

# Generation II

Exterior Cladding Systems  
**H3.2** Environmentally Sustainable  
MicroPro® Treatment



VERSION V1 01/03/2018

NATURAL. DURABLE. CLASSIC.

PROUDLY MADE IN NZ BY



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## DISCLAIMER

The recommendations contained in this document are based on good building practice, but are not an exhaustive statement of all relevant information. The successful performance of the system relies on many factors outside the control of KLC Limited, such as the quality of workmanship and design. KLC Limited will not be responsible for the installation of the products outside of the control of KLC Limited. It is the responsibility of the building designer of the intended project to ensure that the details and recommendations provided are suitable and that the design is executed appropriately.

# 1 Scope

## 1.1 INTENDED USE

The KLC Generation II H3.2 range of Bevelback weatherboards, fascia, cavity battens, scribe and finishing boards (D4S) have been designed as a complete system.

Generation II H3.2 Bevelback weatherboards can be used for buildings that fall within the scope of NZS 3604 Timber Framed Buildings and Acceptable Solutions E2/AS1. Although timber weatherboards can be used on buildings that have a Weathertightness Risk Matrix exceeding 12, you will need to use Acceptable Solutions E2/AS1 Table 3.0 to ascertain which is the correct product and application for your project.

Including:

- NZS 3602:2003 Timber Wood Based Products
- NZS 3617:1979 Specification for profiles of weatherboards, fascia boards and flooring
- AS/5068 Finger Joints in Structural Products
- AS/5069 Finger Joints in Non-Structural Products
- NZS 1328.1:1998 Glued Laminated Structural Timber

Meets and Exceeds:

- NZS 3640:2003 Preservation of timber and wood based products

The information contained within this guide are based on good building practice and are not a complete statement of all relevant building practices.

## 1.2 PRODUCT INFORMATION

KLC Generation II H3.2 products are manufactured from short lengths of clear high grade radiata pine that are finger-jointed together using a structural glue to produce an untreated length of 6.3metres (substrate).

The substrate is then treated to H3.2, using the revolutionary water based micronised copper timber treatment technology called MicroPro®. MicroPro® treated products provide protection from termites, borers, and fungal decay, and are backed by Koppers Performance Chemicals 50-year treatment guarantee. ([www.kopperspc.co.nz](http://www.kopperspc.co.nz)).

The blanks are then kiln dried (KD) to a pre-determined moisture content. The KD H3.2 substrate is then profiled to various Weatherboards, Fascia, Finishing Boards (D4S), box corners and other profiles.

To complement these appearance grade products, a dual coat alkyd priming system is applied.

KLC will not "Warranty" any Generation II H3.2 product that has not been stored correctly and installed by a professional Licenced Building Practitioner and as per the NZ Building Code NZS 3604 and painted in accordance with AS/NZS 2311 2009.

## 2 Use of KLC Generation II Horizontal Weatherboard Profiles

KLC Generation II exterior cladding systems have been designed for use in residential and small commercial building applications.

KLC Generation II H3.2 exterior cladding systems shall be either direct-fixed to framing over a wall underlay or fixed to a H3.2 cavity batten, this method is described in the Acceptable Solution E2/AS1 paragraph 9.1.8.

Timber weatherboards are included in the Acceptable Solution E2/AS1, section 3.0.

All types of weatherboard profiles may be used in low risk buildings. Only bevel back, rusticated and vertical shiplap weatherboards should be used in high risk buildings. For information on requirements for rained ventilated cavities refer to the Acceptable Solution E2/AS1, paragraph 9.1.8.

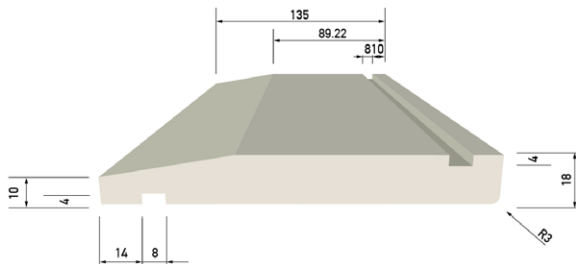
KLC Generation II H3.2 weatherboards are limited to use in buildings with a risk matrix score of 20 or below as outlined in E2/AS1 paragraphs 3.4.1 to 3.4.3 (Weather Tightness Matrix)

Weatherboard cladding systems are an acceptable solution under the terms of the New Zealand Building Code E2/AS1. NZBC E2/AS1 section 1.5 specifies that the design, installation and alteration of cladding is classed as restricted building work. The KLC Generation II cladding products must be installed by a Licenced Building Practitioner (LBP)

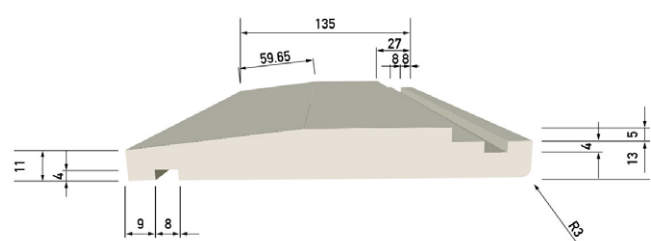
### BEVEL BACK PROFILE SIZES

KLC61 135 x 18	180 x 18
KLC63 135 x 18 Rebated	KLC62 187 x 18
142 x 18	215 x 18
	230 x 18

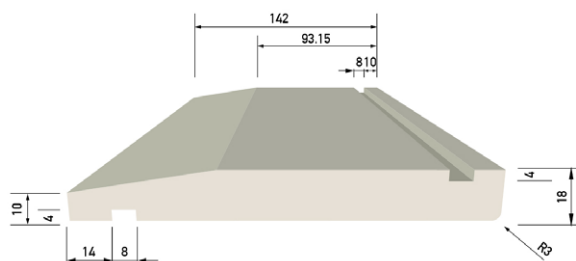
#### KLC61 135x18



#### KLC63 135x18 Rebated



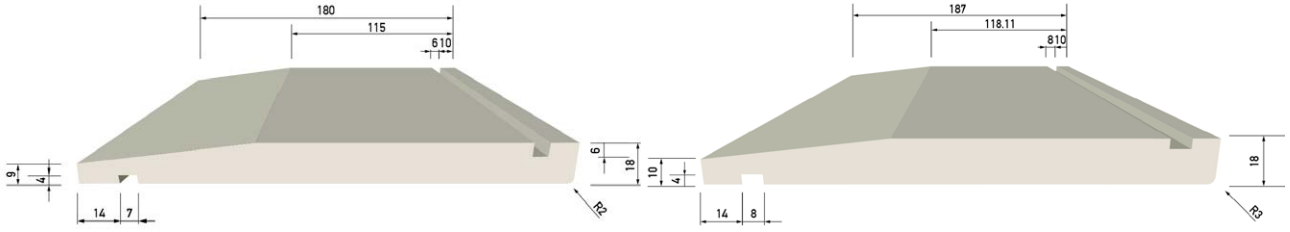
#### 142x21



## 2 Use of KLC Generation II Horizontal Weatherboard Profiles

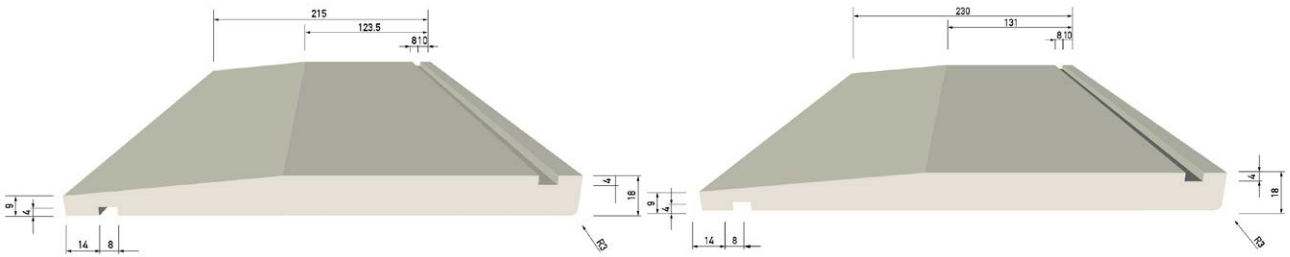
180x18

KLC62 187x18



215x18

230x18



### 3 Life Serviceability

KLC Generation II weatherboards have a durability warranty based on the Treatment Manufacturer's 50-year limited guarantee.

Under the New Zealand Standards NZS 3602:2003 Weatherboards and cladding products must have a minimum durability of 15 years.

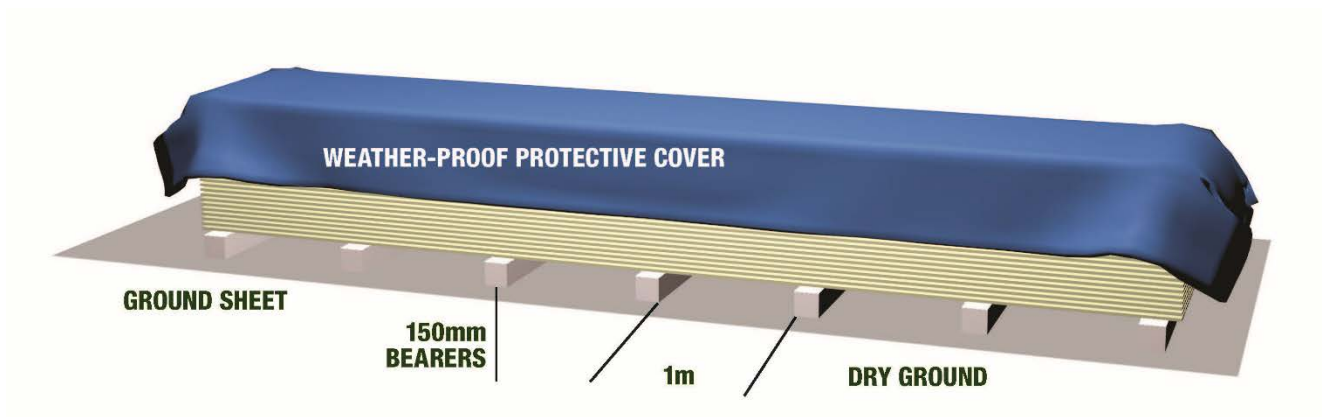
The life service is subject to correct installation, paint coating of the product, maintenance and care.

When KLC Generation II weatherboards are installed according to the instructions contained in this manual and by a Licenced Building Practitioner (LBP) or suitably qualified person, the service life can be expected to be considerably longer.

Full details covering all the aspects of pre-installation care, installation, painting and maintenance are contained within this manual.

## 4 Care and Site Storage

To avoid exposure to the elements in all seasons.



### 4.1 ON-SITE STORAGE

Correct on-site storage of Generation II H3.2 products prior to installation is critical.

- Generation II H3.2 products are made from kiln dried timber. Timber will absorb moisture in a damp environment, and release it in a dry environment.
- Store in a dry, well ventilated area.
- Store on a flat surface 150mm above the ground, supported every metre along the length of the product.
- Protect from the elements including direct sunlight and rain.
- If stored outside, there must be a moisture barrier (ground sheet) under the stack.
- If Generation II H3.2 products do absorb moisture prior to installation, dimensional swelling may occur, this will disappear when the timber returns to its original moisture content.

### 4.2 HANDLING

- Care should be taken when unloading KLC Generation II product. The profiles should be unloaded by hand or if unloaded by mechanical means, ensure that there is a minimum of 2 well-spaced load points to avoid excessive bending or sag during unloading.
- Always carry profiles products on their edge and avoid leaning against any vertical surface to avoid any bending.



## 5 Guidelines for Installation

The products should be installed by a competent qualified person in accordance with the provisions of the Building Code E2/AS1 (sec 9.4) and NZS 3604 (2011). For further information visit BRANZ Good Practice Guide, Timber Cladding.

### 5.1 PRE-INSTALLATION CHECKS

There are many simple checks that should be carried out prior to installation which can avoid issues during installation.

- Where any KLC Generation II profile has been exposed to moisture prior to installation, the moisture content should be checked. If the moisture content is above 15% then the product should not be installed until it returns to 15% or less.
- When excessive moisture or swelling is found the profile should be put aside and allowed to dry to its original profiled dimensions. This is best done by placing the product in fillet and stored as outlined above. Filleting allows air movement through the boards for drying.
- Check for any defects or damage caused during delivery or storage.
- Remove any dirt, dust or stones which may be on the product.
- If there are any areas where a primer coat has been removed or damaged, the affected area should be sanded smooth and a primer coat applied.
- This product is primed with a factory applied alkyd architectural coating, a similar oil-based undercoat or primer must be used for touch-up work
- If building in “sea spray or geothermal zones”, it is the building designer’s responsibility to ensure all specified fastenings, fittings, and flashings comply with NZS 3604, Section 4 – Durability.

### 5.2 INSTALLATION

- Installation must be by a Licensed Building Practitioner (LBP), or supervised by an LBP. Please refer to BRANZ Bulletin Number 468, Fixing of Timber Weatherboards.
- Do not install Generation II H3.2 weatherboards if their moisture content is over 15%.
- If building in “seaspray or geothermal zones”, it is the building designer’s responsibility to ensure all specified fastenings, fittings, and flashings comply with NZS 3604, Section 4 – Durability.
- Avoid joining Generation II H3.2 weatherboards whenever possible, but if unavoidable use a 45-degree scarf joint directly over studs or Generation II H3.2 FJ Cavity Batten. Care must be taken to angle mitre joints away from the prevailing weather, and or use Flat Soakers. Alternatively, a butt joint is acceptable using flat soakers.
- Re-prime all cut ends, mitres, notching’s, borings with 2 coats of brush-applied alkyd primer.
- Leave a 2mm expansion gap in the lap of rebated profiles, ie Rusticated & Bevelback to allow for expansion and contraction.
- Boards must be fixed to allow for seasonal movement, with an overlap of 32mm for Bevelback Profiles.

### 5.3 FRAMING

The timber framing must comply with NZS3604 – Timber Famed Buildings with maximum of 600mm centres.

- The moisture content of the framing must not exceed 20% at the time of fixing the weatherboard. Excessive moisture content in the timber framing may cause movement in the framing structure thus altering the weatherboard positioning.
- Additional framing may be required at soffit, corners, windows and door opening



# 5 Guidelines for Installation

## 5.4 NAIL SELECTION

KLC Generation II H3.2 weatherboards are treated using the revolutionary water based micronised copper timber treatment technology called “MicroPro”.

- In most applications both stainless steel and hot dip galvanised steel fixings and fasteners are safe to use with MicroPro® treated exterior products. Compliant to AS/NZS 4680 and to NZBC E2/AS1 Table 24.
- Note In sea-spray and Geothermal zones nails must be Stainless Steel.
- Hand nailing is recommended as the use of nail guns can cause fibre damage to the face and back of the board.

Based on MicroPro® ISANTA fastener corrosion test results, MicroPro® treatment is considered similar to CCA treatment with regard to the effects on fastener material. Therefore, in most applications both stainless steel and hot dip galvanised steel fixings and fasteners are safe to use with MicroPro® treated exterior products. Compliant to AS/NZS 4680 and to NZBC E2/AS1 Table 24.

