

Artistic impression only. Please see all working drawings and details inside.

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**Harry & Jessica Lo
2 Rapere Street
Rolleston**

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LEGAL DESCRIPTION

Lot: 663
DP: TBC
Site area: 725 m²

PLANNING

Living zone: Selwyn Living Z (Falcon's Landing)
Site coverage area (Only): 261.59 m²
Site coverage: 36.08 %

HARD SURFACE WATER

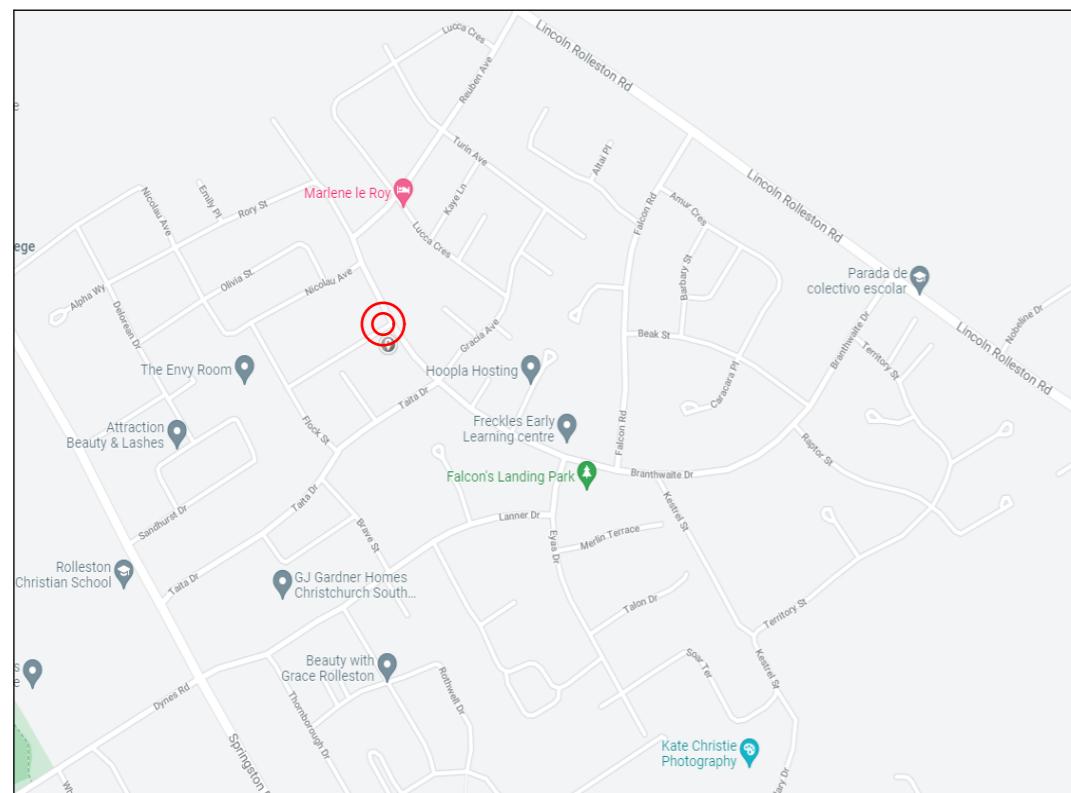
Convey surface water from sealed driveway and path areas to approved outfall or on site, and falls away from any building & neighbours boundaries. Driveway @ 1:100 fall min.

ZONES

Earthquake: Zone 2
Wind: High
Corrosion: Zone C
Altitude above sea: 45 m (Rolleston)

NOTES

- All dimensions taken to foundation edge unless otherwise stated
- Service location to be confirmed



1 Location Plan NTS

SEDIMENT CONTROL

- All adjacent groundcover to be retained in building phase.
- Sediment control soaks preventing run off from excavation & gravel washdown where required.
- 1. To boundaries and street frontage
2. Containing surplus soils & gravel

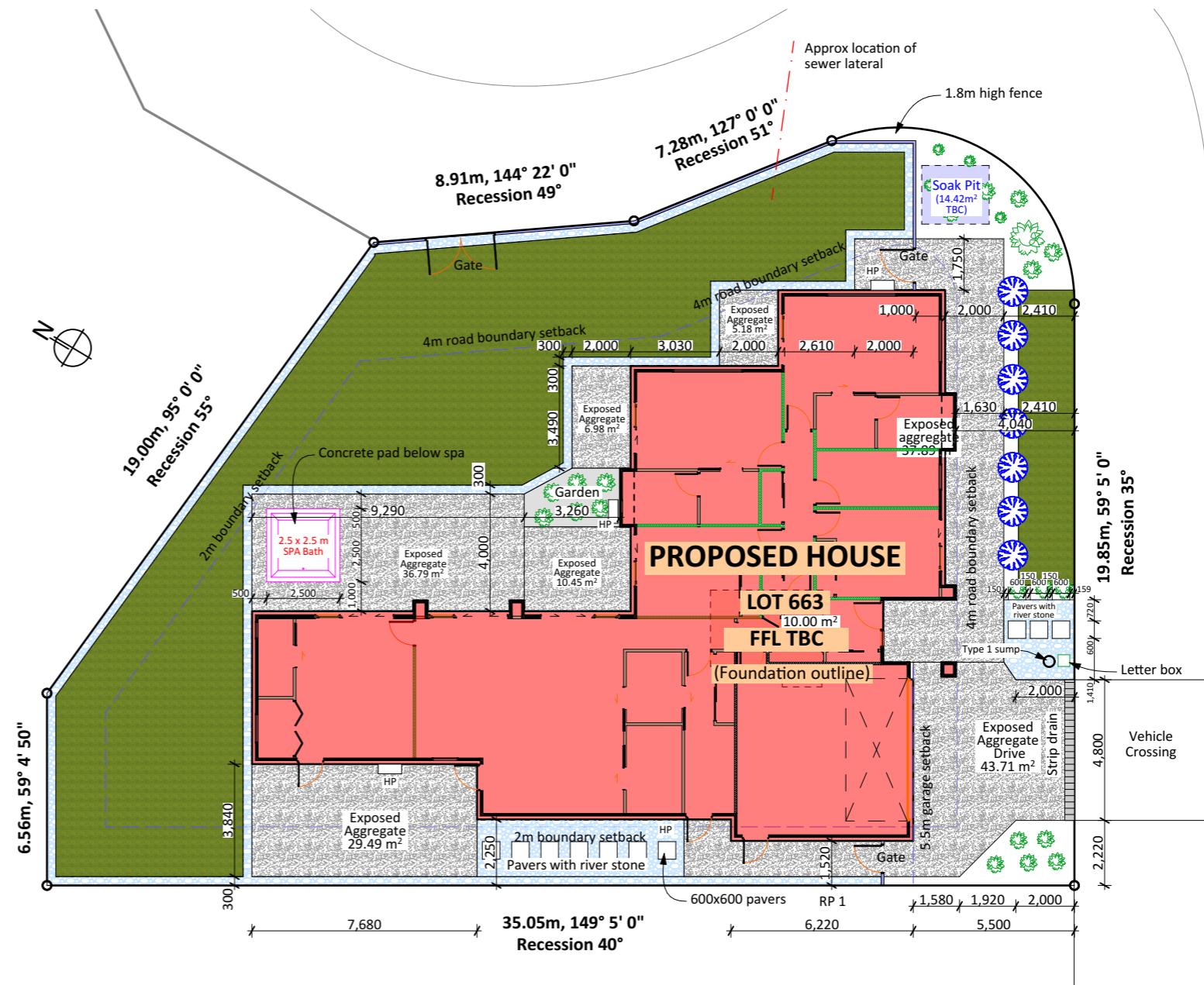
LANDSCAPE LEGEND

- Fence: 1.8m high - 140x20mm or similar dressed pine paling butt joined with timber capping
- Brick letter box with capping
- Shrubs (lavender, rosemary and/or cranberry)
- Dwarf tree (1 to 1.5m apart - feijoa tree or others)



Brick Letter Box (Example)

Fence (Example)



2 Site Plan 1:200

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Site Plan	
SCALE:	1:200
PAPER SIZE:	A3
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FILE NAME:	Harry Lo v22 - 5.pln
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Rapere Street

01

KEY	
	Gully trap
TV	80mm Ø terminal vent
IP	Inspection point
DP	Downpipe
ORG	Overflow relief gully
AAV	Air admittance valve

Laterals

Drainlayer to confirm existing foul drain & stormwater lateral position & depth on site before any work commences, to ensure correct falls can be achieved. Pipes to be min. 100mm Ø

Min. Drains clearance to floor slab

All drains under floor slab to have 50mm min. clearances to underside of floor slab. Drains to be laid straight with even gradient along length of drain

Acceptable solution

NZBC G13 AS1 Sanitary plumbing
NZBC G13 AS2 Drainage

Kitchen gully

Connection to gully by strap boss on gully riser above water trap

Top plate stiffeners

For plumbing systems ducting through wall at BV or vanity/ laundry reinforced by lumberlok stiffener (stud/plate)

Underground drainage

Foul water drain 100mm Ø min. 1:120 fall

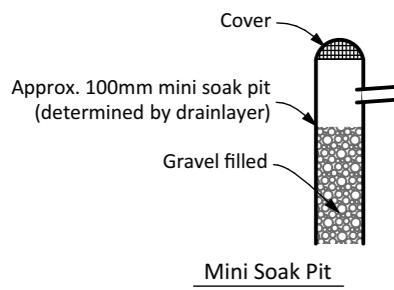
Stormwater drain 100mm Ø min. 1:120 fall

In-slab waste pipes

Vanity, bath, shower	40mm Ø min. 1:40 fall
Laundry	40mm Ø min. 1:30 fall
Kitchen & dishwasher wastes	50mm Ø min. 1:40 fall
WC waste	100mm Ø min. 1:60 fall
HWC drain	22mm Ø min. copper and
HWC Safe Tray	40mm Ø min. uPVC with continuous fall, such as 1:80 fall.

AAV Shower

Mitek lumberlok top plate stiffener to top plate. Centre of the hole to be within 100 - 102mm of adjacent stud. AAV not to extend 1 metre past top plate



NOTES (NZBC E1/VM1):

1. Soakage hole excavated into free draining shingle.
2. Pour 2x10L buckets of clean water into base of hole to confirm that free draining shingle has been reached.

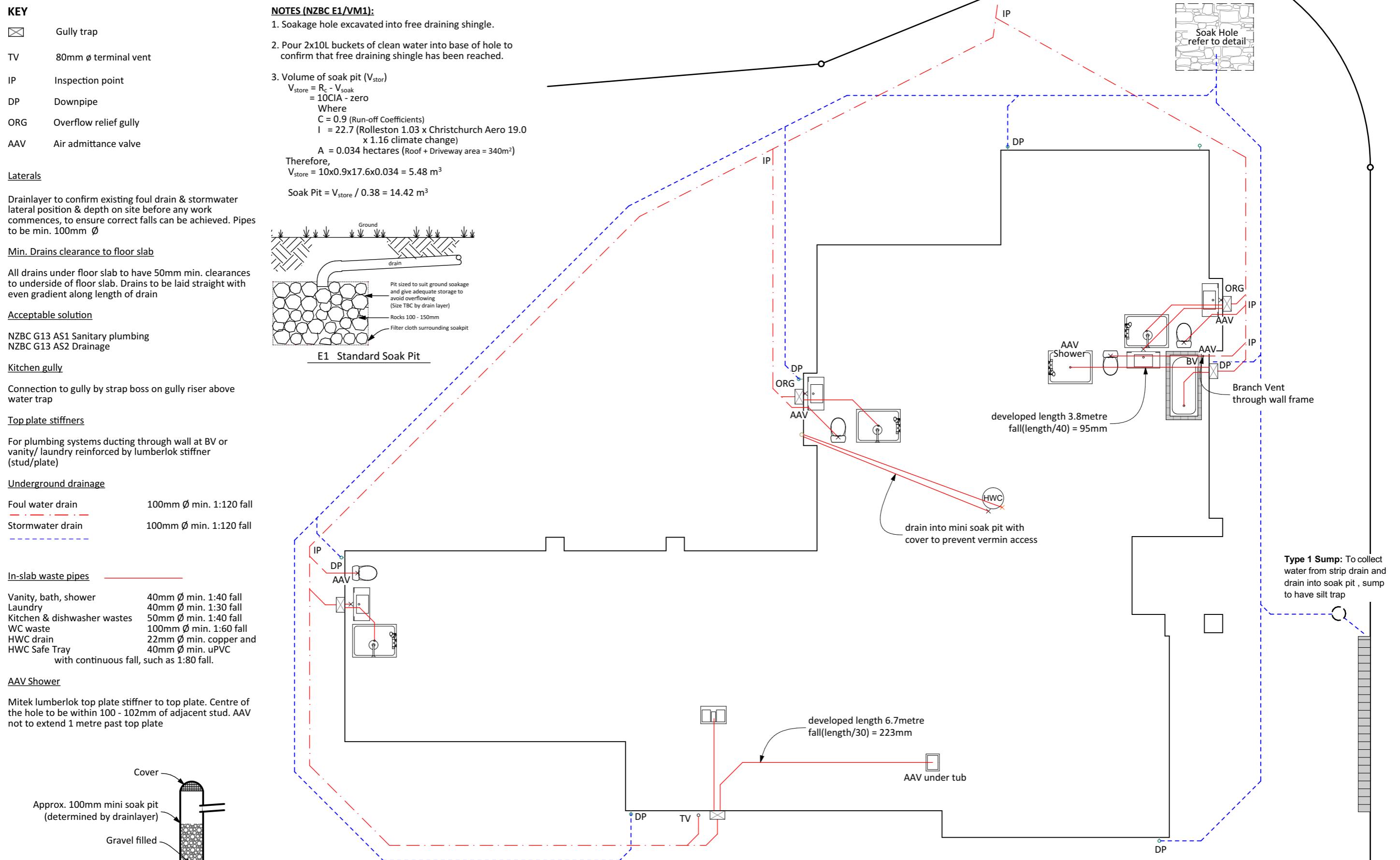
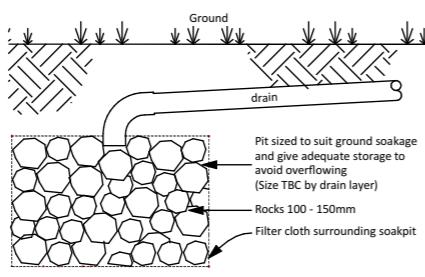
3. Volume of soak pit (V_{stor})

$$V_{stor} = R_c - V_{soak}$$

$$= 10CIA - zero$$
Where
 $C = 0.9$ (Run-off Coefficients)
 $I = 22.7$ (Rolleston 1.03 x Christchurch Aero 19.0 x 1.16 climate change)
 $A = 0.034$ hectares (Roof + Driveway area = 340m²)

Therefore,
 $V_{stor} = 10 \times 0.9 \times 17.6 \times 0.034 = 5.48 \text{ m}^3$

$$\text{Soak Pit} = V_{stor} / 0.38 = 14.42 \text{ m}^3$$



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Rolleston

TITLE: Plumbing & Drainage	
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FILE NAME: Harry Lo v22 - 5.pln	
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FOUNDATION TYPE

TC1 NZS 3604:2011 Foundation.
Refer to Geotechnical Report (Constructive Structural Engineering Job No. 11698 dated on 22 September 2020)

- Concrete Slab & Foundation strength to be 20Mpa
- Concrete Slab thickness to be 100mm

SETOUT

Refer to floor plan to ensure foundation dimensions are consistent before setout. If any inconsistencies occur contact Faye Homes Ltd.

LOAD BEARING WALLS & POINT LOAD

Please refer to truss plan in supporting documentation for location of load bearing walls & confirmation of point load locations

INSPECTIONS

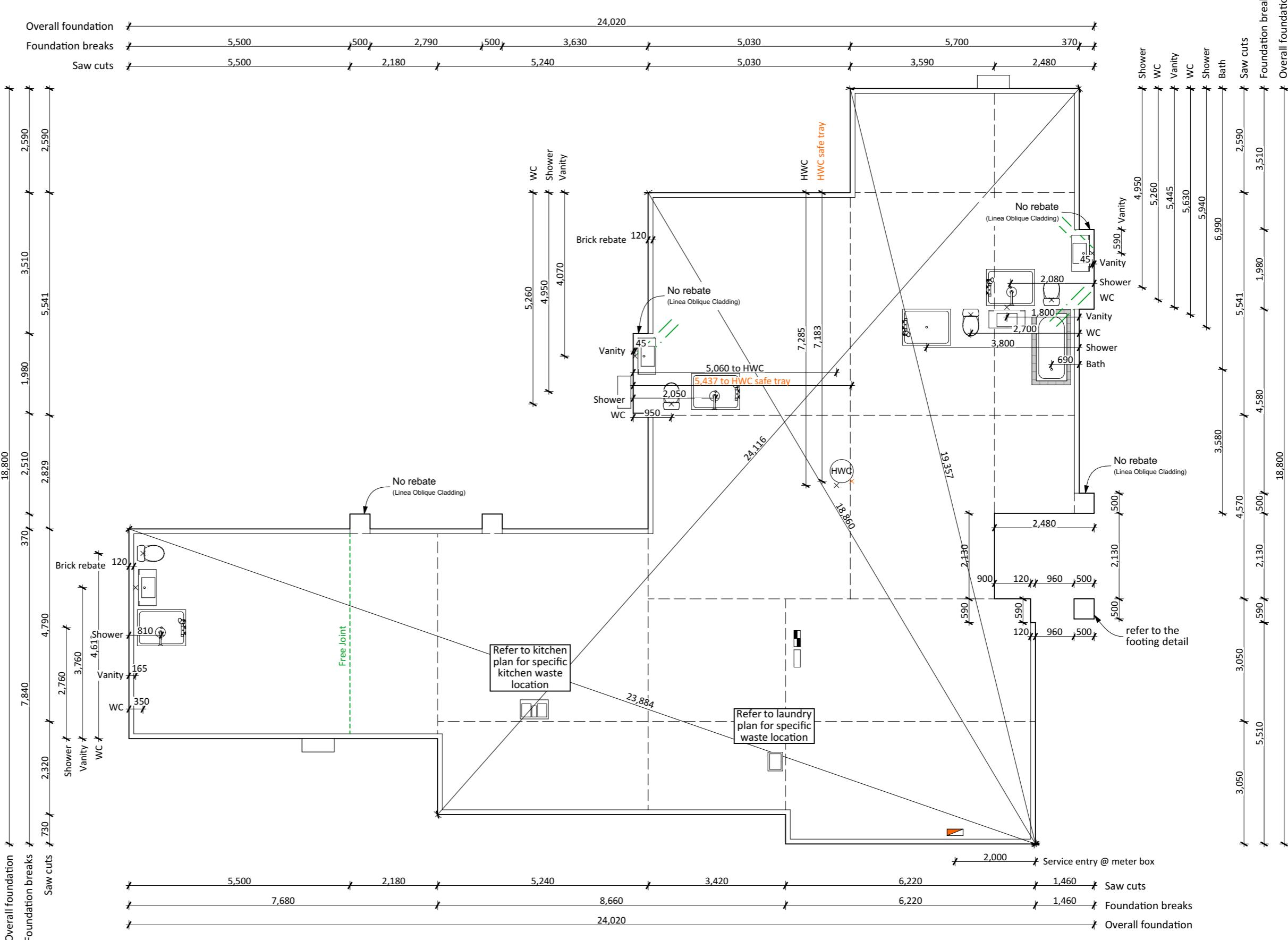
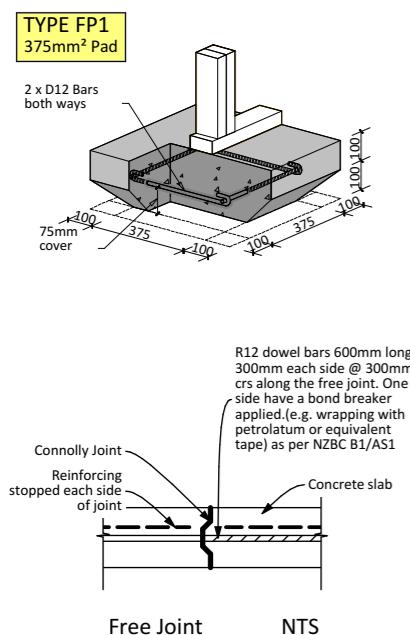
- Chartered Professional Geotechnical Engineer confirms subgrade bearing condition and provide PS4

