

Durasheet™ Fibre Cement

fibre
cement
sheets

Durasheet™ -
tough and
durable



Build it better with **BGC**

BGC

Fibre Cement

History & Mission

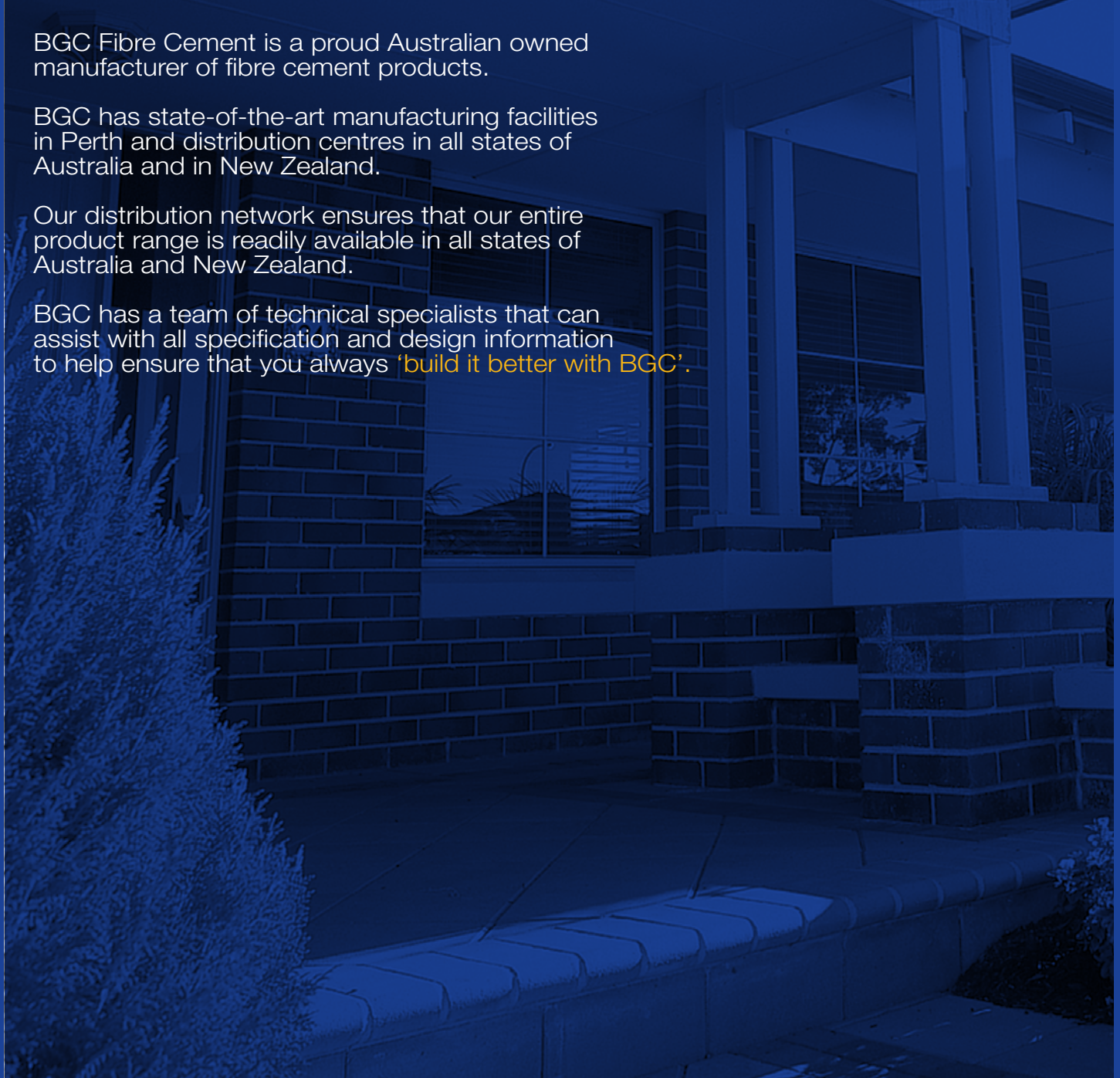


BGC Fibre Cement is a proud Australian owned manufacturer of fibre cement products.

BGC has state-of-the-art manufacturing facilities in Perth and distribution centres in all states of Australia and in New Zealand.

Our distribution network ensures that our entire product range is readily available in all states of Australia and New Zealand.

BGC has a team of technical specialists that can assist with all specification and design information to help ensure that you always 'build it better with BGC'.





BGC Durasheet™ is designed for the cladding of gable ends, soffits, eaves, exterior walls, car ports and verandah linings of timber and steel framed buildings.

4.5mm is generally used in timber framed residential and light commercial buildings for soffit linings. 6.0mm is recommended for residential and commercial applications. 7.5mm is recommended for commercial applications.



Durasheet™

- available in three thicknesses to suit both residential and commercial
- general purpose sheet
- classified as Type A Category 3 for external use
- can be used on timber and steel framed buildings
- can be used for bracing
- can be used for fire rated walls

Contents

Product Description & Information	4
Mass	4
Fire Resistance Rating	4
Quality Systems	4
Sheet Sizes	4
Bracing	5
Compliance	5
Wind Loading	6
Handling and Storage	6
Health and Safety	6
Sheet Cutting and Drilling	6
Fixing Requirements	6
Installation	7
Freeze Thaw	8
Painting	8
Maintenance	8
Warranty	8
Architectural Details	9-37
Accessories	39

Durasheet™ Mass

The approximate weight of Durasheet™ at equilibrium moisture content (7% moisture) is as tabulated.

NOMINAL THICKNESS (mm)	APPROX. WEIGHT (KG/m ²)
4.5	7.1
6.0	9.5
7.5	11.8

Appearance

Durasheet is a smooth flat fibre cement sheet, cut to size and finished with square edges. Durasheet is an un-sanded natural grey colour and suitable for a paint finish. Durasheet™ can be identified by “BGC Durasheet™ ” printed on the back of the sheets.

Product Description

BGC Durasheet™ is a fibre cement sheet for external applications. It is recommended for cladding and for such features as gables, soffits, carports and verandah linings of timber and steel framed buildings.

Durasheet™ is manufactured in nominal thickness of 4.5mm, 6.0mm and 7.5mm.

4.5mm Durasheet™ should only be used in applications such as lining of soffits, ceilings to carports and verandahs where it is unlikely to be subjected to impacts.

6.0mm and 7.5mm Durasheet™ should be used for general cladding applications or for commercial soffits and the like.

Sheet Sizes

THICKNESS (mm)	WIDTH (mm)	LENGTH (mm)			
		1800	2400	2700	3000
4.5	450		x		
	600		x		
	750		x		
	900	x	x		
	1200	x	x	x	x
6	900		x		
	1200	x	x	x	x
7.5	1200	x	x	x	x

*some sizes may not be available in all areas, please check with your BGC stockist for availability

Product Information

Durasheet™ is manufactured from portland cement, sand, finely ground silica, cellulose fibres and water. It is cured in a high-pressure steam autoclave to create a durable, dimensionally stable product.

Durasheet™ fibre cement sheets are manufactured to conform to the requirements of NZS/AS2908.2 Cellulose Cement Products and are classified as Type A Category 3 sheets for external use.

BGC Fibre Cement manufactures Durasheet™ under the rigorous Quality Management System of the International Standard ISO9001:2008 as a holder of Licence Agreement number QEC2955/13.

For a copy of the Material Safety Data Sheet (MSDS) for Durasheet™ call BGC Fibre Cement 0800 424 234 or visit www.bgc.com.au/fibreceement

Control of External Fire Spread

BGG Durasheet™ 6.0mm and 7.5mm Direct Fixed or Cavity Cladding Systems have a performance level A in accordance with NZBC C/AS1 Table 7.5. The systems are suitable for use as external cladding systems on buildings in all purpose groups, at any distance from the Boundary.

Fire Resistance Rating

FRR 30/30/30

External Cladding - 6.0 or 7.5mm BGC Durasheet

Internal Lining - 10mm GIB® Fyrelite one side fixed as per Winstone Wallboards Ltd specification GBTL 30 system from GIB® Fire Rated Systems January 2006.

Insulation - R2.2 fibre glass insulation

Framing as per Timber Framing Section

The above applies to both Direct fixed and Cavity Construction.

For One Way Fire Resistance Ratings we recommend the following Winstone Wallboard Ltd specifications from GIB® Fire Rated Systems January 2006:

15 Minutes	-	GBUW 15
30 Minutes	-	GBUW 30a GBUW 30b
60 Minutes	-	GBUW 60a
90 Minutes	-	GBUW 90
120 Minutes	-	GBUW 120

For further information please contact BGC Fibre Cement

Durasheet™ can be used to provide bracing for timber framed construction designed and constructed as per NZS3604. Table 1 is a summary of the bracing rating (racking resistance) as tested by BRANZ.

Table 1

Bracing ratings for 2.4m high timber framed walls – clad with 6.0mm or 7.5mm Durasheet and founded on either concrete or timber floor. Applies for both Direct Fixed and Cavity Construction.

ELEMENT TYPE	MINIMUM LENGTH OF BRACING ELEMENT	RATING WIND (BU/m)	RATING EARTH-QUAKE (BU)	HOLD DOWN REQUIREMENTS
		6 or 7.5mm	6 or 7.5mm	
BGC – DS1- Timber Foundation	1.2	143	130	The bottom plate shall be nailed through to 100mm wide joists (or Blocking) using pairs of 100x4mm Galvanised flathead nails at 600mm maximum centres. The Nails must be equally spaced across the plate
BGC – DS2- Timber Foundation	2.4	143	130	Secure every second stud (@ sheet sides) to the floor joist with 260x25x1mm galvanised mild steel straps. Fasten the straps with six 30x2.5mm galvanised flathead nails each side Strap centres – 1200mm typical
BGC – DS3 Concrete Slab	1.2	139	130	The Bottom plate must be bolted to the floor slab with M12 x 150mm hot-dip galvanised bolts with 50x50x3mm hot-dip galvanised washers or proprietary anchors with a minimum characteristic pull-out strength of 15 kN and embedded at least 75mm into the concrete foundation
BGC – DS4 Concrete Slab	2.4	139	130	Bolt Centres – 1200mm typical (1400mm maximum) Secure every second stud (@ sheet sides) to the bottom plate with a 130x90x130mm U shaped bracket formed from 25x1mm galvanised mild steel strap, fitted under the bottom plate and fastened to the stud with six 30x2.5mm flat-head galvanised nails at each side Strap centres – 1200mm typical

(Bracing units per metre of element length, in accordance with NZS3604). For architectural details of the above refer to pages 34-37.

Wall Height

For a wall height of H:

Where H is greater than 2.4m the bracing rating in table 1 must be reduced by the factor 2.4/H(metre).

Where H is less than 2.4 the bracing ratings in Table 1 shall be used.

Cladding

The walls must be clad on at least one side with 6.0mm or 7.5mm Durasheet™. Additional lining or cladding may be used without prejudice to the ratings.

Construction

Timber framing at least equivalent to machine stress graded 90 x 45mm Kiln Dried Radiata pine, shall be used. Framing joints shall be nailed as specified by NZS3604. For Bracing applications Durasheet must be fixed vertically.

Fixing

Durasheet™ bracing sheets must be nailed to the framing around the edges and at all intermediate framing (studs and noggings) at 150mm maximum centres.

Fixings must not be placed
Closer than 50mm from sheet corners
Closer than 20mm from the sheet top and bottom edges (top and bottom plates)
Closer than 12mm from the sheet edge

To meet the NZBC requirement of at least 50 years durability for structural elements, external cladding sheets must be fixed with either 40 x 2.8mm for Direct fixed or 60 x 3.15mm for Cavity – Stainless Steel Annular grooved flathead nails.

For external walls Durasheet™ must overhang the foundation slab or lower plate by 50mm. The sheet overhang must not be nailed to the foundation or floor joist.

Hold Down Straps

End straps shall be fabricated from 25 x 1mm mild steel strapping and be secured with 6 of 30 x 2.5mm galvanised flat head nails each side.

Straps that are exposed to the sub floor atmosphere (the sub floor is open to the weather or the sub floor has base boards with 20mm maximum gaps between boards) must be painted. Use a minimum of two coats of 100% acrylic paint applied as recommended by the paint manufacturer.

The paint should be checked every 8 -10 years to ensure it remains serviceable. paint that shows any sign of deterioration – flaking, cracking or peeling – must be repainted immediately.

Compliance

Durasheet™ complies with the requirements of all the relevant Building Codes including Clause E2 External Moisture.

This document is designed to be used in conjunction with E2/AS1 specifically but not limited to:

Section 3.0 Weather tightness Risk Factors
Section 9.0 Wall Claddings
Section 9.7 Fibre Cement Sheet
Table 24 – Fixing Selection for Wall Claddings

Wind Loading

Durasheet™ Cladding may be used in all Building Wind Zones including Very High as set out in NZS3604.

Handling and Storage

Durasheet™ should be stacked flat, up off the ground and supported on level equally spaced (max 450mm) gluts. The sheets must be kept dry, preferably by being stored inside a building. When stored outdoors they must be protected from the weather.

Care should be taken to avoid damage to the ends, edges and surfaces. Sheets must be dry prior to being fixed, or painted. Sheets must be carried on edge.

Health and Safety

Durasheet™ is manufactured from New Zealand cellulose fibre, finely ground sand, Portland cement and additives. As manufactured, the product will not release airborne dust, but during drilling and sanding operations cellulose fibres, silica and calcium silicate dust may be released. Breathing in fine silica dust is hazardous, prolonged exposure (usually over several years) may cause bronchitis, silicosis or cancer.

Avoid Dust inhalation

When cutting sheets, use the methods recommended in this literature to minimise dust generation. These precautions are not necessary when stacking, unloading or handling fibre cement products. For further information or a Material Safety Data Sheet contact BGC Fibre Cement.

Sheet Cutting and Drilling

Durasheet™ may be cut to size on site. If using power tools for cutting, drilling or sanding they must be fitted with appropriate dust collection devices or alternatively an approved (P1 or P2) dust mask and safety glasses should be worn.

It is recommended that work always be carried out in a well-ventilated location.

The most suitable cutting methods are:

- **Score and Snap**
Score the sheet face 4 or 5 times with a 'score and snap' knife. Support the scored edge and snap the sheet upward for a clean break.
- **Hand Guillotine**
Cut on the off-cut side of the line to allow for the blade thickness.
- **Notching**
Notches can be made by cutting the two sides of the notch. Score along the back edge then snap upwards to remove the notch.

Sheet Cutting and Drilling

• Drilling

Use normal high-speed drill bits. Do not use the drill's hammer function. For small round holes, the use of a hole-saw is recommended.

For small rectangular or circular penetrations, drill a series of small holes around the perimeter of the cut out. Tap out the waste piece from the sheet face while supporting the underside of the opening to avoid damage. Clean rough edges with a rasp.

Large rectangular openings are formed by deeply scoring the perimeter of the opening. Next, form a hole in the centre of the opening (refer method above) then saw cut from the hole to the corners of the opening. Snap out the four triangular segments. Clean rough edges with a rasp.

Construction

Timber Framing

In general, details presented in this publication are for low rise residential (up to 2 stories) and light commercial construction on timber framing.

Timber framing must comply with NZS3604 for buildings or parts of a building within the scope limitations of NZS3604. Buildings or parts of a building outside the scope of NZS3604 must be to a specific design in accordance with NZS3603 and AS/NZ1170.

Timber framing must be a minimum of No 1 grade framing but preferably Machine Stress graded Timber.

Timber framing must be treated to a minimum of H1.2 as per NZS3602 – Timber and Wood Based Products for use in Building & NZS3640 Chemical Preservation of Round and Sawn Timber.

Timber Framing Set Out

In all cases studs must be at a maximum 600mm centres. Dwargs/nogs must be fitted flush between the studs at a maximum 800mm centres

Timber framing and battens must have a maximum moisture content of 18% at the time of the Cladding application.

(Note: If the cladding system is installed over framing or battens with a moisture content greater than 18% problems may occur at a later date due to excessive timber shrinkage.)

Direct Fixed or Cavity Construction

As per section 3 of E2/AS1, Fibre cement sheet claddings can be direct fixed if they have a Risk score of between 0-6.

Risk Score of 7- 20 will need be to be constructed on a nominal 20mm drained cavity.

Building Wrap

A BRANZ appraised building wrap must be installed as per the manufacturer's instructions and E2/AS1. Refer to E2/AS1 for the correct type of wall wrap to suit the application.

Unlined gables and walls must incorporate a rigid sheath or an air barrier fixed to the framing, which meets the requirements of NZBC Acceptable Solution E2/AS1 table 23. Where rigid sheathing is used, the fixing length must be increased by a minimum of the thickness of the sheathing.

Flashings

Flashings for all openings, corners, windows, meter boxes etc should be installed prior to Durasheet™. Refer to the Architectural details for recommended flashings. Also refer to E2/AS1 Table 20-22 for flashing material selection and Compatibility.

BGC will not be responsible for the incorrect selection and installation of flashings.

Vent Strip

For cavity construction, BGC Vent strip or similar must be installed at the base of the wall. The vent strip must have ventilation openings 3-5mm wide which permits a ventilation rate of 1000mm² per lineal metre minimum.

Cavity Battens

As per E2/AS1 cavity battens must:

- be nominal 20mm (between limits of 18mm and 25mm in thickness)
- Be at least the same width of the stud
- Be fixed by the cladding fixings, through the building wrap in to the framing. Battens can be temporarily fixed to the studs until Durasheet is installed.
- Comply with the durability requirements of B2/AS1 and if timber comply with NZS3602
- Timber Cavity Battens must be minimum of H3.1

Intermediate Support

When stud spacings are greater than 450mm, intermediate support will be required to hold back the wall wrap and insulation.

This can be achieved by:

- Galvanised mesh 75mm
- Polypropylene tape at 300mm centres maximum
- Galvanised wire at 300mm centres fixed to the dwangs/nogs over the building wrap.
- Vertical cavity battens at 300mm centres maximum

Installation

Durasheet™ must be dry when installed. All sheet edges must be sealed with BGC Edge Sealer or similar prior to installation.

Fasteners must comply with the minimum durability requirements of the NZ Building Code. Fastener selections as per NZ3604.

Sea Spray Zone

- Stainless 316

Zone 1 (outside Seaspray Zone)

- Hot Dipped galvanised or Stainless 316

Zone 2-4 and Geothermal hotspots

- Hot dipped galvanised or stainless 316

Bracing – all Zones

- Stainless 316

Durasheet™ must be fixed to the framing with nails as per E2/AS1 Table 24 – summarised below.

Type	Nail size	Nailing Centres
Direct Fixed	40 x 2.8mm Fibre Cement Nail	200mm centres all framing
Over Cavity	60 x 3.15mm Fibre Cement Nail	200mm centres all framing
Soffit	40 x 2.8mm Fibre Cement Nail	200mm centres all framing

Nails must be 12mm from the sheet edges and no closer than 50mm from the sheet corners. Nails should be driven just flush with the sheet surface – do not over drive the nails.

Durasheet™ can be fixed using nail guns. The nails used must be the same size as prescribed above. Bracing panels must be hand nailed. Please check with the nail gun manufacturer for correct nail type and further information. When using nail guns, if variation occurs, the gun should be set to under-drive and the nails tapped home using a hammer.

All sheet edges must be supported by framing and sheets should be installed vertically.

Durasheet™ cladding can be jointed in a number of ways but must be joined over framing support. Framing must be a minimum of 45mm thick except for sealant joints which must be on a minimum of 70mm framing or 2 35mm studs well spiked.

Vertical Joints:

- uPVC jointer
- Timber Batten
- Flexible Sealant Joint

External and internal corners:

- uPVC jointer
- Timber Batten
- Flexible Sealant

Mid floor Joint

- either h moulding or Z flashing

The above are applicable for both Direct fixed and Cavity Construction.

Soffit sheets can be joined off stud with a uPVC Joiner

Refer to architectural drawings for details of the above joints.

Maintenance

Building Owners are responsible for the maintenance of claddings.

Annual Inspections must be made to ensure that all aspects of the cladding systems, including flashings remain in a waterproof condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress, must be repaired immediately. Sealant, paint coatings, flashings or the Durasheet must be repaired in accordance with the relevant manufacturers' instructions.

