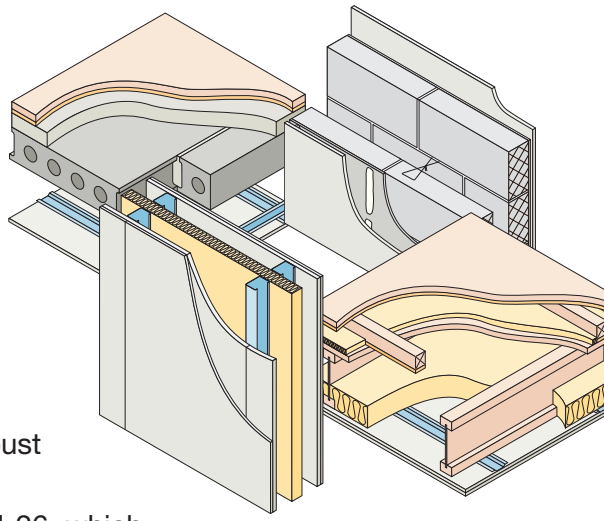
September 2015 Update Pack



Dear Colleague,

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

The most significant amendment is to the Besblock wall, E-WM-26, which can now accept blown mineral fibres as the cavity insulation. This wall, constructed using the proprietary Besblock 'Star Performer' dense aggregate cellular blocks, is the only robustdetails® separating wall to allow generic blown insulation (max 25 kg/m^3) without the need for an internal render (parge coat). The wall was previously specified with only built-in mineral wool. The Code credits have also changed, so please refer to the table on our website.

Knauf's E-WM-28 wall only uses blown mineral fibres; and also has no parge coat. The difference is that although a specific insulation (Knauf Supafil® Party Wall) must be installed, the blocks used in the wall are generic. In this update, the wording used in the E-WM-28 Robust Detail has been amended to emphasise the use of blown fill.

Please update your July 2015, 4th Edition Handbook as follows:

1. Remove and replace all pages of the masonry separating wall E-WM-26.
2. Remove and replace all pages of the masonry separating wall E-WM-28.
3. Remove and replace <u>just the second leaf</u> (pages 3 & 4) of the timber separating floor E-FT-3.
4. Remove and replace all pages of the steel separating floor E-FS-2.

Yours sincerely

John Tebbit

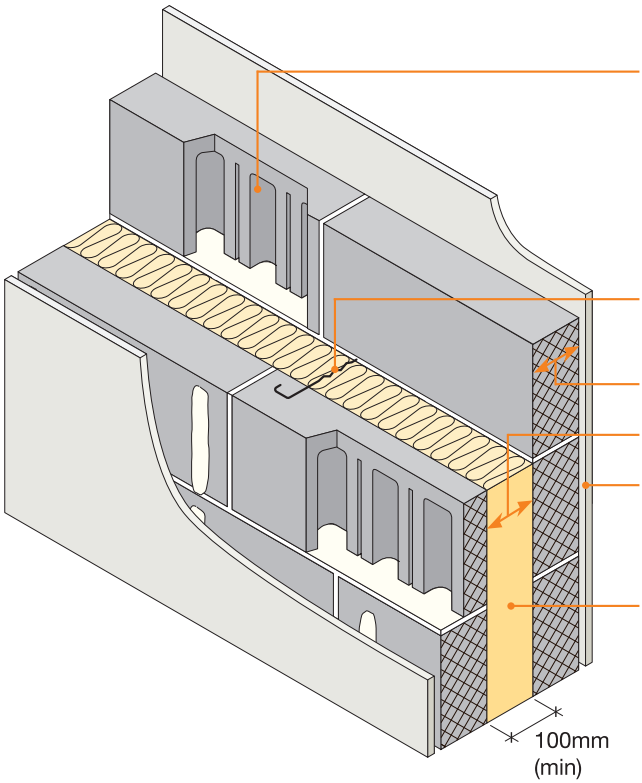
Managing Director,
Robust Details Limited

Changes to the fourth edition following September 2015 update

Section	Page	Amendment
Separating Wall - Masonry		
E-WM-26		
Isometric	1	Blown mineral fibre option added to the insulation description.
DO box	1	Note added giving requirements for insulation injection holes.
Checklist	6	Check point added for requirements relating to insulation injection holes.
E-WM-28		
All	1-6	Insulation name and description amended to highlight blown material.
Separating Floor – Timber		
E-FT-3		
Diagrams 5 and 6	4	References to fixing non-loadbearing partitions to joists have been removed.
Separating Floor – Steel		
E-FS-2		
Diagram 3	3	Joist zone insulation range corrected from 10-33 kg/m^3 to 10-36 kg/m^3.

Separating Wall – Cavity Masonry E-WM-26

Besblock “Star Performer” dense aggregate cellular blocks ■
Gypsum-based board on dabs ■

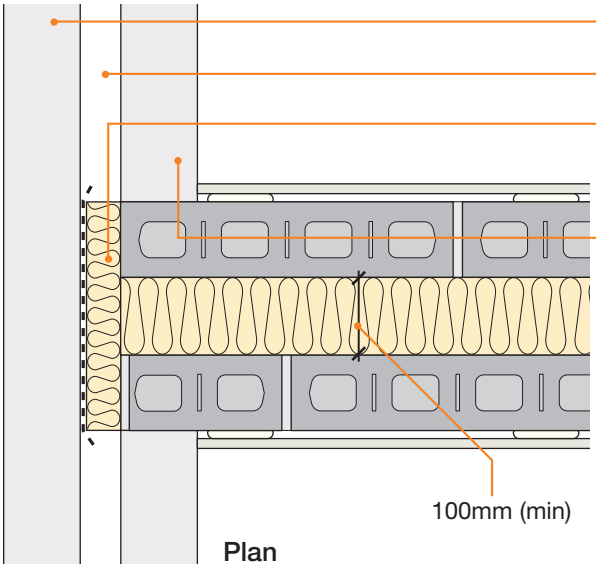


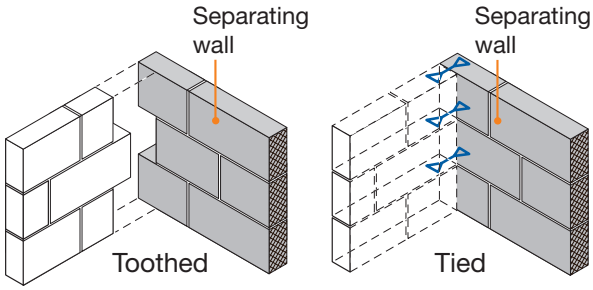
Block	Only Besblock “Star Performer” 5-bridge cellular block (4-core, concrete density 1995 kg/m³, block density 1528 kg/m³, unit weight 14.5 kg)
Wall ties	Approved Document E ‘Tie type A’ (see Appendix A)
Block thickness	100mm (min), each leaf
Cavity width	100mm (min)
Wall finish	Gypsum based-board (nominal 10 kg/m²) mounted on dabs
Insulation	100mm mineral wool roll, quilt or batt with a density of 12-25 kg/m³ or blown mineral fibres with an installed density of max 25 kg/m³
External (flanking) wall	Masonry (both leaves) with 50mm (min) cavity – clear, fully filled or partially filled with insulation

DO

- Place blocks with cellular holes open to lower mortar bed
- Keep cavity insulation and wall ties free from mortar droppings and debris
- Fully fill all blockwork joints with mortar
- Make sure there is no connection between the two leaves except for wall ties and foundation (and insulation)
- 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
- If using blown fibres, ensure all injection holes are drilled through mortar joints, and made good by fully filling with mortar
- 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





Masonry outer leaf

External wall cavity (min 50mm)

Close external wall cavity with a flexible cavity stop. (Optional if external wall cavity is fully filled with built in mineral wool insulation)

Inner leaf where there is no separating floor e.g. for houses

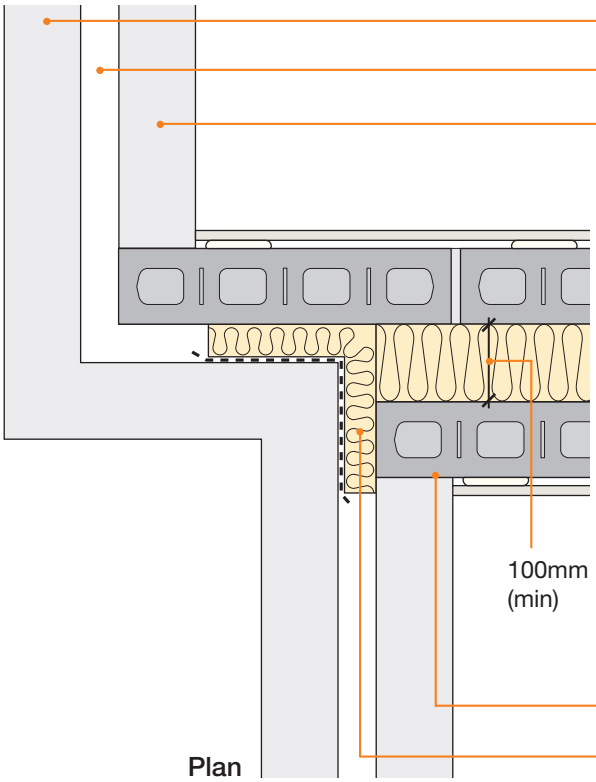
- 100mm (min) concrete block (1350 kg/m³ to 1600 kg/m³) or aircrete block (450 kg/m³ to 800 kg/m³) or Besblock "Star Performer" block
- internal finish – 13mm plaster or nominal 8 kg/m² gypsum-based board

