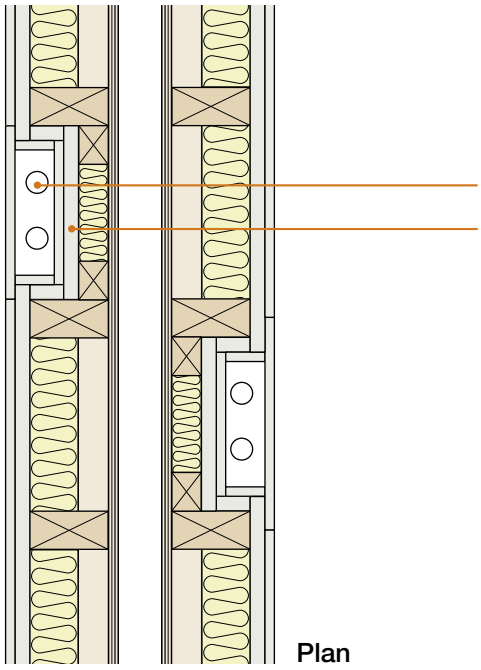
b) They are installed in accordance with the manufacturer's instructions



Plan

Alternatively provide a service void on surface of separating wall. This is the preferred method where more than one socket, switch, etc. are close together, e.g. in a kitchen.

Studs or battens used to create the service zone should be securely fixed back to the separating wall structure



Plan

9.2 – piped services

Service duct within separating wall

Provide two or more layers of gypsum-based board (total nominal mass per unit area 22 kg/m²) to enclose pipes

Stagger services on each side of wall such that they are not positioned in opposite bays

Note: this detail is not applicable for SVPs or gas pipes.

CHECKLIST (to be completed by site manager/supervisor)

Company:

Site:

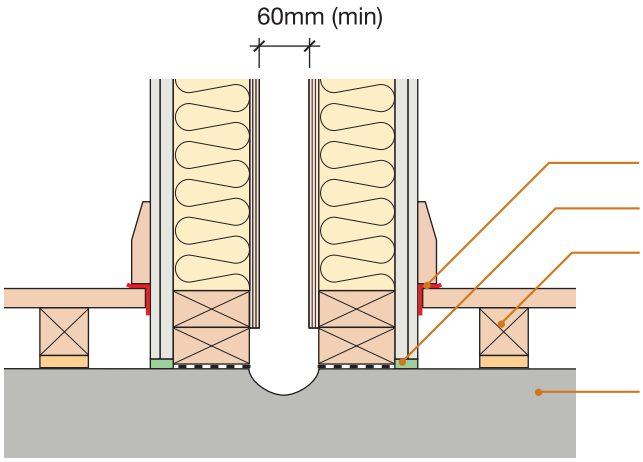
Plot: Site manager/supervisor:

Ref.	Item	Yes (✔)	No (✔)	Inspected (initials & date)
1.	Are wall linings at least 240mm apart?			
2.	Are sheathing boards at least 50mm apart?			
3.	Are stud frames at least 68mm apart?			
4.	Is absorbent material at least 60mm thick?			
5.	Does absorbent material cover whole lining area except above ceiling line in roof void zone?			
6.	Are all joints in wall lining staggered?			
7.	Is separating wall lining correct mass per unit area on both sides?			
8.	Are all joints sealed with tape or caulked with sealant?			
9.	Are services installed in accordance with sketches 9.1 and 9.2?			
10.	If there is a separating floor (e.g. in flats/apartments) has the resilient flanking strip been provided?			
11.	Is separating wall satisfactorily complete?			

Notes (include details of any corrective action)

Site manager/supervisor signature . . . . . .

7. Raft foundation



5mm (min) resilient flanking strip

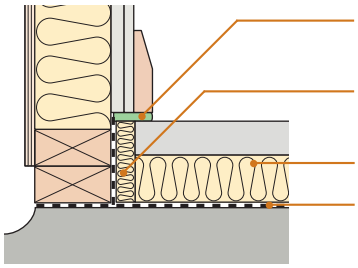
Flexible or acoustic sealant

A floating floor treatment must be used (for ground floor floating floor treatments mineral fibre quilt is not required between the battens or cradle system)

Concrete raft - mass per unit area of 365 kg/m² (min)

Section

Alternative detail with screed finish



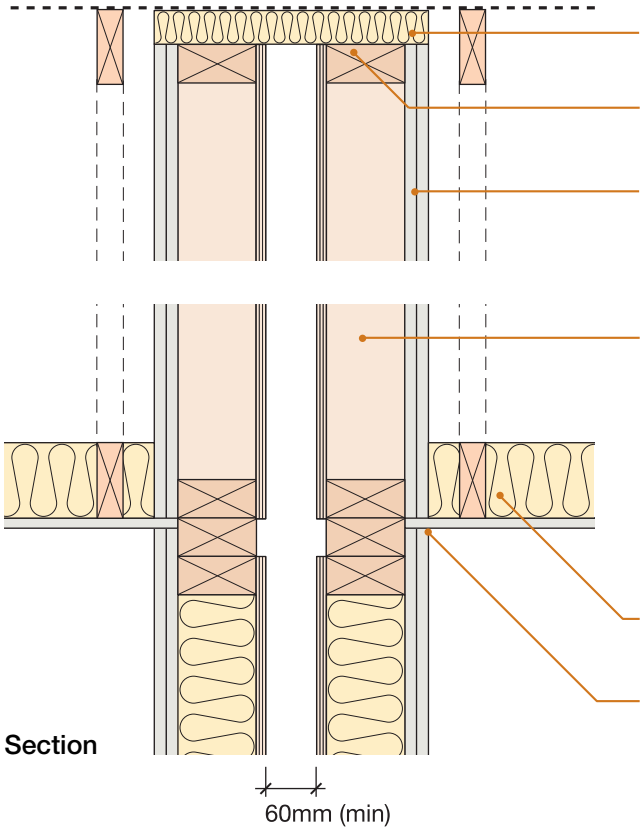
Mastic sealant, ensure skirting and wall lining are isolated from screed

Perimeter insulation, isolating screed from timber frame

Below screed insulation, isolating screed from raft

Polyethylene

8. Roof junction - pitched roof with no room-in-roof



Junction between separating wall and roof filled with flexible closer

Cavity separating wall continuous to underside of roof

Wall lining above ceiling – 2 or more layers of gypsum-based board (minimum total nominal mass per unit area 16 kg/m²), both sides, all joints staggered

Absorbent material not required in separating wall above ceiling

Alternatively use spandrel panel - see Appendix A

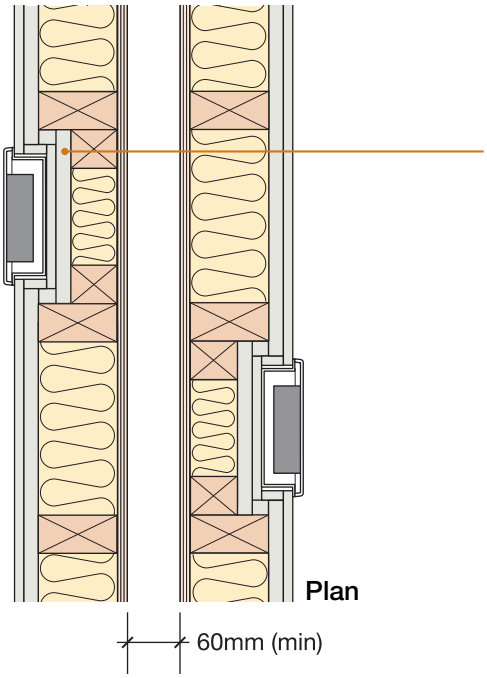
External wall cavity closed at eaves level with a suitable flexible material (e.g. mineral wool). If a rigid material is used, then it should only be bonded to one leaf

100mm (min) mineral wool insulation, 10 kg/m³ (min), between ceiling joists

Seal all perimeter joints with tape or caulk with sealant

Section

9. Services and sockets in the separating wall



9.1 – electrical sockets, switches, etc.

Provide two or more layers of gypsum-based board (total nominal mass per unit area 22 kg/m²) to enclose electrical boxes

Stagger sockets, switches, etc. on each side of the wall such that they are not positioned in opposite bays

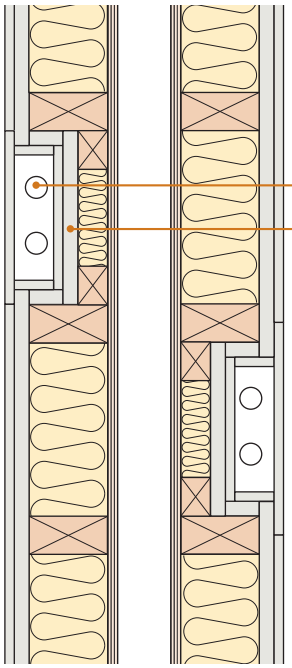
Alternatively, fire resistant putty pads or other proprietary liner may be used with sockets, provided:

a) They achieve a laboratory performance of no worse than $rd\Delta R_w+C_{tr}$ = –1dB - see Appendix H

b) They are installed in accordance with the manufacturer's instructions

Alternatively provide a service void on surface of separating wall. This is the preferred method where more than one socket, switch, etc. are close together, e.g. in a kitchen.