Regular cleaning (at least annually) of the paint finish with water and a mild detergent is recommended to remove grime, dirt and organic growth, to maximise the life and appearance of the cladding.

Recoating of the paint finish will be necessary throughout the life of the cladding system. Repaint every 5-10 years in accordance with the paint manufacturer's instructions. When re-painting, care must be taken to ensure bottom edges are well covered with paint.

Flashings and sealants must continue to perform their design function.

Preparation and Painting

Painting of Durasheet™ is required to meet the durability and external moisture requirements of the NZBC.

Durasheet™ must be painted within 3 months of installation. When using uPVC flashings, the light reflective value of the colour used must be more than 40% as required under E2/AS1. Darker colours can cause excessive movement and reduce the cladding performance.

It is recommended that only quality sealants that comply with the New Zealand Building Code be used – preferable BRANZ appraised products. The sealants manufacturers' instructions must be followed.

Quality Paints that comply with AS3730 should be used and manufacturers' specifications must be followed. All surfaces should be free from dust and contaminants prior to painting.

BGC Fibre Cement manufactures and grades the Durasheet™ to strict quality control measures. The installer is responsible to ensure it will meet the required finish prior to installation. BGC will not be responsible to correct self-evident surface issues after installation

Freeze Thaw

Durasheet™ should not be used in situations where it will be in direct contact with snow or ice for prolonged periods.

Warranty

BGC Fibre Cement (NZ) warrants its products to be free from defects caused by defective materials or workmanship (manufacturer) for a period of 15 years or 50 years for bracing sheets from the date of purchase, subject to the conditions set out below. Further, BGC Fibre Cement (NZ) warrants its products to be resistant from rotting, fire and cracking so long as the installation is carried out in accordance with BGC Fibre Cement literature available at the time of purchase.

Conditions

- i) This warranty is non transferable
- ii) The product must be installed and maintained in accordance with the relevant BGC Fibre Cement (NZ) literature current and available at the time of purchase. All additional products including accessories, jointing systems and coatings used in conjunction with the BGC Fibre Cement product(s) must be applied or installed according to the appropriate manufacturer's instructions.
- iii) BGC Fibre Cement (NZ) is not liable for any breach of warranty unless the claimant provides proof of purchase and a claim is submitted in writing within 30 days of the defect becoming evident. If the defect is detected prior to installation, the claim must be submitted before installation occurs.
- iv) If BGC Fibre Cement (NZ) products are found to be defective, BGC Fibre Cement will at its option, repair or replace the product, supply equivalent replacement products or reimburse the purchase price of the product.
- v) BGC Fibre Cement (NZ) shall not be liable for any damage or losses (direct or indirect) including property damage or personal injury, economic loss or loss of profits, consequential loss arising in contract or negligence or howsoever arising. BGC Fibre Cement (NZ) shall not be liable for any claims, damages or defects arising from or attributed to poor workmanship, poor design or detailing, settlement or structural movement or movement of materials to which the product is attached, incorrect design of the structure, acts of God, including but not limited to floods, cyclones, earthquakes or severe weather or unusual climate conditions, performance of coatings or paints applied to the product, normal wear and tear, growth of mould, mildew, fungi, bacteria or any other organism on the products surface (exposed or unexposed).
- vi) The project must be designed and constructed in accordance with all relevant requirements of the current New Zealand Building Code regulations and standards.
- vii) If satisfying a claim under this warranty which involves recoating or painting of BGC Fibre Cement (NZ) products, there may be slight colour differences between the replacement product and the original products due to the effect weathering and variations in materials over time.
- viii) All warranties, conditions, liabilities and obligations other than those specified in this warranty are excluded to the fullest extent allowed by the law.

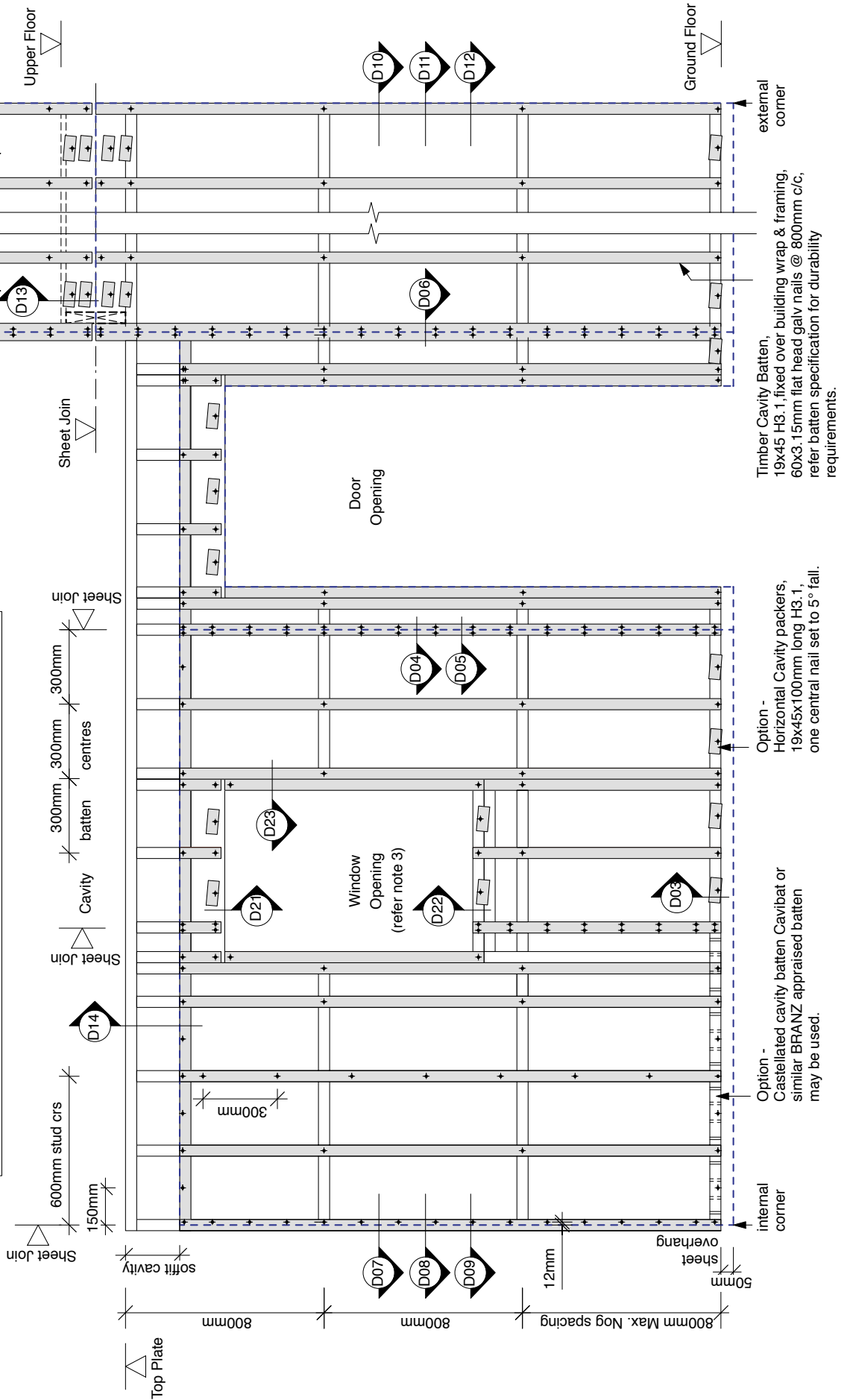
Disclaimer

The successful performance of the relevant product depends on a number of factors outside the control of BGC Fibre Cement (NZ). As such, BGC Fibre Cement (NZ) shall not be liable for the recommendations made in its literature and the performance of the products/systems including its suitability for any purpose or ability to comply with the relevant conditions set out in the New Zealand Building Code. It is the responsibility of the building designer to ensure that the details and recommendations provided in the relevant BGC Fibre Cement (NZ) installation guide are suitable for the intended project and that specific design is conducted where appropriate.

The instructions and recommendations in BGC Fibre Cement (NZ) literature are based on good building practice, but are in no way an exhaustive statement of all relevant information and are subject to conditions above. BGC Fibre Cement has tested the performance of its products when installed in accordance with the products technical specification, in accordance with the standards required by the New Zealand Building Code. Those test results demonstrate the products compliance with the performance criteria set out by the New Zealand Building Code.

Wall Elevation

Note 1: BGC Durasheet™ must be fixed vertically with all sheet edges sealed before fixing.
Note 2: If timber studs are placed @ 400 c/c, no intermediate battens are required, nogs may be placed @ 1200 c/c max, 100mm long packers will be required between battens as shown
Note 3: Horizontal packers are not to be installed on the sill trimmer framing within 100mm of the window opening edge.

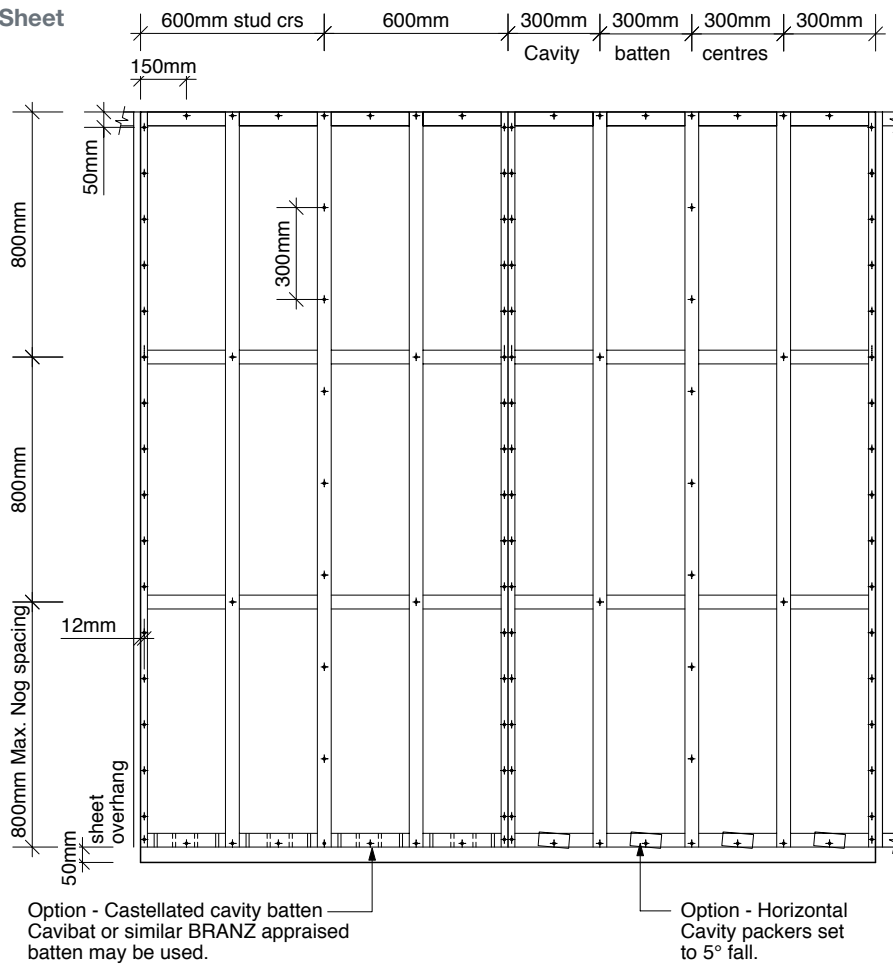


external corner
 Timber Cavity Batten, 19x45 H3.1 fixed over building wrap & framing, 60x3. 15mm flat head galv nails @ 800mm c/c, refer batten specification for durability requirements.

Option - Horizontal Cavity packers, 19x45x100mm long H3.1, one central nail set to 5° fall.

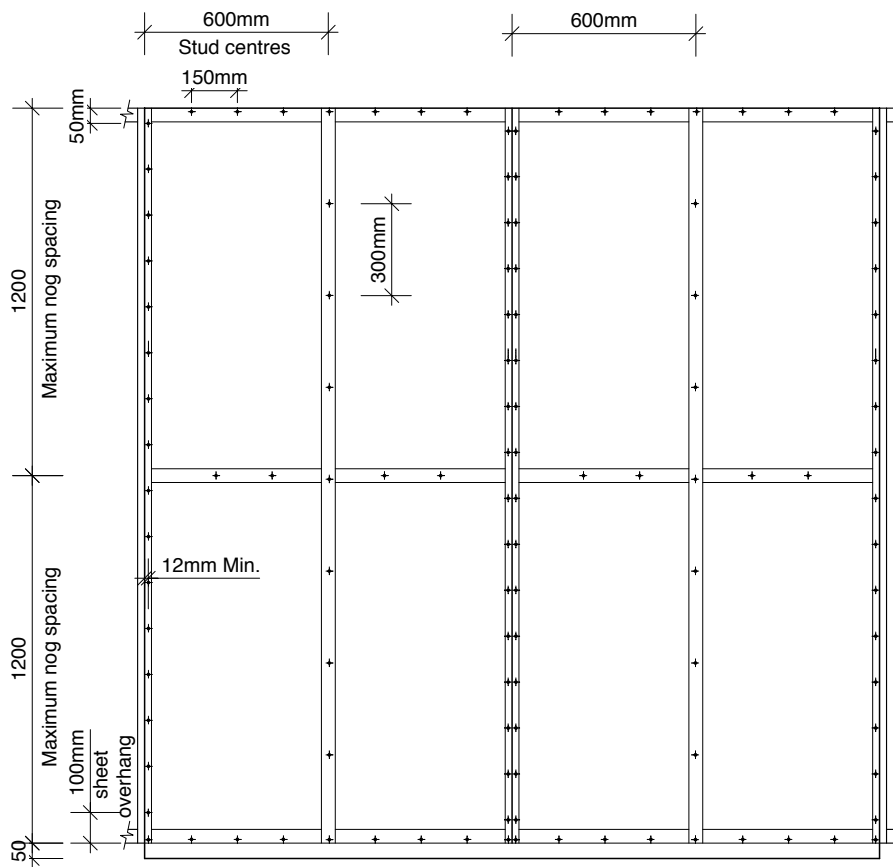
Option - Castellated cavity batten Cavibat or similar BRANZ appraised batten may be used.

Cavity Sheet Fixing



NOTE: BGC Durasheet™ must be fixed vertically with all sheet edges sealed before fixing.

Direct Fix Sheet Fixing



NOTE: BGC Durasheet™ must be fixed vertically with all sheet edges sealed before fixing.

Concrete Foundation Detail-Cavity Construction

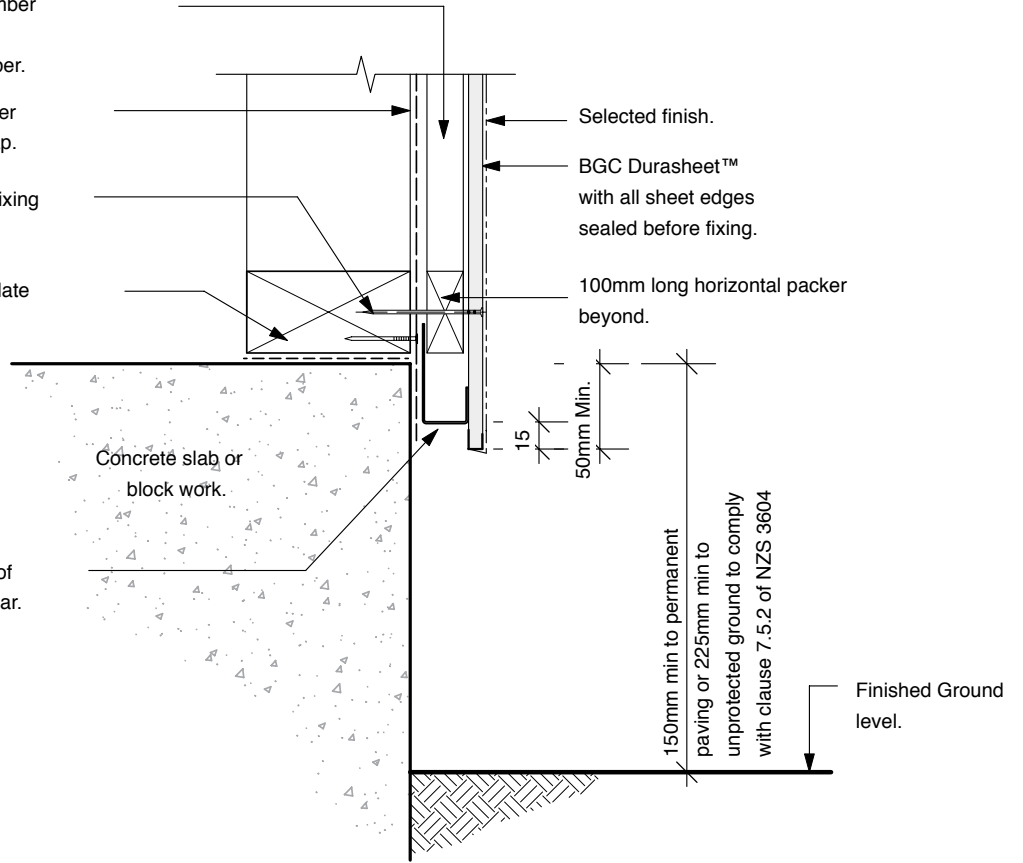
20mm vertical timber cavity batten.
H3.1 treated timber.

Approved breather type building wrap.

Durasheet™ fixing nails.

Timber Bottom plate on D.P.C.

BGC Vermin proof vent strip or similar.

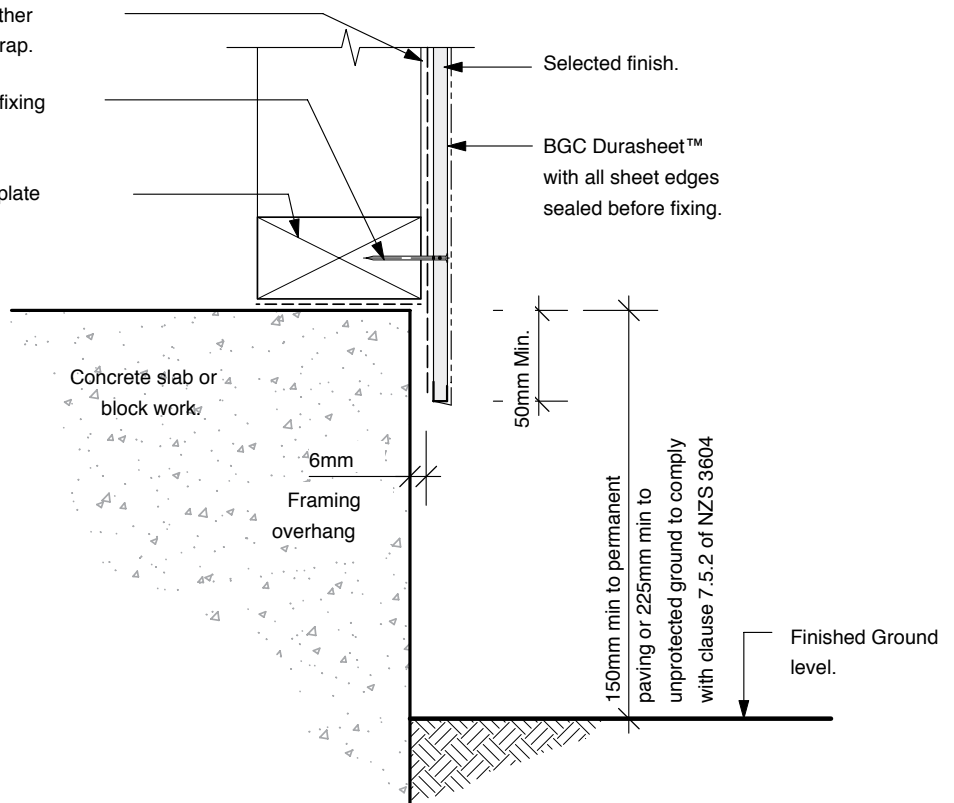


Concrete Foundation Detail-Direct Fix

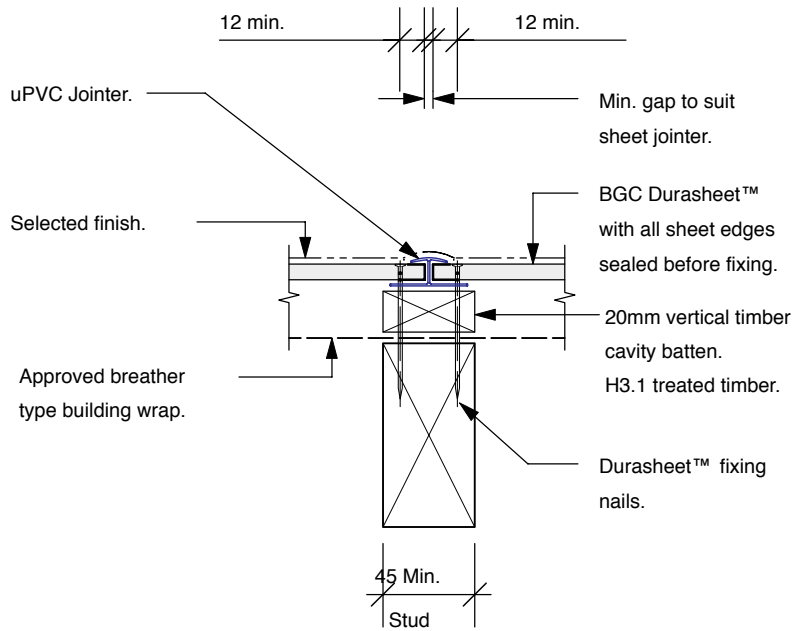
Approved breather type building wrap.

