

Project: Bathroom Wing Rebuild
at Waihaua Marae
449 Arapaoa Rd, Tinopai

For: Waihaua Marae



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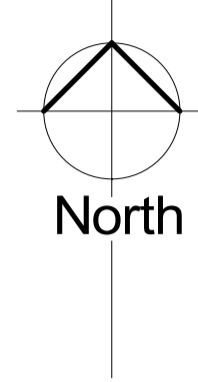
Written Dimensions take precedence over scaled dimensions.
These Drawings shall be read in conjunction with the relevant specifications and specific design
Construction practices shall be in accordance with NZS 3604 2011, relevant New Zealand Standards
and the current New Zealand Building Code
The contractor shall check and verify all dimensions on site. Any discrepancy shall be
referred to the Designer

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Orcan Design

Designing Homes with Attitude

Waihau A4B block



Site Description		
Address		
Legal Description	Waihau A4A Block	
Site Address	449 Arapaoa Rd, Arapaoa	
Site Area	4,023 m ²	
Town Planning		
Zoning	Rural Harbour Overlay	
Moari Purpose	Moari Purpose	
Purpose	Set Apart as a Moari Reservation for the purpose of a meeting-house site and Marae for the common use and benefit of the Moari people of the district	
Road Boundary Dwelling	10.0m	Existing
Side Boundary	3.0m	Complies
Rear Boundary	3.0m	Complies
Coastal Set Back	30.0m	Complies
Maximum Height	8.0m	Complies
Recession Plane	3.0m 45deg	Complies
Site Coverage	Existing	775.0m ² Driveway and Parking - Gravel
		249.2m ² Rear Service Area - Gravel
		316.8m ² Paving - Concrete includes covered
		367.0m ² Meeting House, Dining, Kitchen
		62.3m ² Toilet Block
		25.0m ² Shed
		28.5m ² 3/ Water Tanks
Total Existing	1,823.8m² 45.3%	Impervious Surface
Demolished	62.3m ² Toilet Block	
	29.9m ² Toilet Block Verandah & Paving	
	36.0m ² Rear Shed	
Total Demolition	128.2m²	
Proposed	762.5m ² Driveway and Parking - Gravel	
	222.2m ² Rear Service Area - Gravel	
	287.9m ² Paving - Concrete	
	367.0m ² Meeting House, Dining, Kitchen	
	89.8m ² Bathroom Wing	
	62.1m ² Cover Decking to Bathroom	
	47.5m ² 5/ Water Tanks	
Total Existing	1,839.0m² 45.7%	Impervious Surface
Allowable	402m ² 10%	Existing Infringement
The existing buildings and developed areas significantly infringe the site coverage. The proposed works will be built over the existing building footprint and the existing gravel service area. The existing shed will be removed as part of the works. So the only additional site coverage is from the 2 additional Rainwater Storage Tanks.		
Earthworks	Area	<300m ² Allowable
	Volume	152m ³ Area of Building and Decks
		<300m ³ Allowable
		0m ³ Site Cut
		14m ³ Footings
	Depth	<2.0m Allowable
		0.6m Footing depth
Construction Zones		
Wind	High Wind	
Corrosion	Zone "D"	
Soil Type	Expansive Clays	
Snow Loading	Nil	
Flooding	None Known	
Building		
Existing	454.3m ²	
Demolished	87.3m ²	
Proposed Bathroom Wing	89.8m ²	
Proposed Covered Deck	62.1m ²	
Finished Project	518.9m ²	

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These Drawings shall be read in conjunction with the project and manufacturers specifications.

Construction practices shall be accordance with the NZ Building Code and relevant NZ Standards.

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Notes:

Building Consent

Issue Dates:

27 October 2020	Preliminary Design Proposal
24 May 2021	Preliminary Design Two
26 June 2021	Preliminary Design Two
24 October 2021	Preliminary Design Three

Revision Schedule

Ref.	Description	Date



279 Mountain Rd, RD 2, Maungaturoto 0587
Ph 09 431-2827 or mob 027 292-8820
email stephen@orcandesign.org

Project: No: **CD 765**
Bathroom Block Rebuild

Address:
Waihau Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

Drawn By: *Stephen Orchard*

Scale: **As indicated**

Existing Site Plan

Sheet:

100a

Waihaua A4B block



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**Waihaua Marae
449 Arapaoa Rd
Tinopai 0593**

Client: **Waihaua Marae**

Drawn By: *Stephen Orchard*

Scale: **1 : 150**

Proposed Site Plan

101 Proposed Site Plan
1 : 150

Sheet:

101a

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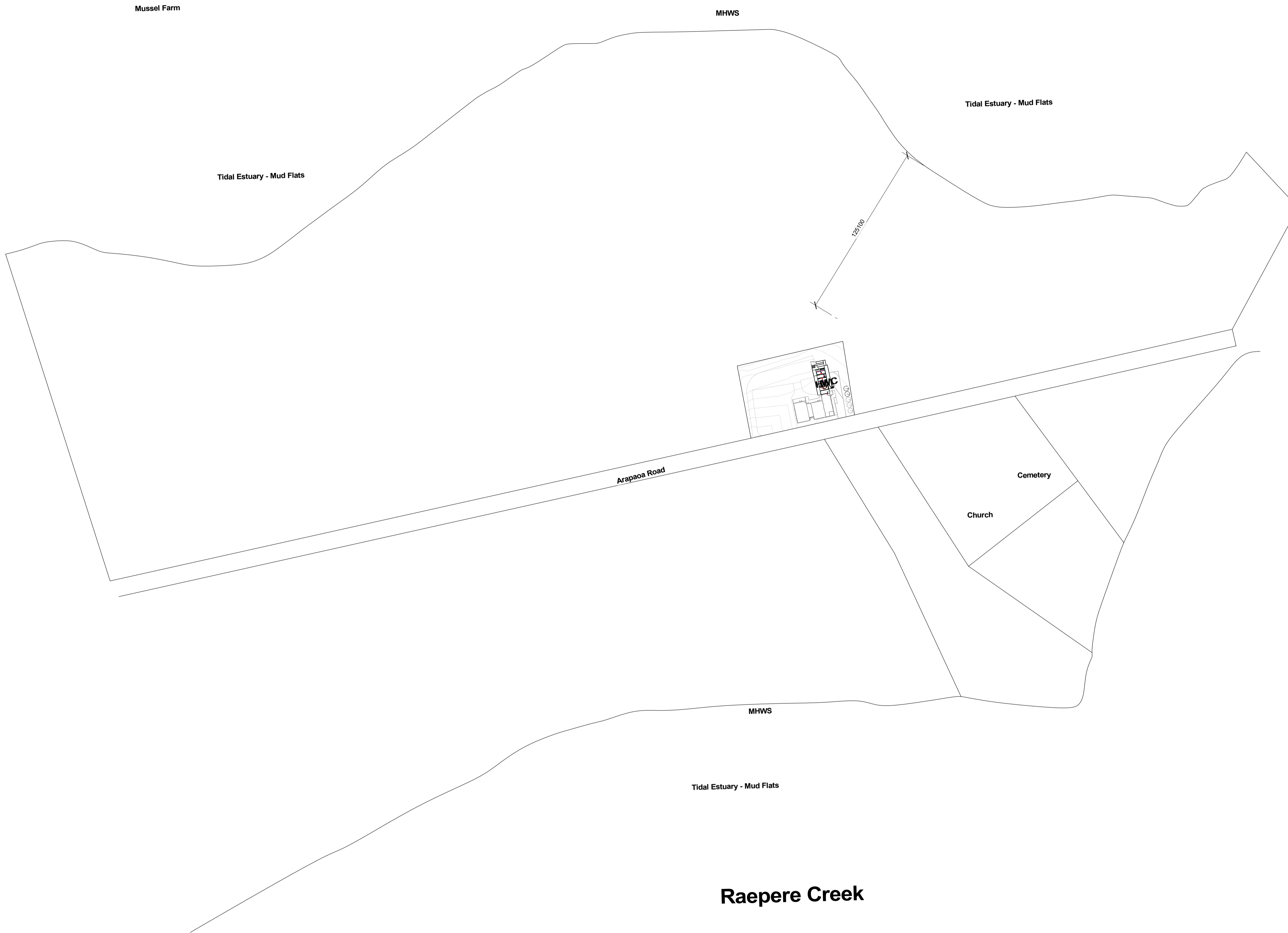
Site Plan with Aerial Phto

Sheet:

102a



Kirikiri Inlet



1 103 Area Plan
1 : 1500

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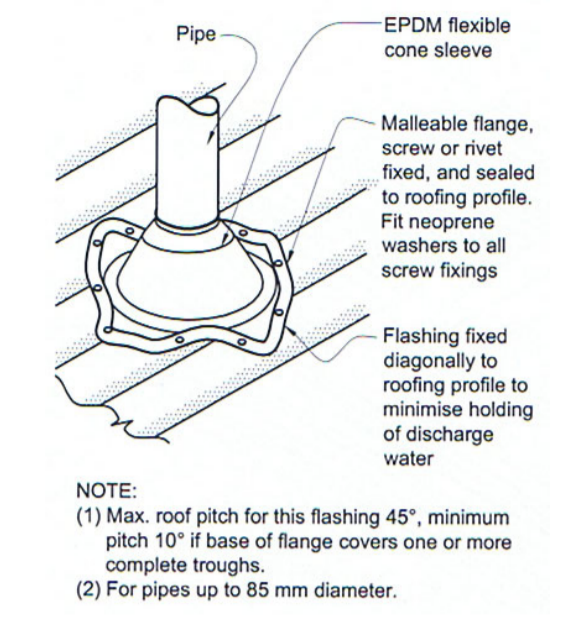
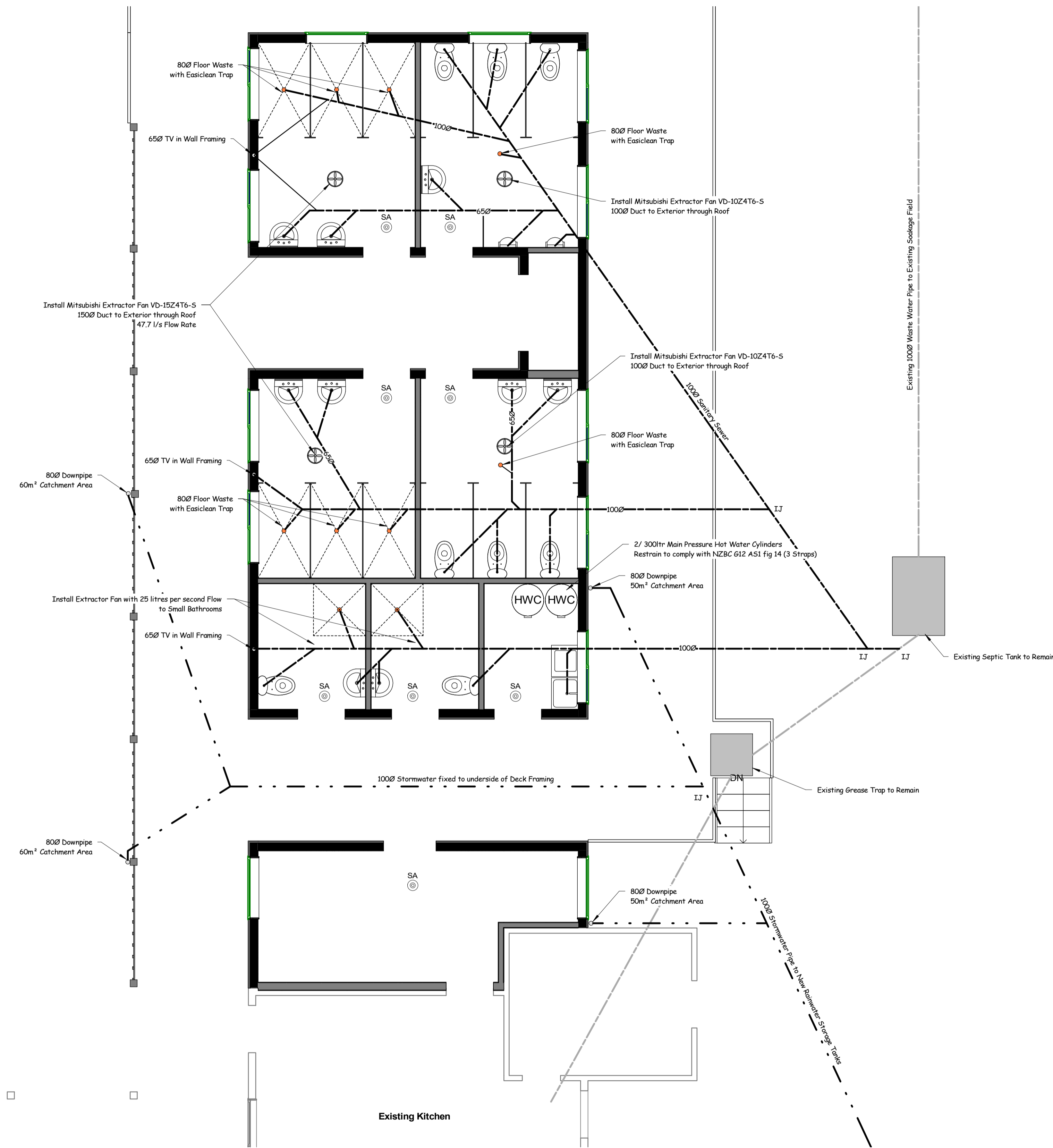
Drawn By: *Stephen Orchard*

Scale: **1 : 1500**

Area Plan

Sheet:

103a



Terminal Vent Detail

Fire Protection Notes

Smoke Alarms SA

Smoke alarms shall be installed as per NZBC F7 AS1
The Smoke Alarm system shall be checked 6 months to ensure all detectors are working properly. All dust shall be removed from the detectors at this time.
Install Smoke Alarms 300mm min away from Wall Ceiling Junction

Drinking Water Filtration

Filtration Type	Installed
Inline Cartridge	Installed between the first flush Diverter & Inlet
Combination Filtration UV Disinfection System	Installed between the outlet and pump

Instruction of Maintenance Requirements to be provided to owner

Surface Finishes

Walls	
Laundry & Storage	Semigloss Acrylic Enamel 2 Undercoats & 2 Top Coats
Bathrooms	Prefinished Hole Compact 3mm Panel
Bathroom Partitions	Prefinished Hole Multipurpose 13mm Panel System
Floors	
All Floors	Tarkett Non Slip Vinyl with 100mm Cove & 50mm lap behind Panel
Decks	Outdure ClassDeck
Ceilings	
All Ceilings	Semigloss Acrylic Enamel 2 Undercoats & 2 Top Coats

Notes

Plumbing Code
AS/NZS 3500.2

Plumbing Pipes Sizes

First Floor - Concrete Floor

WC	100Ø	1:60 fall
Vanity	65Ø	1:40 fall
Shower	65Ø	1:40 fall

Terminal Vents 65Ø in wall framing

All bends underslab to be less than 45deg

Drainage Pipe Sizes

Sanitary Sewer	100Ø	1:60 fall
Stormwater	100Ø	Sealed System
Downpipes	80Ø	Morley

Rainwater Calculations
from E1 AS1 & Continuous Spouting Website
Rainfall Intensity 100mm for a 10% probability of 100mm in 10 minutes from (Appendix A)
125mm Sq Spouting Size 8435mm²
Roof Discharging to Gutter 60m² @ 100mm Rainfall for >25° Roof Pitch from (fig 15)
80mm dia Downpipe 85m² from (Table 5)

1 110 Services Plan
1 : 50

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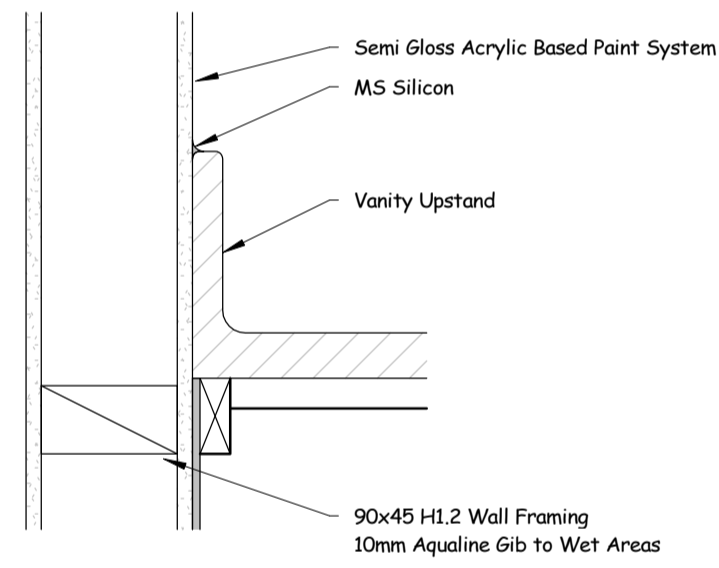
Client: **Waihaia Marae**

Drawn By: *Stephen Orchard*
Scale: **As indicated**

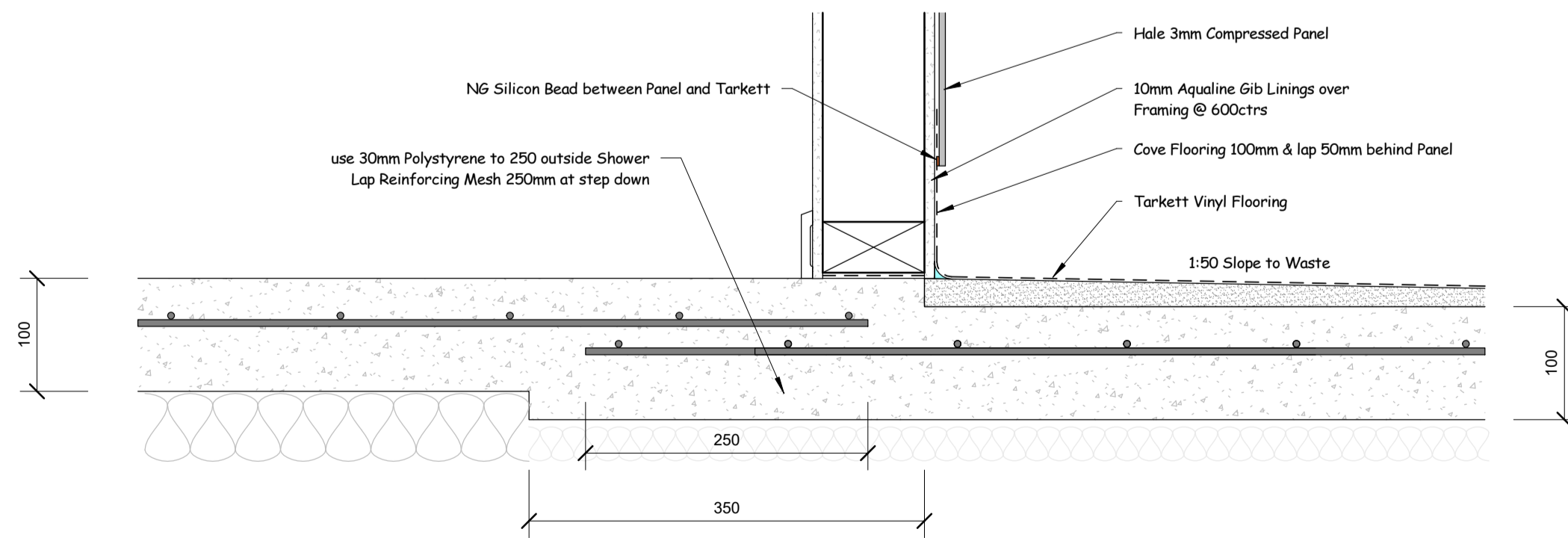
Services Plan



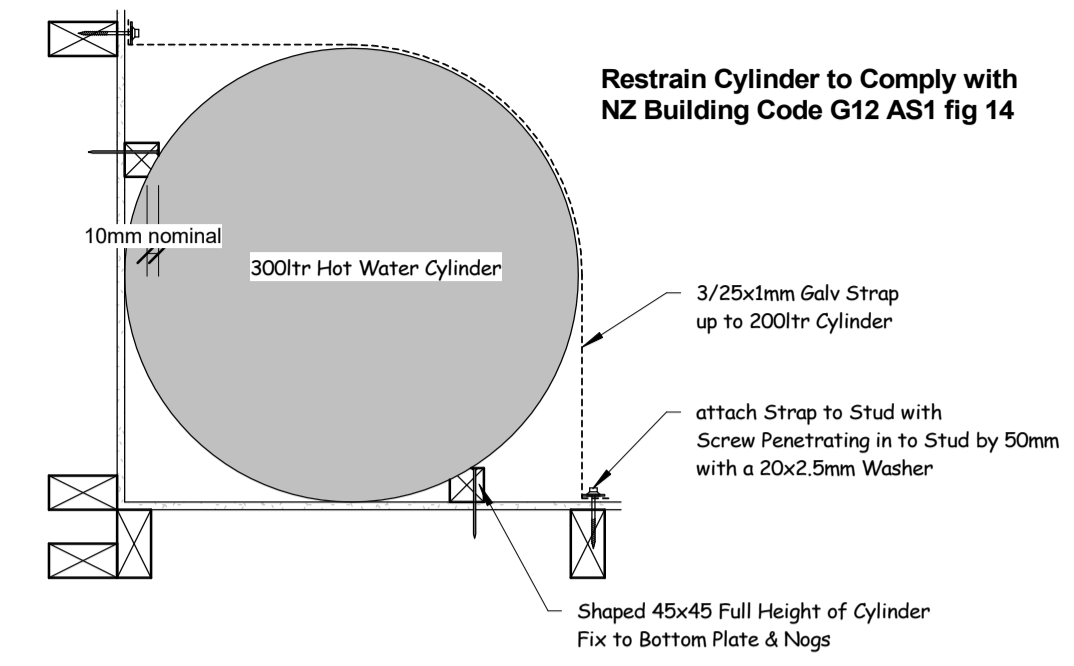
3 Toilet Installation 1 : 5



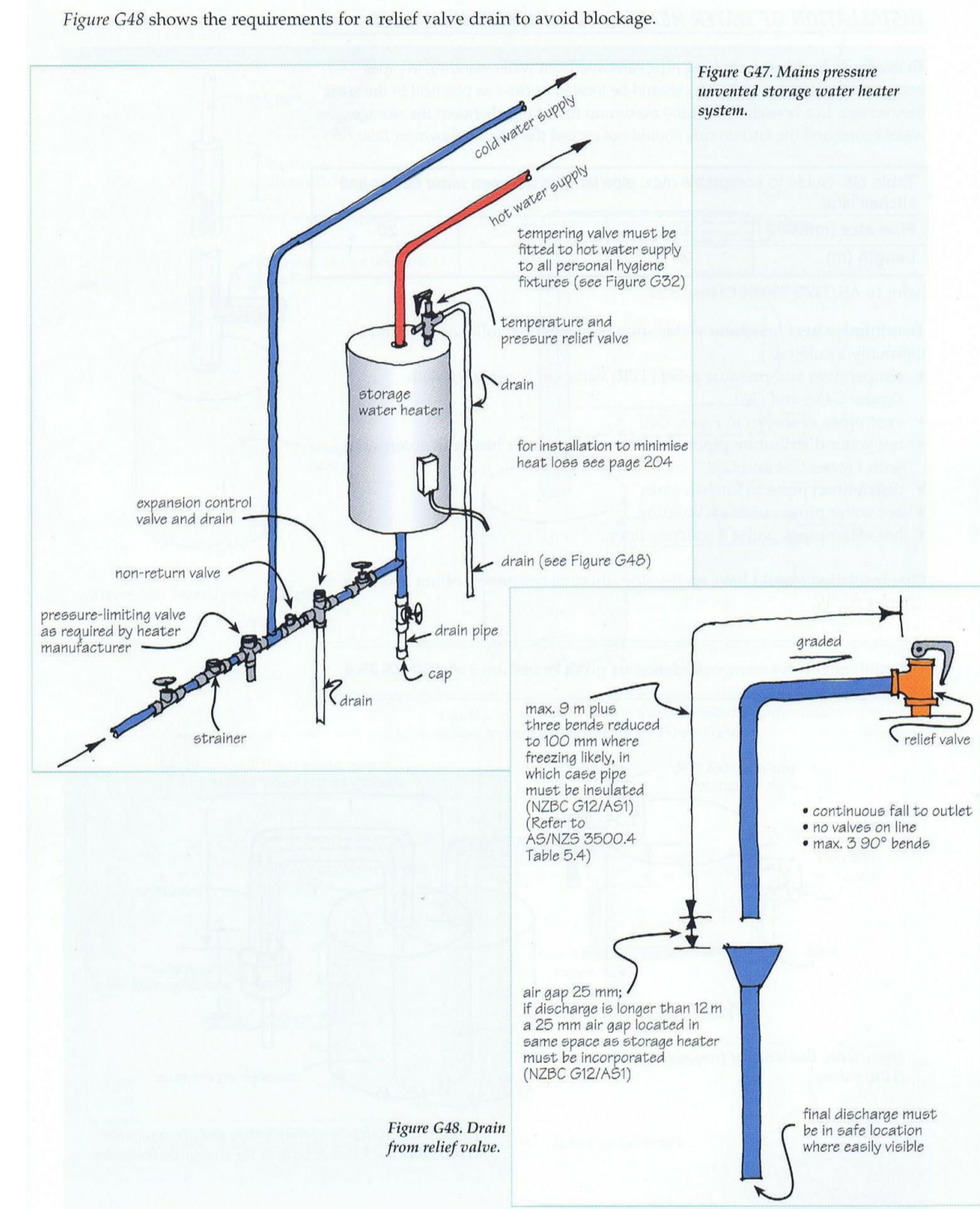
4 Vanity to Wall Detail 1 : 5



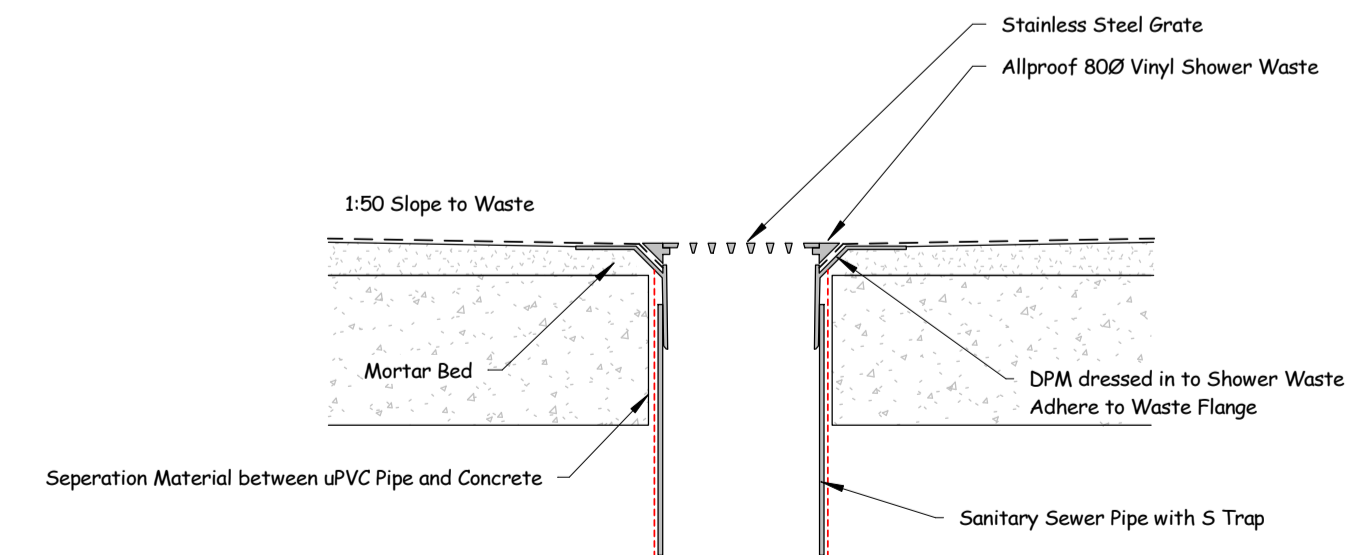
5 Tarkett to Wall Detail 1 : 5



1 HWC Restraint Detail 1 : 10



2 HWC Valve Train 1 : 5



6 Tarkett Shower Waste & Floor Waste Gully 1 : 5

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Drawn By: *Stephen Orchard*

Scale: **As indicated**

Service Plan Details

Sheet:

111a

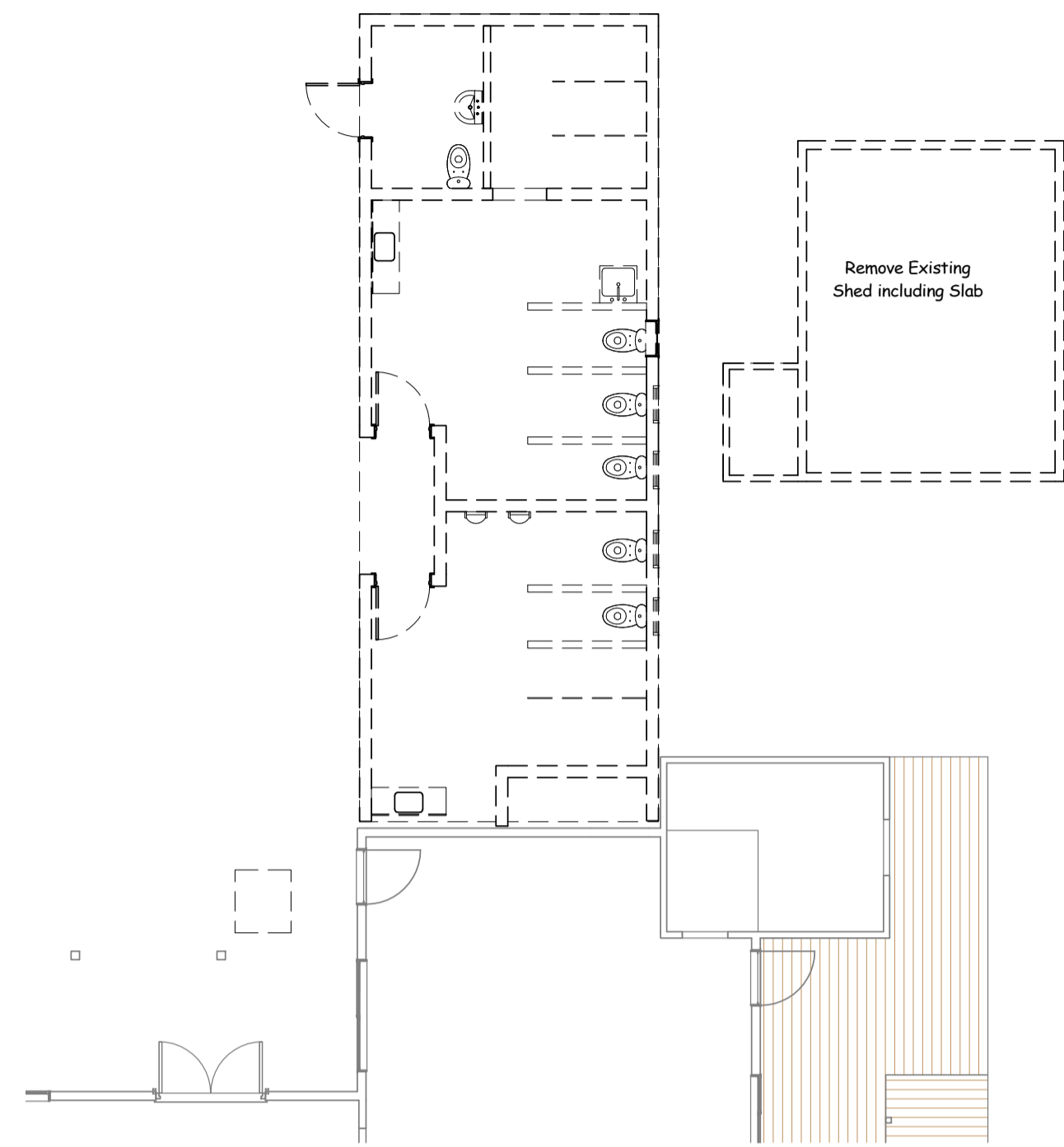
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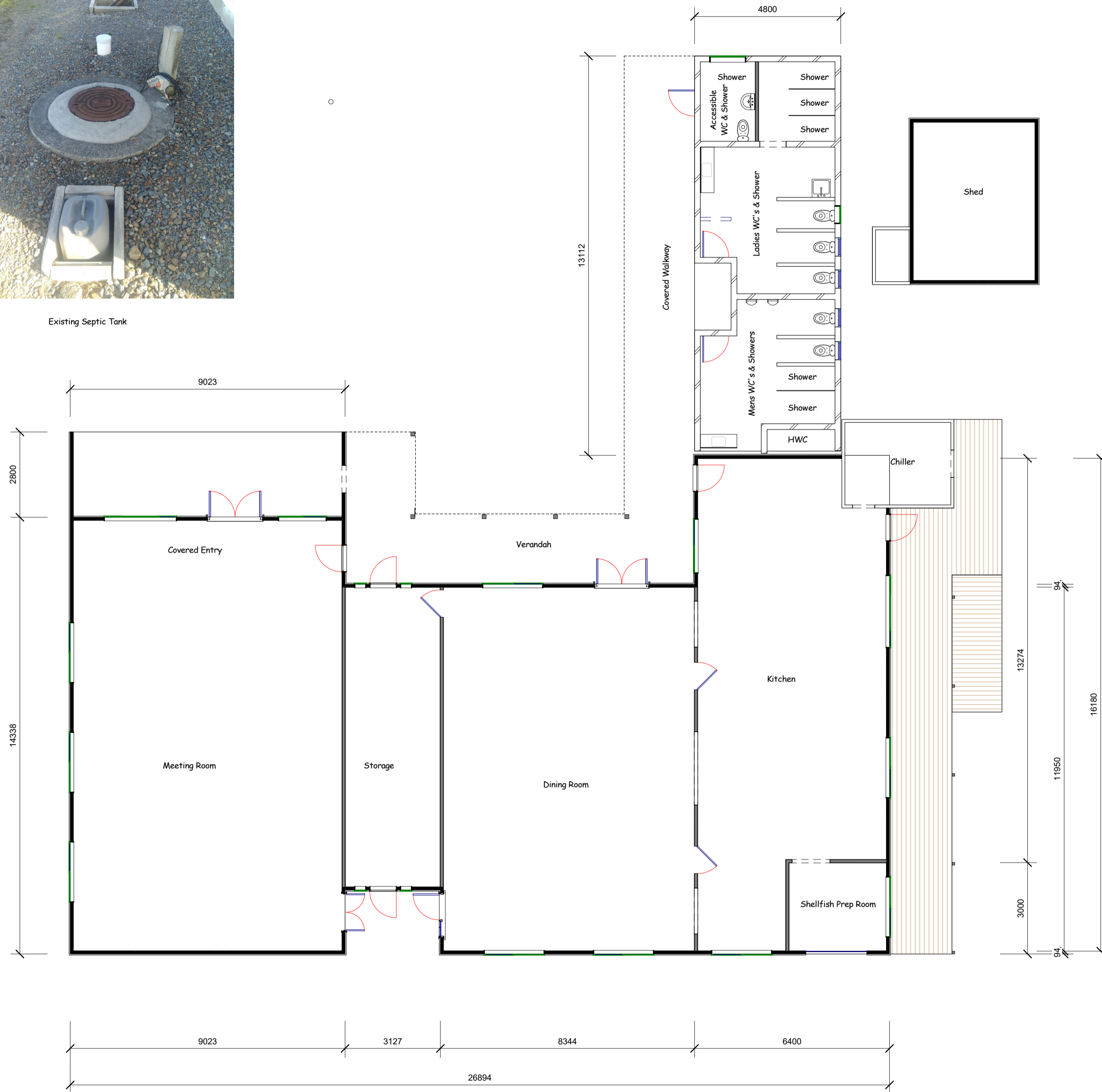


Remove Existing Bathroom Wing Including
 - Slab, Walls and Roof
 - Bathroom Fittings
 - Drainage Pipework

2 300 Demolition Plan
 1 : 100



Existing Septic Tank



1 200 Existing Floor Plan
 1 : 100

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449 Arapaoa Rd
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Client: **Waihua Marae**

Drawn By: *Stephen Orchard*

Scale: **1 : 100**

Existing Floor Plan

Sheet:

200a



Shed and End of Existing Bathroom Block
 All to be Demolished



Existing Kitchen showing end Wall where Bathroom Rebuild Joins



Existing Chiller - New Roof partially covers the Chiller Room



Existing Screened Walkway beside Toilet Block
 To be Demolished

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Notes:
Corrosion Zone D
 This project is within Corrosion Zone D
 All Concrete shall be 25MPa
 All Exterior Fixings shall be 304 Stainless
 All Ecoply Barrier Fixings shall be 304 Stainless
 All Roofing shall be Colorsteel Maxx

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Drawn By: *Stephen Orchard*
 Scale: **As indicated**

