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**STRUCTURAL  
TIMBER ASSOCIATION**  
*Building offsite solutions in timber*

# Structural timber buildings fire safety in use guidance Volume 2 - Cavity barriers and fire stopping

STA fire safety research and guidance project  
Revision v1.1 March 2020



**STAVASSURE**  
*Defining the standard for structural timber*

## Introduction

The Structural Timber Association's objective in developing this guidance is to provide solutions for cavity barrier installations and a clear understanding of who is responsible for design, installation and checking. Consideration has been given to industry good practice and the best-in-class solutions are included within this guidance, with recommendations for increased fire resilience for low to medium-rise structural timber buildings.

The STA appointed a task team to peer review the contents of this guidance and would like to thank the following: Martin Milner (Chair and Technical Consultant), David Fleming (Walker Timber Group), Robin Dodyk (Oregon Timber Frame Ltd), Alan Bodie (Scotframe Timber Engineering), Steve Griffiths (Taylor Lane), John Simpson and Stewart Dalgarno (Stewart Milne Timber Systems), Nick Worboys (Pinewood Structures Ltd) and Andrew Orriss (Structural Timber Association).

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## STA Assure

Please note that timber frame systems performance declarations, only applies when supplied and/or erected by STA member companies, operating under the STA Assure Quality Scheme. They do not apply to non-member companies engaged in the supply and install of timber frames, regardless of any similarity of systems.

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# Structural timber buildings fire safety in use guidance

## Volume 2 - Cavity barriers and fire stopping to elements of structure

**Technical advice to support designers, installers and checkers to achieve resilient fire safe structural timber buildings**

### Scope of document (Parts 1-5)

To provide clarity on the location and detailing for cavity barriers in dwelling houses for single occupancy and multi occupancy blocks.

Part 1: Functional requirements of cavity barriers

Part 2: Responsibility for installation

Part 3: Cavity barrier locations

Part 4: Good practice details

Part 5: Installation care points

### Other relevant STA documents

1. Technical Note 12 - Cavity Barriers around openings
2. For vocabulary of roles in a timber building project refer to STA Technical Note 31.
3. STA Cavity Barrier Guidance document

### Who should read this?

Principal designers, architects, specifiers, contractors, third party inspectors, structural timber suppliers.

### Who should follow the guidance and who is responsible?

This guidance is relevant for all projects in the design process from 1st September 2020.

Regardless of what is recommended as good practice, the responsibility of determining the location of cavity barriers rests with the building designer (see STA vocabulary of roles in a timber building project Technical Note 31, Part 1).

The guidance presented follows STA industry reviews of design and installation procedures. This work, which is not restricted to structural timber buildings but all forms of buildings, identified the need for fire safety at an increased level of understanding, plus processes that address unavoidable construction tolerances.

The STA recommendation is to follow this guidance, even though it may be more than other guidance documents may require. The STA is futureproofing its buildings for fire safety, so that the benefits of energy and productivity-efficient buildings can be realised with inherent fire safety.

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# Part 1 - Functional requirement of cavity barriers

## Terms and understanding

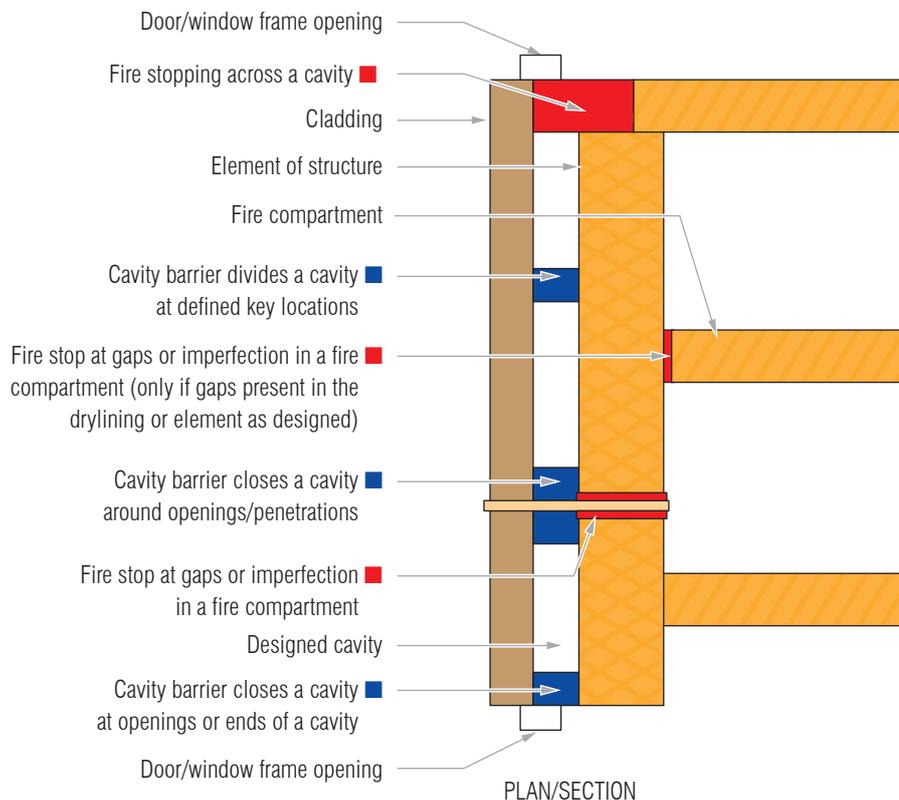
### What is a cavity barrier?

A product that closes or subdivides a concealed cavity and inhibits the spread of fire across or into a cavity; inhibiting is to slow the spread of fire over a time period. See table 1.1 for fire resistance requirements.

### Fire stopping for elements of structure

Fire stopping is a product that closes a gap or imperfection in a fire resisting element of structure or compartment lining and has at least the same fire resistance as the function requirement in which it is located.

A cavity barrier is not fire stopping unless designed for that function. However, fire stopping can achieve cavity barrier functions if it closes a cavity.



**Figure 1.1: Cavity barrier and fire stopping explanation of the difference**

### Fire resistance of an element of structure

The term is generally used in regulation guidance to describe the performance under a standard test condition to achieve a requisite number of minutes of resistance in the test before failure.

The term can also be used in fire engineering to describe the calculated fire performance based on design standards and actual fire data to provide a designed fire performance of the building.

### Elements of structure

The part of the building that provides support or compartmentation for a building. The element of structure is typically a combination of products to form the assembly be it a wall, floor or ceiling and roof.



# Cavity barrier products and requirements

Building Regulations give functional requirements not details. For example ADB-B3(4) in England

“The building shall be designed and constructed so that the unseen spread of fire and smoke within concealed spaces in its structure and fabric is inhibited”.

The designer shall decide how this is achieved.

Guidance documents, for example Approved Document B (England) and Technical Handbook (Scotland), are common means to achieve the regulation functional requirement for situations but other methods can be provided such as a peer reviewed and accepted industry guidance from the STA.

The principal designer manages the building designer and other parties with design responsibility to ensure that the Building Regulation requirements are achieved. The STA recommend the locations and installation approach for cavity barriers contained in this guidance, as this addresses a practicable and increased level of fire safety. Refer to Part 3 of this guidance and STA Technical Note 31, covering the roles in a timber building project.

## Fire safety information

For any building work there are legal requirements to provide summary fire compliance documents to hand over to the principal designer, who in turn passes it to the building “responsible person”.

Regulatory Reform (Fire Safety) Order 2005 in England. Guidance which needs to be submitted by the structural timber building contractor is the location of fire-separating elements (including cavity barriers), where these are the design and installation responsibility of the structural timber building contractor.

ENGLAND: REGULATION B3 (4)	SCOTLAND: STANDARD 2.4
<p><b>Internal fire spread (structure)</b></p> <p>The building shall be designed and constructed so that the unseen spread of fire and smoke within concealed spaces in its structure and fabric is inhibited.</p> <p><b>Intention</b></p> <p>Inhibition of the <b>unseen spread of fire</b> and smoke in cavities, <b>to reduce the risk of structural failure</b> and spread of fire and smoke, <b>where they pose a threat to the safety of people</b> in and around the building.</p>	<p>Every building must be designed and constructed in such a way that in the event of an outbreak of fire within the building, the spread of fire and smoke within cavities in its structure and fabric is inhibited.</p>
<p>Northern Ireland and Wales - as England</p>	

**Table 1.1: Regulation requirements for England, Scotland, N. Ireland and Wales**

## Key points

1. The cavity barrier functional objective is to delay the fire spread not to necessarily stop it; delaying spread from beyond the point of origin before it has extinguished/burnt out. Therefore there is a time requirement, which can be found in regulation guidance and can be followed appropriate to the building and class of use.
2. A cavity barrier's location is dependent on the use of the building and, in some cases, its size, and on the location of the elements of construction. When fire occurs in a building a cavity can act as a chimney drawing up smoke and flames into the cavity. The cavity barrier may act as a primary function to inhibit direct fire spread and or as a secondary purpose to reduce the air draw in a cavity. The reason for distinguishing between primary and secondary barriers is to determine where tolerance of fit can be considered or not. Isolated small gaps for drawing air may be acceptable, whilst gaps to reduce the spread of fire from one compartment to another can be a significant contributory factor in fire spread, with hot gasses passing from one side to the next.
3. The location and product design falls under the principal designers responsibility.
4. The design and installation of the cavity barrier shall follow the care points list presented by the STA.
5. Installation of the cavity barrier shall be to the principal designer's design. If absent or considered not appropriate the installer shall confirm with the principal designer as to the actions to take.

## Cavity barriers compliance

Regulation approved guidance allows designers on common building situations to adopt principles to achieve the Building Regulation functional requirements without further design justification. The STA recommend that cavity barriers have test evidence as noted in Table 1.2

TEST VALIDATION (BOTH SIDES SEPARATELY)		
FIRE RESISTANCE PERFORMANCE TEST	BS476 TEST	EN 13501 COMPLIANCE
	30 minutes' integrity 15 minutes' insulation	30 minutes' integrity (E 30) 15 minutes' insulation (I 15)

**Table 1.2: Cavity barrier test validation with Building Regulation Guidance in England, Approved Document B**

**NOTE:** For Scotland the test validation is for 30 minutes integrity only and for horizontal barriers tested from underside only.



# Fire test compliance

The testing shall be undertaken in similar material family types that are included in the design. For all structural timber building types the use of the cavity barrier can be accepted providing tests have been undertaken with a timber-based product to at least one side of the barrier. The timber-based product can be engineered timber products like OSB, plywood, chipboard, LVL, CLT or solid timber.

COMPLIANCE END APPLICATION	
<b>INSTALLATION REQUIREMENTS</b>	<p>Tight fitting to the surfaces of the cavity space.</p> <p>If a non-combustible board is present behind the cavity barrier, then the depth of board to which the cavity barrier is fixed shall be demonstrated to be unaffected by a fire of equal intensity for the 30 minutes fire condition.</p> <p>The cavity barrier shall be mechanically fixed to the supporting element or demonstrated how it can be secured within the cavity and perform its function during a fire and in its life time. Securing the barrier consideration is needed to allow for movement of the supporting timber structure and cladding.</p> <p><b>External cavity wall notes</b></p> <ol style="list-style-type: none"> <li>1. Products may, depending on their type, require a damp-proof membrane at an interface with and external wall cladding</li> <li>2. Where installed, DPC and cavity trays are not to stop the functional requirement of the cavity barrier</li> <li>3. The design shall consider where free flow of air may be required in the cavity space for external walls and roofs to avoid condensation.</li> <li>4. External walls may require thermal bridging check</li> </ol>
<b>DEEMED TO SATISFY BARRIERS UNDER THE ADB 2019 AND TECHNICAL HAND BOOK 2019</b>	<ol style="list-style-type: none"> <li>a Steel, a minimum of 0.5mm thick</li> <li>b Timber, a minimum width of 38mm thick into the cavity</li> <li>c Polythene-sleeved mineral wool, or mineral wool slab, under compression when installed in the cavity</li> <li>d Calcium silicate, cement-based or gypsum-based boards, a minimum of 12mm thick</li> </ol>

**Table 1.3: Cavity barrier compliance generic compliance under Approved Guidance**

**NOTE:** A cavity barrier may be formed by a construction element provided for another purpose if it achieves the same performance as given in Table 1.1

# External wall cavity

## Product options for between the structural frame and external cladding

PRODUCT TYPE	HOW THEY WORK	BENEFITS	POINTS TO CONSIDER
<b>GLASS AND STONE WOOL PLASTIC SLEEVED “SOCKS”<sup>4</sup></b>	Under compression they provide a tight fit	Ease of site fitting Easily identified Can be changed in dimensions to suit site or design conditions	Butt tight joints - no gaps <sup>1</sup> Sleeve tail lapped under breather membranes To be communicated with follow on trades: <ul style="list-style-type: none"> <li>Cladding to follow the line of the structural frame walls, not independent of structural wall or tolerance gaps can occur<sup>2</sup></li> <li>To be installed as a compression fit to product design. Typically compressed 3mm-10mm</li> <li>Not be compressed by lighting strips or any battening, to be under compression against cladding</li> <li>Check if product provides cavity tray function / or provide cavity tray plus weep holes</li> </ul>
<b>SOLID TIMBER BATTENS</b>	Fully fill gap or where tolerance is required make up tolerance with suitable filler	Can be factory fitted or site fitted	Butt tight joints - no gaps <sup>1</sup> DPC layer to external cavity faces Cavity tray at horizontal members needed plus weep holes Min. size to be cavity width (less tolerance) and 38mm deep Filler to cladding tolerance gaps to be mortar or mineral wool
<b>STEEL PLATES</b>	Plates fitted across the full width of cavity	Supplied and fitted by cladding company <sup>2</sup> Ease of passing through cavity insulation	Corrosion resistance specification to environment Minimum thickness to design - fire engineered Lapped joints - no gaps <sup>1</sup> To be communicated with follow on trades: <ul style="list-style-type: none"> <li>Cavity tray/weep holes at horizontal members needed</li> </ul>
<b>INTUMESCENT STRIP “OPEN STATE BARRIERS”<sup>3,4</sup></b>	Strip fitted to one leaf. When a fire occurs the heat activates the product to expand to fill the gap	Can be factory fitted or site fitted Removes need for cavity tray and weep holes	Tolerance limited to type of intumescent strip used <sup>2</sup> Can be used with solid timber or mineral wool socks for large cavity widths <sup>2</sup> Mechanically fix to structure Butt tight joints - no gaps <sup>1</sup> To be communicated with follow on trades: <ul style="list-style-type: none"> <li>Not to be covered e.g. by battens, lightning rods, services</li> </ul>

**Table 1.4: Cavity barrier product options - external walls**

### NOTES:

- <sup>1</sup> 'No gaps' means contact of surfaces, relevant to the material type.
- <sup>2</sup> Cladding; the gap between the structural frame and cladding inside face is to be closed by the barrier/eventual closure with intumescent band barrier in the event of a fire.
- <sup>3</sup> Open state cavity barriers. ASFP define these as barriers that allow ventilation and drainage in the cold state, but which either close in a fire.
- <sup>4</sup> Tested elements for EI 30/15.