Inner leaf where there is a separating floor e.g. for flats/apartments

- if using robustdetails® for floor, refer to Table 3a in introduction to select an acceptable robustdetails® separating floor. Then refer to separating floor Robust Detail to identify acceptable inner leaf construction or use Besblock "Star Performer" block
- if using floor requiring pre-completion testing, seek specialist advice

Tooth or tie walls together

2. Staggered external (flanking) wall junction



Masonry outer leaf

External wall cavity (min 50mm)

Inner leaf where there is no separating floor e.g. for houses

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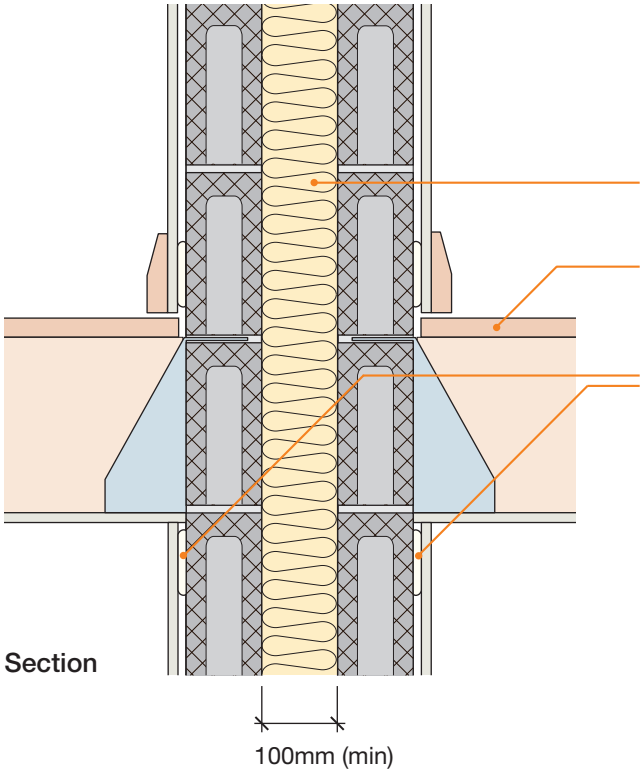
- if using floor requiring pre-completion testing, seek specialist advice

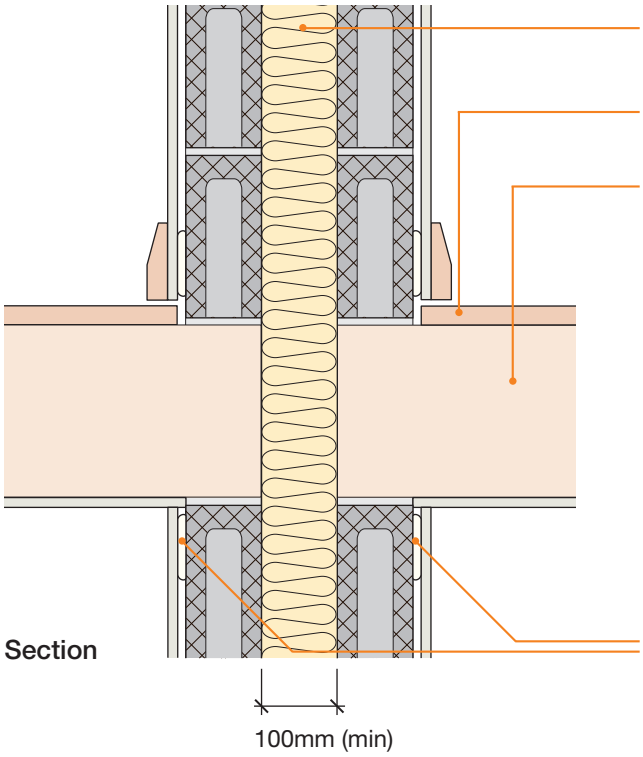
Tooth or tie walls together

Close external wall cavity with a flexible cavity stop. (Optional if external wall cavity is fully filled with built in mineral wool insulation)

3. Internal floor junction: timber floor supported on joist hangers

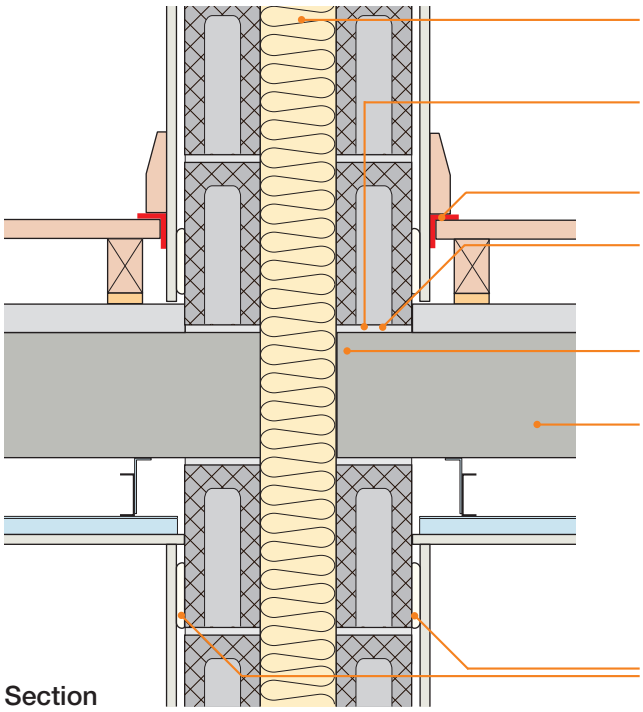


4. Internal floor junction: timber floor joists built in, beam and block or precast concrete



Sketch shows timber joists built in

5. Separating floor junction

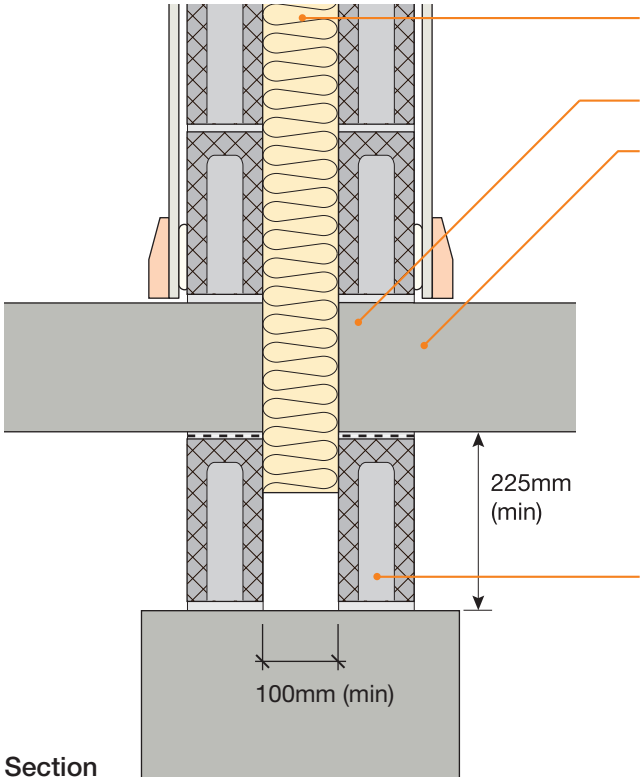


Section

- 100mm mineral wool roll, quilt or batt with a density of 12-25 kg/m³
- Separating wall must not be continuous between storeys
- 5mm (min) resilient flanking strip
- Concrete planks with all voids between planks and blockwork filled with mortar or flexible sealant
- Separating floor must not be continuous between dwellings
- Separating floor:
  - if using robustdetails® for floor, refer to Table 3a in introduction and see separating floor Robust Detail for floating floor and ceiling options
  - if using floor requiring pre-completion testing, seek specialist advice
- Continuous horizontal ribbon of adhesive

