

**One AAC**



**Compleo**®  
wall system

**AUTOCLAVED AERATED CONCRETE PANELS  
FOR LOW RISE EXTERNAL WALLS**

# Contents

THE COMPLEO WALL SYSTEM IS SOLD UNDER LICENCE THROUGH ONE AAC BUILDING SOLUTIONS PTY LTD.

## DISCLAIMER

Products manufactured and systems designed by Knauf are produced in accordance with the Building Code of Australia and relevant Australian Standards. Information in this literature is to be used as a guide only as many aspects of construction are not comprehensively covered. It is the responsibility of the project to determine if Knauf's products and systems are suitable for the intended application. Knauf Plasterboard Pty Ltd will not be held responsible for any claims resulting from the installation of its products or other associated products not in accordance with the recommendations of the manufacturer's technical literature or relevant Australian Standard. This guide provides information on how to install Compleo external wall systems, it also provides recommendation for best practices in Compleo installation.

To ensure this guide is current with the latest information, visit [oneaac.com.au](http://oneaac.com.au) or contact One AAC on **1300 010 222**.

## WARRANTY

Knauf products are guaranteed by a 10 Year Warranty. Visit [knaufplasterboard.com.au](http://knaufplasterboard.com.au) for details.

## VERSION 1

June 2015



<b>Introduction</b>	<b>1</b>
<b>Compliance</b>	<b>2</b>
<b>Performance</b>	<b>3</b>
<b>Systems</b>	<b>4</b>
<b>Design</b>	<b>5</b>
<b>System Components</b>	<b>6</b>
<b>Care and Use</b>	<b>7</b>
<b>Installation</b>	<b>11</b>
<b>Construction Details</b>	<b>20</b>



## COMPLEO OFFERS THE BUILDING INDUSTRY THE BEST OF BOTH WORLDS, SPECIFICALLY THE STRENGTH AND SOLID FEEL OF MASONRY WITH EASIER AND FASTER METHODS OF CONSTRUCTION.

Compleo is a wall system using autoclaved aerated concrete (AAC) panels. The double steel grid reinforcement in Compleo Panels consists of bars running in both the longitudinal and transverse directions giving it excellent impact and damage resistance. Compleo panels also offer thermal, fire resistance and sound insulation properties.

Compleo wall systems are used where a high degree of fire resistance, acoustic insulation and security is required. The thermal performance of Compleo low rise external wall systems also helps maximise energy efficiency. Compleo external wall systems are specified for external walls of timber or steel framed houses.

Compleo Wall Systems outlined in this installation manual have been designed for external use in Class 1 buildings as defined by the Building Code of Australia (BCA).

Compleo Wall Systems must be installed as documented for optimum acoustic, fire and structural performance. Product substitutions may result in system performance being compromised.



# Compliance

## AUSTRALIAN STANDARD AND BUILDING CODE OF AUSTRALIA (BCA) COMPLIANCE



All Compleo external systems and components have been designed and evaluated in accordance with the following standards:

AS/NZS 1170 (Parts 0,1 & 2)	Structural Design Actions
AS 1530.4 : 2005	Methods for fire tests on building materials, components and structures.
AS/NZS 4600 : 2005	Cold Formed Steel Structures
AS/NZS 4859.1:2002	Materials for the thermal insulation of buildings

When building a Compleo wall system refer to the following standards where relevant:

AS/NZS 1170	Structural design actions
NASH	Standard for Residential and Low –rise Steel Framing
AS 1684	Residential timber-framed construction
AS 1720	Timber Structures
AS 2870	Residential slabs and footings
AS/NZS 2904	Damp-proof courses and flashings
AS 3566	Self-drilling screws for the building and construction industries
AS 3623	Domestic Metal Framing
AS/NZS 4347	Damp-proof courses and Flashings
AS/NZS 4600 : 2005	Cold Formed Steel Structures

# Performance

Compleo panels are reinforced aerated autoclaved concrete (AAC), 75mm thick, 600mm wide and readily available in standard lengths of 2700mm to 3300mm long. At an R value of 0.5 m<sup>2</sup>.K/W, Compleo panels are better thermal insulators than bricks or concrete of the same thickness and reduce the total construction weight.

Not only does the Compleo Wall System provide attractive modern exteriors which may be completed in various finishes and colours, but it also has great weather, acoustic and fire resistant properties. Compleo external wall systems are suitable for all bushfire attack levels (BAL) as they all have a Fire Resistance Level of 120/120/120 from the outside.

The Compleo Wall System is a simple, fast and efficient way of constructing a rendered masonry wall. It consists of a steel frame with Compleo panels screwed to top hats. The wall is finished with a suitable elastomeric coating system.

## SYSTEMS

The standard Compleo system consists of internal plasterboard lining on a timber or steel frame with R2.0 insulation in the cavity covered with wall wrap and Compleo Panels on top hats. This system has the following characteristics:

- Thermal R value of 2.8 m<sup>2</sup>.W/K minimum
- Fire Resistance Level (FRL) of 120/120/120 from the outside only
- Acoustic rating of Rw 53

Increased fire and acoustic ratings can be achieved by upgrading the plasterboard lining, refer to system tables. A range of thermal ratings can be achieved by varying the insulation and sarking / wall wrap, refer to Thermal Ratings Table.

## Thermal Ratings Table

Compleo panel on minimum 22mm top hat with min 70mm stud lined with 10mm plasterboard				
Bulk Insulation	Non-Reflective or no Wall Wrap		Anti-glare reflective foil	
	Winter R value (m <sup>2</sup> .W/K)	Summer R value (m <sup>2</sup> .W/K)	Winter R value (m <sup>2</sup> .W/K)	Summer R value (m <sup>2</sup> .W/K)
None	0.89	0.89	1.81*	1.77*
R1.5	2.49	2.32	2.75	2.55
R2.0	2.99	2.80	3.25	3.03
R2.1	3.09	2.90	3.35	3.13
R2.5	3.49	3.28	3.75	3.51
R2.7	3.69	3.47	3.95	3.70

Table Notes:

\* Double sided reflective foil

1. R-Values listed above have been calculated according to AS/NZS 4859.1:2002 and are valid for a mean temperature of 15°C for heat flow out and 30°C for heat flow in as recommended by AS/NZS 4859.1:2002
2. If EarthWool is to be compressed in the cavity, the R-value should be reduced as per Section 3.1 of AS/NZS 4859.1:2002
3. R-Values of outdoor and indoor air films are as per Appendix K of AS/NZS 4859.1:2002
4. R-Values of reflective air spaces are calculated based on EN ISO 6946-1996
5. The total R-Value can be increased by 0.02 if 13mm thick plasterboard is used and by 0.03 if 16mm thick plasterboard is used
6. If thin reflective insulation is used with double sided reflective surfaces, the R-Value of the insulation material on its own can be added to the total R-Value
7. The R-Values listed above do not take into account the effect of thermal bridges like screws, framing members, etc., in accordance with the BCA.

# Systems

External Cladding: Jointed 75mm Compleo Panel



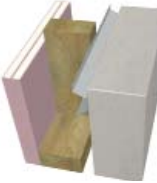

External Cladding Top Hats: Topspan 22 (0.42 BMT) or Topspan 40 (0.55 BMT)

Moisture Barrier: Breathable wall wrap

Frame: Minimum 70mm timber or steel stud

Wall Insulation: Earthwool R2.0

Internal Lining: As per table

System Number	Acoustic Rating R <sub>w</sub> (R <sub>w</sub> +C <sub>tr</sub> ) (Day Design 5008-17)	FRL From Outside Fire Report FAR 4395	FRL From Inside Fire Report FAR 4395	Internal lining	System Image
KCEL1	53 (44)	120/120/120	NA	10mm or 13mm MastaShield	
KCEL2	54 (47)	120/120/120	60/60/60	16mm FireShield	
KCEL3	56 (50)	120/120/120	90/90/90	2 x 13mm FireShield	
KCEL4	57 (51)	120/120/120	120/120/120	2 x 16mm FireShield	

#### Table Notes:

1. FRL is unaffected by the insulation and wall wrap.
2. The Structural Adequacy component of the FRL refers to the stud.
3. 10mm MastaShield may be substituted with, 10mm SoundShield, 10mm WaterShield or 10mm Opal.
4. FireShield may be substituted with TruRock of the same thickness.
5. Connections are:
  - a. Compleo to Top hats; 14g x 85mm to 100mm Bugle head type 17 screws.
  - b. Top hat to stud; Use two screws per stud (one on each leg of the top hat)
    - i. Timber Stud: 12g x 35mm hex head type 17 screws
    - ii. Steel Stud: 10g x 16mm hex head tek screws.

# Design

Once a system has been selected that meets any thermal, fire and acoustic requirements, check the following:

## CONTROL JOINTS

Plan control joint locations along walls and at windows and check locations with the project engineer. *[Refer to page 14 for Control Joint Requirements.]*

## PANEL SET OUT

Plan how panels will be set out by using full or half width panels. Reduce wastage and cutting of panels by dimensioning external walls and windows to match the Compleo Panel width of 600mm. Minimum lintel panel height above windows is 270mm. Joints between panels are nominally 5mm. Vertical control joints are usually 5-10mm wide and horizontal control joints are usually 10-20mm.

## TOP HATS

Determine the building's wind category so the correct top hat spacing can be selected. *[Refer to the Top Hat tables]*

## FRAMING

Ensure frame is designed to carry extra load of panels and it is straight and true, ready for application of top hats. Consider the use of strap bracing the frame to create an even surface.

## SLAB

Check that a slab step down has been planned for the concrete pour if applicable.

## COATING

Select a coating system approved for use on AAC panels.

## COASTAL AREAS

Select appropriate corrosion resistance for steel framing and fasteners in coastal areas such as those within 1000m of breaking surf. Walls must be either exposed to rain to enable wash down or hosed down every 6 months. Before applying coatings, ensure the surfaces to be painted have had any salt build up removed. Compleo is not recommended for use less than 600m from breaking surf without advice from specialist facade engineering consultation.

# System Components

- Compleo Panel (thickness: 75, width: 600, length: 2700 to 3300mm)
- Compleo 3-in-1 Adhesive, Patch & Base Mortar (Coverage: approx 20m<sup>2</sup> per 20 kg bag)
- Top Hats: Lysaght Topspan 22, 0.42BMT (TS2242) or Topspan 40, 0.55BMT (TS4055). The Compleo top hat spacing tables have been calculated based on these two top hats
- Damp Proof Course (DPC) for use at the base of each Compleo panel, not required for use with Shelf Angle option
- Flashing for openings
- Anti-Corrosion Paint such as Solver Line 4120 and brush for application to cut steel reinforcing bars
- Sarking / wall wrap to provide a moisture and draft barrier. It also holds the insulation in the correct place and can increase the thermal resistance of the wall
- Earthwool insulation to meet thermal requirements
- Fasteners (Corrosion Class 3 or 4):
  - Compleo to Top hats; 14g x 85mm - 100mm Bugle head Type 17 screws
  - Top hat to steel stud; 12g x 35mm Hex head Type 17 screws
  - Top hat to steel stud; 10g x 16mm Hex head tek screws
- Coating system approved for use on AAC panels
- Flexible external grade sealant compatible with Compleo panels and coating system, fire rated if required





# Care and Use

## SAFE HANDLING

Compleo panels have a working weight of 51 kg/m<sup>2</sup> (i.e. a 3m panel weighs 92 kg). Use mechanical aids such as trolleys and ensure work practices do not overload individuals. Depending on the length of the panels, Knauf recommends the use of a hydraulic trolley/lifter, a hand truck or group lifting to move Compleo panels around the worksite.



## PERSONAL PROTECTION

- Safety goggles/glasses to comply with AS 1336
- Rubber or PVC gloves
- Safety footwear
- P1 or P2 dust mask if dust is generated
- Class 5 ear plugs or ear muffs for cutting with power tools
- Compleo panels and Compleo 3-in-1 Adhesive Patch and Base Mortar are cementitious products and direct skin contact should be avoided to prevent skin irritation.



## SAFETY INFORMATION AND MATERIAL SAFETY DATASHEETS

More detailed information on how to handle Compleo products and the OH&S requirements associated with the Compleo System are available on product packaging and their material safety datasheets (MSDS).

MSDS for Compleo panel and Compleo 3-in-1 Adhesive Patch and Base Mortar are available from One AAC on **1300 010 222**.

## CUTTING

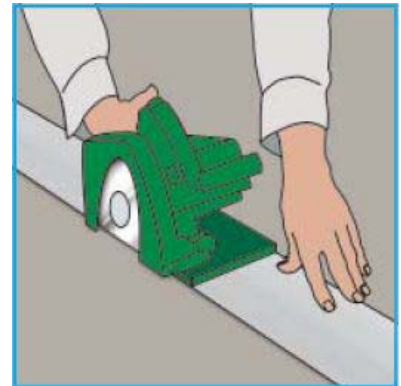
Ensure cutting is carried out in a well ventilated area.