KEY

Saw cut - Shall extend to a quarter of the slab

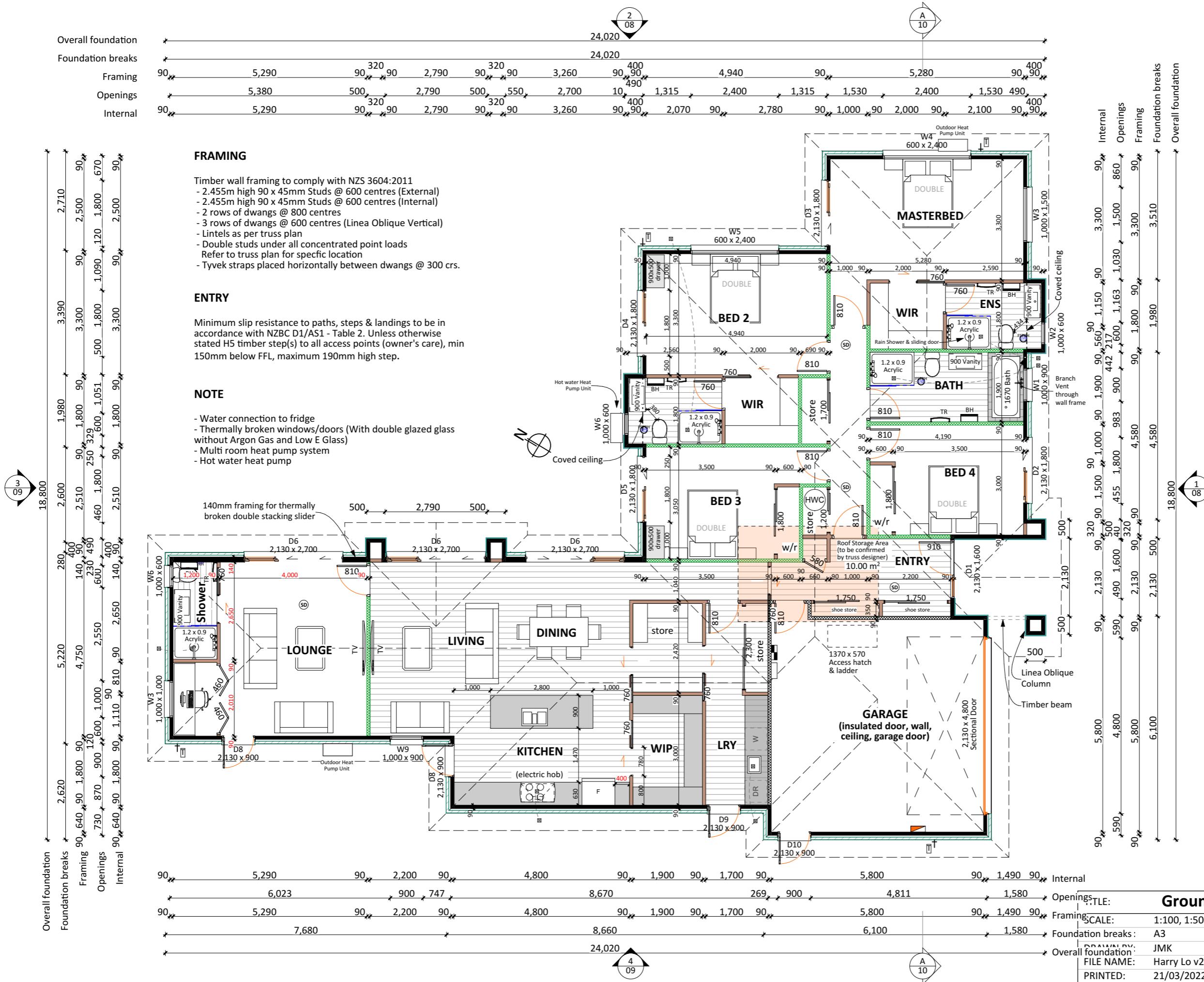
Supplement reinforcing bars
-2/D10 1200mm bars

SLAB THICKENING



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Foundation Plan	
SCALE:	1:100
PAPER SIZE:	A3 PROJECT #: #Pln
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Ground Floor Plan

AREAS

Roof:	302.33 m ²
Over cladding/foundation:	256.29 m ²
Perimeter:	91.30 m
Over framing:	245.36 m ²
Inside framing:	237.23 m ²
Covered area:	5.30 m ²
Total area:	261.59 m ²

KEY

- Meter box
 - Switchboard
 - Data box
 - Hose tap
 - Smoke detector (Wired)
 - Extract fan (Vent to soffit)
 - Exterior framing
 - Interior framing
 - Thermal (or acoustic) break (Insulated to NZBCH1)
 - Sound Insulation/Batt**
 - Brick
 - Linea Oblique (vertical)
 - Vinyl planking
 - Bathroom heater
 - Toilet Roll Holder
 - Heated towel rail

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BRACING NOTES

- All small openings (e.g. power outlets) of 90 x 90mm max. to be placed no closer than 90mm to the edge of braced element.
- Refer to support docs. (Length of GIB EzyBrace elements) for method of calculating element lengths & position of GIB fixings
- Fixing of top plates to external walls to be in accordance with NZS 3604:2011 section 8.7.3.3 & 8.7.3.4. Refer also to BRANZ Build 138 figures 3 & 4.
- Bottom plate cut out should be less than 100mm on bracing element (if required)

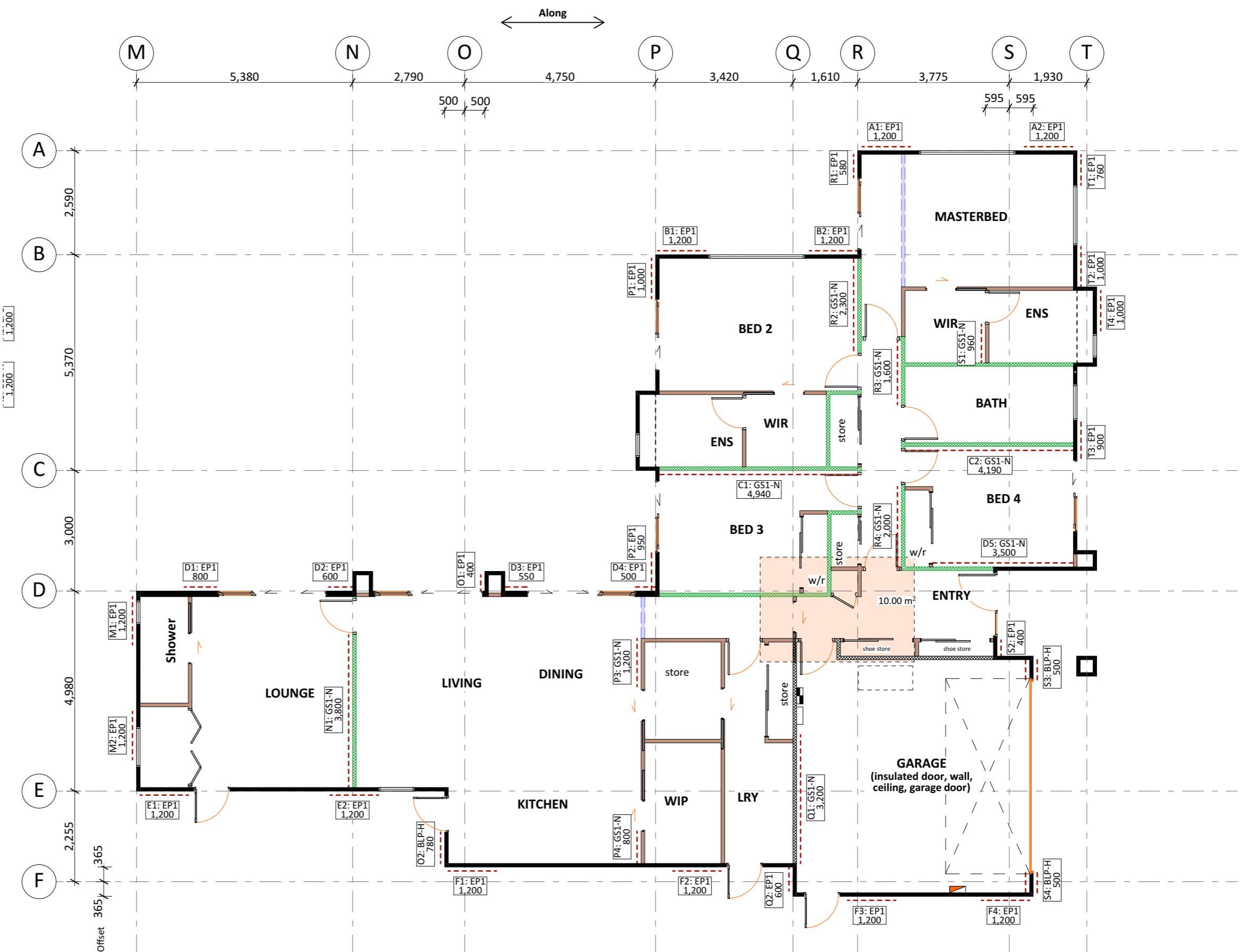
BRACING KEY

GS1-N _ 10/13mm Standard GIB plasterboard to one side only (Min. length- 0.4m)

BLP-H _ 10/13mm GIB Braceline to one side of the frame plus 7mm min. structural plywood manufactured to AS/NZ 2269.0:2012 to the other side (Min. length - 0.4m)

EP1 _ 7mm Ecopoly to one side (Min. length - 0.4m)

A1: GS1-N
1,200
Bracing ID
Bracing type
Length of bracing



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TITLE: Bracing Plan		
SCALE:	1:100	PROJECT #:
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		21/03/2022

PRESSED METAL TILE ROOFING

Roof plan area: 302.33m²

Roof cladding: Pressed metal tile (Shake tile)
with V-trim - 0.39 BMT
Zincalume colorsteel

Roof fixings:
per
4/50 x 2.8mm galv. pre-painted nails
sheet at turndown, and top fixing at
eaves with neoprene washers

Eaves:
noted
600mm off framing - except where

Bracing: Light roof

ROOF STRUCTURE

See Mitek producer statement for truss details & fixings

BATTENS

50 x 40mm H1.2 battens @ 370 crns.
Fixing type S (2 nails) 90 x 3.15 Ø
Power driven nails or 100mm x 3.75 hand driven nails

ROOF PENETRATIONS

All penetrations to be flashed to E2/AS1 8.3.10

GUTTER

Metalline quad gutter x section 5550mm²

DOWNPipes

Max. Roof area 80mm diameter downpipe = 80m²
@ 25° roof pitch

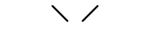
303m² = Min. 4 Downpipes (Actual 6 downpipes)
72m² Fixings @ 1200 crs.

BRACING KEY

Hip/Valley Rafter



Roof plane bracing

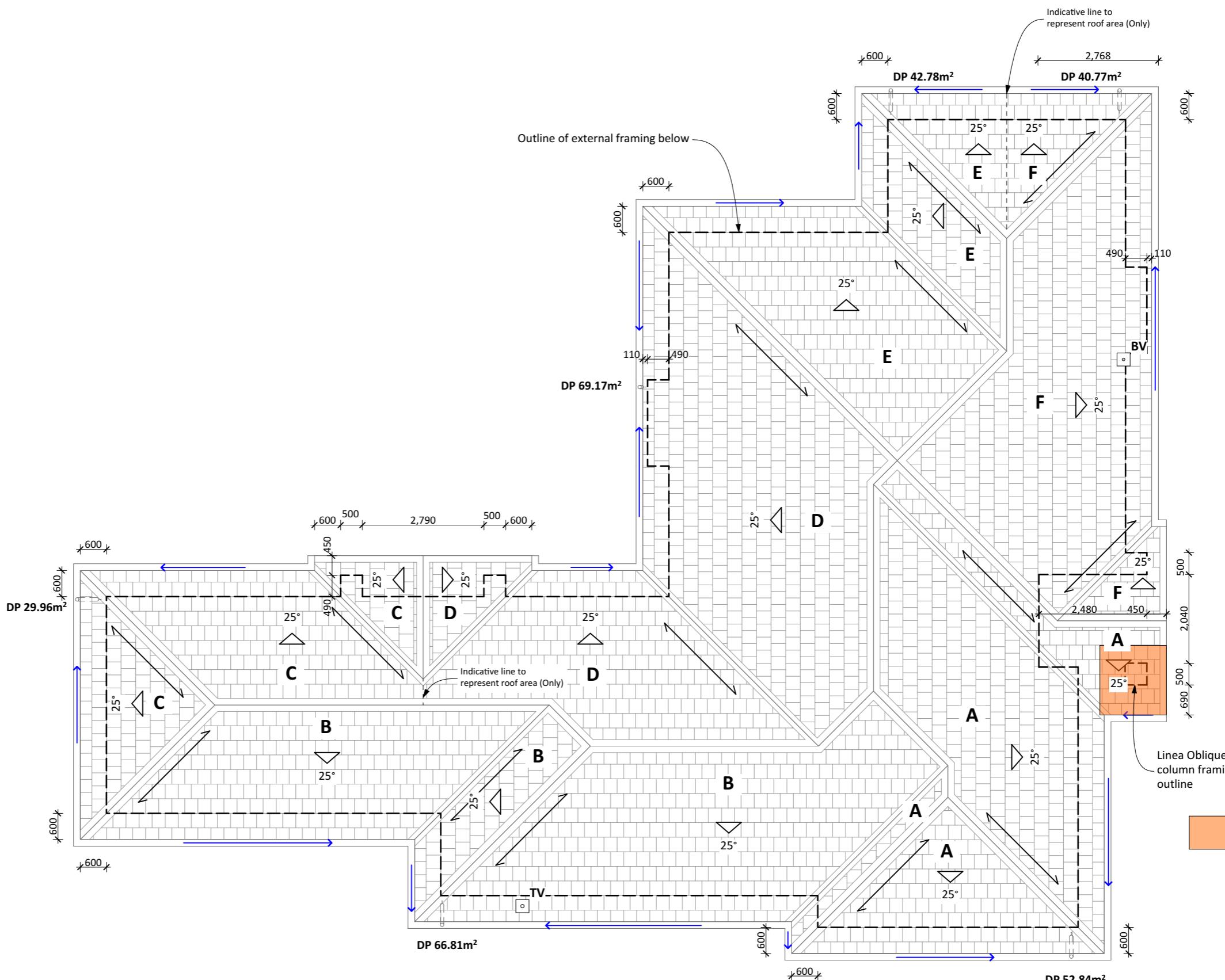


OUTRIGGERS

90 x 45mm outriggers @ max. 1200mm crs. fixed back to
first standard truss.(All joints fixed using a min. of 2 / 90 x
3.15 mm nails). 90x45mm flying rafter on edge. 90x45mm
blocking on edge over wall framing.

VALLEY GUTTERS

All valley gutters are 250mm wide unless otherwise stated.



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Roof Plan	
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LEGEND

Sockets

- ◁ S Single switch socket
- ◁ D Double switch socket
- ◁ safety Double switch bathroom socket
- ◀ ph/inter Telephone/ Internet socket
- ◀ t/v TV socket
- o/s Outdoor switch socket (waterproof)

Mains/ Services/ Switchboard

- Meter Box
- Switchboard
- Data Box

Heating/ Ventilation

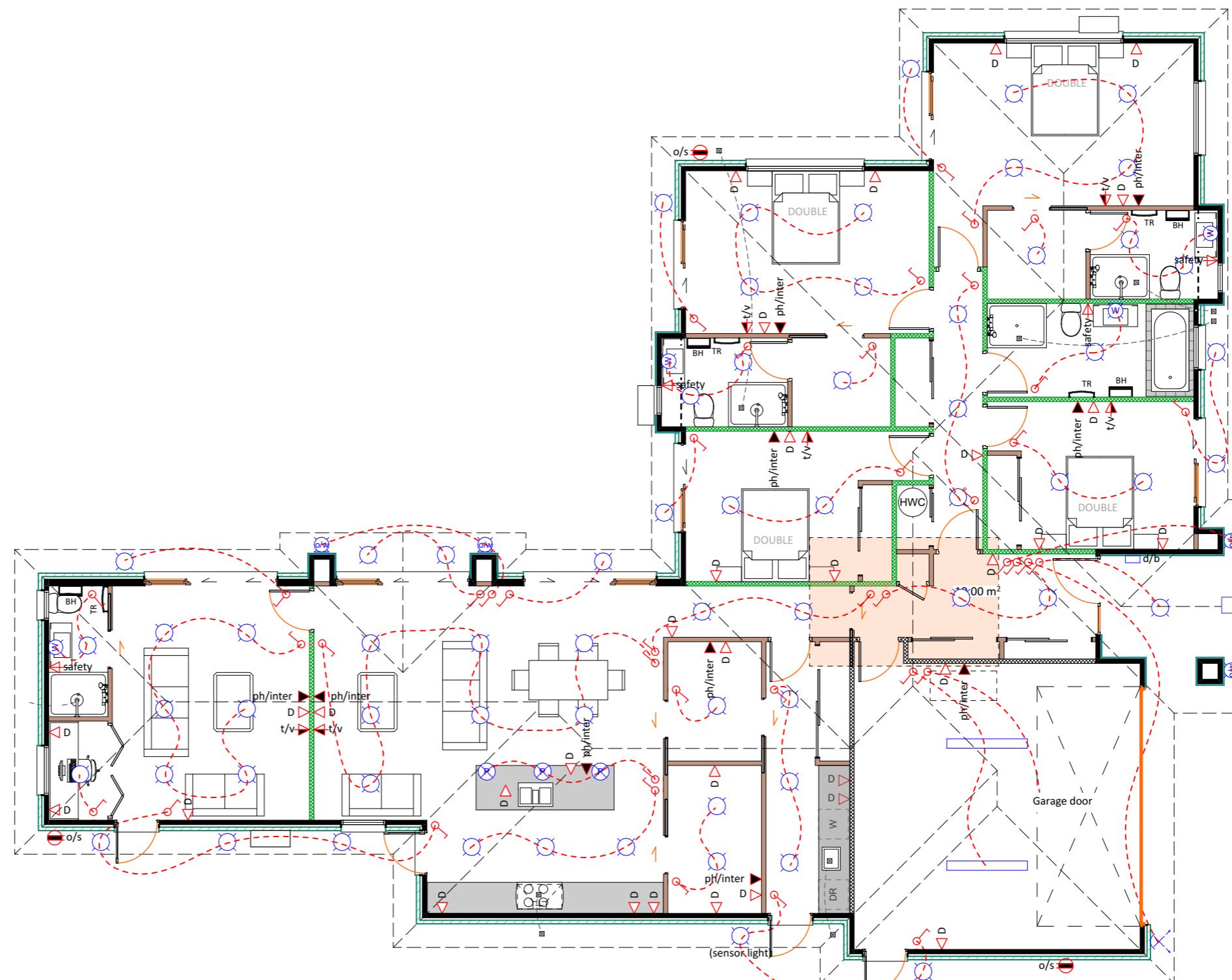
- BH Bathroom Heater
- TR Heated towel rail
- Extract fan

Light Fittings

- LED down lights
- W Vanity lights (Wall mounted)
- DW Outdoor wall light (sensor light)
- X Security lights
- X Hanging pendant light
- Twin fluorescent light
- d/b Door bell button