Sketch shows E-FC-1 type separating floor, FFT1 type floating floor treatment and CT3 type ceiling

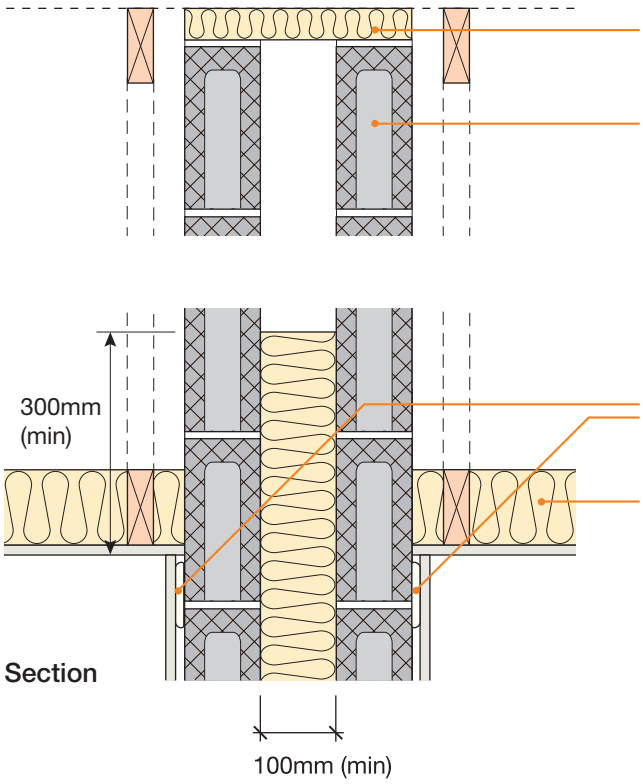
6. Ground floor junction: timber floor, beam and block, precast concrete plank, cast in-situ suspended concrete slab or ground bearing concrete slab



Section

- 100mm mineral wool roll, quilt or batt with a density of 12-25 kg/m³
- Ground floor not continuous between dwellings
- Ground floor construction:
  - timber joists built in with:
    - all voids around the joists filled with mortar
    - the joint interface between the joist and the mortar sealed with flexible sealant (see Appendix A for full specification), or
  - beam and block floor with all voids filled with mortar, or
  - concrete planks with all voids between planks and blockwork filled with mortar or flexible sealant, or
  - ground bearing slab
- Cavity separating wall continuous to foundation, cavity fill may be provided below minimum clear cavity indicated. Continuous raft foundations between dwellings are not acceptable. Solid walls which support separating walls are only acceptable where each ground floor (not timber joists) is built into one side of the separating wall and breaks the vertical continuity of the wall and the minimum clear cavity indicated is maintained.

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



Junction between separating wall and roof filled with flexible closer

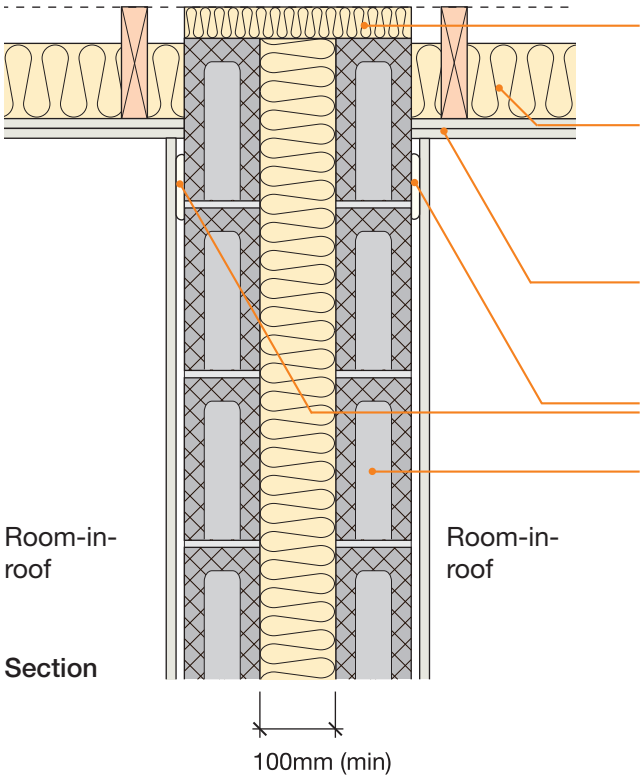
Cavity masonry separating wall continuous to underside of roof. Alternatively use spandrel panel – see Appendix A

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

Continuous horizontal ribbon of adhesive

100mm (min) mineral wool insulation – 10 kg/m^3 (min)

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



Junction between separating wall and roof filled with flexible closer

100mm (min) mineral wool insulation minimum density 10 kg/m^3 or 60mm (min) foil faced PUR or PIR insulation, minimum density 30 kg/m^3 (See Appendix A)

2 layers of nominal 8 kg/m^2 gypsum-based board. Where used rigid insulation may be placed between and/or directly beneath rafters

Continuous ribbon of adhesive

Cavity masonry 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

CHECKLIST (to be completed by site manager/supervisor)

Company:

Site:

Plot: Site manager/supervisor:

Ref.	Item	Yes (✔)	No (✔)	Inspected (initials & date)
1.	Is separating wall cavity at least 100mm?			
2.	Is external (flanking) wall cavity at least 50mm?			
3.	Are separating wall blocks Besblock Star Performer 5-bridge cellular blocks?			
4.	Are the blocks laid with the cells open to the lower bed?			
5.	Is cavity free from droppings and debris?			
6.	Are separating wall ties Approved Document E “Tie type A” (see appendix A)?			
7.	Are cavity stops installed where specified in the Robust Detail?			
8.	Are joints fully filled?			
9.	Are voids around floor joists, chases, etc. fully filled/sealed?			
10.	Is separating wall cavity fully filled with mineral wool insulation, with no gaps or voids?			
11.	Are all injection holes drilled through the mortar joints, and made good by fully filling with mortar?			
12.	Where there is a separating floor (e.g. flats/apartments) has the resilient flanking strip been installed?			
13.	Are all junctions of wall and ceiling boards sealed with tape or caulked with sealant?			
14.	Is separating wall satisfactorily complete?			

Contact details for technical assistance from Besblock, manufacturer of ‘Star Performer’ dense aggregate cellular blocks:

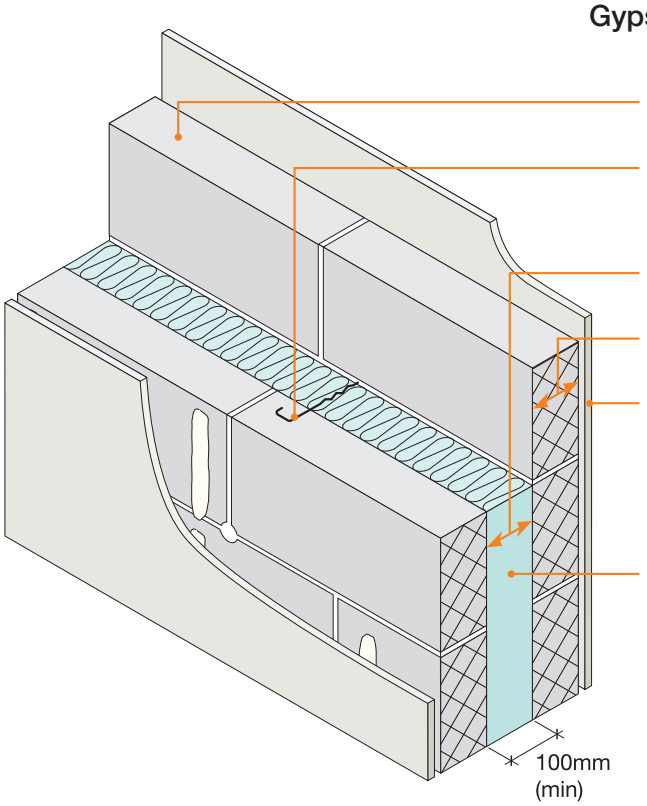
Telephone: 01952 685000 **Fax:** 01952 585224 **E-mail:** technical@besblock.com

Notes (include details of any corrective action)

Site manager/supervisor signature . . . . . .

