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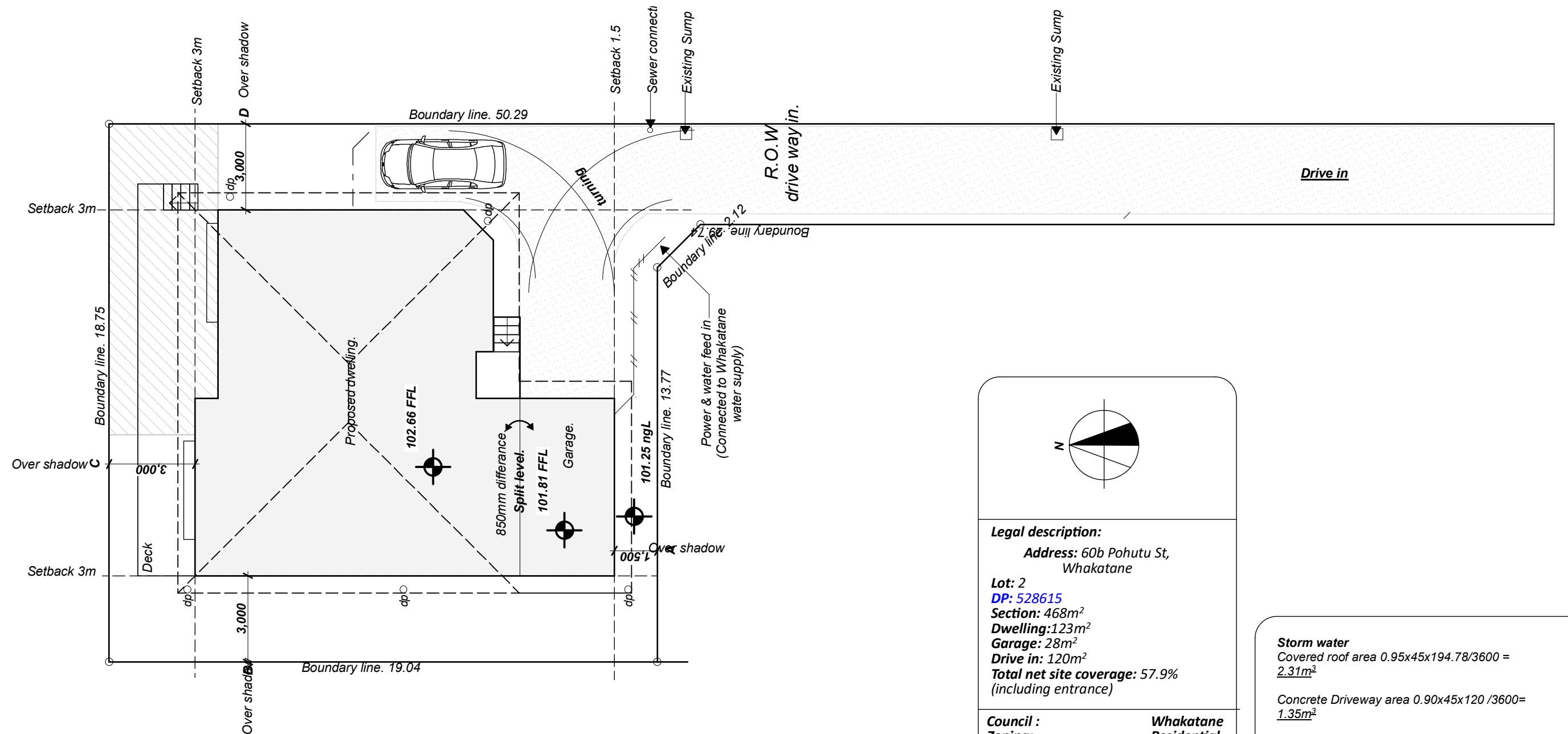
Proposed new home for Barry Raynes

60b Pohutu Street, Whakatane

Consent drawings 21/07/20

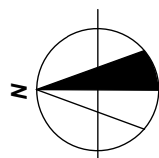


ARCHITECTURAL DRAWING SERVICE
 Steven Bilyard - ph: 027 3470147 email: steve@thedraughtsman.co.nz
 07 312 96 75



Pohutu Street

This livable out door area is breached by the deck. Will need Resource Consent for breach of rule. Rule 4.2.7.1 (a)iii
Site coverage rule is breached by driveway - will require resource consent. Rule 4.2.10.3 (b)



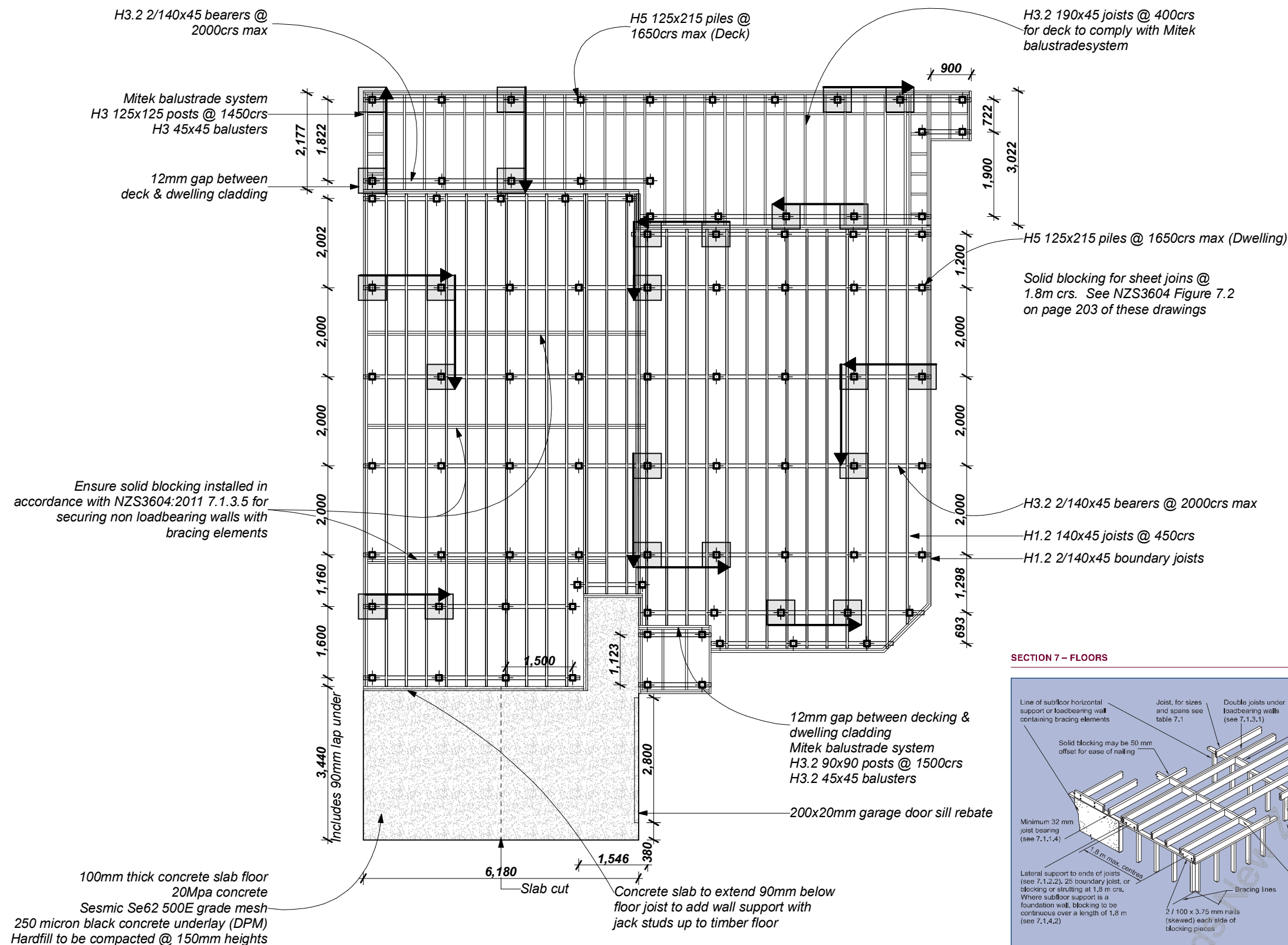
Legal description:
Address: 60b Pohutu St,
Whakatane
Lot: 2
DP: 528615
Section: 468m²
Dwelling: 123m²
Garage: 28m²
Drive in: 120m²
Total net site coverage: 57.9%
(including entrance)

Council :	Whakatane
Zoning:	Residential
Wind Zone:	High
Earthquake Zone:	2
Durability Zone:	C

Storm water
Covered roof area 0.95x45x194.78/3600 =
2.31m³
Concrete Driveway area 0.90x45x120 /3600=
1.35m³
2.31+1.35 = 3.46m³
Surface Water runoff

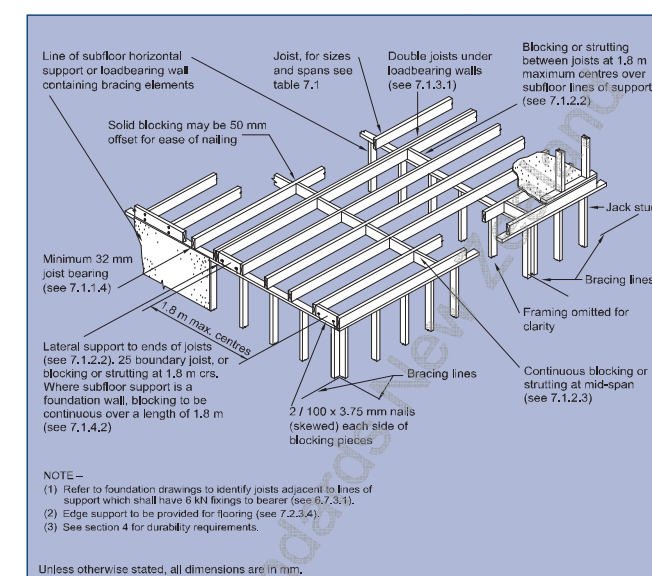
Need correct legal description for this site

the DRAUGHTSMAN dream it • draw it • build it Steven Bilyard 31 McAlister Street, Whakatane Ph 07 312 9675 Email: steve@thedraughtsman.co.nz	Notes copyright remains the property of The Draughtsman Ltd unless specified in writing All dimensions are in millimetres unless otherwise stated All construction to comply with NZBC/NZ 3604 : 2011, along side current standards alike. All built up members mentioned for bearers, lintels, stringers and alike are to be nailed in accordance with NZS 3604 2.4.4.7 All timber to be SG8 unless specified otherwise.	Job Title Proposed new home for Barry Raynes 60b Pohutu Street, Whakatane.	Design Steven Bilyard	Drawing Title Site Plan	Scale 1:300
	Drawn Geoff Bilyard				
	Checked				
	Revision Date				
	Plot Date 21/07/2020				
	ALL DIMENSIONS TO BE VERIFIED ON SITE DO NOT SCALE OFF PLANS.				Drawing Number 101



SECTION 7 - FLOORS

NZS 3604:2011



Subfloor Materials

Deck

H3.2 2/140x45 bearers @ 2000crs max
H3.2 190x45 joists @ 400crs

Dwelling

H1.2 2/140x45 bearers @ 2000crs max
H1.2 140x45 joists @ 450crs max
H1.2 19mm ply flooring
H3.2 19mm ply (Wet areas)

New

125x125 H5 piles @ 1650crs max
275² x200 20 MPa concrete footings

100x25 H3.2 base boards with 20mm gaps between each board. Allow for lockable access door min 450 high x 600 wide to sub floor.

Crawl Space

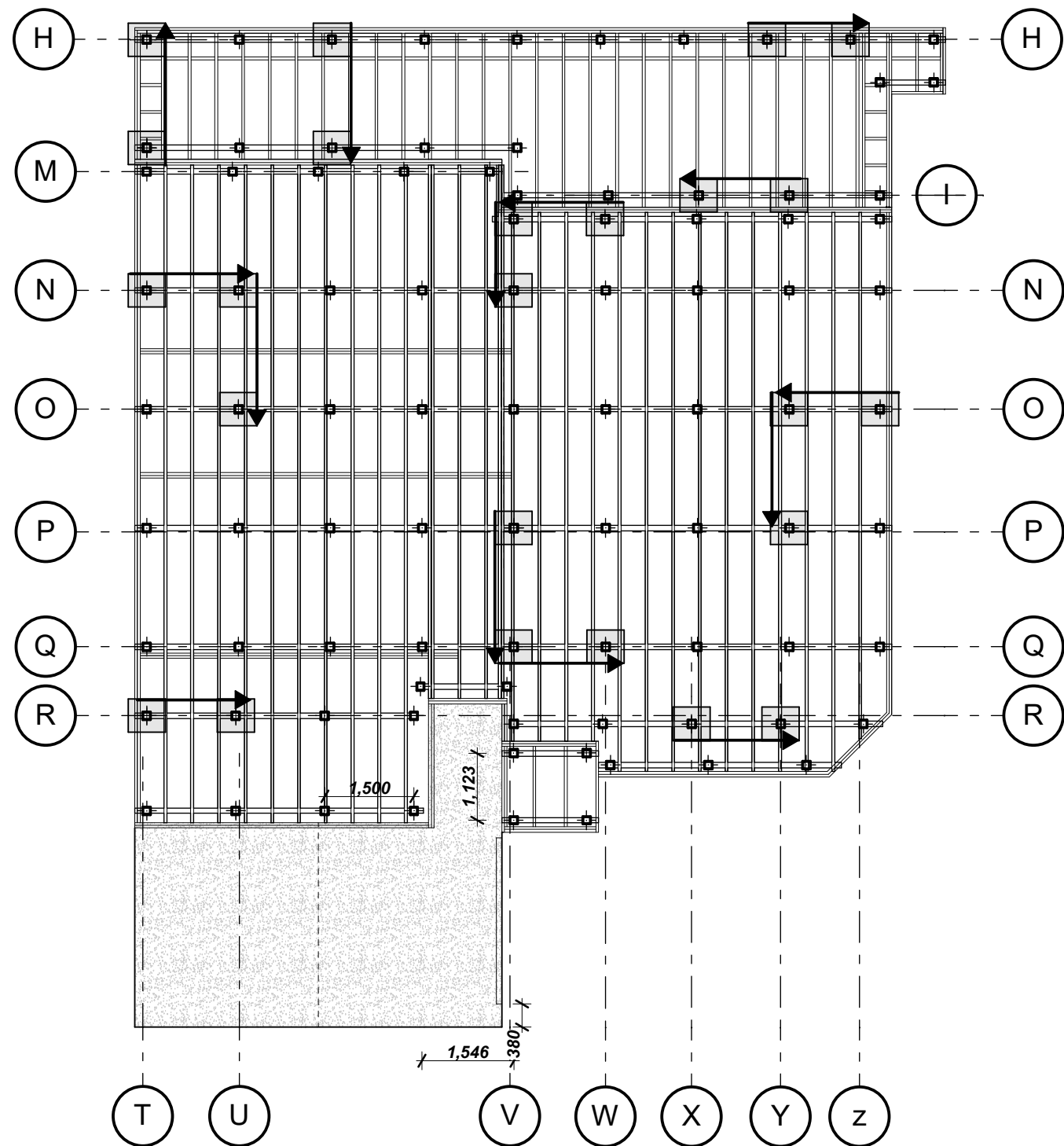
Ensure a crawl space of 450 from ground to underside of joists.

Ordinary Piles

Braced Piles

Arrow directs brace angle to the top

All built up members for bearers, stringers & alike are to be nailed in accordance with NZS3604:2011 2.4.4.7



GIB EzyBrace® Bracing Software



Subfloor Level Along Resistance Sheet

Job Name: Barry Raynes

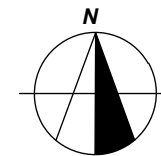
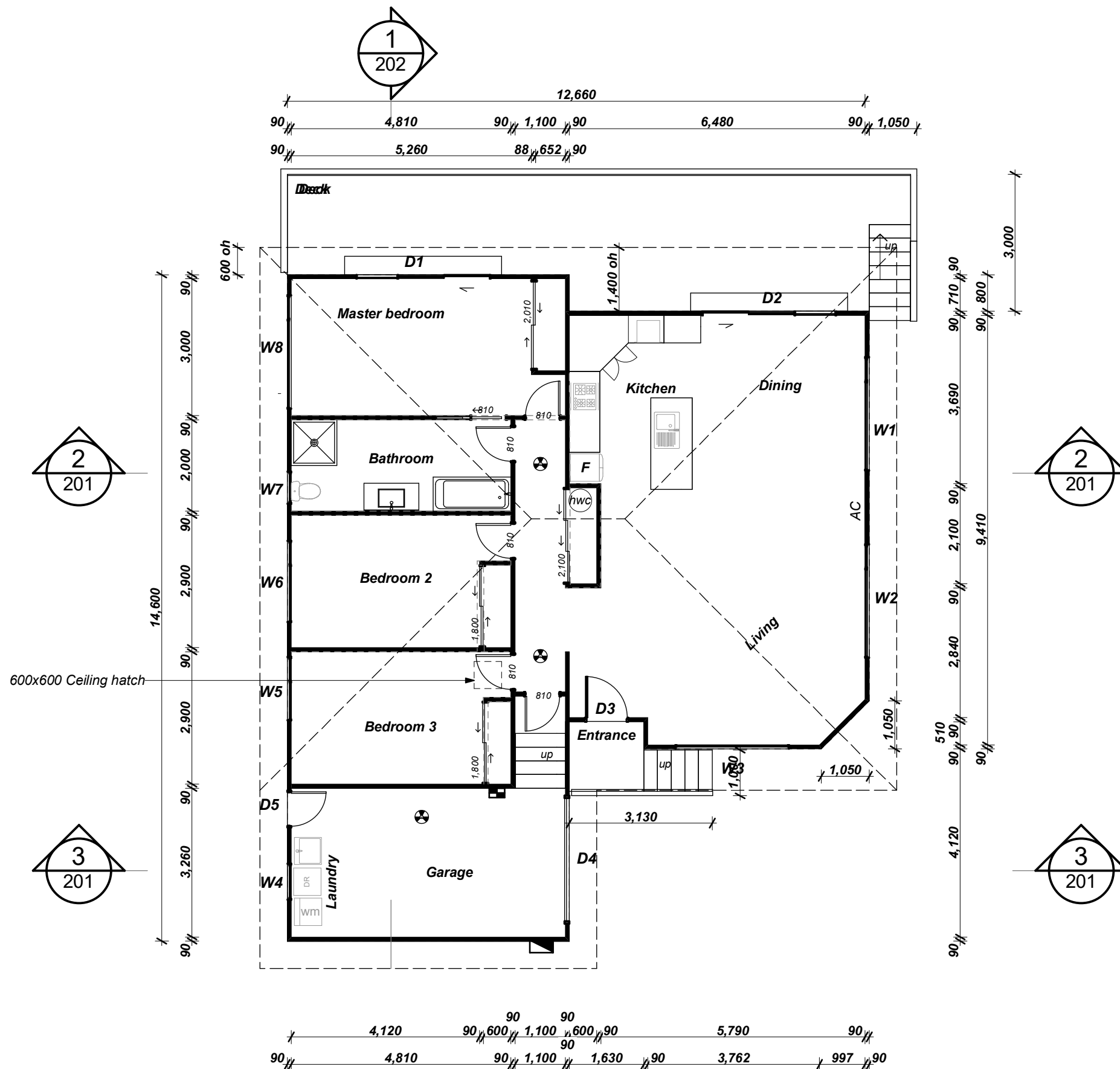
									Wind	EQ
									Demand	
									1246	1549
									Achieved	
									2560	1920
									205%	124%
Line	Element	Length or No.	Angle (degrees)		Type	Supplier	Wind (BUs)	EQ (BUs)		
M	1	2.00			Braced Piles	NZS3604	320	240		
									320 OK	240 OK
N	1	3.00			Braced Piles	NZS3604	480	360		
									480 OK	360 OK
O	1	3.00			Braced Piles	NZS3604	480	360		
									480 OK	360 OK
P	1	2.00			Braced Piles	NZS3604	320	240		
									320 OK	240 OK
Q	1	2.00			Braced Piles	NZS3604	320	240		
									320 OK	240 OK
R	1	4.00			Braced Piles	NZS3604	640	480		
									640 OK	480 OK

Subfloor Level Across Resistance Sheet

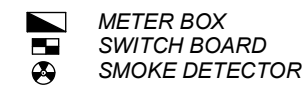
Job Name: Barry Raynes

									Wind	EQ
									Demand	
									1005	1549
									Achieved	
									2720	2040
									271%	132%
Line	Element	Length or No.	Angle (degrees)		Type	Supplier	Wind (BUs)	EQ (BUs)		
T	1	2.00			Braced Piles	NZS3604	320	240		
									320 OK	240 OK
U	1	4.00			Braced Piles	NZS3604	640	480		
									640 OK	480 OK
V	4	4.00			Braced Piles	NZS3604	640	480		
									640 OK	480 OK
W	1	2.00			Braced Piles	NZS3604	320	240		
									320 OK	240 OK
X	1	1.00			Braced Piles	NZS3604	160	120		
									160 OK	120 OK
Y	1	3.00			Braced Piles	NZS3604	480	360		
									480 OK	360 OK
Z	1	1.00			Braced Piles	NZS3604	160	120		
									160 OK	120 OK

Please note that these bracing calcs are for the dwelling only (excludes deck)



**FLOOR AREA
OVER FOUNDATION:** 151.7m²



NOTES:

*Ensure Type 1 smoke detectors to be installed within 3m of all bedroom doors

*Provide terrace/deck to all external doors. 150mm min step (maximum 180mm down from ffl) and a 280mm minimum tread depth. slip resistance to comply with "d1/as1 2.1 table 2" (broom finish concrete)

*Antislip floor covering on all access routes and wet areas (both internal and external) to comply with NZBC D1/AS1 table 2. (accept surface areas inside areas entries as dry areas)

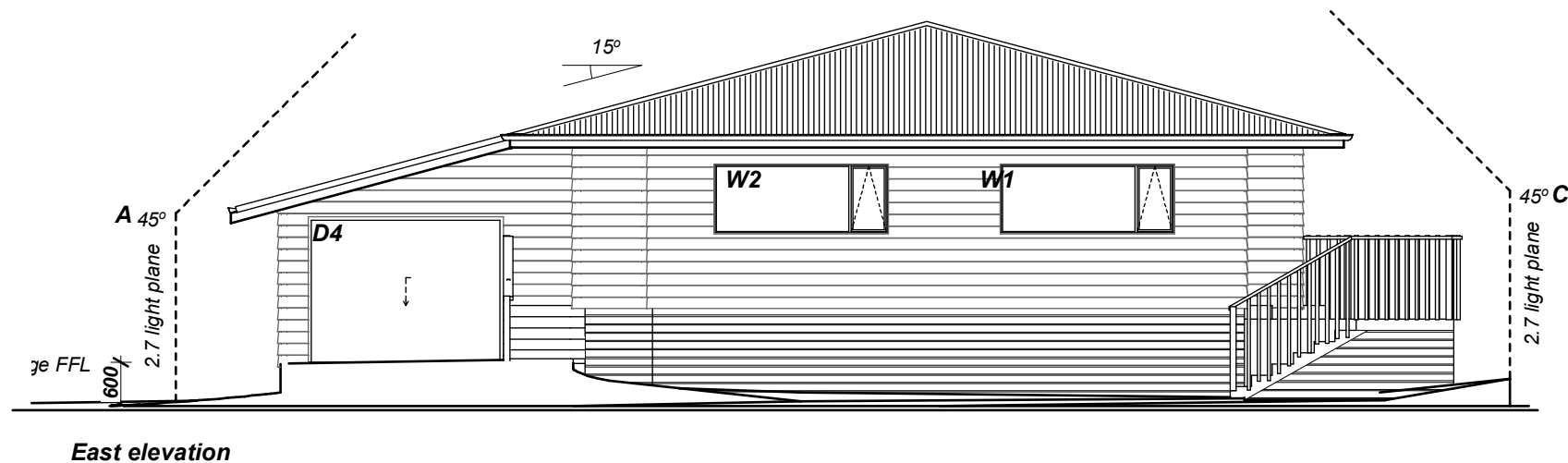
*Provide mechanical ventilation from the bathrooms, Laundry and over stove to the exterior.

Door and window jamb size .

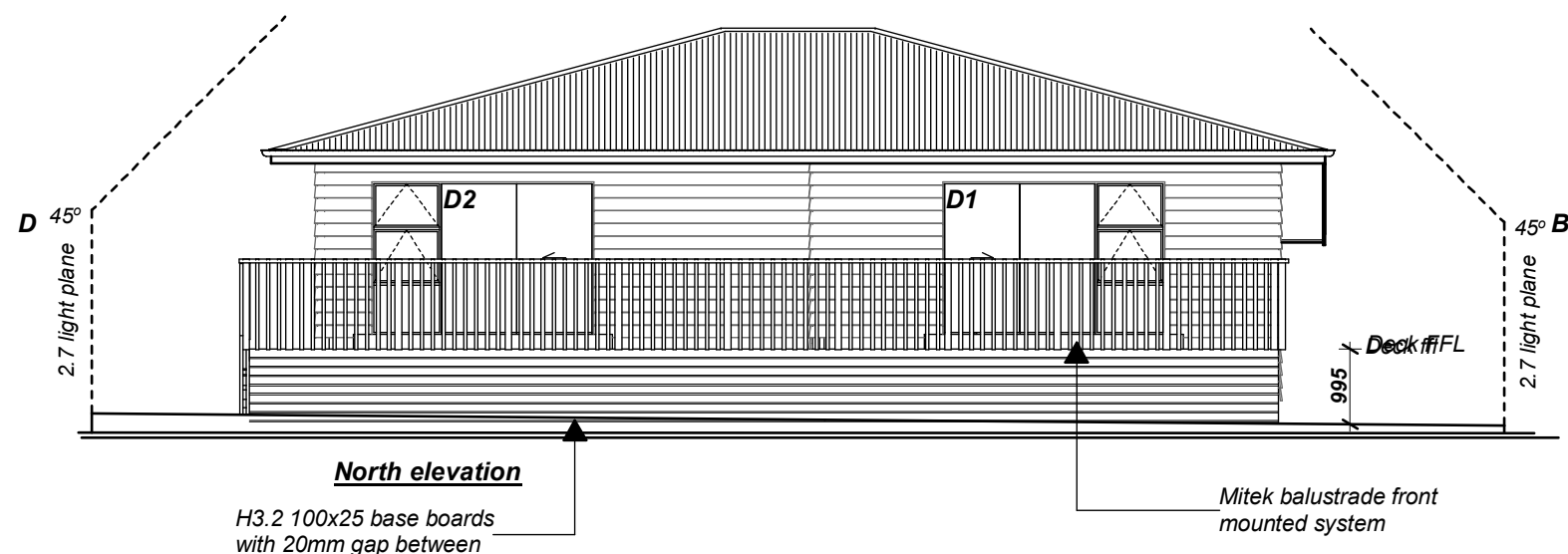
Lintels are all SG8
Build up 2/45mm members to = 90mm thickness.

Doors	width x height	Lintel	Fixing
D1	2950x2025	2/240x45	H
D2	2950x2025	2/240x45	H
D3	950x2025	2/90x45	F
D4	2800x2100	2/240x45	G
D5	810x2100	2/90x45	F

W1	2500x1000	2/240x45	G
W2	2500x1000	2/240x45	G
W3	2500x1200	2/240x45	G
W4	800x1000	2/90x45	F
W5	1400x1000	2/140x45	E
W6	1800x1000	2/190x45	G
W7	800x1000	2/90x45	F
W8	2500x1000	2/240x45	H



East elevation



North elevation

External Moisture Risk Matrix.

A . Windzone	1 high
B. number of storeys	0 Low
C. Roof / wall intersection Design	0 Low
D.Eaves Width	1 Medium
E.Envelope Complexity	1 medium
F. Deck Design	0 low

Total risk score **3 Low risk**

Claddings ok over cavity

Ground Levels:

All outside ground levels are to be a minimum of 150mm below finished floor level to paved ground or 225mm to unpaved ground.

H1 Areas

East, West, South Elevations

Total wall areas, North ,East, South, West	111.57m ²
Total glazing areas:	28.3m ²
Percent of glazing:	21.57%

(Excluding garage)

Dwelling complies with NZBC H1/AS1 schedule method. Table 1 Climate zone 2

Roof: insulation	180mm R3.6 Fibreglass
Walls: insulation	90mm R2.6 Fibreglass
Underfloor: insulation	100mm R1.8 Polystyrene
Glazing:	R0.26 Insulating glass units

Building materials

Building paper

Roof underlay
Thermakraft =covertex 403 plus
Walls
Thermakraft 403 plus
flexible flashing tapes
Thermakraft
Aluband.

Cladding

BGC Nuline weatherboard over drained cavity

Roof

Colorsteel corrugated roofing iron
& Colorsteel flashings.