NOTE

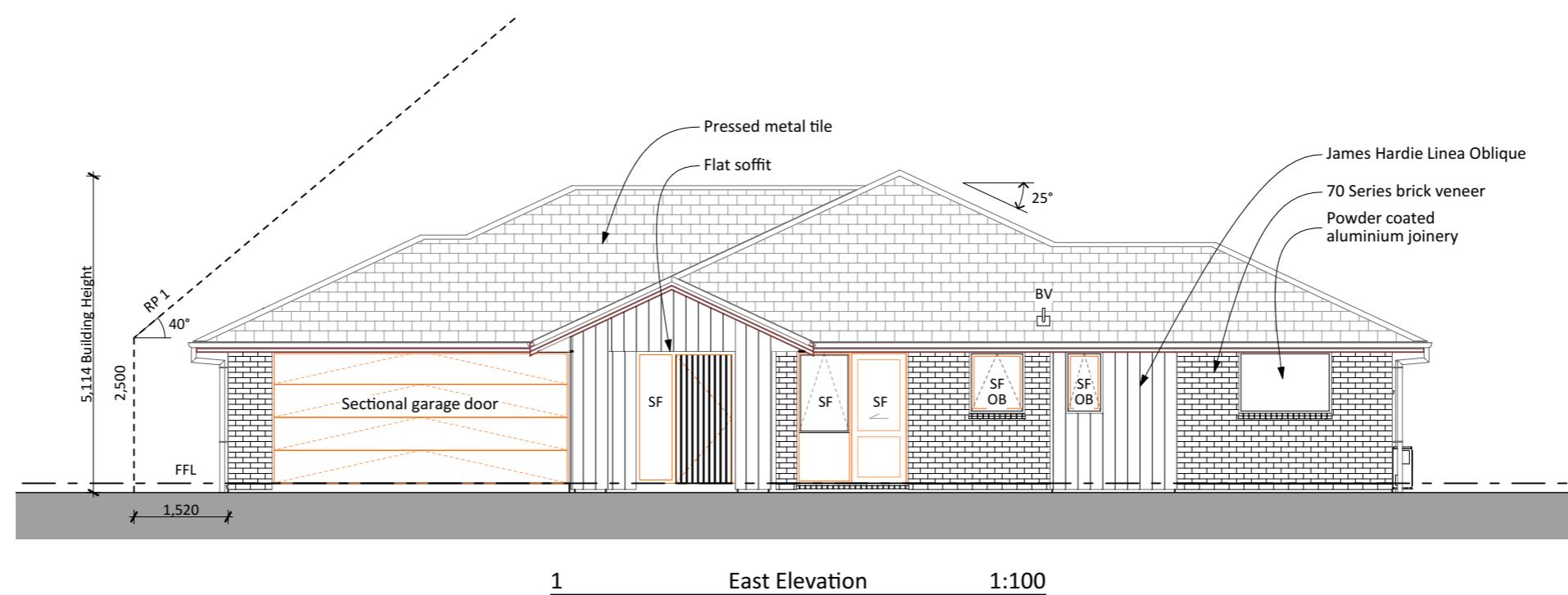
- Single power points to be installed for kitchen appliances includes kitchen connections. ie: microwave, fridge, waste, dishwasher, garage door openers and rangehood.
- Confirm all points, including hob and oven, with kitchen designer prior to placement
- Install single batten holder and switch to attic space in Garage if applicable
- All locations to be confirmed on site by clients with a electrician.



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TITLE: Electrical & Lighting Plan		
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FILE NAME:	Harry Lo v22 - 5.pln	
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BUILDING ENVELOPE RISK MATRIX		
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	Medium risk	1
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		5



KEY

FFL	Finished floor level
OB	Obscure glass
SF	Safety glass
HP	Heat pump - on metal brackets
TV	Terminal vent

BUILDING ENVELOPE RISK MATRIX		
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	Medium risk	1
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		5



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TITLE: **Elevations**
SCALE: 1:100
PAPER SIZE: A3 PROJECT #: #Pln
DRAWN BY: JMK
FILE NAME: Harry Lo v22 - 5.pln
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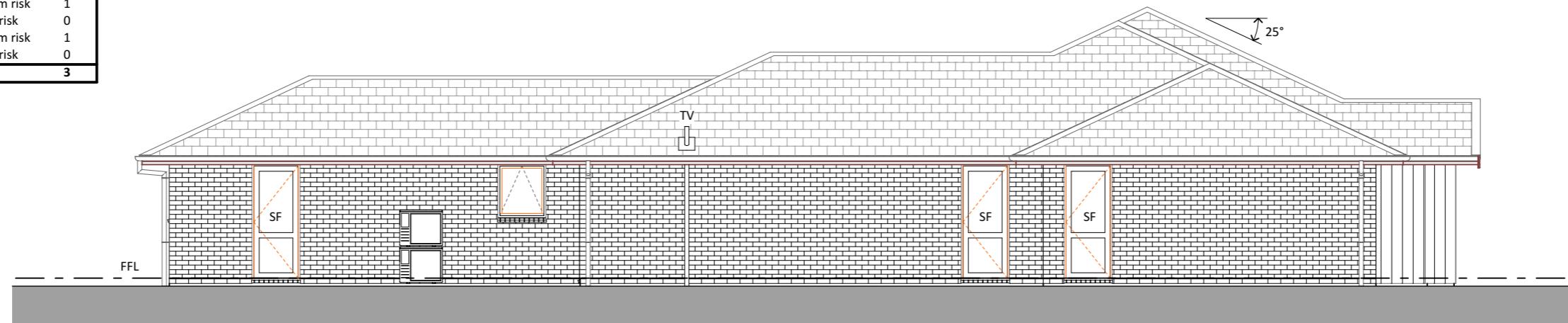
BUILDING ENVELOPE RISK MATRIX		
Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Low risk	0
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		3

KEY

FFL	Finished floor level
OB	Obscure glass
SF	Safety glass
HP	Heat pump - on metal brackets
TV	Terminal vent



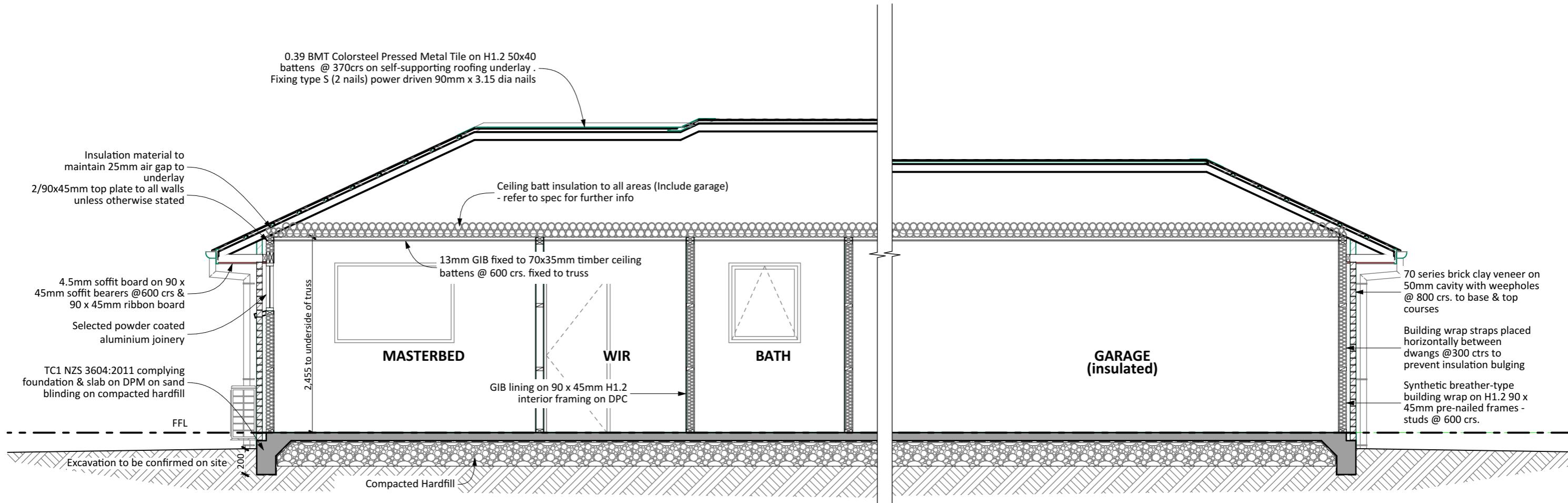
BUILDING ENVELOPE RISK MATRIX		
Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Low risk	0
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		3



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TITLE: **Elevations**
SCALE: 1:100
PAPER SIZE: A3 PROJECT #: #Pln
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Refer to technical spec for full details
of materials, insulation, linings etc

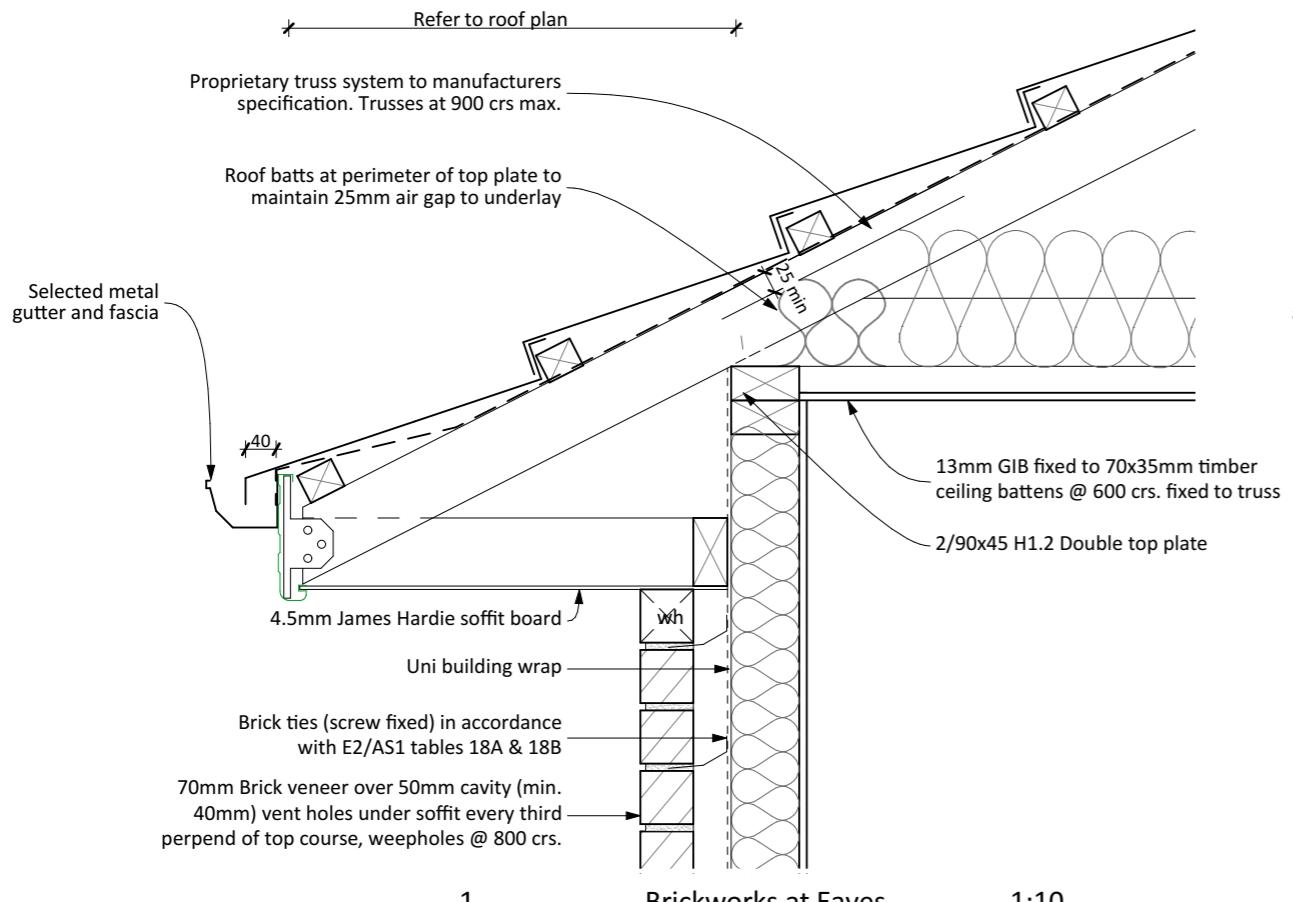


	Specific schedule of timber treatment	Species	Treatment	Element
1	Exterior wall framing (Refer to NZS 3604 for clarification)	Radiata pine	H 1.2	All timber used to be treated as required by NZS 3602. This table is intended as a summary of these requirements only.
2	Interior wall framing	Radiata pine or douglas fir	H 1.2	
3	Wall cavity battens	Radiata pine	H 3.1	Treatment levels shown are the minimum level required. Higher treatment levels may be used if appropriate
4	External door & window reveals	Radiata pine dressing grade	H 3.1	
5	Exposed beams	Radiata pine	H 3.2	
6	Purlins/battens	Radiata pine	H 1.2	
7	Roof framing	Radiata pine or douglas fir	H 1.2	
8	Exposed roof framing	Radiata pine or douglas fir	H 3.2	
9	Posts	Laminated	H-5	

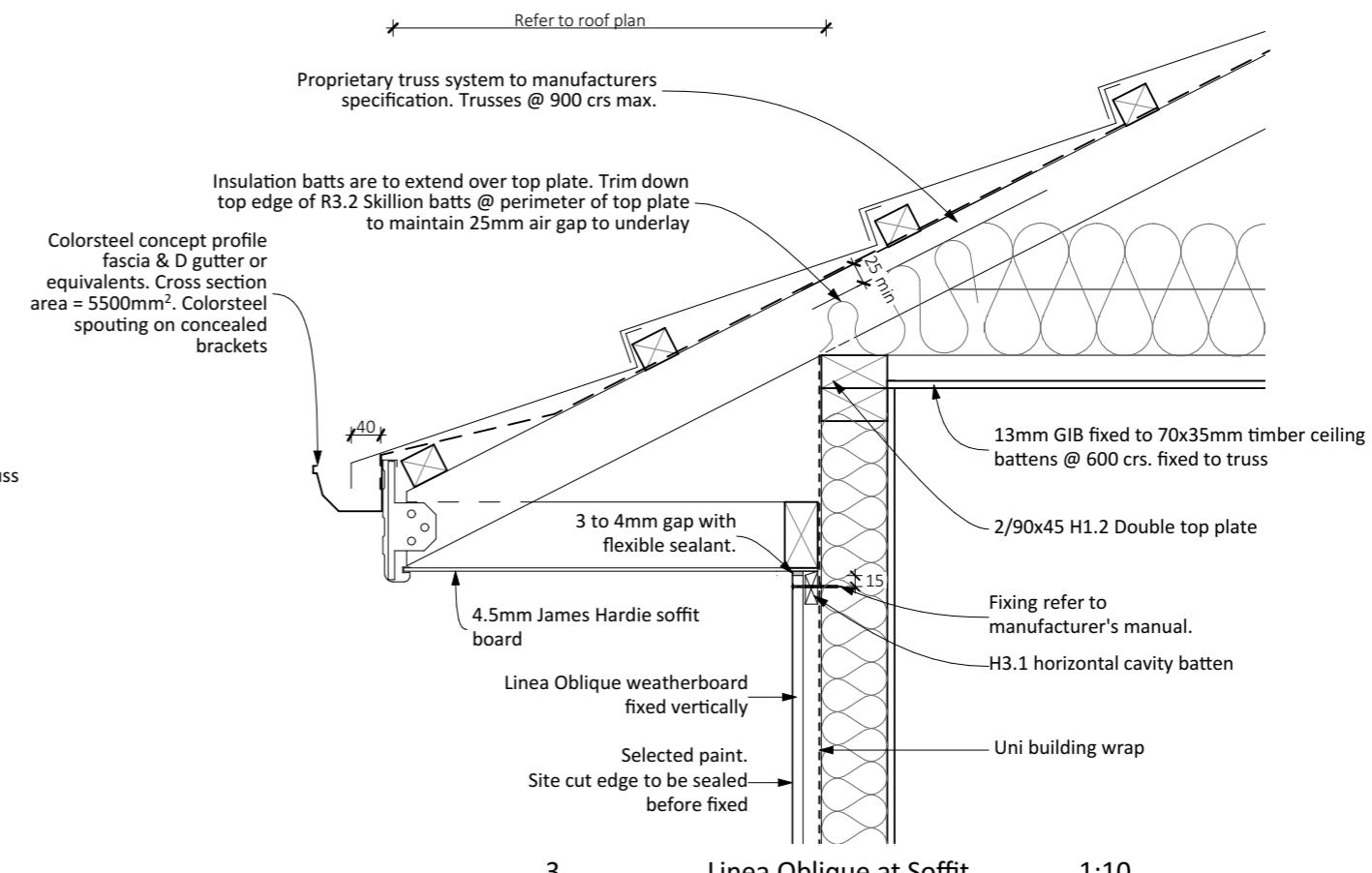
Timber type
All wall framing = SG 8
Lintels = SG 8
Trusses = SG 8
Purlins if applicable = SG 8

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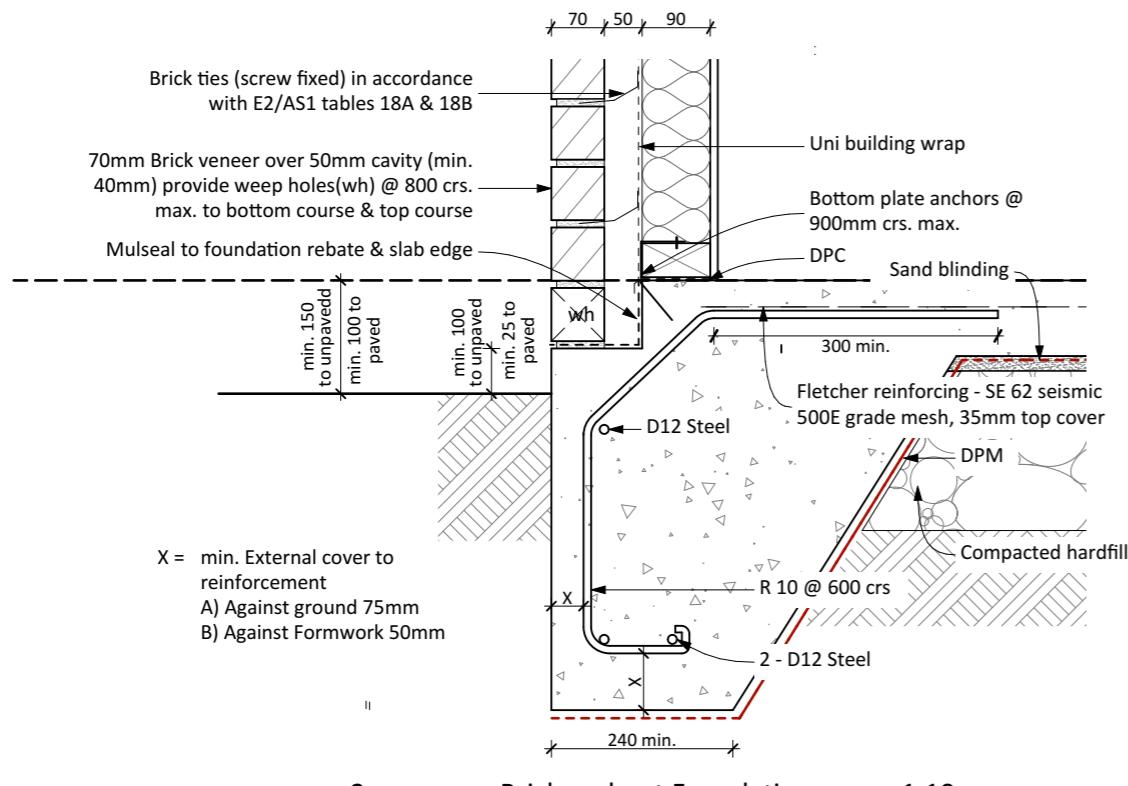
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DRAWN BY: JMK	
FILE NAME: Harry Lo v22 - 5.pln	
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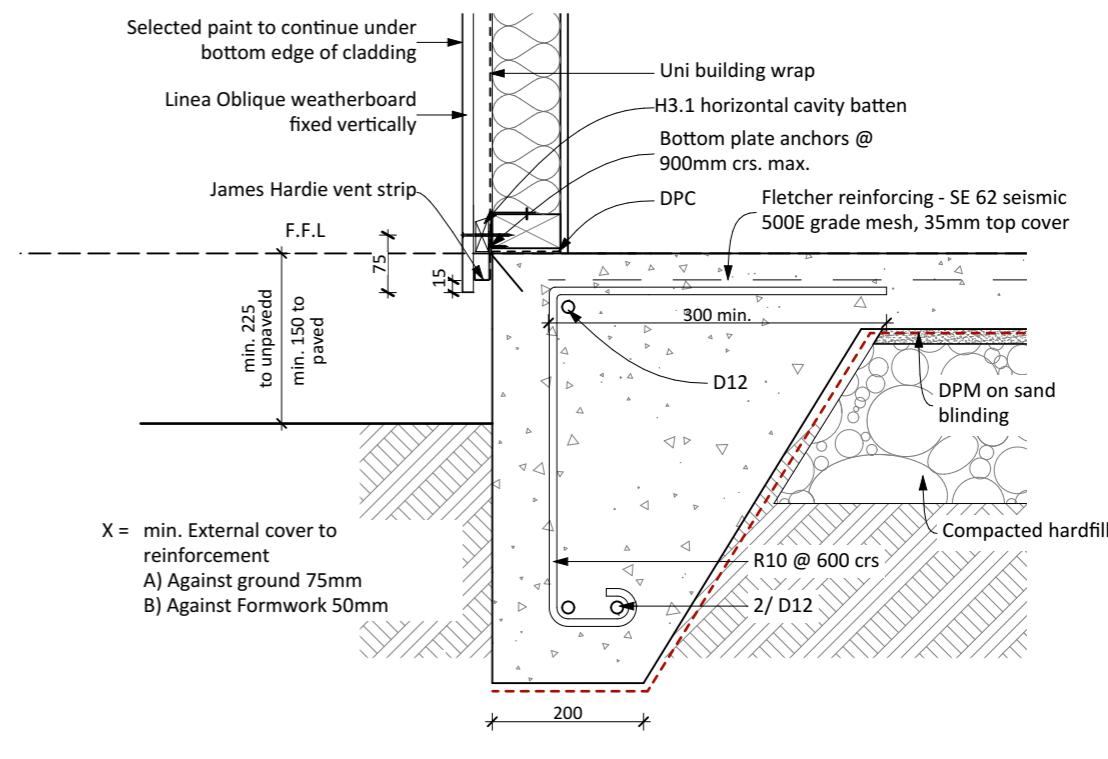
1 **Brickworks at Eaves** 1:10