Fixings to comply with E2/AS1 Table 24

Weatherboard	Framing Set Out	Nails (Direct Fixing)	Nails (on Cavity)	Nailing Requirements	Wind Zone	Wind Barrier*
Horizontal Bevel Back to direct or cavity batten	Studs @ 600mm centres max.	75mm x 3.15mm Jolt Head (JH) Hot Dipped Galvanised Nails or Stainless Steel Nails. 35mm penetration into the board	90mm x 3.15mm Jolt Head (JH) Hot Dipped Galvanised Nails or Stainless Steel Nails 35mm penetration into the board	A 32mm overlap of each board. Single nail located 10mm above lap. Nailed at an upward angle. Punched 2mm depth	Low, Medium, High & Very High	Lightweight Building Paper Heavyweight Building Paper
Box Corners	Only horizontal weatherboards	50x2.5mm Jolt Head (JH) Hot Dipped Galvanised Nails 250mm centres	50x2.5mm Jolt Head (JH) Stainless Steel Nails 250mm centres	300mm centres maximum		

**Note:** Hot dip galvanising must meet the requirements of AS/NZS4680:2006. In Expose Zone D (refer to NZS 3604 paragraph 4.2.3) all fixings must be type 316 stainless steel

## 6 Installation Details for Bevel Back Weatherboards

- Hand nailing is recommended as nail guns can cause damage to the surface of the board. If a nail gun is used, a non-marking attachment should be used to avoid damage to the surface.
- Use 75 x 3.15 or 90 x 3.15 Hot Dipped Galvanised or Stainless-Steel nails for fixing Generation II H3.2 Rusticated weatherboards. Nails must have a minimum penetration of 35mm in to the wall framing. Refer to BRANZ Bulletin 468 and E2/AS1 for complete list of fixing options.
- Nail holes should be pre-drilled especially in areas around joints and the end of boards. This is to avoid splitting the product. Pre-drill all boards 50mm from the end to avoid end splitting.
- Single nail all weatherboard profiles, regardless of size. Nailing boards together will likely result in split boards.
- Location of the nails is to be a maximum overall distance of 42mm from the bottom edge of the board. 32mm minimum overlap and 10mm to the nail fixing point. Aligning the weather grooves.
- Nails should be applied at an upward angle of 10degrees to avoid water entering through the fixing point.
- All nails should be punched to a depth of no less than 2mm.
- As soon as nails are punched below the surface of the weatherboard they must be filled with an exterior grade filler immediately to prevent moisture uptake in the weatherboards.
- Timber weatherboards are designed to accommodate thermal, seismic and moisture related movement in the boards laps. Each weatherboard is single nailed so that the weatherboards can expand, contract and move independently of each other. KLC does not recommend the use of any sealant/glue which inhibits the natural and ongoing movement of the weatherboard.

### JOINTS AND CUTS

All cut ends, drill holes, rebates and notches must be resealed immediately with a suitably approved product. eg an Alkyd Primer

End sealing can also be achieved by the application of 2 coats of brush-applied, quality Alkyd (oil based) primer which are allowed to dry between coats.

When products are joined a scarf or splay joint is to be used. These must face away from the prevailing weather. Alternatively, a corrosion- resistant soaker must be applied.

## 6 Installation Details for Bevel Back Weatherboards

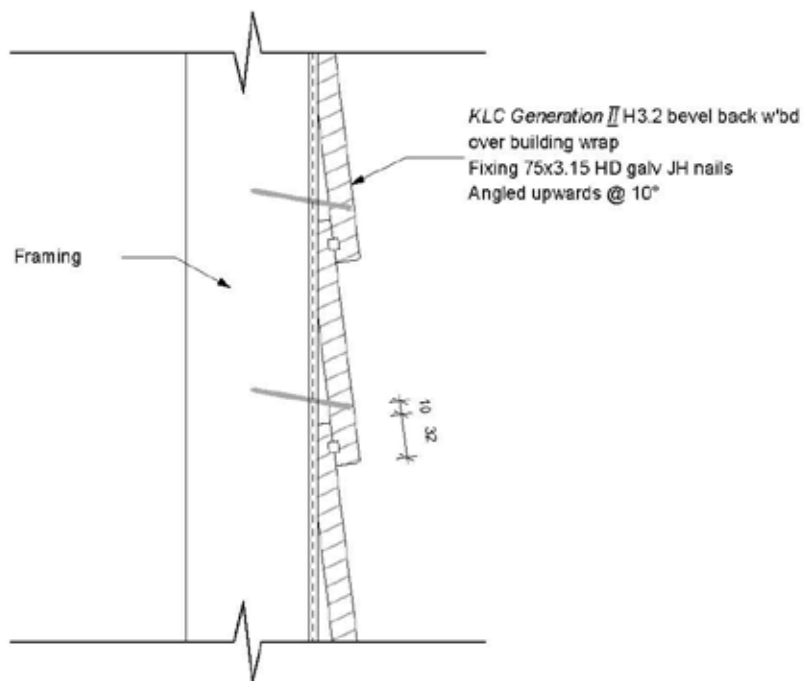
### 6.1 FIXING DETAIL FOR INSTALLATION WEATHERBOARDS DIRECT FIX

Weatherboards can be directly fixed to the framing but the use of this is limited by section 3.3 of E2/AS1.

All types of weatherboards can be used where the risk score is between 0 and 6. Where the building risk score is 7 to 12 only bevelback weatherboards can be used.

Where weatherboards are directly fixed to the framing a wall underlay complying with Table 23 of E2/AS1 sections 9.1.5-9.1.7 shall be installed prior to fixing.

#### D3.1 Direct Fix Fixing detail



# 6 Installation Details for Bevel Back Weatherboards

## 6.2 Fixing Details for Installing Weatherboards using Cavity Battens

Cavities must comply with E2/AS1 sections 9.1.8 to 9.1.9.4, there are 2 different cavity fixing systems:

- a. Cavity battens fixed by the cladding fixings to the wall frame.
- b. Claddings are fixed through the cavity into the wall frame.

Timber Weatherboard cladding with a drained cavity does not require venting at the top of the wall. There must be a restriction of air movement between the cavity and:

- The floor, wall and roof framing.
- Attic roof space.
- Sub-floor space.

Cavities must be drained to the exterior of the building at the bottom of the cavities.

Where window penetrations are wider than cavity batten spaces allowance must be made for air flow between adjacent battens by leaving a minimum gap of 10mm between the bottom of the vertical batten and the flashing to the opening.

It is important to note that where a cavity batten is fixed through the cladding the nails used are required to have a minimum fixing penetration into the framing of 35mm, so a longer nail is required. The nail length shall be 35mm plus thickness of batten, plus thickness of cladding board.

When the cavity batten is fixed to the framing it is considered as part of the framing in respect to the fixing of weatherboards. Cavity battens to be nailed off at 600 mm centres, fastenings as per Detailed Drawings.

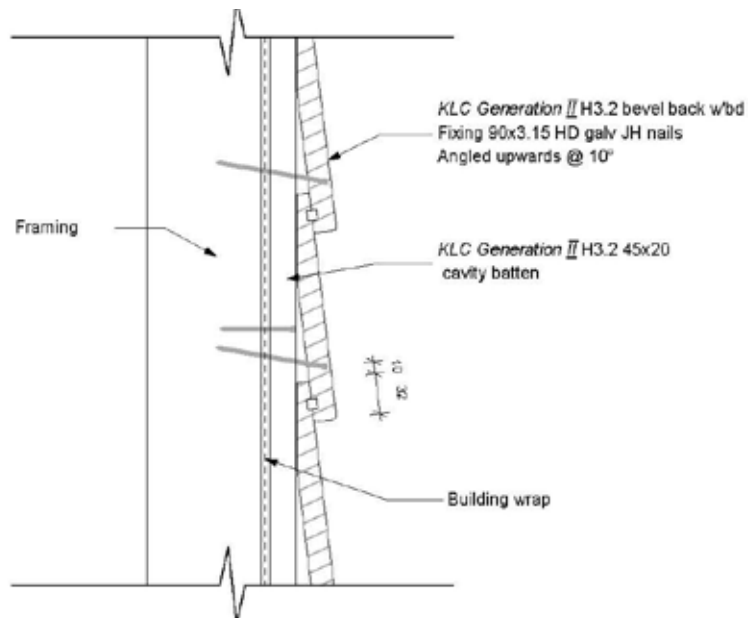
Drained cavity systems are required to be vermin-proofed. Vermin proofing is required above window and door heads and at the base of drained cavities.

Vermin proofing shall:

- Provide holes or slots between 3mm and 5mm.
- Provide an area of opening of 1000mm<sup>2</sup> per lineal meter of wall cladding.
- Be positioned to allow a minimum drip edge to the wall cladding of 10mm at the base of the wall and 15mm above window and door head flashings.

Vermin proofing must be kept clear and unobstructed to maintain draining and venting of the cavity.

### D3.2 Cavity Fixing Detail



# 6 Installation Details for Bevel Back Weatherboards

## 6.3 BOTTOM OF CLADDING

There are differing requirements for the clearance between cladding, ground and pavers.

Wall cladding and concrete slabs:

- Ensure the bottom of the weatherboard is no closer than 150mm from a paved/concrete ground surface or
- 225mm from an uncovered ground surface. Ensure the end is completely sealed with a quality primer
- Overlap the concrete slab by a minimum of 50mm.
- Direct fix cladding must have a minimum horizontal off-set of 6mm to prevent moisture capillary action.

Wall Cladding on suspended timber floors:

- Weatherboards and cladding must overlap the floor structure by no less than 50mm.
- With drained cavities there will be no direct connection between the sub floor spaces and the drained cavities.
- Direct fix cladding must have a minimum horizontal offset of 6mm to prevent moisture capillary action.
- With drained cavity systems care must be taken to ensure air from the sub-floor space cannot enter the cavity.

### Refer to Detail Drawings

## 6.4 WALL PENETRATION

Prior to the installation of doors and windows the following must be completed:

- Wall underlay shall be cut and dressed on all sides.
- Flexible flashing tape shall be applied to the head and sill framing.

Windows, doors and other penetration openings shall have a flexible air seal to minimise the risk of air flow carrying moisture into the building wall.

The air seal shall:

- Be between the reveal or the frame and the wrapped opening.
- Installed over closed cell polyurethane foam, backing rod or similar product.
- Be made of:
  - a. Self-expanding polyurethane foam
  - b. A sealant complying with Type F, class 20LM of ISO 11600 or a low modulus Type II Class A Federal Specification TT-S-00230C.

## 6 Installation Details for Bevel Back Weatherboards

### 6.5 WINDOW AND DOOR HEADS

When installed the flange forming the window, door facing must overlap the cladding material or the back flashing by a minimum of:

- 10mm on jambs
- 8mm on sills

#### Direct Fix Weatherboards:

When installing direct fix weatherboards, window and doors shall have a 5mm stand-off from the flange to the weatherboard to allow for air equalisation. The gap is to be sealed or trimmed down the jamb but left open along the sill.

Head flashings must have a 50mm bead of sealant installed between the weatherboard and each end of the head flashing.

#### Drained Cavity Weatherboard: Systems: There is no sill flashing used.

Weatherboard cladding requires a 5mm stand-off to allow for the use of sealant weather seals between the facings and the cladding head flashings must:

- Incorporate 10mm turn-ups to stop ends, which terminate at the inside face of the cladding.
- Permit ventilation of the drained cavity.
- In very high wind zones, they must have sealant installed between the underside of the head flashing and the top edge of the window head flange.

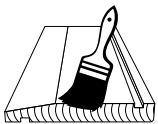
#### Refer to detail drawings

### 6.6 CUTTING AND END SEALING

All cut ends, drill holes, rebates and notches must be resealed immediately with a suitably approved product. eg an Alkyd (oil-based) Primer.

End sealing can also be achieved by the application of 2 coats of brush-applied, quality Alkyd (oil based) primer which are allowed to dry between coats.

When products are joined a scarf or splay joint is to be used. These must face away from the prevailing weather. Alternatively, a corrosion- resistant soaker must be applied.



Two coats of an Alkyd primer (oil-based) or end sealer.

# 6 Installation Details for Bevel Back Weatherboards

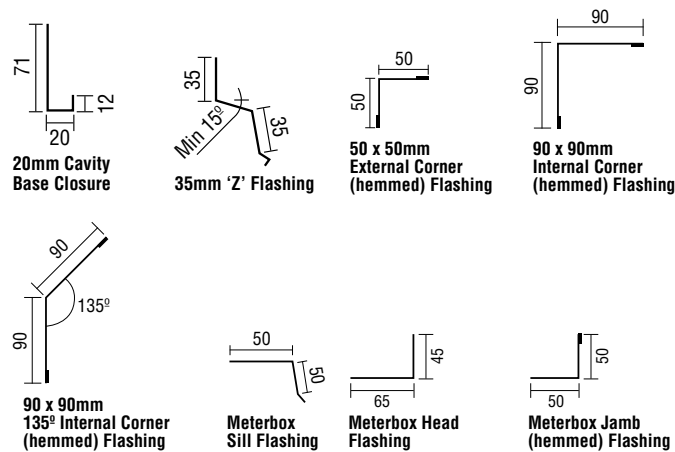
## 6.7 SOAKERS AND FLASHINGS

Soakers and flashings can be Galvanised Steel, Aluminium, Stainless Steel (304) or Copper. All these materials are compatible with the KLC Generation II H3.2 profiles. These are safe to use with MicroPro treated products.

Soakers and flashings must be fixed in accordance with the NZS3604:2011 and Acceptable Solution E2/AS1.

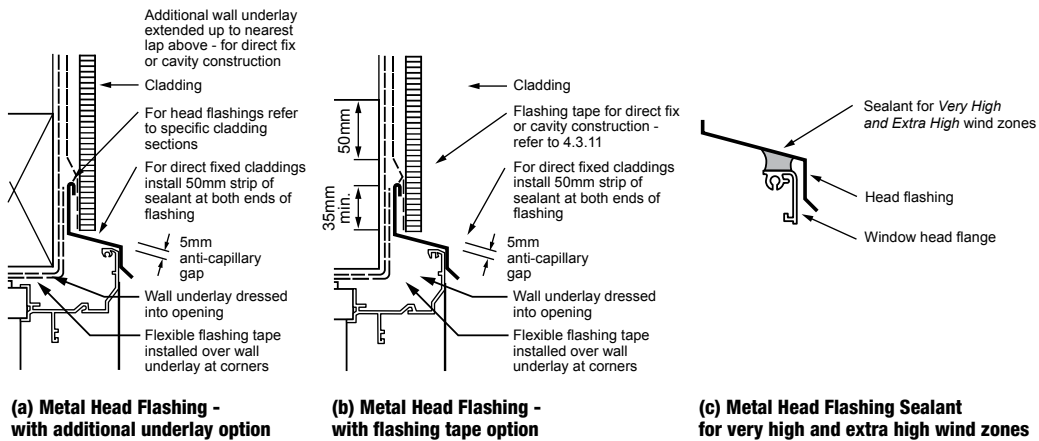
Soakers must have a minimum of 15mm overlap from the corner or join. Flat soakers to be used on all butt joins.

NZS 3604:2011 section 4 and Table 6.12 outline durability for flashings. Section 9 of E2/AS1 outlines flashing design and fabrication details.



### General Sealing of Head Flashing

*Note: May also use wall underlay lapped over flashing upstand in lieu of flexible flashing tape.*





# 6 Installation Details for Bevel Back Weatherboards

## 6.8 BOX CORNERS FOR EXTERNAL CORNERS

The KLC Generation II range includes an internal and external box corner piece 98x18 and an external and internal piece 85 x 18. Both being a two piece system.

