PROPOSED RESIDENTIAL HOUSE

LOT 114, DP 515143
17 BLACK BEECH CRESCENT,
TAKANINI, AUCKLAND 2112

DATE: 08/ 2024
(ISSUE A)

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APPENDIX

1	SPECIFICATIONS
2	ENGINEER DESIGN AND WALL BRACING CALCALATION
3	H1 CALCULATION
4	RISK MATRIX (ON ELEVATIONS)

LEGAL DESCRIPTION:
LOT 114,
DP 515143
Site Area 411 m²

Unitary Planning Zone:
Mixed Housing Suburban

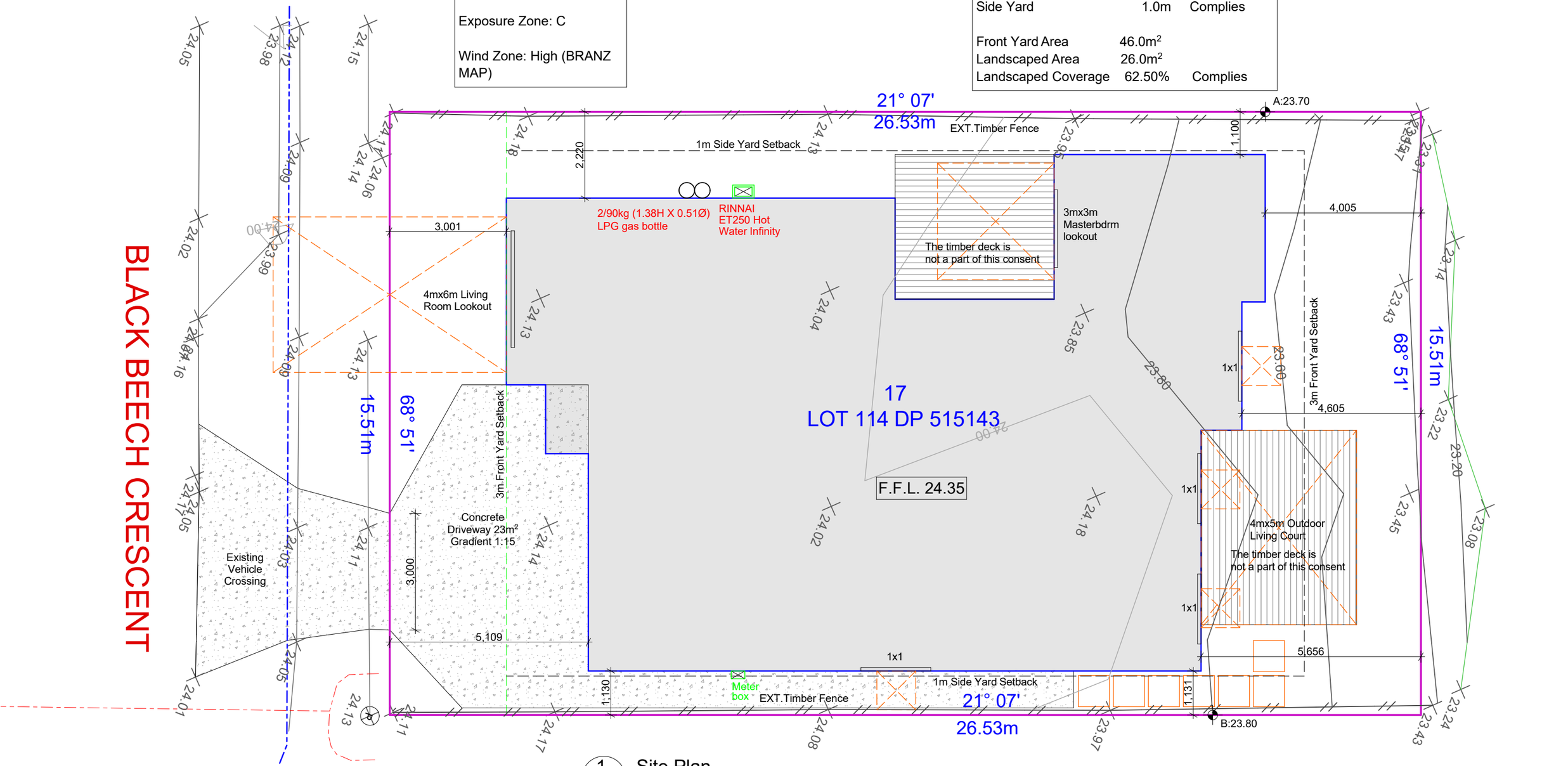
Climate Zone: 1

Earthquake Zone: 1

Exposure Zone: C

Wind Zone: High (BRANZ MAP)

Total site area	411m²	
Building footprint area	205.0m²	
Building coverage	49.88%	Complies
Roofed Area	225.0m²	
Concete Driveway	48.0m²	
Total Impervious Area	273.0m²	
Impervious Coverage	66.42%	Complies
Landscaped area	158.0m²	
Landscaped coverage	38.44%	Complies
Front Yard	3.0m	Complies
Side Yard	1.0m	Complies
Front Yard Area	46.0m²	
Landscaped Area	26.0m²	
Landscaped Coverage	62.50%	Complies



1. Site Plan
1:100

ALL DIMENSIONS MUST BE VERIFIED ON SITE

C&H DESIGN NZ LTD caojun325@hotmail.com Mobile: 021-0737398	PROJECT: **NEW DWELLING**	ADDRESS: **17 Black Beech Crescent, Takanini, Auckland**	DRAWING TITLE: **Site & Drainage Plan**	DRAWN BY: **AC** DATE: **08/2024**	ISSUE: **A**	SCALE: **1:100 /A3**	PAGE NO: **L01**

Excavation and Back Filling
As required for sewer and stormwater. Check for other service lines before excavation - the Drainlayer is responsible for making good any damage. Trenches true to line and with even gradients between gullies, soil stack terminations or downpipes, etc.

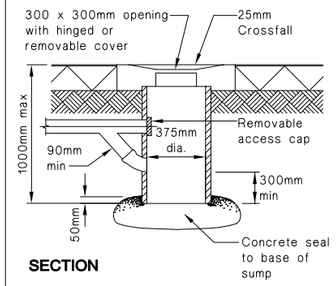
Keep the bottom of trenches clear of loose material. All pipes shall be laid in appropriate bedding material, compacted as required. Shore trenches if required to suit ground conditions. Backfilling shall be by this trade, to the standards required in Siteworks.

Legend:
SS line
SW line
BDY LINE

Water Pipe Material as to G12-2.2 table-1
1)Hot and Cold Water pipe
Ø20mm Copper or Polybutylene
2)Cold Water Pipe only
Ø20mm Polyethylene
3)Hot water pipe shall be insulated in accordance with NZS4305

Note:
1. All services pipes fall to be 1:60 min
2. All services pipes underground to be Ø100mm
3. PVC Down Pipe Size - 80Ømm

Figure 8: Type-one Surface Water Sump
Paragraph 3.6.2



Minimum Gradient of Drain
DN 50: 1:40
DN 65: 1:40
DN 100: 1:60

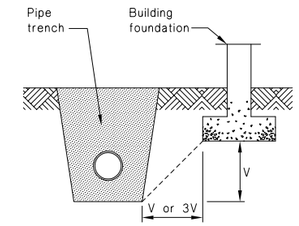
Legend:
WB Wash Basin
KS Kitchen Sink
TV Terminal Vent
SH Shower
ORG Overflow Relief Gully
WC Water Closet
BT Bath Tub
LT Laundry Tub

Plumbing design as to AS/NZS 3500.2
50mm dia - 1:40 Gradient
65mm dia - 1:40 Gradient
100mm dia - 1:60 Gradient

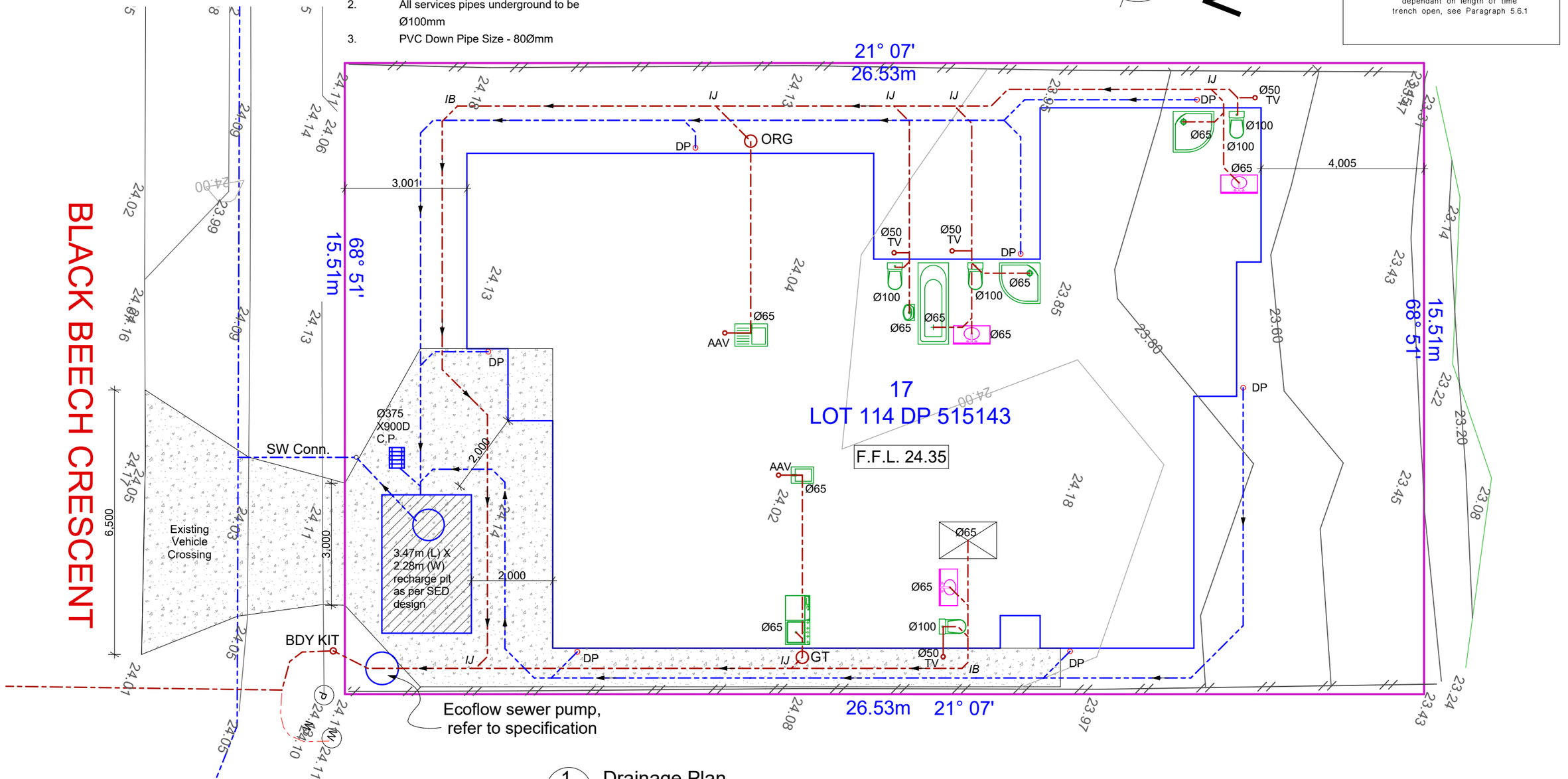
Sanitary Drainage design as to AS/NZS 3500.2
100mm dia - Sanitary 1:60 Gradient

Stormwater Drainage design as to E1/AS1
100mm dia - Stormwater 1:120 Gradient

Figure 8: Relationship of pipe trench to building foundation
Paragraph 5.6.1



Minimum horizontal seperation shall be V or 3V dependant on length of time trench open, see Paragraph 5.6.1



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1. Drainage Plan
1:100

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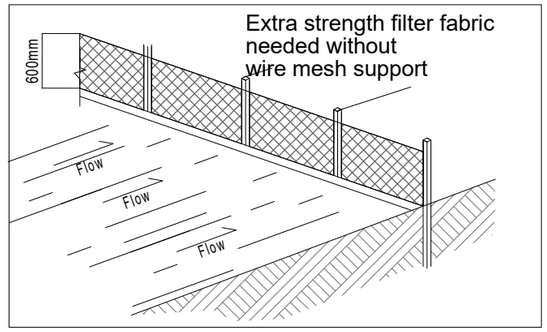
FILLING AREA

EXCAVATION AREA

EARTHWORKS AREAS		
FILLING AREA	123m²	25m³
EXCAVATION AREA	210m²	20m³
Total earthworks :	333m²	45m³



N

BLACK BEECH CRESCENT

600mm
silt fence

EXT.Timber Fence

21° 07'
26.53m

Portaloo

68° 51'

15.51m

17
LOT 114 DP 515143

F.F.L. 24.35

Cleared ground
level 24.00

Vehicle entrance
200mm deep
GAP70 aggregate

Surface
water
diversion

construction
material
storage

Rubbish
skip

Existing
Vehicle
Crossing

Safety
Warning
Sign

600mm
silt fence

EXT.Timber Fence

21° 07'
26.53m

1. Excavation & Site Management Plan
1:100

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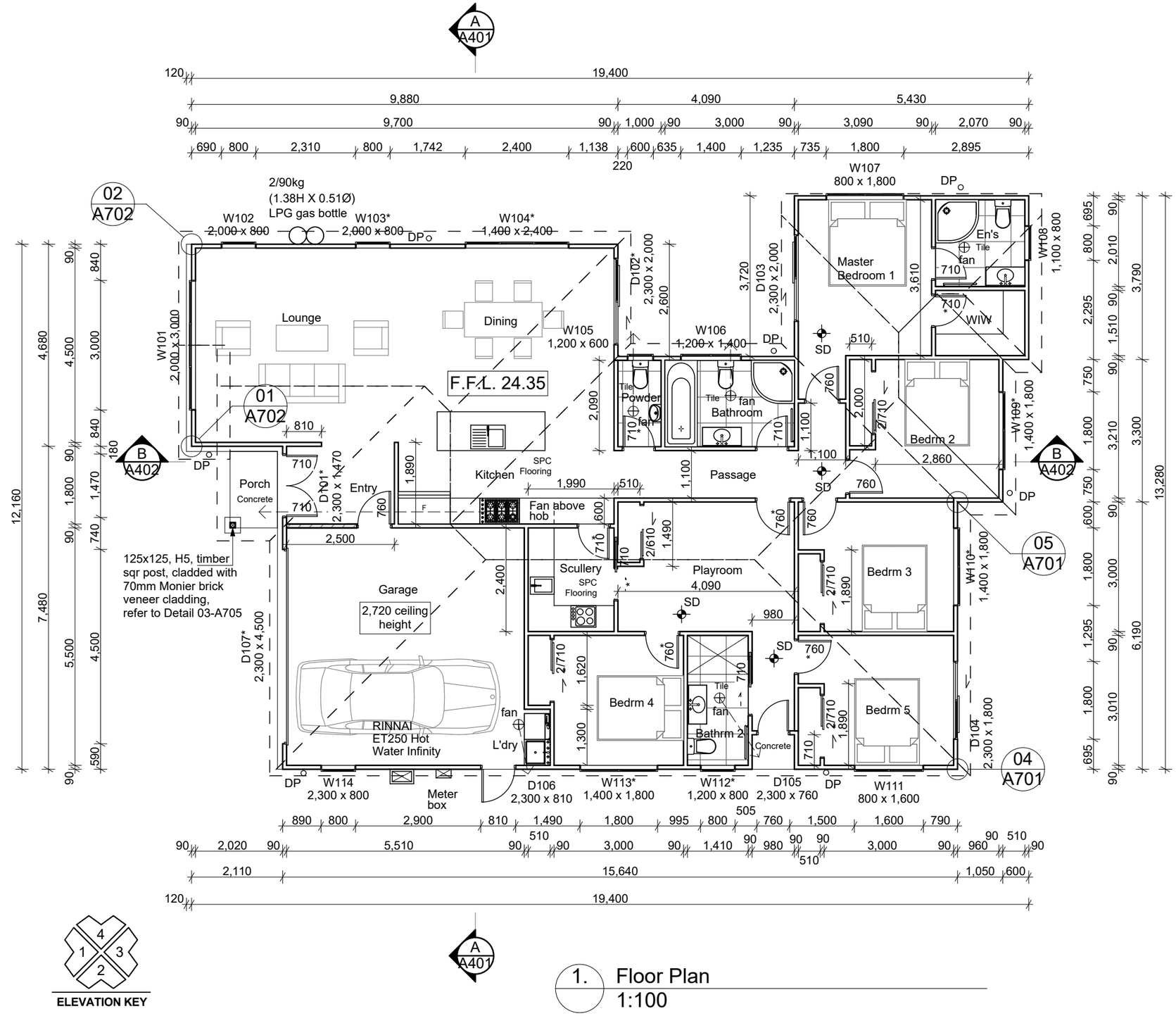

Floor Area:	203.0m²
Porch Area	2.0m²
Total Floor Area:	205.0m²

Wall Frame Construction:
Ceiling heights: = 2.720m

Stud Sizes:
For Loadbearing & External Walls:
Single Storey 90x45 H1.2 SG8 grade studs @ 400c/c
90x45 H1.2 SG8 grade nogs @ 800c/c
nogs @ 600c/c for James Hardie Linea cladding
SHEETROCK® 10mm Plasterboard internal lining, stop flush to level 4 & paint finish.

For Internal Non Loadbearing:
90x45 H1.2 sg8 grade studs @ 600c/c
90x45 H1.2 sg8 grade nogs @ 800c/c
SHEETROCK® 10mm Plasterboard internal lining, stop flush to level 4 & paint finish.

For Wet Area Walls:
90x45 H1.2 sg8 grade studs @ 400c/c
90x45 H1.2 sg8 grade nogs @ 800c/c
Tile finish on wet area membrane over GIB Aqualine

Fixings:
Top Plate:140x35 to 90x45 and top plate to lintel
3/90x3.15mm power driven nails @ 500mm crs;
or 2/100x3.75mm hand driven nails @ 500mm crs
as per NZS 3604:2011 Table 8.19

Bottom Plate: 90x45 H3.2 on Supercourse 500 DPC

Loadbearing wall on slab:
bolts, 140 long with washers as supplied. Minimum edge distance of 59mm to centre of bolt. Minumum of 150 from end of bottom plate & maximum of 600c/c for masonry header blocks & 900c/c for waffle slab edge. Minimum embedment of 88mm.

Loadbearing & Non Loadbearing wall on tmber floor:
Refer Table 8.19 of NZS3604:2011

External Doors & Windows
Double Glazed (R0.46) External Aluminum Joinery
All Glazing to comply with NZS4223:3:2016
Provide window restrictors to all windows to toilets, ensuites,wc.
Provide window restrictors to upper level windows with will sill height less than 1.0m high, windows to have max. opening of 100mm

All windows to be site measured from framed openings on site prior to any window fabrication.
Safety Glazing for doors, side panels, low level and window seat glazing, bathrooms, stairwell landings and similar locations, refer to NZS 4223.3 for thickness and maximum areas of safety glass.

Maximum Tile weights on GIB Aqualine Board:
10mm 26kg/m2
13mm 40kg/m2

Insulation Required in Habitable Spaces as per NZBC H1:

Concrete Slab :	R1.5
Roof :	R6.6
	R3.3 up to 0.5m from the outer edge of the ceiling parameter
Walls :	R2.0
Internal Garage Walls :	R2.0
Double-glazings:	R0.46

Insulation
Hot water pipes to be insulated to NZS4305 Sections 5.
Walls & ceilings between habitable and non-habitable spaces (garages) to be insulated.

Mechanical Ventilation
Provide Mechanical Ventilation to powder rooms & laundry areas. (Wet Areas with no Windows)Vent through Soffits
Min. 25L/s discharge rate to powder room
min. 20L/s discharge rate to laundry
min. 50L/s discharge rate to rangehood

Domestic Smoke Alarms
Smoke alarms to be installed
on all escape routes on all levels within household units and
on all levels within 3.0m of every sleeping space door. They must be audible to the sleeping occupants if located on the other side of closed doors.

Lighting Note
All lighting to be to ca, ic or icf standard.
All lamps to be clearly marked with their rating
Ensure lighting to stairwell achieves minimum 100 lux at tread level for private stair exterior light to beprovided at front Entry to illuminate the access route to comply with G8/AS1.

Wet Area Floor Coverings
Selected non-slip tiles in toilet and bathrooms
SPC timber flooring in kitchen and Cooking Room

Wet Area Waterproof Membrane
ADEX WPM 155 waterproofing membrane applies to wet area as per ADEX specification.

Dry Area Floor Coverings
Concrete in garage
SPC timber flooring in living and dining;
Carpet in bedrooms

Floor Clearance:
Provide step @ door threshold with floor to set height max. 190mm according to D1/AS1

Ducting Termination:
Mechanical ventilation terminate through soffit

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BUILDING ENVELOPE RISK MATRIX		
South Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**9**

Timber bevelback weatherboard over 20mm cavity battens and 70mm brick veneer with 50mm cavity are the suitable claddings to use.

BUILDING ENVELOPE RISK MATRIX		
West Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**7**

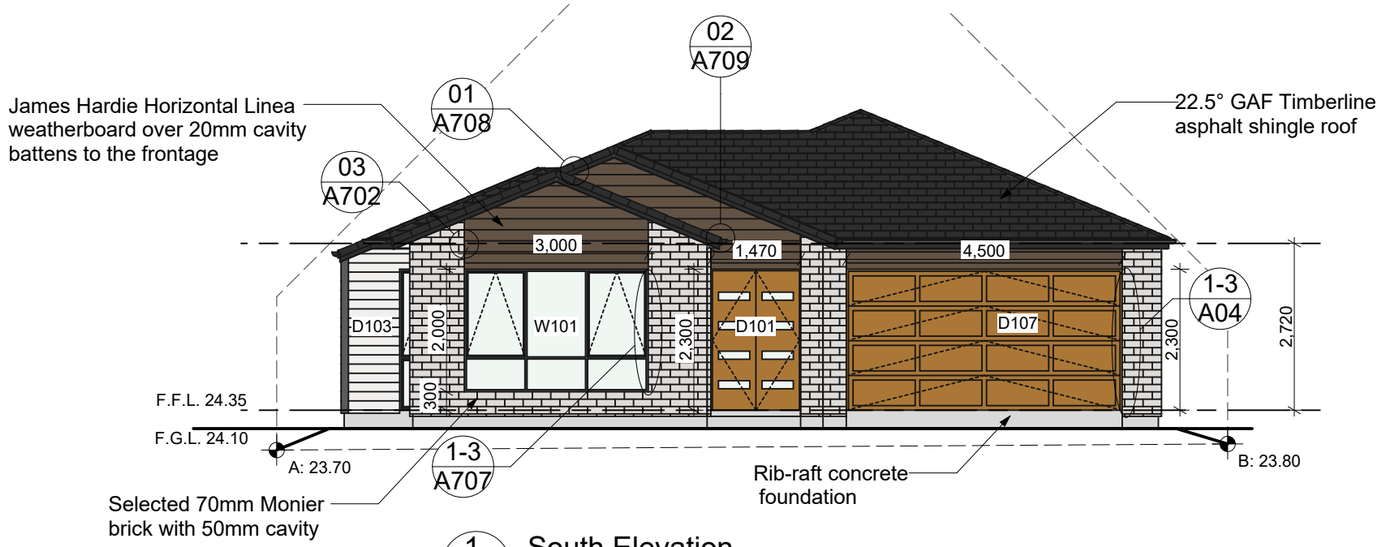
Timber bevelback weatherboard over 20mm cavity battens and 70mm brick veneer with 50mm cavity are the suitable claddings to use.

BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**4**

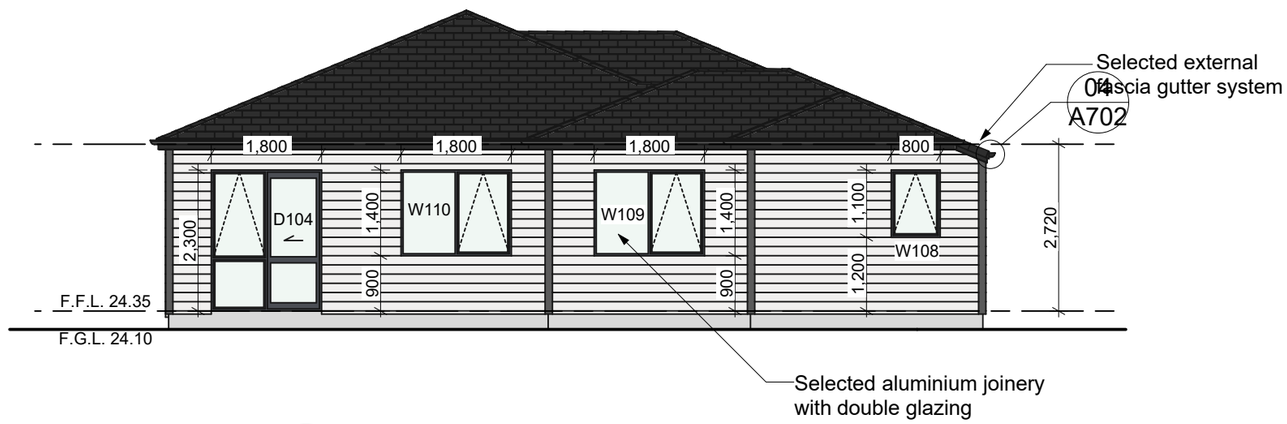
Timber bevelback weatherboard over 20mm cavity battens and 70mm brick veneer with 50mm cavity are the suitable claddings to use.

BUILDING ENVELOPE RISK MATRIX		
East Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**4**

Timber bevelback weatherboard over 20mm cavity battens and 70mm brick veneer with 50mm cavity are the suitable claddings to use.