Soffits

4.5 mm hardies soffit linings
with pvc jointers ,
H3 130x20 mm Timber fascia

Guttering

74mm colorsteel downpipes as per plan
clips @ 1200crs

roofing industries classic spouting
Colorsteel
with internal clips @ 600crs

Window / door joinery

new joinery
powder coated aluminium ,
double glazed

All new joinery to be double glazed
aluminium.

Use H3 pre primed jamb liners.

To comply with nzs 4223.1 ,
4223.2,4223.3 ,4223.4

To have Saftey glazing within glass
800mm from finished floor
levels and appropriate markings on glass (check on delivery).

Ensure guidance of window joiner for best use and design of joinery .

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Job Title

**Proposed new home for Barry Raynes
60b Pohutu Street, Whakatane.**

Design	Steven Bilyard
Drawn	Geoff Bilyard
Checked	
Revision Date	
Plot Date	21/07/2020

Drawing Title

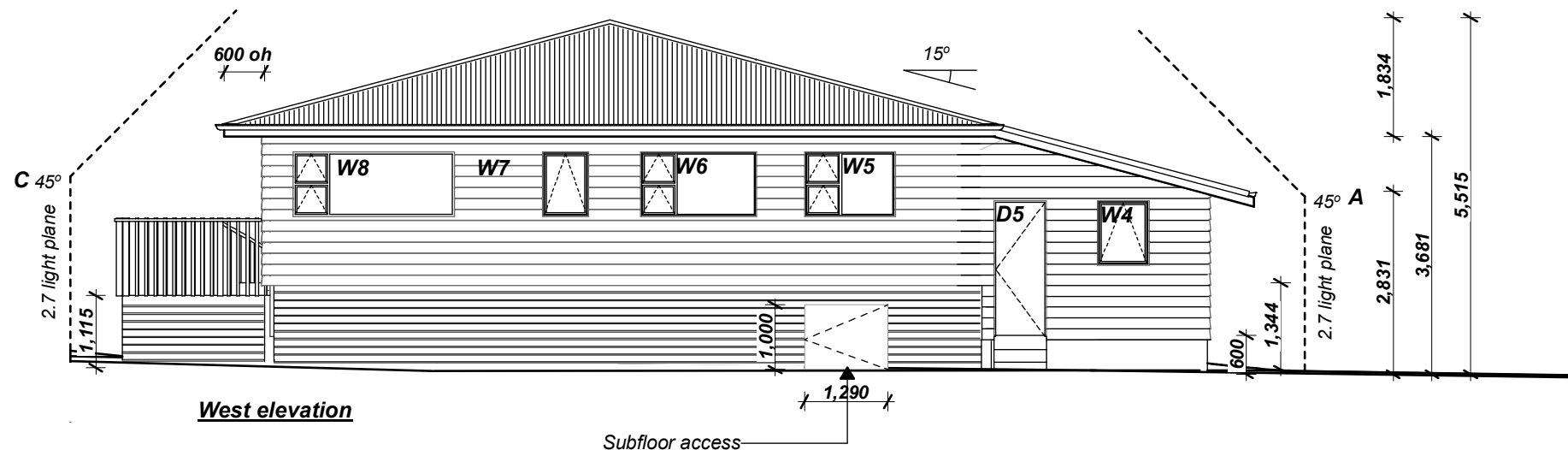
Elevations

Scale

1:100

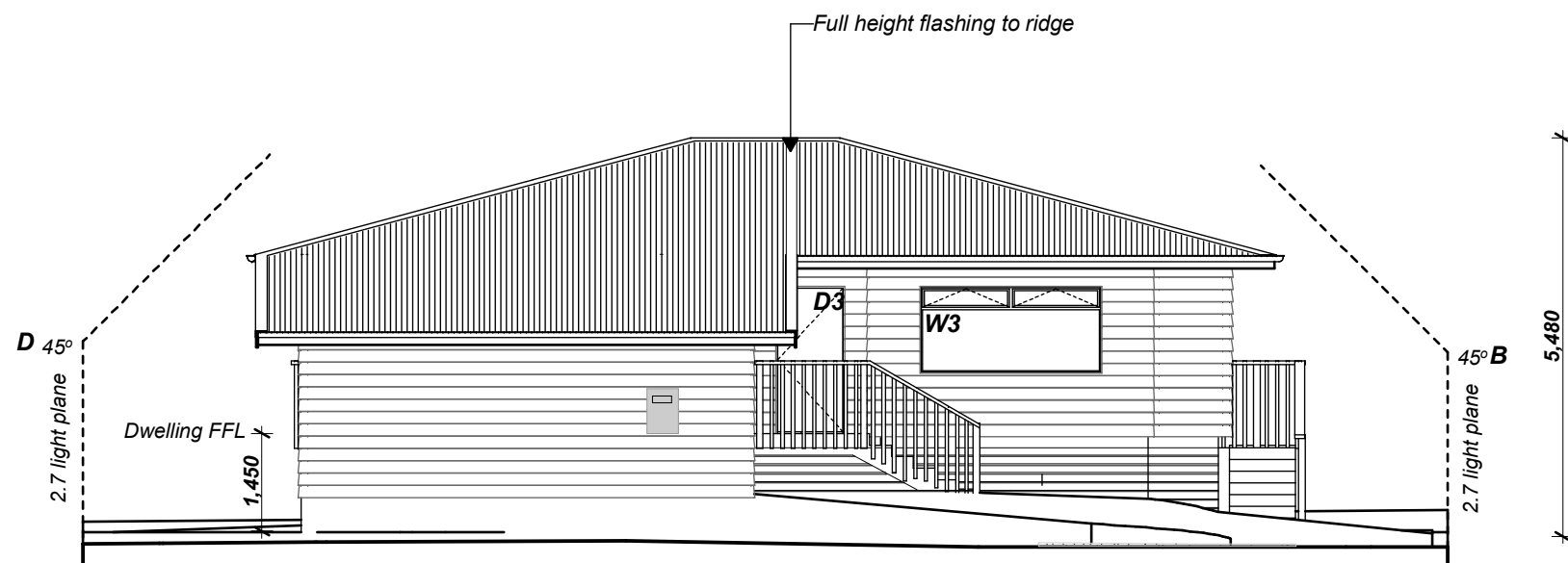
Drawing Number

105



West elevation

Subfloor access



South elevation

External Moisture Risk Matrix.

A . Windzone	1 high
B. number of storeys	0 Low
C. Roof / wall intersection Design	0 Low
D.Eaves Width	1 Medium
E.Envelope Complexity	1 medium
F. Deck Design	0 low

Total risk score 3 Low risk

Claddings ok over cavity

Ground Levels:

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Walls: 90mm R2.6 Fibreglass insulation

Underfloor: 100mm R1.8 Polystyrene insulation

Glazing: R0.26 Insulating glass units

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Building paper

Roof underlay
Thermakraft =covertex 403 plus
Walls
Thermakraft 403 plus
flexible flashing tapes
Thermakraft
Aluband.

Cladding

BGC Nuline weatherboards on drained cavity

Roof

Colorsteel corrugated roofing iron
& Colorsteel flashings.

Soffits

4.5 mm hardies soffit linings
with pvc jointers ,
H3 130x20 mm Timber fascia

Guttering

74mm Colorsteel downpipes as per plan
clips @ 1200crs

roofing industries J line spouting
Coloursteel
with internal clips @ 600crs

Window / door joinery

new joinery
powder coated aluminium ,
double glazed

All new joinery to be double glazed
aluminium.

Use H3 pre primed jamb liners.

To comply with nzs 4223.1 ,

4223.2,4223.3 ,4223.4

To have Saftey glazing within glass
800mm from finished floor
levels and appropriate markings on glass (check on delivery).

Ensure guidance of window joiner for best use and design of joinery .

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60b Pohutu Street, Whakatane.**

Design	Steven Bilyard
Drawn	Geoff Bilyard
Checked	
Revision Date	
Plot Date	21/07/2020

Drawing Title

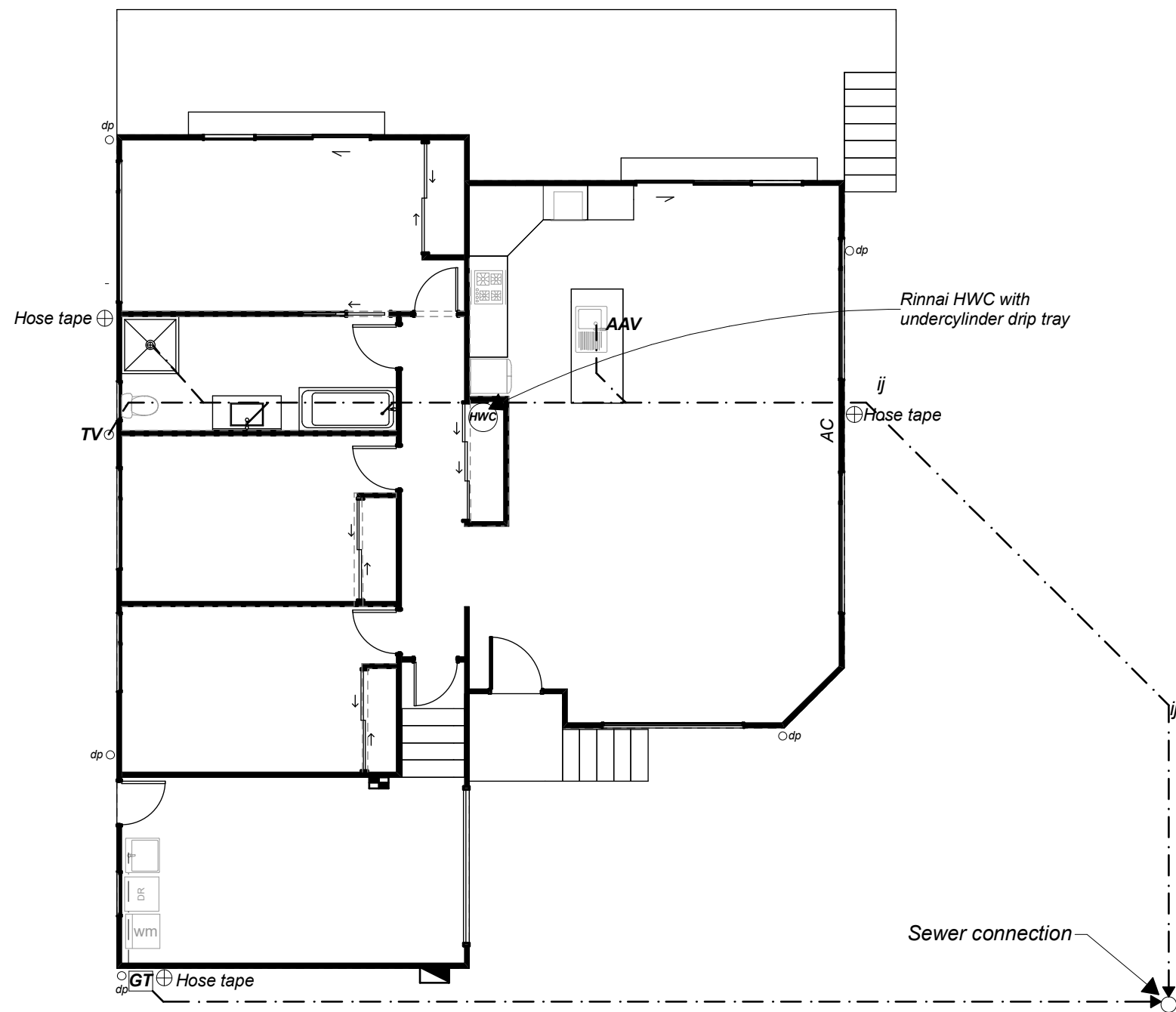
Elevations

Scale

1:100

Drawing Number

106



**plumbing & drainage to comply
with AS/NZS 3500.1 cold water
supply
AS/NZS 3500.2 Foul water**

plumbing size & min gradient

wc	= 100 dia @ :120
bath	=50 dia @ 1:40
vanity/basin	=50 dia @ 1:20
shower	=50 dia @ 1:20
sink	=50 dia @ 1:20
tub	=50 dia @ 1:20
FWG	=65 dia @ 1:20
branch drain	=100 dia @ 1:60
foulwater drain	=100 dia @ 1:60
stormwater drain	=100 dia @ 1:60

- rodding points @ head of drain & every 50m of drain, inspection points @ every junction & change of direction greater than 45° (or as shown rp & ip)
- all underslab branch drains to be 100mm min other plumbing underslab to be 65 dia
- all vent pipes to be run in wall spaces and through roofing
- overflow relief gully to be 150mm min between overflow level of the gully and the lowest fixture measured to :
top grate in FWG or shower or top of water seal in soil fixtures (if 150mm cannot be achieved a reflux valve must be fitted to protect those fixtures within this distance)

all pipes in concrete to have denso tape (synthetic fabric based impregnated and coated with organic petroleum based compounds) applied

Pipes shall incorporate expansion joints in accordance with chapter 8 of NZS7643

Mains Pressure : 15mm dia allows 12m max pipe length beyond 12m pipe must be lagged