3 **Linea Oblique at Soffit** 1:10



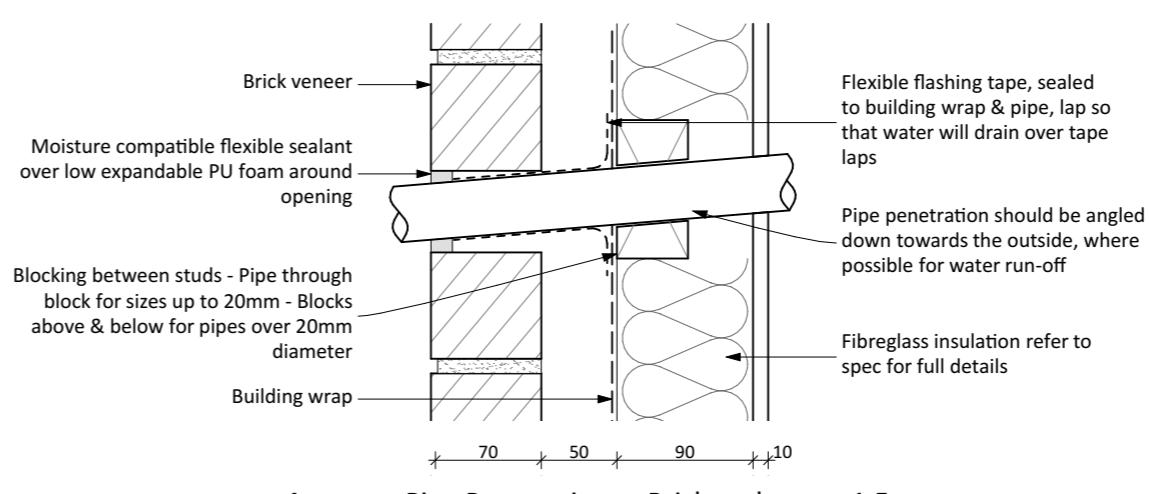
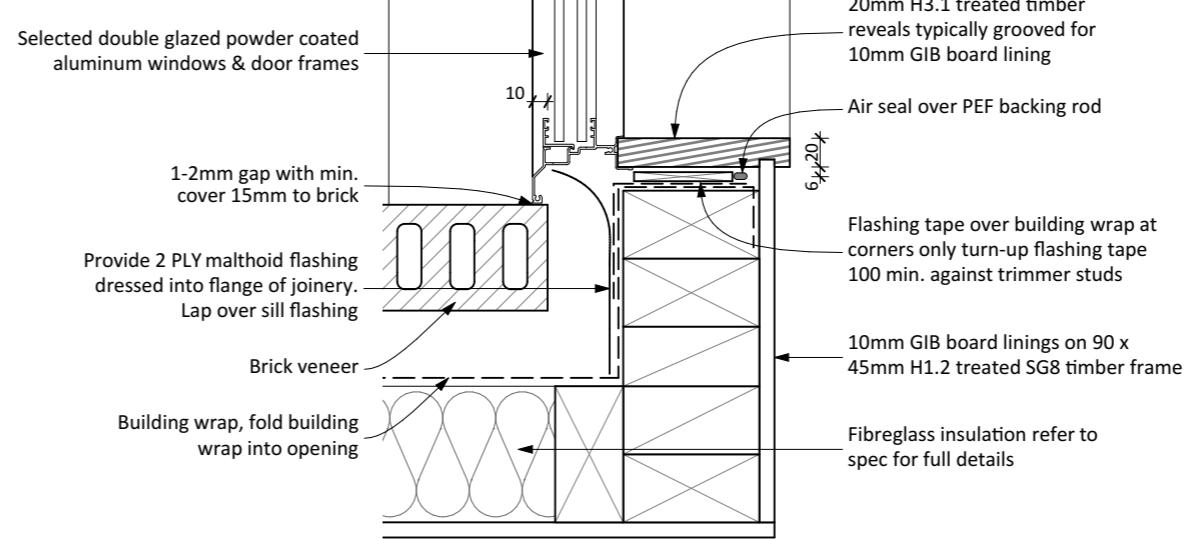
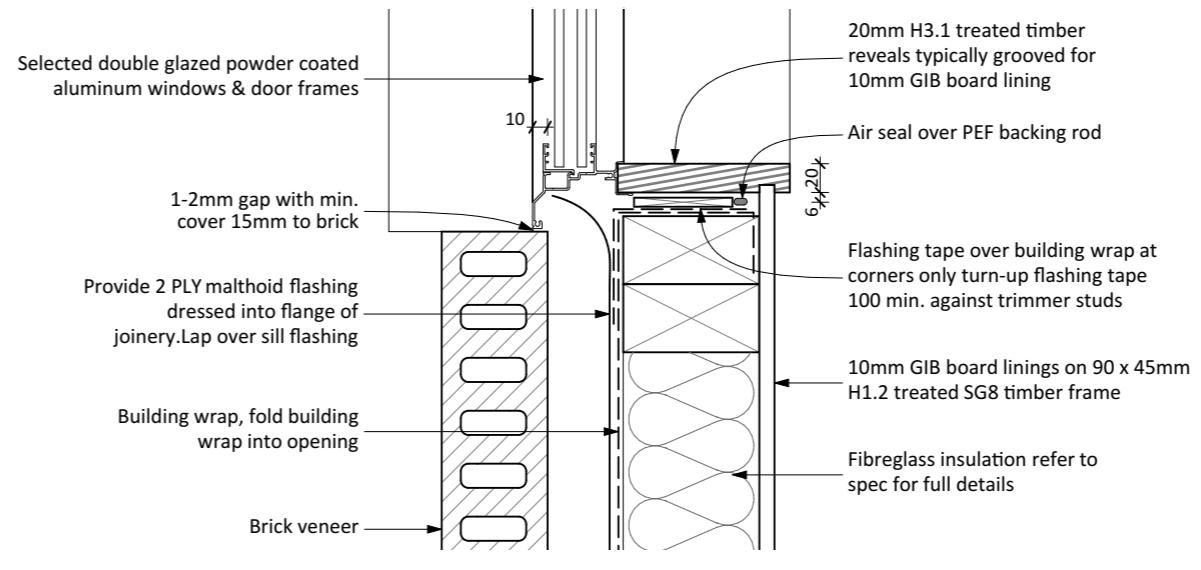
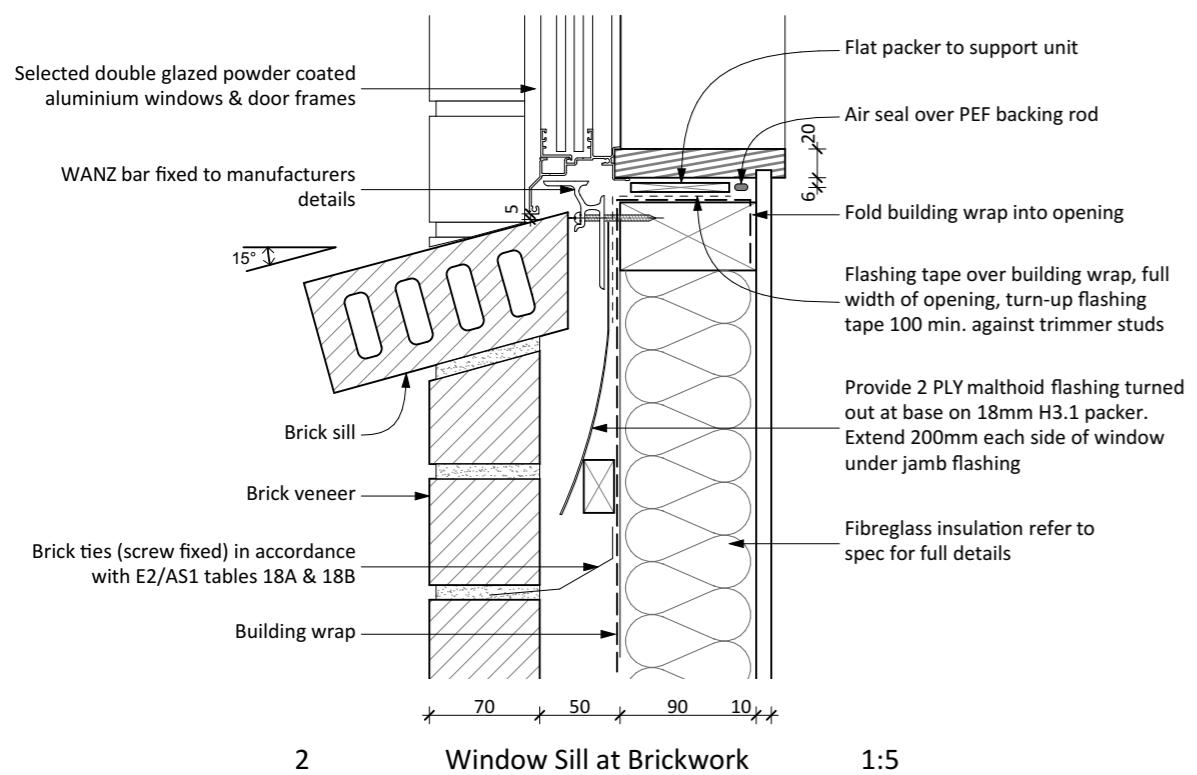
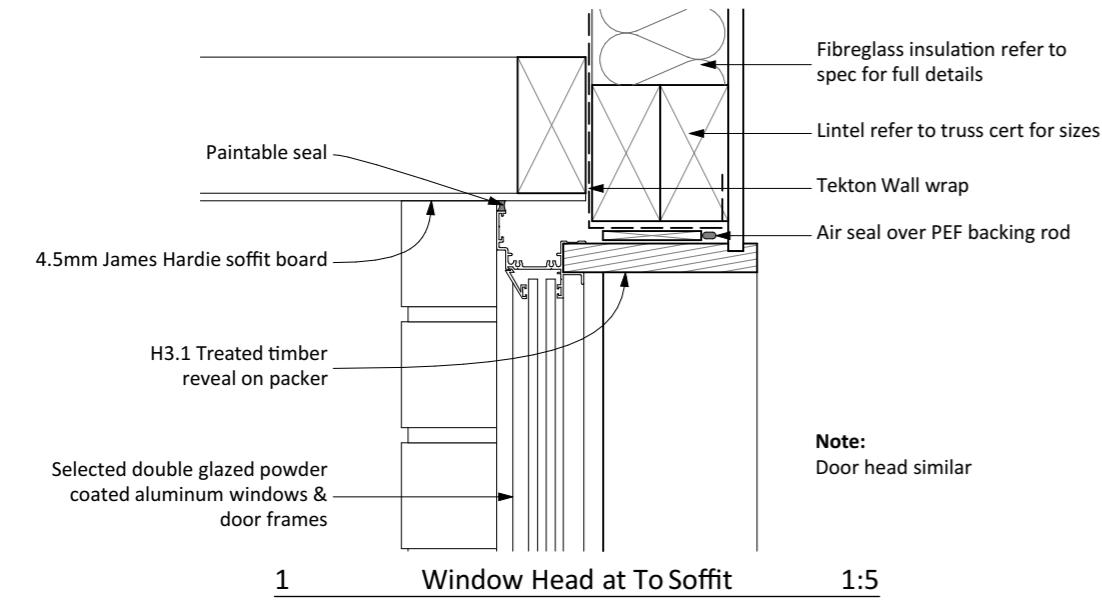
2 **Brickworks at Foundation** 1:10



4 **Linea Oblique at Foundation** 1:10

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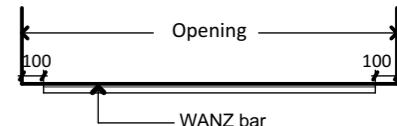
Details Eaves & Foundation	
SCALE:	1:10
PAPER SIZE:	A3
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FILE NAME:	Harry Lo v22 - 5.pln
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WANZ BAR COMMENT

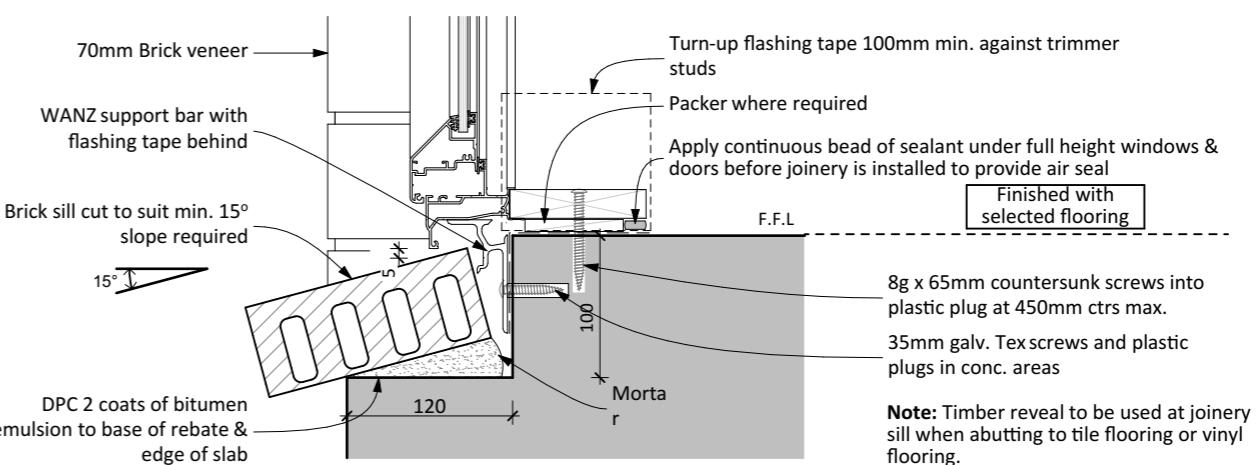
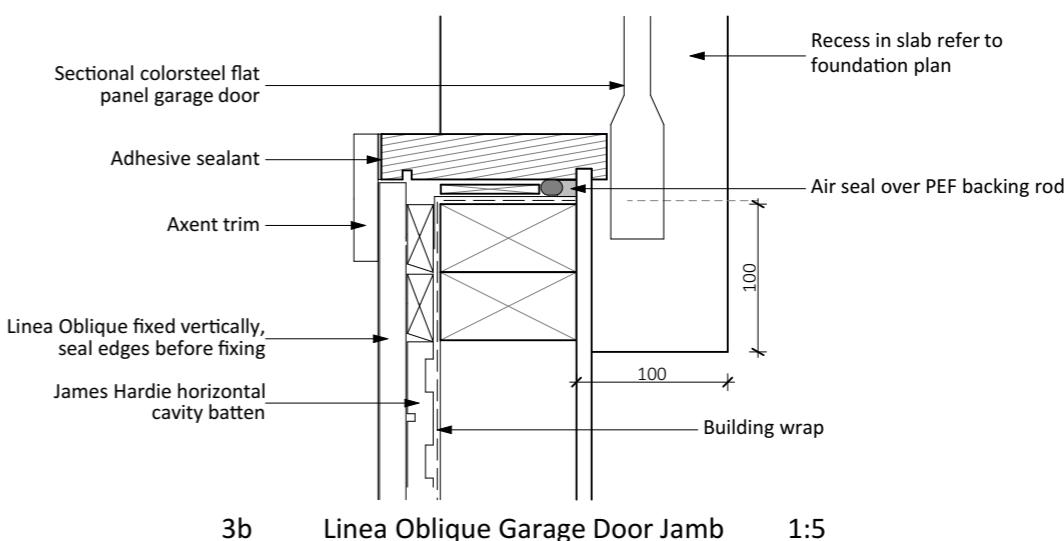
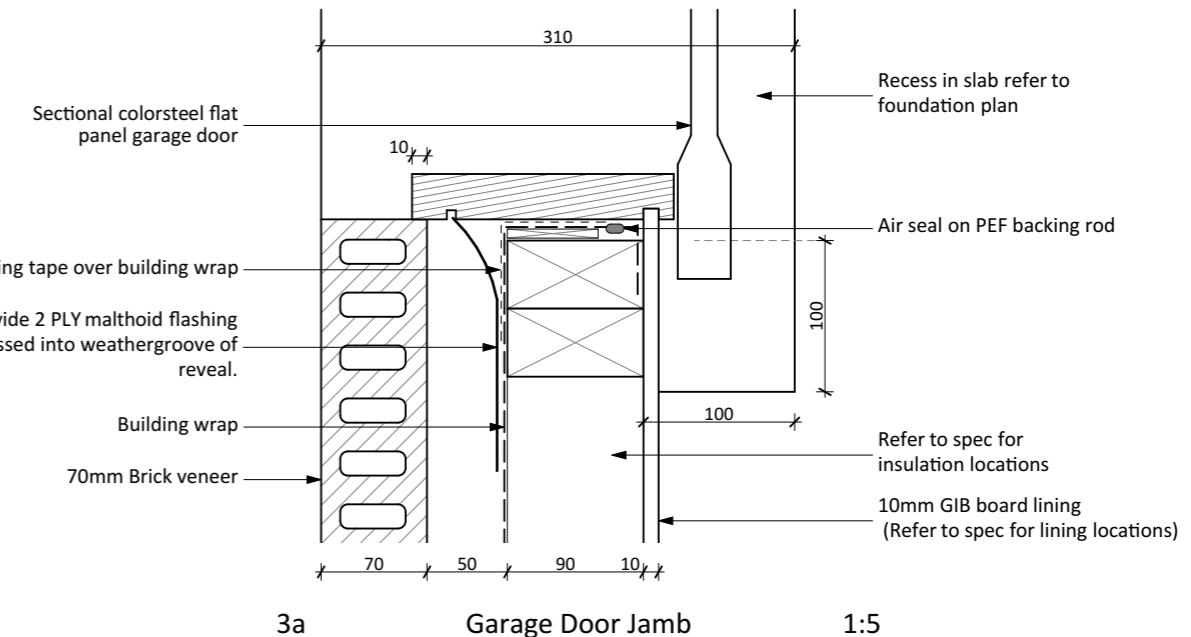
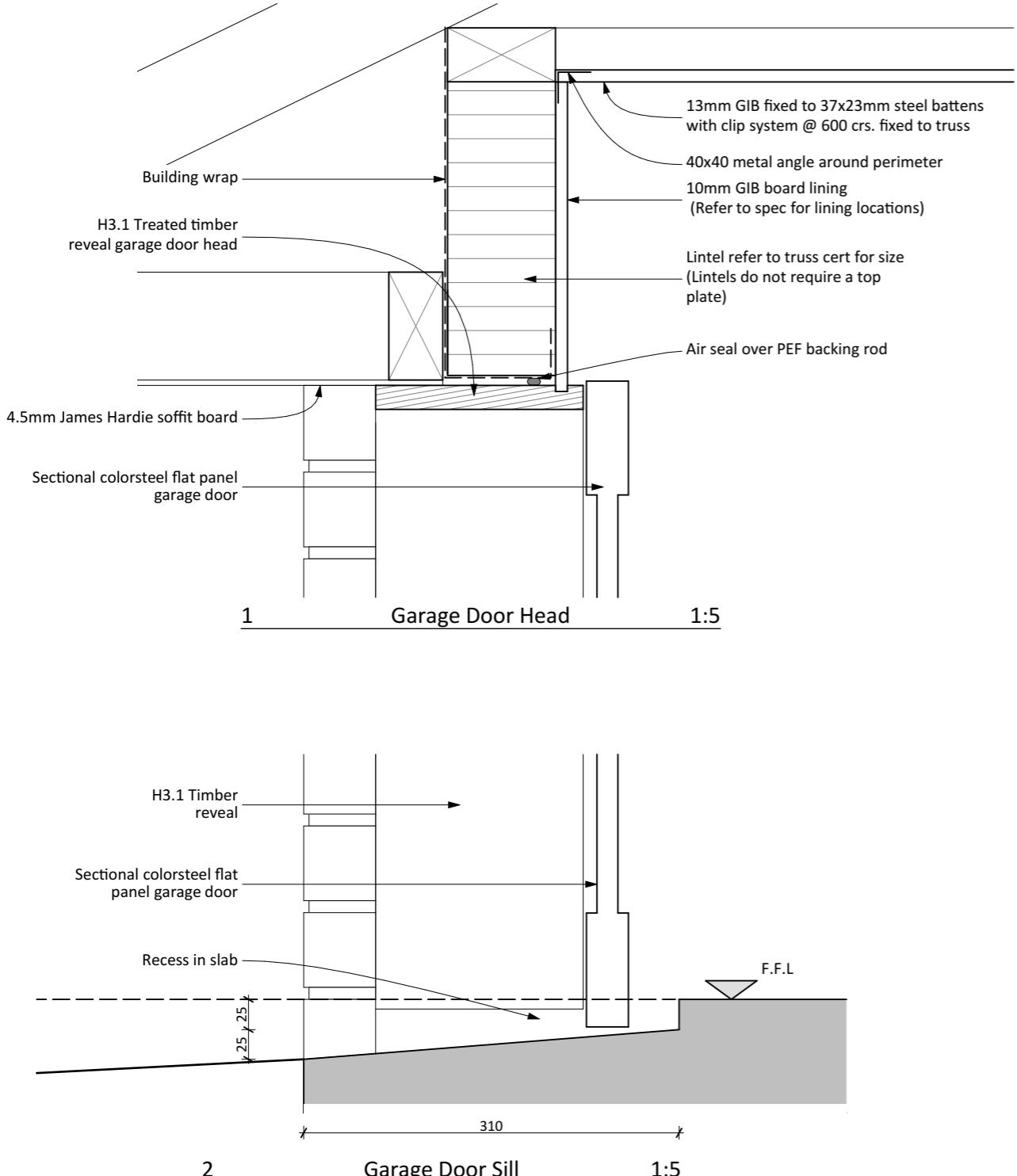
WANZ bars to all windows/doors.
Bars location indicated as below