Use a circular saw with a dust extractor or a wet saw to cut Compleo panels. A diamond tipped saw blade or similar is recommended as the blade must be able to cut through the core and the double steel grid reinforcement. *[Figure 1]*

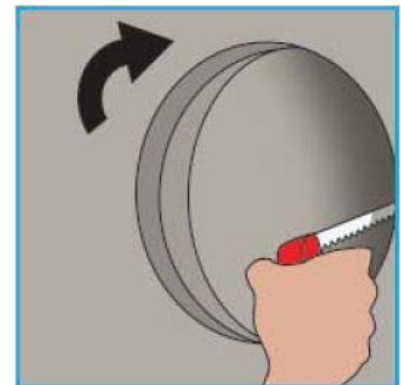
Do not cut panels to a width less than 270mm.

To make penetrations through the panels, use combinations of a handsaw, keyhole saw and angle grinder. *[Figure 2 and 3]*

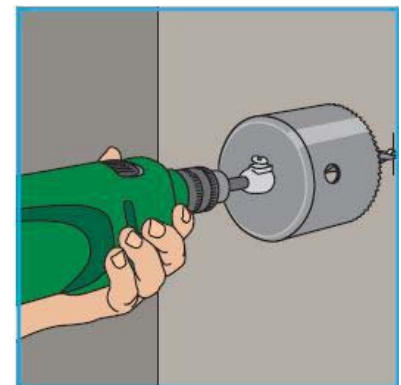
Any steel reinforcement that has been exposed as a result of cutting must be protected against corrosion by applying anti – corrosion paint such as Solver Line 4120.



**FIGURE 1 Sharp Edged Cuts**



**FIGURE 2 Making Holes With Handsaw**

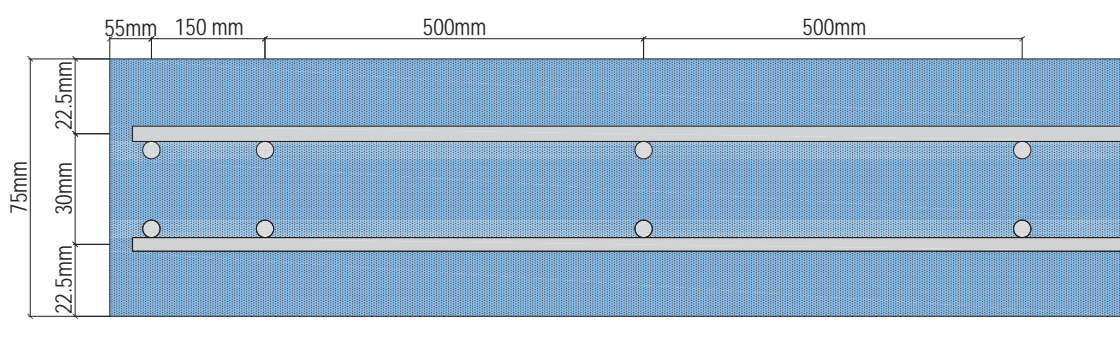


**FIGURE 3 Making Holes with Keyhole Saw**

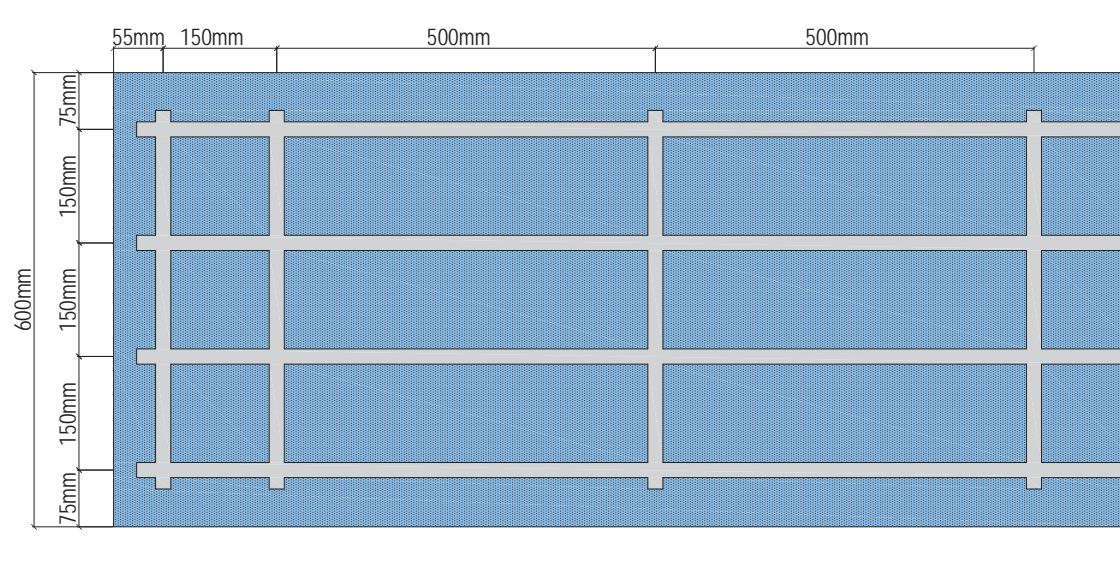
### COMPLEO PANEL REINFORCEMENT

Compleo panels are 600mm wide. The total length of the wall must be taken into account when planning the installation. Ensure any cut down panels are placed away from doors and large penetrations. Alternatively, locate the cut panel next to a support column or structure.

All Compleo panels come with a double steel grid reinforcement. The steel reinforcement runs both across and along the panels.



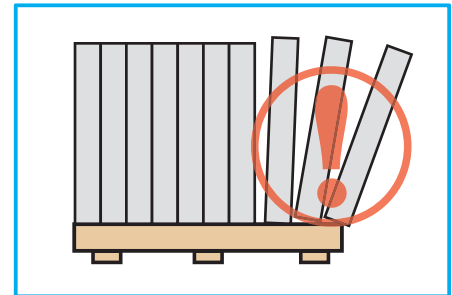
**FIGURE 4** Edge section view of Compleo panel



**FIGURE 5** Face section of Compleo panel

### DELIVERY AND STORAGE

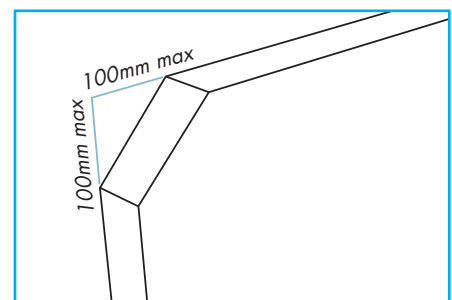
- Reduce the possibility of damage by delivering to the site immediately before installation.
- Unload Compleo panels with a forklift or crane; they are delivered in packs of 10 panels which weigh more than 800 kg.
- Protect Compleo panels and accessories from weather by storing inside or covering fully, stacked clear of the floor.
- High levels of water absorption will not affect the long term performance of Compleo panels, however they must be dry before plasterboard installation.



**FIGURE 6 Beware Of Panels Falling After Removing Strapping.**

### PATCHING

- Use Compleo 3-in-1 mortar to repair damage to Compleo panels in which the steel reinforcement is intact. Patching may be easier after installation of panels.
- Maximum repair size for fire rated walls is a triangle with two legs of 100mm. [Figure 7]



**FIGURE 7 Maximum Patching Size For Fire Rated Wall**



# Installation

## COMPLEO PANEL INSTALLATION SEQUENCE

### Framing

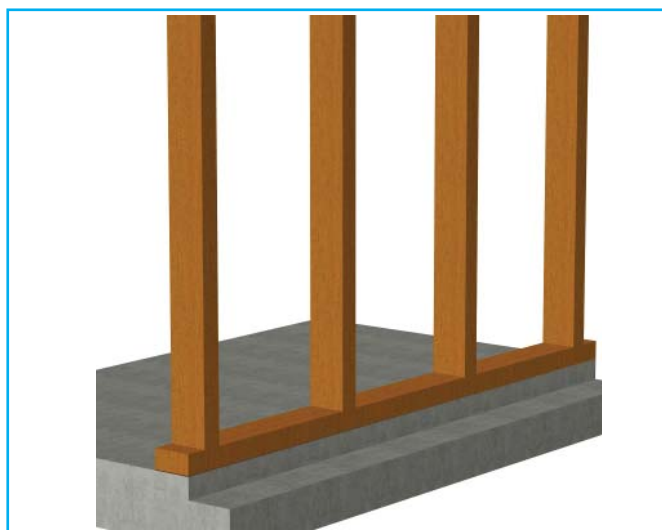
- › Check that the framing is straight and plumb.  
[Figure 8]

### Damp Proof Coursing

- › At the base of the Compleo Wall, fix Damp Proof Coursing to the bottom plate as shown in the construction details. Ensure the DPC completely covers the rebate in the slab.  
[Figure 9]

### Wall Wrap

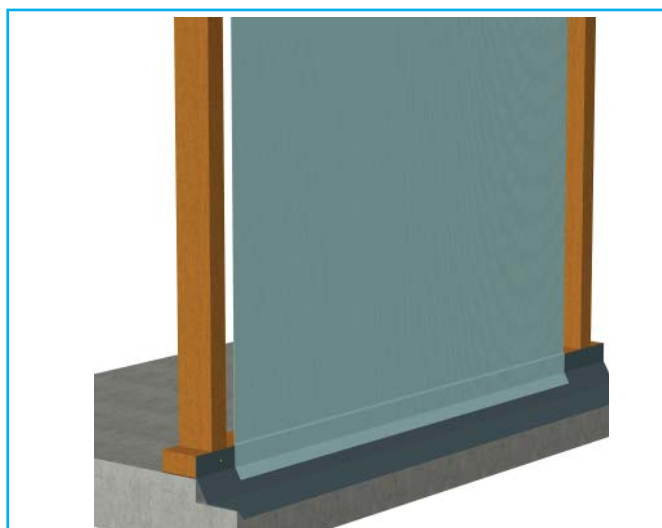
- › Install wall wrap / sarking as specified. Install according to the manufacturer's instructions, including wrapping around window and door openings.  
[Figure 10]



**FIGURE 8 Framing**



**FIGURE 9 Damp Proof Coursing**



**FIGURE 10 Wall Wrap**

### Control Joints

- › Check control joint locations. *[Refer to Control Joint section]*

### Top Hats

- › Select the appropriate top hat spacing based on panel location and wind category. *[Refer to Top Hat Tables]*. Install top hats including additional top hats around openings as shown in the construction details. Top hats must not span across control joints. Fix top hats on each stud with two screws, one on each flange. *[Figure 11]*

### Cut Panels

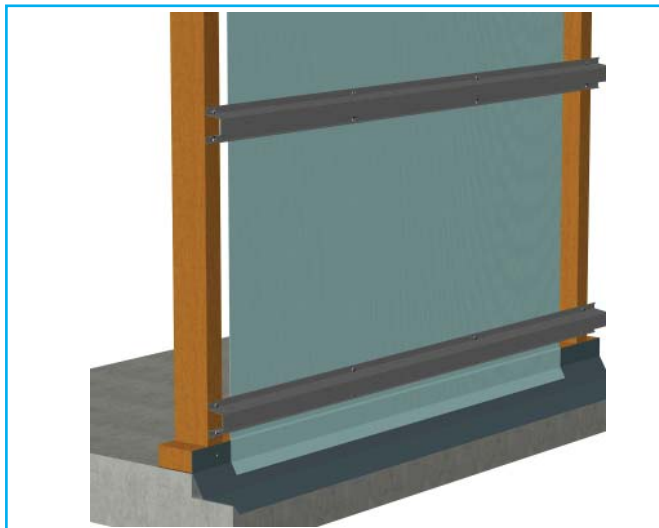
- › Cut Compleo panels to size and apply anti-corrosion paint to any exposed steel reinforcing. Do not cut panels to a width less than 270mm.