Separating Wall – Cavity Masonry E-WM-28

Lightweight aggregate blocks ■
Knauf Insulation Supafil® Party Wall blown glass mineral wool insulation ■
Gypsum-based board (nominal 8 kg/m²) on dabs ■

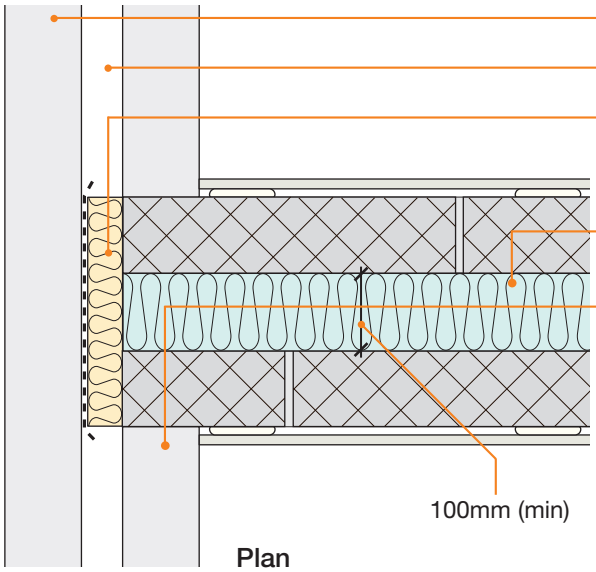


Block density	1350 to 1600 kg/m³
Wall ties	Approved Document E 'Tie type A' (see Appendix A)
Cavity width	100mm (min)
Block thickness	100mm (min), each leaf
Wall finish	Gypsum-based board (nominal 8 kg/m²) mounted on dabs
Insulation	Knauf Supafil® Party Wall blown glass mineral wool insulation
External (flanking) wall	Masonry (both leaves) with 50mm (min) cavity – clear, fully filled or partially filled with insulation

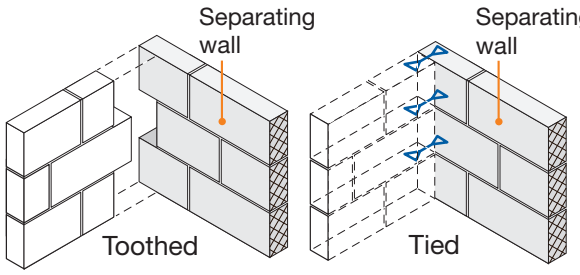
DO

- Keep cavity and wall ties free from mortar droppings and debris
- Fully fill all blockwork joints with mortar
- Make sure there is no connection between the two leaves except for wall ties, insulation and foundation
- Ensure that only solid blocks (i.e. not hollow or cellular) are used in the construction of separating and flanking walls
- Supafil® Party Wall is only to be installed by contractors approved by Knauf Insulation; and must not exceed 25 kg/m³ density once installed
- Ensure all injection holes are drilled through mortar joints, and made good by fully filling with mortar
- 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



Plan



Masonry outer leaf

External wall cavity (min 50mm)

Close external wall cavity with a flexible cavity stop. (Optional if external wall cavity is fully filled with built in mineral wool insulation)

Supafil® Party Wall

Inner leaf where there is no separating floor e.g. for houses

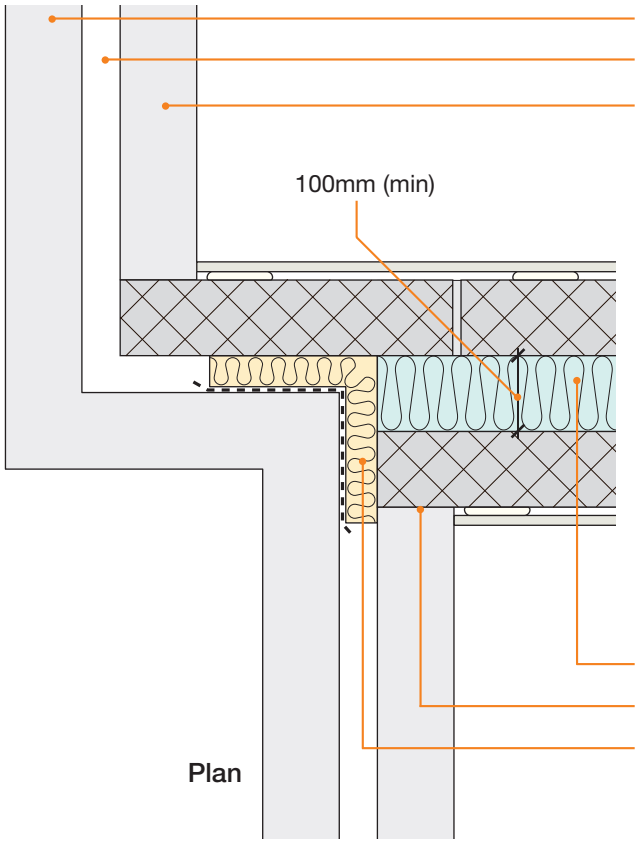
- 100mm (min) concrete block (1350 kg/m³ to 1600 kg/m³) or aircrete block (450 kg/m³ to 800 kg/m³)
- internal finish – 13mm plaster or nominal 8 kg/m² gypsum-based board

Inner leaf where there is a separating floor e.g. for flats/apartments

- if using robustdetails® for floor, refer to Table 3a in introduction to select an acceptable robustdetails® separating floor. Then refer to separating floor Robust Detail to identify acceptable inner leaf construction
- if using floor requiring pre-completion testing, seek specialist advice

Tooth or tie walls together

2. Staggered external (flanking) wall junction



Plan

Masonry outer leaf

External wall cavity (min 50mm)

Inner leaf where there is no separating floor e.g. for houses

- 100mm (min) concrete block (1350 kg/m³ to 1600 kg/m³) or aircrete block (450 kg/m³ to 800 kg/m³)
- internal finish – 13mm plaster or nominal 8 kg/m² gypsum-based board

Inner leaf where there is a separating floor e.g. for flats/apartments

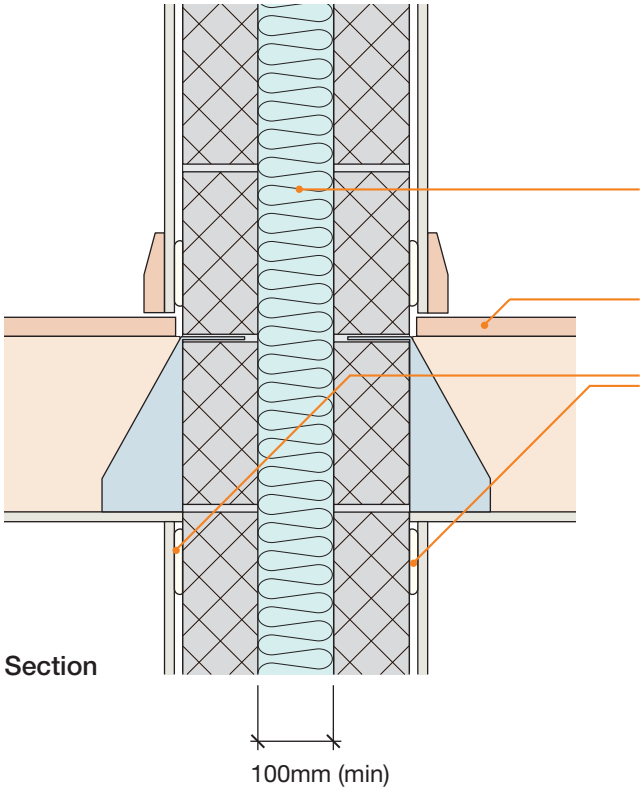
- if using robustdetails® for floor, refer to Table 3a in introduction to select an acceptable robustdetails® separating floor. Then refer to separating floor Robust Detail to identify acceptable inner leaf construction
- if using floor requiring pre-completion testing, seek specialist advice

Supafil® Party Wall

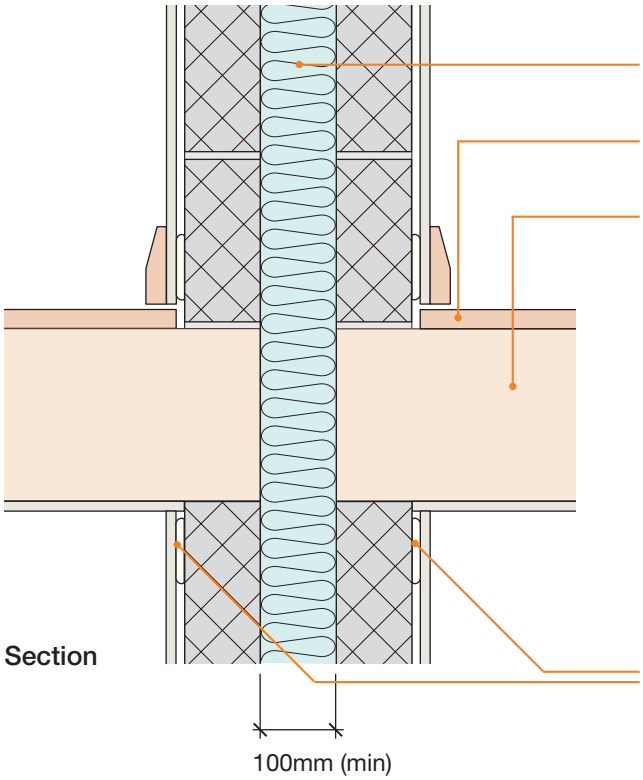
Tooth or tie walls together

Close external wall cavity with a flexible cavity stop. (Optional if external wall cavity is fully filled with built in mineral wool insulation)