Durasheet™ fixing nails.

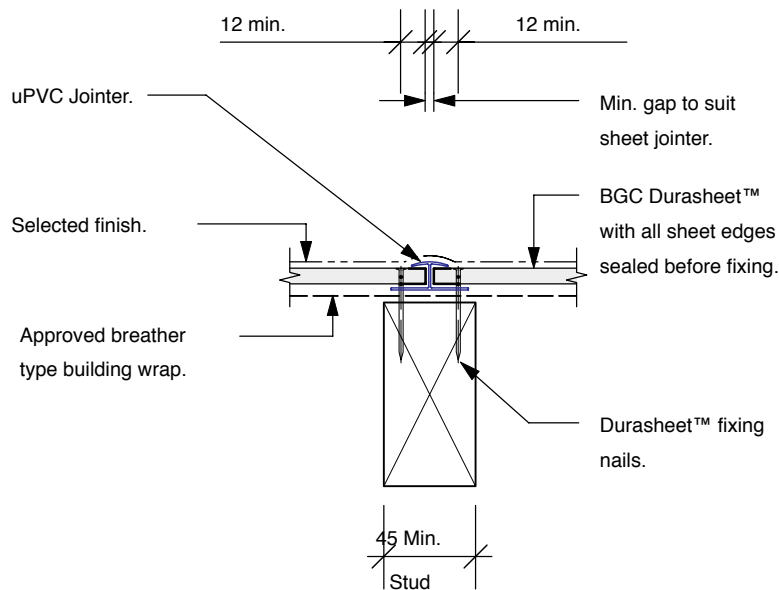
Timber Bottom plate on D.P.C.



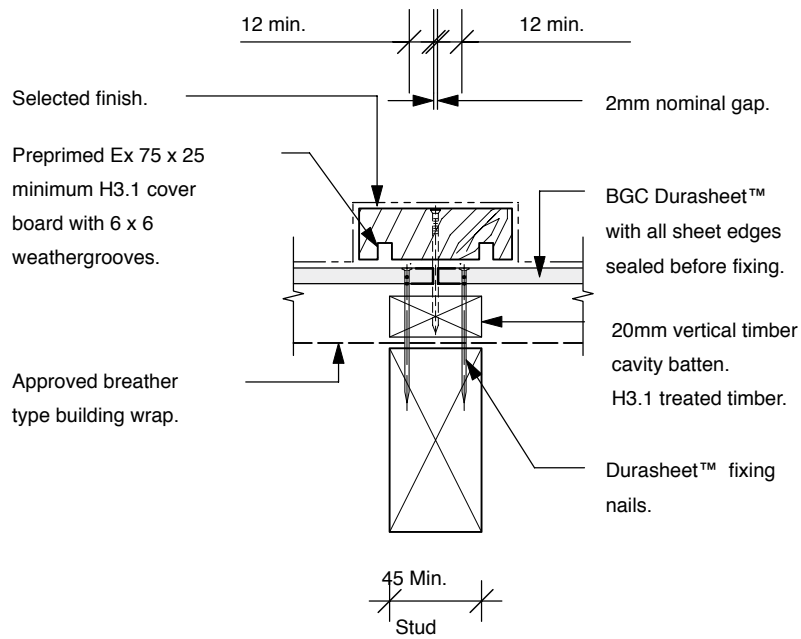
Vertical uPVC Joints-Cavity Construction



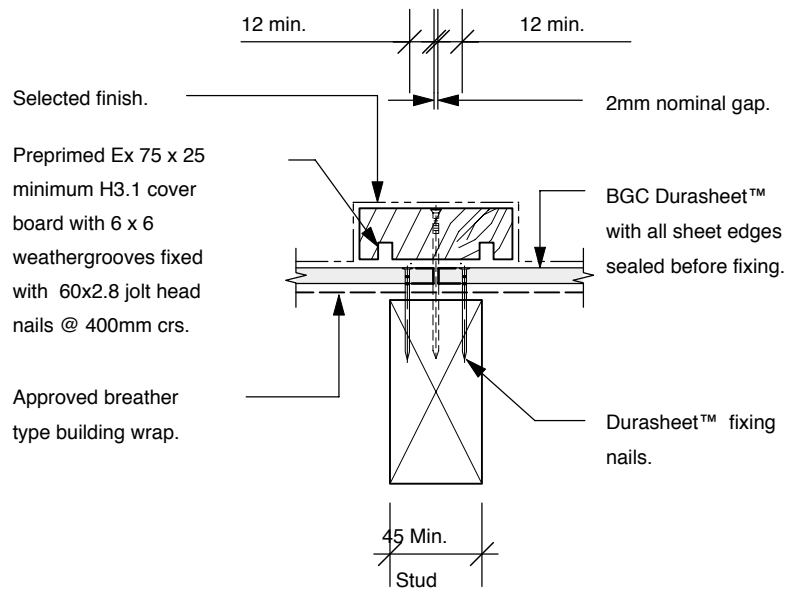
Vertical uPVC Joints-Direct Fix



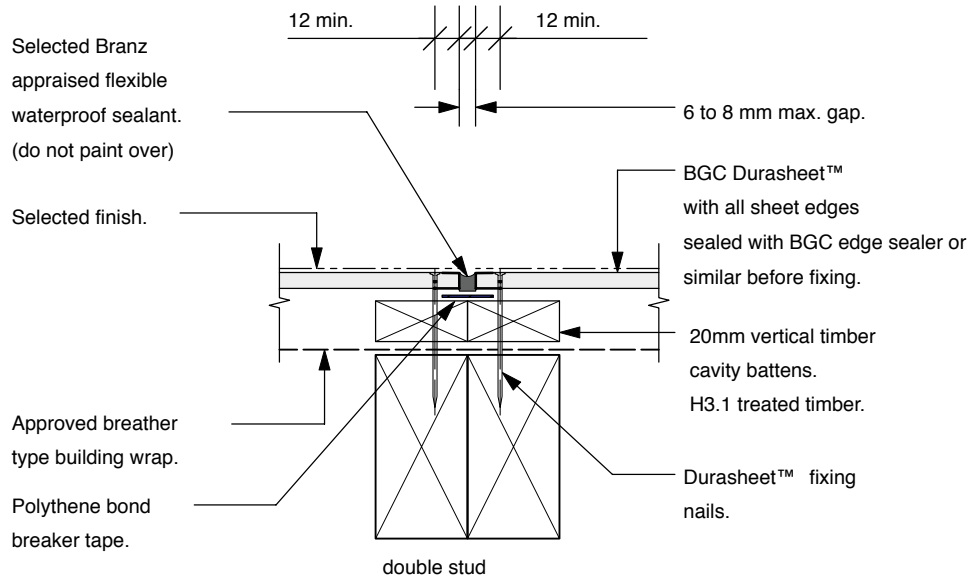
Vertical Timber Batten Joints-Cavity Construction



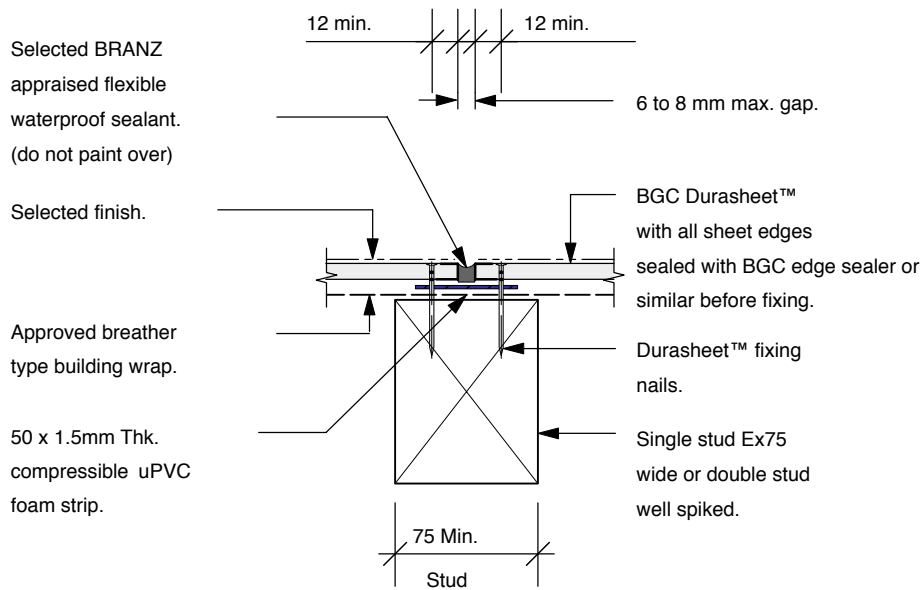
Vertical Timber Batten Joints-Direct Fix



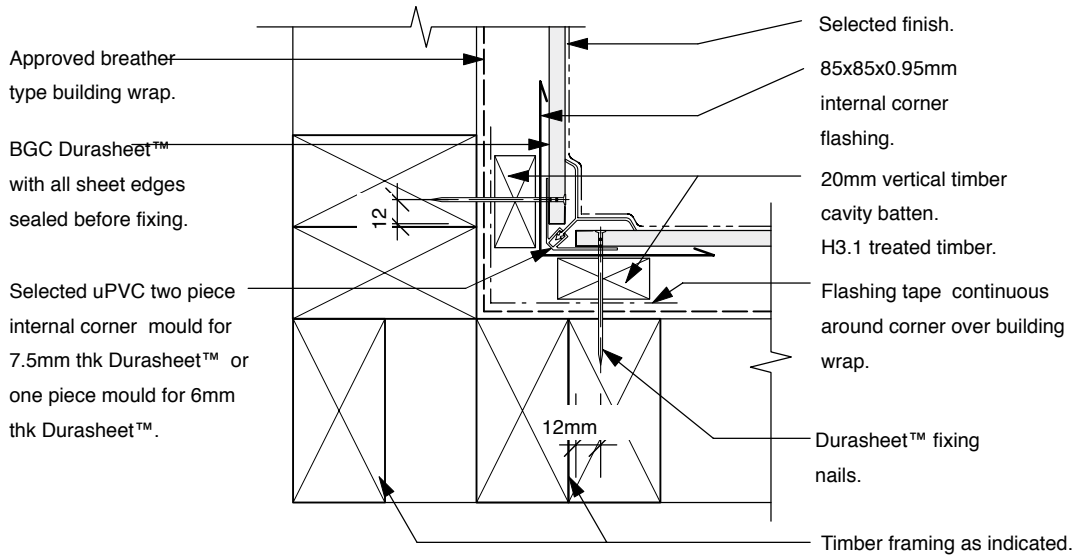
Vertical Sealant Joints-Cavity Construction



Vertical Sealant Joints-Direct Fix

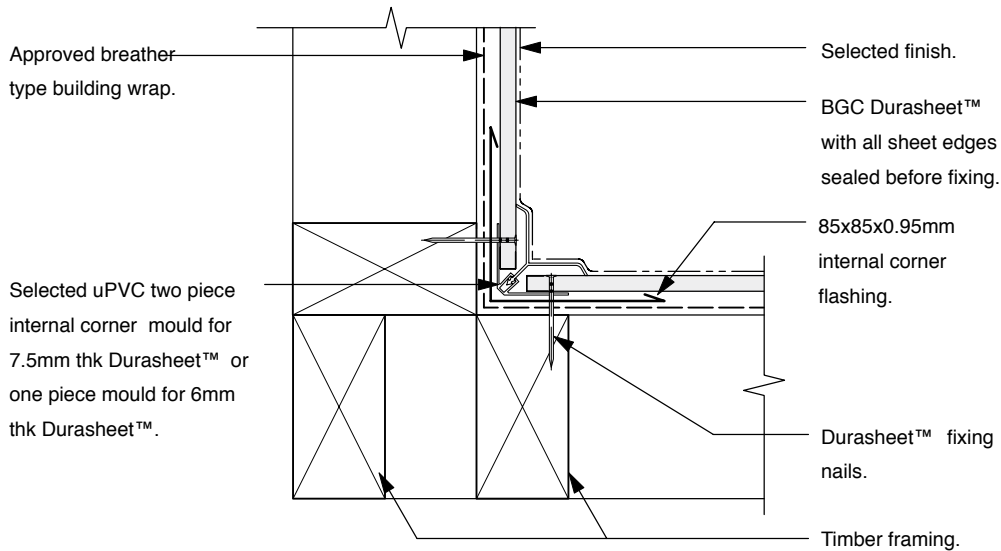


uPVC Internal Corner Joints-Cavity Construction



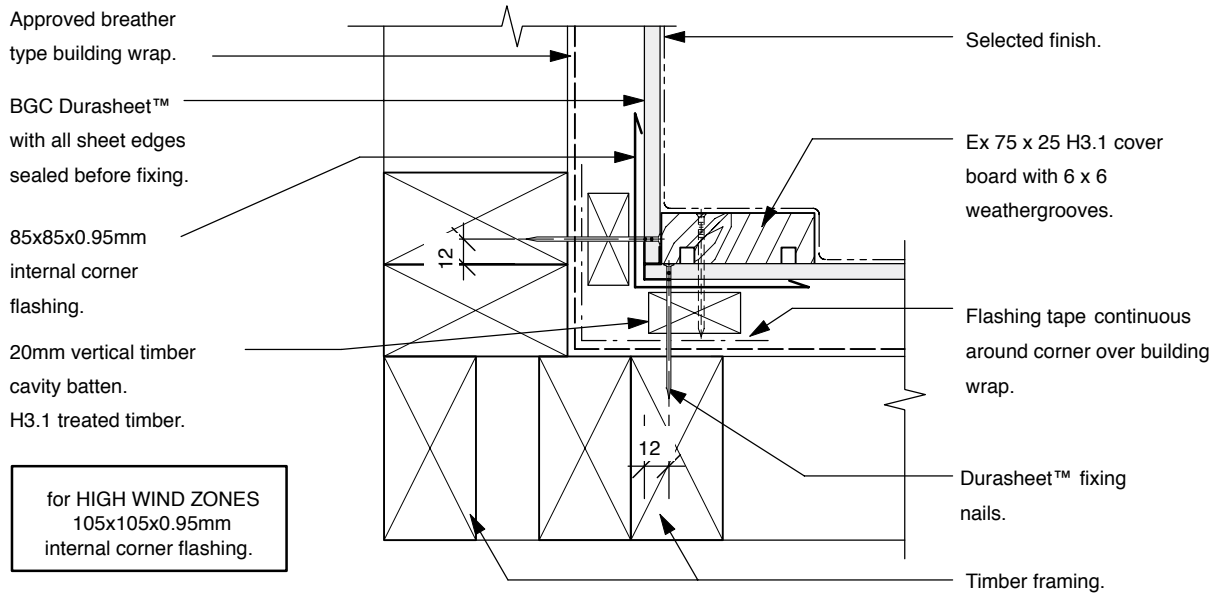
for HIGH WIND ZONES
105x105x0.95mm
internal corner flashing.

uPVC Internal Corner Joints-Direct Fix

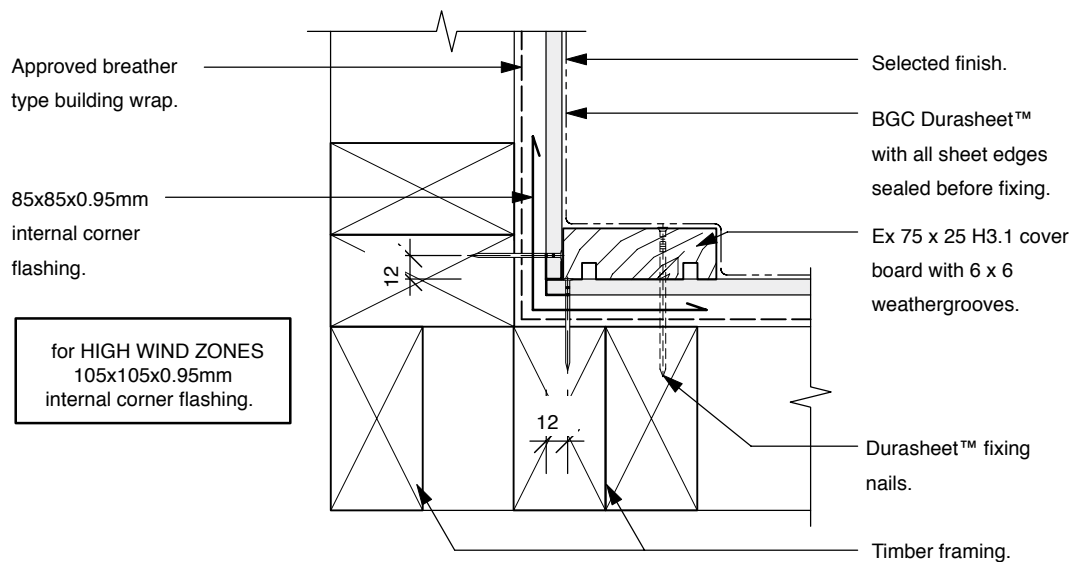


for HIGH WIND ZONES
105x105x0.95mm
internal corner flashing.