### Joint and Fix Panels

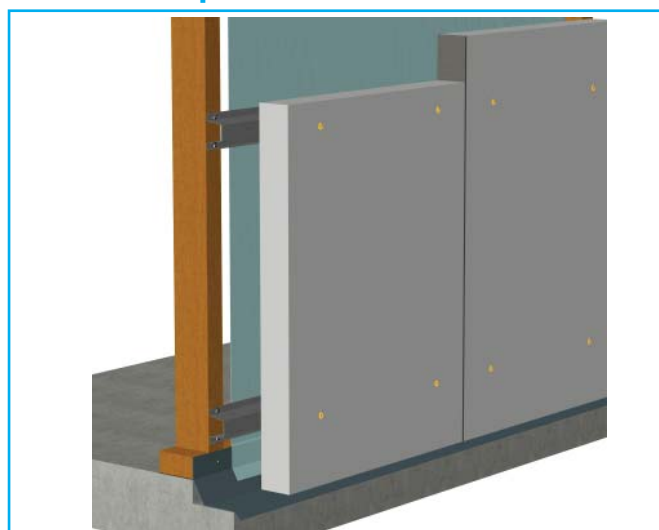
- › Fix panels to top hats using two screws per panel, jointing panels with Compleo 3-in-1 Adhesive as they are installed. Apply the compound to the edge of one panel and push the next panel into place, creating a 5mm wide joint. *[Figure 12]*

### Levelling Render

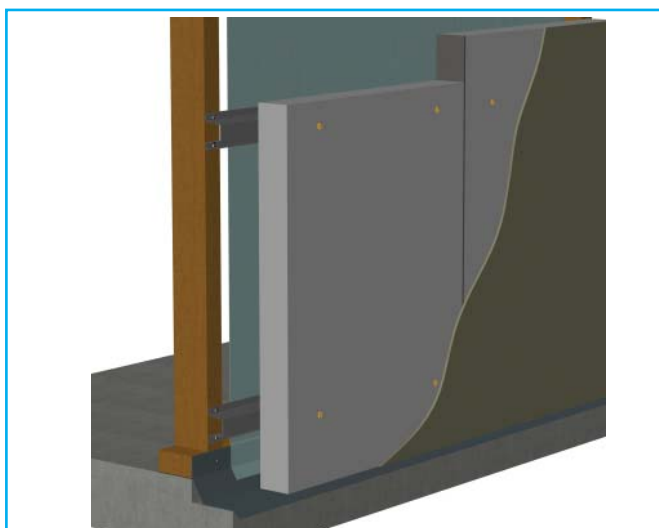
- › Fill screw holes and patch any imperfections using Compleo 3-in-1. Apply an acrylic levelling render over the entire wall in accordance with the manufacturer's instructions, using a primer if necessary. Remove any render from control joints and gaps around penetrations. *[Figure 13]*



**FIGURE 11 Top Hats**



**FIGURE 12 Joint and Fix Panels**



**FIGURE 13 Levelling Render**

### Windows and Penetrations

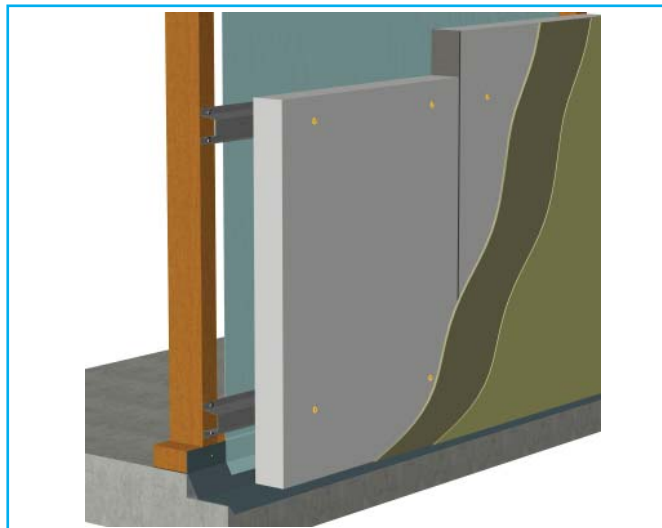
- › Seal control joints and gaps around windows, pipes and cables with flexible external grade sealant compatible with Compleo panels and the coating system. Select a sealant that is fire rated if required.

### Coating

- › Apply coating system suitable for AAC panels. This typically consists of an elastomeric coating system. [Figure 14]

### Plasterboard

- › Install Plasterboard according to Knauf Technical Literature. Ensure all gaps around openings and the perimeter are sealed.



**FIGURE 14** Coating

## CONTROL JOINT REQUIREMENTS

Control Joints must be installed at:

- All control joints in the structure
- Any change in the substrate or lining material

Vertical control joints must be installed full storey height at:

- 6m maximum intervals
- 4m maximum intervals where the top coat of paint has an LRV below 40% (dark colours)
- External and internal corners
- All doors, including sliding and garage doors
- Both sides of any opening where the vertical joint length is less than 600mm long, unless the joint is glued and meshed. And:
  - Minimum one side of openings greater than 2450mm and less than 3600mm in width
  - Both sides of openings greater than 3600mm in width

Horizontal control joints for timber construction must be 35mm wide and created with a temporary packer and covered with a moulding. For steel or engineered timber joists, the control joint must be 7.5mm wide.

Horizontal control joints must be installed at:

- Every floor line
- 3.9m maximum intervals

Note: The project engineer must approve the control joint widths and layout.



## NUMBER OF TOP HATS

### LYSAGHT TOPSPAN TS2242

#### Panels supported at the base

Wind Class (AS 4055)	Panel Location	STUD SPACING (mm)	Maximum Panel Length (mm)					
			1800	2100	2400	2700	3000	3300
N1	Away from corners	600	3	3	3	3	3	3
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	3	3	3	3	4	4
		450	3	3	3	3	3	3
N2	Away from corners	600	3	3	3	3	3	3
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	3	3	4	4	4	5
		450	3	3	3	3	3	3
N3, C1	Away from corners	600	3	3	3	4	4	4
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	4	5	5	6	6	6
		450	3	3	3	4	4	4
N4, C2	Away from corners	600	4	4	4	5	5	6
		450	3	3	3	3	3	4
	Within 1200mm of corners	600	5	6	-	-	-	-
		450	4	4	4	5	5	5
N5, C3	Away from corners	600	5	5	6	6	7	7
		450	3	3	4	4	4	5
	Within 1200mm of corners	600	-	-	-	-	-	-
		450	5	5	6	6	7	7

- Notes:
1. Studs can be either minimum MGP10 timber or minimum 1.15mm BMT steel
  2. Complete panel is fixed to each top hat with 2 x 14g bugle head screws.
  3. Maximum deflection in Serviceability Limit State (SLS) is Span/ 360.

## LYSAGHT TOPSPAN TS2242

### Panels suspended

Wind Class (AS 4055)	Panel Location	STUD SPACING (mm)	Maximum Panel Length (mm)					
			1800	2100	2400	2700	3000	3300
N1	Away from corners	600	3	3	3	4	4	4
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	4	4	4	4	5	5
		450	3	3	3	3	4	4
N2	Away from corners	600	3	4	4	4	4	4
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	4	4	5	5	5	6
		450	3	4	4	4	4	4
N3, C1	Away from corners	600	4	4	4	5	5	5
		450	3	3	4	4	4	4
	Within 1200mm of corners	600	5	6	6	7	7	7
		450	4	4	4	5	5	5
N4, C2	Away from corners	600	5	5	5	6	6	7
		450	4	4	4	4	4	5
	Within 1200mm of corners	600	6	7	8	9	9	10
		450	5	5	5	6	6	6
N5, C3	Away from corners	600	6	6	7	7	8	8
		450	4	4	5	5	5	6
	Within 1200mm of corners	600	—	—	—	—	—	—
		450	6	6	7	7	8	8

- Notes:
1. Studs can be either minimum MGP10 timber or minimum 1.15mm BMT steel.
  2. Complete panel is fixed to each top hat with 2 x 14g bugle head screws.
  3. Maximum deflection in Serviceability Limit State (SLS) is Span/ 360.

## LYSAGHT TOPSPAN TS4055

### Panels supported at the base

Wind Class (AS 4055)	Panel Location	STUD SPACING (mm)	Maximum Panel Length (mm)					
			1800	2100	2400	2700	3000	3300
N1	Away from corners	600	3	3	3	3	3	3
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	3	3	3	3	3	3
		450	3	3	3	3	3	3
N2	Away from corners	600	3	3	3	3	3	3
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	3	3	3	3	3	3
		450	3	3	3	3	3	3
N3, C1	Away from corners	600	3	3	3	3	3	3
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	3	3	3	4	4	4
		450	3	3	3	3	3	4
N4, C2	Away from corners	600	3	3	3	3	3	4
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	4	4	4	5	5	6
		450	3	3	4	4	4	5
N5, C3	Away from corners	600	3	4	4	4	4	5
		450	3	3	3	3	4	4
	Within 1200mm of corners	600	5	5	6	6	7	7
		450	4	4	5	5	6	6

- Notes:
1. Studs can be either minimum MGP10 timber or minimum 1.15mm BMT steel.
  2. Complete panel is fixed to each top hat with 2 x 14g bugle head screws.
  3. Maximum deflection in Serviceability Limit State (SLS) is Span/ 360.

**LYSAGHT TOPSPAN TS4055**

**Panels suspended**

Wind Class (AS 4055)	Panel Location	STUD SPACING (mm)	Maximum Panel Length (mm)					
			1800	2100	2400	2700	3000	3300
N1	Away from corners	600	3	3	3	3	3	3
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	3	3	3	4	4	4
		450	3	3	3	3	3	3
N2	Away from corners	600	3	3	3	3	3	3
		450	3	3	3	3	3	3
	Within 1200mm of corners	600	3	4	4	4	4	4
		450	3	3	3	4	4	4
N3, C1	Away from corners	600	3	3	4	4	4	4
		450	3	3	3	3	3	4
	Within 1200mm of corners	600	4	4	4	5	5	5
		450	4	4	4	4	4	5
N4, C2	Away from corners	600	4	4	4	4	4	5
		450	3	4	4	4	4	4
	Within 1200mm of corners	600	5	5	5	6	6	7
		450	4	4	5	5	5	6
N5, C3	Away from corners	600	4	5	5	5	5	6
		450	4	4	4	4	5	5
	Within 1200mm of corners	600	6	6	7	7	8	8
		450	5	5	6	6	7	7

- Notes:
1. Studs can be either minimum MGP10 timber or minimum 1.15mm BMT steel.
  2. Complete panel is fixed to each top hat with 2 x 14g bugle head screws.
  3. Maximum deflection in Serviceability Limit State (SLS) is Span/ 360.



## FIXING OF SHORT PANELS

**Panels supported at base or suspended**, fixed to two rows of top hats only.

Applicable to maximum panel length of 1500mm only. For longer panels refer to the number of top hat tables.

### MAXIMUM VERTICAL SPACING OF TOP HATS (LYSAGHT TOPSPAN TS2242)

Wind Class (AS 4055)	Panel Location	STUD SPACING (mm)	Maximum Vertical Spacing of Top Hat (mm)
N1, N2, N3, C1	Away from corners	600	1200
		450	1200
	Within 1200mm of corners	600	1200
		450	1200
N4, C2	Away from corners	600	1200
		450	1200
	Within 1200mm of corners	600	1050
		450	1200
N5, C3	Away from corners	600	1200
		450	1200
	Within 1200mm of corners	600	-
		450	1200

- Notes:
1. Studs can be either minimum MGP10 timber or minimum 1.15mm BMT steel.
  2. Compleo panel is fixed to each top hat with 2 x 14g bugle head screws.
  3. Maximum deflection in Serviceability Limit State (SLS) is Span/ 360.