# External wall cavity between the structural frame and external cladding

Soft cavity barrier band

Rigid cavity band

Fire reactive cavity band



<b>MINERAL WOOL SOCKS</b> GOOD IF WITHIN TOLERANCE	<b>TIMBER BATTENS, STEEL PLATES</b> GOOD IF TOLERANCE TAKEN UP BY FILLER	<b>INTUMESCENT BAND</b> GOOD IF DESIGN ACCOUNTS FOR TOLERANCE OF GAP
Not tolerant of weather damage or light abuse during the construction process - easily dislodged	Tolerant of weather damage or light abuse during the construction process	Tolerant of weather damage or light abuse during the construction process
Cladding to be aligned to the tolerance of assembly of the structural frame from direct measurement from the frame	Acts as a guideline for cladding to be aligned to the tolerance of assembly of the structural frame	Allows cladding to be aligned to the tolerance of assembly of the structural frame from direct measurement from the frame
Limited tolerance of cavity width - must be under compression to manufactures requirements (likely to be 5mm to 10mm)	Tolerance of cavity width - must be taken up by robust filler	Tolerance to be included in the design selection of the barrier, in so much that the expandability of the strip to be at the limits of acceptable cavity tolerance

**Table 1.5: Cavity barrier suitability for external wall cavity conditions**

## Cavity barriers around openings

Where the opening frame extends beyond the internal fire resistance lining and the reveal passes the cavity zone then the cavity barrier function can be replaced by a fire stopping detail. This ensures that the internal elements of structure maintain the fire resistance required.

### Key points

1. Ensure any opening does not cause an imperfection in the fire resistance line of the elements of structure or provide fire stopping at the gap formed.
2. A cavity barrier is not fire stopping unless designed specifically for that purpose.
3. The char rating of timber cavity barriers or timber elements in the frame can be used to provide fire stopping conditions
4. Drylining, where used as fire resistance barrier/effective fire stopping, may be used to bridge a gap (e.g. window reveal), providing it has support at a free edge, or that a free edge does not cantilever more than the board thickness.
5. Junctions to frames and fire lining/fire stopping element should be sealed with a fire resisting sealant suitable for the fire resistance requirement and gap present.
6. The cavity barrier at the head of the window/door and the reveal must be tightly connected.
7. A window/door frame may be used (if data available) to justify it as a cavity barrier, only if it closes the cavity.

# Internal wall cavity

Product options for between the structural frames in compartment walls, ceilings, spandrels and floor zones

PRODUCT TYPE	HOW THEY WORK	BENEFITS	POINTS TO CONSIDER
<b>GLASS AND STONE WOOL PLASTIC SLEEVED “SOCKS”, OR UNBAGGED PRODUCT</b>	Under compression they provide a tight fit between the compartment wall elements (walls, floors, ceiling, roof)	Site fitted as work progresses or follow on trades where access is available	To be installed as a compression fit to product design. Typically compressed 5mm-10mm <sup>2, 3</sup> Butt tight joints between lengths - no gaps <sup>1</sup>
<b>SOLID TIMBER BATTENS</b>	Fully fill gap or where tolerance is required make up tolerance with suitable filler e.g. mineral wool	Can be factory fitted or site fitted	Tolerance gaps filler to considered and checked <sup>2</sup> Butt tight joints - no gaps <sup>1</sup> Minimum size to be cavity width (less tolerance) and 38mm deep
<b>STEEL PLATES</b>	Plates fitted across the full width of cavity	Site fitted	Minimum 0.5mm thick <sup>2</sup> Lapped joints - no gaps <sup>1</sup>
<b>INTUMESCENT STRIP</b>	Strip fitted to one leaf. When a fire occurs the heat activates the product to expand to fill the gap	Can be factory fitted or site fitted <sup>4</sup>	Tolerance limited to type of intumescent strip used <sup>2</sup> Can be used with solid timber or mineral wool socks for specific cavity widths <sup>2</sup> Mechanically fix to structure; one of the leaves that form the cavity Butt tight joints - no gaps <sup>1</sup>

**Table 1.6: Cavity barrier suitability for external wall cavity conditions**

**NOTES:**

- <sup>1</sup> 'No gaps' means contact of surfaces, relevant to the material type.
- <sup>2</sup> The gap between the structural frame elements is to be fully closed by the barrier/eventual closure with intumescent band barrier in the event of a fire.
- <sup>3</sup> Tested elements for EI 30/15. Untested mineral (glass or stone) wool (minimum density 20kg/m<sup>3</sup> shall be a minimum of 300mm deep into the cavity, this results in fully filled compartment walls to have inherent cavity barriers.



# Internal wall cavity between the structural frame and external cladding

Soft cavity barrier band	Rigid cavity band	Fire reactive cavity band
		
<b>MINERAL WOOL SOCKS</b> GOOD IF WITHIN TOLERANCE	<b>TIMBER BATTENS, STEEL PLATES</b> GOOD IF TOLERANCE TAKEN UP BY FILLER	<b>INTUMESCENT BAND</b> GOOD IF DESIGN ACCOUNTS FOR TOLERANCE OF GAP
Tolerance gap not likely to be significant on an internal cavity frame - under control of the structural timber assembler.		
Ease of fitting	Difficult to site fit  Tight tolerance for factory fit  Will not provide acoustic performance on any acoustic cavity wall requirement	Difficult to site fit  Tight tolerance for factory fit

**Table 1.7: Cavity barrier suitability for internal party walls or floor cavity conditions**

## Tolerance of installation

In the event of a fire gaps will allow hot gases to pass a barrier and create conditions to ignite the elements on the other side of the barrier. The installation of barriers to inhibit or stop fire should be subjected to a quality control process and signed off that they are appropriate.

The STA have a quality installation programme for its members. The STA Assure process for cavity barrier installation covers the installer training and sign of that the barrier has been installed correctly; presenting the customer with a technical trail of installation plus the provision of follow on trade information to reduce errors or mistakes by others during the build process. In terms of closeness of fit of barriers and fire stopping, there's a need to understand the purpose and sensitivity of the barrier being considered, and as to who is responsible for the final element of installation that completes the assembly. The critical barriers at horizontal floor levels, heads of openings and at gable ceiling level; in these locations as near as perfect installation is essential, with full filled cavity barriers to be under compression (flexi mineral wool) and tight fitted (solid).

The critical barriers at vertical locations are reveals of openings and vertical party wall locations; in these locations as near as perfect installation is essential, with full filled cavity barriers to be under compression (flexi mineral wool) and tight fitted (solid).

Fire stopping is to fully fill the imperfection or where at party wall flexi barriers are used then these are to be under compression (flexi mineral wool) and tight fitted (solid).

## Fire safety information

For any building work there are legal requirements to provide summary fire compliance documents to hand over to the principal designer, who in turn passes it to the building "responsible person".

Regulatory Reform (Fire Safety) Order 2005 in England. Guidance which needs to be submitted by the structural timber building contractor is the location of fire-separating elements (including cavity barriers), where these are the design and installation responsibility of the structural timber building contractor.

## Part 2 - Cavity barrier roles and responsibilities

### Responsibility of design

#### External wall cavity barrier and fire stopping to elements of structure

LOCATIONS	DESIGN RESPONSIBILITY	COMMENT	STRUCTURAL TIMBER BUILDING OPTION TO INSTALL	CHECK AUDIT
<b>DIVISION FOR COMPARTMENTATION</b>	Building designer	The location to be on the builder designer drawings	Areas that allow access to the cavity there is an option to install	By others or option for STA Assure compliance check
<b>CAVITY BARRIER BELOW DPC</b>	Building designer / sub structure engineer	The location to be on the builder designer drawings	By ground worker or for certain products option to install	By others or option for STA Assure compliance check
<b>CAVITY BARRIER AROUND OPENINGS</b>	Building designer	The location to be on the builder designer drawings	Areas that allow access to the cavity there is an option to install	By others or option for STA Assure compliance check
<b>CAVITY BARRIERS AROUND SERVICE PENETRATIONS</b>	Building designer	The location to be on the builder designer drawings	Areas that allow access to the cavity there is an option to install	By others or option for STA Assure compliance check
<b>FIRE STOPPING</b>	Building designer	The location to be on the builder designer drawings	Areas that allow access to the cavity there is an option to install	By others or option for STA Assure compliance check



# Internal frame elements

## Cavity barriers to internal compartment walls and floors and fire stopping to elements of structure

LOCATIONS	DESIGN RESPONSIBILITY	COMMENT	STRUCTURAL TIMBER BUILDING PROVIDER INPUT	CHECK AUDIT
<b>DIVISION FOR COMPARTMENTATION</b>	Building designer	The location to be on the builder designer drawings	Areas closed off by the build process installed by provider as work progresses	STA Assure compliance check
			In areas follow on trades can access there is an option to install	By others or option for STA Assure compliance check
<b>CAVITY BARRIER AROUND OPENINGS</b>	Building designer	The location to be on the builder designer drawings	In areas follow on trades can access there is an option to install	By others or option for STA Assure compliance check
<b>CAVITY BARRIERS AROUND SERVICE PENETRATIONS</b>	Building designer	The location to be on the builder designer drawings	Typically works occur after structural timber provider has left site	By others
<b>FLOOR ZONE ABOVE COMPARTMENT OR LOAD BEARING WALLS</b>	Building designer	The location to be on the builder designer drawings	In areas follow on trades can access there is an option to install	By others or option for STA Assure compliance check
<b>FIRE STOPPING</b>	Building designer	The location to be on the builder designer drawings	In areas follow on trades can access there is an option to install	By others or option for STA Assure compliance check

## Responsibility

### Installation responsibility

It is recommended that an installer has the training to install fire protection elements such as cavity barriers. The STA Assure process includes as built labels and care point checks on work, so that it can be traced back to the company responsible.

### Tolerances

The performance of a product can be severely undermined by poor installation, leading in the event of a fire to consequential spread of the fire. The assembly of the cavity barrier products are to be installed to the products specifications. For primary cavity barriers any gaps in a line of a cavity barrier that is not an intumescent based product, or other product justified by test, is not acceptable as such gaps can lead to a breach in the cavity barrier function. To allow for some error in installation the STA have considered the use of additional cavity barriers to reduce the likelihood of unintended gaps occurring in one area and therefore provide secondary lines of defence against a breach; this is not to suggest a relaxation on the tight quality controls being demanded of the STA installers with no gaps being present.

### For installation see

Part 4 - good practice details

Part 5 - care points

### Product substitution

Product substitution from that specified may alter the fire resistance performance significantly and cannot be done unless approved by the company responsible for the product specification.

## ■ Part 3 - Cavity barrier locations

# Background to locations and details

The functional requirements and regulation guidance requirements for cavity barriers is presented in Part 1 of this document.

In determining the location of any cavity barrier, the designer shall ensure that the detail will close a cavity at its boundary and to sub divide a length and width of an excessive cavity.

The boundary of a cavity is where it ceases to be a cavity in that member or where a hole or other aperture is formed such as doorways and windows.

Cavity barriers are present where holes occur and enter the cavity as the hole forms a new boundary in the relevant wall or ceiling.

Concept details for each junction is covered in Part 5 of this document.

The installation of the Cavity Barriers can be agreed in the contract. Part 2 provides a list of responsibilities that can be agreed.

The STA recommend that if the cavity barriers are not to be installed by the STA Structural Building System member, for example installed instead by the cladding contractor then the guidance in the STA documents should be followed and signed off by the installer as noted in Part 4.

## Additional clarity on cavity barrier locations

### **Sub-divide extensive cavities**

STA consider that for combustible cavities subdivision shall be 10m in multi occupancy dwellings and 20m for Euro class A1/A2/ B sheathing exposed to the cavity and where the breather membrane does not contribute to the fire. The STA recommend the approach taken by the Scottish Technical handbook as an example of a resilient solution which can also adopted in England, Wales and Northern Ireland.

### **Cavity barrier below DPC level**

The guidance documents to the regulations do not explicitly explain what to do below the DPC line or to the below ground cavity to external walls. The STA recommends that following a review of the regulations and considering the impact of concern relating to fire spread and combustible framing, that the inclusion of cavity barriers below DPC lines is a recommendation for projects from 1st September 2020. The responsibility for installing the cavity barrier below DPC is not the structural timber building supplier, but rests with the building designer for details and ground work contractor for installation.

### **Cavity barriers around meter cupboards**

The STA recommend that all meter cupboards have a cavity barrier around them, unless there is an inherent cavity barrier in the construction of the service cupboard.

### **Cavity barriers to service penetrations**

The STA recommend that service penetrations should have a cavity barrier and relevant fire stopping. The cavity barrier function may be provided by non-combustible sleeves/conduits.

### **Cavity barriers to cladding penetrations**

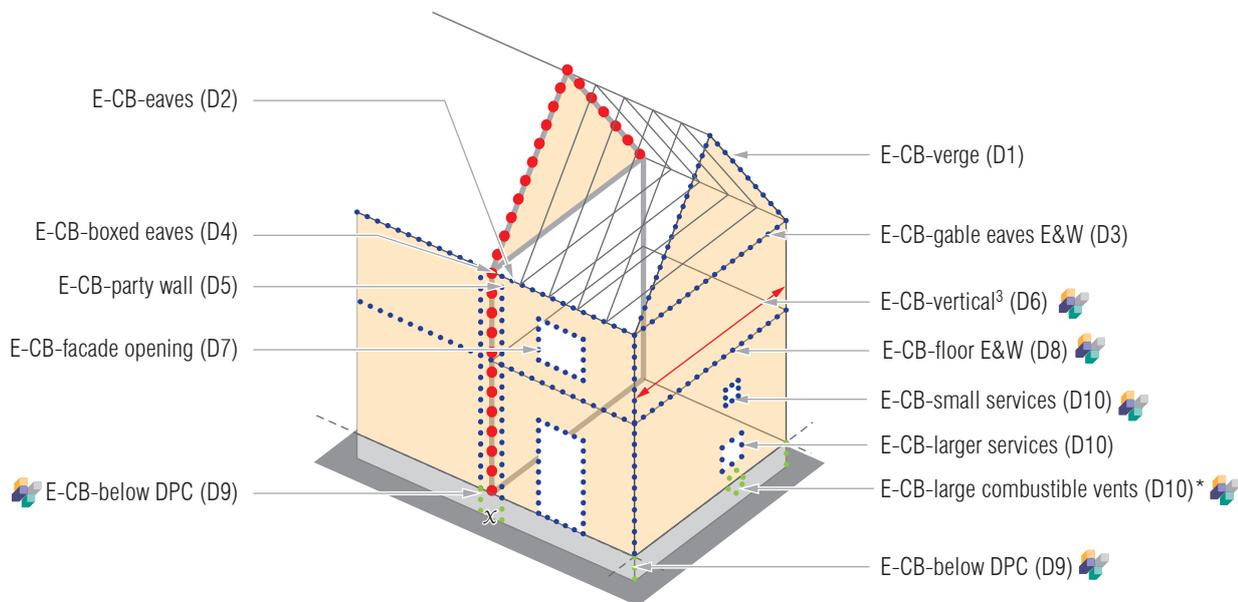
Penetrations such as sub-floor ground ventilation grills and ducting should have a cavity barrier installed over them, or be constructed using a non-combustible material. Weep vents are acceptable and not considered to be a fire spread risk.