Studs or battens used to create the service zone should be securely fixed back to the separating wall structure



9.2 – piped services

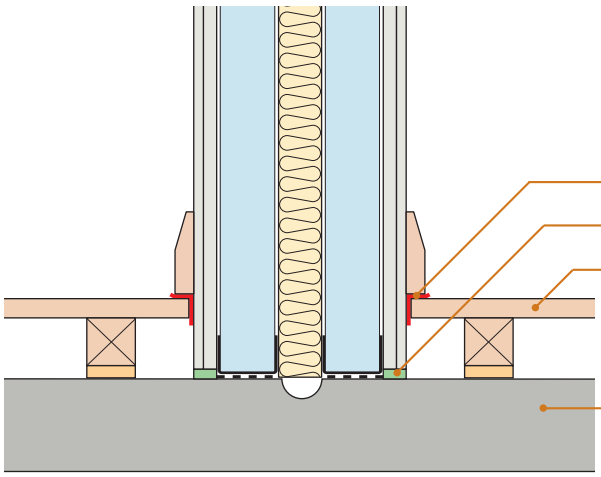
Service duct within separating wall

Provide two or more layers of gypsum-based board (total nominal mass per unit area 22 kg/m²) to enclose pipes

Stagger services on each side of wall such that they are not positioned in opposite bays

Note: this detail is not applicable for SVPs or gas pipes.

7. Raft foundation



5mm (min) resilient flanking strip

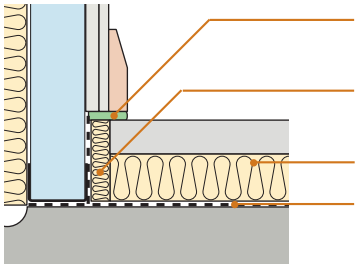
Flexible or acoustic sealant

A floating floor treatment must be used (for ground floor floating floor treatments mineral fibre quilt is not required between the battens or cradle system)

Concrete raft - mass per unit area of 365 kg/m² (min)

Section

Alternative detail with screed finish



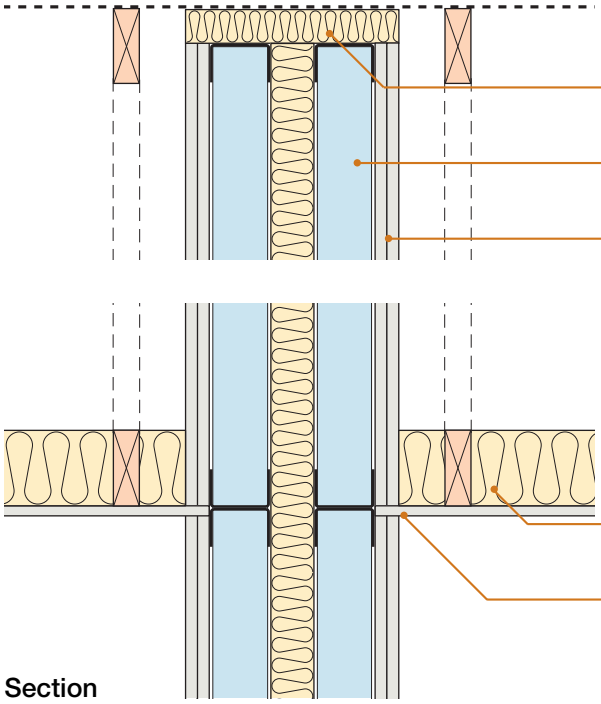
Mastic sealant, ensure skirting and wall lining are isolated from screed

Perimeter insulation, isolating screed from metal frame

Below screed insulation, isolating screed from raft

Polyethylene

8. Roof junction - pitched roof with no room-in-roof



Junction between separating wall and roof filled with flexible closer.

Cavity separating wall continuous to underside of roof

Wall lining above ceiling – 2 or more layers of gypsum-based board (minimum total nominal mass per unit area 16 kg/m²), both sides, all joints staggered

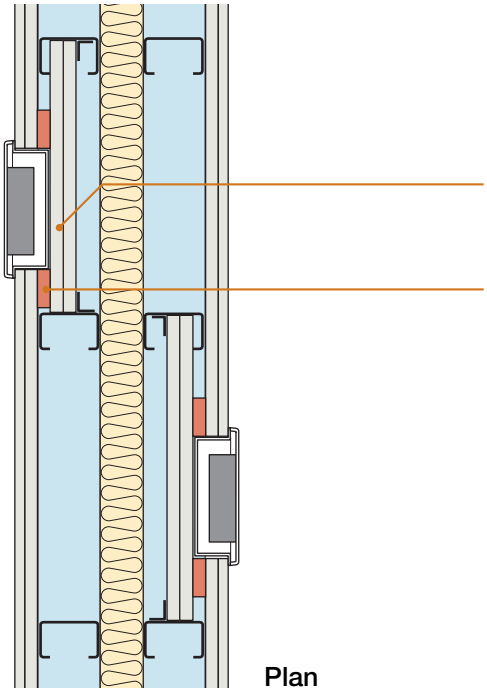
External wall cavity closed at eaves level with a suitable flexible material (e.g. mineral wool). If a rigid material is used, then it should only be bonded to one leaf

100mm (min) mineral wool insulation, 10 kg/m³ (min), between ceiling joists

Seal all perimeter joints with tape or caulk with sealant

Section

9. Services and sockets in the separating wall



Plan

9.1 – electrical sockets, switches, etc.

Stagger sockets, switches, etc. on each side of the wall such that they are not positioned in opposite bays

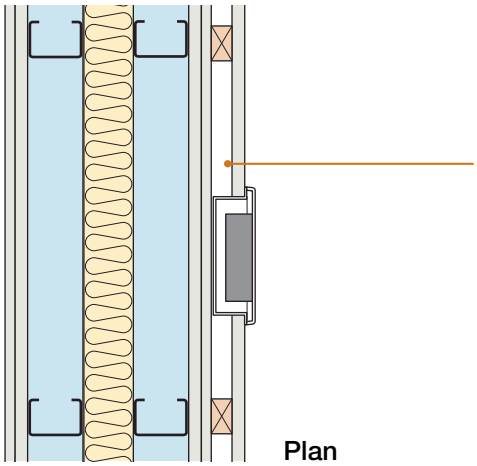
Provide two or more layers of gypsum-based board (total nominal mass per unit area 22 kg/m^2) to enclose electrical boxes

Fire resistant seal where required by Part B of the Building Regulations

Alternatively, fire resistant putty pads or other proprietary liner may be used with sockets, provided:

a) They achieve a laboratory performance of no worse than **rd** $\Delta R_w + C_{tr}$ = –1dB - see Appendix H

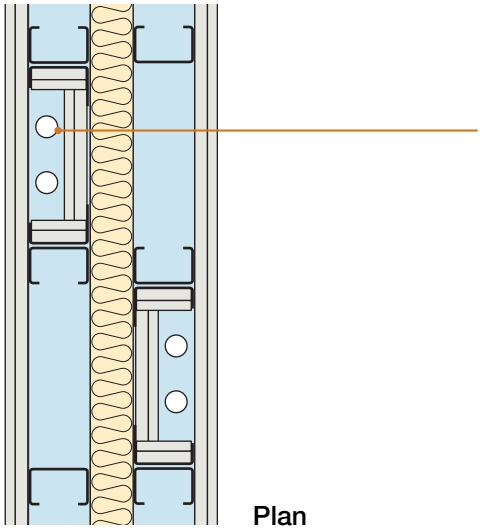
b) They are installed in accordance with the manufacturer's instructions



Plan

Service void on surface of separating wall. This is the preferred method where more than one socket, switch, etc. are close together, e.g. in a kitchen.

Studs or battens used to create the service zone should be securely fixed back to the separating wall structure.



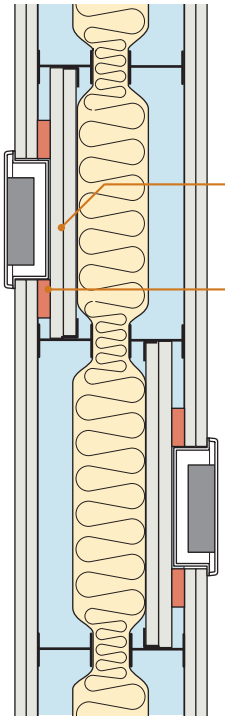
Plan

9.2 – piped services

Stagger services on each side of wall such that they are not positioned in opposite bays

Note: this detail is not applicable for SVPs or gas pipes

10. Services and sockets in the separating wall



Plan

10.1 electrical sockets, switches etc

Stagger sockets, switches, etc. on each side of the wall such that they are not positioned in opposite bays

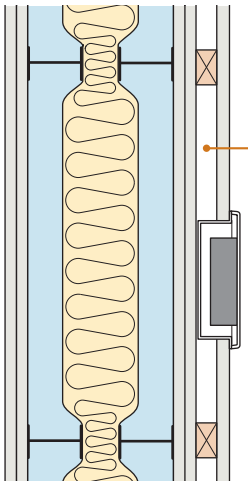
Provide two or more layers of gypsum-based board (total nominal mass per unit area 22 kg/m²) to enclose electrical boxes

Fire resistant seal where required by Part B of the Building Regulations

Alternatively, fire resistant putty pads or other proprietary liner may be used with sockets, provided:

a) They achieve a laboratory performance of no worse than $\mathbf{rd}\,\Delta R_w + C_{tr}$ = −1dB - see Appendix H

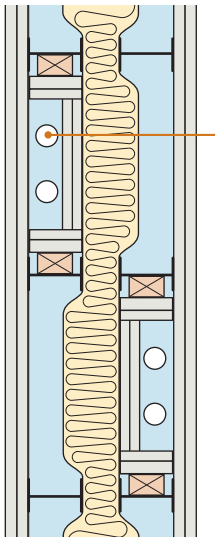
b) They are installed in accordance with the manufacturer's instructions



Plan

Service void on surface of separating wall. This is the preferred method where more than one socket, switch, etc. are close together, e.g. in a kitchen

Studs or battens used to create the service zone should be securely fixed back to the separating wall structure



Plan

10.2 piped services

Stagger services on each side of the wall such that they are not positioned in opposite bays

Note: this detail is not applicable for SVPs or gas pipes

CHECKLIST (to be completed by site manager/supervisor)

Company:

Site:

Plot: Site manager/supervisor:

Ref.	Item	Yes (✔)	No (✔)	Inspected (initials & date)
1.	Are wall linings at least 190mm apart?			
2.	Is absorbent material 100mm (min) Isover mineral wool quilt (min density 10 kg/m^3)?			
3.	Is quilt compressed between studs?			
4.	Is separating wall lining two layers of 15mm Gyproc SoundBloc plasterboard on both sides?			
5.	Are all joints in wall lining staggered?			
6.	Are all joints sealed with tape or caulked with sealant?			
7.	Are services and sockets installed in accordance with sketches 10.1 and 10.2?			
8.	Is separating wall satisfactorily complete?			