1. South Elevation
1:100



3. North Elevation
1:100

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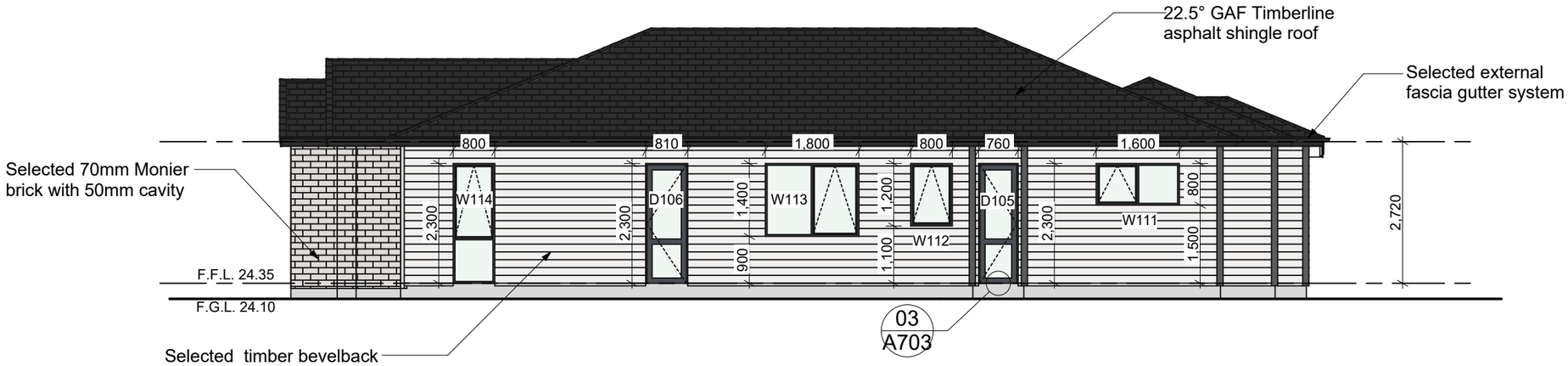
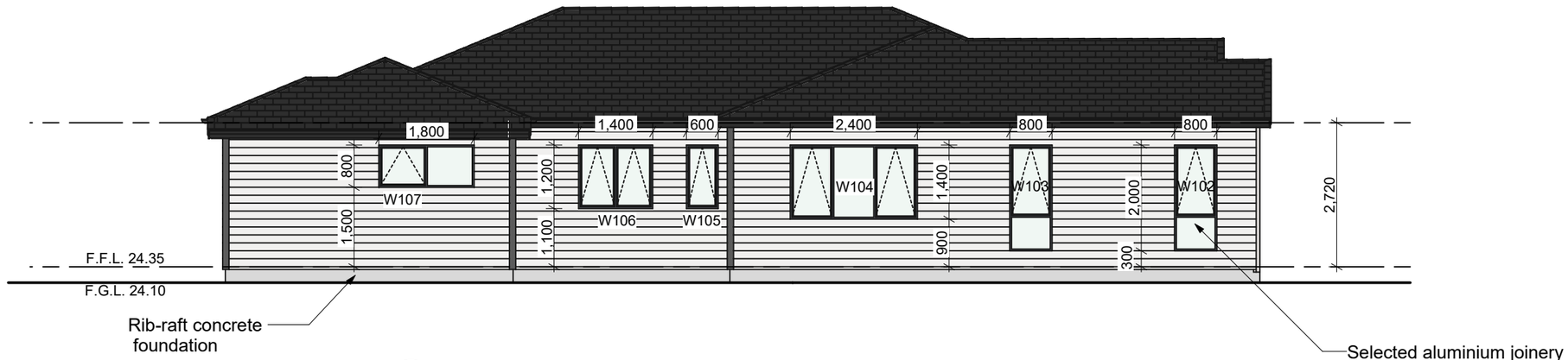


2. East Elevation
1:100



4. West Elevation
1:100

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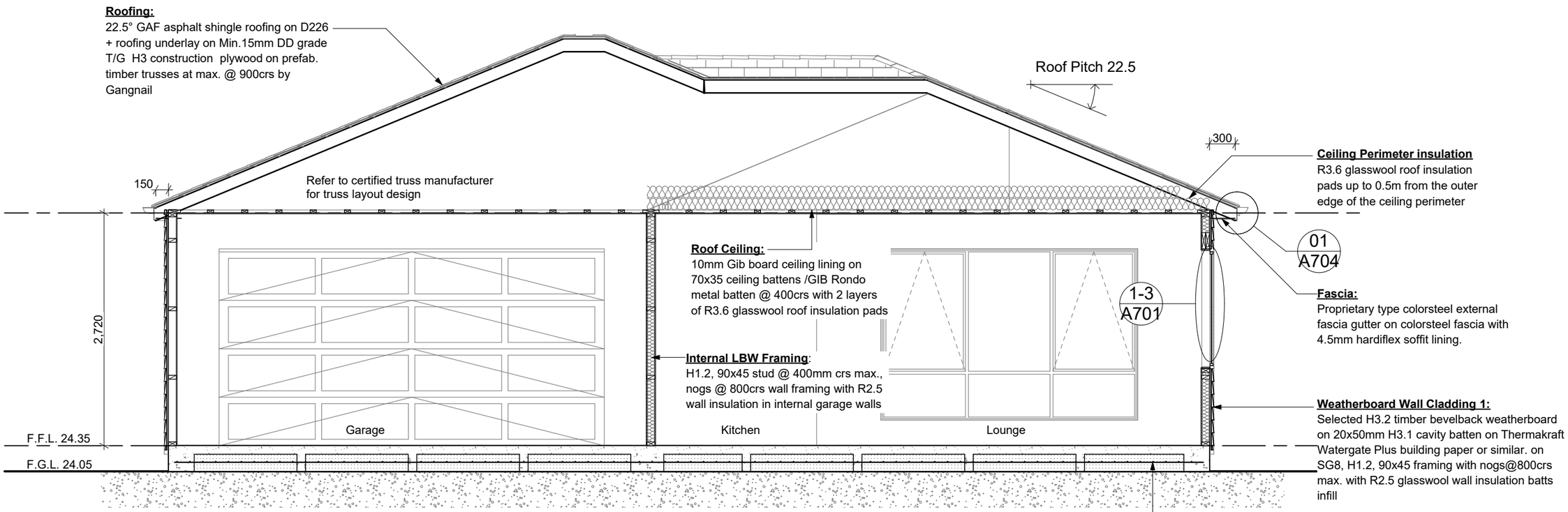

A. Section AA
1:50

All timber size complied with NZS 3604:2011

Timber treatment requirements chart	
BUILDING ELEMENT	TREATMENT LEVELS
-Exterior/interior wall framing and roof framing -Subfloor framing	SG8 -H1.2
Exterior use timber-Unroofed decking and enternal stairs,handrails and balustrades	SG8 -H3.2
-Piles and other structural in ground material	SG8 -H5

ALL DIMENSIONS MUST BE VERIFIED ON SITE

NOTE:

1. All external timber wall frame to be 90x45, H1.2, SG8 stud @ 400Crs max, nogs @ 800Crs max;
   or nogs @ 600Crs for James Hardie Linea Weatherboard Cladding above window head;
2. All internal timber load bearing wall frame to be 90x45, H1.2, SG8 stud @ 400Crs max, nogs @ 800Crs max.
3. All internal timber non-load bearing wall frame to be 90x45, H1.2, SG8 stud @ 600Crs max, nogs @ 800Crs max.
4. In bathroom wet area timber wall framing to be H1.2, SG8, 90x45 stud @ 400crs max (AC Directives), lined with 10mm GIB Aqualine.
5. All external windows/doors to be R0.46 double glazed, excludes garage.
6. Insulation System: R2.5 insulation batts for external wall & internal walls around garage, 2 layers of R3.6 insulation batts for flat ceiling.
   Min. R3.6 roof insulation up to 0.5m from the outer edge of the ceiling perimeter;
7. Grade A safety glazing to shower screen & windows in wet area.

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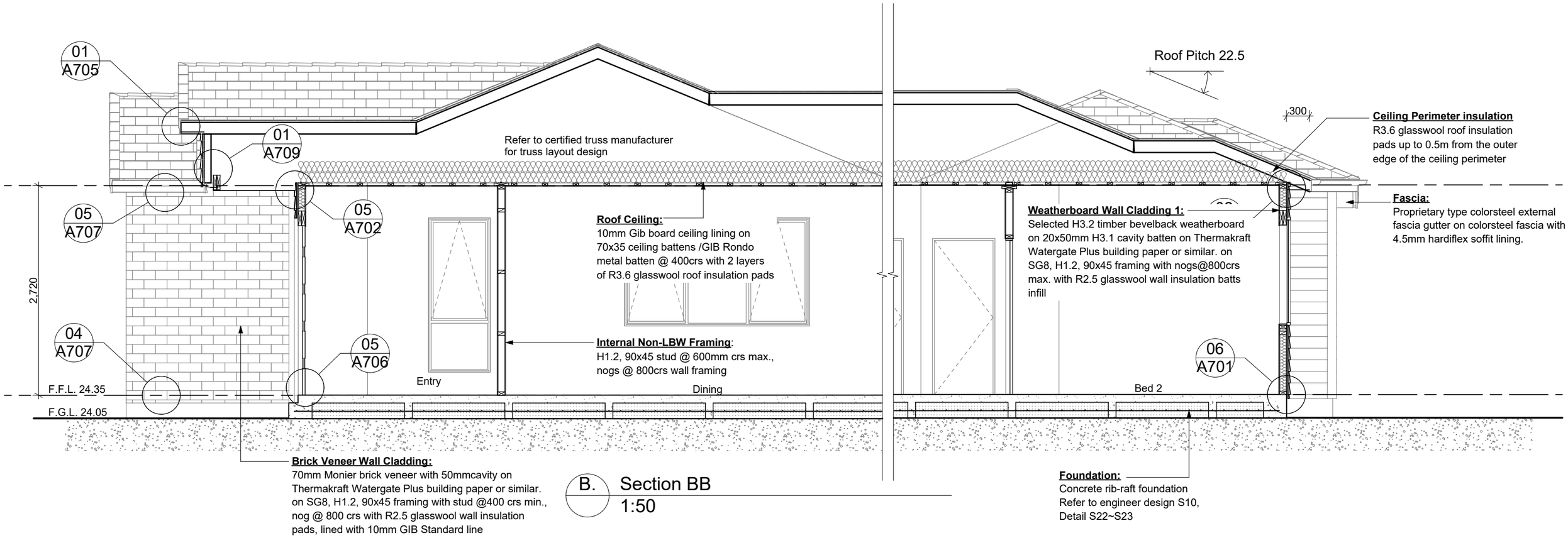

B. Section BB
1:50

All timber size complied with NZS 3604:2011

Timber treatment requirements chart	
BUILDING ELEMENT	TREATMENT LEVELS
-Exterior/interior wall framing and roof framing -Subfloor framing	SG8 -H1.2
Exterior use timber-Unroofed decking and enternal stairs,handrails and balustrades	SG8 -H3.2
-Piles and other structural in ground material	SG8 -H5

ALL DIMENSIONS MUST BE VERIFIED ON SITE

NOTE:

1. All external timber wall frame to be 90x45, H1.2, SG8 stud @ 400Crs max, nogs @ 800Crs max;
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3. All internal timber non-load bearing wall frame to be 90x45, H1.2, SG8 stud @ 600Crs max, nogs @ 800Crs max.
4. In bathroom wet area timber wall framing to be H1.2, SG8, 90x45 stud @ 400crs max (AC Directives), lined with 10mm GIB Aqualine.
5. All external windows/doors to be R0.46 double glazed, excludes garage.
6. Insulation System: R2.5 insulation batts for external wall & internal walls around garage, 2 layers of R3.6 insulation batts for flat ceiling.
   Min. R3.6 roof insulation up to 0.5m from the outer edge of the ceiling perimeter;
7. Grade A safety glazing to shower screen & windows in wet area.

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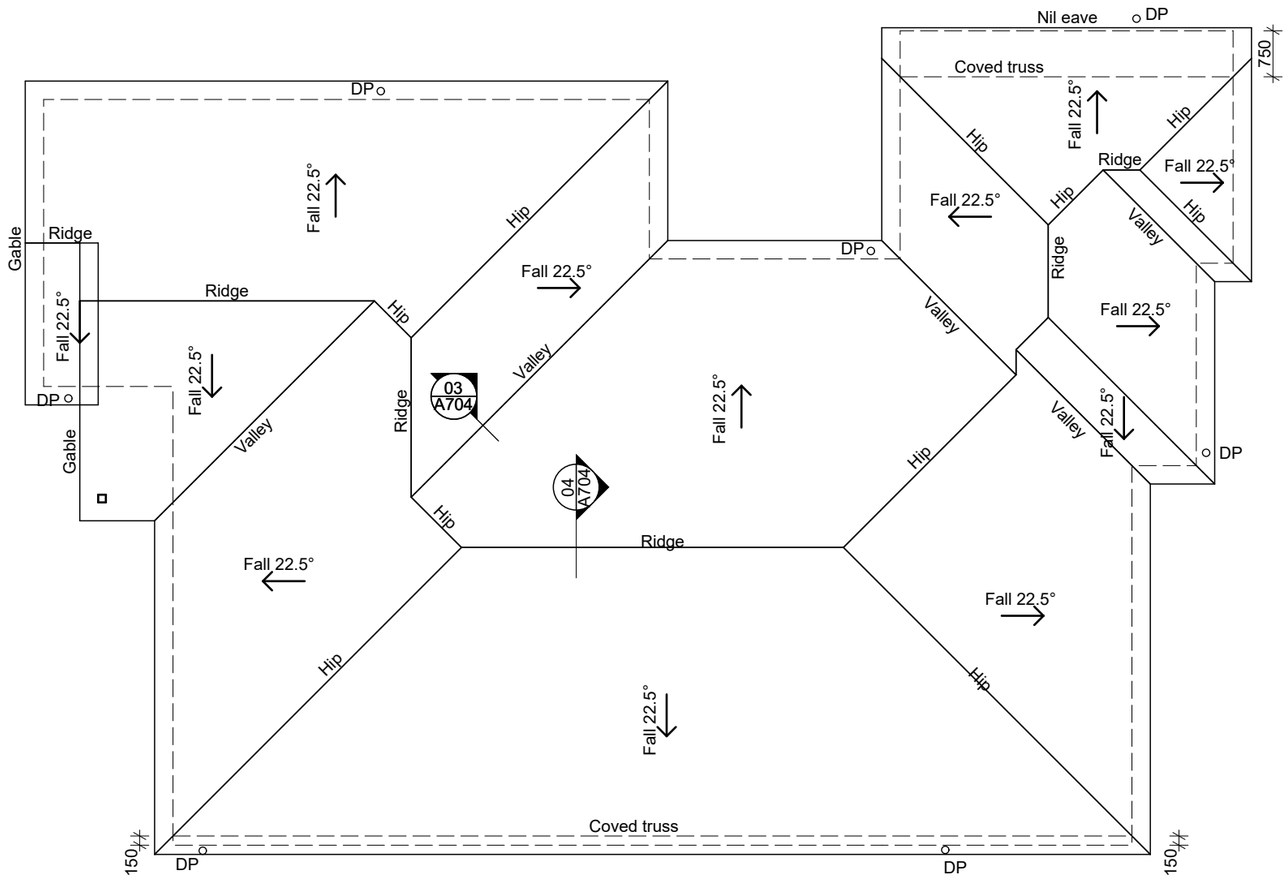

1. Roof Plan
1:100

NOTE:

Roofing :
GAF Timberline light weight asphalt shingle roofing on D226+ roof underlay on 15mm DD grade T/G construction plywood on prefabricate timber trusses @ 900 crs max. by Gangnail or similar

· Roof Pitch - 22.5°;

· Roof Overhang - 300mm;

· PVC Down Pipe Size - Ø80mm

· Colorsteel External Fascia Gutter Size -125mm

· Roof Catchment Plane Area - 225m²

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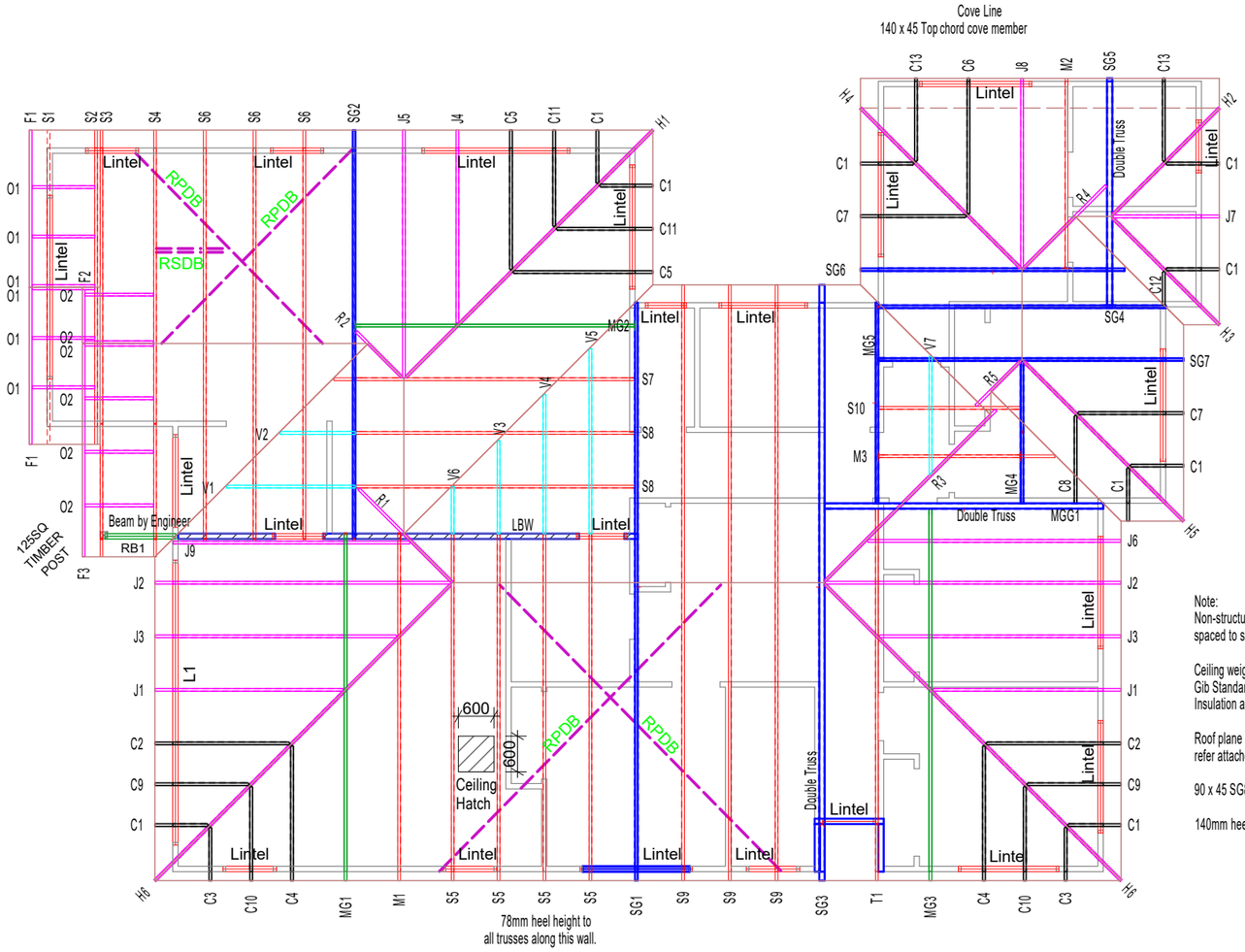

1. Roof Framing Plan
1:100

Note:
Non-structural gable truss to have vertical webs spaced to suit cladding and studs in wall below.

Ceiling weight applied:
Gib Standard (10mm 7kg/sq.m) Restraint spacing: 400mm
Insulation allowance 5.7kg/sq.m. Specified weight: 12.7kg/sq.m.

Roof plane bracing to NZS 3604:2011 table 10.16.
refer attached bracing fixing detail for installation.

90 x 45 SG8 @900crs to all Outriggers.

140mm heel height to all trusses, unless specified otherwise.

Engineer beam/lintel and bracing refer to S11,

LEGEND:

RPDB- ROOF PLANE DIAGONAL BRACE METAL STRIPS (PER NZS3604 -2011 TABLE 10.16/FIGURE10.22)
A DIAGONALLY OPPOSING PAIR OF CONTINUOUS STEEL STRIPS EACH HAVING A CAPACITY OF 8.0 KN IN TENSION, FIXED TO EACH TOP CHORD AND TO THE TOP PLATE. DETAIL REFERS TO SHEET A610

Trusses fixing to top plate type:
(NZS 3604:2011, Table 10.14)
2 / 90 x 3.15 skew nails + 2 wire dogs

Note:
This truss plan is based on current manufactory design layout. If different framing manufactory carried out the job at the construction stage, the design must be reviewed

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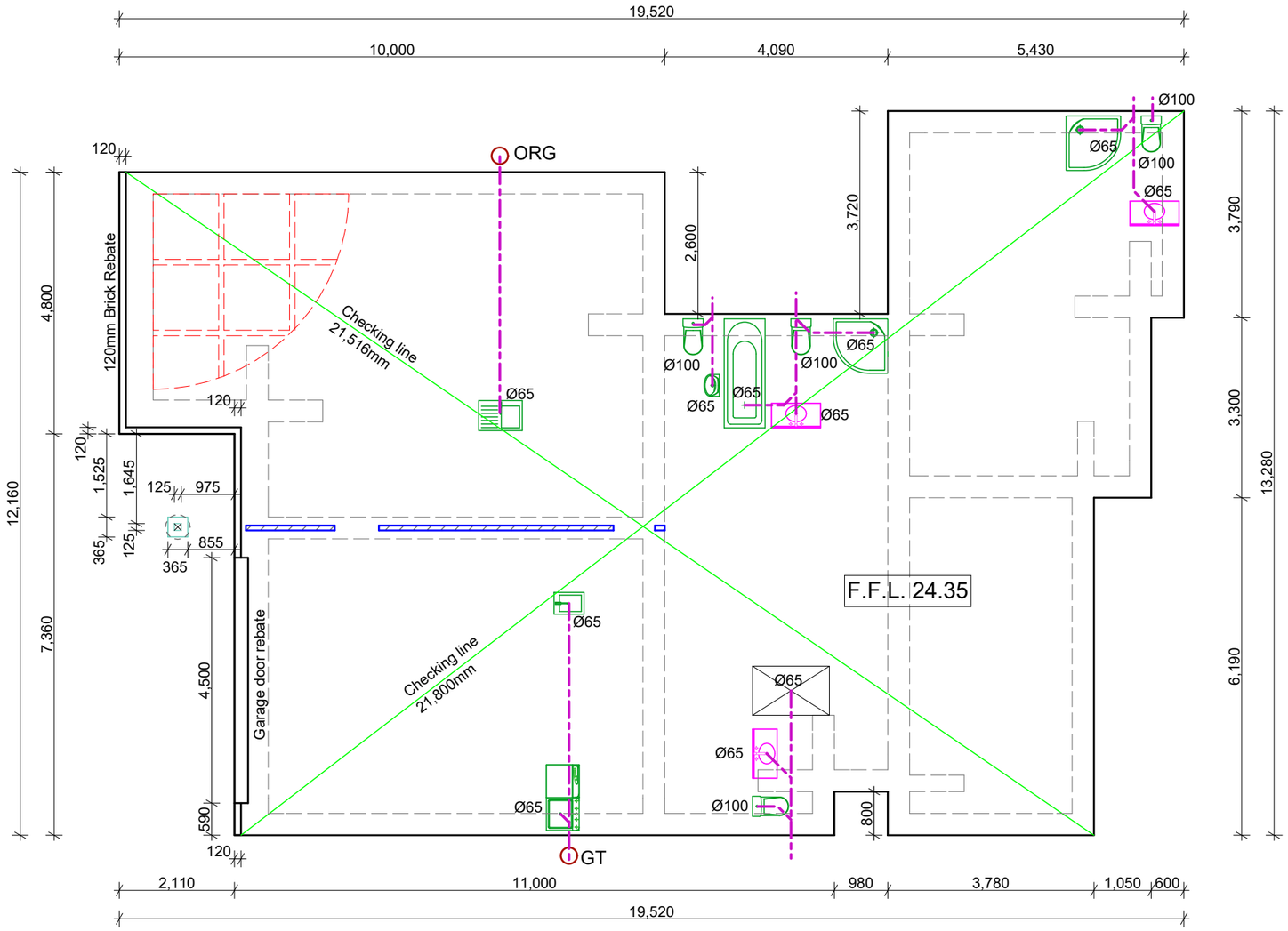

1. Foundation Setout Plan
1:100

NOTE:
All plumbing pipe penetrations in concrete slab must be protected by polystyrene and taped,

All plumbing pipes in the concrete slab to be Ø65mm min.

Thermakraft 250µm Thermathene Black underslab DPM applies over 25mm sand blinding

Plan shows dimension and drainage only.
All LBW, pad footing, pile location & detail Refer to Engineer Design Drawing S10, Detail S22~S23 and calculations.

ALL DIMENSIONS MUST BE VERIFIED ON SITE

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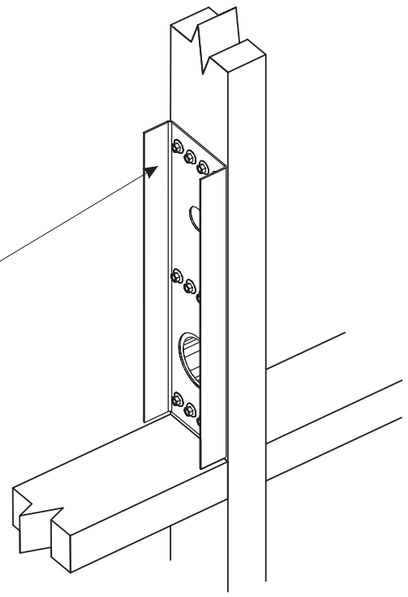
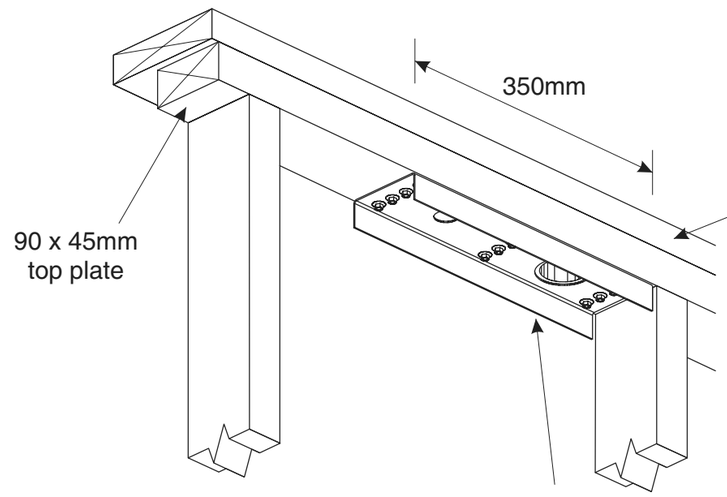
Note:
Use Stud Stiffener as template
for drilling 60mm hole.

Fix to side of stud with 3 rows of
4 x Type 17-14g x 35mm Hex Head
Screws (supplied).