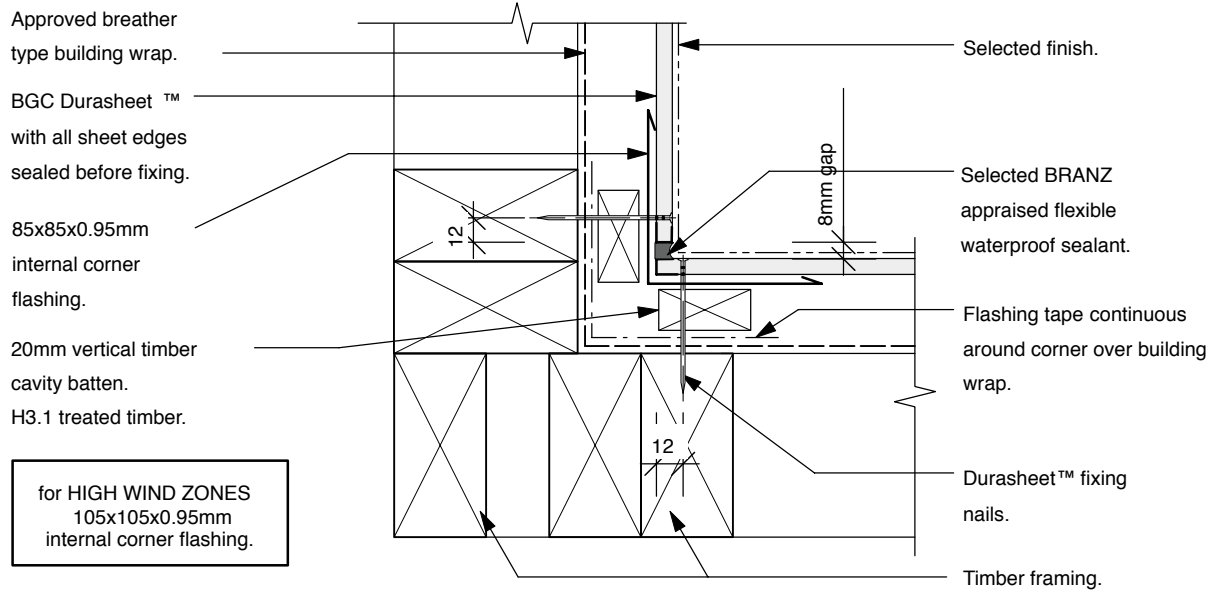
Timber Batten Internal Corner Joints-Cavity Construction



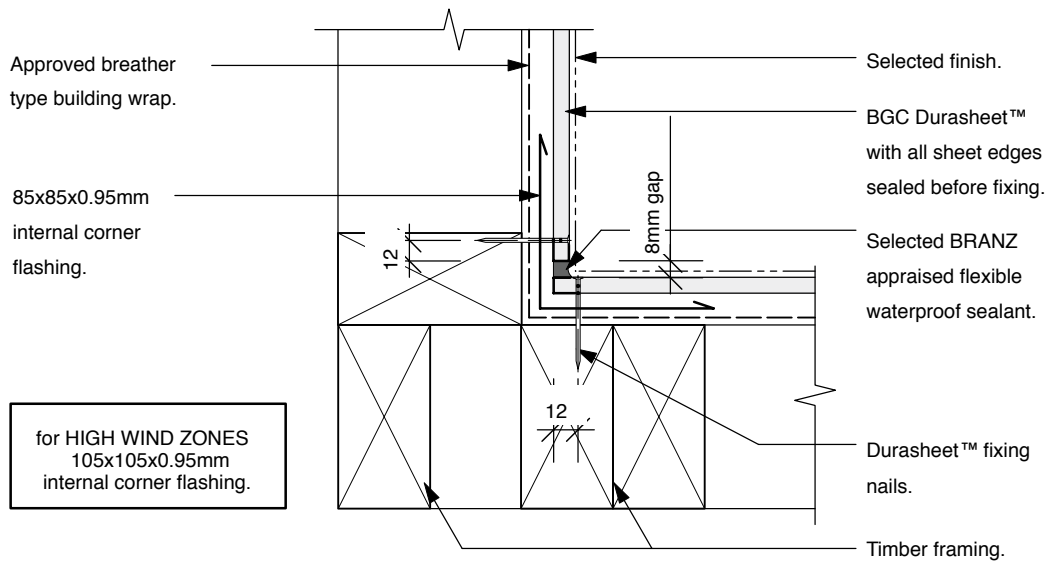
Timber Batten Internal Corner Joints-Direct Fix



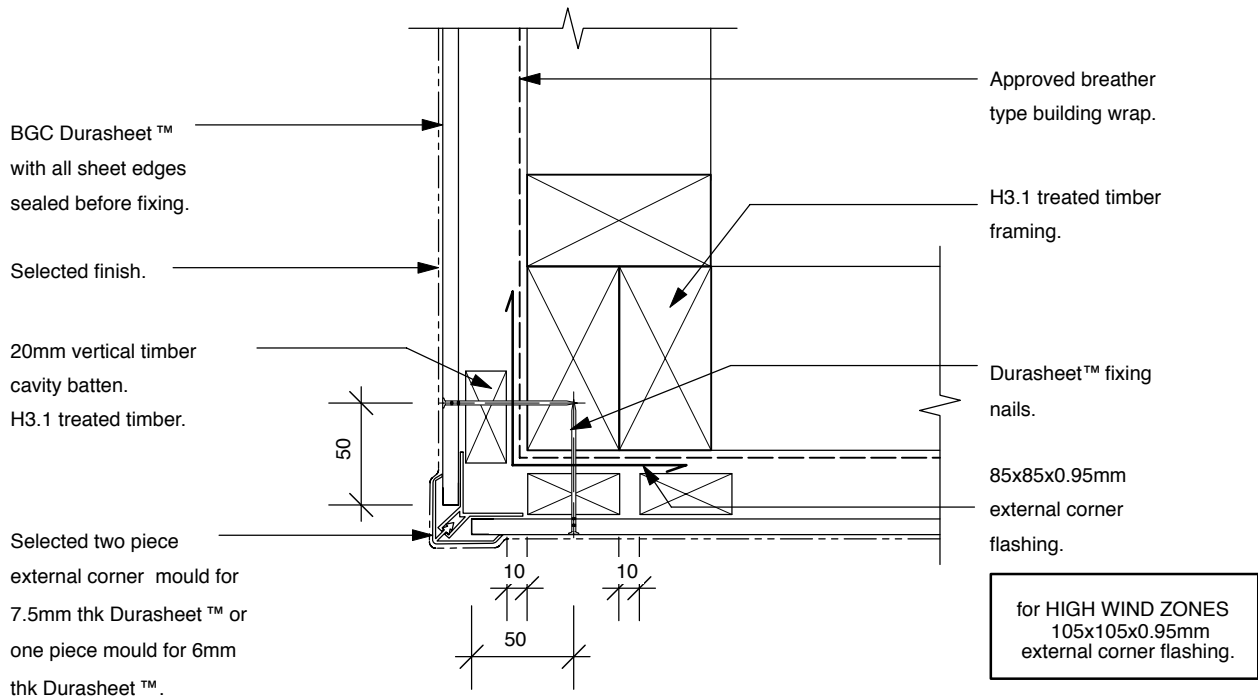
Sealant Internal Corner Joints-Cavity Construction



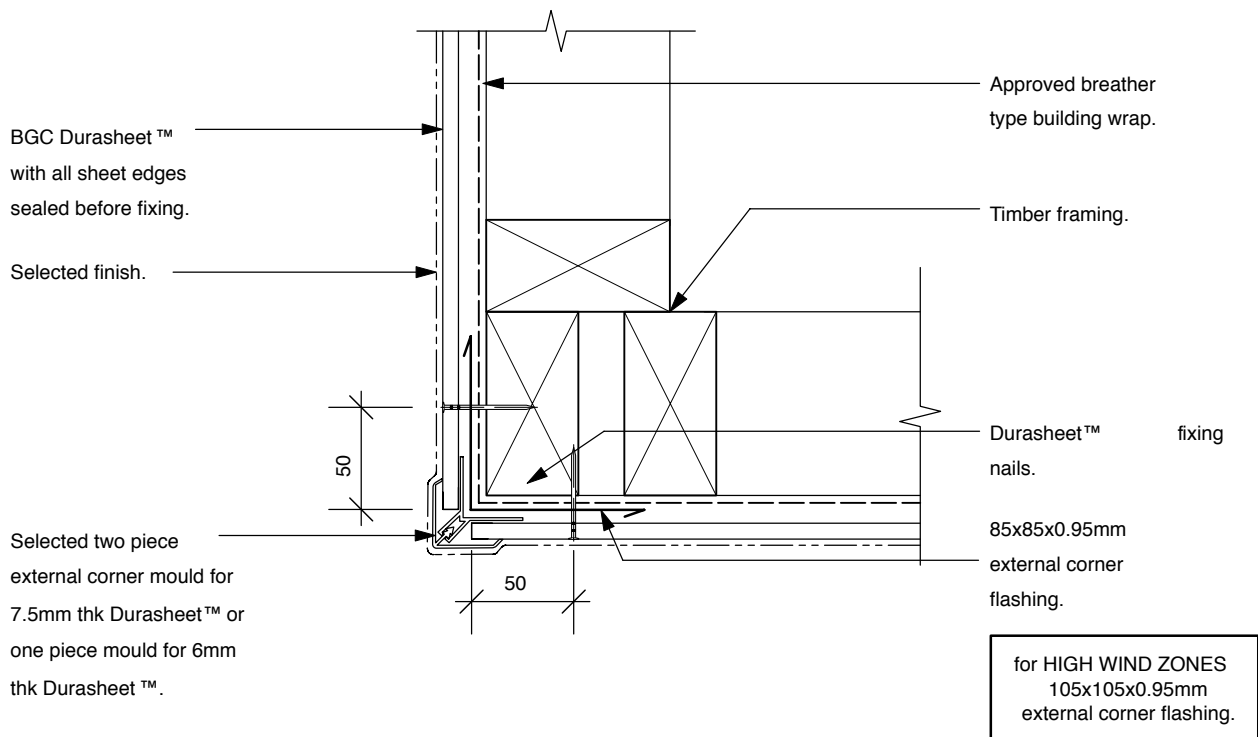
Sealant Internal Corner Joints-Direct Fix



uPVC External Corner Joints-Cavity Construction



uPVC External Corner Joints-Direct Fix



Timber Batten External Corner Joints-Cavity Construction

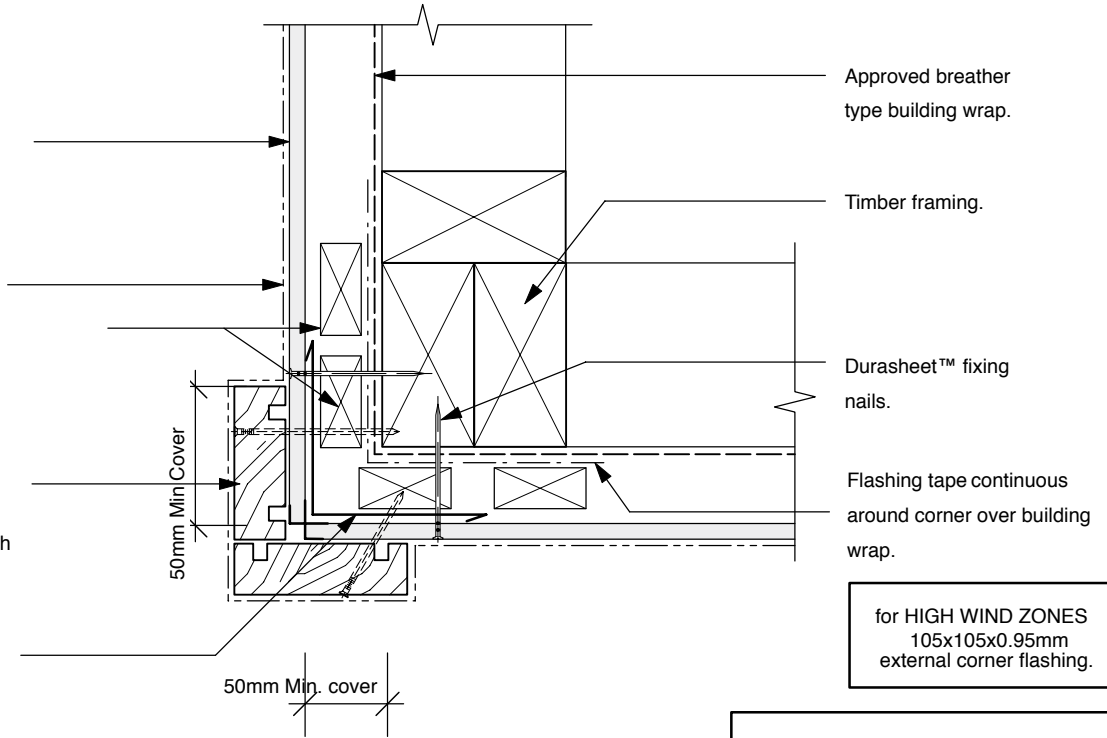
BGC Durasheet™ with all sheet edges sealed before fixing.

Selected finish.

20mm vertical timber cavity batten.
H3.1 treated timber.

Ex 25 H3.1 cover board with 6 x 6 weathergrooves. Fix with 2 - 60 x 2.8mm jolthead nails @ 400 crs.

85x85x0.95mm external corner flashing.



for HIGH WIND ZONES
105x105x0.95mm
external corner flashing.

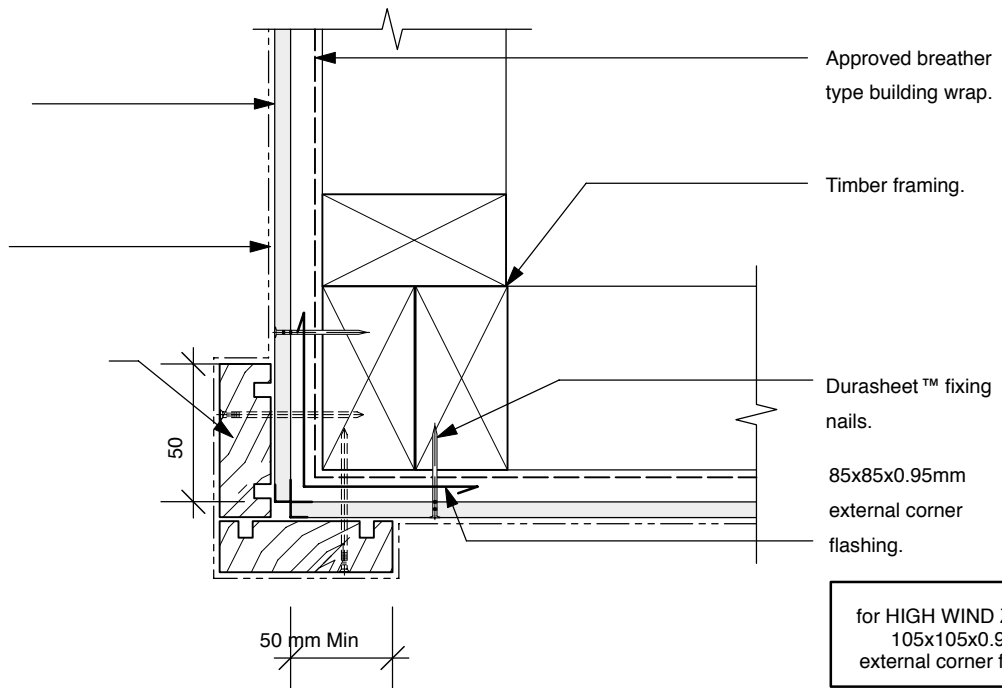
NOTE: 10mm Min. gap between cavity battens.

Timber Batten External Corner Joints-Direct Fix

BGC Durasheet™ with all sheet edges sealed before fixing.

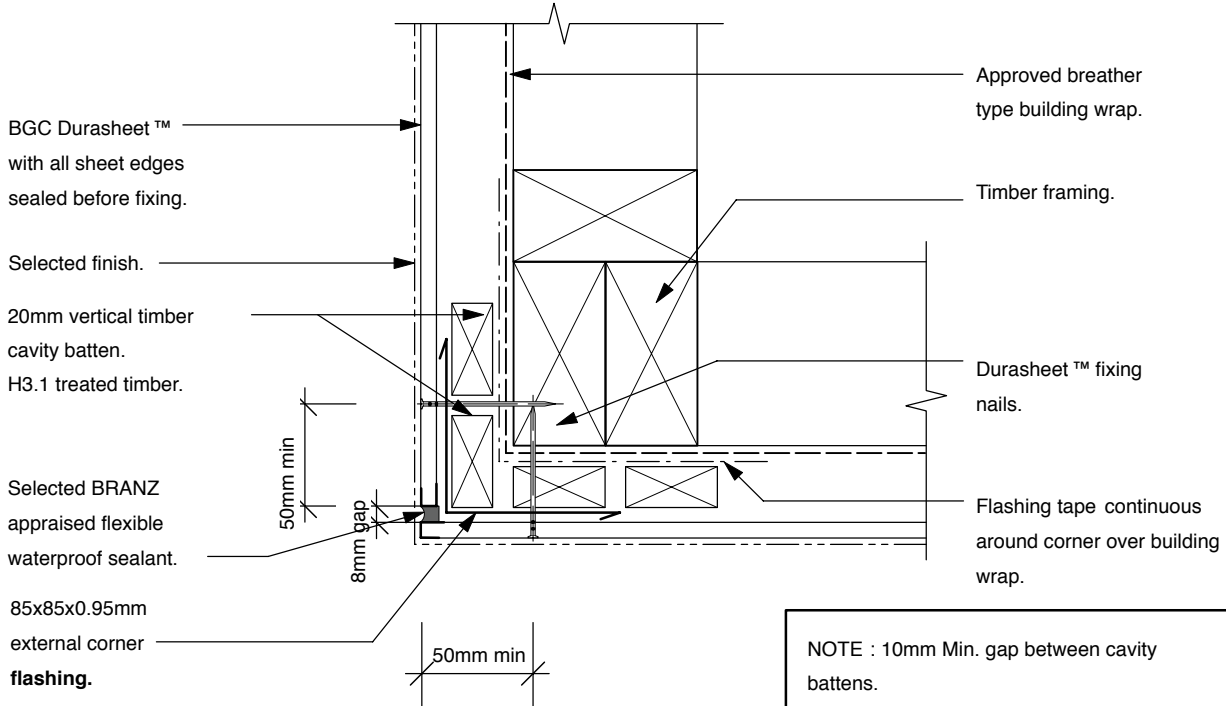
Selected finish.

Ex 75 x 25 H3.1 cover board with 6 x 6 weathergrooves. Fix with 2 - 60 x 2.8mm jolthead nails @ 400 crs.



for HIGH WIND ZONES
105x105x0.95mm
external corner flashing.

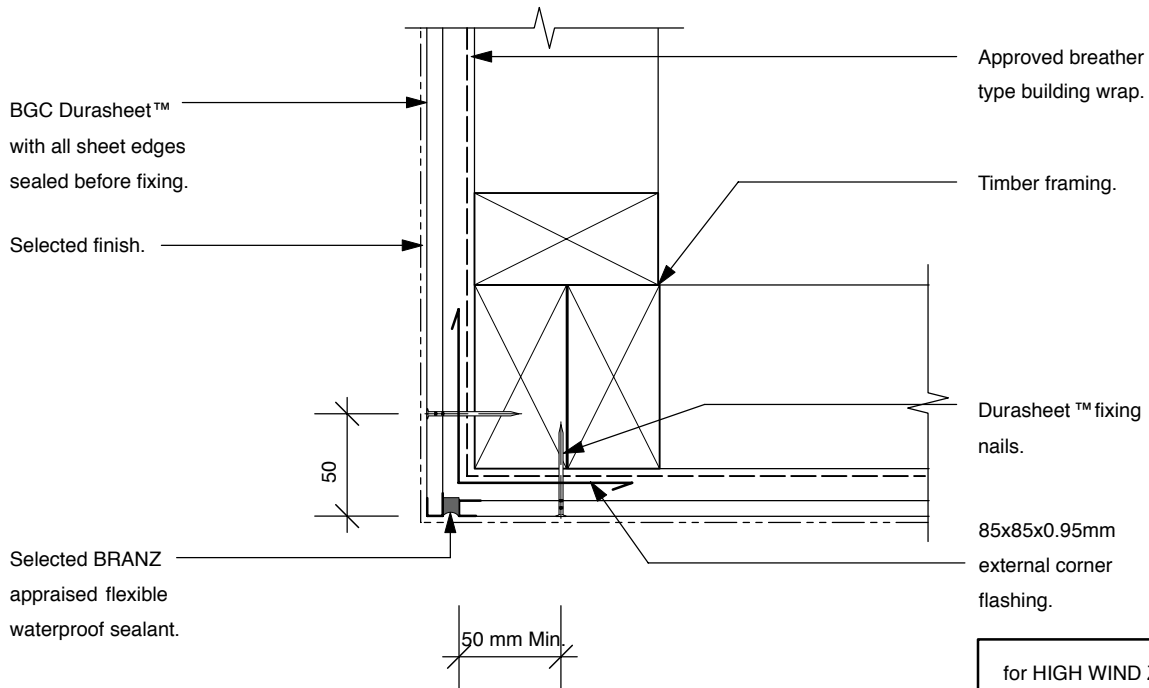
Sealant External Corner Joints- Cavity Construction



NOTE : 10mm Min. gap between cavity battens.

for HIGH WIND ZONES
105x105x0.95mm
external corner flashing.