55° tempering to be provided to all sanitary fixtures

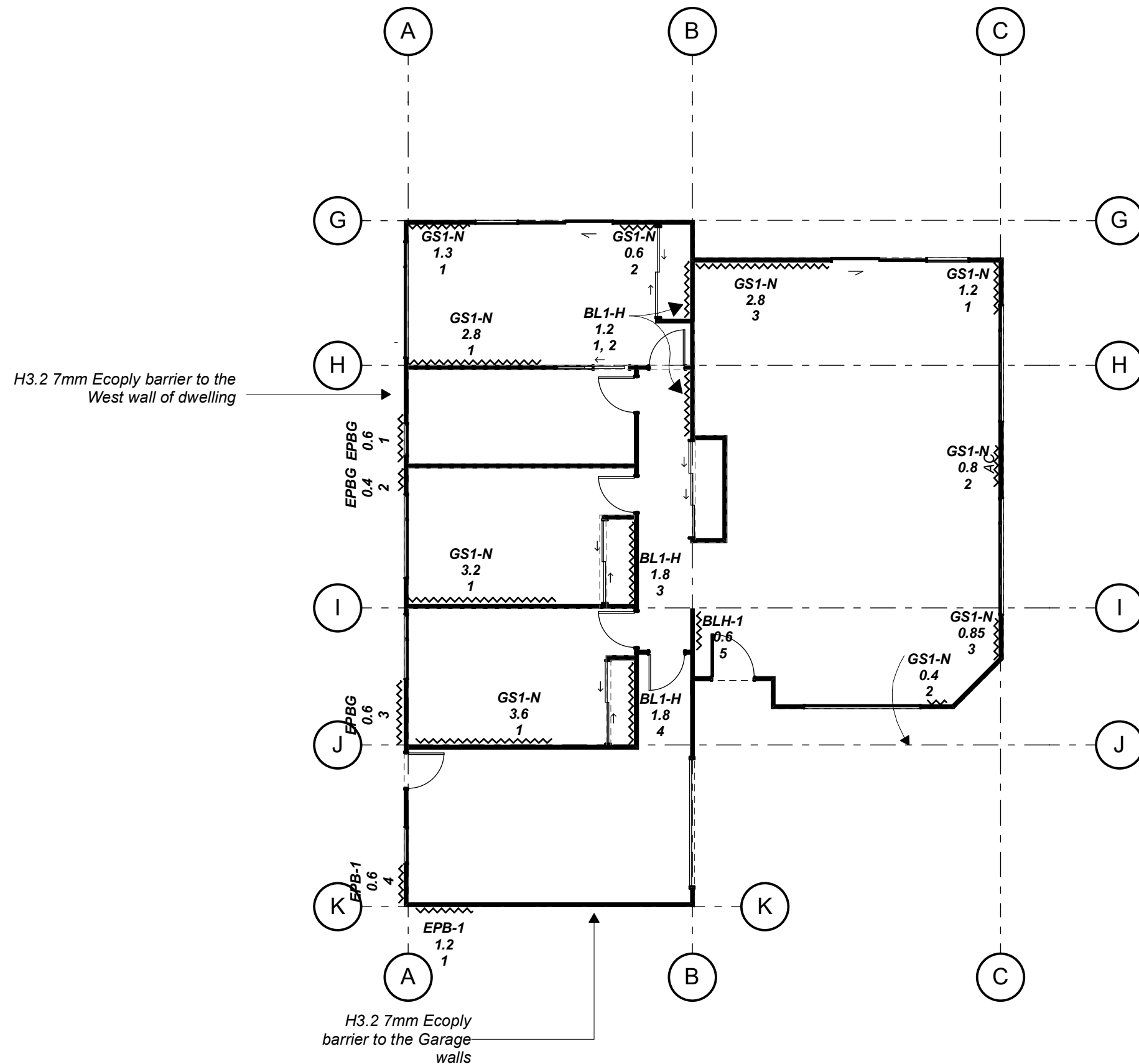
Street connection water supply

Key

R/P	rodding point
I/j	Inspection junction
dp	down pipe
G/T	gully trap

Foul Drains — — — — —

Storm water drains — — — — —



Bracing example =

GS1-N
1.2
1

Brace type
brace length
brace number

Brace area
~~~~~

Brace type

GS1-N = Gib standard on one side  
BL1-H = Gib Braceline one side  
EPB-1 = Ecoply barrier on one side  
EPBG = Ecoply barrier one side  
GIB standard on the other



Demand Calculation Sheet

Job Details

Name: Barry Raynes  
Street and Number: 60B Pohutu St  
Lot and DP Number:  
City/Town/District: Whakatane  
Designer: Geoff Bilyard  
Company: The Draughtsman LTD  
Date: 7/02/2020

Building Specification

Number of Storeys 1  
Floor Loading 2 kPa  
Foundation Type Subfloor  
Subfloor Cladding Weight Light  
  
**Single**  
Cladding Weight Light  
Roof Weight Light  
Room in Roof Space No  
Roof Pitch (degrees) 15  
Roof Height above Eaves (m) 1.8  
Building Height to Apex (m) 5.4  
Ground to Lower Floor (m) 1.35  
  
Average Stud Height (m) 2.45  
Building Length (m) 12.6  
Building Width (m) 14.6  
Building Plan Area (m²) 151.70

Building Location

Wind Zone = High  
Earthquake Zone 2  
Soil Type D & E (Deep to Very Soft)  
Annual Prob. of Exceedance: 1 in 500 ( Default)

Bracing Units required for Wind

|                | Along | Across |
|----------------|-------|--------|
| Single Level   | 660   | 499    |
| Subfloor Level | 1246  | 1005   |

Bracing Units required for Earthquake

|                | Along & Across |
|----------------|----------------|
| Single Level   | 994            |
| Subfloor Level | 1549           |

GIB EzyBrace® Version 12/18



Single Level Across Resistance Sheet

Job Name: Barry Raynes

Timber Floor Limit of 120 BUS/m Applied

|      |         |               |                    |                 |              |          |               |             | Wind         | EQ           |
|------|---------|---------------|--------------------|-----------------|--------------|----------|---------------|-------------|--------------|--------------|
|      |         |               |                    |                 |              |          |               |             | Demand       |              |
|      |         |               |                    |                 |              |          |               |             | 499          | 994          |
|      |         |               |                    |                 |              |          |               |             | Achieved     |              |
|      |         |               |                    |                 |              |          |               |             | 1167<br>234% | 1070<br>108% |
| Line | Element | Length<br>(m) | Angle<br>(degrees) | Stud Ht.<br>(m) | Type         | Supplier | Wind<br>(BUs) | EQ<br>(BUs) |              |              |
| A    | 1       | 0.60          |                    | 2.45            | EPBG 2.4 0.6 | CHH      | 71            | 71          |              |              |
|      | 2       | 0.40          |                    | 2.45            | EPBG 2.4 0.4 | CHH      | 39            | 45          |              |              |
|      | 3       | 0.60          |                    | 2.45            | EPBG 2.4 0.6 | CHH      | 71            | 71          |              |              |
|      | 4       | 0.60          |                    | 2.45            | EPB1 3.1 0.6 | CHH      | 43            | 48          |              |              |
|      |         |               |                    |                 |              |          |               |             | 223 OK       | 234 OK       |
| B    | 1       | 1.20          |                    | 2.45            | BL1-H        | GIB®     | 141           | 122         |              |              |
|      | 2       | 1.20          |                    | 2.45            | BL1-H        | GIB®     | 141           | 122         |              |              |
|      | 3       | 1.80          |                    | 2.45            | BL1-H        | GIB®     | 212           | 183         |              |              |
|      | 4       | 1.80          |                    | 2.45            | BL1-H        | GIB®     | 212           | 183         |              |              |
|      | 5       | 0.60          |                    | 2.45            | BL1-H        | GIB®     | 58            | 59          |              |              |
|      |         |               |                    |                 |              |          |               |             | 763 OK       | 671 OK       |
| C    | 1       | 1.20          |                    | 2.45            | GS1-N        | GIB®     | 81            | 71          |              |              |
|      | 2       | 0.80          |                    | 2.45            | GS1-N        | GIB®     | 48            | 46          |              |              |
|      | 3       | 0.85          |                    | 2.45            | GS1-N        | GIB®     | 52            | 49          |              |              |
|      |         |               |                    |                 |              |          |               |             | 181 OK       | 166 OK       |



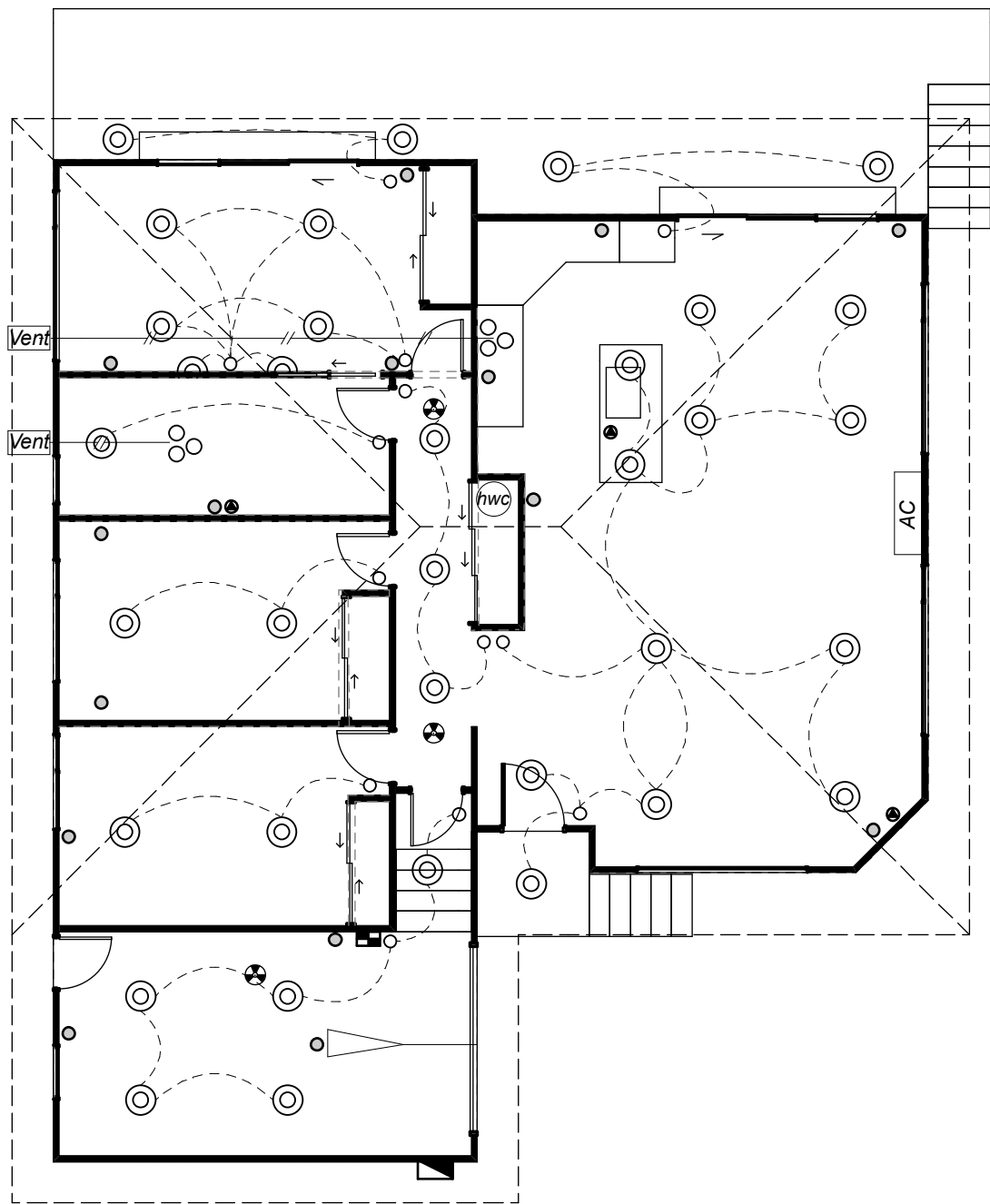
Single Level Along Resistance Sheet

Job Name: Barry Raynes

Timber Floor Limit of 120 BUS/m Applied

|      |         |               |                    |                 |              |          |               |             | Wind         | EQ           |
|------|---------|---------------|--------------------|-----------------|--------------|----------|---------------|-------------|--------------|--------------|
|      |         |               |                    |                 |              |          |               |             | Demand       |              |
|      |         |               |                    |                 |              |          |               |             | 660          | 994          |
|      |         |               |                    |                 |              |          |               |             | Achieved     |              |
|      |         |               |                    |                 |              |          |               |             | 1088<br>165% | 1003<br>101% |
| Line | Element | Length<br>(m) | Angle<br>(degrees) | Stud Ht.<br>(m) | Type         | Supplier | Wind<br>(BUs) | EQ<br>(BUs) |              |              |
| G    | 1       | 1.30          |                    | 2.45            | GS1-N        | GIB®     | 88            | 76          |              |              |
|      | 2       | 0.60          |                    | 2.45            | GS1-N        | GIB®     | 34            | 34          |              |              |
|      | 3       | 2.80          |                    | 2.45            | GS1-N        | GIB®     | 189           | 165         |              |              |
|      |         |               |                    |                 |              |          |               |             | 311 OK       | 275 OK       |
| H    | 1       | 2.80          |                    | 2.45            | GS1-N        | GIB®     | 189           | 165         |              |              |
|      |         |               |                    |                 |              |          |               |             | 189 OK       | 165 OK       |
| I    | 1       | 3.20          |                    | 2.45            | GS1-N        | GIB®     | 216           | 188         |              |              |
|      |         |               |                    |                 |              |          |               |             | 216 OK       | 188 OK       |
| J    | 1       | 3.60          |                    | 2.45            | GS1-N        | GIB®     | 243           | 212         |              |              |
|      | 2       | 0.40          |                    | 2.45            | GS1-N        | GIB®     | 21            | 23          |              |              |
|      |         |               |                    |                 |              |          |               |             | 264 OK       | 234 OK       |
| K    | 1       | 1.20          |                    | 2.45            | EPB1 3.1 1.2 | CHH      | 108           | 141         |              |              |
|      |         |               |                    |                 |              |          |               |             | 108 OK       | 141 OK       |



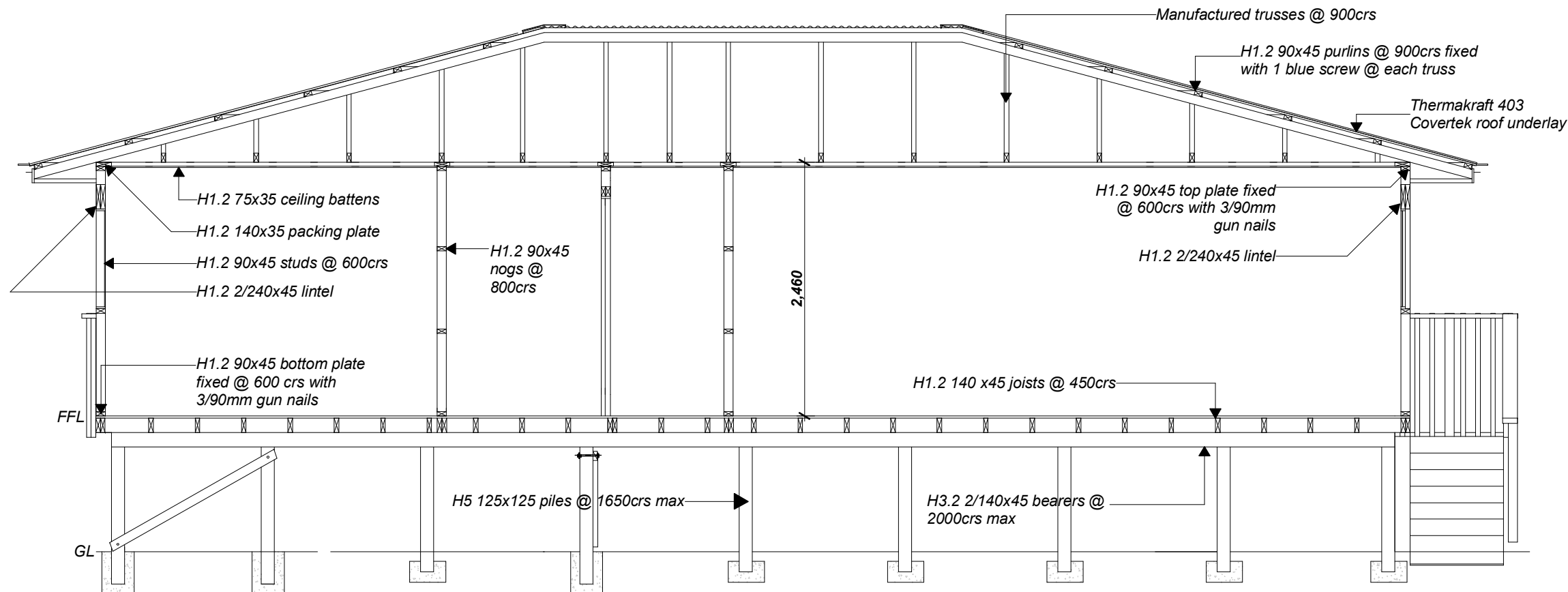


**Electrical Legend**

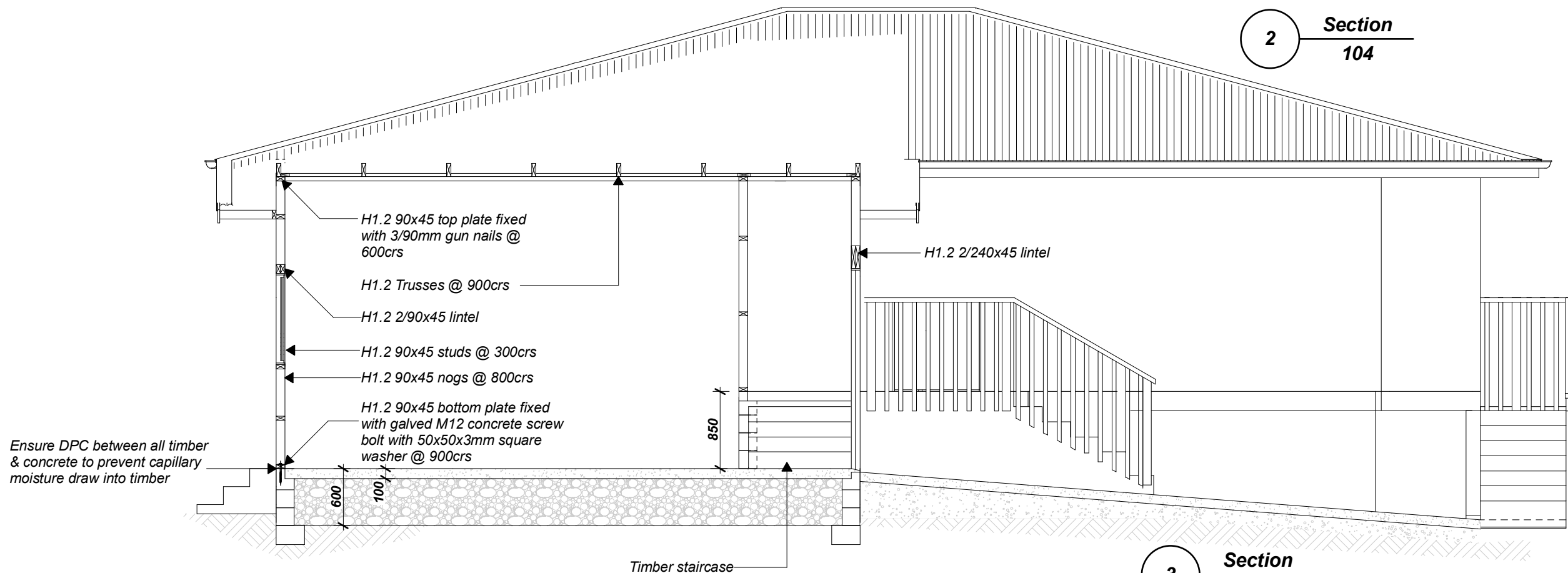
- ● Power Point/Double plug
- ⊙ Down Light
- ⌋ Light wall mount
- Light Auto on
- Light Switch
- ☼ Smoke Detector
- ⬜ Distribution Board
- ⬛ Meter Board
- ⊗ Extractor fan light
- ▴ Motor Garage Door
- Vent Vent through Soffit
- AC Air Conditioning

*\*All down lights inside insulation envelope to be CA rated. Ensure light selection with safety feature to provide no radial clearance in the insulation.*

**Ensure electrician guidance on site for best use and positioning of Fittings.**



2 Section  
104



3 Section  
104

#### Framing construction

##### Dwelling

##### Foundation

Piles H5 125x125 piles @ 1650mm crs max

Bearers H3.2 2/140x45

Joists H1.2 min 140x45 @ 450crs

Perimeter foundation joist.

##### Garage

20 Series block foundation

20Moa concrete

Seismic Se62 500E grade mesh

250 micron black concrete underlay

Hardfill compacted in 150mm heights

##### Walls 2.4 STUD

Bottom plate H1.2 90x45

fixed @600 mm crs with 3/90mm gun nails.

##### Top plate

Single H1.2 90x45 with H1.2 140x35 plate packer to new wall

##### Studs

Exterior walls H1.2 90x45 @600crs 2.4 stud

Garage walls with stud height 3.1m

H1.2 90x45 @ 400crs

Nogs@ 800crs

Interior walls H1.2 90x45 studs at 600crs

Nogs @ 800crs

##### Opening trimmers (on there flat)

openings up to 2.4m 90x45

upto 3.0m 90x75