The boxed corner must provide a minimum cover of 50mm from the cut end of the weatherboards. Boxed corners are made weather proof by one of the following methods:

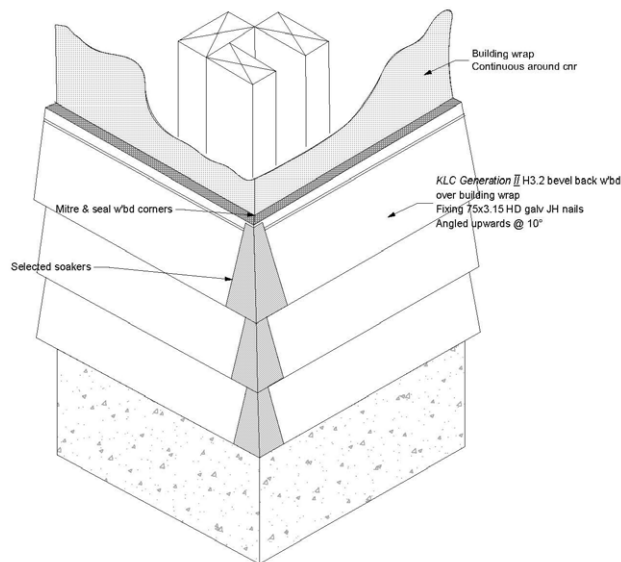
1. For Bevelback profiles a scribe can be used.

There are boxed corner options for Bevelback weatherboards as shown in the figure below.

**Refer to detailed drawings section**

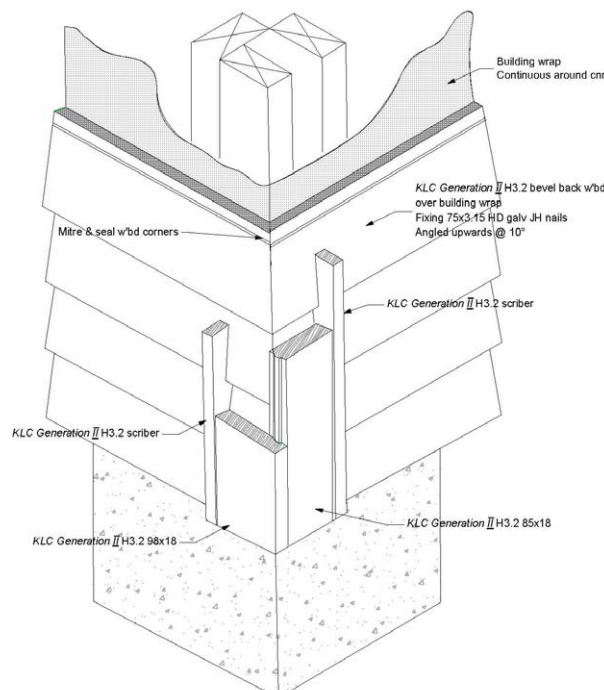
### D-3.3 Bevelback External Corner with Soakers

*Note: Direct Fix drawing shown, Cavity fix similar but with KLC Generation II H3.2 45x20 cavity batten*



### D-3.4 Bevelback Boxed Corner

*Note: Direct Fix drawing shown, Cavity fix similar but with KLC Generation II H3.2 45x20 cavity batten*

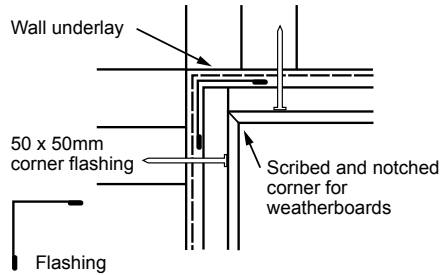


# 6 Installation Details for Bevel Back Weatherboards

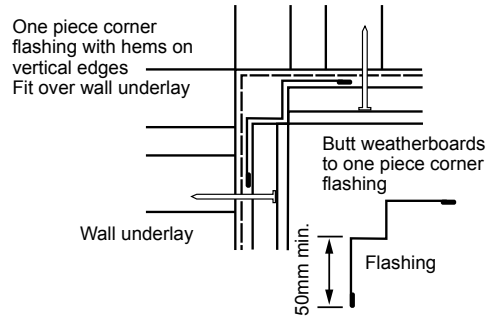
## 6.9 INTERNAL CORNERS

Internal corners must be made water tight by the use of corrosion-resistant flashings which shall be fitted behind the weatherboards on all internal corners.

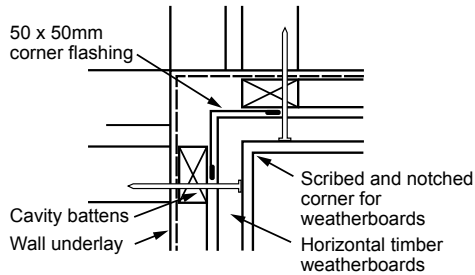
Refer to detailed drawings section



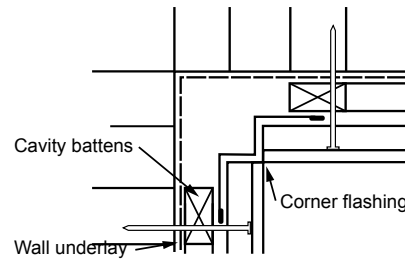
(a) Direct Fix - Internal Butt Corner



(b) Direct Fix - Internal Corner Flashing



(c) Cavity - Internal Butt Corner



(d) Cavity - Internal Corner Fillet

## 6.10 GENERAL INTER-STOREY JUNCTIONS

Inter-storey junctions in cladding over drained cavity systems shall be formed for walls over 2 storeys or 7 metres in height.

Cavity battens used can run the full height of the wall, however walls over 7 metres or 2 storeys must have an Inter-Storey Junction. This is formed to allow for the management of moisture handled by the cavity to be directed to the outside of the building.

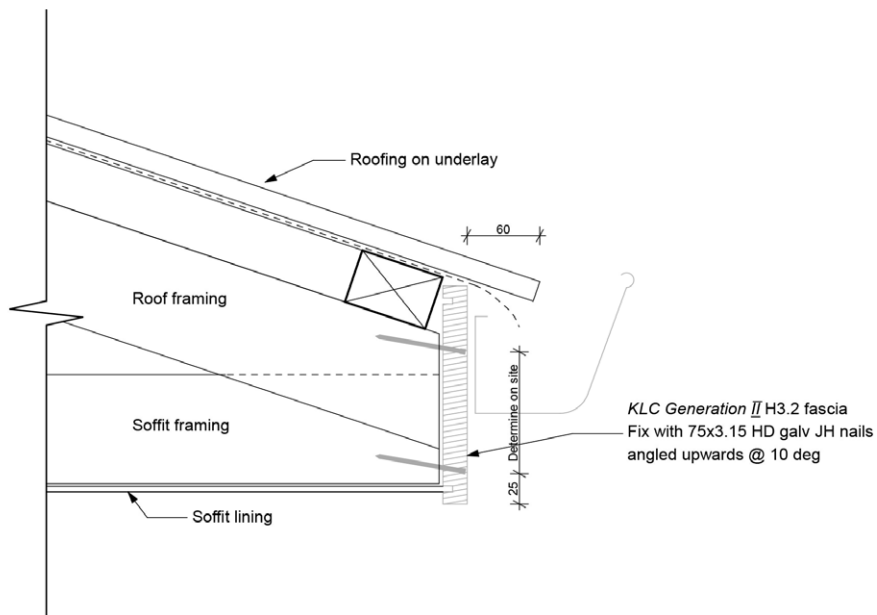
The Junction must have:

- A Minimum 15mm drip edge
- A minimum 5mm capillary gap Flashing used must have:
- A Minimum 15 degree slope
- A minimum 35mm up stand
- A minimum 35mm cover over the weatherboard

Refer to detailed drawings section

# 7 Fascia Installation

As an alternative to nail fixing, fascia can be screwed onto rafter ends as wide as is practical with wide head (10mm) Stainless steel screws, slightly countersunk. Screws should be a min. 75mm long.



KLC Generation II H3.2 products have a premium factory applied alkyd primer and undercoat applied in two separate coats.

- All painting must be carried out in a good tradesman-like manner and in accordance with AS/NZS 2311 2009. Please also refer to “BRANZ Good Practice Guide to Exterior Coating”.
- **Do not** use a sealant at the lap of each board. As radiata is a natural product and will expand and contract in temperature changes – the use of a sealant will inhibit this natural movement and affect the overall finish.
- **Do not** paint Generation II H3.2 weatherboards if the moisture content is over 15%.
- Remove any dirt and surface contamination by sanding and dusting down. Prime immediately any exposed bare timber with a premium exterior alkyd primer.
- Darker colours will absorb heat from the sun and may cause excessive movement, distortion, cracking and possible resin bleed. Light colours reflect the sun's heat.
- The KLC warranty will be void if dark colours with a Light Reflectance Value (LRV) less than 45 are used.
- KLC Limited recommend an application of two coats of quality exterior house paint at a rate no greater than 12m<sup>2</sup> per litre per coat.

### Top Coat Light Reflectance Values as recommended by KLC



The significance of Light Reflectance Values is now being recognized by the building industry.

When paint is exposed to sunlight it absorbs and reflects radiant heat (as well as UV light). It's not only radiant heat warming up the paint film that is the problem. Damage is caused by temperature changes (i.e. from hot sun to cloudy sky) causing the paint film to go through a process of heating up then cooling down again resulting in changes in dimensional stability of the timber substrate. Increases in the core temperature of the timber substrate can also cause resins to mobilise and leach through the paint film. This is known as resin bleed.

The other factor to consider is UV light, the other part of the sun's spectrum. When UV light hits the paint film it causes the release of free radicals that can damage the surface.

Light paint colours with a high light reflectance (and therefore a high LRV over 45) allow less free radicals to be released, which means the paint film and substrate will last longer. Correspondingly dark colours with a lower light reflectance allow more free radicals to be absorbed therefore causing more damage to the surface and resulting in reduced life for the paint film.

KLC recommend choosing a colour with an LRV of 45 or higher for use on all KLC timber products coated with PPG 839 alkyd primer.

## 9 Maintenance

It is the responsibility of the home owner to ensure that annual maintenance is carried out. Maintenance should be carried out every 12 months. In some cases this may be required more regularly eg. sea spray

### Maintenance Checklist

1. Wash all exterior surfaces using a low pressure wash system to remove dust, dirt and other contaminants.
  - Do not use a high pressure washing system eg water blaster
  - If the washing does not remove stubborn areas of mold or dirt use a soft brush or broom and an appropriate cleaning agent to remove these deposits. Check with the paint manufacturer and read the directions on the product to apply the cleaning agent.
2. Once the building is clean and the surfaces have been inspected for damage, wear and tear and paint coating degrade then repairs and must be undertaken immediately.
  - If the paint surface has been damaged, then:
    - Remove all damaged paint, sand back if required
    - Apply a quality primer on any bare timber
    - Once the primer has dried apply 2 top coats of a quality top coat paint.
3. It is a general rule that timber weatherboard homes should be repainted every 10 years if the initial coating product used was of good quality, delivering a good quality coating finish. In some cases repainting may be required earlier depending on condition and exposure to harsher elements.

## 10 Health & Safety

Health and safety precautions should be adhered to when working with all wood products.

Machine tools should be fitted with dust extractors and work areas should be kept clean.

If dust levels exceed Work Safe New Zealand Standards, the wearing of a dust mask (AS/NZS 1715 & AS/NZS 1716) and protective eyewear (AS/NZS1336 & AS/NZS 1337) is recommended.

Storage and work areas should be adequately ventilated.

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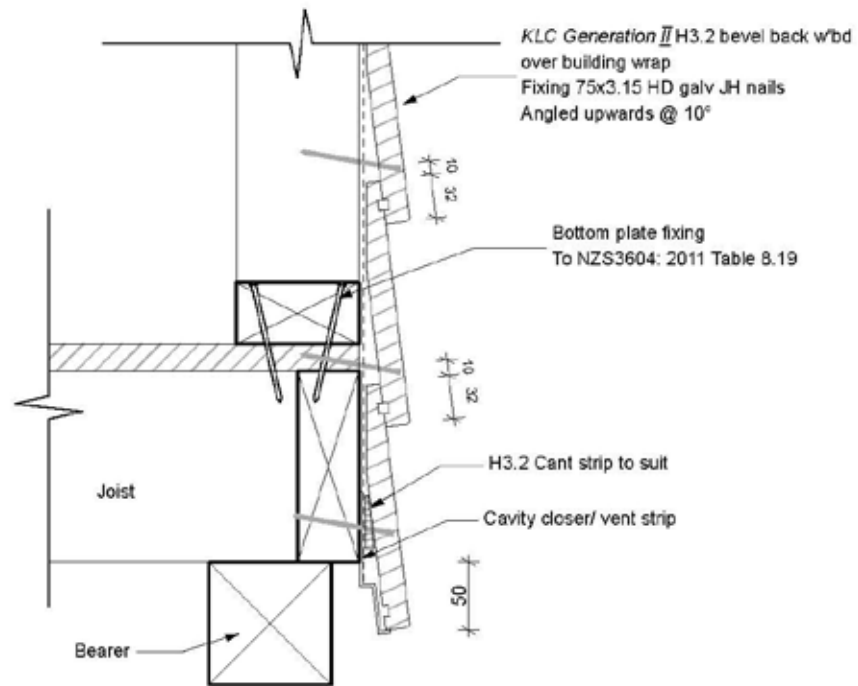
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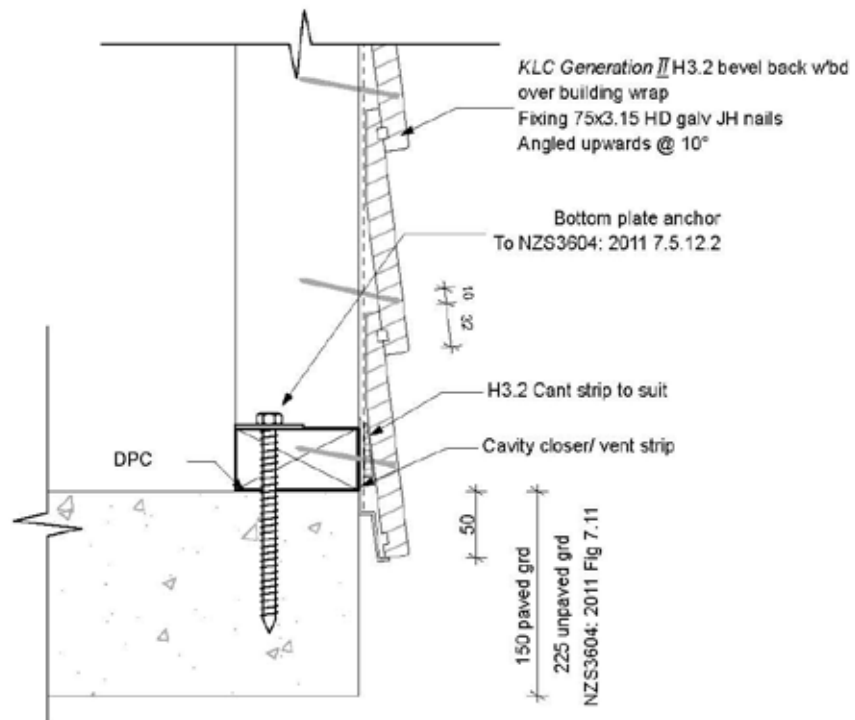