Sealant External Corner Joints- Direct Fix



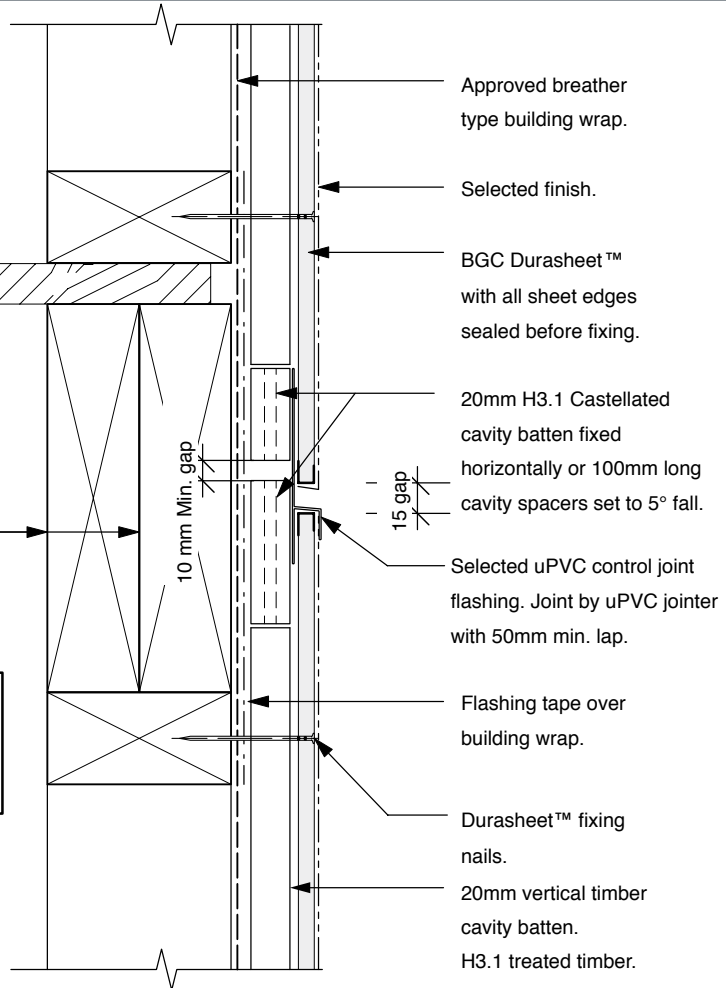
for HIGH WIND ZONES
105x105x0.95mm
external corner flashing.

Horizontal Joints - "H" Mould-Cavity Construction

Mid floor flooring - finish
10mm back from external
wall framing.

Mid floor structure

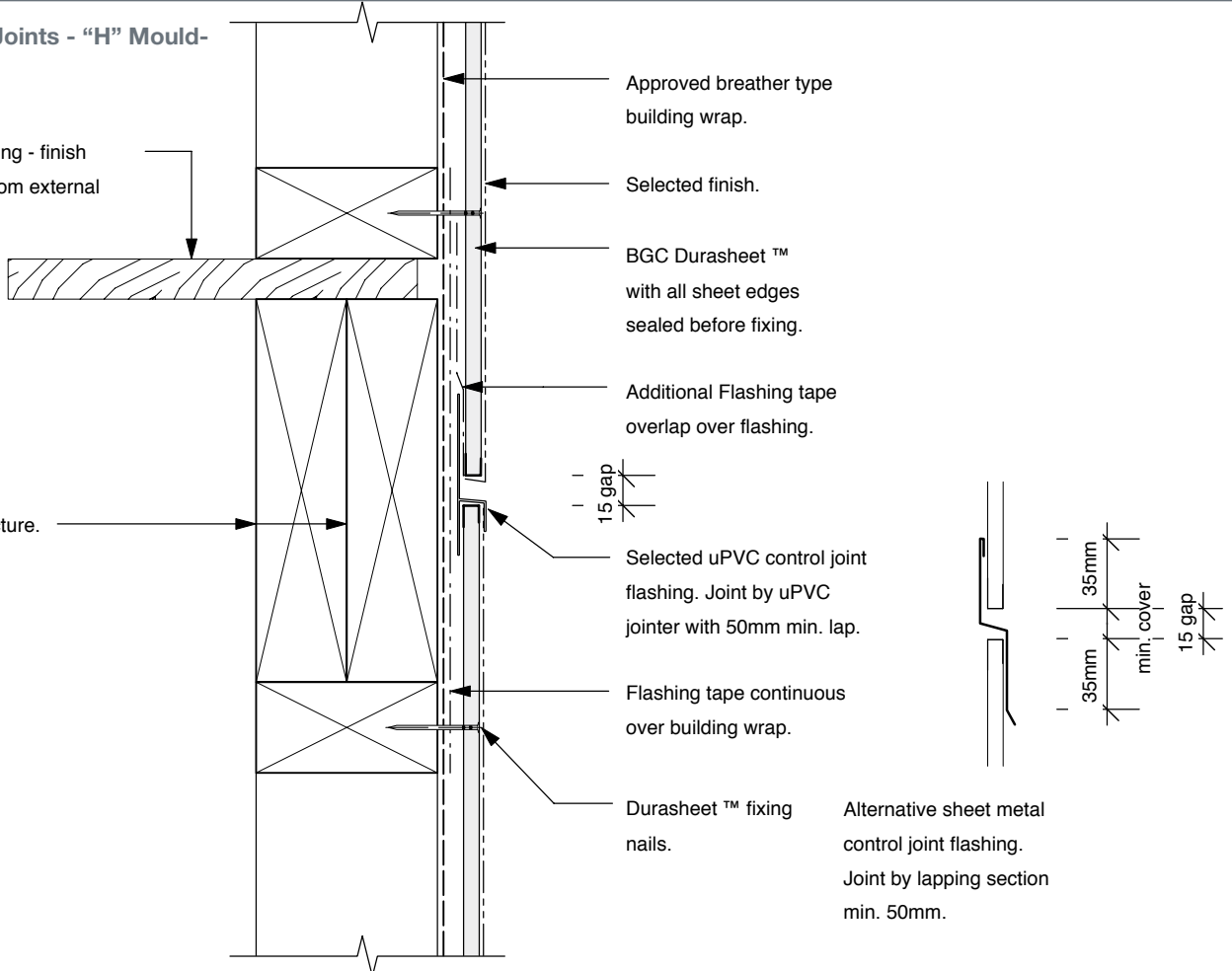
NOTE : ONLY suitable for up to 2 storeys in height. For cavities over 2 storeys in height, refer to " E2/AS1 Figure 70 ".



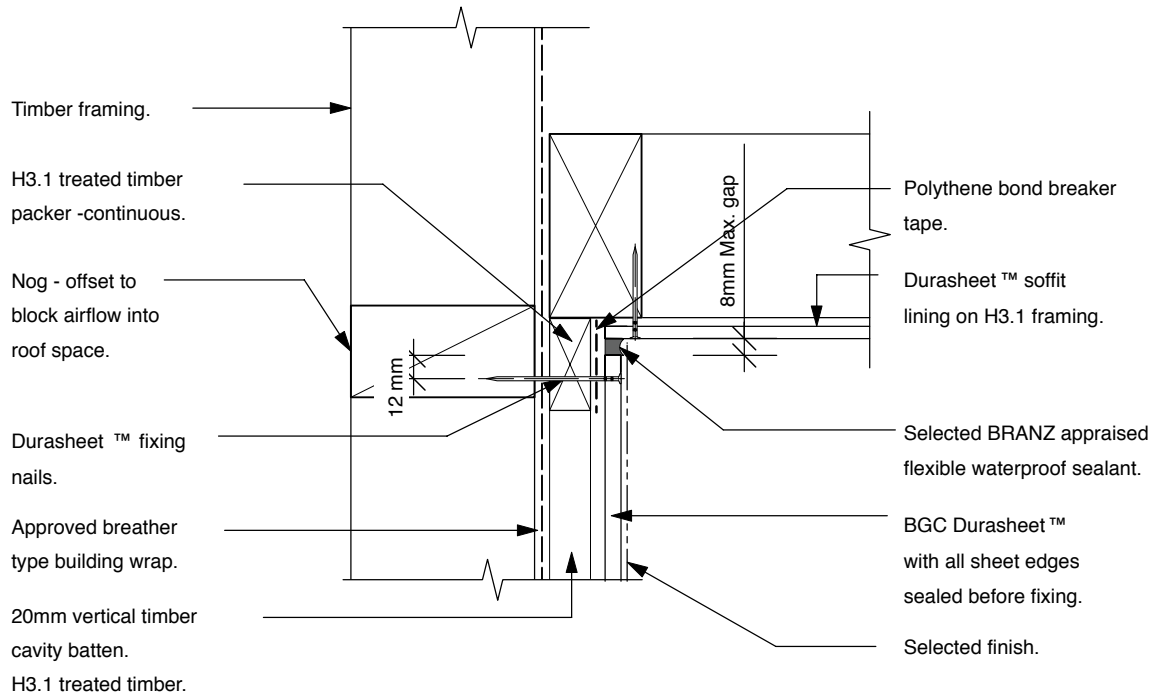
Horizontal Joints - "H" Mould-Direct Fix

Mid floor flooring - finish
10mm back from external
wall framing.

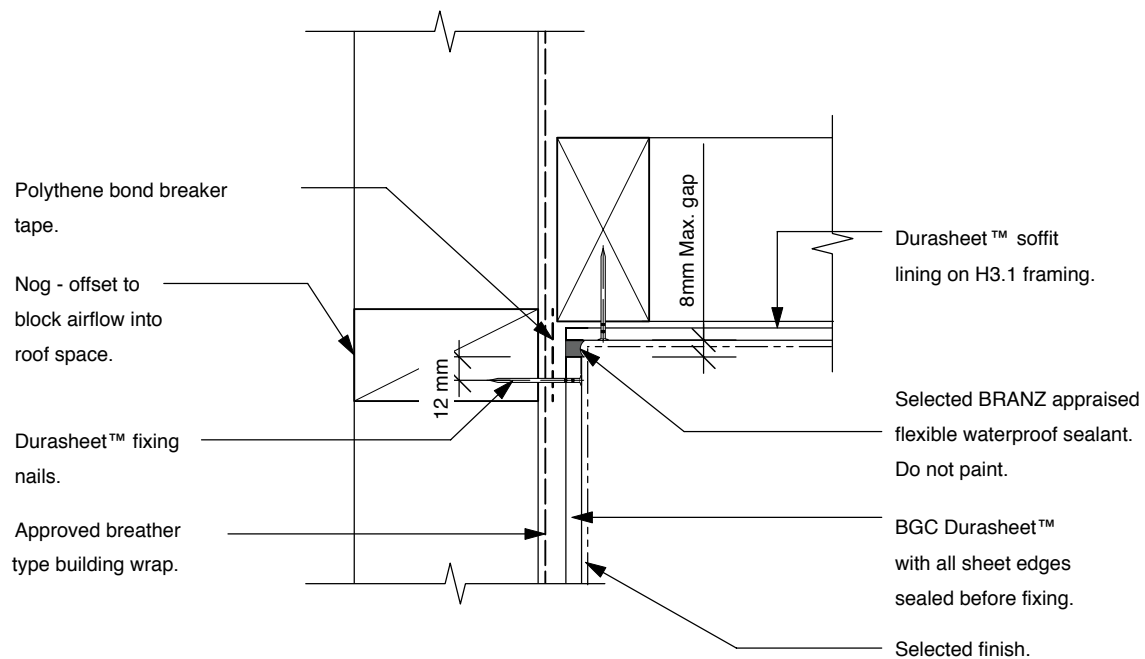
Mid floor structure.



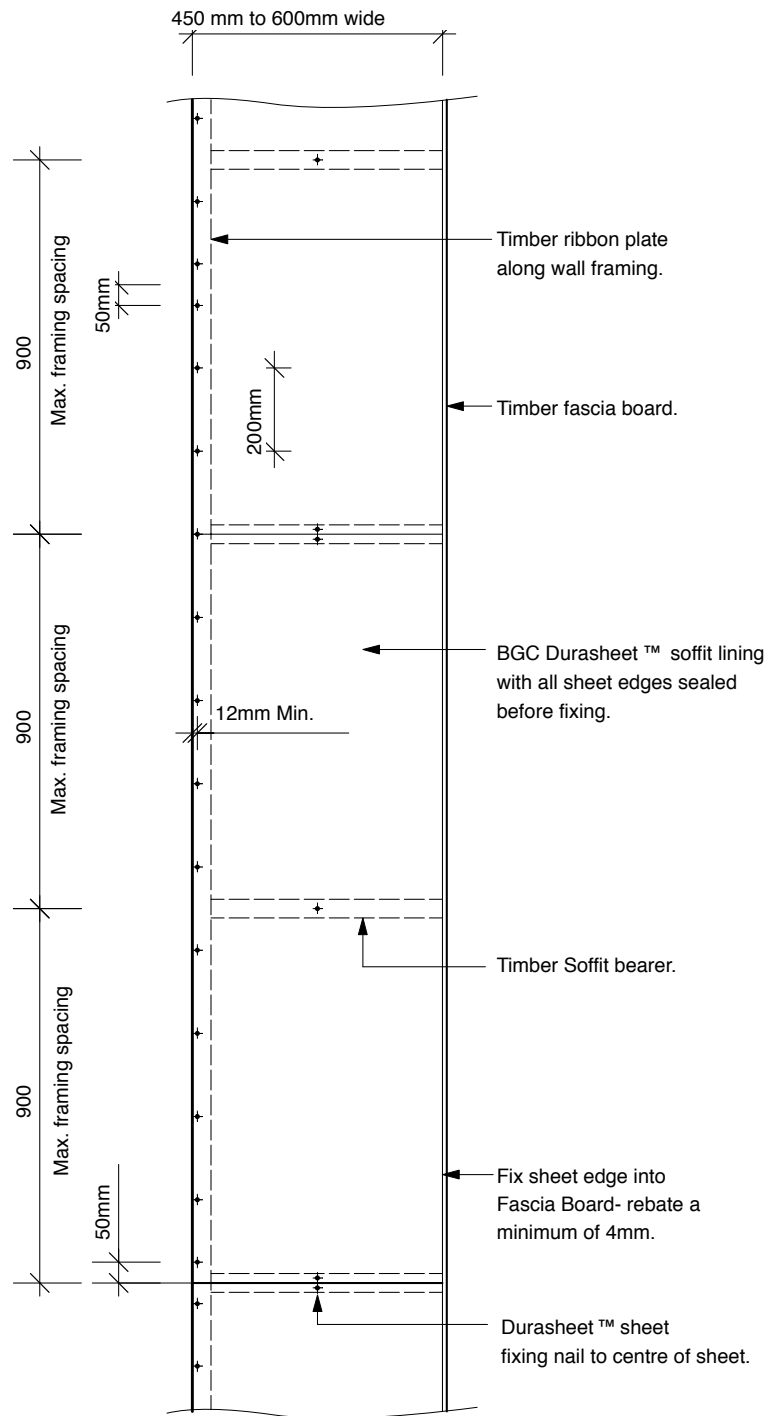
Soffit Details-Cavity Construction



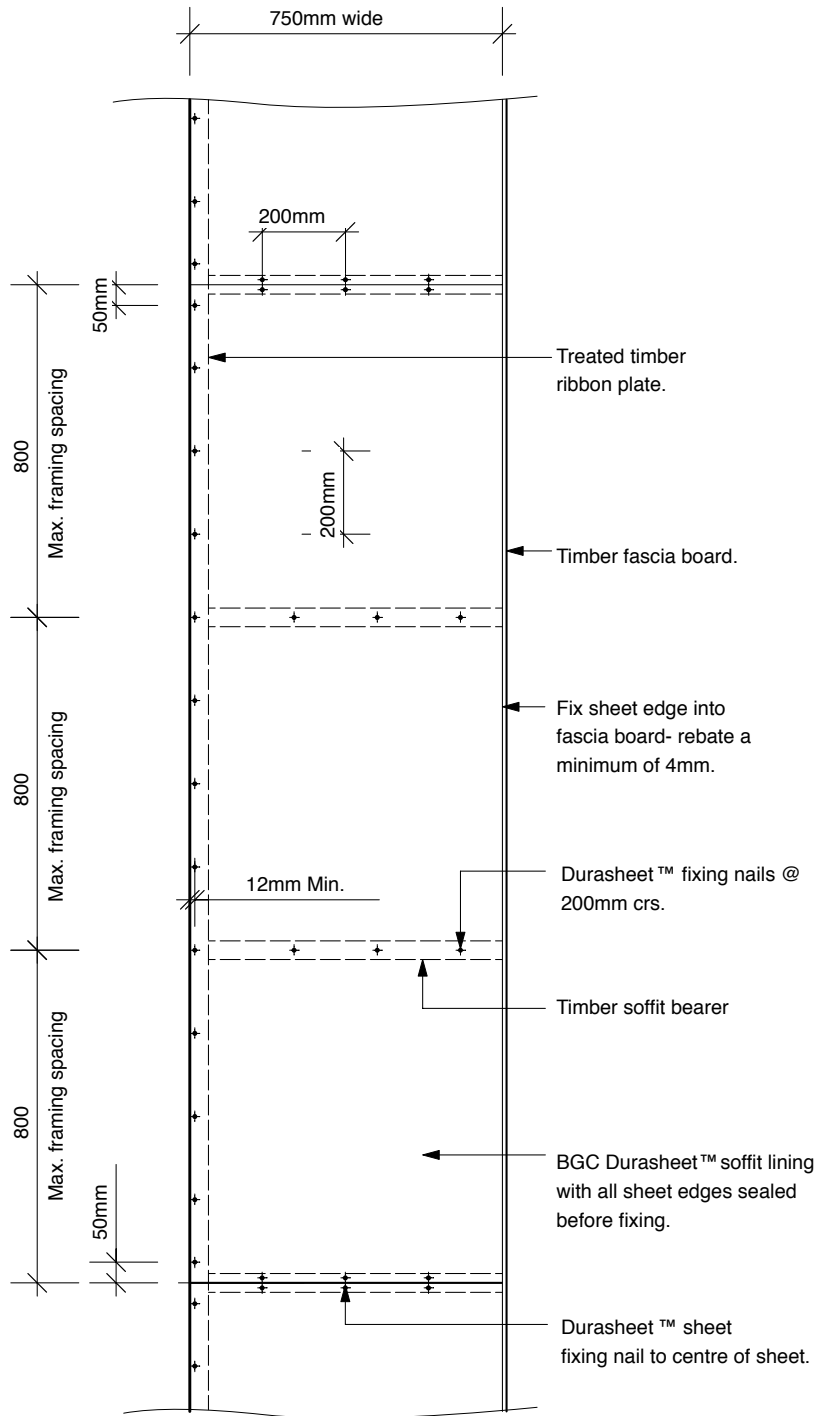
Soffit Details-Direct Fix



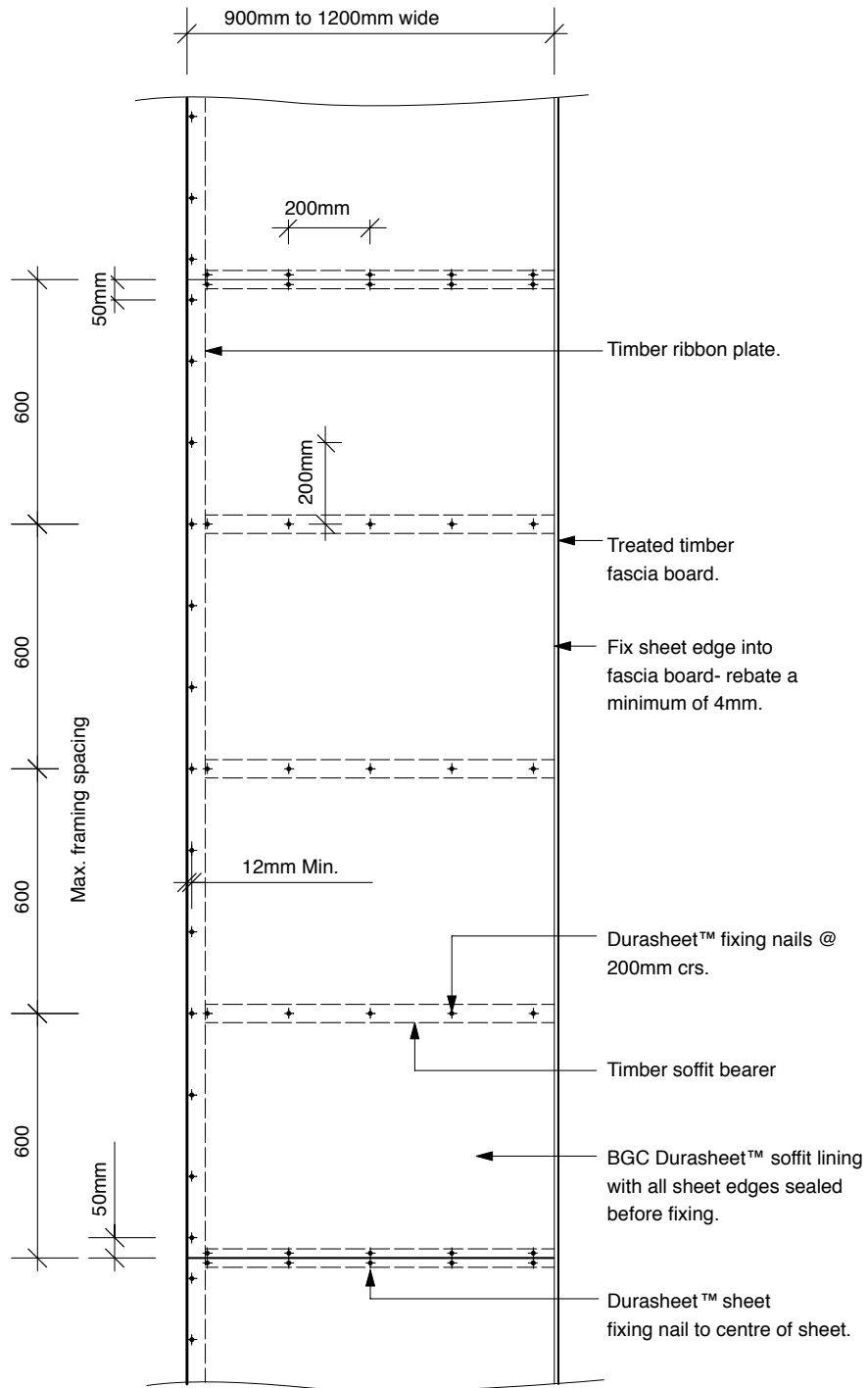
450mm to 600mm Wide Soffit & Eaves Setout