Fixings

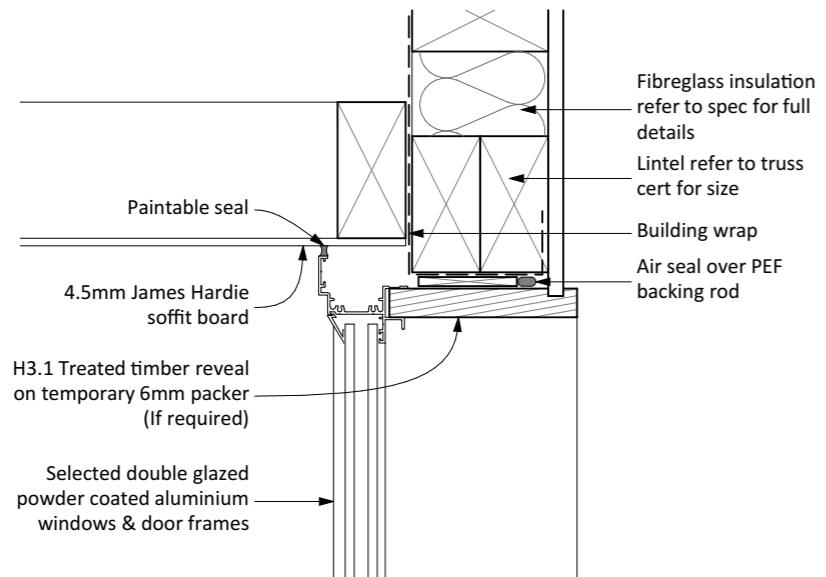
- at each end of the bar and at a max. 300mm centres between.
- into timber: 10g x 50mm SS screws
- into concrete: driven into plastic plugs or similar. may be substituted for 6mm masonry anchors. pre-fill fixing holes with silicon sealant

Details Brick	
SCALE:	1:5
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FILE NAME:	Harry Lo v22 - 5.pln
PRINTED:	21/03/2022

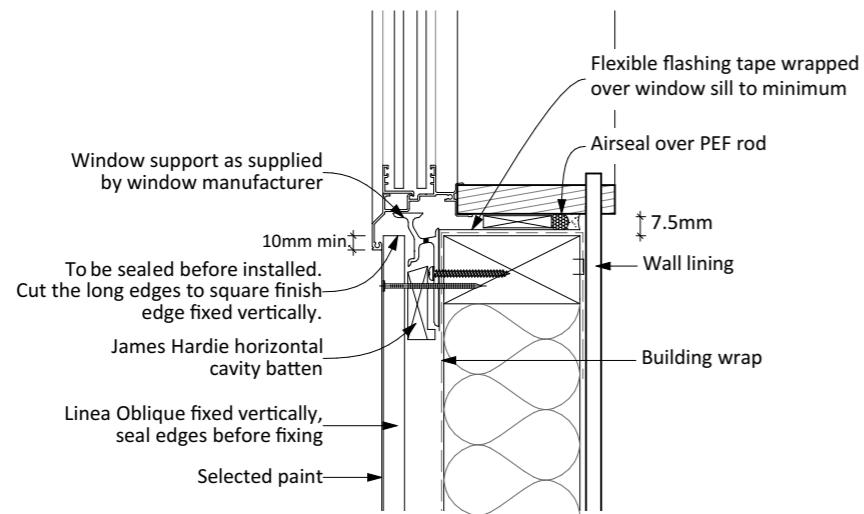


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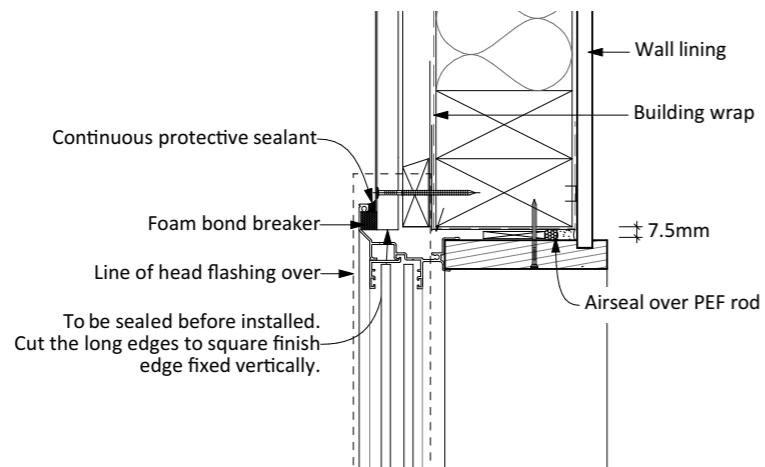
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SCALE:	1:5	
PAPER SIZE:	A3	PROJECT #: #Pln
DRAWN BY:	JMK	
FILE NAME:	Harry Lo v22 - 5.pln	
PRINTED:	21/03/2022	



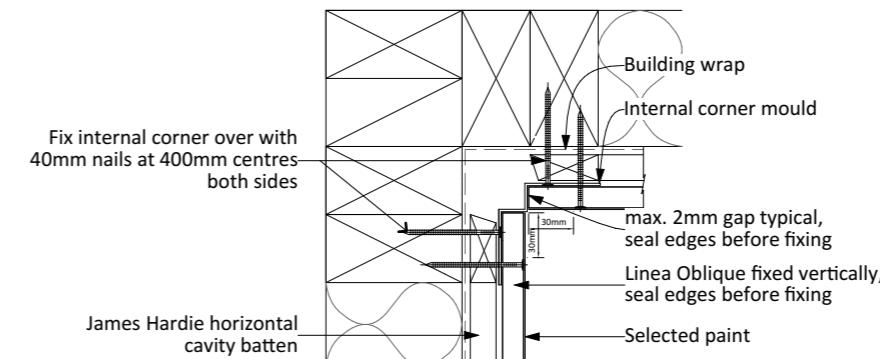
1 Linea Oblique Window Head 1:5



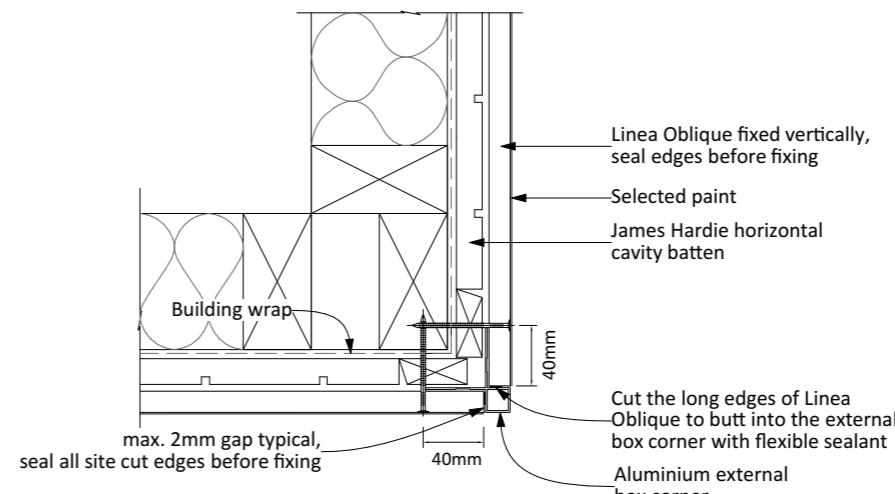
2 Linea Oblique Window Sill 1:5



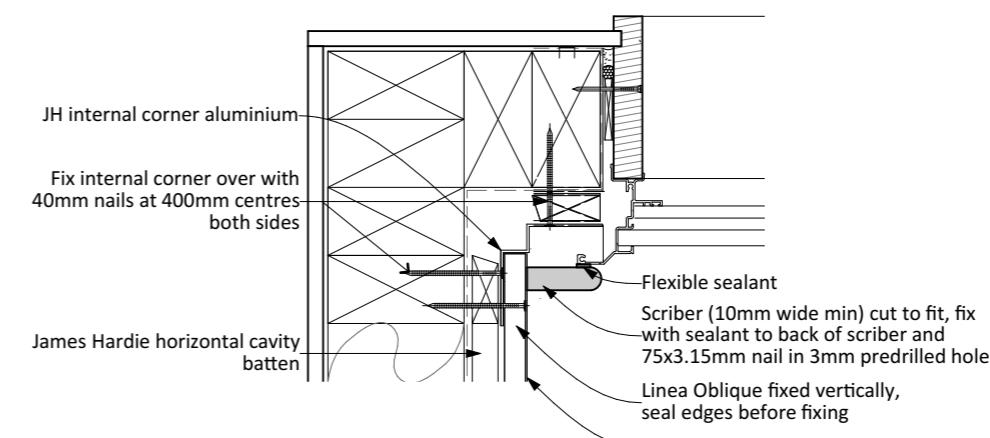
3 Linea Oblique Window Jamb 1:5



4 Linea Oblique Internal Corner 1:5

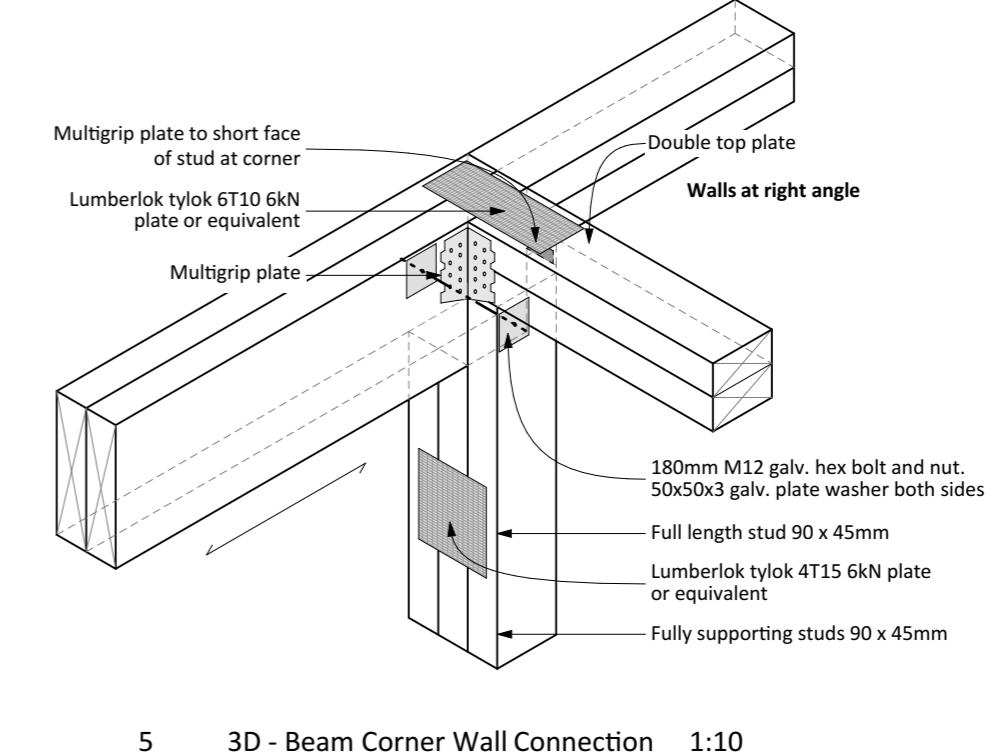
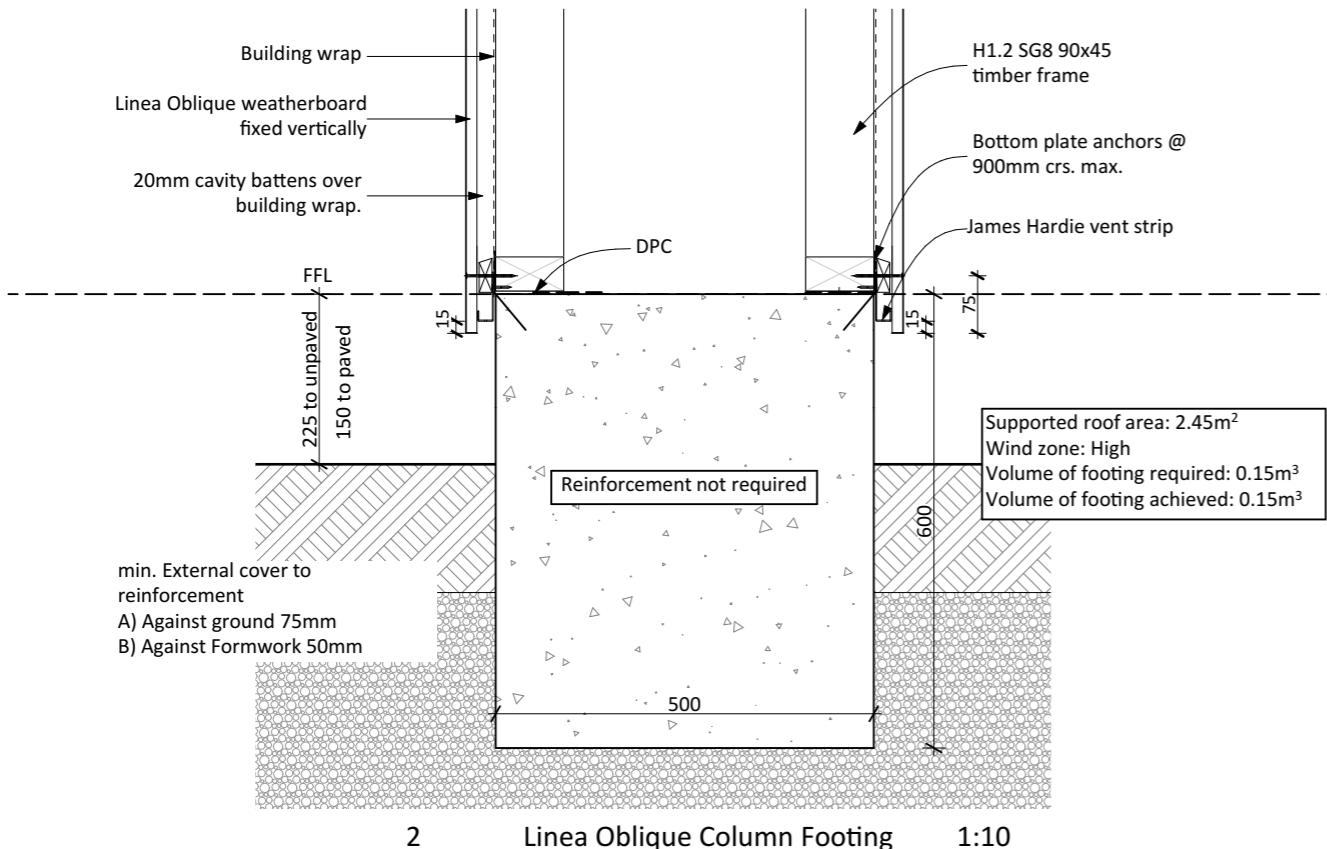
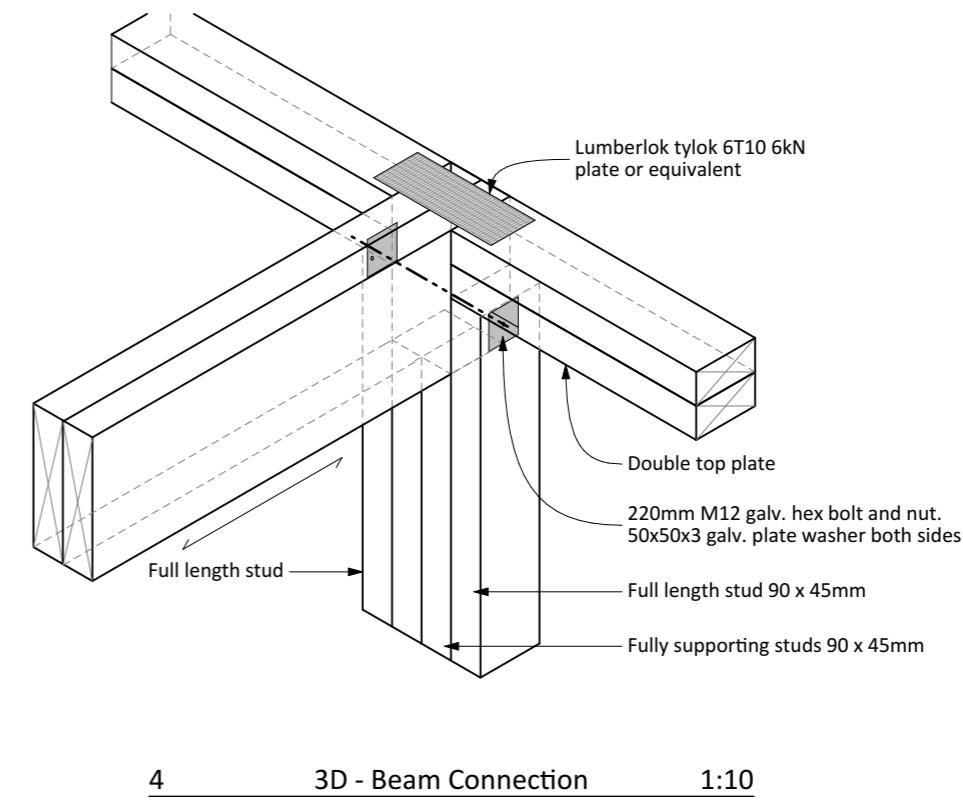
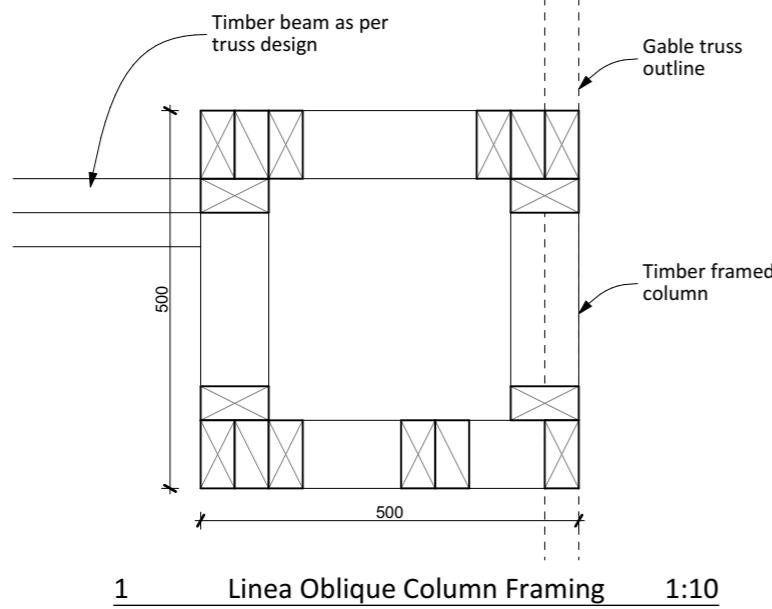