# 11 Detailed Drawings

## D1.1 Bevelback, Direct Fix, Foundation Timber Floor

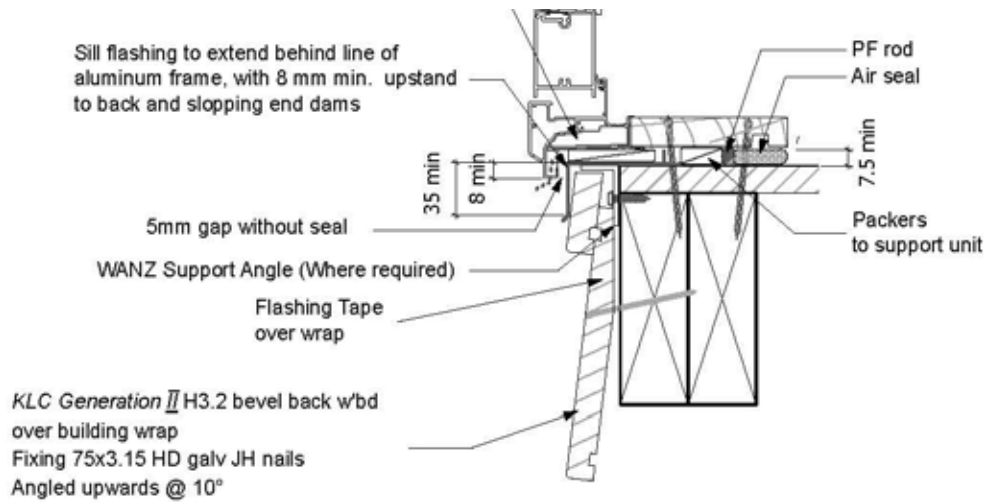


## D1.2 Bevelback, Direct Fix, Foundation Concrete Floor

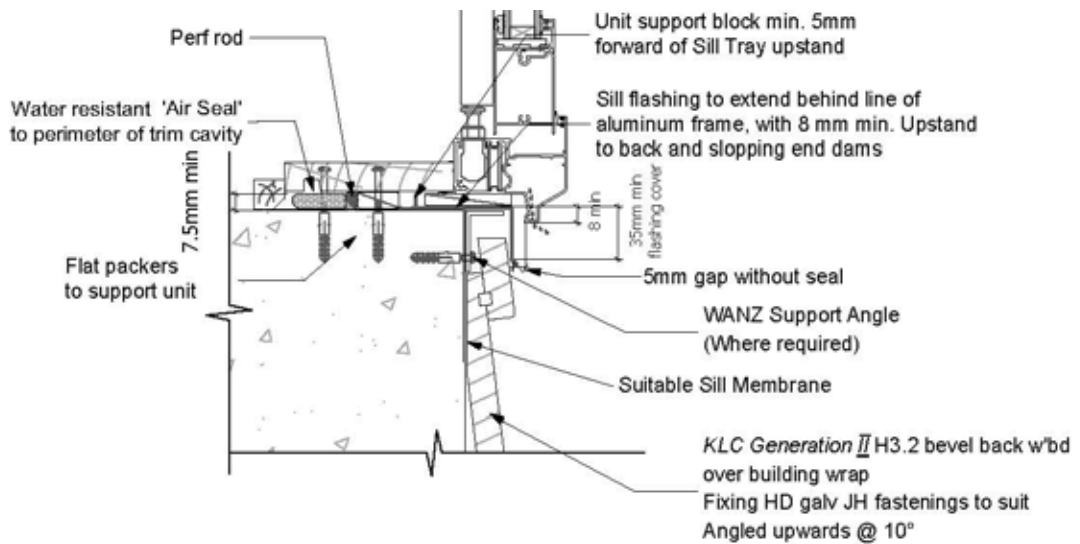


# 11 Detailed Drawings Section

## D1.3 Direct Fix, Sill, Timber Floor

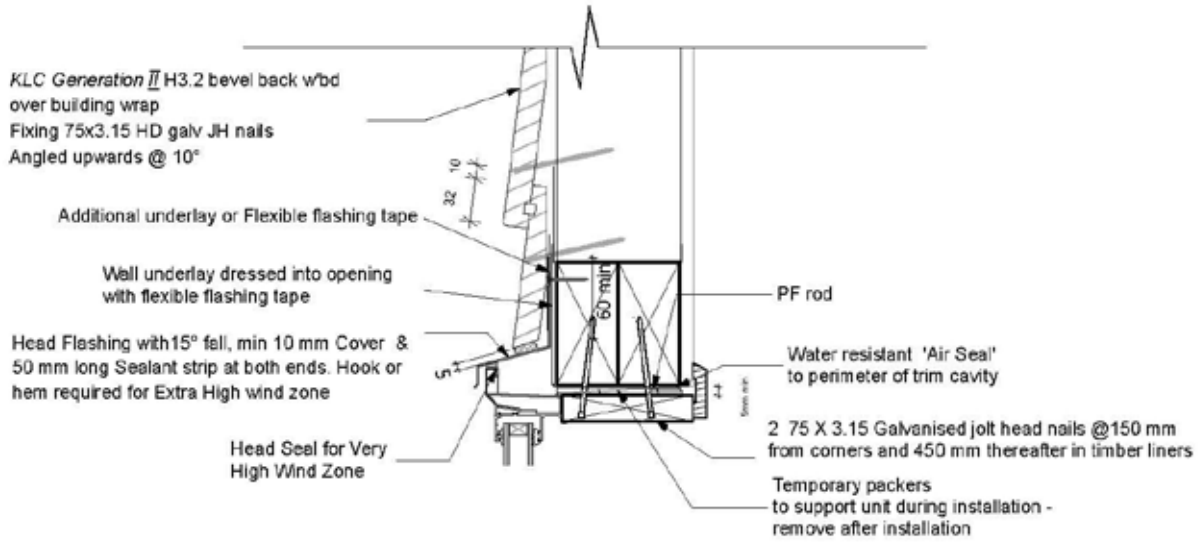


## D1.4 Direct Fix, Sill, Concrete Floor

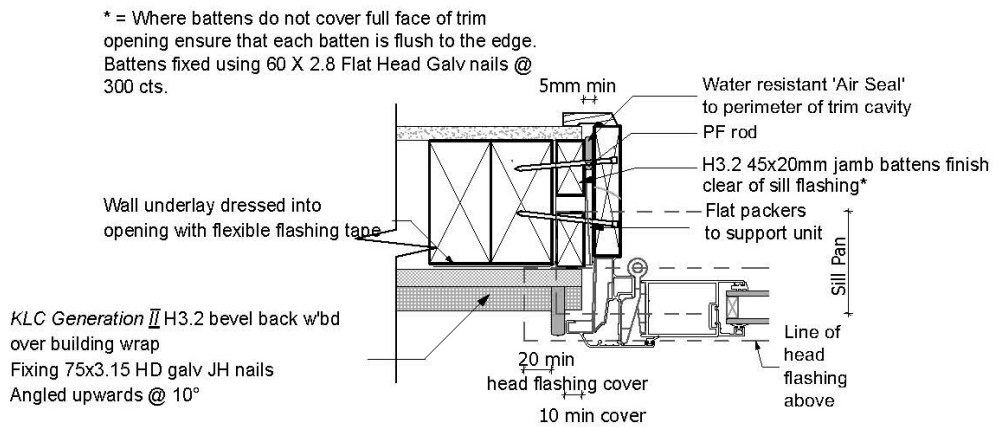


# 11 Detailed Drawings Section

## D1.5 Direct Fix, Door Jamb

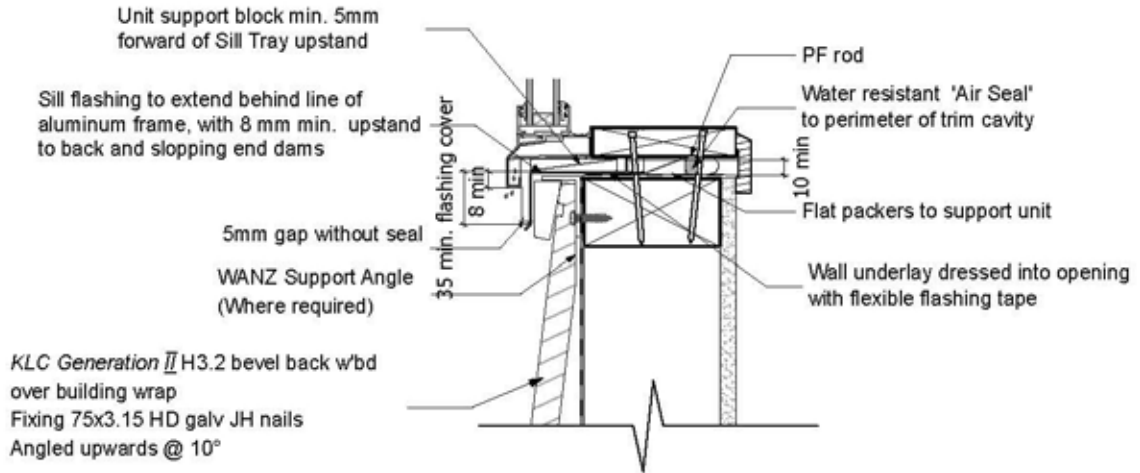


## D1.6 Direct Fix, Door Jamb

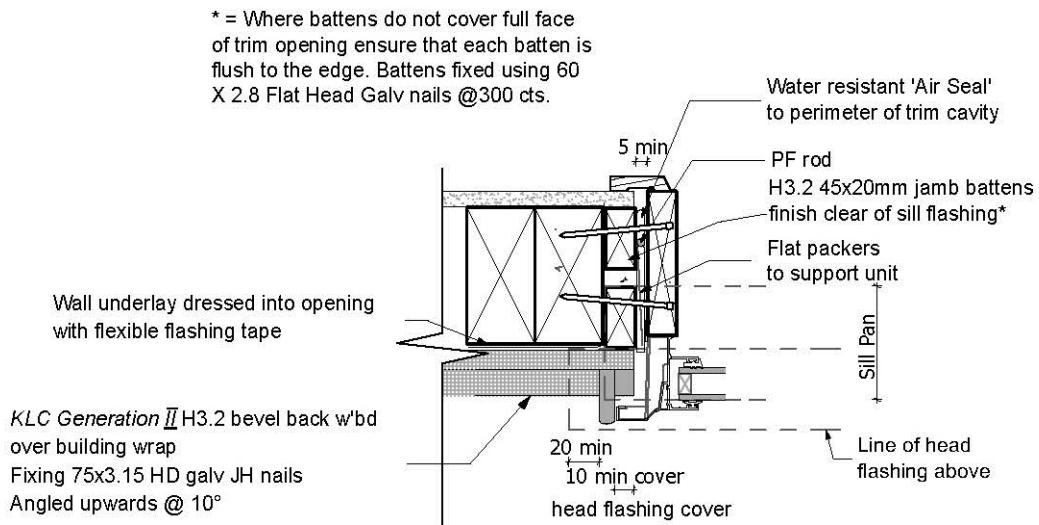


# 11 Detailed Drawings Section

## D1.7 Direct Fix, Window Sill

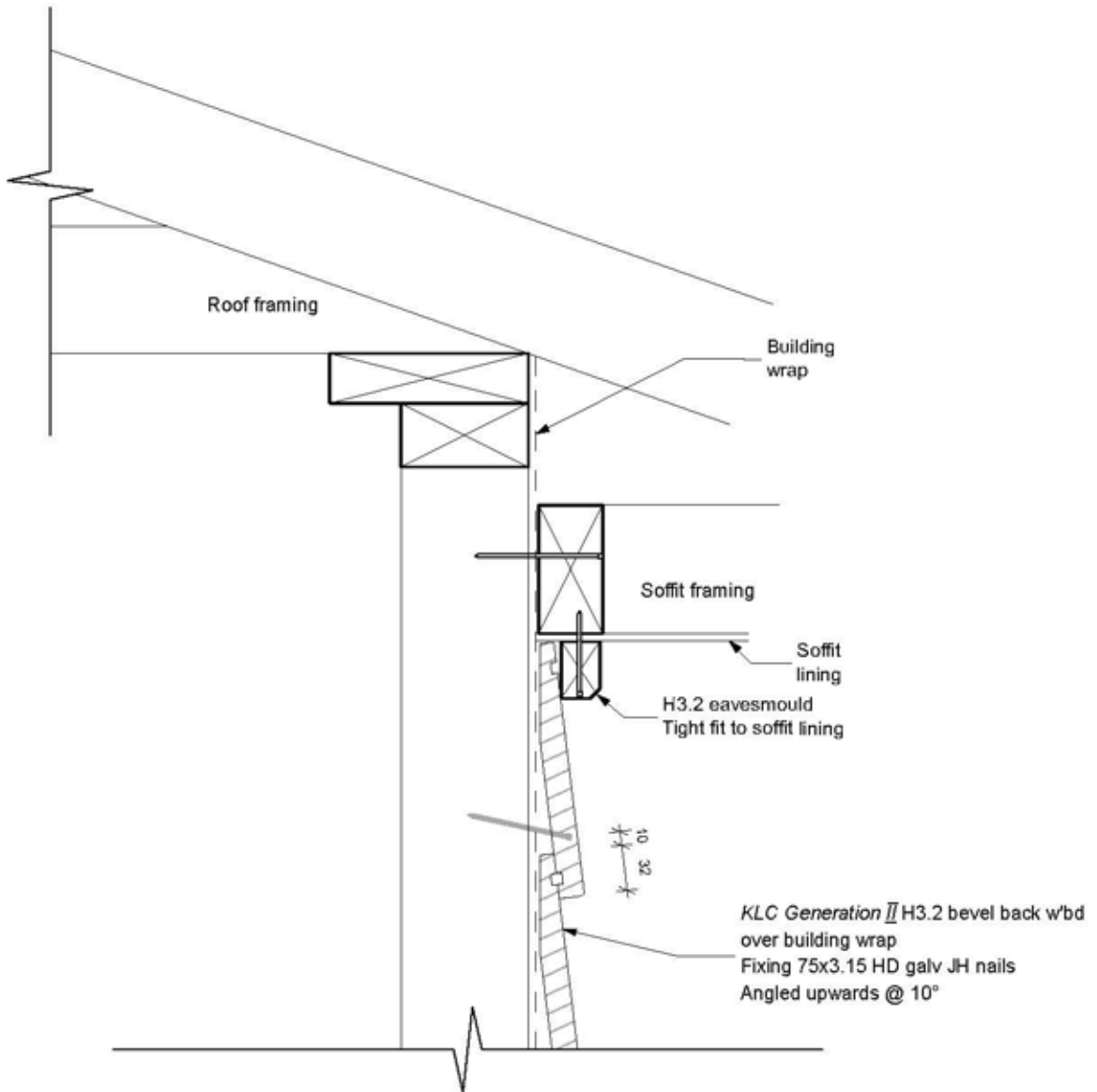


## D1.8 Direct Fix, Window Jamb



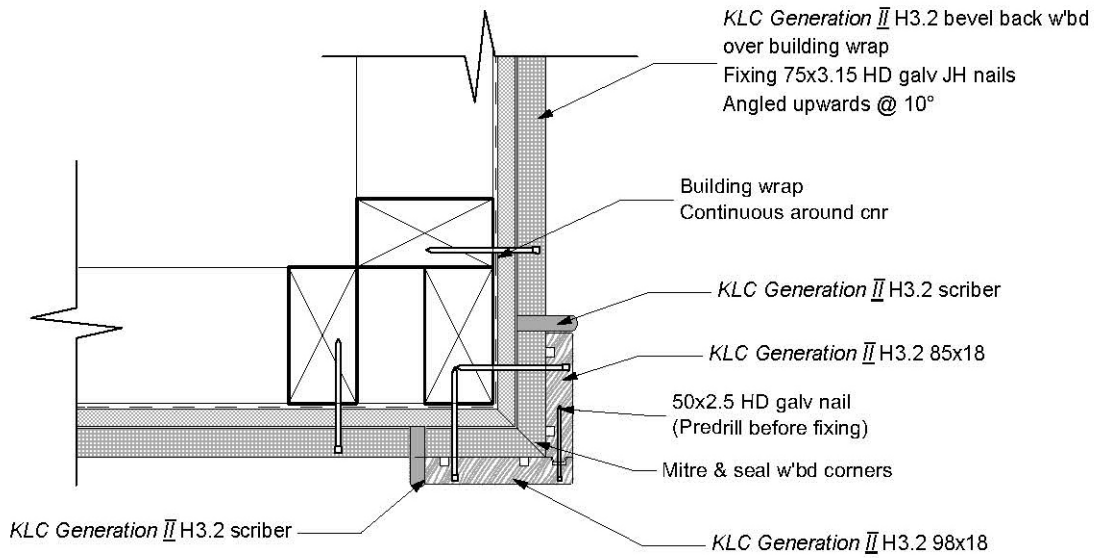
# 11 Detailed Drawings Section

## D1.9 Direct Fix, Soffit Junction

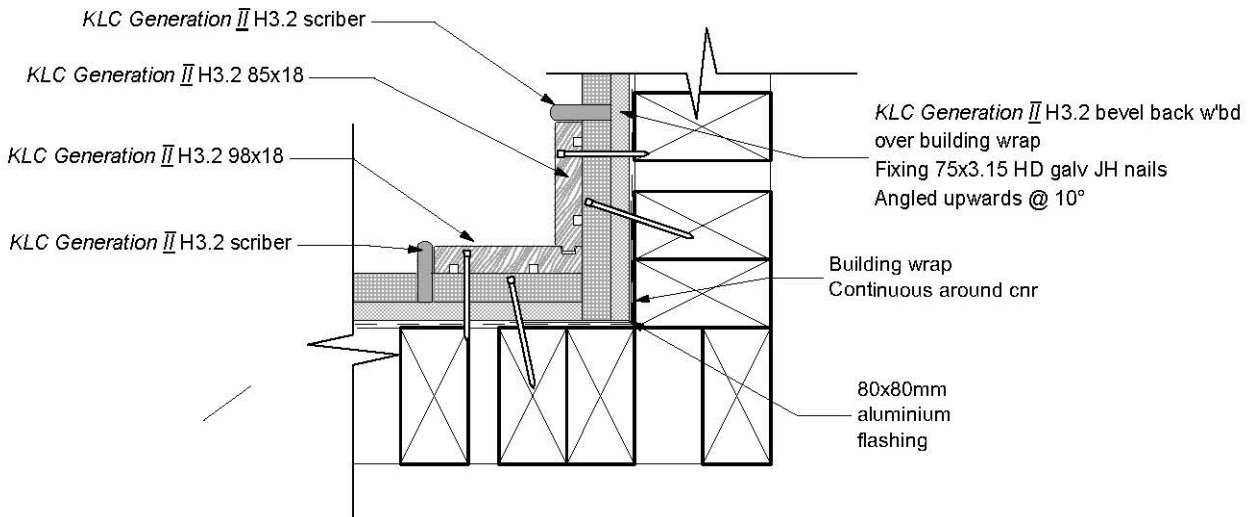


# 11 Detailed Drawings Section

## D1.10 Direct Fix, External Box Corner

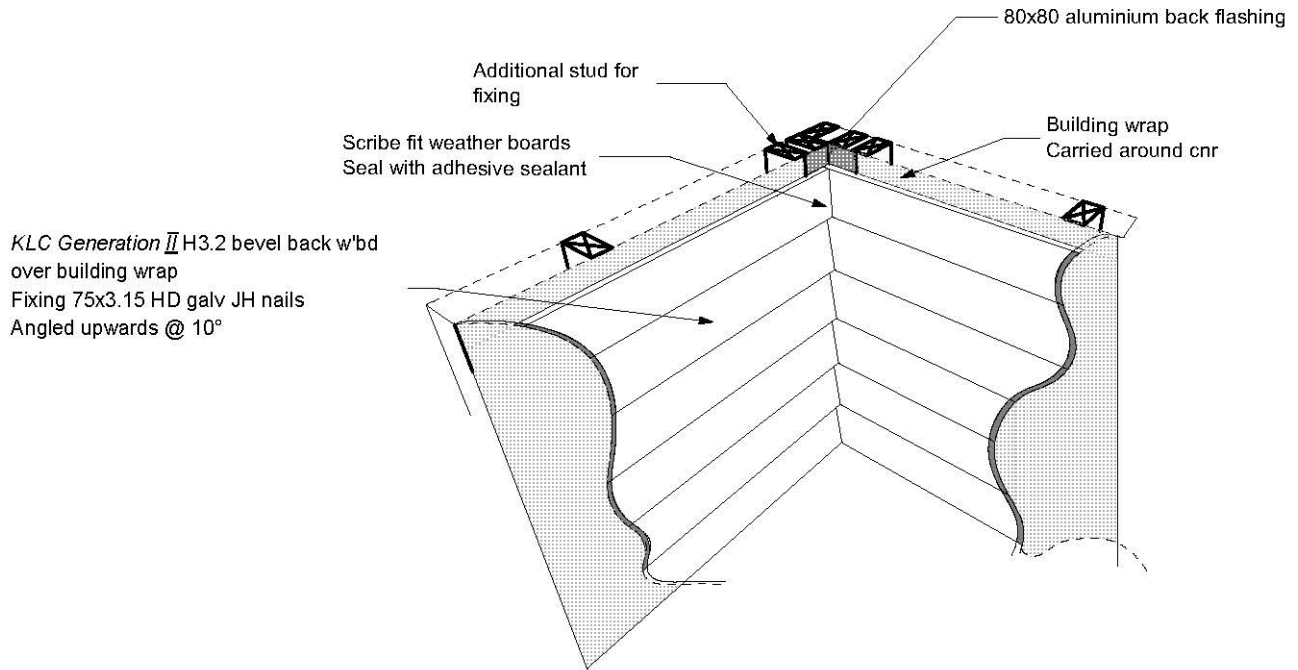


## D1.11 Direct Fix, Internal Box Corner



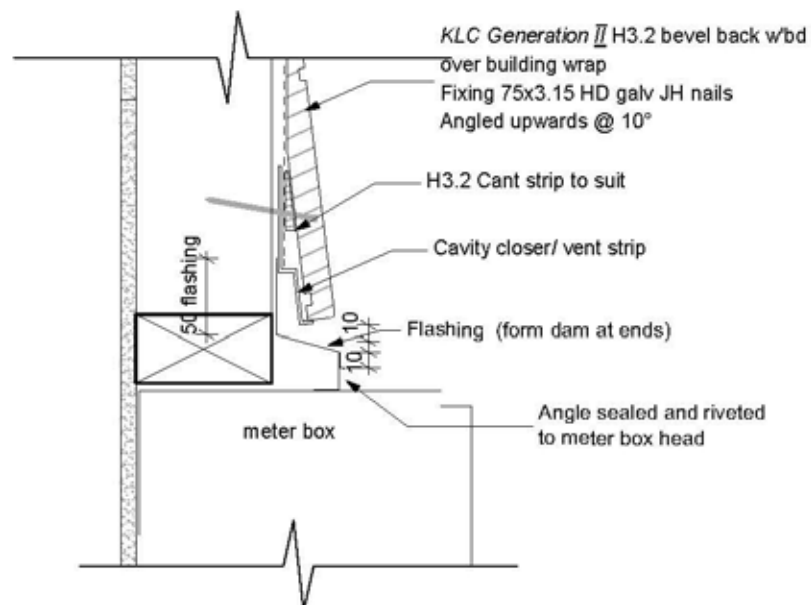
# 11 Detailed Drawings Section

## D1.12 Direct Fix, Scribe Fit Internal Corner



Note: Direct Fix drawing shown, Cavity fix similar with KLC Generation II H3.2 45x20 cavity batten