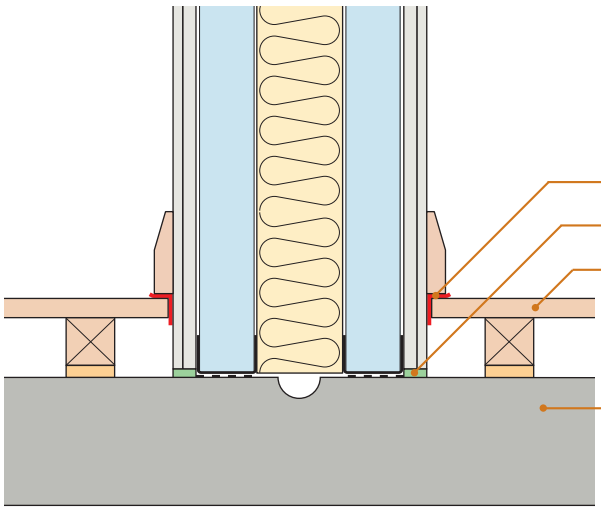
Contact details for technical assistance from British Gypsum, manufacturer of Gypwall QUIET IWL steel frames:

Telephone: 0844 800 1991 **Fax:** 0844 561 8816 **E-mail:** bgtechnical.enquiries@bpb.com

Notes (include details of any corrective action)

Site manager/supervisor signature . . . . . .

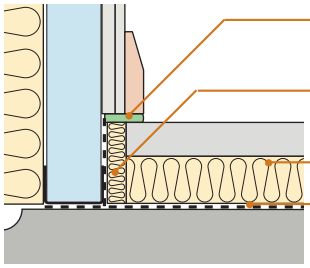
7. Raft foundation



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

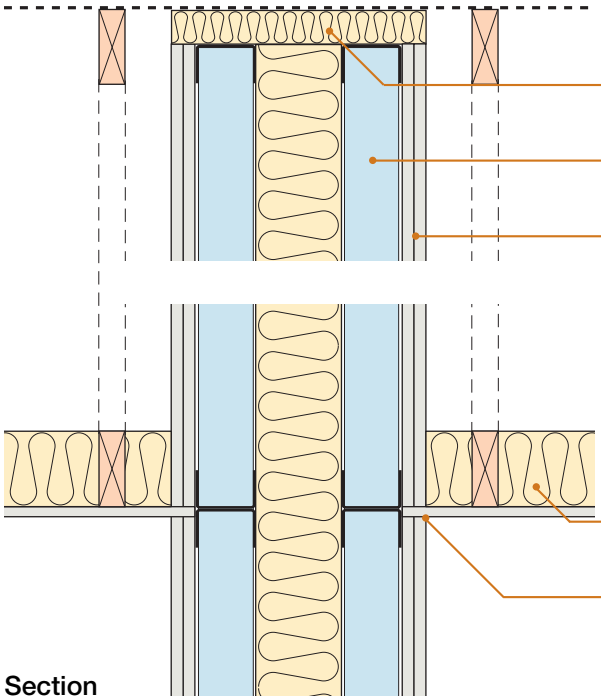
Section

Alternative detail with screed finish



- Mastic sealant, ensure skirting and wall lining are isolated from screed
- Perimeter insulation, isolating screed from metal frame
- Below screed insulation, isolating screed from raft
- Polyethylene

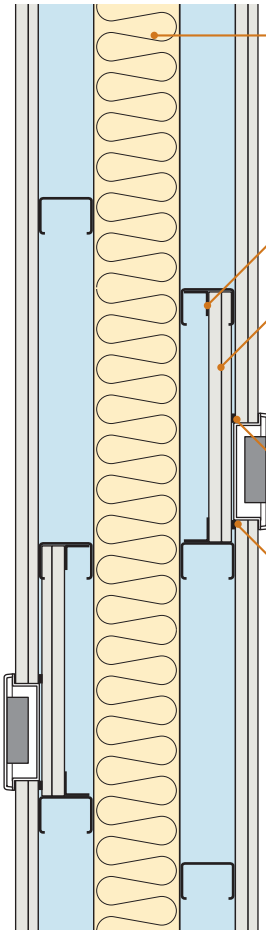
8. Roof junction - pitched roof with no room-in-roof



- Junction between separating wall and roof filled with flexible closer.
- Cavity separating wall continuous to underside of roof
- Wall lining above ceiling – 2 or more layers of gypsum-based board (minimum total nominal mass per unit area 16 kg/m²), both sides, all joints staggered
- External wall cavity closed at eaves level with a suitable flexible material (e.g. mineral wool). If a rigid material is used, then it should only be bonded to one leaf
- 100mm (min) mineral wool insulation, 10 kg/m³ (min), between ceiling joists
- Seal all perimeter joints with tape or caulk with sealant

Section

9. Services and sockets in the separating wall



Plan

80mm mineral wool insulation batts to cavity

25mm galvanised steel angle screw fixed to frame on site

2 layers nominal mass per unit area 22 kg/m² to enclose electrical boxes

Alternatively, fire resistant putty pads or other proprietary liner may be used with sockets, provided:

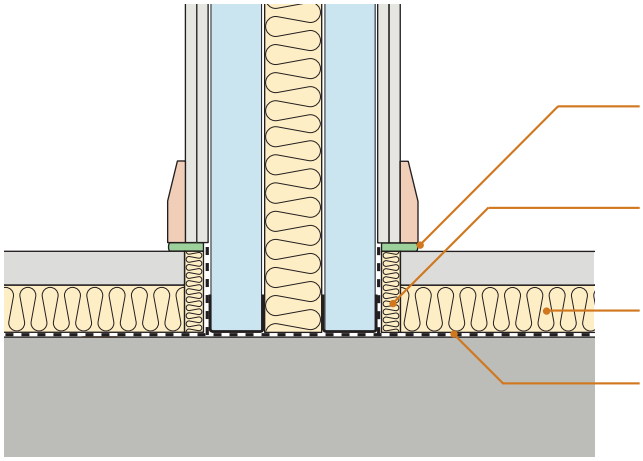
a) They achieve a laboratory performance of no worse than $\mathbf{rd}\,\Delta R_w + C_{tr} = -1$dB - see Appendix H

b) They are installed in accordance with the manufacturer's instructions

Intumescent seal

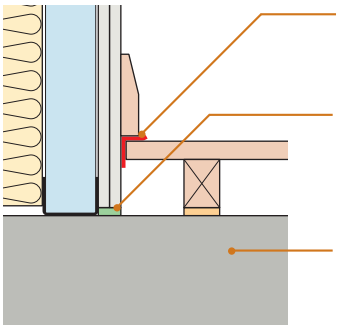
Stagger sockets and switches on each side of party wall

9. Ground floor junction

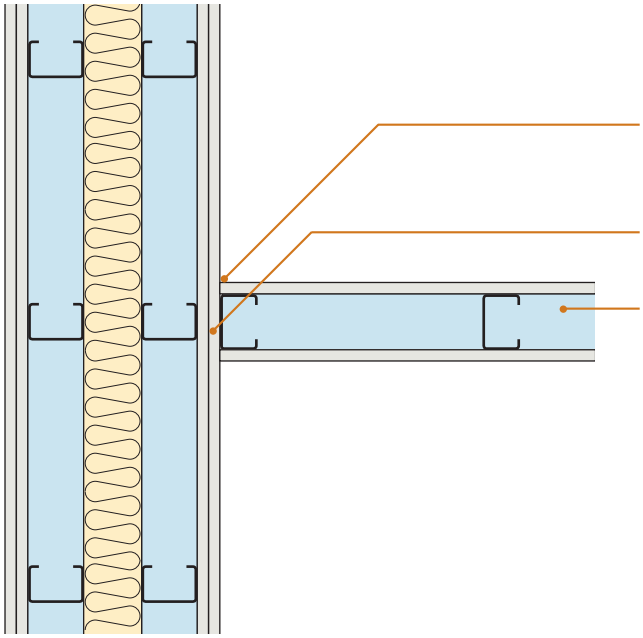


Section

Alternative detail with timber floating floor finish



10. Internal wall junction

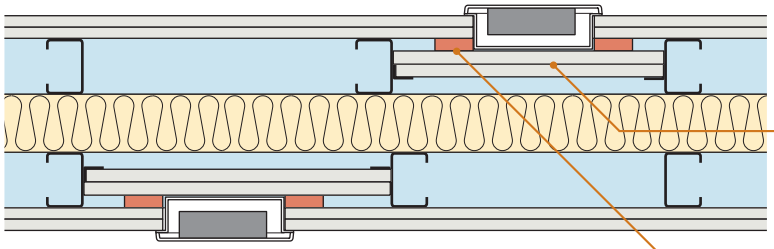


Plan

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

11. Services and sockets in the separating wall

11.1 Electrical sockets, switches etc



Plan

Stagger sockets, switches, etc. on each side of the wall such that they are not positioned in opposite bays

Provide two or more layers of gypsum-based board (total nominal mass per unit area 20 kg/m²) to enclose electrical boxes