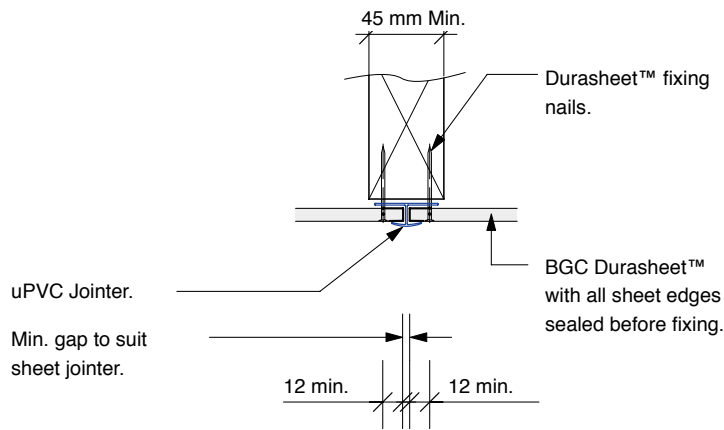
750mm Wide Soffit & Eaves Setout



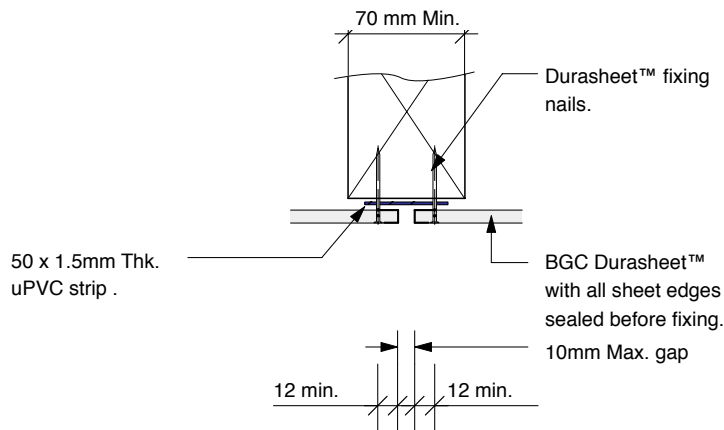
900mm to 1200mm Wide Soffit & Eaves Setout



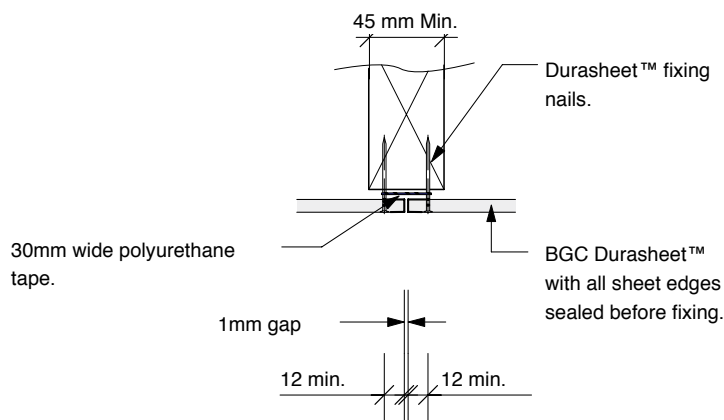
Soffit Joints



uPVC Jointer Detail

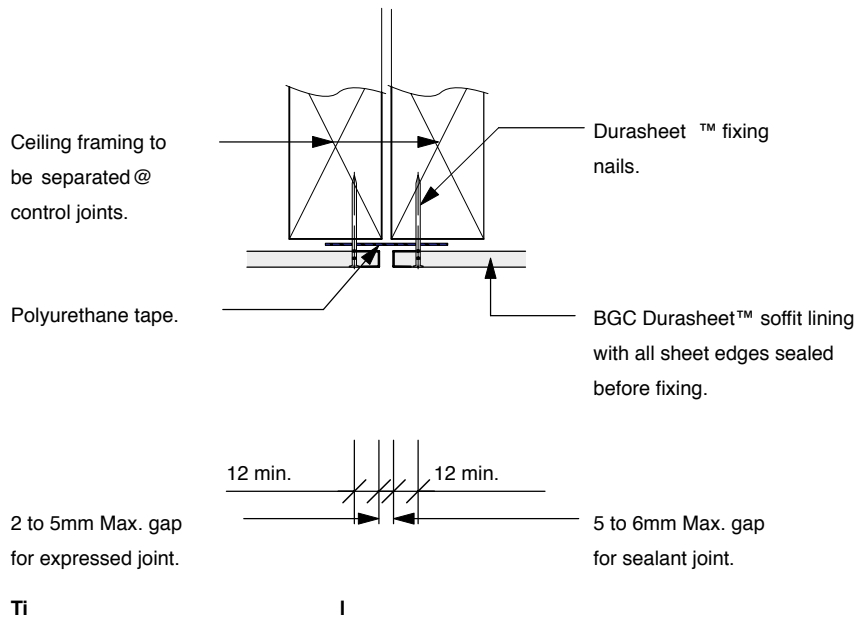


Exposed Joint Detail

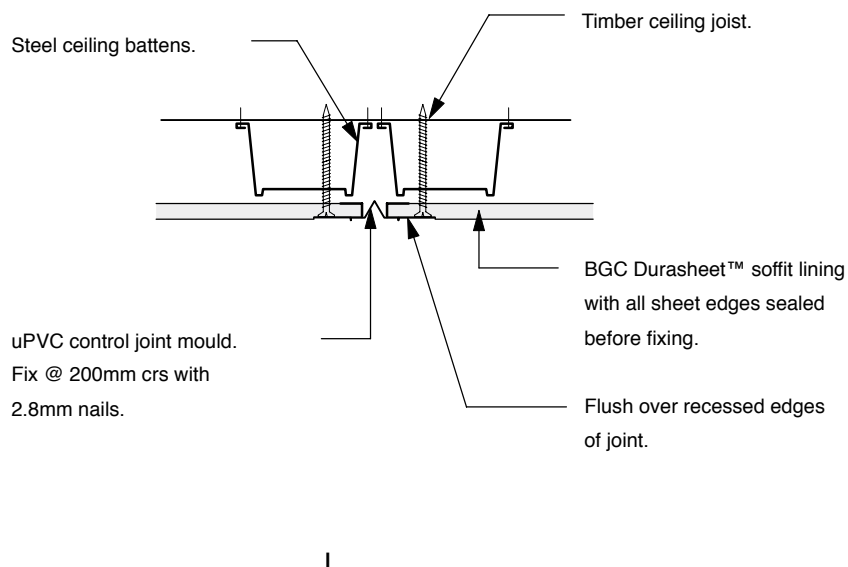


Butt Joint Detail

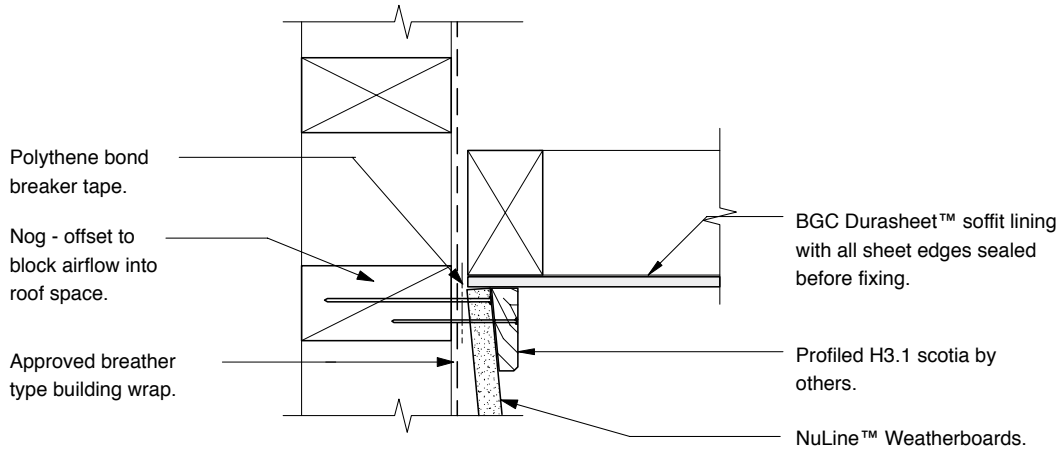
Timber Frame-Soffit Control Joints



Metal Frame-Soffit Control Joints

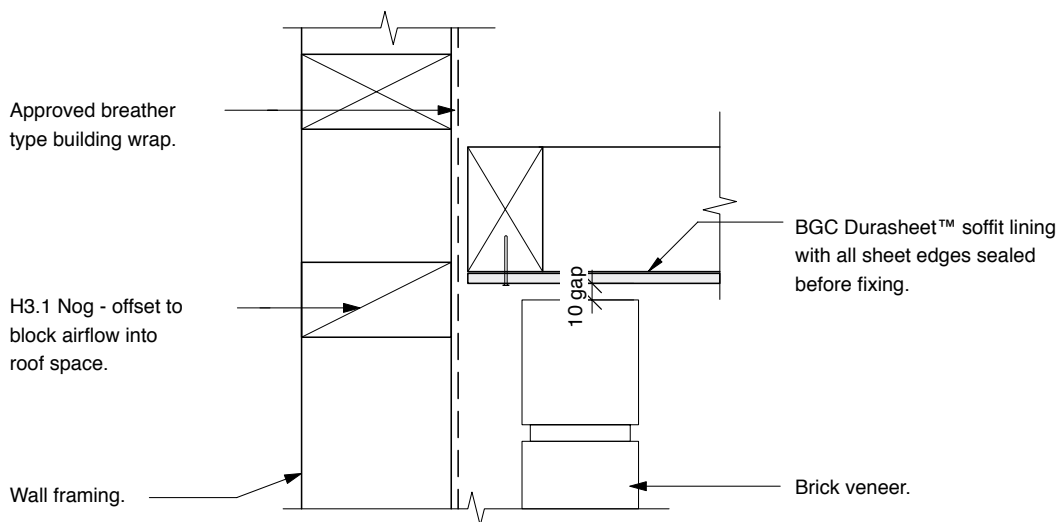


BGC Durasheet™ soffitt / Nuline™ Weatherboards

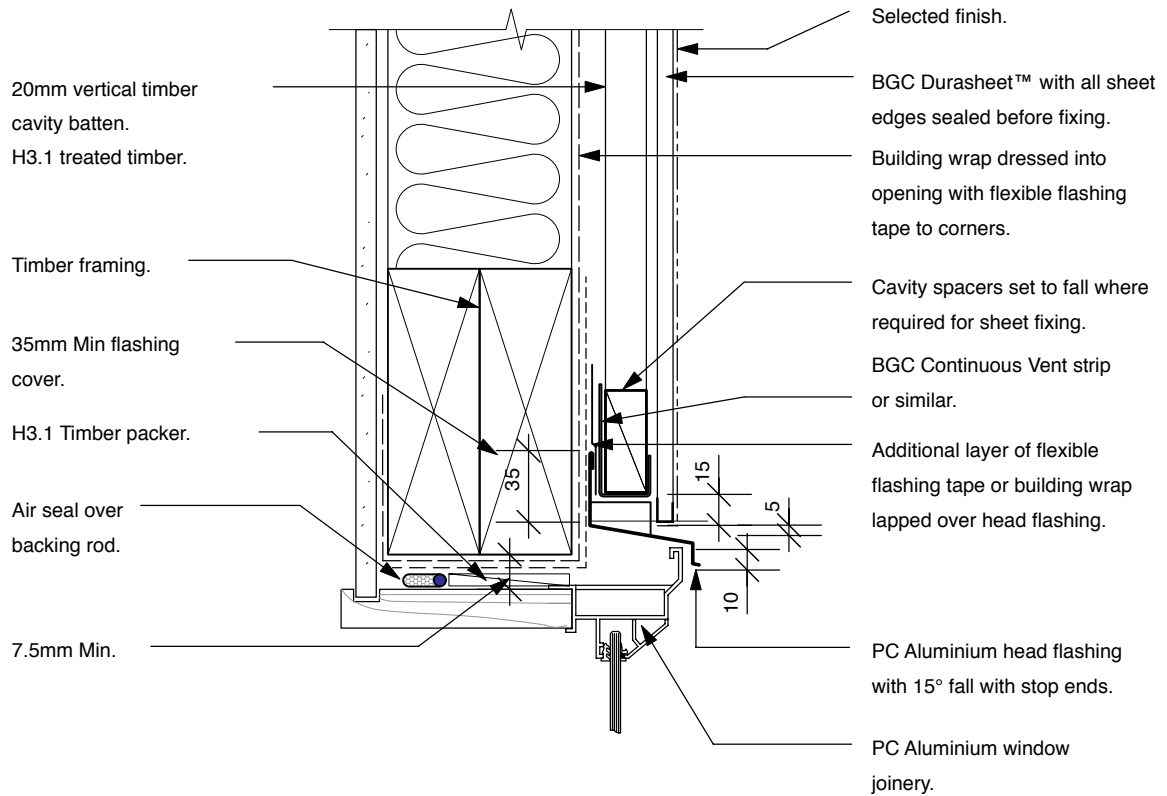


Detail similar for NuLine™ Weatherboards on cavity.