# STA good practice guide to cavity barrier locations

Regardless of the country where being built, the following are the recommended locations for cavity barriers in structural timber buildings

**IMPORTANT:** All cavity barriers and fire stopping to be agreed in the contract as to who is responsible for the design and installation.



## Key

- Standard cavity barrier
- Fire stopping cavity barrier
- Below DPC cavity barrier
- STA recommendations
- x Assumes no party wall cavity below structural timber structure, otherwise fire stopping to continue below DPC

\* Large vents are items like sub-floor ventilation but not perp end / slot hole vents

**D = GOOD PRACTICE CONCEPT  
DETAIL IN PART 4 OF THIS DOCUMENT**

**e.g. D1 = DETAIL 1**

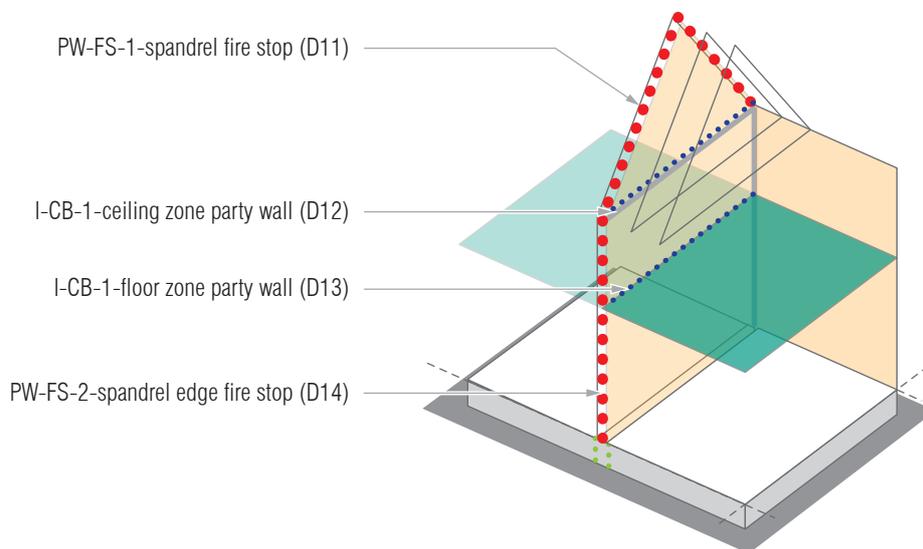
**Figure 3.1: External weather clad frame<sup>1</sup>**

**External cavity barrier locations; resilience solution (single dwelling structure with uninhabited pitch roof space<sup>2</sup>)**

## NOTES:

- <sup>1</sup> Cladding covers all forms from masonry, masonry slip elements, render boards, lightweight cladding boards and timber cladding. However some cladding types such as open facade cladding, steel plates and open board designs may require additional cavity barriers, subject to the designer's answer to satisfy the regulation requirements.
- <sup>2</sup> For flat roofs follow same principles for room in the roof. Consider the insulated roof portion as a storey level condition for cavity barriers and fire stopping.
- <sup>3</sup> Vertical cavity barriers required at 10m centres for wood-based structural elements, typically at corners for convenience.

# STA good practice guide to cavity barrier locations cont.../



## Key

- Standard cavity barrier
- Fire stopping cavity barrier
- Below DPC cavity barrier
-  STA recommendations

**D = GOOD PRACTICE CONCEPT  
DETAIL IN PART 4 OF THIS DOCUMENT**

**e.g. D11 = DETAIL 11**



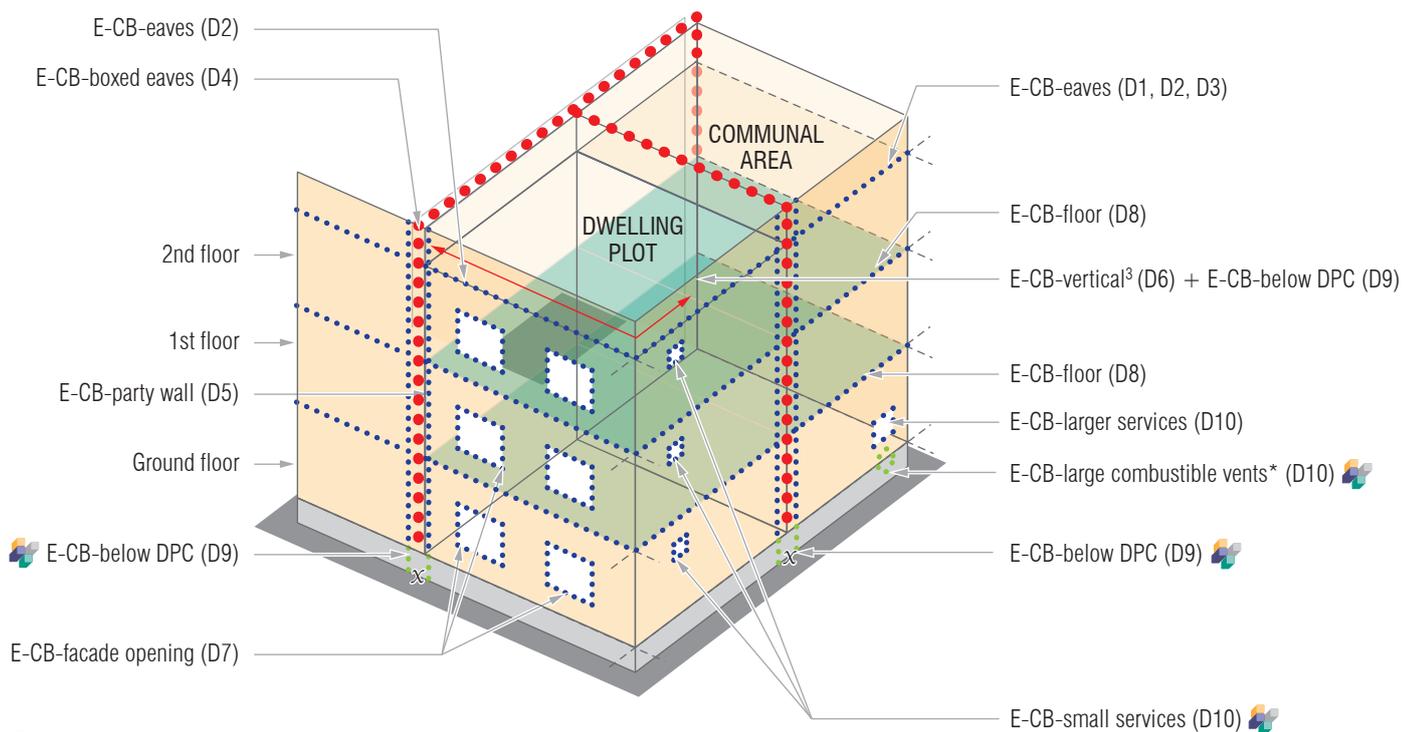
**Full filled party walls result in the cavity barrier being installed by default of the mineral wool fill. However, the top of party wall may require a specific cavity barrier if edge seal uninsulated or single spandrel panels are used.**

**Figure 3.2: Internal frame compartment wall between dwellings that includes a cavity  
Internal cavity barrier location: resilience solution (single dwelling structure with uninhabited pitch roof space<sup>2</sup>)**

## NOTES:

*I-CB-1 locations must be undertaken by the structural timber building frame installer.*

<sup>2</sup> *For flat roofs follow same principles for room in the roof. Consider the insulated roof portion as a storey level condition for cavity barriers and fire stopping.*



**Key**

- Standard cavity barrier
- Fire stopping cavity barrier
- Below DPC cavity barrier
-  STA recommendations

x Assumes no party wall cavity below structural timber structure, otherwise fire stopping to continue below DPC

\* Large vents are items like sub-floor ventilation but not perp end / slot hole vents

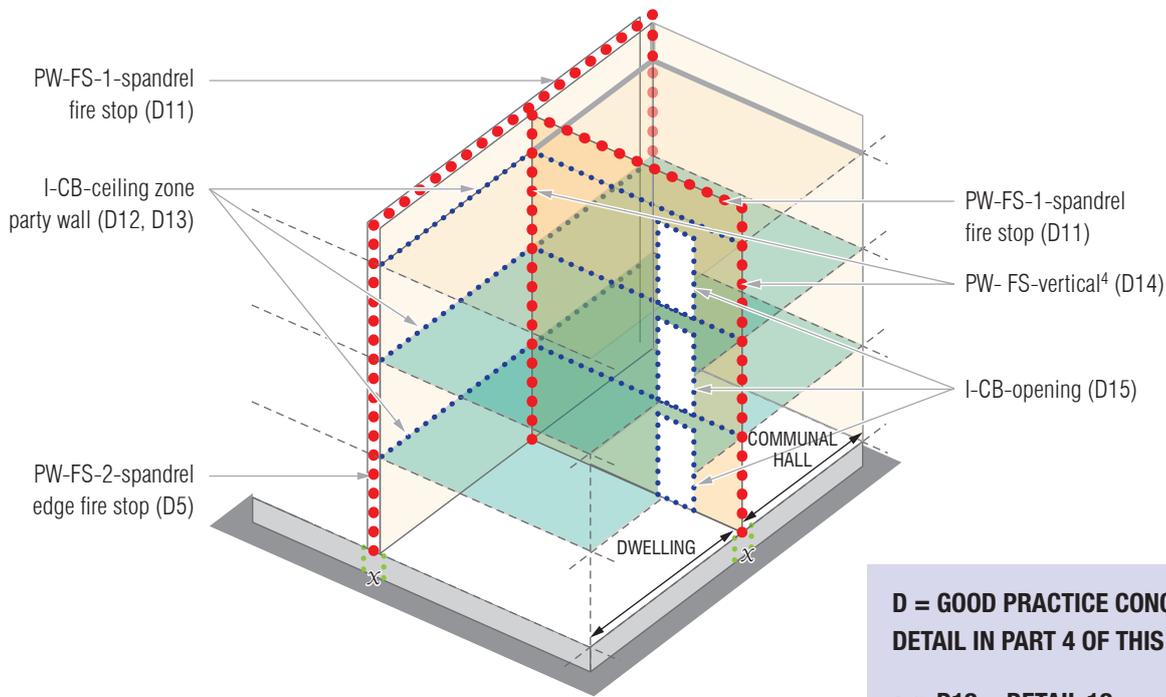
**D = GOOD PRACTICE CONCEPT  
DETAIL IN PART 4 OF THIS DOCUMENT**  
e.g. D1 = DETAIL 1

**Figure 3.3: External weather clad frame  
External cavity barrier locations: resilience solution (multi dwelling)**

**NOTE:**

<sup>3</sup> Vertical cavity barriers required at 10m centres for wood-based structural elements, typically at corners for convenience.

# STA good practice guide to cavity barrier locations cont.../



**D = GOOD PRACTICE CONCEPT  
DETAIL IN PART 4 OF THIS DOCUMENT**  
e.g. D12 = DETAIL 12

**Key**

- Standard cavity barrier
- Fire stopping cavity barrier
- Below DPC cavity barrier
- x Assumes no party wall cavity below structural timber structure, otherwise fire stopping to continue below DPC

**!** Full filled party walls result in the cavity barrier being installed by default of the mineral wool fill. However, the top of party wall may require a specific cavity barrier if edge seal uninsulated or single spandrel panels are used.

**Figure 3.4: Internal frame compartment wall between dwellings and common areas that includes a cavity**  
**Internal cavity barrier location single dwelling England / Wales compliance only**

**NOTE:**

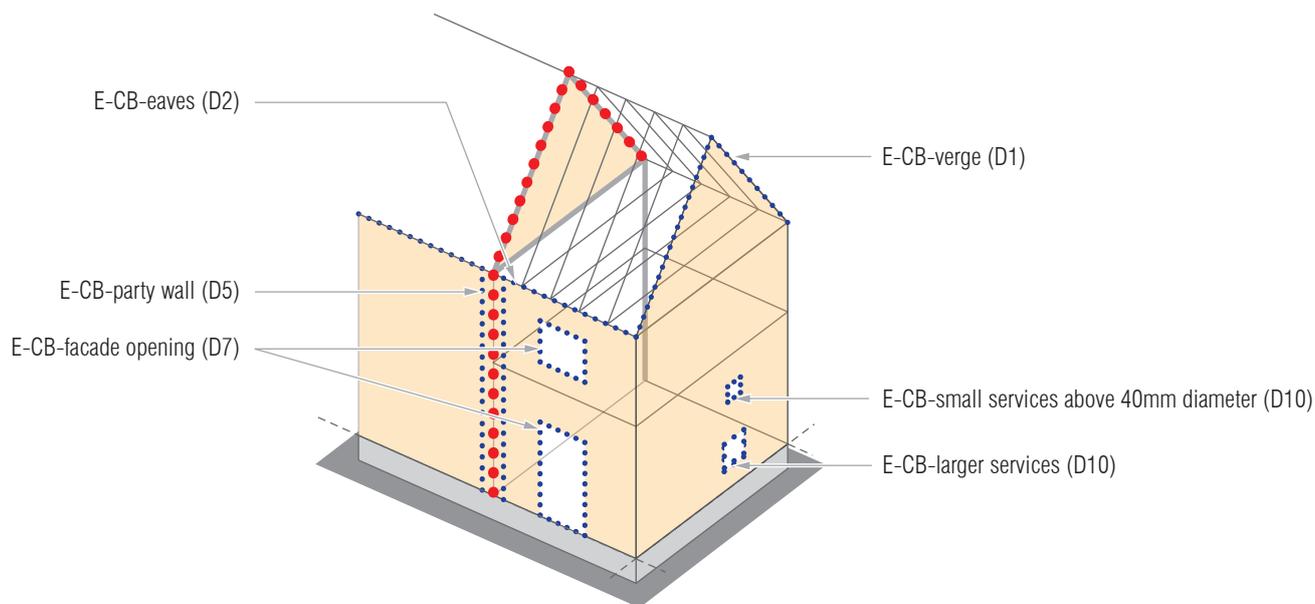
<sup>4</sup> I-CB-1 locations must be undertaken by the structural timber building frame installer. Vertical Cavity Barriers required at 1m centres.



# Compliance for England and Wales

## Approved document regulation approach only

Minimum level of cavity barrier installation to comply with current building regulation approved guidance in England and Wales only. STA recommendations from 1st September 2020 are as given in Figures 3.1 - 3.4.