5 Linea Oblique External Corner 1:5



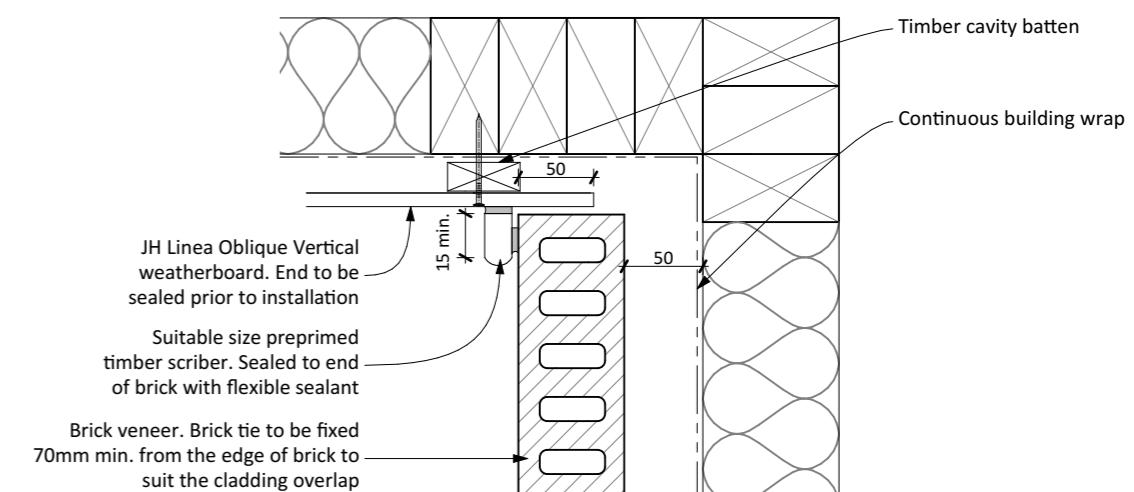
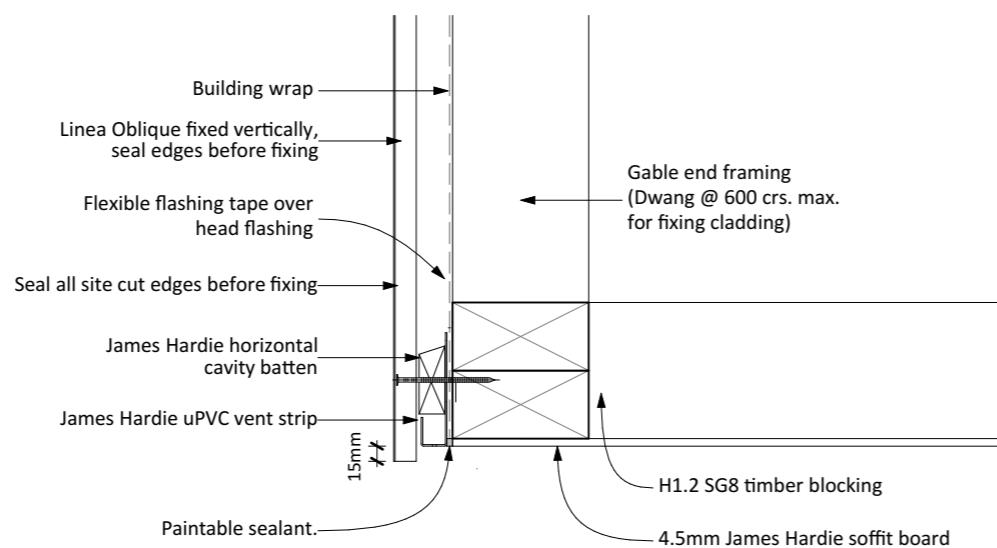
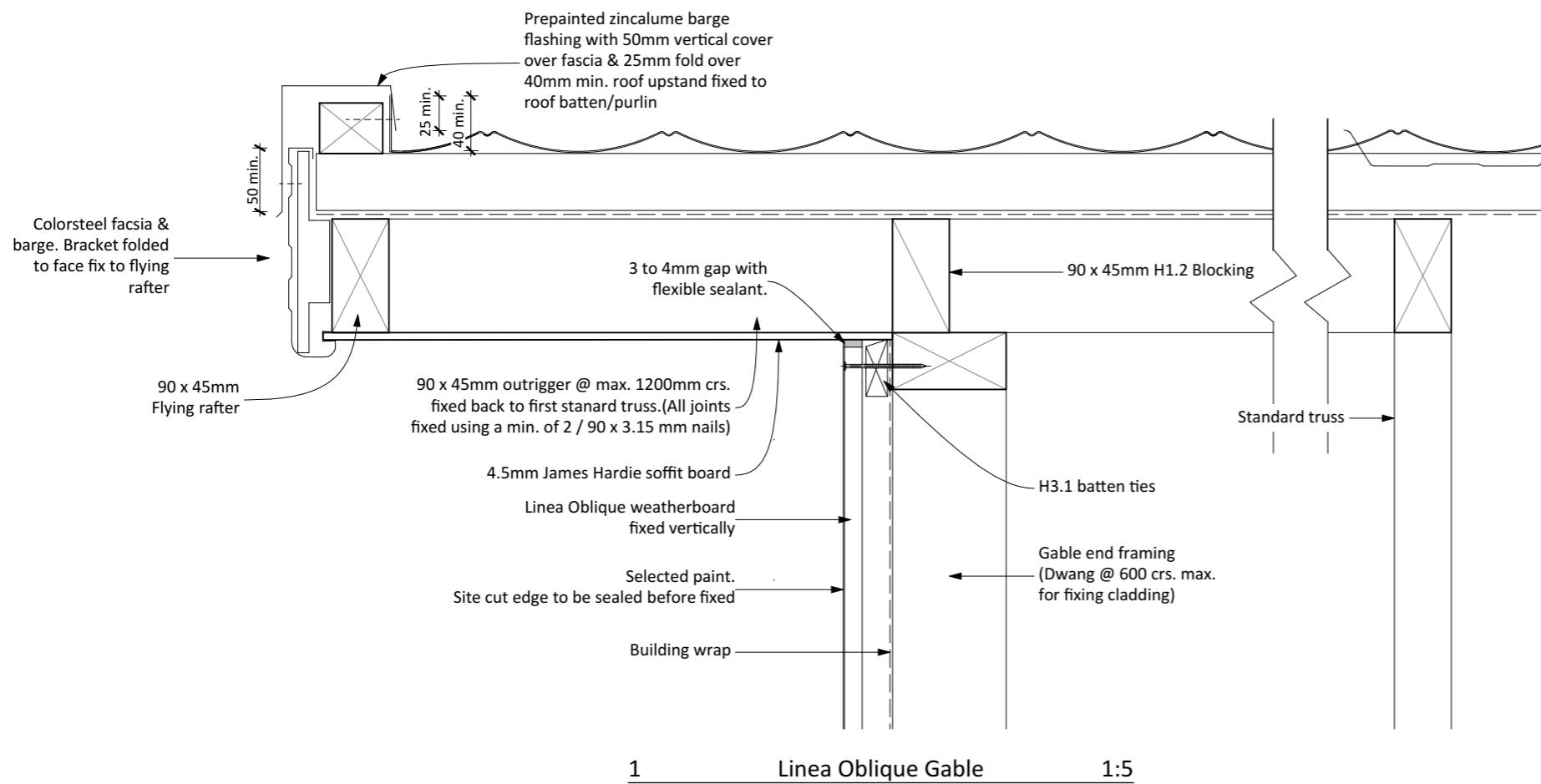
6 Linea Oblique Internal Corner at Window Jamb 1:5