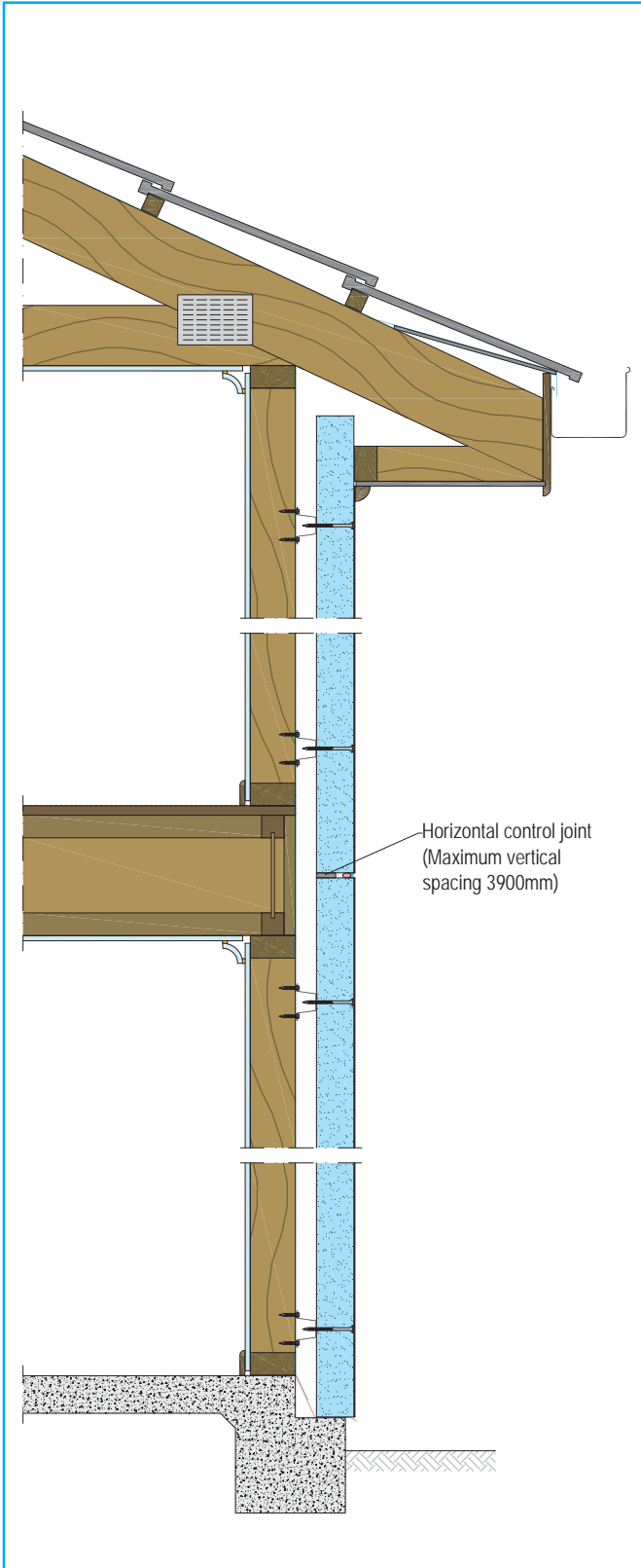
### MAXIMUM VERTICAL SPACING OF TOP HATS (LYSAGHT TOPSPAN TS4055)

Wind Class (AS 4055)	Panel Location	STUD SPACING (mm)	Maximum Vertical Spacing of Top Hat (mm)
N1, N2, N3, N4, N5, C1, C2, C3	Away from corners	600	1200
		450	1200
	Within 1200mm of corners	600	1200
		450	1200

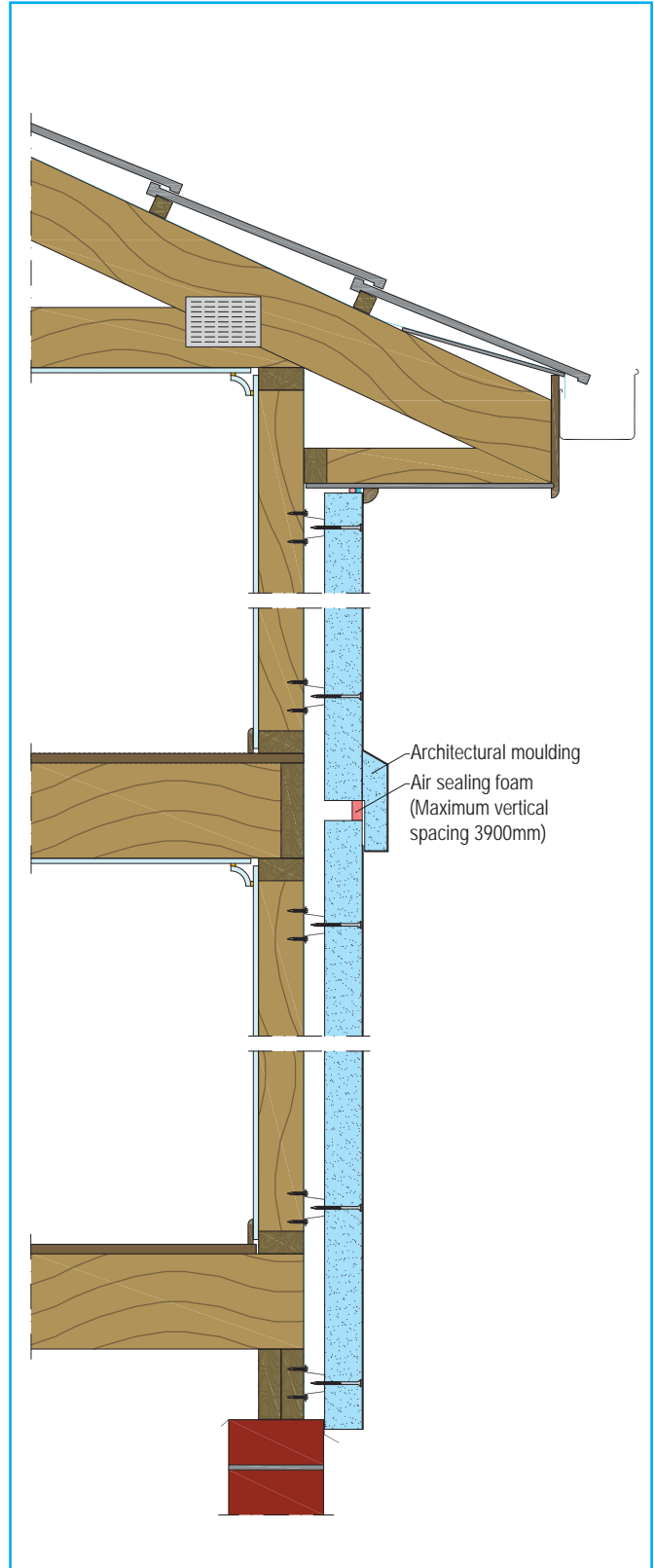
- Notes:
1. Studs can be either minimum MGP10 timber or minimum 1.15mm BMT steel.
  2. Compleo panel is fixed to each top hat with 2 x 14g bugle head screws.
  3. Maximum deflection in Serviceability Limit State (SLS) is Span/ 360.