### Key

- Standard cavity barrier
- Fire stopping cavity barrier

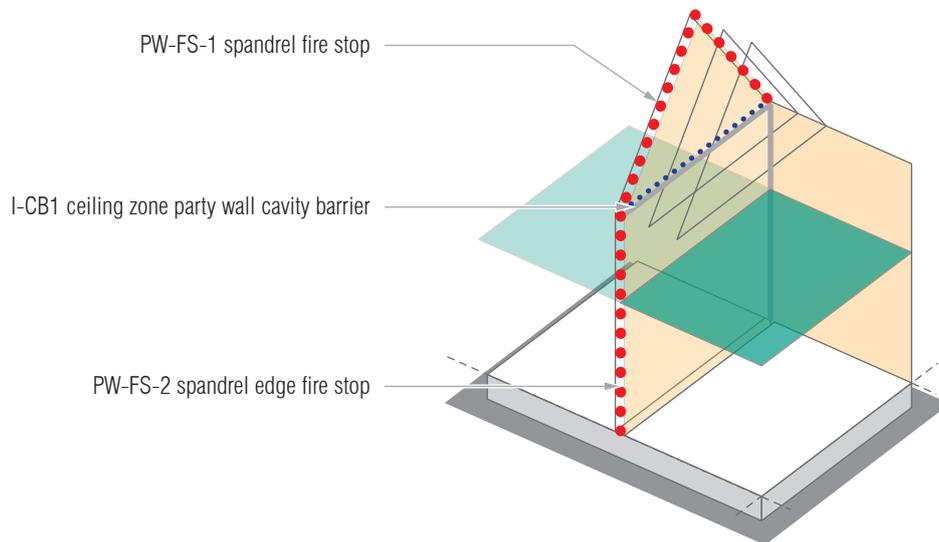
### Figure 3.5: External weather clad building

#### External cavity barrier locations (single dwelling England and Wales compliance only)



The STA recommend that the design adopts the locations presented in Figure 3.1

# Compliance for England and Wales cont.../



**Key**

- Standard cavity barrier
- Fire stopping cavity barrier

**!** Full filled party walls result in the cavity barrier being installed by default of the mineral wool fill. However, the top of party wall may require a specific cavity barrier if edge seal uninsulated or single spandrel panels are used.

**Figure 3.6: Internal frame compartment wall between dwellings that includes a cavity  
Internal cavity barrier location (single dwelling England / Wales)**

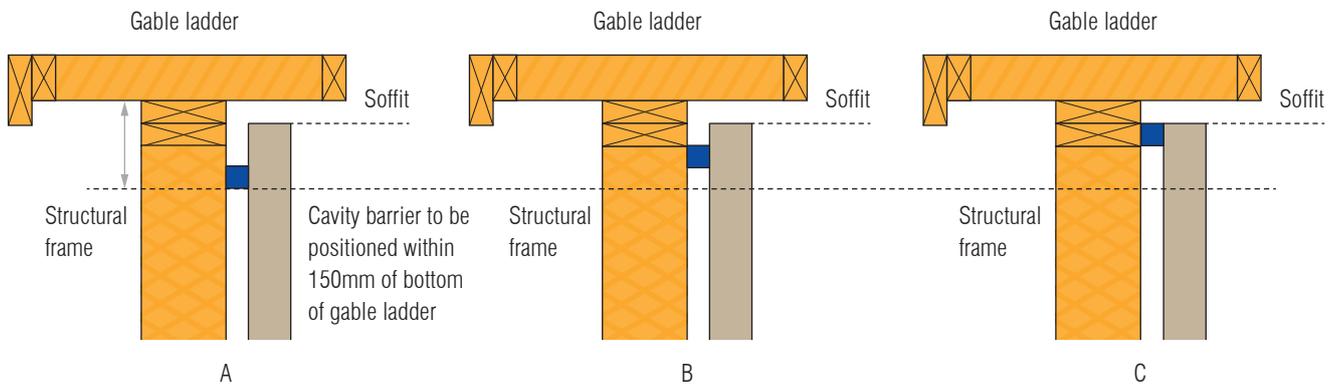
 The STA recommend that the design adopts the locations presented in Figure 3.1

**NOTE:** I-CB-1 locations must be undertaken by the structural timber building contractor.  
All other cavity barriers and fire stops to be agreed in the contract as to who is responsible for the design and installation.



## Part 4 - Good practice concept details

### Detail 1: E-CB-verge



#### D1 Section through verge

##### **DETAIL 1 NOTES:**

*Cold roof structure - options A, B or C*

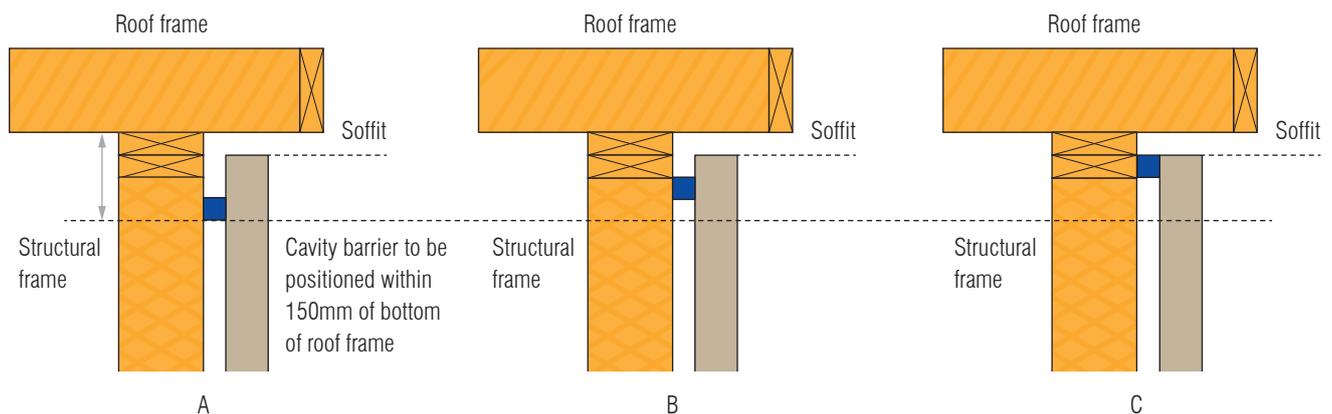
*Warm roof structure - option B or C*

*Flat roof structure - option B or C*

*Drylining and insulation omitted for clarity*

*Wall ties, breather membrane and VCL omitted for clarity*

### Detail 2: E-CB-eaves



#### D2(i) Section through eaves

##### **DETAIL 2(i) NOTES:**

*Cold roof structure - options A, B or C*

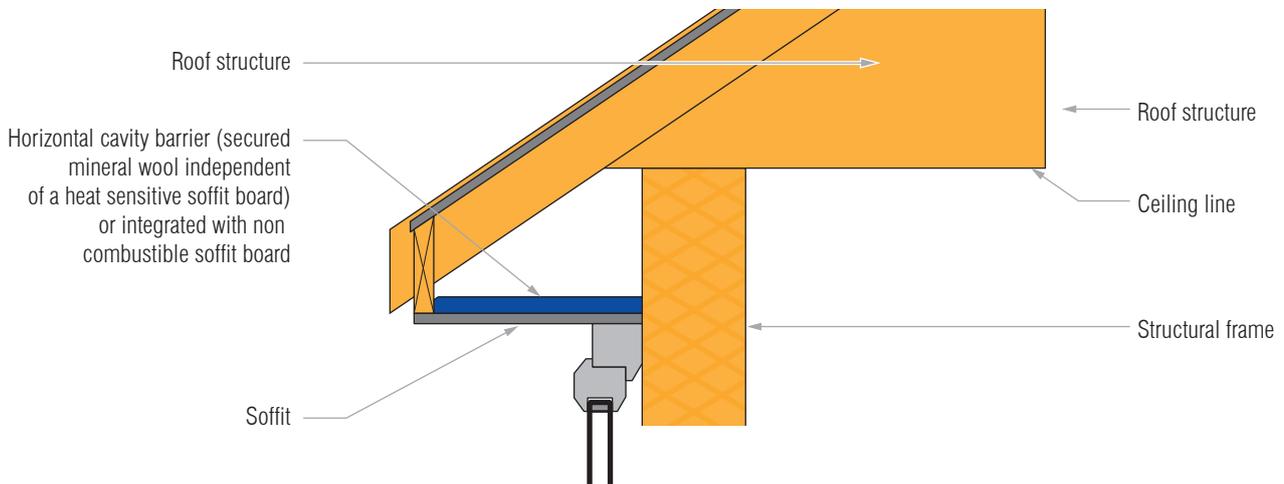
*Warm roof structure - option B or C*

*Flat roof structure - option B or C*

*Drylining and insulation omitted for clarity*

*Wall ties, breather membrane and VCL omitted for clarity*

## Detail 2: E-CB-eaves cont.../



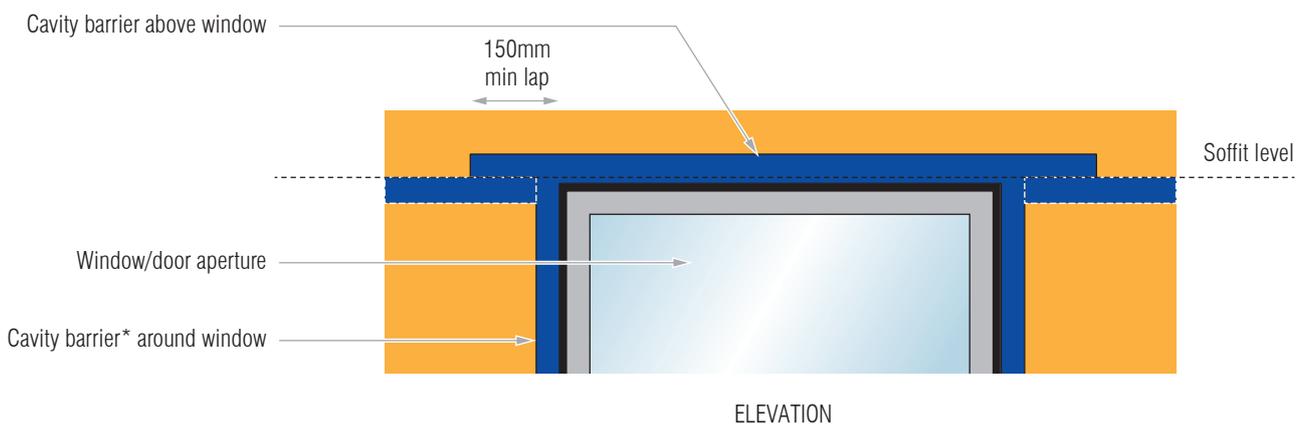
### 2(ii) Section above windows at soffit level

**DETAIL 2(ii) NOTES:**

*Cold/warm/flat roof structures*

*Drylining and insulation omitted for clarity*

*Wall ties, breather membrane and VCL omitted for clarity*



### 2(iii) Elevation above windows at soffit level

**\* NOTE:** *Cavity barriers around windows can turn to fire stopping (same fire resistance as the walls) if the window location is such that there is a breach in the wall envelope line - see guidance Part 2*

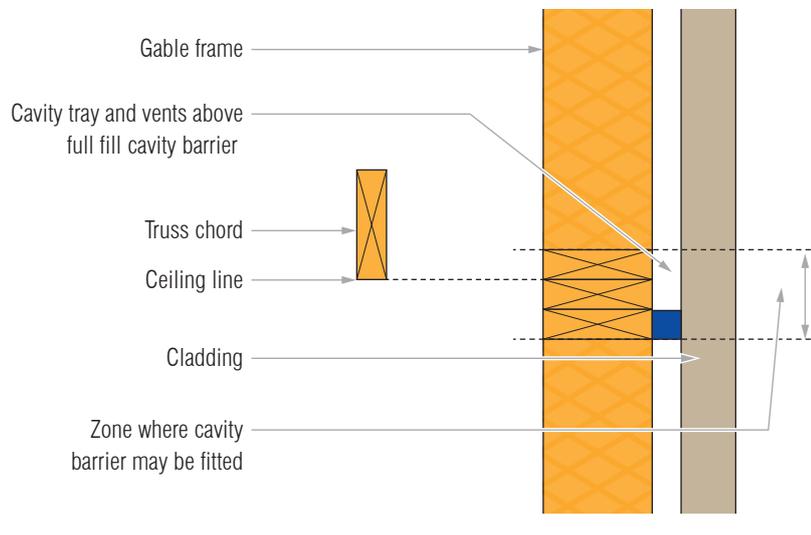
**DETAIL 2(iii) NOTES:**

*Cold/warm/flat roof structures*

*Drylining and insulation omitted for clarity*



## Detail 3 : E-CB-gable eaves

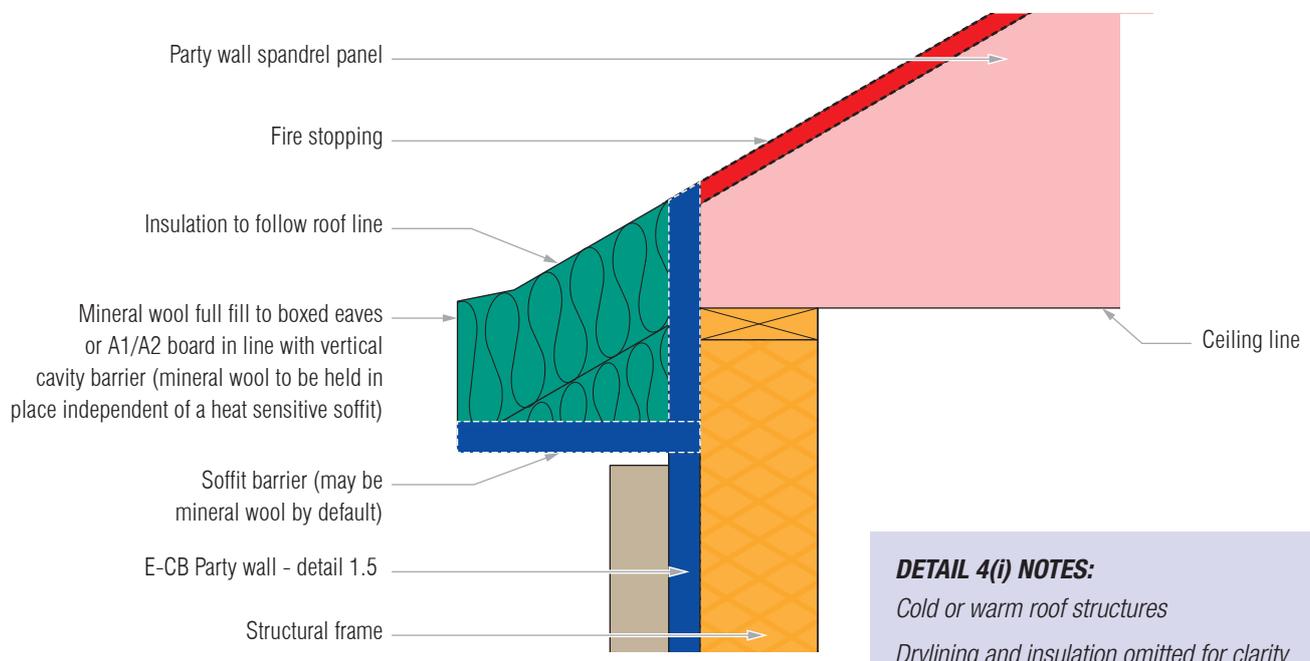


### **DETAIL 3 NOTES:**

*Cold or warm roof structures  
Drylining and insulation omitted for clarity  
Wall ties, breather membrane and VCL omitted for clarity  
Where intumescent cavity barriers are used omit cavity trays and cladding vent*