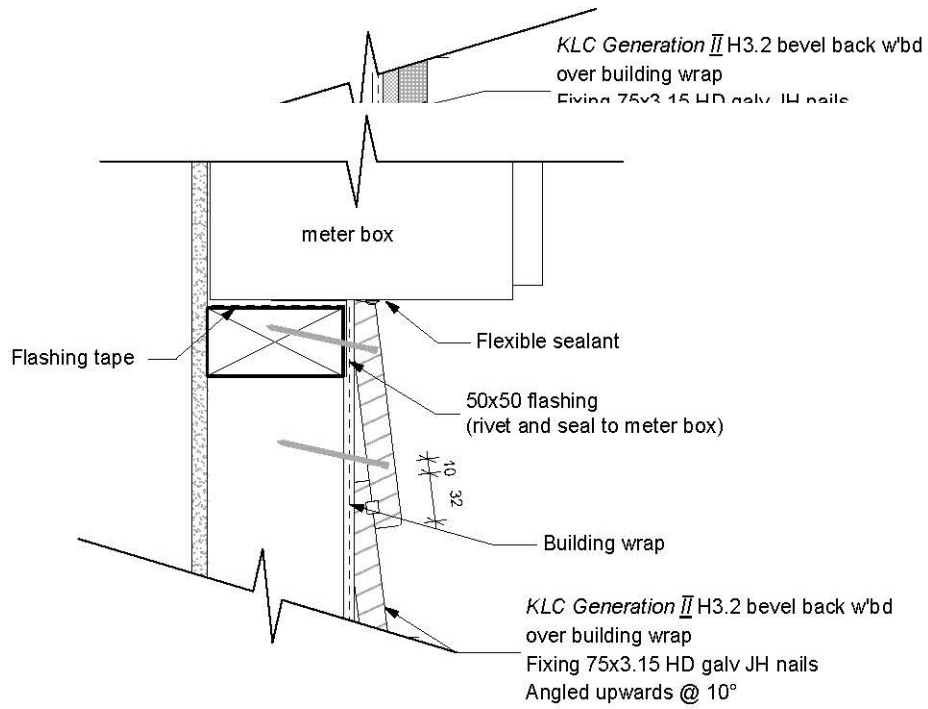
## D1.13 Direct Fix, Meter Box Head



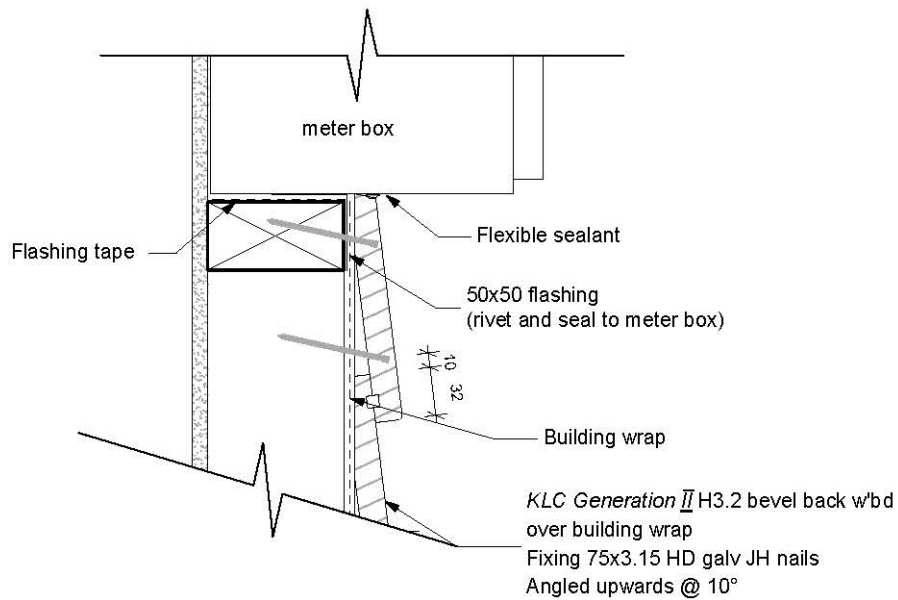


# 11 Detailed Drawings Section

## D1.14 Direct Fix, Meter Box Jamb

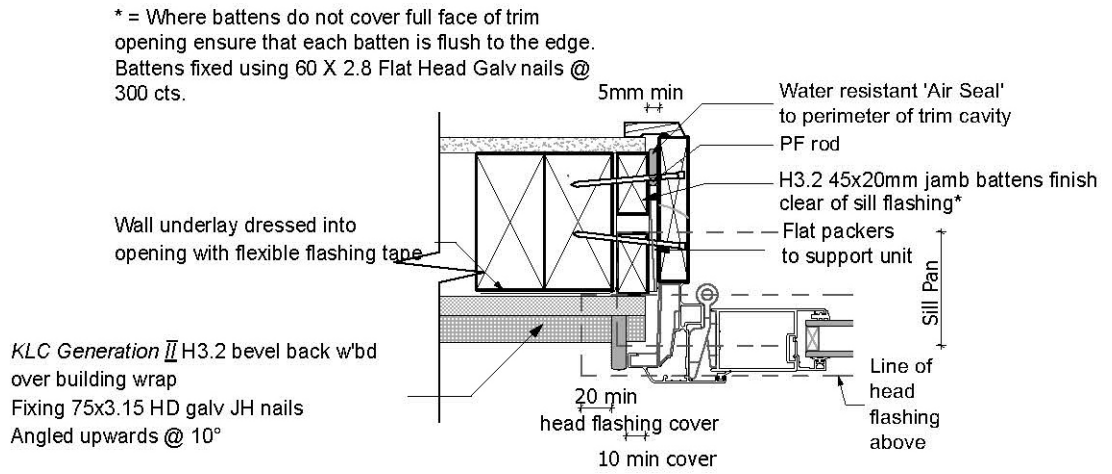


## D1.15 Direct Fix, Meter Box Sill

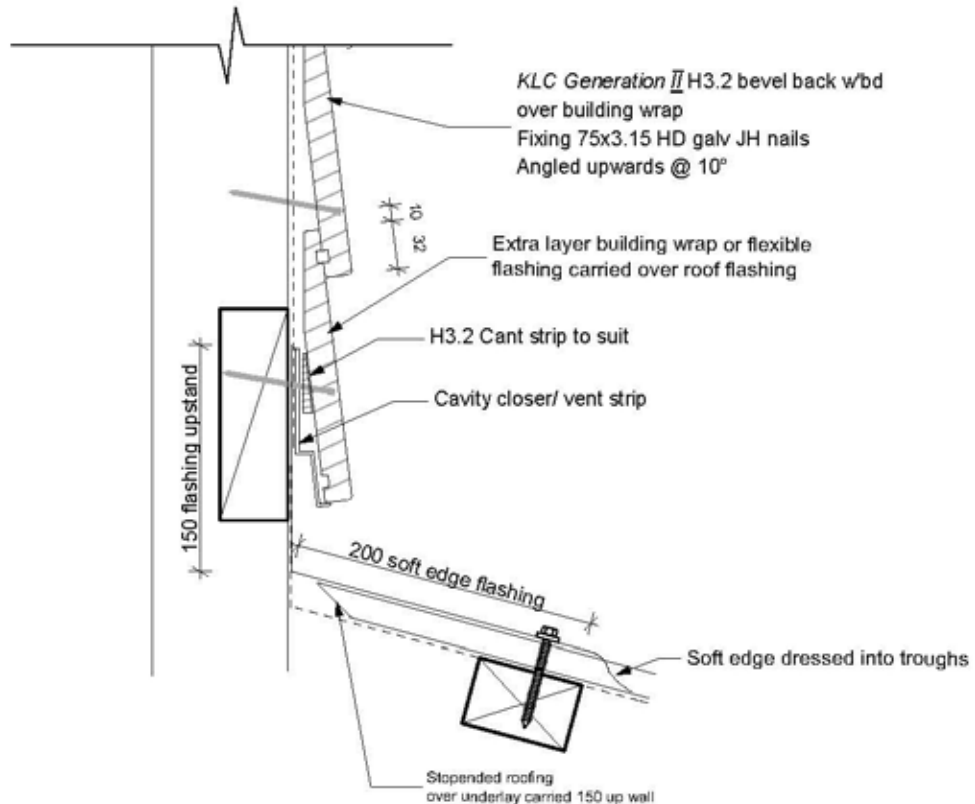


# 11 Detailed Drawings Section

## D1.16 Direct Fix, Pipe Penetration

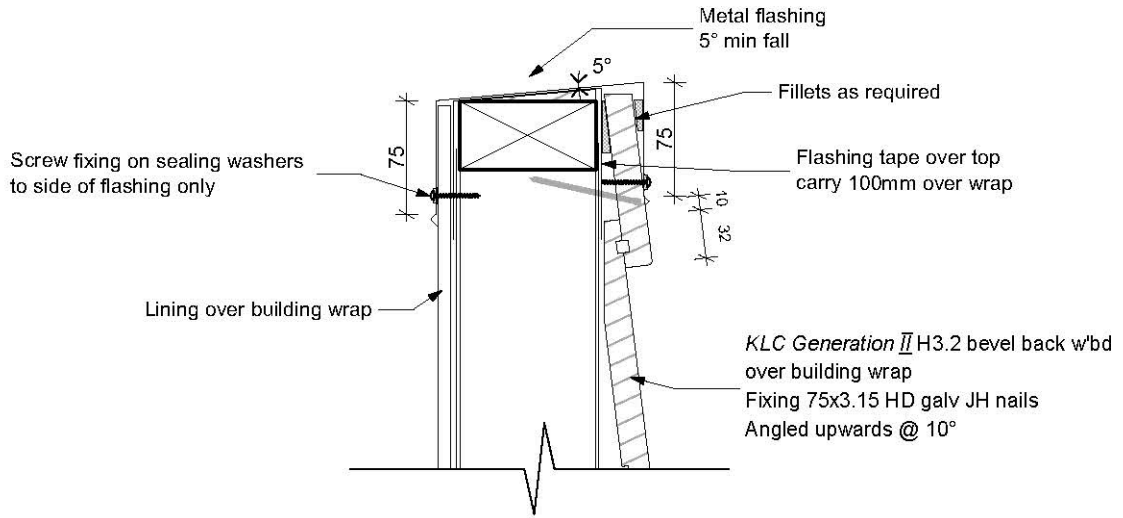


## D1.17 Direct Fix, Apron

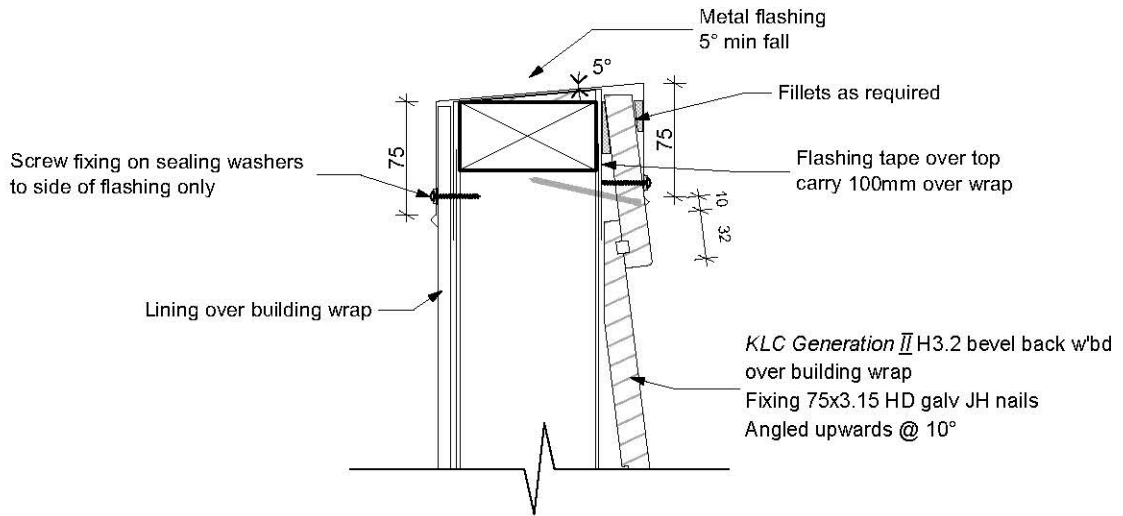


# 11 Detailed Drawings Section

## D1.18 Direct Fix, Fixing Detail, Parapet

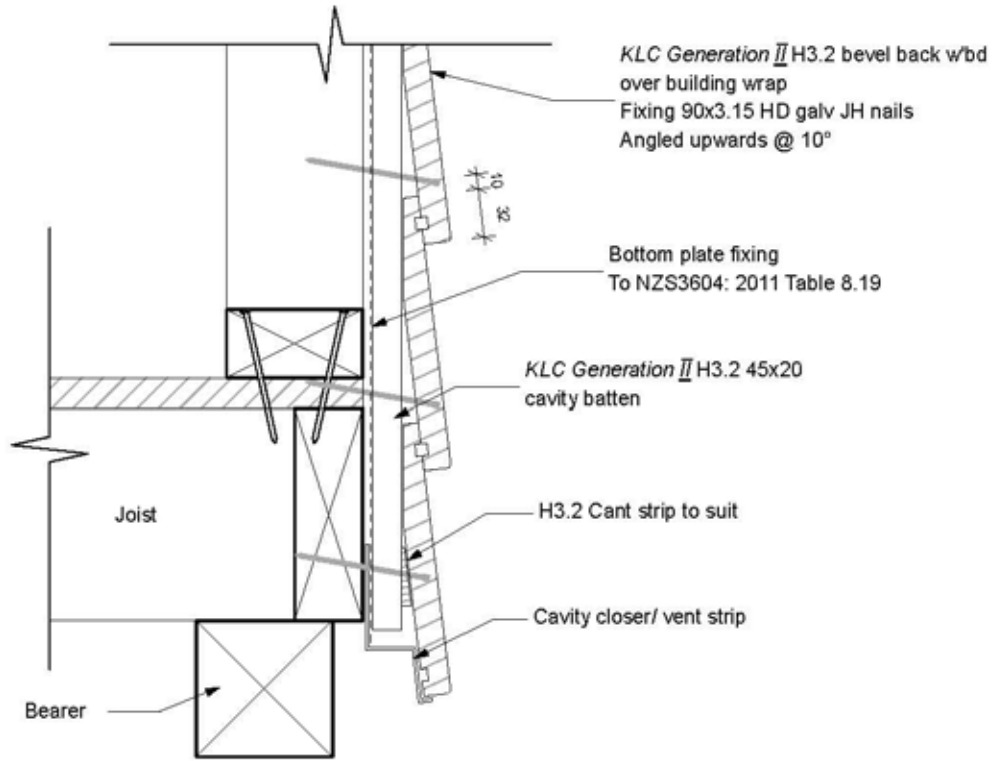


## D3.1 Direct Fix, Fixing Detail

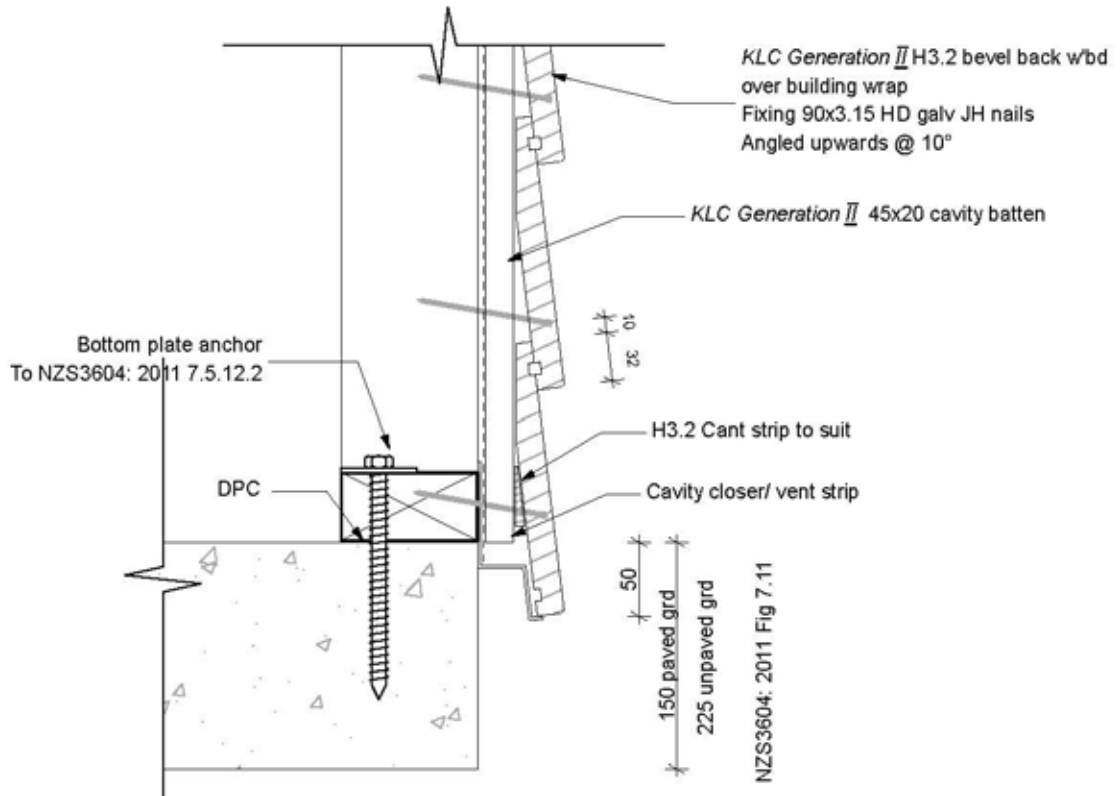


# 11 Detailed Drawings Section

## D2.1 Cavity Fix, Foundation, Timber Floor

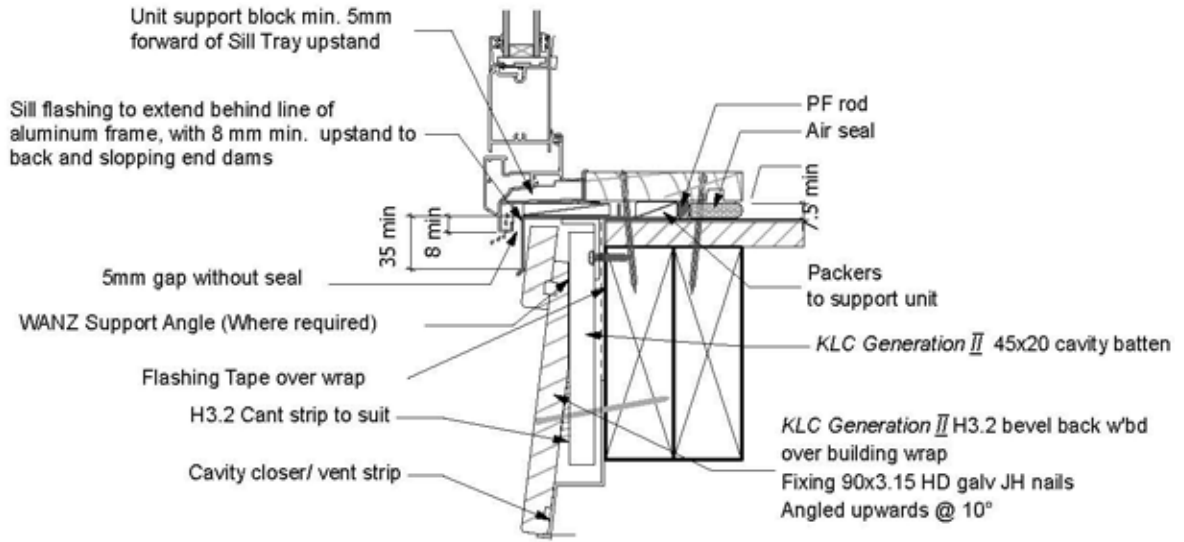


## D2.2 Cavity Fix, Foundation Concrete Floor

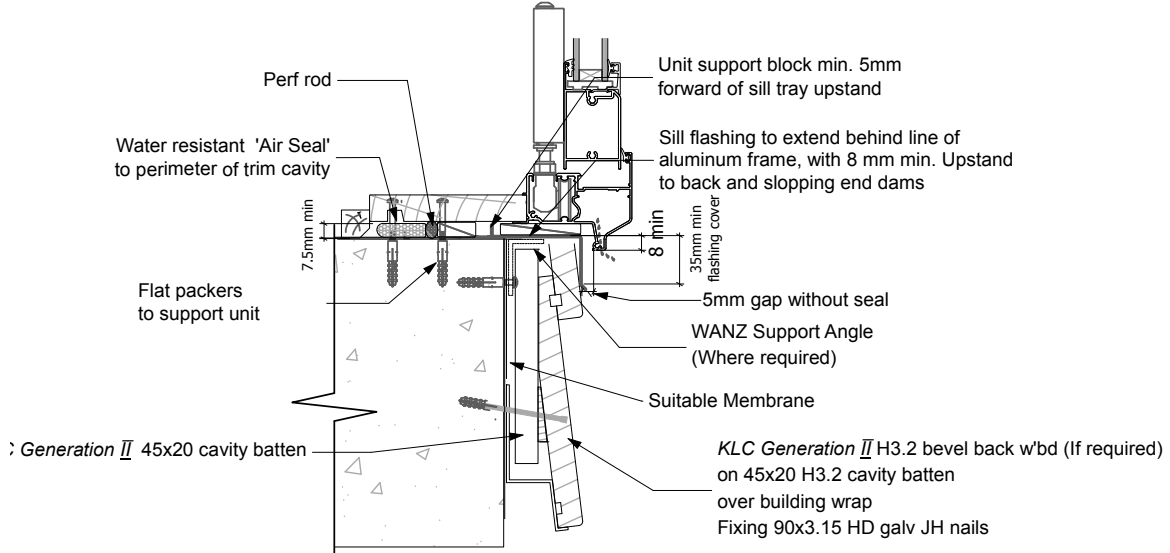


