



Dave DeGray

Residential and Commercial
Design and Draughting

Dave DeGray Design

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CLIENT NAME Brad and Nicole Chandler

PLANS FOR PROPERTY AT: 42 Horton Road Tasman

Lot 1
DP 461365

PROJECT DESCRIPTION AND SCOPE OF WORK

Construct new house, studio and Garage. Service with new Wastewater System. Stormwater to be stored in on-site water tanks with dedicated 7000L for sprinkler system. Form new driveway and turning area. Seal 10m into property to match Horton Rd surface

Disclaimer Plans and supporting documents are assembled from site inspection, information from council files, information from owners, and information from contributing consultants and building professionals. The designer does not accept responsibility for absolute accuracy for the sum of all information submitted to the Local Authority for consent. Owners, contractors and consultants must check all design information against site and 'as built' structures. Additional information discovered in situ or requested by Local Authority to be treated as a variation to contract documents. All critical dimensions to be checked and confirmed or submitted for revision before the commencement of construction or supply of components.

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Site plan:

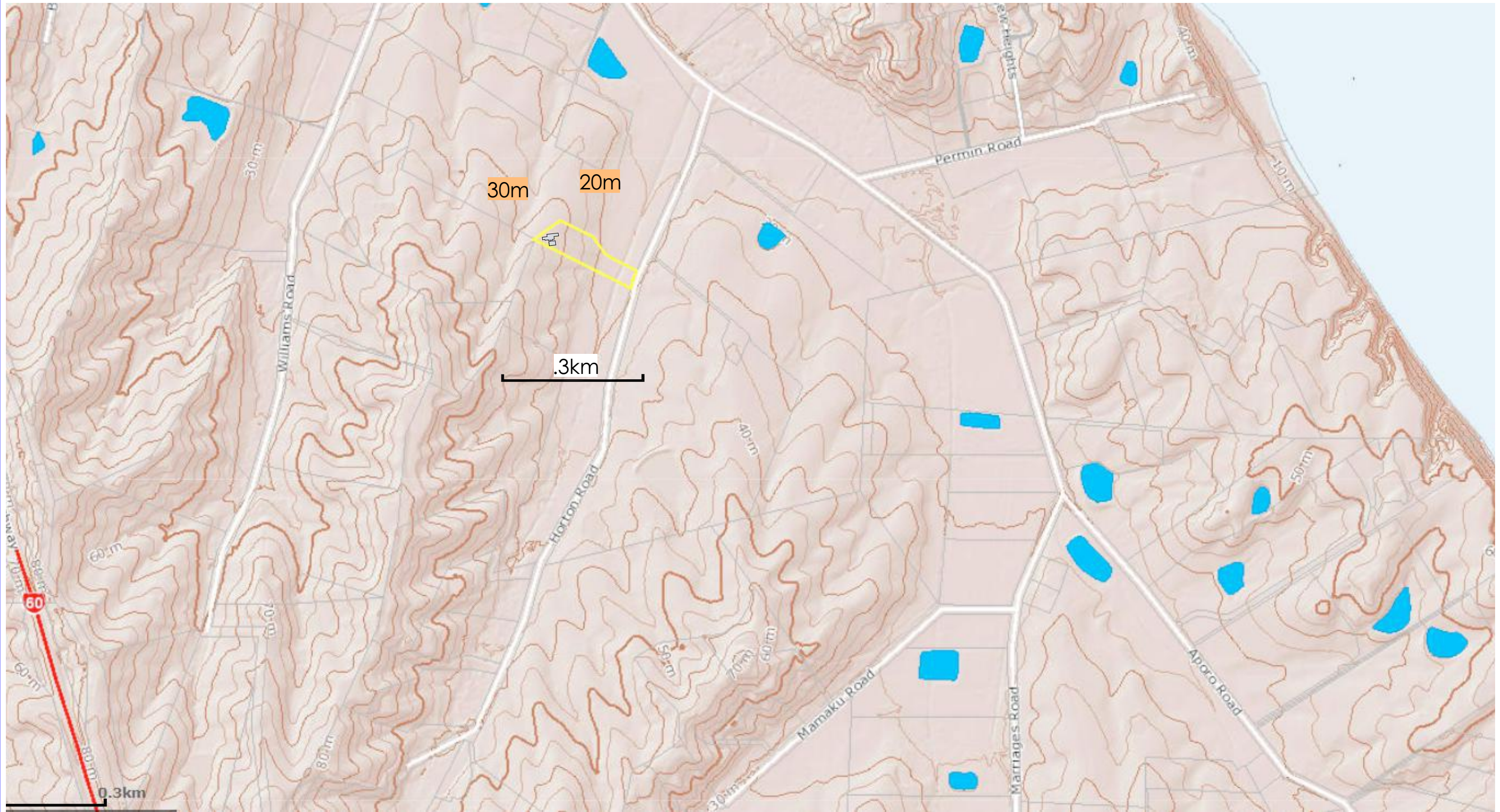
New House and Garage
 42 Horton Road Tasman
 Lot 1 DP 461365
 1.067Ha
 House and Garage 280m²
 Coverage .2%
 Wind Zone very high
 Durability zone C
 Eq Zone 2
 On-site wastewater disposal
 On-site potable water storage

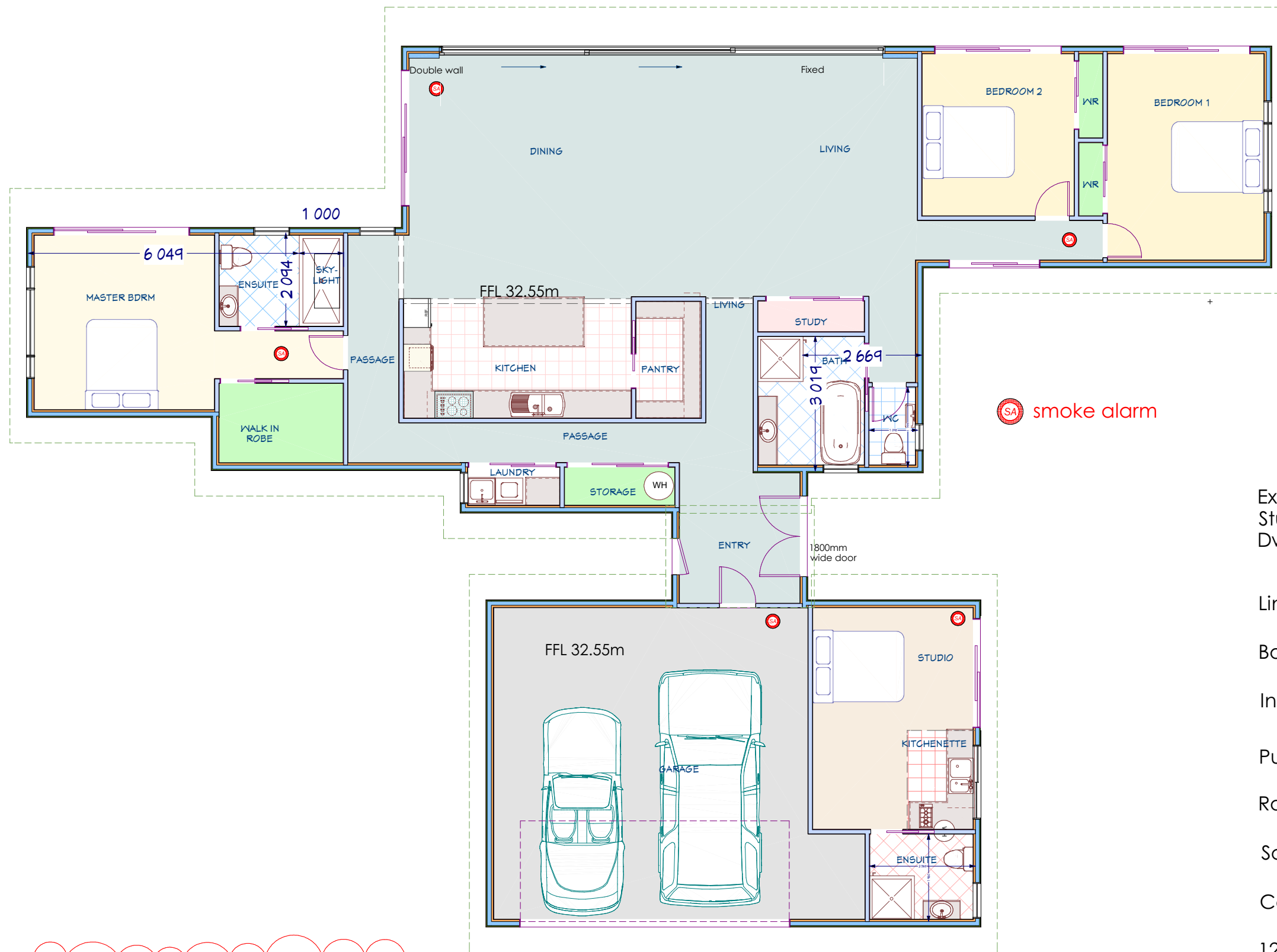


Appendices

Sprinkler Design
 Prolam beam summary
 MaxRaft foundation design
 Mitek Truss design and PS1-ITM
 Gib Ezy brace calculations
 Ardex WPM 001
 Ardex Butynol Manual
 Hard as Rocks Stone veneer

installation
 Terra Lana Insulation Data sheet
 Shadowclad Installation
 Intello Vapour Check installation
 Solitex Extesana Building wrap
 ALF 3.2 H1 Calculations
 Tindus Engineering Ltd Design





Timber Treatment and Grade

External wall framing 90 x 45 sg8 H1.2
 Studs @ 400mm c/c
 Dwargs @ 800mm c/c

Lintels (dimensions vary) sg8 H1.2

Bottom plates H1.2 (external and wet areas)

Internal wall framing 90 x 45 sg8 H1.2

Purlins 70 x 45 sg8 H1.2

Rafters sg8 H1.2

Soffit framing H1.2

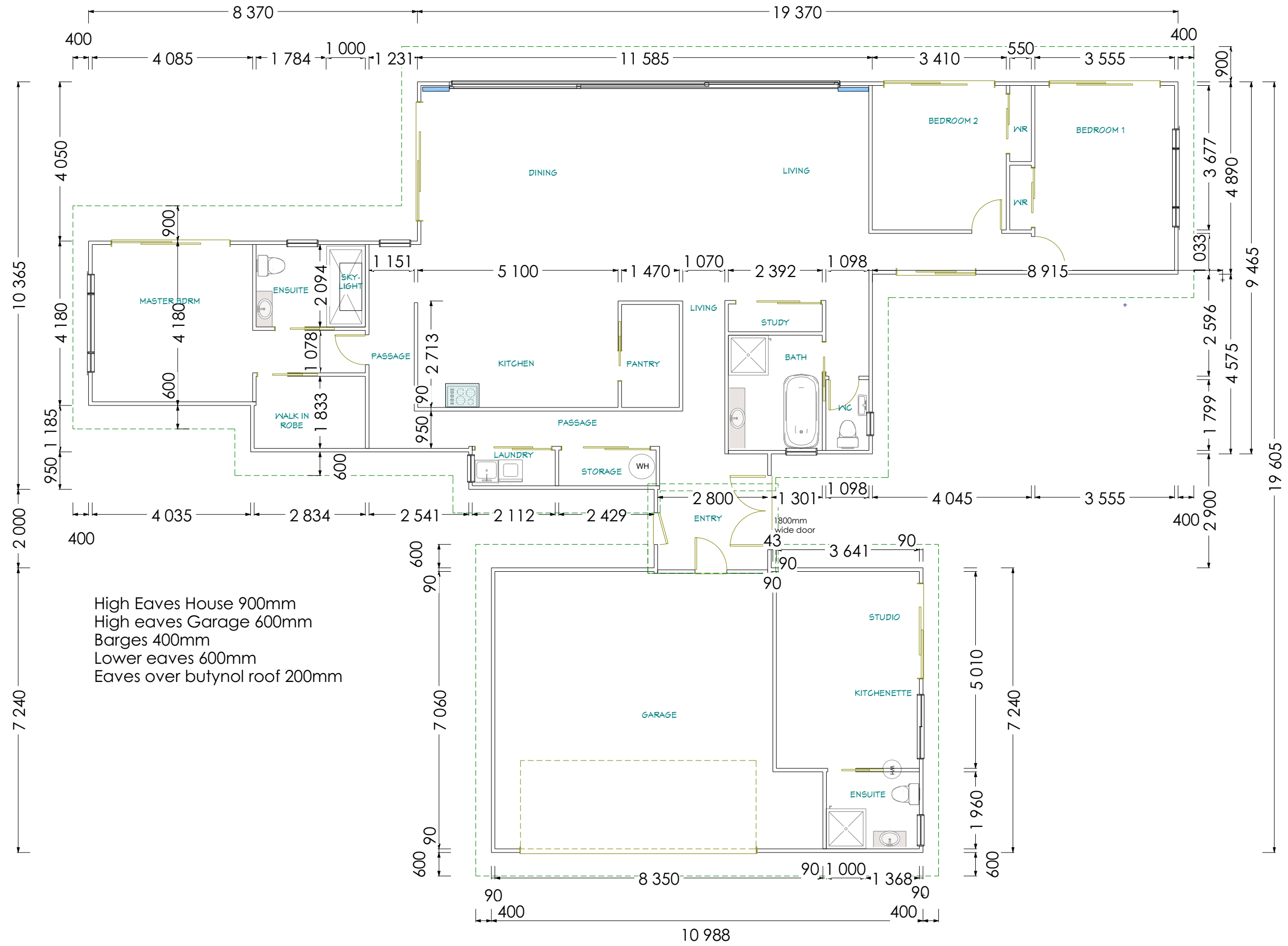
Cavity Battens 45 x 20 H3.2

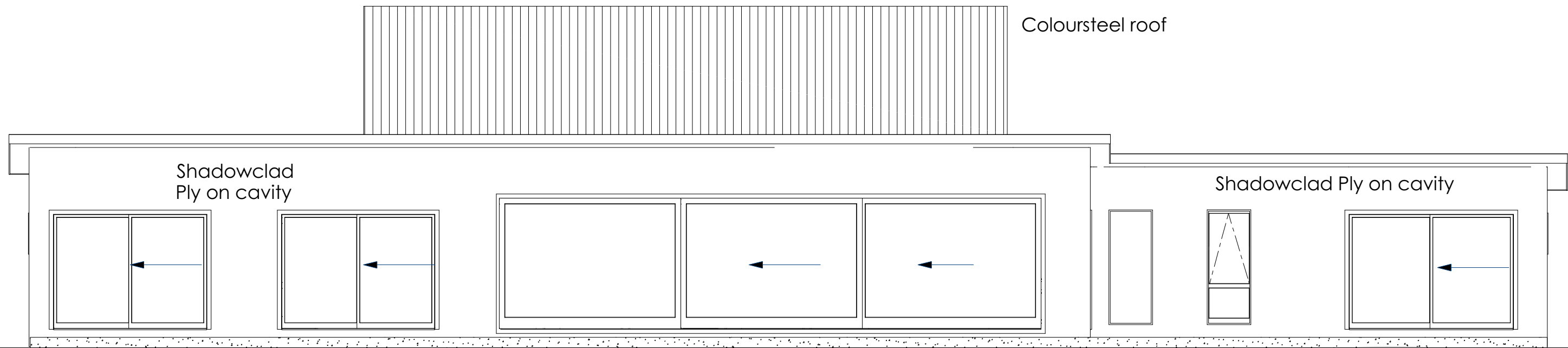
12mm Shadowclad Ply cladding H3.0

Soffit Scotia Moulding H3.2

All timber components to be read as per this schedule unless specified otherwise

All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity.

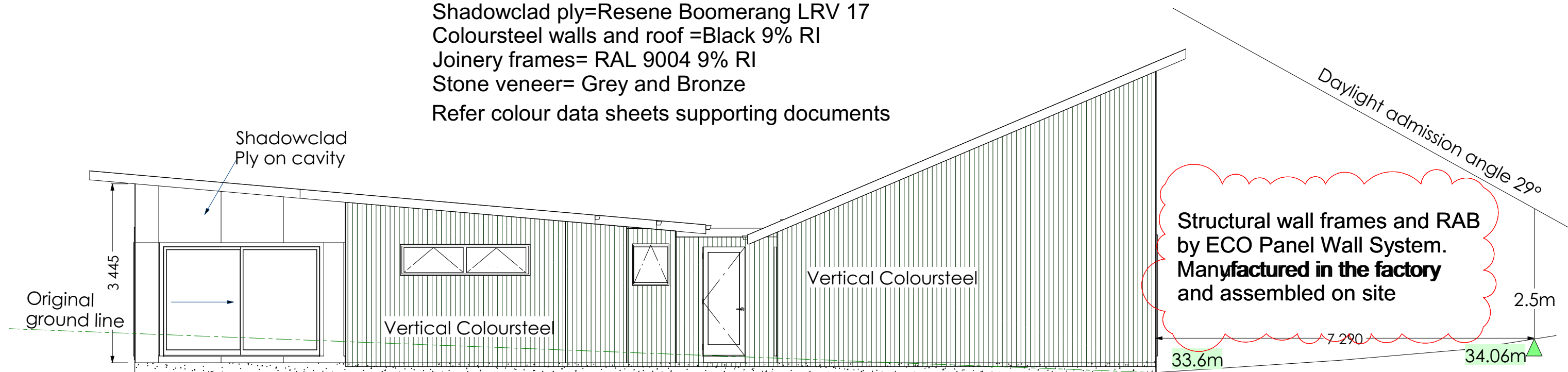




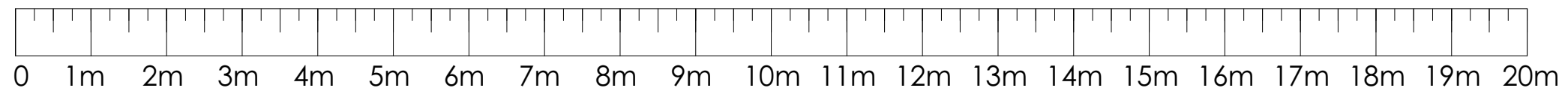
North Elevation

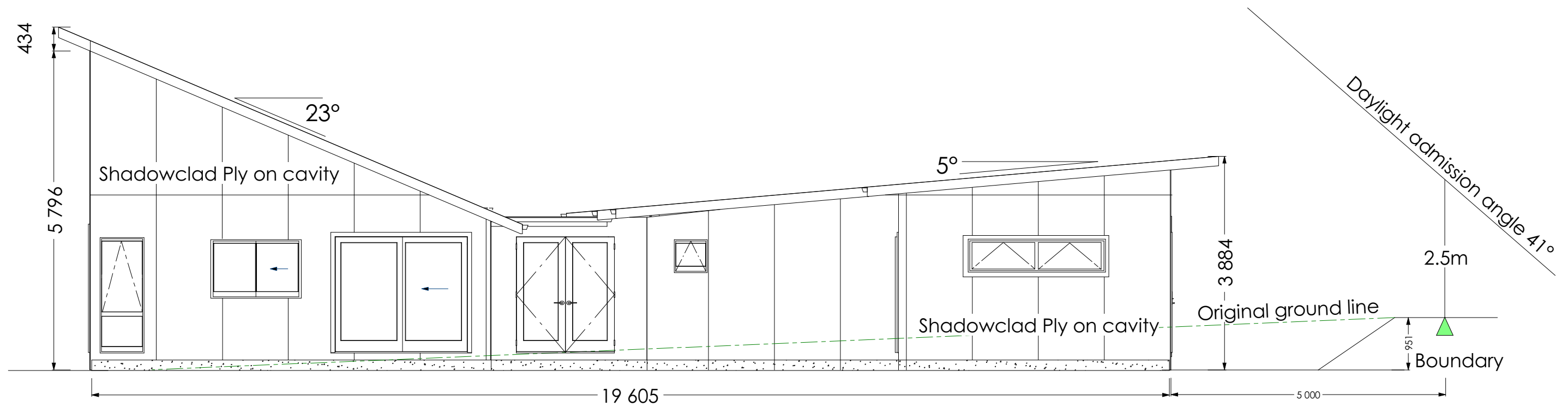
Colours:

- Shadowclad ply=Resene Boomerang LRV 17
- Coloursteel walls and roof =Black 9% RI
- Joinery frames= RAL 9004 9% RI
- Stone veneer= Grey and Bronze
- Refer colour data sheets supporting documents



West Elevation





East Elevation

Colours:

Shadowclad ply=Resene Boomerang LRV 17

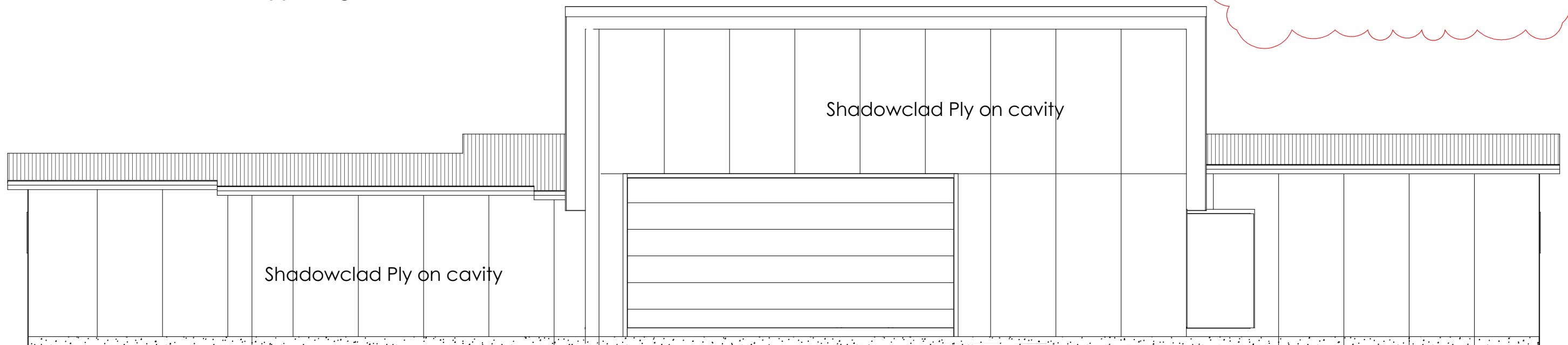
Coloursteel walls and roof =Black 9% RI

Joinery frames= RAL 9004 9% RI

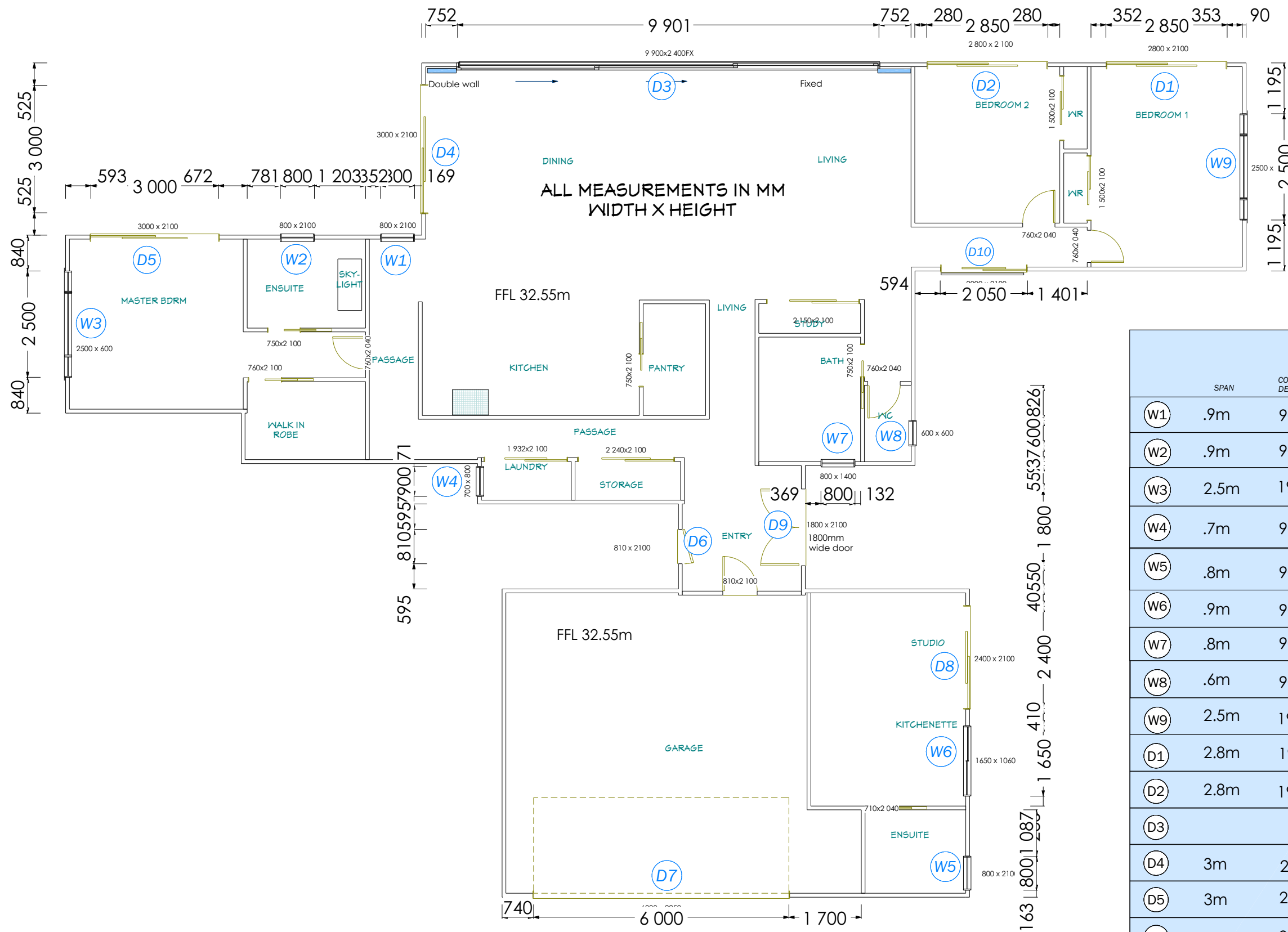
Stone veneer= Grey and Bronze

Refer colour data sheets supporting documents

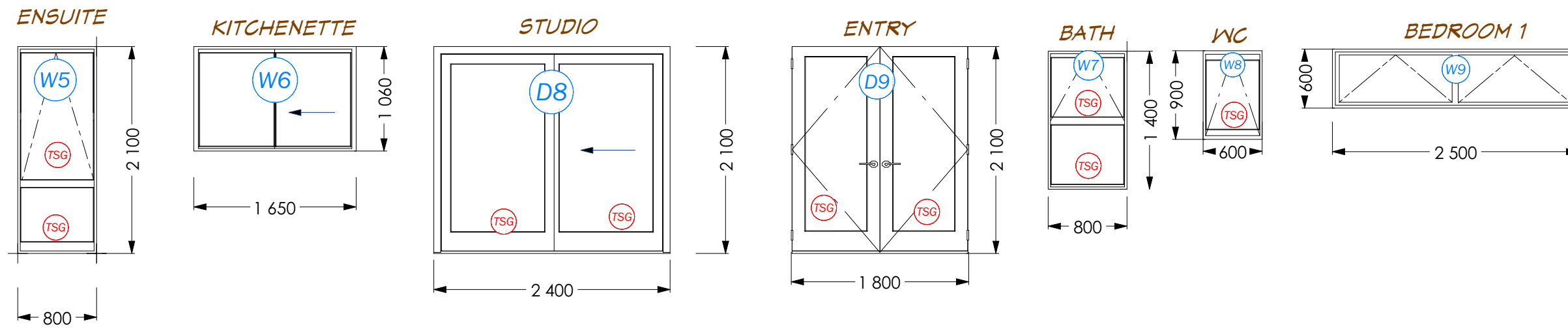
Structural wall frames and RAB by ECO Panel Wall System. Manufactured in the factory and assembled on site



South Elevation

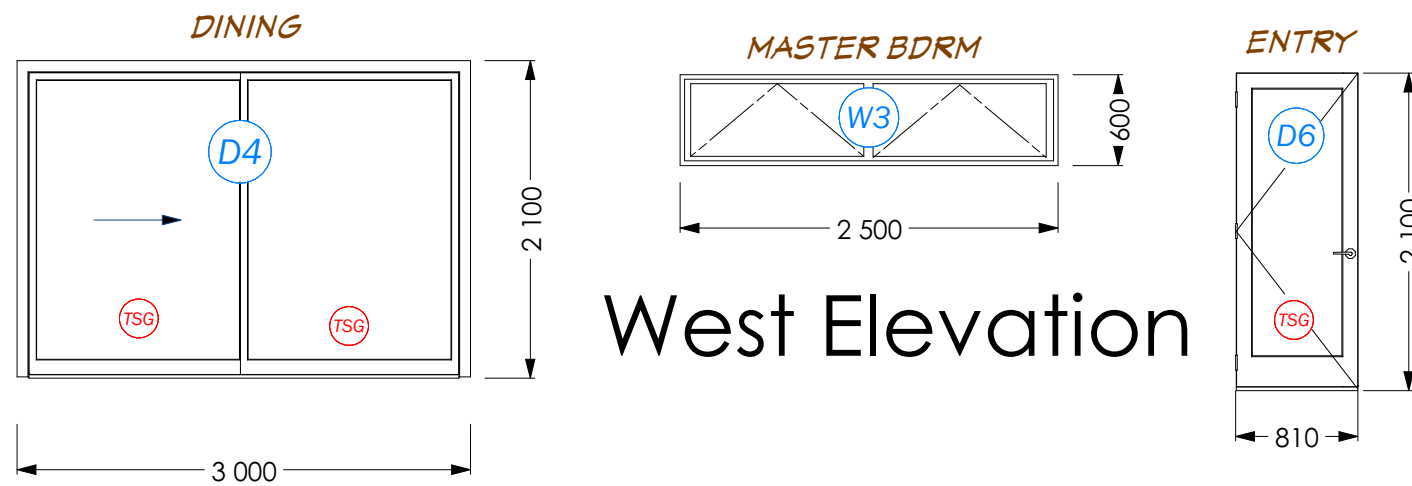


LINTEL SCHEDULE				
	SPAN	COMPONENT SIZE DEPTH AND THICKNESS	FIXING TYPE	TIMBER GRADE AND SPECIFICATION
W1	.9m	90 X 90mm	Type F	sg8 H1.2
W2	.9m	90 X 90mm	Type F	sg8 H1.2
W3	2.5m	190 X 90mm	Type F	sg8 H1.2
W4	.7m	90 X 90mm	Type E	sg8 H1.2
W5	.8m	90 X 90mm	Type F	sg8 H1.2
W6	.9m	90 X 90mm	Type F	sg8 H1.2
W7	.8m	90 X 90mm	Type F	sg8 H1.2
W8	.6m	90 X 90mm	Type E	sg8 H1.2
W9	2.5m	190 X 90mm	Type F	sg8 H1.2
D1	2.8m	190 x 90mm	Type F	sg8 H1.2
D2	2.8m	190 X 90mm	Type F	sg8 H1.2
D3	By Tindus Engineering Ltd			
D4	3m	240 x 90mm	Type G	sg8 H1.2
D5	3m	240 X 90mm	Type G	sg8 H1.2
D6	.85m	90 X 90mm	Type F	sg8 H1.2
D7	By Tindus Engineering Ltd			
D8	2.4m	190 X 90mm	Type G	sg8 H1.2
D9	1.8m	140 X 90mm	Type F	sg8 H1.2
D10	2m	140 X 90mm	Type F	sg8 H1.2



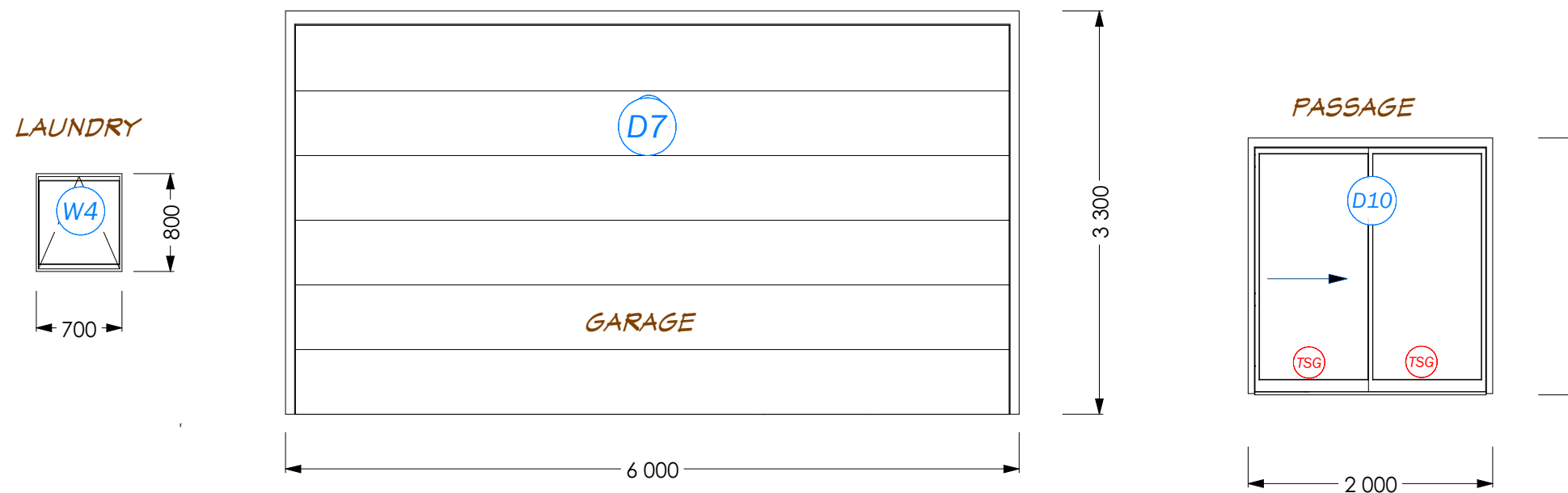
East Elevation

Measurements show sizes over jambs
Note: allow 25mm in both directions for opening size

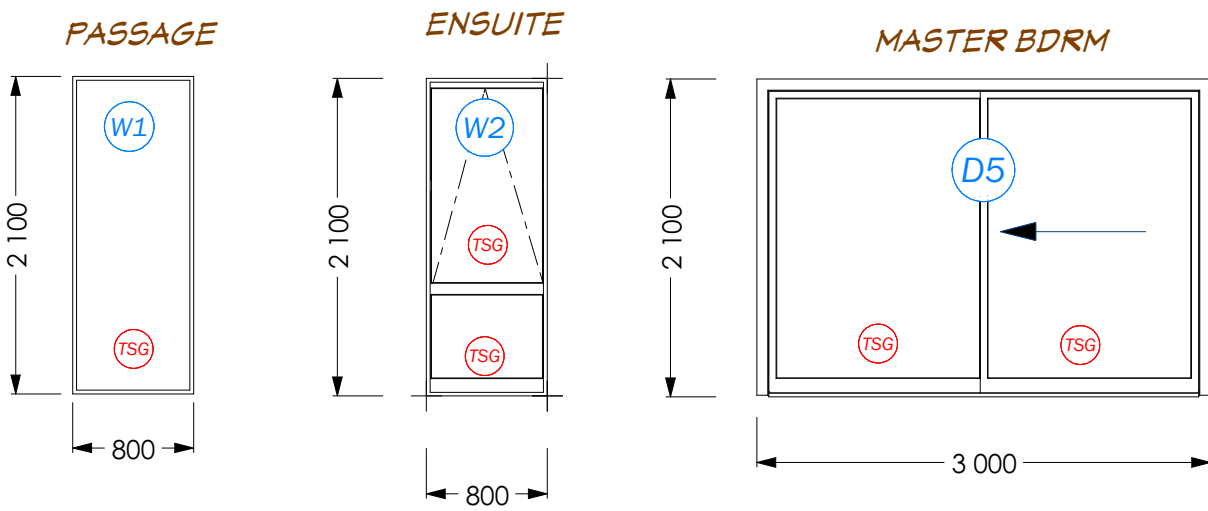
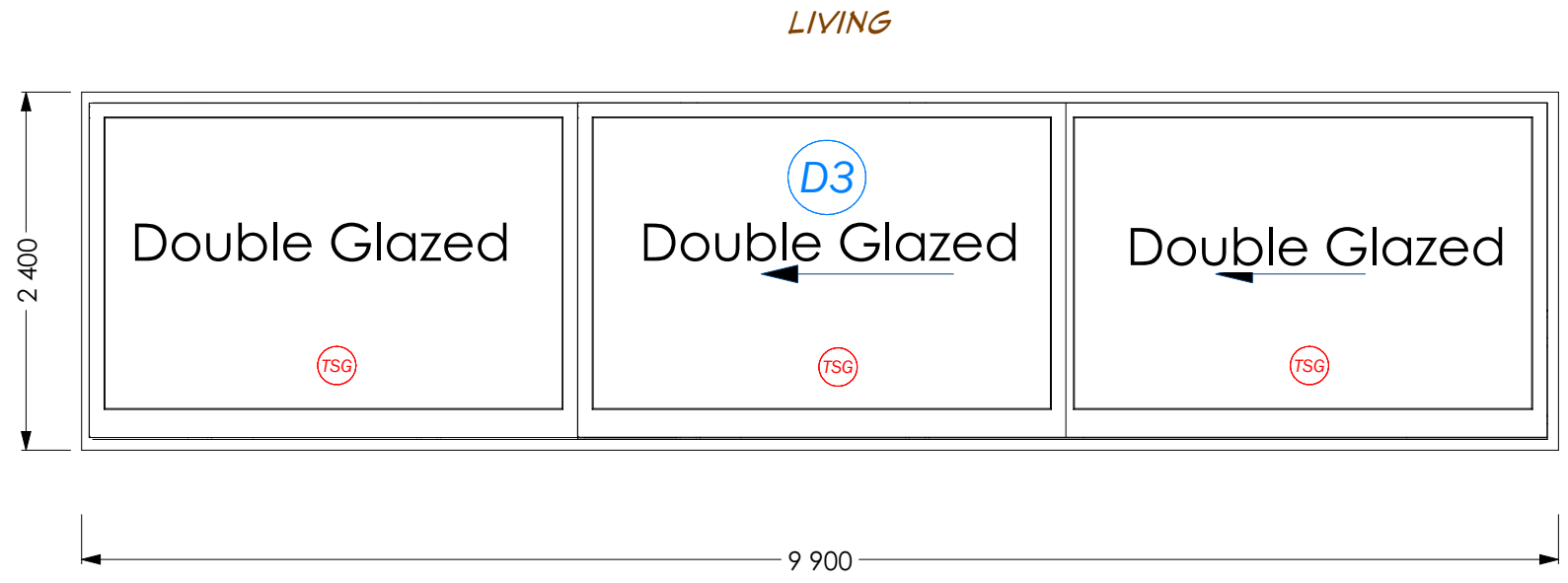
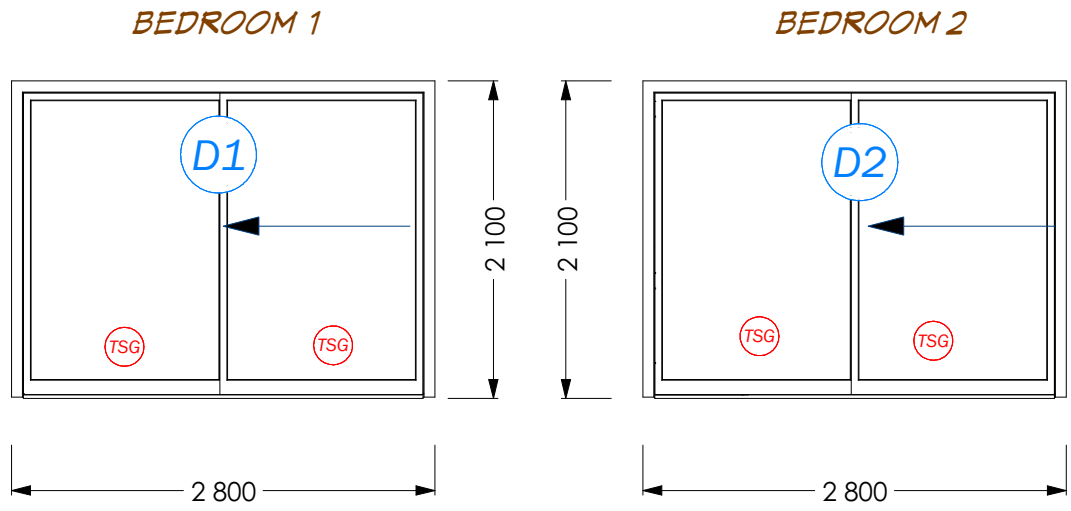


West Elevation

TSG Toughened safety glass not less than 5mm thickness



South Elevation

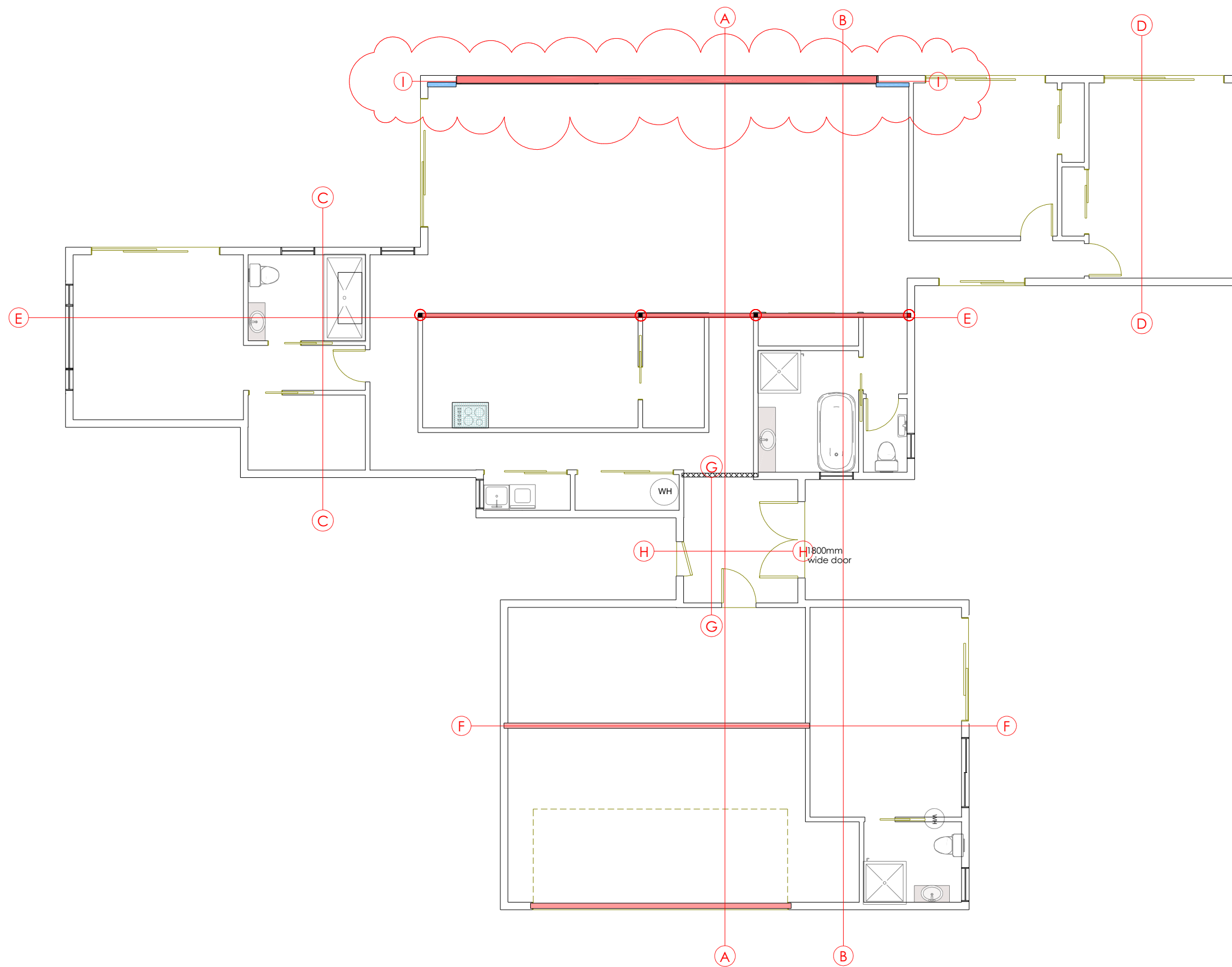


North Elevation

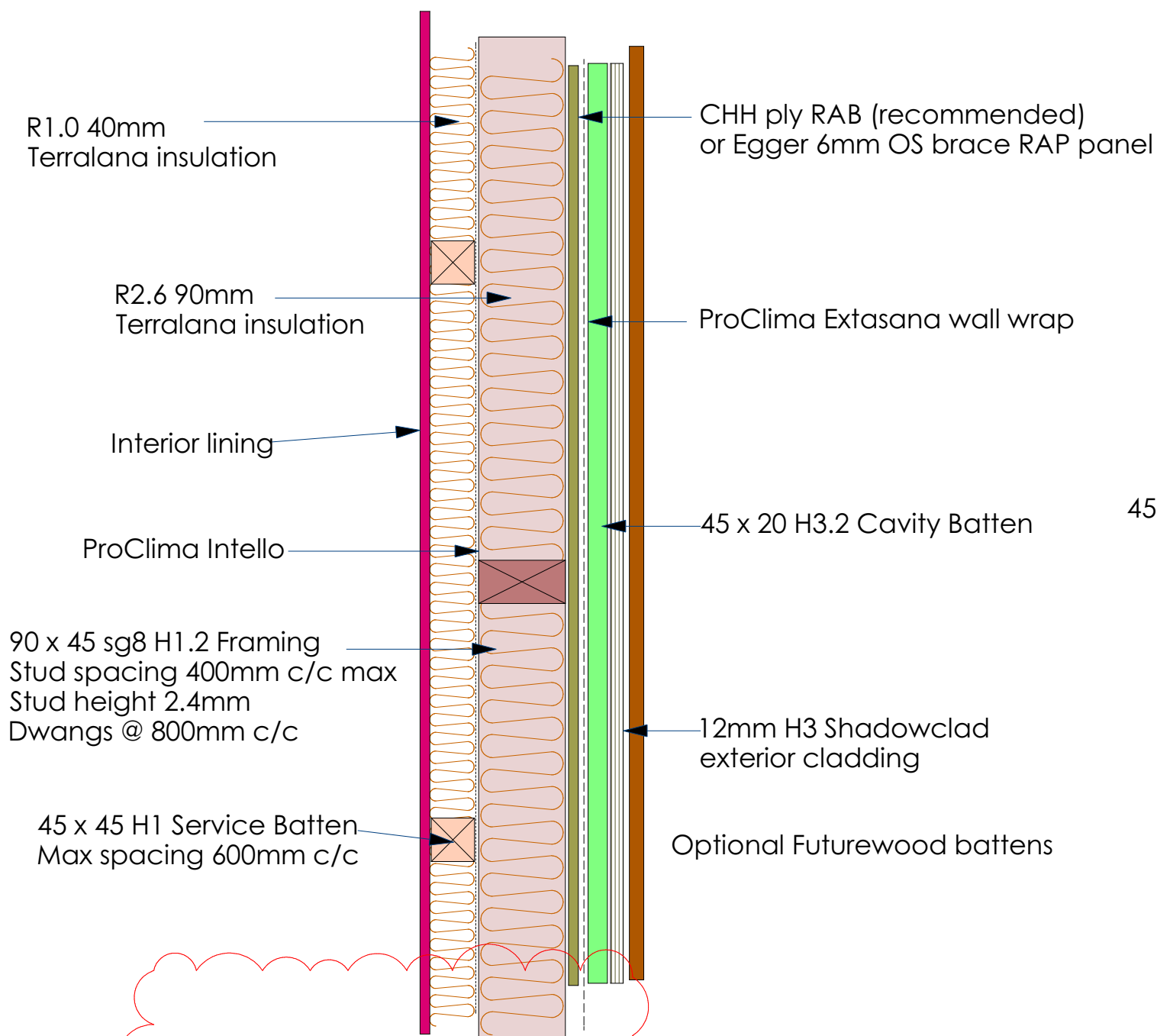
Window and Door Schedule;
 Aluminium Joinery, triple glazed
 TSG Grade A Toughened safety glass where specified
 Dimensions are taken over jambs
 Allow 25mm in both directions for opening size
 All units to be measured on site
 Prior to manufacture.
 Colour, opening configuration and Furniture to be confirmed by owner