### **D3 Section at eaves/gable**

## Detail 4: E-CB-boxed eaves

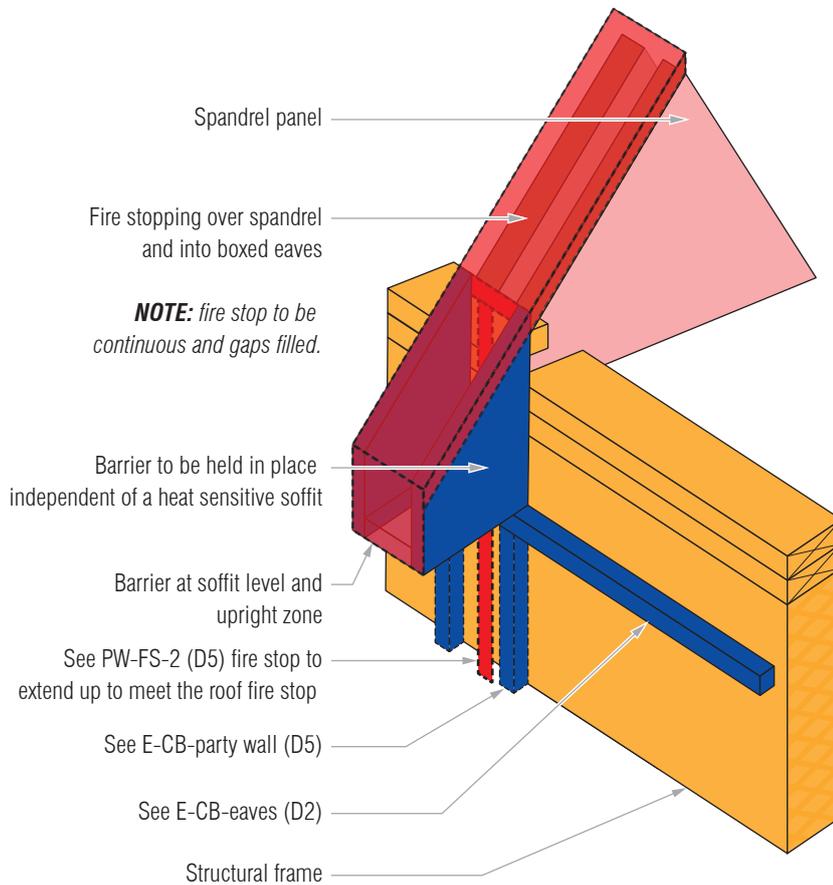


### **DETAIL 4(i) NOTES:**

*Cold or warm roof structures  
Drylining and insulation omitted for clarity  
Wall ties, breather membrane and VCL omitted for clarity  
Intumescent products to be tested for this application and due to size of the opening not likely to be appropriate*

### **D4(i) Section at boxed eaves**

## Detail 4: E-CB-boxed eaves cont.../



### **DETAIL 4(ii) NOTES:**

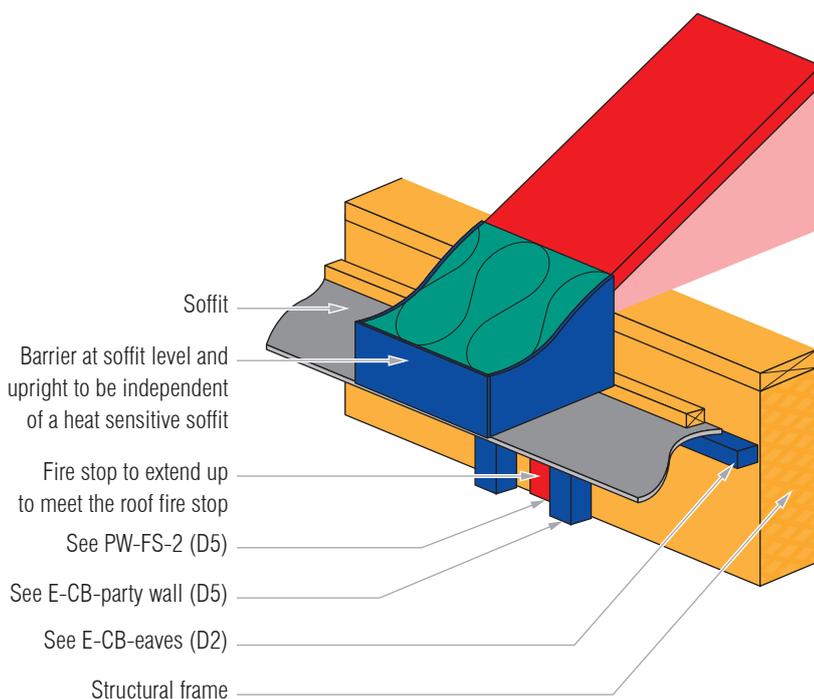
*Cold or warm roof structures*

*Drylining and insulation omitted for clarity*

*Wall ties, breather membrane and VCL omitted for clarity*

*Intumescent products to be tested for this application and due to size of the opening not likely to be appropriate*

### **D4(ii) Isometric of boxed eaves party wall, option 1 rigid boxed eaves**

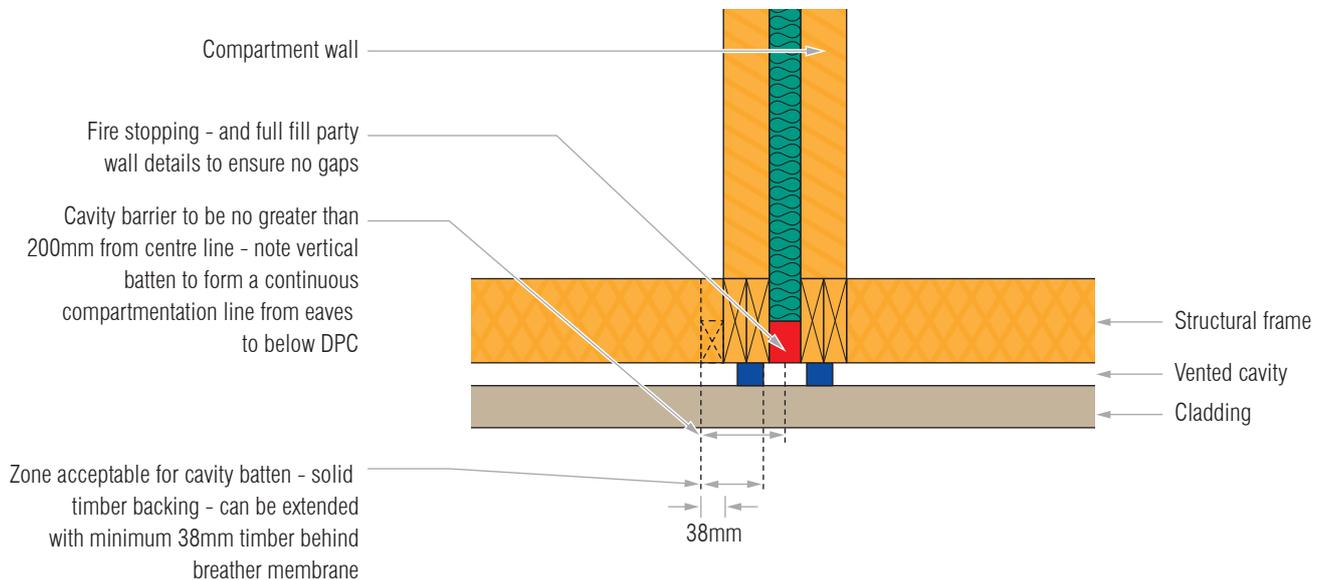


**NOTE:** fire stop to be continuous and gaps filled.

### **D4(ii) Isometric of boxed eaves party wall, option 2 mineral wool filled boxed eaves**

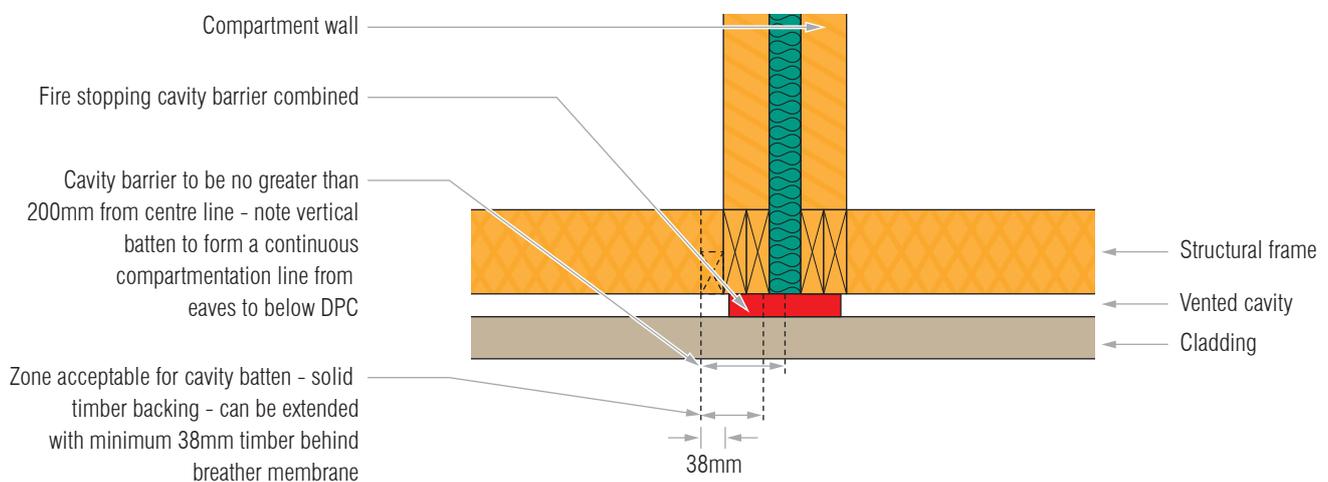


## Detail 5: E-CB-party wall



### D5(i) Section of party wall, option 1

**NOTE:** Wall ties / battens to cladding to be fixed back to solid timber elements of at least 38mm deep - allow space for ties



### D5(ii) Section of party wall, option 2

**NOTE:** Wall ties / battens to cladding to be fixed back to solid timber elements of at least 38mm deep - allow space for ties

#### **DETAIL 5(i) and 5(ii) NOTES:**

*Drylining omitted for clarity*

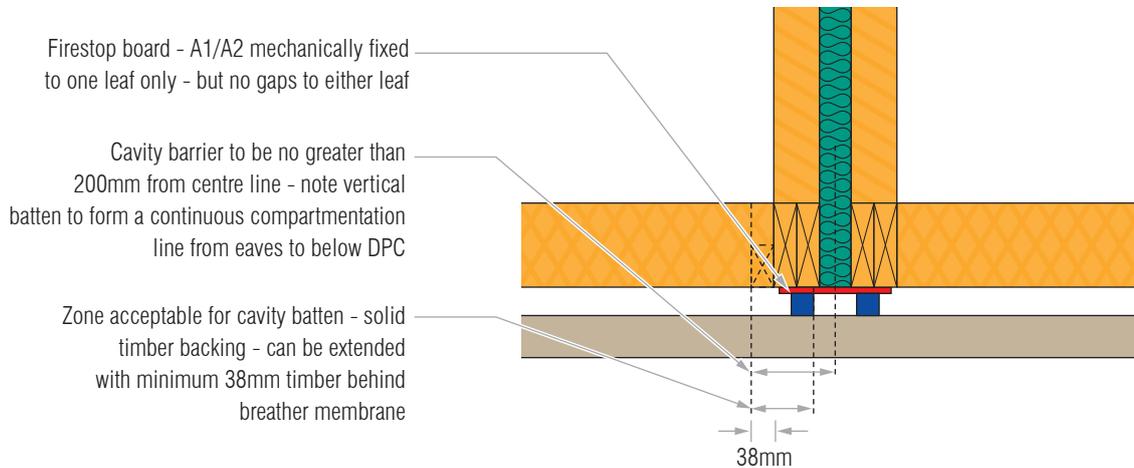
*Insulation omitted for clarity, except in party wall cavity*

*Wall ties, breather membrane and VCL omitted for clarity*

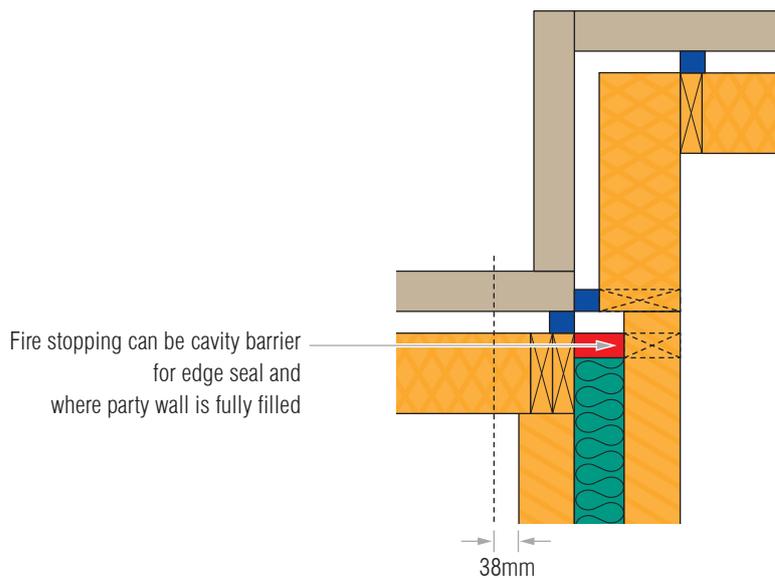
*Intumescent barrier option subject to manufacturer test*

*compliance for cavity width present*

## Detail 5: E-CB-party wall cont.../



**D5(iii) Section of party wall, option 3**



**D5(iv) Section of party wall, stepped party wall structure, option 4**

**DETAIL 5(iii) and 5(iv) NOTES:**

*Drylining and insulation omitted for clarity*

*Wall ties, breather membrane and VCL omitted for clarity*

*Intumescent barrier option subject to manufacturer test compliance for cavity width present*

*Wall ties/battens to cladding to be fixed back to solid timber elements of at least 38mm deep, plus allow space for ties*



## Detail 6: E-CB-vertical



**D6 Plan of vertical cavity barrier**

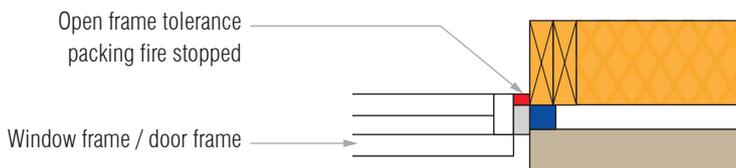
**DETAIL 6 NOTES:**

*Drylining and insulation omitted for clarity*

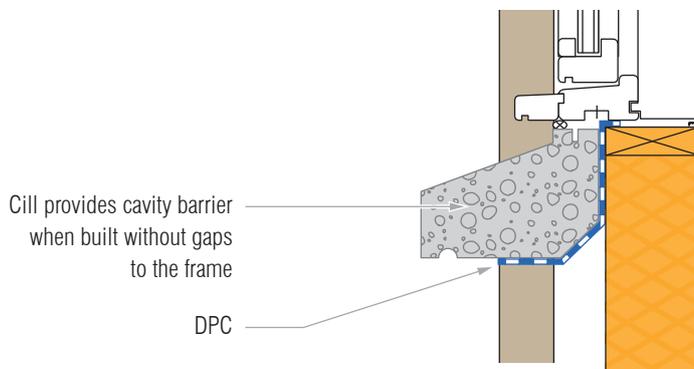
*Wall ties, breather membrane and VCL omitted for clarity*