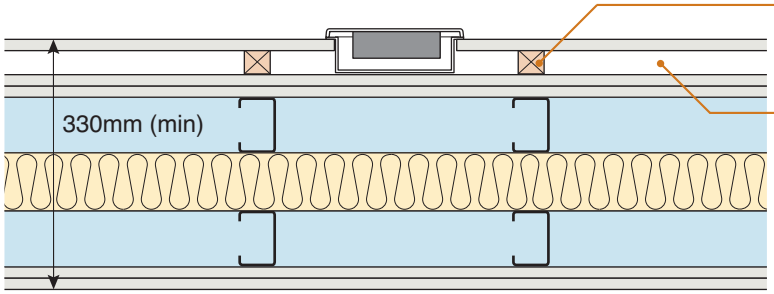
Fire resistant seal where required by Part B of the Building Regulations

Alternatively, fire resistant putty pads or other proprietary liner may be used with sockets, provided:

a) They achieve a laboratory performance of no worse than $\mathbf{rd}\,\Delta R_w+C_{tr}$ = –1dB - see Appendix H

b) They are installed in accordance with the manufacturer's instructions

11.2 Electrical sockets and switches in service void



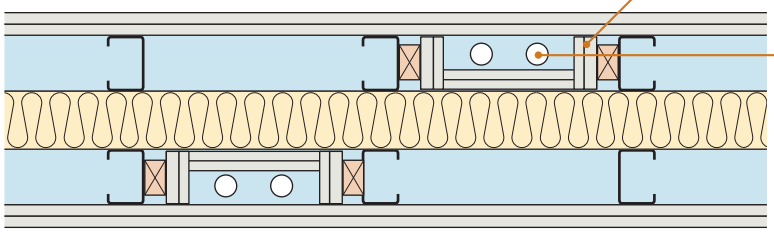
Plan

Service void using min 25mm battens or steel studs with 1 layer of gypsum board

Service void on surface of separating wall. This is the preferred method where more than one socket, switch, etc. are close together, e.g. in a kitchen

Studs or battens used to create the service zone should be securely fixed back to the separating wall structure

11.3 Piped services located within wall



Plan

Provide two or more layers of gypsum-based board (total nominal mass per unit area 20 kg/m²) to enclose pipes

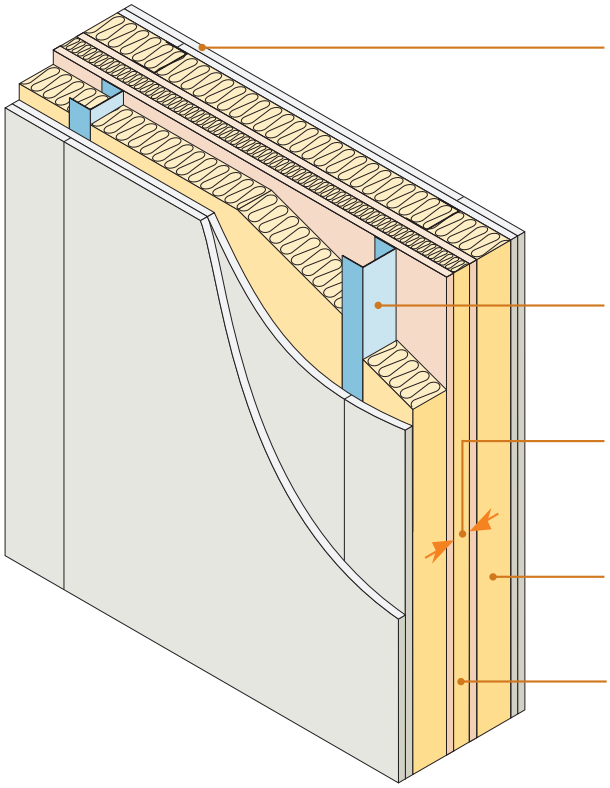
Stagger services on each side of the wall such that they are not positioned in opposite bays

Note: this detail is not applicable for SVPs or gas pipes

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

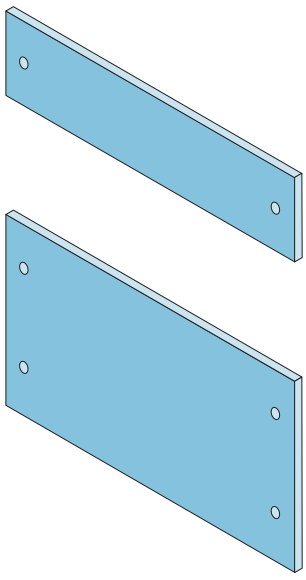
Separating Wall – Modular Build Steel Frame E-WS-6

Modular build twin metal frames ■
Only for use in lightweight steel frame modular houses ■



Wall lining	2 layers of gypsum-based board, total mass per unit area 23 kg/m² (min), both sides - all joints staggered
Metal frame	Metal frame 'C' or 'I' studs minimum 100mm
Sheathing board	Minimum 15mm board with 40mm (min) spacing between boards
Absorbent material	100mm (min) mineral wool 10-40 kg/m³
Cavity insulation	Mineral wool batts to fill cavity (site-filled)

Tie Plates



Single tie plate

Double tie plate

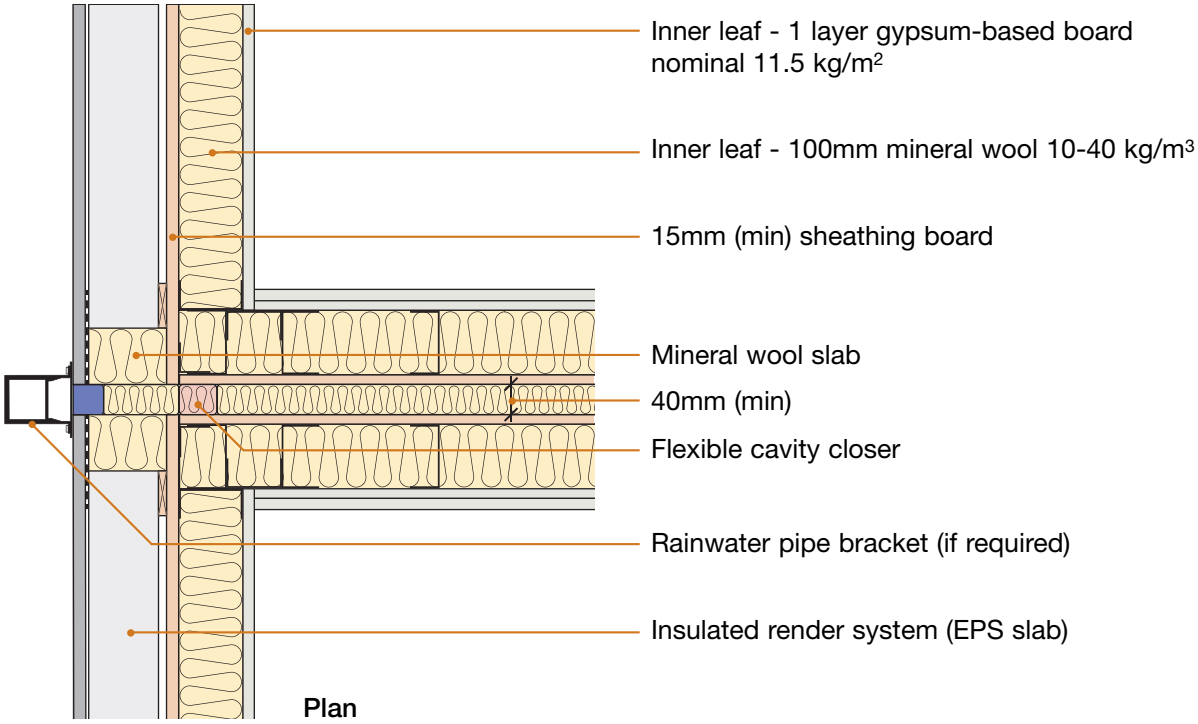
At both ends of modules:

- 1 single tie plate at the top of uppermost modules
- 1 double plate at intermediate floor level

DO

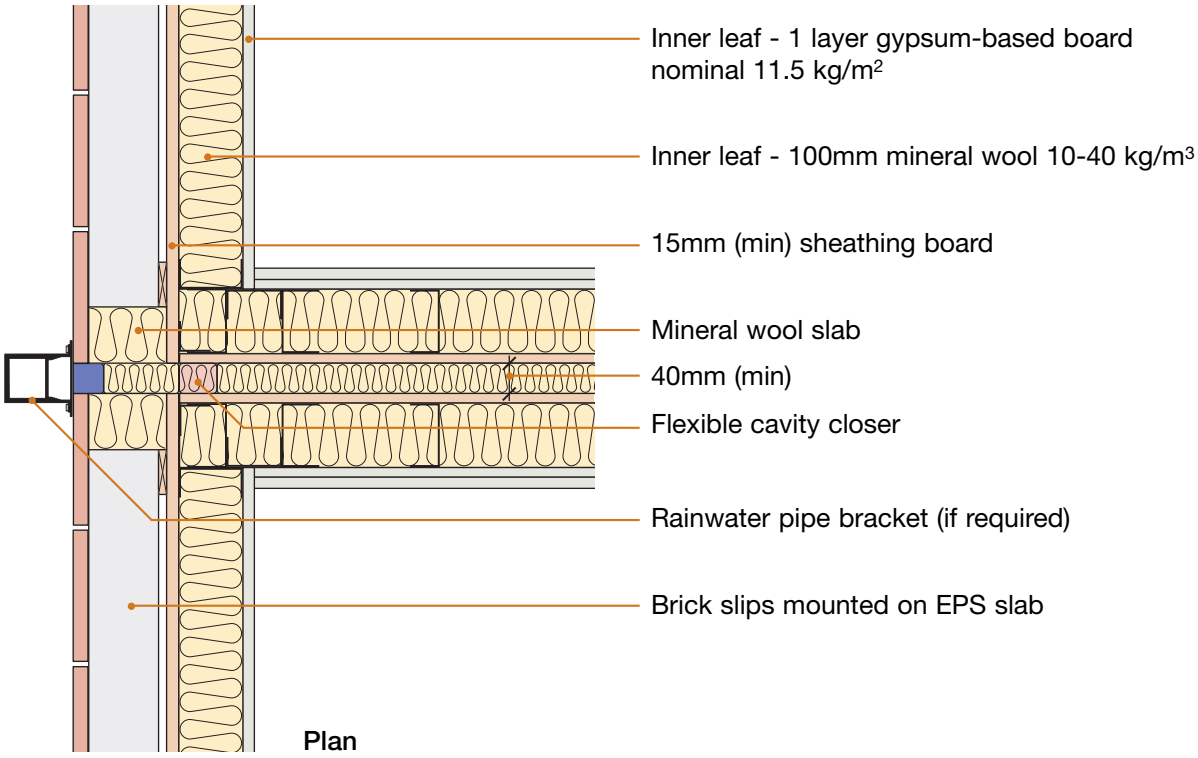
- Keep wall sheathing boards at least 40mm apart
- Ensure that batts cover the whole wall area and are fitted together tightly
- Ensure that all cavity stops/closers are flexible
- Make sure there is no connection between the two leafs except for specified tie plates
- Stagger joints in wall linings to avoid air paths
- Seal all joints in outer layer with tape or caulk with sealant
- Refer to Appendix A