TSG Toughened safety glass not less than 5mm thickness

Note: allow 25mm in both directions for opening size

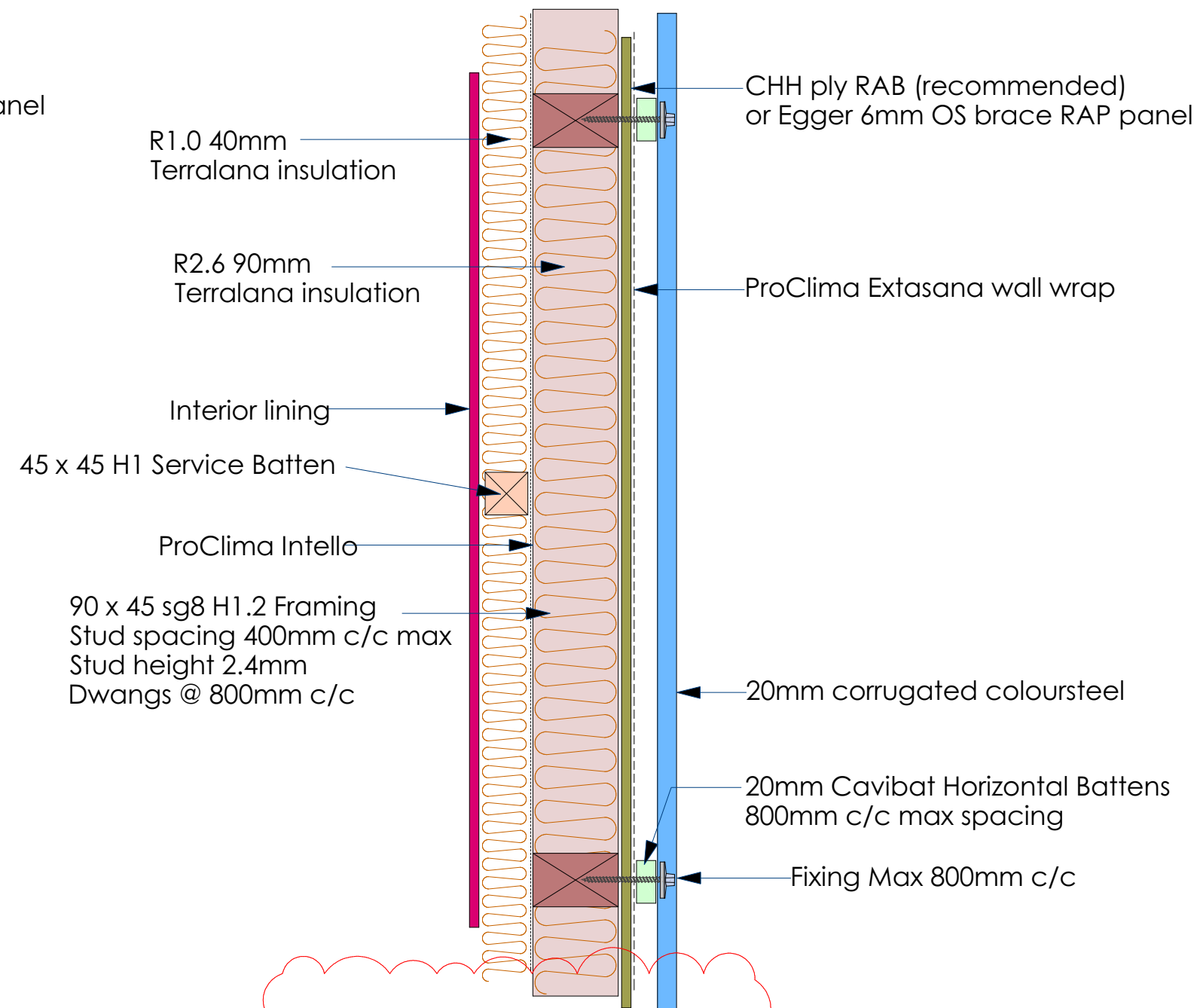


Shadowclad on cavity

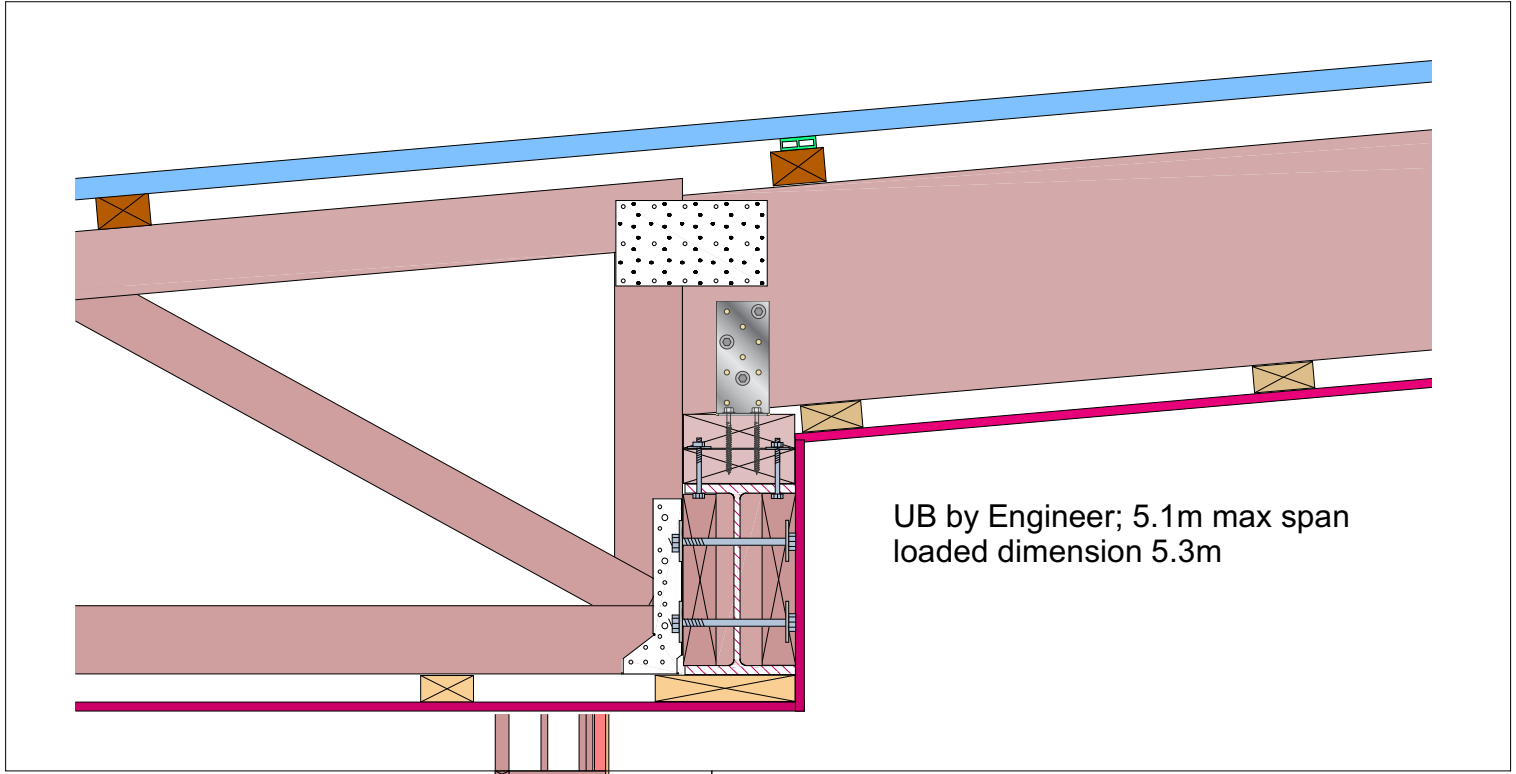
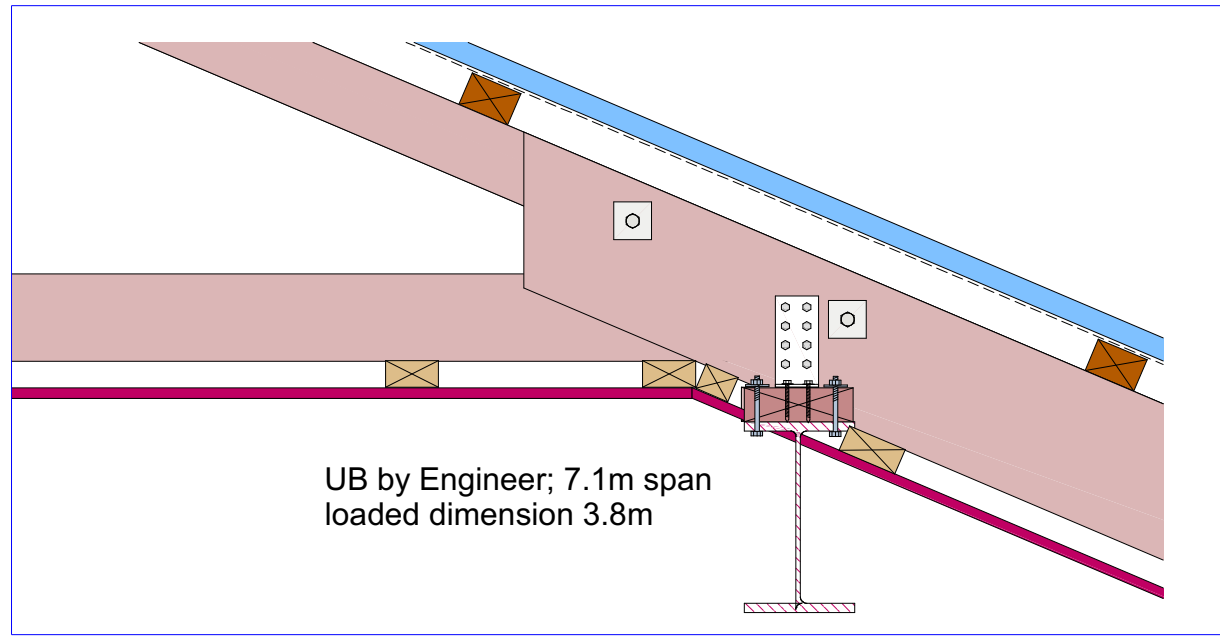


All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

Vertical Colousteel

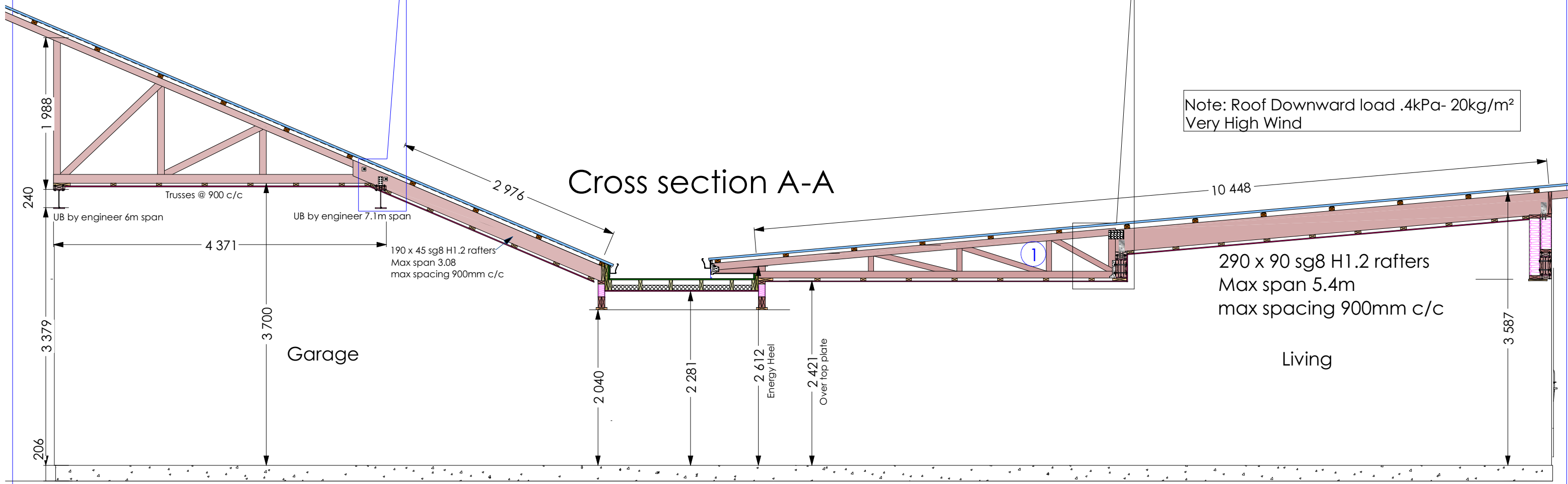


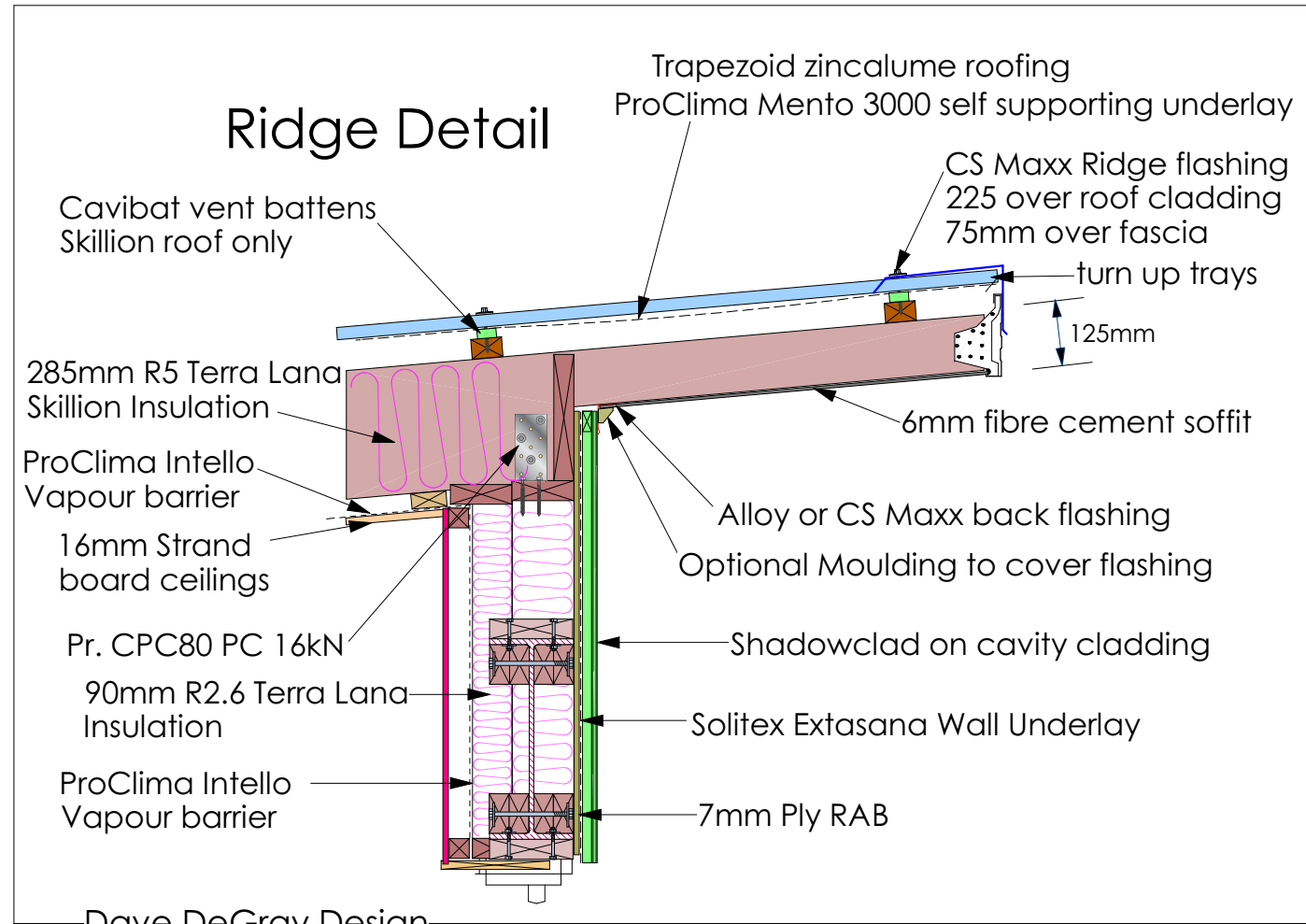
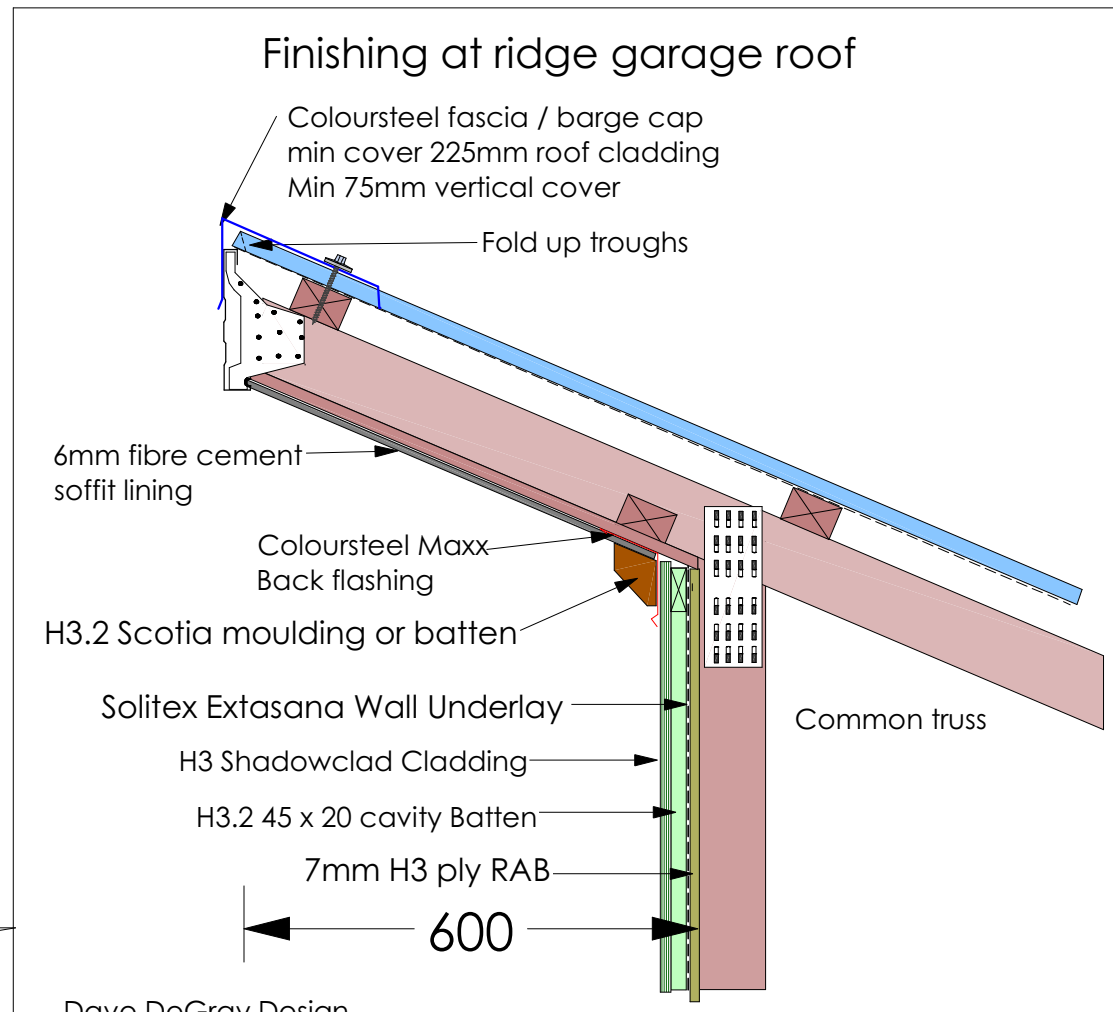
All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB



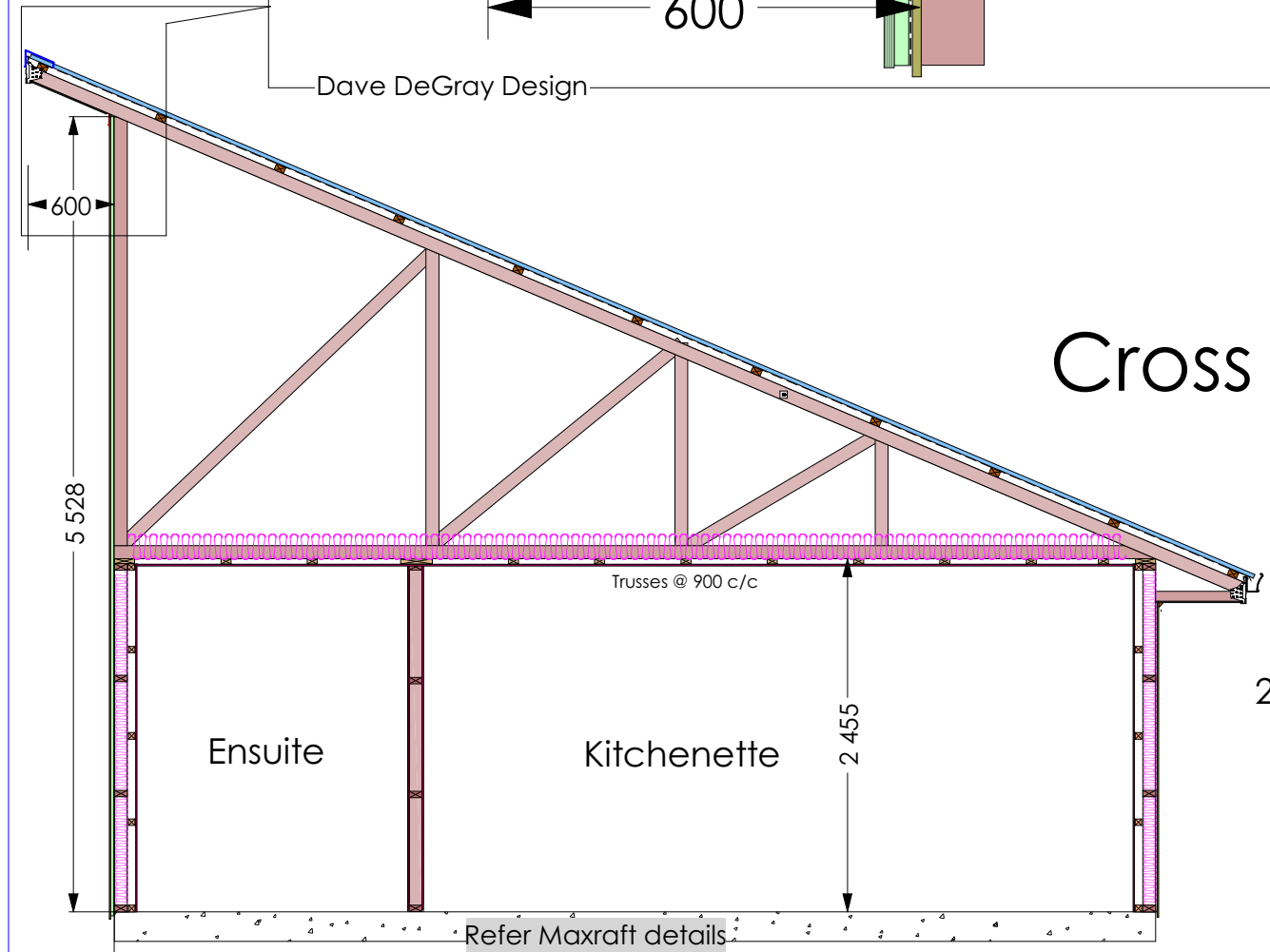
Note: Roof Downward
load .85kPa- 60kg/m²
Very High Wind

Note: Roof Downward load .4kPa- 20kg/m²
Very High Wind

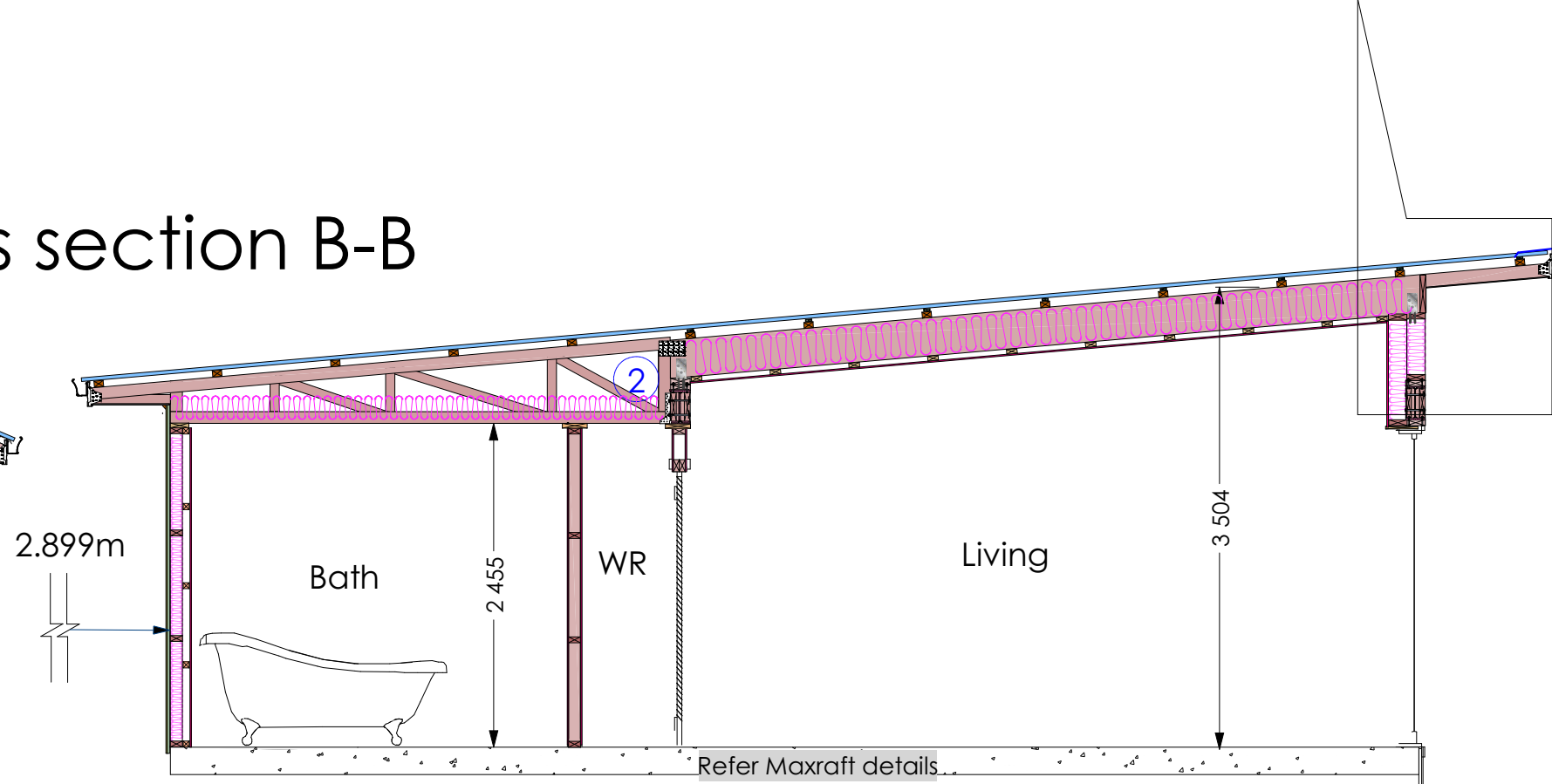




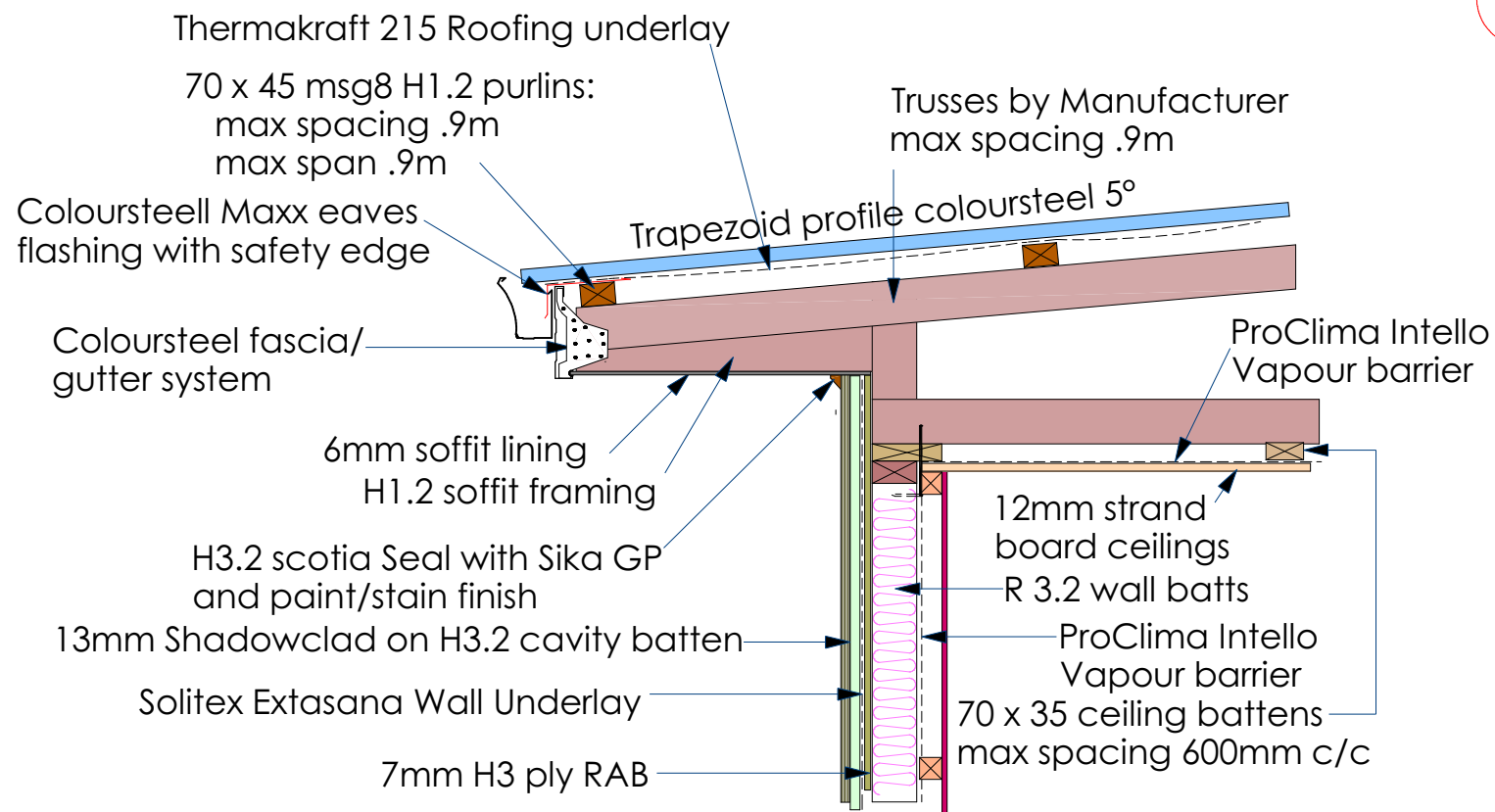
UB by Engineer; 9.9m max span
loaded dimension 2.7m



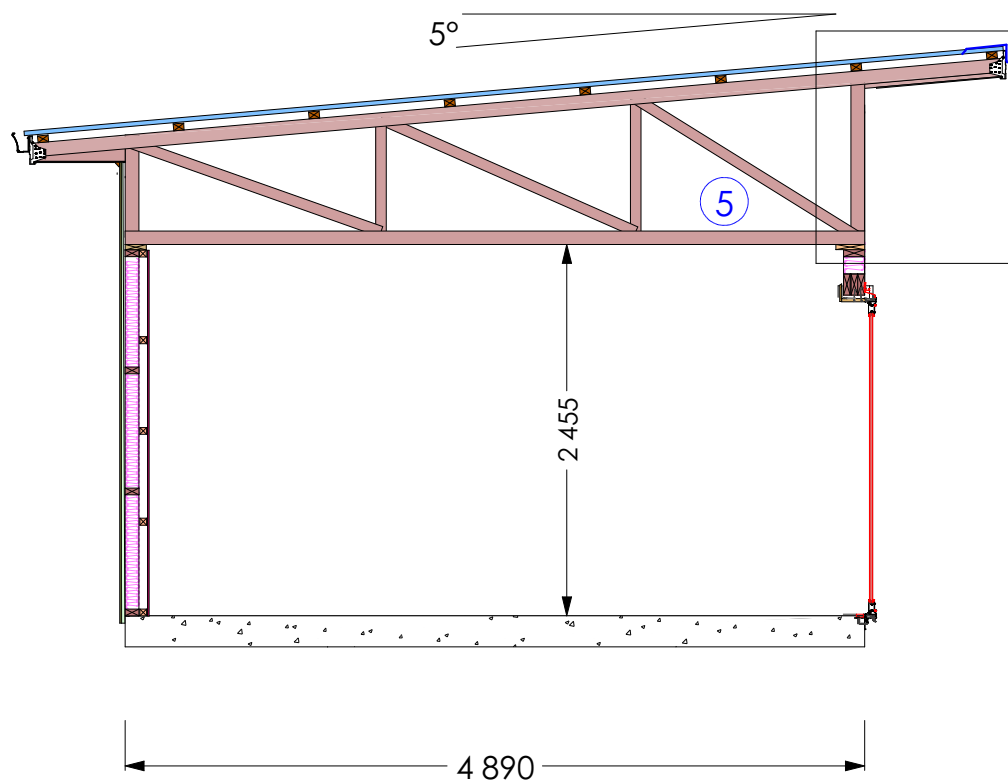
Cross section B-B



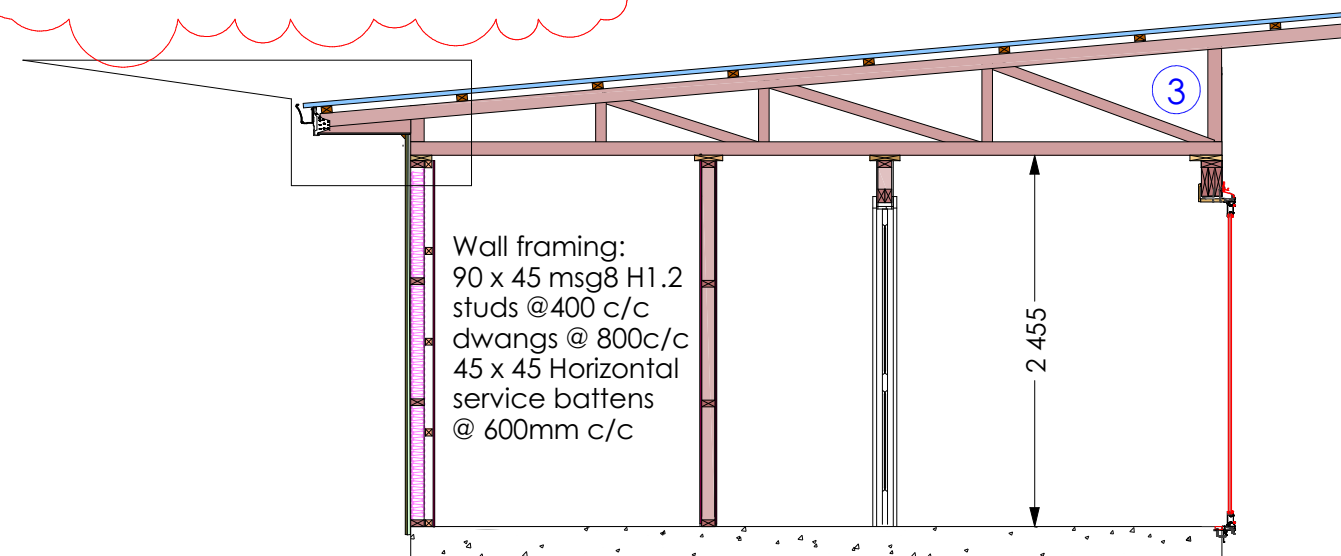
Eaves detail



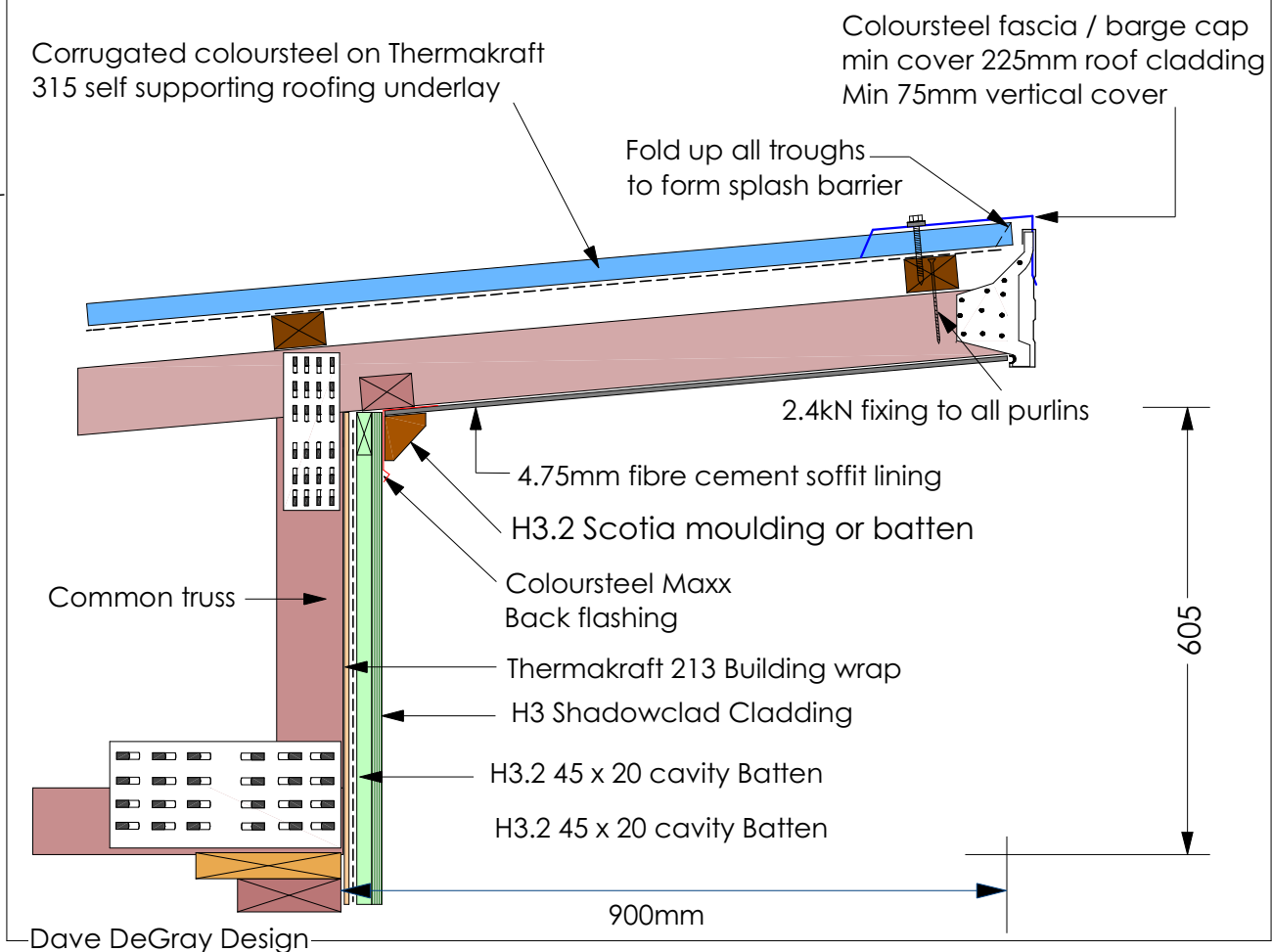
Cross section D-D



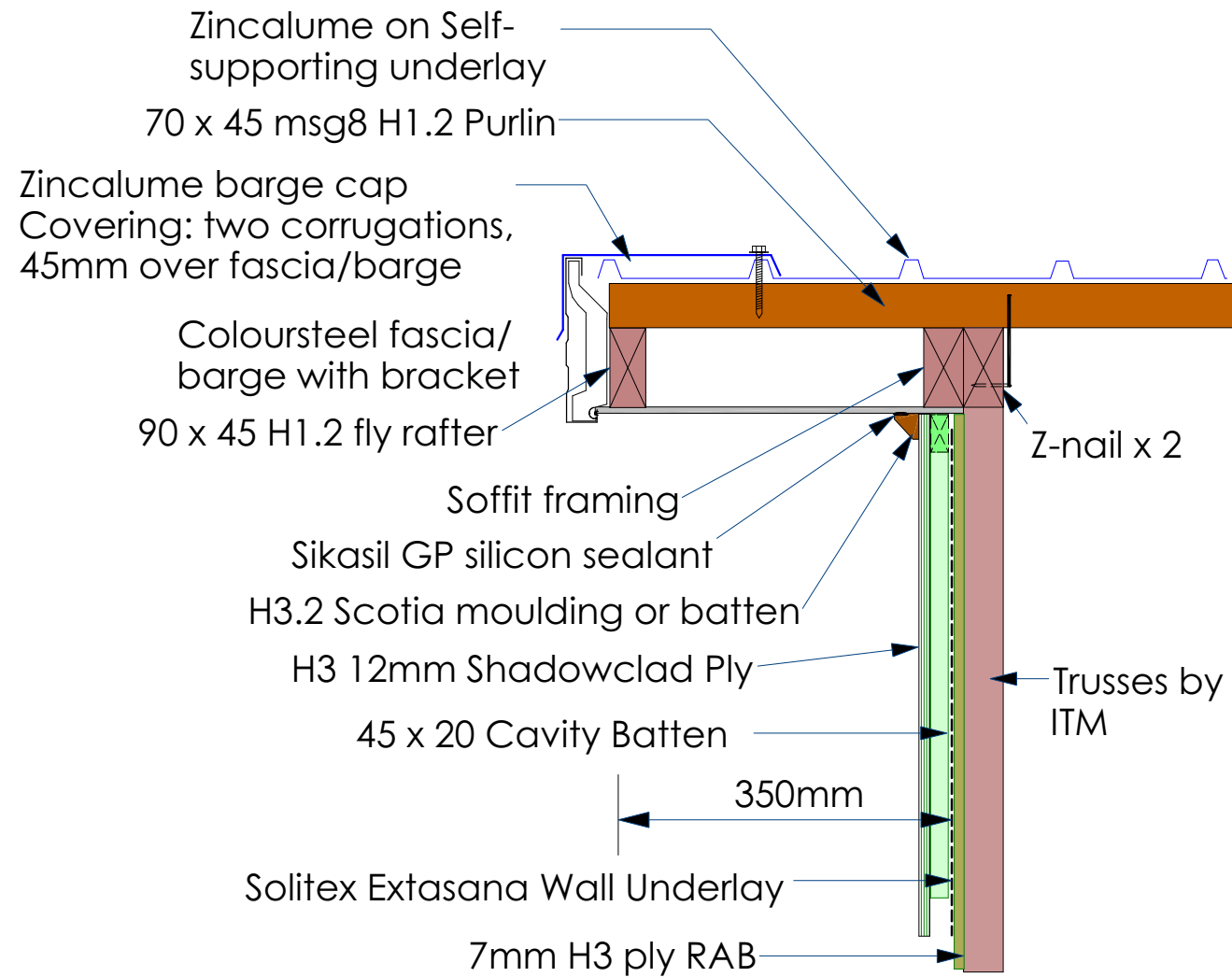
All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB



Corrugated coloursteel on Thermakraft 315 self supporting roofing underlay

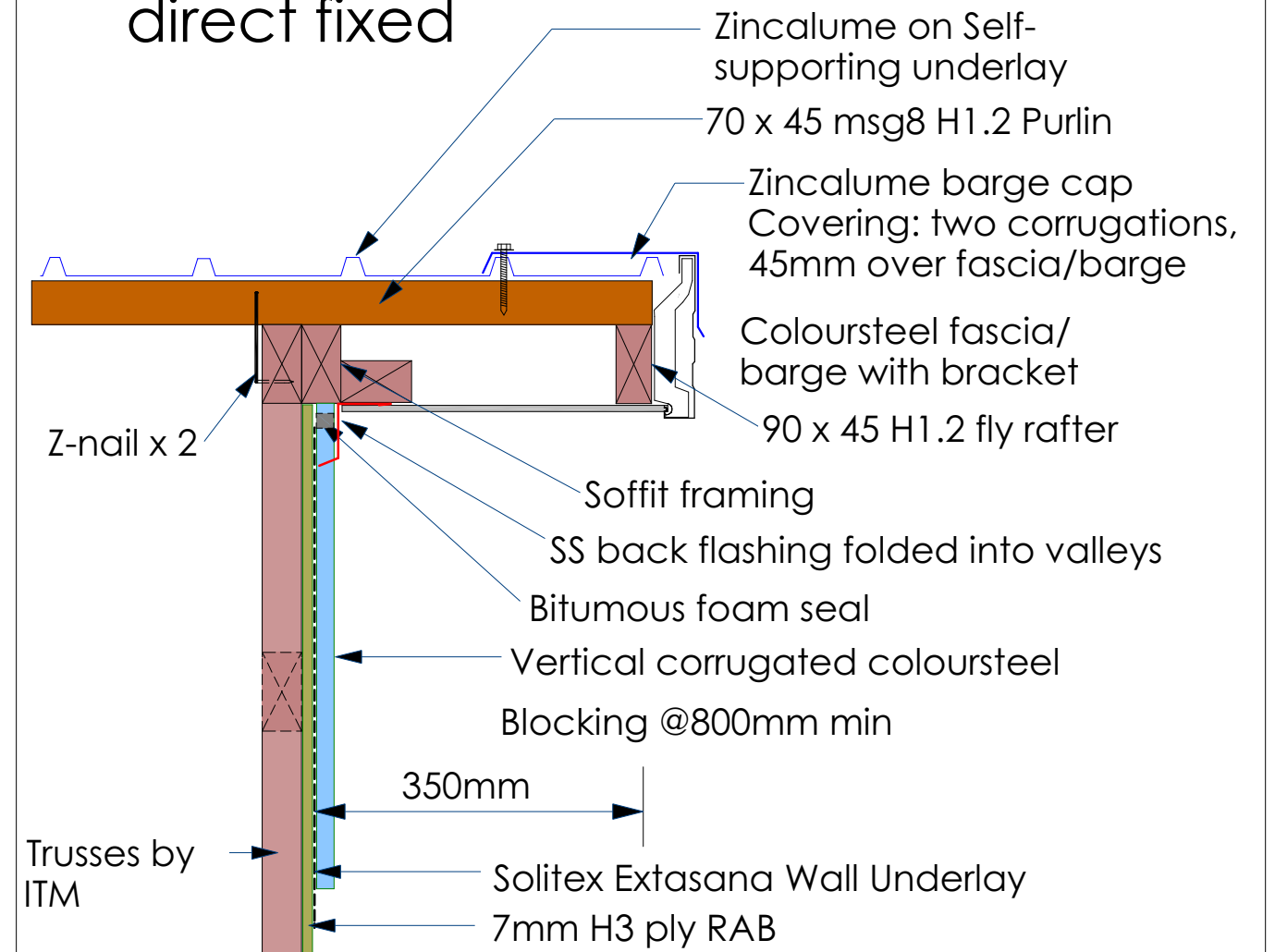


Finishing at barge: Ply on Cavity



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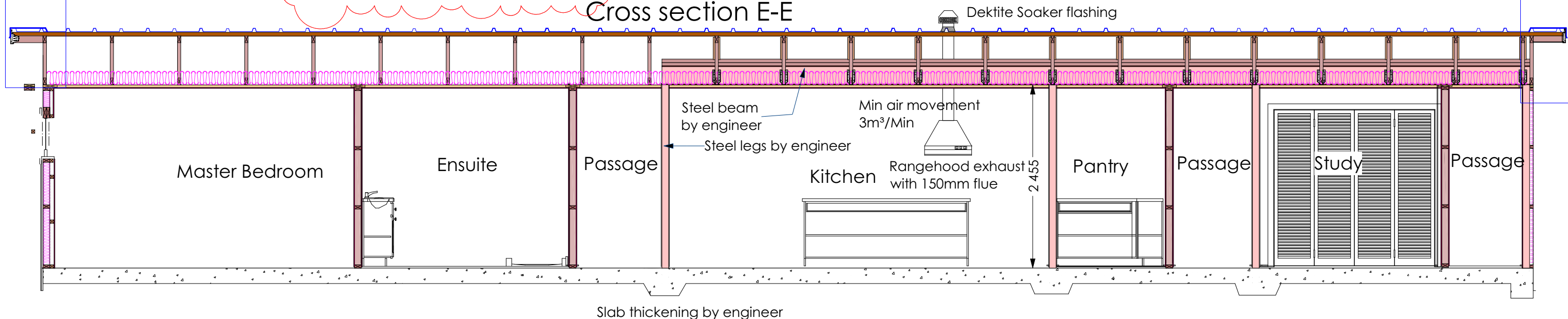
Finishing at barge: Coloursteel direct fixed



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All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

Cross section E-E



Note: slab indicative only, design to come with maxraft info

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LBP 100490
email: davedegray@xnet.co.nz

162 Tarrant Road RD1
Upper Moutere 7173
TEL 03 5432 841
Mobile 0274 588721

PROJECT DESCRIPTION:

42 Horton Rd Tasman

SHEET TITLE:

Cross section E-E

SCALE 1: @ A3 print Size

±50

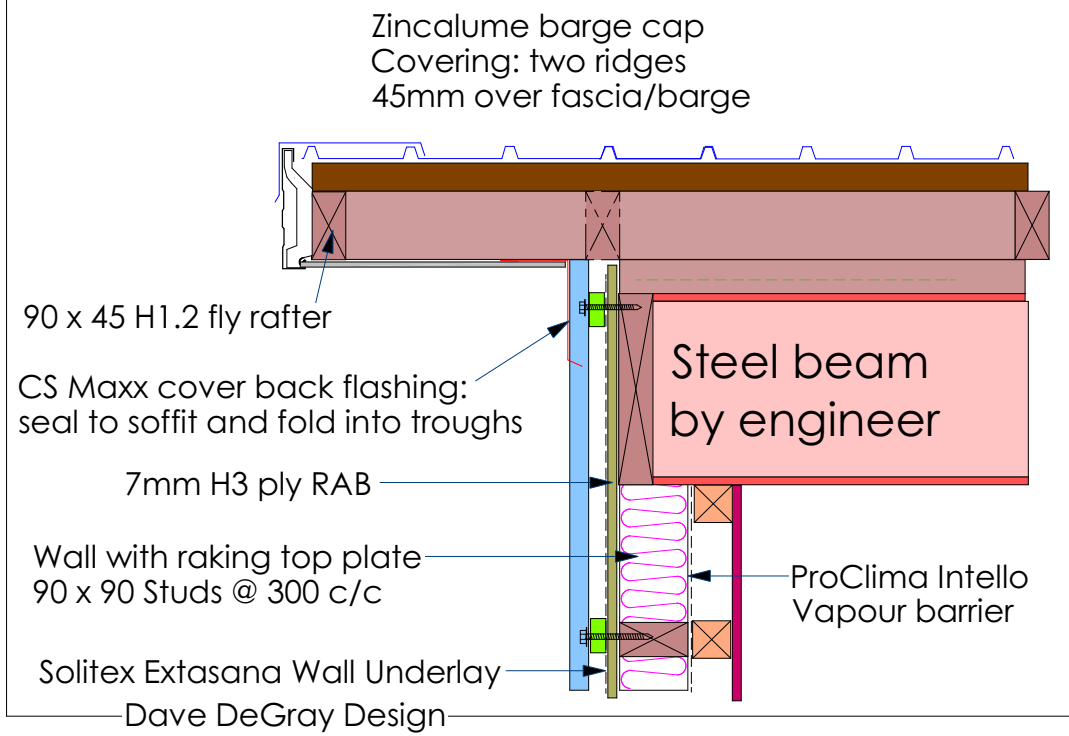
Drawn By:
Dave DeGray
DATE:
31-Jan-20

Check all
Dimensions
on site

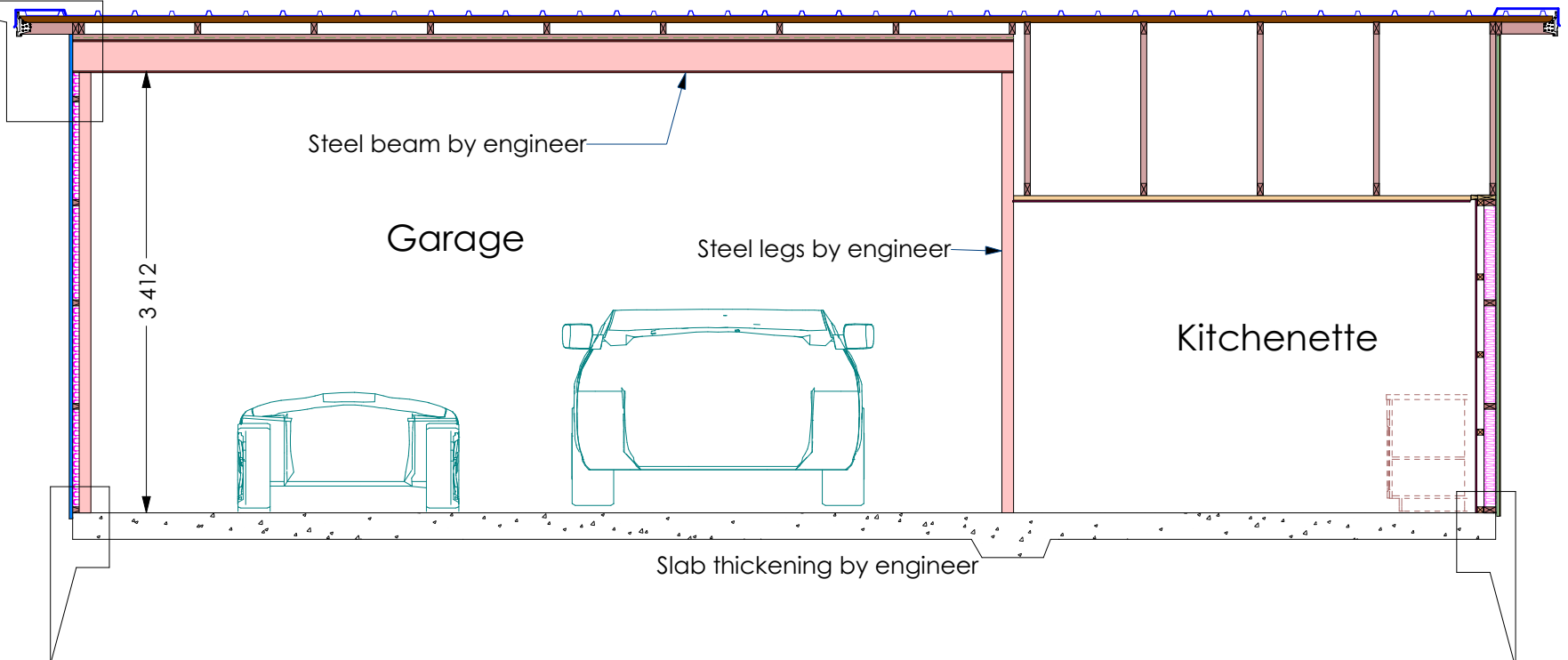
SHEET:
16A

Finishing at barge CS on cavity cladding

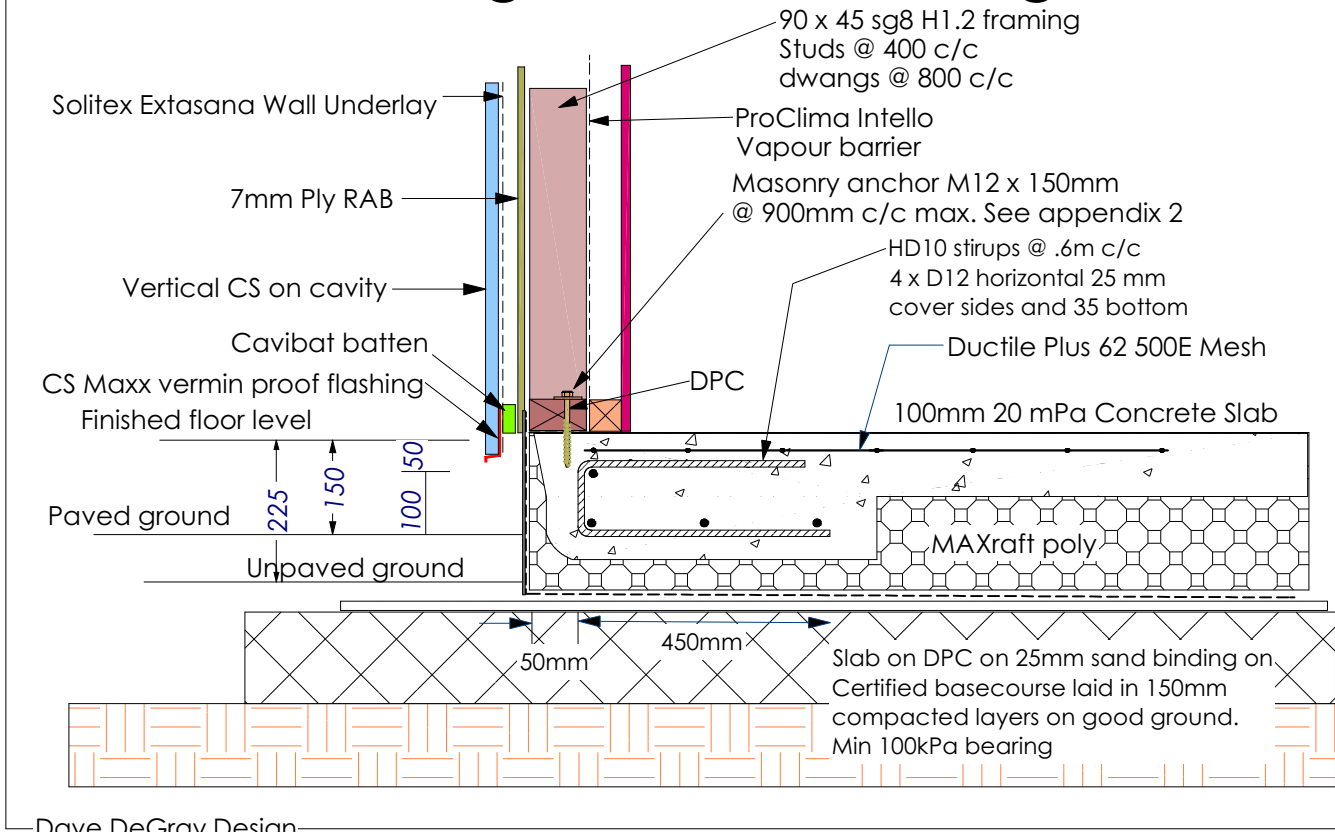
All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB



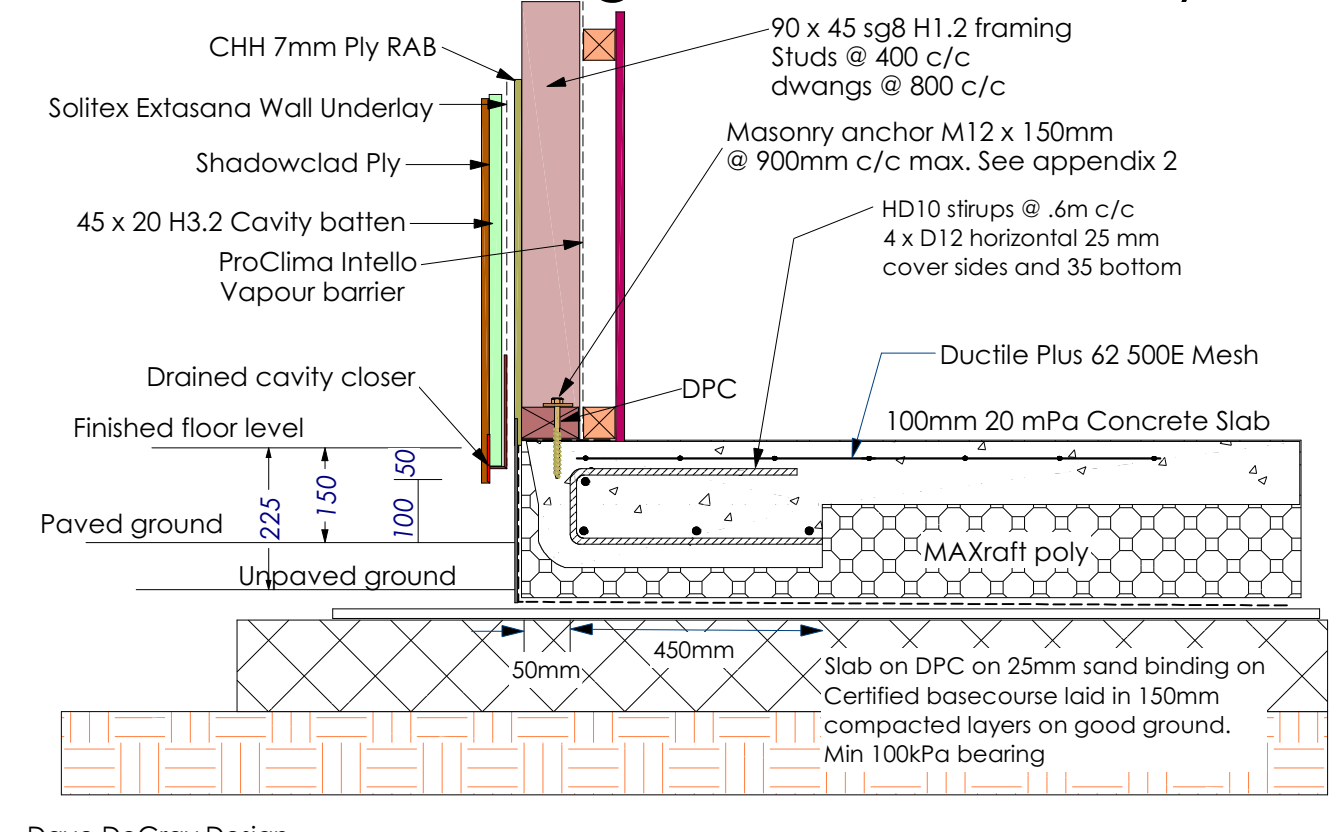
Cross section F-F



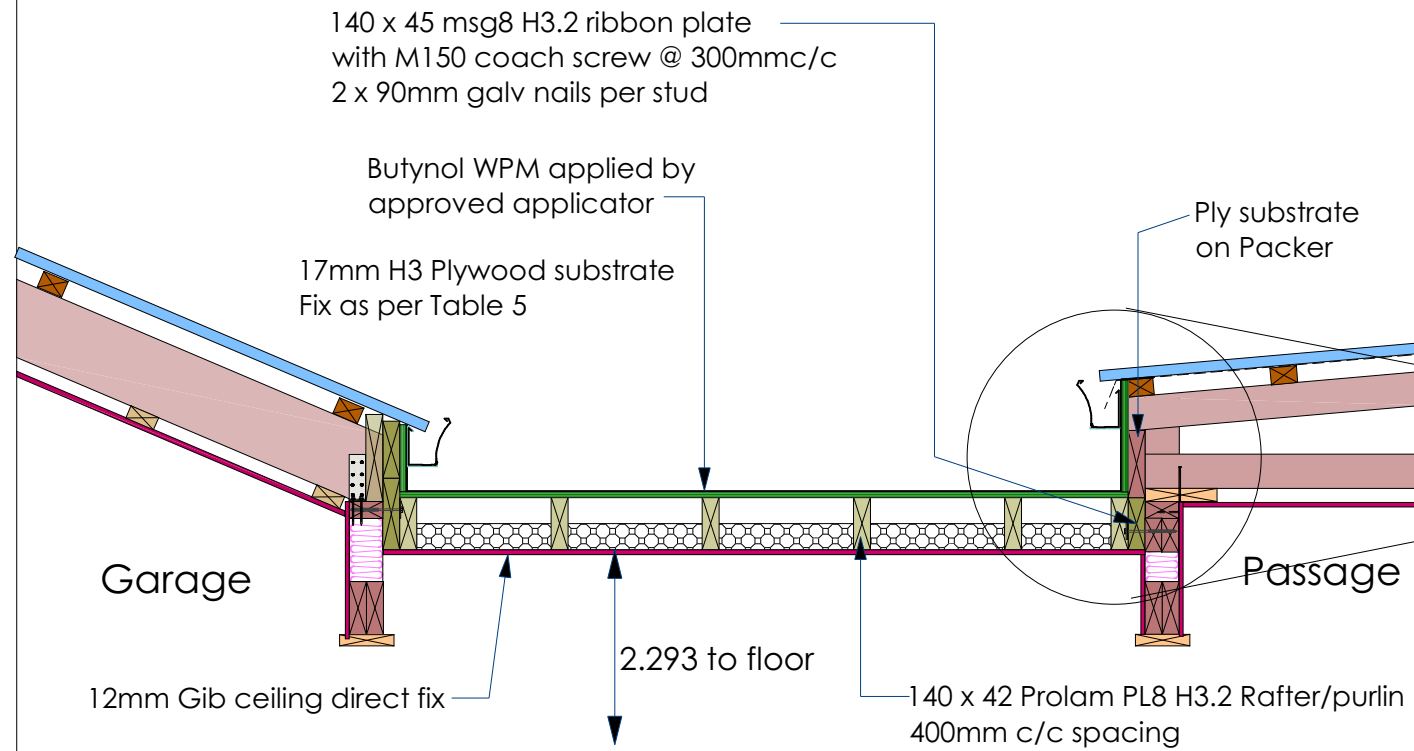
Foundation Edge Vertical corrugated CS



Foundation Edge Shadowclad Ply

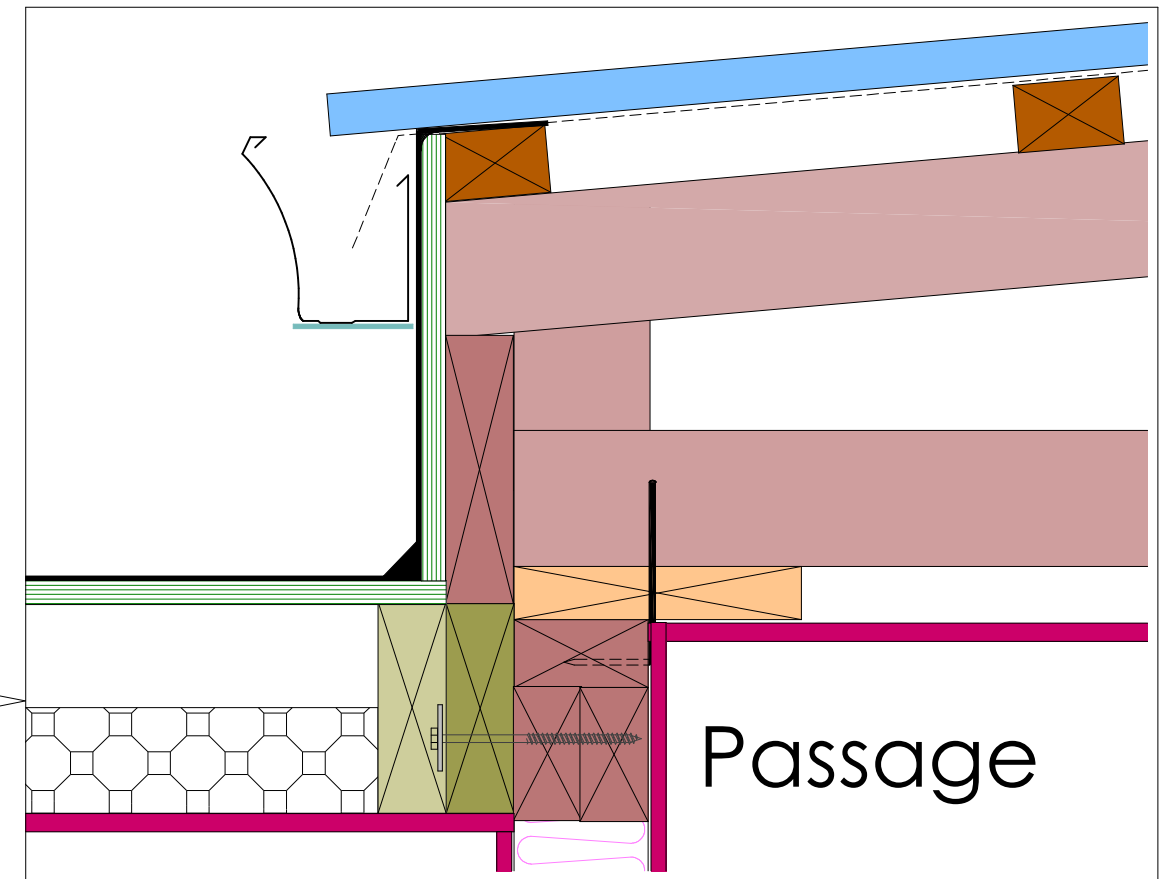


Butynol Membrane roof Cross section G-G

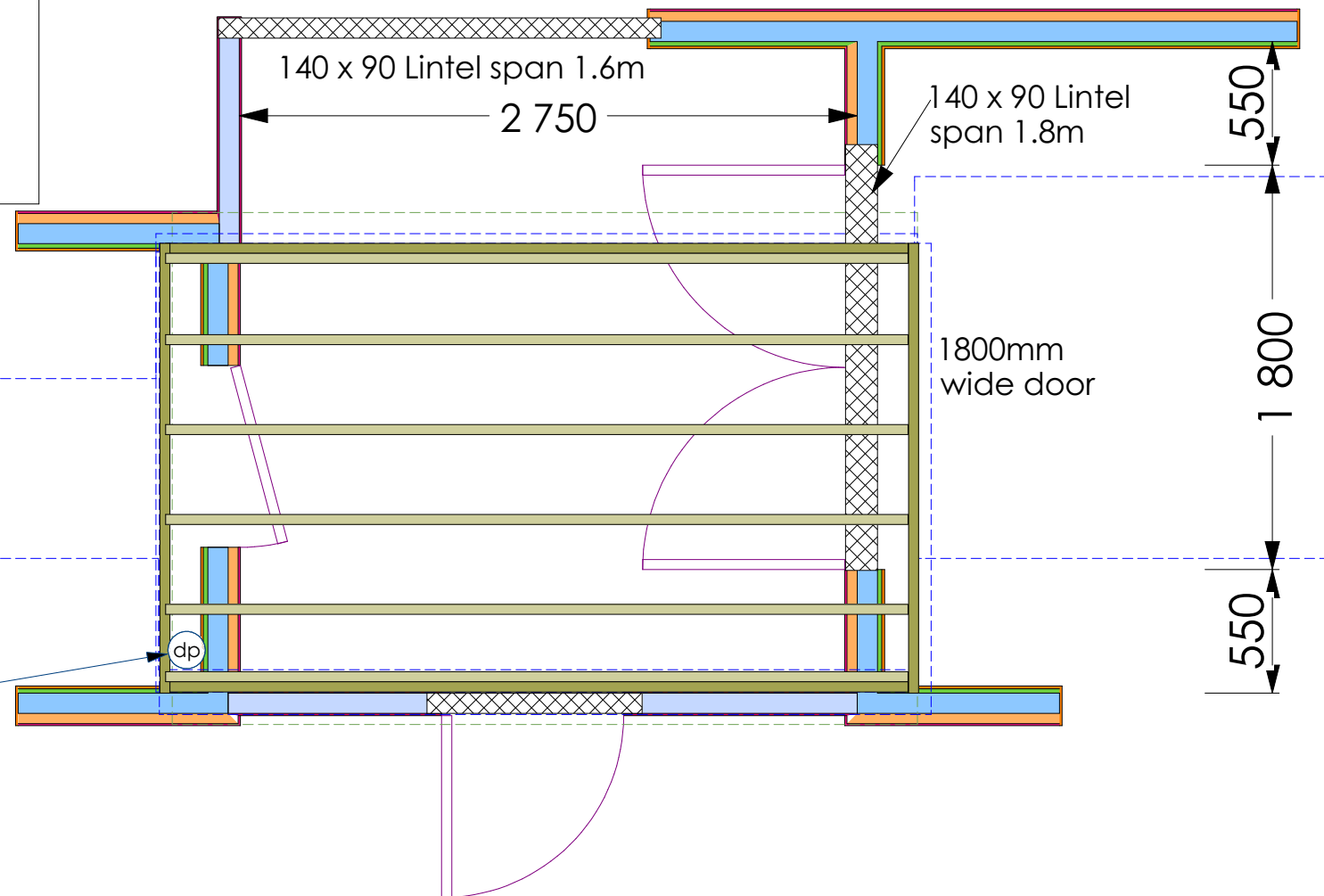


Method Construct basic membrane roof min 300mm below final position. apply adhesive sealant to top of framing on north wing side Lift into place against soffit lining and fix to studs and plates with coach screws and galv nails. Fit flashing to vermin proof

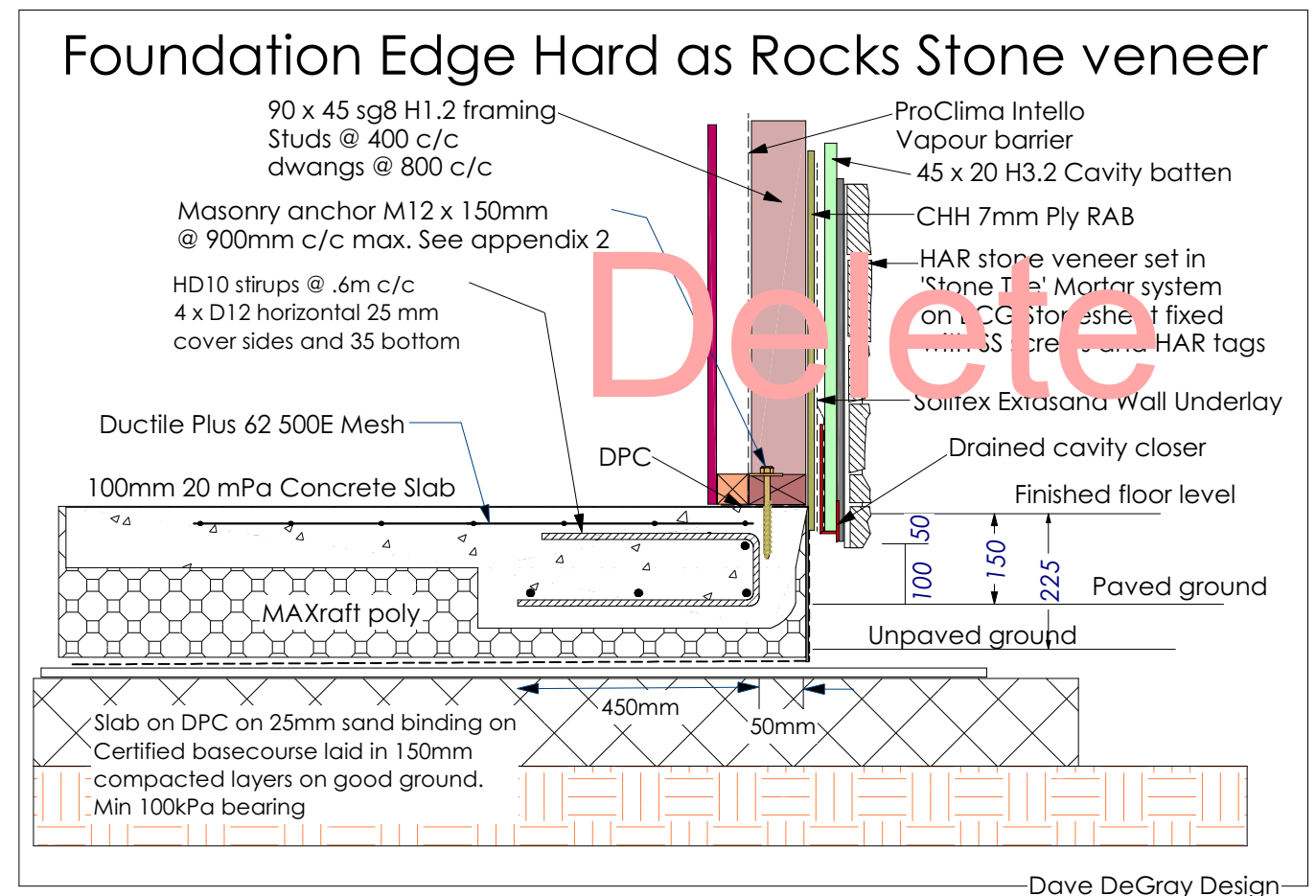
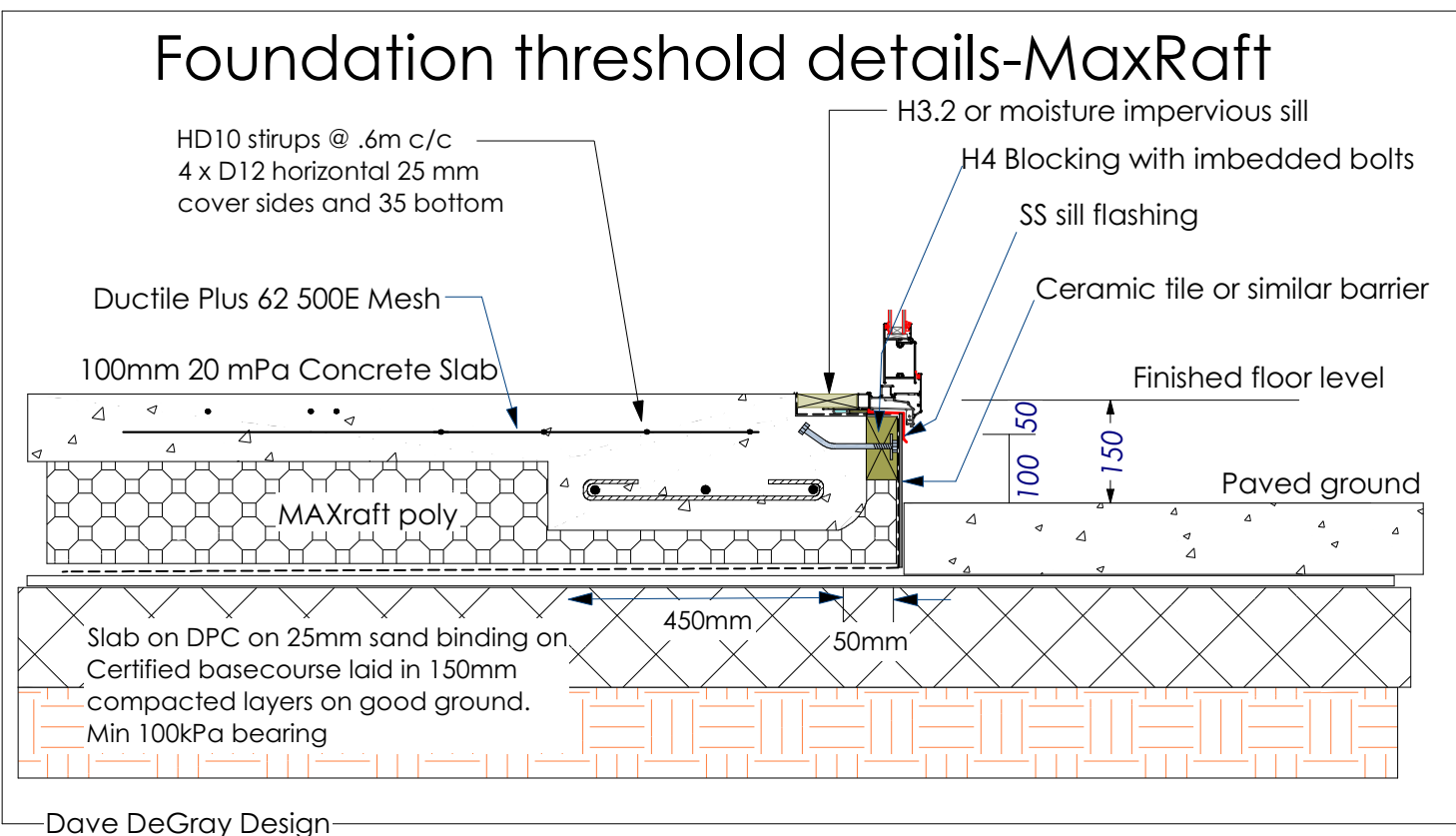
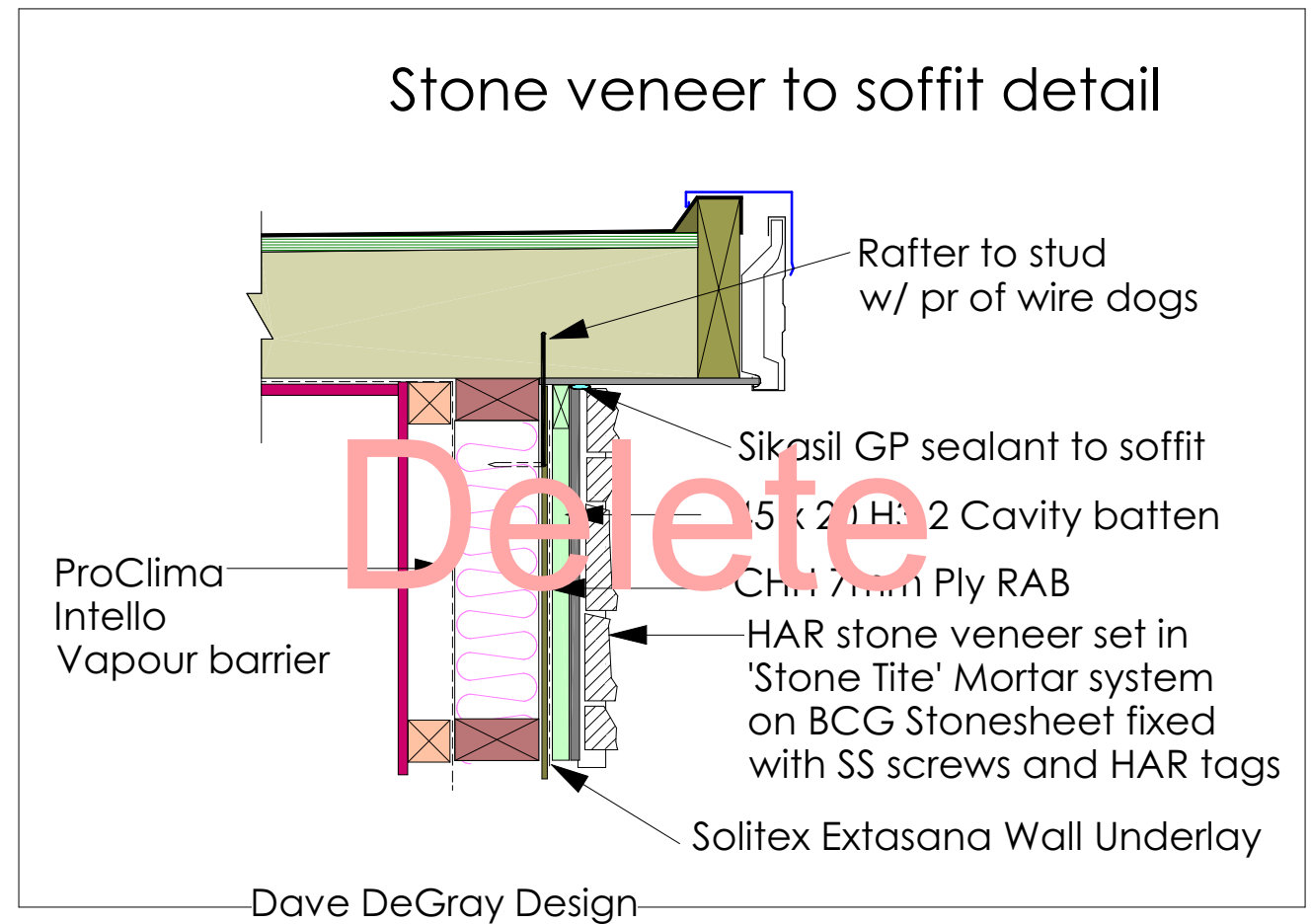
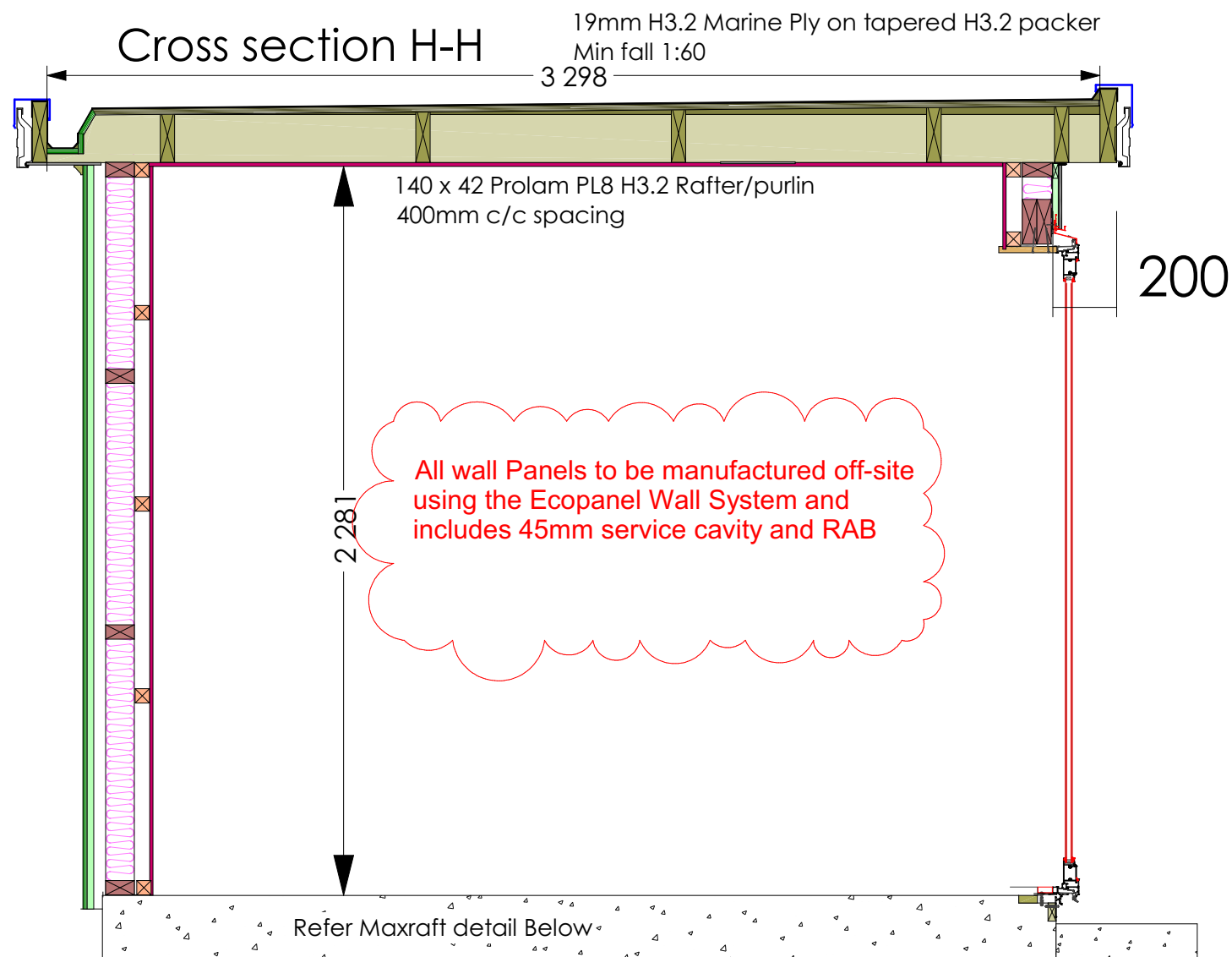
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Plan view of framing

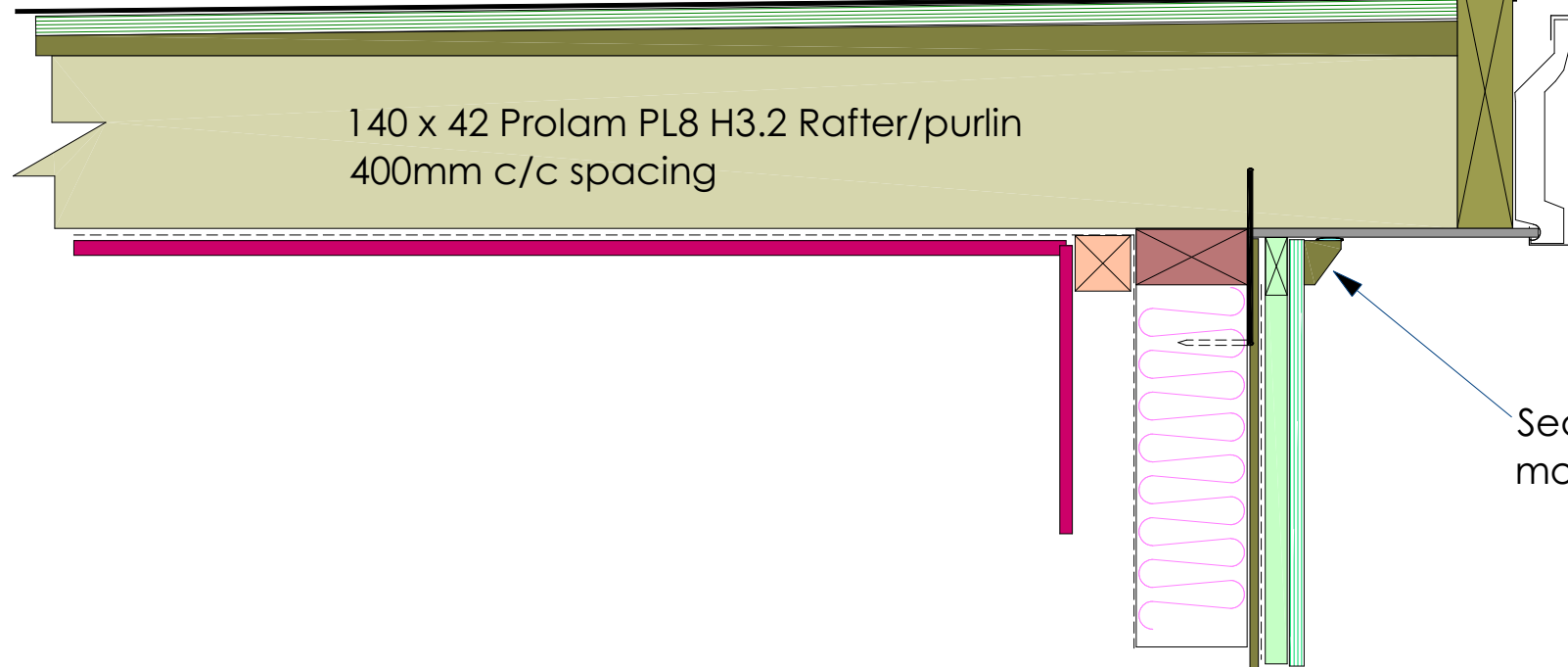


Downpipe and overflow Rainhead



Butynol membrane over 19mm H3.2 ply over H3.2 tapered packer
Fall 1:60 to gutter

Coloursteel Maxx Flashing
Seal folded edge to butynol
Safety edge on top



Ex-240 x 45 sg8 H3.2 membrane roof framing. finish with CS fascia to match and CS Maxx cap flashing w/ safety edge