##### Lintels

See proposed floor plan and truss layout plan for lintel sizes and fixings.

(Truss load point Lintels over ride architectural designed lintels)

##### Roof structure

Manufactured trusses @ 900crs See truss plan for layout and fixings.

##### Purlins

H1.2 90x45 purlins spacings @ 900crs

Fixings 1/blue screw into each truss chord.

##### Ceiling

H1.2 140x35 plate packer fixed to top plate with 3/90x3.15 nails @500crs + 75x35 ceiling batten @ 450crs fixed with 2/75x3.06 nails @ truss

##### Durability

Construction materials to comply with Performance clause B2.3.2 Durability

Elements difficult to get to must have an intended life of 50 years  
Elements which can receive normal maintenance may last the lessor of the intended building life or for 15 years.

External claddings must under go regular washing & maintenance according to manufacturer's documentation.

#### Notes

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All dimensions are in millimetres unless otherwise stated  
All construction to comply with NZBC/NZ 3604 : 2011, along side current standards alike.  
All built up members mentioned for bearers, lintels, stringers and alike are to be nailed in accordance with NZS 3604 2.4.4.7  
All timber to be SG8 unless specified otherwise.

**ALL DIMENSIONS TO BE VERIFIED ON SITE DO NOT SCALE**

**OFF PLANS.**

#### Job Title

**Proposed new home for Barry Raynes  
60b Pohutu Street, Whakatane.**

|               |                |
|---------------|----------------|
| Design        | Steven Bilyard |
| Drawn         | Geoff Bilyard  |
| Checked       |                |
| Revision Date |                |
| Plot Date     | 21/07/2020     |

#### Drawing Title

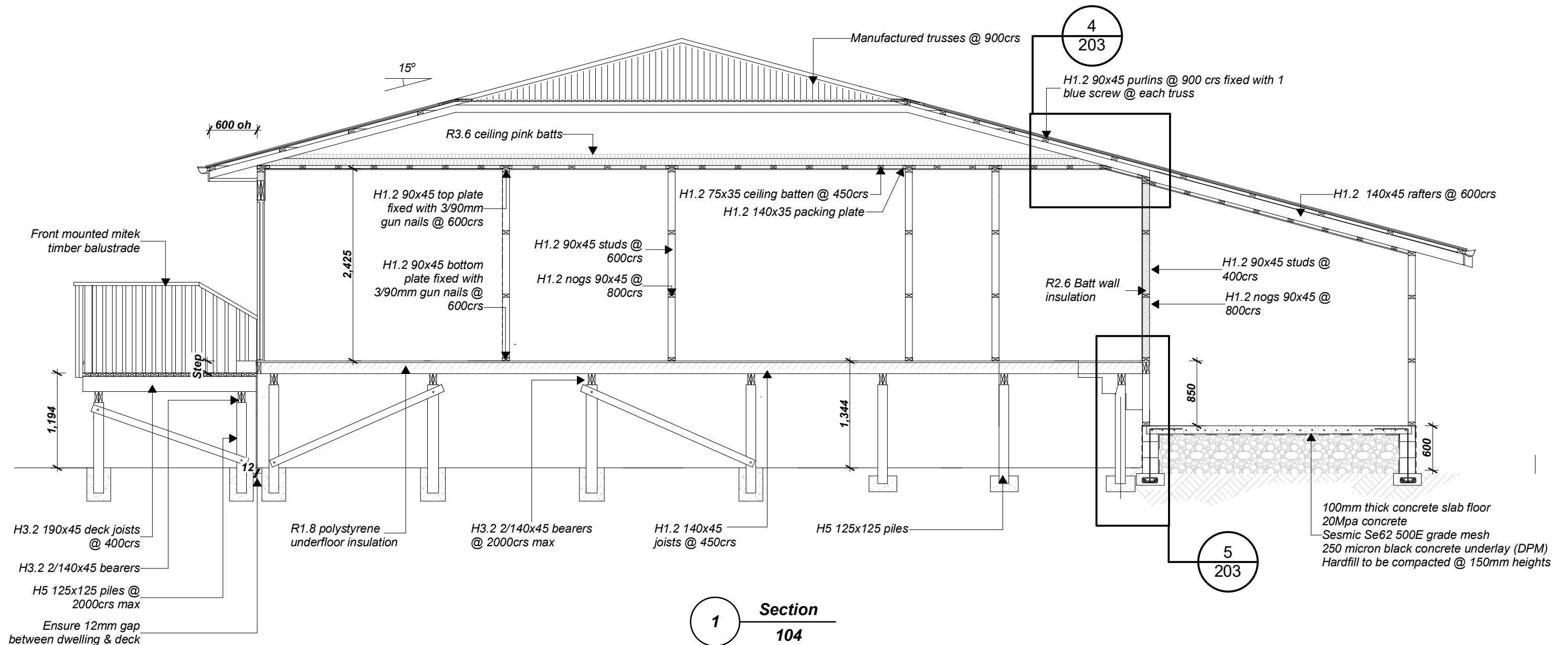
**Cross Sections**

#### Scale

**1:50**

#### Drawing Number

**201**



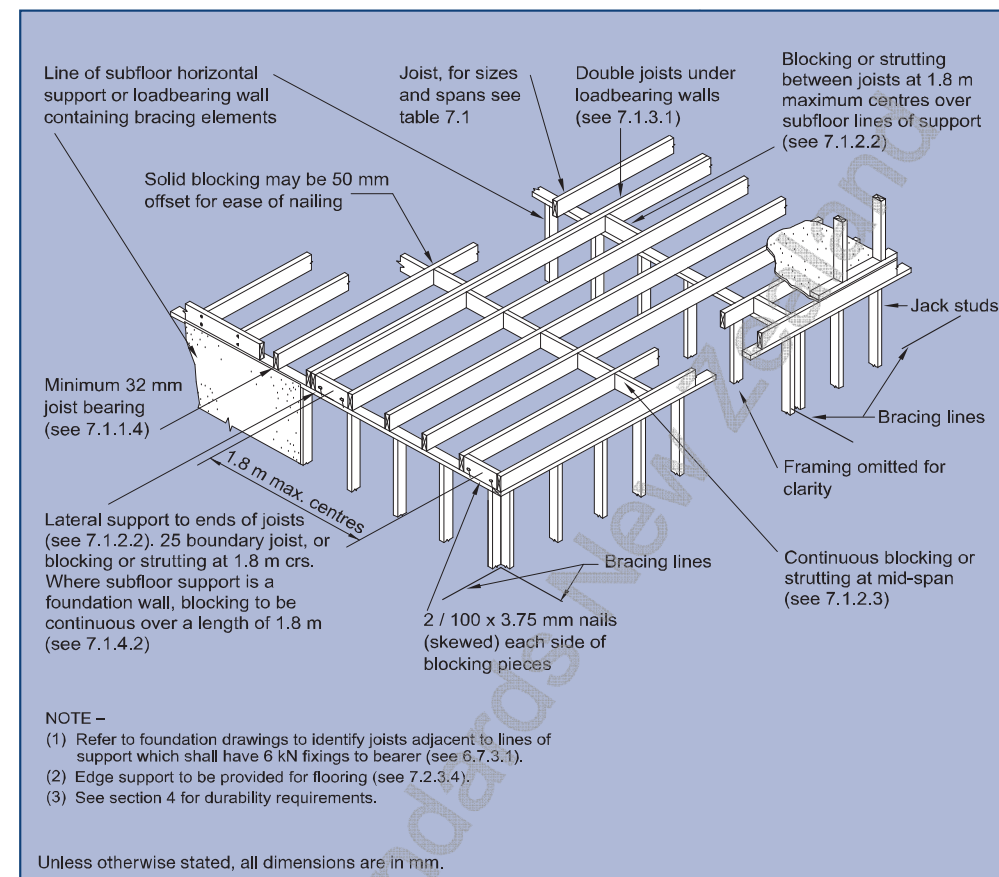
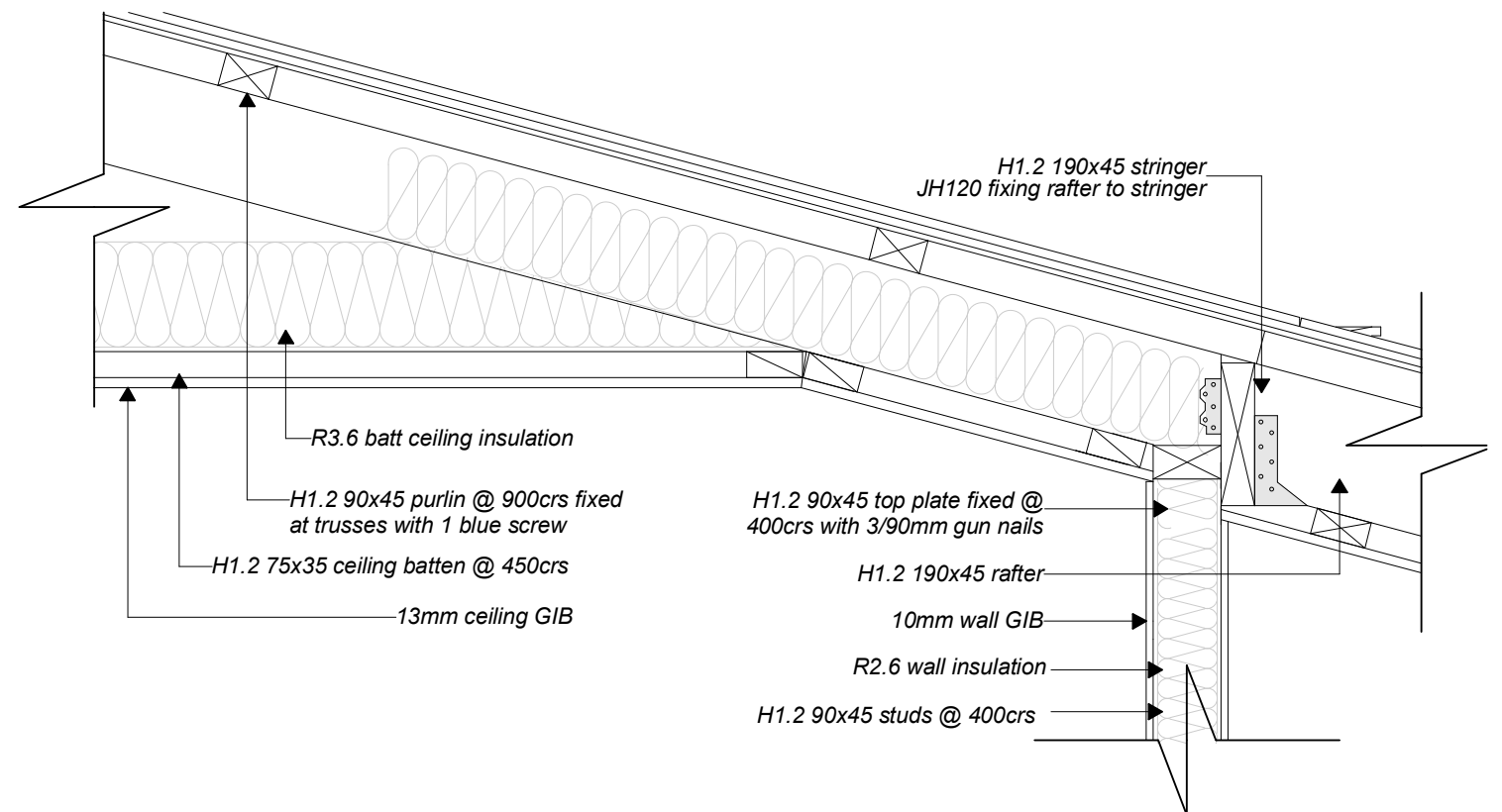
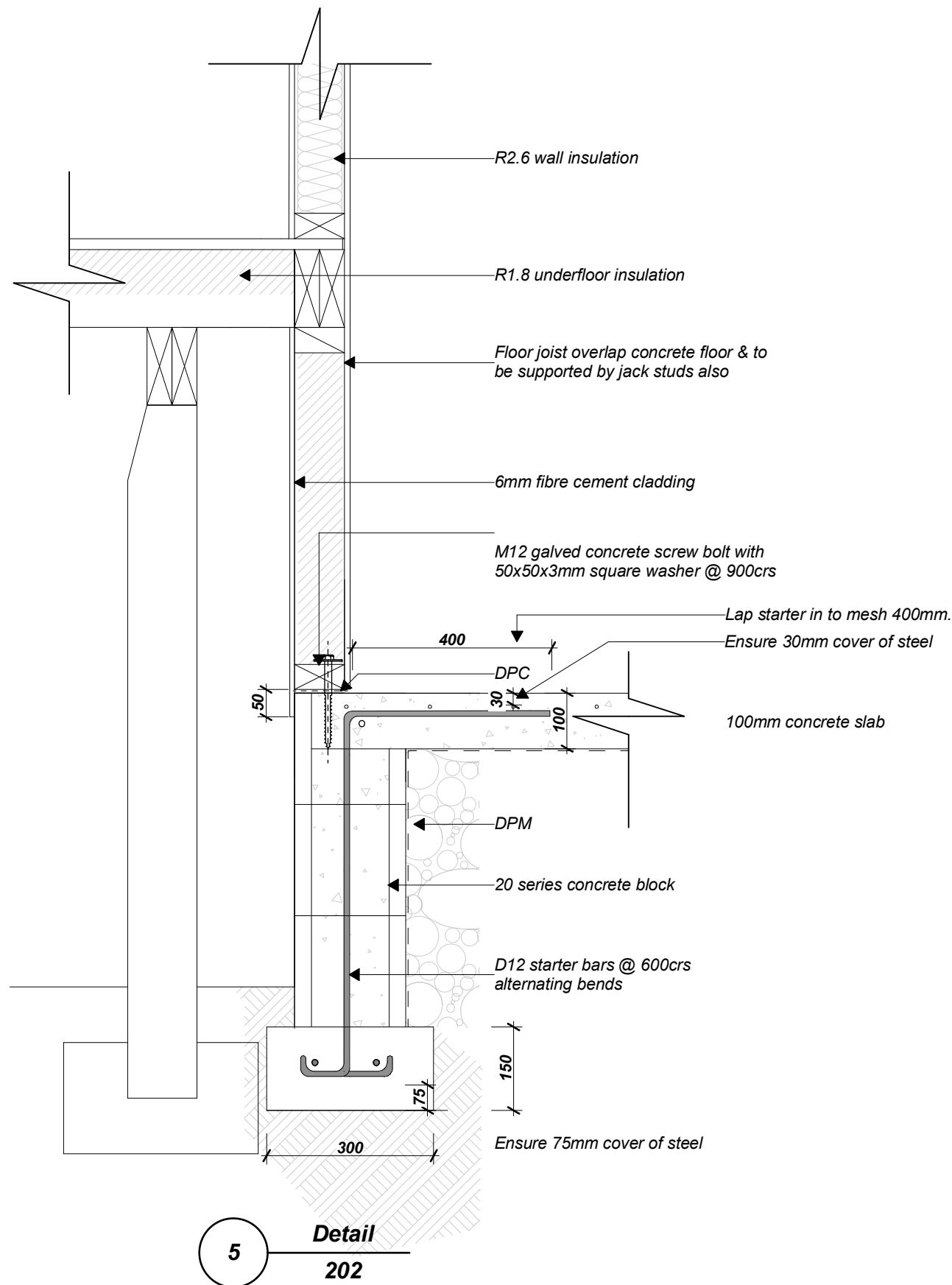
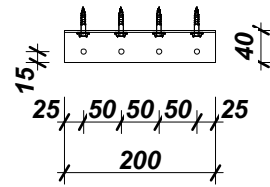
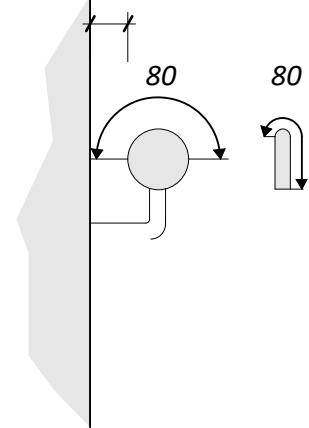


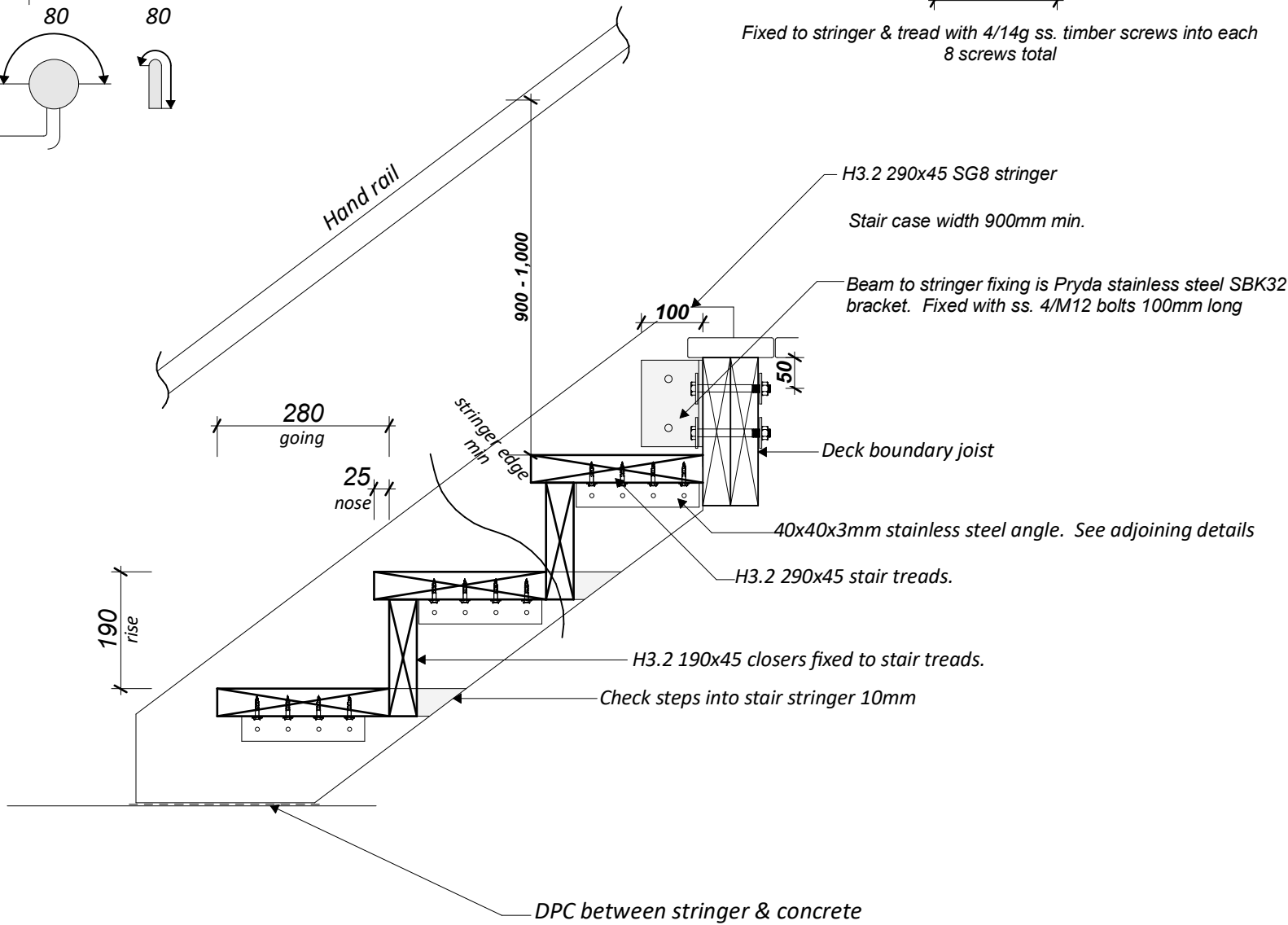
Figure 7.2 - Floor joists layout criteria (see 7.1.2.2)

A graspable handrail must not exceed 80mm around the upper surface perimeter.

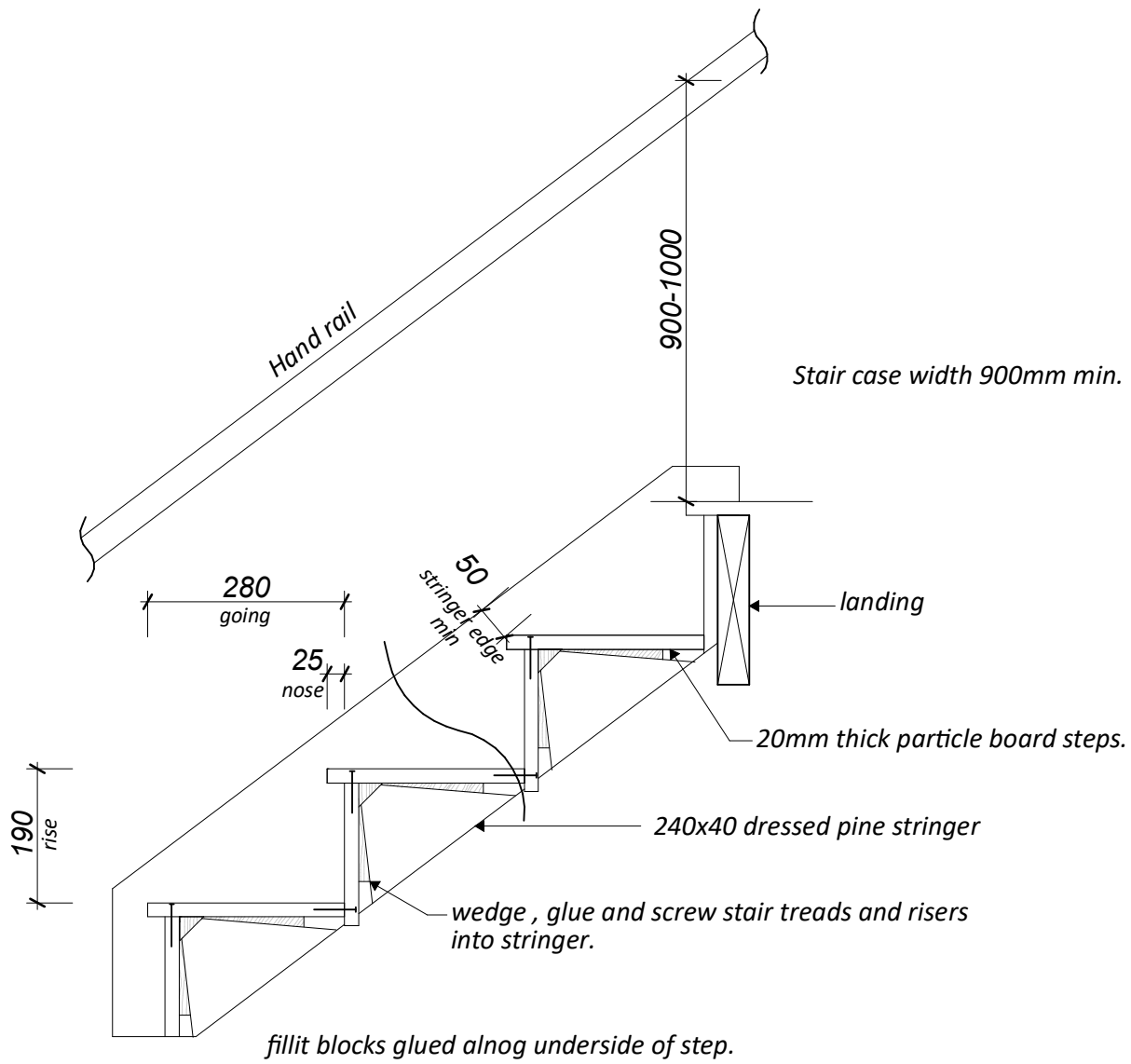
50 min from wall



Fixed to stringer & tread with 4/14g ss. timber screws into each 8 screws total



**Main external stairway.**



**Common and main private internal stairway.**

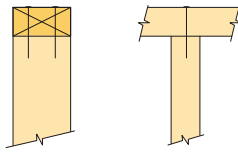
Max rise = 190mm  
Min going = 280mm  
max nosing = 25mm  
max pitch = 37°

Sizes shown are max and min indications only.

## FIXING OPTIONS

### FIXING TYPE A 0.7 kN

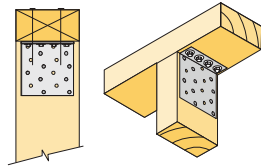
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



### FIXING TYPE B 4.7 kN

CHOOSE ANY OF THE 3 OPTIONS BELOW

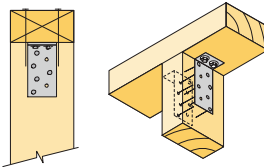
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus  
LUMBERLOK  
6kN Stud Anchor  
(CPC80)

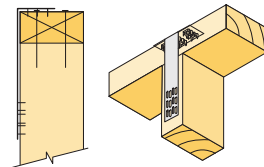
Recommended for internal wall options to avoid lining issues

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



Plus  
2 x LUMBERLOK  
CPC40

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



Plus  
LUMBERLOK  
Stud Strap  
(one face only)

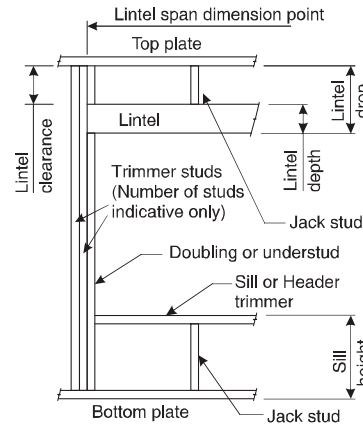
#### Note:

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.

#### NOTE:

- ★ All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20 kPa.
- ★ Refer to Table 8.19 NZS 3604:2011 for nailing schedule to resist horizontal loads.
- ★ These fixings assume the correct choice of rafter/truss to top plate connections have been made.
- ★ All fixings assume bottom plate thickness of 45mm maximum. Note: TYLOK options on timber species.
- ★ Wall framing arrangements under girder trusses are not covered in this schedule.
- ★ All timber selections are as per NZS 3604:2011.

#### DEFINITIONS



#### Lintel Supporting Girder Trusses:

| Roof Tributary Area | Light Roof |    |    | Heavy Roof |    |    |
|---------------------|------------|----|----|------------|----|----|
|                     | Wind Zone  |    |    | Wind Zone  |    |    |
|                     | L, M, H    | VH | EH | L, M, H    | VH | EH |
| 8.6 m²              | G          | G  | H  | G          | G  | H  |
| 11.6 m²             | G          | H  | H  | G          | G  | H  |
| 12.1 m²             | G          | H  | H  | G          | G  | H  |
| 15.3 m²             | H          | H  | -  | G          | H  | H  |
| 19.1 m²             | H          | -  | -  | G          | H  | -  |
| 20.9 m²             | H          | -  | -  | H          | H  | -  |
| 21.8 m²             | H          | -  | -  | H          | -  | -  |
| 34.3 m²             | -          | -  | -  | H          | -  | -  |

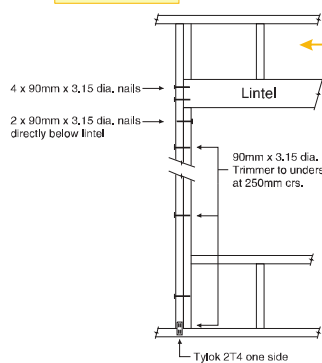
#### Notes:

- 1) Roof Tributary Area = approx. 1/2 x (Total roof area on girder and rafter trusses supported by lintel)
- 2) Assumed girder truss is at mid-span or middle third span of lintel
- 3) Use similar fixings for both ends of lintel
- 4) All other cases require specific engineering design

## SELECTION CHART FOR LINTEL FIXING

| Lintel Span | Loaded Dimension<br>(See Fig. 1.3<br>NZS 3604:2011) | Light Roof |   |   |    |    | Heavy Roof |   |   |    |    |
|-------------|-----------------------------------------------------|------------|---|---|----|----|------------|---|---|----|----|
|             |                                                     | Wind Zone  |   |   |    |    | Wind Zone  |   |   |    |    |
|             |                                                     | L          | M | H | VH | EH | L          | M | H | VH | EH |
| 0.7         | 2.0                                                 | E          | E | E | E  | F  | E          | E | E | E  | E  |
|             | 3.0                                                 | E          | E | E | E  | F  | E          | E | E | E  | F  |
|             | 4.0                                                 | E          | E | E | F  | F  | E          | E | E | F  | F  |
|             | 5.0                                                 | E          | F | F | F  | G  | E          | F | F | F  | F  |
|             | 6.0                                                 | E          | F | F | G  | G  | E          | F | F | F  | G  |
| 0.9         | 2.0                                                 | E          | E | E | F  | F  | E          | E | E | E  | F  |
|             | 3.0                                                 | E          | E | F | F  | F  | E          | E | E | F  | F  |
|             | 4.0                                                 | E          | E | F | F  | F  | E          | E | E | F  | F  |
|             | 5.0                                                 | E          | F | F | F  | G  | E          | F | F | F  | F  |
|             | 6.0                                                 | E          | F | F | G  | G  | E          | F | F | F  | G  |
| 1.0         | 2.0                                                 | E          | E | E | F  | F  | E          | E | E | E  | F  |
|             | 3.0                                                 | E          | E | F | F  | F  | E          | E | E | F  | F  |
|             | 4.0                                                 | E          | F | F | F  | G  | E          | F | F | F  | F  |
|             | 5.0                                                 | E          | F | F | G  | G  | E          | F | F | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | G  | E          | F | F | F  | G  |
| 1.2         | 2.0                                                 | E          | E | F | F  | F  | E          | E | E | F  | F  |
|             | 3.0                                                 | E          | F | F | F  | F  | E          | E | E | F  | F  |
|             | 4.0                                                 | E          | F | F | G  | G  | E          | F | F | F  | G  |
|             | 5.0                                                 | E          | F | F | G  | G  | E          | F | F | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | G  | E          | F | F | F  | G  |
| 1.5         | 2.0                                                 | E          | E | F | F  | F  | E          | E | E | F  | F  |
|             | 3.0                                                 | E          | F | F | F  | G  | E          | E | E | F  | F  |
|             | 4.0                                                 | E          | F | F | G  | G  | E          | F | F | F  | G  |
|             | 5.0                                                 | E          | F | F | G  | G  | E          | F | F | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | H  | E          | F | F | F  | G  |
| 2.0         | 2.0                                                 | E          | F | F | F  | G  | E          | E | E | F  | F  |
|             | 3.0                                                 | E          | F | F | G  | G  | E          | E | E | F  | F  |
|             | 4.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 5.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
| 2.4         | 2.0                                                 | E          | F | F | G  | G  | E          | E | E | F  | F  |
|             | 3.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 4.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 5.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
| 3.0         | 2.0                                                 | E          | F | F | G  | G  | E          | E | E | F  | F  |
|             | 3.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 4.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 5.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
| 3.6         | 2.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 3.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 4.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 5.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