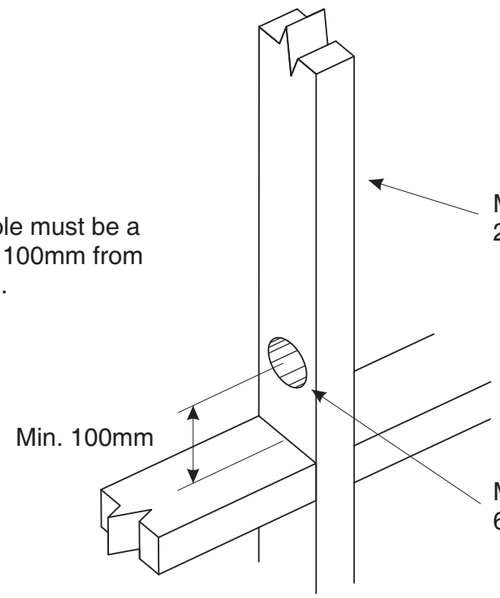
Code: **FSS**
Material: **1.55mm G300 Z275 Galvanised Steel**
Packed: **8 x Framing Stud Stiffeners per Carton**
100 x Type 17-14g x 35mm Hex Head Galvanised Screws

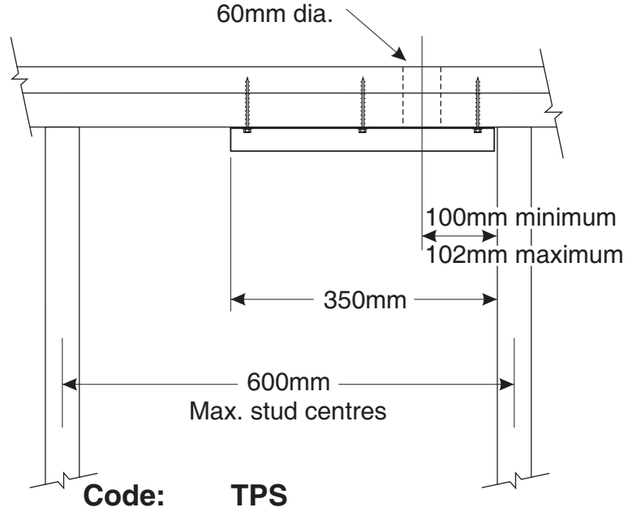


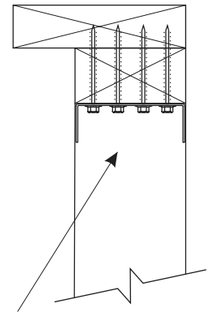
Note:
Use Top Plate Stiffener
as template for drilling
60mm hole.

Fix up into top plate and into packer with 3 rows of
4 x Type 17-14g x 75mm Hex Head Screws
(supplied). It may be advisable to drill pilot hole for
each screw to assist installation.

Centre of hole must be a
minimum of 100mm from
nog location.







Position Top Plate
Stiffener under top plate
as shown within the wall
frame.

Code: **TPS**
Material: **1.55mm G300 Z275 Galvanised Steel**
Packed: **8 x Top Plate Stiffeners per Carton**
100 x Type 17-14g x 75mm Hex Head Galvanised Screws

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TABLE 1A - MAXIMUM HEIGHT (H) FOR WEBS @ 600MM CRS.

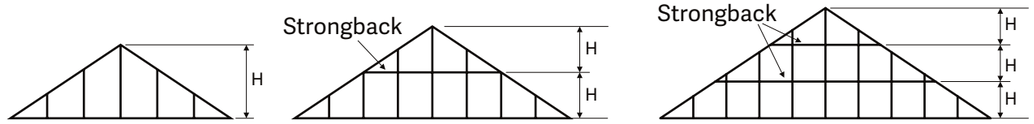
WIND ZONE	MAXIMUM HEIGHT (H)											
	70x45 Web		90x45 Web		Double Component Gable End Webs 2/ 70x45		Double Component Gable End Webs 2/ 90x45		45x70 "on flat"		45x90 "on flat"	
	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8
LOW	1750	1950	1900	2100	2200	2450	2400	2650	2350	2600	2950	3150
MEDIUM	1600	1750	1750	1900	2000	2200	2200	2400	2150	2350	2750	2950
HIGH	1400	1500	1500	1650	1750	1900	1900	2100	1800	2050	2350	2650
VERY HIGH	1250	1400	1400	1500	1600	1750	1750	1900	1600	1900	2050	2400
EXTRA HIGH	1150	1350	1300	1450	1550*	1700*	1650*	1850*	1450	1700	1850*	2200*

TABLE 1B - MAXIMUM HEIGHT (H) FOR WEBS @ 400MM CRS.

WIND ZONE	MAXIMUM HEIGHT (H)											
	70x45 Web		90x45 Web		Double Component Gable End Webs 2/ 70x45		Double Component Gable End Webs 2/ 90x45		45x70 "on flat"		45x90 "on flat"	
	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8
LOW	2000	2200	2200	2400	2550	2750	2750	2950	2700	2900	3250	3500
MEDIUM	1800	2000	2000	2200	2300	2550	2500	2750	2450	2700	3050	3300
HIGH	1600	1750	1750	1900	2000	2200	2200	2400	2150	2350	2750	2950
VERY HIGH	1450	1600	1600	1750	1850	2000	2000	2200	1950	2200	2500	2750
EXTRA HIGH	1400	1550	1500	1650	1750*	1950*	1900*	2100*	1800	2100	2300*	2650*

*Use these values for full height brick veneer attached to gable end.
Please note that the maximum height of brick veneer on a gable end wall is 5.5m. Clause 1.1.2 (NZS 3604:2011).

SELECTION PROCESS



- No strongback
- 1 row of strongback
- 2 rows of strongback

STRONGBACK OPTIONS

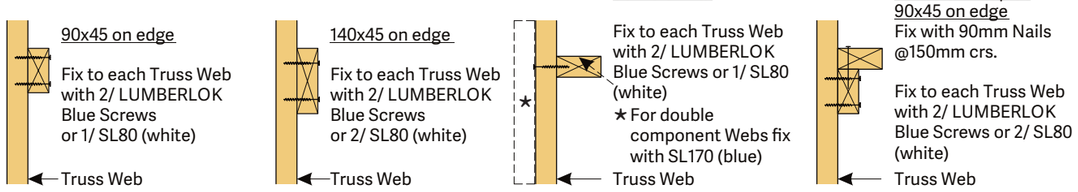


TABLE 2 - STRONGBACK SPAN AND GABLE BRACE LOCATION

OPTION 1	OPTION 2	OPTION 3	OPTION 4
90x45 on edge	140x45 on edge	90x45 on flat	90x45 on flat plus 90x45 on edge
Max. span and/or gable brace crs. 1200mm	Max. span and/or gable brace crs. 1400mm	Max. span and/or gable brace crs. 1600mm	Max. span and/or gable brace crs. 2000mm

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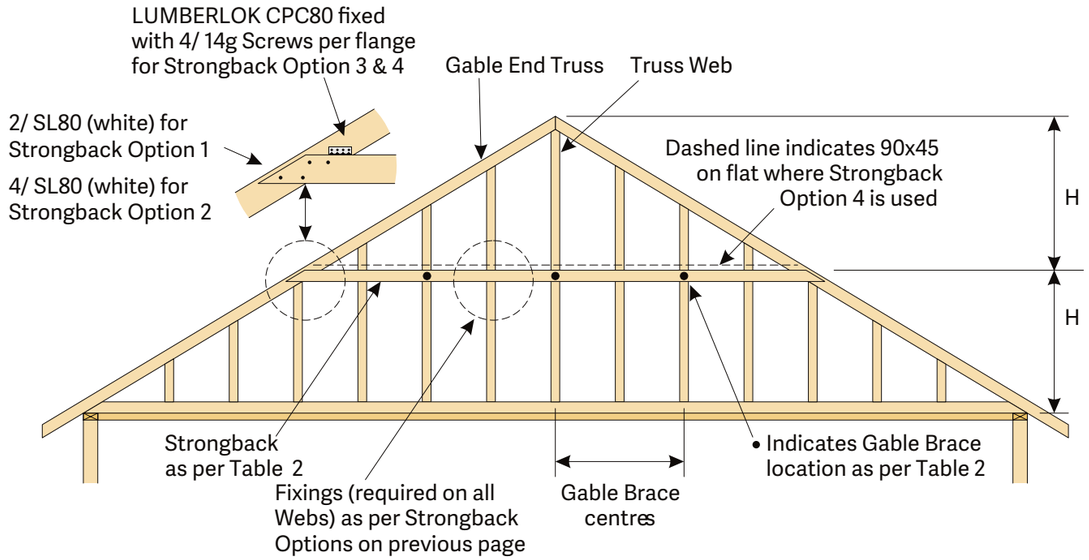
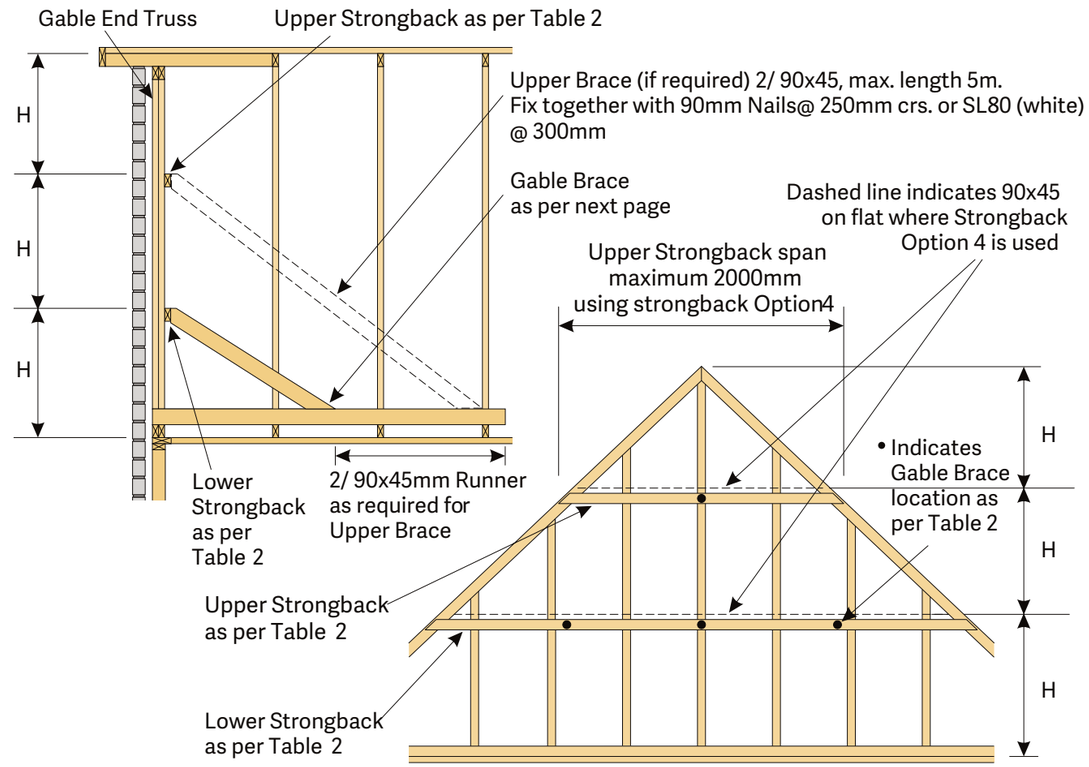


SINGLE STRONGBACK DETAILS



DOUBLE STRONGBACK DETAILS FOR ALL GABLE END OPTIONS

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OVERHANG OPTIONS

- All gable end loading parameters are based on the design considerations used in NZS 3604:2011 and cover heavy roof weight, extra high wind load and snow load Sg of up to 1.0kPa.
- All live load considerations as per AS/NZS 1170.
- All timber to be minimum grade SG8 as defined in NZS 3604:2011.

CANTILEVER PURLIN OPTION

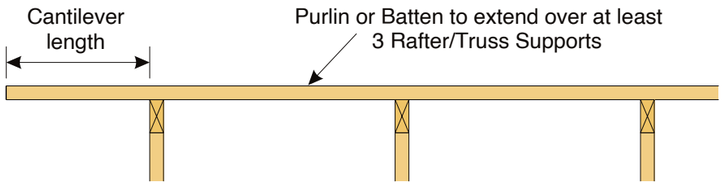

TABLE 1

PURLIN SIZE & ORIENTATION	MAX. CANTILEVER LENGTH (mm)	PURLIN CENTRES (mm)
45x45 ⊠	200	400
70x45 ⊠	300	900
90x45 ⊠	450	900

CANTILEVER OUTRIGGER OPTION

(Note: Maximum sidewall overhang of 750mm)
(See details on next pages)

TABLE 2

MAX. CANTILEVER LENGTH 750mm	OUTRIGGER SIZE & ORIENTATION	MAX. CANTILEVER LENGTH (mm)	OUTRIGGER CENTRES (mm)
	70x45 ⊠	750	600
		600	900
	90x45 ⊠	750	900
		600	1200
	90x45 ⊠	750	400
		600	600

CANTILEVER OUTRIGGER/PURLIN COMBINATION OPTION

(Note: Maximum sidewall overhang of 1200mm)
(See details on next pages)

TABLE 3

MAX. CANTILEVER LENGTH 1200mm	OUTRIGGER SIZE & ORIENTATION	MAX. CANTILEVER LENGTH (mm)	OUTRIGGER CENTRES (mm)
	45x45 Purlin 90x45 Outrigger ⊠	1200	450
	70x45 Purlin 90x45 Outrigger ⊠	1200	700
	90x45 Purlin 90x45 Outrigger ⊠	1200	900

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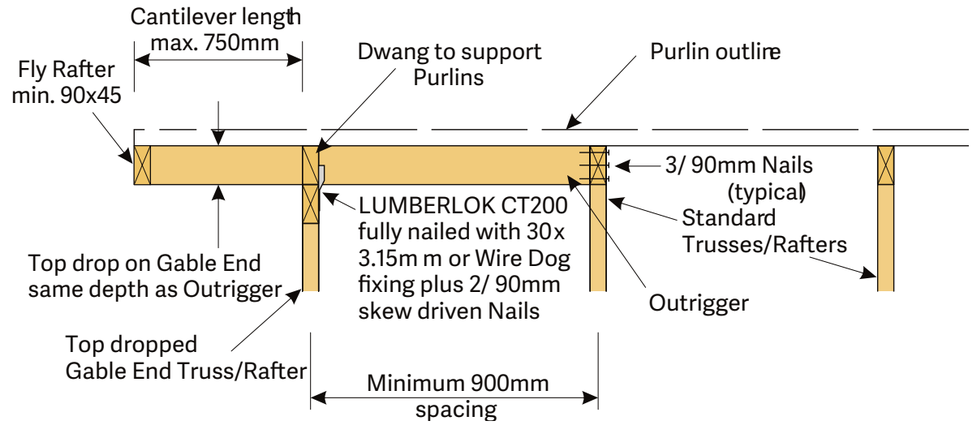
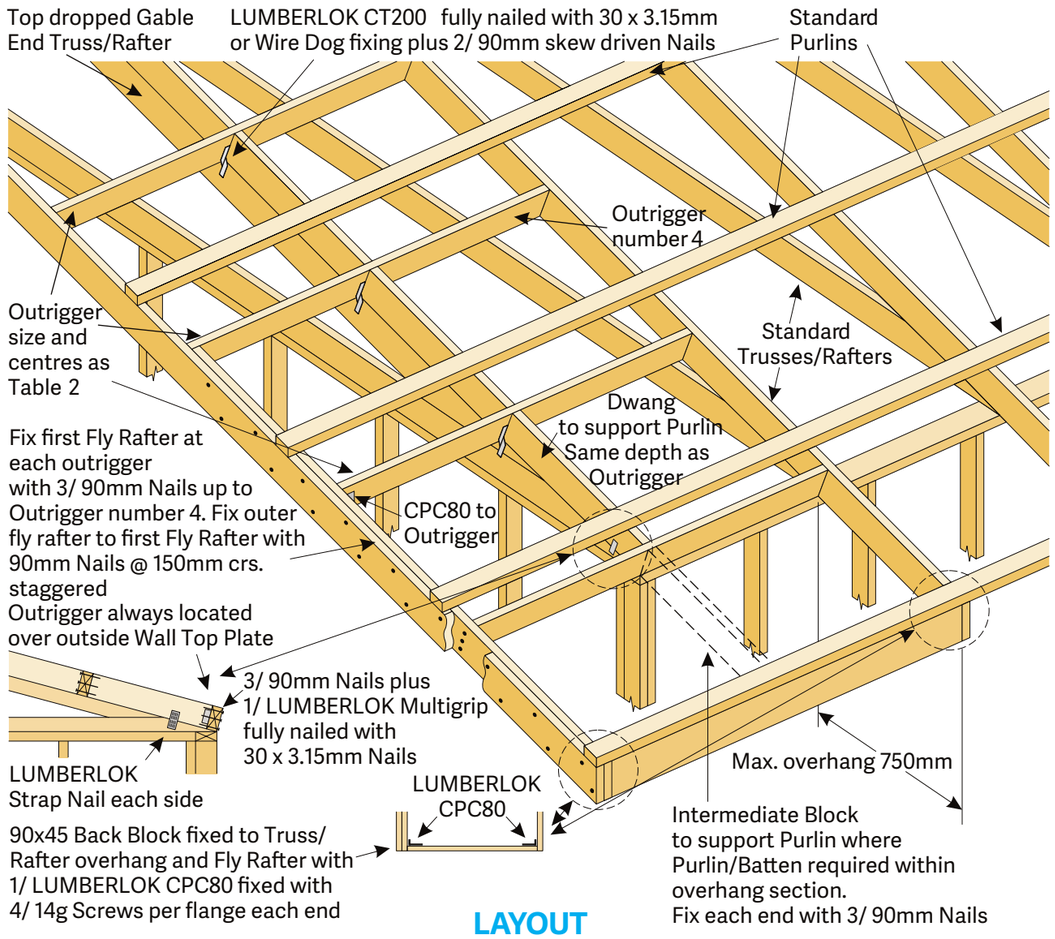
CONSTRUCTION DETAILS FOR CANTILEVER OUTRIGGER OPTION

(SPANS & CENTRES AS PER TABLE 2)



CROSS SECTION



LAYOUT

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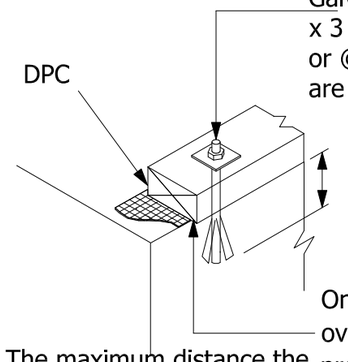
NZS 3604:2011
SECTION 7 FIGURE 7.21



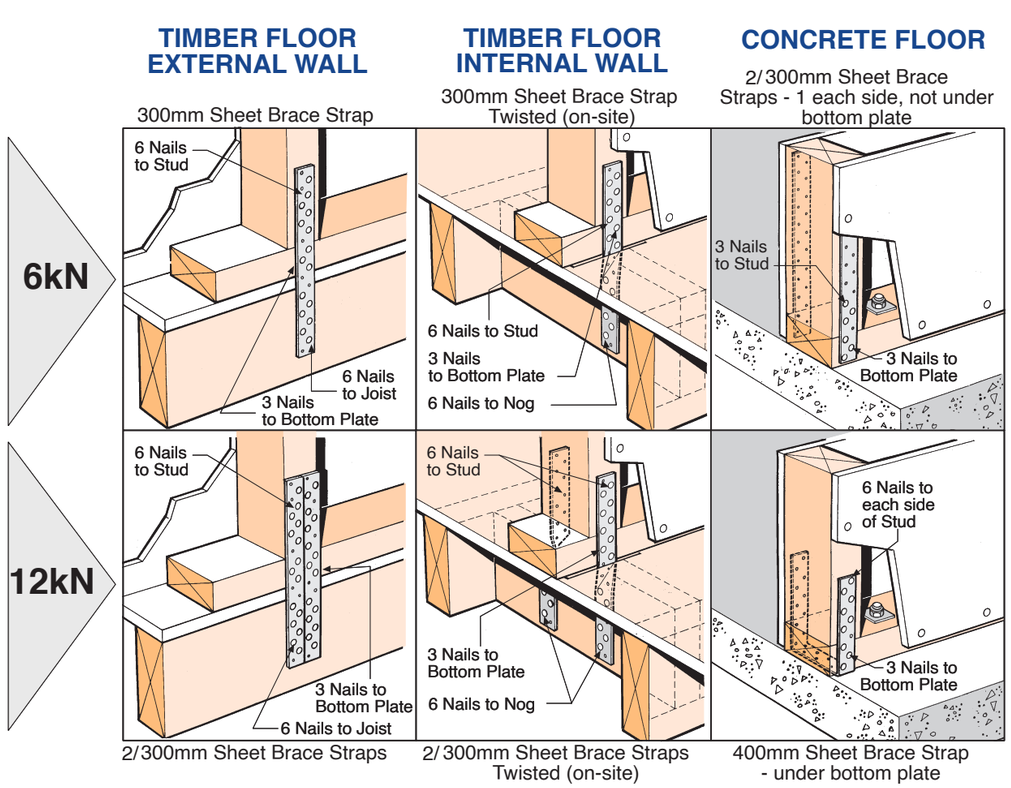
Galv. M12 Anchor Bolts with 50 x 50 x 3 mm washers @ 900mm crs. max. or @ 600mm if masonry header block are used

90 min. for internal and external walls on in-situ concrete. 120min. for external walls on masonry header block

On external wall, project plate over edge of wall by 6 min. to prevent water being drawn up behind cladding by capillary action

The maximum distance the bolt to be set 150mm from the end of the plate

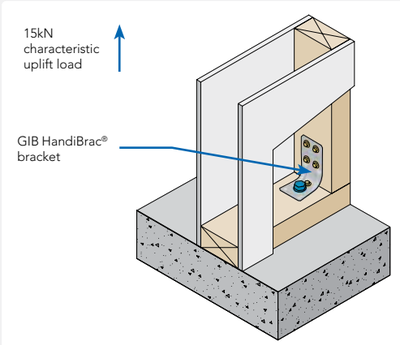
01 / - Bottom Plate Fixing Detail



PANEL HOLD-DOWN DETAILS

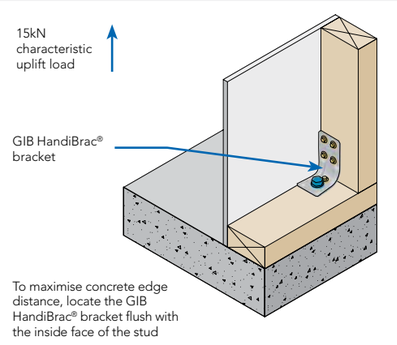
CONCRETE FLOOR – INTERNAL WALL

The bottom plate at both ends of the bracing element is fixed using a BOWMAC® screw bolt. For BOWMAC® screw bolt installation see instructions on next page



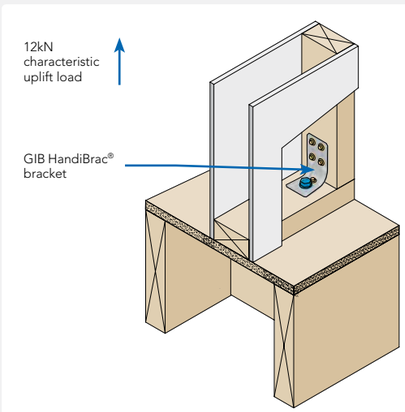
CONCRETE FLOOR – EXTERNAL WALL

The bottom plate at both ends of the bracing element is fixed using a BOWMAC® screw bolt. For BOWMAC® screw bolt installation see instructions on next page.



TIMBER FLOOR – INTERNAL WALL

Bottom Plate is fixed using a BOWMAC® screw bolt. For BOWMAC® screw bolt installation see instructions on next page.



TIMBER FLOOR – EXTERNAL WALL

Bottom Plate is fixed using a BOWMAC® screw bolt. For BOWMAC® screw bolt installation see instructions on next page.

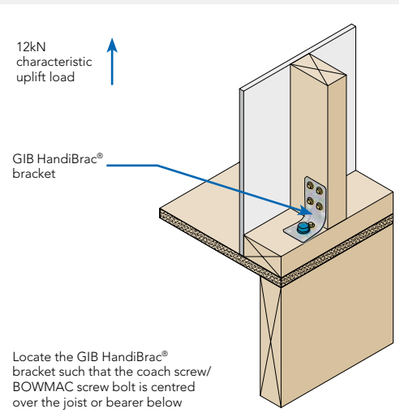


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Table 10.18 – Nailing schedule for hand-driven and power-driven nails (see 10.5.1)

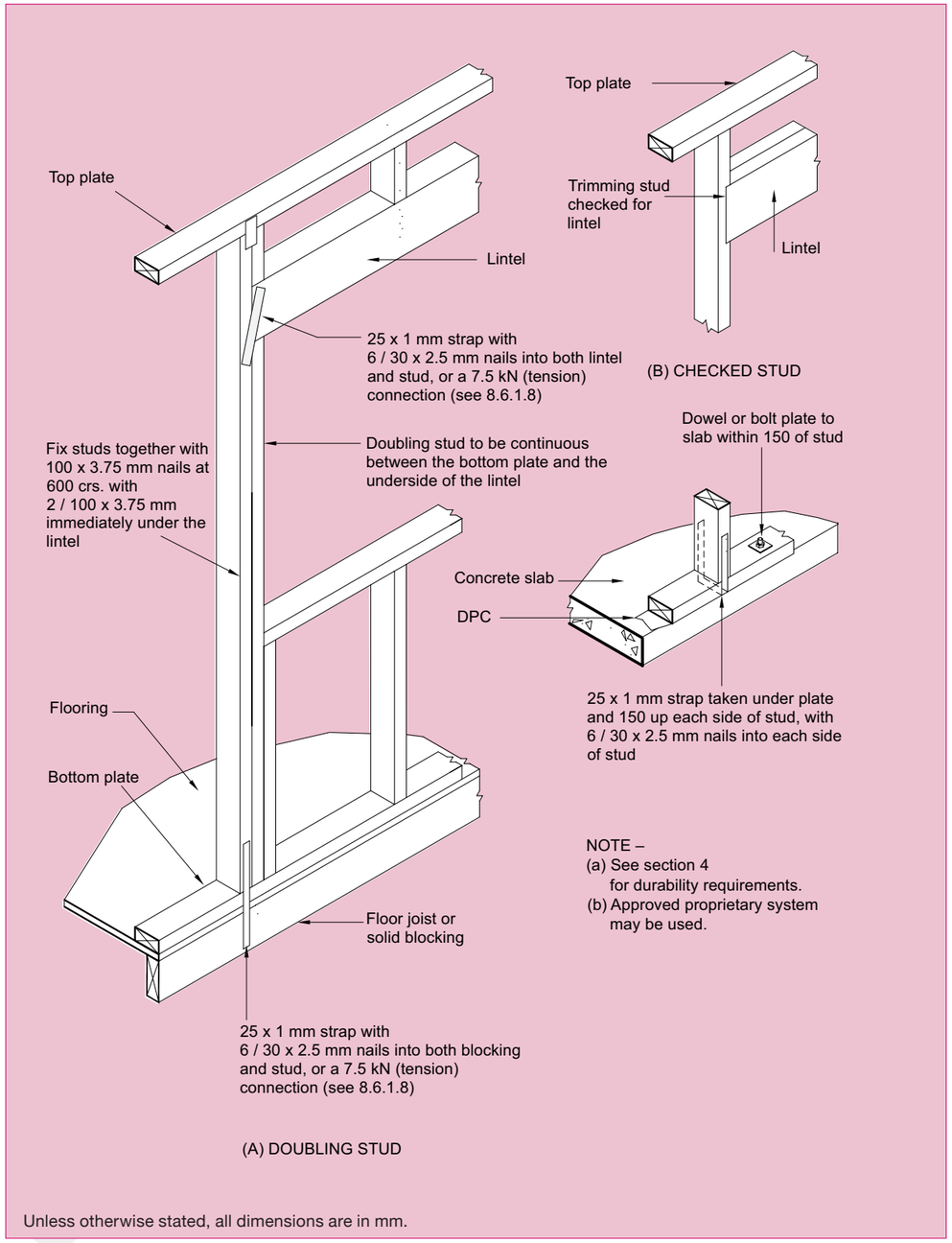
Joint	Hand-driven nails		Power-driven nails	
	Length (mm) **x diameter** (mm) **and type**	**Number/ Location**	**Length** (mm) **x diameter** (mm) **and type**	**Number/ Location**
Roof framing				
Rafter or jack rafter to ridge board or top plate (except skillion roofs) (see 10.2.1.3.7)	See table 10.1	See table 10.1	See table 10.1	See table 10.1
Truss to top plate of external wall	See tables 10.14 and 10.15	See tables 10.14 and 10.15	See tables 10.14 and 10.15	See tables 10.14 and 10.15
Truss to top plate of internal wall	100 x 3.75	2	90 x 3.15	2
Ceiling batten to parallel top plate of internal wall bracing element	75 x 3.15	2 at 400 mm centres	90 x 3.15	2 at 400 mm centres
Collar tie or cleat to rafter	75 x 3.15	4	75 x 3.06	4
Flitches to ridge board and roof members for each side on both joints	60 x 2.8	3	60 x 2.8	3
Hip rafter to top plate	See table 10.1	See table 10.1	See table 10.1	See table 10.1
Underpurlin strut to underpurlin or top plate or strutting beam	100 x 3.75 together with fixing types as set out in table 10.5	2	90 x 3.15 together with fixing types as set out in table 10.5	3
Strutting beam to top plate	See table 10.7	See table 10.7	See table 10.7	See table 10.7
Roof braces at each connection to a framing member:				
(a) 90 mm x 19 mm brace	75 x 3.15	3	75 x 3.15	3
(b) 70 mm x 45 mm brace runner	100 x 3.75	2	90 x 3.15	3
(c) 90 mm x 45 mm brace	100 x 3.75	3	90 x 3.15	5
(d) Steel strip brace				
(i) At ends	60 x 3.15	3	–	–
(ii) Other cases	60 x 3.15	2	–	–
(iii) To ends of braces	–	–	–	–

NOTE –
(1) Nail lengths and diameters are the minimum required.
(2) Refer to 4.4 for required protective coatings for metal fasteners.
(3) Proprietary fixings with the required fixing capacity indicated in the tables may be used.