1. External wall junction – render



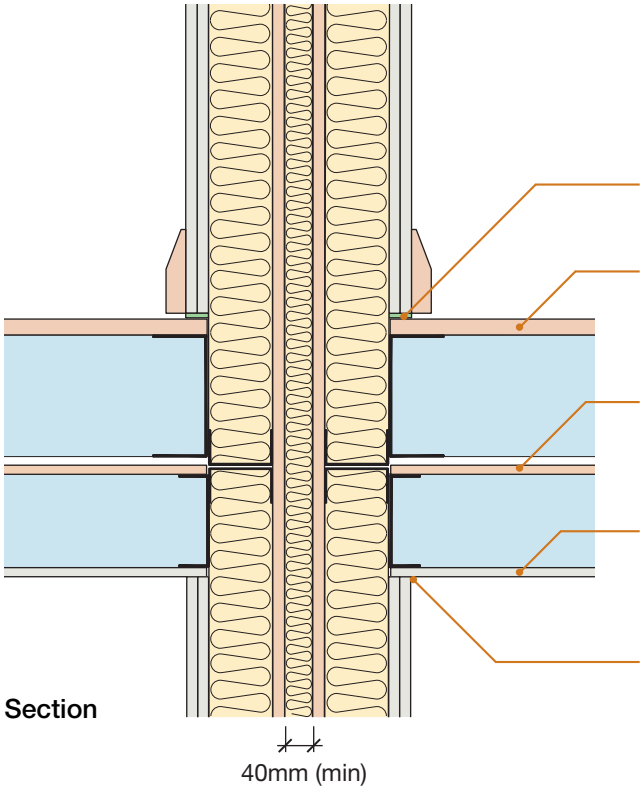
Plan

2. External wall junction – brick slip



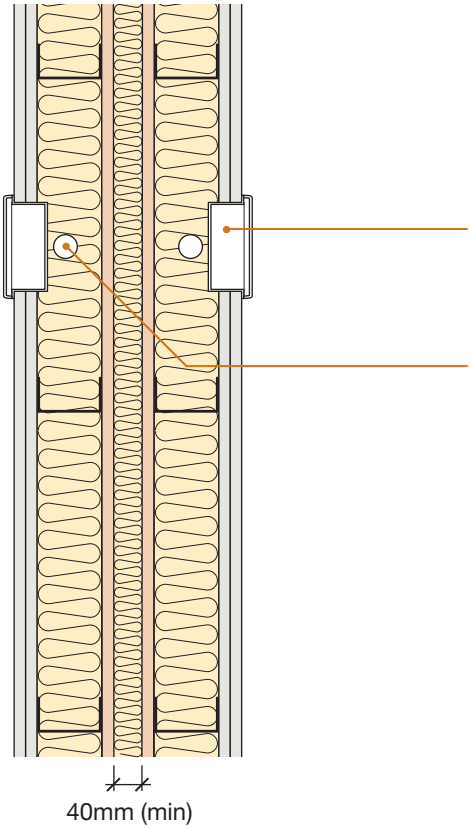
Plan

3. Internal floor junction



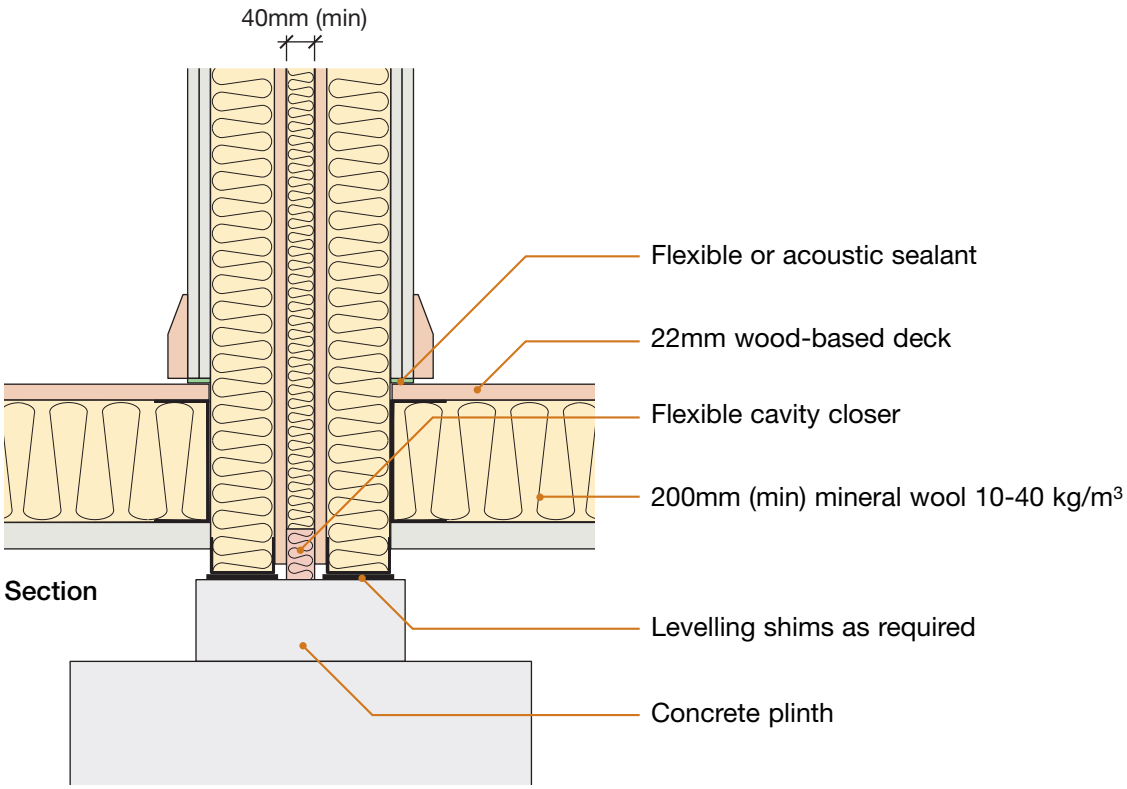
Section

4. Services and sockets in the separating wall

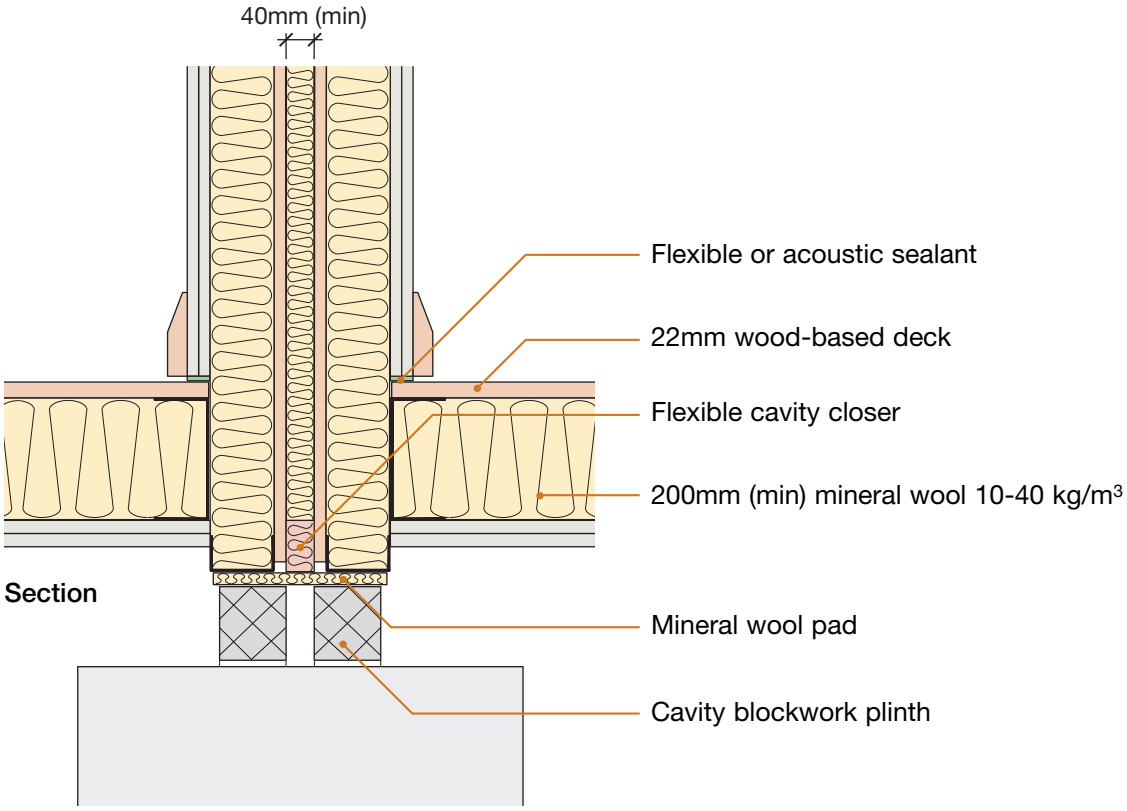


Plan

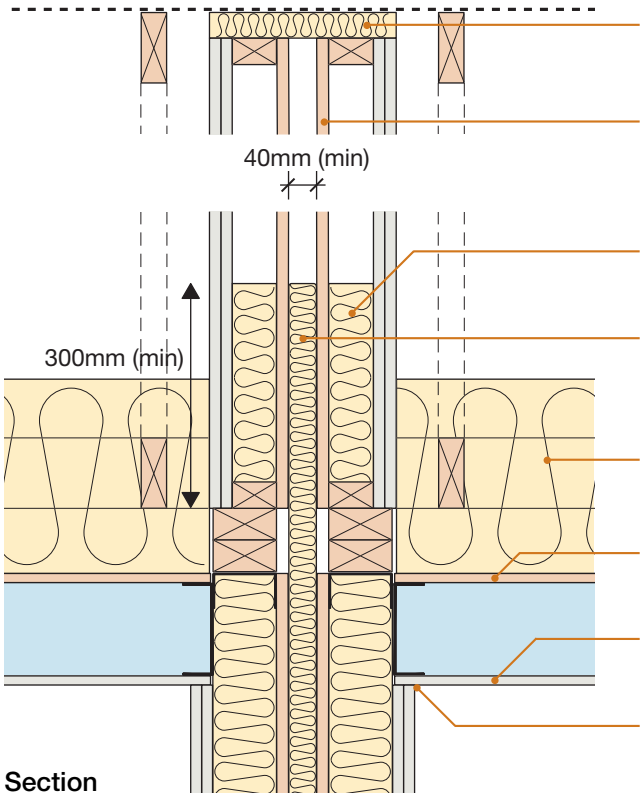
5. Ground floor junction – at ends of modules



6. Ground floor junction – separating wall between plinths



7. Roof junction – pitched roof with no room-in-roof



Junction between spandrels and roof filled with flexible closer

15mm (min) sheathing board

150mm (min) mineral wool 10-40 kg/m³

Separating wall insulation to extend 300mm (min) into spandrel cavity

300mm (min) mineral wool insulation 10 kg/m³ (min)

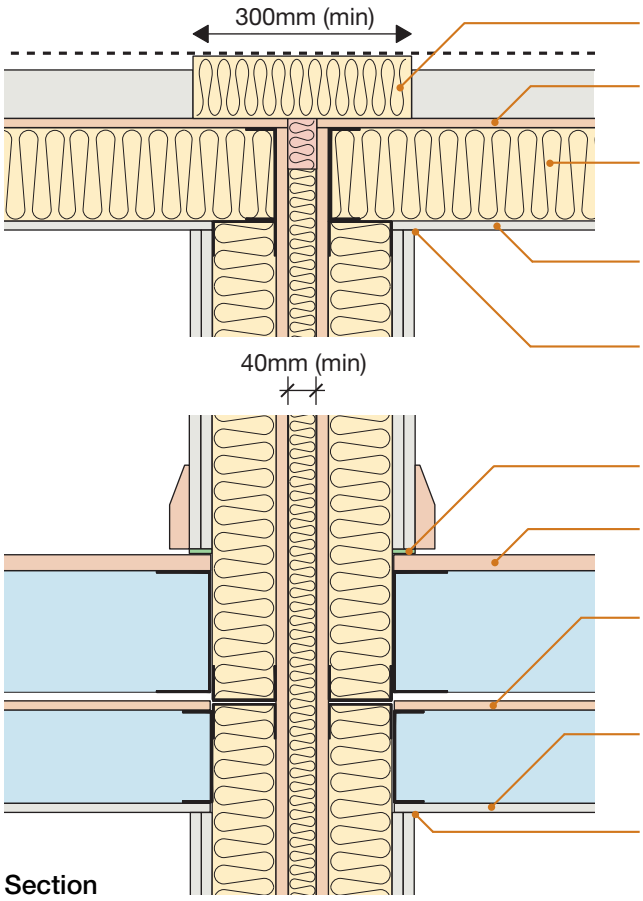
15mm (min) sheathing board

1 layer gypsum-based board nominal 11.5 kg/m²

Seal all perimeter joints with tape or caulk with sealant

Section

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



Flexible cavity closer

15mm (min) sheathing board

150mm (min) mineral wool 10-40 kg/m³

1 layer gypsum-based board nominal 11.5 kg/m²