# Construction Details

## COMPLEO WALLS - FULL HEIGHT



**FIGURE 16 Full Height Two Storey**  
(supported at base)



**FIGURE 17 Full Height Two Storey**  
(panel suspended)

TYPICAL HORIZONTAL SECTION AND JOINTS

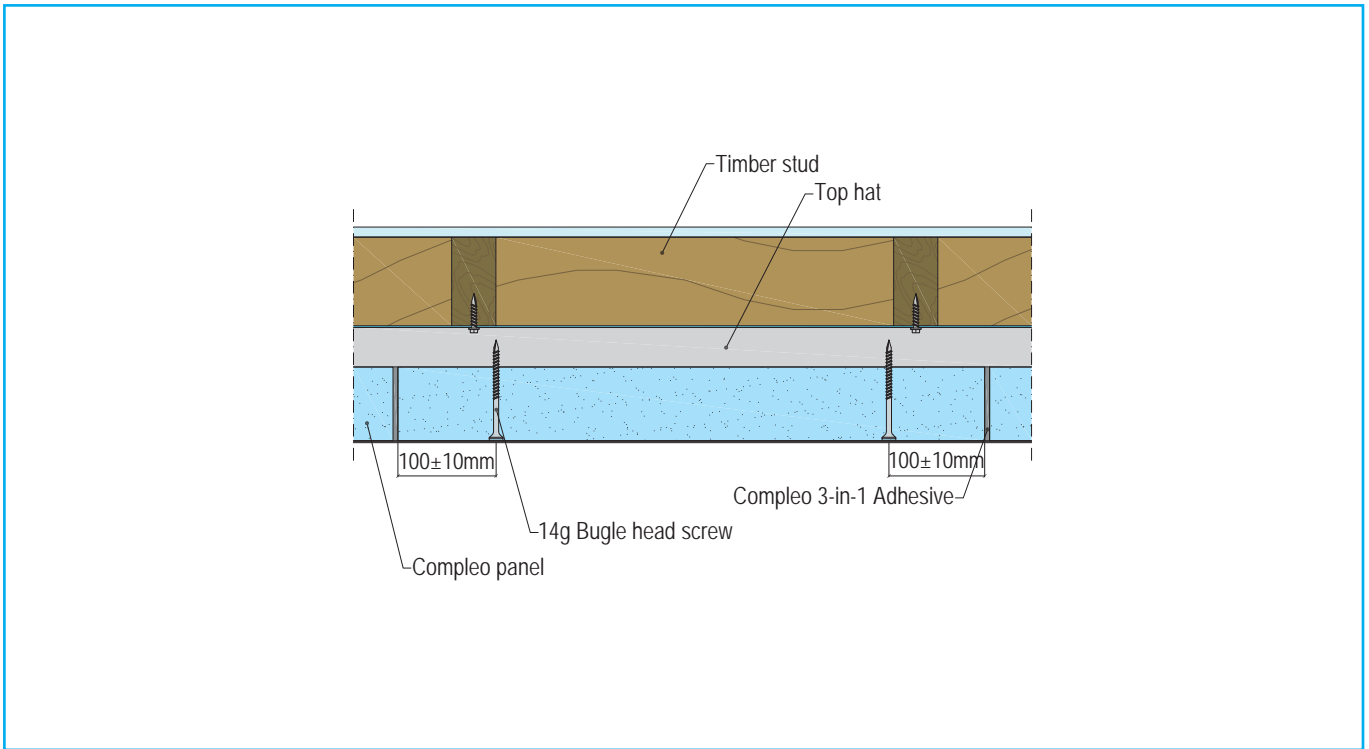


FIGURE 18 Typical Horizontal Section

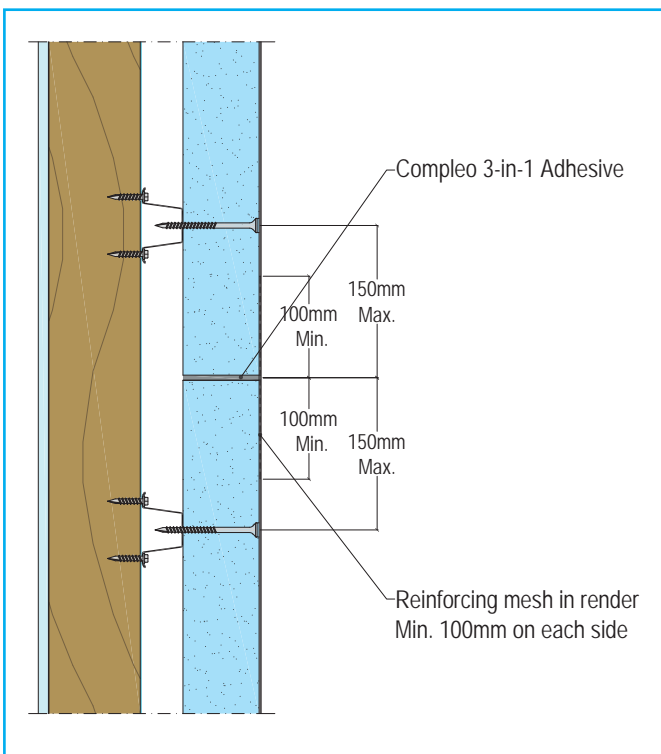


FIGURE 19 Horizontal Panel Jointing

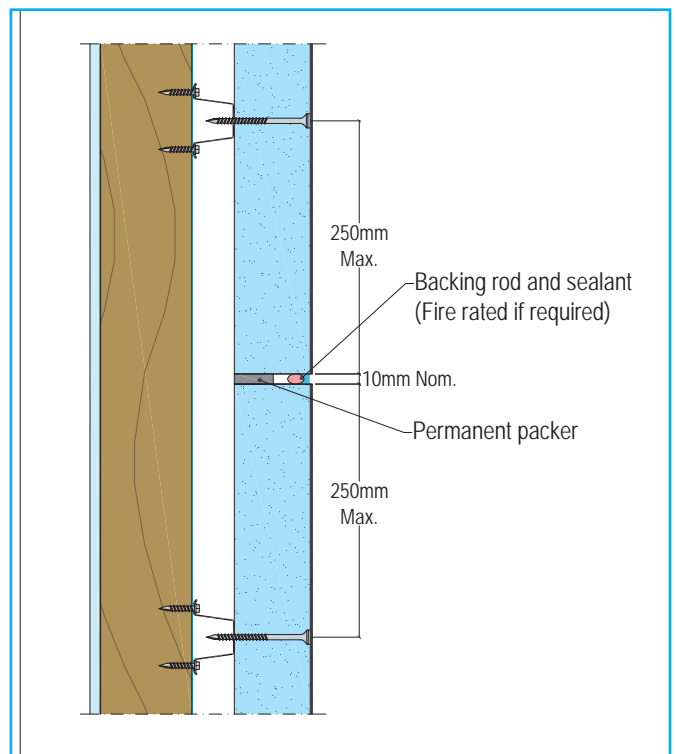


FIGURE 20 Horizontal Control Joint

CONTROL JOINTS

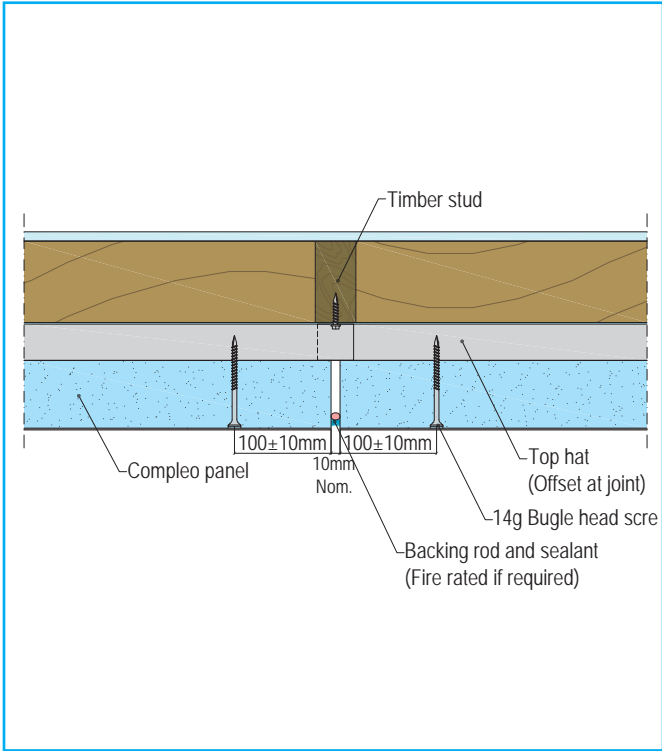


FIGURE 21 Control Joint on Single Stud

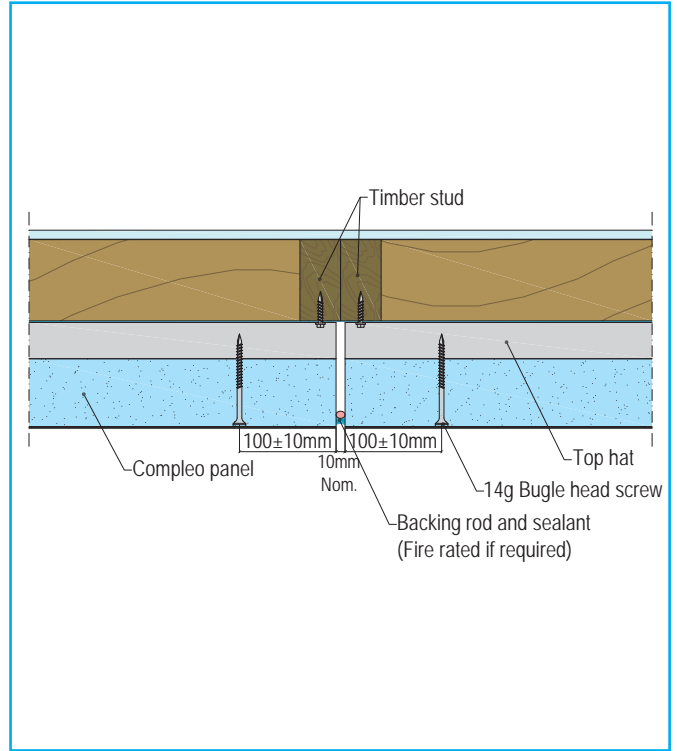


FIGURE 22 Control Joint on Double Stud

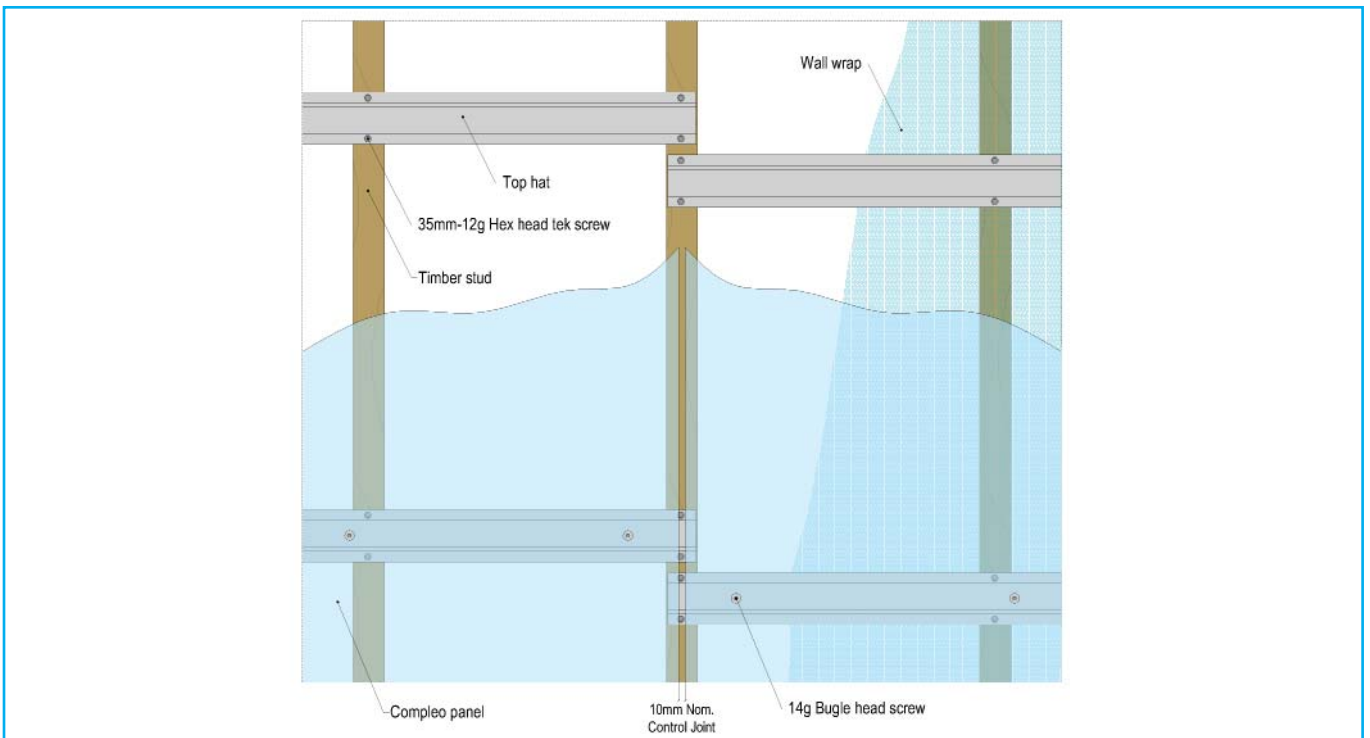


FIGURE 23 Control Joint on Single Stud Elevation

BASE DETAILS

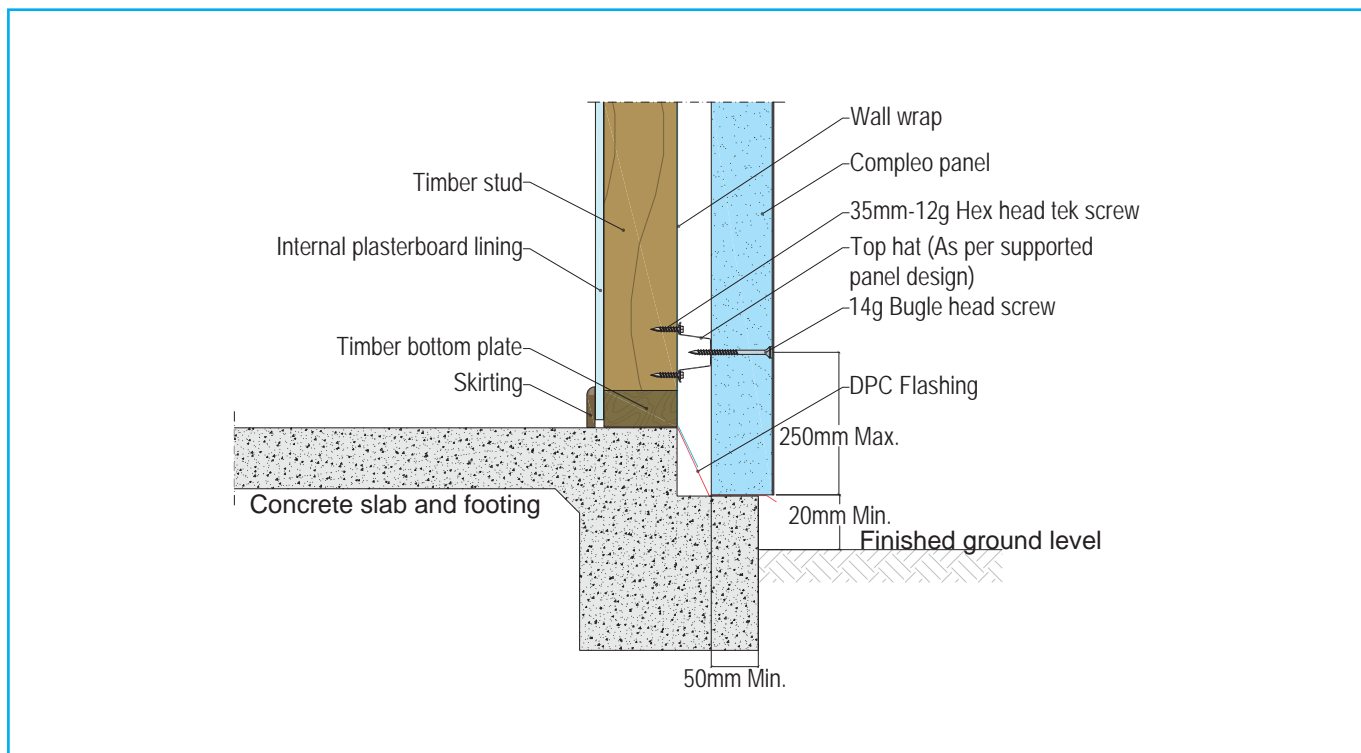


FIGURE 24 Concrete Slab Base

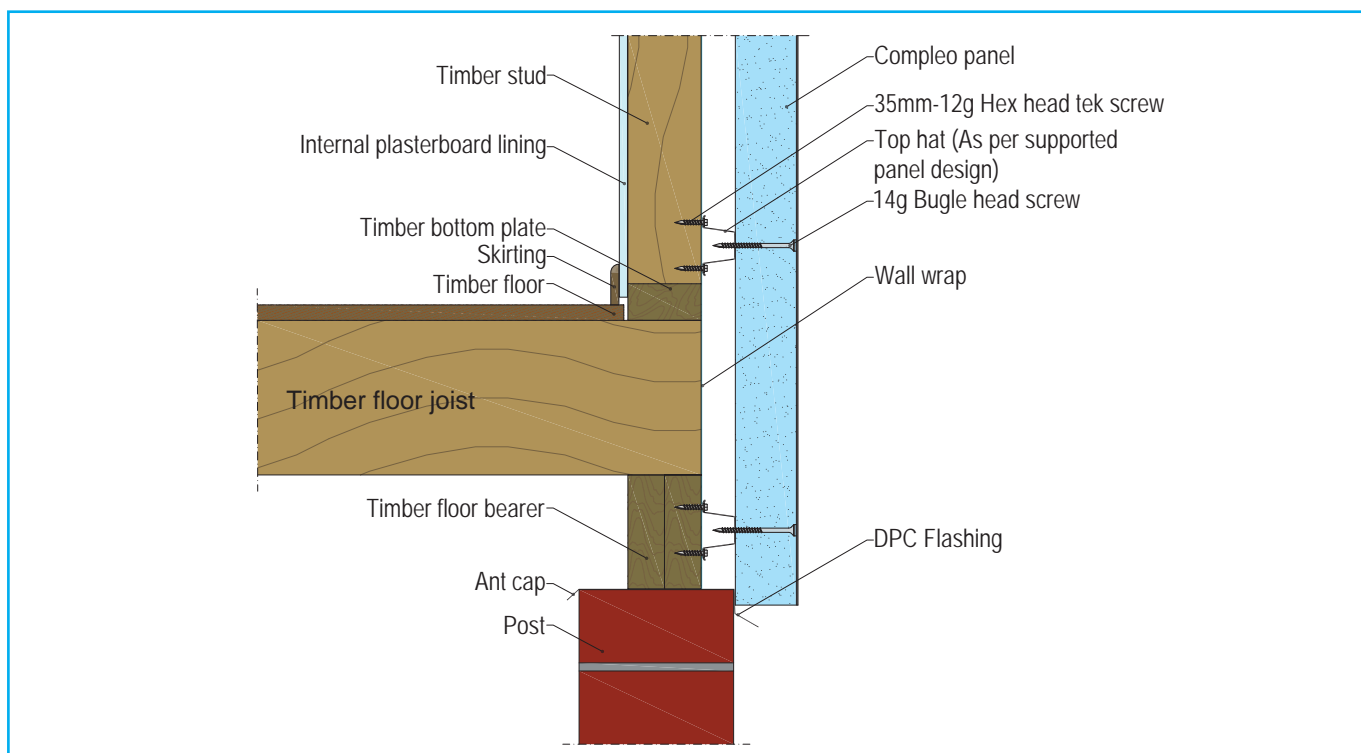


FIGURE 25 Suspended Timber Floor Base (Option 1)