*Material types - intumescent options acceptable*

## Detail 7: E-CB-façade opening



**D7(i) Section of reveal (see Technical Note 12 for more details)**



**D7(ii) Section of cill**

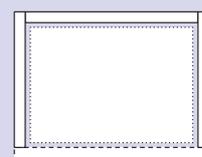
**DETAIL 7 NOTES:**

*Drylining and insulation omitted for clarity*

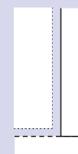
*Wall ties, breather membrane and VCL omitted for clarity*

*Intumescent barrier option subject to manufacturer test compliance for cavity width present*

*Wall ties/battens to cladding to be fixed back to solid timber elements of at least 38mm deep, plus allow space for ties*



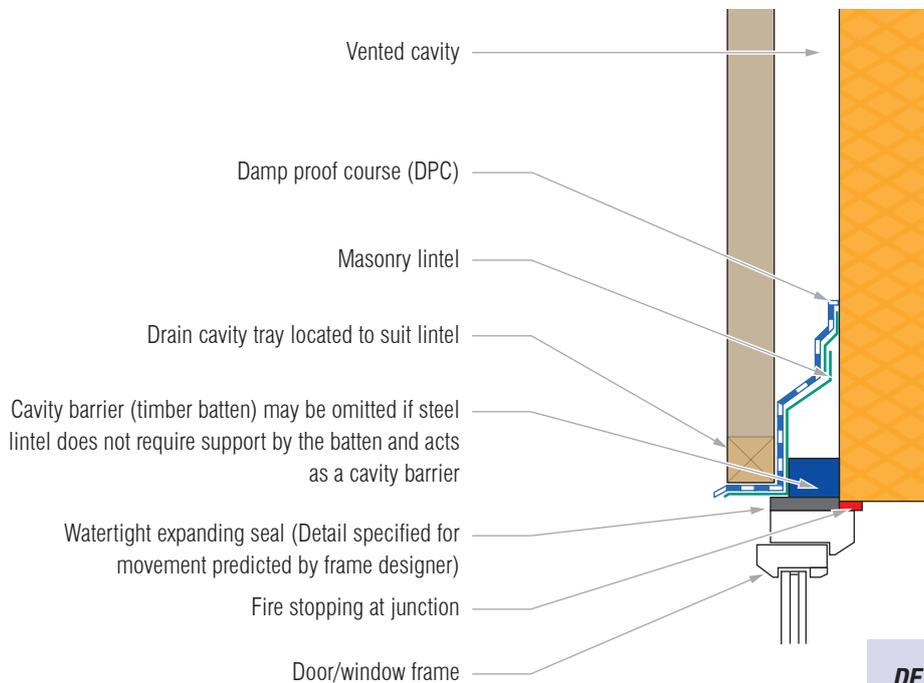
*Cavity barrier to be continuous around the whole perimeter of the opening with all gaps closed*



*Corner option*

*If the internal fire resistance lining or window frame does not cover the cavity barrier location then the cavity barrier changes to a fire stopping condition*

## Detail 7: E-CB-façade opening cont.../



### D7(iii) Section on head of opening

#### **DETAIL 7(iii) NOTES:**

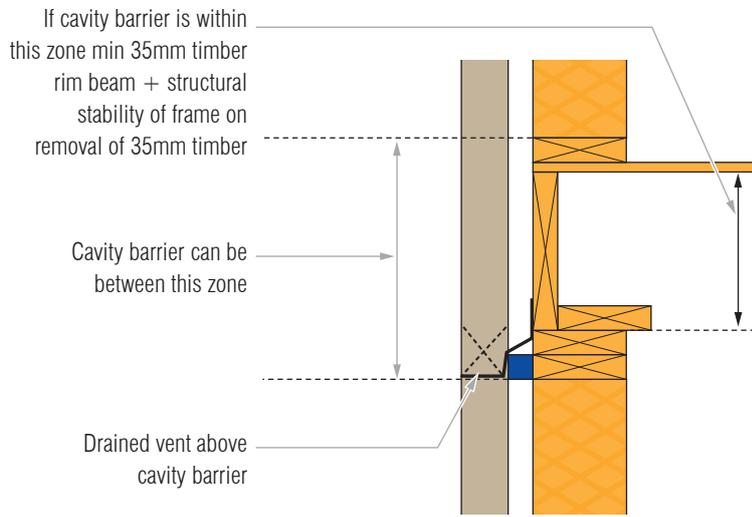
*Drylining and insulation omitted for clarity*

*Wall ties, breather membrane and VCL omitted for clarity*

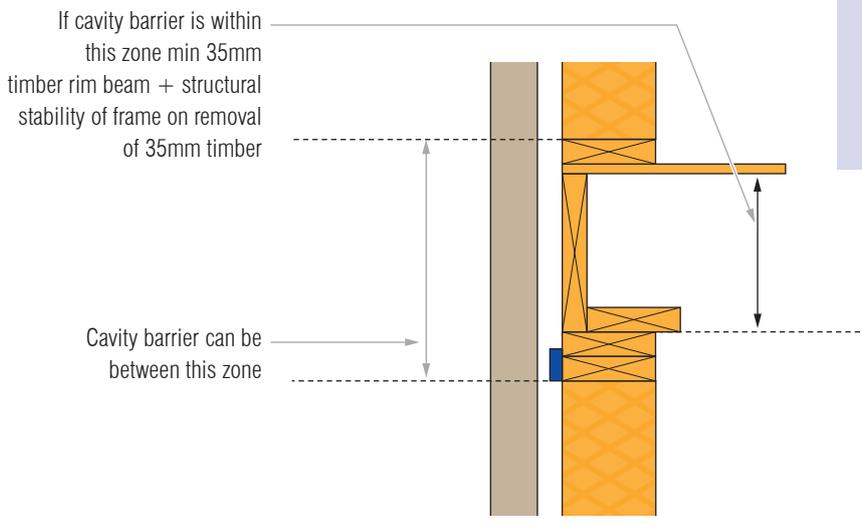
*Material types - intumescent options acceptable*



## Detail 8: E-CB-floor



**D8(i) Section of full fill cavity barrier**



**D8(ii) Section of intumescent cavity barrier**

**DETAIL 8(i) and 8(ii) NOTES:**

*Single occupancy or compartment floor option*

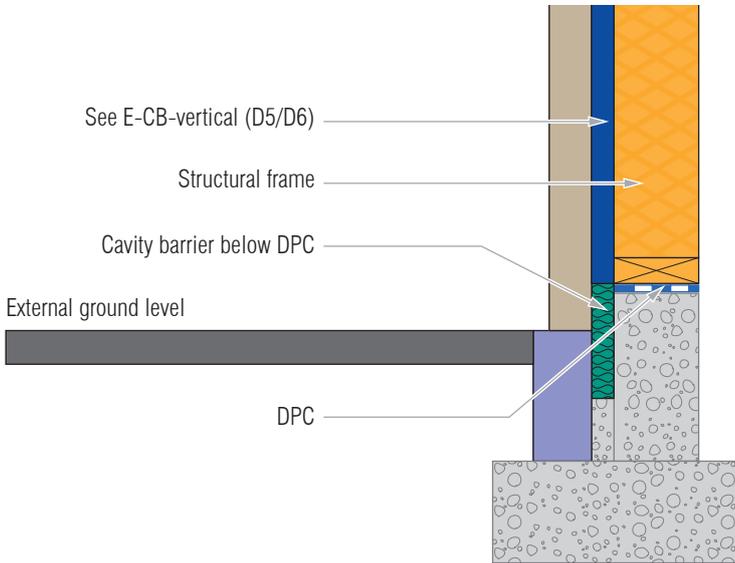
*Drylining and insulation omitted for clarity*

*Floating floors for compartment floor omitted for clarity*

*Cavity barrier and vents not needed with intumescent barrier*

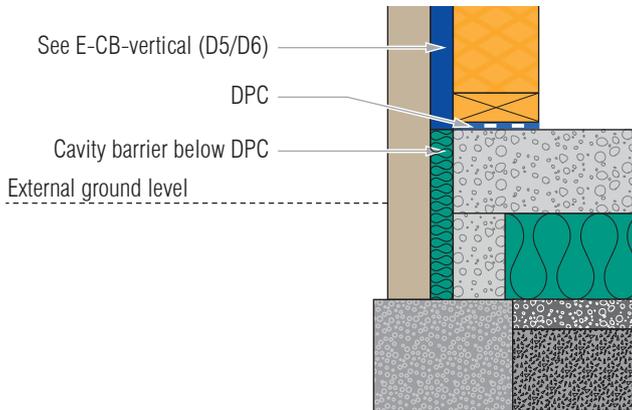
*Wall ties, breather membrane and VCL omitted for clarity*

# Detail 9: E-CB-below DPC



**NOTE:** Cavity Barrier below DPC can be mineral wool or masonry with appropriate DPC detailing

## D9(i) Section below DPC



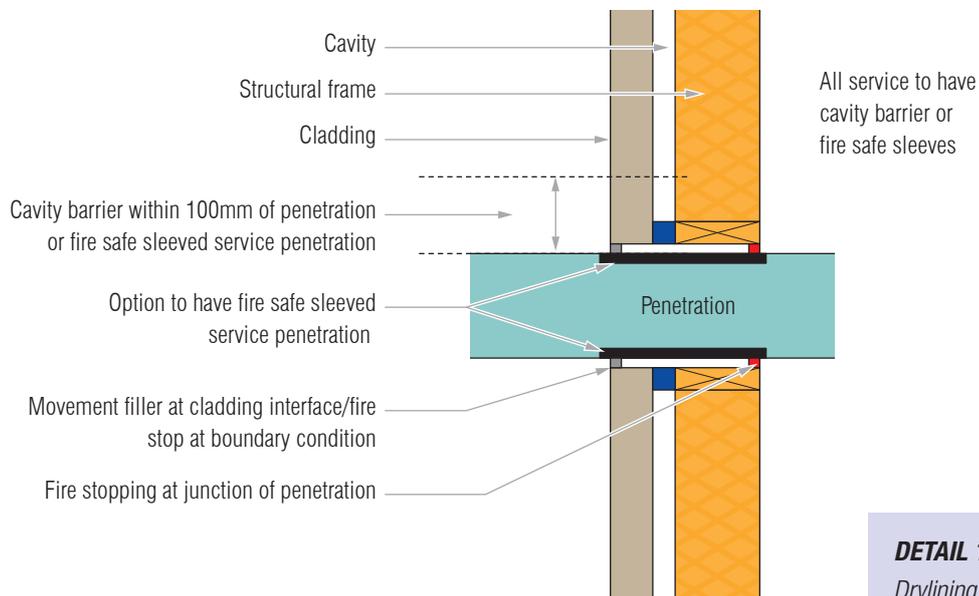
**NOTE:** Cavity Barrier below DPC can be mineral wool or masonry with appropriate DPC detailing

## D9(ii) Section below DPC

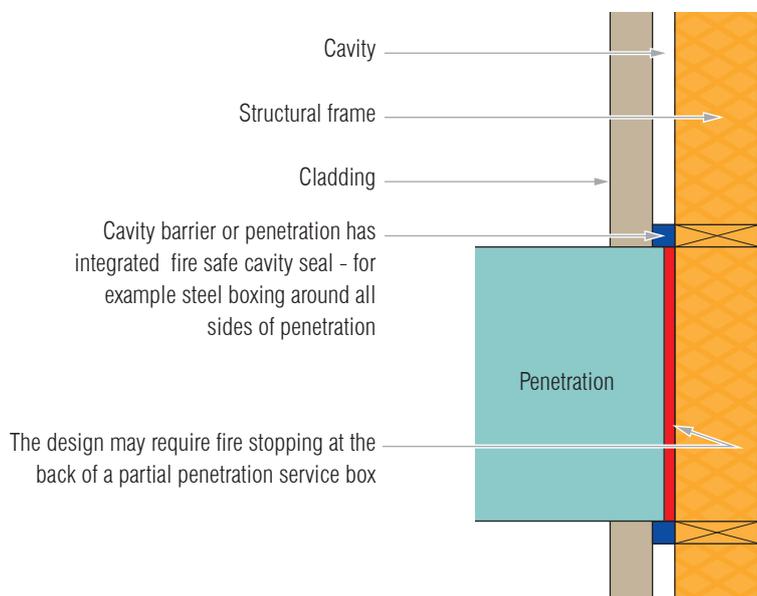
**DETAIL 9(i) and 9(ii) NOTES:**  
 Drylining and insulation omitted for clarity  
 Wall ties, breather membrane and VCL omitted for clarity  
 Material types - recommended to adopt mineral wool subject to manufacturers declaration that material does not deteriorate if damp  
 Alternative use of masonry/thermal fire safe boards