Table 10.18 – Nailing schedule for hand-driven and power-driven nails (continued) (see 10.5.1)

Joint	Hand-driven nails		Power-driven nails	
	Length (mm) **x diameter** (mm) **and type**	**Number/ Location**	**Length** (mm) **x diameter** (mm) **and type**	**Number/ Location**
Roof framing (continued)				
Blocking between rafters, joists or truss chords, 90 mm x 45 mm	100 x 3.75	2 (end nailed)	90 x 3.15	2 (end nailed)
Outrigger to gable top plate (as for equivalent purlins)	See table 10.10 and table 10.11	See table 10.10 and table 10.11	See table 10.10 and table 10.11	See table 10.10 and table 10.11
Outrigger to rafter	100 x 3.75 or 75 x 3.15	2 (end nailed) 4 (skewed)	90 x 3.15	3 (end nailed)
Flying rafter to outrigger	100 x 3.75	2	90 x 3.15	3
Outrigger blocking to top plate	100 x 3.75	4 (skewed)	90 x 3.15	4 (skewed)
Purlin or batten directly to rafter or top chord	See table 10.10 and table 10.11	See table 10.10 and table 10.11	See table 10.10 and table 10.11	See table 10.10 and table 10.11
Roof sarking				
Board sarking to rafters or top chords:				
(a) Boards not exceeding 75 mm wide	2½ x finished thickness	1	–	–
(b) Boards exceeding 75 mm wide		2	–	–
Sheet material for sheet sarking to:				
(a) Rafters or top chords at sheet edges	30 x 2.5 FH	150 mm centres	–	–
(b) Intermediate supports		300 mm centres	–	–
Purlins or battens through sarking to rafter or top chord	See table 10.15	See table 10.15	See table 10.15	See table 10.15

NOTE –
(1) Nail lengths and diameters are the minimum required.
(2) Refer to 4.4 for required protective coatings for metal fasteners.
(3) Proprietary fixings with the required fixing capacity indicated in the tables may be used.



Unless otherwise stated, all dimensions are in mm.

Figure 8.12 – Lintel fixing to prevent uplift (see 8.6.1.8 and table 8.14 (a) and (b))

Table 8.19 – Nailing schedule for hand-driven and power-driven nails (see 8.8.6)

Joint	Hand-driven nails		Power-driven nails	
	Length (mm) **x diameter** (mm) **and type**	**Number/ Location**	**Length** (mm) **x diameter** (mm) **and type**	**Number/ Location**
Bottom plate to floor framing at: (a) External walls and internal wall bracing elements (b) Internal walls (may be nailed to floor decking) (c) Trimmer not exceeding 4.2 m long	100 x 3.75 100 x 3.75 100 x 3.75	2 at 600 mm centres 1 at 600 mm centres 4 (end nailed)	90 x 3.15 90 x 3.15 90 x 3.15	3 at 600 mm centres 1 at 600 mm centres 6 (end nailed)
Dwang to stud	75 x 3.15 or 100 x 3.75	2 (skewed) 2 (end nailed)	75 x 3.06 90 x 3.15	2 (skewed) 2 (end nailed)
Fishplate to straightened stud	60 x 2.8	4 each side of cut	60 x 2.8	4 (each side of cut)
Half joint in top plate	75 x 3.15	3	75 x 3.06	4
Lintel to trimming stud	75 x 3.15 or 100 x 3.75	4 (skewed) 2 (end nailed)	90 x 3.15	3 (end nailed)
Ribbon board to stud	100 x 3.75	2	90 x 3.15	3
Sill or header trimmer to trimming stud for: (a) Trimmer not exceeding 2.4 m long (b) Trimmer not exceeding 3.0 m long (c) Trimmers not exceeding 3.6 m long	100 x 3.75 100 x 3.75 100 x 3.75	2 (end nailed) 3 (end nailed) 4 (end nailed)	90 x 3.15 90 x 3.15 90 x 3.15	3 (end nailed) 5 (end nailed) 6 (end nailed)
Solid plaster batten to stud	60 x 2.8 (galv.)	500 mm centres	60 x 2.8 (galv.)	500 mm centres
Stud to plate	75 x 3.15 or 100 x 3.75	4 (skewed) 2 (end nailed)	75 x 3.06 90 x 3.15	4 (skewed) 3 (end nailed)
Top plate 140 mm x 35 mm to 90 mm x 45 mm and top plate to lintel	100 x 3.75	2 at 500 mm centres	90 x 3.15	3 at 500 mm centres
Trimming studs at openings, blocking and studs at wall intersections	100 x 3.75	600 mm centres	90 x 3.15	600 mm centres
Trimming stud to doubled stud immediately under lintel	100 x 3.75	2	90 x 3.15	2
Waling to stud	60 x 2.8	2	60 x 2.8	2

NOTE –
(1) Nail lengths and diameters are the minimum required.
(2) Refer to 4.4 for required protective coatings for metal fasteners.
(3) For studs up to 2.7 in length, 2 / 90 x 3.15 power-driven nails (end nailed) are sufficient.

Table 4.1 – Protection required for steel fixings and fastenings excluding nails and screws[1] (see 4.4.1)

ZONES	FIXING FASTENING	ENVIRONMENT		MATERIAL
ALL ZONES	Nail plates	CLOSED AND ROOF SPACES		Continuously coated galvanized steel[2]
	Wire dogs & bolts			Hot-dipped galvanized steel[2]
	All other structural fixings	CLOSED		Mild steel (uncoated, non-galvanized)[3]
ZONE D	All structural fixings	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]
ZONES B AND C	Treated timber pile connections more than 600 mm from the ground and all subfloor connections	Subfloors vented 7000 mm² or less	SHELTERED[4]	Hot-dipped galvanized steel[2]
		Subfloors vented more than 7000 mm²	EXPOSED	Type 304 stainless steel[5]
	Treated timber pile connections within 600 mm of the ground	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]
	All other structural fixings, except fabricated brackets[6]	SHELTERED[4]		Hot-dipped galvanized steel[2]
		EXPOSED		Type 304 stainless steel[5]

(1) Items described in this table are steel fasteners required to last not less than 50 years, used for joining timber, such as nail plates, bolts, brackets, wire dogs and similar, but not including nails or screws (which are described in table 4.3).
(2) All galvanizing weights to steel shall be as given in table 4.2.
(3) Steel fixings in timber treated with copper-based timber preservatives shall be as per 4.4.4.
(4) "Sheltered" shall be that above a 45° line drawn from the lower edge of a projecting weathertight structure such as a floor, roof or deck. "Exposed" shall be below that 45° line. See figure 4.3(a) and (b).
(5) Type 304 stainless steel is sufficient to comply with NZBC requirements, but may have surface rust. Type 316 may be used where appearance is a consideration but exceeds the requirements of the NZBC.
(6) "Fabricated brackets" shall be made from 5 mm (minimum thickness) mild steel and shall be hot-dipped galvanized.

Table 4.2 – Galvanizing of steel components other than nails and screws (see 4.4.2)

Component	Standard	Protection required
Bolts in any location that require galvanizing (see table 4.1)	AS/NZS 4680 and AS 1214	600 g/m² average
Nail plates used in sheltered locations Nail plates used in exposed locations	AS 1397 AS/NZS 4680	Z275 pre-galvanized sheet 390 g/m²
Brackets used in sheltered locations Brackets used in exposed locations	AS/NZS 4680 AS/NZS 4680	390 g/m² 600 g/m²
Nail plates used in roof spaces	AS 1397	Z275 pre-galvanized sheet
Wire dogs in any location that require galvanizing (see table 4.1)	AS/NZS 4534	150 g/m² (Zn + 5 % Al)

4.4.3 Nails

The materials for nails and screws shall be as given in table 4.3.

Table 4.3 – Steel items such as nails and screws used for framing and cladding (see 4.4.3)

Building location	Nail or screw use				
	Cladding that acts as bracing (50-year durability)	Non-structural cladding (15-year durability)	Framing in "Closed" areas[1] including roof spaces	Framing in "Sheltered" areas[1]	Framing in "Exposed" areas[1]
Zone D	Stainless steel[2] or silicon bronze or protected galvanized steel[3]	Galvanized steel[4]	Mild steel[5]	Galvanized steel[5]	Stainless steel[2]
Zones B & C	Galvanized steel[4]	Galvanized steel[4]	Mild steel[5]	Galvanized steel[5]	Galvanized steel[5]

(1) For definitions of "closed", "sheltered", and "exposed" see table 4.1 and figure 4.3(a) and (b).
(2) Stainless steel nails shall be minimum Type 304 and shall have annular grooves to provide similar withdrawal resistance to hot-dipped galvanized nails.
(3) Protection of galvanized steel nails shall consist of putty and an exterior painting system consisting of a primer undercoat and 2 top coats of oil-based or acrylic paint.
(4) Where the cladding is a corrosive timber, such as western red cedar or redwood, or is treated with copper-based ACQ or CuAz preservatives, use stainless steel [2] or silicon bronze.
(5) Steel fixings in timber treated with copper-based preservatives shall be as per 4.4.4.
(6) Irrespective of the above, nails and screws shall be compatible with any fixing plate that is used with them.
(7) Nails and screws and other fixings into piles within 600 mm of the ground shall be stainless steel.
(8) Galvanized nails shall be hot-dipped galvanized to a minimum of 320 g/m²; galvanized screws shall be mechanically zinc plated in accordance with AS 3566: Part 2, Class 4.
(9) Type 304 stainless steel is sufficient to comply with NZBC requirements, but may have surface rust. Type 316 may be used where appearance is a consideration but exceeds the requirements of the NZBC.

ALL DIMENSIONS MUST BE VERIFIED ON SITE

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Table 8.18 – Fixing of top plate of wall to supporting members such as studs and lintels at 600 mm centres (see 8.7.6 and figure 8.12)

Loaded dimension of wall (m)	Light roof										Heavy roof				
	Roof member spacing (mm)														
	900					1200					900				
	Wind zone					Wind zone					Wind zone				
	L	M	H	VH	EH	L	M	H	VH	EH	L	M	H	VH	EH
	Fixing type (see below)														
2.0	A	A	B	B	B	A	A	B	B	B	A	A	A	B	B
3.0	A	B	B	B	B	A	B	B	B	B	A	A	B	B	B
4.0	A	B	B	B	B	A	B	B	B	B	A	A	B	B	B
5.0	B	B	B	B	B	B	B	B	B	B	A	A	B	B	B
6.0	B	B	B	B	B	B	B	B	B	B	A	A	B	B	B

Fixing type	Fixing to resist uplift	Capacity of alternative fixing (kN)
A	2 / 90 x 3.15 end nails	0.7
B	2 / 90 x 3.15 end nails + 2 wire dogs	4.7

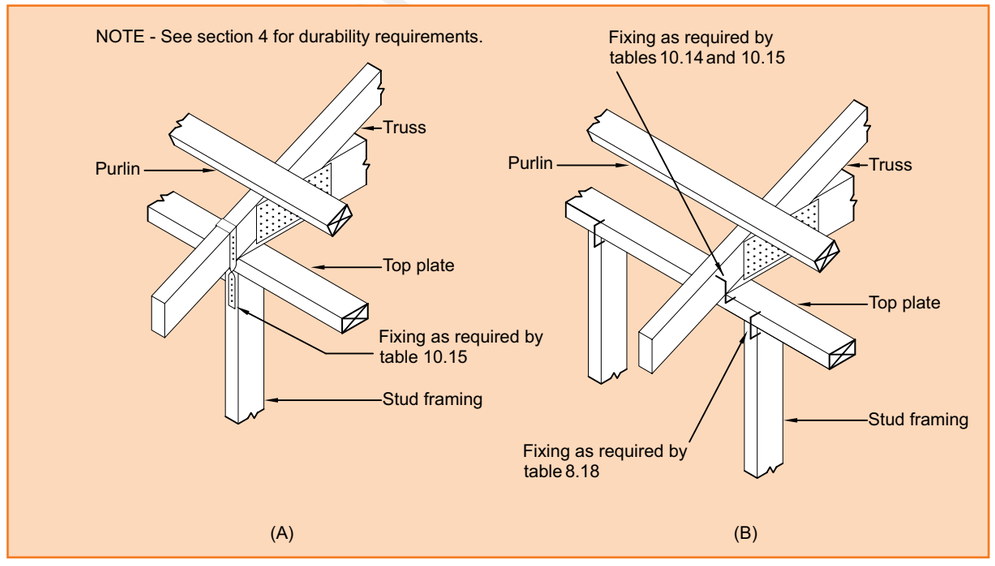
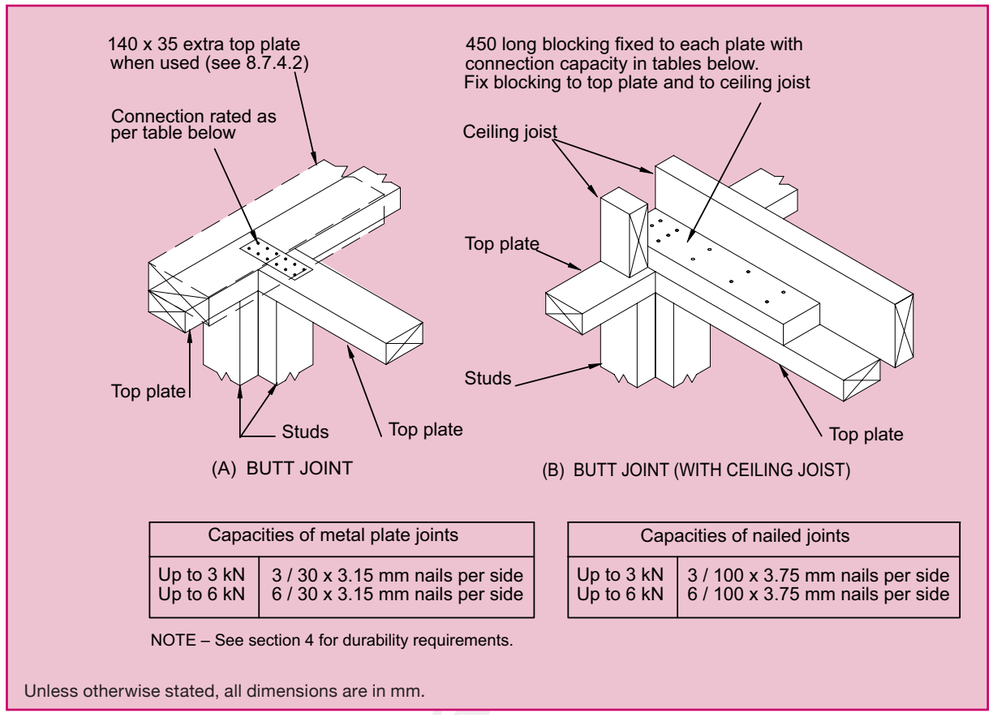


Figure 10.21 – Truss/top plate connections (see 10.2.2.6)



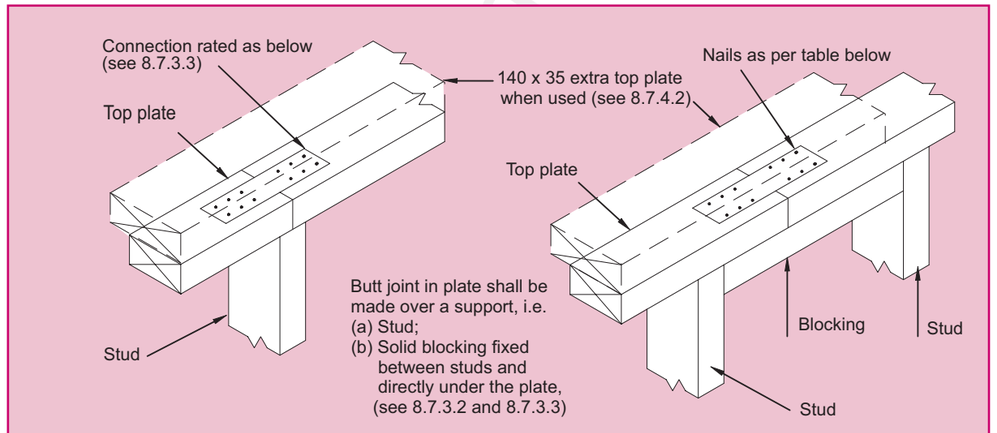
Capacities of metal plate joints	
Up to 3 kN	3 / 30 x 3.15 mm nails per side
Up to 6 kN	6 / 30 x 3.15 mm nails per side

Capacities of nailed joints	
Up to 3 kN	3 / 100 x 3.75 mm nails per side
Up to 6 kN	6 / 100 x 3.75 mm nails per side

NOTE – See section 4 for durability requirements.

Unless otherwise stated, all dimensions are in mm.

Figure 8.16 – Connecting top plates to external walls at right angles – Walls containing bracing (see 8.7.3.4)



Capacities of metal plate joints(2)	
Up to 3 kN	3 / 30 x 3.15 mm nails per side
Up to 6 kN	6 / 30 x 3.15 mm nails per side

Capacities of nailed joints(2)	
Up to 3 kN	3 / 100 x 3.75 mm nails per side
Up to 6 kN	6 / 100 x 3.75 mm nails per side

NOTE –
(1) See section 4 for durability requirements.
(2) Not required when extra top plate is used.

Unless otherwise stated, all dimensions are in mm.

Figure 8.15 – Connecting top plates in line – Walls containing bracing (see 8.7.3.3)

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Design Note B4

Requirements For Brick Veneer Ties

April 2020

Brick Veneer is to be attached to, and supported by a structural timber or concrete frame using brick ties that meet the manufacturing standard, AS/NZS 2699.1:2000. They are to be installed to meet the requirements of NZBC E2/AS1 Masonry and NZS4210. It should be noted that E2/AS1 Masonry is only one solution

Durability

New Zealand has been divided into 4 separate zones, which reflect their exposure to coastal salt sea spray and sulphurous gases in the thermal regions of New Zealand; referred to as Hot Spots. These conditions and zones dictate what type of brick tie is required.

The Territorial Authority can advise on the 'durability zone' where the brick veneer is to be constructed. It is important to obtain clarification of this prior to building, especially if the site is close to coastal waters.

Location of Building	Required Protection for Brick Tie
Sea Spray Zone *(500m of the sea including harbours, or 100m from tidal estuaries.)*	316 or 316L stainless steel
Geothermal Hot Spot *(50m of a geothermal hot spot)*	Specific Engineering Design
Elsewhere Note: The above requirements may be modified; check for alterations	470gm/m^2 or 304 stainless steel

General Installation

Brick ties shall be installed to meet the following requirements:

- Brick ties may be dry laid, that is, placed directly onto the brick.
- Brick ties shall be screw fixed into timber framing, studs, joists, lintels – where not possible, nogs may be used.
- The tie must extend a minimum of half way into the mortar course.
- Brick ties may be fixed to concrete structures using appropriate fixings.
- The brick tie must land min. 50% onto the brick and the end have a 15mm cover for galvanised.
- Screw must be hard into framing and sloping 5 degrees down from fixing.

No of Brick Ties Required

Approximately 5 per square metre of wall or 110 per 1000 bricks.

Positioning of brick ties

Horizontal	Vertical
400mm	500mm
450mm	450mm
600mm	350mm

Specific Locations

- Within 300mm around openings.
- Within the top 2 mortar courses.
- Within the bottom 3 mortar courses.
- In the bottom course where a bond breaker has been used.

Required Length of Brick Tie

Cavity Width	70mm Bricks	90mm Bricks
40mm	85/90mm	85/90mm
45mm	85/90mm	90/115mm
50mm	85/90mm	
55mm	90/115mm	

Sizes of brick ties.

Standard Heavy Duty brick ties are manufactured in the following sizes. 85mm, 90mm, 105mm, 115mm, 135mm

Limited supplies of special length ties may be obtainable in 50mm and 70mm. Ties may be manufactured to length, discuss with the suppliers.

NOTE: A galvanised Cavity Tie 185mm x 105mm is manufactured by MASONS Plastabrick Ltd Ph. 0800 522 533.

Major Brick Tie Manufacturers

MASONS Plastabrick Ltd

P.O.Box 101

Silverdale 0932

0800 522 533

Fortress Fasteners

The Ultimate Brick Tie

0800 42 52 62

Ancon

2/19 Nuttall Drive

Hillsborough

Christchurch 8022

03 376 5205

Design Note B7

Vertical Control Joints In Brick Veneer

April 2020

Under normal conditions "Control Joints" are NOT required in The Brickery® clay brick veneers.
(Refer NZS 4210:2001)

The Brickery® clay bricks expand slightly but not to a degree that would create problems in normal residential construction.

Should cracking occur due to control joints not being installed, it is aesthetic only and does not threaten the structural integrity or weathertightness of the veneer.

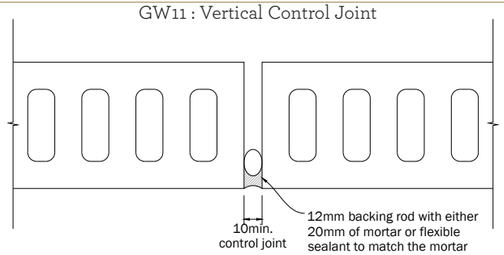
Commonsense and good building practices dictate the requirements for control joints in clay brick veneers.

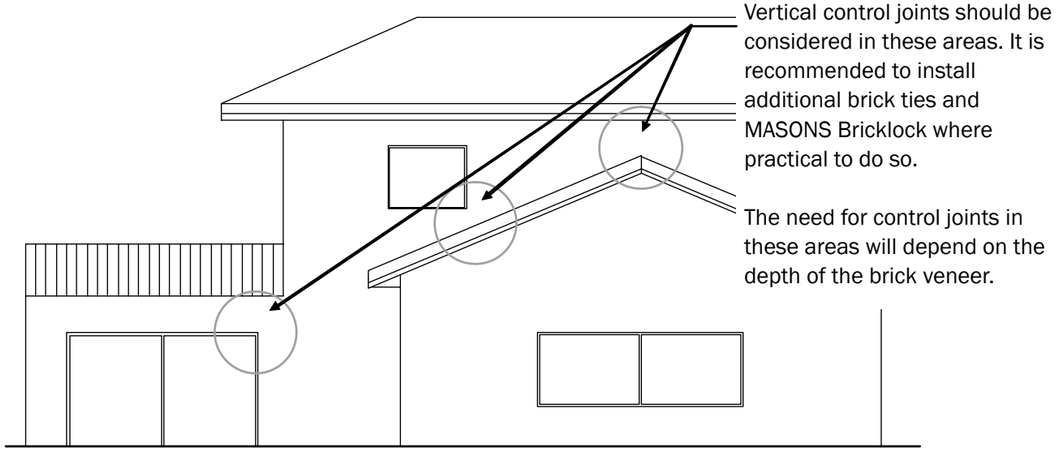
Examples of situations where control joints shouild be considered:

- If a full veneer wall, i.e. no openings, 10.0m or longer is involved, design for a 10mm control joint, near the middle of the wall.
- Junctions between large and small panels of brickwork, such as those indicated below.

Please contact NZ Brick Distributors on 0800 BRICKS if in doubt.

GW11 : Vertical Control Joint





Vertical control joints should be considered in these areas. It is recommended to install additional brick ties and MASONS Bricklock where practical to do so.

The need for control joints in these areas will depend on the depth of the brick veneer.

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Roof Bracing Options

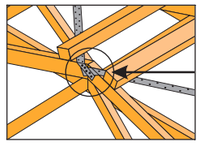
i) ROOF PLANE BRACE

Each roof plane brace can be:

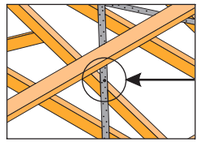
- A hip or valley rafter running continuously from ridge to the top plate in accordance with Clauses 10.2.1.3.2 or 10.2.1.3.3 NZS 3604:2011.

OR

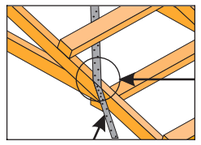
- A pair of tensioned and crossed LUMBERLOK Strip Brace running continuously from ridge to wall frame installed as detailed below.