BASE DETAILS AND CORNERS

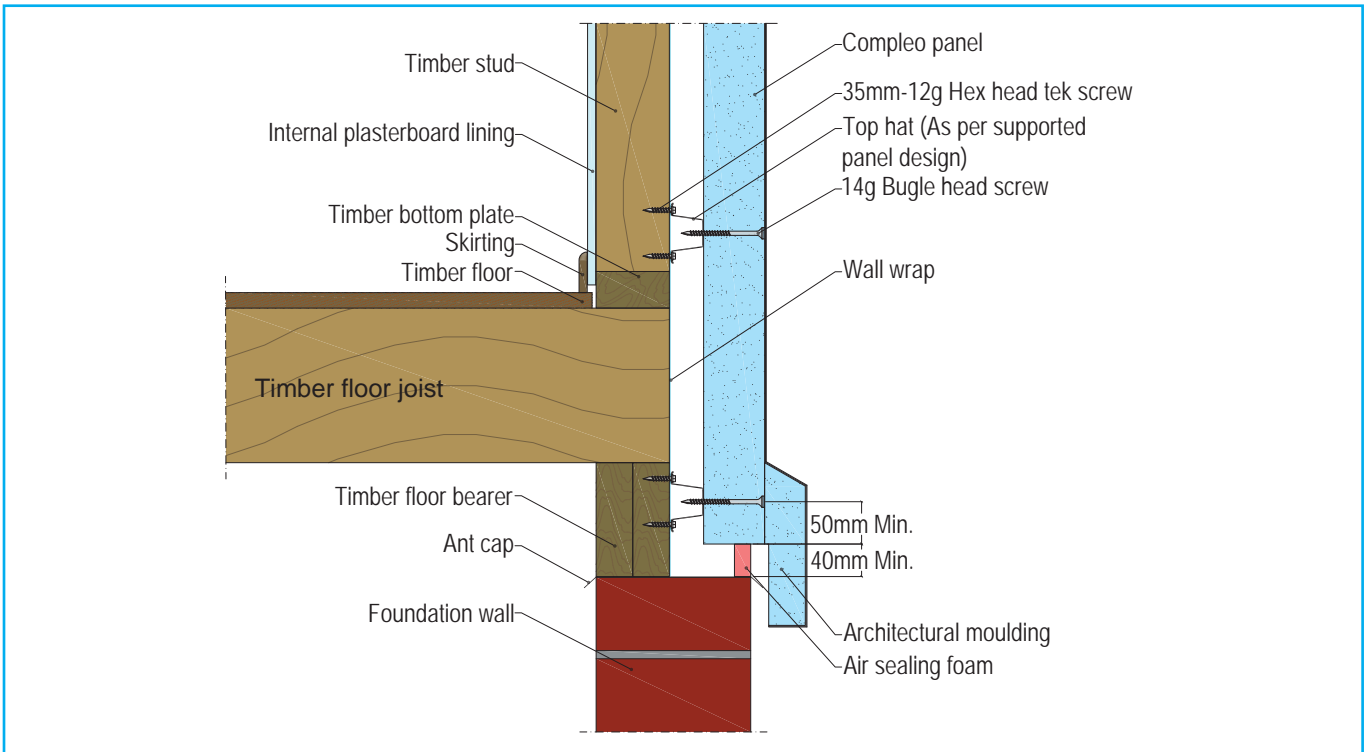


FIGURE 26 Suspended Timber Floor Base (Option 2)

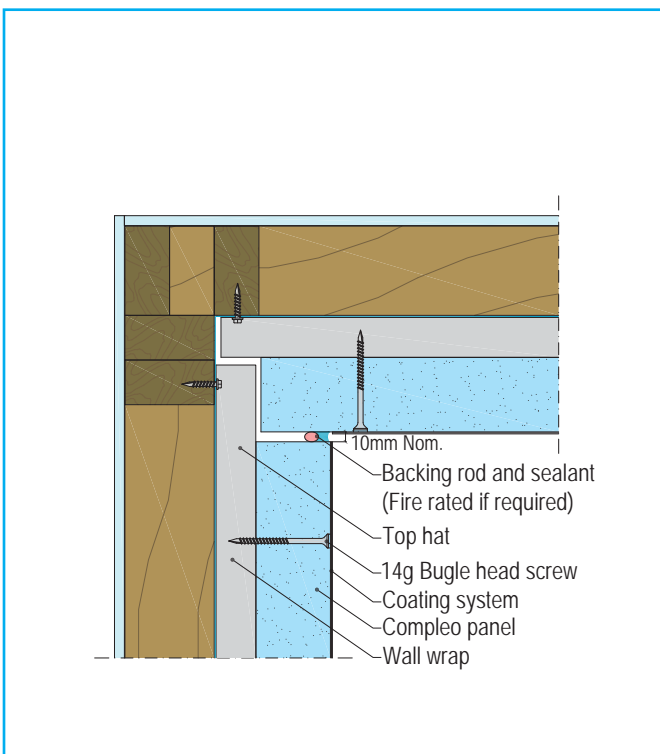


FIGURE 27 Internal Corner

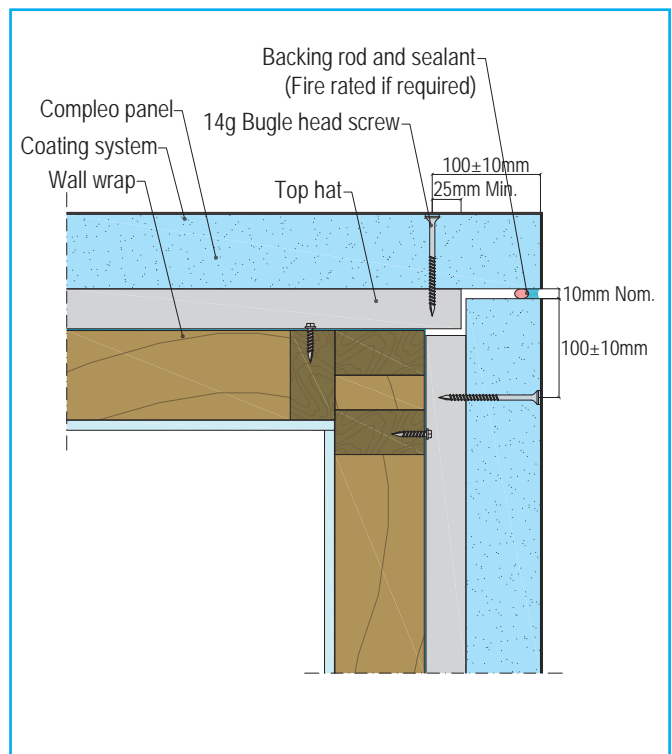
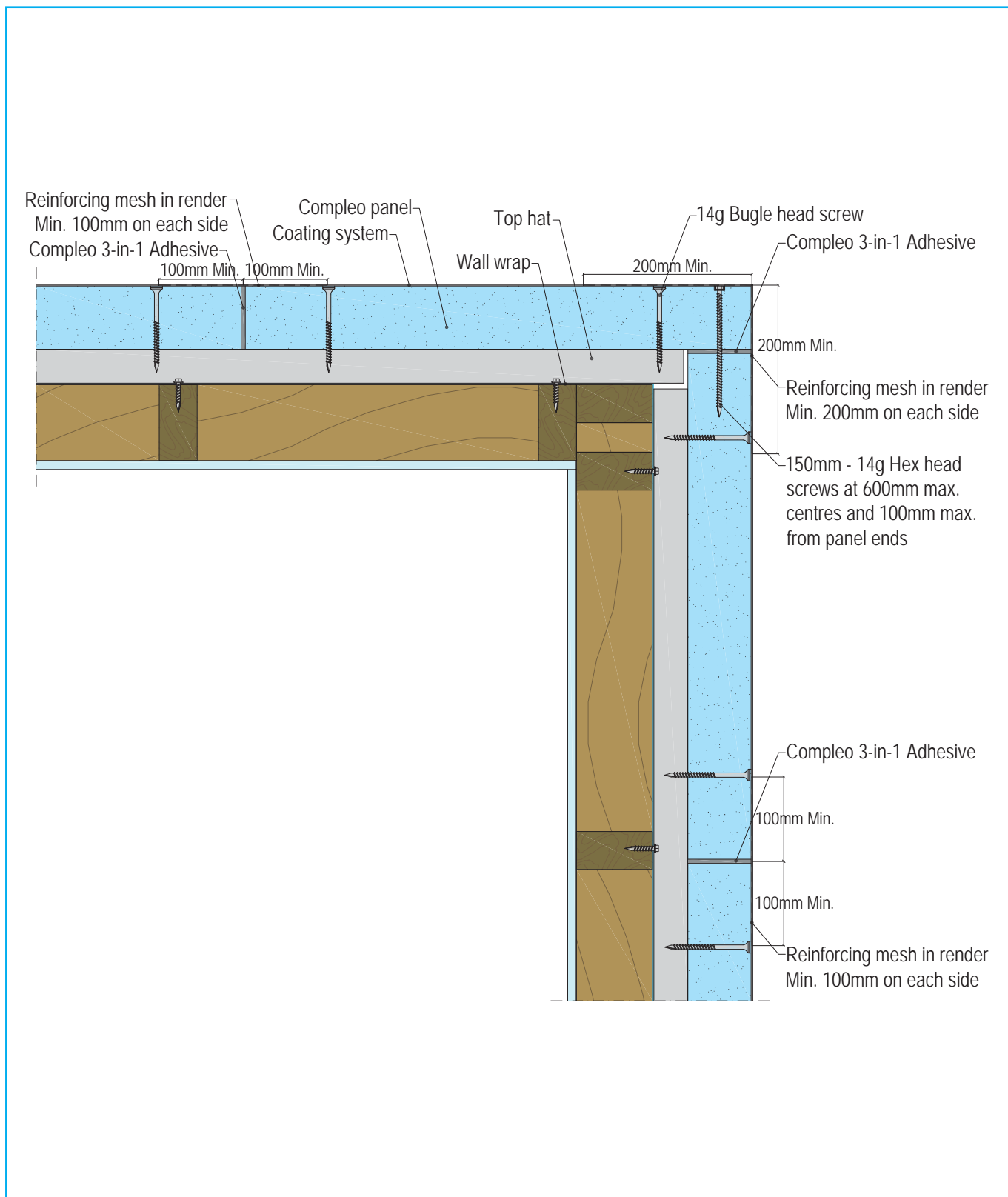


FIGURE 28 External Corner (Option 1)