Proposed Floor Plan

Sheet: **400a**



Dwelling Window & Door Schedule

XItem	Size	Description	Lintel	Hold Down	Trimming Studs	Sill Trimmer	Comment
W101	500x1200	Storeroom Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	A Grade Toughened Safety Glass
D102	2400x1000	Glazed Aluminium Door	140x90 S68	Type F	1/140x45 + 1 Understud	na	A Grade Toughened Safety Glass
D103	2400x900	Glazed Aluminium Door	140x90 S68	Type F	1/140x45 + 1 Understud	na	A Grade Toughened Safety Glass
D104	2400x900	Solid Aluminium Door	140x90 S68	Type F	1/140x45 + 1 Understud	na	Glass above 2.0m
D105	2400x900	Solid Aluminium Door	140x90 S68	Type F	1/140x45 + 1 Understud	na	Glass above 2.0m
W106	500x1400	Ladies Shower Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
W107	500x1400	Ladies Shower Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
D108	2400x900	Solid Aluminium Door	140x90 S68	Type F	1/140x45 + 1 Understud	na	na
D109	2400x900	Solid Aluminium Door	140x90 S68	Type F	1/140x45 + 1 Understud	na	na
D110	2400x1500	Double Solid Aluminium Door	140x90 S68	Type F	1/140x45 + 1 Understud	na	na
D111	2400x900	Solid Aluminium Door	140x90 S68	Type F	1/140x45 + 1 Understud	na	na
D112	2400x900	Solid Aluminium Door	140x90 S68	Type F	1/140x45 + 1 Understud	na	na
W113	500x1400	Mens Shower Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
W114	500x1400	Mens Shower Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
W115	500x1400	Mens Shower Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
W116	500x1400	Mens WC Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
W117	500x1400	Mens WC Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
W118	500x1400	Mens WC Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
W119	500x1400	Ladies WC Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
W120	500x1400	Ladies WC Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	Opaque A Grade Toughened Safety Glass
W121	500x1400	Laundry Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	A Grade Toughened Safety Glass
W122	500x1400	Laundry Window	140x90 S68	Type F	1/140x45 + 1 Understud	1/140x45	A Grade Toughened Safety Glass

All Glazing to be Double Glazed Insulated Units
 All doors to be Key lockable externally and snib lockable internally. All Doors to be keyed alike
 All Glazing to meet requirement of NZBC F2 AS1 Section 1 & NZS 4223, Part 3 1999
 Restrictor stays limiting the opening to 100mm to be used for all opening sashes
 see Mitek Lintel Detail for Lintel Hold Down Details
 see fig 8.5 NZ3604 2011 for clarification of Trimmer Stud requirements

Ground Floor Notes

Framing	
Load Bearing Walls	
External	140x45 H1.2 KD S68 @ 600 ctrs
Non Load Bearing Walls	
Internal	90x45 H1.2 KD S68 @ 600 ctrs
nogs	90x45 H1.2 KD S68 @ 800 ctrs
Stud to Top Plate Fixings	
With Roof Load	Type "B" for Roof Load Type "A" for Floor Areas
Ceilings	
Ceiling Strapping	70x32 @ 600 ctrs
Treatment	
Wall Framing	H1.2
Cladding	
Building Wrap	Ecoply Barrier
Cavity Batten	H3.2 Timber placed Vertical @ 600ctrs
Walls	Oblique Weather Board over Cavity
Soffits	6mm Hardiflex Sheet
Wall & Ceiling Linings	
Walls	Stone Ldy& Cpd
Bathrooms	12mm Plywood with Gloss Acrylic Paint Finish
Ceilings	13mm Gib Aqualine with Hales 3mm Compact Panel over 13mm Gib Aqualine with Gloss Acrylic Paint Finish
Insulation	
Walls	Earthwool 3.2w 140mm
Ceiling	Earthwool 3.6c 180mm
Floor Coverings	
Tarkett Non Slip Vinyl	All Rooms

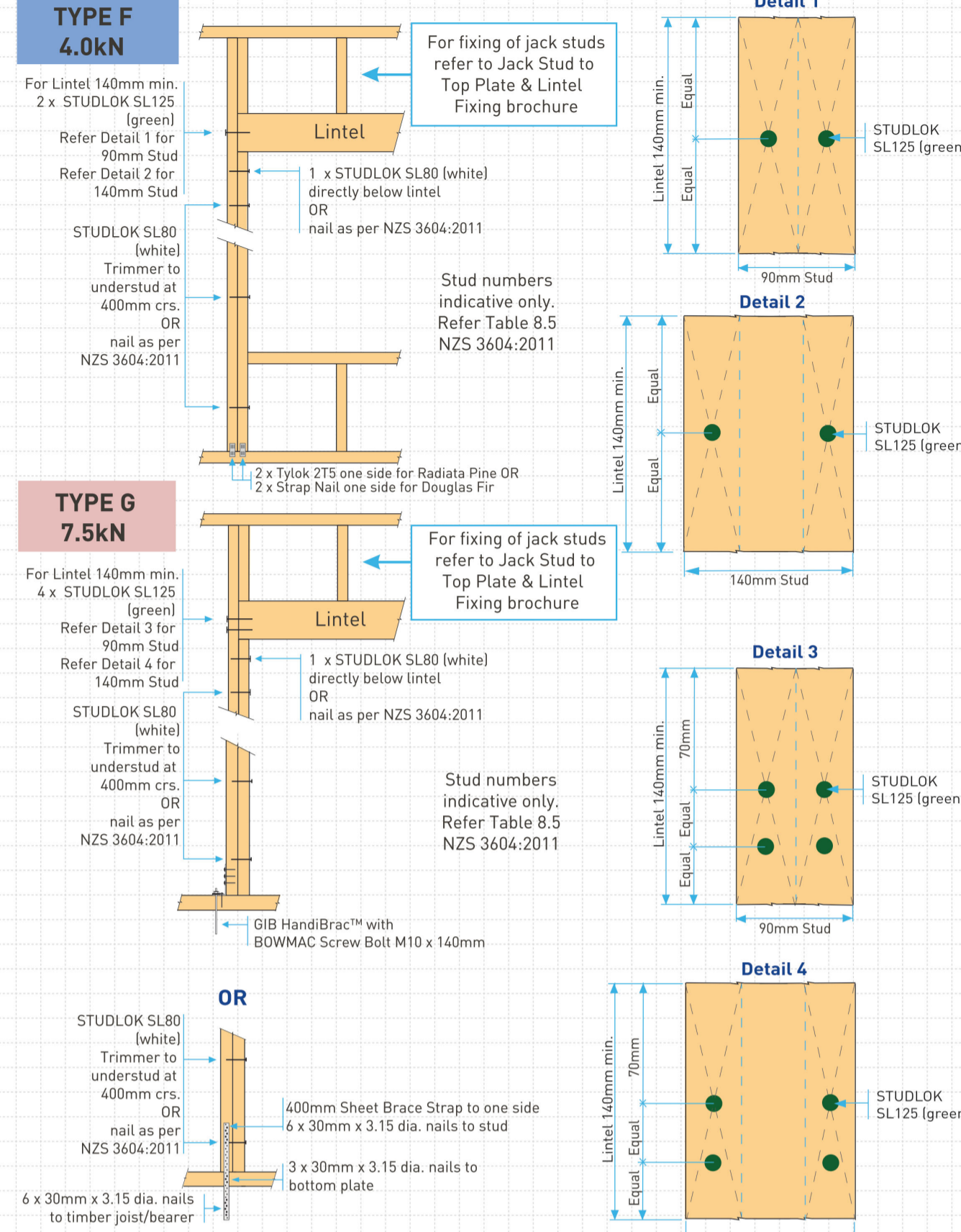
400 Proposed Bathroom Floor Plan
 1 : 50

STUDLOK™ LINTEL FIXING OPTIONS FOR ON-SITE
ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011

Lintel Span (m)	Loaded Dimension (m)	Light Roof					Heavy Roof				
		Wind Zone					Wind Zone				
		Low	Medium	High	Very High	Extra High	Low	Medium	High	Very High	Extra High
1.0	2.0	E	E	E	F	F	F	F	F	F	F
	3.0	E	E	F	F	F	F	F	F	F	F
	4.0	E	F	F	F	G	G	G	G	G	G
	5.0	E	F	F	G	G	G	G	G	G	G
	6.0	E	F	F	G	G	G	G	G	G	G
1.2	2.0	E	E	F	F	F	F	F	F	F	F
	3.0	E	F	F	F	G	G	G	G	G	G
	4.0	E	F	F	G	G	G	G	G	G	G
	5.0	E	F	F	G	G	G	G	G	G	G
	6.0	E	F	F	G	G	G	G	G	G	G
1.5	2.0	E	E	F	F	F	F	F	F	F	F
	3.0	E	F	F	F	G	G	G	G	G	G
	4.0	E	F	F	G	G	G	G	G	G	G
	5.0	E	F	F	G	G	G	G	G	G	G
	6.0	E	F	F	G	G	G	G	G	G	G
2.0	2.0	E	F	F	G	G	G	G	G	G	G
	3.0	E	F	F	G	G	G	G	G	G	G
	4.0	E	F	F	G	G	G	G	G	G	G
	5.0	E	F	F	G	G	G	G	G	G	G
	6.0	E	F	F	G	G	G	G	G	G	G
2.4	2.0	E	F	F	G	G	G	G	G	G	G
	3.0	E	F	F	G	G	G	G	G	G	G
	4.0	E	F	F	G	G	G	G	G	G	G
	5.0	E	F	F	G	G	G	G	G	G	G
	6.0	E	F	F	G	G	G	G	G	G	G
3.0	2.0	E	F	F	G	G	G	G	G	G	G
	3.0	E	F	F	G	G	G	G	G	G	G
	4.0	E	F	F	G	G	G	G	G	G	G
	5.0	E	F	F	G	G	G	G	G	G	G
	6.0	E	F	F	G	G	G	G	G	G	G
3.4	2.0	F	F	G	G	G	G	G	G	G	G
	3.0	F	F	G	G	H	H	H	H	H	H
	4.0	F	F	G	G	H	H	H	H	H	H
	5.0	F	F	G	G	H	H	H	H	H	H
	6.0	F	F	G	G	H	H	H	H	H	H
4.2	2.0	F	F	G	G	H	H	H	H	H	H
	3.0	F	F	G	G	H	H	H	H	H	H
	4.0	F	F	G	G	H	H	H	H	H	H
	5.0	F	F	G	G	H	H	H	H	H	H
	6.0	F	F	G	G	H	H	H	H	H	H
4.5	2.0	F	F	G	G	H	H	H	H	H	H
	3.0	F	F	G	G	H	H	H	H	H	H
	4.0	F	F	G	G	H	H	H	H	H	H
	5.0	F	F	G	G	H	H	H	H	H	H
	6.0	F	F	G	G	H	H	H	H	H	H
4.8	2.0	F	F	G	G	H	H	H	H	H	H
	3.0	F	F	G	G	H	H	H	H	H	H
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	5.0	F	F	G	G	H	H	H	H	H	H
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	6.0	F	F	G	G	H	H	H	H	H	H
5.4	2.0	F	F	G	G	H	H	H	H	H	H
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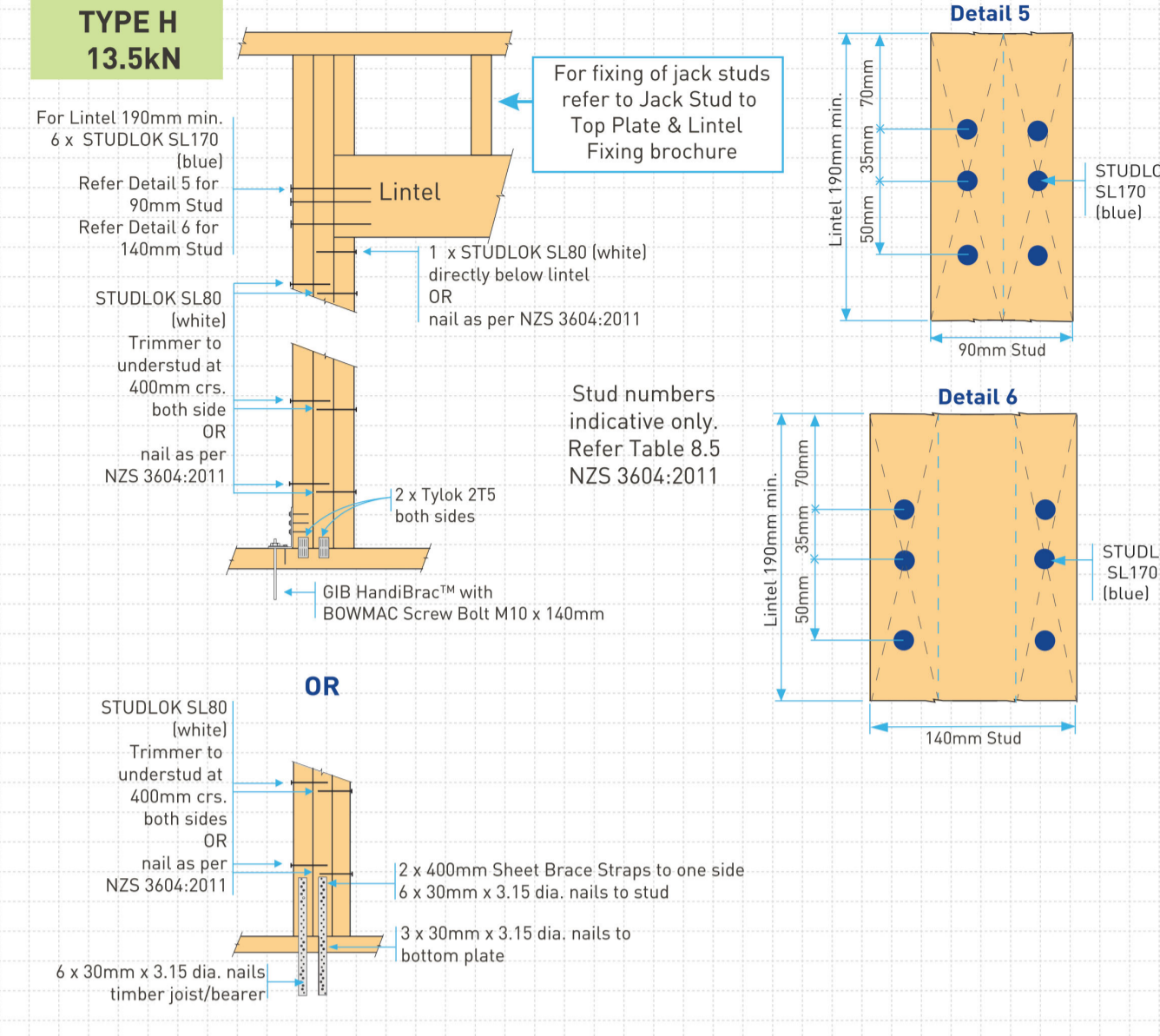
MiTek
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STUDLOK™ LINTEL FIXING OPTIONS FOR ON-SITE
ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011



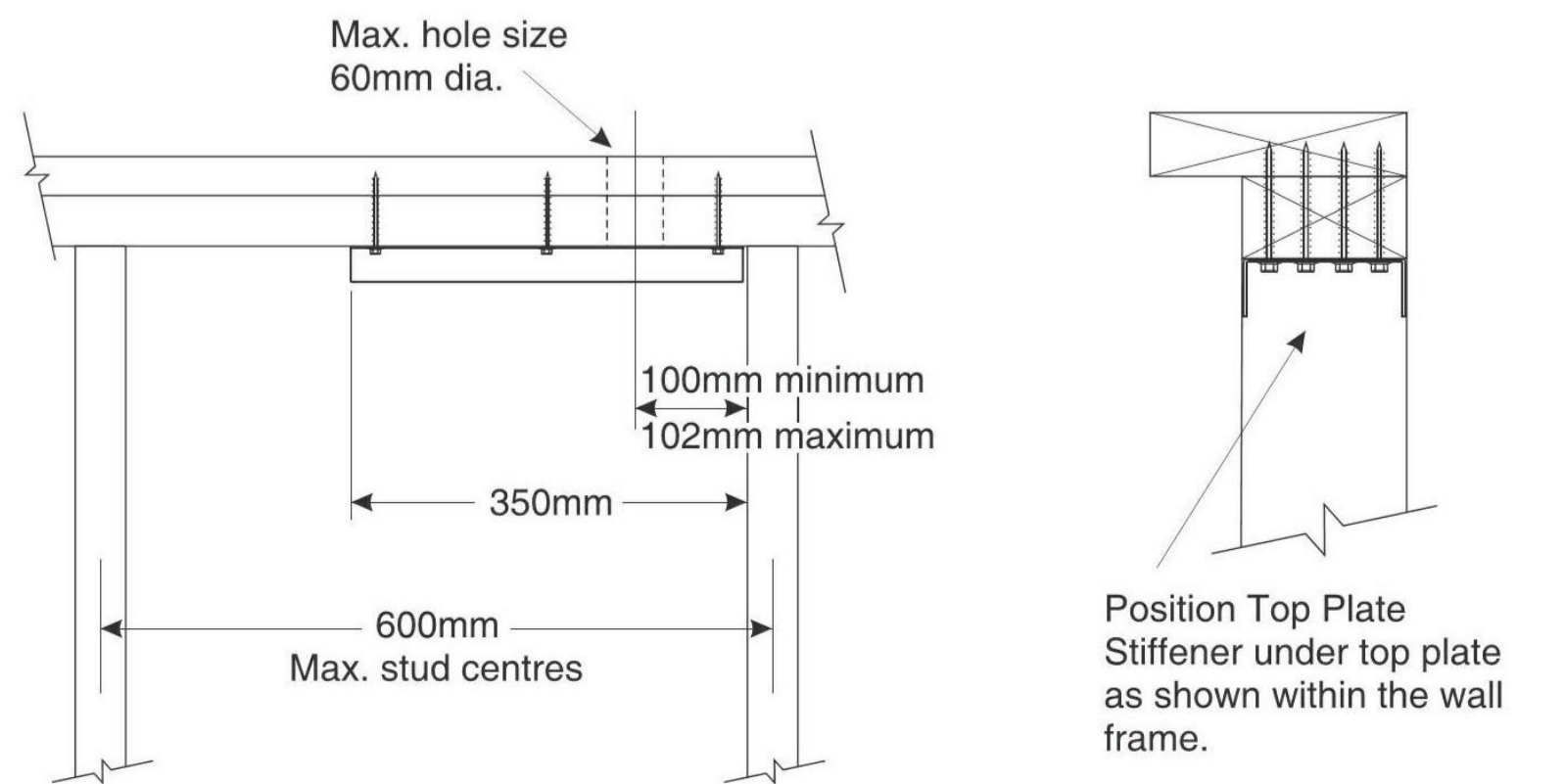
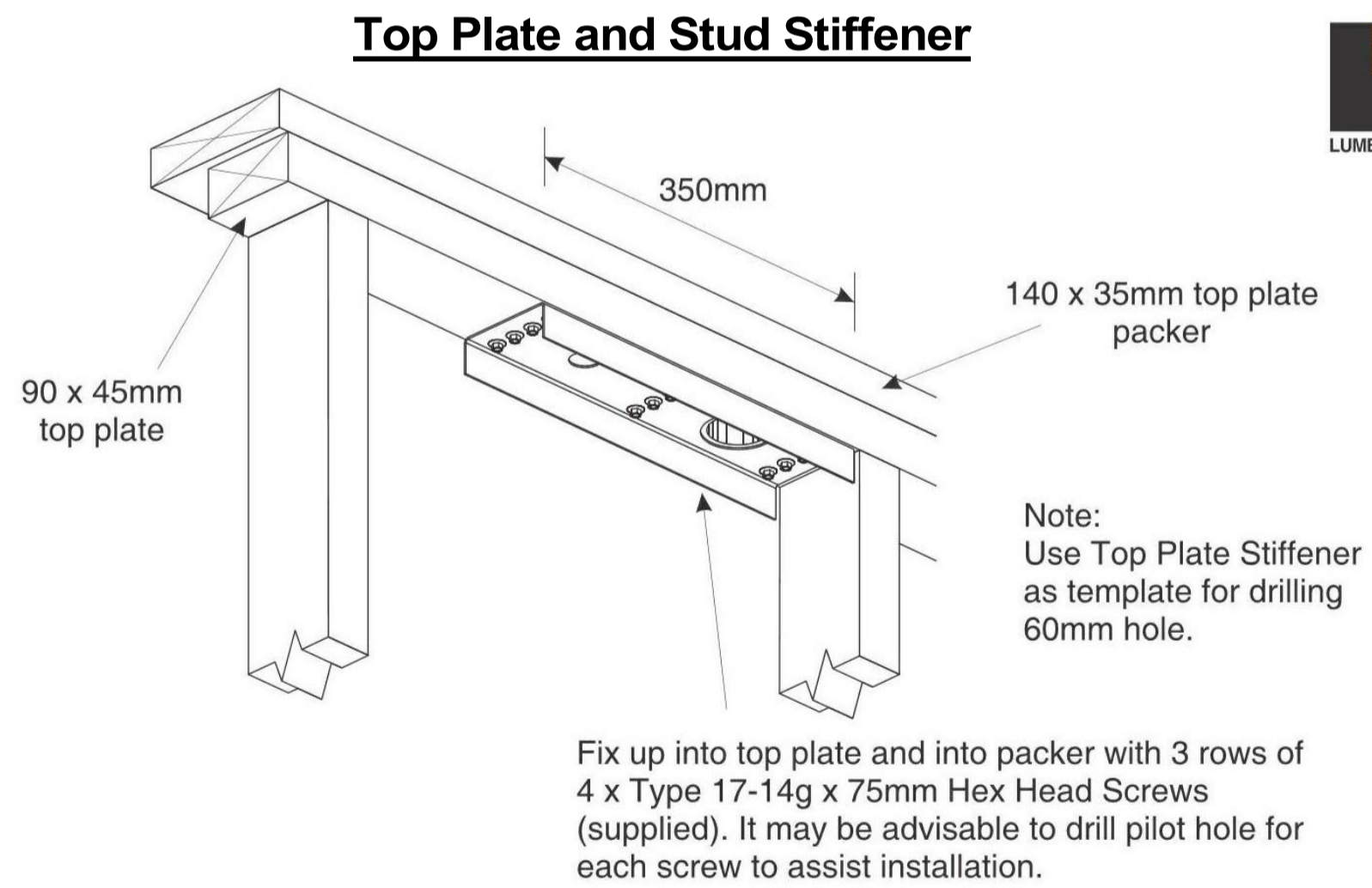
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STUDLOK™ LINTEL FIXING OPTIONS FOR ON-SITE
ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011



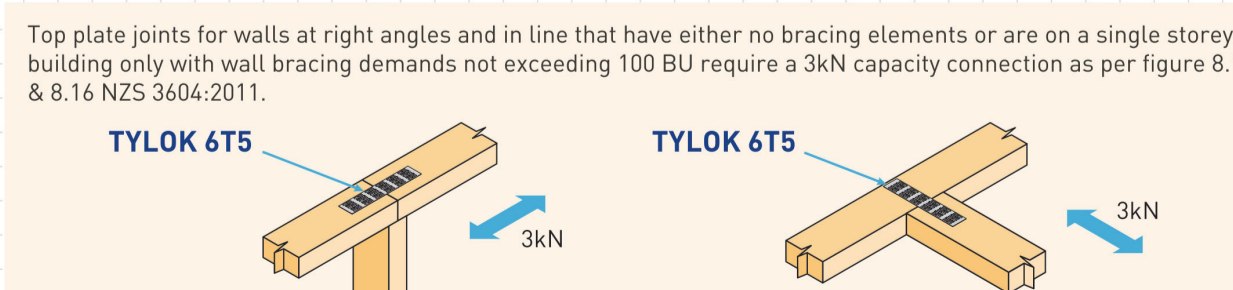
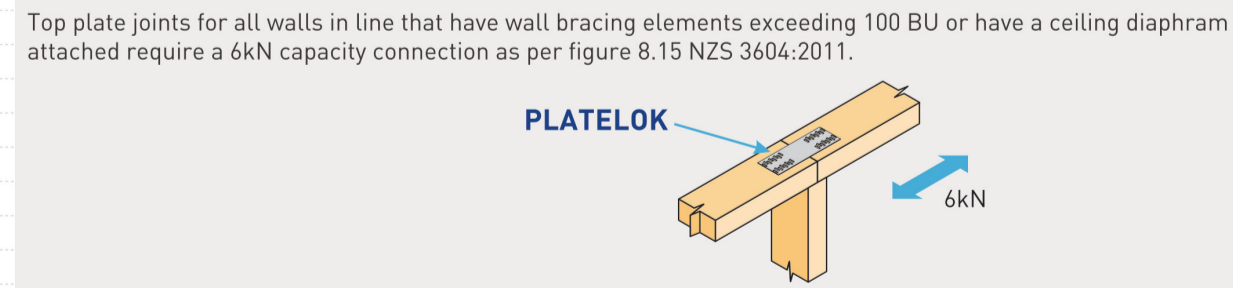
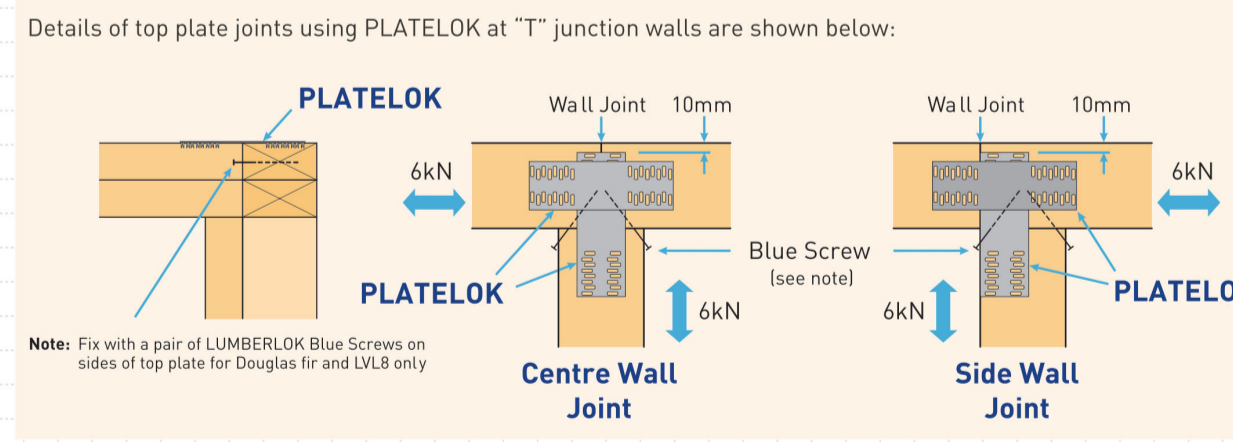
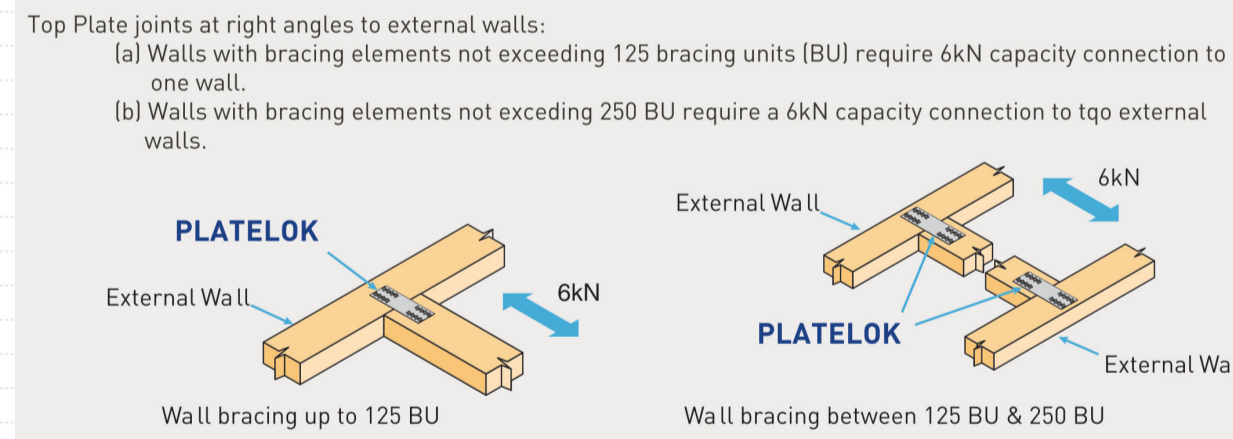
NOTE: STUDLOK TYPE F 4.0 kN fixing can be used for TYPE E 1.4 kN fixing

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PLATELOK

TOP PLATE CONNECTIONS AS REQUIRED BY CLAUSE 8.7.3 NZS 3604:2011

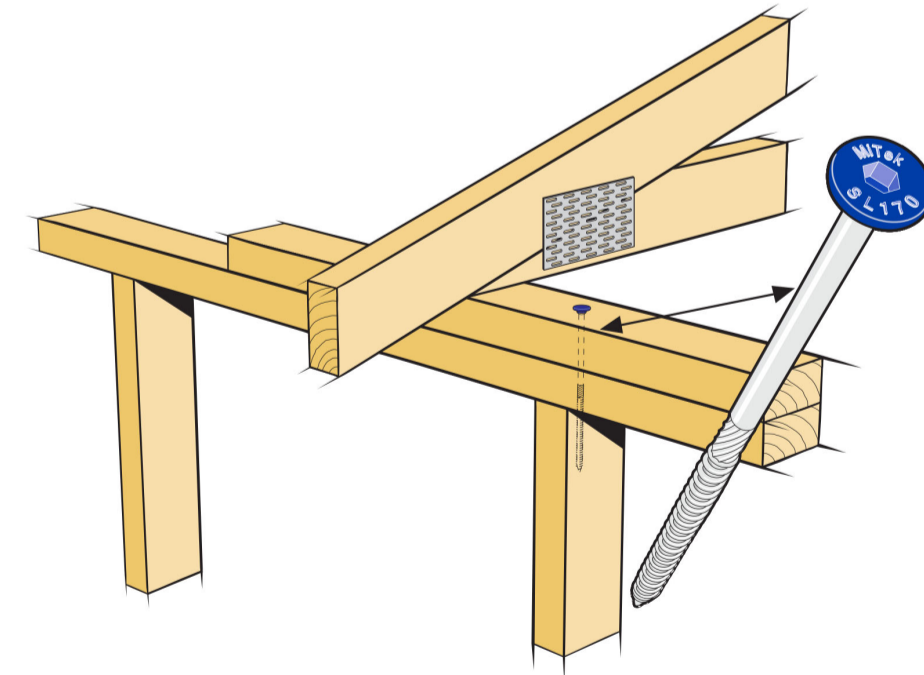


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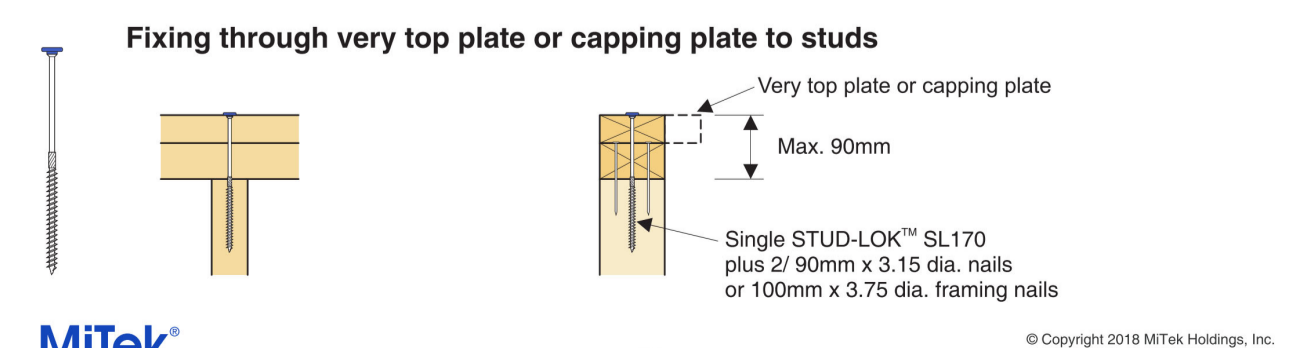
STUD-LOK™

Provides a solution for top plate to stud fixings for residential timber frame buildings



- ★ Complies with fixing requirements in Section 8 NZS 3604:2011
- ★ The BOWMAC® STUD-LOK™ forms an integral part of the MiTek Truss & Frame design and layout

- NOTE:
- ★ Refer to Table 8.19 NZS 3604:2011 for nailing schedule to resist lateral loads.
 - ★ The STUD-LOK™ connections assume that the correct choice of rafter/truss fixings have been made.
 - ★ Wall framing arrangements under girder trusses are not covered in this schedule.
 - ★ All timber selections are as per NZS 3604:2011 and include LVL8 timber grades.