| 4.2         | 2.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 3.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 4.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 5.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
| 4.5         | 2.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 3.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 4.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 5.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
| 4.8         | 2.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 3.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 4.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 5.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |
|             | 6.0                                                 | E          | F | F | G  | H  | E          | E | E | F  | G  |

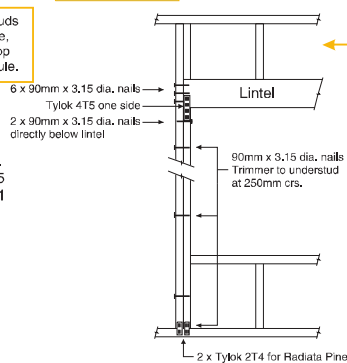
### TYPE E 1.4 kN



For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

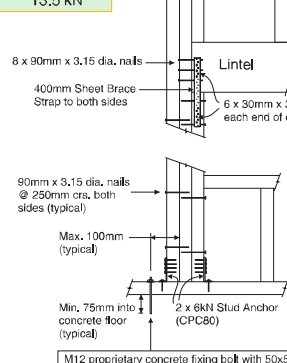
### TYPE F 4.0 kN



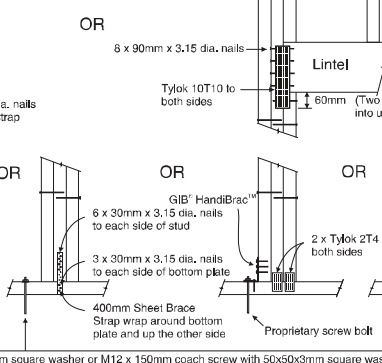
For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

### TYPE H 13.5 kN



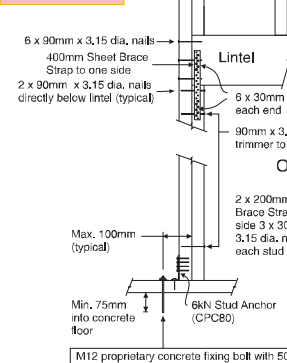
OR



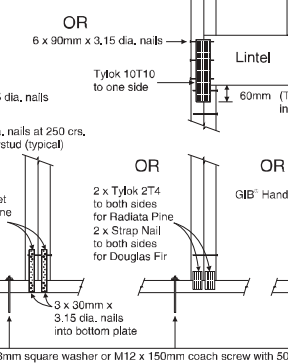
For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

### TYPE G 7.5 kN



OR



For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

#### Notes

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All dimensions are in millimetres unless otherwise stated  
All construction to comply with NZBC/NZ 3604 : 2011, along side current standards alike.  
All built up members mentioned for bearers, lintels, stringers and alike are to be nailed in accordance with NZS 3604 2.4.4.7  
All timber to be SG8 unless specified otherwise.

**ALL DIMENSIONS TO BE VERIFIED ON SITE DO NOT SCALE**  
**OFF PLANS.**

#### Job Title

**Proposed new home for Barry Raynes**  
**60b Pohutu Street, Whakatane.**

#### Design

Steven Bilyard

#### Drawn

Geoff Bilyard

#### Checked

#### Revision Date

#### Plot Date

21/07/2020

#### Drawing Title

**Lumberlok Details**

#### Scale

#### Drawing Number

**205**

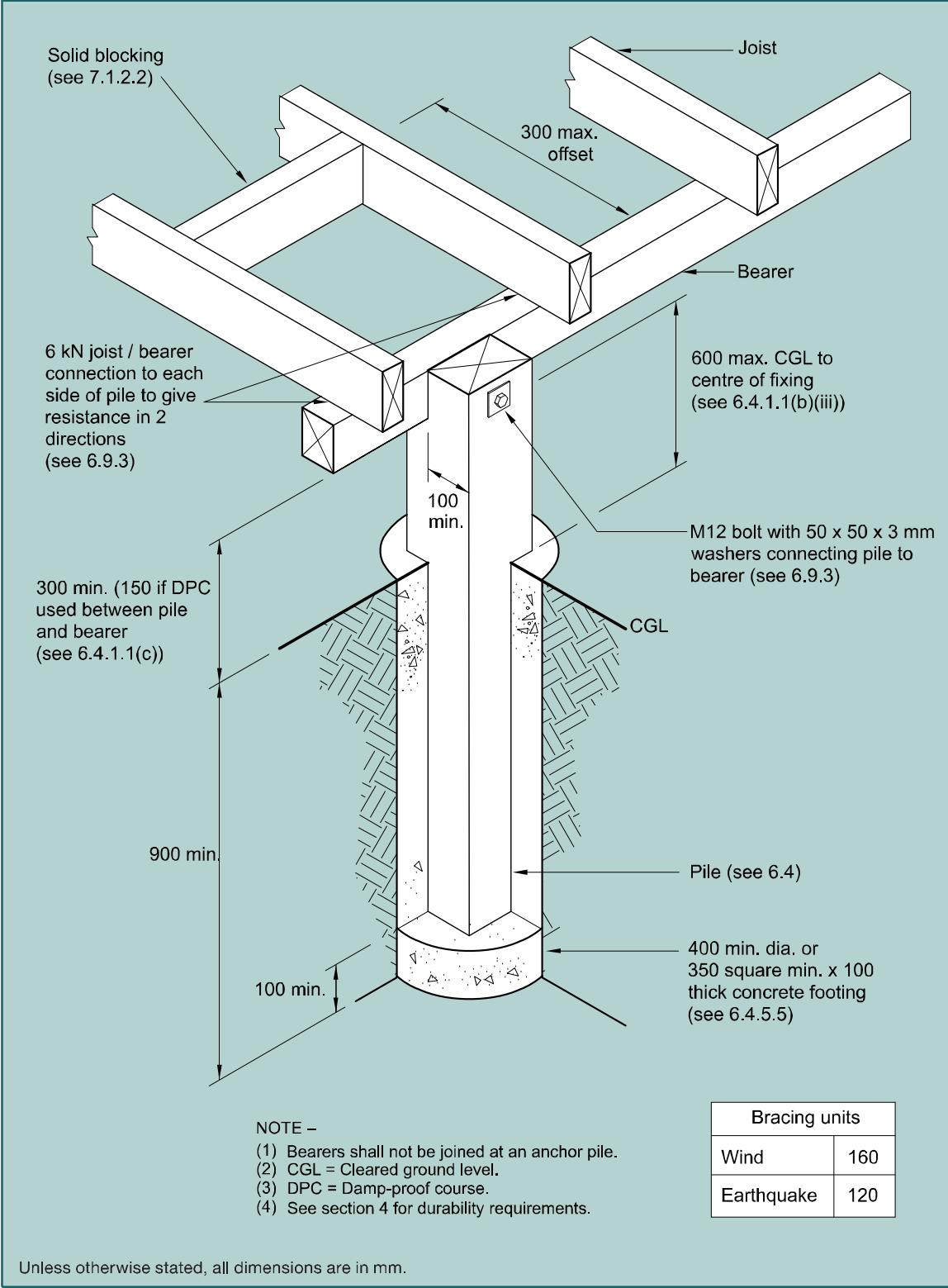


Figure 6.10 – Anchor pile directly connected to bearer only (see 6.9)

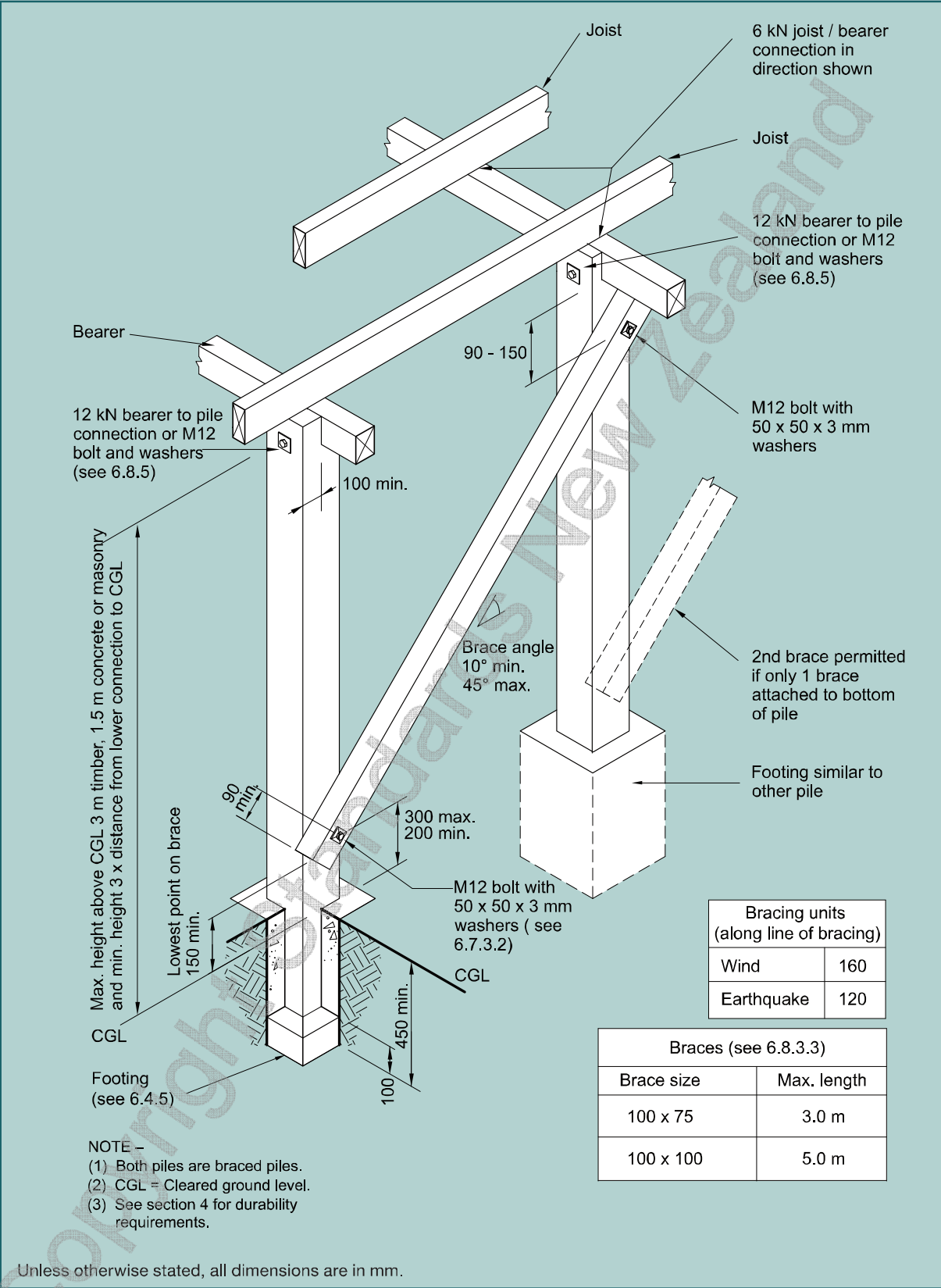
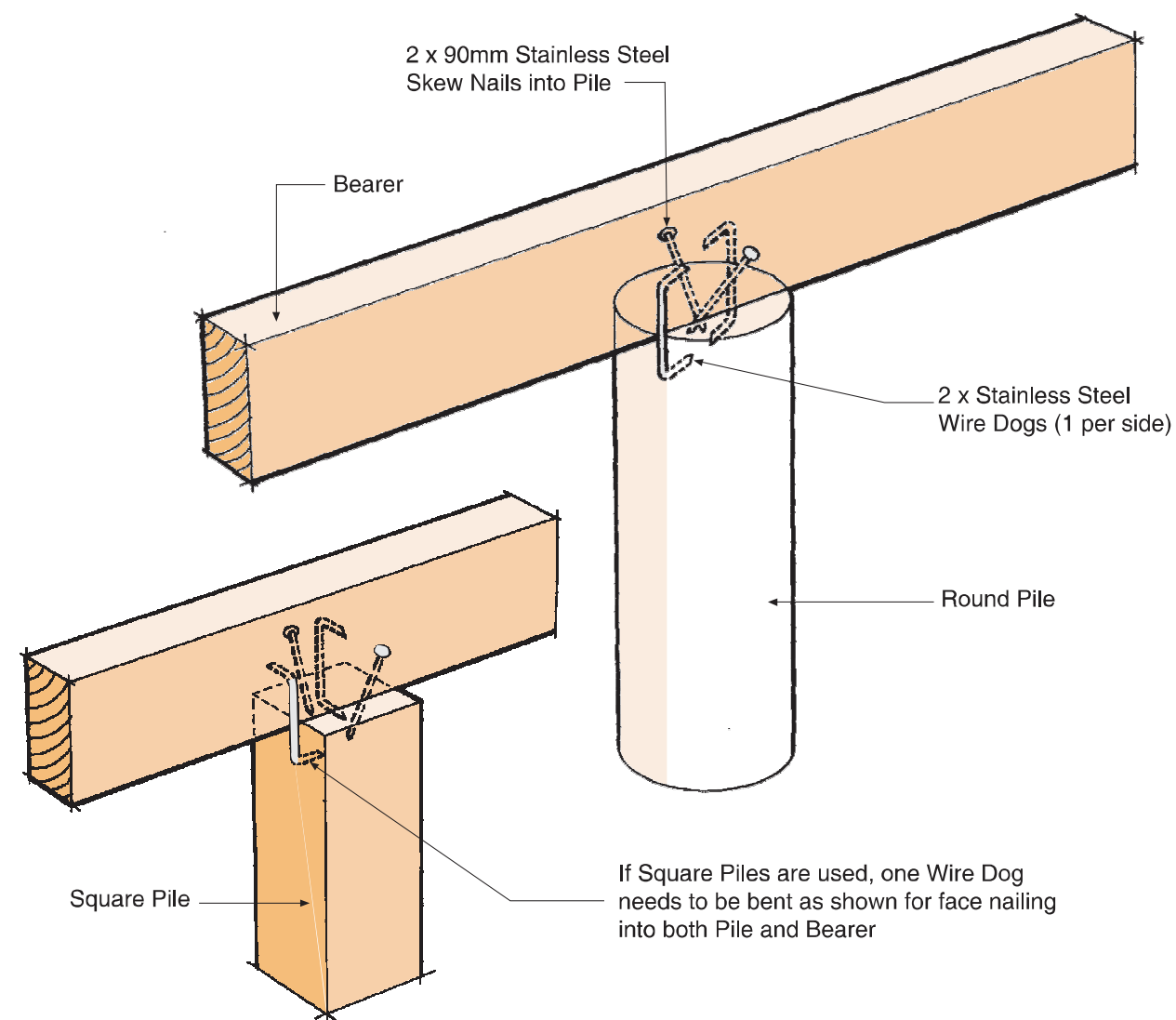


Figure 6.6 – Braced pile system – Brace connected to pile (see 6.8)

## ORDINARY PILE FIXING

- ★ Complies with NZS 3604:2011
- ★ All Fixings Stainless Steel
- ★ For all Ordinary Piles (Refer Figure 6.3 NZS 3604:2011)



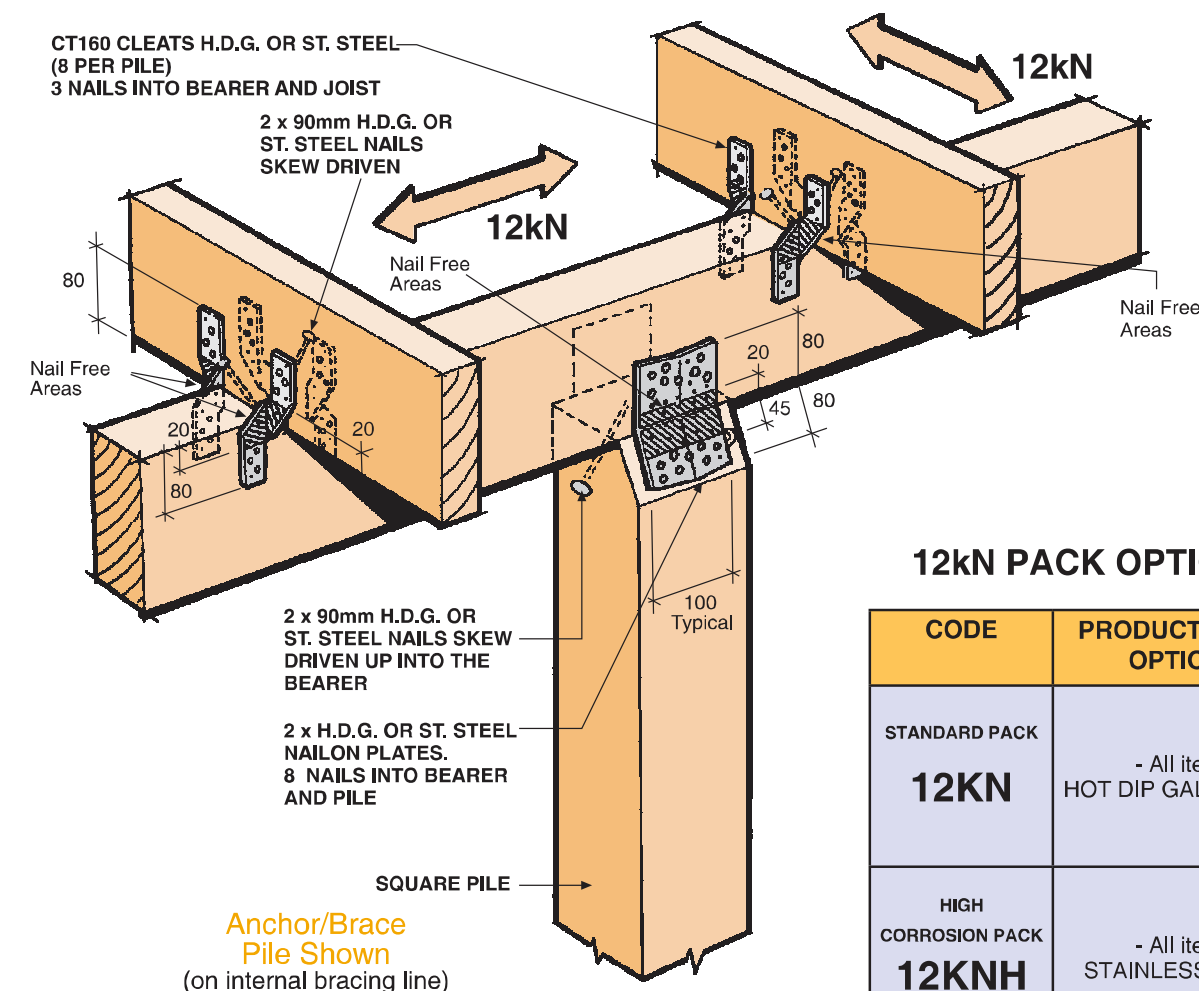
**Code:** OPF  
**Packed:** 20 x Stainless Steel Wire Dog Staples  
 20 x Stainless Steel Nails 90mm x 4 dia.

Available from leading Builders Supply Merchants  
 throughout New Zealand

## 12kN PILE FIXING FOR BRACED PILES OR ANCHOR PILES

- ★ The 12kN Pile Fixing must be installed in accordance with this brochure
- ★ Auckland University Tested. Test Ref. 4613
- ★ All subfloor construction must be in accordance with NZS 3604:2011
- ★ NZS 3604 requires lines of lateral support to floor joists within 300mm of bearer or bracing lines, refer to Clause 7.1.2
- ★ Joists deeper than 150mm require solid nogging over braced or anchor pile

6. FOUNDATION/SUBFLOOR



### 12kN PACK OPTIONS

| CODE                                | PRODUCT FINISH OPTIONS            |
|-------------------------------------|-----------------------------------|
| STANDARD PACK<br><b>12KN</b>        | - All items<br>HOT DIP GALVANISED |
| HIGH CORROSION PACK<br><b>12KNH</b> | - All items<br>STAINLESS STEEL    |

★ See Over For Corrosion Table.



SCAN FOR  
 INSTALLATION  
 VIDEO

<https://vimeo.com/117350344>

GIB EzyBrace® Systems specification BL1-H

| Specification code | Minimum length (m) | Lining requirement                           | Other requirements |
|--------------------|--------------------|----------------------------------------------|--------------------|
| BL1-H              | 0.4                | 10mm or 13mm GIB Braceline® to one side only | Hold downs         |

WALL FRAMING

Wall framing to comply with;

- NZBC B1 — Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
- NZBC B2 — Durability B2/AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor

Use panel hold downs at each end of the bracing element. The GIB HandiBrac® is recommended. See details in GIB EzyBrace® Systems or GIB® Site Guide.

Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or Three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor

Use panel hold downs at each end of the bracing element. The GIB HandiBrac® is recommended. See details in GIB EzyBrace® Systems or GIB® Site Guide. Within the length of the bracing element bottom plates are to be fixed in accordance with the requirements of NZS 3604:2011.

WALL LINING

- A layer of 10mm or 13mm GIB Braceline®
- Sheets can be fixed vertically or horizontally.
- Sheet joints shall be touch fitted.
- Use full length sheets where possible.

PERMITTED ALTERNATIVES

For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrace® Systems literature.

FASTENING THE LINING

Fasteners

32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws. If using the GIBFix® Framing System or if fastening through GIBFix® Angles use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Fastener centres

50,100,150, 225, 300mm from maximum each corner and 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm maximum centres to the sheet joint. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING

Joint strength is important in delivering bracing system performance. All fastener heads stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.

GIB EzyBrace® Systems specification GS1-N

| Specification code | Minimum length (m) | Lining requirement                                           |
|--------------------|--------------------|--------------------------------------------------------------|
| GS1-N              | 0.4                | Any 10mm or 13mm GIB® Standard plasterboard to one side only |

WALL FRAMING

Wall framing to comply with;

- NZBC B1 — Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
- NZBC B2 — Durability B2/AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING

Timber floor

Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor

Internal Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75 x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and 600mm centres thereafter.

External Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for external wall bottom plate fixing.

WALL LINING

- Any 10mm or 13mm GIB® plasterboard lining.
- Sheets can be fixed vertically or horizontally.
- Sheet joints shall be touch fitted.
- Use full length sheets where possible.

PERMITTED ALTERNATIVES

For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrace® Systems literature.

FASTENING THE LINING

Fasteners

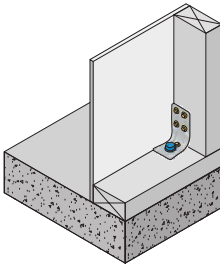
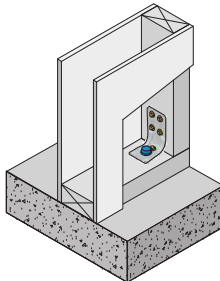
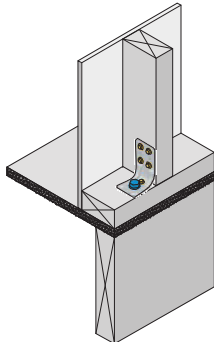
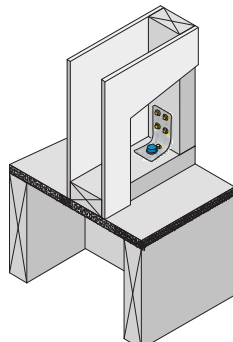
32mm x 6g GIB® Grabber® High Thread Screws, 32mm x 7g GIB® Grabber® Dual Thread Screws or 30mm GIB® Nails. If using the GIBFix® Angle use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

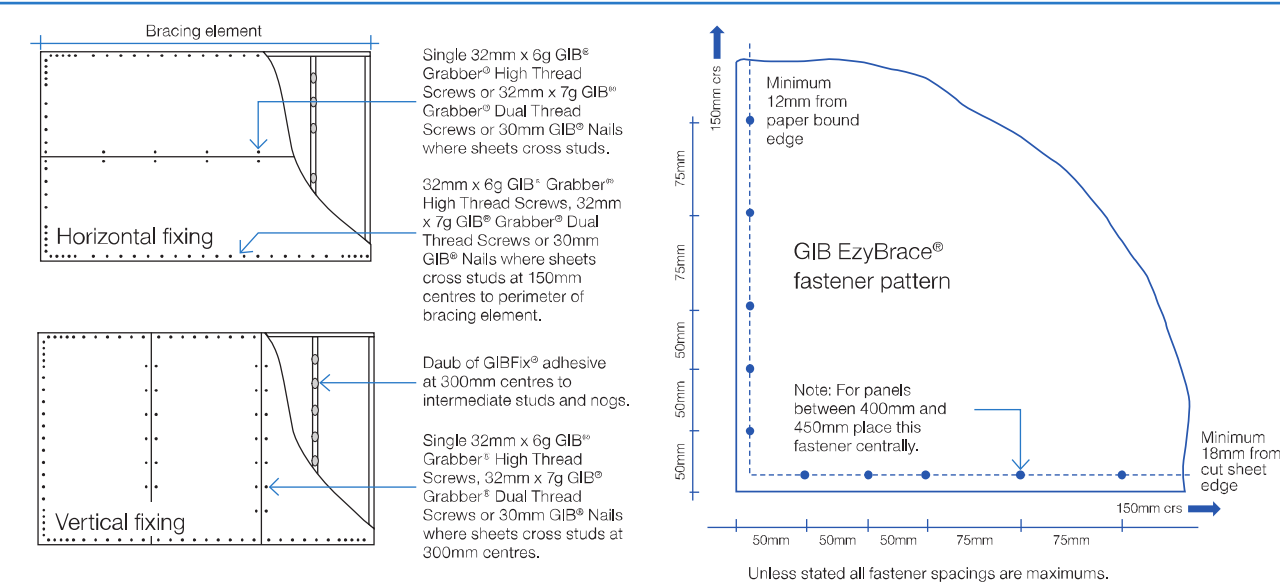
Fastener centres

50,100,150, 225, 300mm maximum from each corner and 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm maximum centres to intermediate sheet joints. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING

Joint strength is important in delivering bracing system performance. All fastener heads stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.

| Concrete floor                                                                                                                          |                                                                                     | Timber floor                                                                                                           |                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| External walls                                                                                                                          | Internal walls                                                                      | External walls                                                                                                         | Internal walls                                                                        |
|                                                      |  |                                     |  |
| GEB009                                                                                                                                  | GEB010                                                                              | GEB011                                                                                                                 | GEB012                                                                                |
| Position GIB HandiBrac® as close as practicable to the internal edge of the bottom plate.                                               |                                                                                     | Position GIB HandiBrac® flush with the outside stud face, as close as practicable to the centre of the boundary joist. |                                                                                       |
| Position GIB HandiBrac® at the stud/plate junction and at mid-width of plate.                                                           |                                                                                     | Position GIB HandiBrac® in the centre of floor joist or full depth solid block.                                        |                                                                                       |
| Hold-down fastener requirements                                                                                                         |                                                                                     |                                                                                                                        |                                                                                       |