# 11 Detailed Drawings Section

## D2.3 Cavity Fix, Door Sill, Timber Floor



## D2.4 Cavity Fix, Door Sill, Concrete Floor



# 11 Detailed Drawings Section

## D2.5 Cavity Fix, Window Head

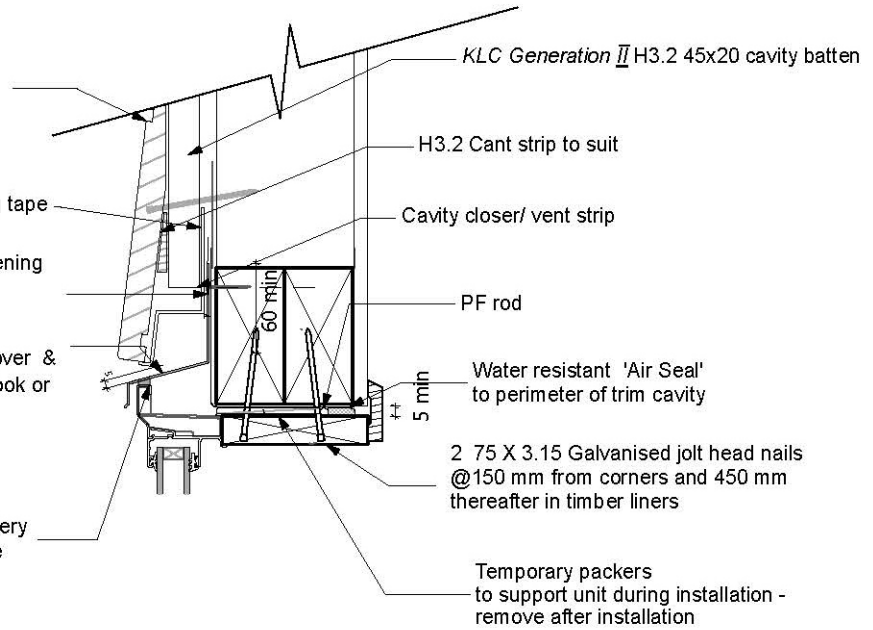
KLC Generation II H3.2 bevel back w'bd  
on cavity batten  
over building wrap  
Fixing 90x3.15 HD galv JH nails  
Angled upwards @ 10°

Additional underlay or Flexible flashing tape

Wall underlay dressed into opening  
with flexible flashing tape

Head Flashing with 15° fall, min 10 mm Cover &  
50 mm long Sealant strip at both ends. Hook or  
hem required for Extra High wind zone

Head Seal for Very  
High Wind Zone

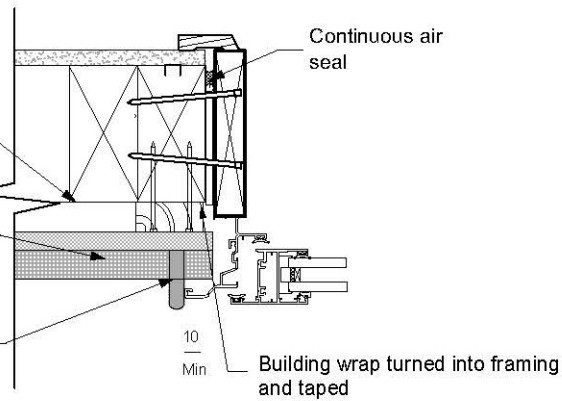


## D2.6 Cavity Fix, Window Jamb

KLC Generation II H3.2 45x20  
cavity batten

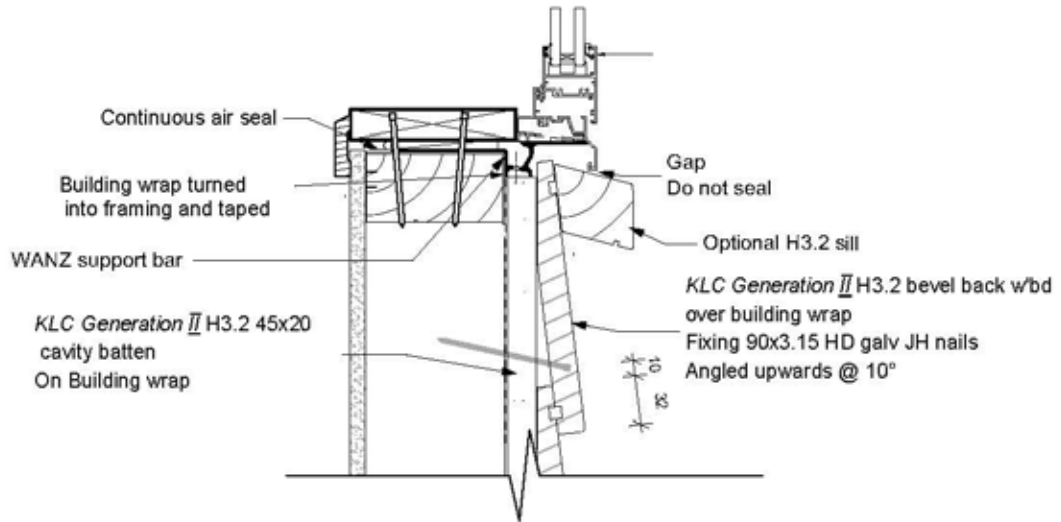
KLC Generation II H3.2 bevel back w'bd  
over building wrap  
Fixing 90x3.15 HD galv JH nails  
Angled upwards @ 10°