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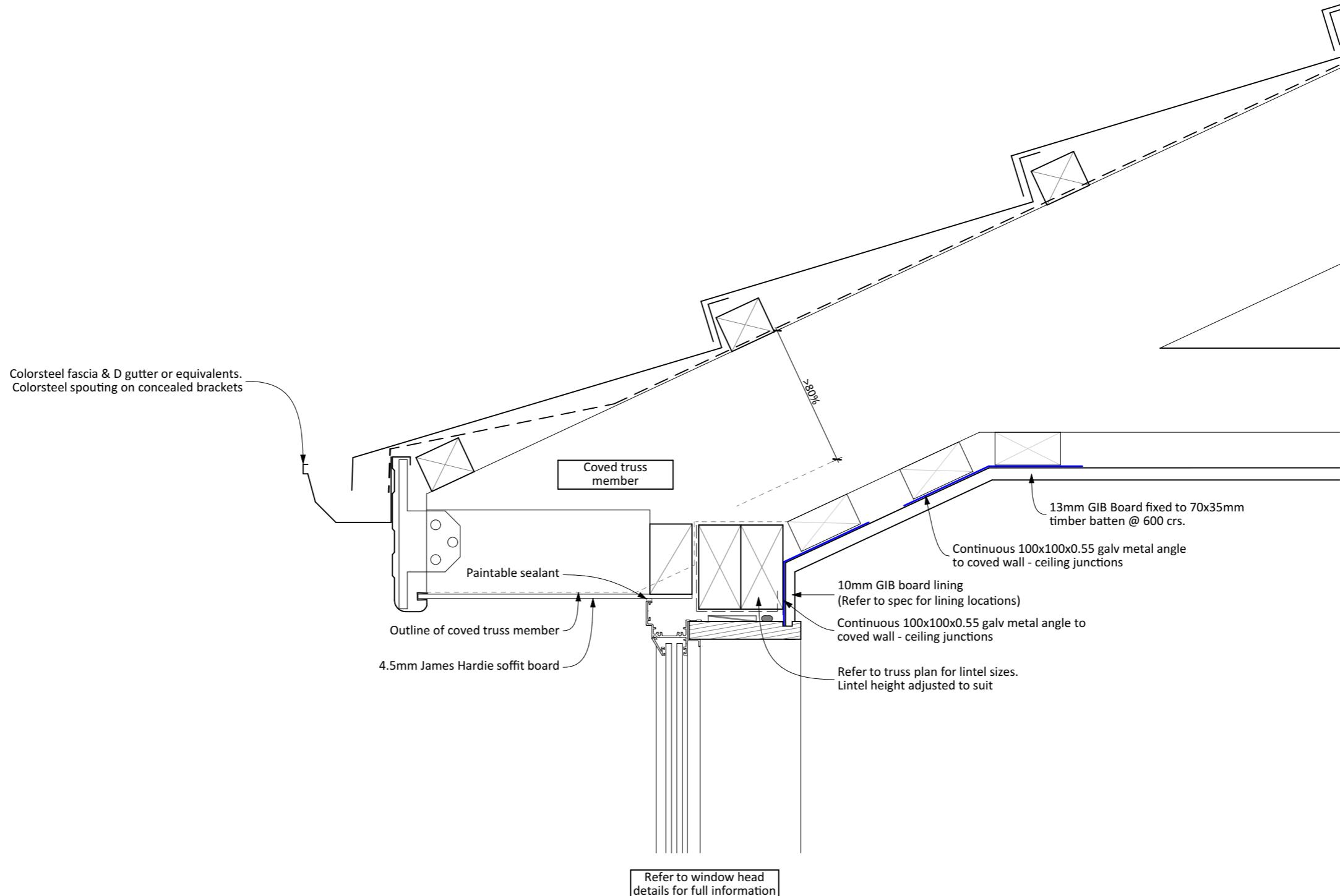
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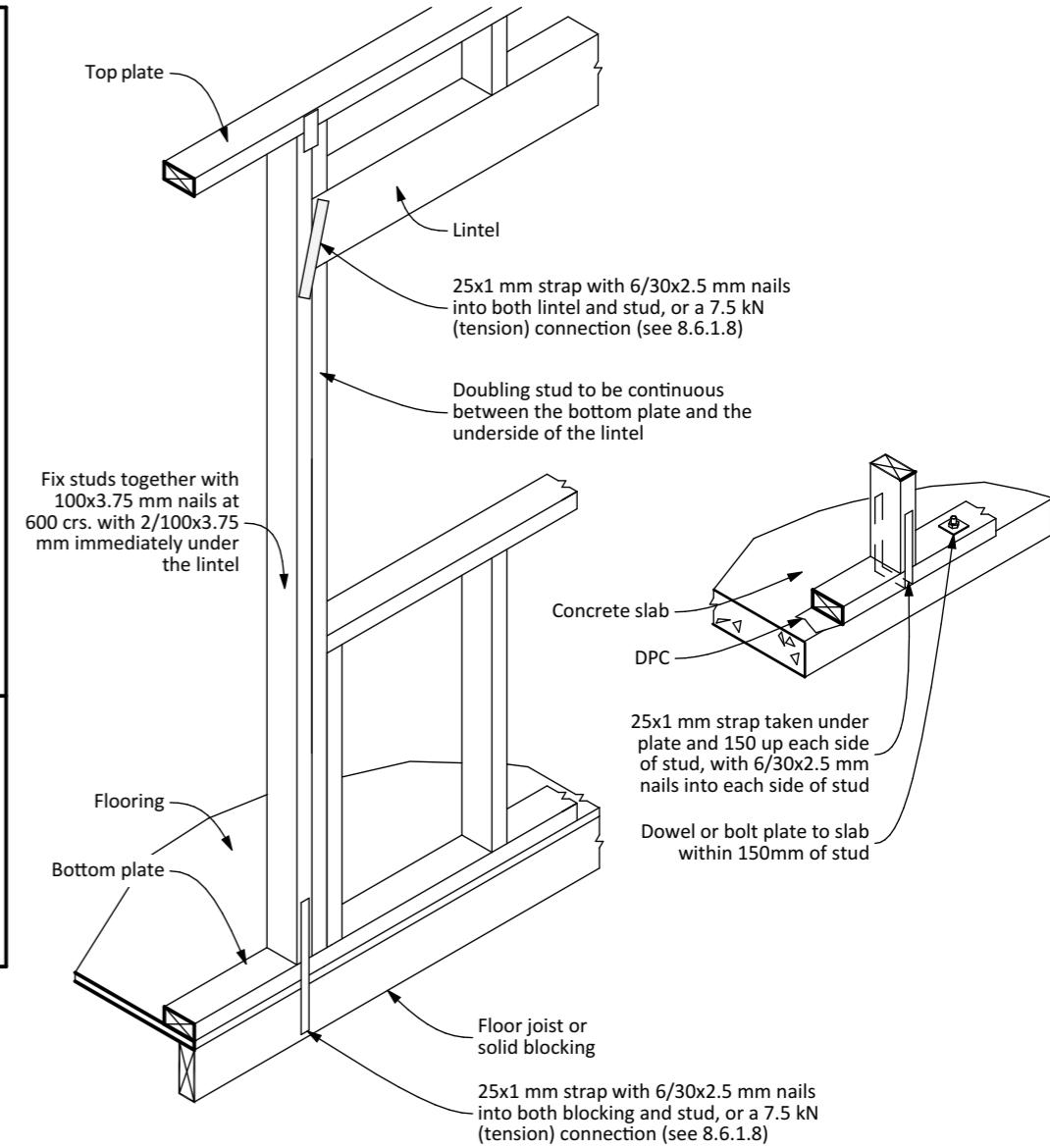
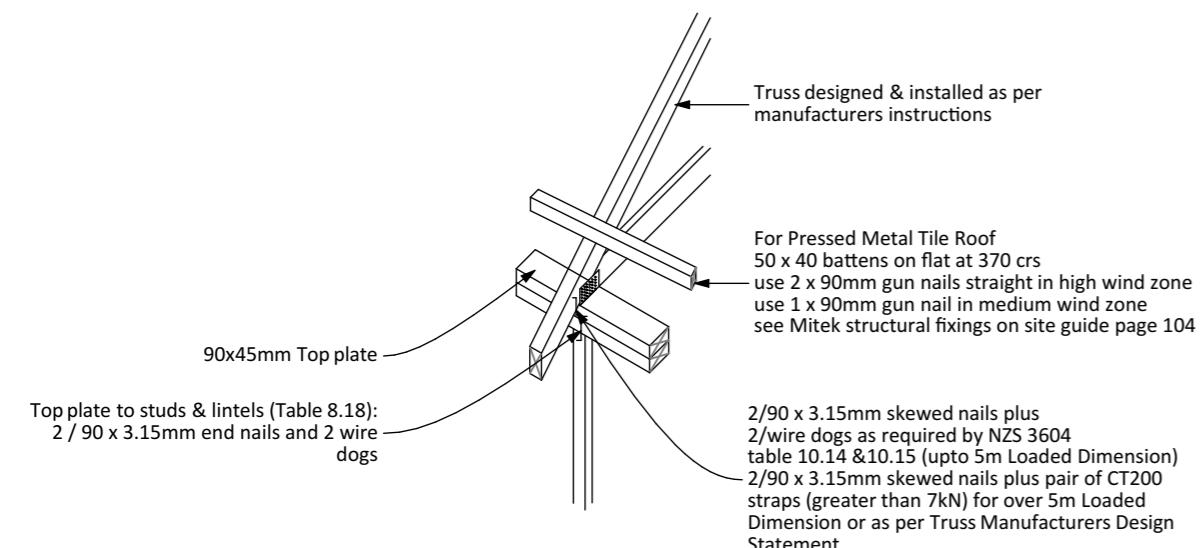
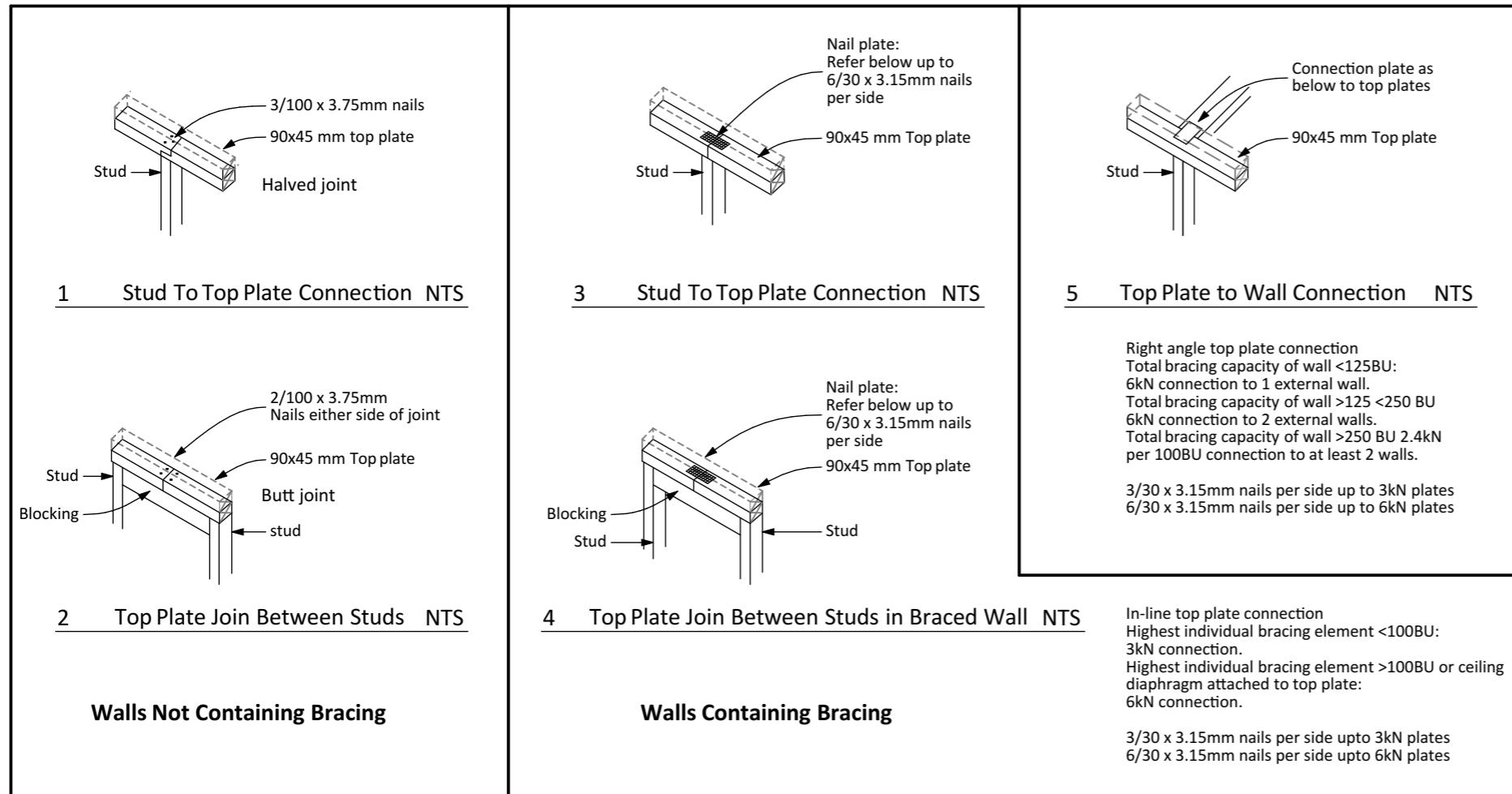
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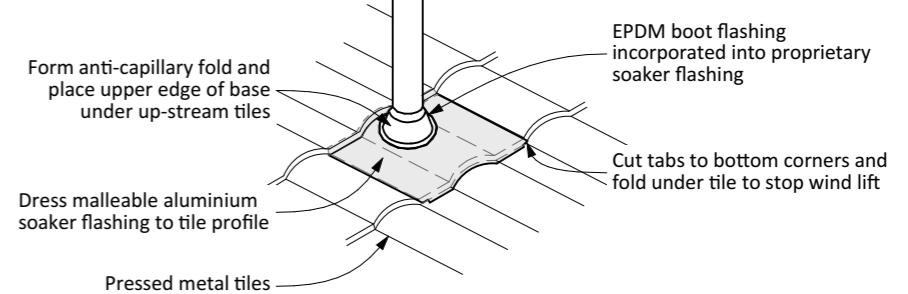
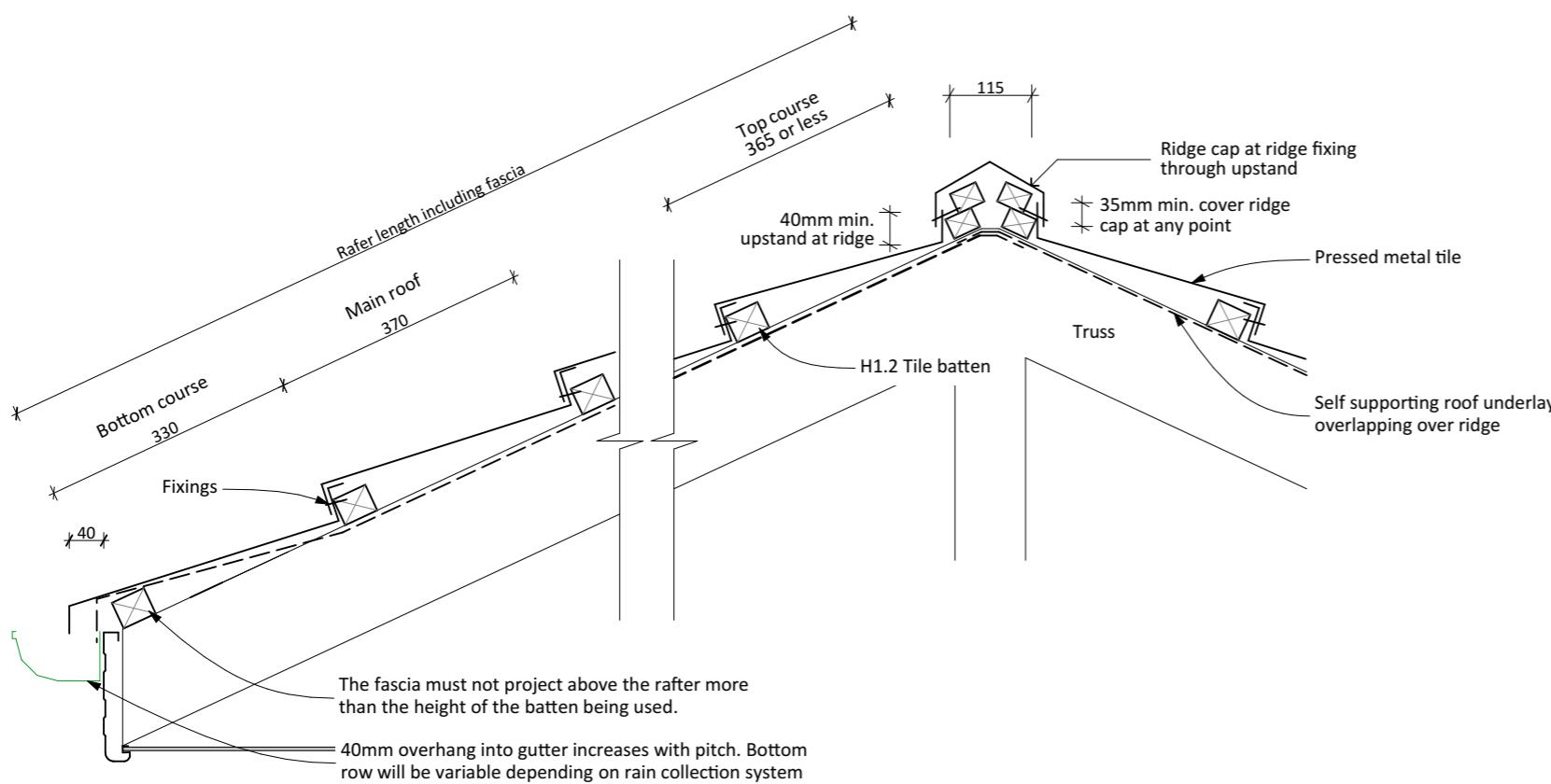
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Top Plate Connections & Uplift Prevention



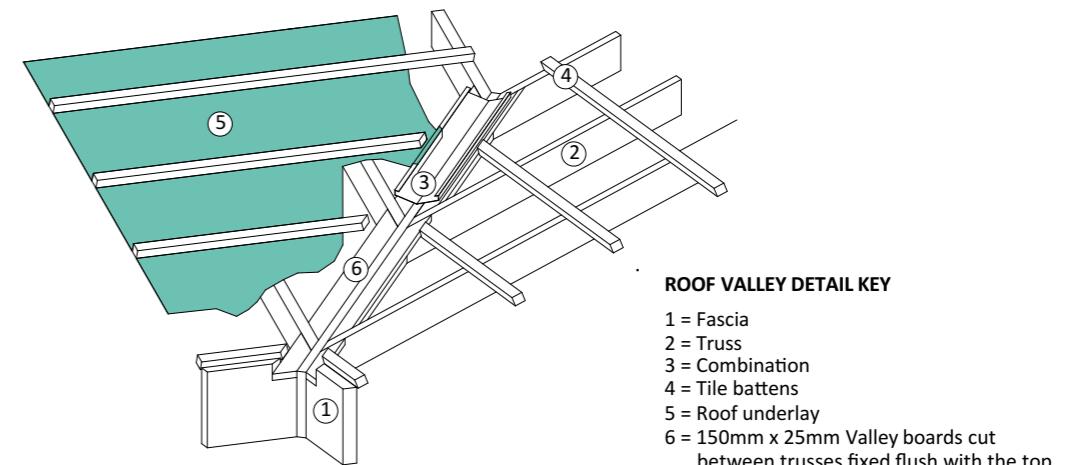
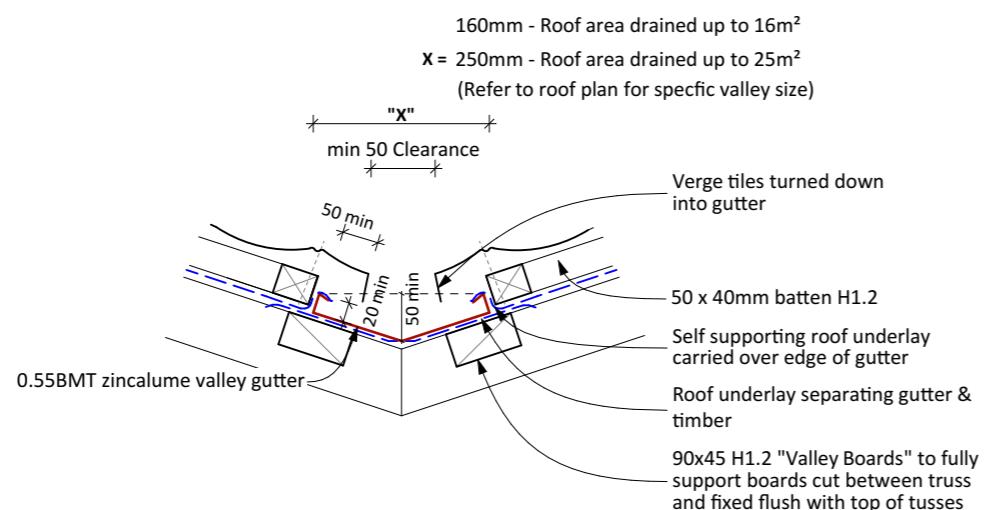
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TITLE: Details Framing	
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3 Roof Penetration NTS

1 Pressed Metal Tile Roof Details 1:10



2 Roof Valley Detail 1:10

4 Roof Valley Detail NTS

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TITLE:		Details PMT Roof
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FILE NAME:	Harry Lo v22 - 5.pln	
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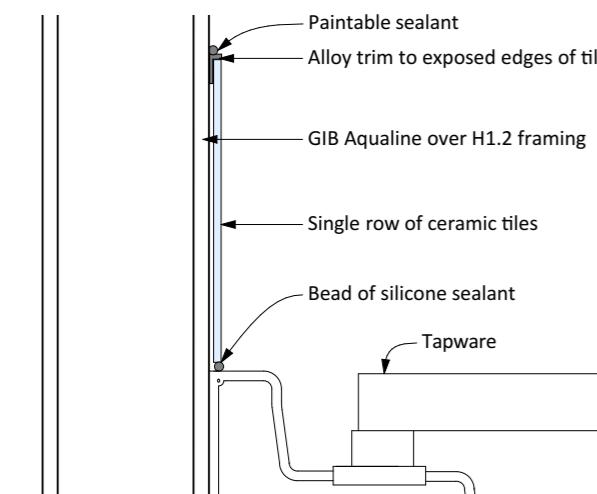
SURFACES

Splash backs

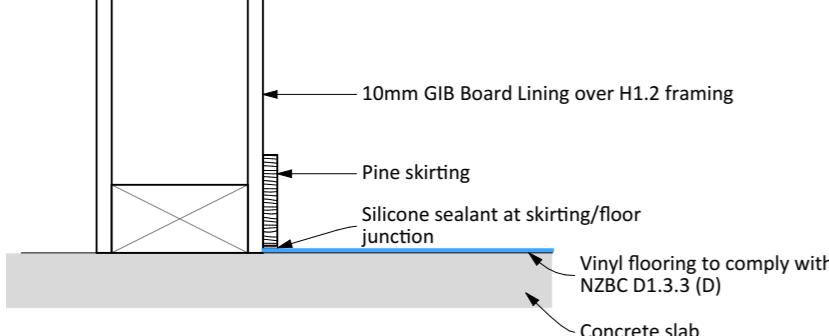
(Including kitchen) Shall be sealed to the bench

Tiles

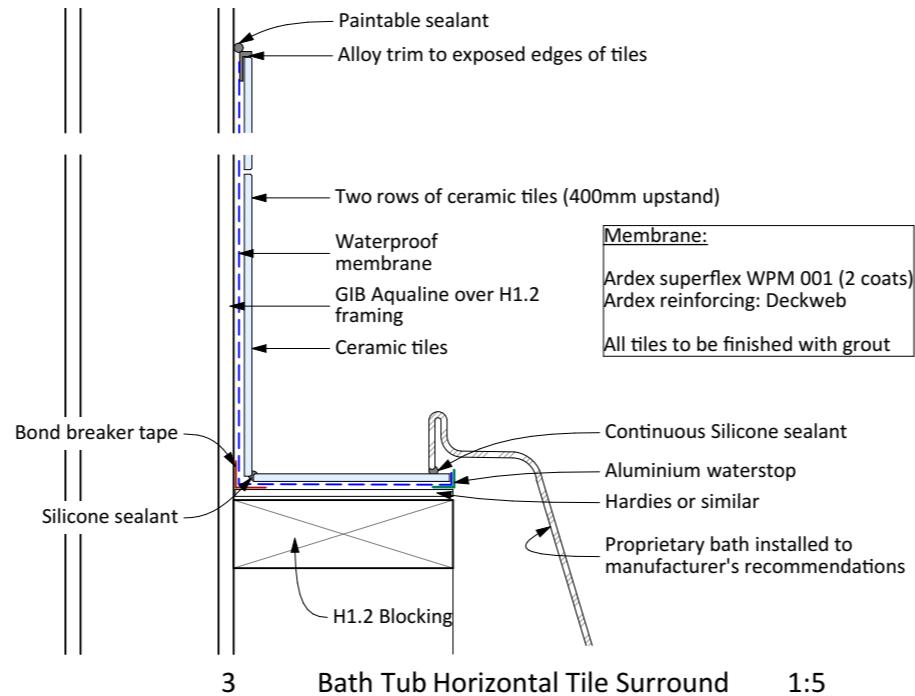
Ceramic or stone tiles having 6% maximum water absorption, grouted joints (Ardex FG8 or equivalent), and bedded with an adhesive specified by the tile manufacturer as being suitable for tiles substrate material and the environment of use