5 x 30mm x 3.15 dia.
Nails each end

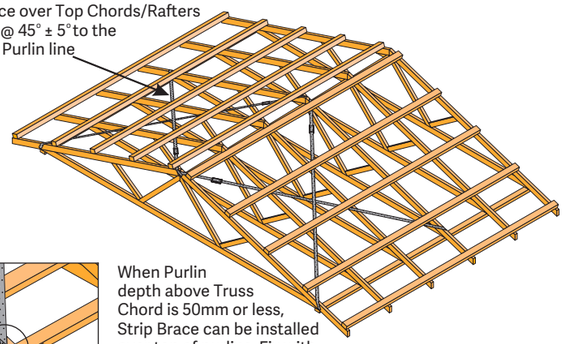


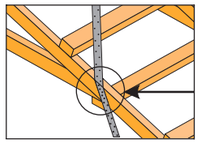
1 x 30mm x 3.15 dia.
Nail at crossing
(after tensioning)



5 x 30mm x 3.15 dia.
Nails each end

6 x 30mm x 3.15 dia.
Nails to Wall Frame

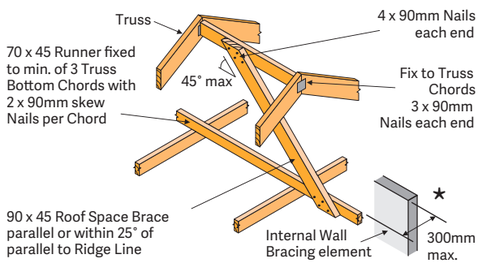




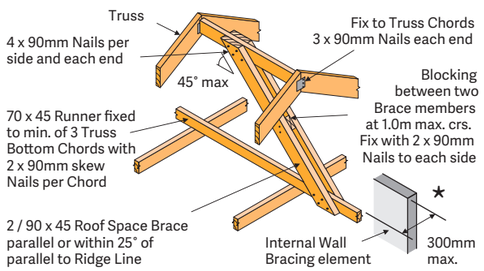
When Purlin depth above Truss Chord is 50mm or less, Strip Brace can be installed over top of purlins. Fix with 1 x 30mm x 3.15 dia. Nail at the Purlin closest to the Rafter/Truss crossing

ii) ROOF SPACE BRACE

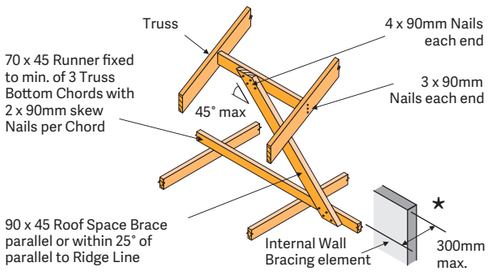
(A) Less than 2m long



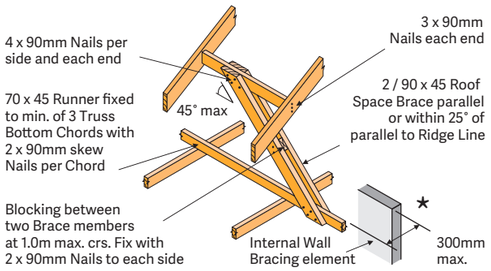
(B) More than 2m long (Max. 4.8m)



(C) Not directly under the ridge - less than 2m long



(D) Not directly under the ridge - more than 2m long



ALL DIMENSIONS MUST BE VERIFIED ON SITE

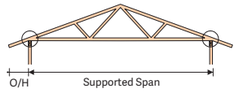
STUD TO TOP PLATE FIXING SCHEDULE

ALTERNATIVE TO TABLE 8.18 NZS 3604:2011

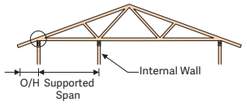
NOTE:

- All fixings are designed to resist vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20kPa
- Refer to Table 8.19 NZS 3604:2011 for nailing schedule to resist lateral loads
- These fixings assume the correct choice of rafter/truss to top plate connections have been made
- For gable end walls where the adjacent rafter/truss is located within 1200mm and with a maximum verge overhang of 750mm, select stud to top plate fixing using a loaded dimension of 1.5m
- All fixings assume top plate thickness of 45mm maximum
- Wall framing arrangements under girder trusses are not covered in this schedule
- All timber selections are as per NZS 3604:2011

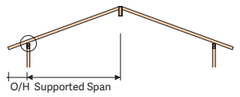
LOADED DIMENSION DEFINITION



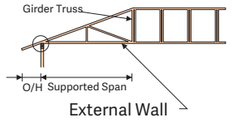
External Wall
Standard Truss



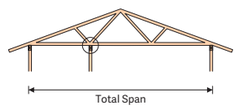
External Wall
Internally supported Truss



External Wall
Rafter roof



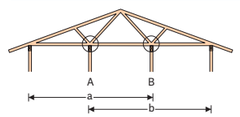
External Wall
Jack Truss



Internal Wall
Internally supported Truss
(overhang dimension does not apply)

EXTERNAL WALL
LOADED DIMENSION =
$\frac{\text{SUPPORTED SPAN}}{2}$ + O/H

INTERNAL WALL
LOADED DIMENSION =
$\frac{\text{TOTAL SPAN}}{2}$



Multiple internal Walls
(overhang dimension does not apply)

MULTIPLE INTERNAL WALL
LOADED DIMENSION FOR
WALL A = $\frac{a}{2}$
WALL B = $\frac{b}{2}$

FIXING SELECTION CHART

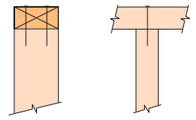
(Suitable for walls supporting roof members at 600, 900 or 1200mm crs.)
Wind Zones L, M, H, VH, EH, as per NZS 3604:2011

Loaded Dimension (m) Stud Centres			Light Roof Wind Zone					Heavy Roof Wind Zone				
300mm	400mm	600mm	L	M	H	VH	EH	L	M	H	VH	EH
3.0	2.3	1.5	A	A	B	B	B	A	A	B	B	B
4.0	3.0	2.0	A	A	B	B	B	A	A	B	B	B
5.0	3.8	2.5	A	B	B	B	B	A	A	B	B	B
6.0	4.5	3.0	A	B	B	B	B	A	A	B	B	B
7.0	5.3	3.5	A	B	B	B	B	A	A	B	B	B
8.0	6.0	4.0	A	B	B	B	B	A	A	B	B	B
9.0	6.8	4.5	B	B	B	B	B	A	A	B	B	B
10.0	7.5	5.0	B	B	B	B	B	A	A	B	B	B
11.0	8.3	5.5	B	B	B	B	B	A	A	B	B	B
12.0	9.0	6.0	B	B	B	B	B	A	A	B	B	B

FIXING OPTIONS

FIXING TYPE A 0.7kN

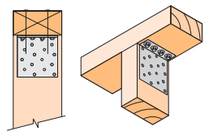
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



FIXING TYPE B 4.7kN

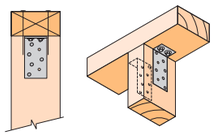
CHOOSE ANY OF THE 3 OPTIONS BELOW

2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
LUMBERLOK
6kN Stud Anchor
(CPC80)

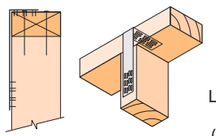
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
2 x LUMBERLOK
CPC40

Recommended for internal wall options to avoid lining issues

2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
LUMBERLOK
Stud Strap
(one face only)

NOTE:
To calculate the number of B type fixings required, divide the wall length by the stud centres, add 1 to this figure and locate this number of fixings as evenly as possible along the wall length. This figure includes the start and end studs in each wall length.

8. WALLS

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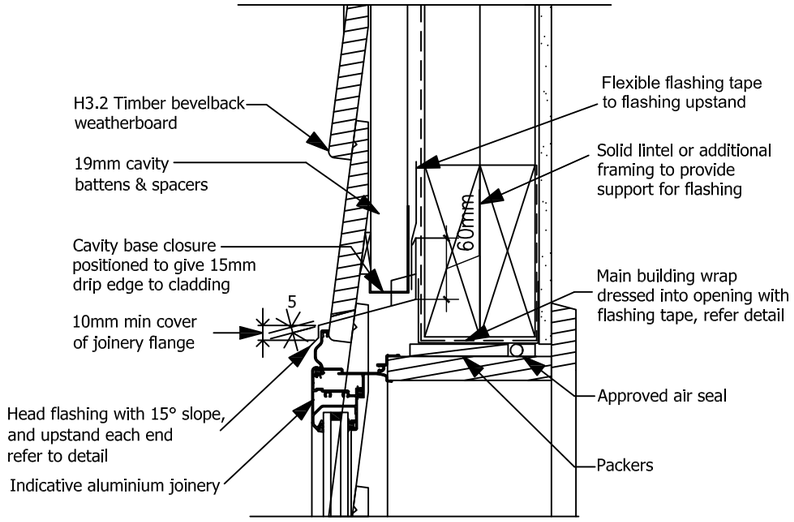
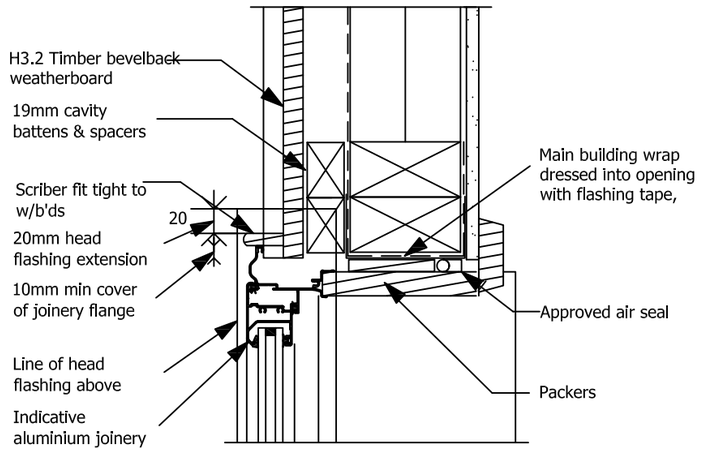
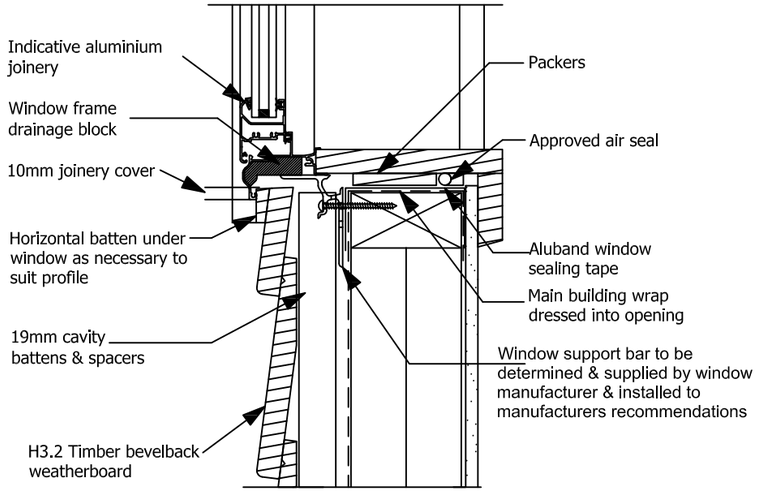


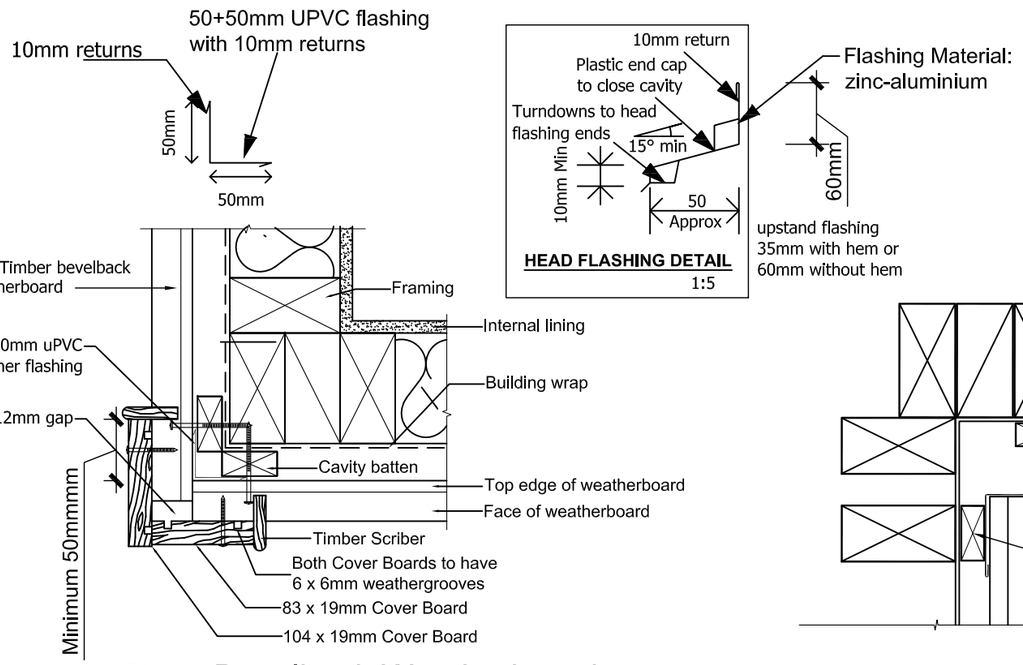
01 A401 WEATHERBOARD WINDOW HEAD DETAIL 1:5



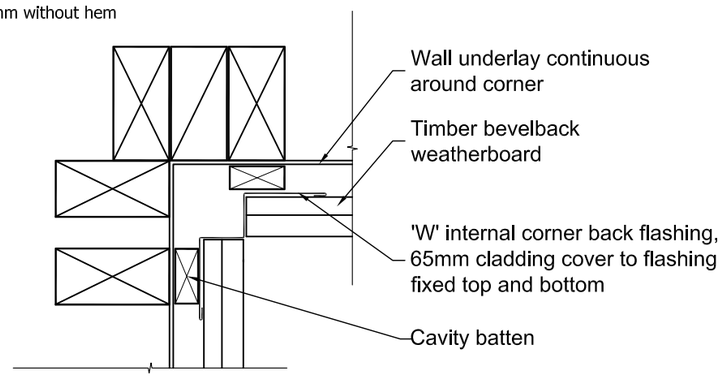
02 A401 WEATHERBOARD WINDOW/DOOR JAMB DETAIL 1:5



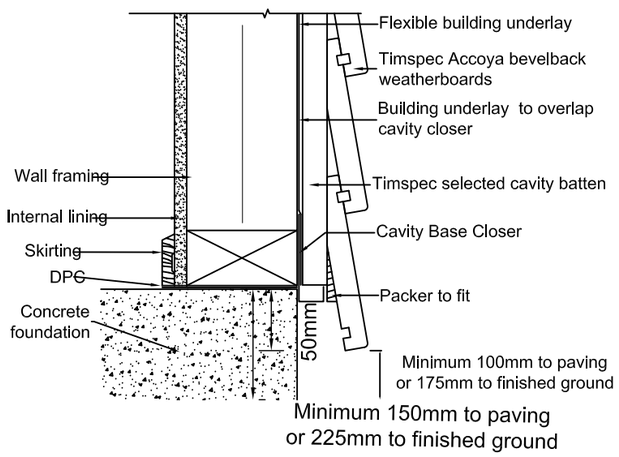
03 A401 WEATHERBOARD WINDOW SILL DETAIL 1:5



04 A201 Bevelback Weatherboard External Corner Detail 1:5



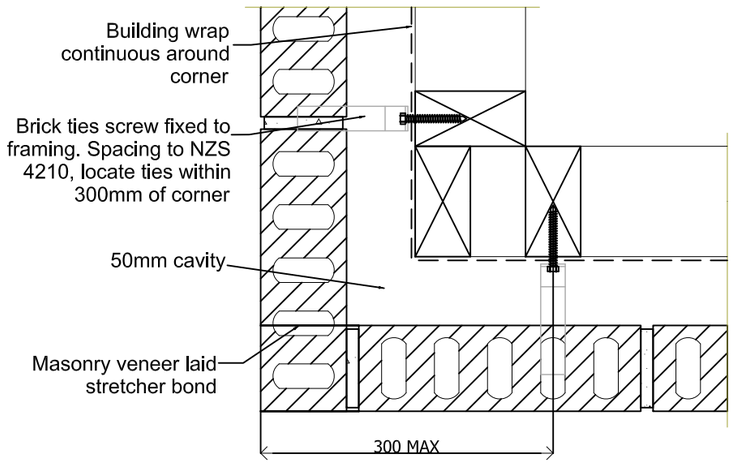
05 A201 Bevelback Weatherboard internal corner detail 1:5



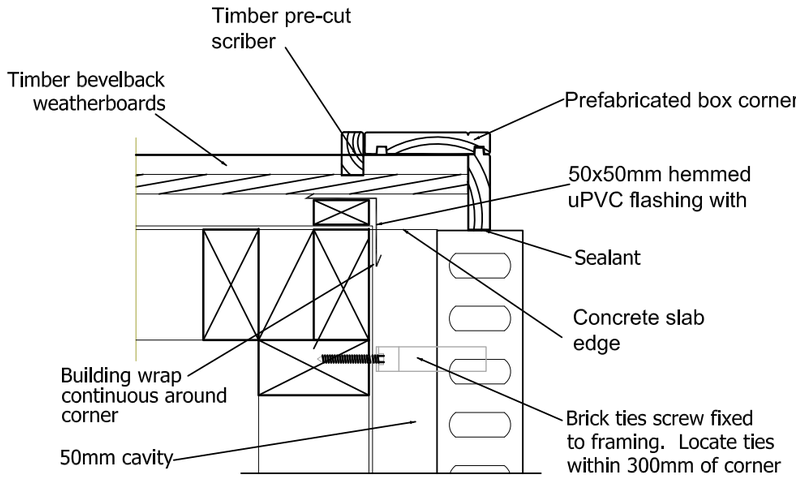
06 A402 Weatherboard Base of Wall Detail 1:5

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SET OUT ANY WORK

C&H DESIGN NZ LTD caojun325@hotmail.com Mobile: 021-0737398	Project: New House Development 17 Black Beech Crescent, Takaknini, Auckland	Title:	Date:	Scale:	Client :	DW by :	Issue:	Job No:	Sheet No.:
		Assembly Details 01	08 / 2024	1:5 - A3		AC	A		A701

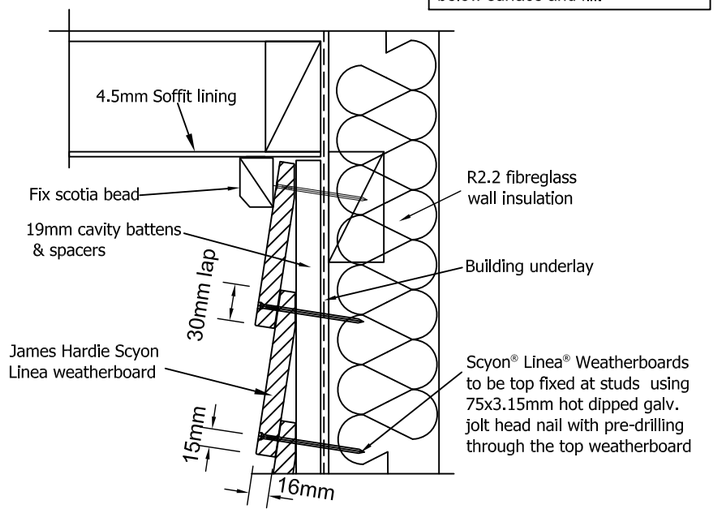


01 A201 BRICK EXTERNAL CORNER DETAIL 1:5

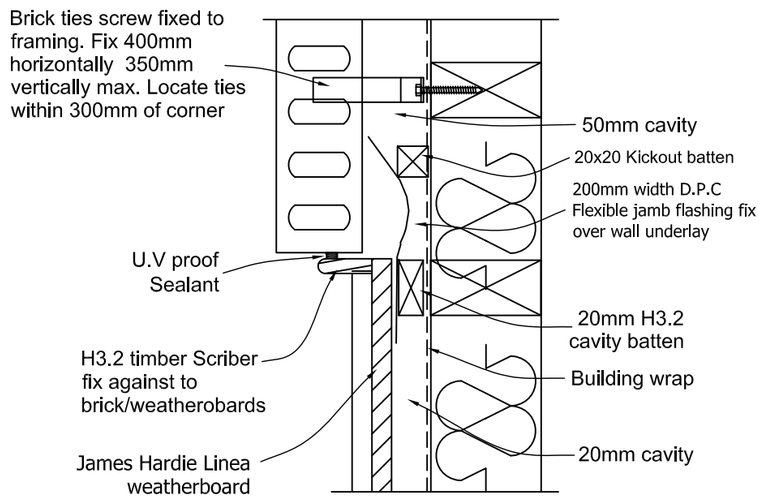


02 A201 Brick And Weatherboard External Corner Joint Detail 1:5

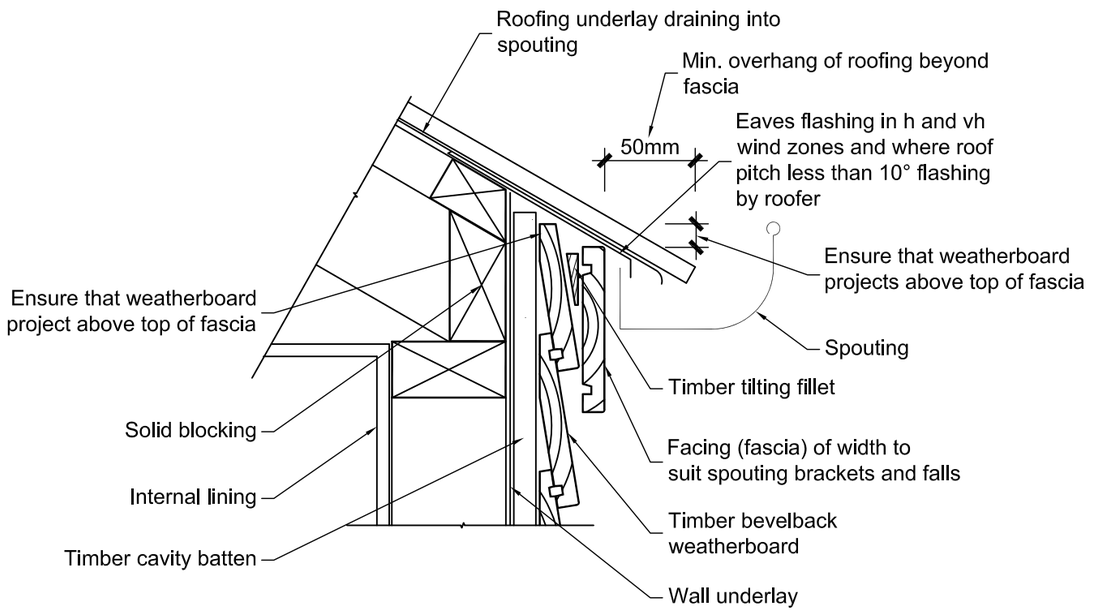
Scyon® Linea® Weatherboards to be face fixed at corners and down window and door openings using 75 x 3.15mm jolt head nails at 90° to face, punch 2mm below surface and fill.



05 A402 JH Linea W/B to Soffit and Fixing Detail 1:5



03 A301 Brick to Weatherboard Abutting Joint Detail 1:5



04 A301 BEVELBACK WEATHERBOARD WALL TO NIL SOFFIT DETAIL

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SETTING OUT ANY WORK

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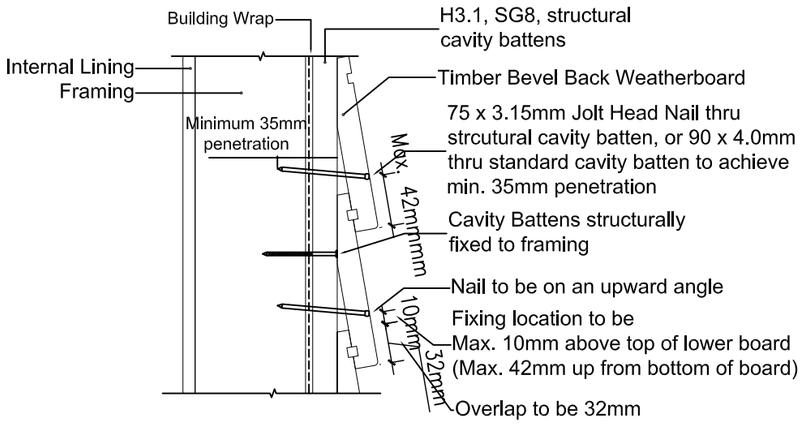
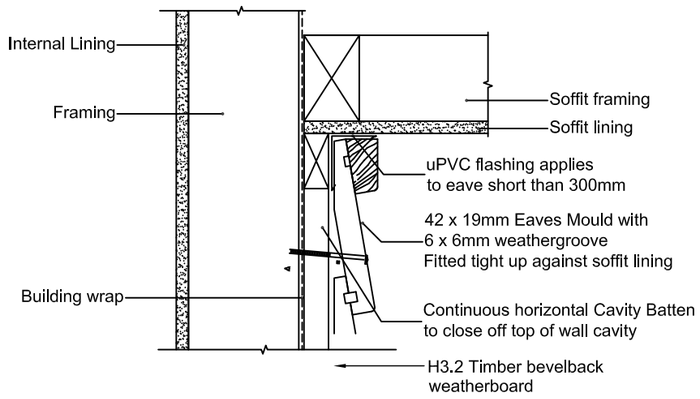
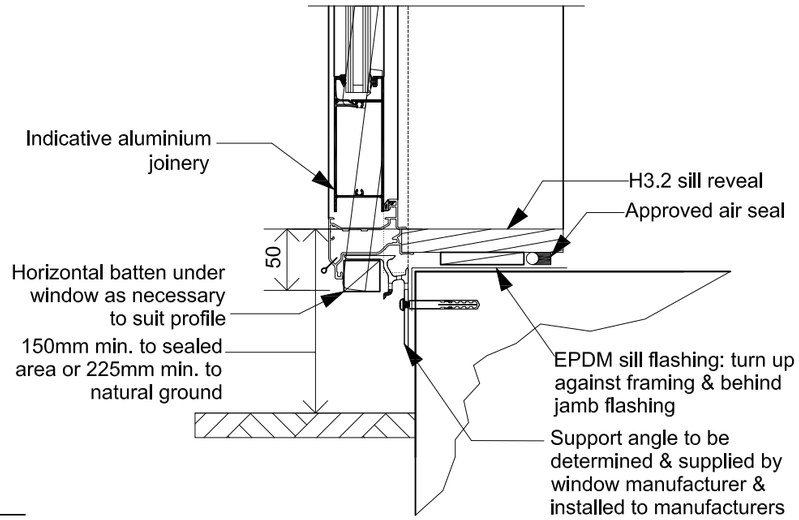
	17 Black Beech Crescent, Takaknini, Auckland	Assembly Details 02	08 / 2024	1:5 - A3		AC	A		A702