**FIGURE 29 External Corner (Option 2)**



INTERMEDIATE FLOORS

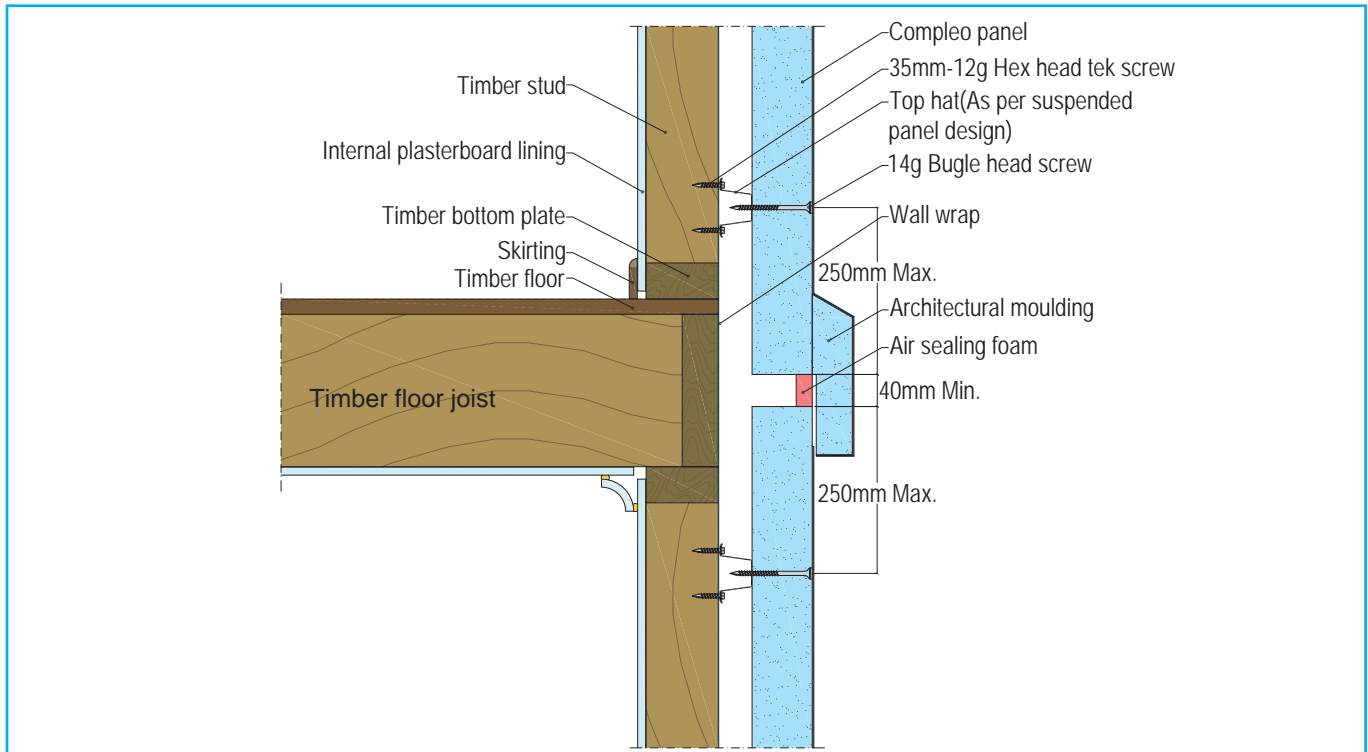


FIGURE 30 Intermediate Solid Timber Joist Floor

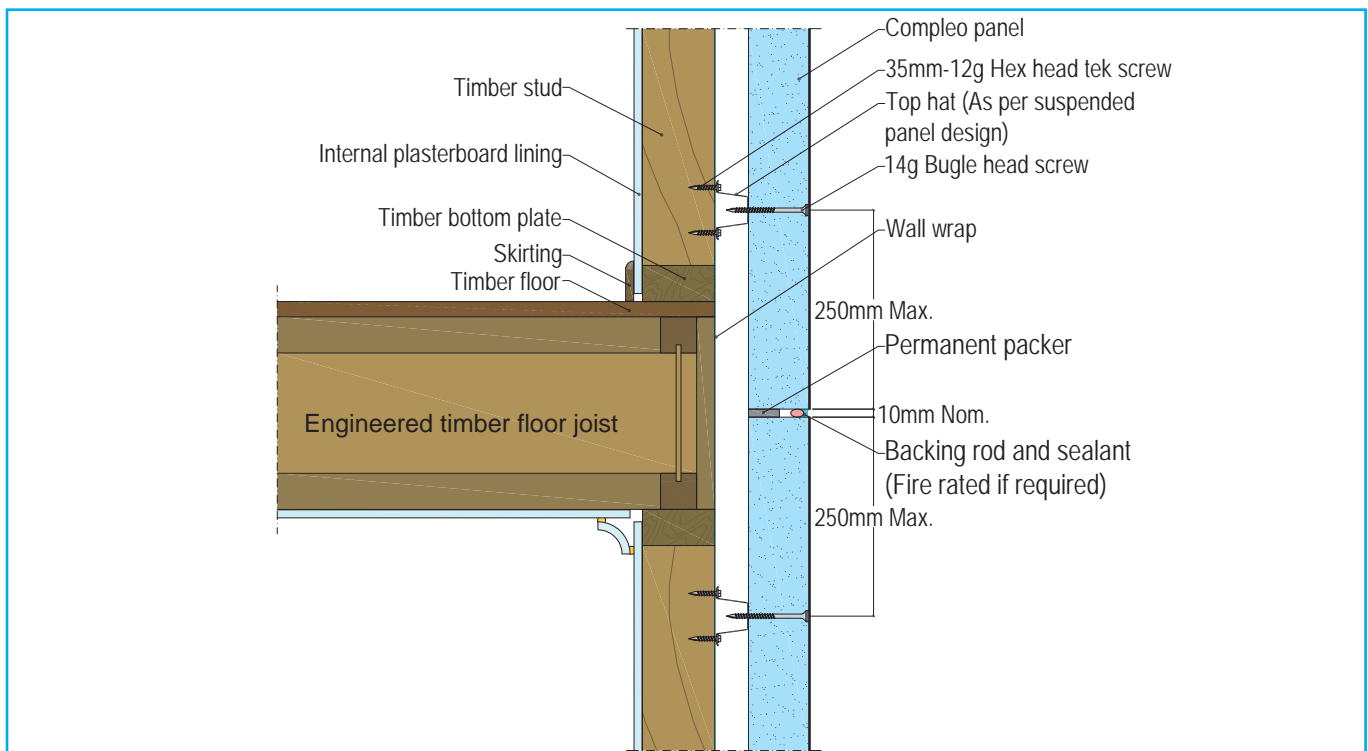


FIGURE 31 Intermediate Engineered Timber Joist Floor

ROOFS

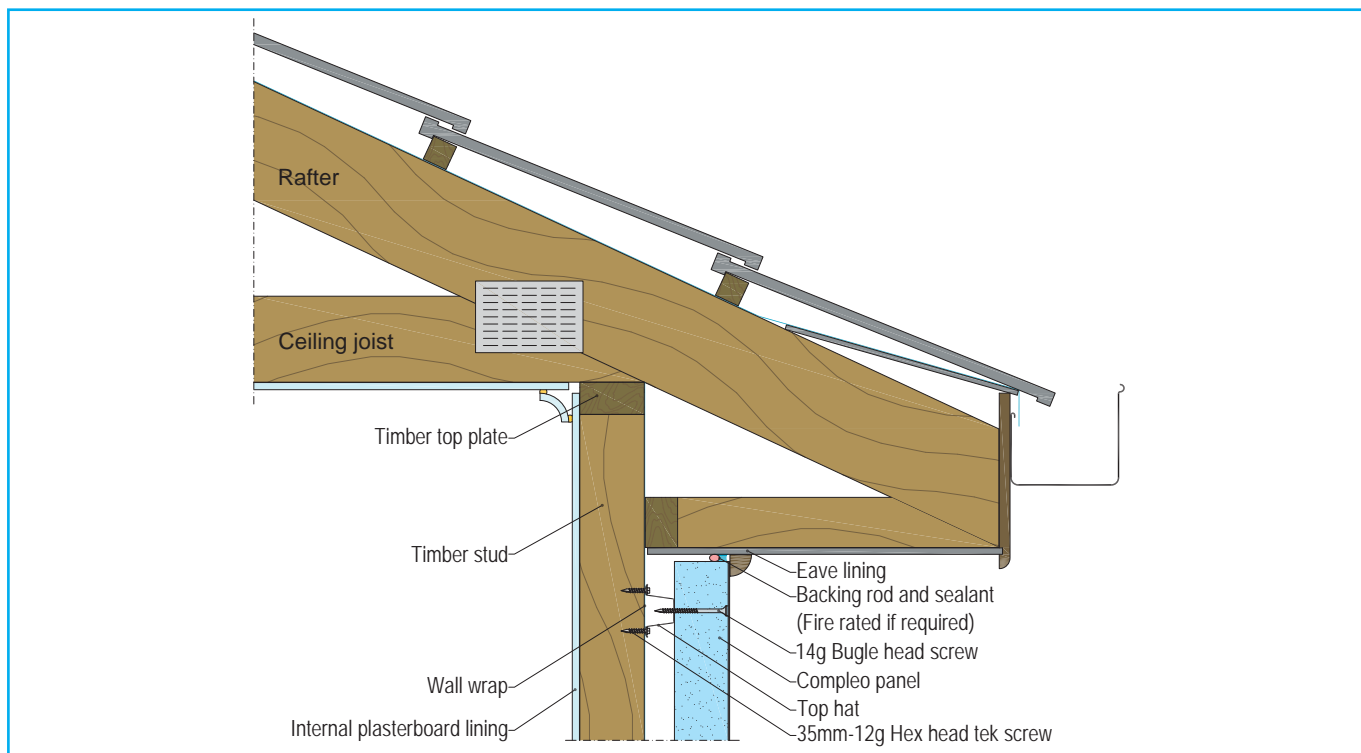


FIGURE 32 Roof Eave (Option 1)

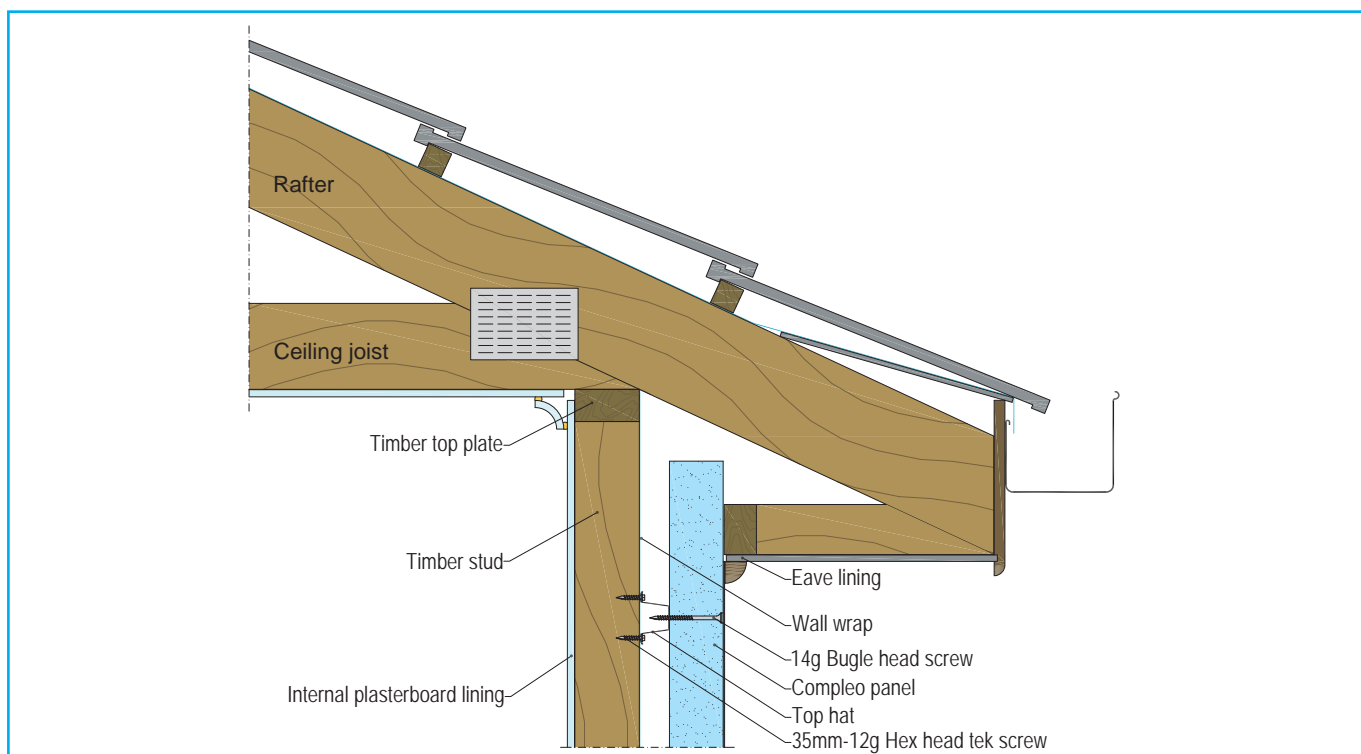


FIGURE 33 Roof Eave (Option 2)