| A mechanical fastening with a minimum characteristic uplift capacity of 15kN or use supplied BT10/140 screwbolt in GIB HandiBrac® pack. |                                                                                     | 12 x 150mm galvanised coach screw or use supplied BT10/140 screwbolt in GIB HandiBrac® pack.                           |                                                                                       |



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems.

7.10 ECOPLY® BARRIER BRACING SPECIFICATION – EPBG

Table 8: Ecoply® Barrier Structural Brace To One Side with 10mm GIB® To The Other

| Specification No. | Minimum Wall Length | Lining Requirements                                                     | Hold-Down      | BU's/m Wind | BU's/m Earthquake |
|-------------------|---------------------|-------------------------------------------------------------------------|----------------|-------------|-------------------|
| EPBG              | 0.4m                | Ecoply® Barrier one side and 10mm GIB® Standard plasterboard other side | Yes            | 100         | 115               |
|                   | 1.2m                |                                                                         | GIB HandiBrac® | 150         | 150               |

Framing

Wall framing must comply with:

- NZBC B1 - Structure: ASI Clause 3 Timber (NZS 3604).
- NZBC B2 - Durability: ASI Clause 3.2 Timber (NZS 3602).

Framing dimensions and height are as determined by the NZS 3604 stud and top plate tables for load bearing and non load bearing walls. Kiln dried verified structural grade timber must be used. Machine stress graded timber, such as Laserframe®, is recommended.

Bottom Plate Fixing

Use GIB HandiBrac® hold-down connections at each end of the bracing element. Refer to manufacturer installation instructions supplied with the connectors for correct installation instructions and bolt types to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are fixed in accordance with the requirements of NZS 3604.

Lining

Side 1: One layer of 7mm Ecoply® Barrier vertically fixed directly to framing. If part sheets are used, ensure nailing at required centres is carried out around the perimeter of each sheet or part sheet. A 2-3mm expansion gap should be left between sheets.

Side 2: One layer of 10 or 13mm GIB® Standard plasterboard vertically or horizontally fixed. Sheet joints are touch fitted and fastener heads and joints stopped in accordance with the GIB® Site Guide.

Fastening the Ecoply® Barrier

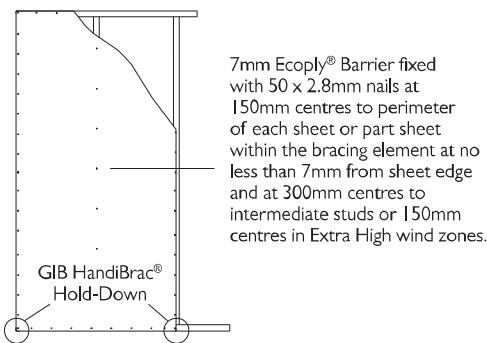
Fasteners

Fasten with 50 x 2.8mm galvanised or stainless steel flat head nails direct fix. Place fasteners no less than 7mm from sheet edges. Screws cannot be used. Power driven nails are suitable. Do not overdrive, nails must be full round head.

In certain circumstances stainless steel fasteners may be required. Refer to section 7.1 of the Ecoply Barrier Specification and Installation Guide for these circumstances and further fastener selection advice. Where stainless steel nails are required, annular grooved nails must be used.

Fastening Centres

Fasteners are placed at 150mm centres around the perimeter of each sheet and 300mm centres to intermediate or 150mm centres in Extra High wind zones. Where more than one sheet forms the brace element each sheet must be nailed off independently.



Fastening the GIB® Plasterboard

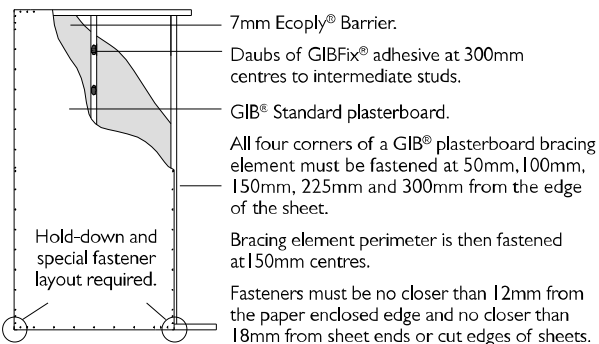
Fasteners

32mm x 6g GIB Grabber® Screws or 35mm GIB® Nails

Fastening centres

Fasten 50, 100, 150, 225 and 300mm from each corner and 150mm thereafter around the perimeter of the bracing element. For vertical fixing place fasteners at 300mm centres at intermediate sheet joints. For horizontal fixing place single fasteners in the tapered edge where sheets cross studs.

Place fasteners 12mm from paper bound edges and 18mm from cut sheet edges. GIB® plasterboard must be treated in every respect in accordance with relevant GIB® literature.



Ecoply® Bracing Systems are designed to meet the requirements of the New Zealand Building Code and have been tested and analysed using the P2.1 method referenced in NZS 3604:2011 listed as an acceptable solution B1/AS1 Structure. Testing was carried out using Ecoply Barrier manufactured by CHH Woodproducts and SG8 timber framing and GIB® products manufactured by Winstone Wallboards Ltd. Substituting materials may compromise performance of the system. GIB® and GIB HandiBrac® are registered trade marks of Fletcher Building Holdings Ltd.

SEPTEMBER 2017

7.7 ECOPLY® BARRIER BRACING SPECIFICATION – EPBI

Table 5: Sided Structural Plywood Brace

| Specification No. | Minimum Wall Length | Lining Requirements      | Hold-Down      | BU's/m Wind | BU's/m Earthquake |
|-------------------|---------------------|--------------------------|----------------|-------------|-------------------|
| EPBI              | 0.4m                |                          |                | 80          | 95                |
|                   | 0.6m                | Ecoply® Barrier one side | Yes            | 95          | 105               |
|                   | 1.2m                |                          | GIB HandiBrac® | 120         | 135               |

Framing

Wall framing must comply with:

- NZBC B1 - Structure: ASI Clause 3 Timber (NZS 3604).
- NZBC B2 - Durability: ASI Clause 3.2 Timber (NZS 3602).

Framing dimensions and height are as determined by the NZS 3604 stud and top plate tables for load bearing and non load bearing walls. Kiln dried verified structural grade timber must be used. Machine stress graded timber of minimum SG8, such as Laserframe®, is recommended.

Bottom Plate Fixing

Use GIB HandiBrac® hold-down connections at each end of the bracing element. Refer to manufacturer installation instructions supplied with the connectors for correct installation instructions and bolt types to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are fixed in accordance with the requirements of NZS 3604.

Lining

One layer of 7mm Ecoply® Barrier vertically fixed directly to framing. If part sheets are used, ensure nailing at required centres is carried out around the perimeter of each sheet or part sheet. A 2-3mm expansion gap should be left between sheets.

Fastening Ecoply® Barrier Panels

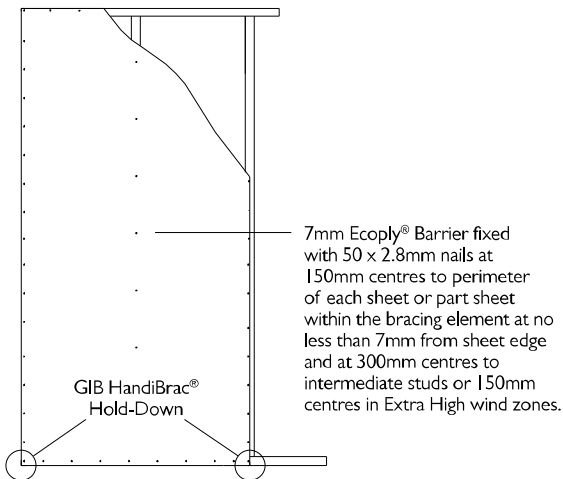
Fasteners

Fasten with 50 x 2.8mm galvanised or stainless steel flat head nails direct fix. Place fasteners no less than 7mm from sheet edges. Screws cannot be used. Power driven nails are suitable. Do not overdrive, nails must be full round head.

In certain circumstances stainless steel fasteners may be required. Refer to section 7.1 in the Ecoply Barrier Specification and Installation Guide for these circumstances and further fastener selection advice. Where stainless steel nails are required, annular grooved nails must be used.

Fastening Centres

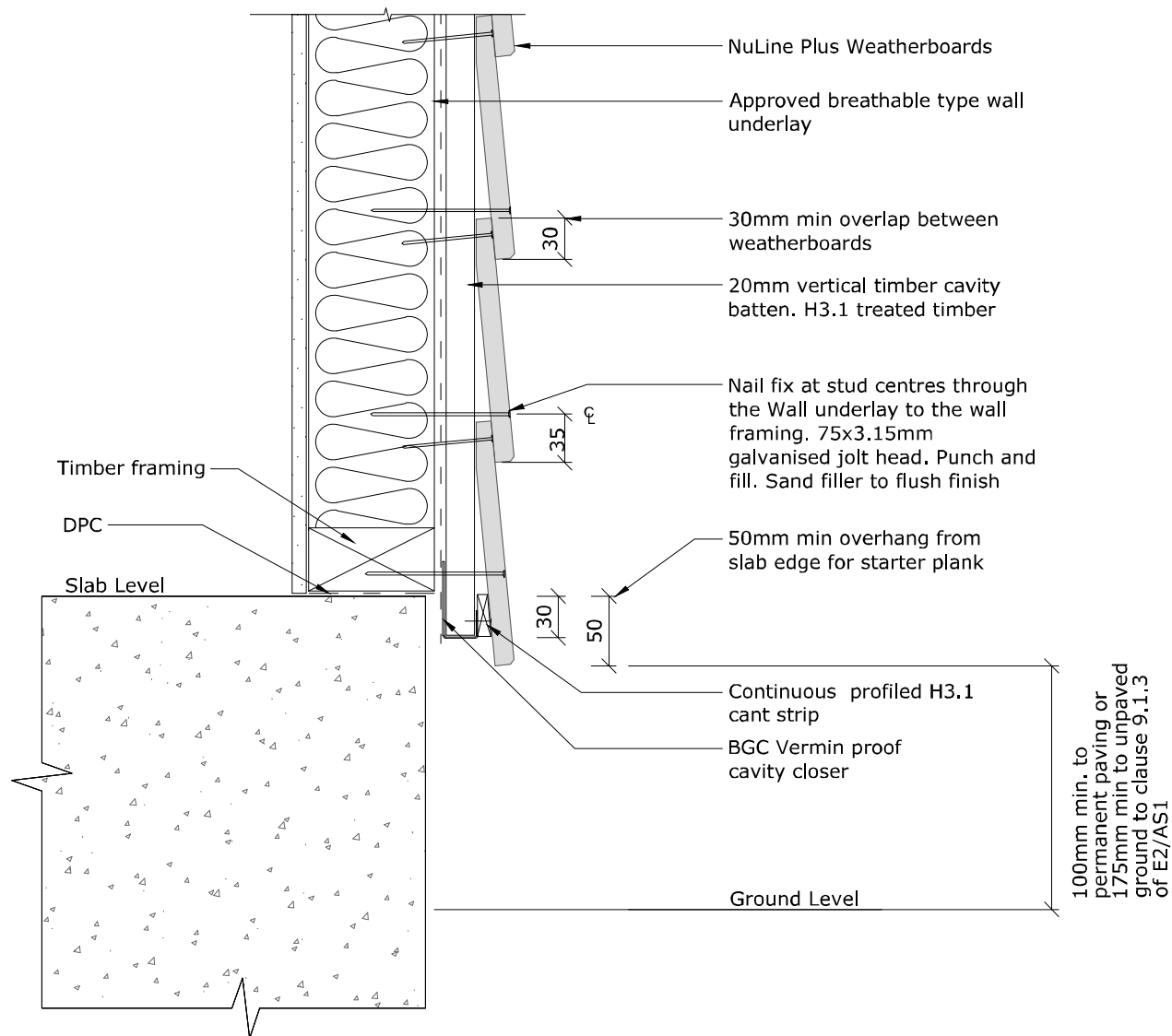
Fasteners are placed at 150mm centres around the perimeter of each sheet and 300mm centres to intermediate studs or 150mm centres in Extra High wind zones. Where more than one sheet forms the brace element each sheet must be nailed off independently.



Ecoply® Bracing Systems are designed to meet the requirements of the New Zealand Building Code and have been tested and analysed using the P2.1 method referenced in NZS 3604:2011 listed as an acceptable solution B1/AS1 Structure. Testing was carried out using Ecoply Barrier manufactured by CHH Woodproducts and SG8 timber framing and GIB® products manufactured by Winstone Wallboards Ltd. Substituting materials may compromise performance of the system. GIB® and GIB HandiBrac® are registered trade marks of Fletcher Building Holdings Ltd.

SEPTEMBER 2017

# BGC Fibre Cement



## Fixing option.

If Nuline Plus is installed on structurally fixed cavity battens (fixed at 300mm centres with a 65 x 2.87 RounDrive Ring Shank Nail or 60 x 2.8 galvanised jolt head nails offset 12mm either side of the centre line), then direct fixed nail sizes can be used ie concealed nail - 50 x 2.87 Paslode Galvanised ring shank D-head gun nail or 50 x 2.8mm galvanised or Stainless Steel ring shank, flat head nail and face nail - 60 x 3.15mm galvanised or stainless steel ring shank jolt head nail

PROFILE BGC NuLine™ Plus Weatherboards

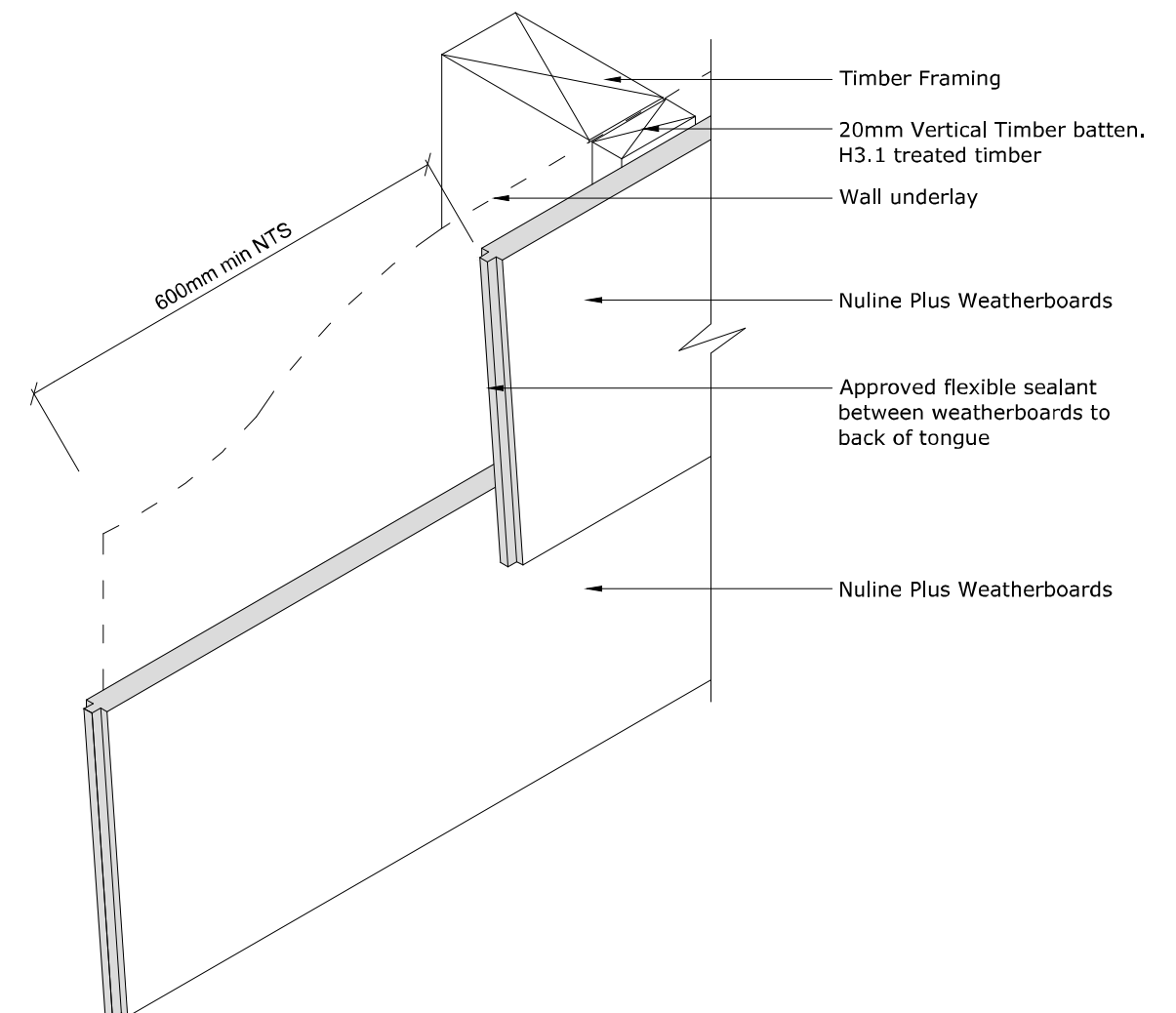
DATE Feb 2016

SCALE 1:5 @ A4

DETAIL Foundation Detail  
Cavity Construction

DETAIL NO. NU-01

# BGC Fibre Cement



PROFILE BGC NuLine™ Plus Weatherboards

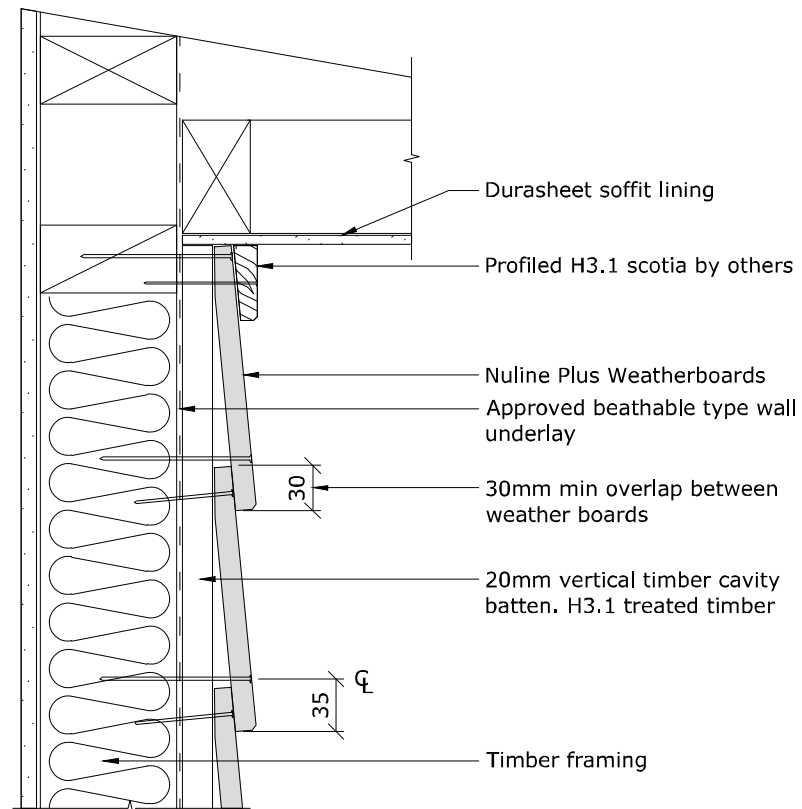
DATE Feb 2016

SCALE 1:5 @ A4

DETAIL Plank Joint  
Cavity Construction

Drawing Number

210

**BGC****Fibre Cement**

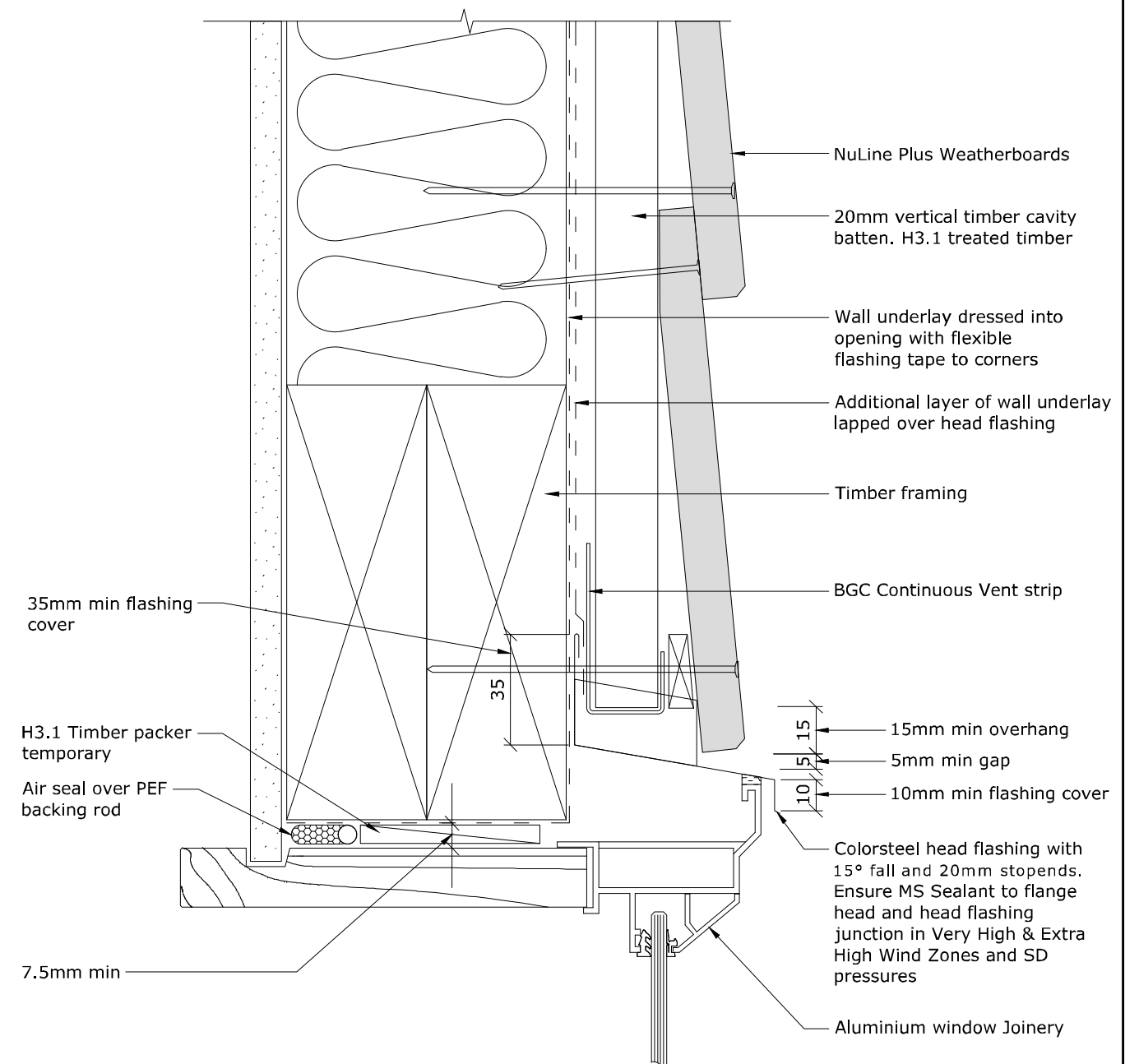
PROFILE BGC NuLine™ Plus Weatherboards

DATE Feb 2016

DETAIL Soffit Detail  
Cavity Construction

SCALE 1:5 @ A4

DETAIL NO. NU-03

**BGC****Fibre Cement**

PROFILE BGC NuLine™ Plus Weatherboards

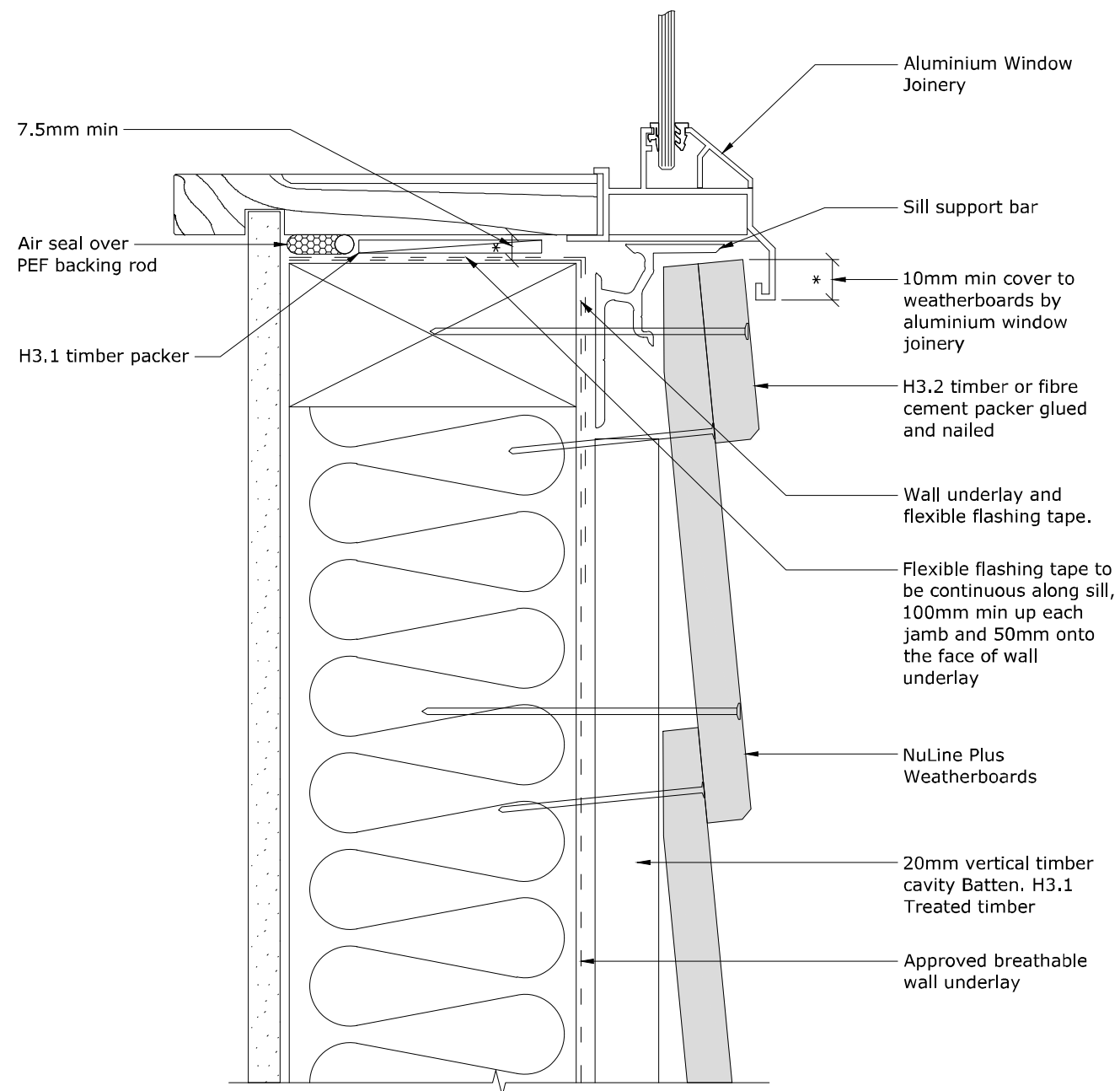
DATE Feb 2016

DETAIL Window Head  
Cavity Construction

SCALE 1:2 @ A4

Drawing Number

**211**

**BGC****Fibre Cement**

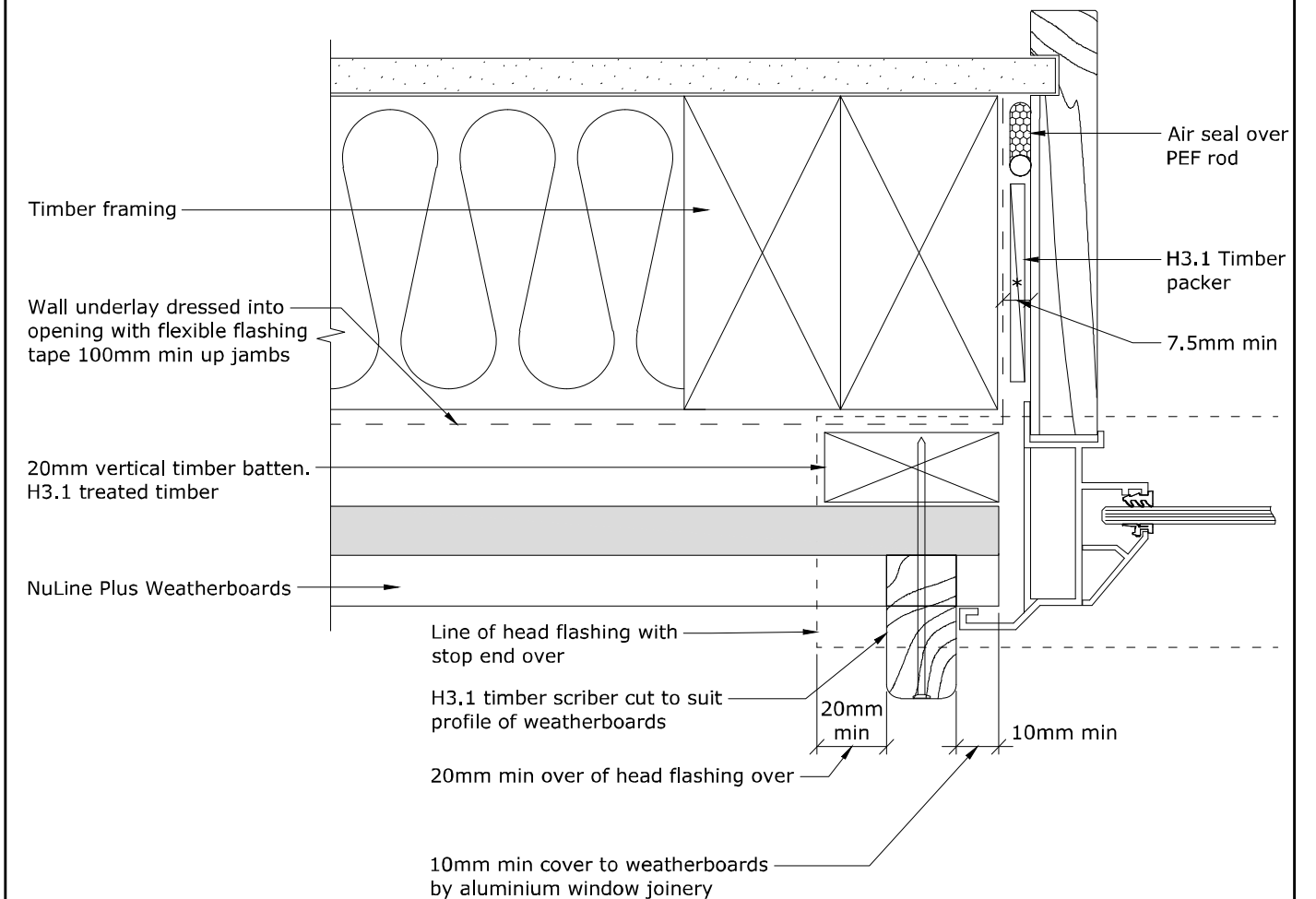
PROFILE BGC NuLine™ Plus Weatherboards

DATE Feb 2016

DETAIL Window Sill  
Cavity Construction

SCALE 1:2 @ A4

DETAIL NO. NU-08

**BGC****Fibre Cement**

PROFILE BGC NuLine™ Plus Weatherboards

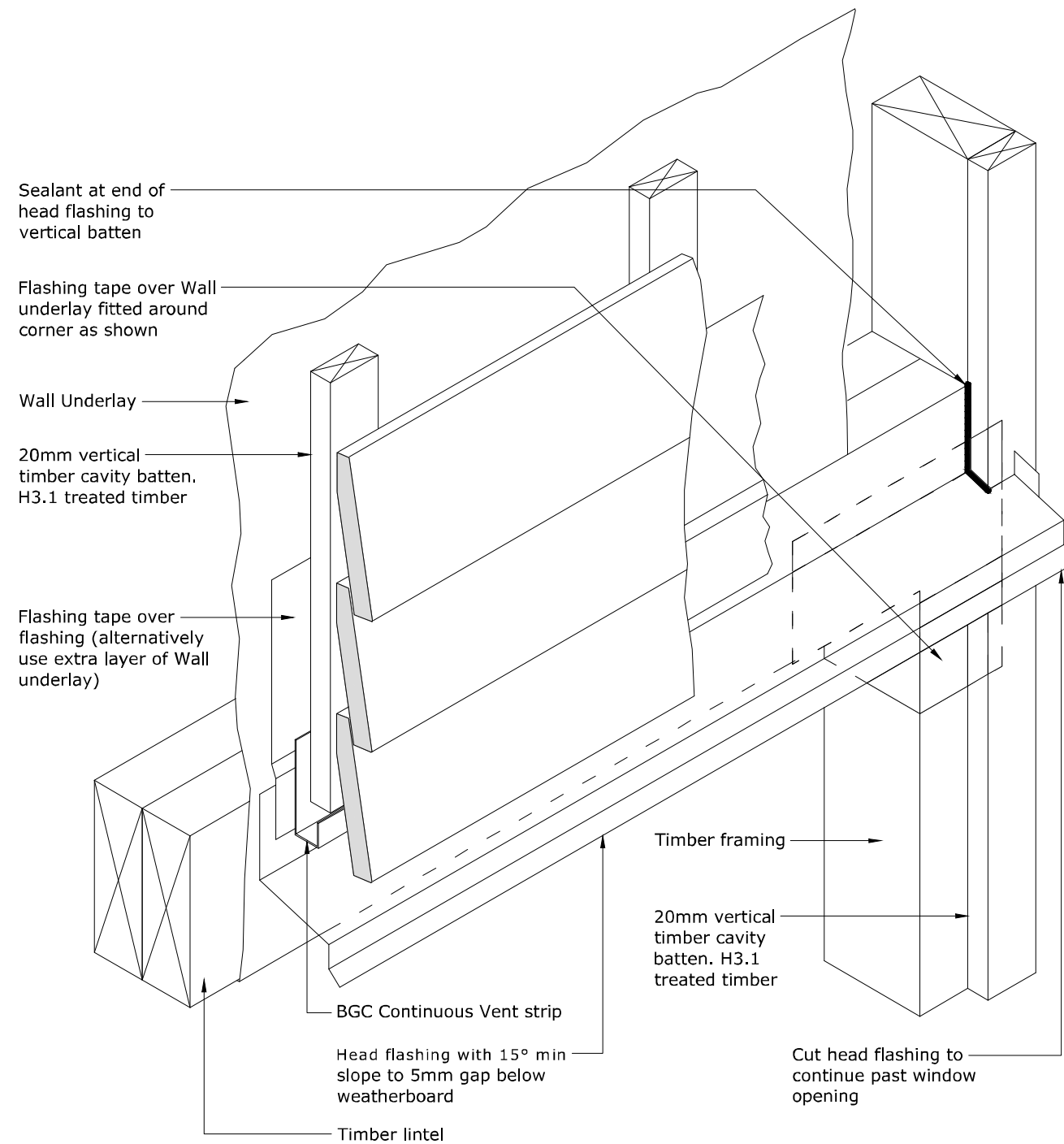
DATE Feb 2016

DETAIL Window Jamb  
Cavity Construction

SCALE 1:2 @ A4

Drawing Number

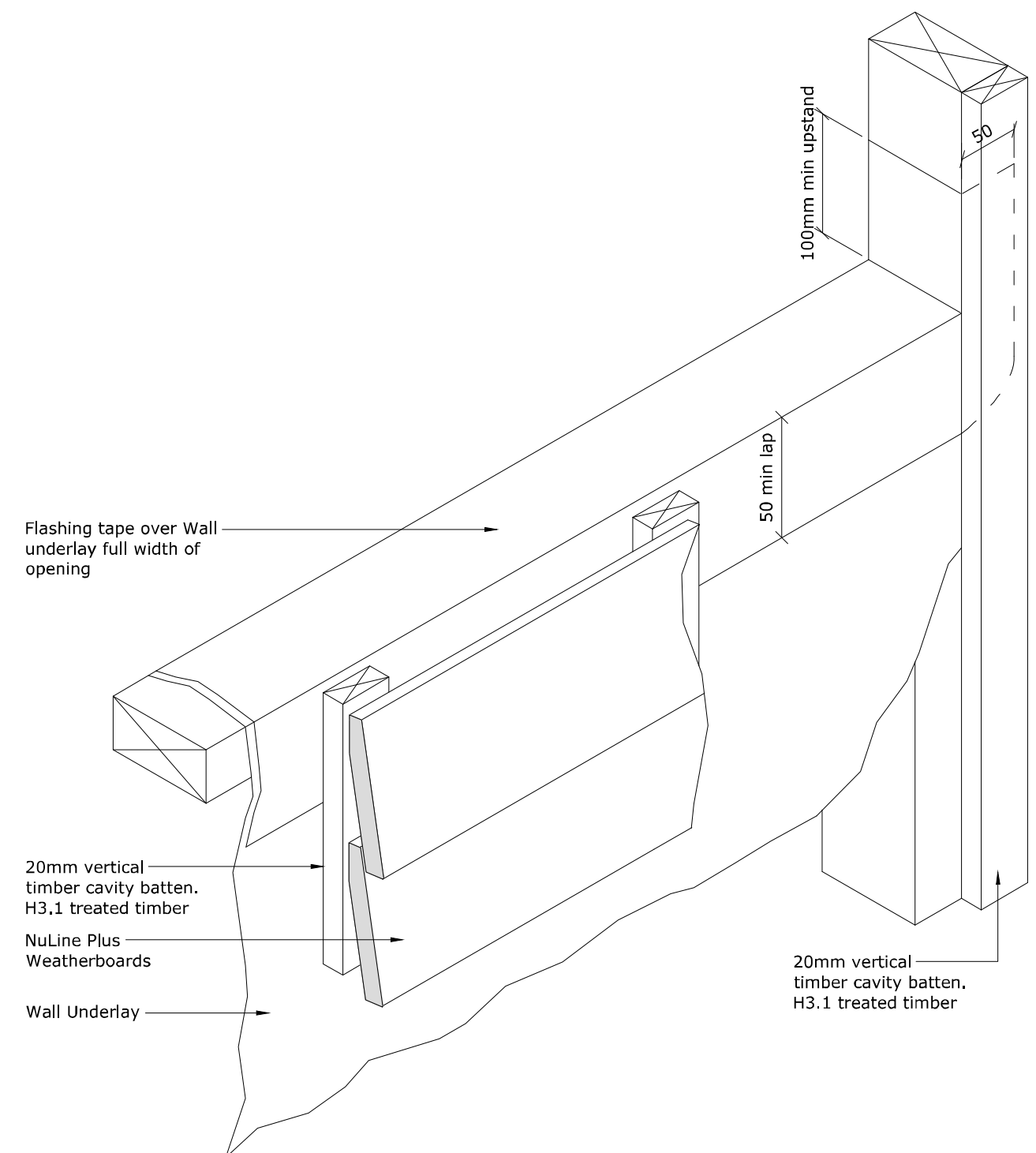
**212**



PROFILE **BGC NuLine™ Plus Weatherboards**

DETAIL **Window Head/Jamb Junction Detail  
Cavity Construction**

DATE Feb 2016  
SCALE 1:5 @ A4  
DETAIL NO. **NU-26**

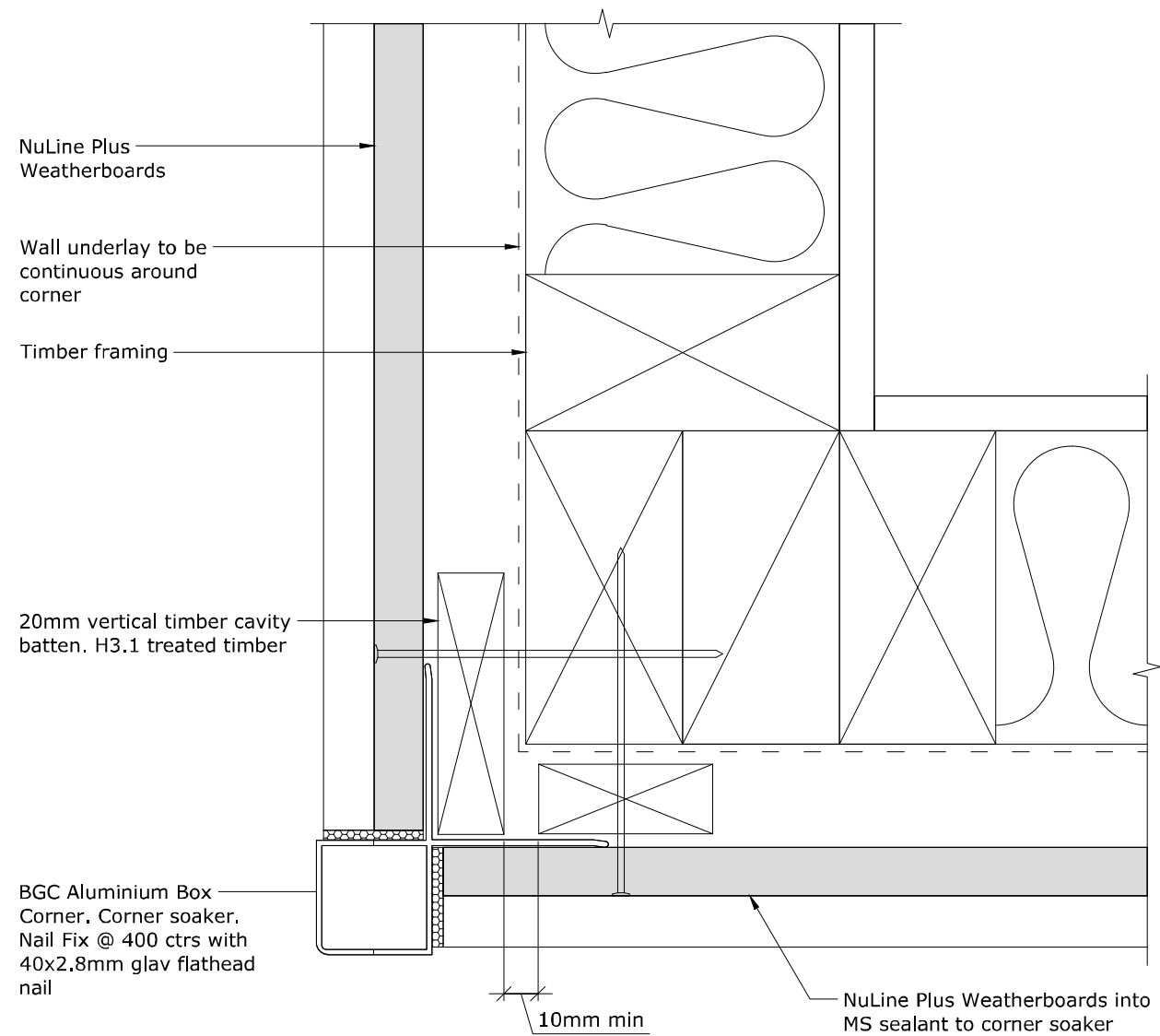


Note:  
Sill support bars required for  
openings wider than 600mm

PROFILE **BGC NuLine™ Plus Weatherboards**

DETAIL **Window Sill/Jamb Junction Detail  
Cavity Construction**

DATE Feb 2016  
SCALE 1:5 @ A4  