KLC Generation II H3.2 scribe

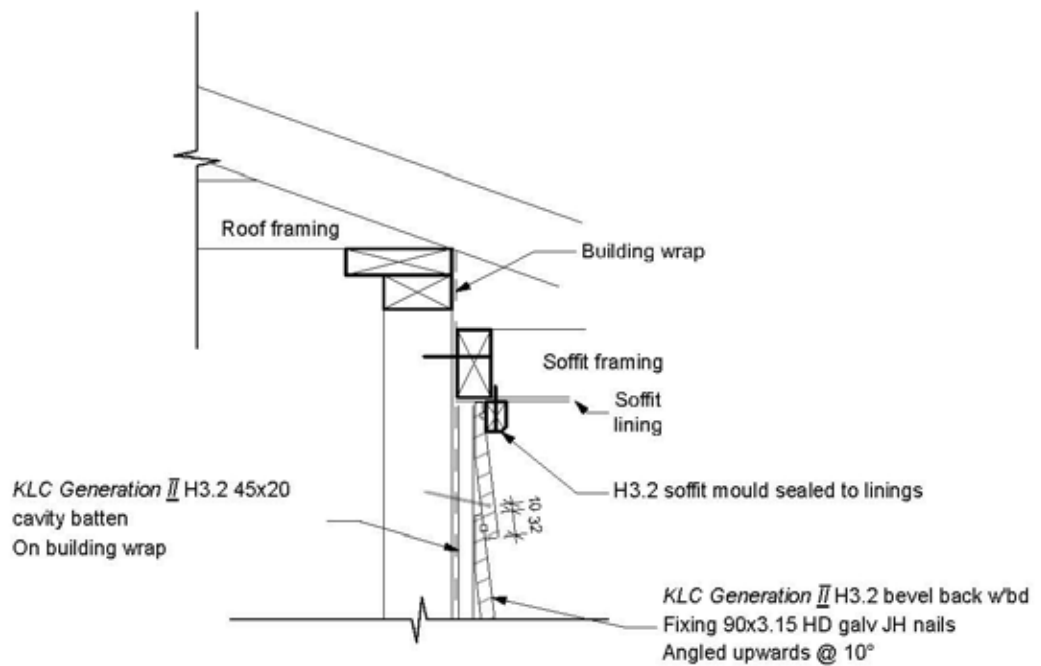


# 11 Detailed Drawings Section

## D2.7 Cavity Fix, Window Sill

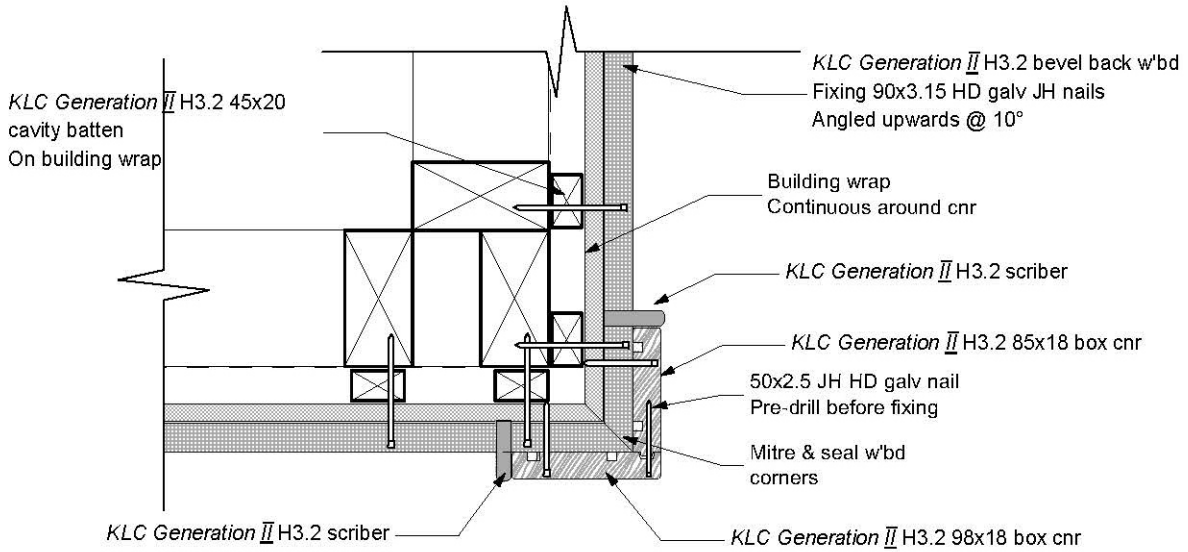


## D2.8 Cavity Fix, Soffit Junction

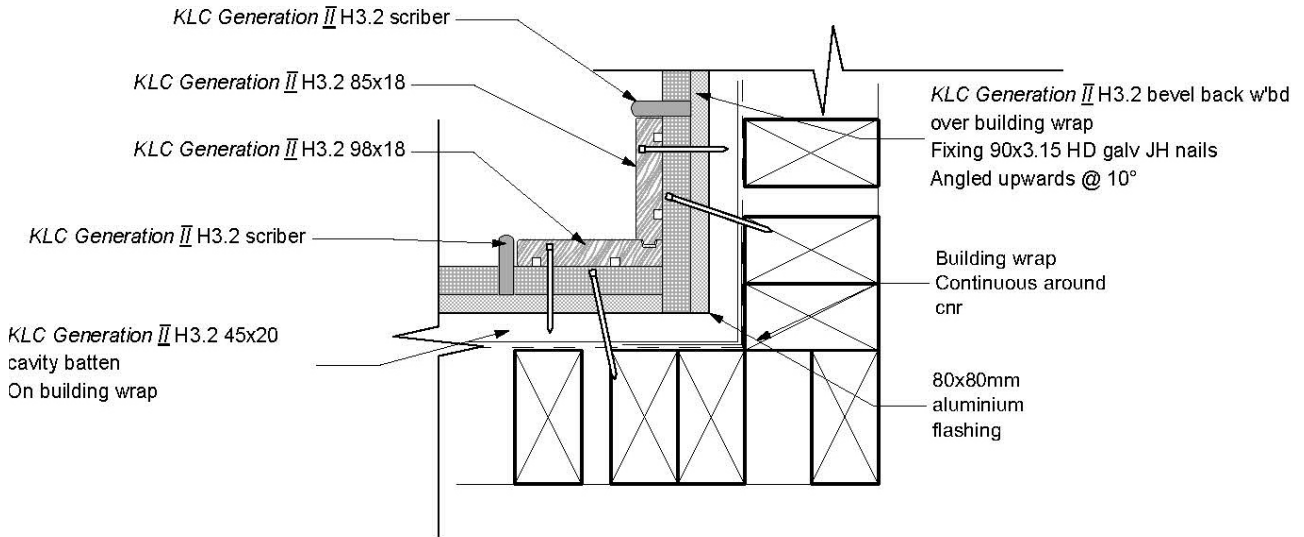


# 11 Detailed Drawings Section

## D2.9 Cavity Fix, External Box Corner



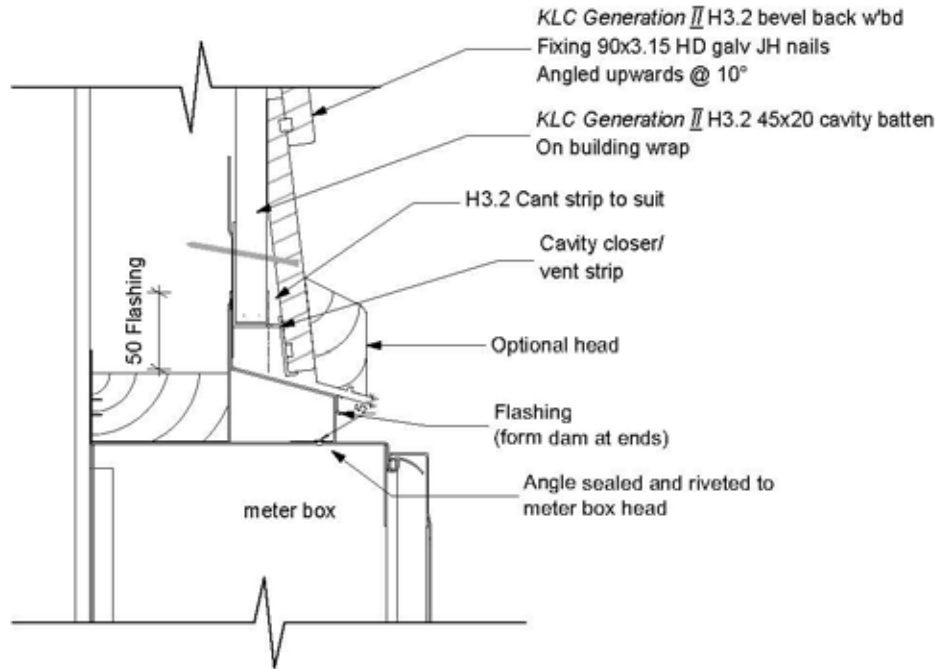
## 2.10 Cavity Fix, Internal Box Corner



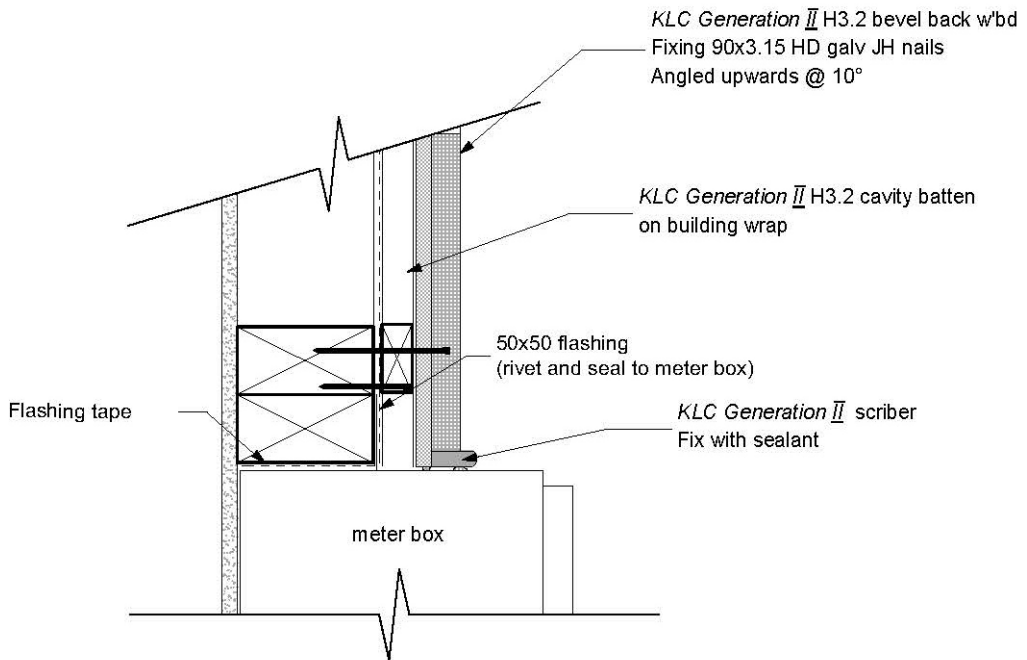


# 11 Detailed Drawings Section

## 2.11 Cavity Fix, Meter Box Head

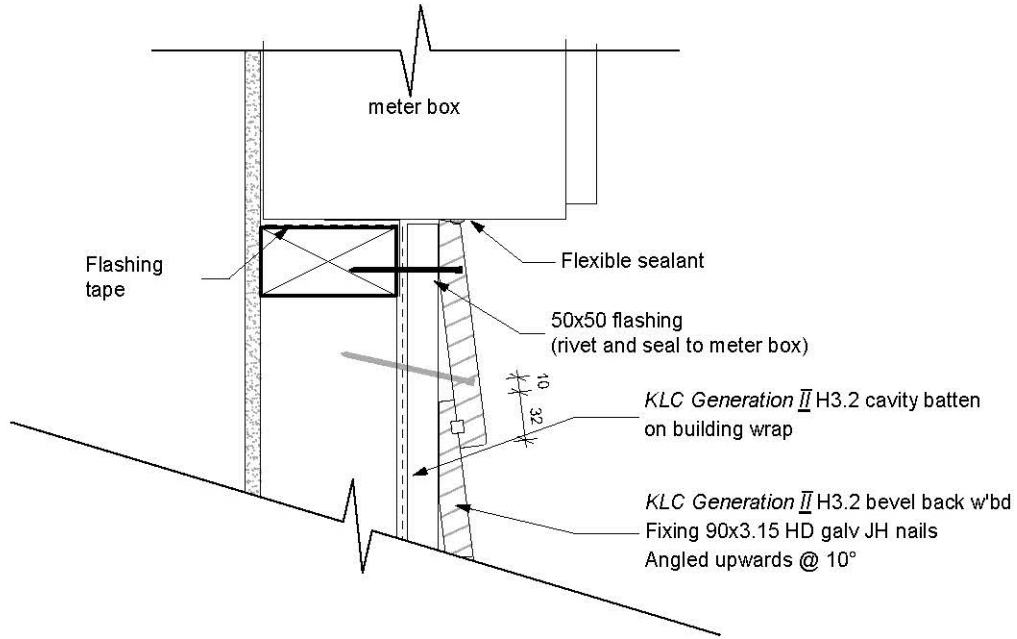


## D2.12 Cavity Fix, Meter Box Jamb

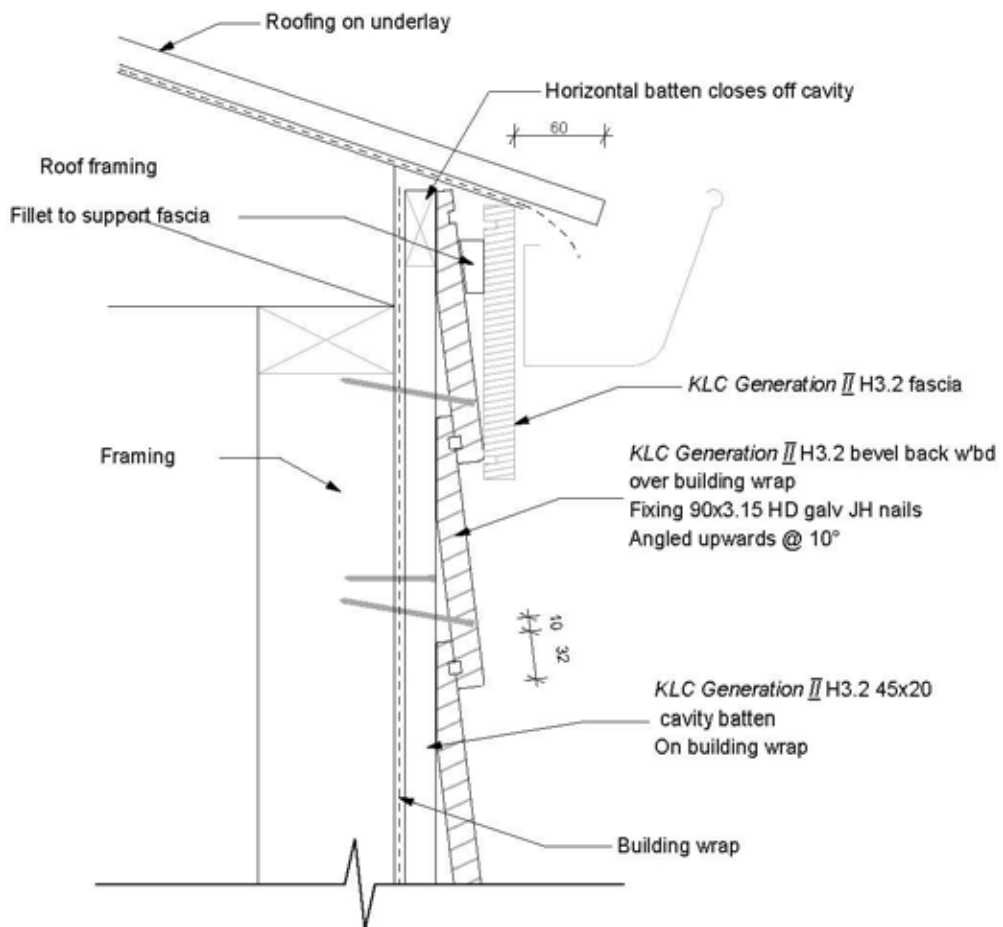