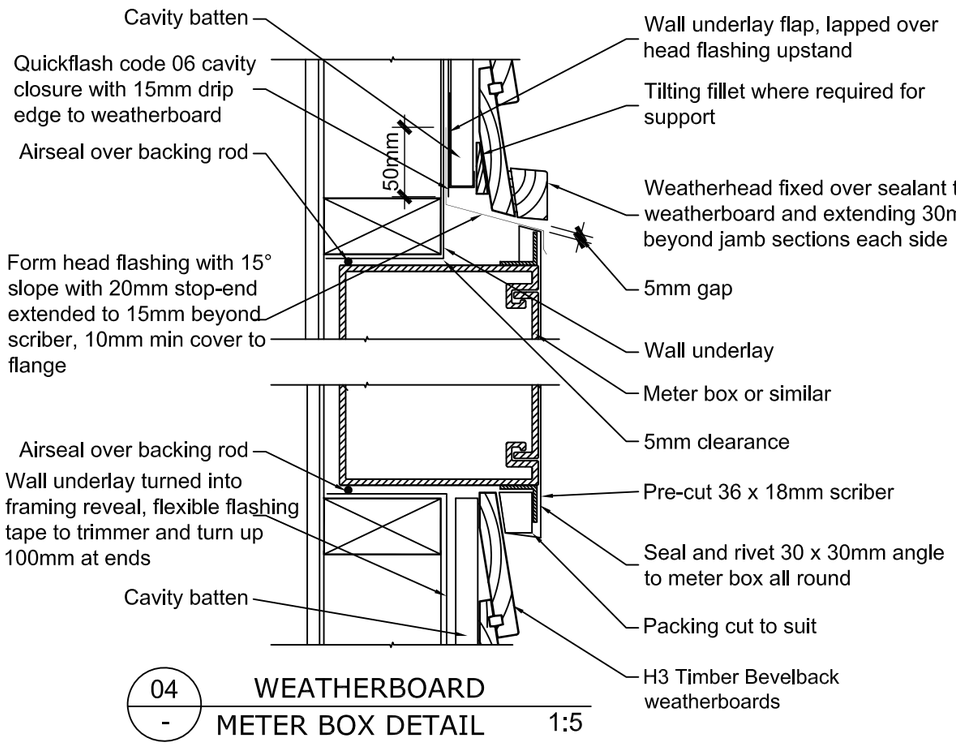
01 / - Bevelback - W/B Fixing Detail - paint finish 1:5



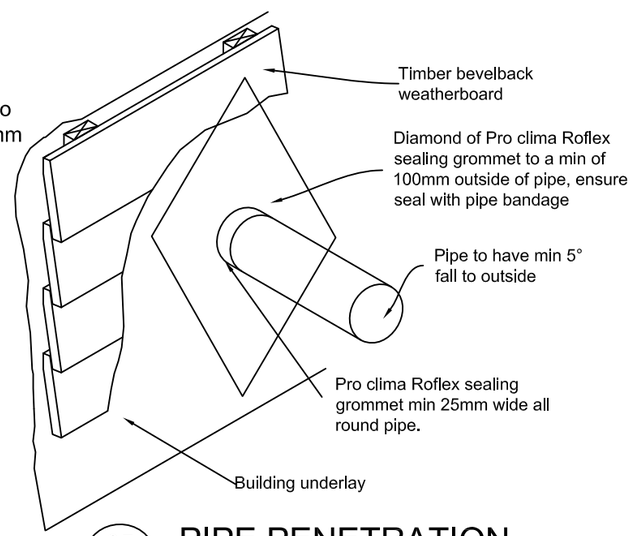
02 / A402 BEVELBACK WEATHERBOARD WALL TO SOFFIT DETAIL 1:5



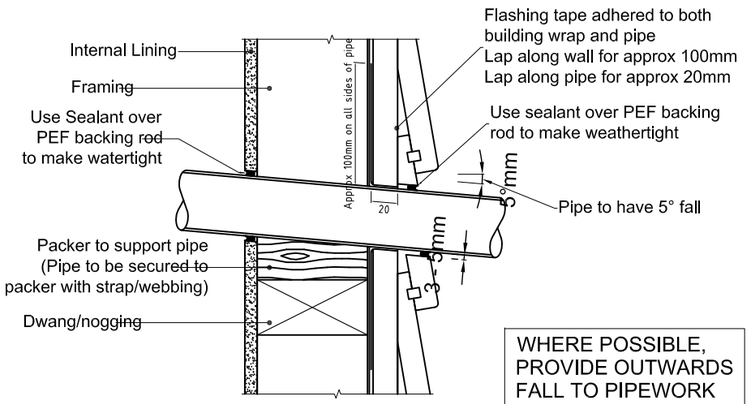
03 / A302 WEATHERBOARD DOOR SILL DETAIL 1:5



04 / - WEATHERBOARD METER BOX DETAIL 1:5



05 / - PIPE PENETRATION (FOR PIPES UP TO 150mm)



06 / - PIPE PENETRATION (FOR PIPES UP TO 150mm) 1:5

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SET OUT ANY WORK

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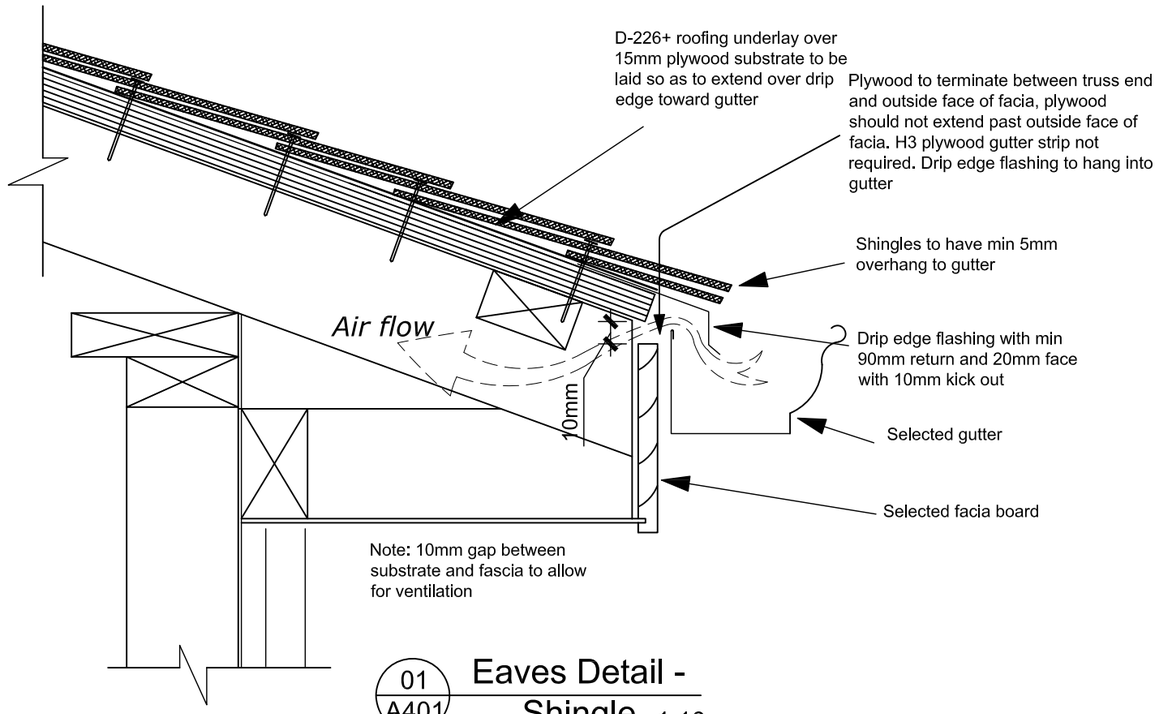
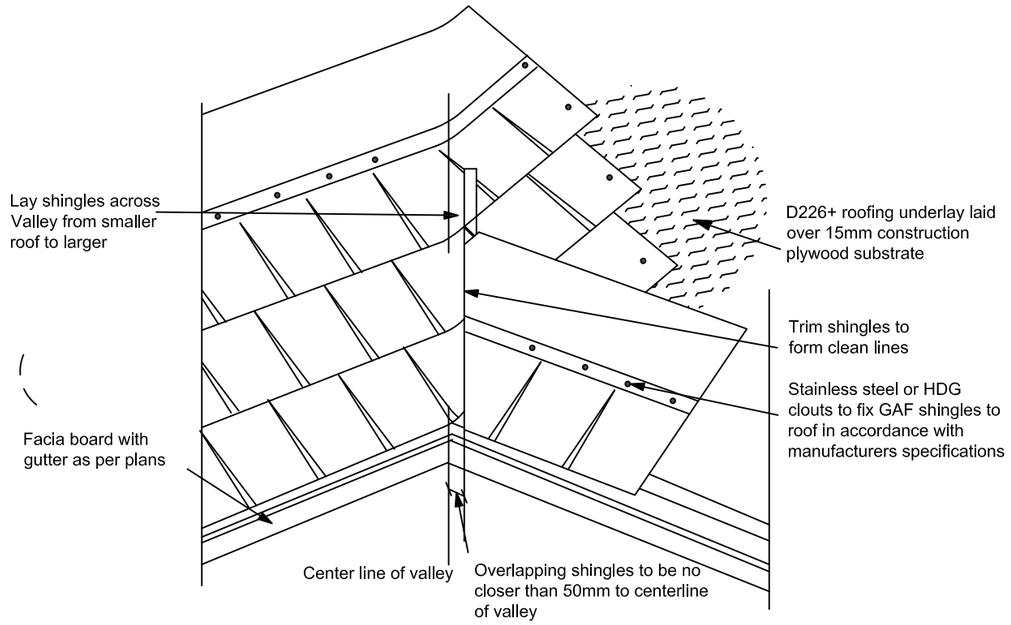
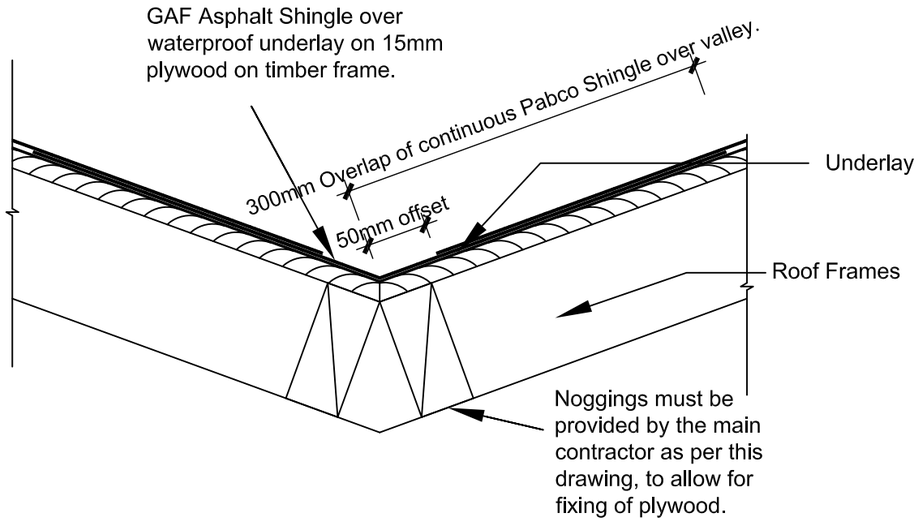


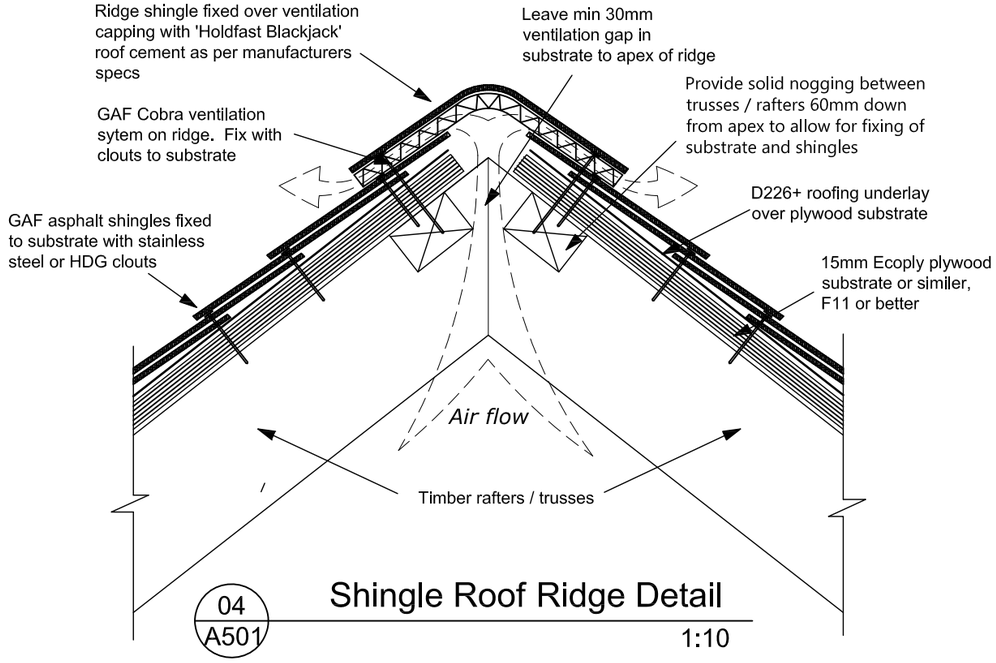
01 / A401 Eaves Detail - Shingle 1:10



02 / - Shingle Roof - Valley Detail - 3D



03 / A501 Shingle Roof - Valley Detail 2D 1:5



04 / A501 Shingle Roof Ridge Detail 1:10

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SETTING OUT ANY WORK

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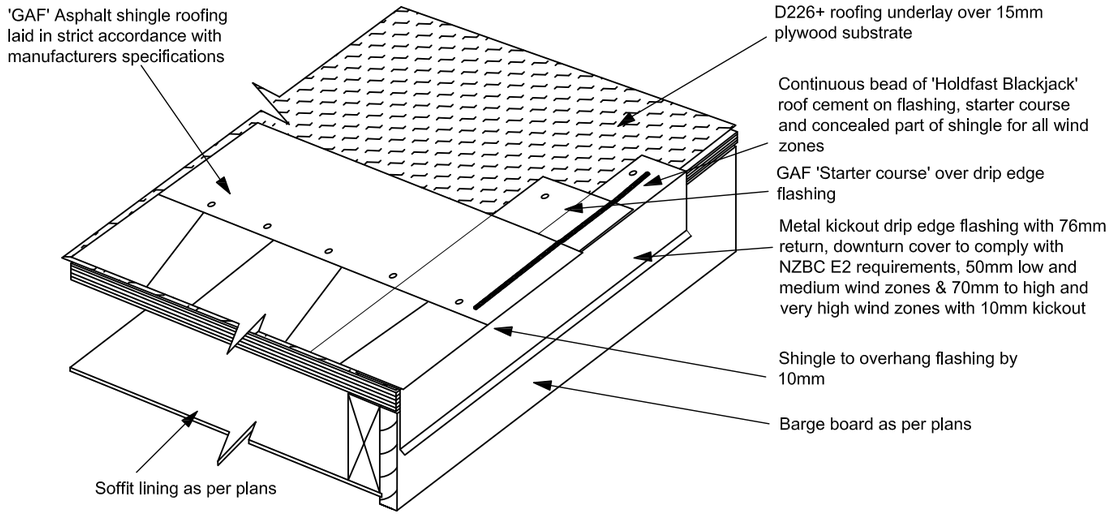
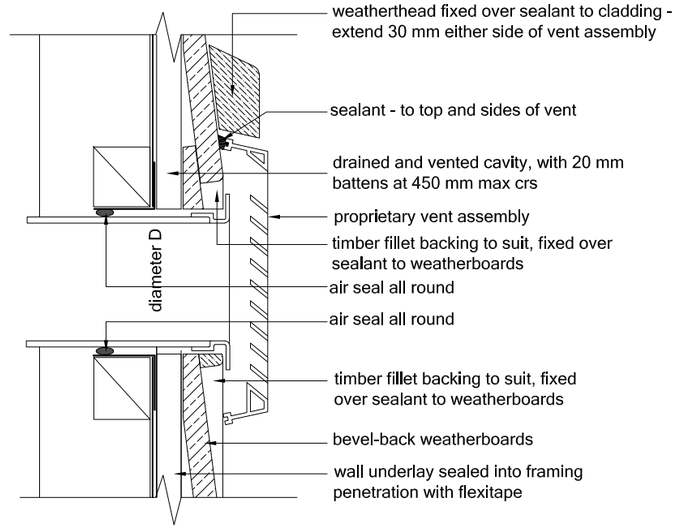
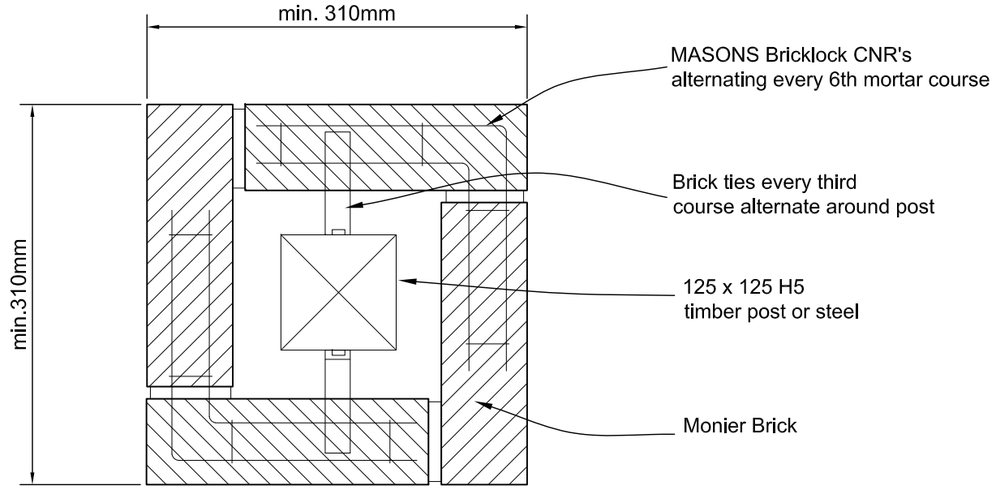
	17 Black Beech Crescent, Takaknini, Auckland	Assembly Details 04	08 / 2024	1:5 - A3		AC	A		A704



01 / A402 Shingle Roof Barge Detail 1:5



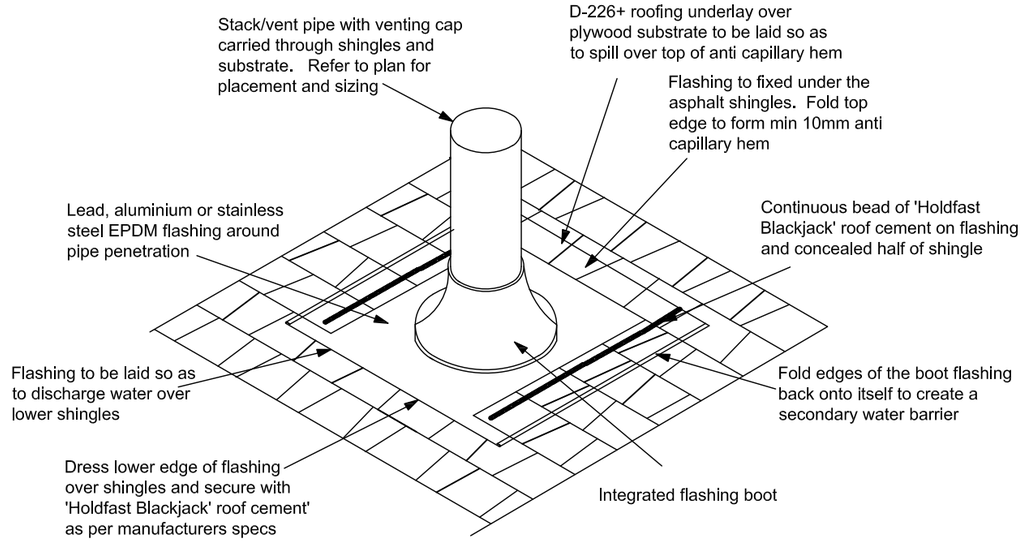
02 / - Ducting Cowl Detail - Weatherboard 1:5



03 / A201 POST CORNER DETAIL 1:5

Notes

- Do NOT fill cavity with concrete
- Provide weepholes at the base
- Provide waterproof capping on top of the column
- Embed posts to specific engineering design



04 / - Shinge Roof Penetration Detail 1:5

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SETTING OUT ANY WORK

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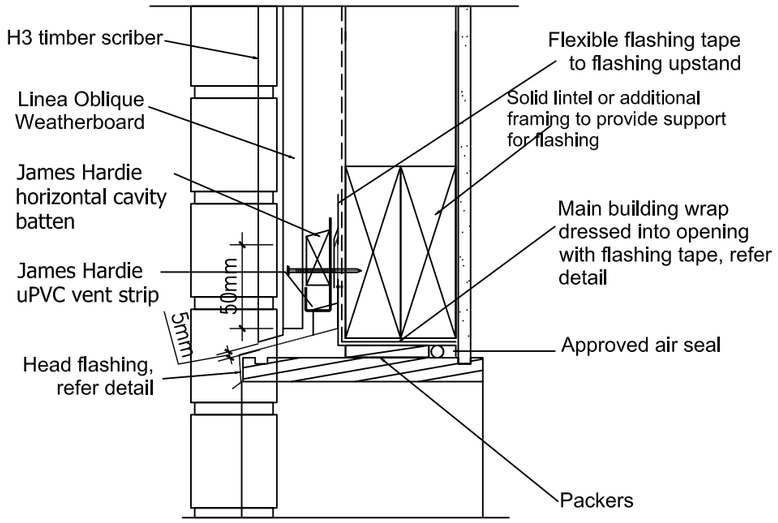
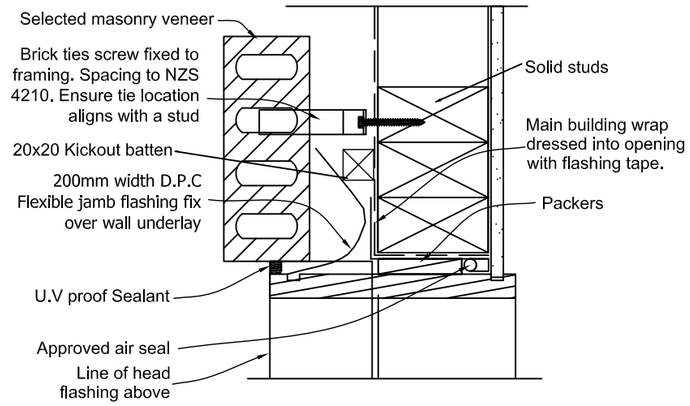
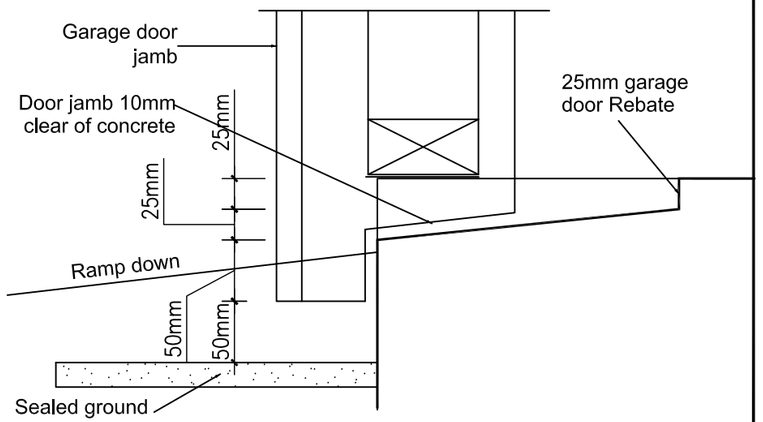
	17 Black Beech Crescent, Takaknini, Auckland	Assembly Details 05	08 / 2024	1:5 - A3		AC	A		A705



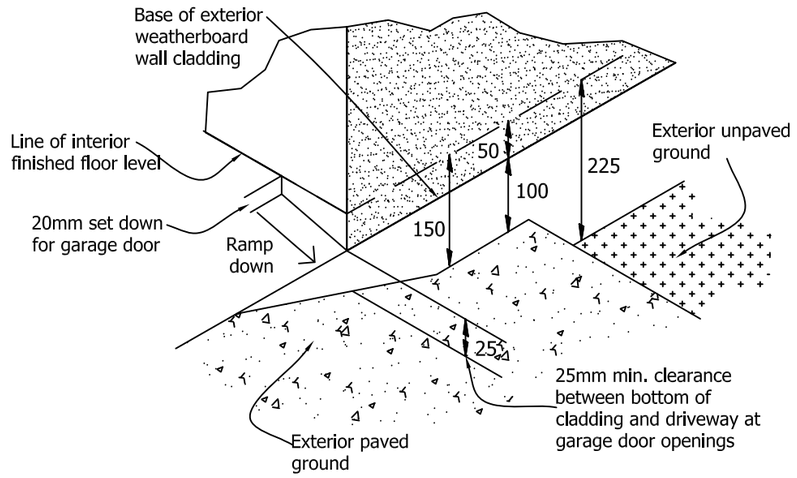
01 / A301 — Oblique weatherboard Garage door head detail 1:5



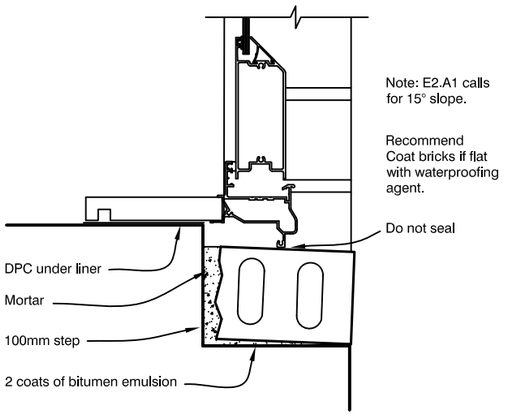
02 / A301 — Brick Veneer Garage Door Jamb Detail 1:5



03 / A301 — Garage Door Sill Detail 1:5

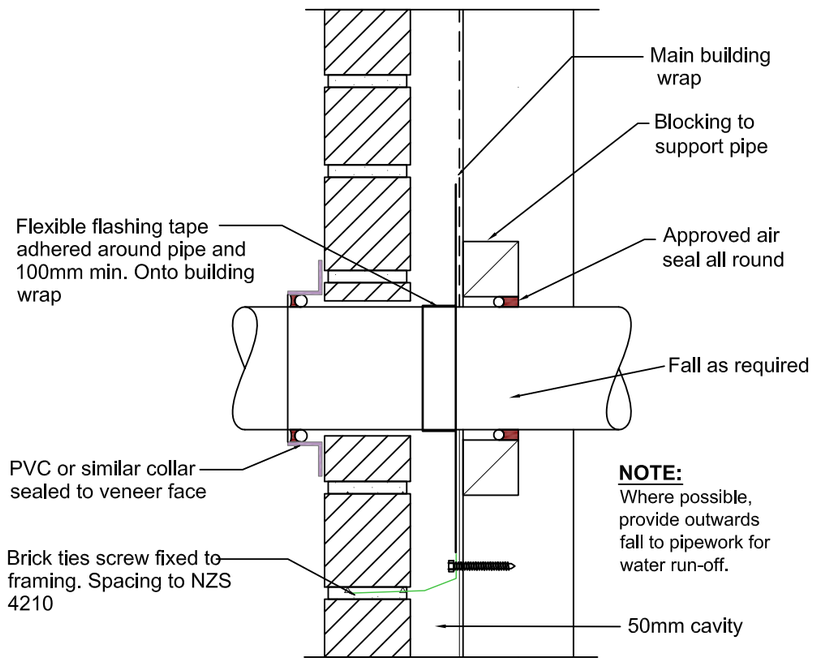


04 / - — Garage door levels and cladding clearance 1:5



Note: If brick is to be sloped further either increase the depth of the step or reduce the thickness of brick.