Drawing Number



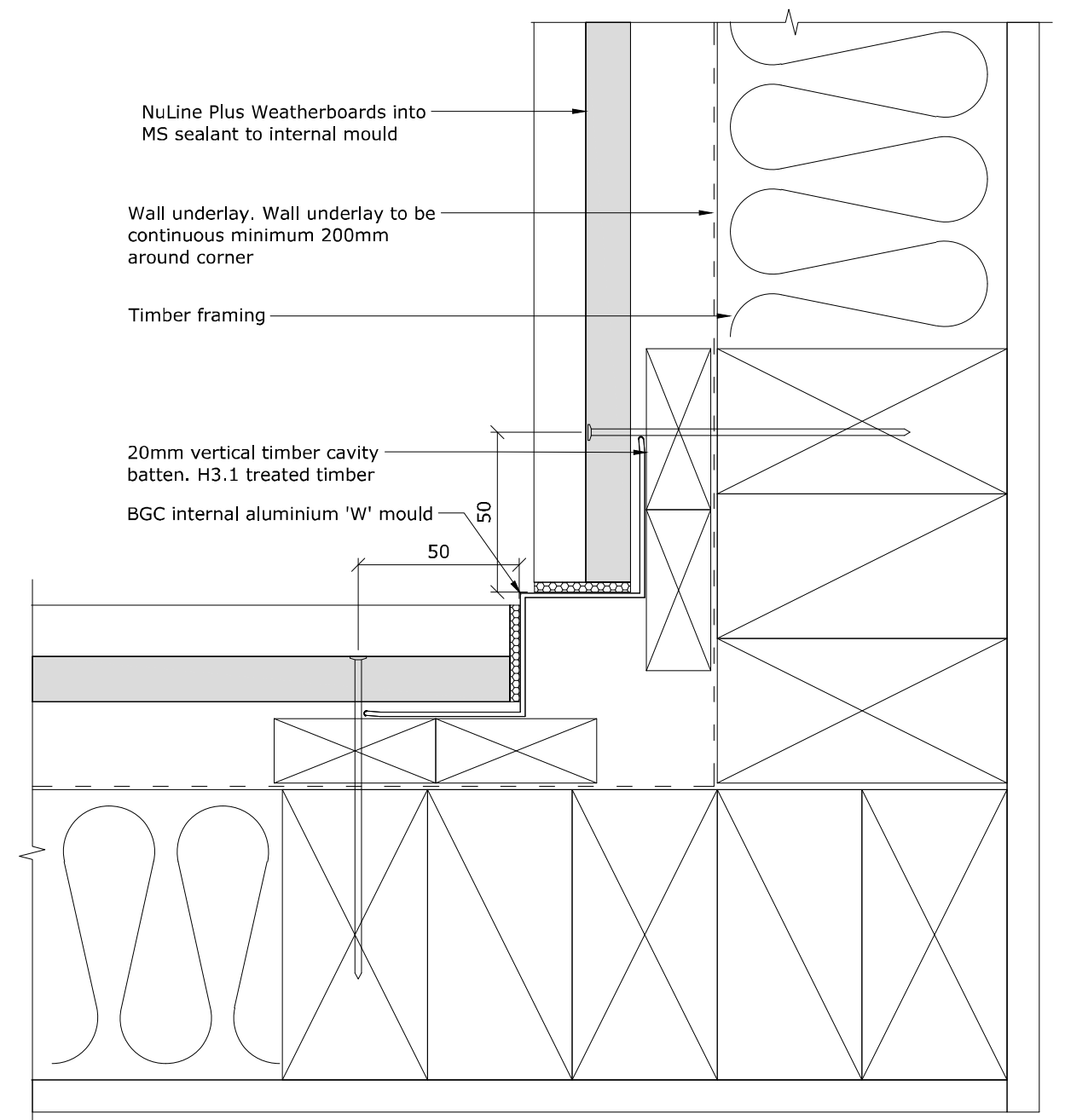
PROFILE BGC NuLine™ Plus Weatherboards

DETAIL External Corner Detail with BGC Profile Cavity Construction

DATE Feb 2016

SCALE 1:2 @ A4

DETAIL NO. NU-10



PROFILE BGC NuLine™ Plus Weatherboards

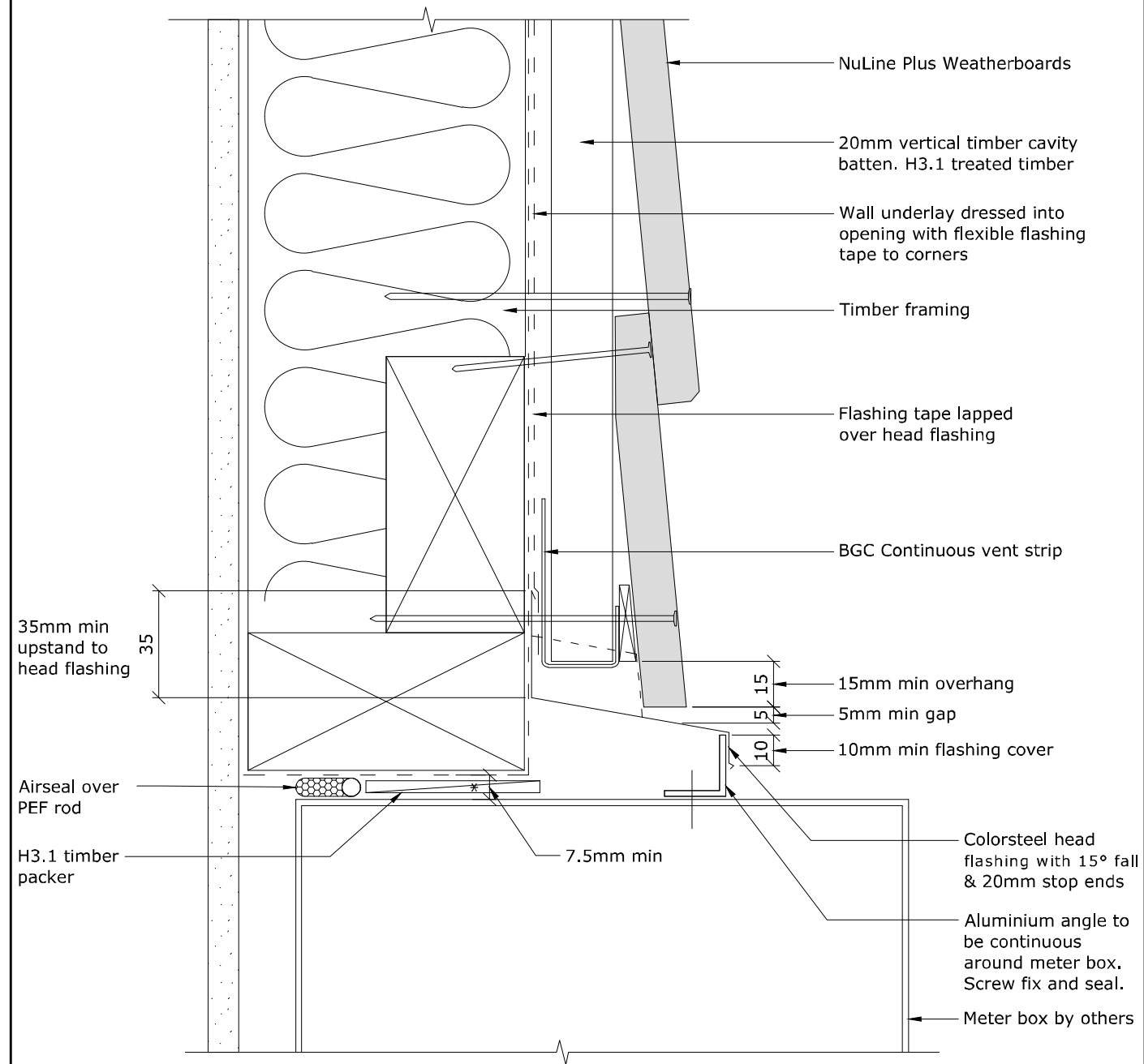
DETAIL Internal Corner Detail with BGC Profile Cavity Construction

DATE Feb 2016

SCALE 1:2 @ A4

Drawing Number

# BGC Fibre Cement



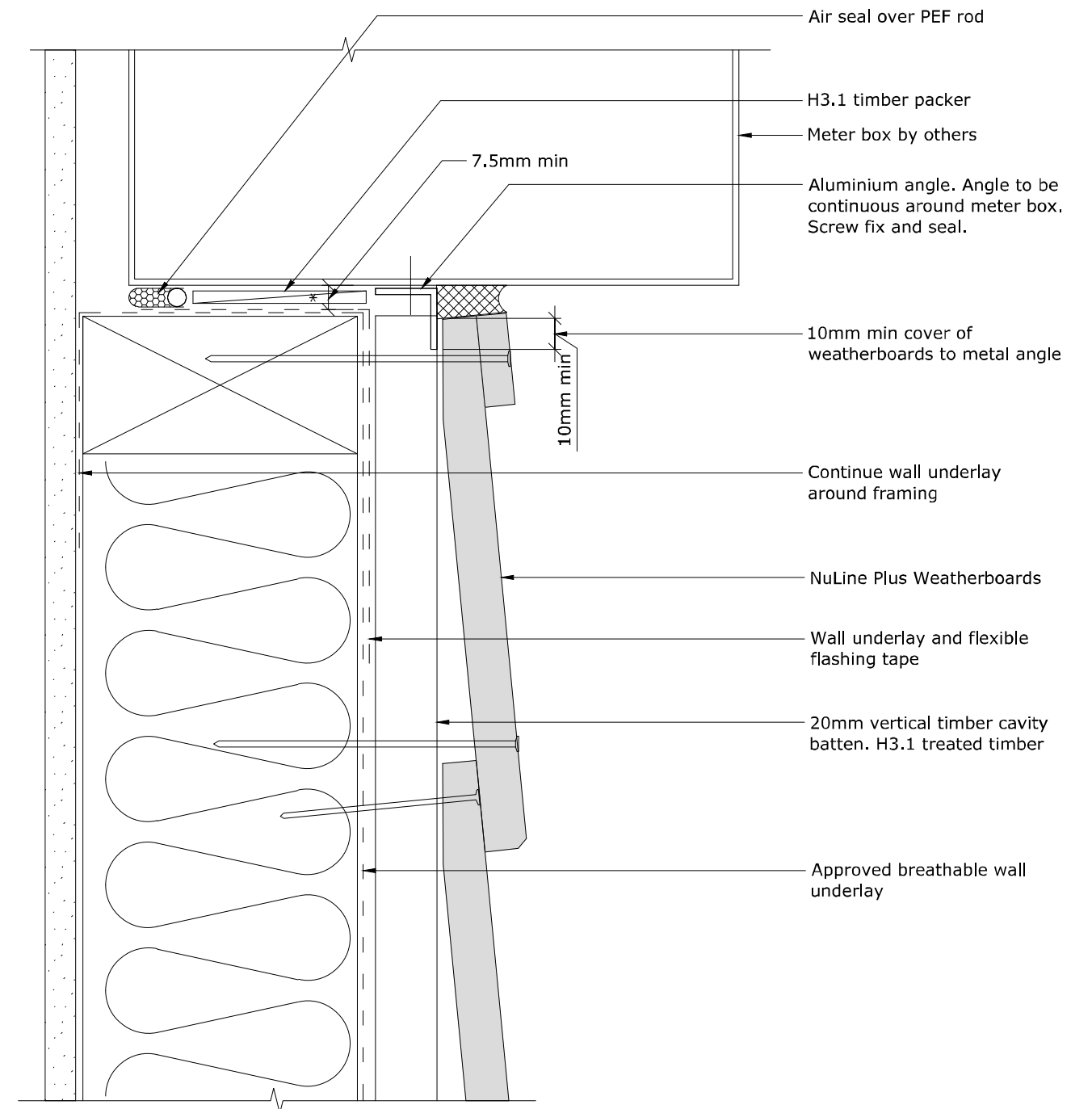
PROFILE BGC NuLine™ Plus Weatherboards

DATE Feb 2016  
SCALE 1:2 @ A4

DETAIL Meter Box Head  
Cavity Construction

DETAIL NO. NU-13

# BGC Fibre Cement



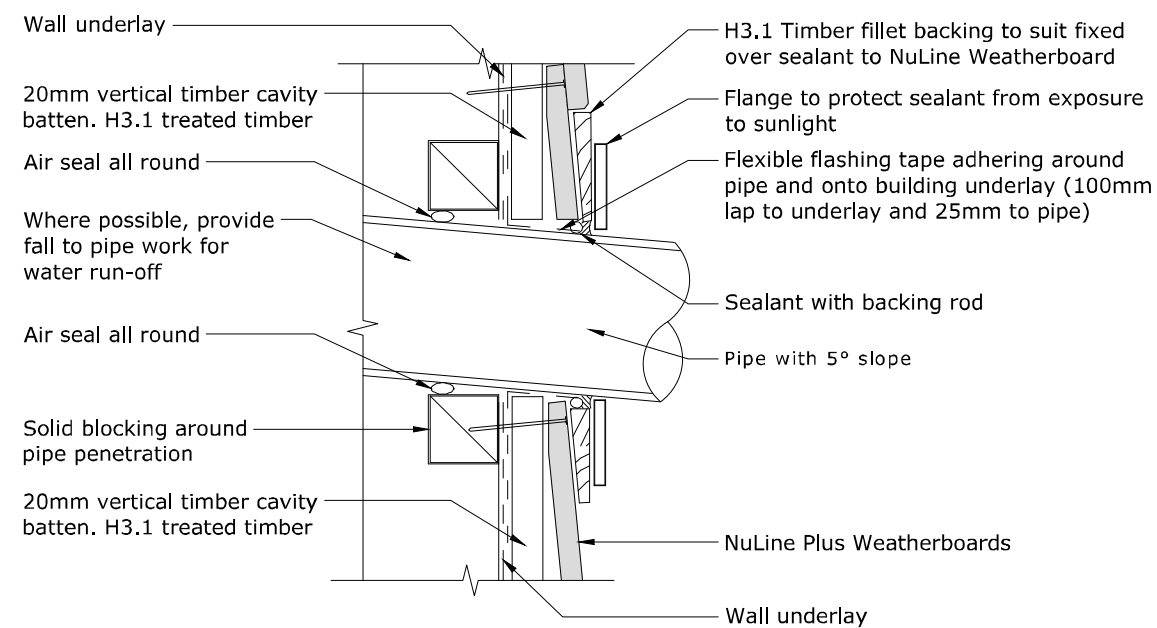
PROFILE BGC NuLine™ Plus Weatherboards

DATE Feb 2016  
SCALE 1:2 @ A4

DETAIL Meter Box Sill  
Cavity Construction

Drawing Number

215

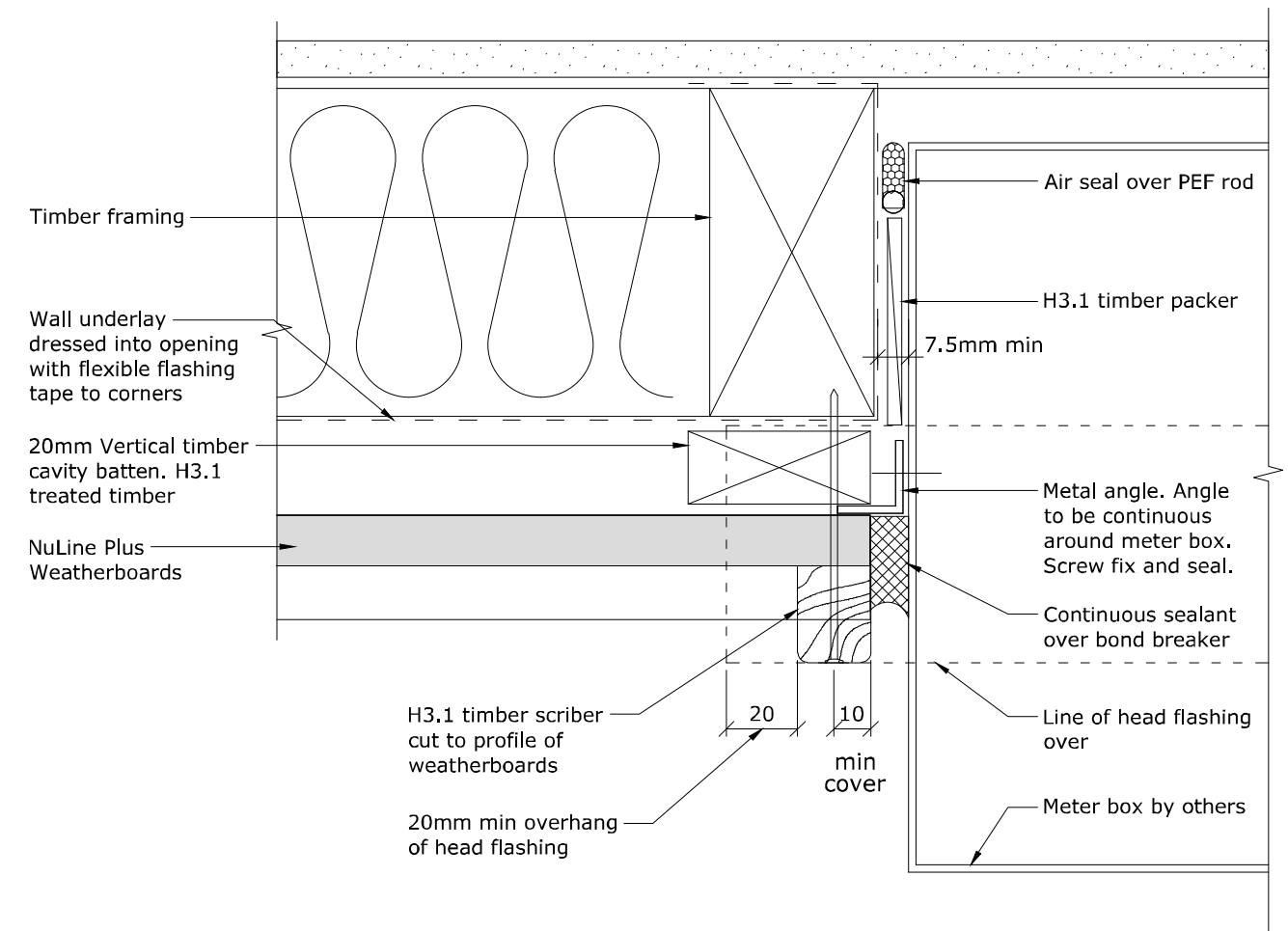


PROFILE BGC NuLine™ Plus Weatherboards

DATE Feb 2016  
SCALE 1:5 @ A4

DETAIL Pipe Penetration Detail  
Cavity Construction

DETAIL NO. NU-25



PROFILE BGC NuLine™ Plus Weatherboards

DATE Feb 2016  
SCALE 1:2 @ A4

DETAIL Meter Box Jamb  
Cavity Construction

Drawing Number

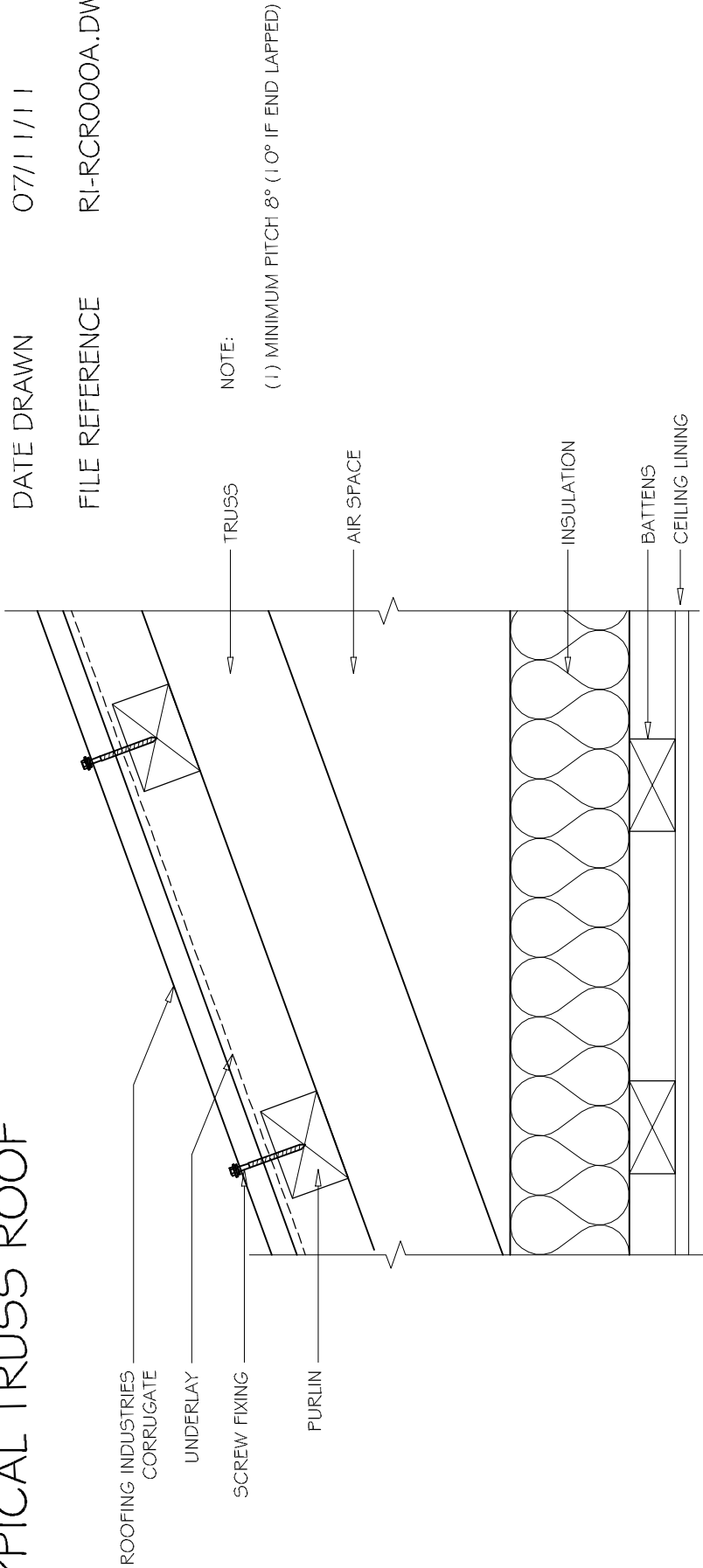
**216**

RESIDENTIAL CORRUGATE  
TYPICAL TRUSS ROOF

DETAIL NO. RCRO00A

DATE DRAWN 07/11/11

FILE REFERENCE RI-RCRO00A.DWG



NOTES:

- These details are generally in compliance with E2/AS1 and/or the NZ Metal Roof & Wall Cladding Code of Practice and in some cases specific details by 'Roofing Industries'.
- The building designer is ultimately responsible to ensure that details used meet the requirements of the NZ Building Code for the specific project.
- Details of the supporting structure including cavity battens are indicative only and are the responsibility of the building designer. For steel framed buildings thermal break cavity battens may be required.
- Underlay selection and building wrap types are the responsibility of the designer. Netting or other support is generally required at roof pitches less than 8 degrees combined with a self supporting paper. At roof pitches of 8° and above where non self supporting paper is used or purlin spacing is in excess of self supporting criteria, netting or other support should be used. Alternative support to netting should be used in severe coastal environments including when aluminum is used.
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A  
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1:5  
PITCHED TRUSS ROOF

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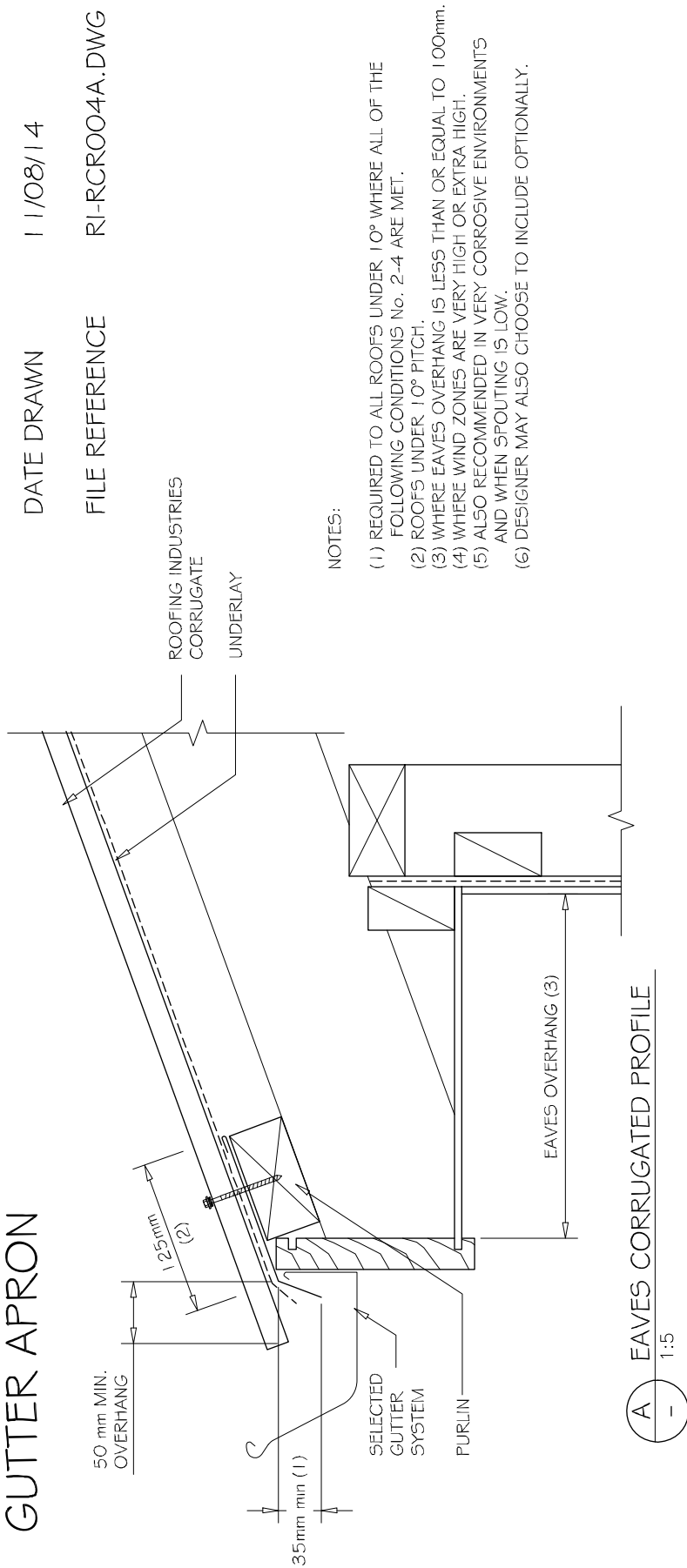


RESIDENTIAL CORRUGATE  
GUTTER APRON

DETAIL NO. RCRO04A

DATE DRAWN 11/08/14

FILE REFERENCE RI-RCRO04A.DWG



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- Underlay selection and building wrap types are the responsibility of the designer. Netting or other support is generally required at roof pitches less than 8 degrees combined with a self supporting paper. At roof pitches of 8° and above where non self supporting paper is used or purlin spacing is in excess of self supporting criteria, netting or other support should be used. Alternative support to netting should be used in severe coastal environments including when aluminum is used.
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EAVES CORRUGATED PROFILE

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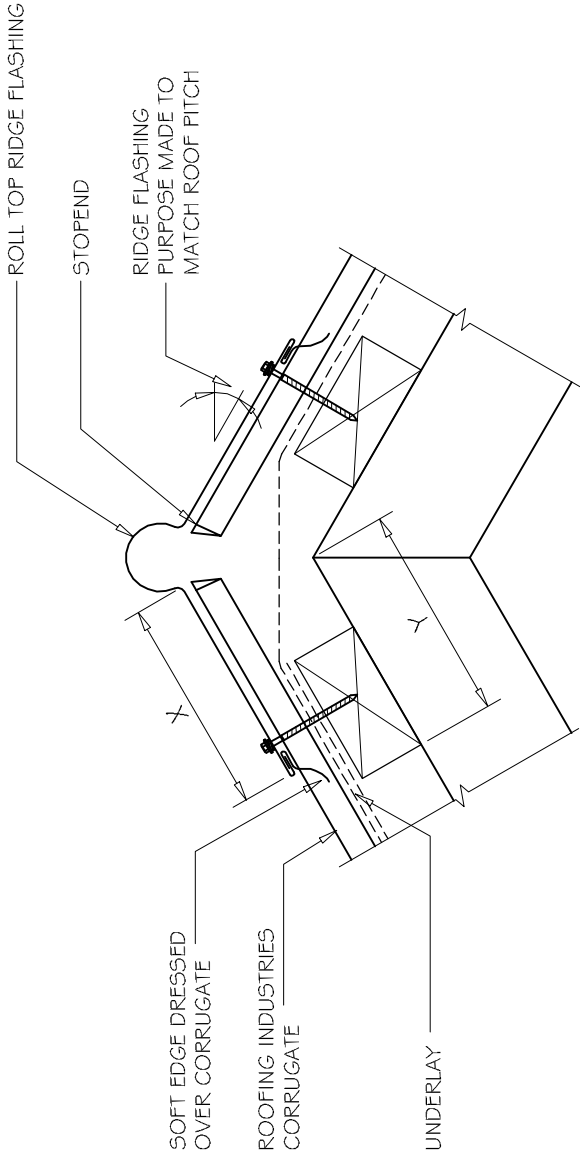


RESIDENTIAL CORRUGATE  
RIDGE AND HIP FLASHING  
(Roll Top)

DETAIL NO. RCRO05A

DATE DRAWN 07/11/11

FILE REFERENCE RI-RCRO05A.DWG



NOTES:

- (1) SITUATION 1: IN LOW, MEDIUM OR HIGH WIND ZONES, WHERE ROOF PITCH IS 10° OR GREATER.
- (2) SITUATION 2: FOR ALL ROOF PITCHES IN VERY HIGH AND EXTRA HIGH WIND ZONES, FOR ALL WIND ZONES WHERE ROOF PITCH LESS THAN 10°.
- (3) EXCLUDING ANY SOFT EDGE OR TURN-DOWN TO ROOFING.

| SITE WIND ZONE<br>(As per NZS3604) | MINIMUM mm (X)                      |
|------------------------------------|-------------------------------------|
|                                    | TRANSVERSE FLASHING<br>OVER ROOFING |
| SITUATION 1 (1)                    | 130 (3)                             |
| SITUATION 2 (2)                    | 200 (3)                             |

A ROLL TOP VERSION CORRUGATED PROFILE  
1:5

NOTES:

- These details are generally in compliance with E2/A5.1 and/or the NZ Metal Roof & Wall Cladding Code of Practice and in some cases specific details by 'Roofing Industries'.
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- Details of the supporting structure including cavity battens are indicative only and are the responsibility of the building designer. For steel framed buildings thermal break cavity battens may be required.
- Underlay selection and building wrap types are the responsibility of the designer. Netting or other support is generally required at roof pitches less than 8° degrees combined with a self supporting paper. At roof pitches of 8° and above where non self supporting paper is used or purlin spacing is in excess of self supporting criteria, netting or other support should be used. Alternative support to netting should be used in severe coastal environments including when aluminum is used.
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| ROOF PITCH | DISTANCE Y mm |             |
|------------|---------------|-------------|
|            | SITUATION 1   | SITUATION 2 |
| 8°         | N/A           | 218         |
| 10°        | 167           | 217         |
| 15°        | 162           | 212         |
| 20°        | 156           | 206         |
| 25°        | 150           | 200         |
| 30°        | 143           | 193         |
| 35°        | 134           | 184         |
| 40°        | 125           | 175         |
| 45°        | 115           | 165         |

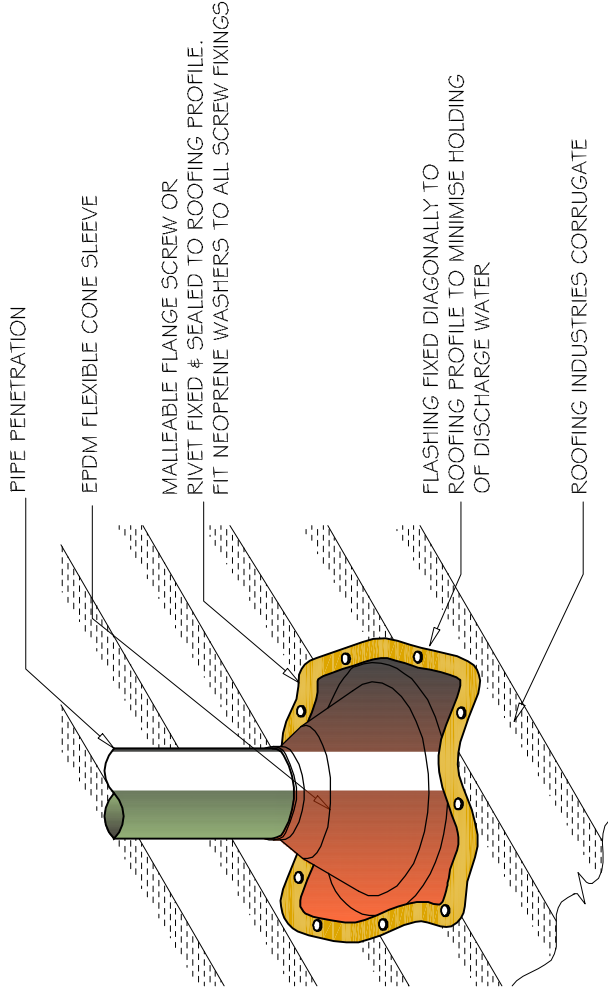
FOR STANDARD 50mm FURLINS ON FLAT

RESIDENTIAL CORRUGATE  
EPDM FLASHING FOR UP TO 85mm DIA PIPE

DETAIL NO. RCRO14A

DATE DRAWN 15/11/11

FILE REFERENCE RI-RCRO14A.DWG



NOTES:

- (1) FOR PIPES UP TO 85mm DIAMETER.
- (2) MAX ROOF PITCH FOR THIS FLASHING 45°, MIN PITCH 10°
- (3) MAXIMUM ROOF LENGTH ABOVE PENETRATION NOT TO EXCEED 12.0 METRES.
- (4) ALSO REFER TO NZ METAL ROOF & WALL CLADDING CODE OF PRACTICE.

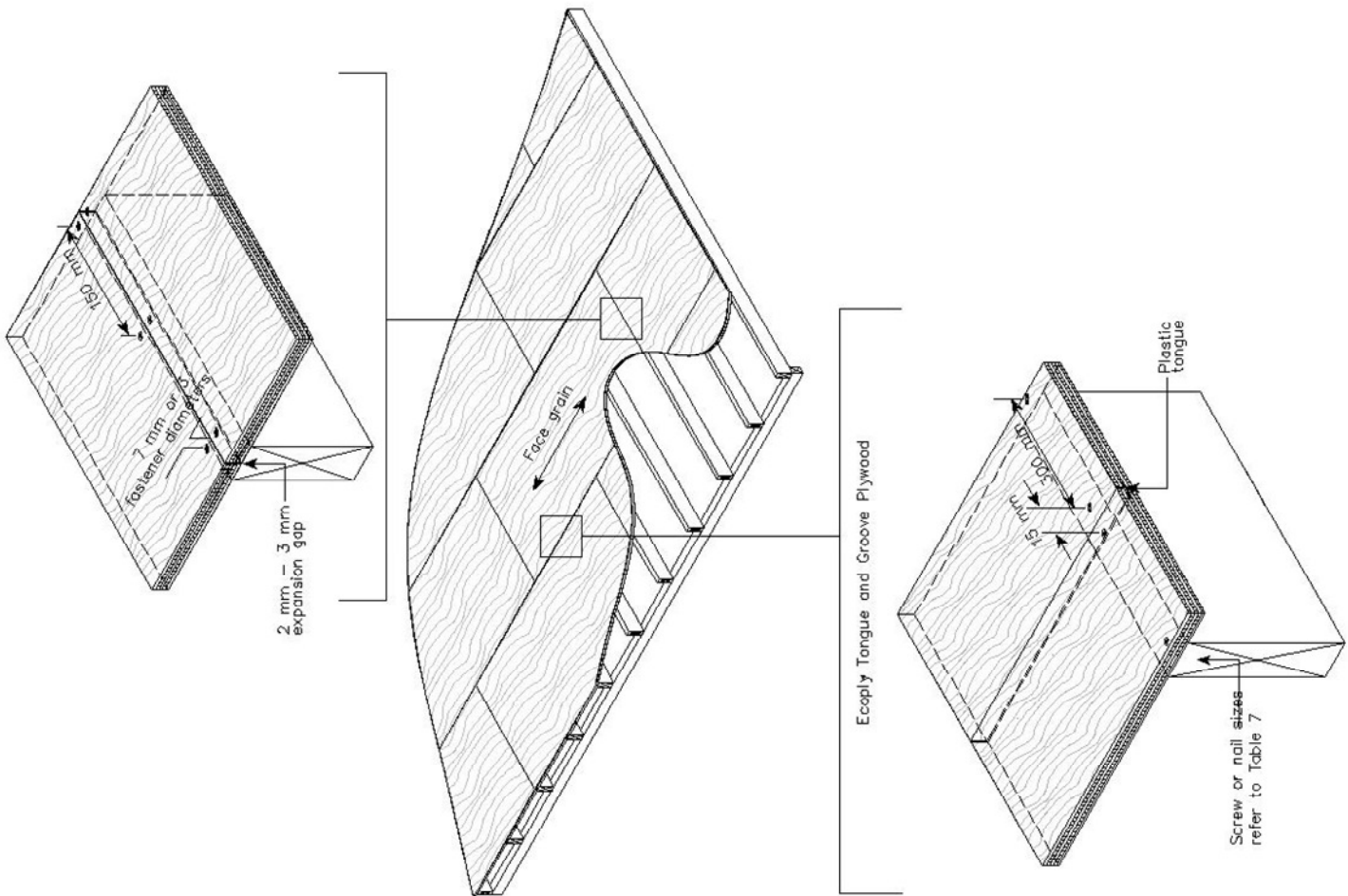
NOTES:

- These details are generally in compliance with E2/A5.1 and/or the NZ Metal Roof & Wall Cladding Code of Practice and in some cases specific details by 'Roofing Industries'.
- The building designer is ultimately responsible to ensure that details used meet the requirements of the NZ Building Code for the specific project.
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- Underlay selection and building wrap types are the responsibility of the designer. Netting or other support is generally required at roof pitches less than 8° degrees combined with a self supporting paper. At roof pitches of 8° and above where non self supporting paper is used or purlin spacing is in excess of self supporting criteria, netting or other support should be used. Alternative support to netting should be used in severe coastal environments including when aluminum is used.
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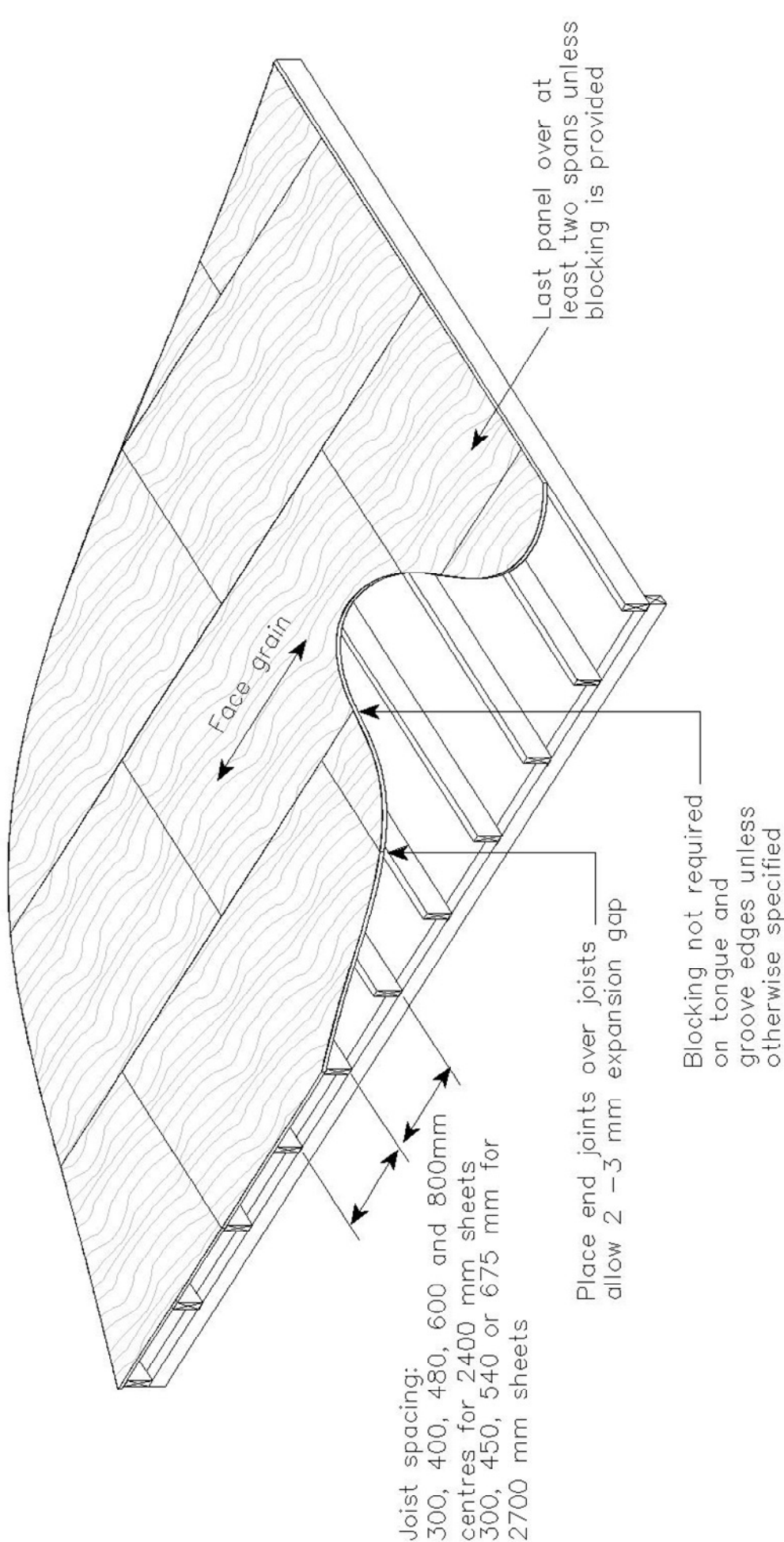
Drawing Number

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EC002: Fastener spacings from edges

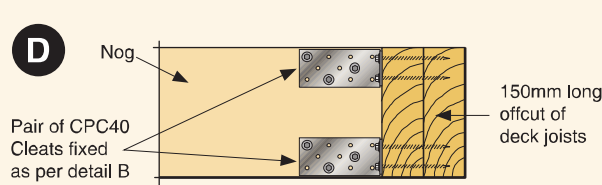
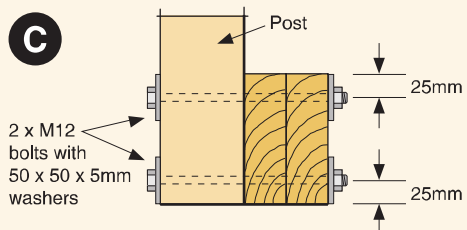
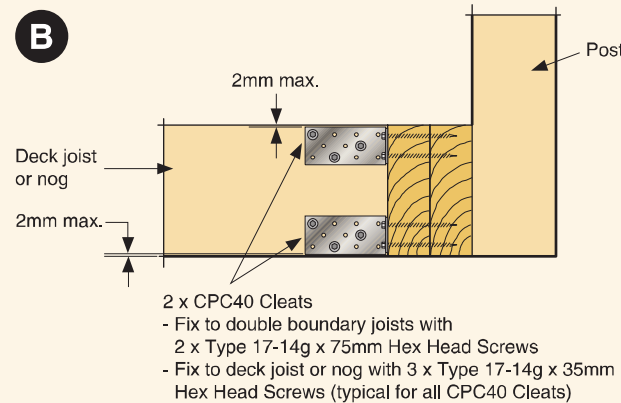
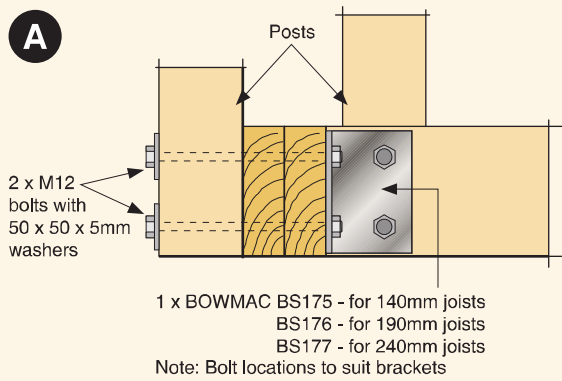
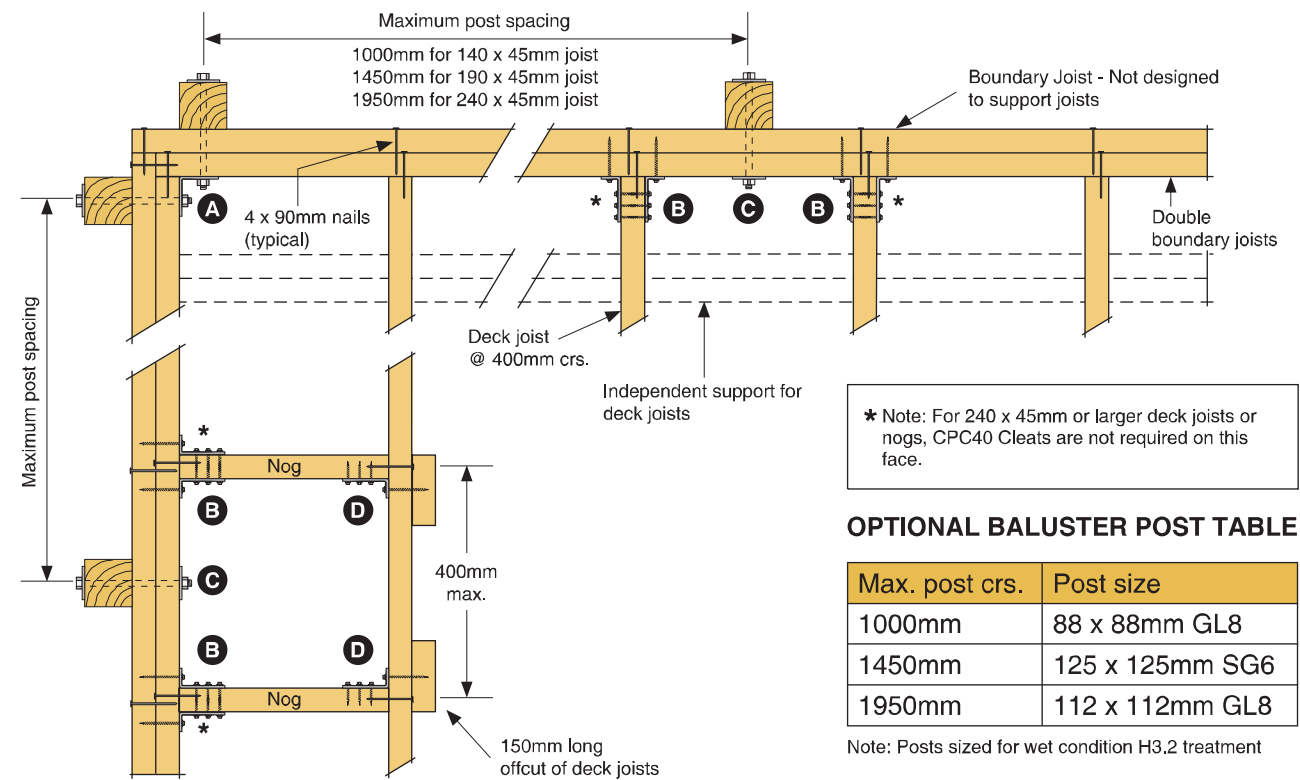


EC007: Ecoply® Flooring layout

FACE FIXED BALUSTER POSTS



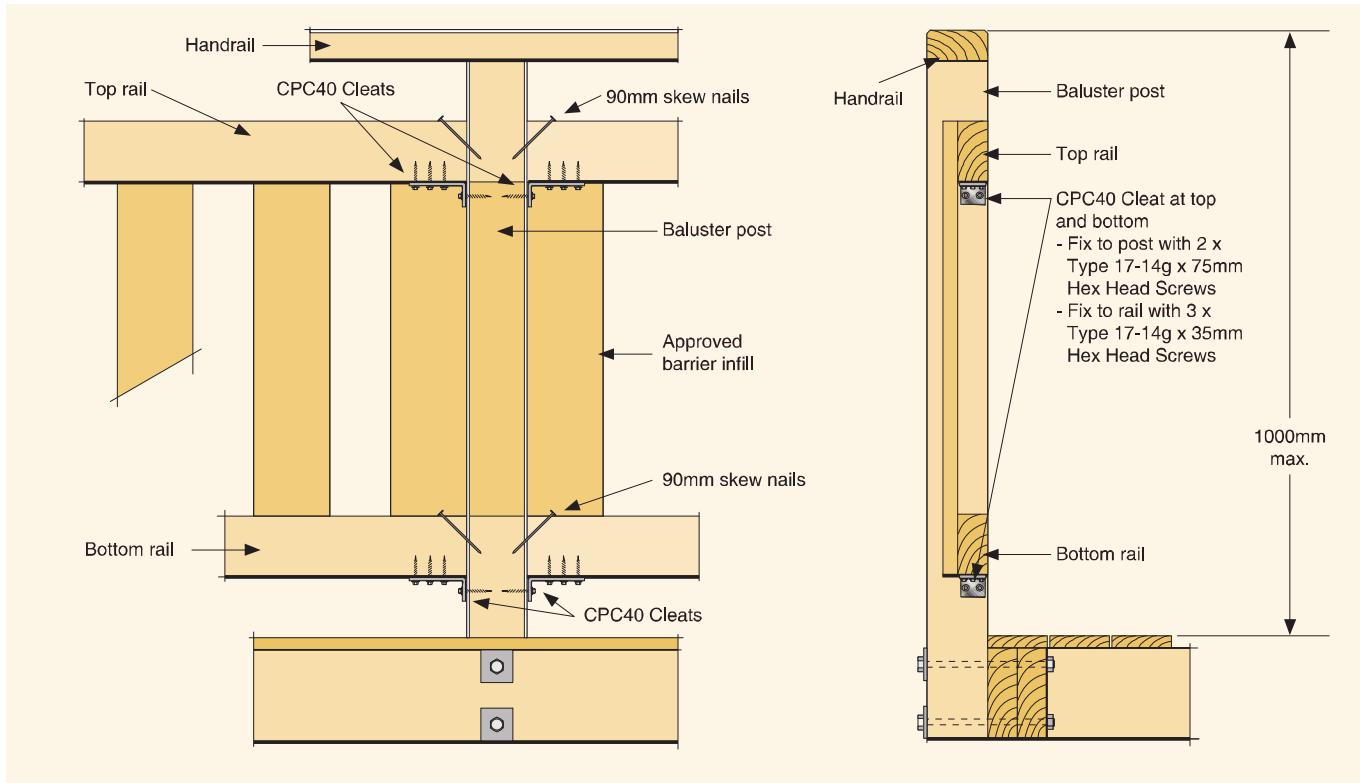
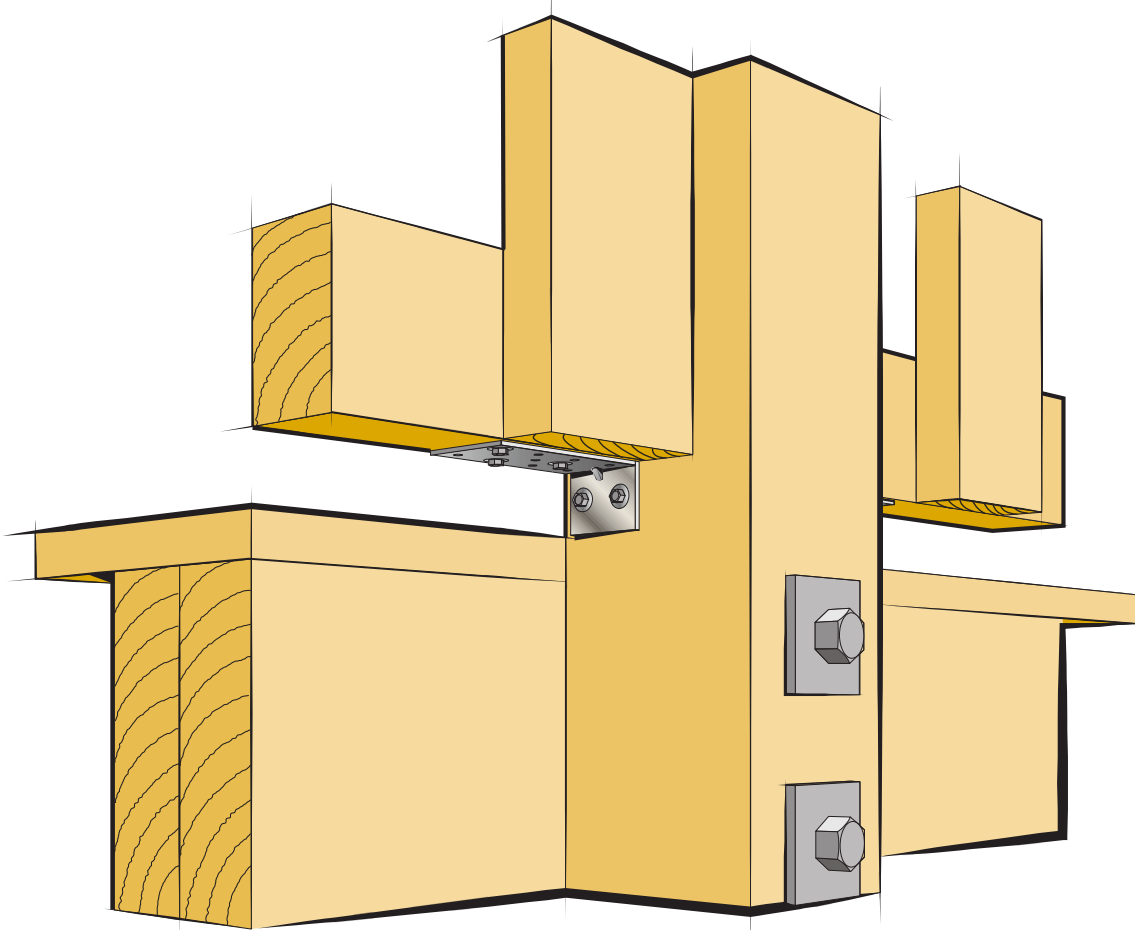
- Complies with Table 3.3 AS/NZS 1170.1:2002 for horizontal load of 0.75kN/m on handrail
- All fixings are designed to provide adequate rotational stability to the handrail system to resist the horizontal load at top of baluster post
- Assumes an approved post and balustrade system is used



BALUSTER POST TO RAIL FIXING



- Covers post/rail fixing only
- Approved or engineered deck baluster post and rail must be used



NEW ZEALAND BUILDING CODE

E3.3.4 requires impervious and easily cleaned surfaces to all surfaces adjacent to sanitary fixtures or laundering facilities.

E3.3.5 requires that surfaces of building elements likely to be splashed or contaminated in the course of the intended use of the building must also be impervious and easily cleaned.

E3.3.6 requires that surfaces of building elements likely to be splashed must be constructed in a way that prevents water from penetrating behind linings or into concealed spaces (e.g. wall cavities).

Walls in wet areas therefore need to be addressed according to whether they fall within the scope of one of the following descriptions:

1. Wall surface likely to be splashed
2. Shower walls. Although not a requirement of NZBC it is highly recommended that the wall surfaces within 150mm of the top edge of a bath, and the vertical faces immediately under the edge of a bath, are treated in the same way as for a shower wall.

WALL SURFACES IN AREAS LIKELY TO BE SPLASHED

- Suitable linings include:
- a. Integrally waterproof sheet material (e.g. polyvinylchloride) with sealed joints
  - b. Ceramic or stone tiles having 6% maximum water absorption, waterproof grouted joints, and bedded with an adhesive specified by the tile manufacturer as being suitable for the tiles, substrate material and the environment of use
  - c. Cement based solid plaster or concrete having a steel trowel or polished finish (semi-gloss or gloss paint must be used if a paint finish is required)
  - d. Cork tile or sheet sealed with waterproof applied coatings
  - e. Monolithic applied coatings having a polished, non-absorbent finish (e.g. terrazzo)
  - f. Sheet linings finished with vinyl coated wallpaper, or semi-gloss or gloss coating
  - g. Water resistant sheet linings finished with decorative high pressure laminate or factory applied polyurethane or resin
  - h. Modular or multiple lining units which are themselves *impervious* and easily cleaned, and are installed with *impervious* joints