3. Internal floor junction: timber floor supported on joist hangers

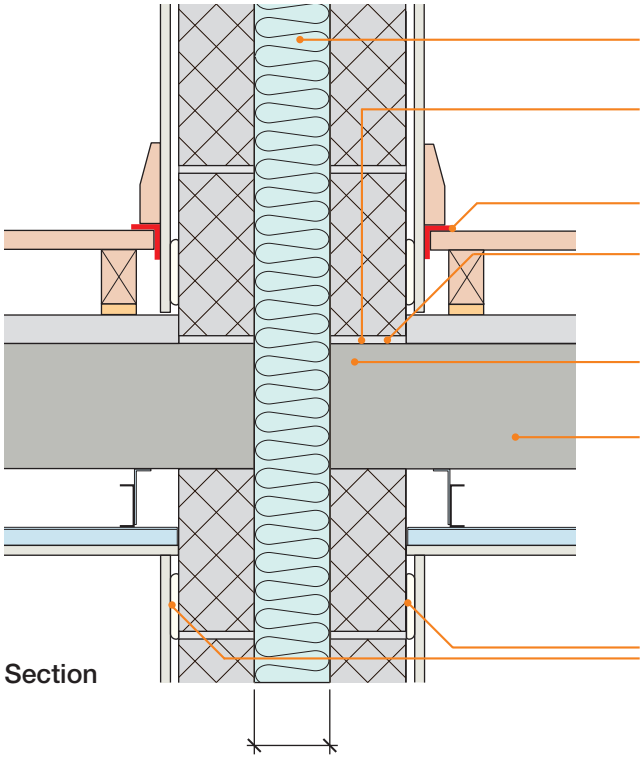


4. Internal floor junction: timber floor joists built in, beam and block or precast concrete



Sketch shows timber joists built in

5. Separating floor junction



Supafil® Party Wall

Separating wall must not be continuous between storeys

5mm (min) resilient flanking strip

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

Separating floor must not be continuous between dwellings

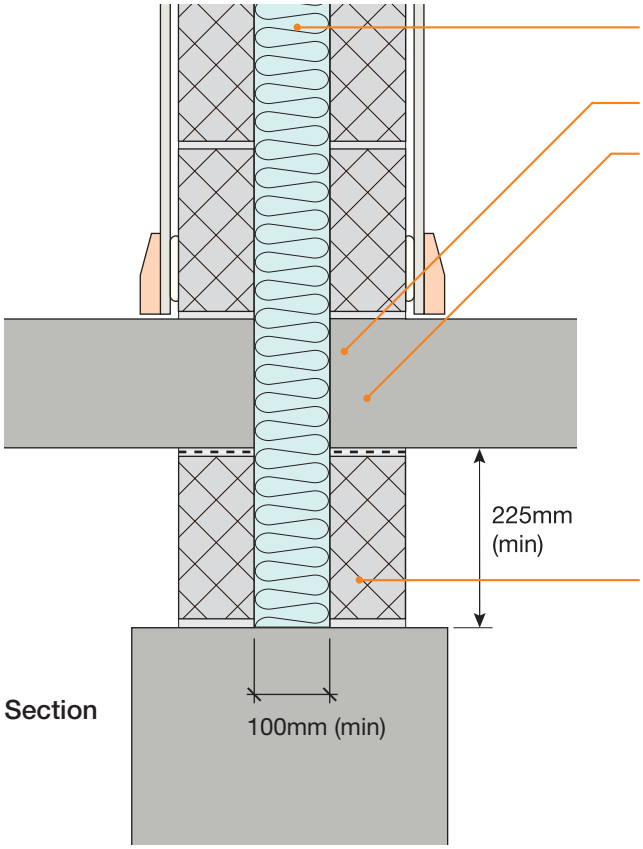
Separating floor:

- if using robustdetails® for floor, refer to Table 3a in introduction and see separating floor Robust Detail for floating floor and ceiling options
- if using floor requiring pre-completion testing, seek specialist advice

Continuous horizontal ribbon of adhesive

Sketch shows E-FC-1 type separating floor, FFT1 type floating floor treatment and CT3 type ceiling

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



Supafil® Party Wall

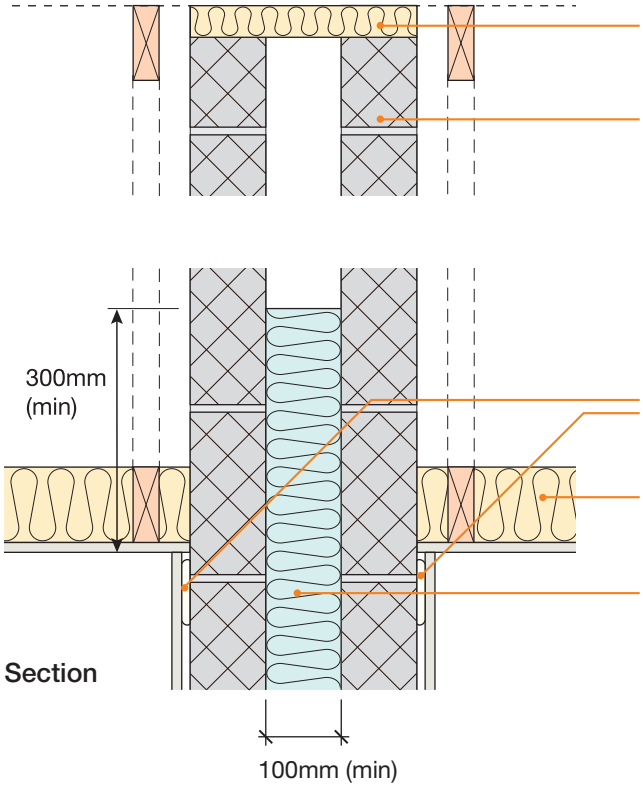
Ground floor not continuous between dwellings

Ground floor construction:

- timber joists built in with:
  - all voids around the joists filled with mortar
  - the joint interface between the joist and the mortar sealed with flexible sealant (see Appendix A for full specification), or
- beam and block floor with all voids filled with mortar, or
- concrete planks with all voids between planks and blockwork filled with mortar or flexible sealant, or
- ground bearing slab

Cavity separating wall continuous to foundation, cavity fill may be provided below minimum clear cavity indicated. Continuous raft foundations between dwellings are not acceptable. Solid walls which support separating walls are only acceptable where each ground floor (not timber joists) is built into one side of the separating wall and breaks the vertical continuity of the wall and the minimum clear cavity indicated is maintained.

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



Junction between separating wall and roof filled with flexible closer

Cavity masonry separating wall continuous to underside of roof. Alternatively use spandrel panel – see Appendix A

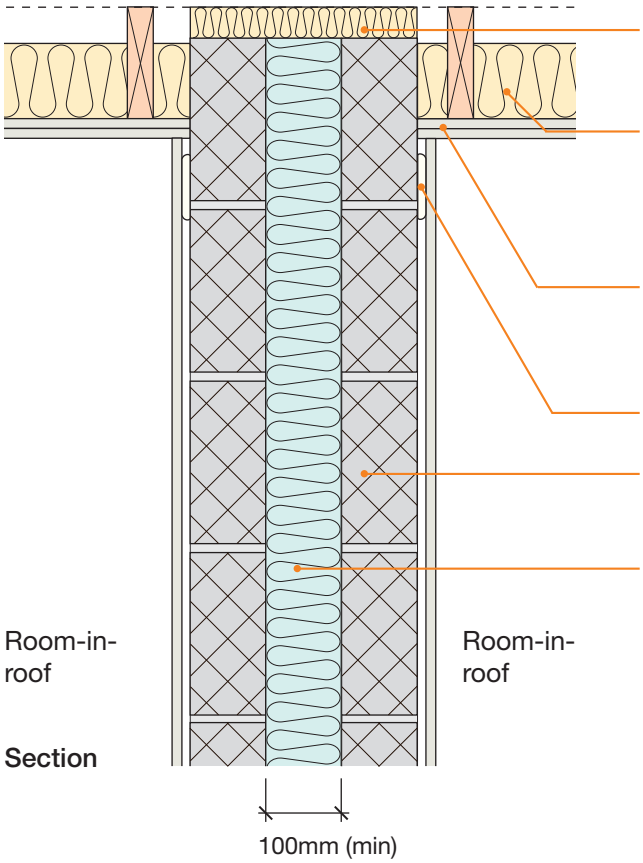
External wall cavity closed at eaves level with a suitable flexible material (e.g. mineral wool). If a rigid material is used, then it should only be bonded to one leaf