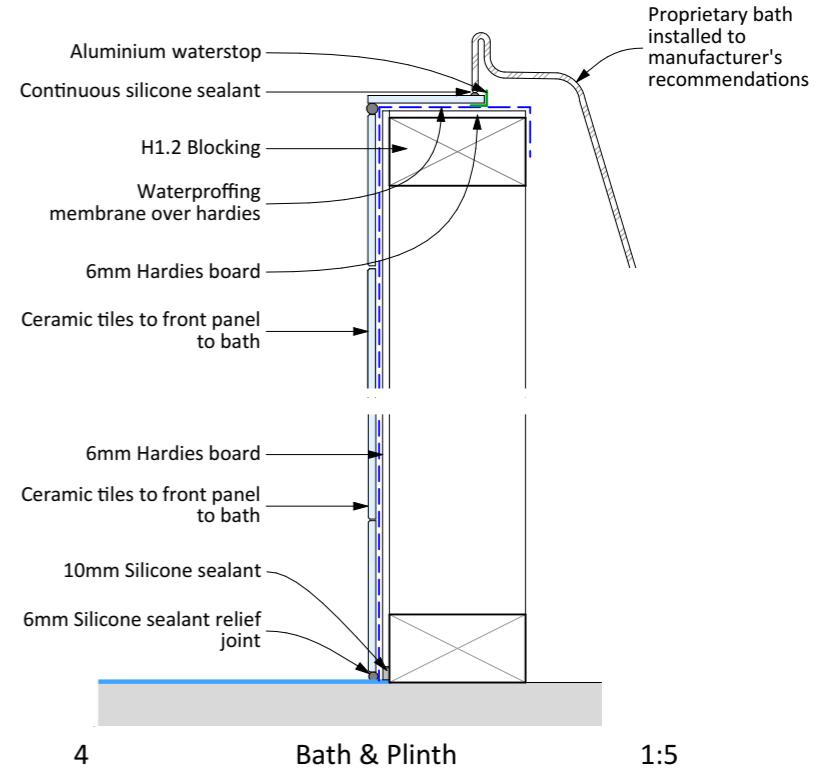
1 Basin Splash Back 1:5



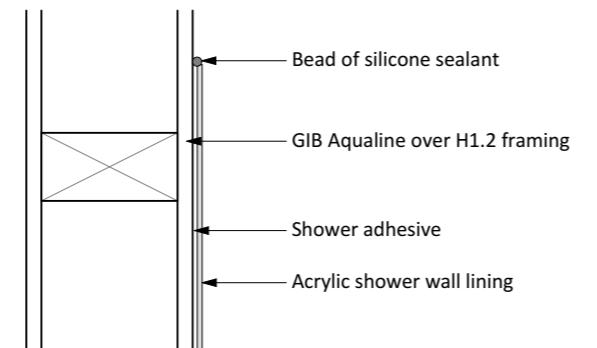
2 Vinyl Flooring Over Concrete 1:5



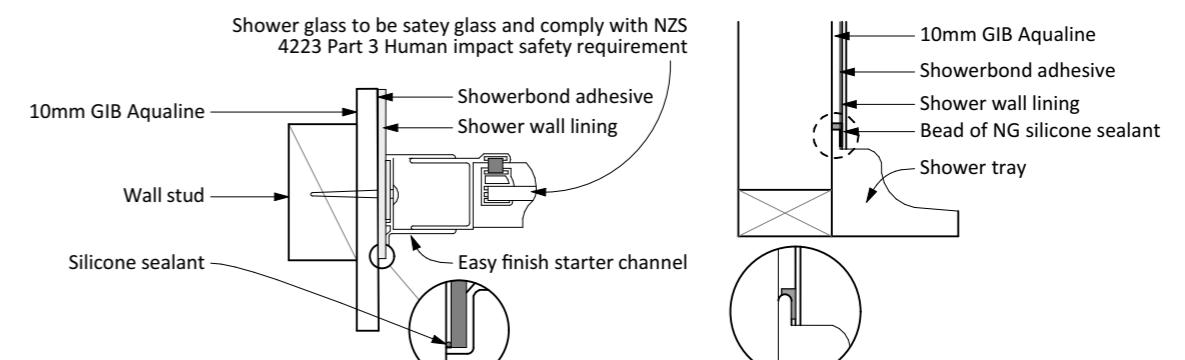
3 Bath Tub Horizontal Tile Surround 1:5



4 Bath & Plinth 1:5



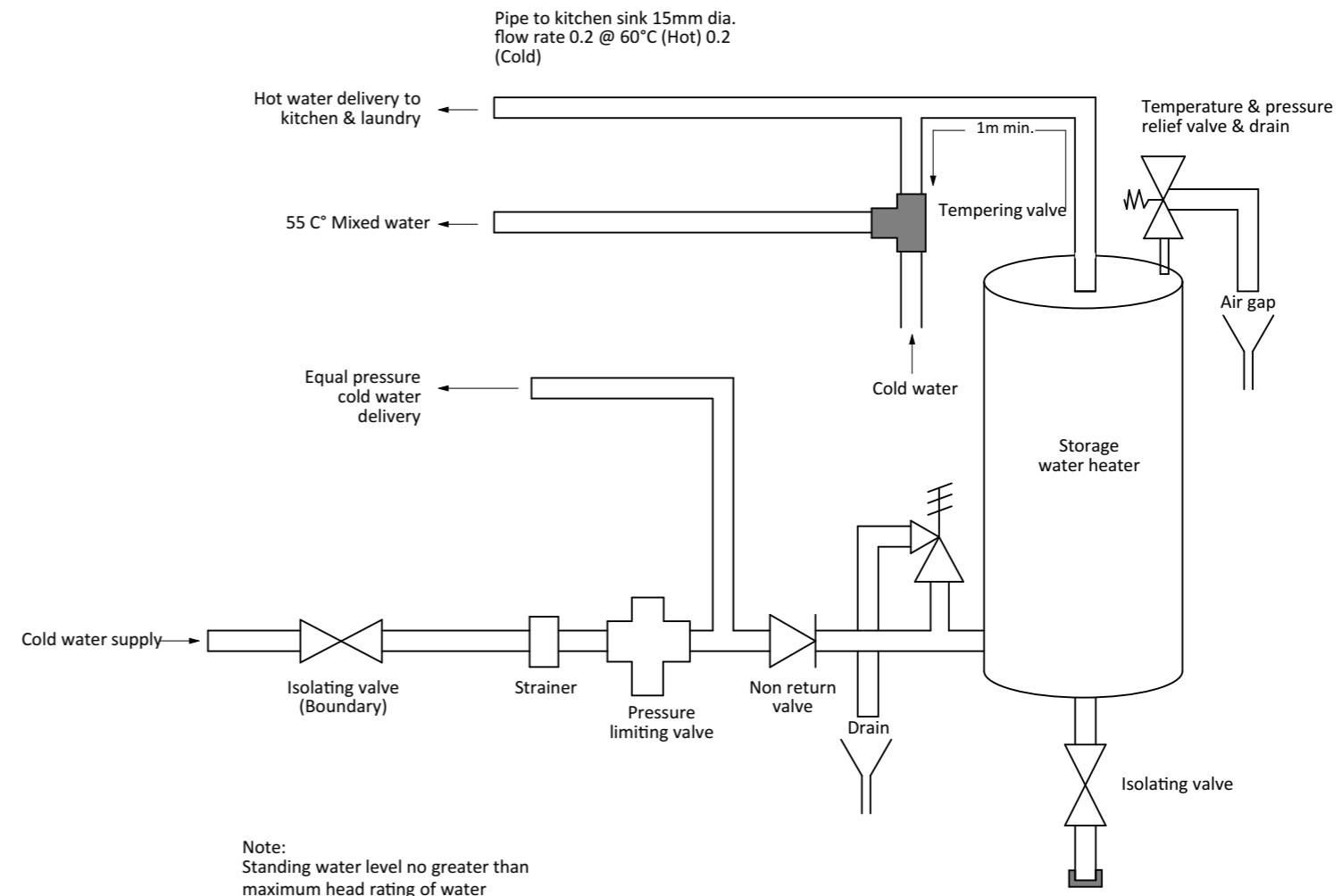
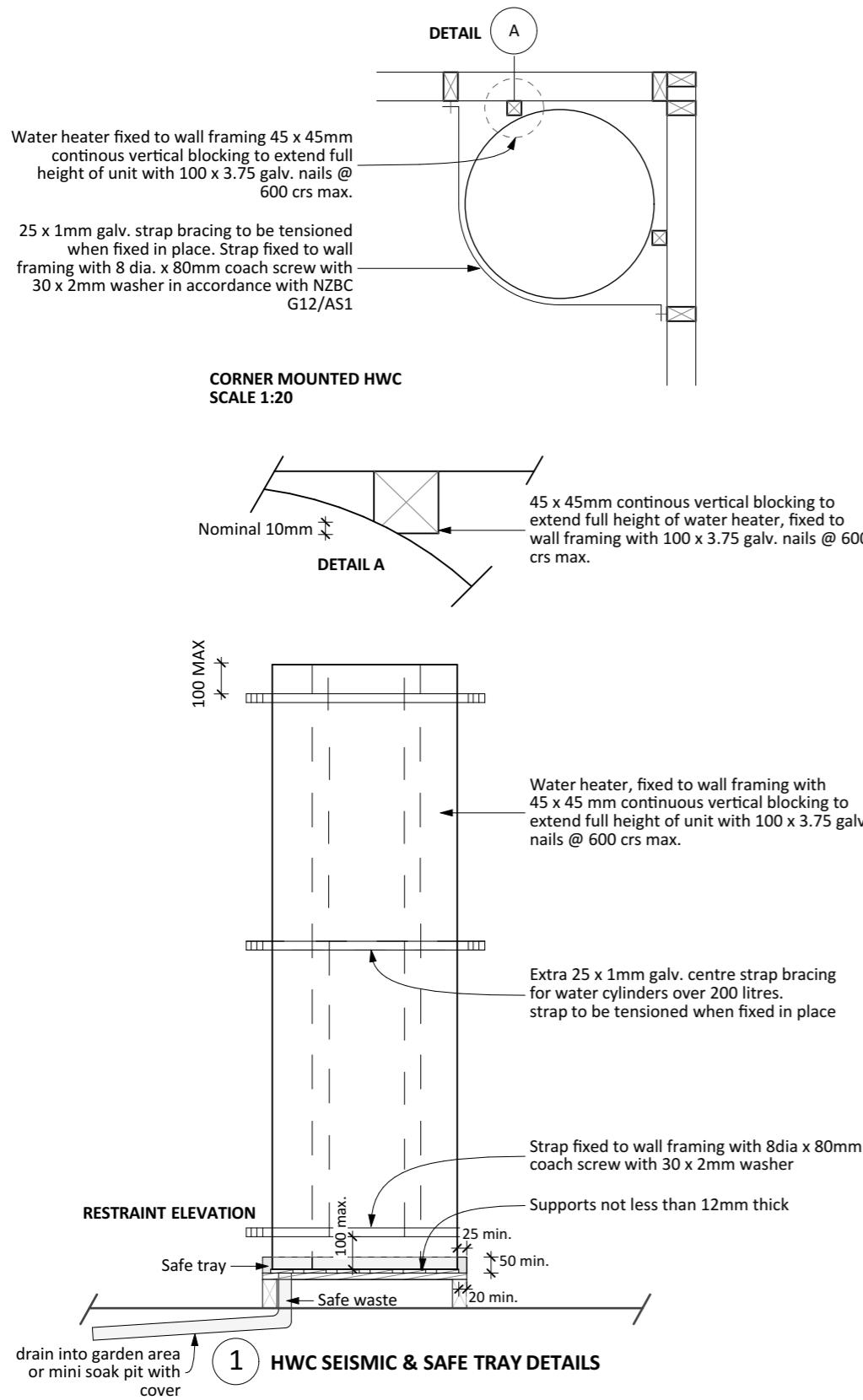
5 Acrylic Top Shower Lining to Wall 1:5



6 Acrylic Shower Details 1:5

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TITLE: Details Wet Area	
SCALE: 1:5	
PAPER SIZE: A3	PROJECT #: #Pln
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2 HWC VALVES

Hot water cylinder notes

Hot water cylinder, installation (complete with seismic restraints) shall comply with manufacturers instructions & NZBC G12/AS1 water supplies. Provide outlet for hwc relief valve

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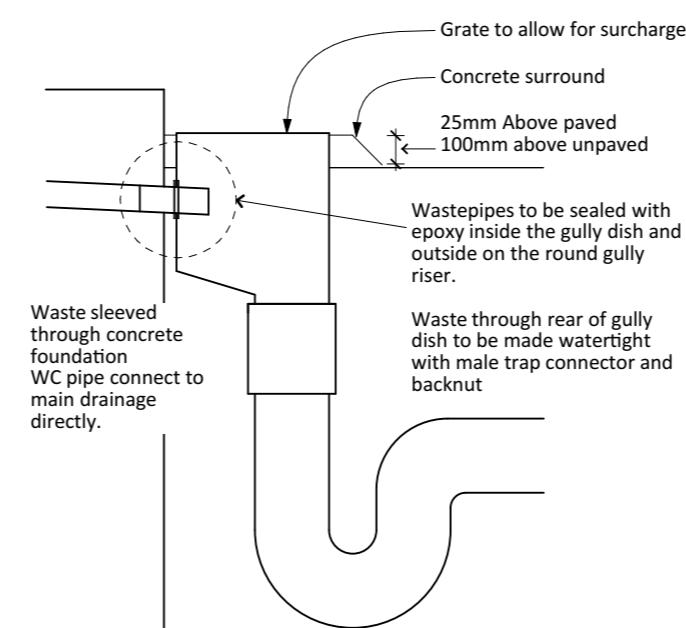
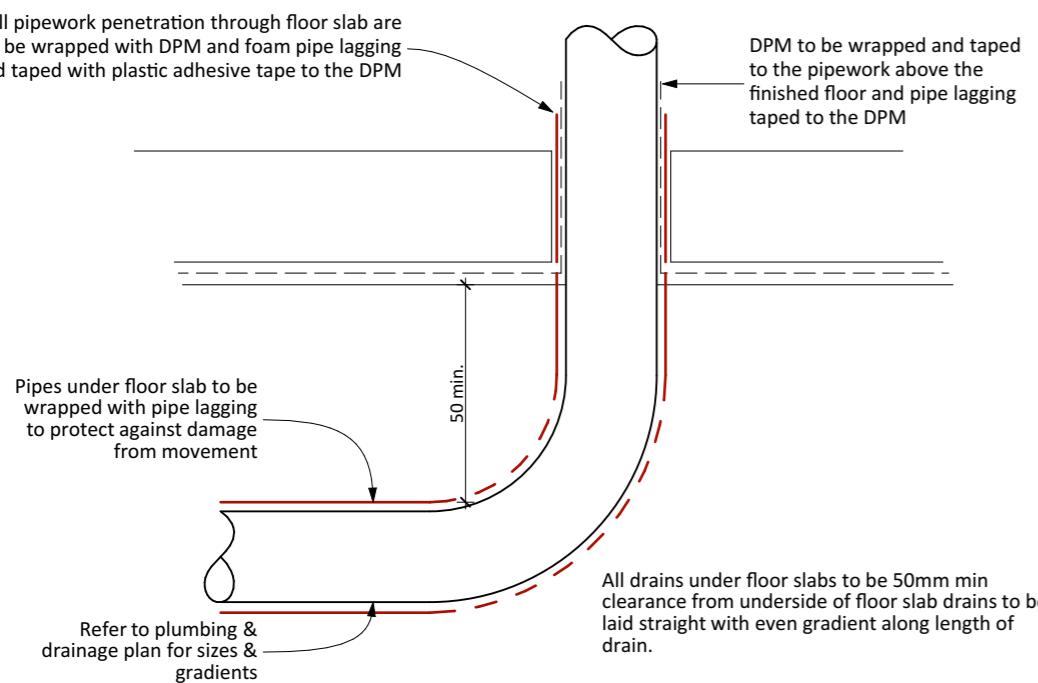
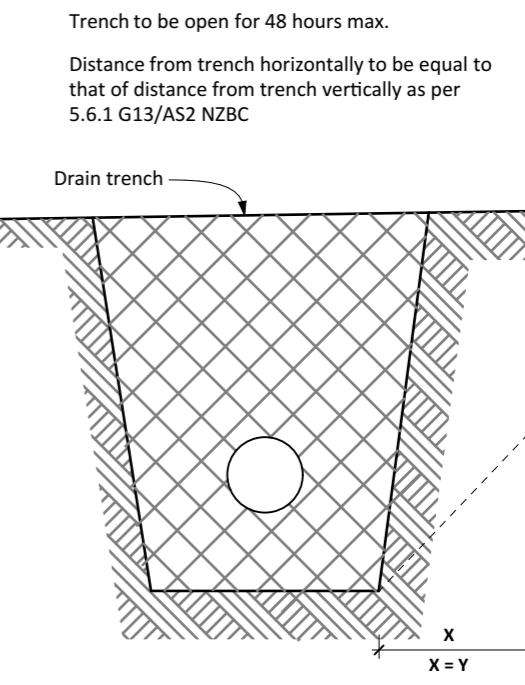
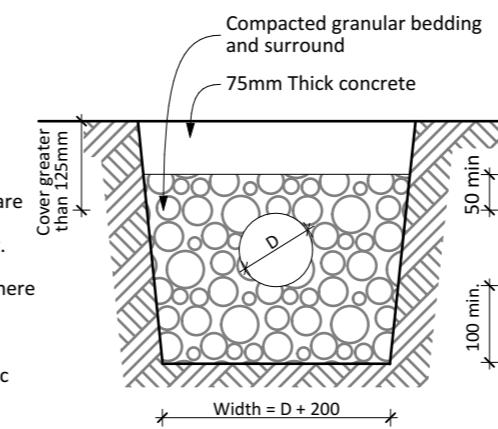
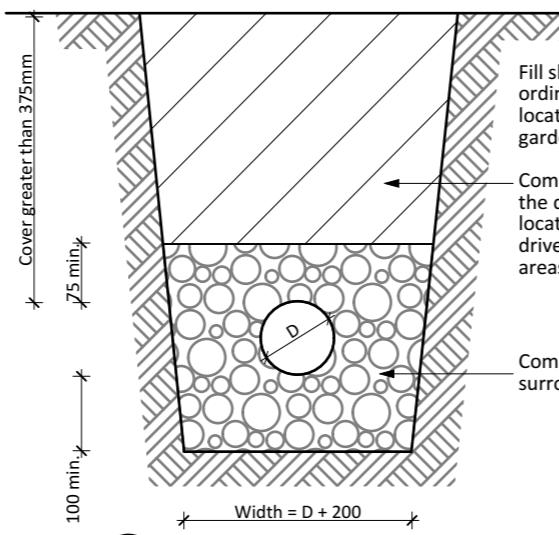
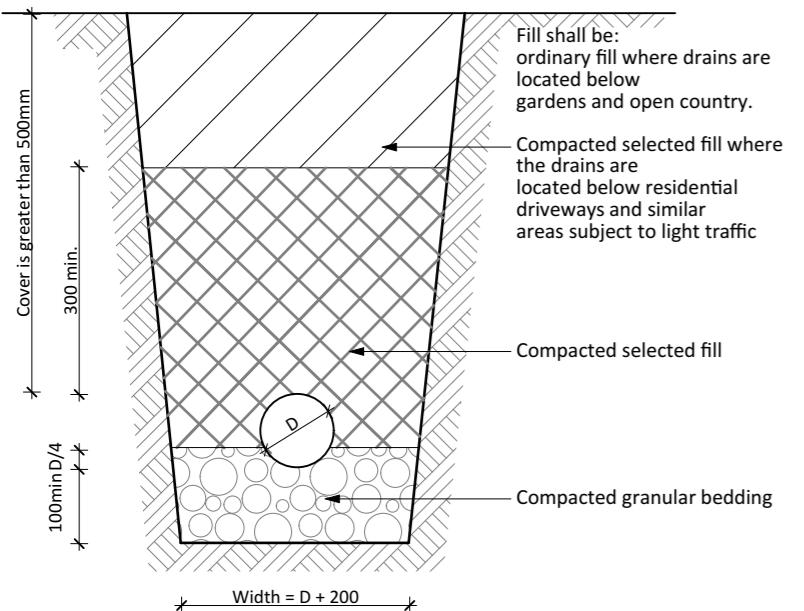
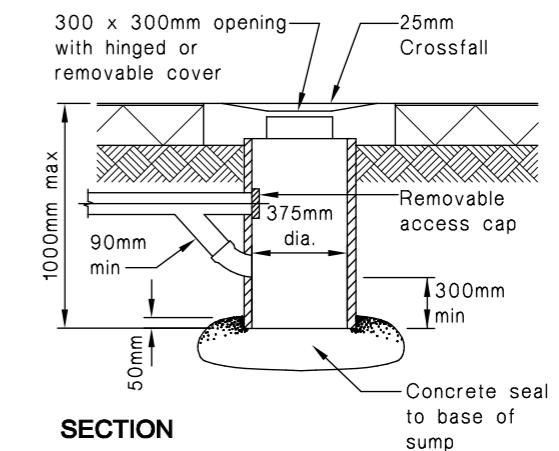


Figure 8: Type-one Surface Water Sump
Paragraph 3.6.2



Extracted from E1

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TITLE:		Details Trenches & Pipes
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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 mm ² or less	SHELTERED ⁽⁴⁾ Hot-dipped galvanized steel ⁽²⁾
		Subfloors vented more than 7000 mm ²	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 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/m ² average
Nail plates used in sheltered locations Nail plates used in exposed locations	AS 1397 AS/NZS 4680	Z275 pre-galvanized sheet 390 g/m ²
Brackets used in sheltered locations Brackets used in exposed locations	AS/NZS 4680 AS/NZS 4680	390 g/m ² 600 g/m ²
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/m ² (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.

Denotes the fixings protective coatings
Required as per NZS 3604:2011 Section 4 Durability

CORROSION ZONE = ZONE C

BRICK WORK

Masonry bricks

Piers no less than 230mm min.

Brick door sills:

Low risk situation - Mulseal to rebate
(Brick Cladding under 600mm Soffit - No brick above)

Vents:

- Top of walls
- Under windows Over 2.4m Wide (Positioned)

Joints

Stuck - Mortar see: Specifications

Brick ties:

Single storey - 600 cntrs Horizontally , 400mm max. Vertically
Type - EM (Wet or Dry bedded)
Rebate(Liquid applied damp-proof course) - Within 300mm or two course
Top of veneer panels and top of panels under opening - Within 300mm or two course
Unsupported panel sides and edges of opening - Within 300mm or two course
Bricks returns less than 230mm and greater than 115mm tie every second brick

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