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Notes:

Building Consent

Issue Dates:	

Revision Schedule		
Ref.	Description	Date

Orcan Design
279 Mountain Rd, RD 2, Maungaturoto 0587
Ph 09 431-2827 or mob 027 292-8820
email stephen@orcandesign.org

Project: No: **CD 765**
Bathroom Block Rebuild

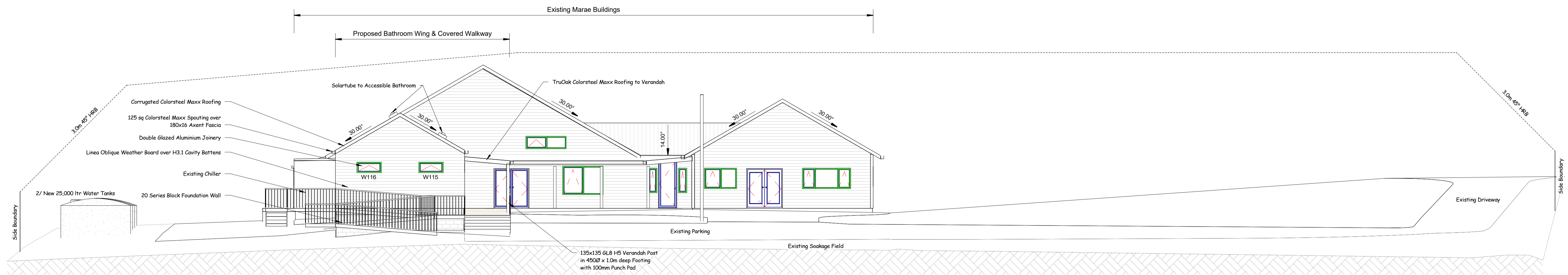
Address:
Waihau Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

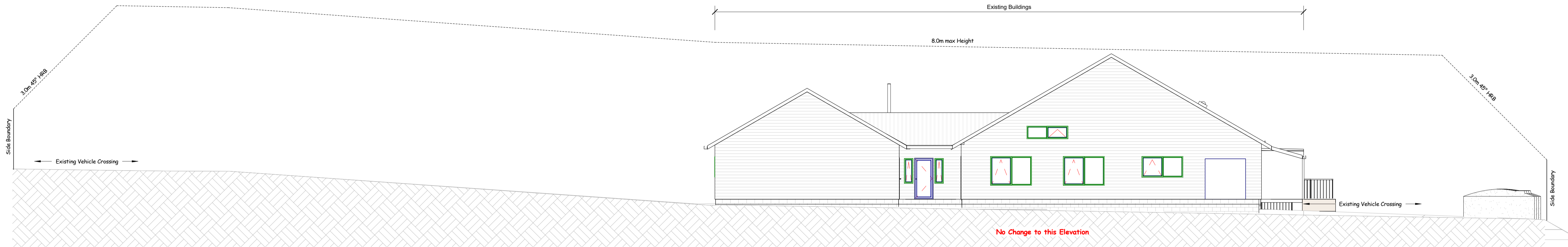
Drawn By: *Stephen Orchard*
Scale: **1 : 5**

Floor Plan Notes

Sheet: **401a**



2 North Elevation
1 : 100



1 South Elevation
1 : 100



Revision Schedule		
Ref.	Description	Date

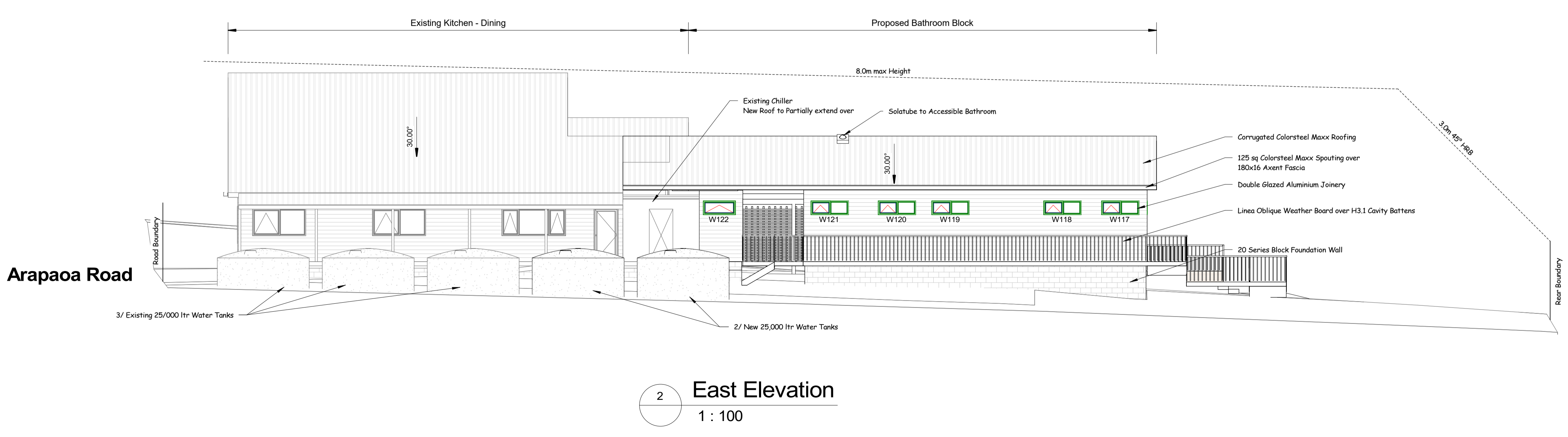
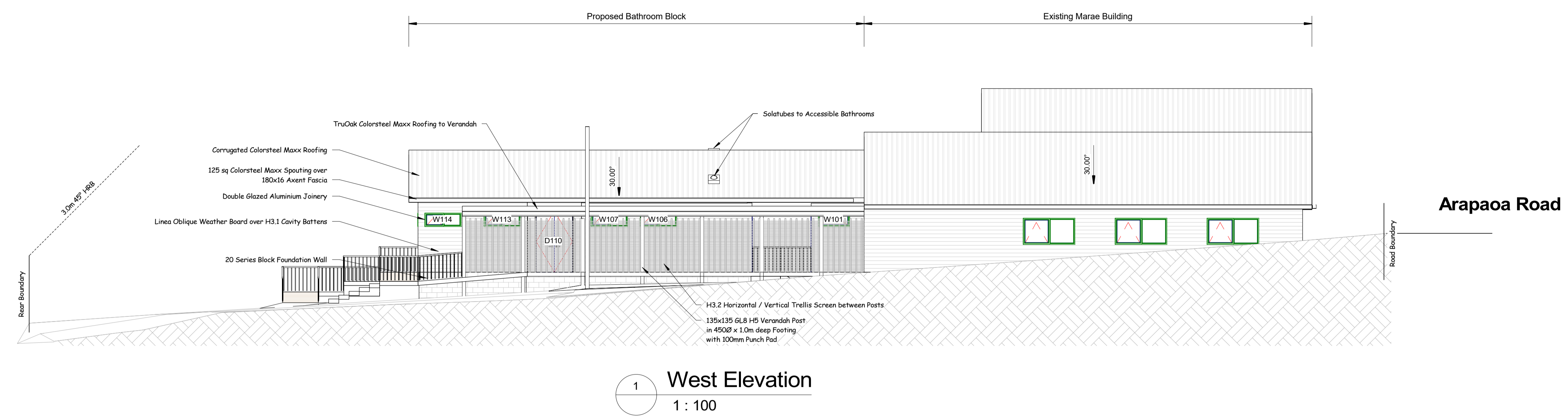
Project:	No: CD 765	Client: Waihaua Marae
Bathroom Block Rebuild		Drawn By: <i>Stephen Orchard</i>
Address: Waihaua Marae 449 Arapaoa Rd Tinopai 0593		Scale: As indicated
		Elevations
		Sheet: 500a

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Building Consent

Issue Dates:	
27 October 2020	Preliminary Design Proposal
24 May 2021	Preliminary Design Two
26 June 2021	Preliminary Design Two
24 October 2021	Preliminary Design Three

Revision Schedule		
Ref.	Description	Date

Orcan Design

279 Mountain Rd, RD 2, Maungaturoto 0587
 Ph 09 431-2827 or mob 027 292-8820
 email stephen@orcandesign.org

Project: Bathroom Block Rebuild No: **CD 765**

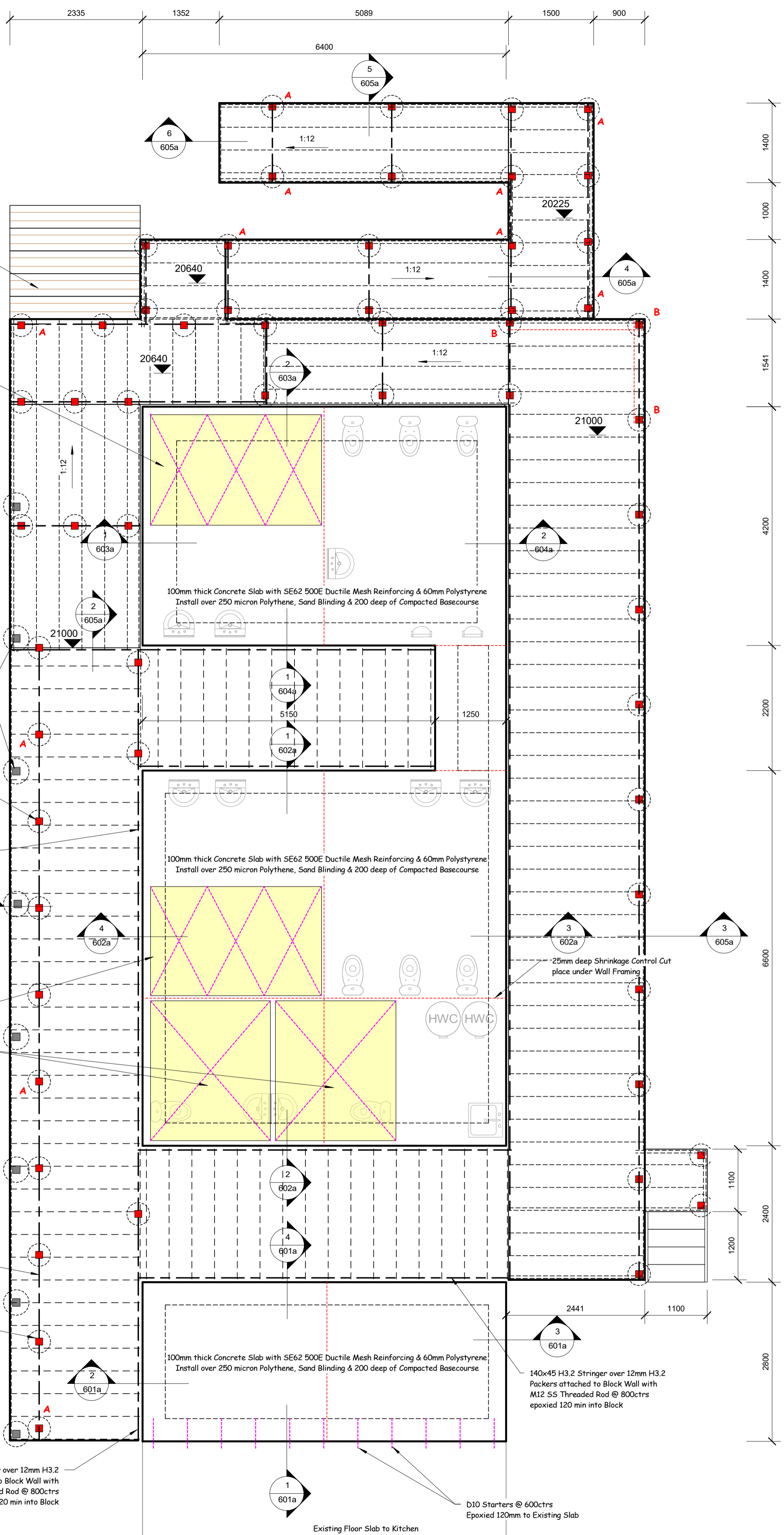
Address:
Waihua Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihua Marae**

Drawn By: *Stephen Orchard*
 Scale: **As indicated**

Elevations

Sheet: **501a**



600 Foundation Plan
1 : 50

Deck & Ramp Notes	
Piles	See Plans and Details for all Pile Types All Piles 125x125 H5 RAD
Pile Footings	Ordinary Piles 400Ø x 600 Bored Piles 400Ø x 600 Anchor Piles 400Ø x 900
Beams	All Beams 2/140x45 S68 H3.2 Stringers 140x45 S68 H3.2
Joists	All Joists 140x45 S68 H3.2 @ 400ctrs
Concrete	20 MPa 19mm
Fixings	All Fixings to be 304 Stainless Steel or Better Ordinary Piles 1pr of 90x3.15 SS Nails & 1pr of SS Wire Dogs Bored Piles Mitek SS 12kN Fixings Anchor Piles 400Ø x 600
Decking	Outdure Casadeck Decking and Fixings
Balustrade	Posts 90x90 H3.2 S68 @ 1.0m ctrs Top Rail 140x45 H3.2 S68 1.0m high Bottom Rail 90x70 H3.2 S68 Balustrade 50x40 H3.2 S68 with 100mm gap between
Ramps	Similar construction to Decks Maximum Slope 1:12 Grab Rail @ 900mm above Ramp Surface

Table 3: Laps in concrete. The values for 300 grade differ from those in the current NZS 3604. They come from NZS 3101 (2006) and would be an Alternative Solution.

Diameter	Grade 300 laps (mm)	Grade 500 laps (mm)
R10 (plain round)	350 (with hooks)	-
D10 (deformed)	350	550
D12	400	650
D16	500	850

Table 4: Laps in concrete masonry. The values for 300 grade differ from those in the current NZS 3604. They come from NZS 4230 (2004) and would be an Alternative Solution.

Diameter	Grade 300 laps (mm)	Grade 500 laps (mm)
R10 (plain round)	800	-
D10 (deformed)	400	700
D12	480	840
D16	640	1,120

Table 5: Minimum bend diameters in mm for rebar (rounded up to the nearest 10 mm). From NZS 3101:2006 Tables 8.1 and 8.2 and clause 8.4.2.

Rebar type	Bar diameter (mm)						
	6	10	12	16	20	25	32
Plain bars	30	50	60	80	100	150	170
Deformed bars	30	50	60	80	100	150	170
Plain bars (stirrups and ties)	20	20	30	40	40	80	-
Deformed bars (stirrups and ties)	30	40	50	70	80	150	-

Pipes & Wastes Through & Under The Floor Slab

Where a Pipe passes through a concrete slab it must:

- Rise through the slab vertically.
- Be sleeved or wrapped in a durable, flexible material

The exposed pipe above the slab should be protected from damage and capped prior to pouring.

Where a Pipe passes through a foundation Wall it must:

- Be a minimum of 45° to the foundation
- Be sleeved or wrapped in a durable flexible material, with 25mm clearance around the pipe
- The pipe should be located within the middle third of the foundation vertically

Where the pipe runs under the slab:

- Be laid straight and with an even gradient
- It shall be a minimum of 50mm below the underside of the slab
- There shall be 100mm min of sand and under the pipe
- All bends under the slab shall be a maximum of 45°

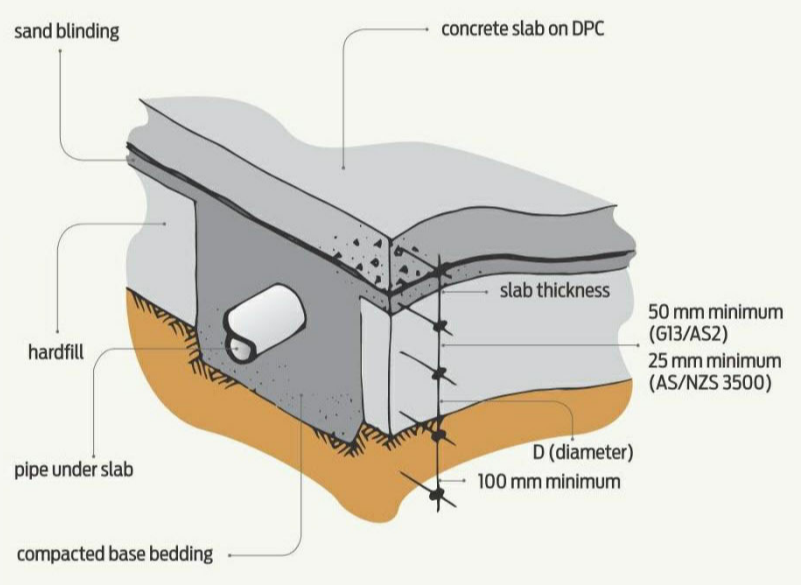


Figure 2 Clearance between pipe and slab.

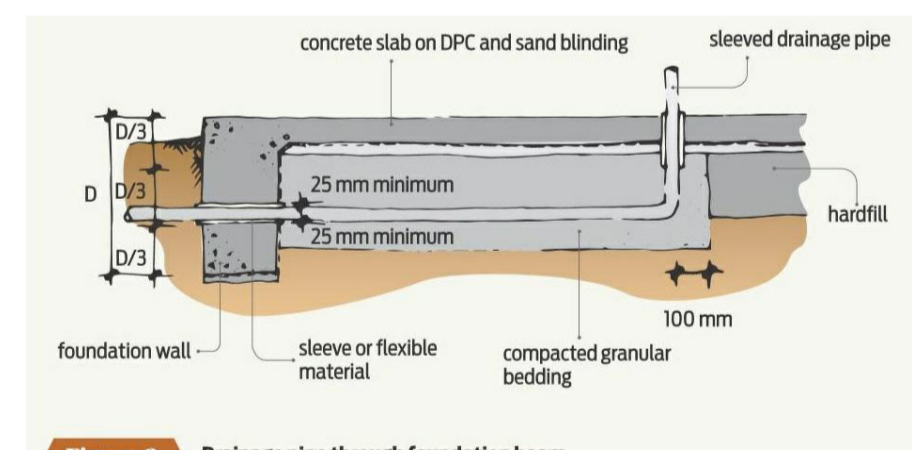


Figure 3 Pipe passing through a footing (plan view).

Verandah Post Note	
Verandah Post Footing volumes have been taken using Table 9.1 & Fig 9.1 of NZS 3604 2011.	
Verandah Post to Beam connection rating have been taken using Table 9.2 & Fig 9.3 of NZS 3604 2011.	
Very High Wind Zone	
Carpent Roof	
Post 1 Roof Area	2.5m ²
Footing Volume	0.16m ³
Footing Size	450Ø x 1.0m deep
Uplift Resisting Post to Beam	Post Embedded in Footing 1pr BS85 Bowmac Brackets (6.0kN required)

Foundation Notes

Footings	See Plans and Details for all Footing Information
Foundation Walls	Masonry 20 Series Concrete Block HD12's @ 600ctrs Vertical and Horizontal
Slab	Thickness 100mm Mesh Wireplus Ductile Plus 62 500E DPC 250 micron Polythene
Concrete Block Fill	25 MPa 19mm 25 MPa
Reinforcing Cover	Concrete 75mm to earth Masonry 35mm above ground 50mm above ground 30mm for mesh
Reinforcing Laps	Concrete 720mm HD12 Masonry 850mm HD12
Mesh to Starters	600mm min
Shrinkage Cuts	25mm deep @ 6.0m max ctrs see NZS 3604 2011 7.5.8.6.1
Supplementary Reinforcing Bars	2/D12x1200long shall not pass through a Shrinkage Control Joint see NZS3604 2011 Fig 7.18
Slab Internal Corners	
Bottom Plate Fixings	Mitek M10x140 Blue Bolt Screw Anchors @ 600ctrs See Gib Details for Bracing Panels

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Notes:

Building Consent

Issue Dates:	

Revision Schedule

Ref.	Description	Date



279 Mountain Rd, RD 2, Maungaturoto 0587
Ph 09 431-2827 or mob 027 292-8820
email stephen@orcandesign.org

Project: No: **CD 765**
Bathroom Block Rebuild

Address:
Waihua Marae
449 Arapaoa Rd
Tinopai 0593

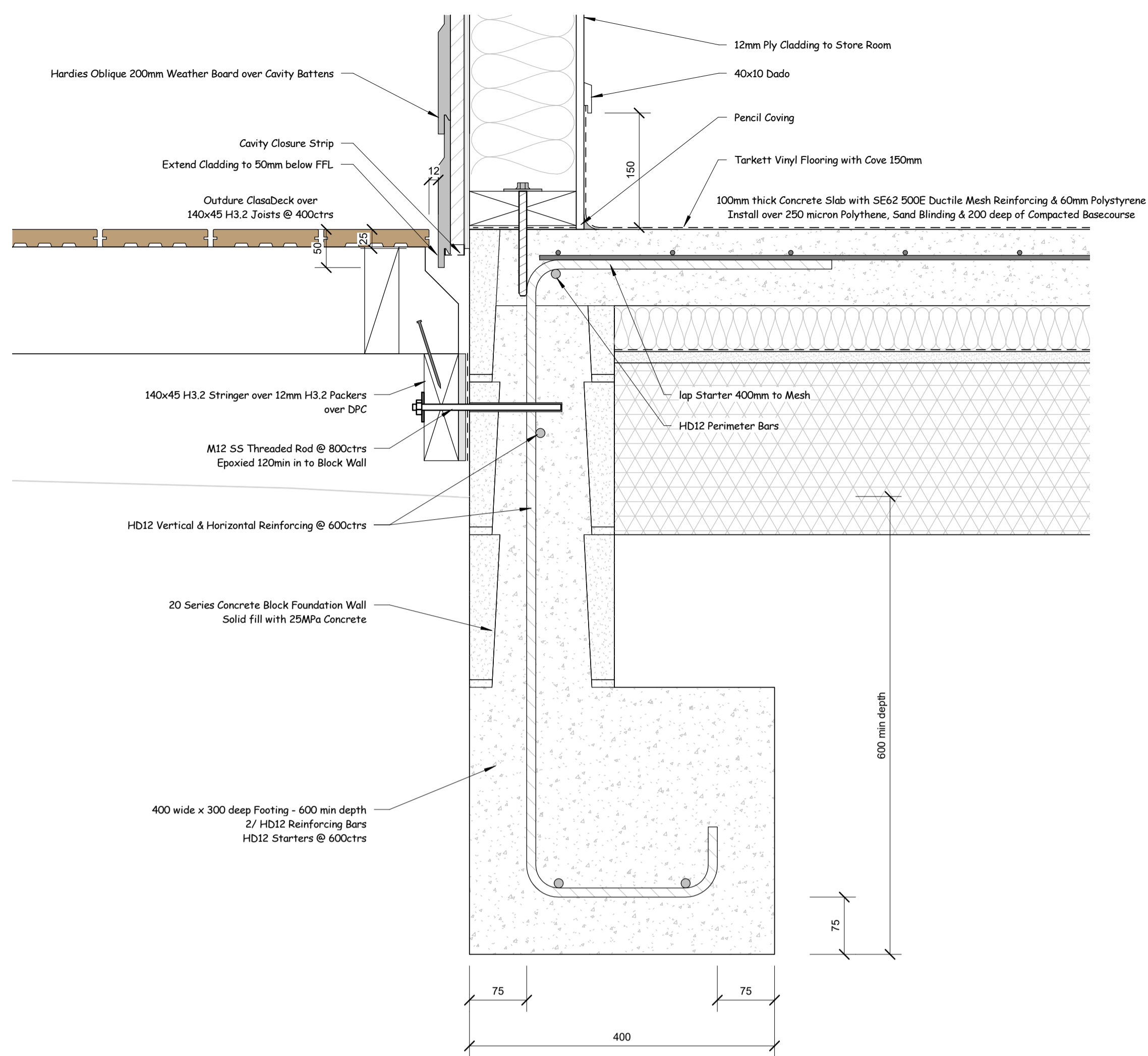
Client: **Waihua Marae**

Drawn By: **Stephen Orchard**

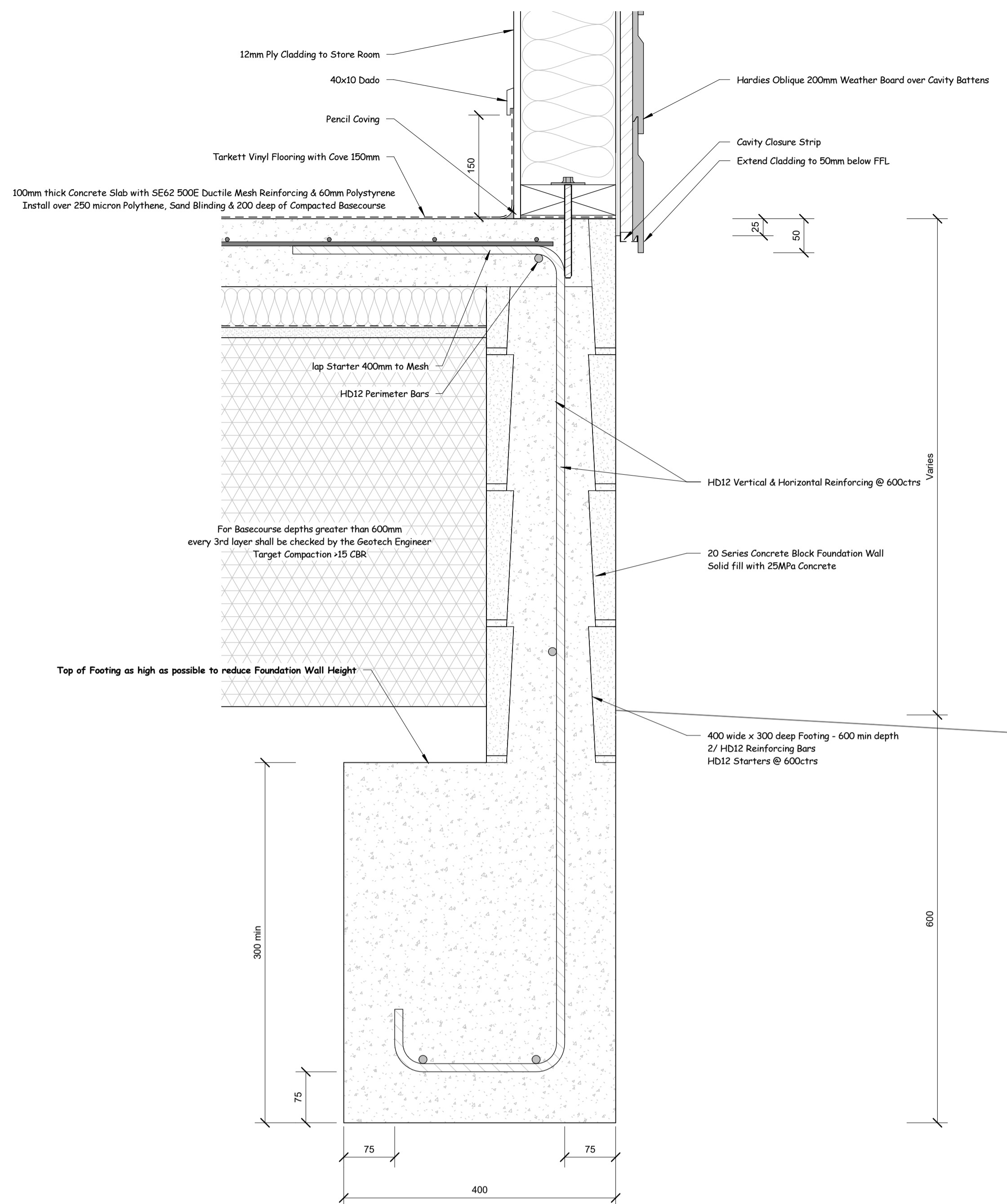
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Foundation Plan & Details

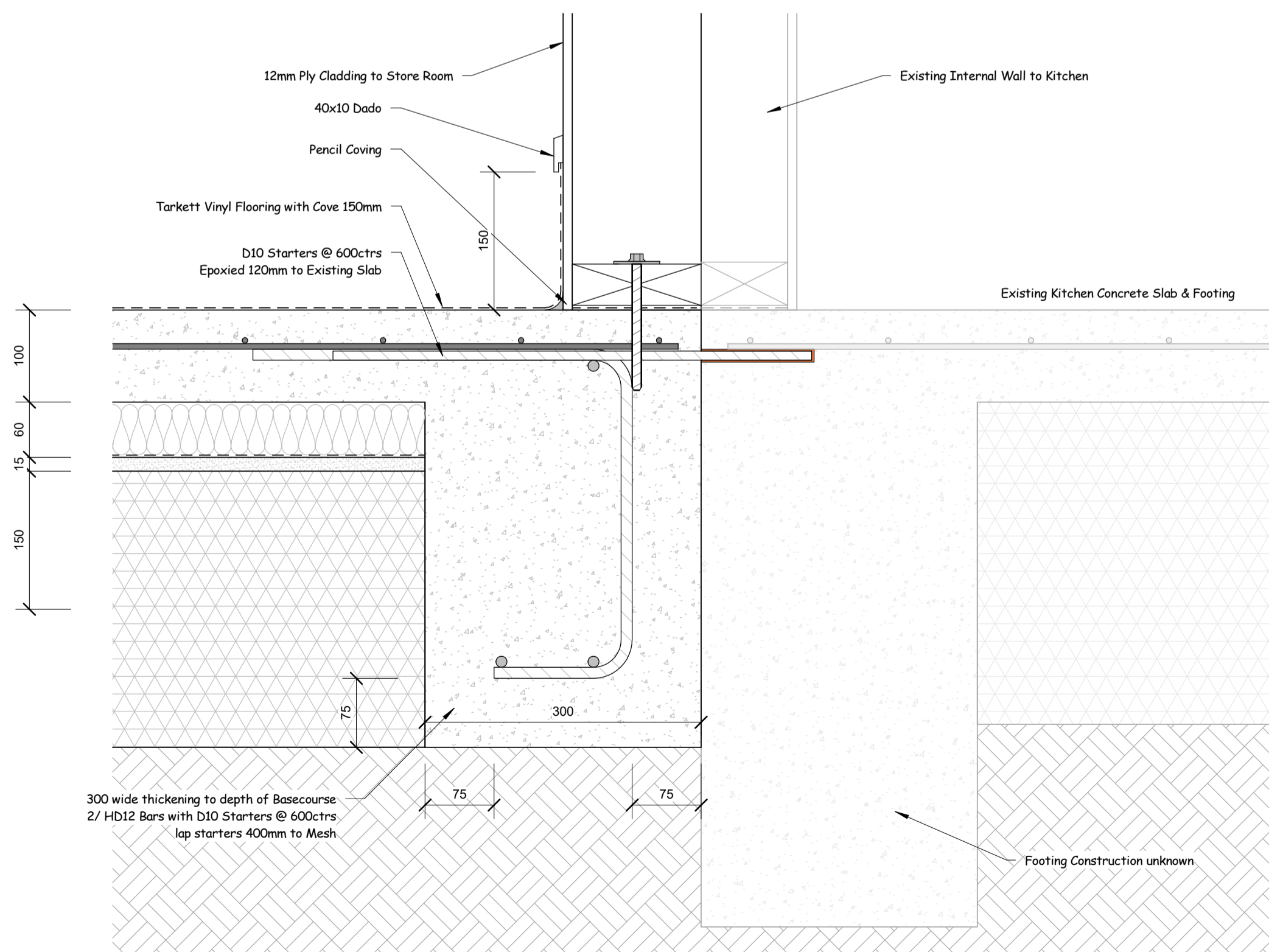
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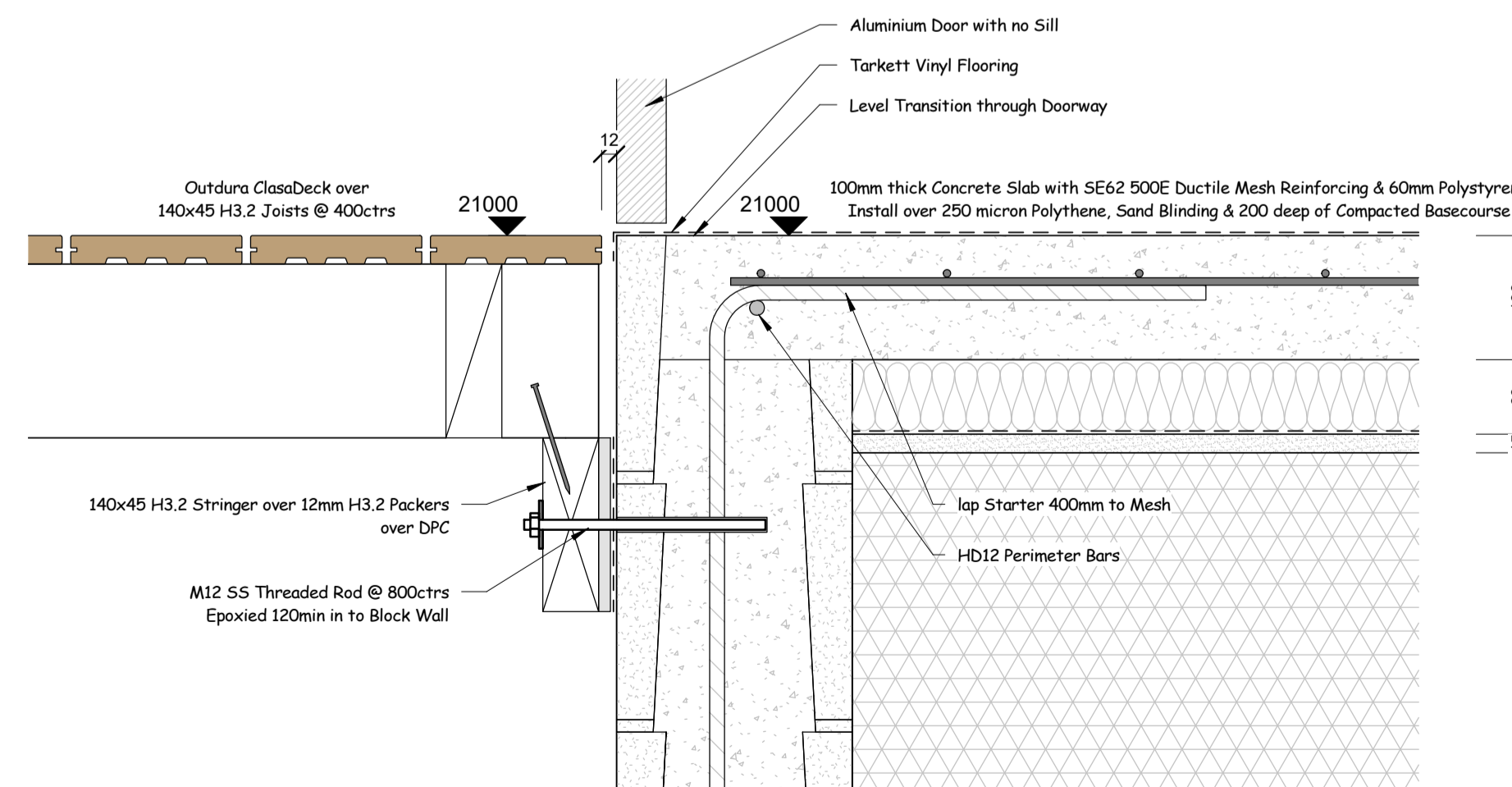
2 600 Storeroom to Walkway Footing
600a 1:5



3 600 Storeroom External Footing
600a 1:5



1 600 Storeroom to Kitchen Footing
600a 1:5



4 600 Storage Room Doorway Footing
600a 1:5

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Ph 09 431-2827 or mob 027 292-8820
email stephen@orcandesign.org

Project: No: **CD 765**
Bathroom Block Rebuild

Address:
Waihaia Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihaia Marae**

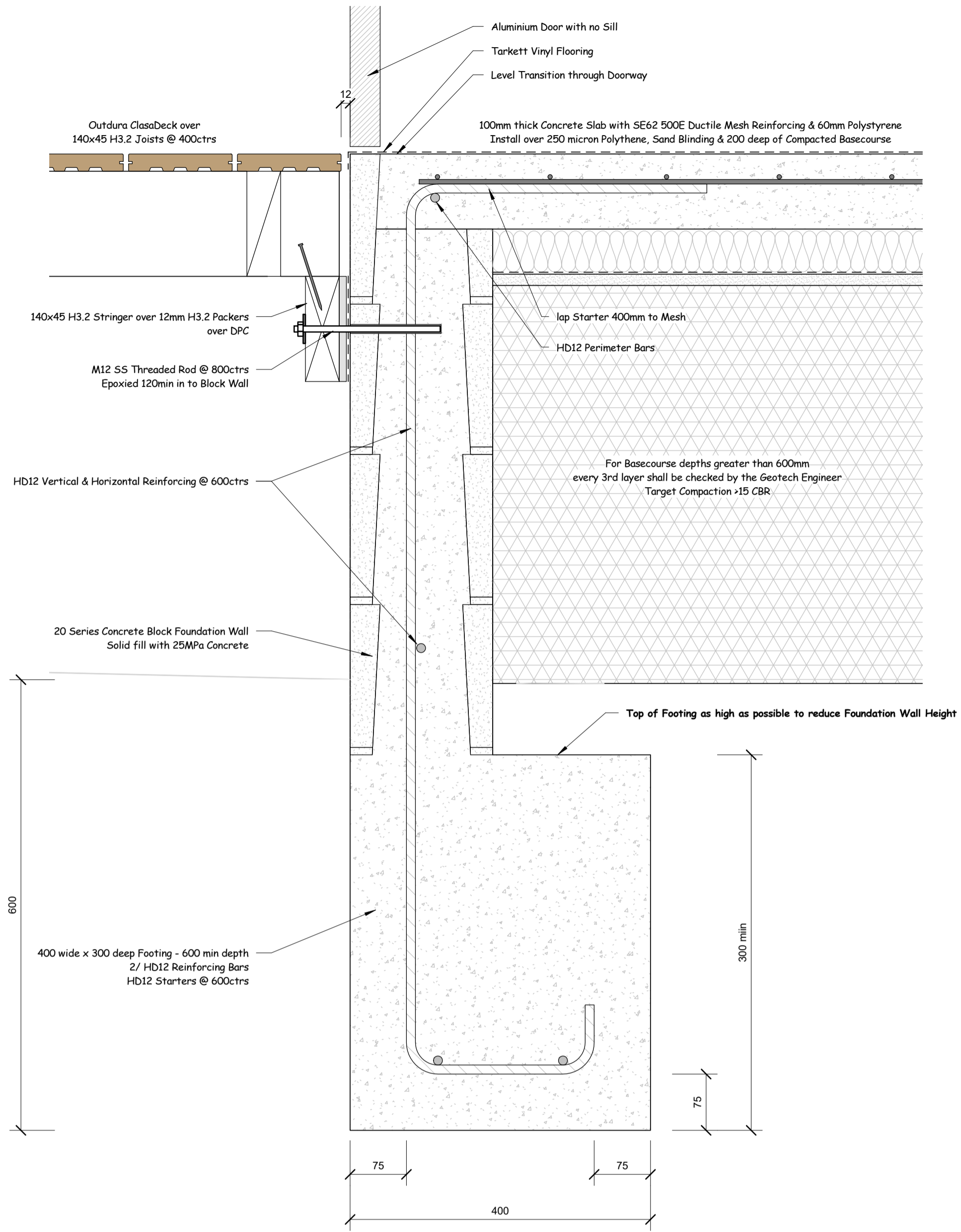
Drawn By: *Stephen Orchard*

Scale: **1:5**

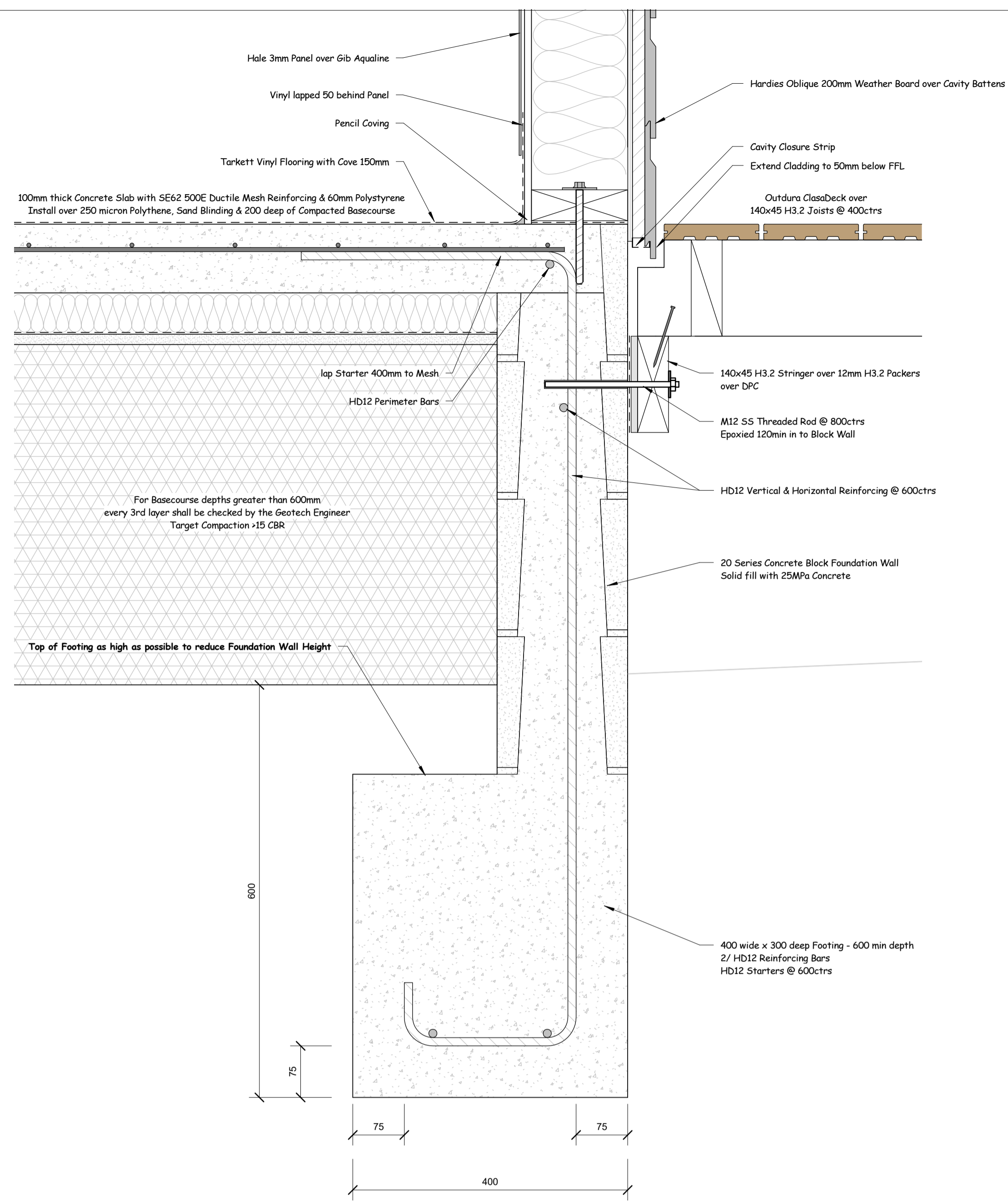
Foundation Details - Storeroom

Sheet:

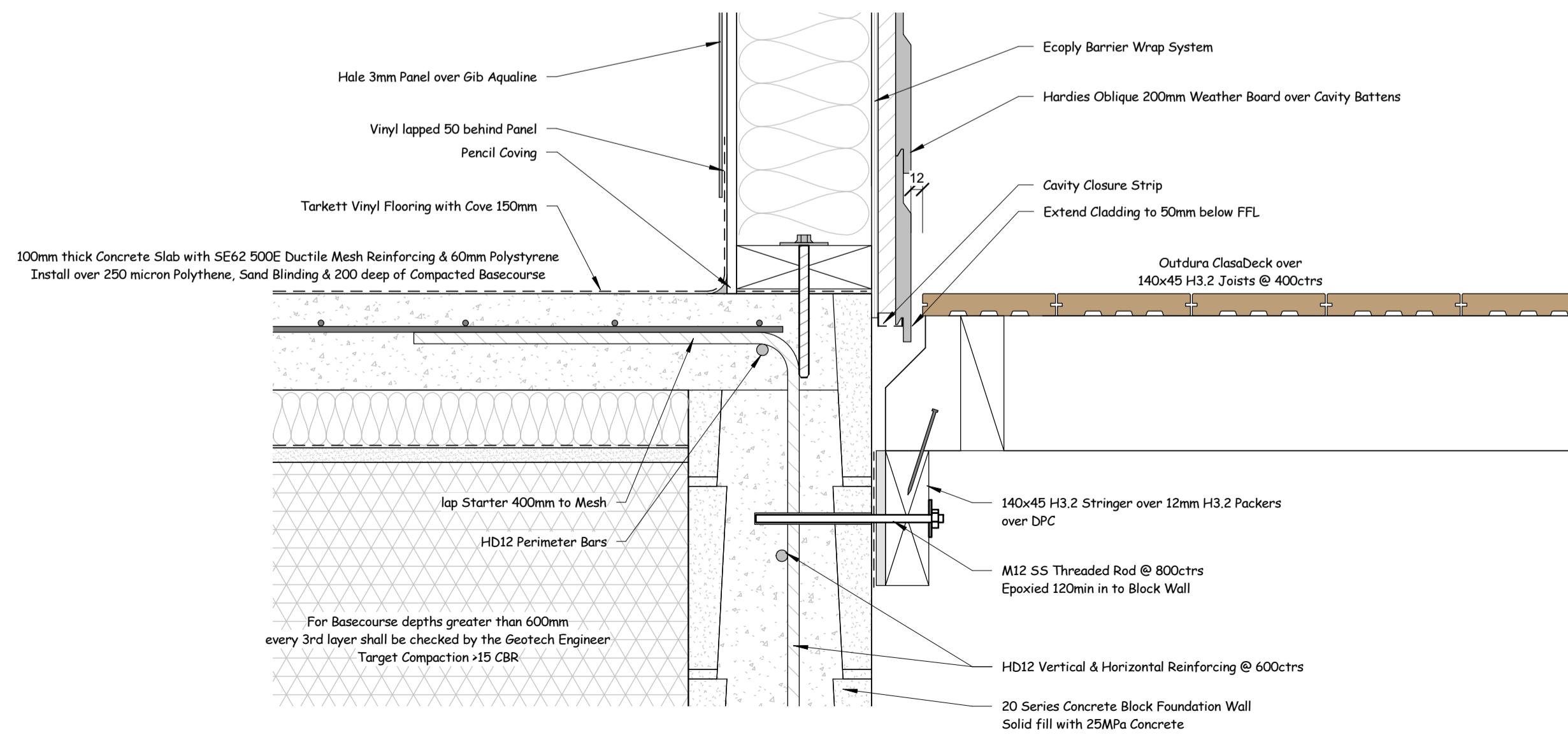
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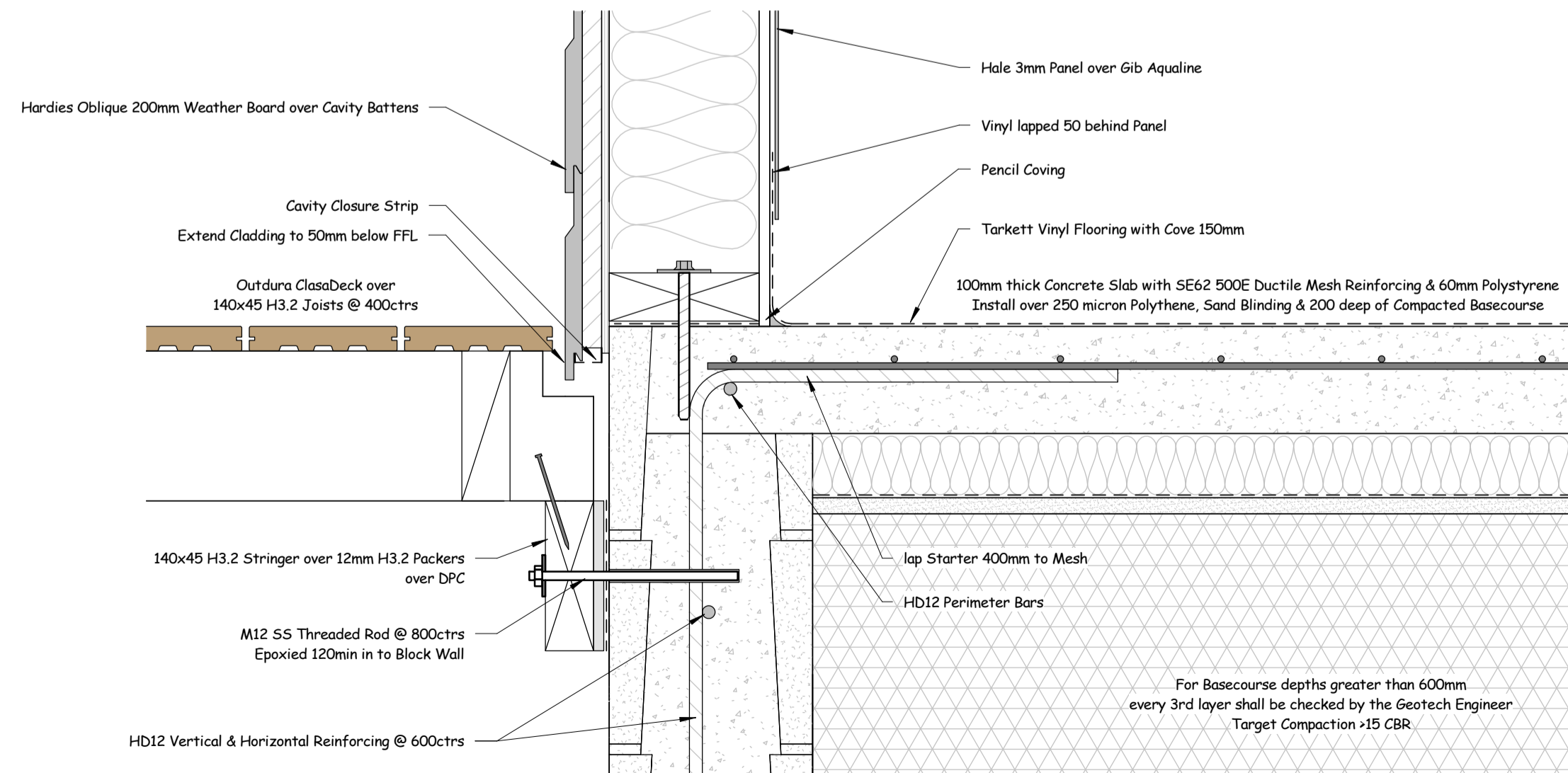
1 600 Ladies Shower Door Footing
600a 1 : 5



2 600 Family Bathrooms to Walkway Footing
600a 1 : 5



3 600 Ladies Bathroom External Footing
600a 1 : 5



4 600 Ladies Bathroom to Walkway Footing
600a 1 : 5

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Issue Dates:

Revision Schedule

Ref.	Description	Date

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Ph 09 431-2827 or mob 027 292-8820
email stephen@orcandesign.org

Project: No: **CD 765**
Bathroom Block Rebuild

Address:
Waihau Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

Drawn By: *Stephen Orchard*

Scale: **1 : 5**

Foundation Details -
Ladies Bathroom

Sheet:

602a

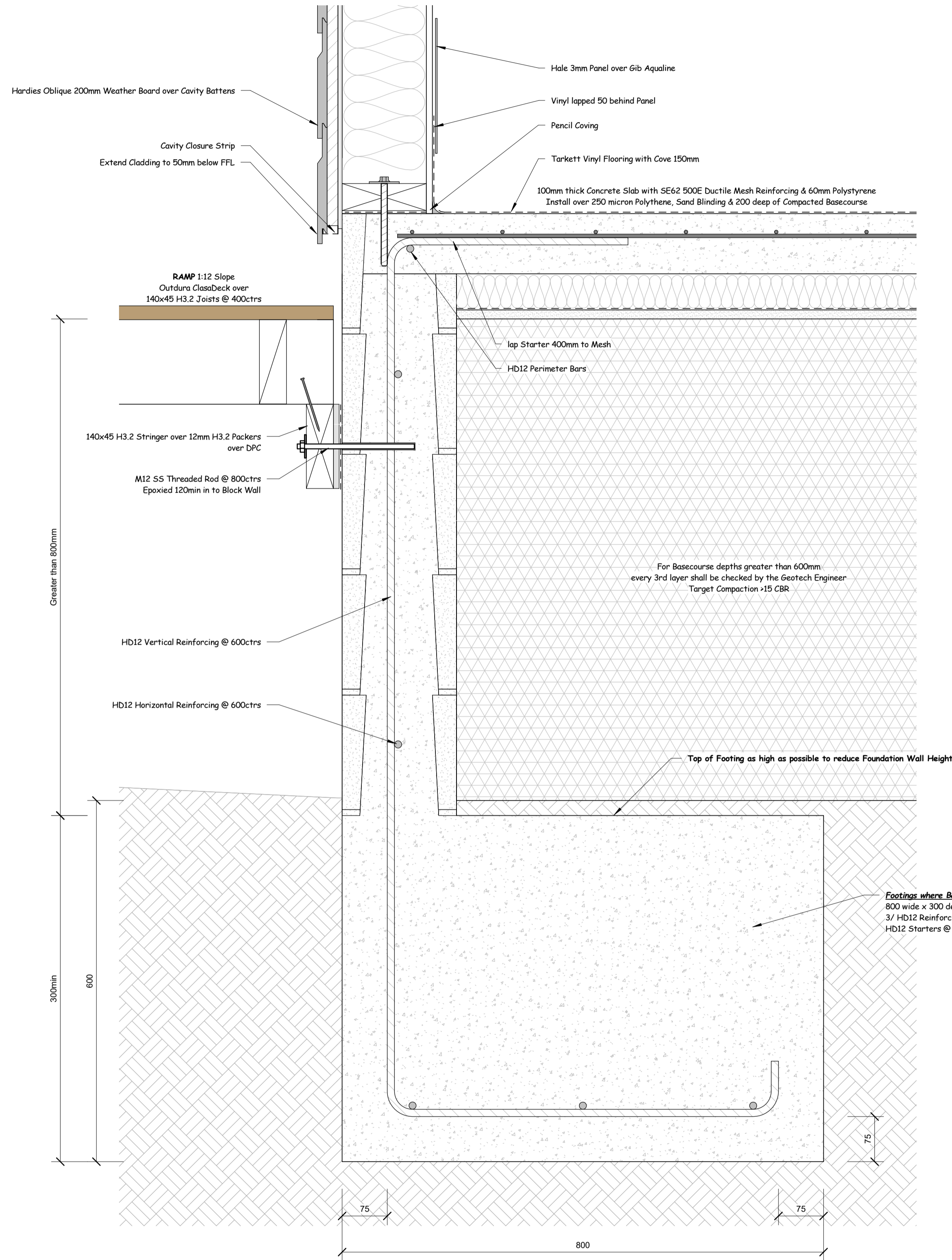
Written Dimensions take precedent over scaled dimensions
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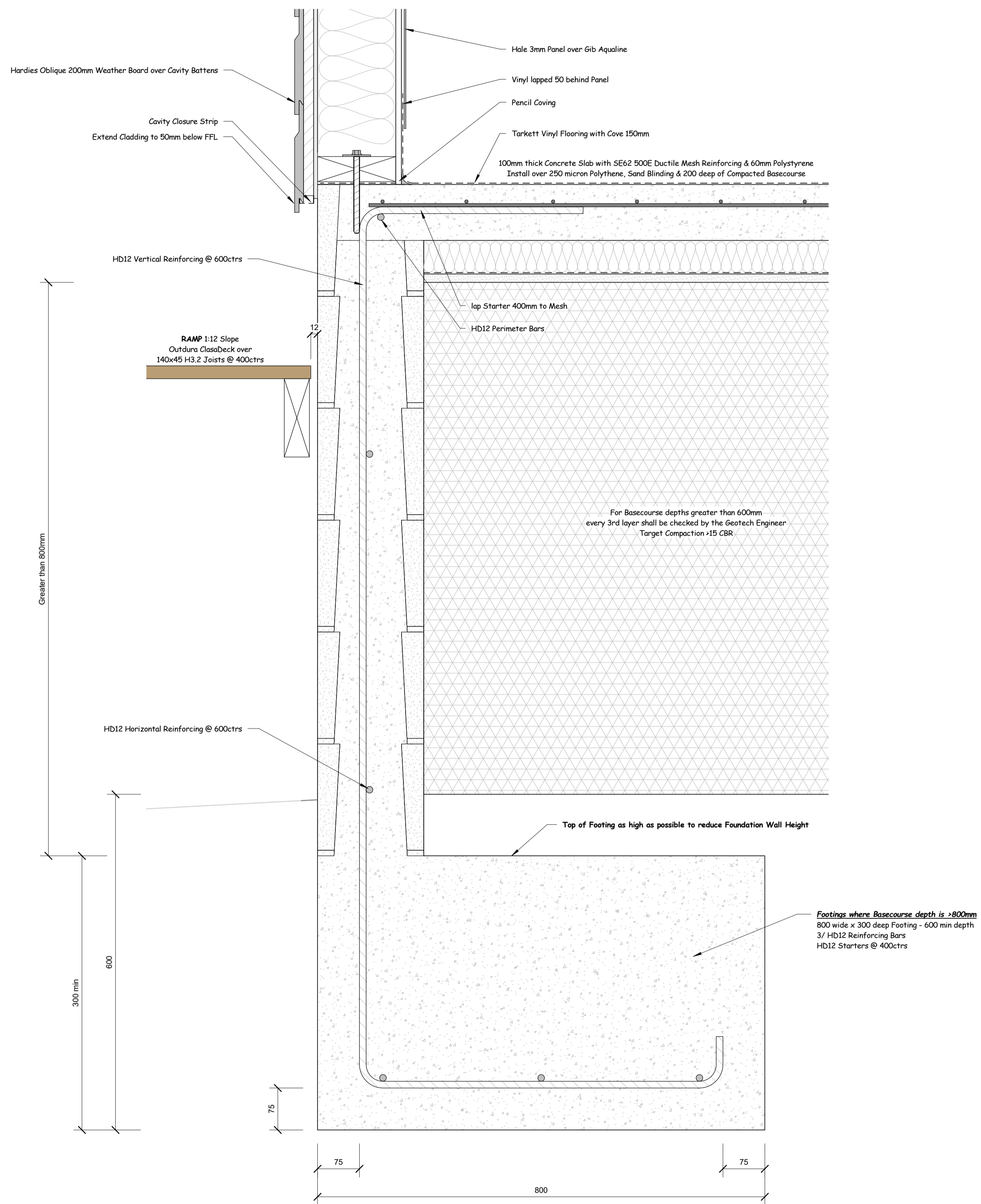
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Notes:



1 600 Mens Bathroom to Walkway
600a 1 : 5



2 600 Mens Bathroom End Footing
600a 1 : 5

Building Consent

Issue Dates:

Ref.	Description	Date

Revision Schedule

Ref.	Description	Date

Orcan Design

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Project: No: **CD 765**
Bathroom Block Rebuild

Address:
Waihau Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

Drawn By: *Stephen Orchard*

Scale: **1 : 5**

Foundation Details -
Mens Bathroom

Sheet:

603a

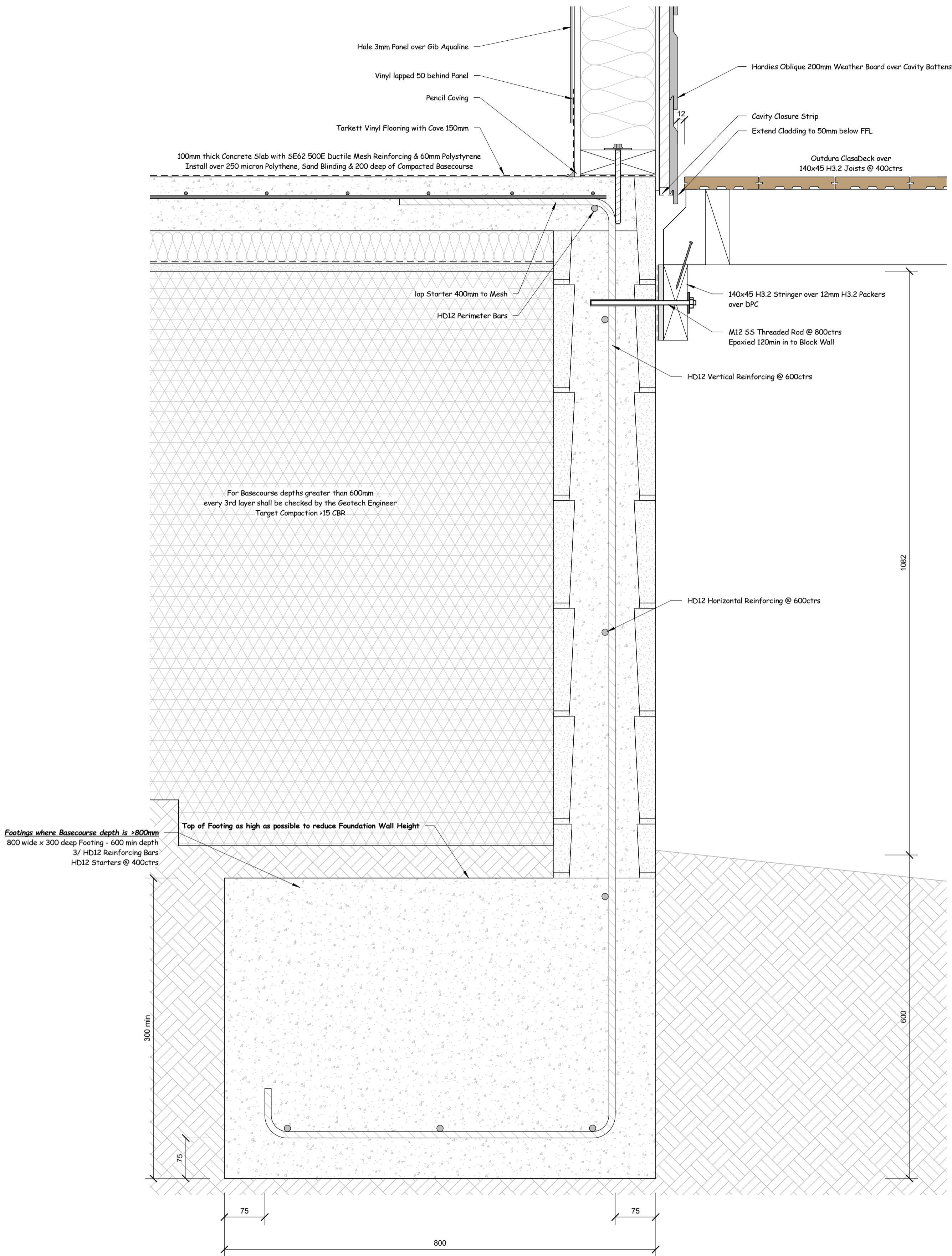
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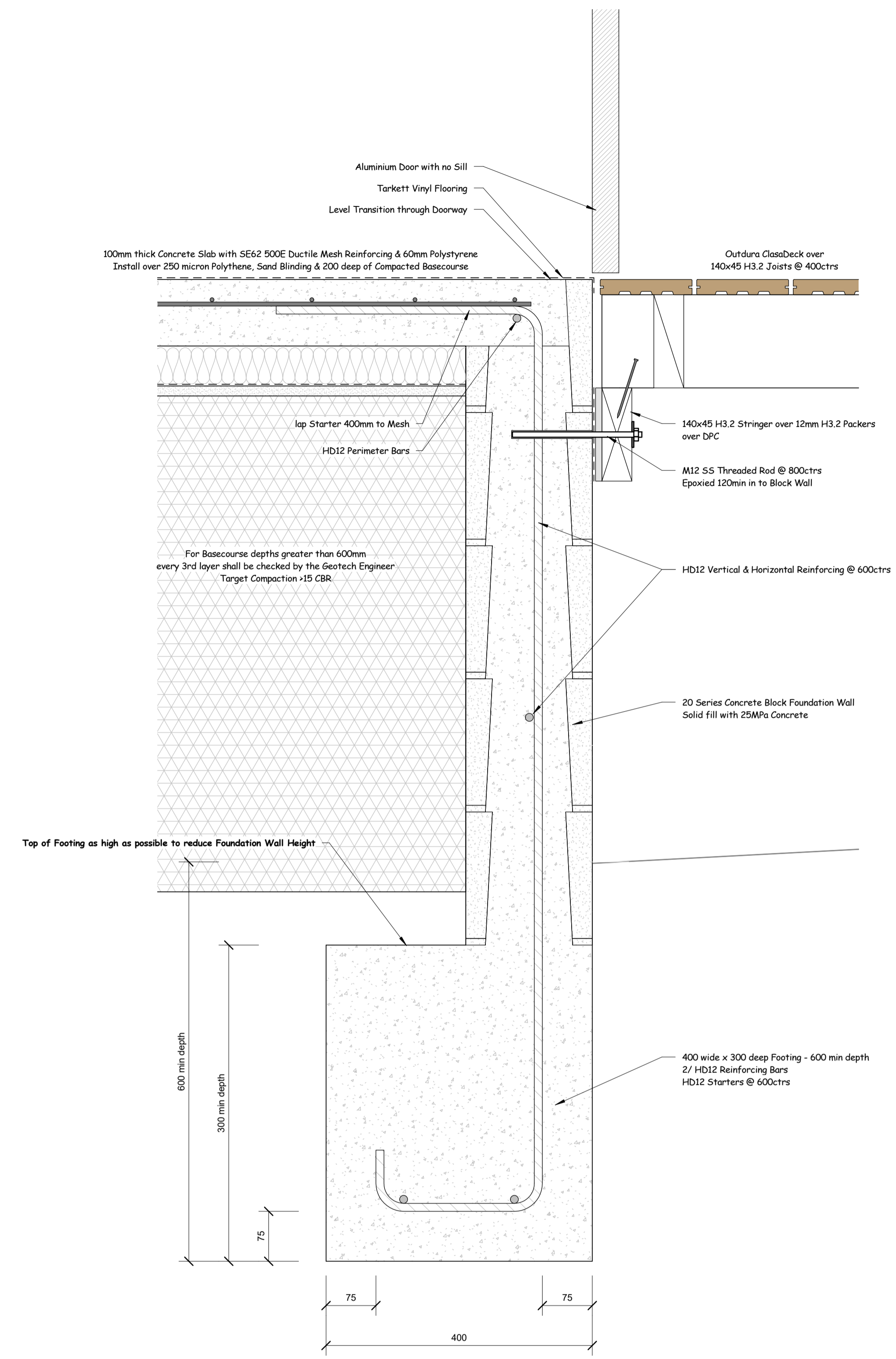
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Notes:



1 600 Mens Bathroom External Footing
600a 1:5



2 600 Mens Bathroom Door Footing
600a 1:5

Building Consent

Issue Dates:

Revision Schedule		
Ref.	Description	Date



279 Mountain Rd, RD 2, Maungaturoto 0587
Ph 09 431-2827 or mob 027 292-8820
email stephen@orcandesign.org

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No: **CD 765**

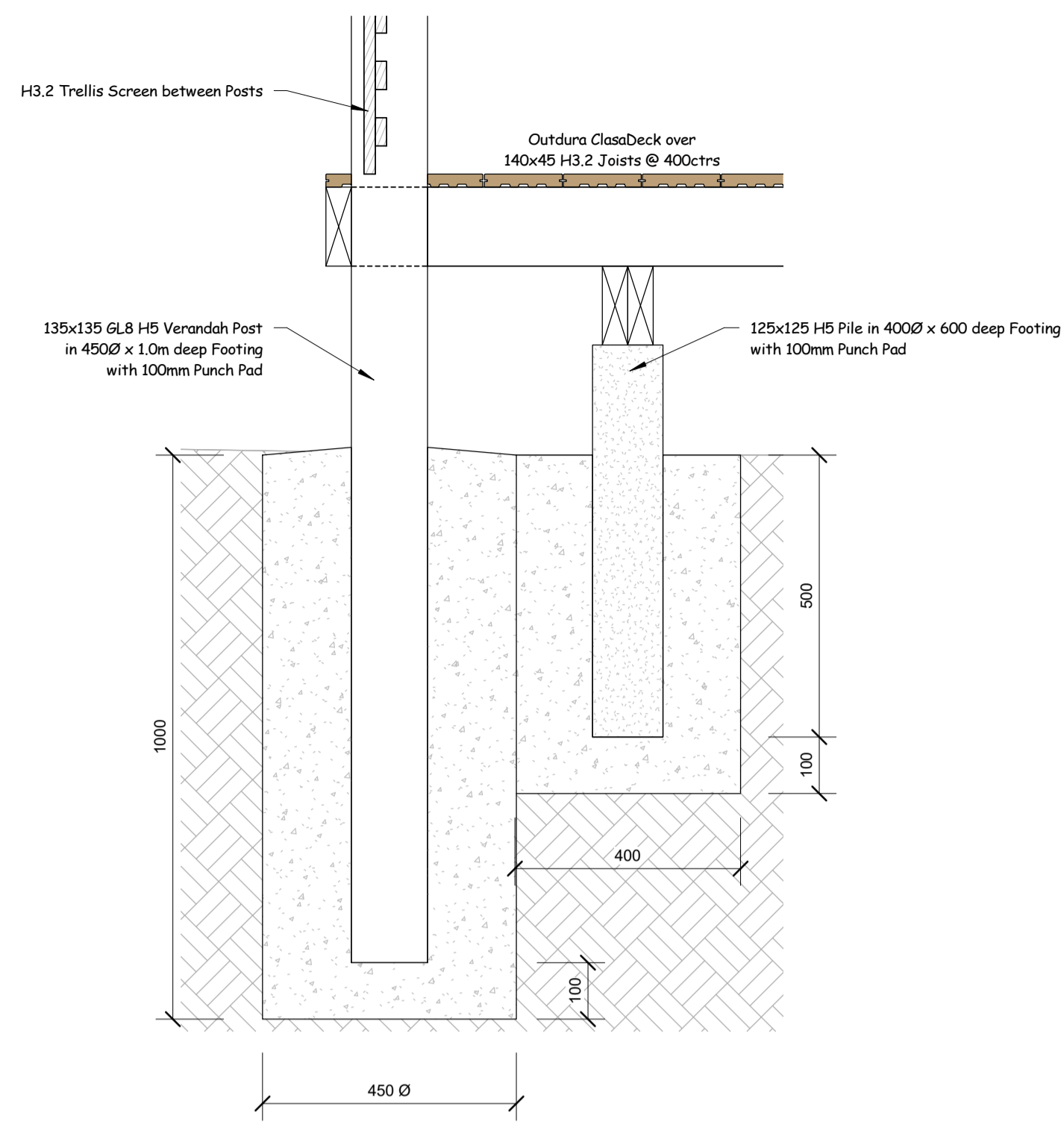
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Waihau Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

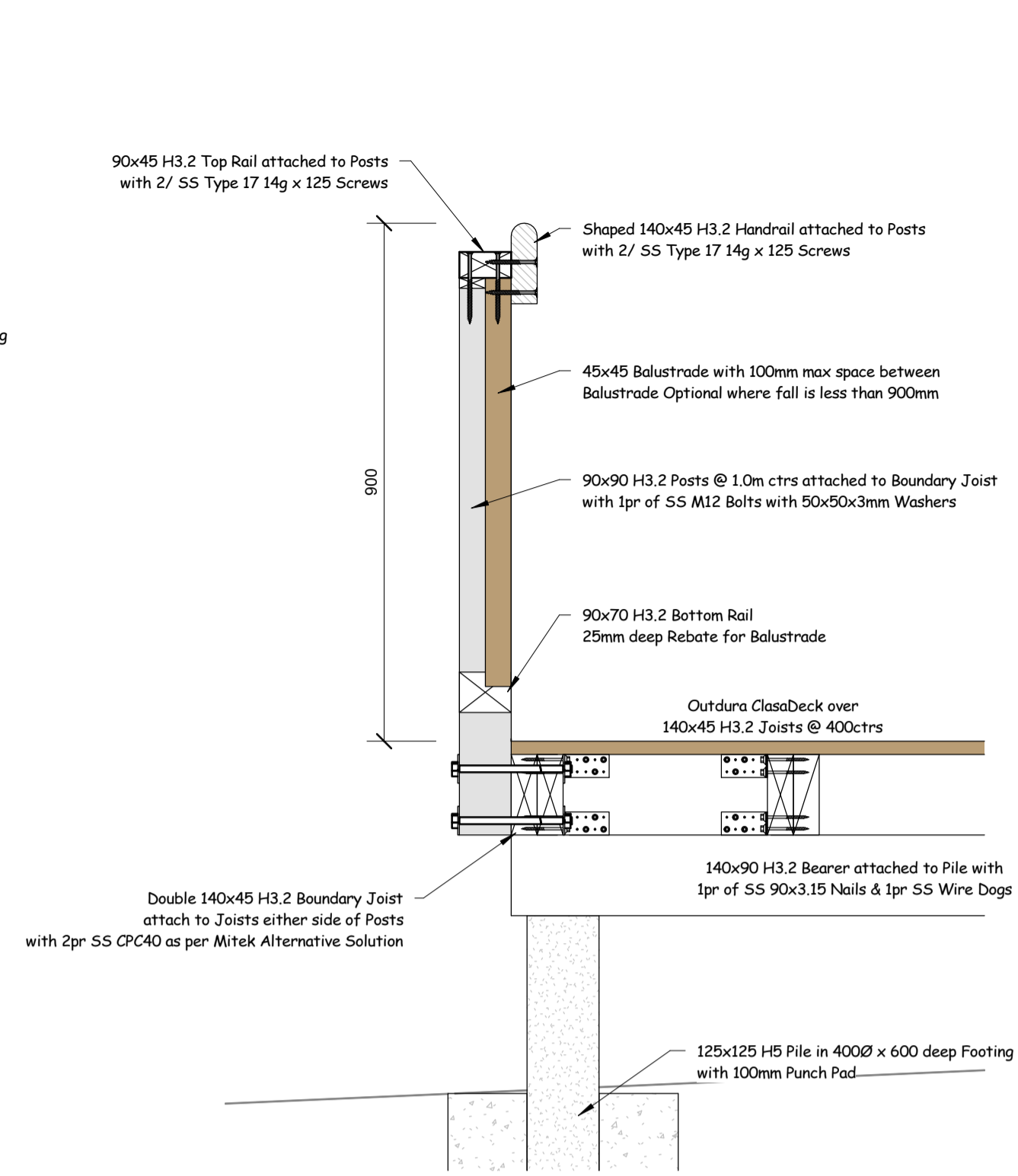
Drawn By: *Stephen Orchard*
Scale: **1:5**