Continuous horizontal ribbon of adhesive

100mm (min) mineral wool insulation – 10 kg/m^3 (min)

Supafil® Party Wall

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



Junction between separating wall and roof filled with flexible closer

100mm (min) mineral wool insulation minimum density 10 kg/m^3 or 60mm (min) foil faced PUR or PIR insulation, minimum density 30 kg/m^3 (See Appendix A)

2 layers of nominal 8 kg/m^2 gypsum-based board. Where used rigid insulation may be placed between and/or directly beneath rafters

Continuous horizontal ribbon of adhesive

Cavity masonry separating wall continuous to underside of roof covering

Supafil® Party Wall

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

CHECKLIST (to be completed by site manager/supervisor)

Company:

Site:

Plot: Site manager/supervisor:

Ref.	Item	Yes (✔)	No (✔)	Inspected (initials & date)
1.	Is separating wall cavity at least 100mm?			
2.	Is external (flanking) wall cavity at least 50mm?			
3.	Are separating wall blocks lightweight aggregate (1350 to 1600 kg/m^3)?			
4.	Is cavity free from droppings and debris?			
5.	Are separating wall ties to Approved Document E “Tie type A” (see Appendix A)?			
6.	Are cavity stops installed where specified in the Robust Detail?			
7.	Are joints fully filled?			
8.	Is blue Supafil® Party Wall installed to a maximum density of 25 kg/m^3, and was it by an approved installer?			
9.	Are all injection holes drilled through the mortar joints, and made good by fully filling with mortar?			
10.	Are voids around floor joists, chases, etc. fully filled/sealed?			
11.	Where there is a separating floor (e.g. flats/apartments) has the resilient flanking strip been installed?			
12.	Are all junctions of wall and ceiling boards sealed with tape or caulked with sealant?			
13.	Is separating wall satisfactorily complete?			

Contact details for technical assistance from Knauf Insulation Ltd, manufacturer of Supafil® Party Wall:

Telephone: 01744 766 666 **E-mail:** technical.uk@knaufinsulation.com

Notes (include details of any corrective action)

Site manager/supervisor signature . . . . . .

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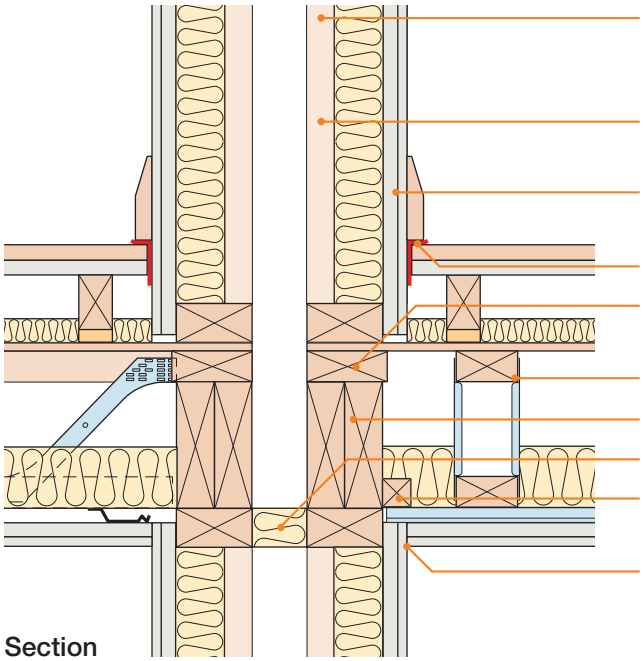
3. Separating wall junction (top chord supported)



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

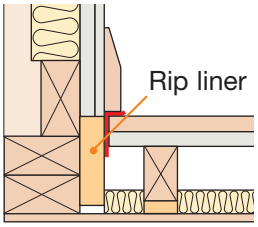
Joists may span in either direction

Ring beams packed to stud width

Close cavity with a cavity stop (see Appendix A)

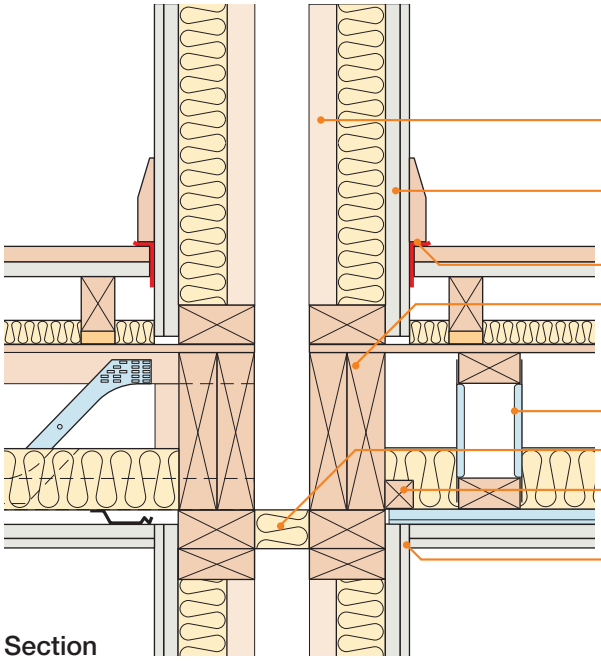
Softwood timber nogging for resilient bar support (leave a small gap at end of resilient bar)

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

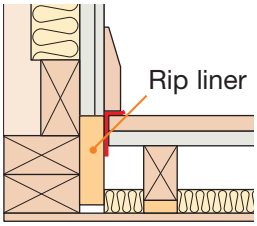
Close spaces between floor joists with full depth timber blocking or continuous header joist where joists are at right angles to the wall

Joists may span in either direction

Close cavity with a cavity stop (see Appendix A)

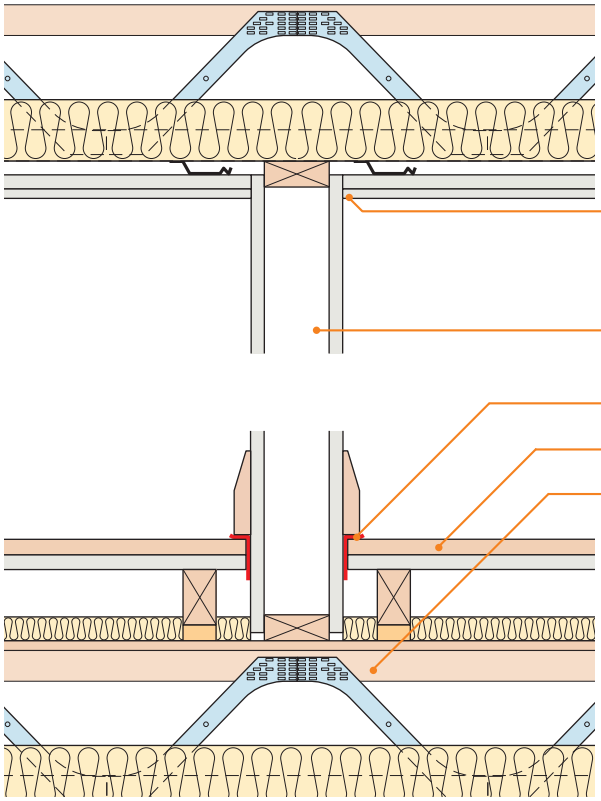
Softwood timber nogging for resilient bar support (leave a small gap at end of resilient bar)

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

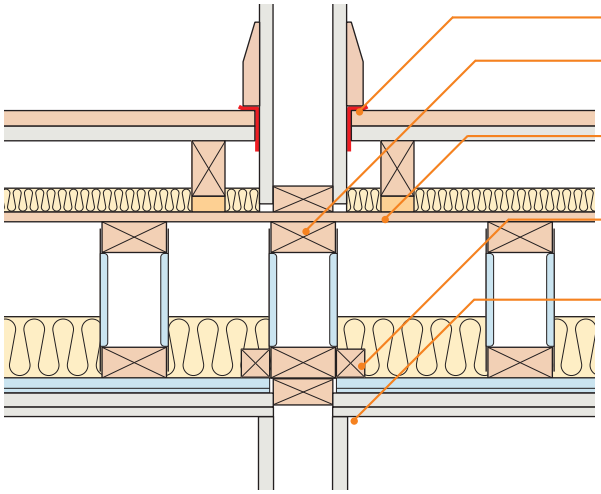
5mm (min) resilient flanking strip

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

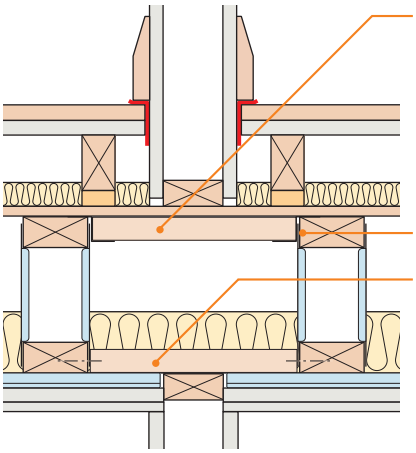
Extra metal web joist (see joist type, page 1) under internal wall