Plywood Thickness (mm)	Maximum Joist Spacings (mm)
12	600
15	800
17	900
21	1200

Table 5
Screw Fixing Schedule
(Self Drilling / Countersinking)

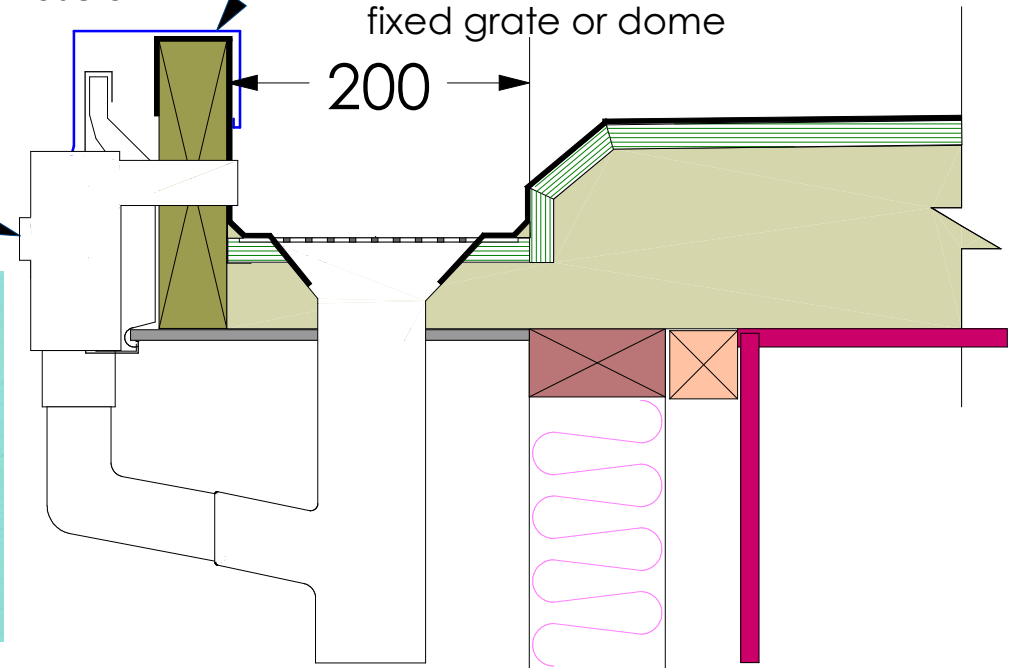
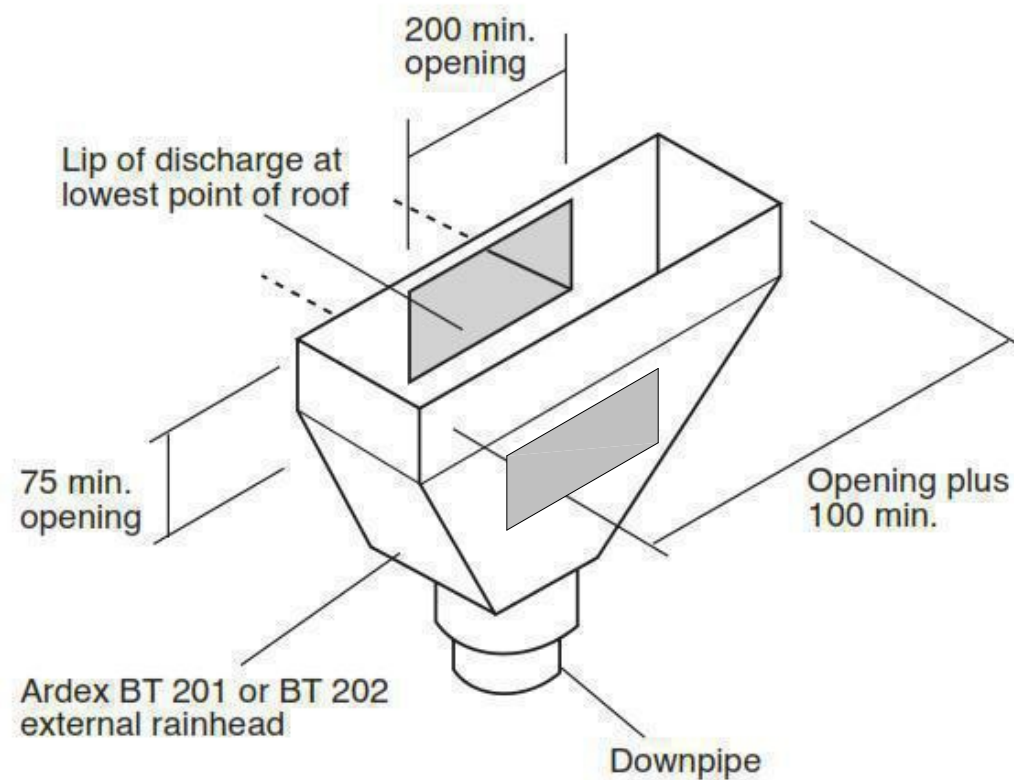
Plywood Thickness (mm)	Screw Size (mm)
12	40 x 8 gauge
15	45 x 8 gauge
17	50 x 8 gauge
21	65 x 10 gauge

DP and Overflow for butynol roof

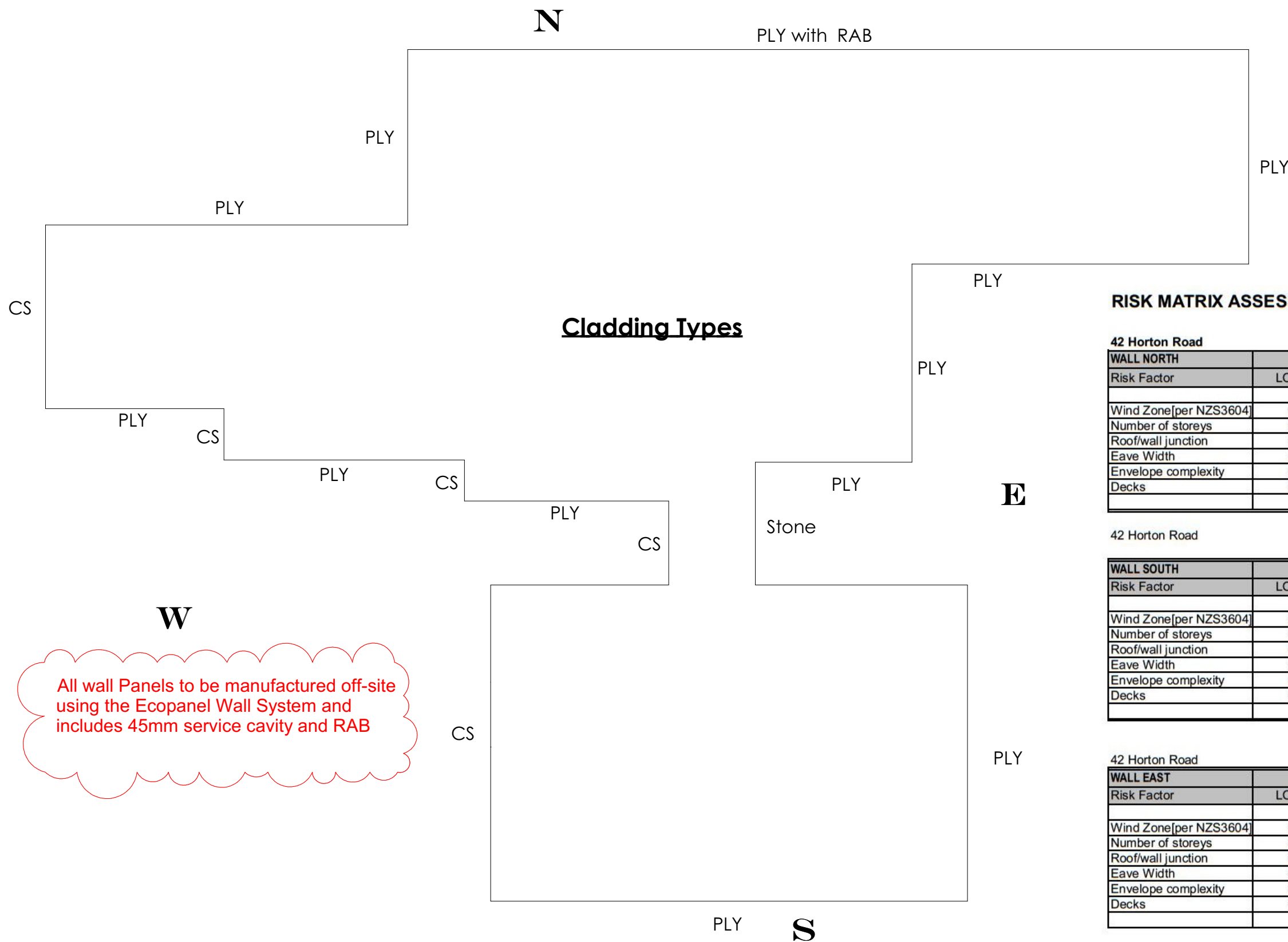
Overflow rainhead fed by 200 x 50mm scupper.
Coloursteel maxx to match fascia

Coloursteel Maxx cap
Proprietary Roof outlet with membrane clamped by screw fixed grate or dome

Overflow protection below intake
Same size or larger than intake
Run overflow into DP



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All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

Stone veneer cladding deleted

PLY with RAB = H3 13mm Shadowclad on cavity with CHH Ply RAB
 PLY = 13mm H3 Shadowclad on cavity

CS = Corrugated Coloursteel fixed vertically on Cavibat
 Horizontal battens max spacing 800mm

RISK MATRIX ASSESSMENT

42 Horton Road

WALL NORTH Risk Factor	RISK SEVERITY				Subtotals for each Risk factor
	LOW	MEDIUM	HIGH	VERY HIGH	
Wind Zone[per NZS3604]	0	0	1	2	2
Number of storeys	0	0	1	2	0
Roof/wall junction	0	1	1	3	1
Eave Width	0	1	1	2	1
Envelope complexity	0	1	3	3	3
Decks	0	0	2	4	0
Total Risk Score					7

42 Horton Road

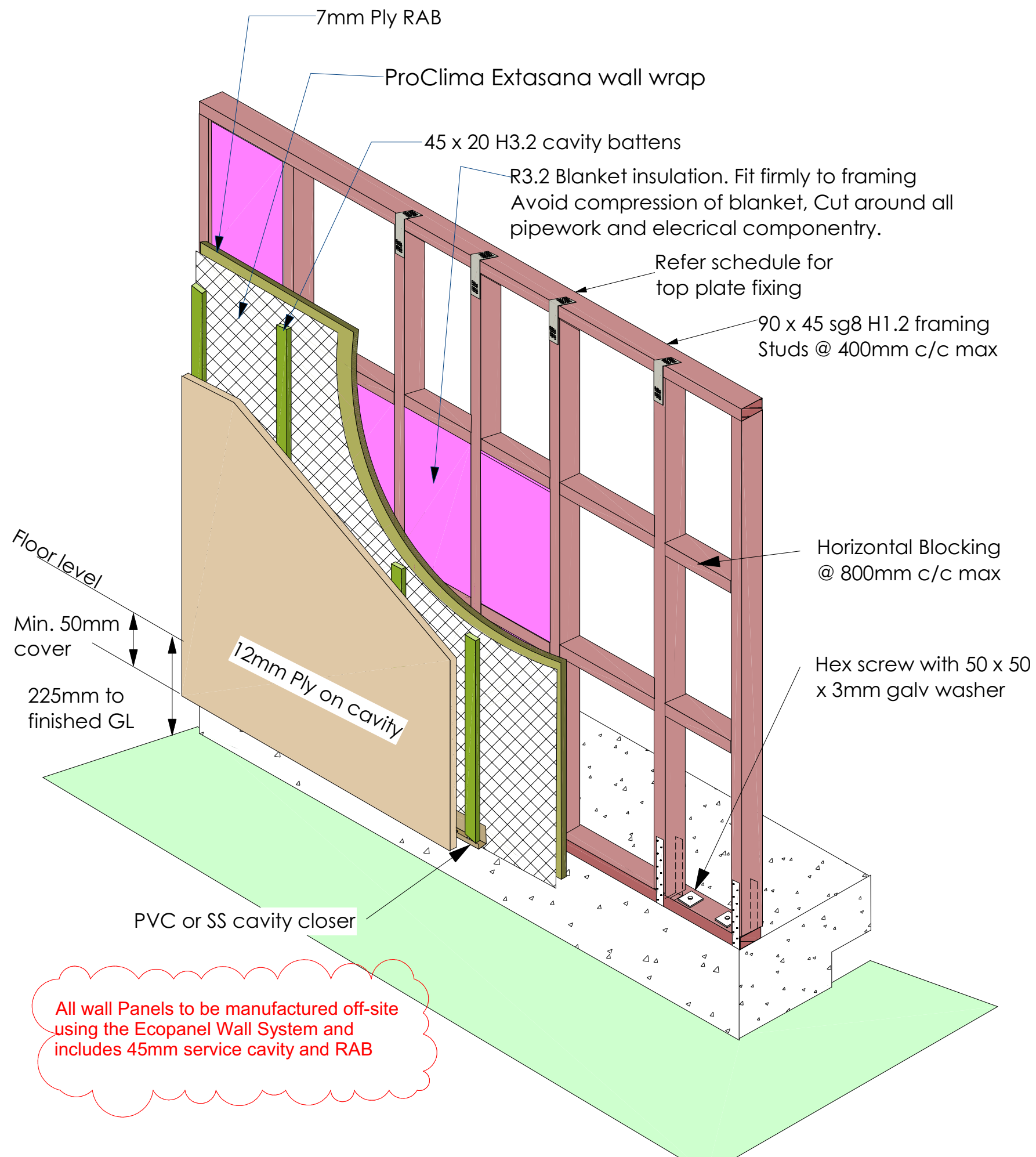
WALL SOUTH Risk Factor	RISK SEVERITY				Subtotals for each Risk factor
	LOW	MEDIUM	HIGH	VERY HIGH	
Wind Zone[per NZS3604]	0	0	1	2	2
Number of storeys	0	0	1	2	0
Roof/wall junction	0	1	1	3	1
Eave Width	0	1	1	2	1
Envelope complexity	0	1	3	3	3
Decks	0	0	2	4	0
Total Risk Score					7

42 Horton Road

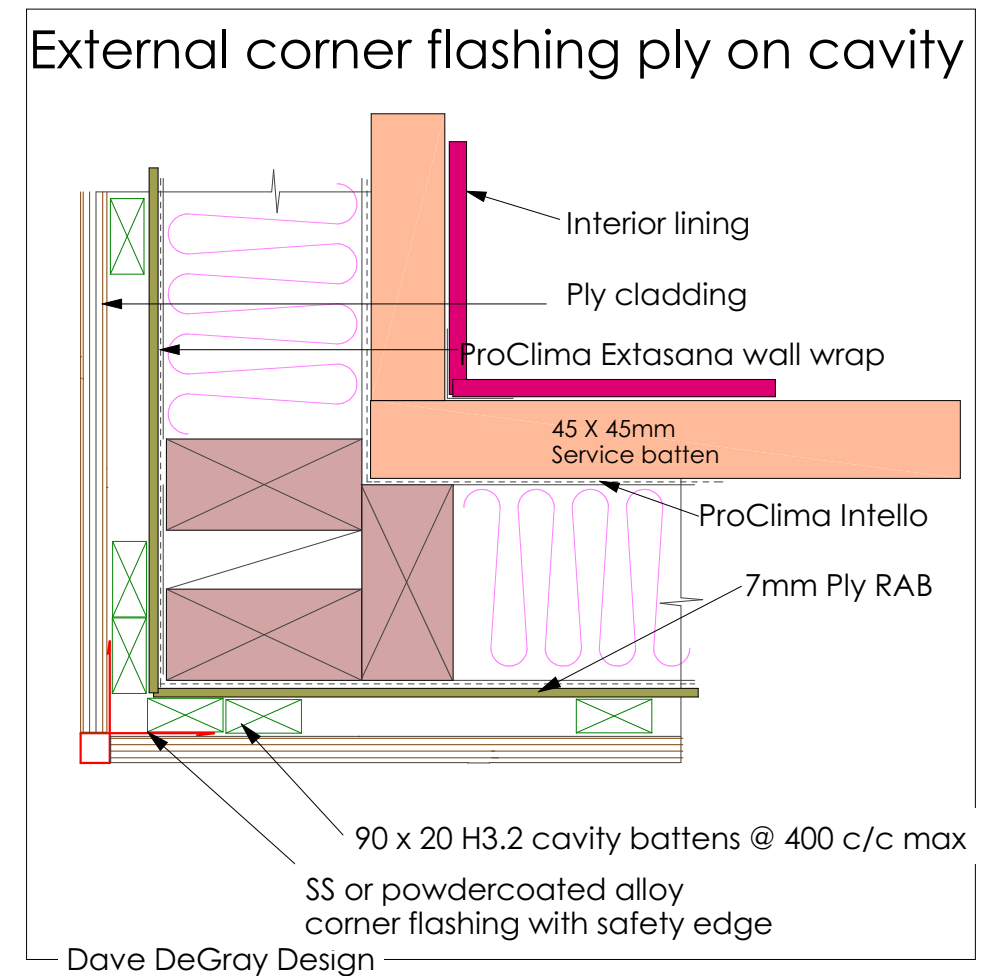
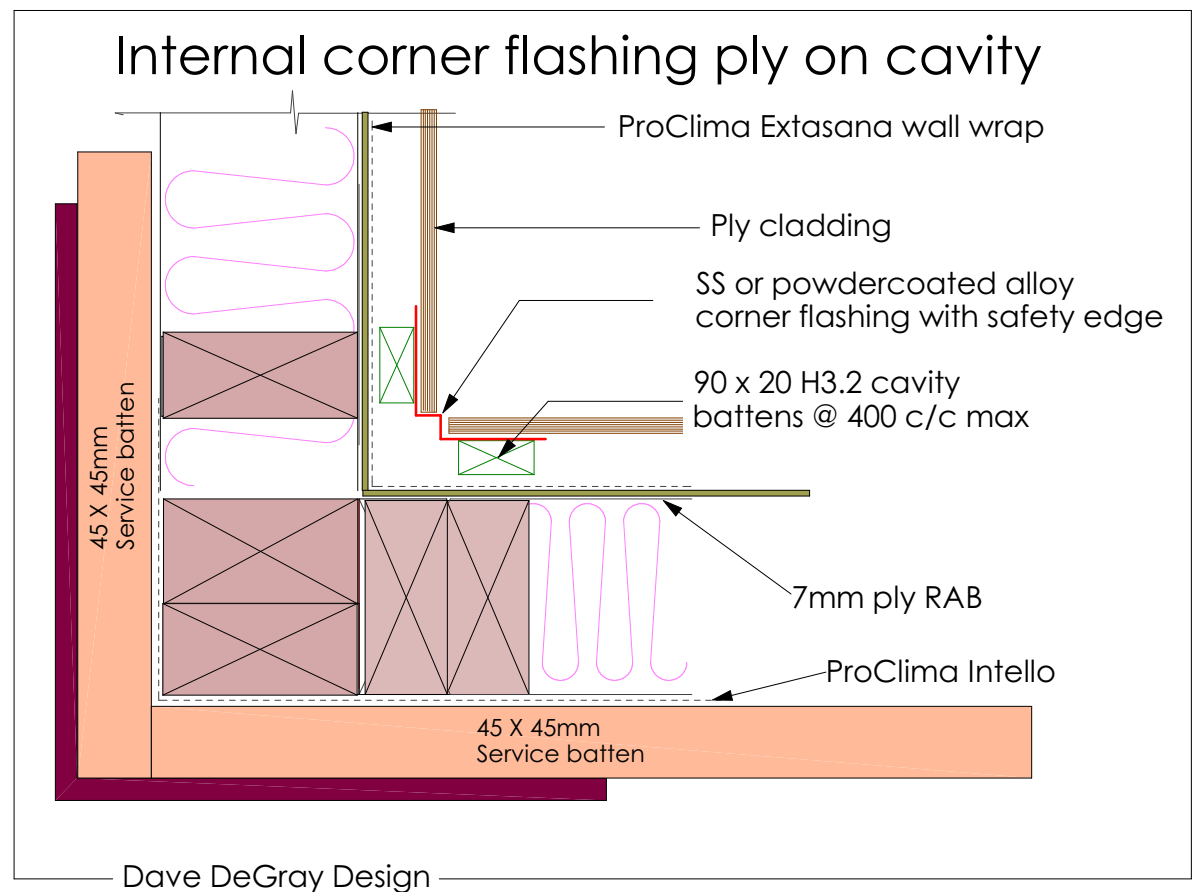
WALL EAST Risk Factor	RISK SEVERITY				Subtotals for each Risk factor
	LOW	MEDIUM	HIGH	VERY HIGH	
Wind Zone[per NZS3604]	0	0	1	2	2
Number of storeys	0	0	1	2	0
Roof/wall junction	0	1	1	3	1
Eave Width	0	1	1	2	1
Envelope complexity	0	1	3	3	3
Decks	0	0	2	4	0
Total Risk Score					7

42 Horton Road

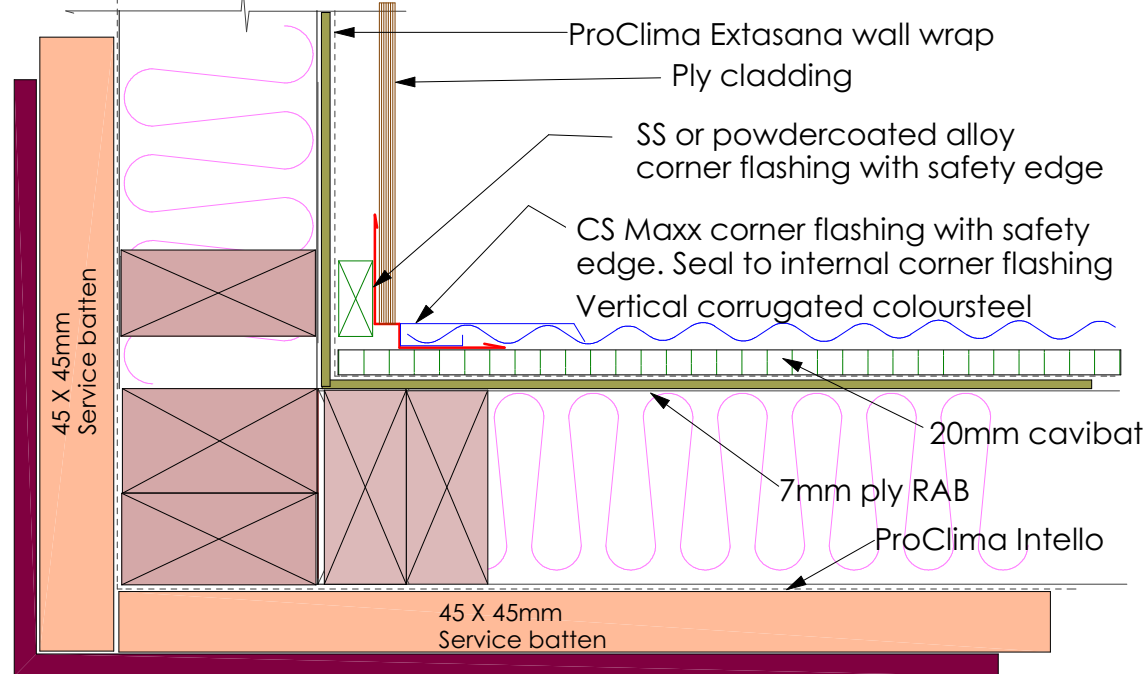
WALL WEST Risk Factor	RISK SEVERITY				Subtotals for each Risk factor
	LOW	MEDIUM	HIGH	VERY HIGH	
Wind Zone[per NZS3604]	0	0	1	2	2
Number of storeys	0	1	1	2	1
Roof/wall junction	0	0	1	3	0
Eave Width	0	1	1	2	1
Envelope complexity	0	1	3	3	3
Decks	0	0	2	4	0
Total Risk Score					7