Foundation Details - Mens Bathroom

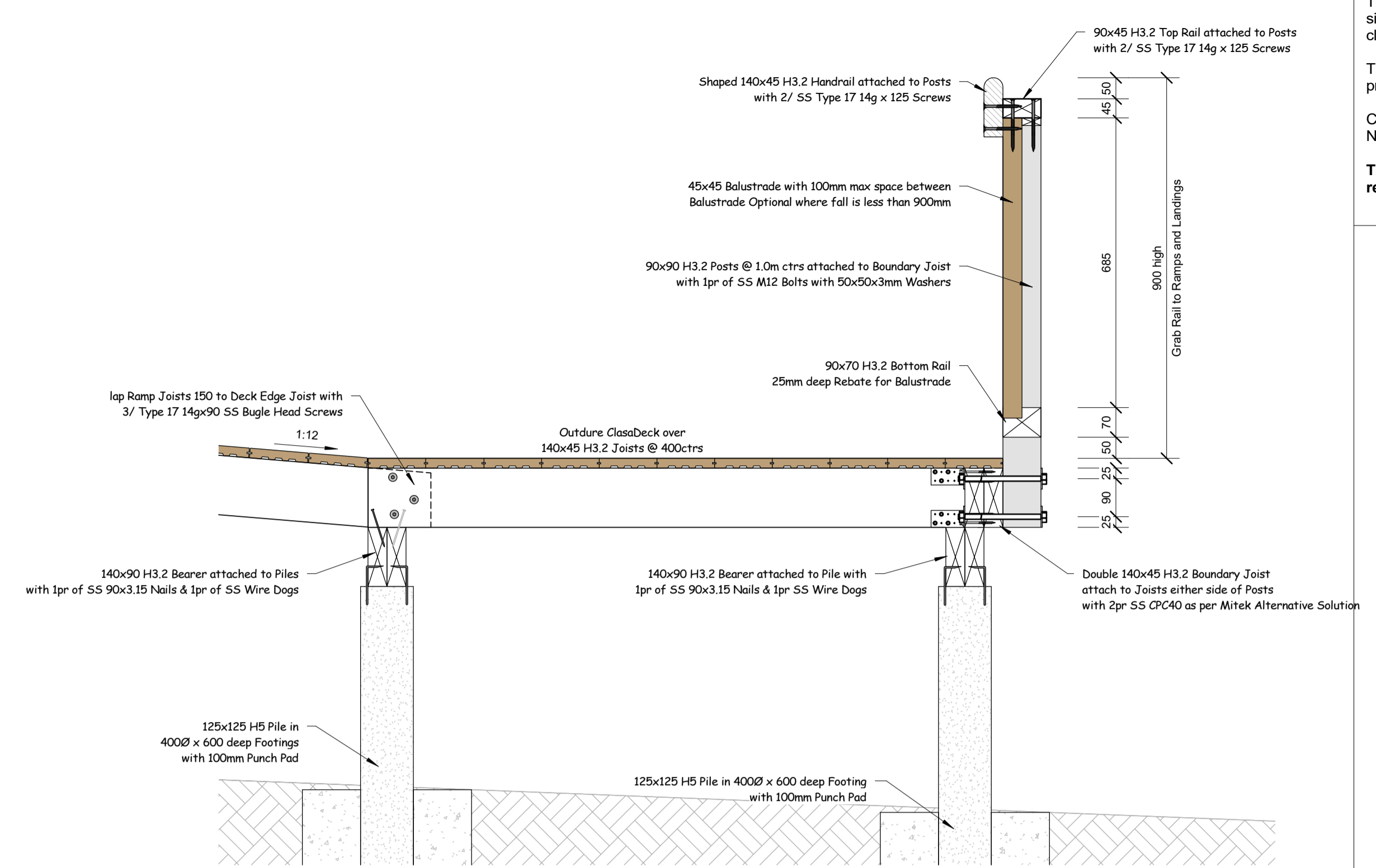
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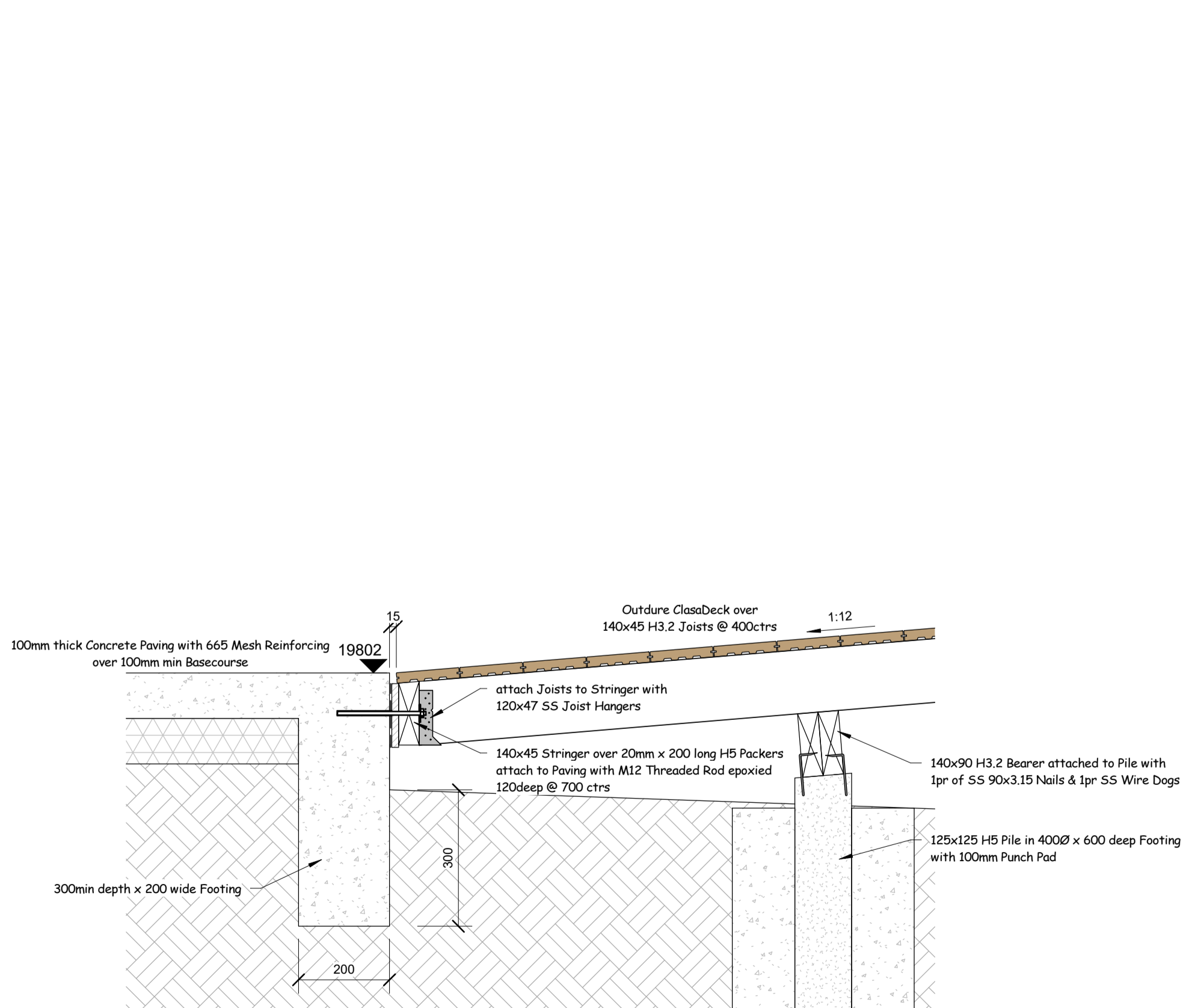
1 600 Covered Walkway Outer Edge
600a 1 : 10



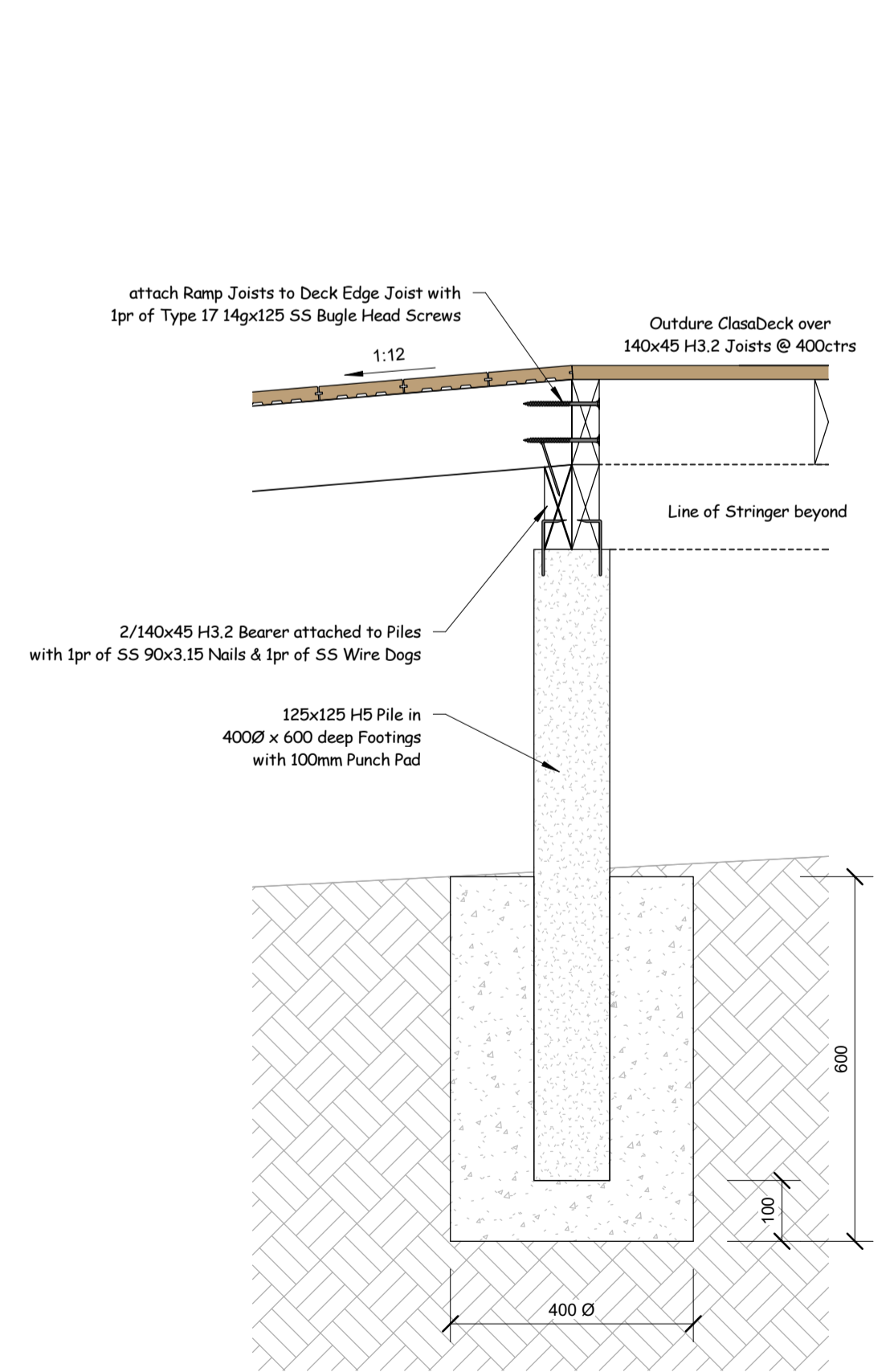
5 600 Ramp Detail
600a 1 : 10



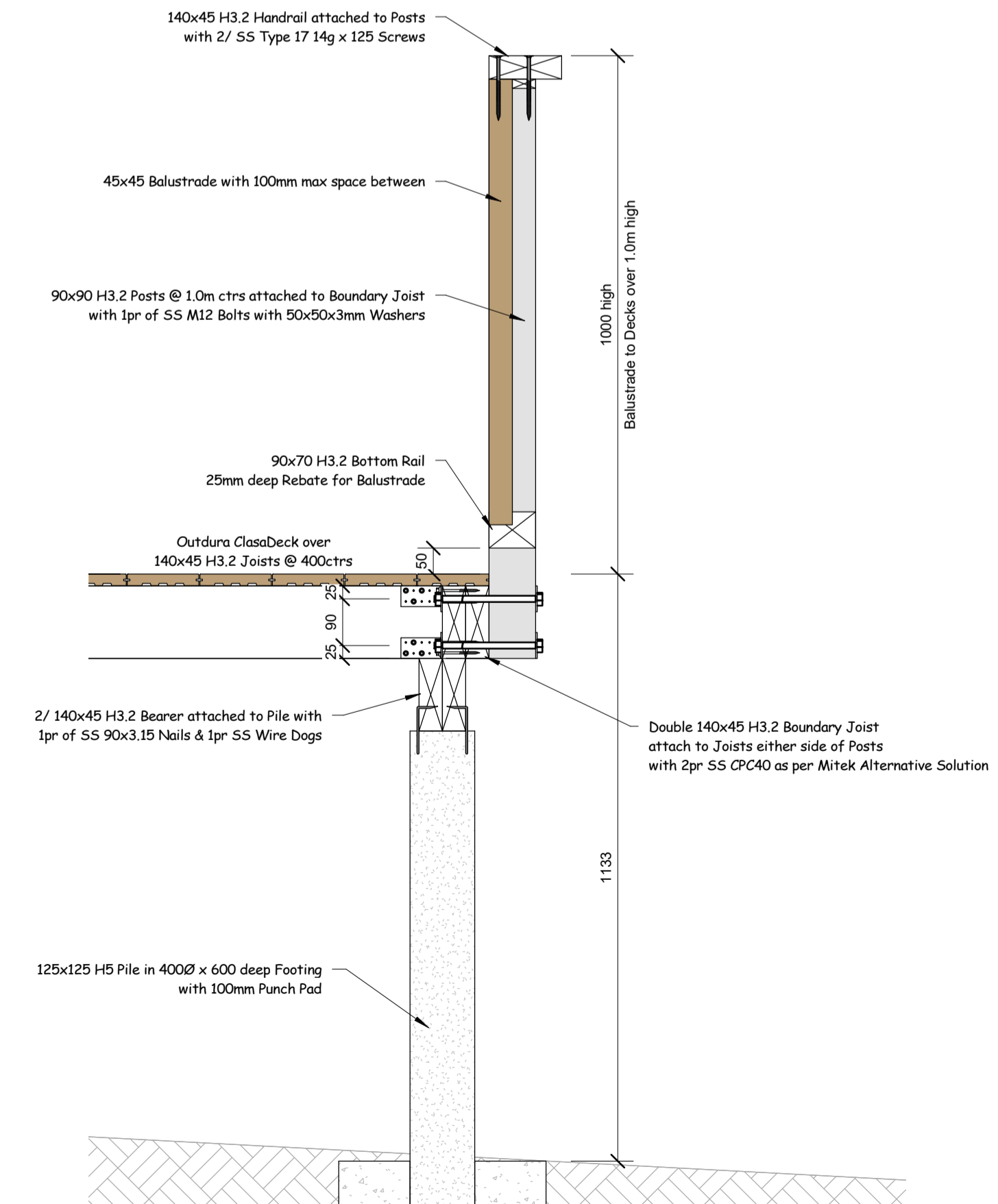
4 600 Ramp Landing
600a 1 : 10



6 600 Ramp to Paving
600a 1 : 10



2 600 Deck to Ramp Transition
600a 1 : 10



3 600 Deck Balustrade Detail
600a 1 : 10

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Revision Schedule

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Project: No: **CD 765**
Bathroom Block Rebuild

Address:
Waihua Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihua Marae**

Drawn By: **Stephen Orchard**

Scale: **1 : 10**

Foundation Details -
Decks and Ramps

Sheet:

605a

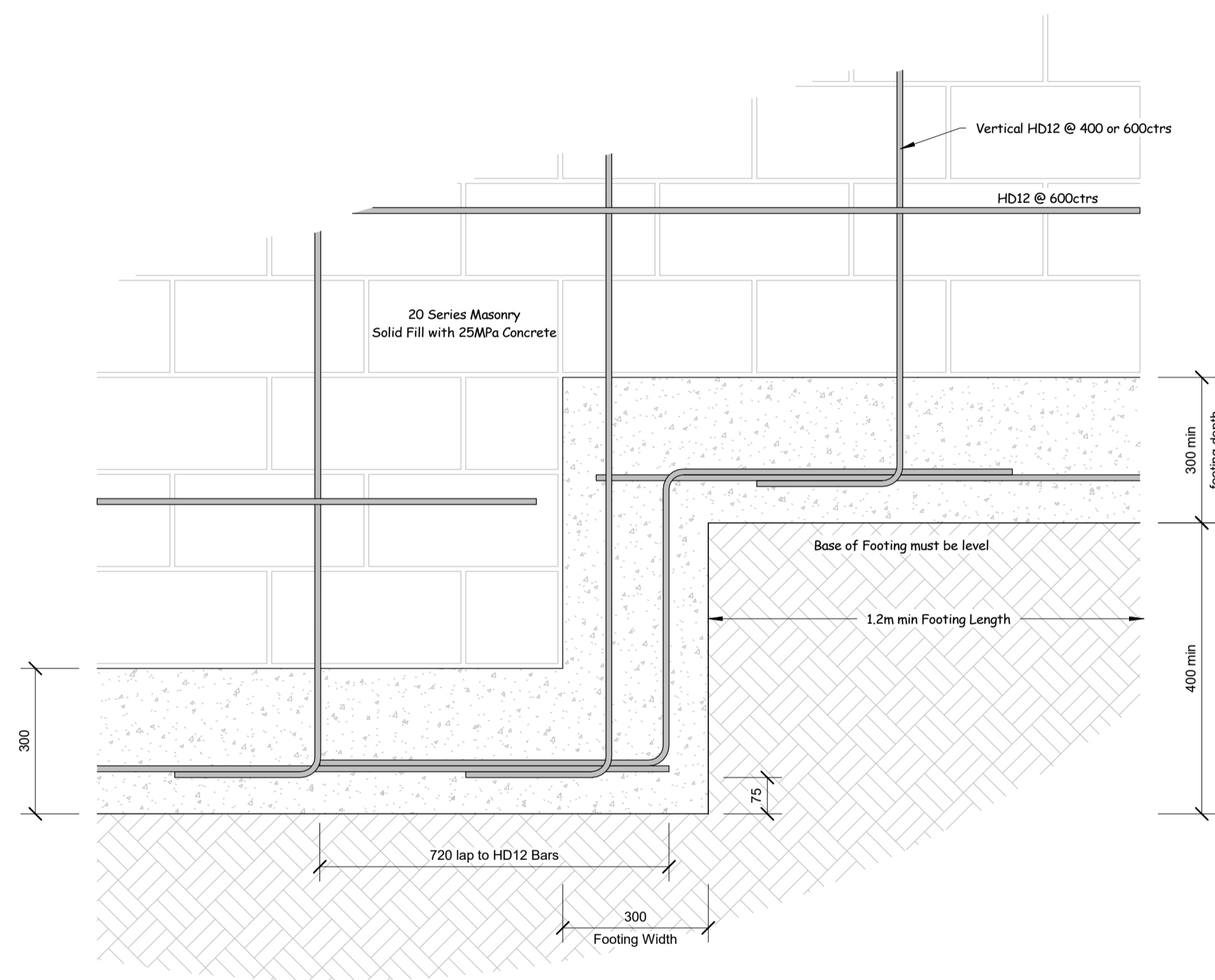
Written Dimensions take precedent over scaled dimensions
 The Contractor shall check and verify all dimensions on site. Any discrepancy shall be referred to the designer for clarification.

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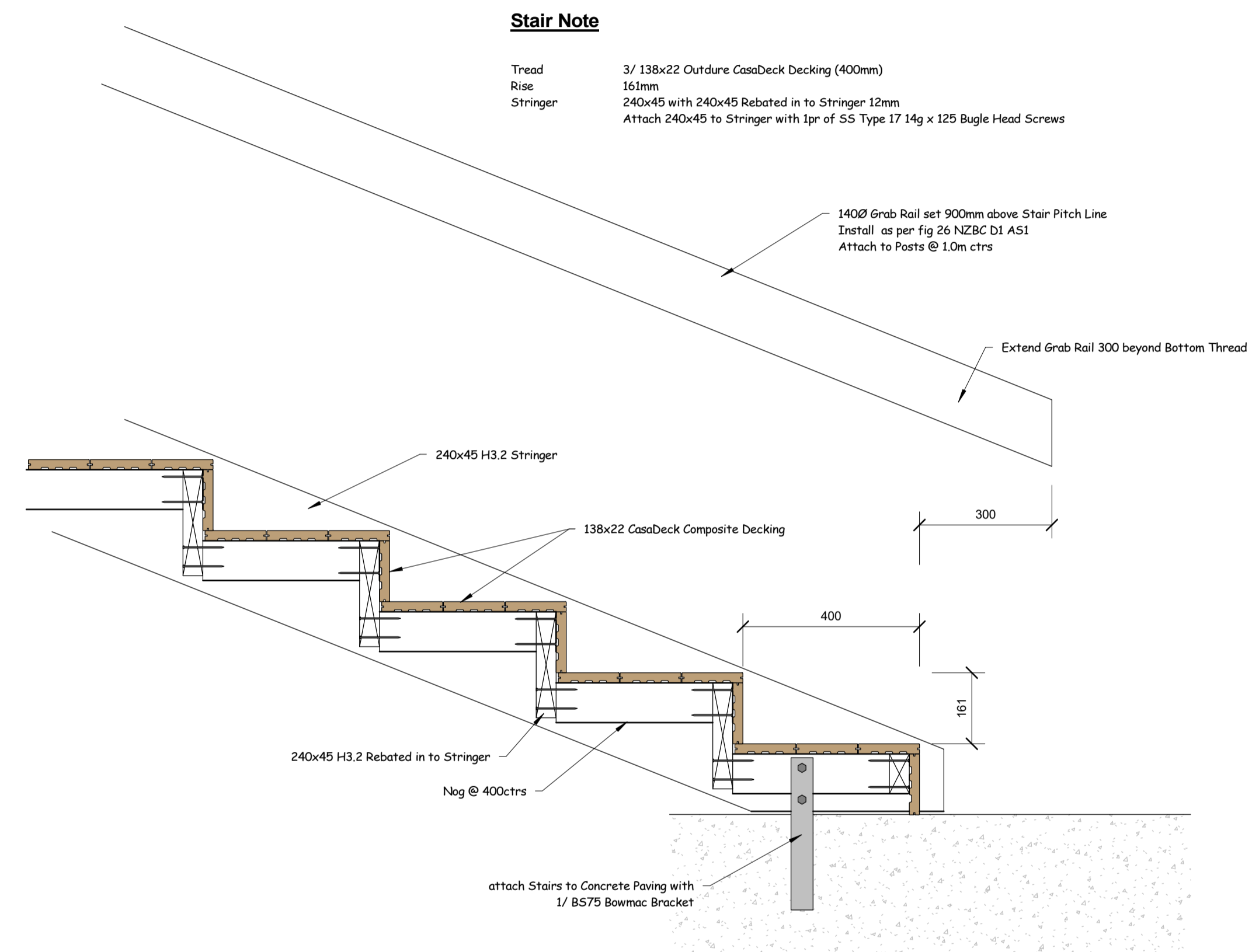
Construction practices shall be accordance with the NZ Building Code and relevant NZ Standards.

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Notes:



2 600 Step In Footing
 1 : 10



1 Deck Stair Detail
 1 : 10

Building Consent

Issue Dates:

Ref.	Description	Date

Revision Schedule

Ref.	Description	Date

Orcan Design

279 Mountain Rd, RD 2, Maungaturoto 0587
 Ph 09 431-2827 or mob 027 292-8820
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Address:
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449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

Drawn By: *Stephen Orchard*

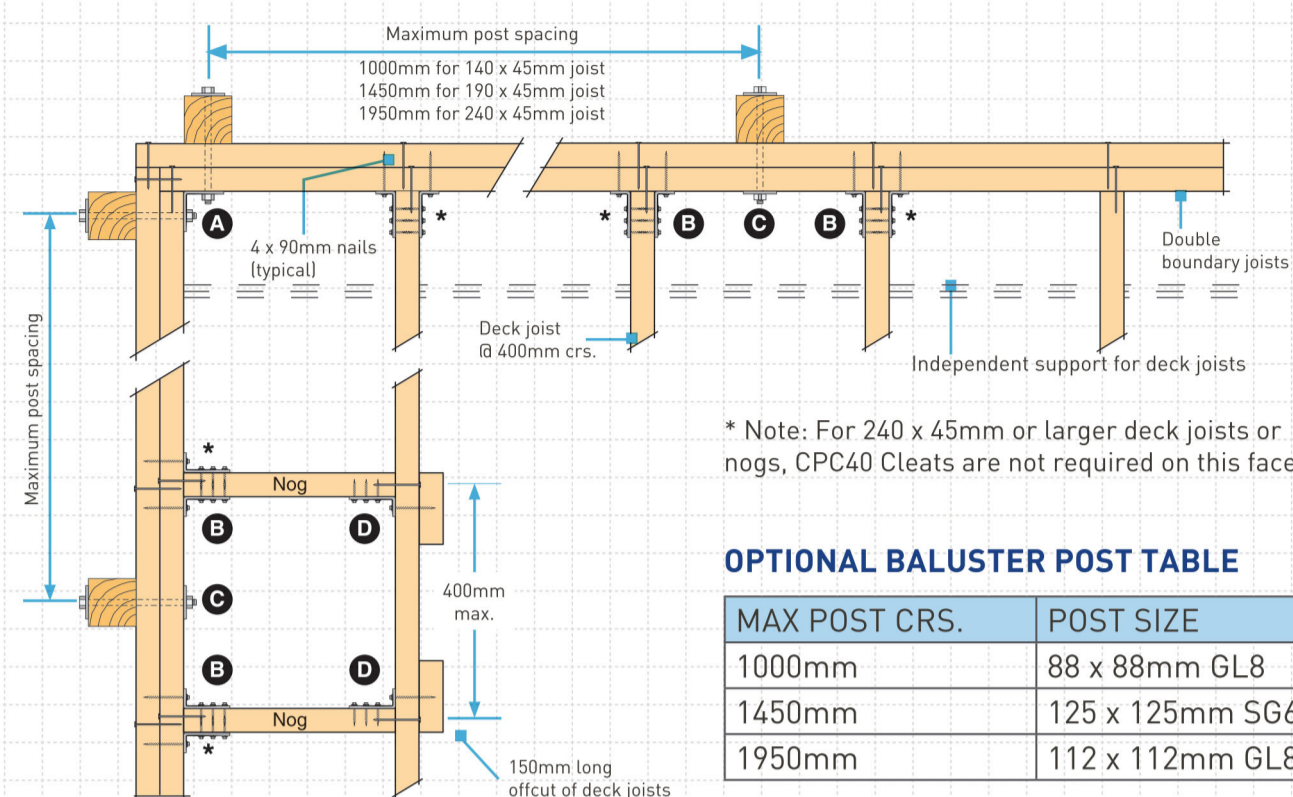
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Foundation Details

Sheet: 606a

FACE FIXED BALUSTER POSTS

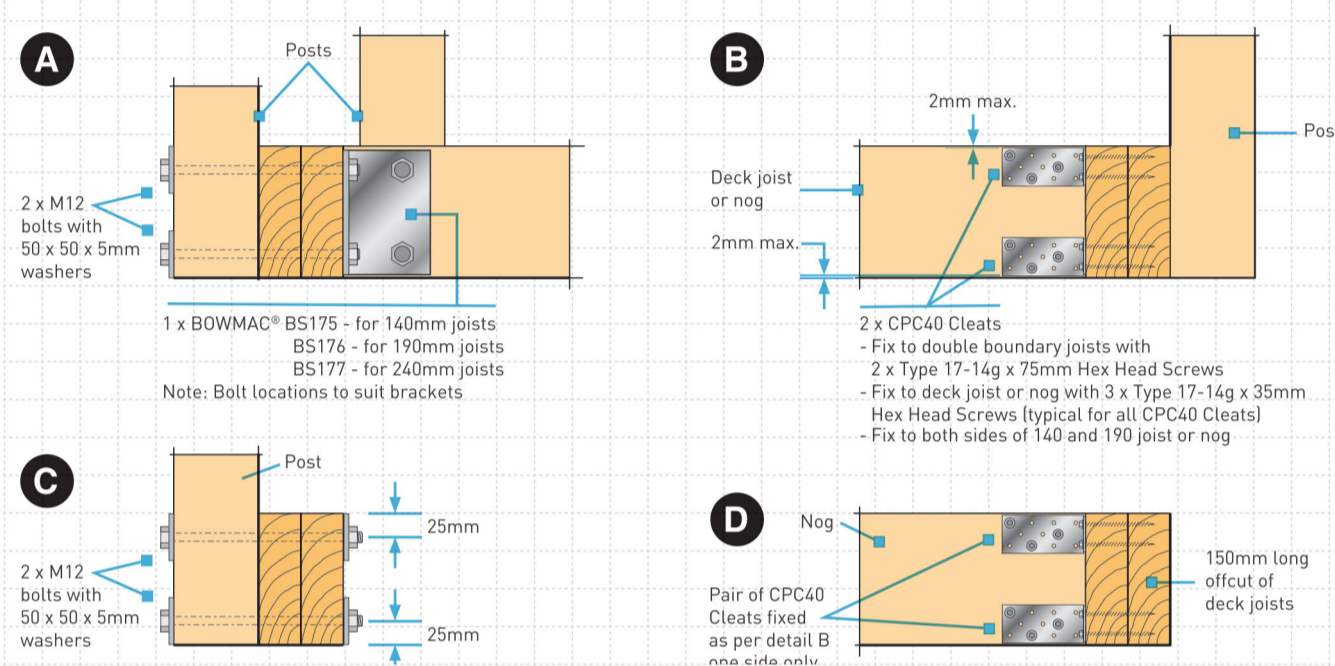
- Complies with Table 3.3 AS/NZS 1170.1:2002 for horizontal load of 0.75kN/m on handrail.
- All fixings are designed to provide adequate rotational stability to the handrail system to resist the horizontal load at top of baluster post.
- Assumes an approved post and balustrade system is used.



OPTIONAL BALUSTER POST TABLE

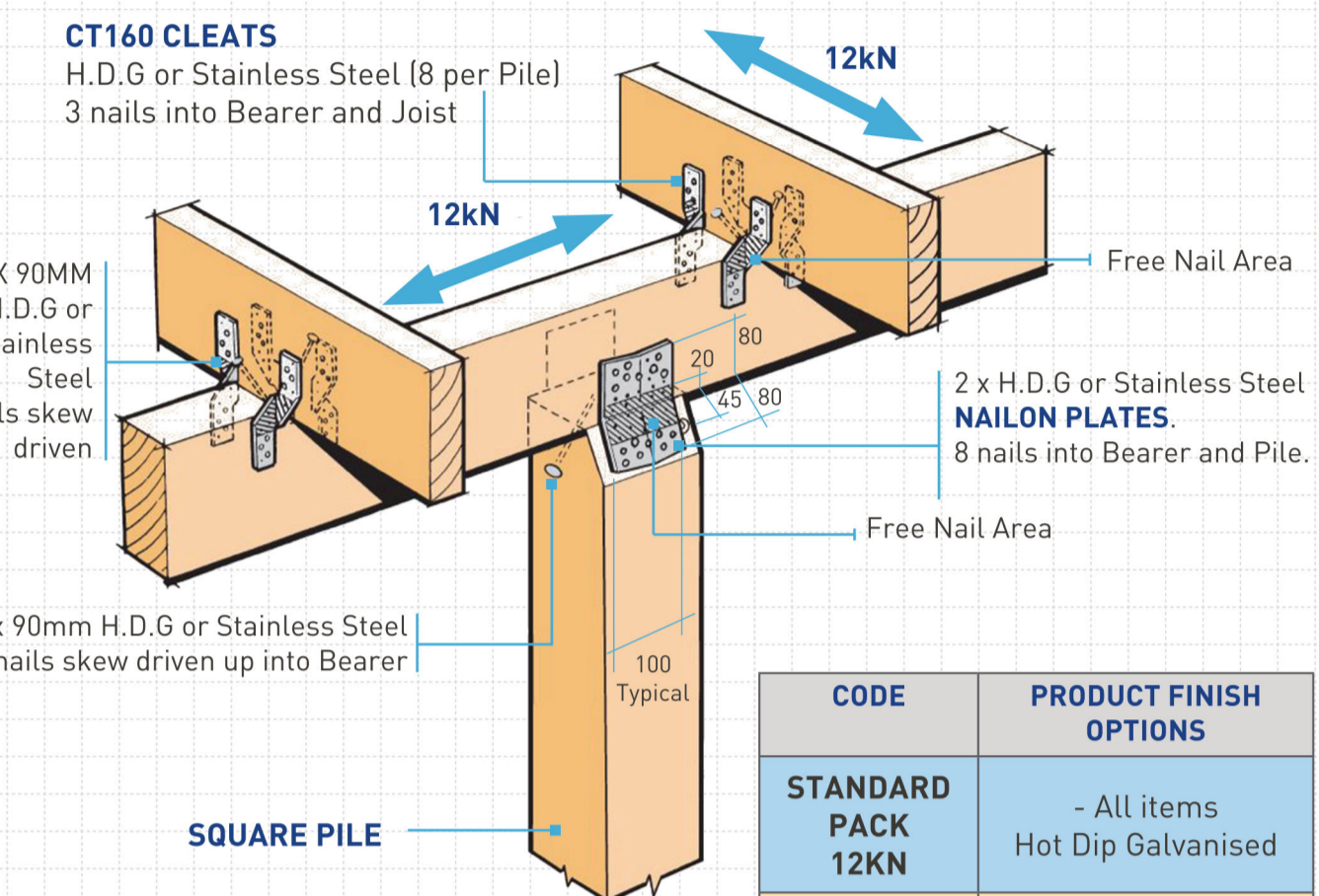
MAX POST CRS.	POST SIZE
1000mm	88 x 88mm GL8
1450mm	125 x 125mm SG6
1950mm	112 x 112mm GL8

Note: Post sized for wet condition H3.2 treatment



12kN PILE FIXING FOR BRACED PILES OR ANCHOR PILES

- The 12kN Pile Fixing must be installed in accordance with this brochure.
- Auckland University Tested 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 clause 7.1.2.
- Joists deeper than 150mm require solid nogging over braced or anchor pile.



Anchor / Brace Pile Shown (on internal bracing line)

AVAILABLE FROM LEADING BUILDERS SUPPLY MERCHANTS THROUGHOUT NEW ZEALAND

MiTek **LUMBERLOK**
Timber Connectors

CODE	PRODUCT FINISH OPTIONS
STANDARD PACK 12KN	- All items Hot Dip Galvanised
HIGH CORROSION PACK 12KNH	- All items Stainless Steel

12kN PILE FIXING

Left Hand Shown

Right Hand Shown

CT160RH
CT160LH
CT160LH

2 x 90mm H.D.G or Stainless Steel nails skew driven into Bearer

4 x CT160 CLEATS
3 nails per Joist and Bearer

2 x NAILON PLATES
1mm x 160mm long per joint, 8 nails into Pile and Bearer

2 x 90mm nails skew driven up into Bearer, 1 each side

25° Max. Scarf

SQUARE PILE

140mm min. Diameter Pile

2 Skew Nails

Bearer must be centrally located onto Pile

Joist Skew nails omitted for clarity

NAILON PLATE 1mm x 160mm (ex 12kN Pack) 8 nails per end. No nails within 18mm of timber edge

12kN
45
45
12kN

Joist

Nail Free Area

2 x 90mm skew nails per side

Ordinary Pile

12kN BEARER SPLICE
Clause 6.12.7.2 NZS 3604:2011

CORROSION HAZARD USE TABLE	
Standard Pack (12KN) - Zones B & C - All fixings ABOVE 600mm from ground level	- All items Hot Dip Galvanised
High corrosion pack (12KNH) - Zone D - All fixings BELOW 600mm from ground level	- All items Stainless Steel (304)

12kN Joint Fixing Schedule

PILE TO BEARER

- Nailon Plate (2 per joint) 1mm x 100mm (Typical) x 160mm long
- 8 Nails per Plate into Pile
- 8 Nails per Plate into Bearer
- 2 Skew Nails 90mm (1 per face)

JOIST TO BEARER

- CT160 Cleats (4 per Joist) 160mm long
- 3 Nails per Cleat into Joist
- 3 Nails per Cleat into Bearer
- 2 Skew Nails 90mm (1 per side)

NAILS

- 80 x 45mm x 3.55 dia. Spiral Nails
- 6 x 90mm x 4 dia. St. Steel Nails (12KNH Pack only)

12kN Pile Set Contents

Each set represents 1 x 12kN Pile Fixing (4 per carton)
2 x Nailon Plates 160mm long
8 x CT160 Cleats
80 x 45mm x 3.55 dia. Spiral Nails
90mm x 4 dia. St. Steel Angular Groove 6 - 12KNH Pack

12kN Fixing - Pile to Bearer

12kN Fixing - Joist to Bearer

12kN Fixing - Joist to Bearer

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Construction practices shall be accordance with the NZ Building Code and relevant NZ Standards.