05 / A402 — BRICK VENEER - DOOR SILL DETAIL 1:5



06 / - — PIPE PENETRATION (FOR PIPES UP TO 150mm) 1:5

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SET OUT ANY WORK

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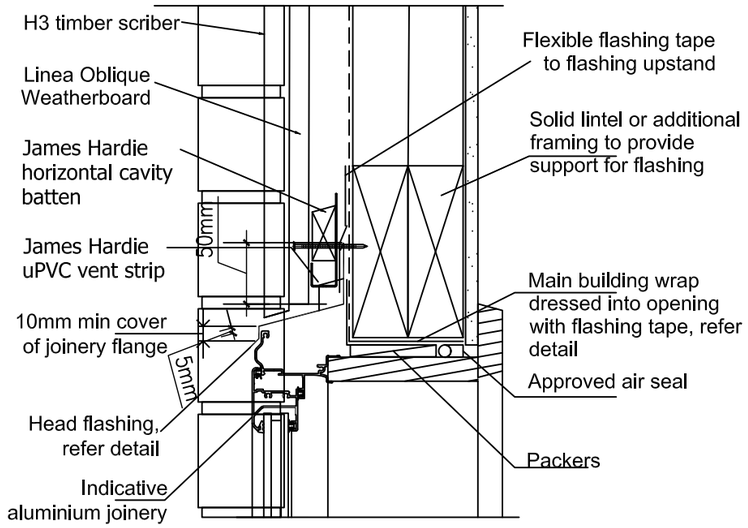
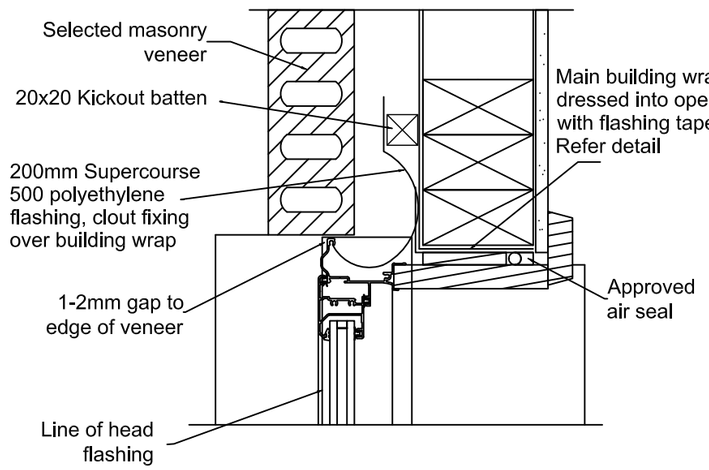
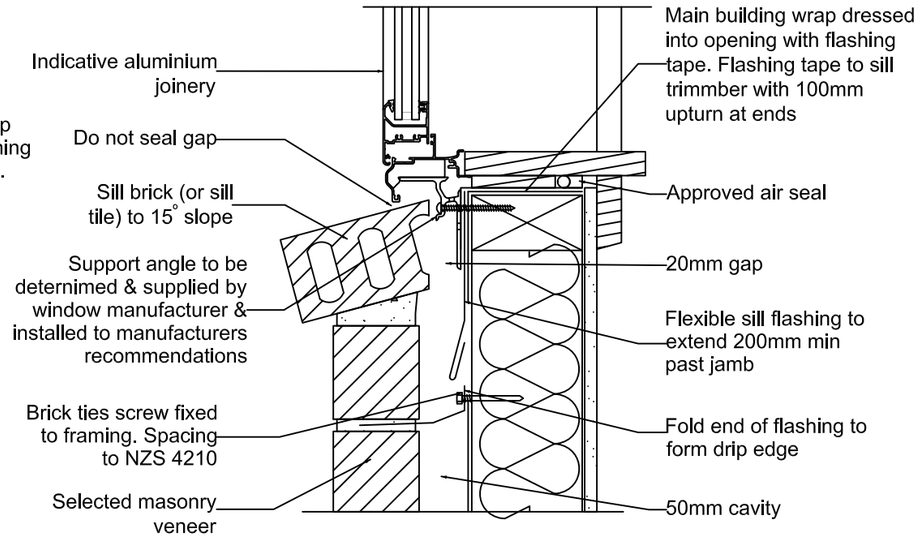


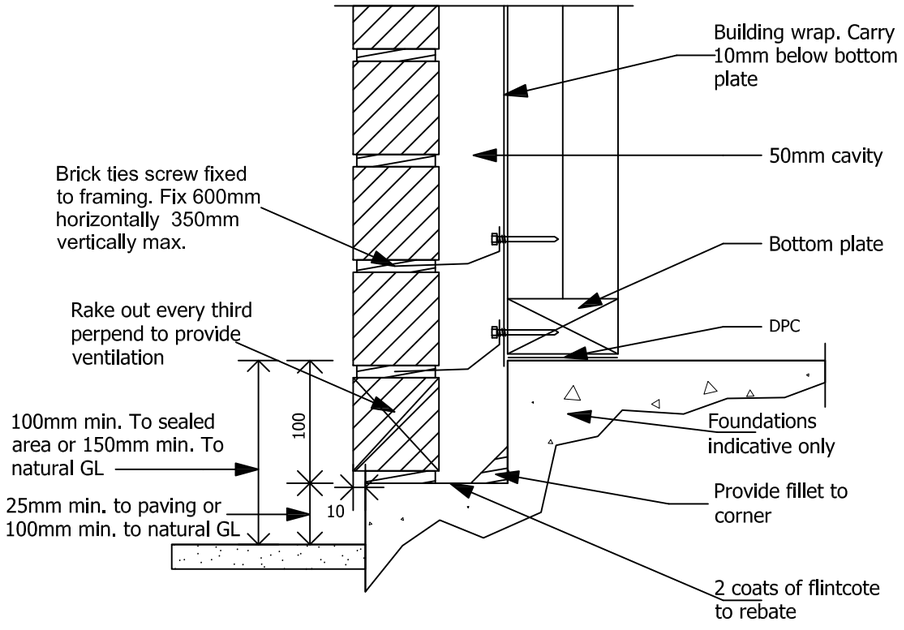
01 A301 WEATHERBOARD WINDOW HEAD DETAIL 1:5



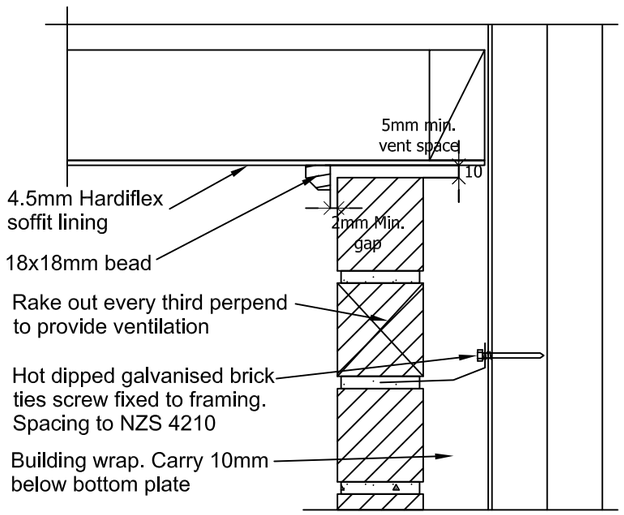
02 A301 BRICK VENEER WINDOW /DOOR JAMB DETAIL 1:5



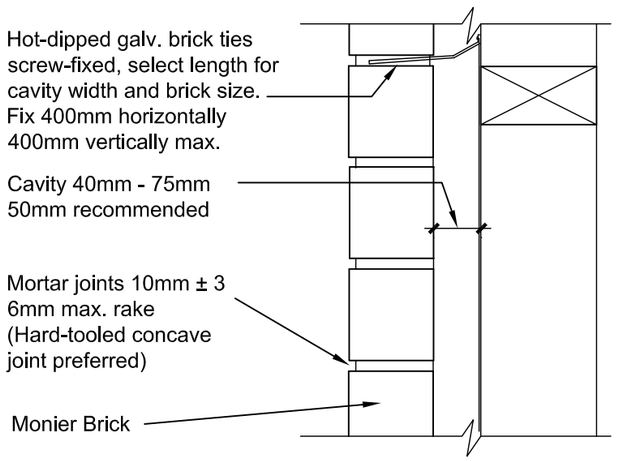
03 A301 BRICK VENEER WINDOW SILL DETAIL 1:5



04 A402 BRICK VENEER TO CONCRETE BASE 1:5



05 A402 MASONRY VENEER TO SOFFIT JUNCTION 1:5



06 - WALL SECTION - TYPICAL 1:5

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SETTING OUT ANY WORK

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caojun325@hotmail.com Mobile: 021-0737398

Project:	Title:	Date:	Scale:	Client Name:	DW by:	Revise:	Job No.	Sheet No.:
17 Black Beech Crescent, Takaknini, Auckland	Assembly Details 07	08 / 2024	1:5 - A3		AC	A		A707

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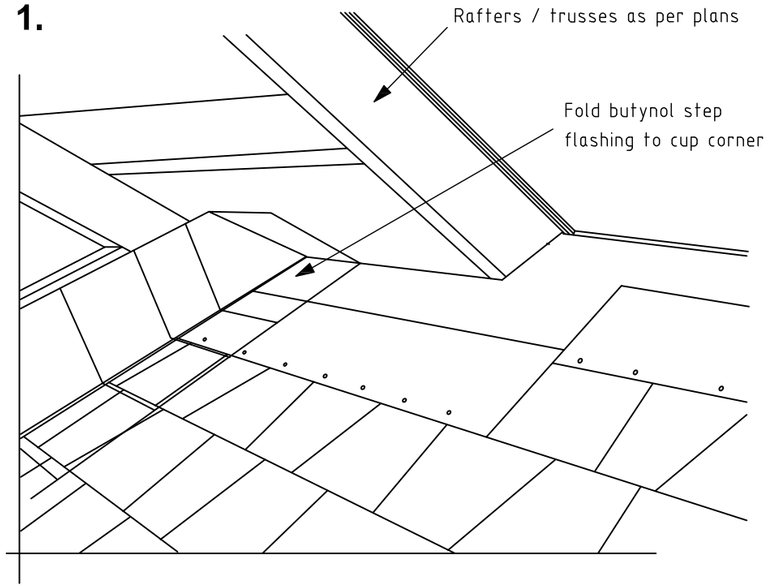

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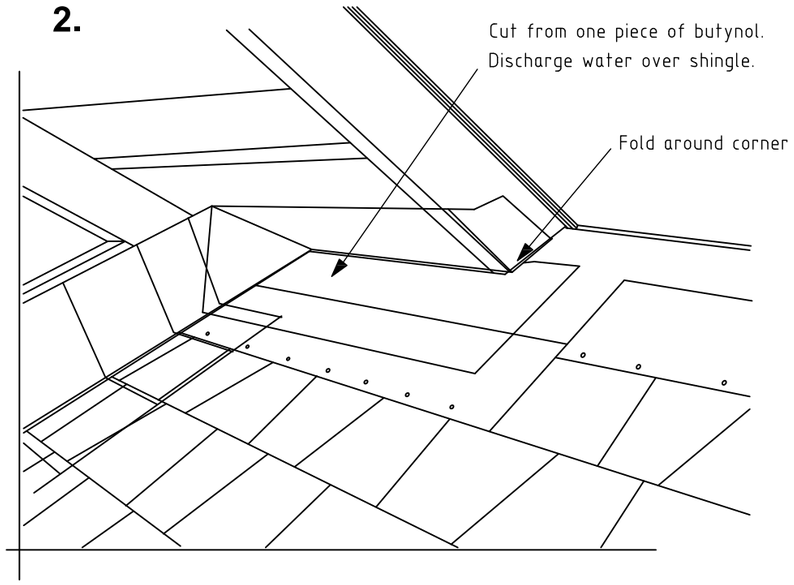

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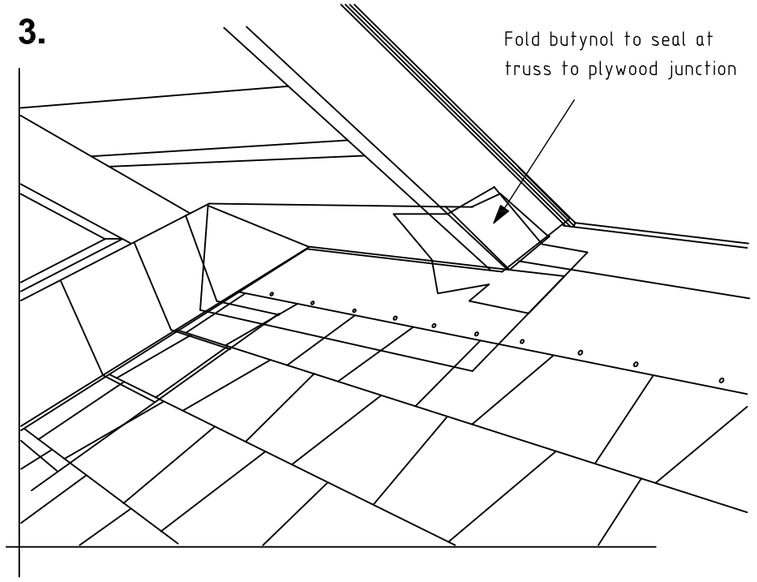

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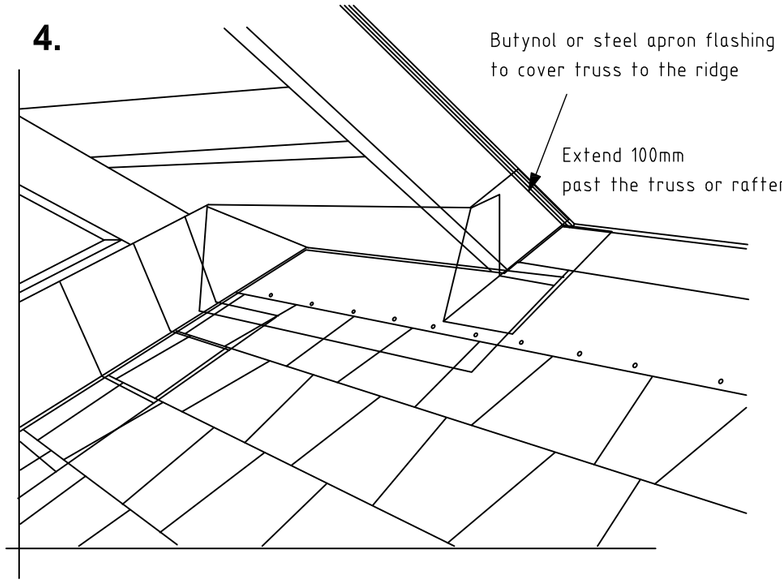

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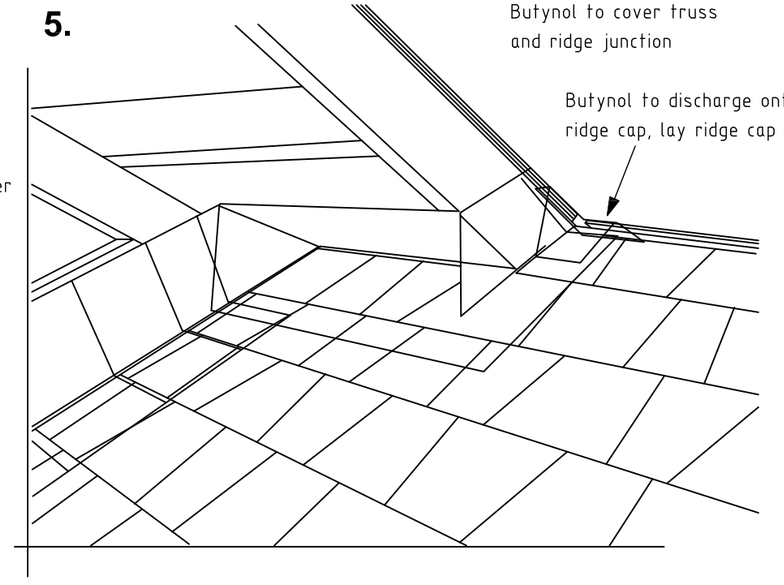

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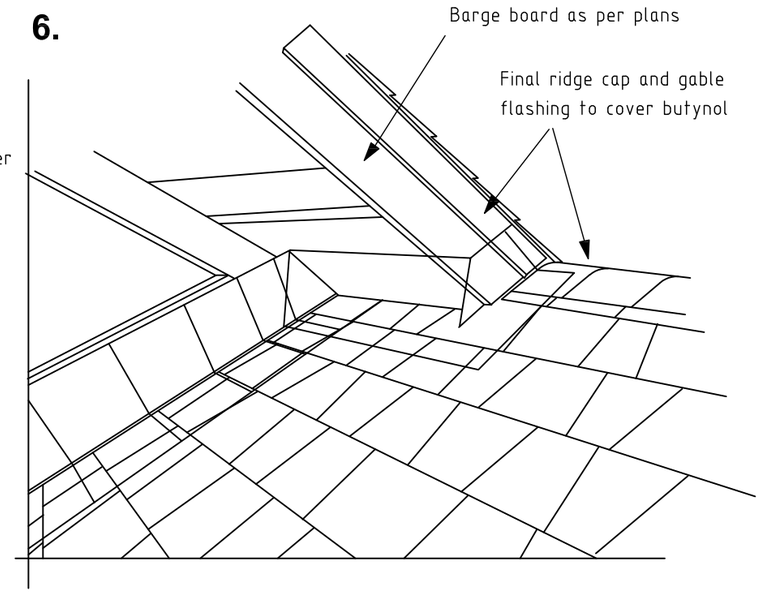

01
A301

Asphalt Shingle-
Barge to Ridge Detail

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SETTING OUT ANY WORK

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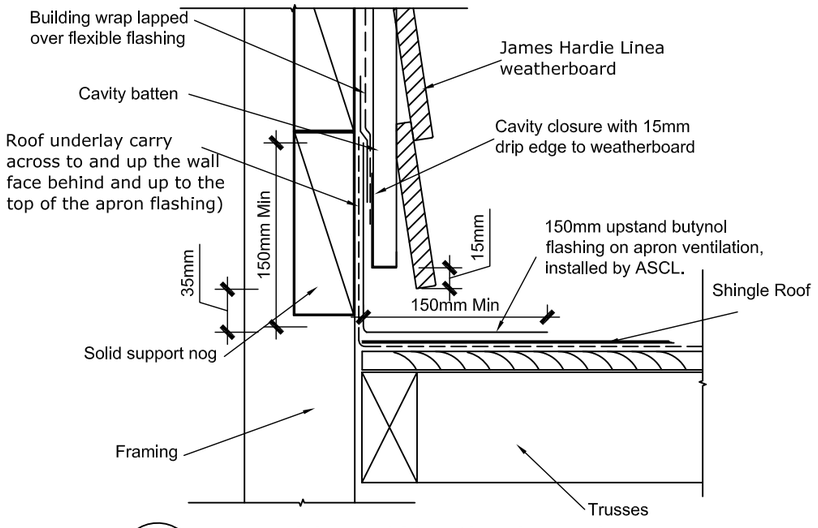
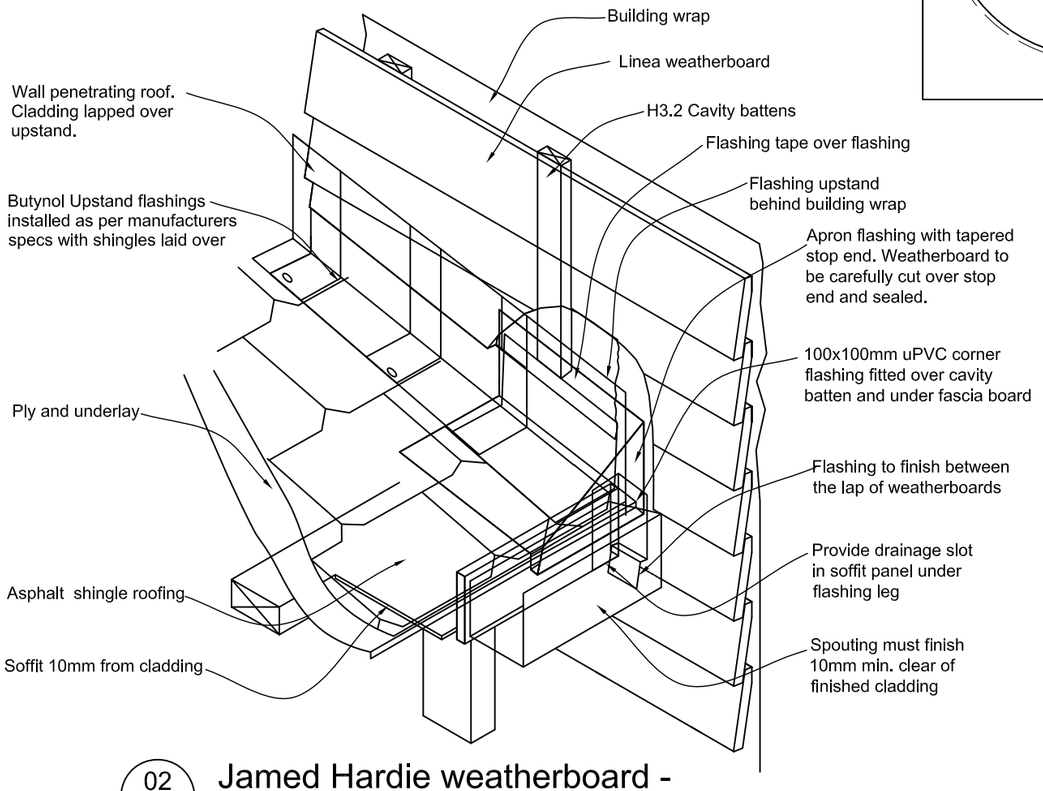
caojun325@hotmail.com Mobile: 021-0737398

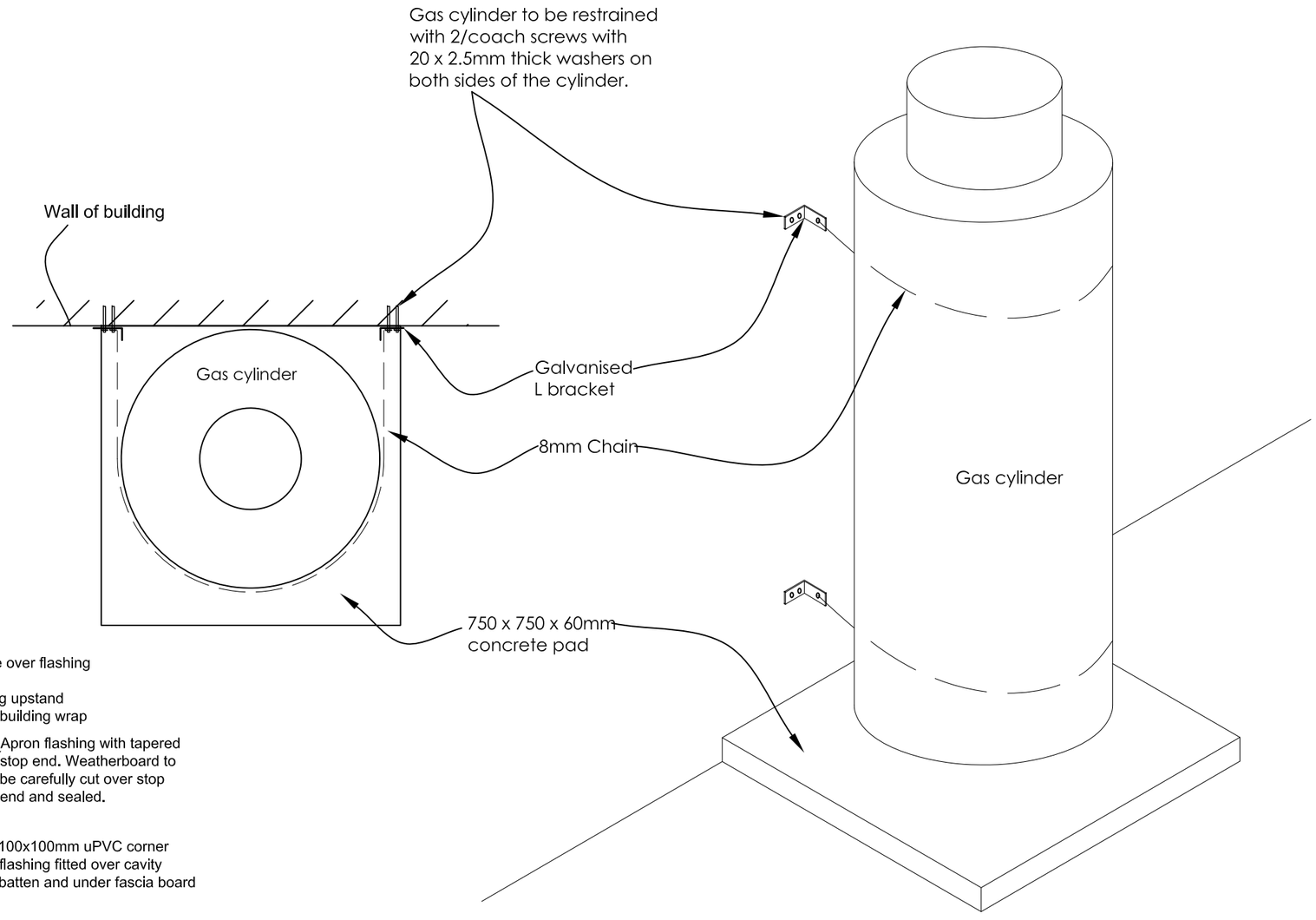
Project:	Title:	Date:	Scale:	Client Name:	DW by:	Revise:	Job No.	Sheet No.:
17 Black Beech Crescent, Takaknini, Auckland	Assembly Details 08	08 / 2024	1:5 - A3		AC	A		A708



01 / A402 — Linea Weatherboard Parallel Apron Flashing 1:5



02 / A301 — Jamed Hardie weatherboard - cavity - stop end flashing 1:5



03 / - — GAS CYLINDER RESTRAINT DETAIL

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SETTING OUT ANY WORK

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	17 Black Beech Crescent, Takaknini, Auckland	Assembly Detail 09	08 / 2024	1:5 - A3		AC	A		A709

Note:

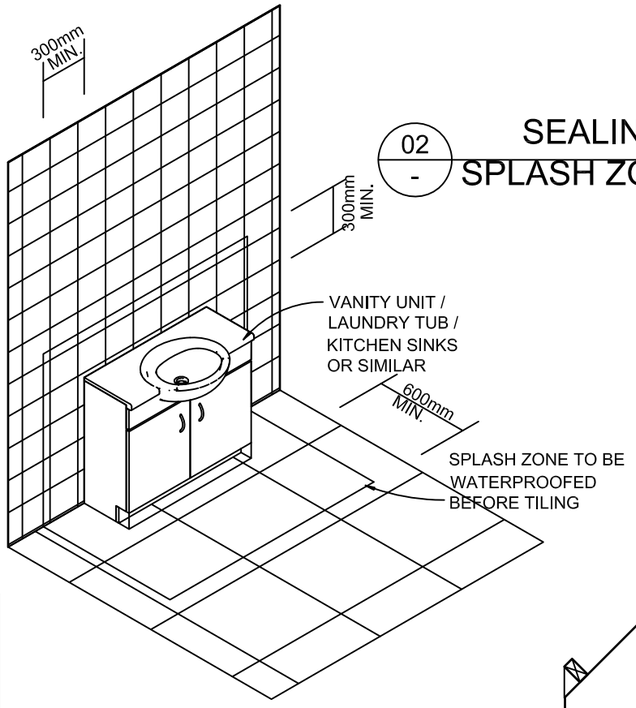
Waterproofing is required to all penetrations to waterproof membrane.