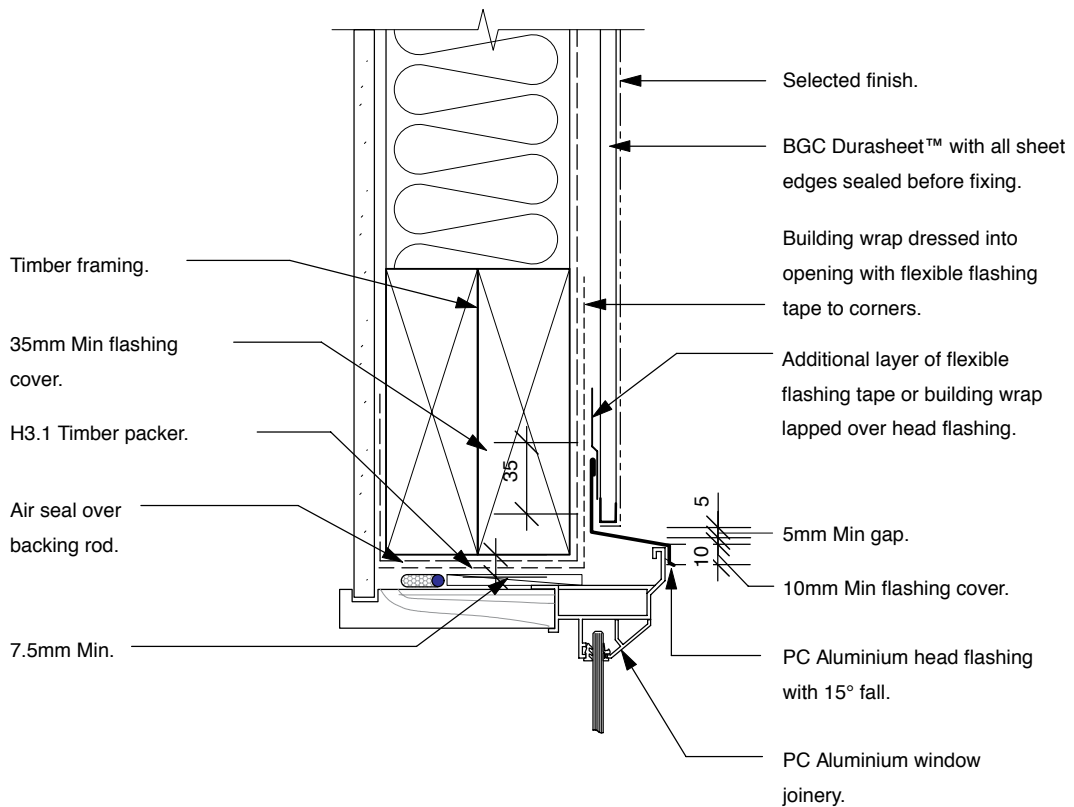
BGC Durasheet™ soffitt / Brick Veneer



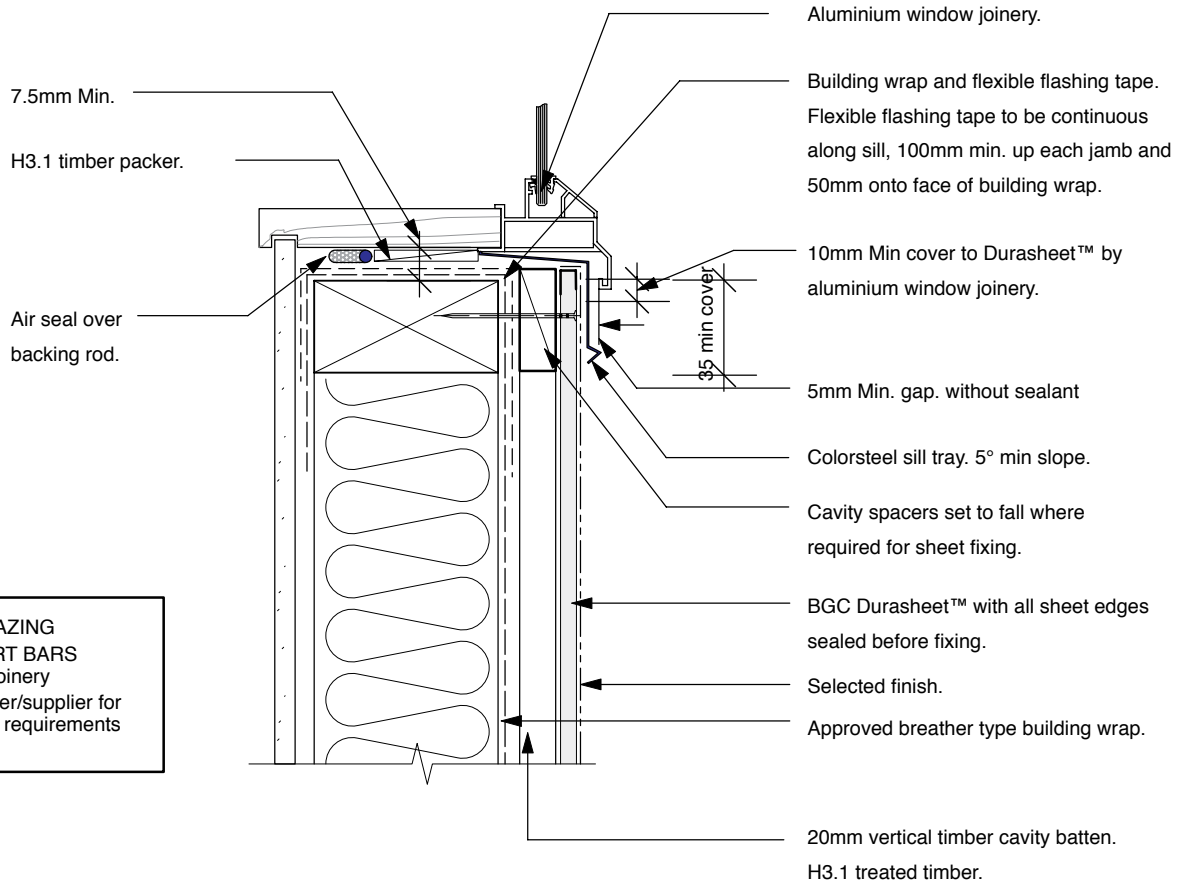
Window Head Details-Cavity Construction



Window Head Details-Direct Fix

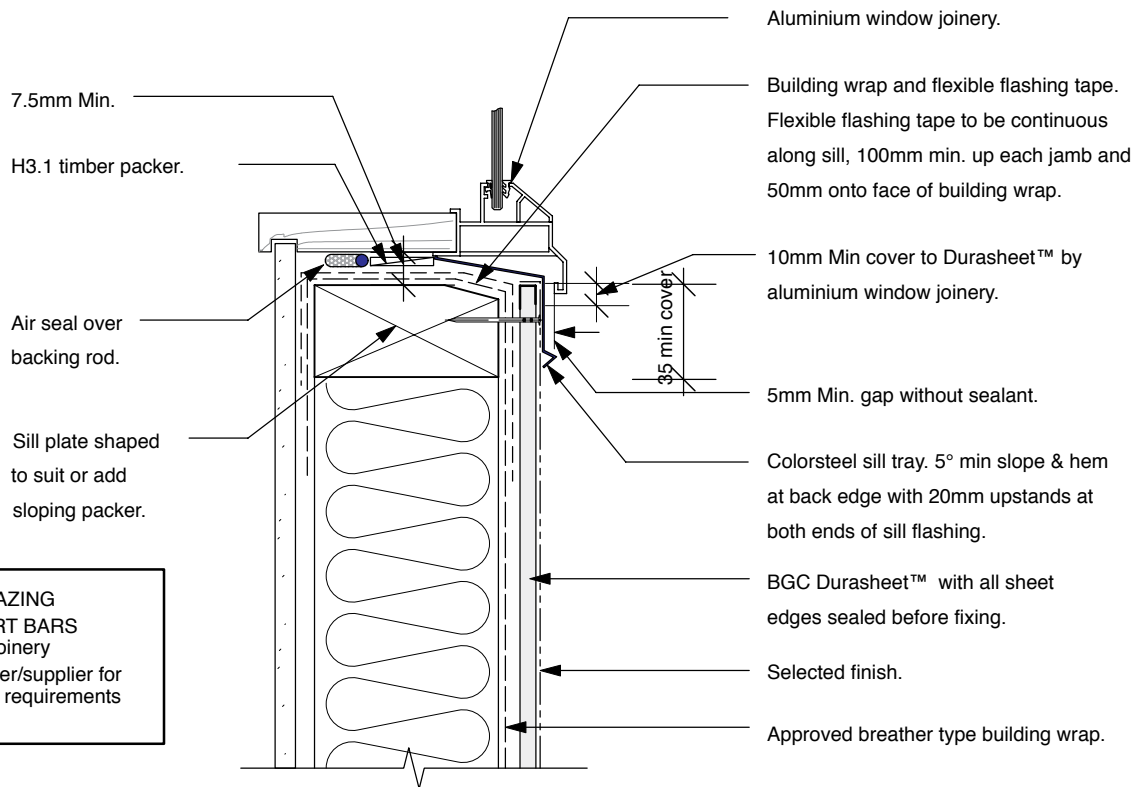


Window Sill Details-Cavity Construction



GLAZING
SUPPORT BARS
refer joinery
manufacturer/supplier for
installation requirements

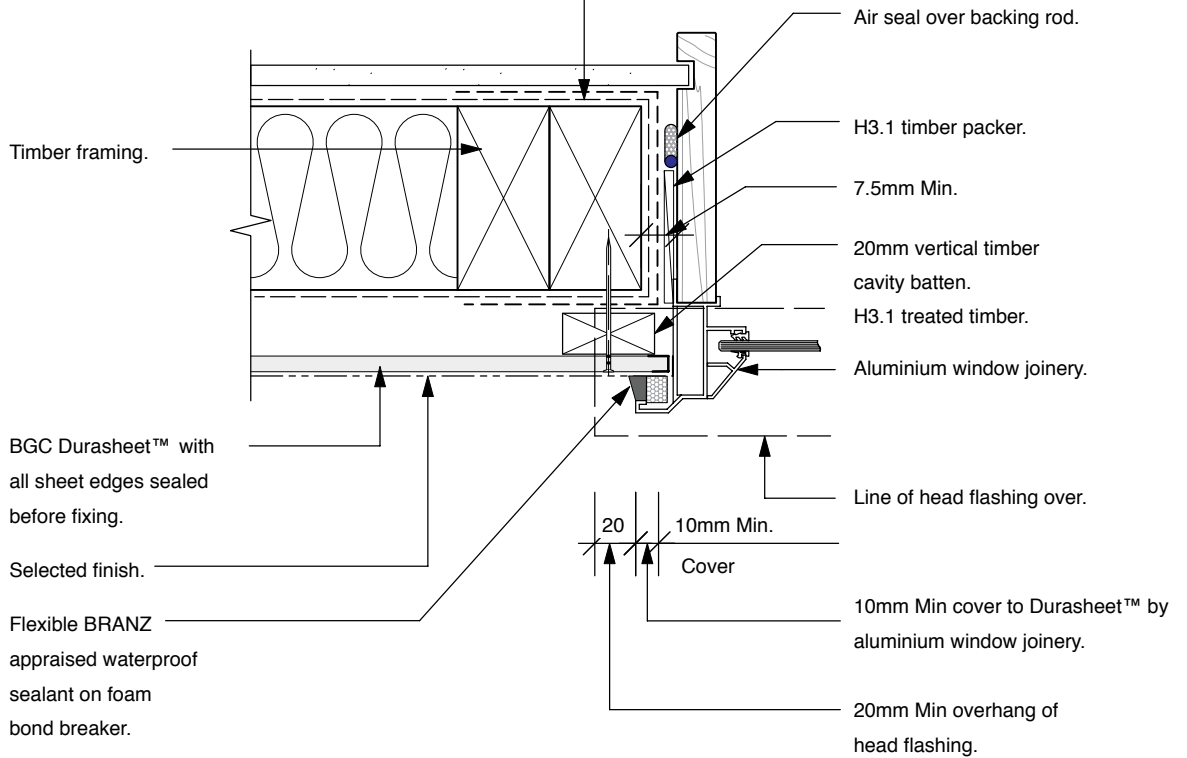
Window Sill Details-Direct Fix



GLAZING
SUPPORT BARS
refer joinery
manufacturer/supplier for
installation requirements

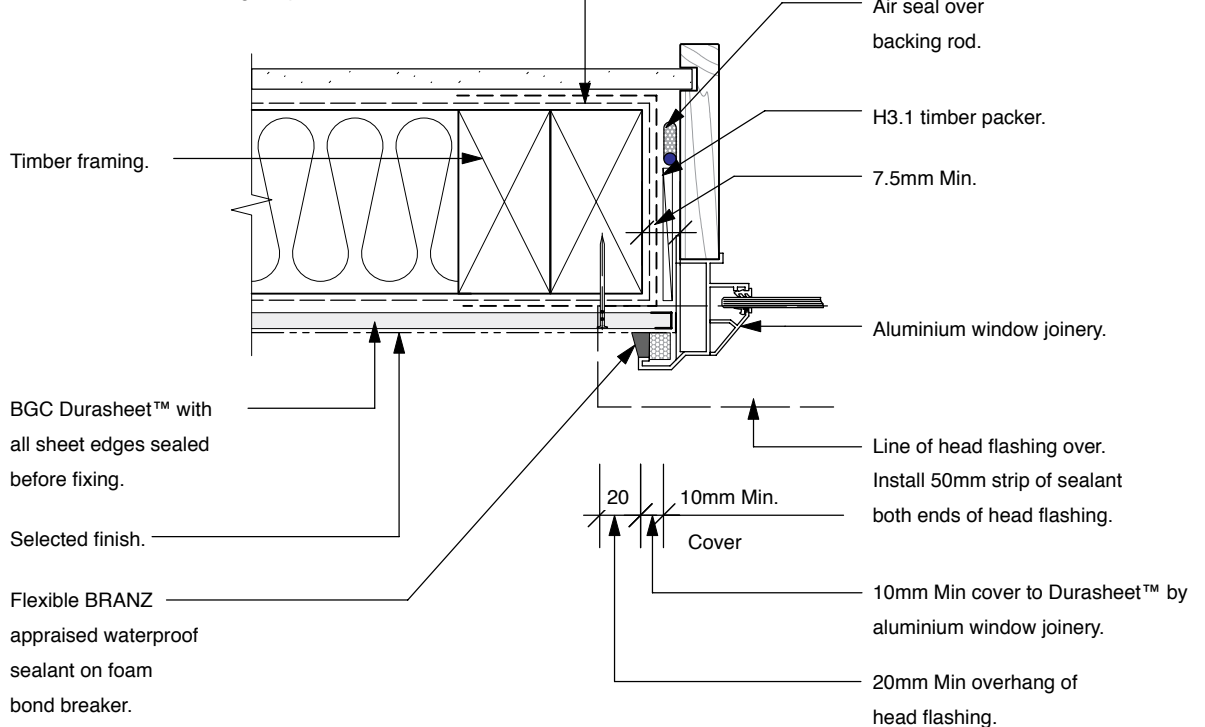
Window Jamb Details-Cavity Construction

Building wrap and flexible flashing tape.
Flexible flashing tape to be continuous along sill, 100mm min. up each jamb and 50mm onto face of building wrap.

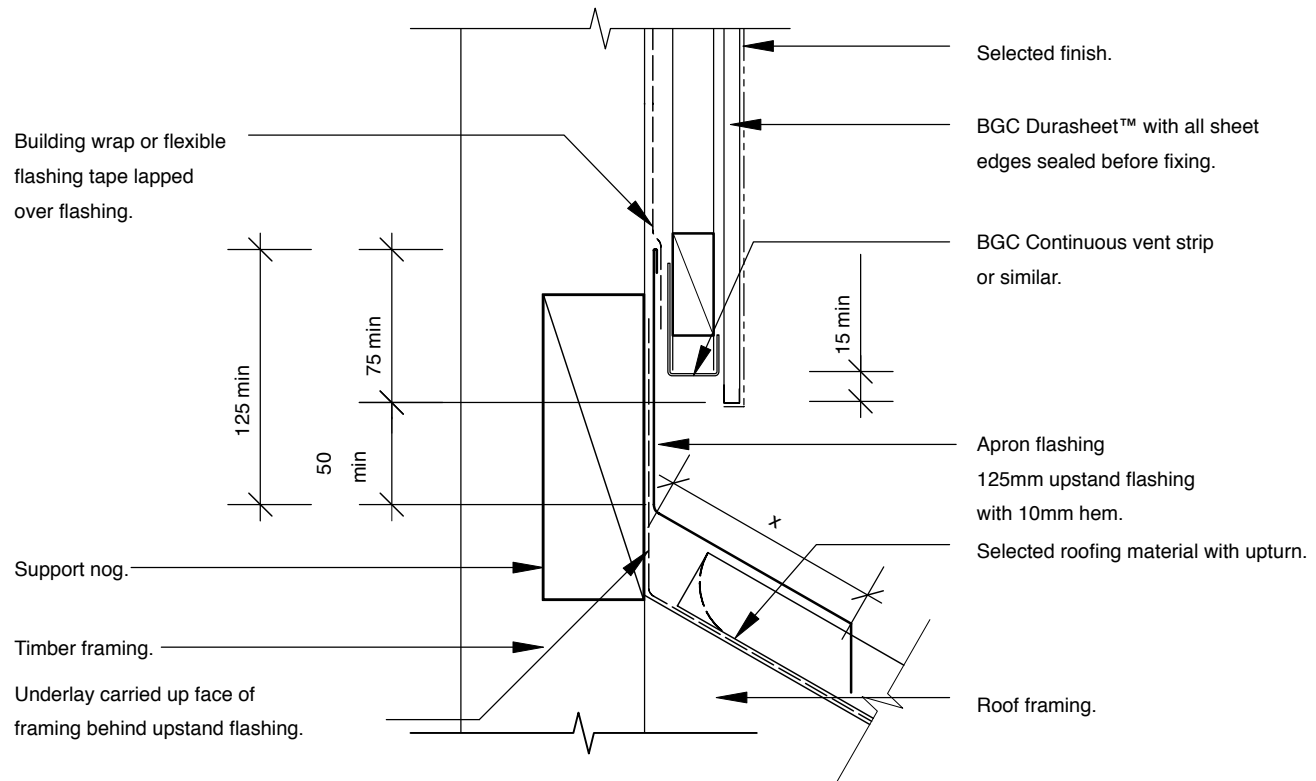


Window Jamb Details-Direct Fix

Building wrap and flexible flashing tape.
Flexible flashing tape to be continuous along sill, 100mm min. up each jamb and 50mm onto face of building wrap.

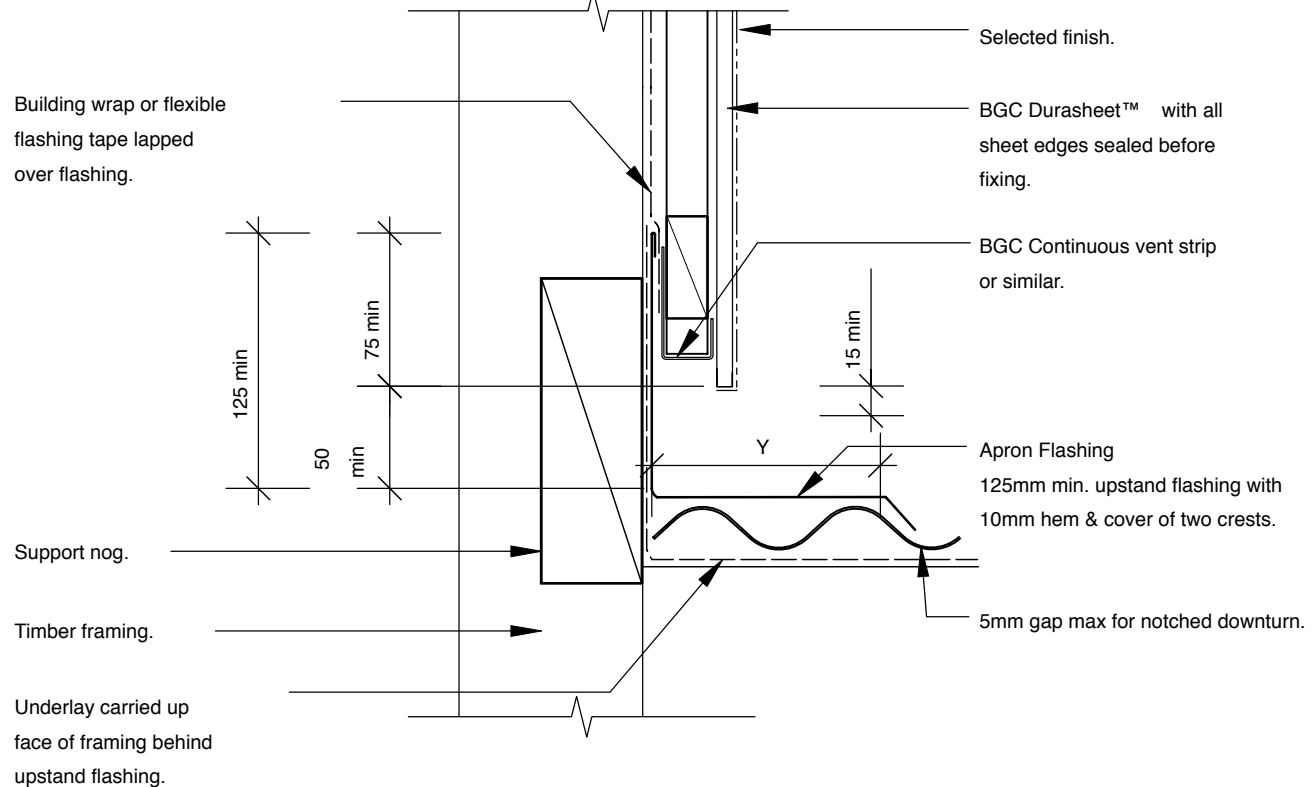


Transverse Apron Flashing Details-Cavity Construction



Note:
X = Refer to NZBC E2 / AS1 Table 7 for flashing cover requirements.

Parallel Apron Flashing Detail-Cavity Construction



Note:
Y = Refer to NZBC E2 / AS1 Table 7 for flashing cover requirements.

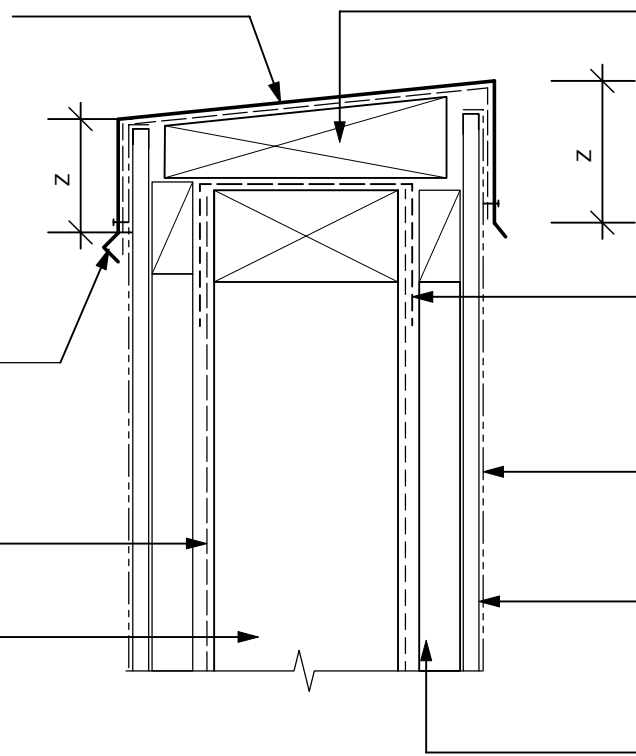
Parapet Flashing Details-Cavity Construction

Metal flashing with 5° slope on flashing tape to separate metal capping and treated timber packer. Fix through sides only.

Metal flashing to have birds beak fold if used as inside face for enclosed decks.

Approved breather type building wrap.

H3.1 Timber framing.



Sloping H3.1 treated timber packer to form min 5° slope.

Flashing tape continuous around corner over building wrap.

Selected finish.

BGC Durasheet™ with all sheet edges sealed before fixing.

20mm vertical timber cavity batten.

H3.1 treated timber.

Note:
Z = Refer to NZBC E2 / AS1 Table 7 for flashing cover requirements.

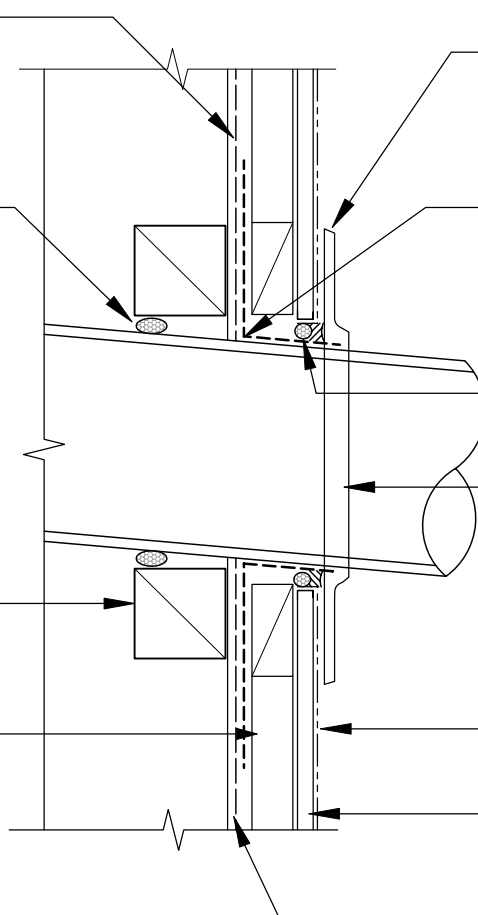
Pipe Penetration Details-Cavity Construction

Approved breather type building wrap.