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)

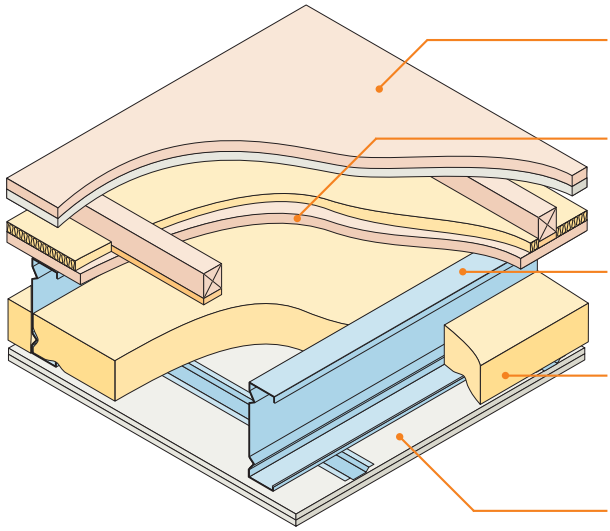
Z Clip

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

Alternative detail

Separating Floor – UltraBEAM Metal Joists E-FS-2

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

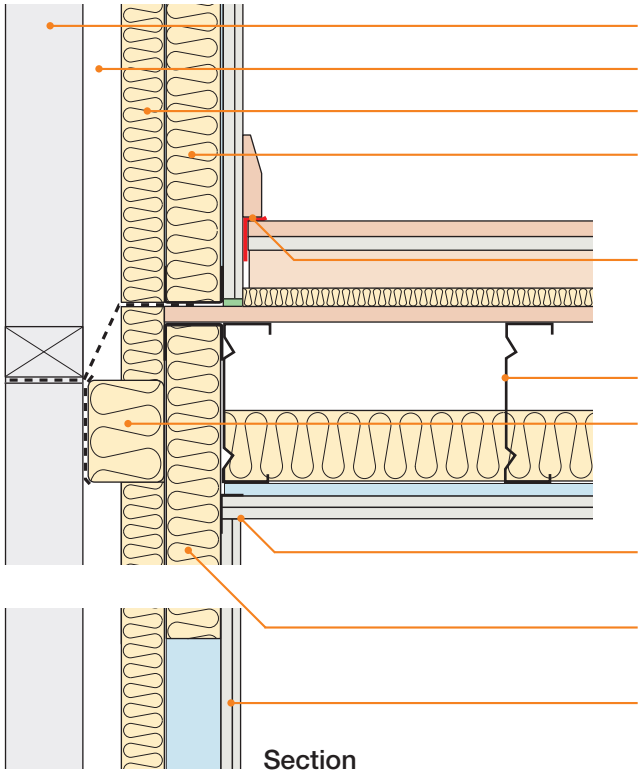


Floating floor	See section 6 for suitable floating floor treatment
Floor decking	22mm thick (min) wood based board, density 600 kg/m³ (min)
Joists	225mm (min) deep UltraBEAM metal joists
Absorbent material	100mm (min) mineral wool quilt insulation (10–36 kg/m³) between joists
Ceiling	See section 5 for suitable ceiling treatment

DO

- Lay quilt (min 100mm thick) 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

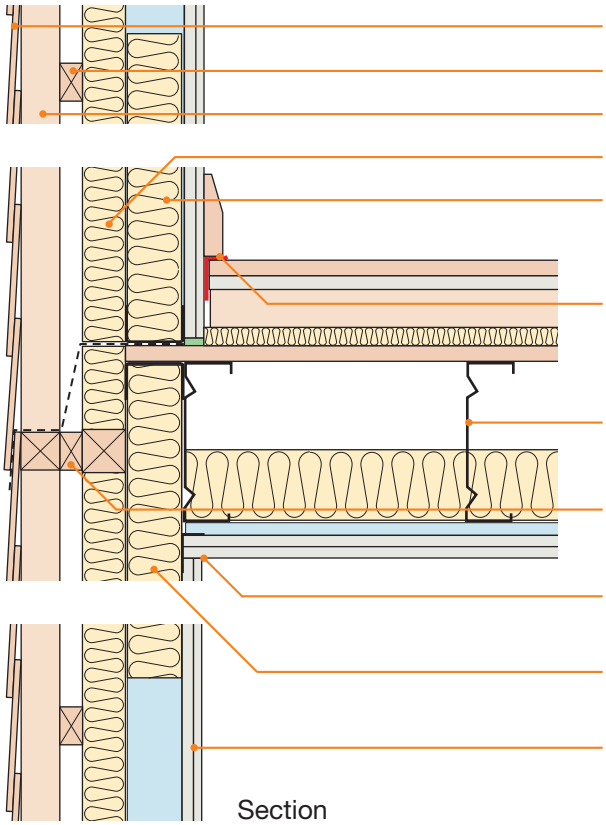
1. External (flanking) wall junction – masonry outer leaf



Section

- Masonry outer leaf (min 100mm thick)
- 25mm (min) cavity
- 55mm (min) rigid insulation board
- Mineral wool insulation batts, 33-60 kg/m^3, between studs to 600mm (min) above bottom rail of steel frame
- 5mm (min) resilient flanking strip installed at perimeter and turned under skirting board
- Joists may span in either direction
- Close cavity with a cavity stop (see Appendix A)
- Seal all perimeter joints with tape or caulk with sealant
- Mineral wool insulation batts, 33-60 kg/m^3, between studs to 600mm (min) below ceiling level
- Two layers gypsum-based board fixed to external steel frame nominal 20 kg/m^2 combined

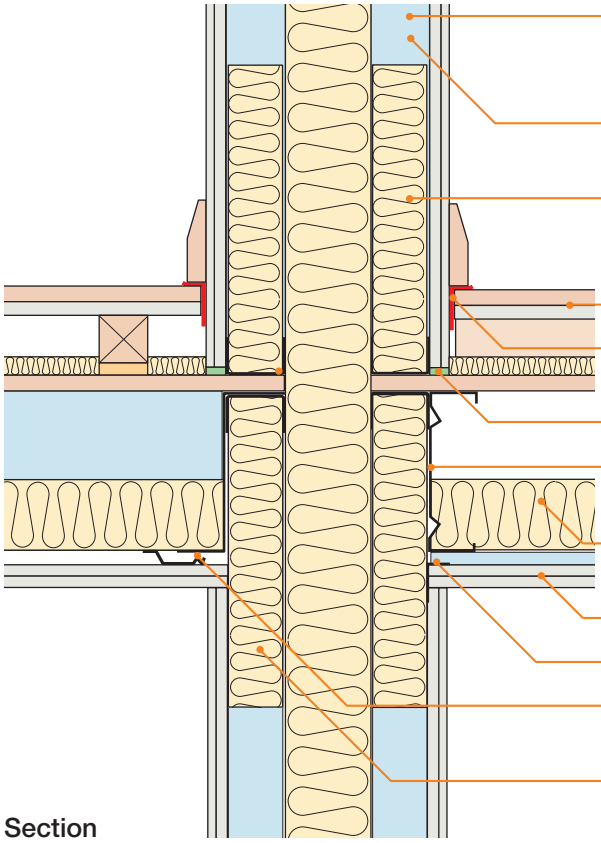
2. External (flanking) wall junction – timber cladding outer leaf



Section

- 8mm (min) weatherboard
- 50x50mm timber battens
- 25x50mm timber counterbattens
- 55mm (min) rigid insulation board
- Mineral wool insulation batts, 33-60 kg/m^3, between studs to 600mm (min) above bottom rail of steel frame
- 5mm (min) resilient flanking strip installed at perimeter and turned under skirting board
- Joists may span in either direction
- Close cavity with a cavity stop (see Appendix A)
- Seal all perimeter joints with tape or caulk with sealant
- Mineral wool insulation batts, 33-60 kg/m^3, between studs to 600mm (min) below ceiling level
- Two layers gypsum-based board fixed to steel frame nominal 20 kg/m^2 combined, joints to be staggered and taped