Waterproofing is required 300mm above the shower rose head. Pus 1800mm from the floor

Where a door occurs a water stop angle is required. Waterproofing membrane and angle is to terminate below finished tile level.

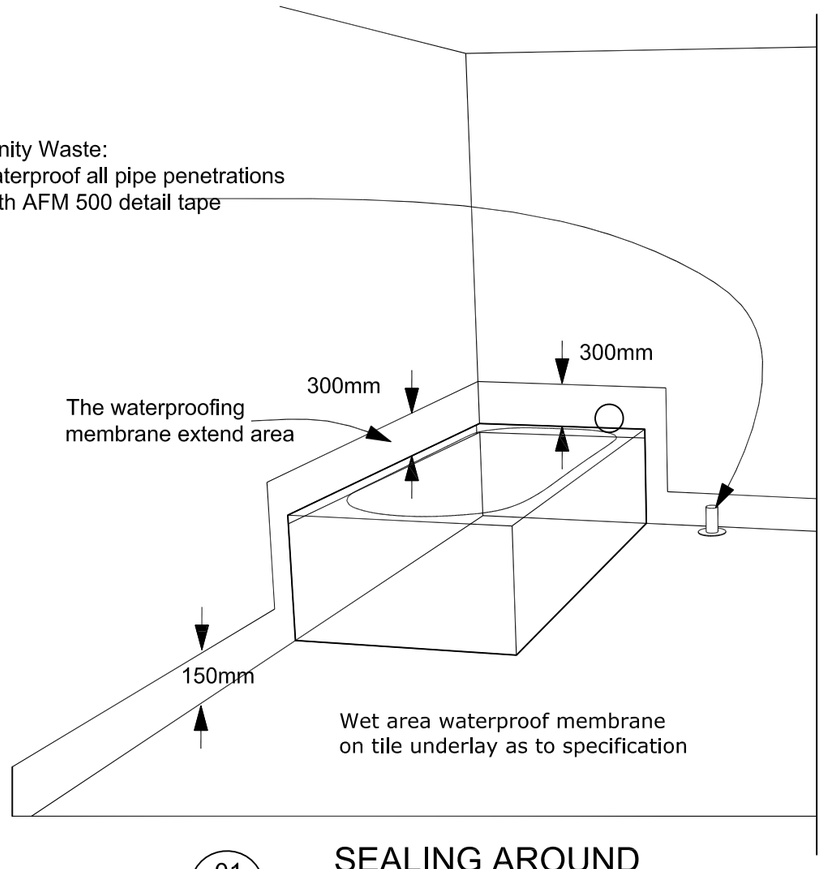
Waterproofing is required 300mm above bath rim.

Waterproofing is required 150mm above top of floor

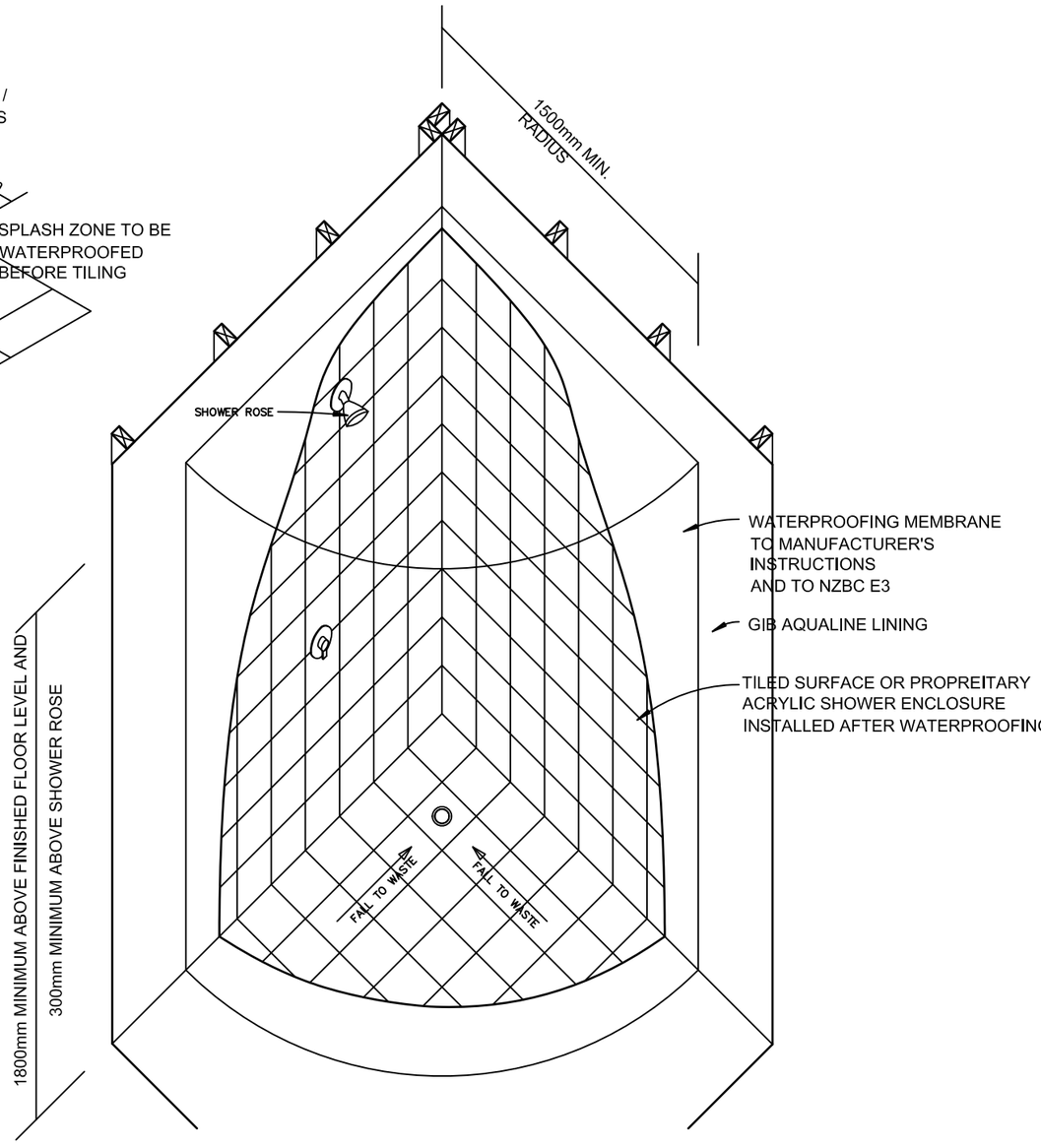


02 - SEALING AROUND SPLASH ZONE (VANITIES)

Vanity Waste:
Waterproof all pipe penetrations with AFM 500 detail tape



01 - SEALING AROUND SPLASH ZONE (BATH TUB)



03 - SEALING AROUND SPLASH ZONE (SHOWERS)

IMPORTANT--CONTRACTOR MUST VERIFY ALL DIMENSION ON SITE PRIOR TO SET OUT ANY WORK

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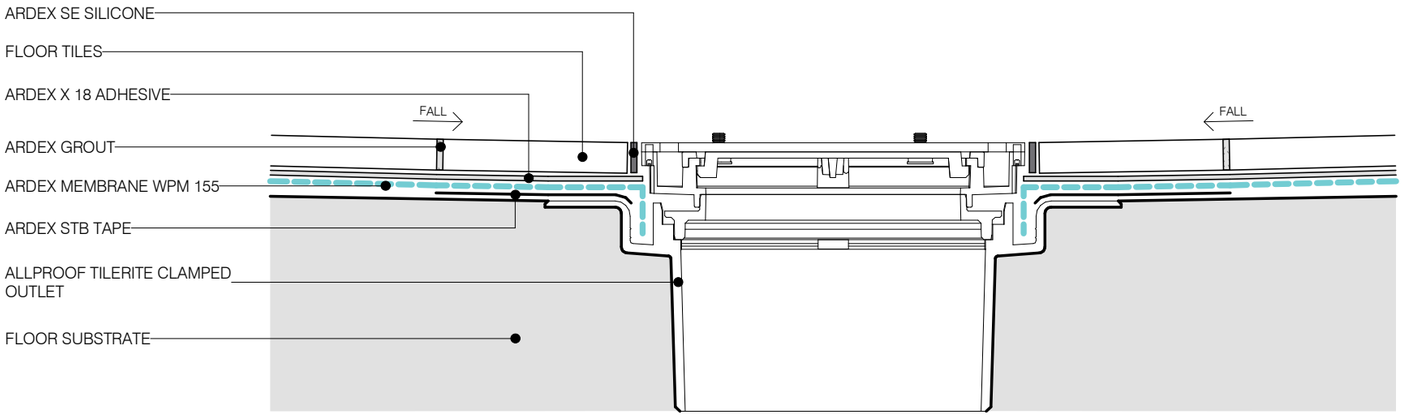
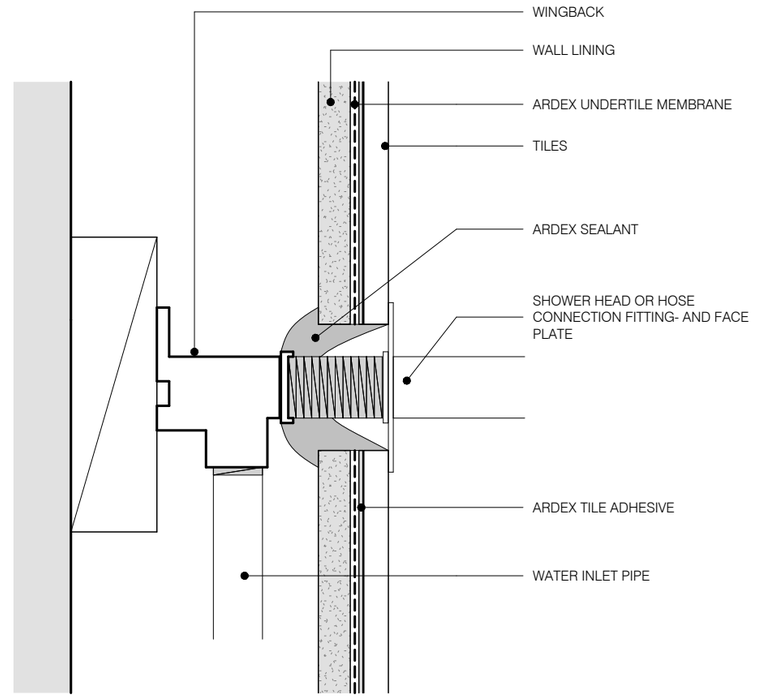
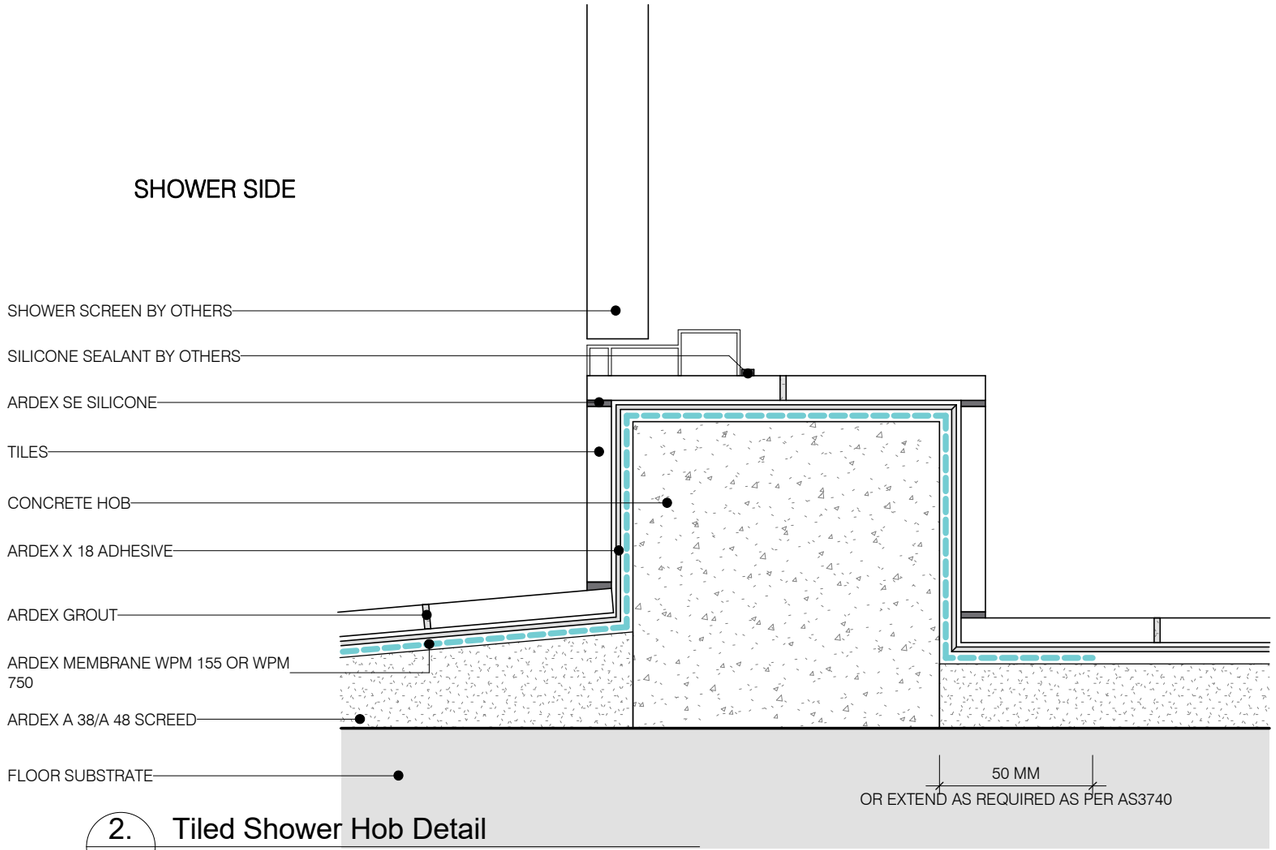


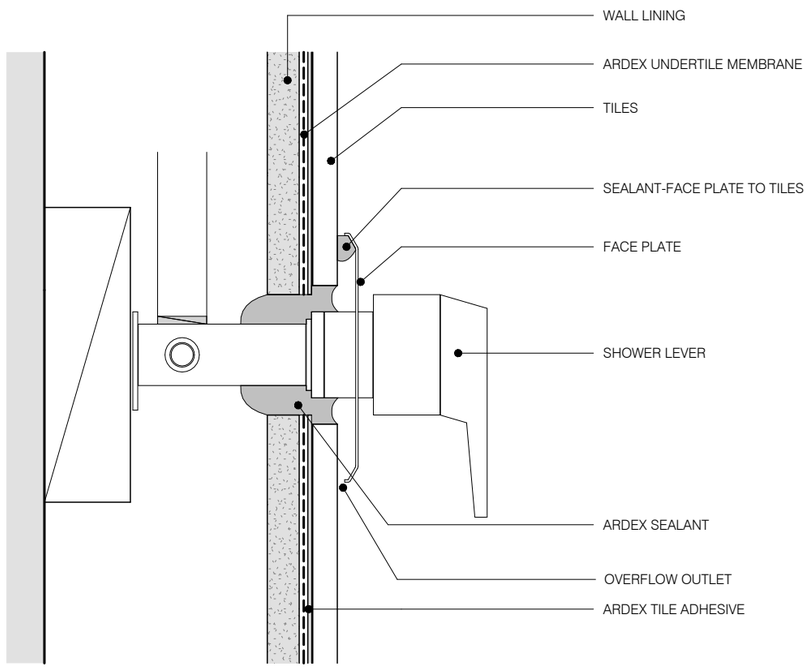
1. Tiled Shower Drainage Detail Outlet Detail



3. Tiled Shower Head Detail



2. Tiled Shower Hob Detail



4. Tiled Shower Mixer Detail
1:1.2500

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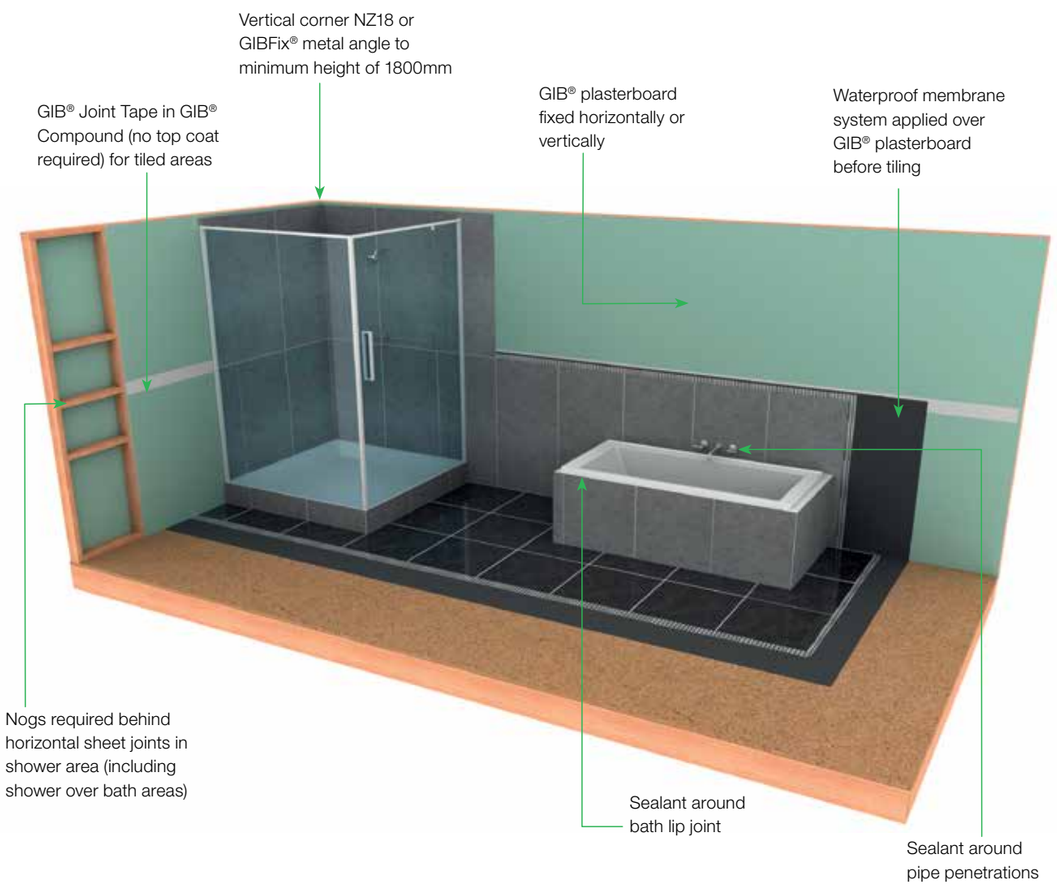
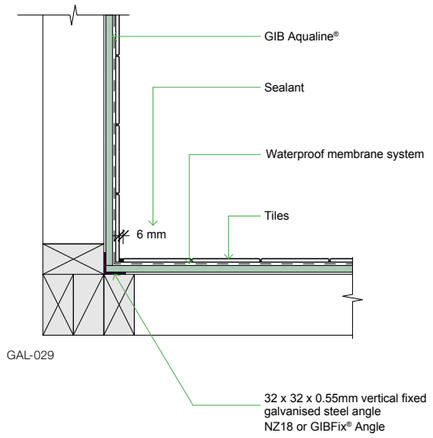
SHOWER OVER BATH – TILED WALL DETAILS

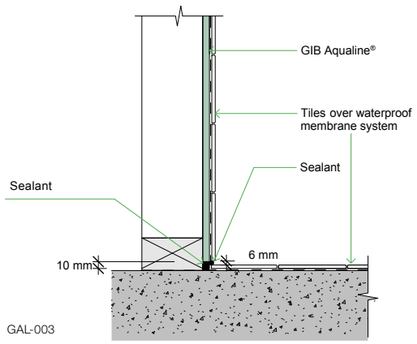


A: TILED INTERNAL CORNER



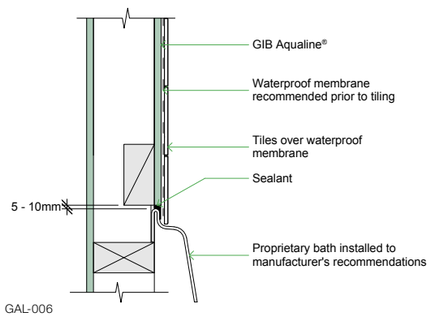
GAL-029

B: CERAMIC FLOOR LINING JUNCTION



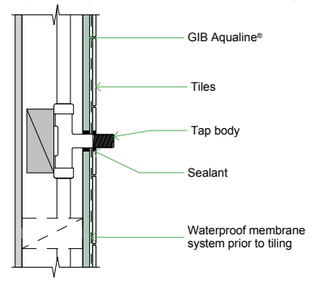
GAL-003

C: BATH LINING JUNCTION



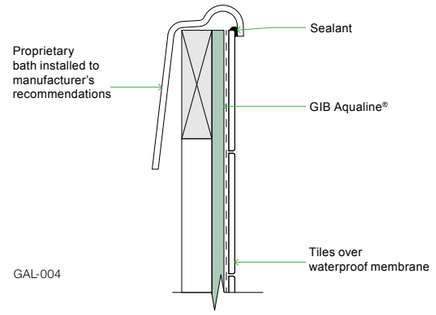
GAL-006

D: SEALING WET AREA PENETRATION



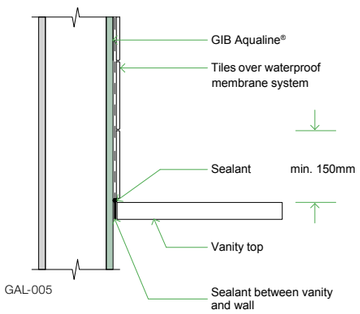
GAL-002

E: BATH CRADLE LINING DETAIL

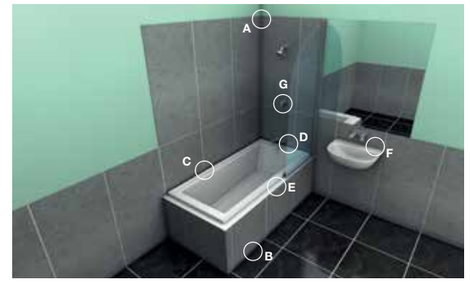


GAL-004

F: VANITY TOP LINING JUNCTION



GAL-005



G: SHOWER MIXER PENETRATION IN WET WALL LININGS

Refer to the shower mixer manufacturer for shower mixer installation detailing including the use of proprietary products to prevent water or moisture ingress behind the wet wall lining.

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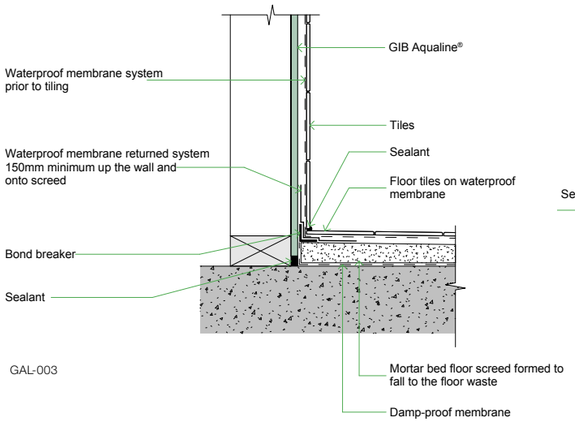
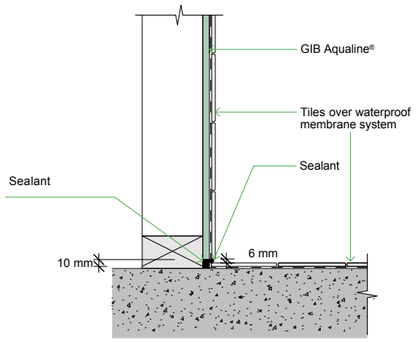
SHOWER – TILED WALL AND BASE DETAILS

A: MORTAR UNDER CERAMIC FLOOR LINING JUNCTION



GAL-003

C: CERAMIC FLOOR LINING JUNCTION

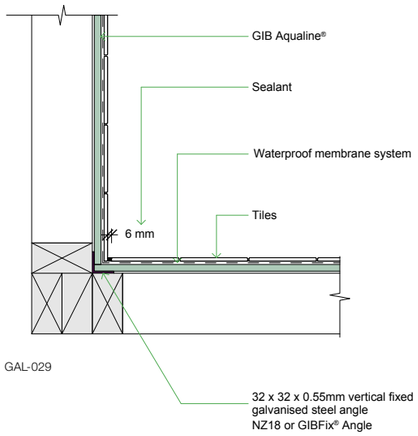


GAL-002A

PREFORMED SHOWER BASE JUNCTIONS

Refer to the shower base manufacturer for proprietary shower tray installation detailing including wet wall lining junction detailing.

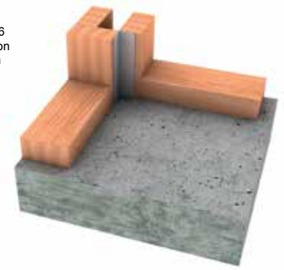
B: TILED INTERNAL CORNER



GAL-029

D: TILED INTERNAL CORNER METAL ANGLE POSITION

Refer to page 16 of this publication for specification and installation guidance.

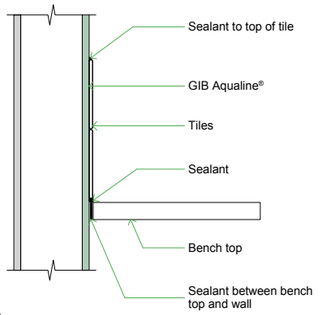


E: SHOWER MIXER PENETRATION IN WET WALL LININGS

Refer to the shower mixer manufacturer for shower mixer installation detailing including the use of proprietary products to prevent water or moisture ingress behind the wet wall lining.

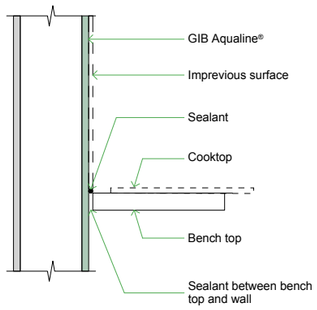
KITCHEN AND LAUNDRY DETAILS

A: BENCH TOP LINING JUNCTION



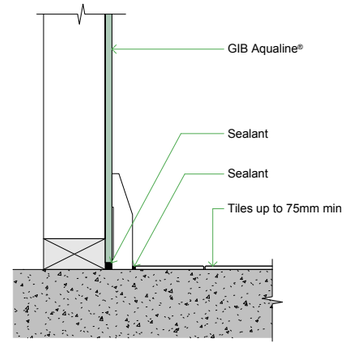
GAL-024

B: COOKTOP LINING JUNCTION



GAL-023B

CERAMIC FLOOR SKIRTING LINING JUNCTION



GAL-001A

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