Air seal all round.

Solid backing around pipe penetration.

20mm vertical timber cavity batten.
H3.1 treated timber.



Flange to protect sealant from exposure to sunlight.

Flexible flashing tape adhering around pipe and onto building paper (100mm lap to underlay and 25mm to pipe).

BRANZ appraised sealant with backing rod.

Pipe with 5° slope to outside.

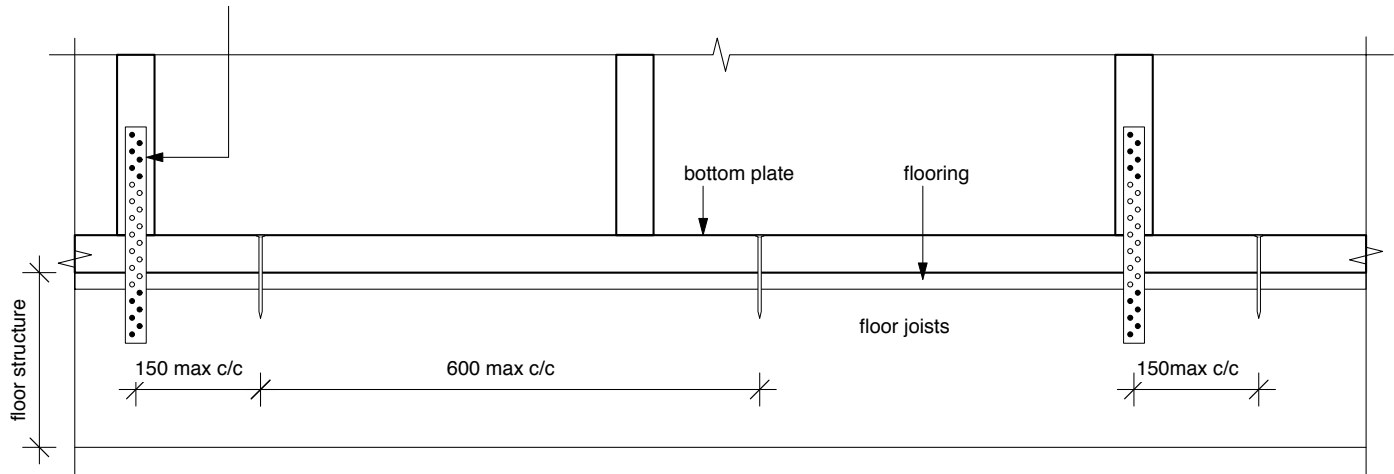
Selected finish.

BGC Durasheet™ with all sheet edges sealed before fixing.

Approved breather type building wrap.

Brace Panel Hold Down-Timber floor

BGC - DS1 & DS2
Secure every 2nd stud (at sheet sides) to floor joists with 260x25x1.0mm galv mild steel strap, fixed each end with 6/30x2.5mm galvanised flat head nails



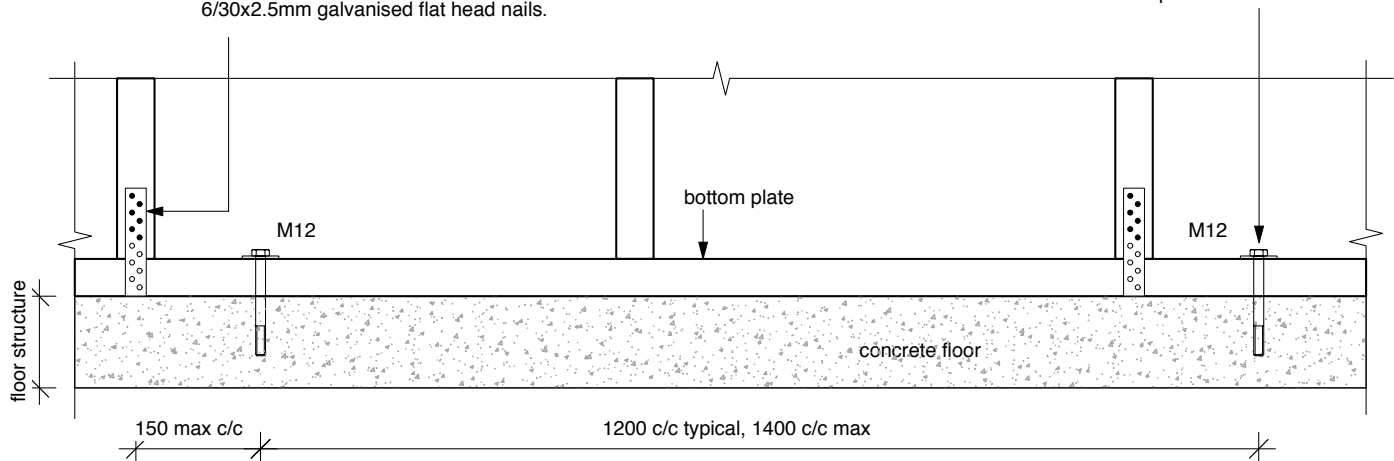
Direct Fix & Cavity

BGC - DS1 (1200mm) & DS2 (2400mm)
Timber Floor

Brace Panel Hold Down-Construction Detail

BGC - DS3 & DS4
Secure every 2nd stud (at sheet edge) to bottom plate with 130x90x130x25x1.0mm galv mild steel "U" bracket, fixed each end with 6/30x2.5mm galvanised flat head nails.

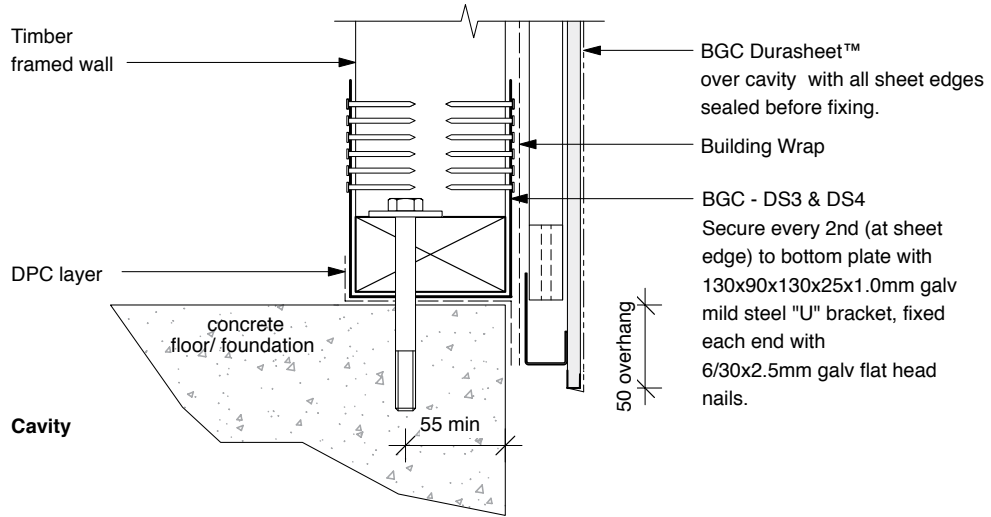
M12 Hold Down Bolts, 75mm into concrete foundation/floor, with 50x50x3.0mm HD Galv sq washer



Direct Fix & Cavity

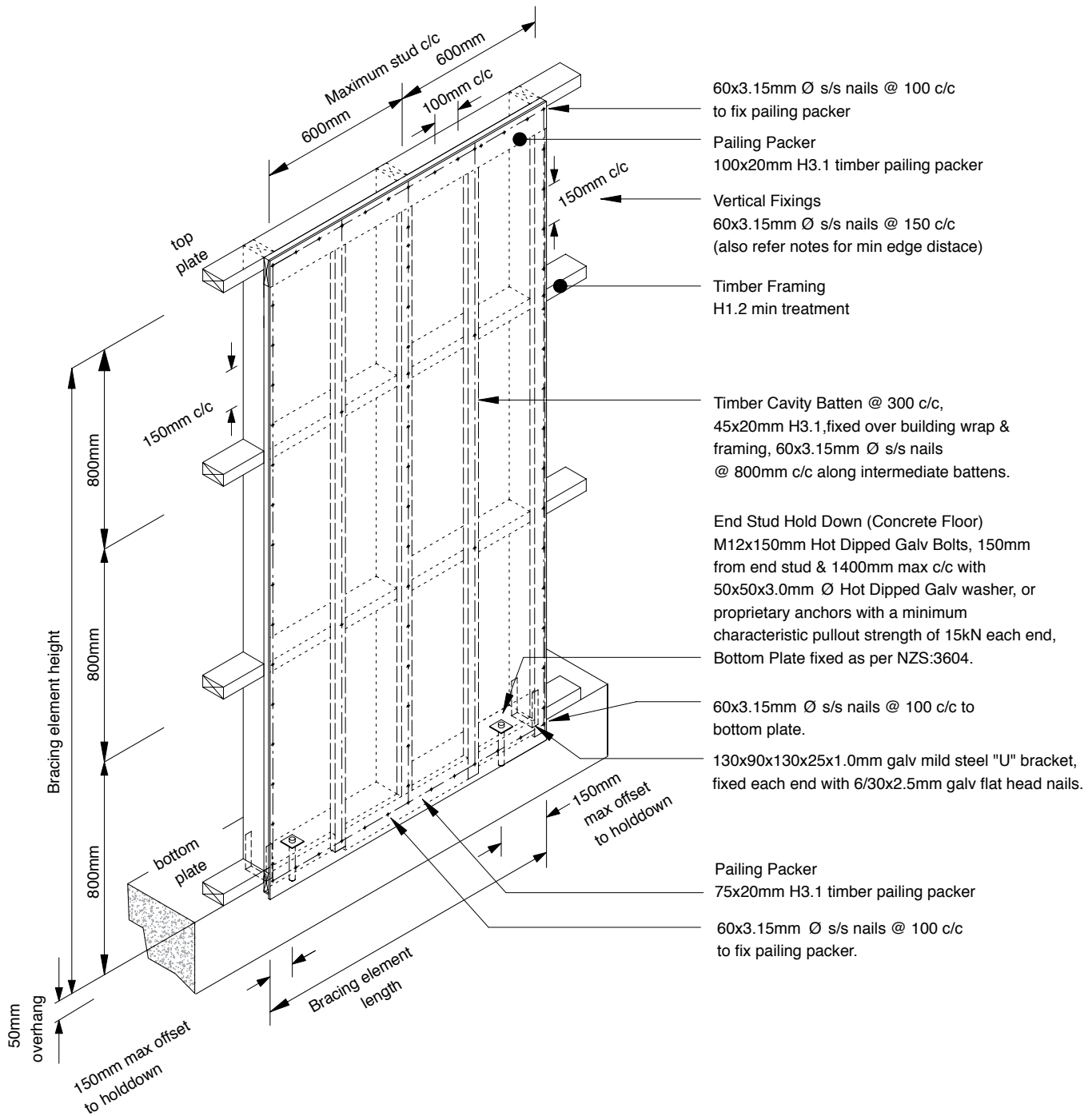
BGC - DS3 (1200mm) & DS4 (2400mm)
Concrete Floor

Brace Element Hold Down - Section



BGC - DS3 & DS4 Sheet overhang & Bracket (concrete floor)

Brace Element-3D View-Timber Floor



60x3.15mm Ø s/s nails @ 100 c/c to fix pailing packer

Pailing Packer
100x20mm H3.1 timber pailing packer

Vertical Fixings
60x3.15mm Ø s/s nails @ 150 c/c (also refer notes for min edge distance)

Timber Framing
H1.2 min treatment

Timber Cavity Batten @ 300 c/c, 45x20mm H3.1, fixed over building wrap & framing, 60x3.15mm Ø s/s nails @ 800mm c/c along intermediate battens.

End Stud Hold Down (Concrete Floor)
M12x150mm Hot Dipped Galv Bolts, 150mm from end stud & 1400mm max c/c with 50x50x3.0mm Ø Hot Dipped Galv washer, or proprietary anchors with a minimum characteristic pullout strength of 15kN each end, Bottom Plate fixed as per NZS:3604.

60x3.15mm Ø s/s nails @ 100 c/c to bottom plate.

130x90x130x25x1.0mm galv mild steel "U" bracket, fixed each end with 6/30x2.5mm galv flat head nails.

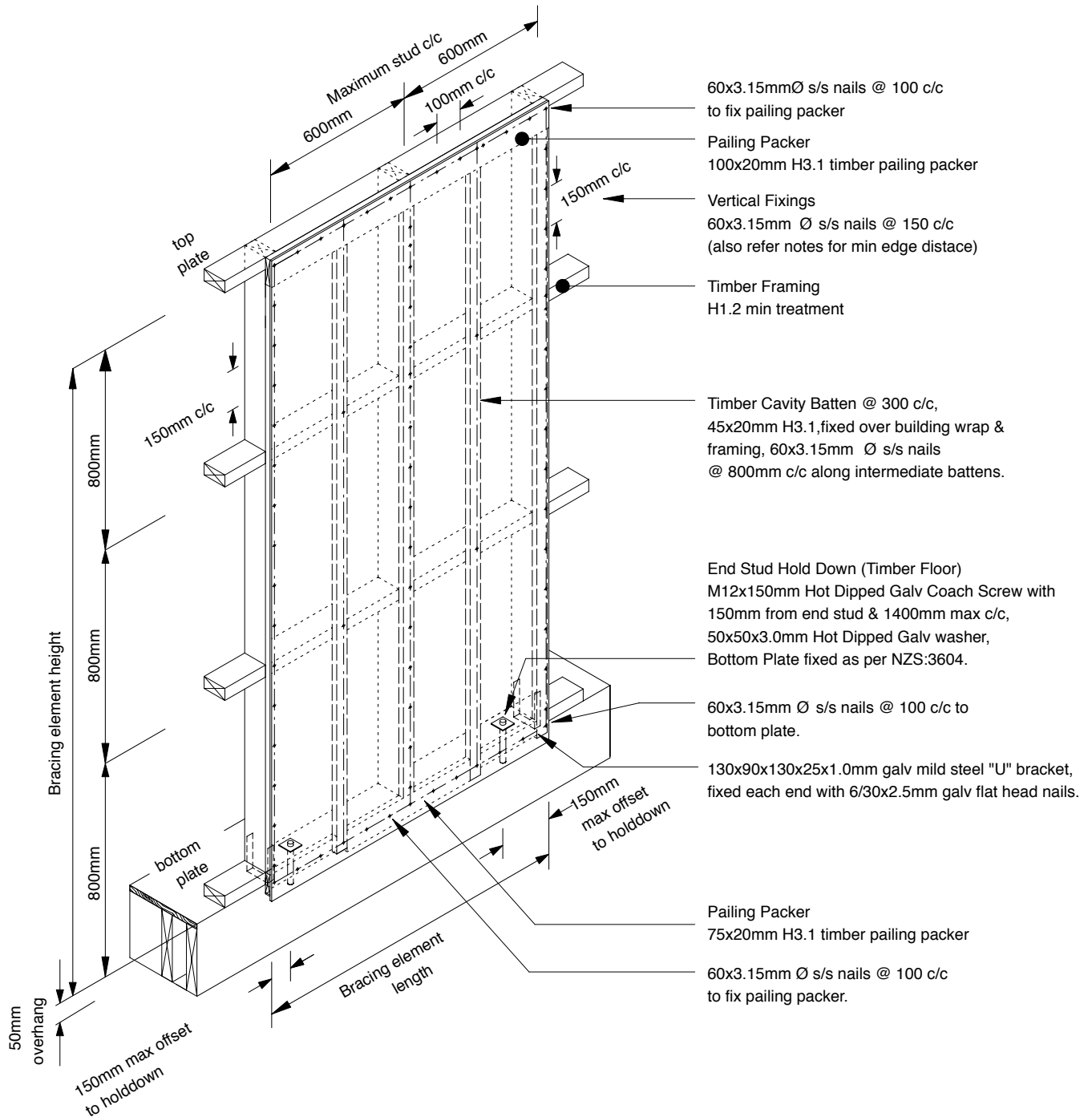
Pailing Packer
75x20mm H3.1 timber pailing packer

60x3.15mm Ø s/s nails @ 100 c/c to fix pailing packer.

Note 1:
Use same nailing pattern for DIRECT FIX as cavity nailing pattern

DS3 - 1200mm length
DS4 - 2400mm length

Brace Element-3D View-Timber Floor



60x3.15mmØ s/s nails @ 100 c/c to fix pailing packer

Pailing Packer
100x20mm H3.1 timber pailing packer

Vertical Fixings
60x3.15mm Ø s/s nails @ 150 c/c (also refer notes for min edge distance)

Timber Framing
H1.2 min treatment

Timber Cavity Batten @ 300 c/c,
45x20mm H3.1, fixed over building wrap & framing, 60x3.15mm Ø s/s nails @ 800mm c/c along intermediate battens.

End Stud Hold Down (Timber Floor)
M12x150mm Hot Dipped Galv Coach Screw with 150mm from end stud & 1400mm max c/c, 50x50x3.0mm Hot Dipped Galv washer, Bottom Plate fixed as per NZS:3604.

60x3.15mm Ø s/s nails @ 100 c/c to bottom plate.

130x90x130x25x1.0mm galv mild steel "U" bracket, fixed each end with 6/30x2.5mm galv flat head nails.

Pailing Packer
75x20mm H3.1 timber pailing packer

60x3.15mm Ø s/s nails @ 100 c/c to fix pailing packer.

Note 1:
Use same nailing pattern for DIRECT FIX as cavity nailing pattern

DS1 - 1200mm length
DS2 - 2400mm length

Supplied by BGC Fibre Cement

Durasheet 4.5, 6 and 7.5mm – sizes as per page 4
Durablades – 180, 250 or 300mm

Supplied by others – available from your Building Merchant

uPVC Jointers
uPVC Internal and External Corners
uPVC Vent Strips
uPVC h Mould
uPVC Control Joint Mould

85mm x 85mm Internal/External Corner flashing - E2 Flashing Solutions or similar
105mm x 105mm Internal/External Corner flashing – E2 Flashing Solution or similar

Vented Cavity Closer

Nails

30 x 2.5mm Hot dipped galvanised Flat Head Nail
40 x 2.8mm Hot dipped galvanised Fibre Cement Nail
60 x 3.15mm Hot dipped galvanised Fibre Cement Nail

40 x 2.8mm Stainless Steel 316 Annular grooved Flat Head Nail
60 x 3.15mm Stainless Steel 316 Annular grooved Flat Head Nail

Sealant

Flexible sealants – ie Holdfast 220LM or similar BRANZ Appraised product

BGC Fibre Cement

PO Box 76695
Manukau City 2241

Telephone: 09 264 1457
Freephone: 0800 424234
Facsimile: 09 264 1459

www.bgc.com.au

BGC Fibre Cement is a proud Australian owned manufacturer of Fibre Cement products.

BGC has state of the art manufacturing facilities in Perth, WA and distribution centres in all states of Australia and in New Zealand.

BGC has a team of technical specialists who can assist with all specification and design information.

BGC provides builders, developers and architects with a range of design alternatives and innovative products such as:

- Durasheet™ – fibre cement sheet for external applications.
- Duratex™ – fibre cement sheets for applied finish systems.
- Durabacker™ – fibre cement sheet for high build plaster coatings.
- Duraplank™ – woodgrain and smooth fibre cement plank for external applications.
- Duraliner™ – Internal lining suitable as a substrate for tiles and is ideal for wet areas.
- NuLine™ – weatherboard cladding system.
- Stonesheet™ – fibre cement stone slip substrate.



Quality
Endorsed
Company

Safe working practices - Please wear a P1 or P2 mask and safety goggles (approved to AS/NZW1337 standards) whilst cutting or installing Durasheet™. Durasheet™ can be safely handled during unloading or stacking without the use of these precautions.

Cleaning up - Always wet down your work area when cutting Durasheet™, to ensure that dust is managed. Dispose of any vacuumed dust with care and using containment procedures.