Seal all perimeter joints with tape or caulk with sealant

Flexible or acoustic sealant

22mm wood-based deck

15mm (min) sheathing board

1 layer gypsum-based board nominal 11.5 kg/m²

Seal all perimeter joints with tape or caulk with sealant

Section

CHECKLIST (to be completed by site manager/supervisor)

Company:

Site:

Plot: Site manager/supervisor:

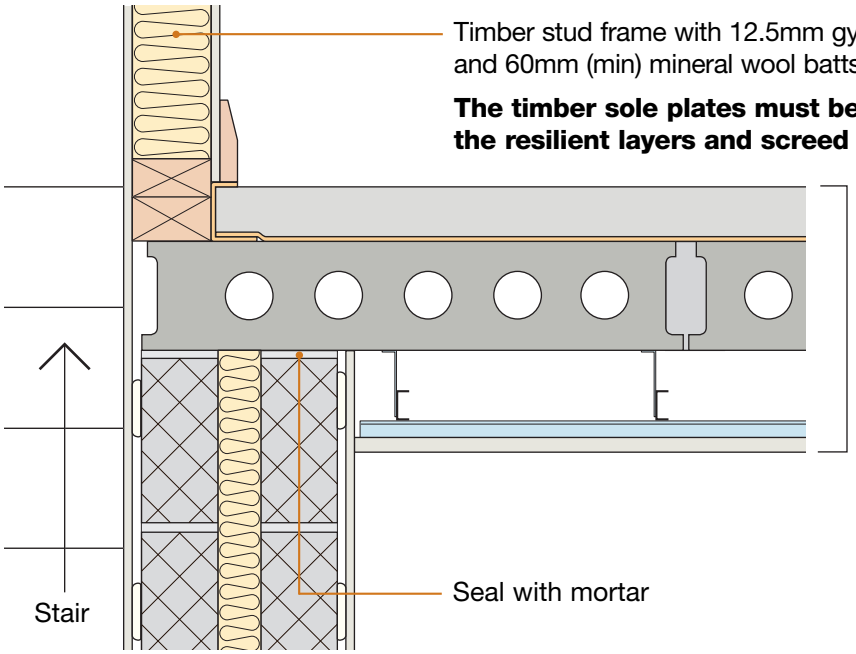
Ref.	Item	Yes (✔)	No (✔)	Inspected (initials & date)
1.	Are separating wall leafs at least 40mm apart?			
2.	Are the metal frames a minimum of 100mm or greater?			
3.	Are the twin wall frames isolated from each other (no direct fixings) except for specified tie plates?			
4.	Is the mineral wool placed in the cavities of both leafs?			
5.	Are the 2 layers of gypsum-based board nominal mass per unit area 23 kg/m^2 for both sides?			
6.	Are all joints in the separating wall lining staggered?			
7.	Are all joints sealed with tape or caulked with sealant?			
8.	Is the separating wall satisfactorily complete?			

Notes (include details of any corrective action)

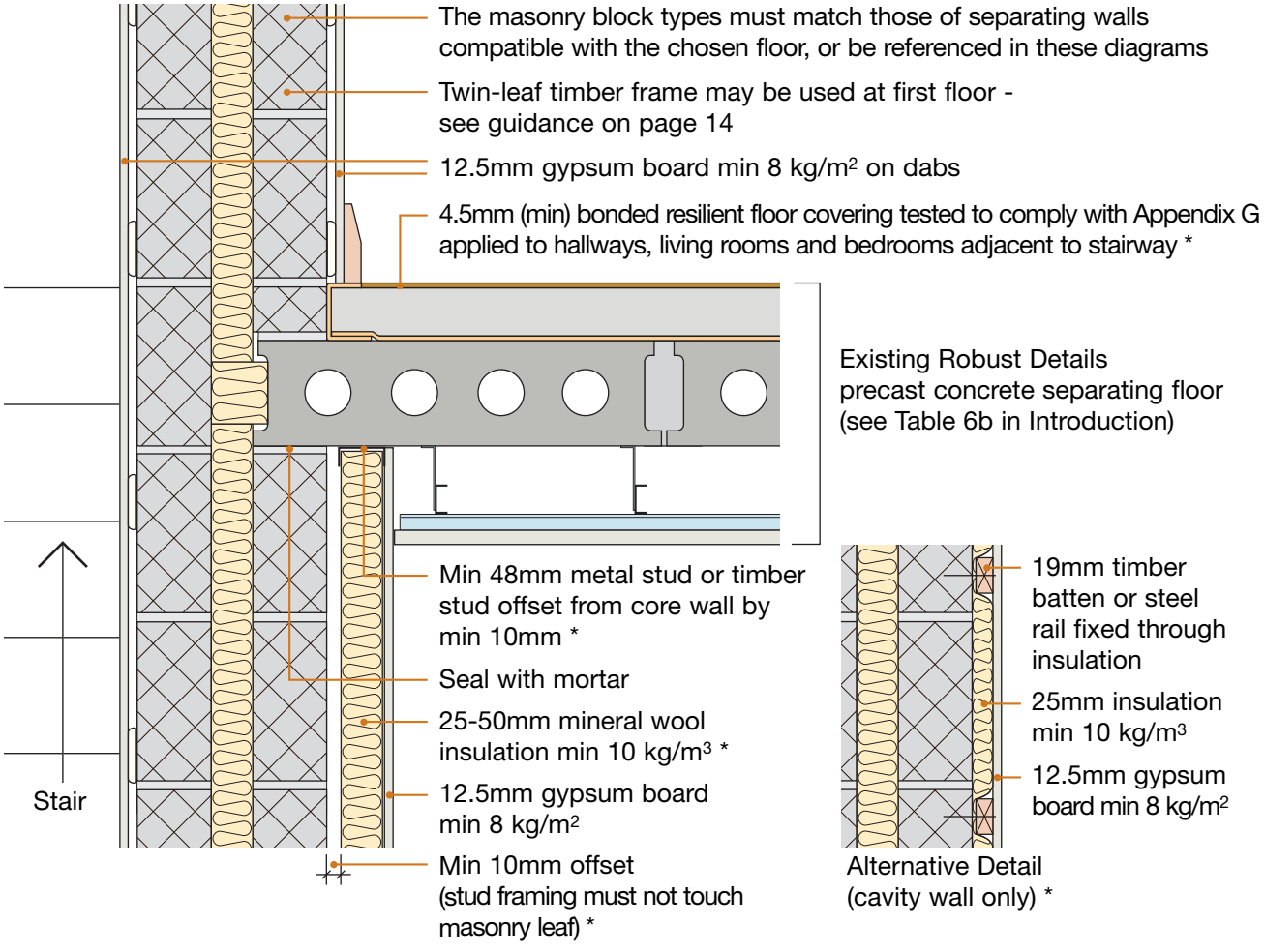
Site manager/supervisor signature . . . . . .