ROOFS

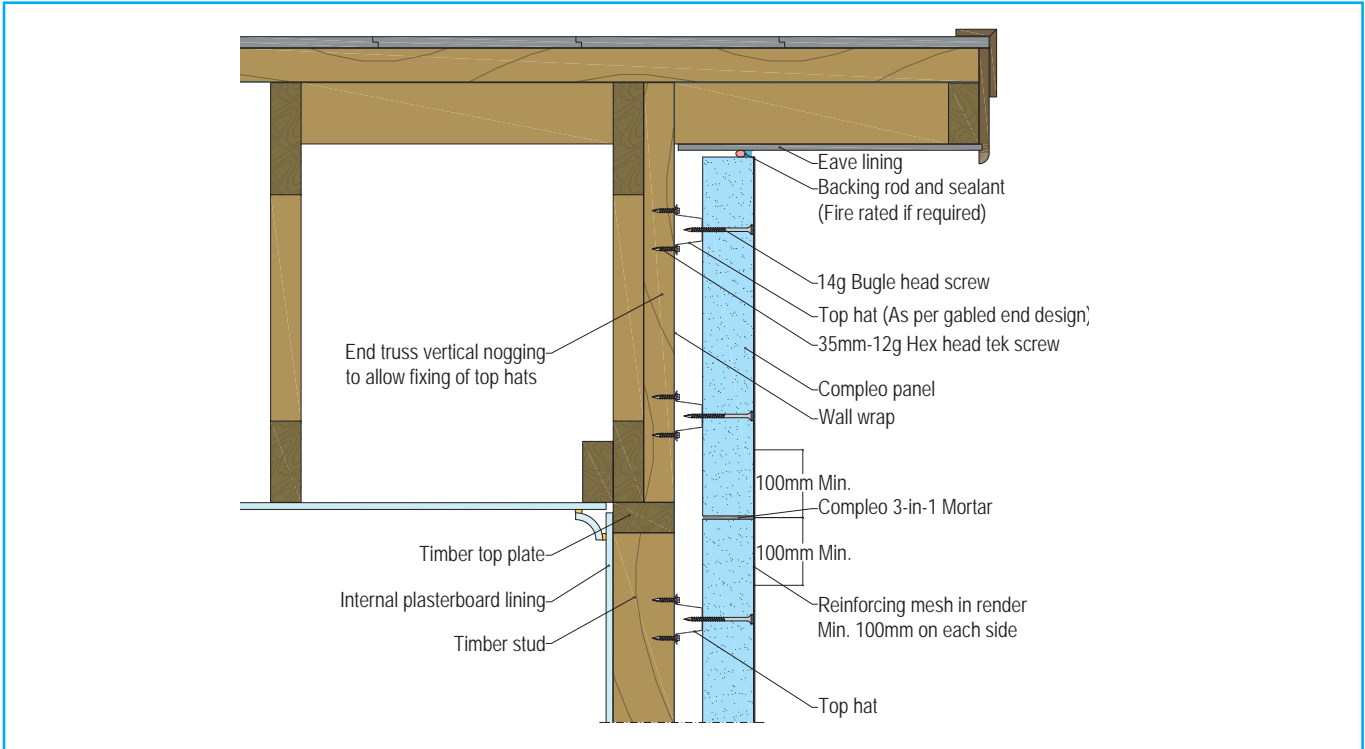


FIGURE 34 Roof Gabled End

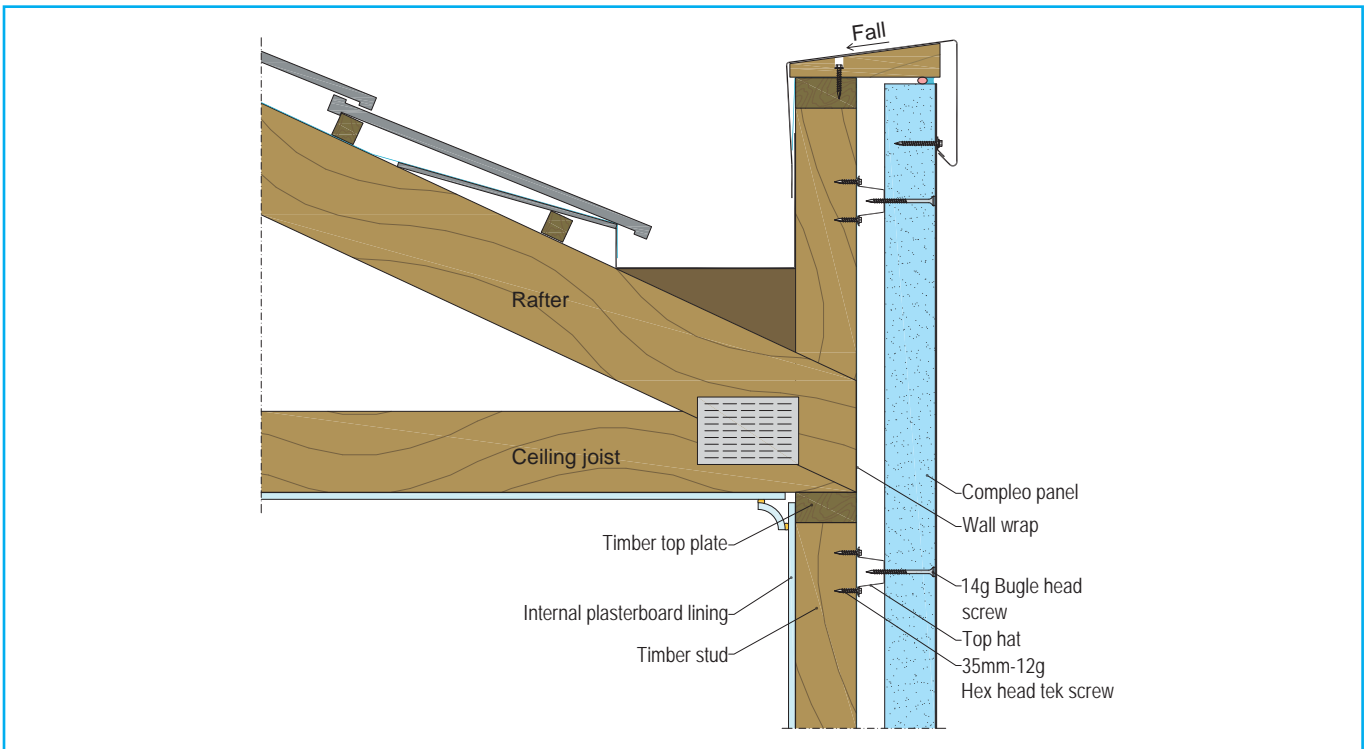


FIGURE 35 Roof Parapet

ROOF AND WINDOWS

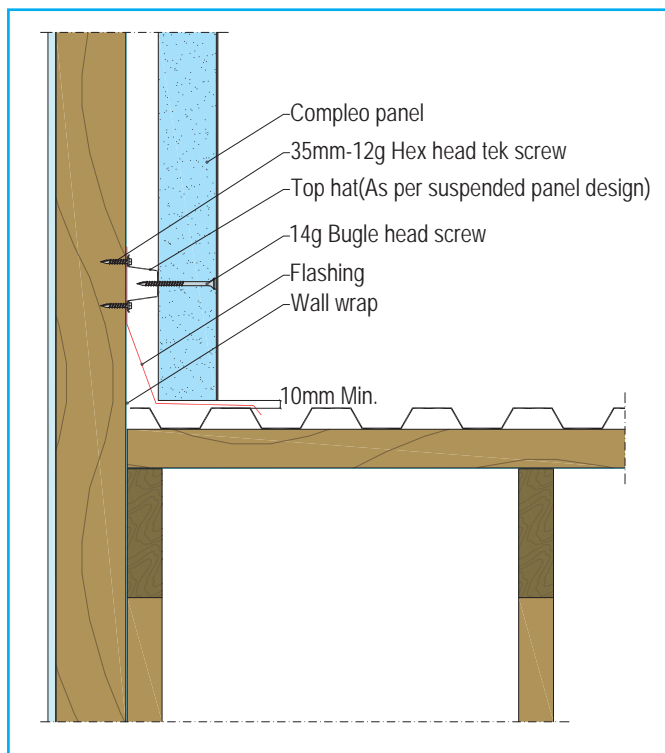


FIGURE 36 Roof and Wall Junction

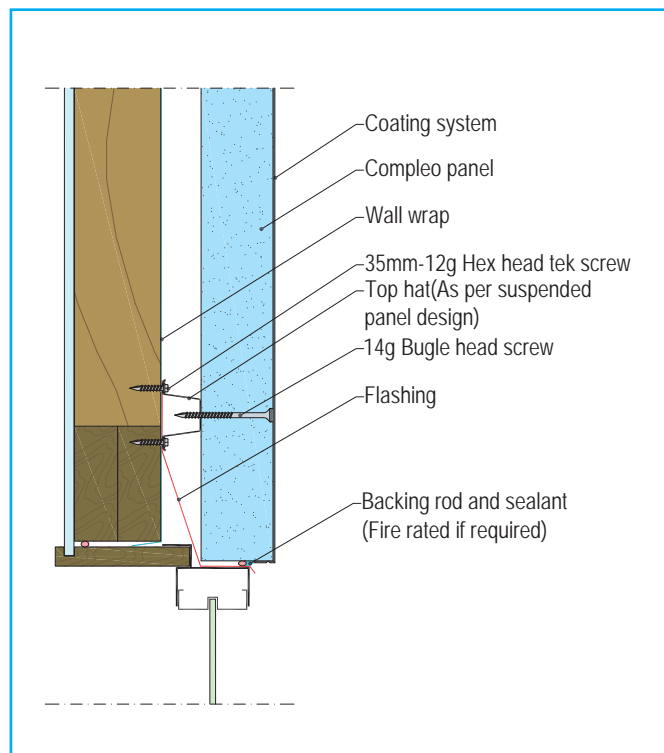


FIGURE 37 Window Head (Example Only)

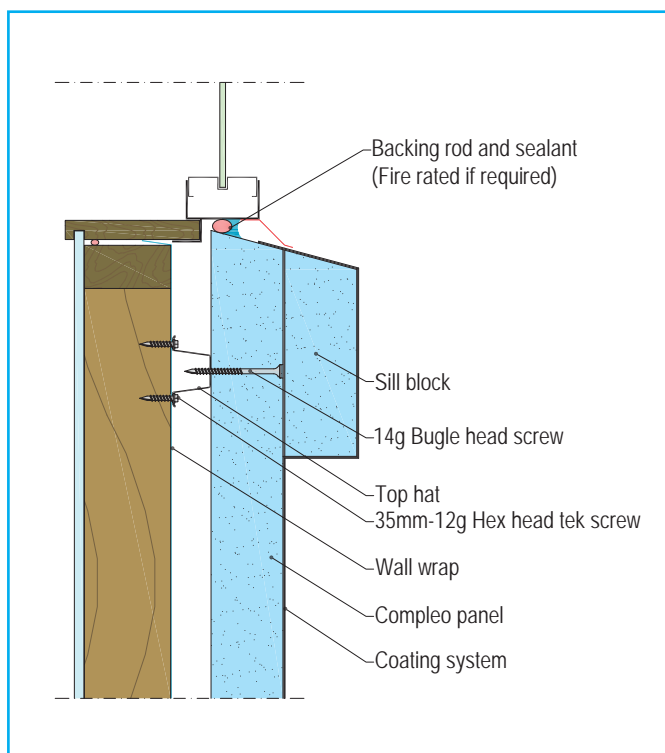


FIGURE 38 Window Sill (Example Only)

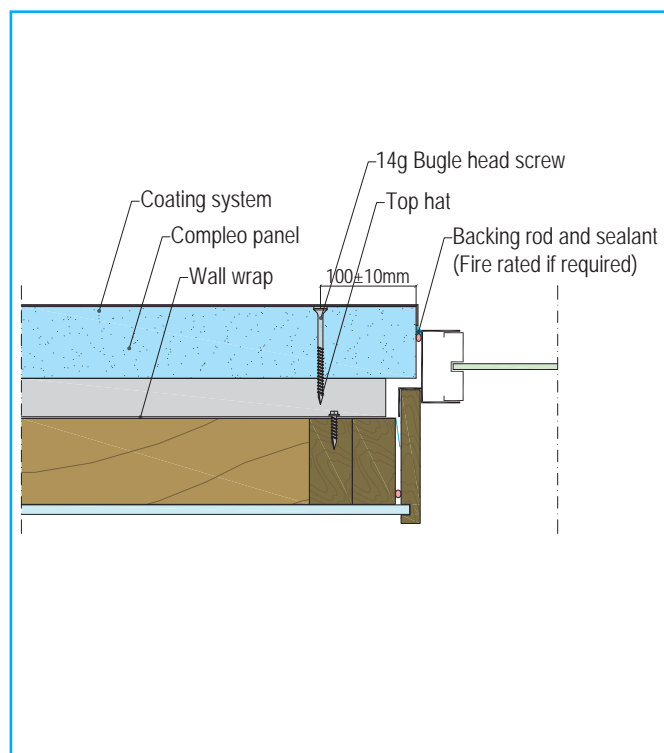


FIGURE 39 Window Jamb (Example Only)

# One AAC

**One AAC Building Solutions Pty Ltd**

ABN 36 602 372 627

Unit 1/1-2 Bushells Place

Wetherill Park NSW 2164

**Phone 1300 010 222**

**[oneaac.com.au](http://oneaac.com.au)**