  - i. Timber or timber-based products such as particleboard sealed with waterproof applied coatings.

**NB: Floor surfaces and floor/wall junctions are required by E3 to be impervious.**

SURFACES IN SHOWERS AND AROUND BATHS

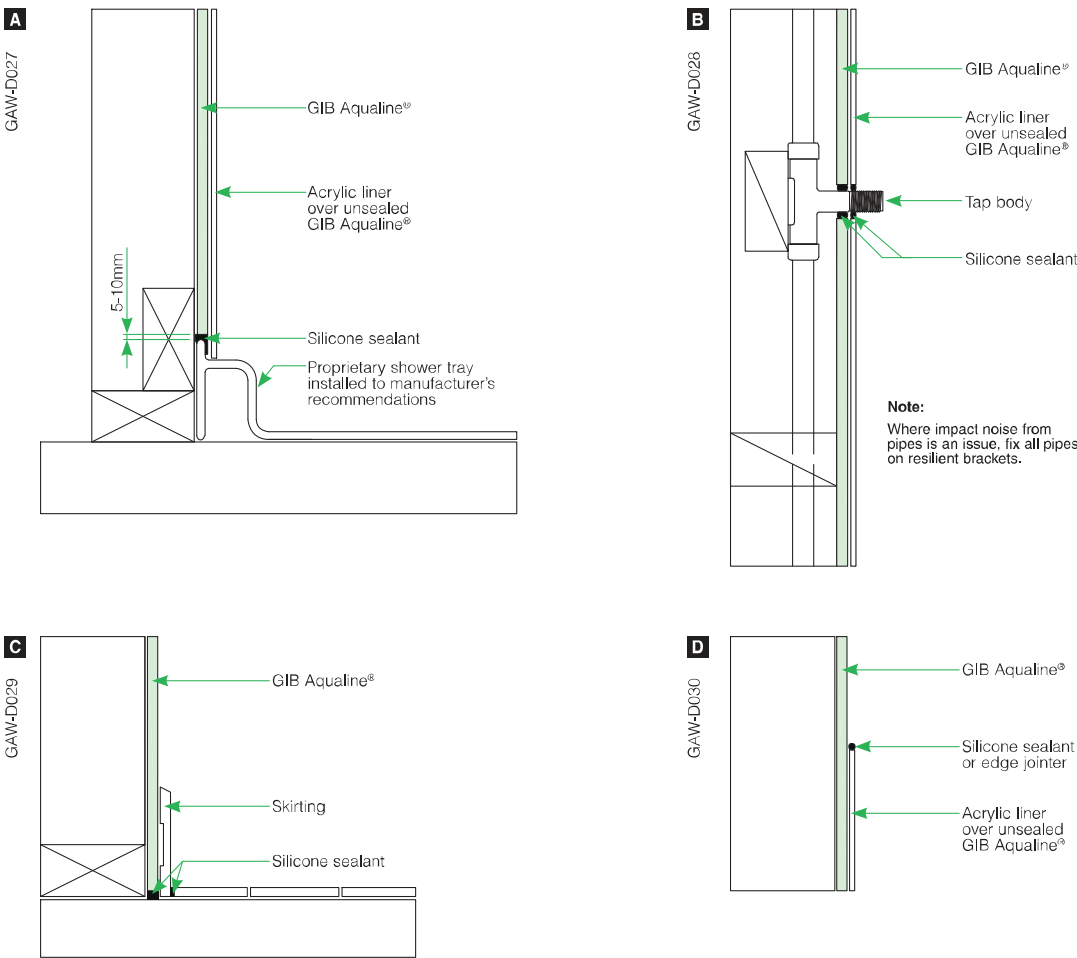
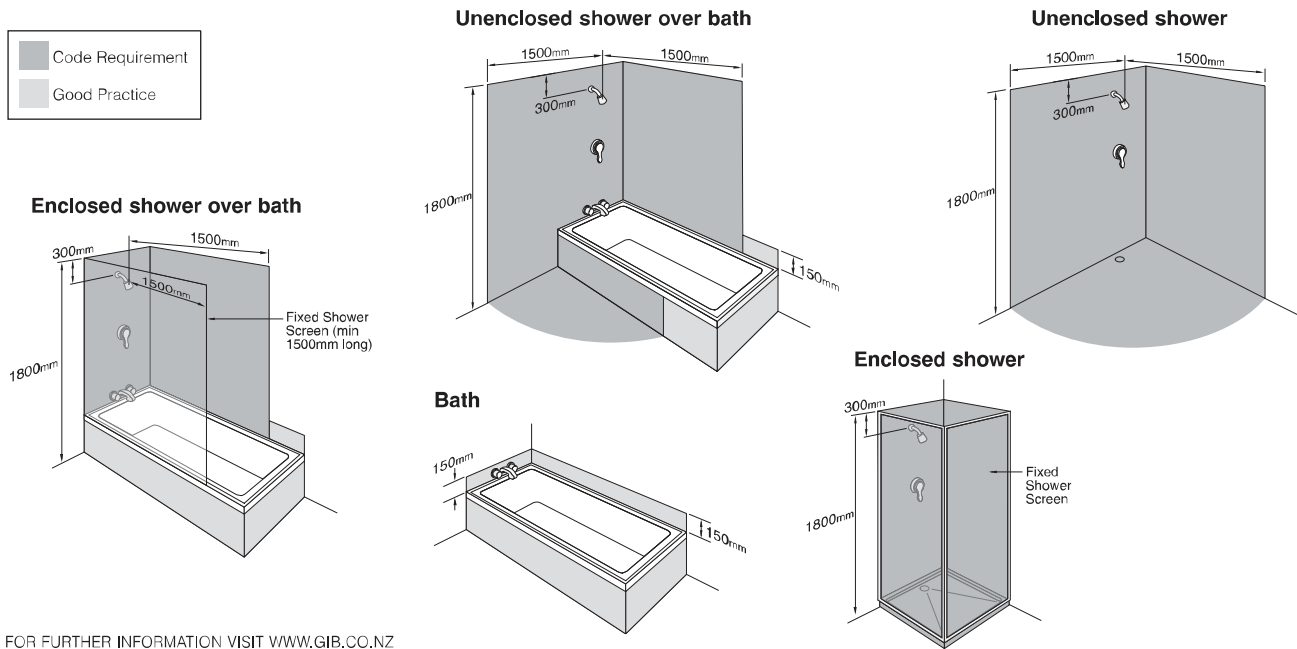
Suitable linings include all of the above, but **NOT including items (d) and (f) from the above list.**

Note that a waterproof membrane complying with AS/NZS 4858: 2004 **MUST** be applied to all lining materials used under ceramic tiles in these areas.

The waterproof membrane must extend to a 1500mm horizontal radius from a shower rose unless the shower is contained within a fixed enclosure. A shower curtain does not constitute a fixed enclosure.

Particleboard manufacturers recommend that in wet areas, panels should be protected with a suitable wet area membrane or an integrally waterproof sheet material. Some local authorities call for this treatment on all timber based floors. Local requirements should be checked before proceeding.

**Dark grey shaded areas in the diagrams below represent the minimum extent of wall surfaces requiring impervious sheet materials or waterproof membranes prior to tiling. Light grey shaded areas represent good practice.**



| SCHEDULE OF FINISHES |                                                                                                                                                                                                |                                                                                                                                |                                                                               |                                                                                                                            |                                                                          |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| ROOM                 | FLOOR                                                                                                                                                                                          | WALLS                                                                                                                          | CEILING                                                                       | TRIM                                                                                                                       | DOORS                                                                    |
| BEDROOMS             | Owner selected finish                                                                                                                                                                          | 10mm Standard gib LVL4 finish.                                                                                                 | 13mm Gib ultraline level 4 finish.                                            | Plaster square stopped scotia line.<br>60x10mm single bevel architrave.<br>60x10mm single bevel skirting. (paint finished) | 35mm hollow core custom<br>2.1m head height.<br>Owner selected hardware. |
| LIVING               | Owner selected finish                                                                                                                                                                          | 10mm Standard gib LVL4 finish.                                                                                                 | 13mm Gib ultraline level 4 finish.                                            | Plaster square stopped scotia line.<br>60x10mm single bevel architrave.<br>90x10mm single bevel skirting. (paint finished) |                                                                          |
| MASTERBED            | Owner selected finish                                                                                                                                                                          | 10mm Standard gib LVL4 finish.                                                                                                 | 13mm Gib ultraline level 4 finish.                                            | Plaster square stopped scotia line.<br>60x10mm single bevel architrave.<br>90x10mm single bevel skirting. (paint finished) | 35mm hollow core custom<br>2.1m head height.<br>Owner selected hardware. |
| BATHROOM             | Owner selected finish                                                                                                                                                                          | 10 mm aqua line gib LVL4 finish<br>Acrylic shower wall liner<br>Tiled splash backs.<br>Impervious easy to clean paint coating. | 13mm aqua line gib LVL4 finish<br><br>Impervious easy to clean paint coating. | Plaster square stopped scotia line.<br>60x10mm single bevel architrave.<br>90x10mm single bevel skirting. (paint finished) | 35mm hollow core custom<br>2.1m head height.<br>Owner selected hardware. |
| KITCHEN              | Owner selected finish                                                                                                                                                                          | 10mm gib LVL4 finish.<br>Impervious easy to clean paint coating.<br>Glass splash back behind stove.                            | 13mm Gib ultraline level 4 finish.                                            | Plaster square stopped scotia line.<br>60x10mm single bevel architrave.<br>90x10mm single bevel skirting. (paint finished) | 35mm hollow core custom<br>2.1m head height.<br>Owner selected hardware. |
| GARAGE/LAUNDRY       | Owner selected finish                                                                                                                                                                          | 10mm gib LVL4 finish.<br>10 mm aqua line gib LVL4 finish<br>Around laundry area<br>Impervious easy to clean paint coating.     | 13mm Gib ultraline level 4 finish.                                            | Plaster square stopped scotia line.<br>60x10mm single bevel architrave.<br>90x10mm single bevel skirting. (paint finished) | 35mm hollow core custom<br>2.1m head height.<br>Owner selected hardware. |
|                      |                                                                                                                                                                                                |                                                                                                                                |                                                                               |                                                                                                                            |                                                                          |
|                      |                                                                                                                                                                                                |                                                                                                                                |                                                                               |                                                                                                                            |                                                                          |
|                      |                                                                                                                                                                                                |                                                                                                                                |                                                                               |                                                                                                                            |                                                                          |
|                      |                                                                                                                                                                                                |                                                                                                                                |                                                                               |                                                                                                                            |                                                                          |
|                      |                                                                                                                                                                                                |                                                                                                                                |                                                                               |                                                                                                                            | All 2.1 doors to have<br>3 x hinges, brushed alloy<br>finish.            |
| DECK                 | Build entrance porch and patio deck in<br>accordance with<br>the NZBC , Deck not attached to dwelling<br>at ground level , Ensure 12mm gap between<br>deck structure<br>and dwelling cladding. |                                                                                                                                |                                                                               | <div><div>the</div><div>DRAUGHTSMAN</div><div>LTD</div><div>dream it • draw it • build it</div></div>                      |                                                                          |