Appendix A2 – Specific Flanking Conditions

Section A - cavity walls



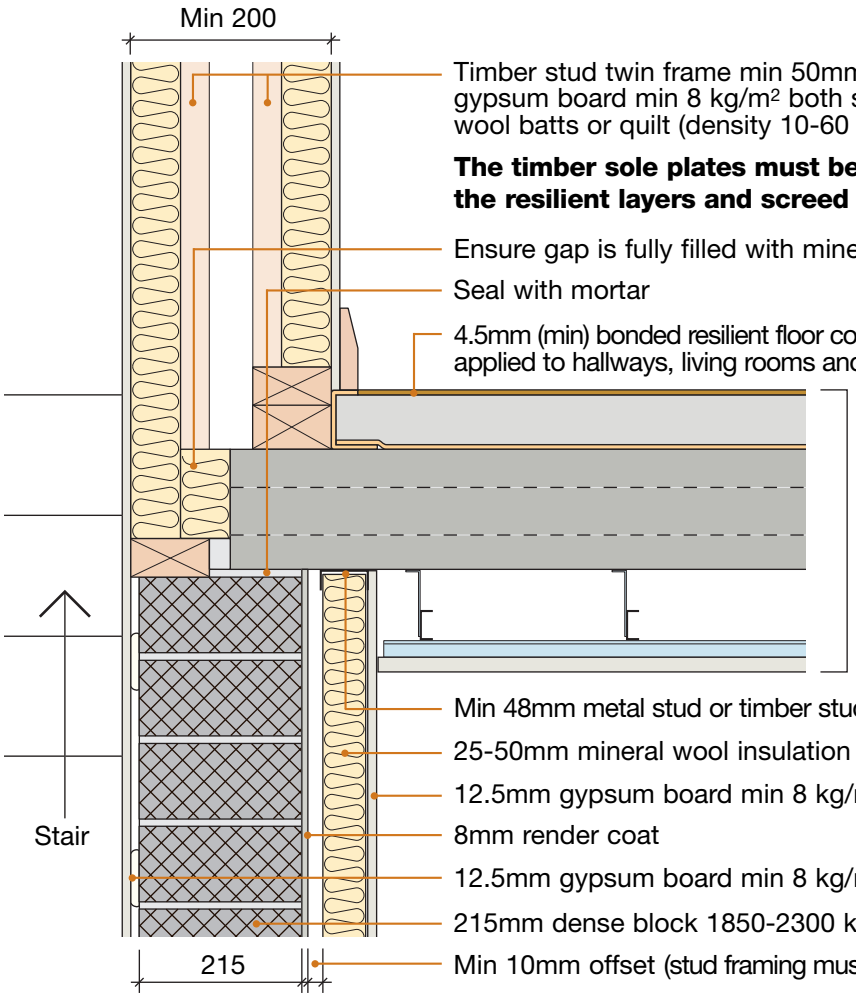
Alternative construction



* The independent leaf and bonded resilient layer are optional where a cavity masonry wall is used at ground floor.

Appendix A2 – Specific Flanking Conditions

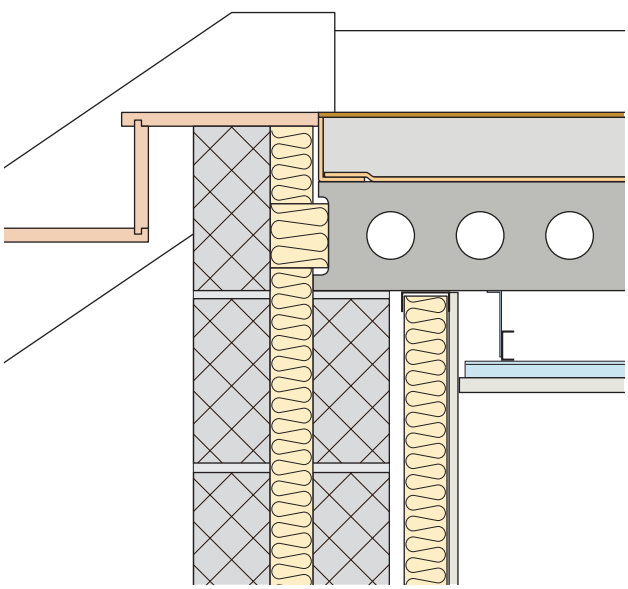
Section A - solid walls

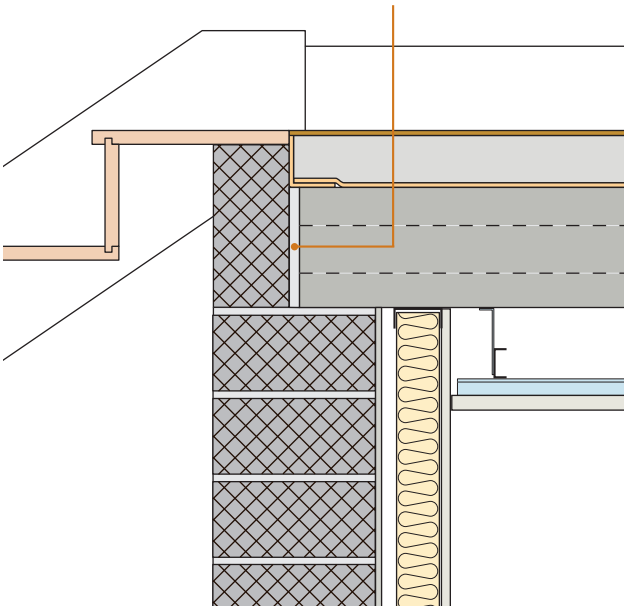


Appendix A2 – Specific Flanking Conditions

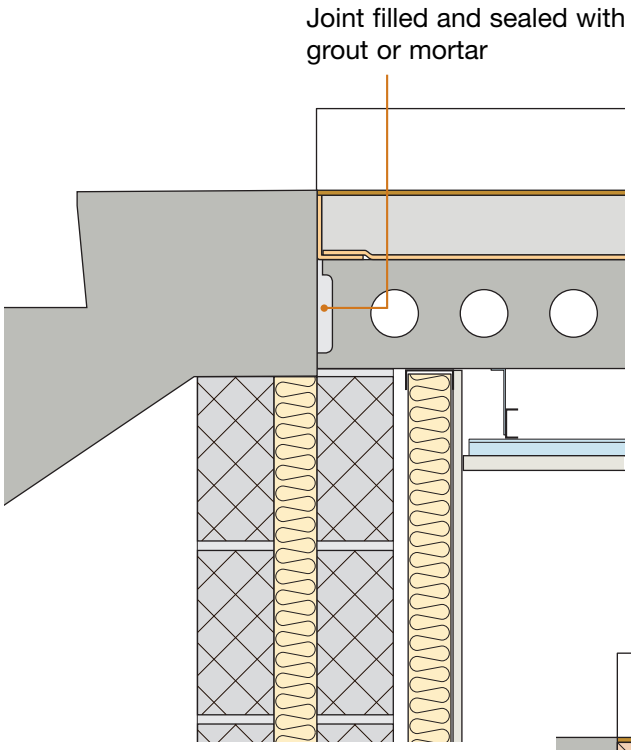
The stairs or timber block (see Alternative Detail) must be in place prior to installation of the resilient layers and screed

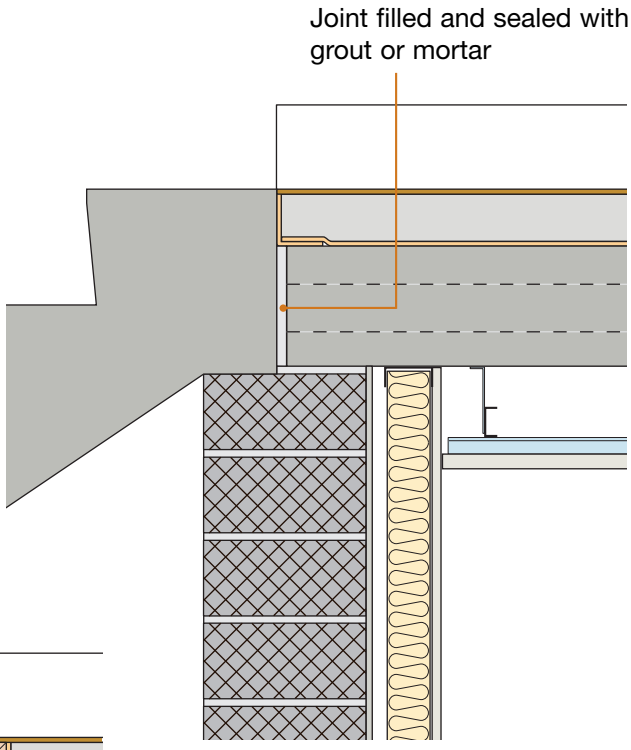
Section B - common junctions at stair landing
Timber stairs



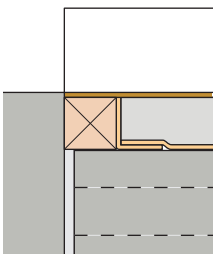


Section B - common junctions at stair landing
Concrete stairs





The independent leaf and bonded resilient layer are optional where a cavity masonry wall is used at ground floor.