# Detail 10: E-CB-larger services



**D10(i) Section around service penetration**



**D10(ii) Section around service penetration**

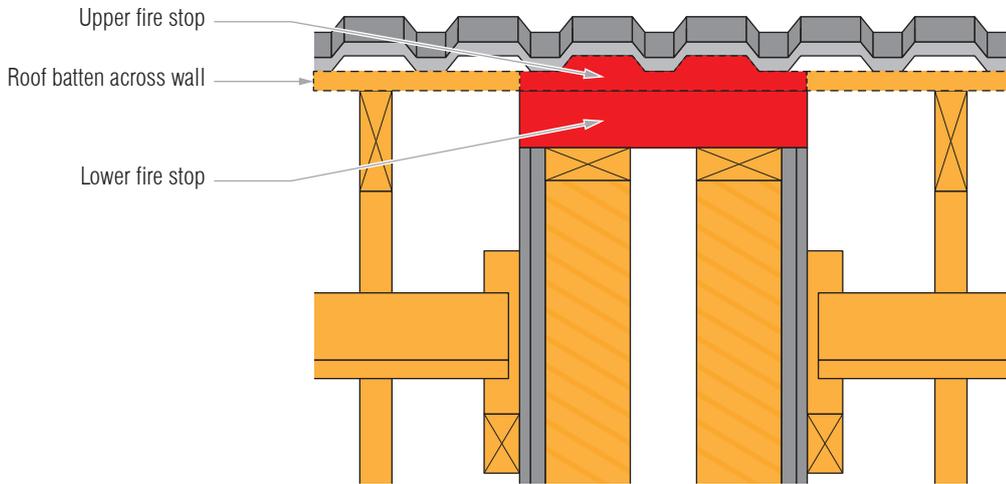
**DETAIL 10(i) and 10(ii) NOTES:**

*Drylining and insulation omitted for clarity*

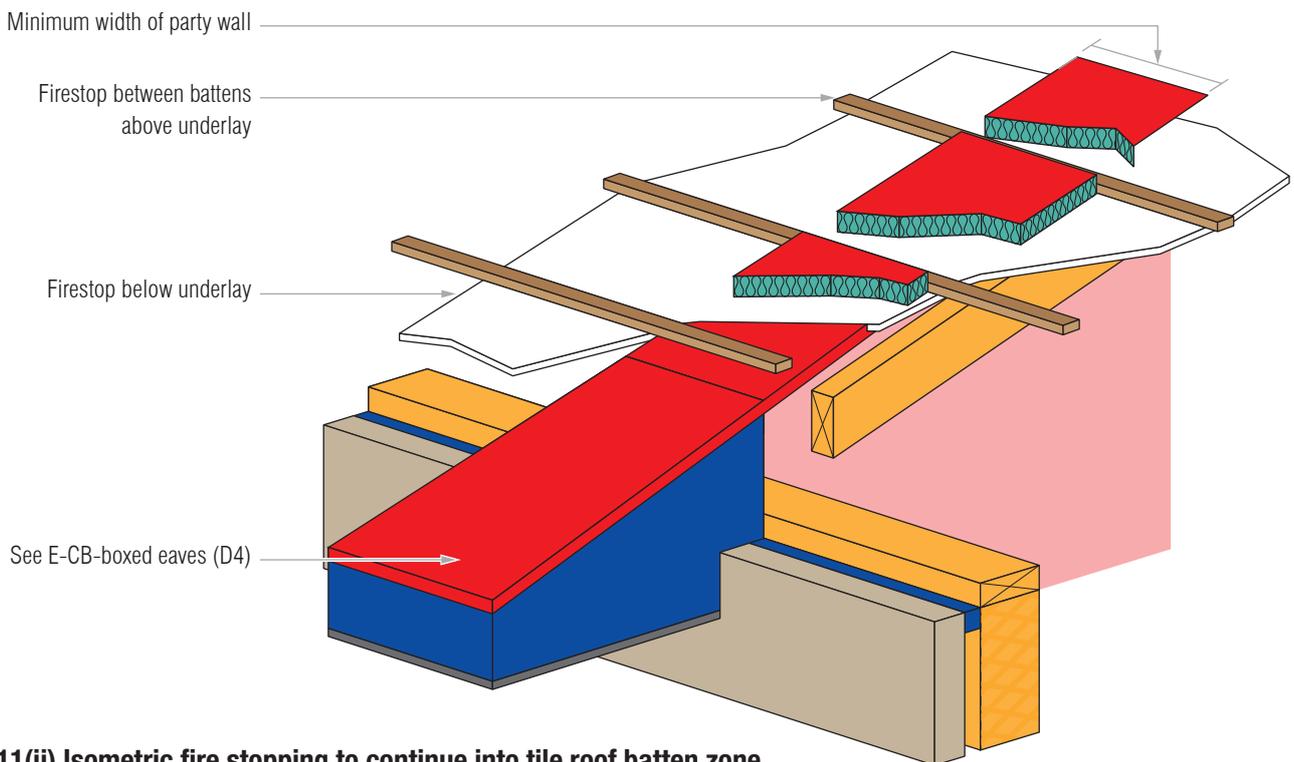
*Wall ties, breather membrane and VCL omitted for clarity*

*Intumescent barrier option subject to manufacturer test compliance for cavity width present*

# Detail 11: PW-FS-1-spandrel fire stop



**D11(i) Section of spandrel fire stop**

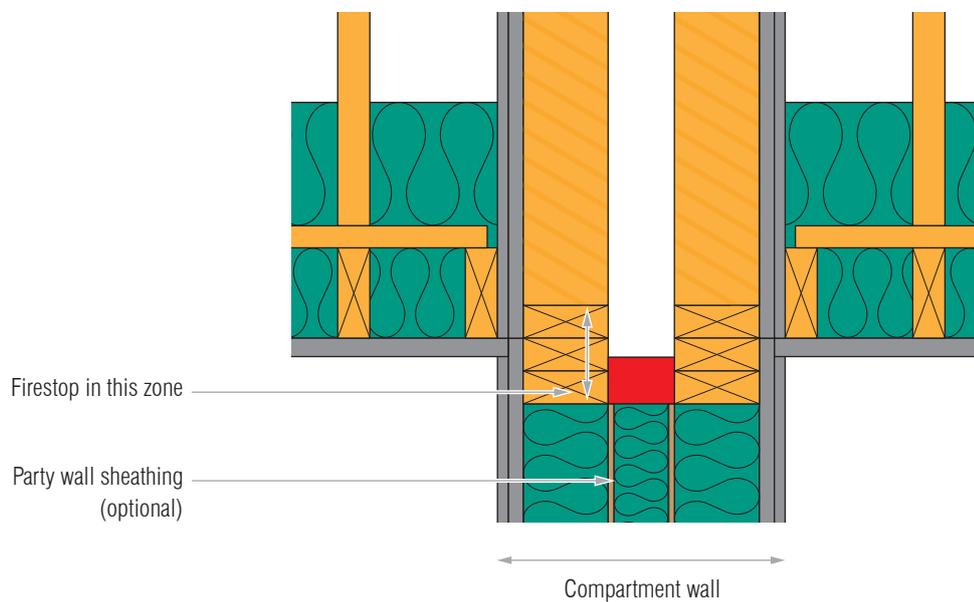


**D11(ii) Isometric fire stopping to continue into tile roof batten zone**

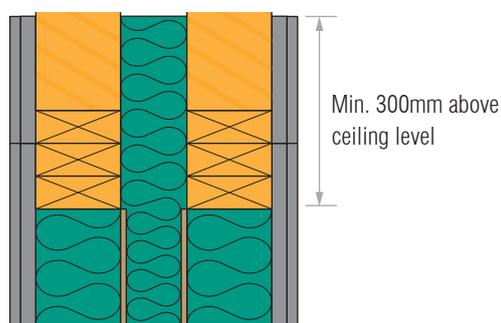
**DETAIL 11(ii) NOTES:**  
 Cold or warm roof structures  
 Drylining and insulation omitted for clarity  
 Wall ties, breather membrane and VCL omitted for clarity  
 Intumescent products to be tested for this application



## Detail 12: I-CB-1-ceiling zone party wall



**D12(i) Section of ceiling zone party wall, option 1**



**D12(ii) Section of spandrel fire stop, option 2**

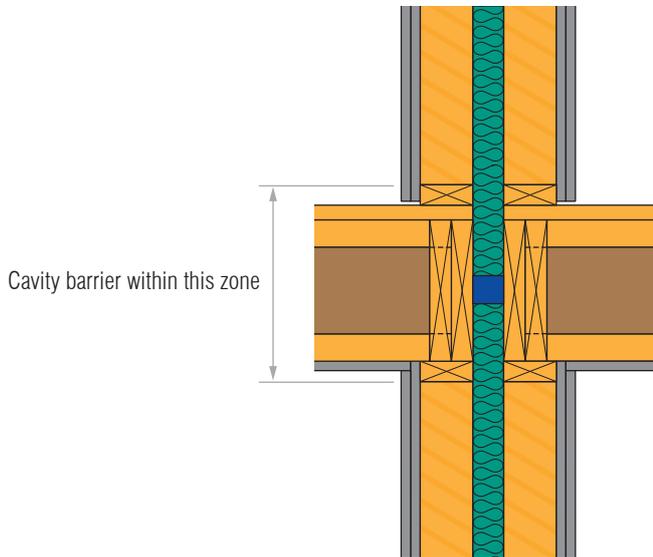
**DETAIL 12 NOTES:**

*Cold or warm roof condition*

*Insulation and drylining shown as indicative this is to be to the project design*

*Intumescent products may be suitable subject to manufacturer's declaration of test and suitability of gap width*

## Detail 13: I-CB-ceiling zone



### DETAIL 13 NOTES:

*Drylining omitted for clarity*

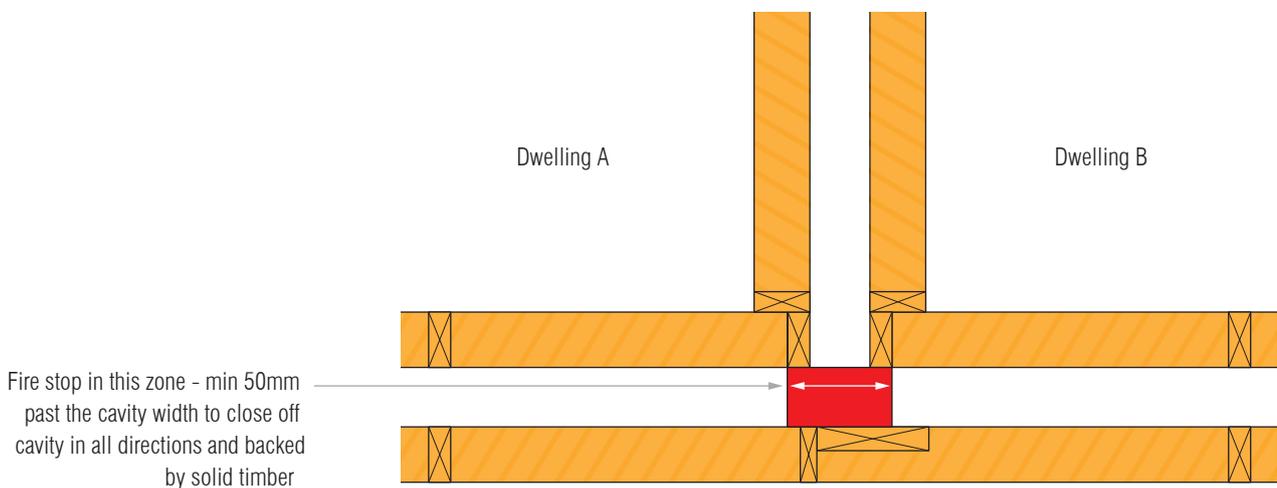
*Insulation omitted for clarity/ except in party wall cavity*

*Intumescent barrier option subject to manufacturer test compliance for cavity width present.*

*Cavity barrier may already be incorporated by full fill mineral wool an can be omitted as an additional member - however weathertight bagged products can be used to keep area free of water during the construction process*

**D13 Section of ceiling zone cavity barrier**

## Detail 14: PW-FS-2-spandrel edge fire stop



**D14(i) Section of spandrel edge fire stop, option 1**

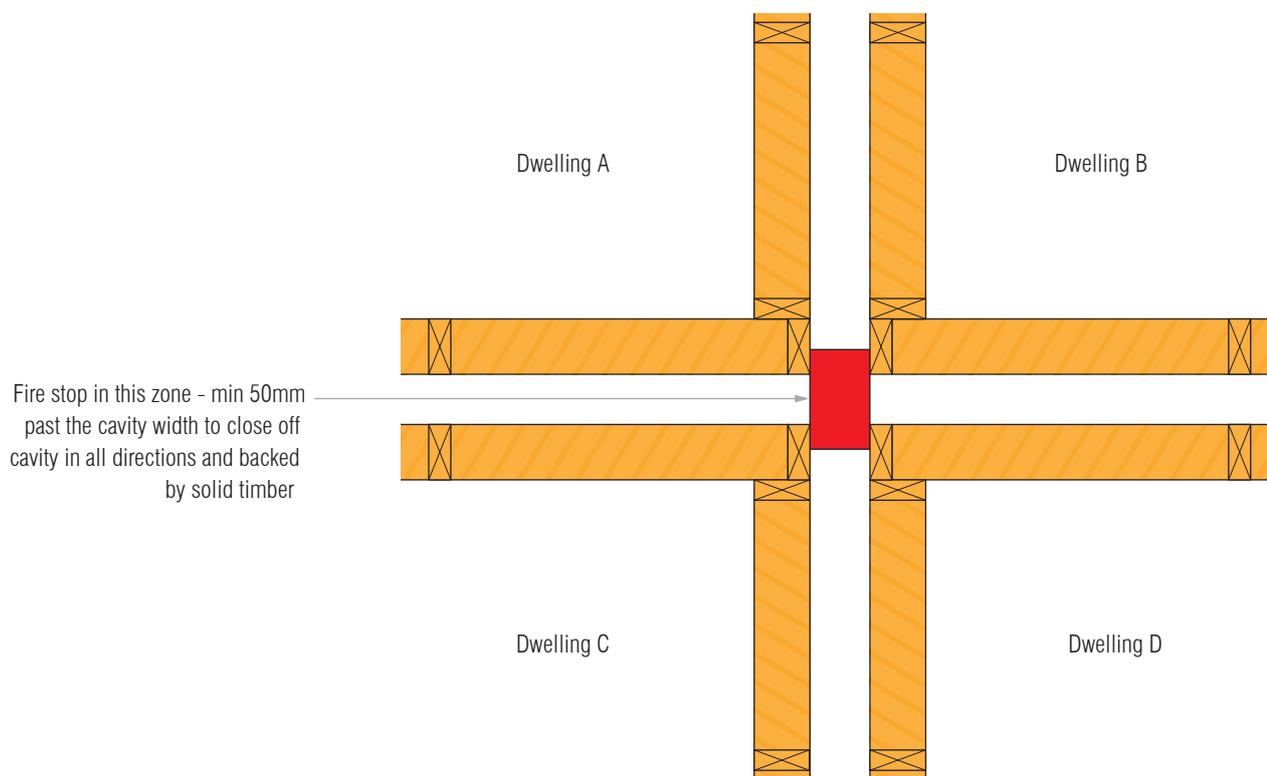
Dwelling C  
Public Corridor

### DETAIL 14(i) NOTES:

*Drylining and insulation omitted for clarity*

*Intumescent barrier option subject to manufacturer test compliance for cavity width present and EI rating*

*Fire stop may already be incorporated by full fill mineral wool*



### D14(ii) Section of spandrel edge fire stop, option 2 (multiple room compartmentation)

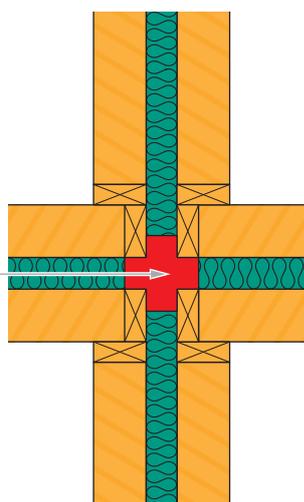
**DETAIL 14(ii) and 14(iii) NOTES:**

*Drylining and insulation omitted for clarity*

*Intumescent barrier option subject to manufacturer test compliance for cavity width present and EI rating*

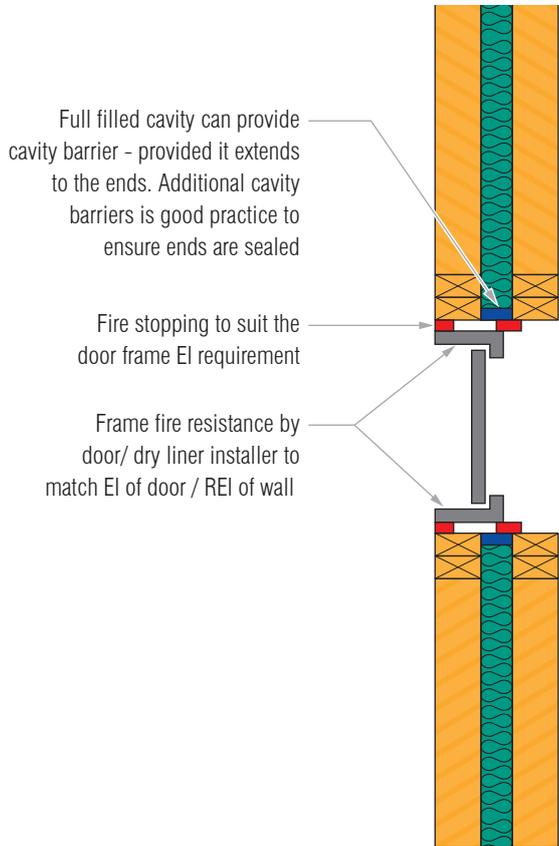
*Fire stop may already be incorporated by full fill mineral wool*