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Notes:

Building Consent

Issue Dates:

Revision Schedule

Ref.	Description	Date

Orcan Design

279 Mountain Rd, RD 2, Maungaturoto 0587
Ph 09 431-2827 or mob 027 292-8820
email stephen@orcandesign.org

Project: **Bathroom Block Rebuild**
No: **CD 765**

Address: **Waihau Marae
449 Arapaoa Rd
Tinopai 0593**

Client: **Waihau Marae**

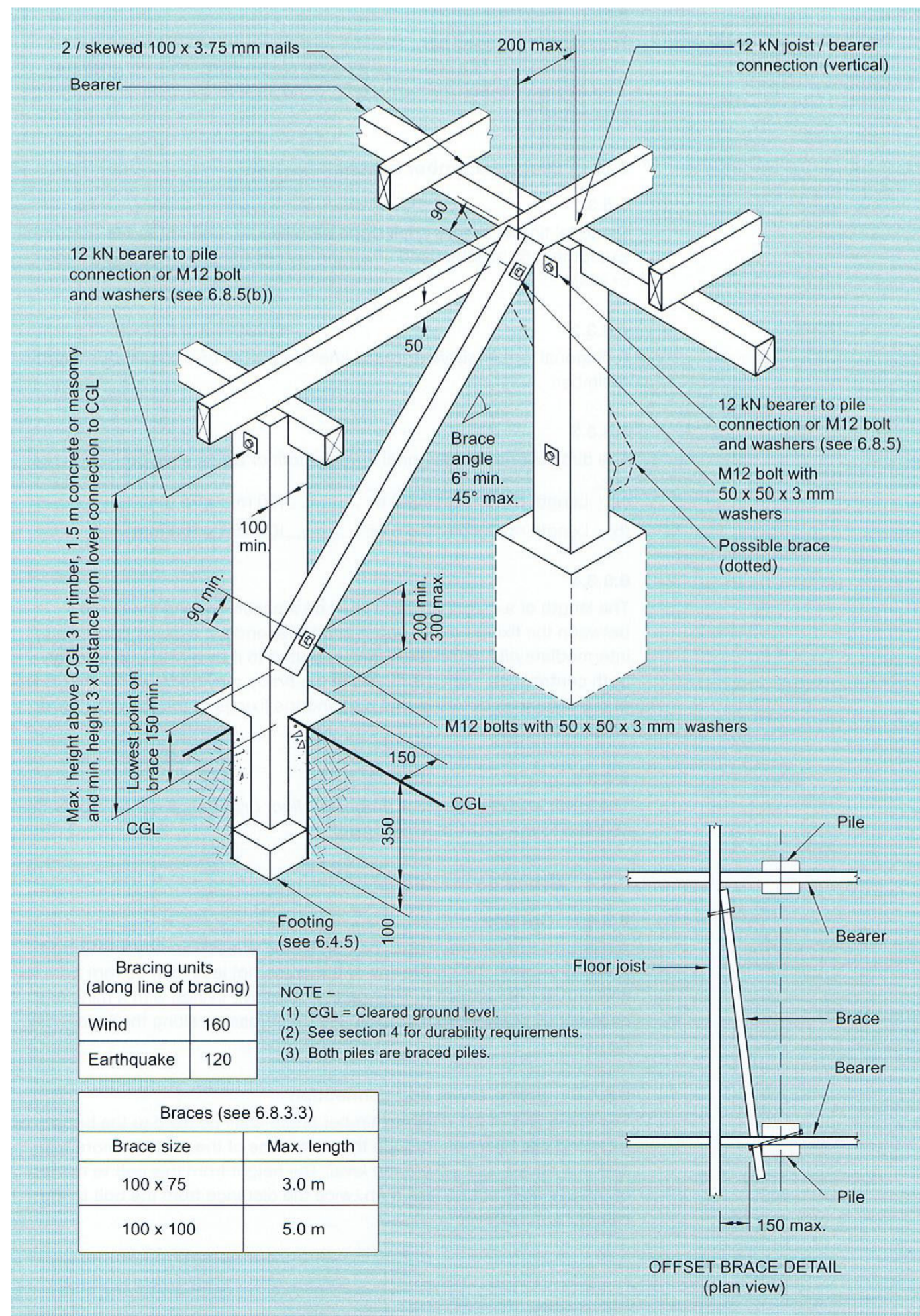
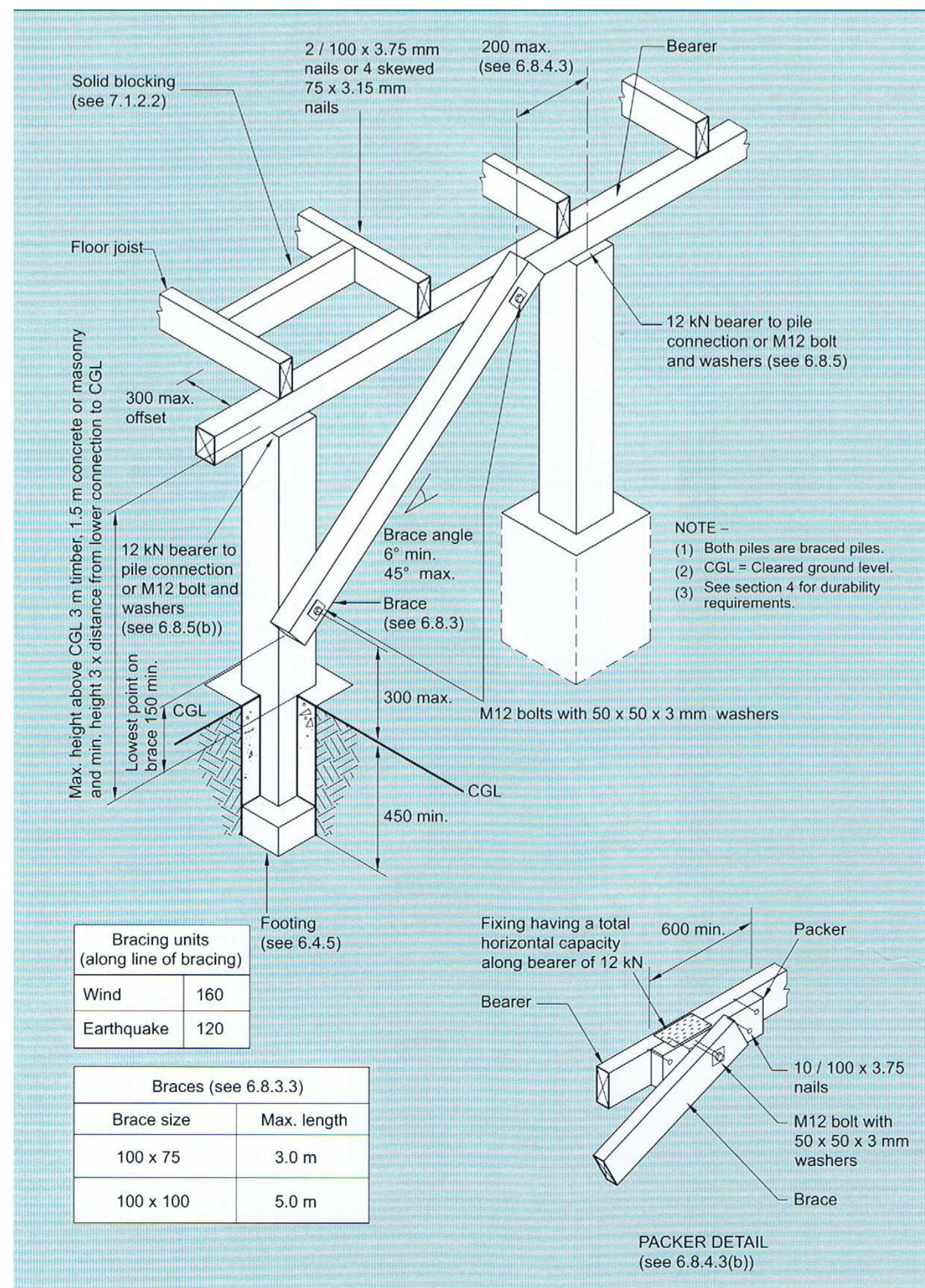
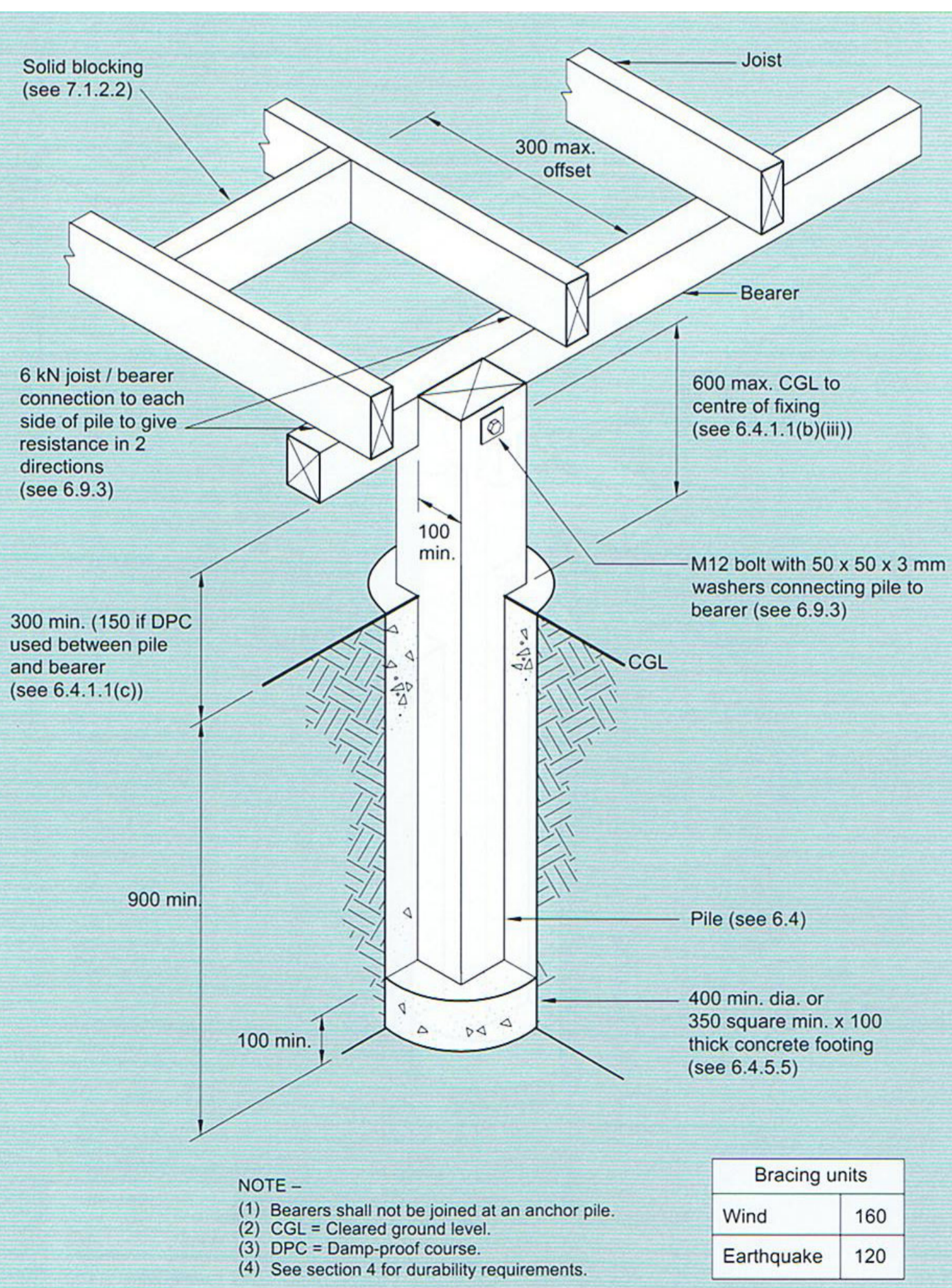
Drawn By: *Stephen Orchard*

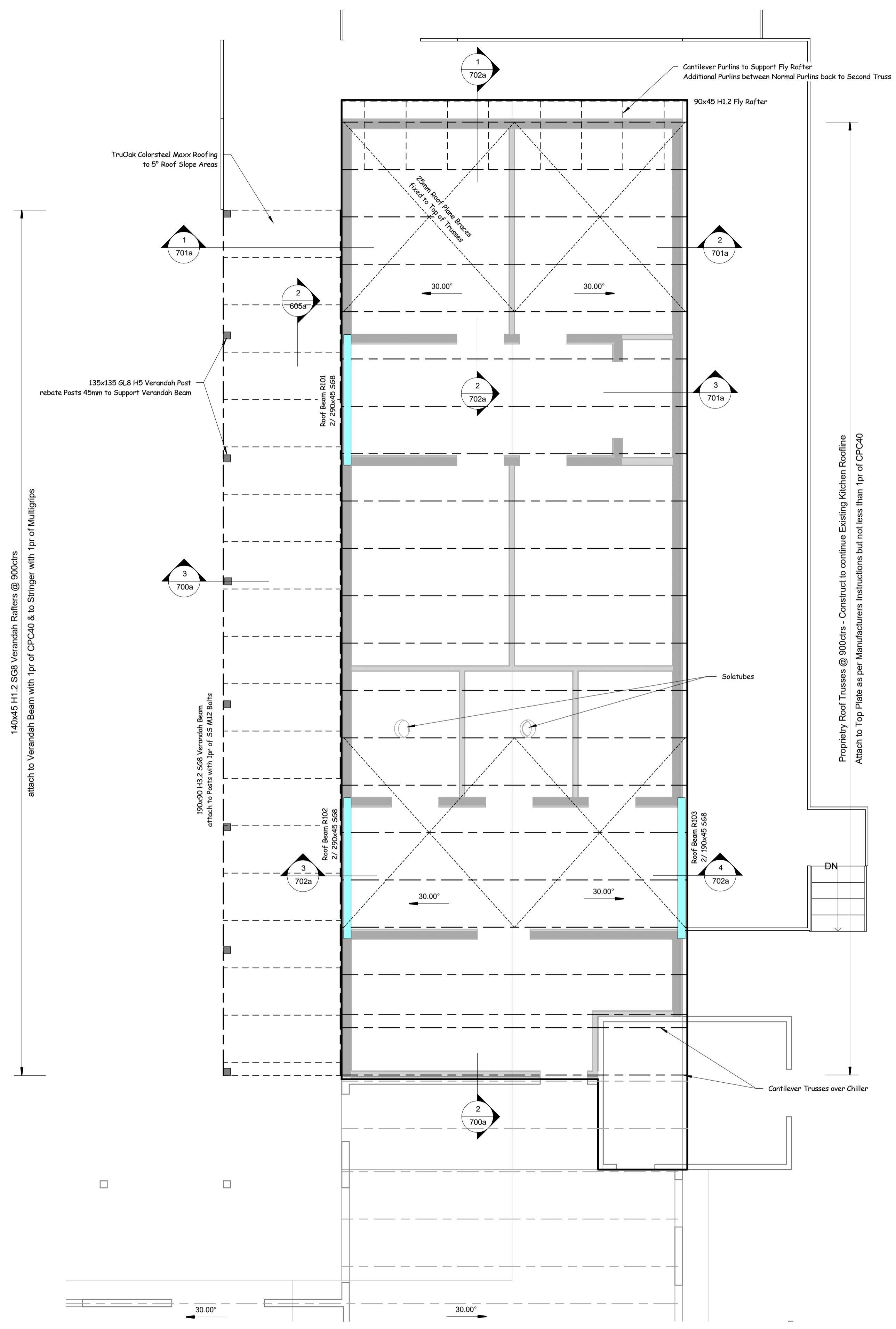
Scale:

Foundation Details - Alternative Solutions

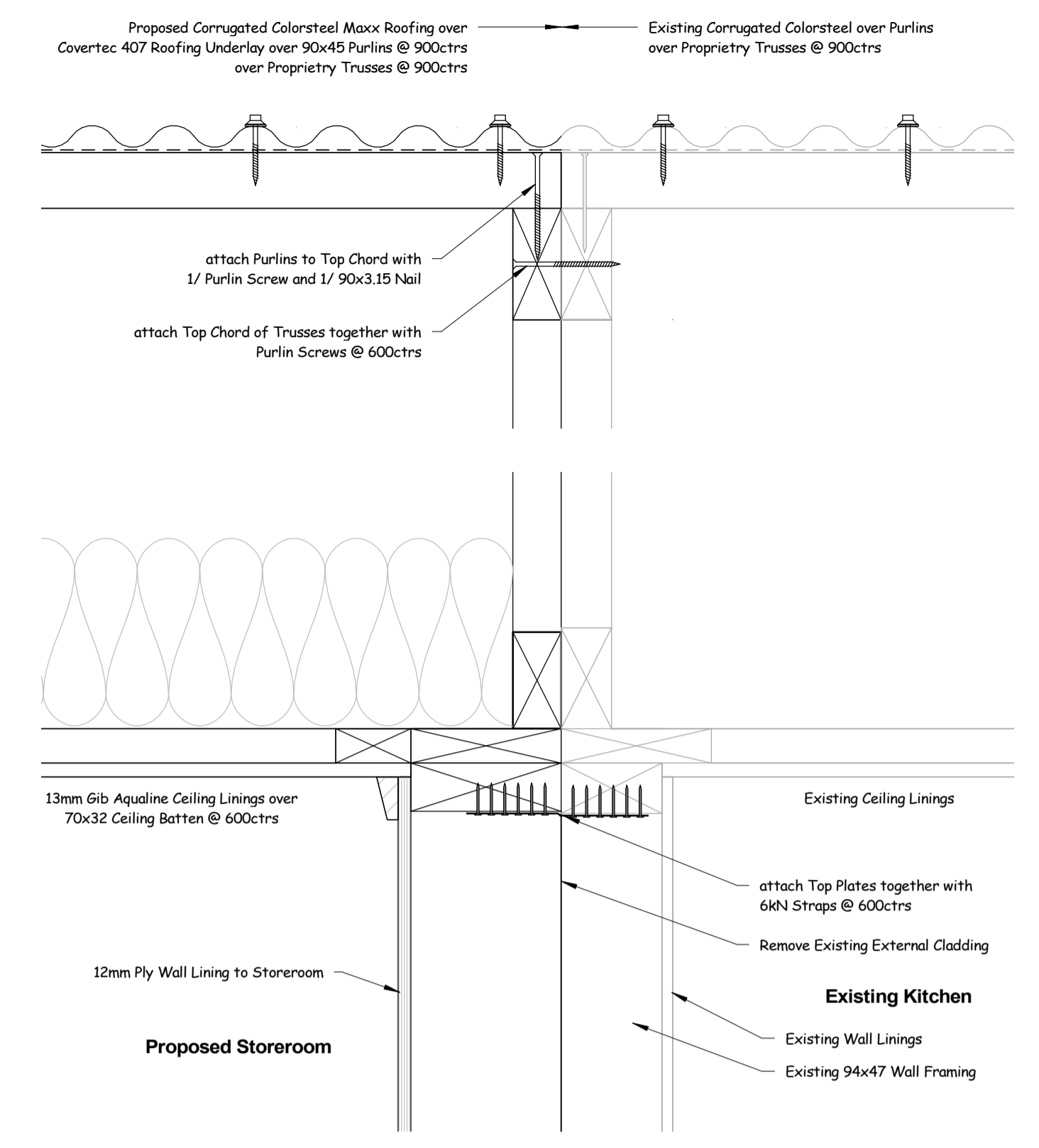
Sheet:

607a





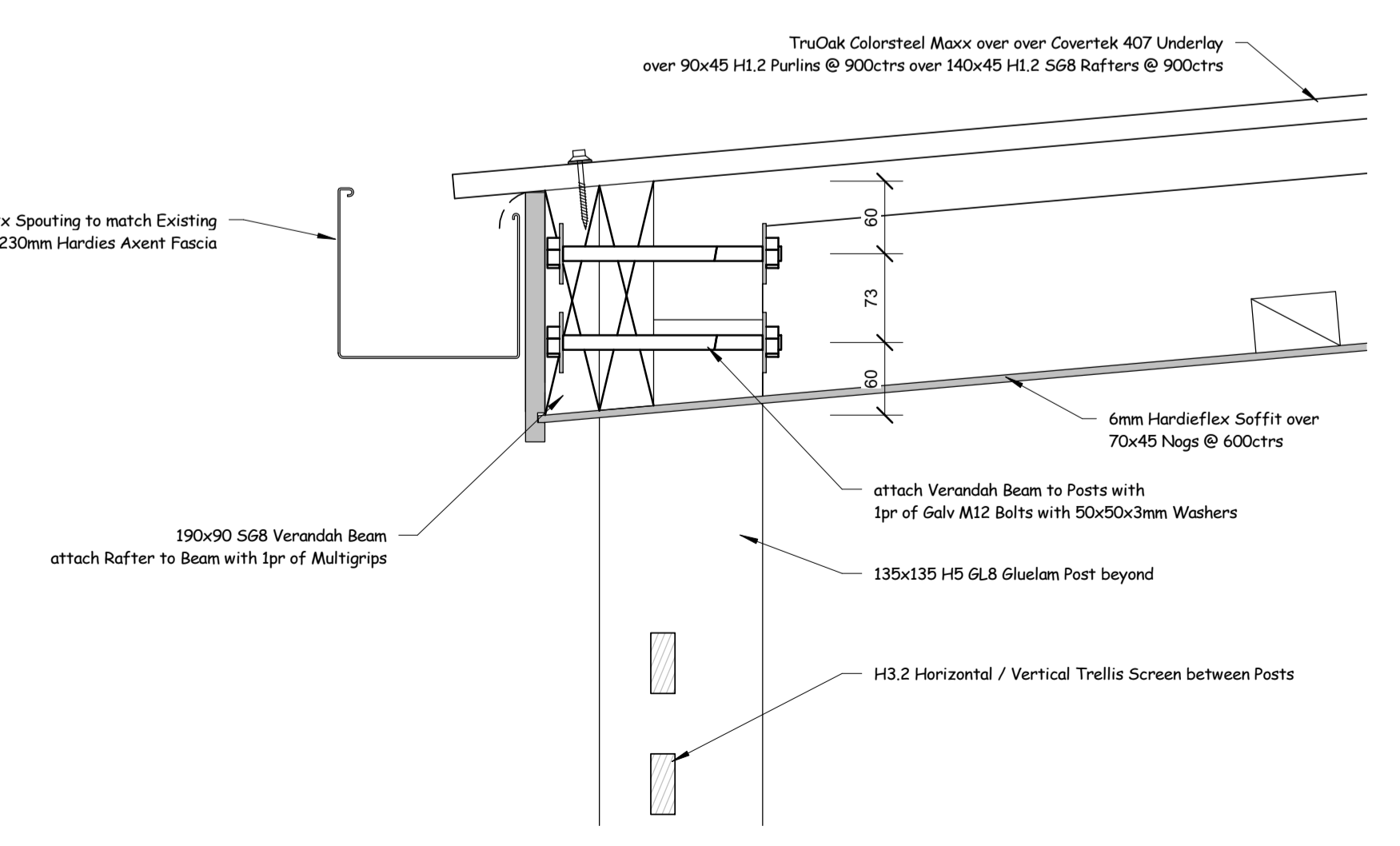
1 **700 Roof Framing Plan**
1 : 50



2 **700 Proposed Roof to Existing Roof**
1 : 5

Roof Framing Notes

Roof Framing	
Structure	Trusses Proprietary Trusses @ 900 ctrs
Fly Rafters	90x45 H1.2 S68
Purlins	90x45 H1.2 S68 @ 600ctr
Ceiling Batten	70x32 H1.2 @ 600 ctrs
Fixings	
Trusses	Proprietary Trusses as per Manufacturers Details
Purlins	1/10gx80 Purlin Screw & 1/ 90x3.15 Nail
Roofing	Roofing Screws colour matched to Roofing
Insulation	
Ceiling Insulation	R3.6c Marmoth
Roofing Underlay	Covertek 407 Self Supporting Roofing Underlay placed Vertical
Roofing	
Roofing Material	30° 5° Corrugated Coloursteel Maxx TruOak Colorsteel Maxx
Flashings	Colorsteel Maxx as required to waterproof roof to match existing Roof
Fascia	180x18 H3.1 PP
Spouting	Coloursteel Maxx 125mm Square
Downpipes	Marley 80mm PVC
Rainwater Calculations	
from E1 AS1 & Continuous Spouting Website	
Rainfall Intensity	100mm for a 10% probability of 100mm in 10 minutes from (Appendix A)
125mm Sq Spouting Size	8435mm ²
Roof Discharging to Gutter	60m ² @ 100mm Rainfall for >25° Roof Pitch from (fig 15)
80mm dia Downpipe	85m ² from (Table 5)



3 **700 Verandah Post to Fascia**
1 : 5

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Address:
Waihau Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

Drawn By: *Stephen Orchard*
Scale: **As indicated**

Roof Framing Plan

Sheet: **700a**

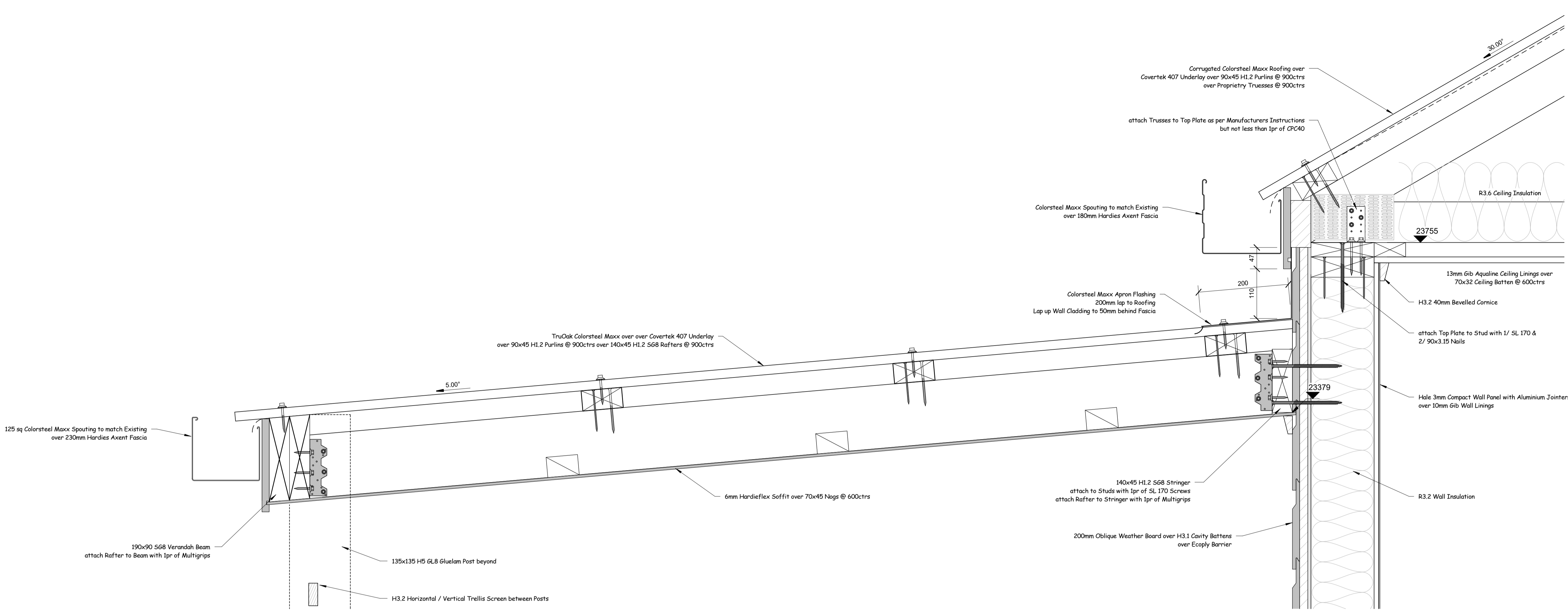
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The Contractor shall check and verify all dimensions on site. Any discrepancy shall be referred to the designer for clarification.

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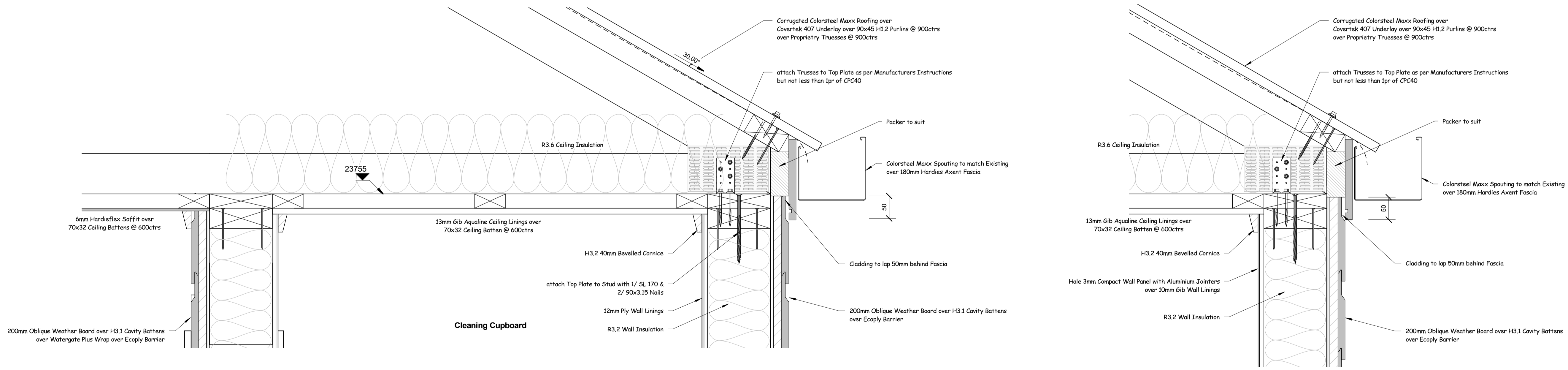
Construction practices shall be accordance with the NZ Building Code and relevant NZ Standards.

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Notes:



700 Verandah Detail
1 : 5
1
700a



700 Cleaning Cupboard
1 : 5
3
700a

700 Typical Roof Edge Detail
1 : 5
2
700a

Building Consent

Issue Dates:	

Revision Schedule		
Ref.	Description	Date

Orcan Design

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email stephen@orcandesign.org

Project: **Bathroom Block Rebuild** No: **CD 765**
Address: **Waihua Marae
449 Arapaoa Rd
Tinopai 0593**

Client: **Waihua Marae**

Drawn By: *Stephen Orchard*
Scale: **1 : 5**

Roof Details

Sheet: **701a**

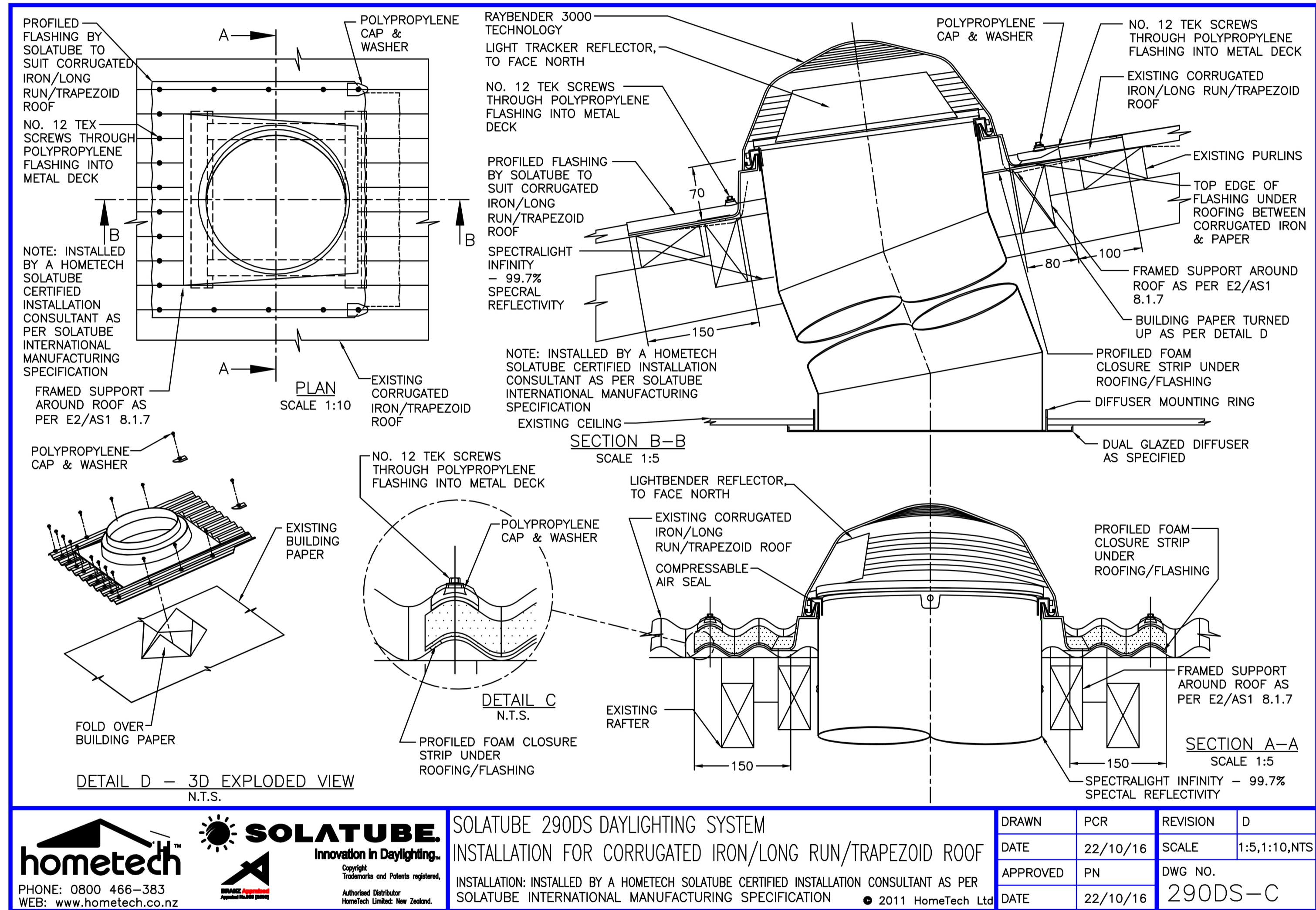
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Notes:



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 WEB: www.hometech.co.nz

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SOLATUBE 290DS DAYLIGHTING SYSTEM
INSTALLATION FOR CORRUGATED IRON/LONG RUN/TRAPEZOID ROOF
 INSTALLATION: INSTALLED BY A HOMETECH SOLATUBE CERTIFIED INSTALLATION CONSULTANT AS PER SOLATUBE INTERNATIONAL MANUFACTURING SPECIFICATION © 2011 HomeTech Ltd

DRAWN	PCR	REVISION	D
DATE	22/10/16	SCALE	1:5, 1:10, NTS
APPROVED	PN	DWG NO.	290DS-C
DATE	22/10/16		

Building Consent

Issue Dates:		

Revision Schedule		
Ref.	Description	Date



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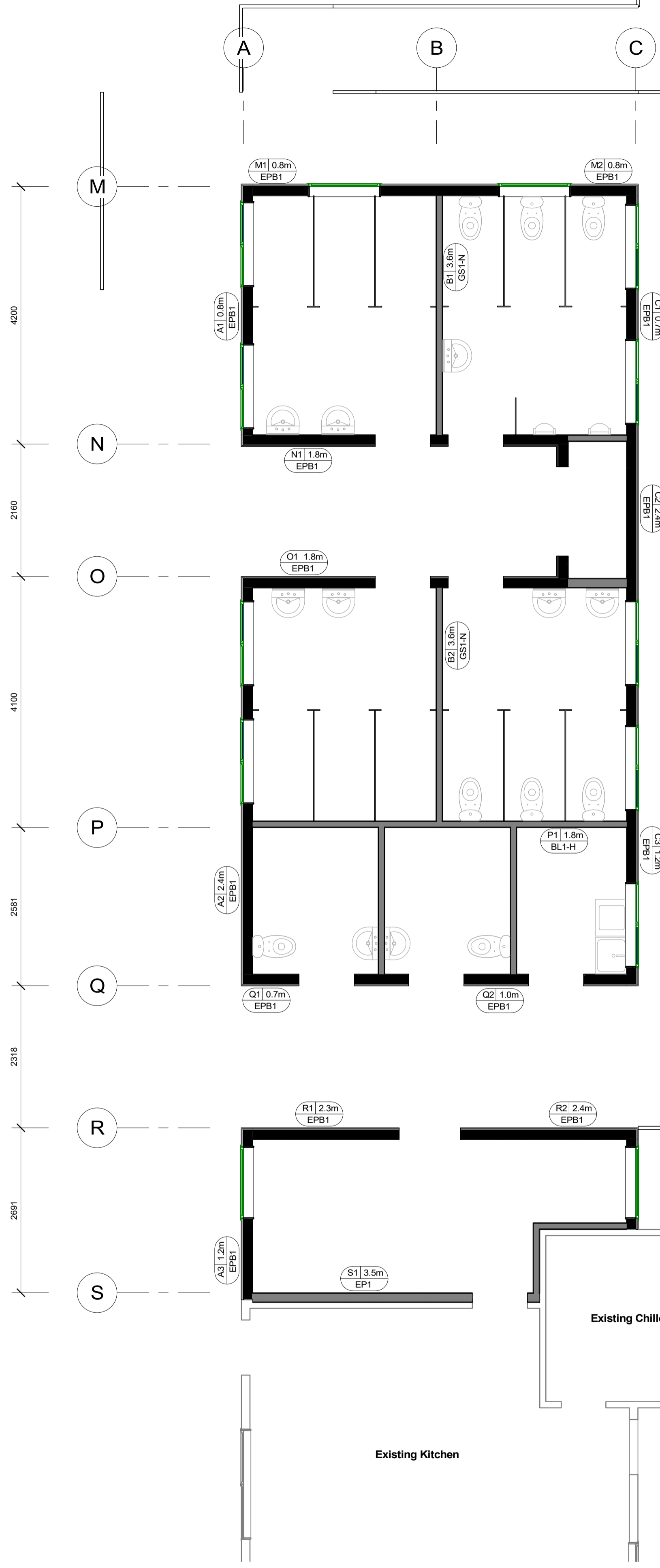
Project: No: **CD 765**
Bathroom Block Rebuild

Address:
Waihau Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

Drawn By: *Stephen Orchard*
 Scale:

Roof Details - Solatube



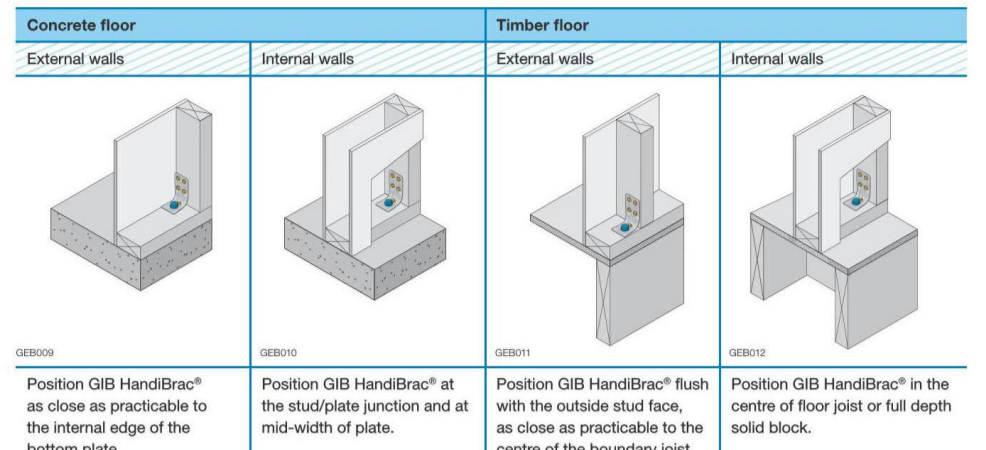
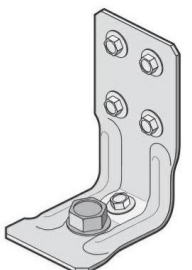
800 Bracing Plan
1 : 50

GIB HandiBrac® Installation

Developed in conjunction with MT&K, the GIB HandiBrac® has been designed and tested by Winstone Wallboards for use in GIB EzyBrac® elements that require hold-downs. The GIB HandiBrac® is a substitute for bottom plate hold-down straps.