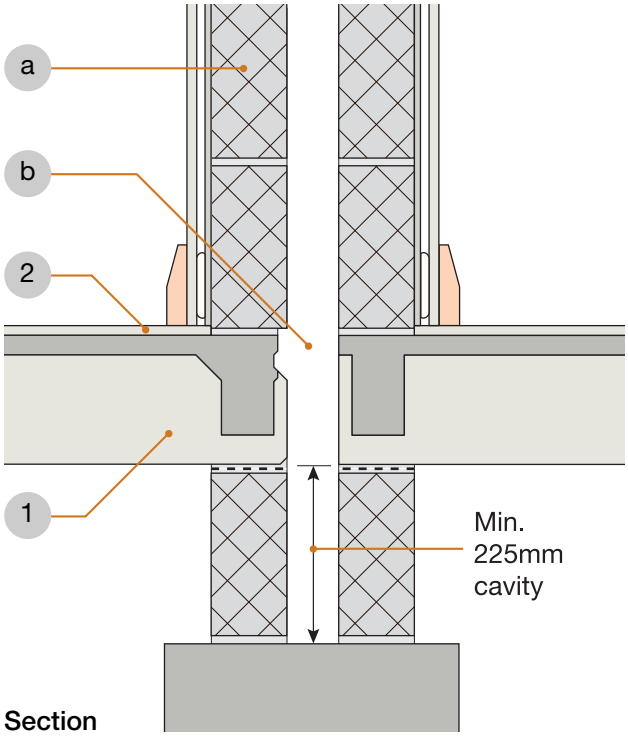


Alternative Detail at Floor/Stair Junction (can be used with any of the four configurations shown above)

Appendix A2 – Specific Flanking Conditions

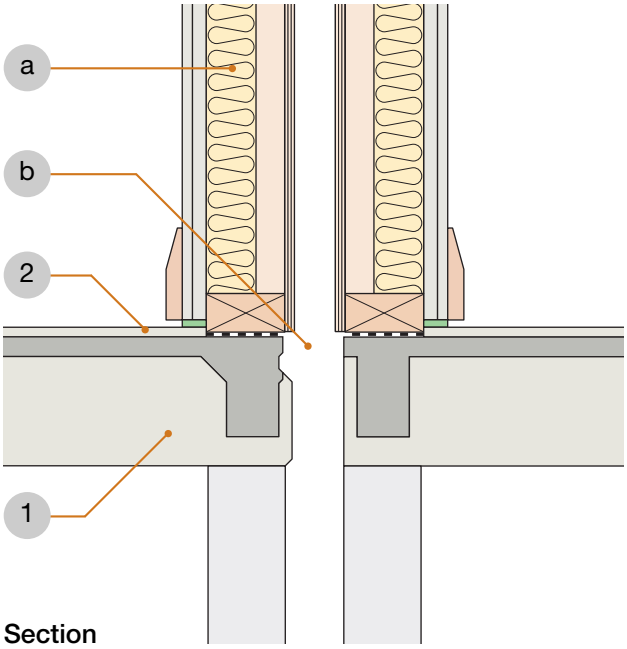
Nu-Span and Spantherm pre-insulated ground floor concrete slabs for robustdetails® cavity separating walls. Refer to Table 6 in Introduction.

1. Slab installation - ground floor only



Section

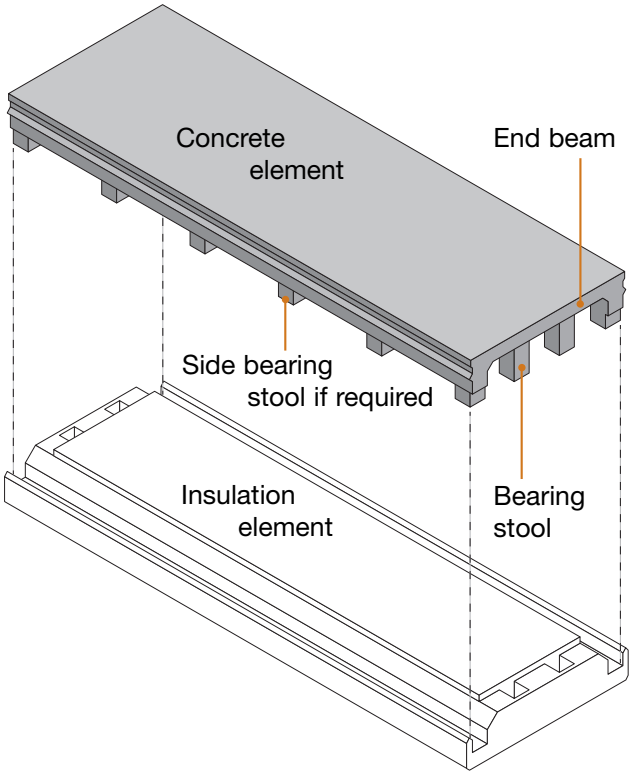
Masonry walls



Section

Timber and light steel frame walls

2. Slab components



Key

1 Nu-Span or Spantherm pre-insulated slab, 300mm or 375mm deep.
Slabs can be end-bearing or side-bearing.

2 Nominal 10mm self-levelling compound. Thicker screed layers are also acceptable.

a robustdetails® separating wall. Refer to Table 6a in the Introduction and relevant Robust Detail in the Handbook

b Maintain minimum cavity width specified for chosen robustdetails® separating wall. This can be insulated in accordance with the specification for the chosen wall type.

Contact details for Nu-Span:

Telephone: 01842 810445
E-mail: info@nu-span.com
Web: www.nu-span.com

Contact details for Spantherm:

Telephone: 01636 831043
E-mail: spantherm@creaghconcrete.com
Web: www.creaghconcrete.com

Appendix H

Determination of the acoustic performance for "putty pads" and other proprietary socket or switch box liners, or proprietary backboxes used with robustdetails® light frame separating walls

To determine the acoustic performance of putty pads and other proprietary socket or switch box liners on robustdetails® light frame separating walls, airborne measurements should be undertaken in an acoustic test laboratory. The following sections H.1 to H.4 outline the measurement and performance rating criteria. For the purposes of all twin timber or light steel frame robustdetails® separating floors the following test procedure may be used.

H.1 Test Laboratory Requirements

The test facility must have UKAS Accreditation (or European equivalent) for the measurement of airborne sound insulation in the laboratory. The measurements should be undertaken in a laboratory with suppressed flanking insulation and in accordance with the ISO series ISO 10140.

H.2 Core (or base) Wall Structure

Testing should be undertaken on a core wall structure with the following construction specification:

Wall Structure	Twin leaf 89mm timber stud frame or 70mm light steel stud frame with 50mm cavity between frames
Wall linings	2 layers 15mm gypsum-based board (combined total of min. 24 kg/m^2) each side
Insulation	Min. 25mm mineral wool (min. 10 kg/m^3) between studs in each leaf

Refer to ISO 10140-1 Annex A

H.3 Testing Required

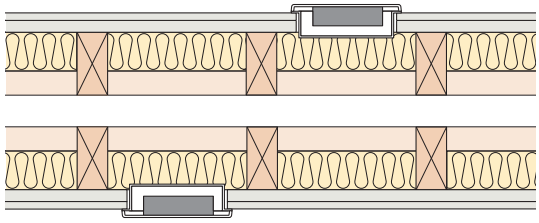
Tests should be conducted using the method described in ISO 10140-2 and the performance of each measurement rated in accordance with BS EN ISO 717-1: 2020.

For the purposes of putty pads and other proprietary socket or switch box liners on robustdetails® light frame separating walls, two different airborne measurements are required as follows:

Airborne

Test 1 Determination of R_w+C_{tr} for the core wall structure

Test 2 Determination of R_w+C_{tr} for the core wall structure with 2 double* sockets complete with liners cut into the wall on both sides of the wall, offset horizontally by 150mm max. so as to be in separate stud bays. A length of electrical cable or similar passing through the liner should be included



* ***Single sockets can be used if the manufacturer does not intend to supply a product suitable for double sockets.***

H.4 Expression of Performance

The airborne sound insulation performance of the putty pads and other proprietary liners should be expressed in accordance with ISO 10140 and BS EN ISO 717-1 (2020) as:

Result: difference in airborne sound insulation performance (ΔR_w+C_{tr}) as a result of the inclusion of the treated sockets

Outcome: for compliance the difference between the two tests should be no worse than –1 dB.

H.5 Replacement Products

Any replacement product will be regarded as a 'new product' and will therefore have to be tested in full, in accordance with the requirements of this Appendix H.