Fire stop in this zone - min 50mm past the cavity width to close off cavity in all directions and backed by solid timber

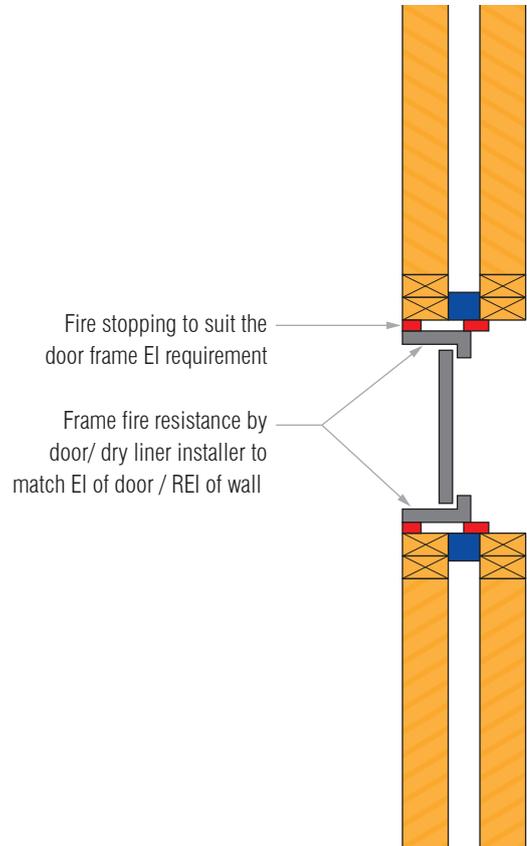


### D14(iii) Section of spandrel edge fire stop, option 3 (fully filled compartment walls)

# Detail 15: I-CB-opening



**D15(i) Section of opening reveal**

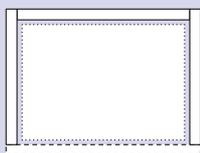


**D15(ii)**

**DETAIL 15(i) and 15(ii) NOTES:**

*Drylining omitted for clarity cavity barrier may be omitted where full fill mineral insulation is present - fully packed to edge*

*Intumescent barrier option subject to manufacture test compliance for cavity width present.*



*Cavity barrier to be continuous around the whole perimeter of the opening with all gaps closed*

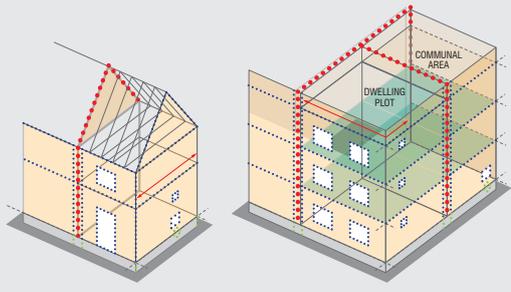


*Corner option*



# Part 5 - Cavity barrier installation care points

## Care points for designers

PROCESS	CARE POINTS	PHOTO / DIAGRAM / REFERENCE
1	Determine location of fire stopping and cavity barriers. Understand the difference	 <p>For locations to close and divide a cavity see Part 3 of guidance</p>
2	Provide details for each location	Provide resilient details taking account of tolerances and project details. See Part 4 of guidance
3	Provide specification cavity barrier types and fire stopping types	<p>Design (product and fixings) to be durable over lifetime of project</p> <p>Refer to manufacture's literature for tests to EN standards and compliance for the actual application being designed.</p> <p>Check if construction element fulfilling another use will also provide the cavity barrier</p>
4	Complete designers check list	Incorporate as part of STA procedures
5	Tender details where relevant to include cavity barrier and fire stopping sign off strategy	Include for STA member company STA Assure training and process for cavity barriers installation

**NOTE:** Fire safety information to be considered by the designer. For any building work there are legal requirements to provide summary fire compliance documents for to hand over to the principal designer who in turn passes it to the building "responsible person". Guidance required to be submitted of the fire-separating elements (which may be the cavity barriers) is the responsibility of the company who has agreed to take the design and install responsibility in the contract.

# Checklist for designers

PROCESS	CHECK
Around openings in the cladding	<input type="checkbox"/>
At floor levels	<input type="checkbox"/>
At party walls	<input type="checkbox"/>
At centres on plan no more than 10m /20m	<input type="checkbox"/>
At roof eaves/ upper ceiling level	<input type="checkbox"/>
At different junctions of building	<input type="checkbox"/>
At service penetrations (fire stopping will be required in most locations)	<input type="checkbox"/>
At service cupboards	<input type="checkbox"/>
Tender/pre-construction information STA Assure installer for barriers	<input type="checkbox"/>
<b>CHECK TARGET TOLERANCES FOR THE CAVITY WIDTH</b>	
Cavity barriers to be specified for the cavity tolerance on the project. See Part 1 of guidance Note that cavity barriers should be suitable for irregular spaces due to build tolerances	<input type="checkbox"/>
Provide guidance on what to do if target tolerances of the cavity width are not achieved in the building process	<input type="checkbox"/>
Note fire stopping needed at gaps / imperfection of fit for the line of fire resistance required Fire stopping materials are to be suitable for irregular spaces and suitable / test certificate for the application Reference guidance on fire stopping <i>Association for Specialist Fire Protection (ASFP) website (www.asfp.org)</i>	<input type="checkbox"/>
The specification of products used shall be fixed so that their performance is unlikely to be made ineffective by: <ul style="list-style-type: none"> <li>• Movement of the building due to subsidence, shrinkage or temperature change and movement of the external envelope due to wind</li> <li>• Collapse in a fire of services that may be bridging a cavity; for which they shall have a cavity barrier to cover them</li> <li>• Failure in a fire of fixings or elements to which the cavity barrier may be fixed</li> </ul>	<input type="checkbox"/>
<b>ALTERNATIVE DESIGN APPROACH</b>	
BS 999913 is the fire safety code of practice for building design, management and use. The standard outlines ways to meet fire safety legislation through a more flexible approach to design. Has this been considered / applied	<input type="checkbox"/> Y / N



# Cavity barrier installation care points

For the designer/installer/checker

PROCESS	CARE POINTS	PHOTO / DIAGRAM / REFERENCE
1	<p>Know why installing cavity barrier correctly is important:</p> <ul style="list-style-type: none"> <li>• Cavities can act as chimneys which can draw fire to spread beyond the original location</li> <li>• An effectively installed cavity barrier provides resistance to fire spread and slows the spread of fire</li> <li>• If cavity barriers are not installed correctly or removed and damaged, they will no longer be able to provide the resistance to fire spread which could endanger lives</li> </ul> <p>The STA installer will be trained and provide an installer card on completion</p>	<p><b>STA - cavity barrier installer card</b></p>
2	<p>Key points for full filled cavity barriers</p> <ul style="list-style-type: none"> <li>• Ensure that cavity barriers are tightly fitted and matched to the cavity</li> <li>• Tolerance of the cladding to frame is to be considered</li> <li>• Once the cladding is in place the cavity barrier is to be checked for compliance for the gap</li> <li>• Full filled cavity barriers to fill the space and for compression barriers shall be under compression</li> <li>• Ensure cavity barriers are located at the edges of cavities</li> </ul>	
3	<p>Key points for intumescent cavity barriers</p> <ul style="list-style-type: none"> <li>• Ensure that cavity barriers are tightly fitted and matched to the cavity</li> <li>• Tolerance of the cladding to frame is to be considered</li> <li>• Once the cladding is in place the cavity barrier is to be checked for compliance for the gap</li> <li>• Open vented cavity barriers (intumescent) shall be suitable for the cladding type and width</li> <li>• Ensure cavity barriers are located at the edges of cavities</li> </ul>	

# Cavity barrier installation care points cont.../

PROCESS	CARE POINTS	PHOTO / DIAGRAM / REFERENCE
4	<p>Tolerance of cavity barriers limited to agreed strategy</p> <p>Confirm with design the acceptable tolerances</p>	<p>Target zero tolerance tight fit</p> <p>Wall</p> <p>Opening</p> <p>Maximum 2mm gap</p> <p>Party wall fire stopping target zero tolerance tight fit</p> <p>Wall</p> <p>Zero tolerance tight fit</p> <p>Maximum 2mm gap</p> <p>Wall below DPC</p> <p>Party wall</p>
5	<p><b>No gaps on installation of cavity barrier or fire stopping</b></p> <p>Key points:</p> <ul style="list-style-type: none"> <li>• Ensure direct connection to the next cavity barrier</li> <li>• Do not allow gaps between barriers</li> <li>• Don't fit timber cavity barriers with gaps at joints</li> <li>• Junctions in barriers should be tightly butted or overlapped by min 150mm</li> <li>• Ensure flexi barriers are installed with insulation tightly butted together, not just polythene</li> <li>• Don't flow flexi cavity barriers around corners - always work away with full lengths</li> <li>• Ensure all vertical cavity barriers are installed in locations of studs behind</li> <li>• Do not install vertical cavity barriers onto OSB only</li> </ul>	<p>Gap</p> <p>Butt jointed</p> <p>Gap</p> <p>Butt jointed</p> <p>Gap</p> <p>Butt jointed</p> <p>Gap</p> <p>Square butt jointed</p> <p>Bent round</p>



## Care points for structural timber frame erectors

PROCESS	CARE POINTS	PHOTO / DIAGRAM / REFERENCE
1	Agree who is responsible for installing and structural and cladding elements that will interfere with cavity barriers	Ensure evidence for this is recorded
2	Agree who is responsible for installing cavity barriers	Ensure evidence for this is recorded
3	Ask for details of cavity tolerance agreement and check compliance with specified cavity barrier width for tolerance of gap expected	Drawings should clearly show location and type
4	If installing cavity barriers agree installation method statement with designer for functional requirements	Ensure evidence for this is recorded
5	If not installing cavity barriers, ensure confirmation of this is documented	<b>Check frame tolerance before installing cavity barriers</b>
6	<p>A) Stop installing cavity barriers if the structural frame is out of tolerance and agree cavity barrier widths needed to match the new gap present</p> <p>B) For fire stopping and cavity barriers at party walls do not continue works until barriers/fire stopping is signed off to the method statement</p>	 <p>STA Assure process label for STA installers</p>
7	Where responsible sign off that cavity barriers are in place and not breached/absent or damaged before leaving the site - ensure STA labels are in place	Ensure evidence for this is recorded
8	Hand in cavity barrier compliance form signed and agreed to client	Ensure evidence for this is recorded
9	Use digital photography to record evidence of all barriers and fire stopping installed. Issue customer with record of installation at handover	 Photo evidence needed

# Care points for masonry cladding: brick/block/stone layers

PROCESS	CARE POINTS	PHOTO / DIAGRAM / REFERENCE
1	<p>Key points for cladding:</p> <ul style="list-style-type: none"> <li>Cladding should be plumbed up to follow the line of the frame and maintain a reasonably constant cavity width</li> <li>Adjustments to cavity barrier depths can then be carried out prior to the construction of the cladding</li> </ul>	If the structural frame is not to expected tolerance please consult the cladding engineer
2	Agree who is responsible for installing cavity barriers	If to be undertaken by cladding company, ensure has training been given
3	Ask for details of cavity barriers/fire stopping that interfaces with masonry cladding/wall ties so process 4 & 5 can be fulfilled	 Project specific details required
4	If installing cavity barriers agree installation method	 Project specific details required
5	Stop work if cavity barrier missing and inform site manager - do not continue building without the cavity barrier in place	
6	Sign off that cavity barriers are in place and not breached/absent or damaged from masonry works	Project quality agreement with principal contractor
7	Hand in cavity barrier compliance form signed and agreed to client	 Digital photographic record of cavity barriers installation



# Care points for external cladding installers

PROCESS	CARE POINTS	PHOTO / DIAGRAM / REFERENCE
1	Agree who is responsible for installing cavity battens to support the cladding	If the structural frame is not to expected tolerance please consult the building designer
2	Agree who is responsible for installing cavity barriers	If to be undertaken by cladding company, ensure has training been given
3	Ask for details of cavity barriers that interfaces with cladding battens and cladding board so process 4 & 5 can be fulfilled	 Project specific details required
4	If installing cavity barriers agree installation method with how the cavity battens work	 Project specific details required
5	If not installing cavity barriers agree installation of battens/ cladding past cavity barrier	 Project specific details required
6	Stop work if cavity barrier missing and inform site manager - do not continue cladding process without the cavity barrier in place	
7	Sign off that cavity barriers are in place and not breached/absent or damaged from cladding works	Project quality agreement with principal contractor
8	Hand in cavity barrier compliance form signed and agreed to client	 Digital photographic record of cavity barriers installation
9	Recommend an agreed project compliance document is established to clearly show what good looks like and what unacceptable build looks like	

# Care points for roofing contractors installing felt/battens and tiles

PROCESS	CARE POINTS	PHOTO / DIAGRAM / REFERENCE
1	Agree who is responsible for installing fire stopping at party walls.	If the structural frame is not to expected tolerance please consult the building designer
2	Stop work if cavity barrier missing and inform site manager - do not continue cladding process without the cavity barrier in place	
3	Agree installation method	 Project specific details required - see Part 4, Detail 11
4	Sign off that cavity barriers are in place and not breached/absent or damaged from cladding works	Project quality agreement with principal contractor
5	Hand in cavity barrier compliance form signed and agreed to client	 Digital photographic record of cavity barriers installation
6	Recommend an agreed project compliance document is established to clearly show what good looks like and what unacceptable build looks like	

# Care points for soffit eaves verge installers

PROCESS	CARE POINTS	PHOTO / DIAGRAM / REFERENCE
1	Agree who is responsible for installing eaves cavity barriers, party wall vertical cavity battens and fire stopping at box eaves details	If the structural frame is not to expected tolerance please consult the building designer
2	Ask for details of cavity barriers that interfaces with soffits especially the boxed eaves fire stopping so follow on processes can be fulfilled	
3	Agree installation method	
4	Stop work if cavity barrier missing and inform site manager - do not continue cladding process without the cavity barrier in place	
5	Sign off that cavity barriers are in place and not breached/absent or damaged from cladding works	Project quality agreement with principal contractor
6	Hand in cavity barrier compliance form signed and agreed to client	 Digital photographic record of cavity barriers installation
7	Recommend an agreed project compliance document is established to clearly show what good looks like and what unacceptable build looks like	

## Appendix: Building regulation guidance

England & Wales, Building Regulations, Approved Document B, Parts 1&2

Scotland Scottish Standards Section 2 - 2019

Building Regulations (Northern Ireland), Guidance Technical Booklet E

HM Government, The Building Regulations 2010 (England), Approved Documents  
Available at: [www.planningportal.gov.uk](http://www.planningportal.gov.uk)

Welsh Government, The Building Regulations 2010 (Wales)  
Available at: <http://gov.wales>

Scottish Building Standards Agency, The Building (Scotland) Regulations 2004, Technical Handbook  
Available at: [www.gov.scot](http://www.gov.scot)

Northern Ireland, Department of Finance, The Building Regulations (Northern Ireland) 2012, Technical Booklet  
Available at: [www.finance-ni.gov.uk](http://www.finance-ni.gov.uk)



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