- Quick and easy to fit.
- May be fitted at any stage before lining.
- Framing face is clear to allow flush lining.
- Easily inspected.

The GIB HandiBrac® with BOWMAC® blue head screw bolt is suitable for timber and concrete floors constructed in accordance with NZS 3604:2011.



Concrete floor
Position GIB HandiBrac® as close as practicable to the internal edge of the bottom plate.

Timber floor
Position GIB HandiBrac® flush with the outside stud face, with the outside stud face, as close as practicable to the internal edge of the bottom plate.

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 100mm galvanneal coach screw or use supplied BT10/140 screwbolt in GIB HandiBrac® pack.

3.3 ECOPLY® BRACING SPECIFICATION - EPI

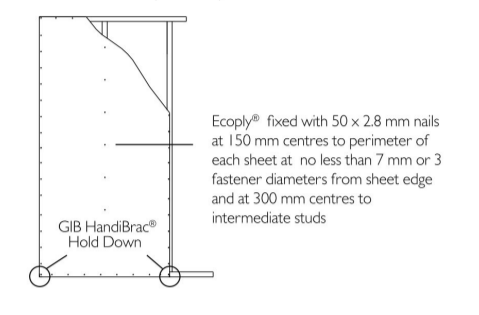
Specification No.	Minimum Wall Length	Lining Requirements	BU/Um Wind	BU/Um Earthquake
EPI 0.4	0.4m	Ecoply one side	80	95
EPI 0.6	0.6m	Ecoply one side	95	105
EPI 1.2	1.2m	Ecoply one side	120	135

Framing
Wall framing must comply with:
• NZBC B1 - Structure/AS1 Clause 3 Timber (NZS 3604)
• NZBC B2 - Durability/AS1 Clause 3.2 Timber (NZS 3602)

Fastening the Ecoply® panels
Fasten with 50 x 2.8mm hot dipped galvanised or stainless steel flat head nails for direct fix. Place fasteners no less than 7mm or 3 fastener diameters from sheet edges. Screws cannot be used. Power driven nails are suitable. Do not overdrive, nails must be full round head.

Fasteners for H3.2 CCA treated Ecoply® panels
Where fasteners are in contact with H3.2 CCA treated timber or plywood, fasteners shall be a minimum of hot dip galvanised. 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.

Lining
One layer of 7mm, 9mm or 12mm Ecoply plywood 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.



Ecoply® Bracing Systems are designed to meet the requirements of the NZBC and have been tested and analysed using the F21 method referenced in NZS 3604:2011 based on an acceptable solution B1/AS1 Structure. Testing was carried out using Ecoply manufactured by Carter Holt Harvey and SGB 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.



GIB EzyBrac® 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

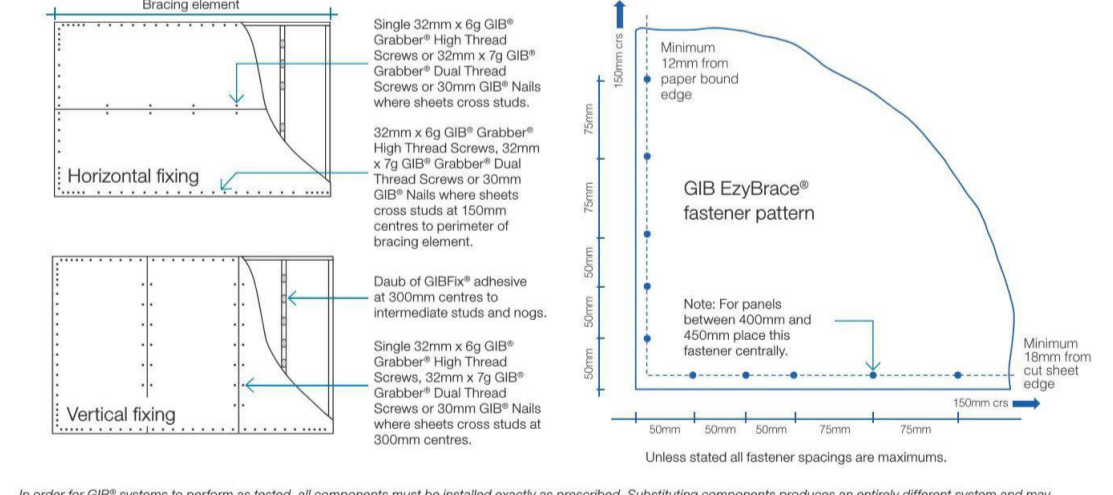
WALL FRAMING
Wall framing to comply with:
• NZBC B1 - Structure B1/AS1 Clause 3 Timber (NZS 3604:2011)
• NZBC B2 - Durability B2/AS1 Clause 3.2 Timber (NZS 3602)

Permitted Alternatives
For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrac® 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 dabs 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.

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.



Unless stated all fastener spacings are maximums.

Bracing Plan Notes
Site Wind Zone from NZS 3604: 2011
View High Wind Region
L1e Zone
Roughness
Exposure
Topography
Zone 1
A
No
Open
Exposed
TZ
Site Earthquake Zone
Bracing Element Length
Bracing Element Number
Bracing Type
A1 2.4m GS1-N
Refer to Ply & Gib Sections of the Specifications for full construction details of bracing elements

7.7 ECOPLY® BARRIER BRACING SPECIFICATION - EPB1

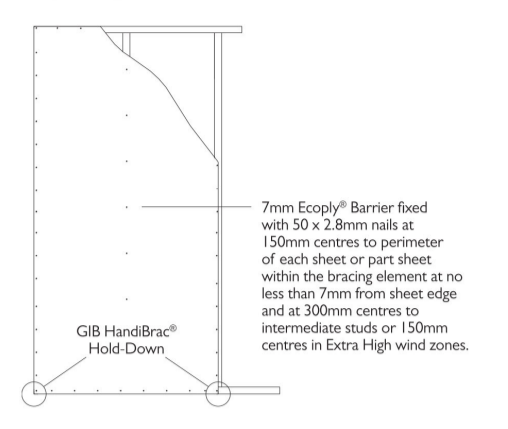
Specification No.	Minimum Wall Length	Lining Requirements	Hold-Down	BU/Um Wind	BU/Um Earthquake
EPB1	0.4m	Ecoply® Barrier one side	Yes	80	95
	0.6m	Ecoply® Barrier one side	Yes GIB HandiBrac®	95	105
	1.2m	Ecoply® Barrier one side	Yes	120	135

Framing
Wall framing must comply with:
• NZBC B1 - Structure/AS1 Clause 3 Timber (NZS 3604)
• NZBC B2 - Durability/AS1 Clause 3.2 Timber (NZS 3602)

Fastening the Ecoply® panels
Fasten with 50 x 2.8mm hot dipped galvanised or stainless steel flat head nails for direct fix. Place fasteners no less than 7mm or 3 fastener diameters from sheet edges. Screws cannot be used. Power driven nails are suitable. Do not overdrive, nails must be full round head.

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 the sheet joint. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use dabs 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.

WALL 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.

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GIB EzyBrac® Systems specification BL1-H

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

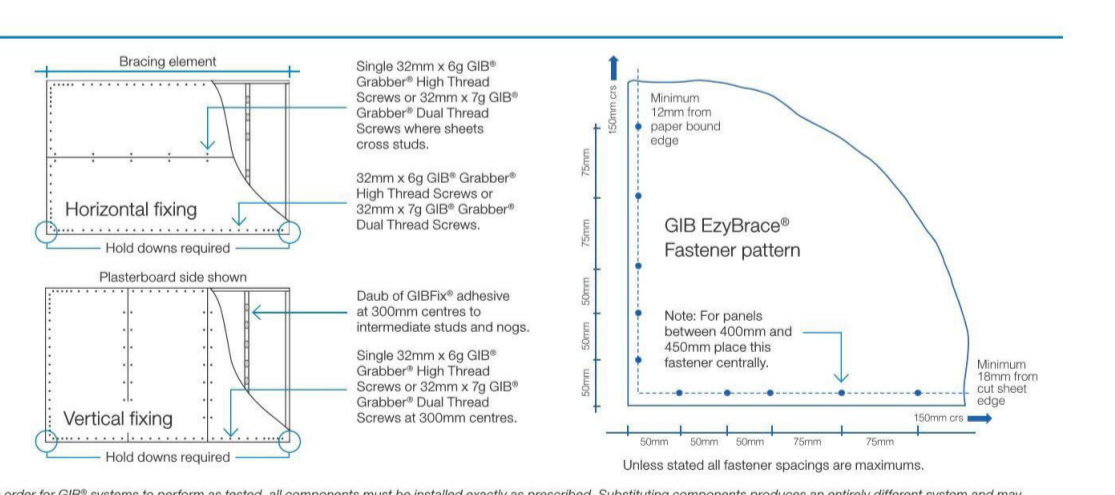
WALL FRAMING
Wall framing to comply with:
• NZBC B1 - Structure B1/AS1 Clause 3 Timber (NZS 3604:2011)
• NZBC B2 - Durability B2/AS1 Clause 3.2 Timber (NZS 3602)

Permitted Alternatives
For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrac® 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 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 the sheet joint. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use dabs 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.

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



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Notes:

Revision Schedule

Ref.	Description	Date

Issue Dates:

Building Consent

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Ph 09 431-2827 or mob 027 292-8820
email stephen@orcandesign.org

Project: No: **CD 765**

Barthom Block Rebuild

Address: **Waihua Marae
449 Arapaoa Rd
Tinopai 0593**

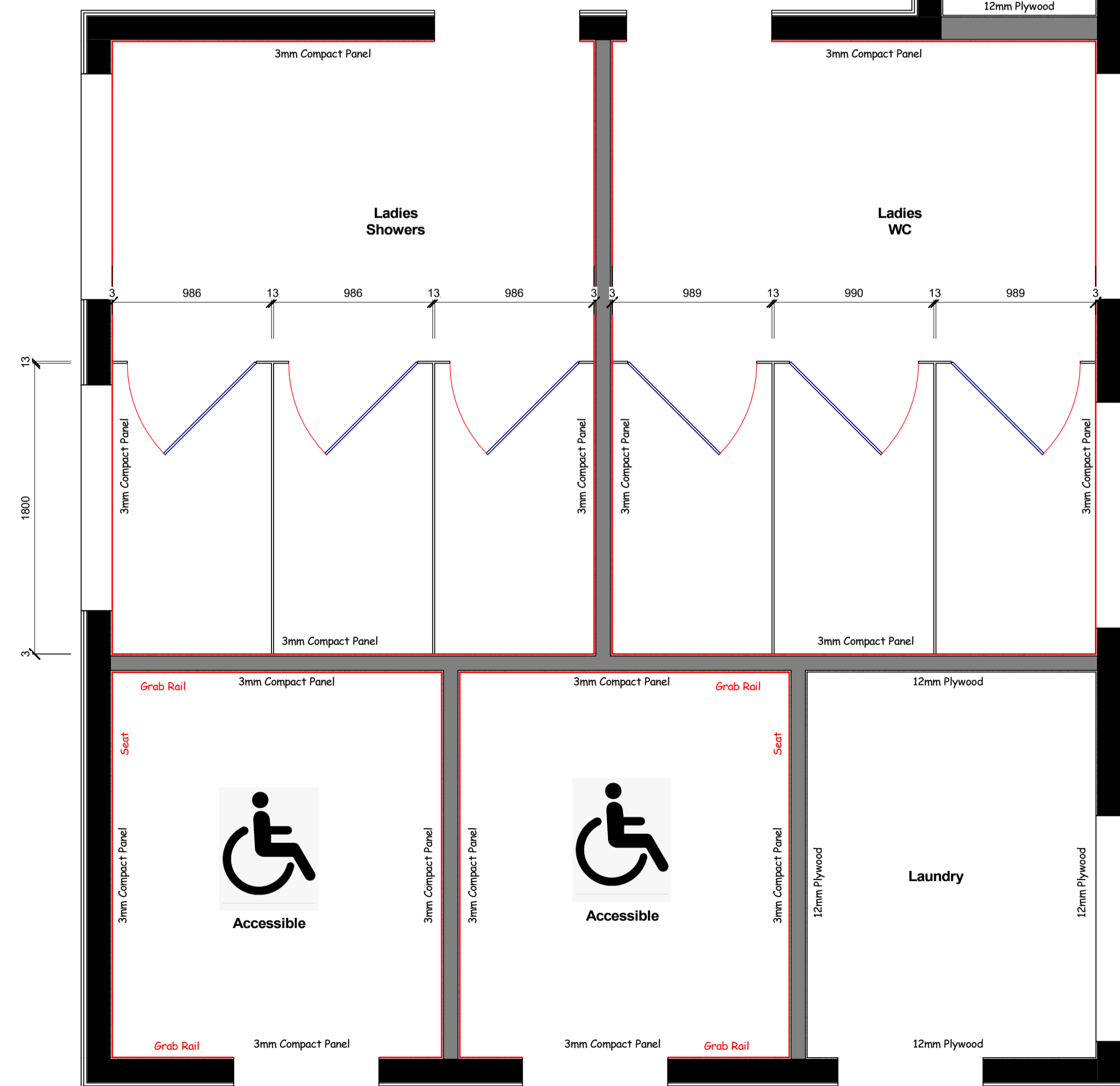
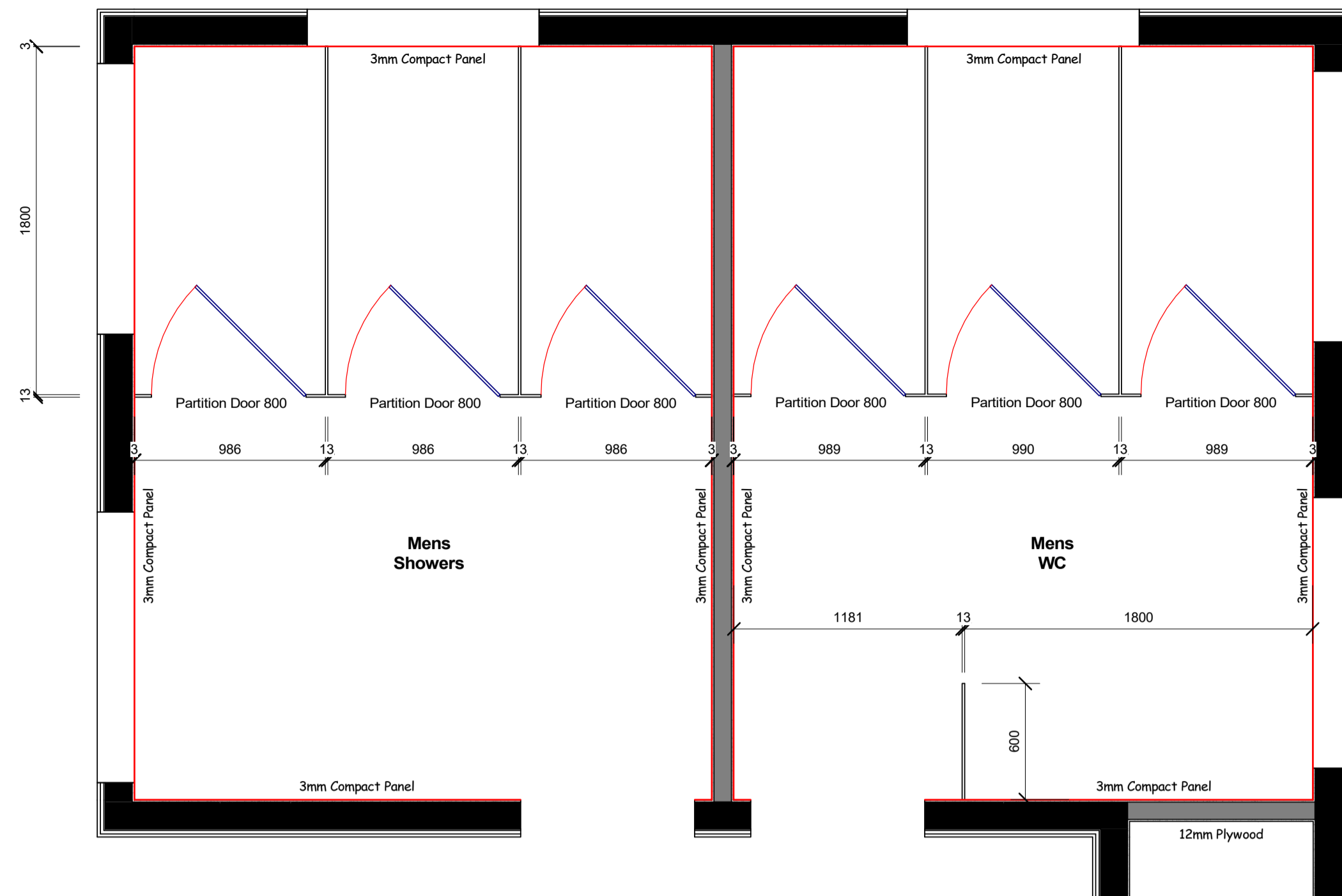
Client: **Waihua Marae**

Drawn By: **Stephen Orchard**

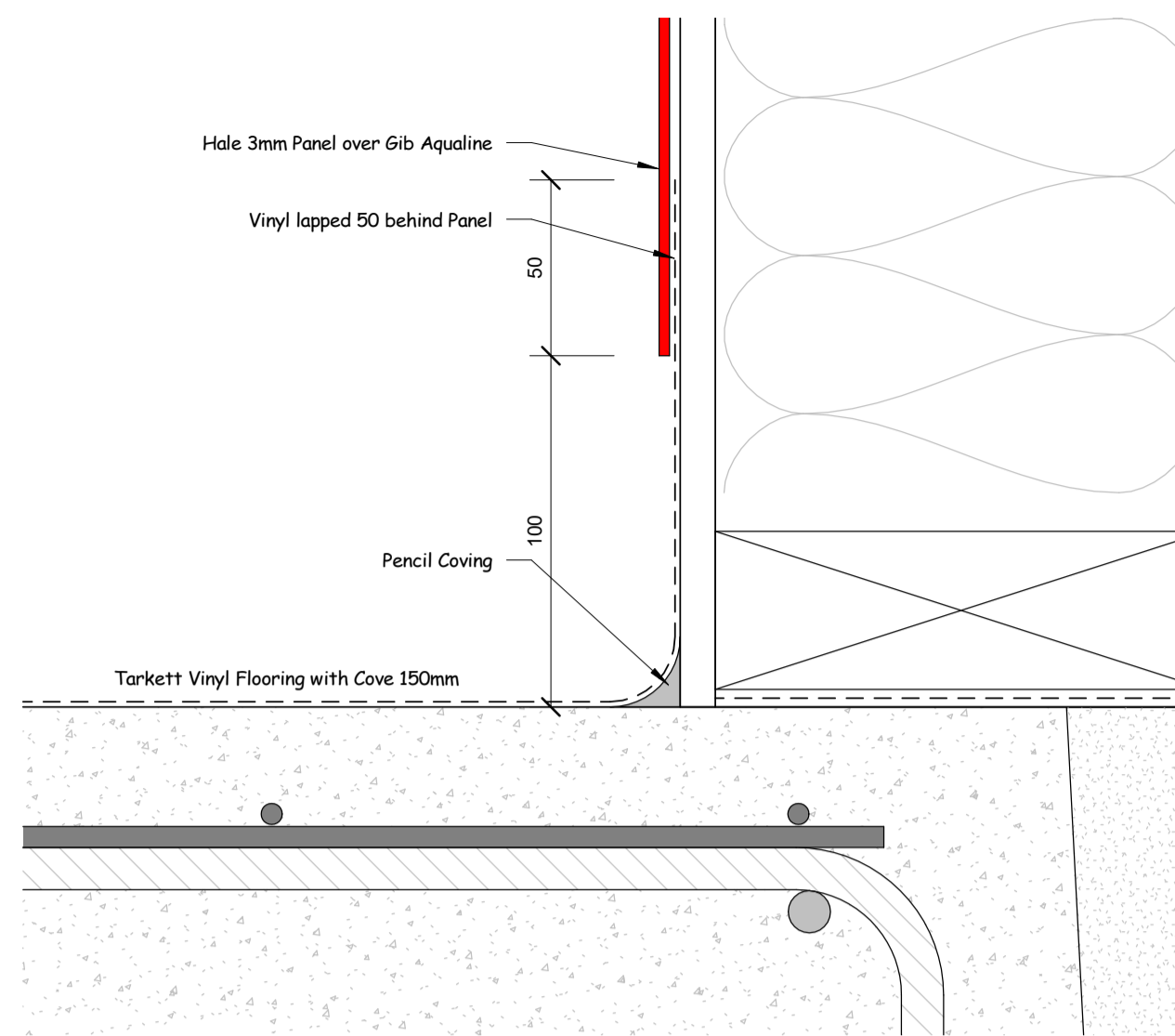
Scale: **As indicated**

Bracing Plan & Details

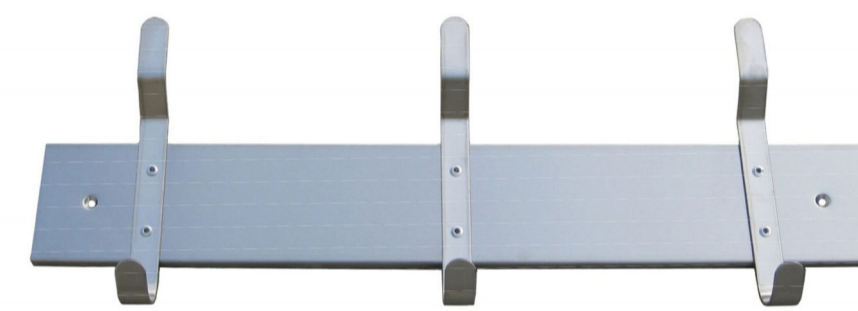
Sheet: **800a**



1 900 Partitioning Plan
1 : 25



2 900 Coved Vinyl Detail
1 : 2



Hook Bank - Allow 1 per Shower

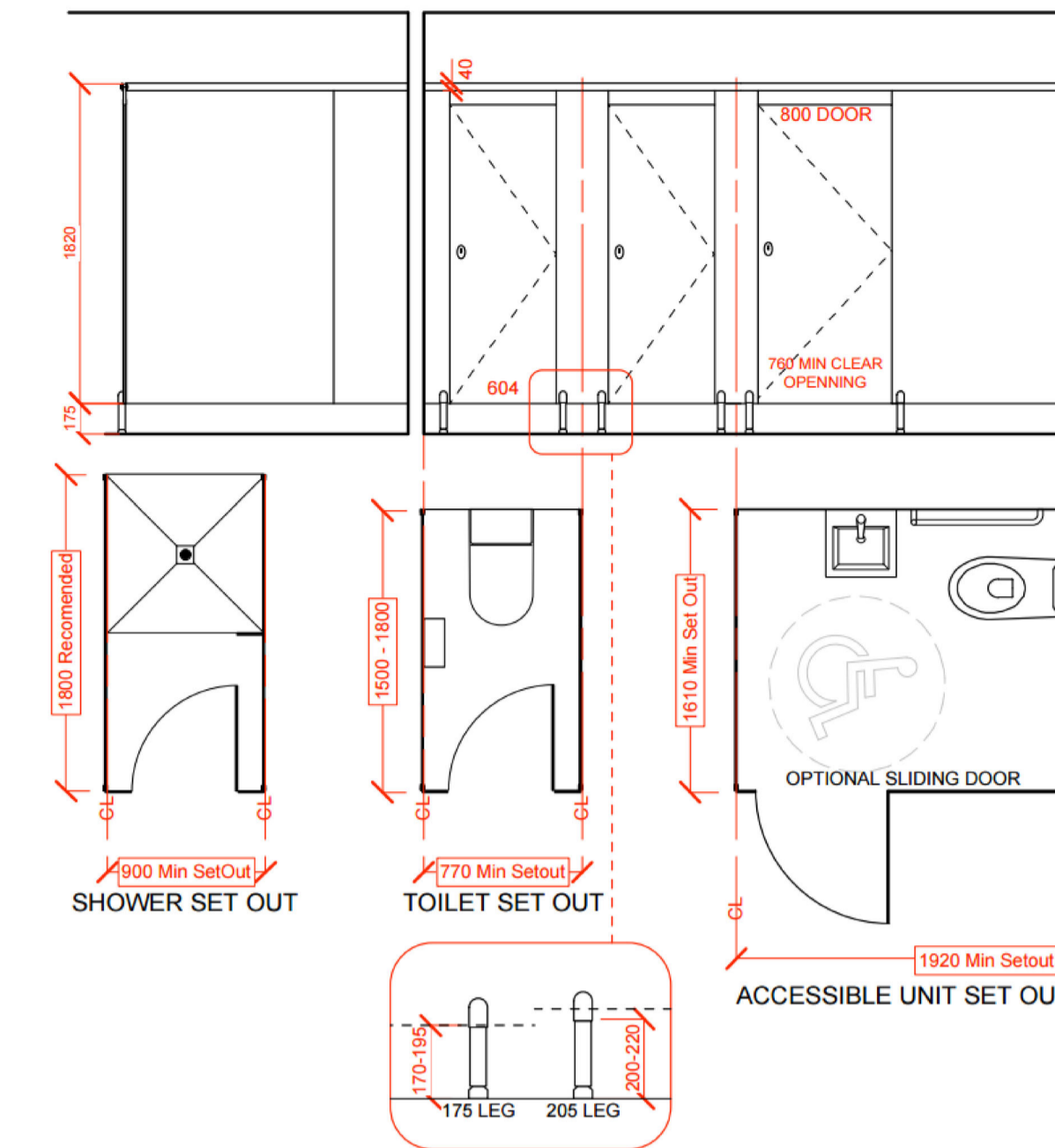


Accessible Bathroom Grab Rails
Allow 1 per WC & Shower



Fold Down Baby Change Table
Allow 1 per Accessible Bathroom

TYPICAL DETAIL



Paper Towel Dispenser - Allow 1 per Vanity



Toilet Roll Holder - Allow 1 per Stall



Accessible Bathroom Shower Seat
Allow 1 per Shower



Fold Down Baby Change Table
Allow 1 per Accessible Bathroom

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Client: **Waihua Marae**

Drawn By: *Stephen Orchard*

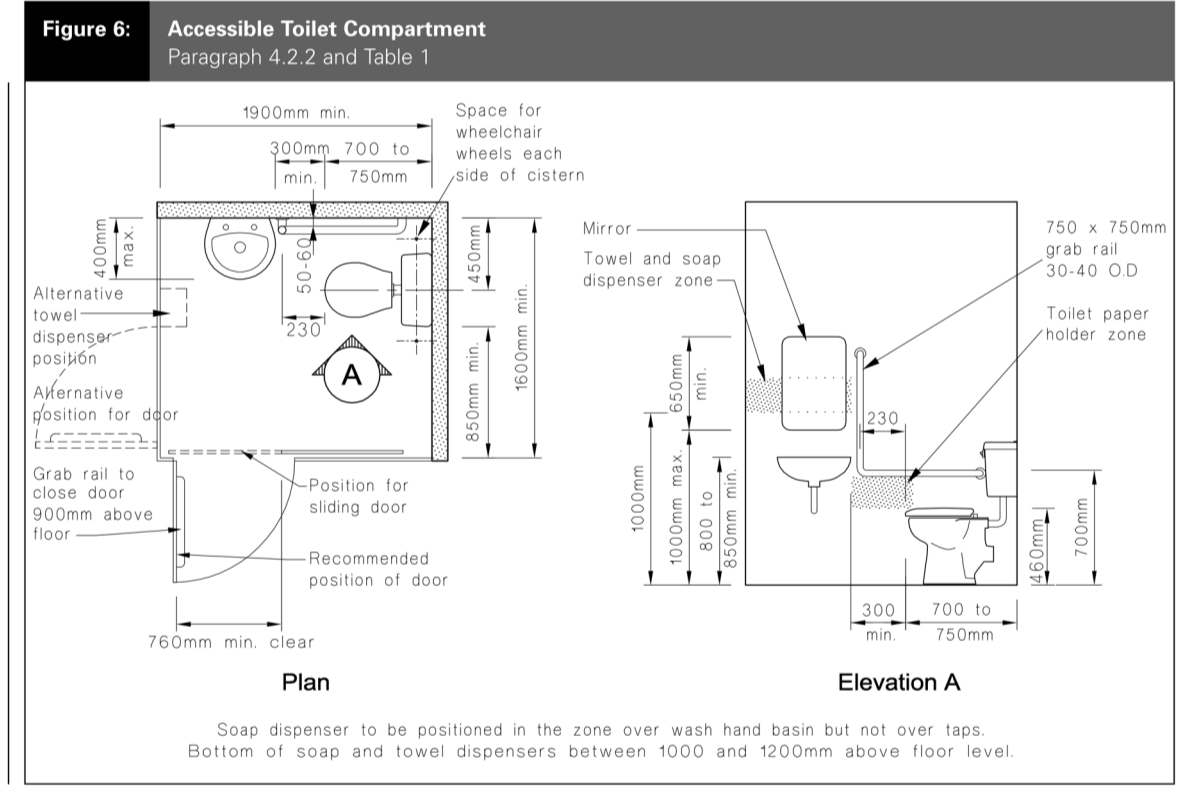
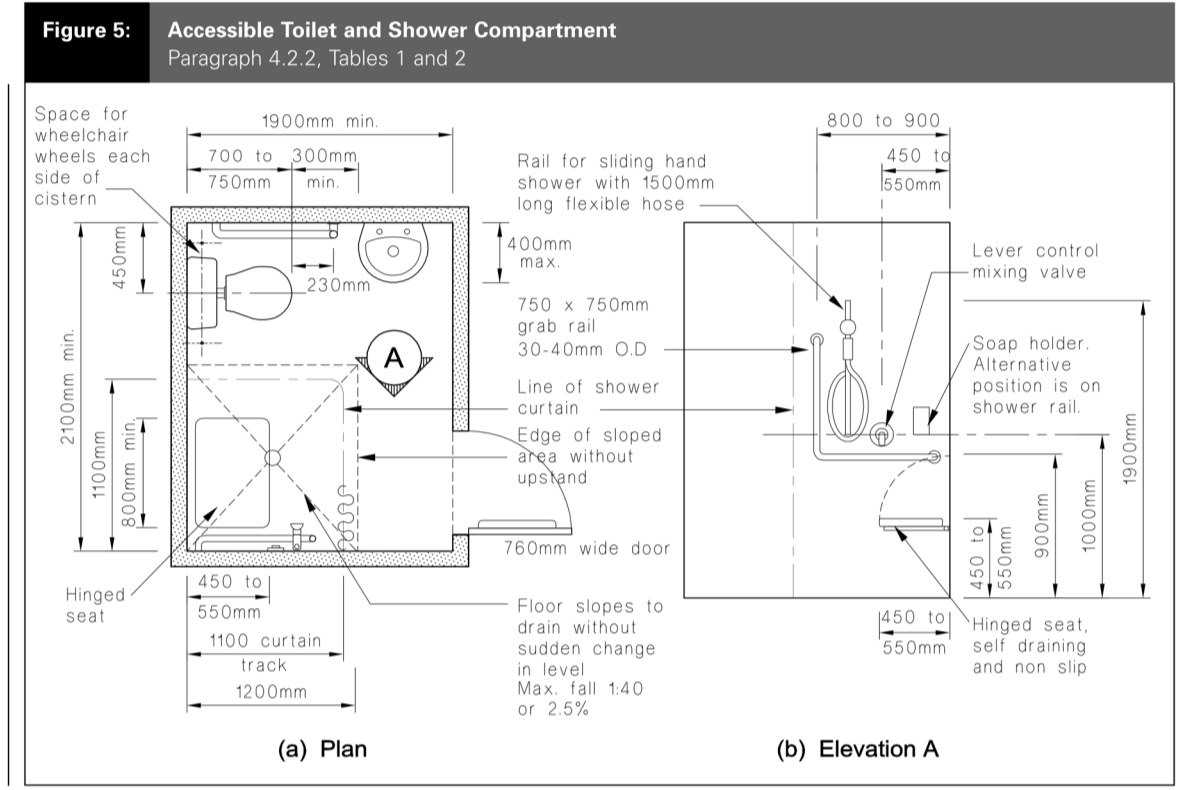
Scale: **As indicated**

Partitioning Plan

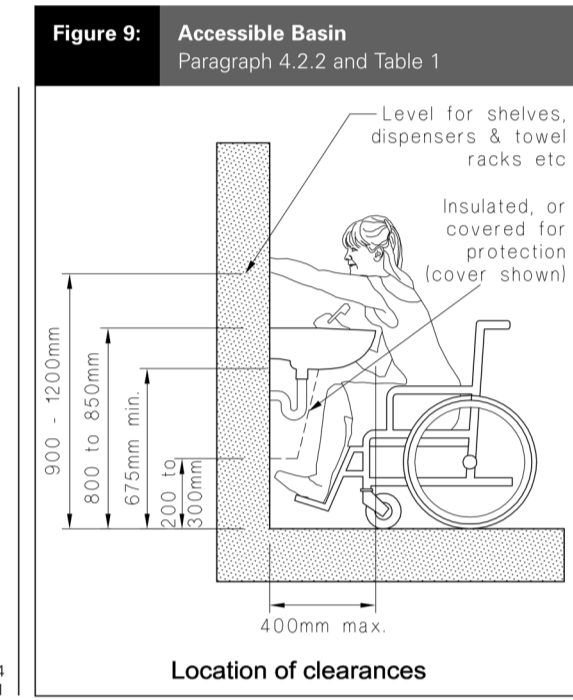
Sheet:

900a

PERSONAL HYGIENE Acceptable Solution G1/AS1



PERSONAL HYGIENE Acceptable Solution G1/AS1



4.2.3 For safety in an accessible shower compartment the shower slider rod, or the adjustable shower assembly integrated with the grab rail, shall be firmly fixed in place.

COMMENT: Sliding rod assemblies are used by people with disabilities as a grab rail in an emergency and rods can come away in their hands leading to a fall.

4.2.4 Accessible showers shall have a level threshold.

4.2.5 If two or more toilet compartments are provided for wheelchair users, at least one shall have a pan of the opposite hand.

4.2.6 The WC flushing control shall be easily operable, positioned on the centre line or approach side of the WC pan, and no higher than 1200 mm above the finished floor level. Similarly, easily operable privacy bolts (to indicate whether the toilet is occupied) shall be located no more than 1200 mm above floor level.

4.2.7 NZS 4121 Section 10 is also an acceptable solution for people with disabilities.

4.2.8 Where there is a wall hung pan or a concealed cistern, full access is required each side of the WC pan, as detailed in Figure 7, to allow for wheel-over access. The wall in front of a concealed cistern shall extend no less than 1.0 m above floor level to provide back support, and fold-up lid shall be provided.

5.0 Non-flushing Sanitary Fixtures

5.0.1 Soil fixtures that are not water flushed, such as those using chemicals or biological treatment, shall be located where they will not cause a nuisance.

COMMENT:
1. "Nuisance" is a defined term under the Health Act 1956.
2. Some types of non-water borne toilets may require the provision of specific ventilation.

5.0.2 Privies are acceptable if located at least 3.0 m from any building having a classified use, other than outbuildings or ancillary buildings. Receptacles for excreta are to be constructed to exclude flies and be fitted with a hinged lid.

6.0 Privacy

6.1 Line of sight

6.1.1 There shall be no direct line of sight between an access route or accessible route and a WC, urinal, bath, shower or bidet. See Figure 10 for acceptable layouts.

Amend 4 Jul 2001

Amend 5 Jun 2007

Written Dimensions take precedent over scaled dimensions. The Contractor shall check and verify all dimensions on site. Any discrepancy shall be referred to the designer for clarification.

These Drawings shall be read in conjunction with the project and manufacturers specifications.

Construction practices shall be accordance with the NZ Building Code and relevant NZ Standards.