# 11 Detailed Drawings Section

## D2.13 Cavity Fix, Meter Box Sill

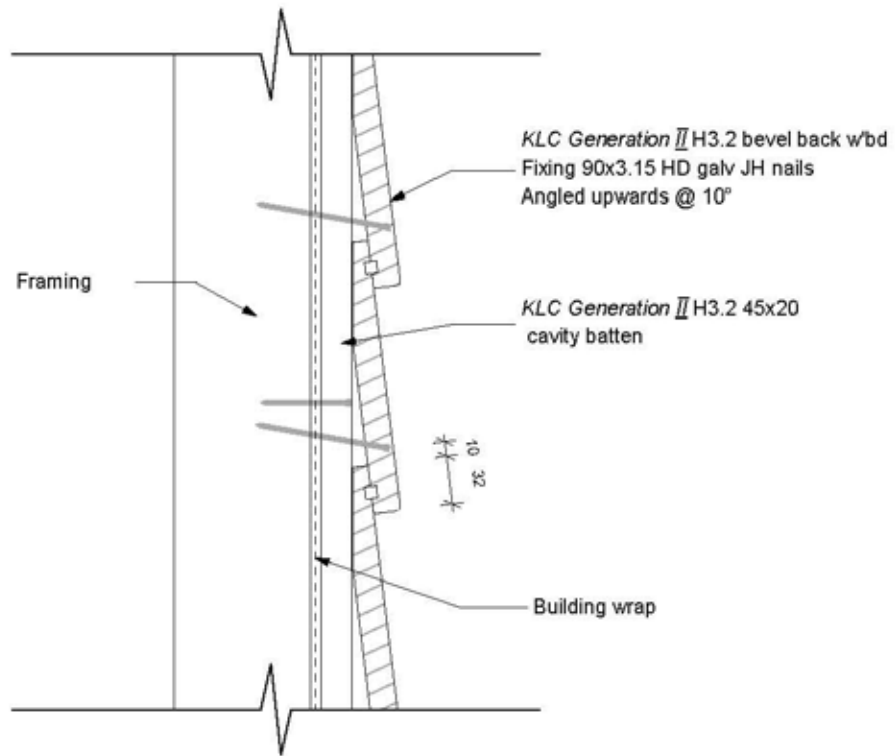


## D2.14 Cavity Fix, Nil Soffit

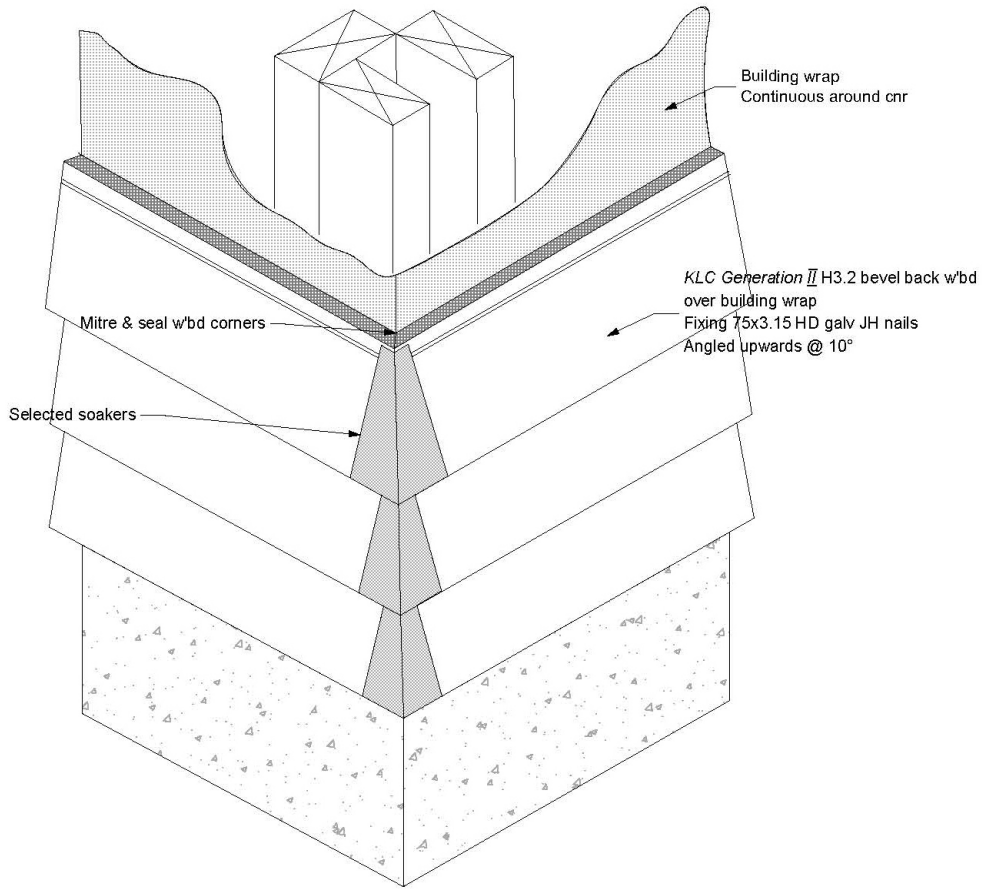


# 11 Detailed Drawings Section

## D3.2 Cavity Fix, Fixing Detail



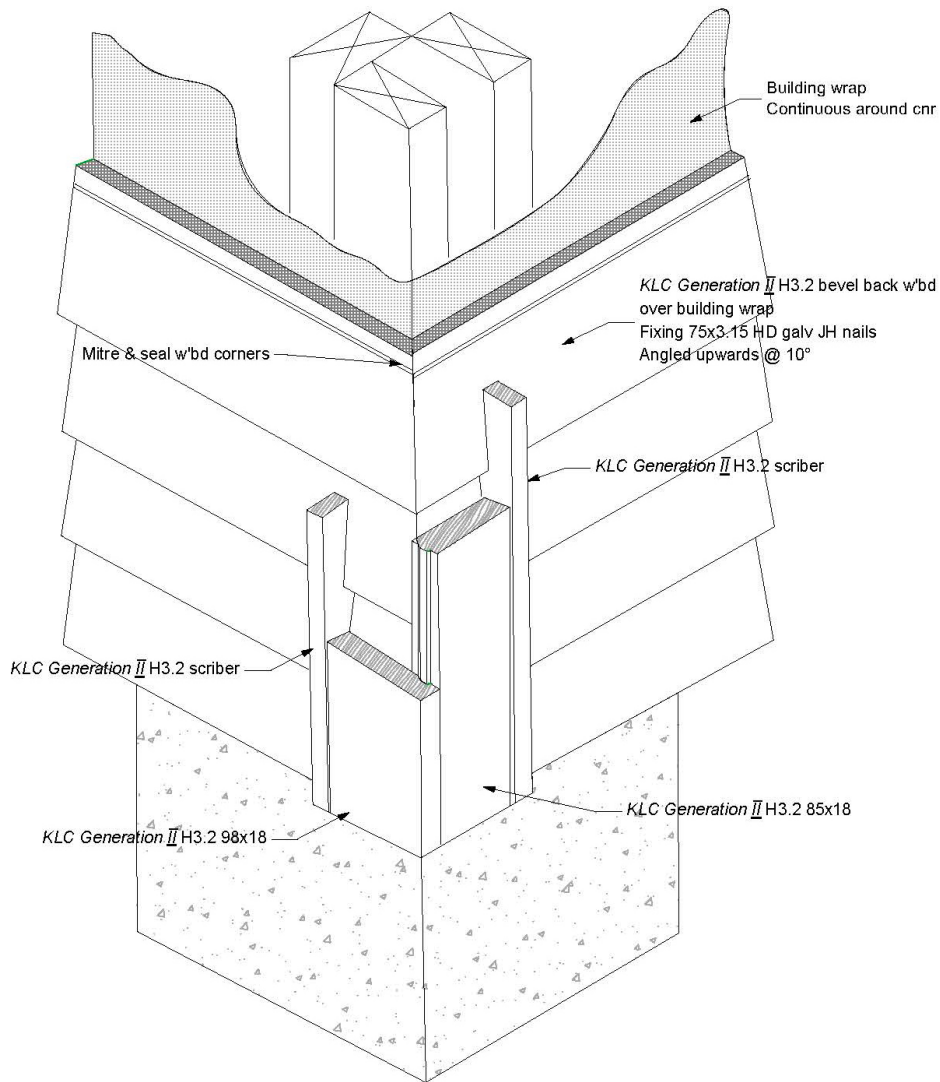
## D3.3 External Corner with Soakers



*Note: Direct Fix drawing shown, Cavity fix similar but with KLC Generation II H3.2 45x20 cavity batten*

# 11 Detailed Drawings Section

## D3.4 External Corner Boxing



Note: Direct Fix drawing shown, Cavity fix similar but with KLC Generation II H3.2 45x20 cavity batten

## D3.5 Fascia Installation

# 11 Detailed Drawings Section