3. Separating wall junction



Section

If using robustdetails® for wall - refer to Table 3c in Introduction to select an appropriate robustdetails® separating wall

If using wall requiring pre-completion testing - seek specialist advice

Mineral wool insulation batts, 33-60 kg/m³, between studs to 600mm (min) above bottom rail of steel frame

Floating floor treatment (see section 6)

5mm (min) resilient flanking strips installed at perimeter and turned under skirting board

Flexible acoustic sealant below plasterboard

225mm (min) deep UltraBEAM metal joists with 22mm water resistant t&g floor decking

100mm mineral wool insulation quilt - 10-36 kg/m³ (min)

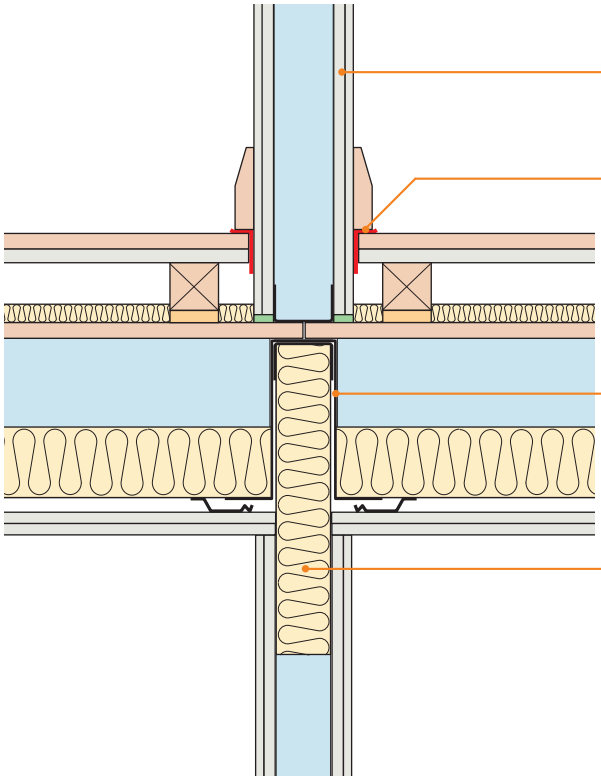
Ceiling treatment (see section 5)

Fixing angle

Resilient bar below joists at 450mm centres fixed through joist flange to manufacturer's detail

Mineral wool insulation batts, 33-60 kg/m³, between studs to 600mm (min) below decking level

4. Internal wall junction



2 layers of gypsum-based board nominal 20 kg/m² combined, joints to be staggered and taped

5mm (min) resilient flanking strip

Lipped 'Zed' floor support by Hadley Group

Mineral wool insulation batts, 33-60 kg/m³, between studs to 600mm (min) below decking level

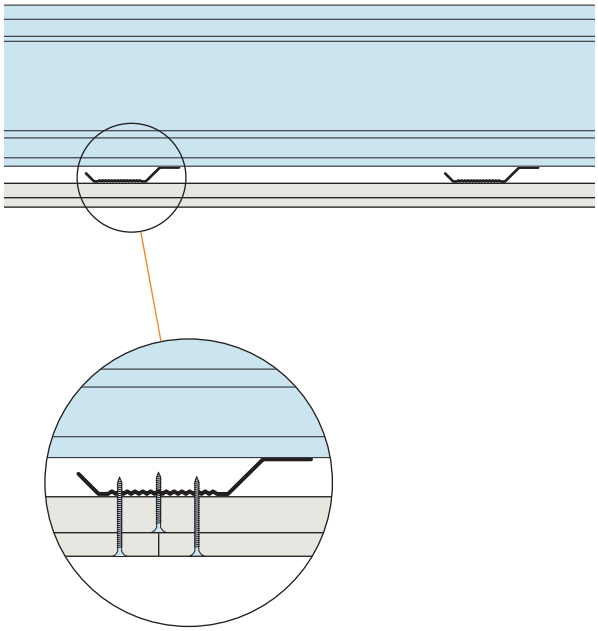
5. Ceiling treatment for E-FS-2

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 rdΔRw+Ctr=17dB and rdΔLw=16dB) – 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

25mm (min) resilient bars with CT3

25mm (min) metal resilient ceiling bars mounted at right angles to the joists at 450mm centres (bars must achieve a minimum laboratory performance of rdΔRw+Ctr=17dB and rdΔLw=16dB) - see Appendix E

Ceiling treatment CT3

Two layers of gypsum-based board, composed of 10mm (nominal 12kg/m²) fixed with 30mm screws and second layer of 10mm (nominal 12kg/m²) fixed with 30mm screws

6. Floating floor treatment for E-FS-2

Floating floor treatment:

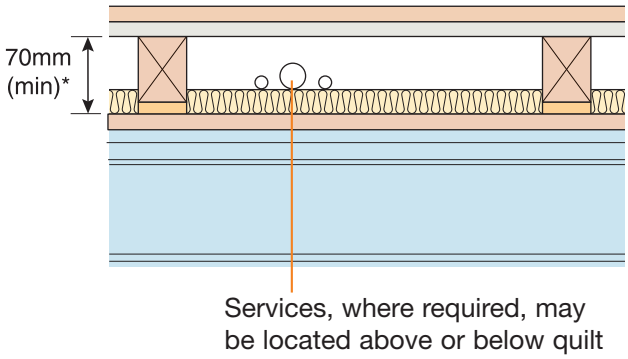
a) Must achieve a minimum laboratory performance of rd $\Delta R_w + C_{tr} = 13$dB and rd $\Delta L_w = 15$dB - see Appendix C.

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

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

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

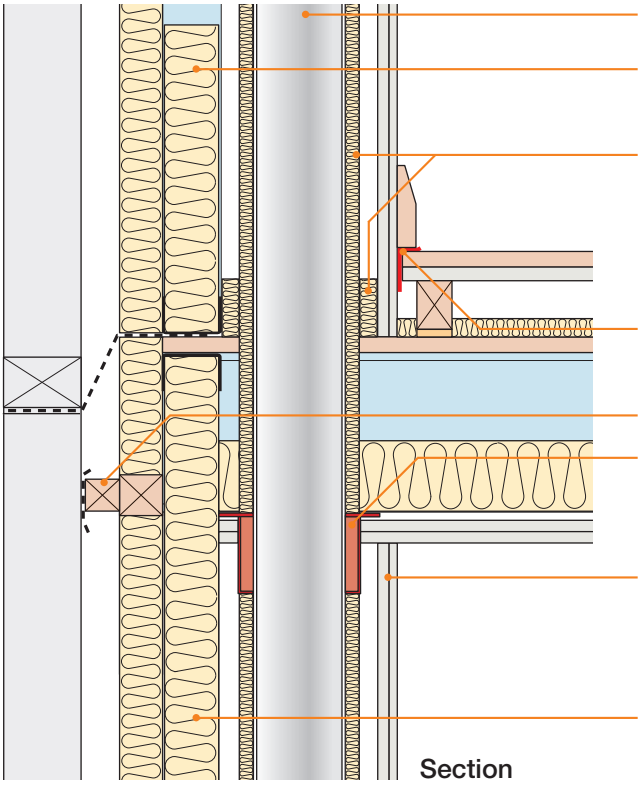
* Note - void dimension indicated is when floor is loaded to 25 kg/m^2.



FFT1 – Resilient composite deep batten system

- 22 mm (min) t&g flooring board
- gypsum-based board nominal 13.5 kg/m^2
- FFT1 resilient composite deep battens
- resilient layer must be continuous and pre-bonded to batten
- battens may have the resilient layer at the top or the bottom
- mineral wool quilt laid between battens
  – 13mm (min) 33-36 kg/m^3, or
  – 25mm (min) 10-36 kg/m^3
- ensure any services do not bridge the resilient layer

7. Services – pipes through separating floor



Section

Service pipe

Mineral wool insulation batts, 33-60 kg/m^3, between studs of steel frame

25mm mineral fibre quilt insulation (10-36kg/m^3) installed around the complete perimeter of the service pipe. Where the service pipe penetrates the separating floor, all voids are to be packed with insulation quilt

5mm (min) resilient flanking strips installed at perimeter and turned under skirting board

Close cavity with a cavity stop (see Appendix A)

Proprietary fire collar fitted around pipe and fixed to underside of steel joists

2 layers of gypsum-based board nominal 20 kg/m^2 combined fixed to 45mm metal frame stud forming duct. Joints to be staggered and taped

Mineral wool insulation batts, 33-60 kg/m^3, between studs to 600mm (min) below ceiling level

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 quilt (min 100mm thick) 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 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 . . . . . .