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Notes:

Building Consent

Issue Dates:	

Revision Schedule		
Ref.	Description	Date



279 Mountain Rd, RD 2, Maungaturoto 0587
Ph 09 431-2827 or mob 027 292-8820
email stephen@orcandesign.org

Project: No: **CD 765**
Bathroom Block Rebuild

Address:
Waihau Marae
449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

Drawn By: *Stephen Orchard*
Scale:

Accessible Fittings Details

Sheet: **901a**

Carpark

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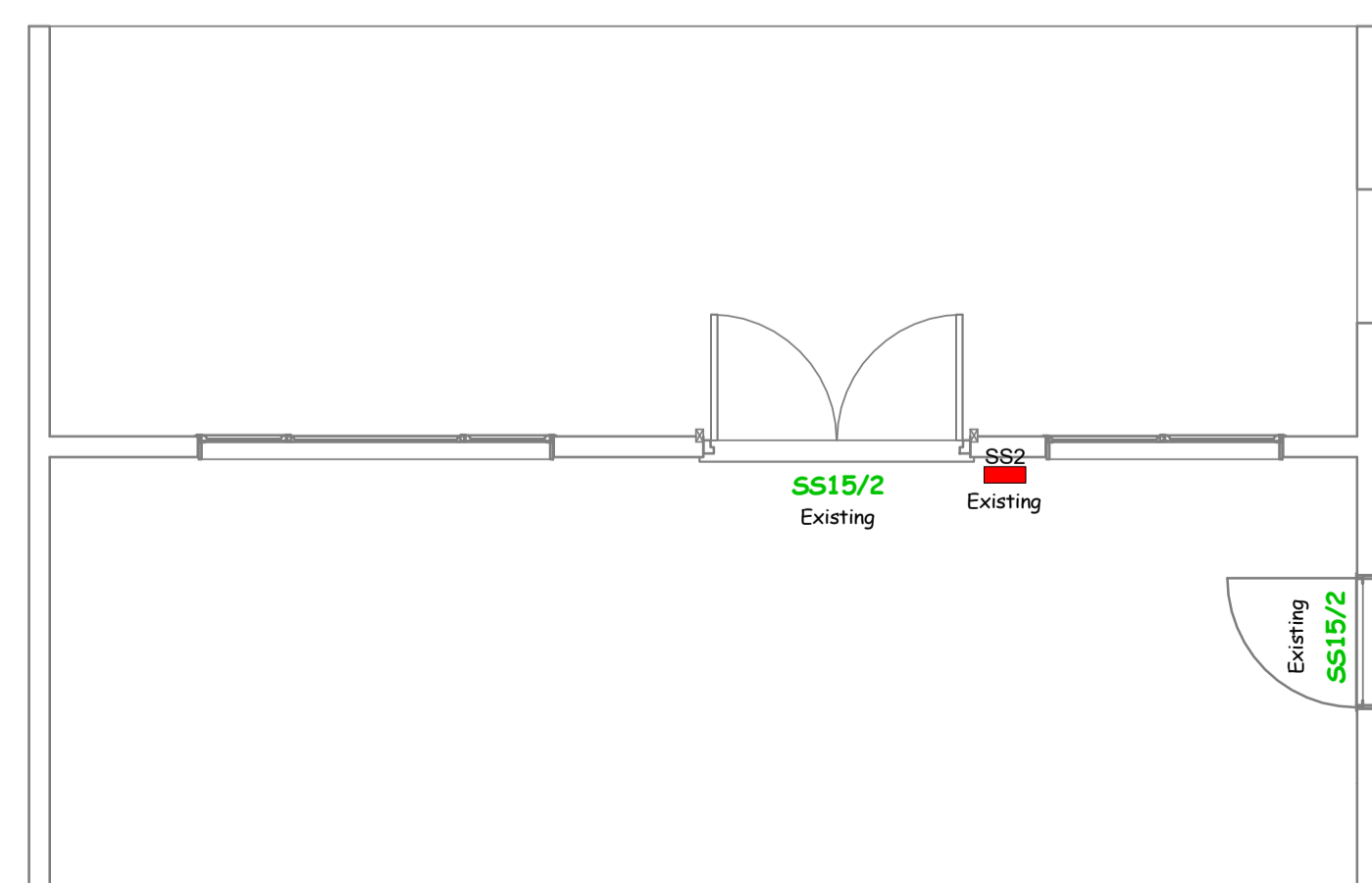
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Notes:

Legend

- SS15/2 Final Exit Sign to comply with NZBC F8
- SS15/4 Exit Sign with Direction Arrow
- SS2 Manual Emergency Alarm Point
- Siren Fire Alarm Siren
- FE Fire Extinguisher
- Main Evacuation Pathways

1 902 Egress Plan
1 : 50



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449 Arapaoa Rd
Tinopai 0593

Client: **Waihau Marae**

Drawn By: *Stephen Orchard*

Scale: **1 : 50**

Egress Plan

Sheet:

902a

Driveway

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Waihua Marae
449 Arapaoa Rd
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Client: **Waihua Marae**

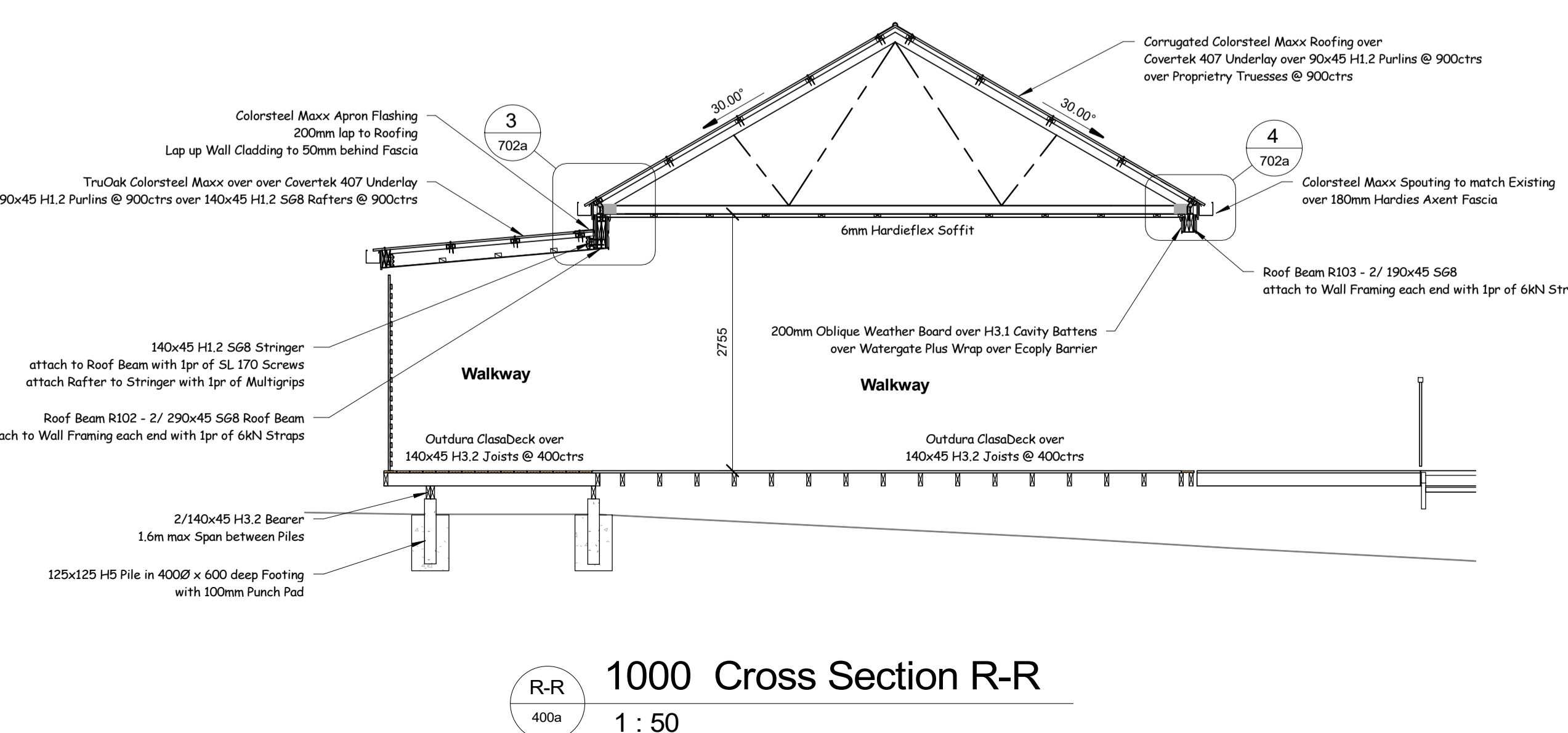
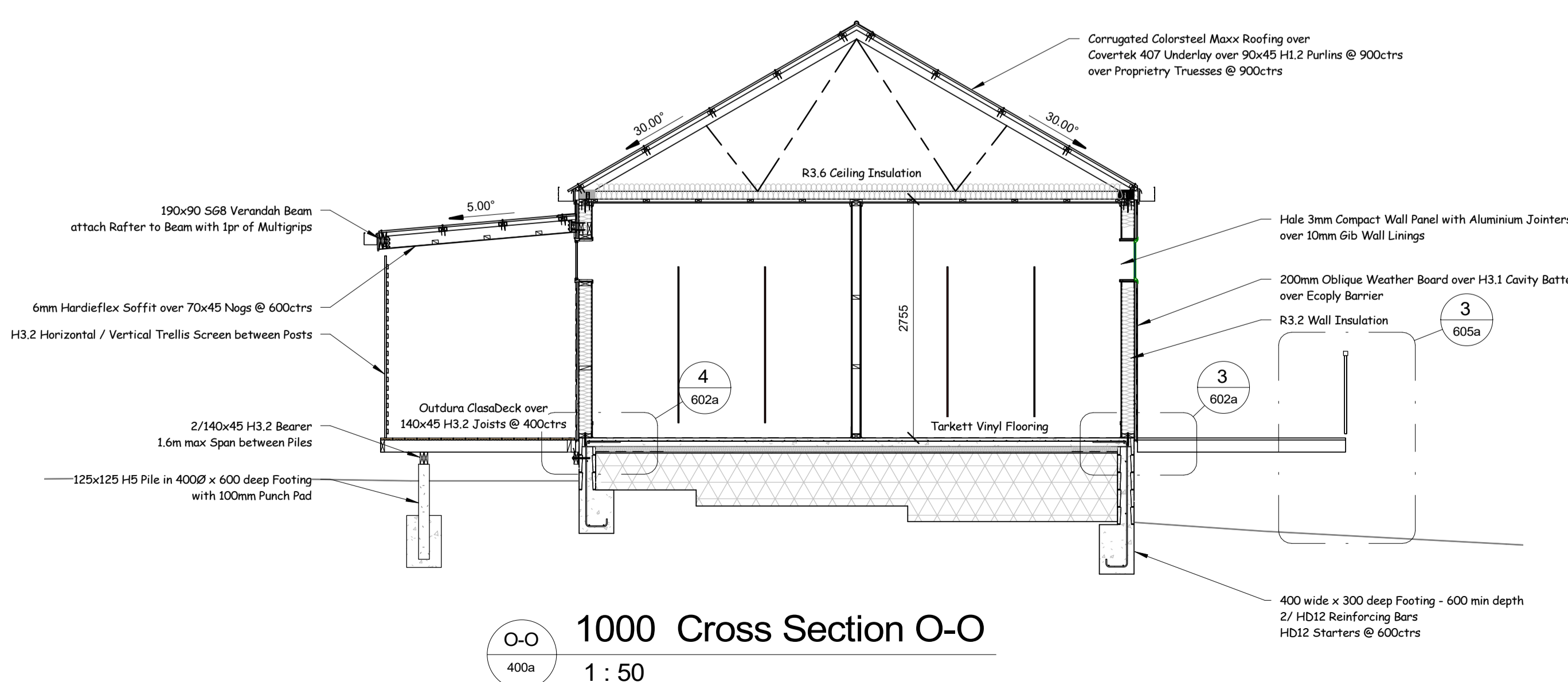
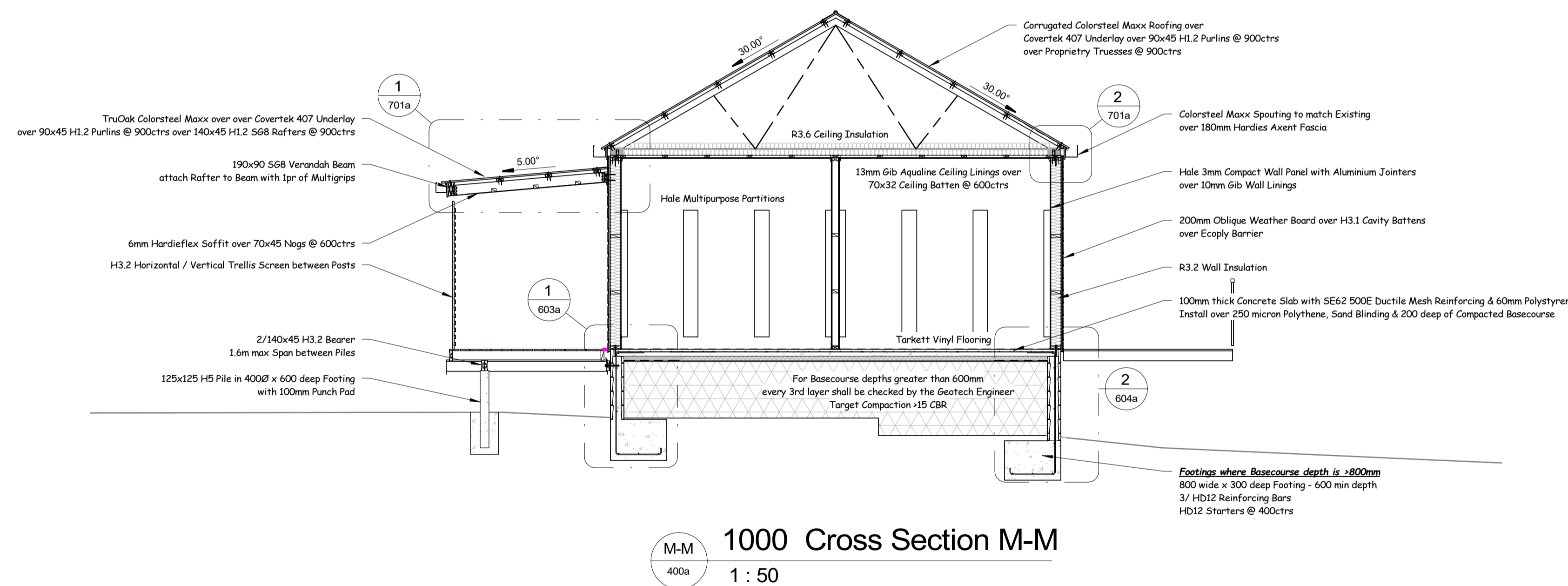
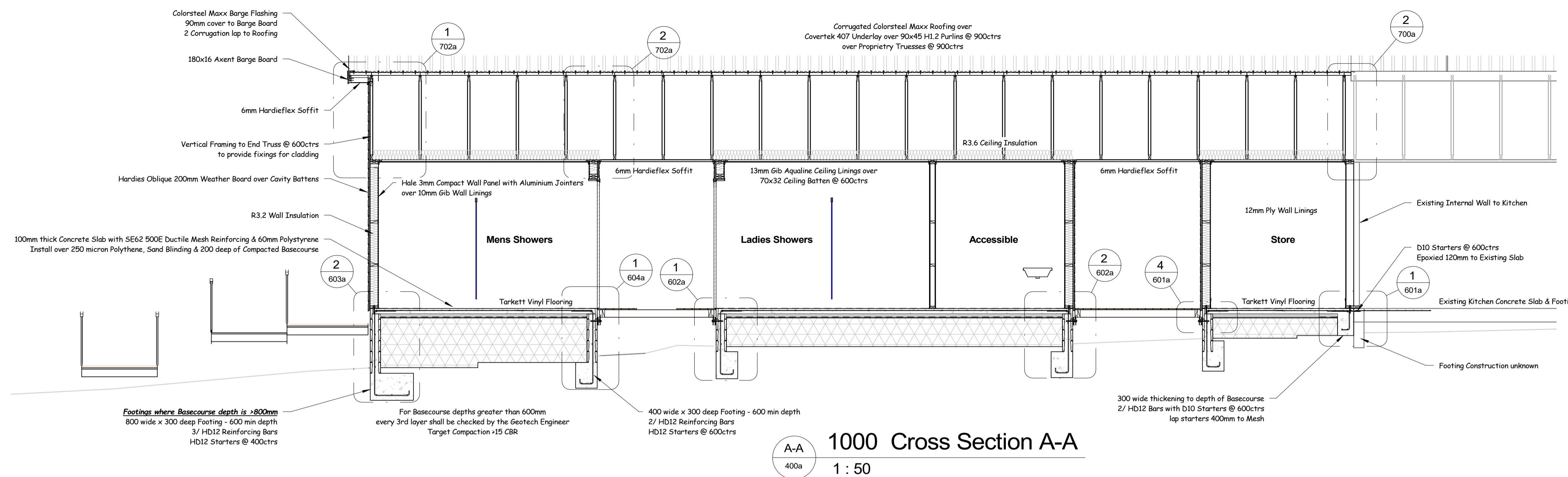
Drawn By: *Stephen Orchard*

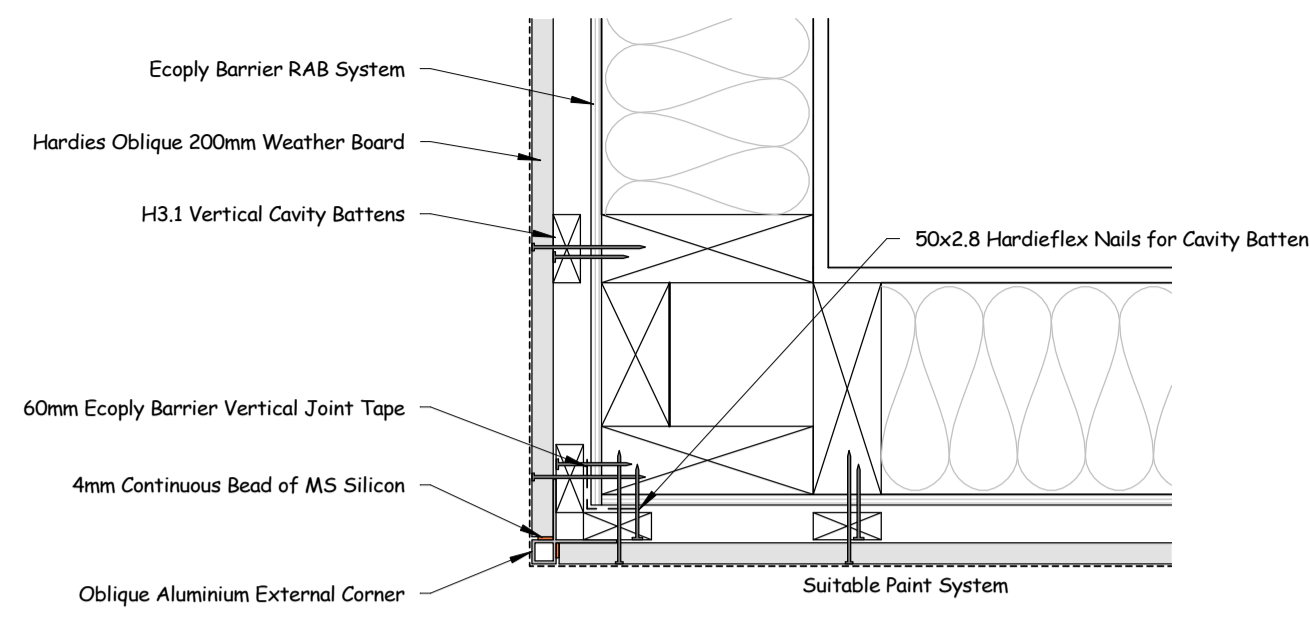
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Cross Sections

Sheet:

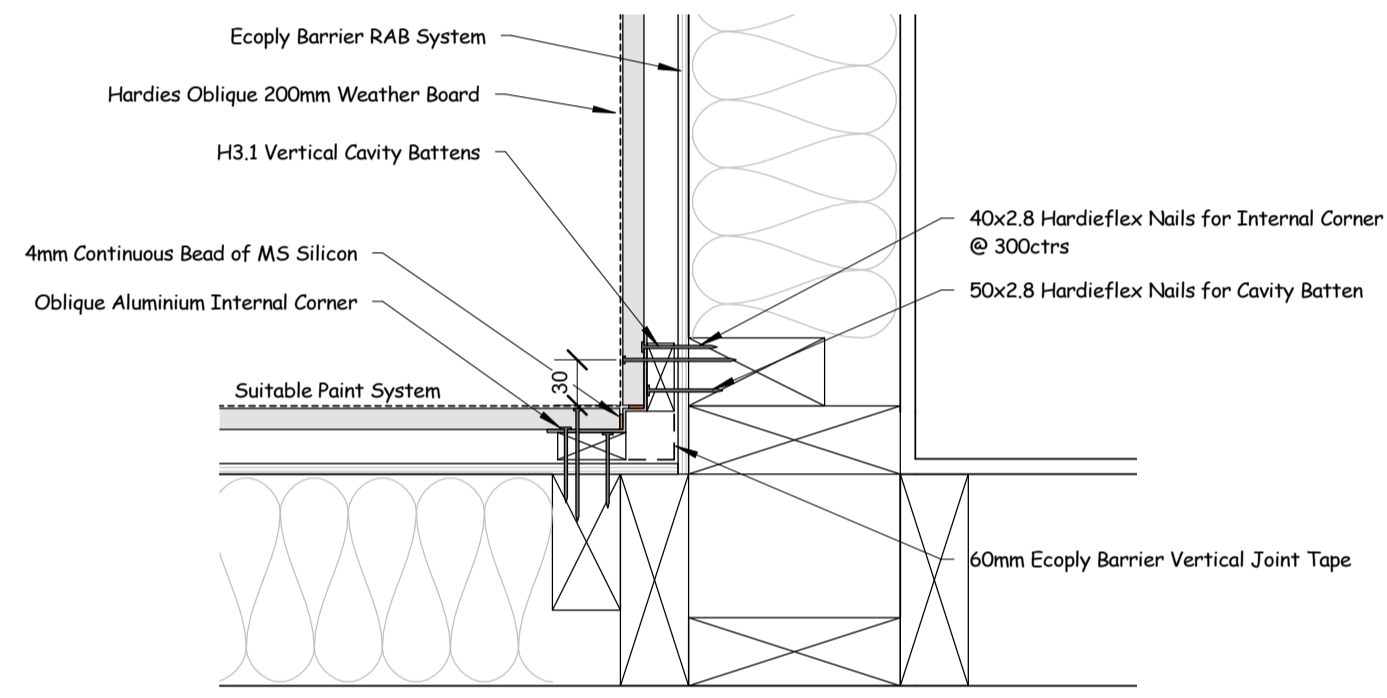
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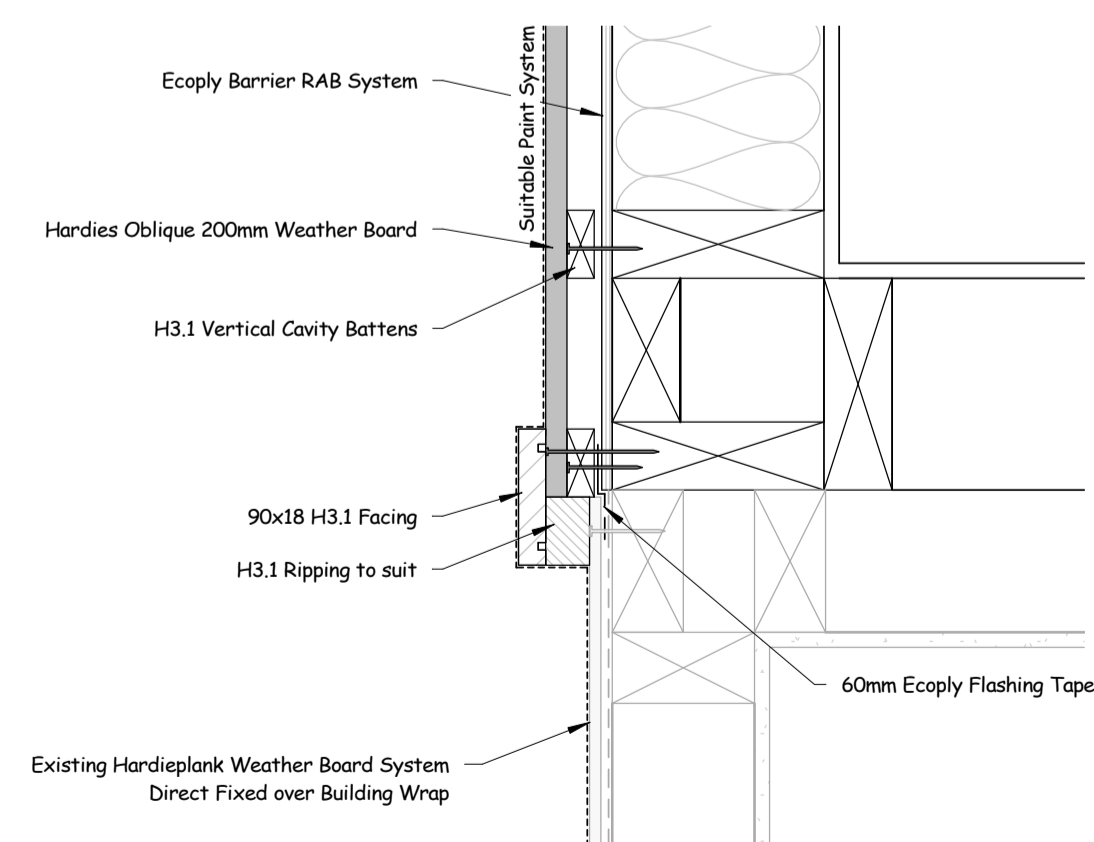


Seal all Site Cut Sheet Edges

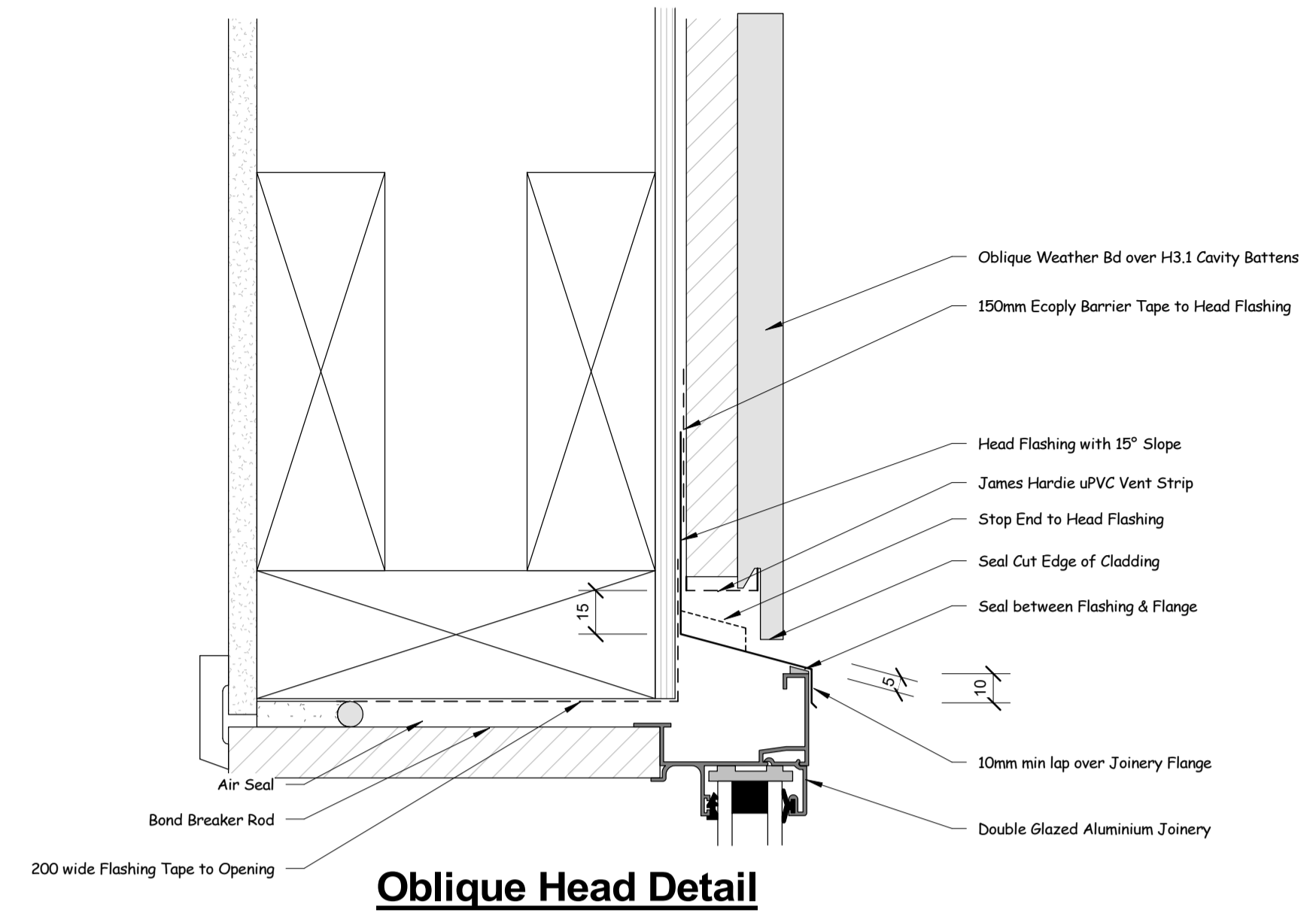
2 2000 Oblique External Corner
400a 1 : 5



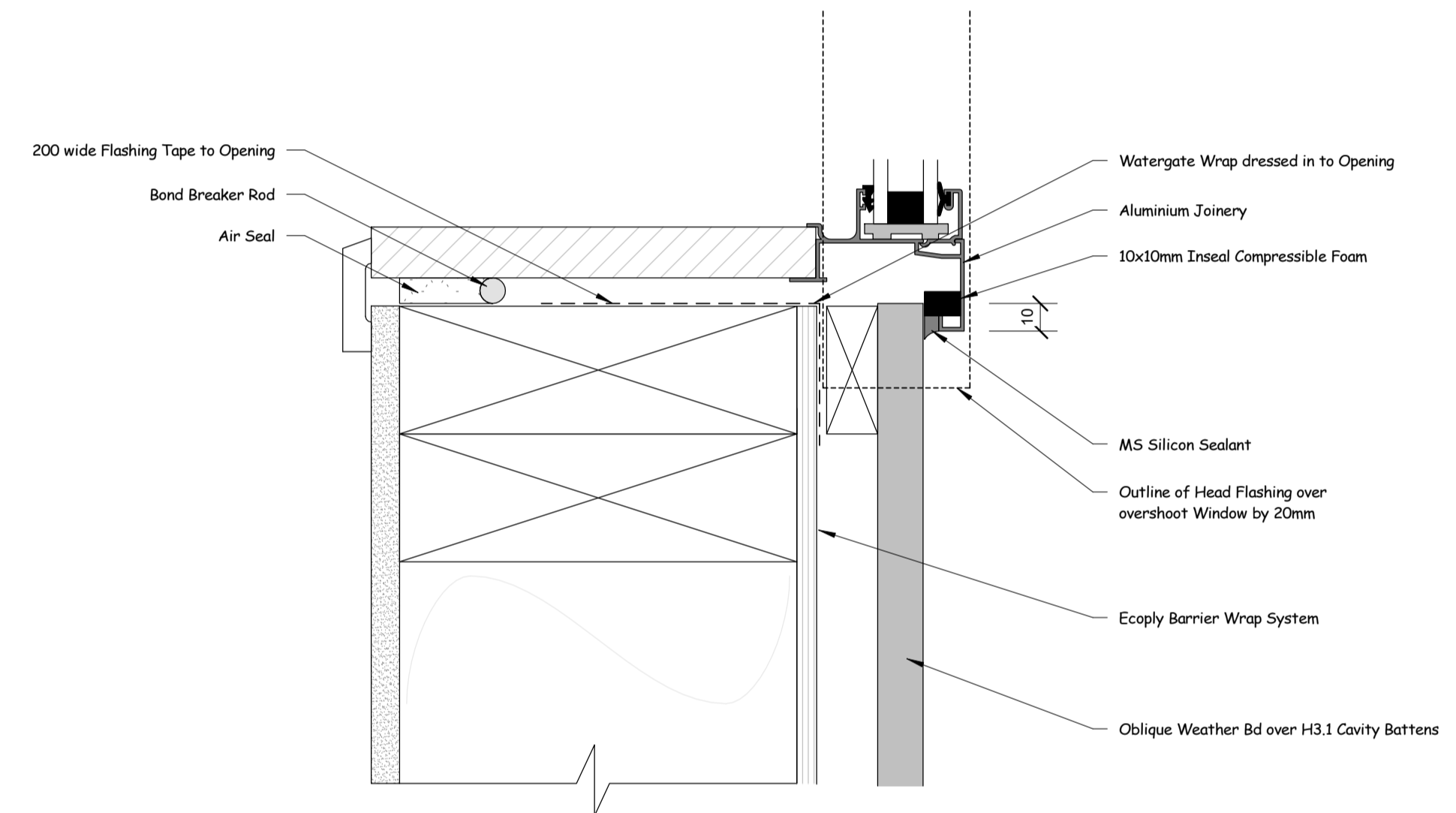
3 2000 Oblique Internal Corner
400a 1 : 5



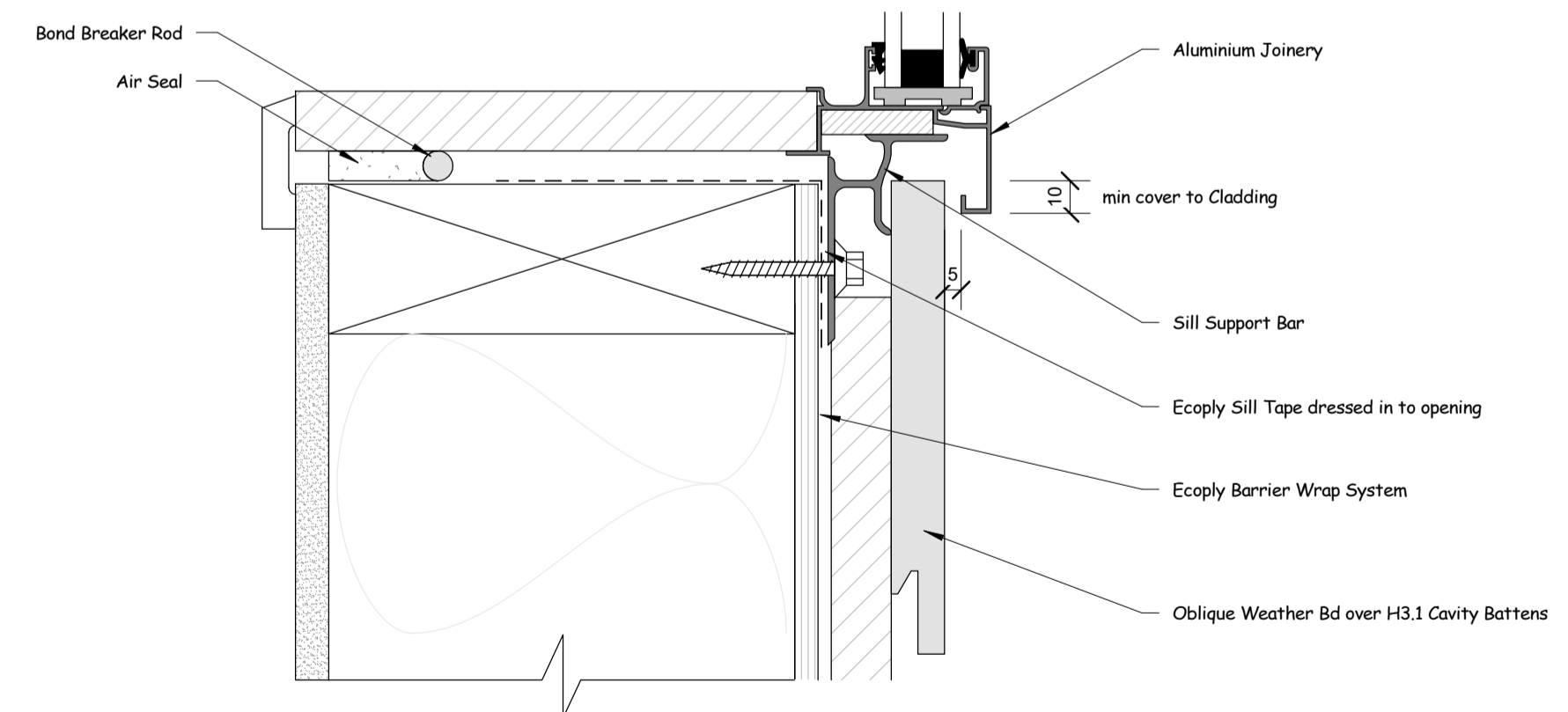
4 2000 Oblique Proposed to Existing
400a 1 : 5



Oblique Head Detail



Oblique Jamb Detail



Oblique Sill Detail

1 Window Details - Oblique Weather Bd
1 : 2

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Client: **Waihau Marae**

Drawn By: *Stephen Orchard*

Scale: **As indicated**

Construction Details -
Cladding

Sheet:

2000a