All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

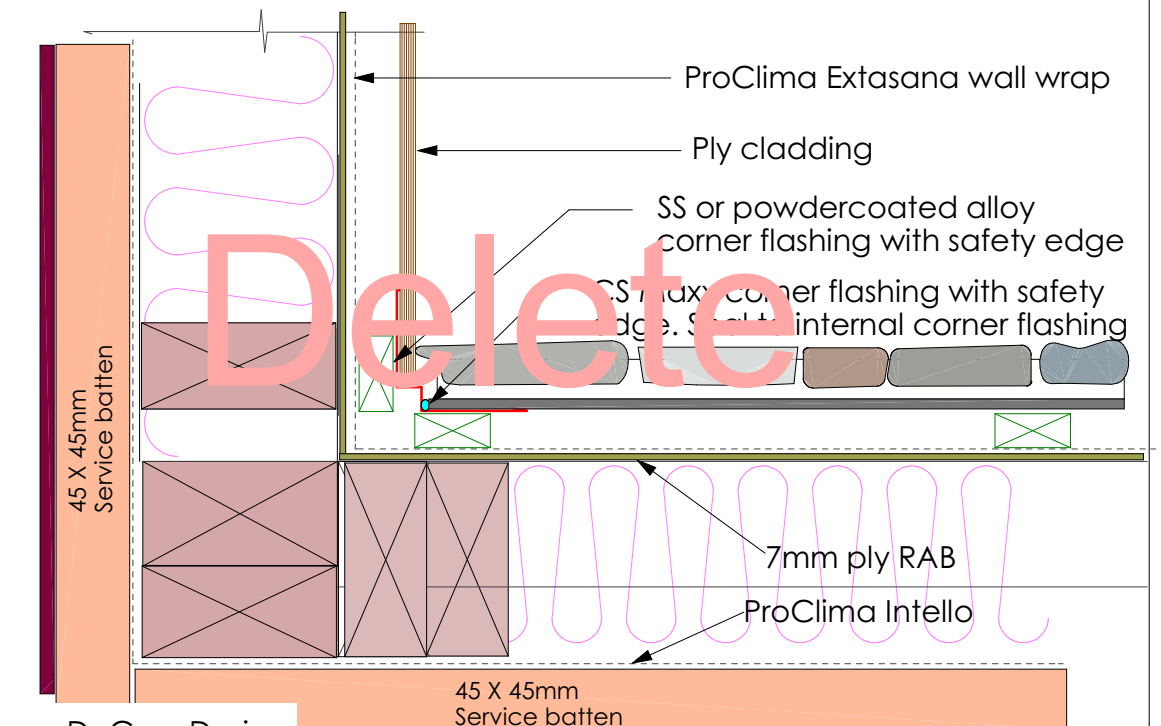


Internal corner flashing-ply on cavity to Corrugated Coloursteel



Dave DeGray Design

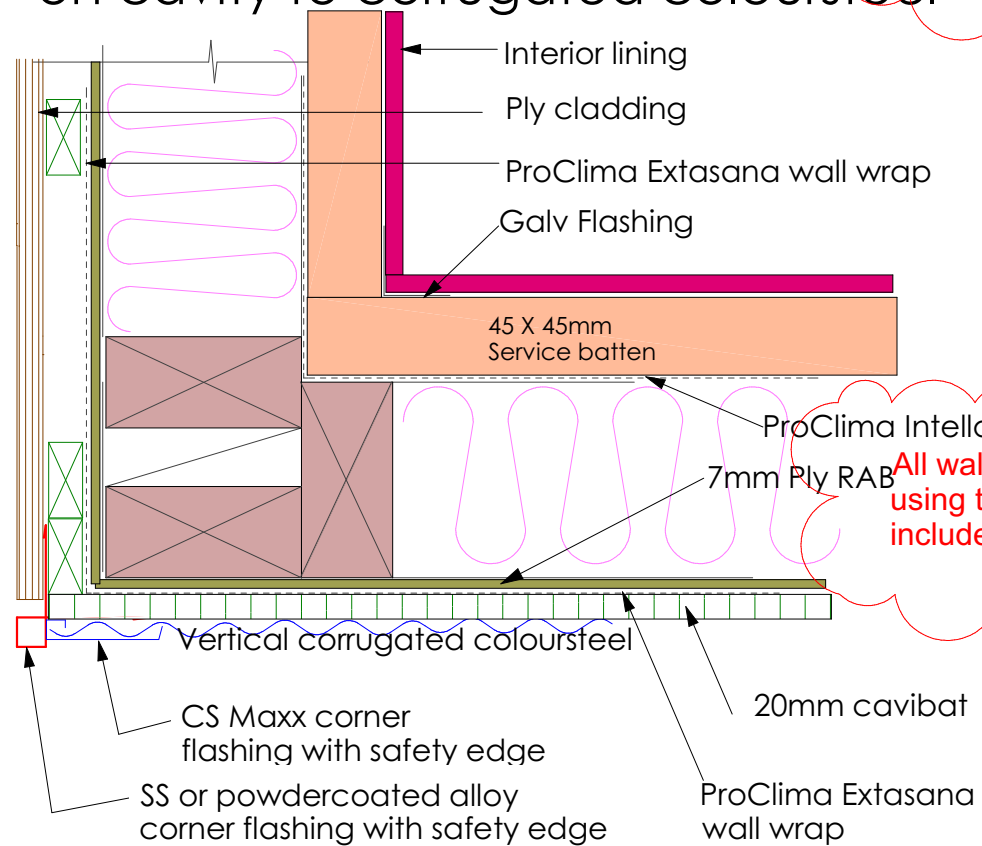
Internal corner flashing-ply on cavity to Stone veneer



Dave DeGray Design

All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

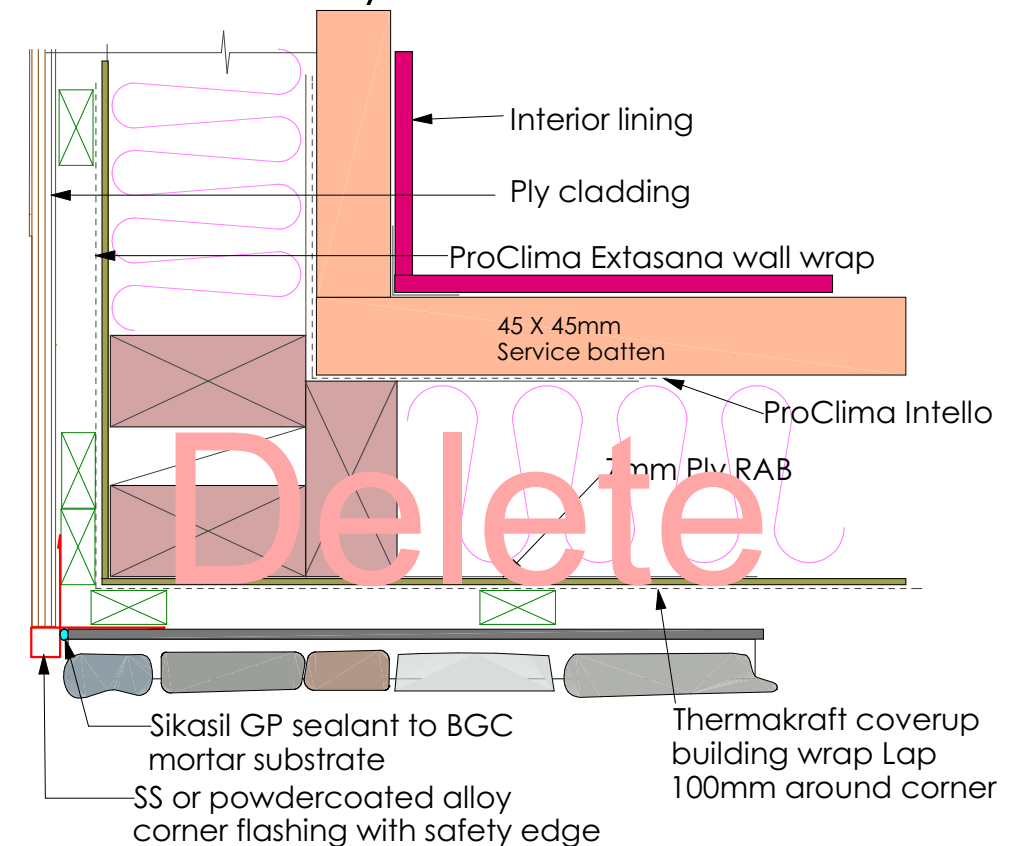
External corner flashing ply on cavity to corrugated coloursteel



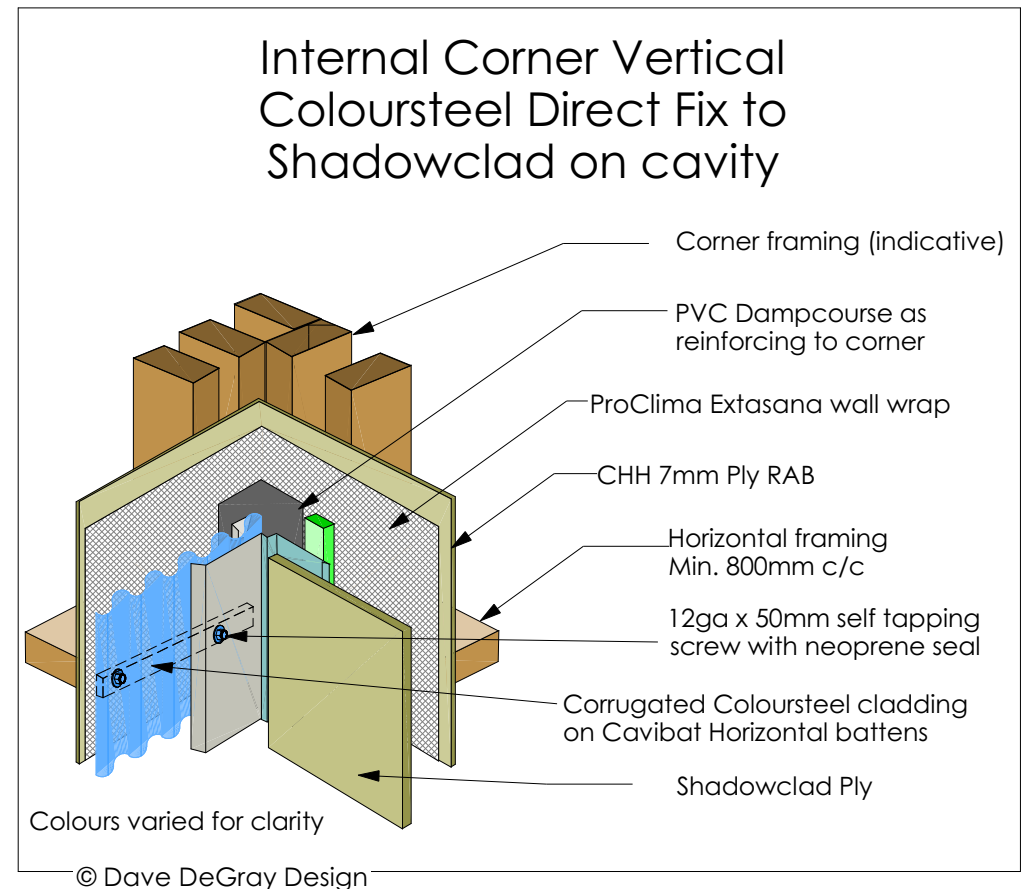
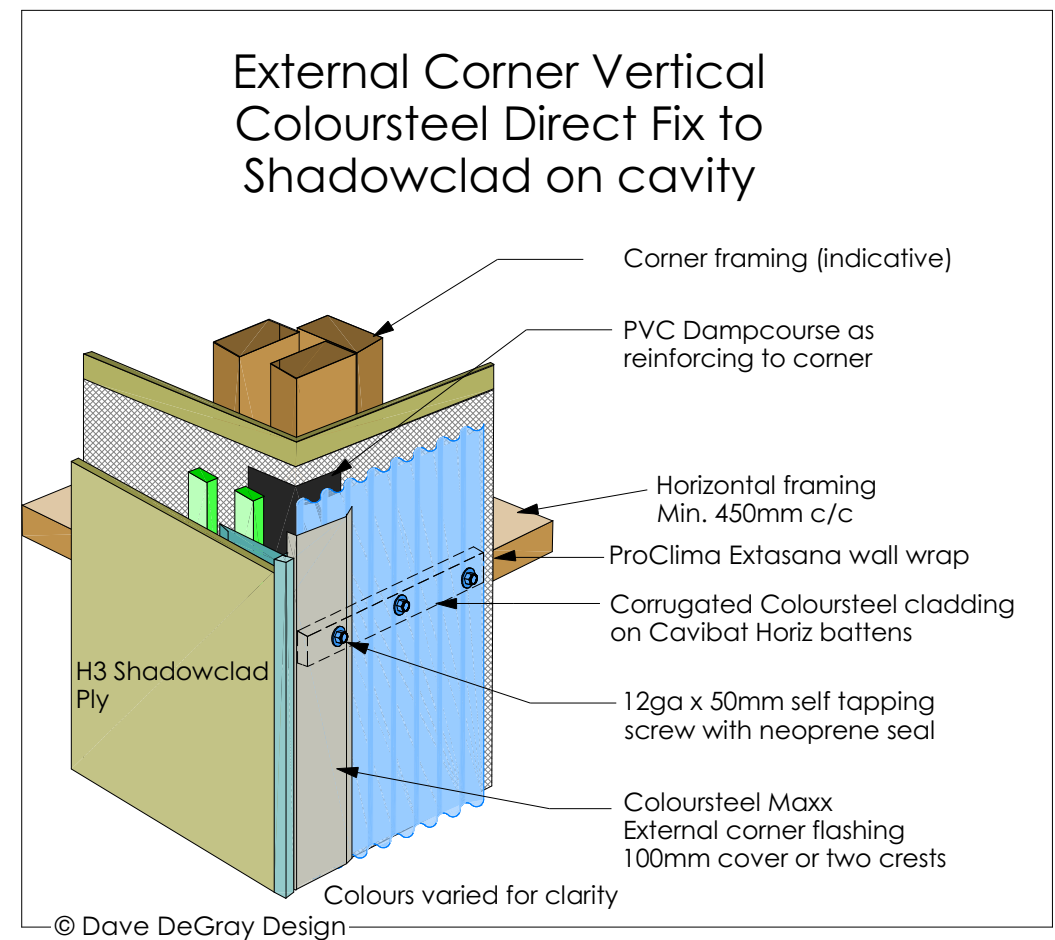
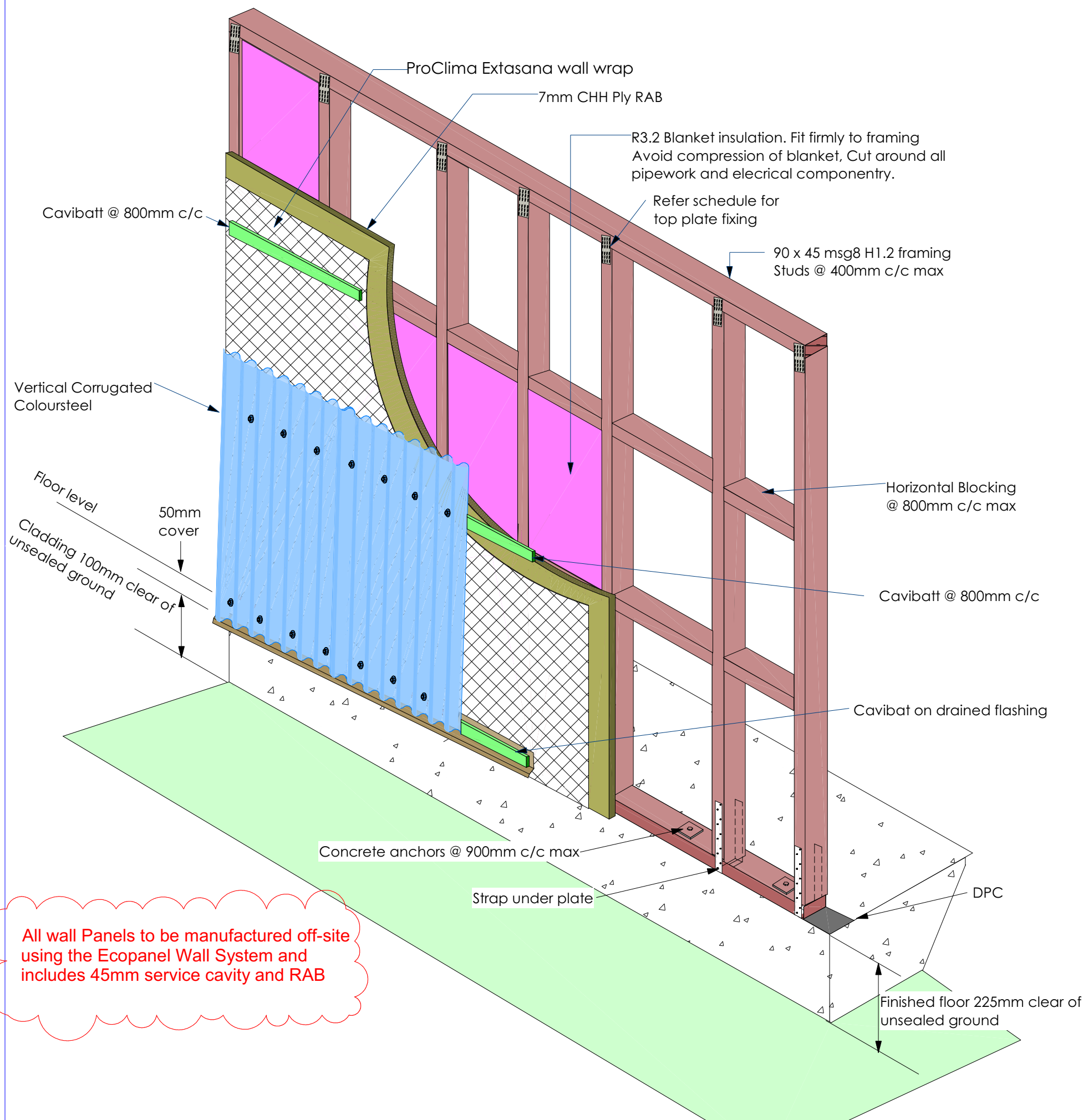
Dave DeGray Design

All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

External corner flashing ply on cavity to Stone veneer

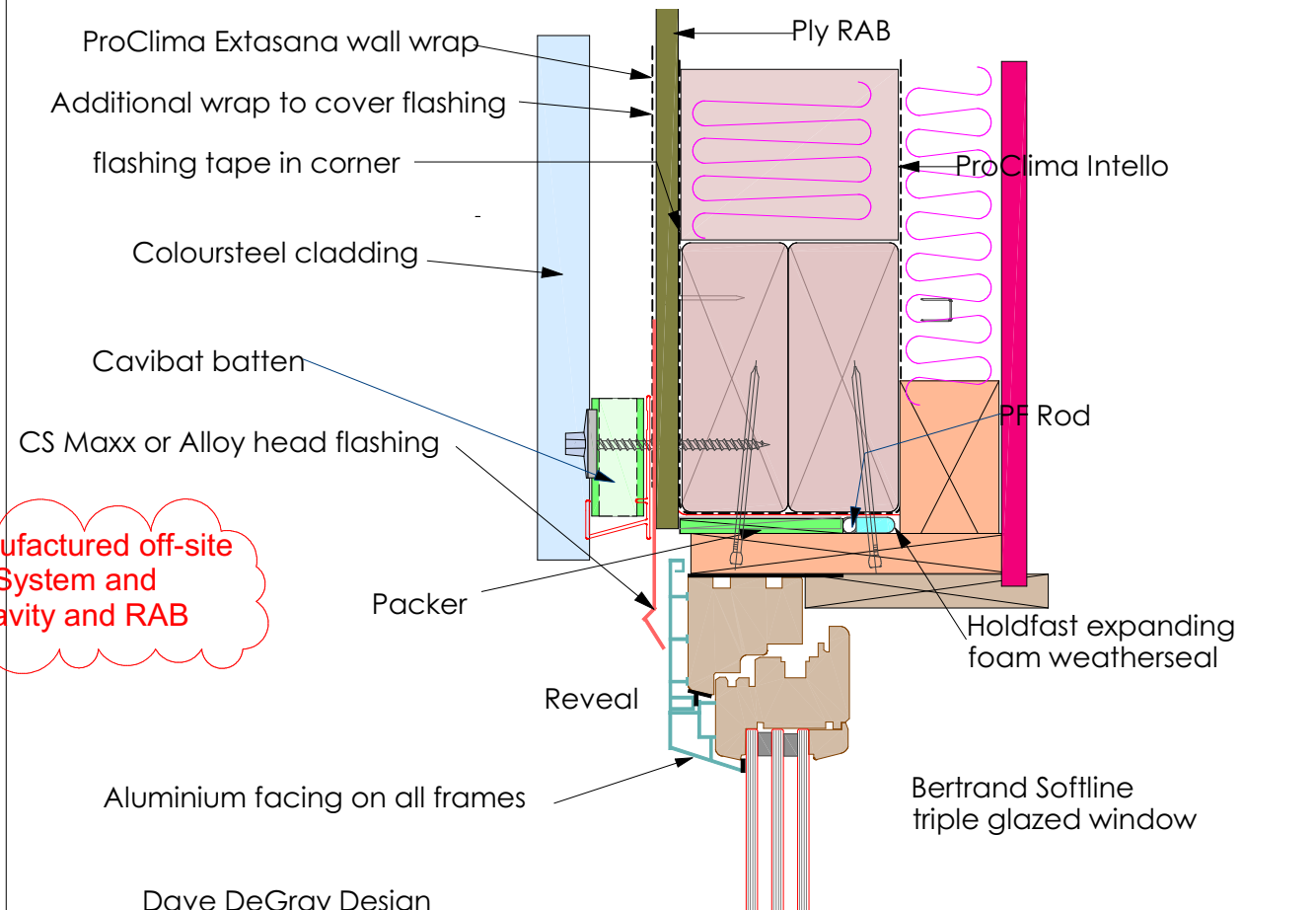


Dave DeGray Design



All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

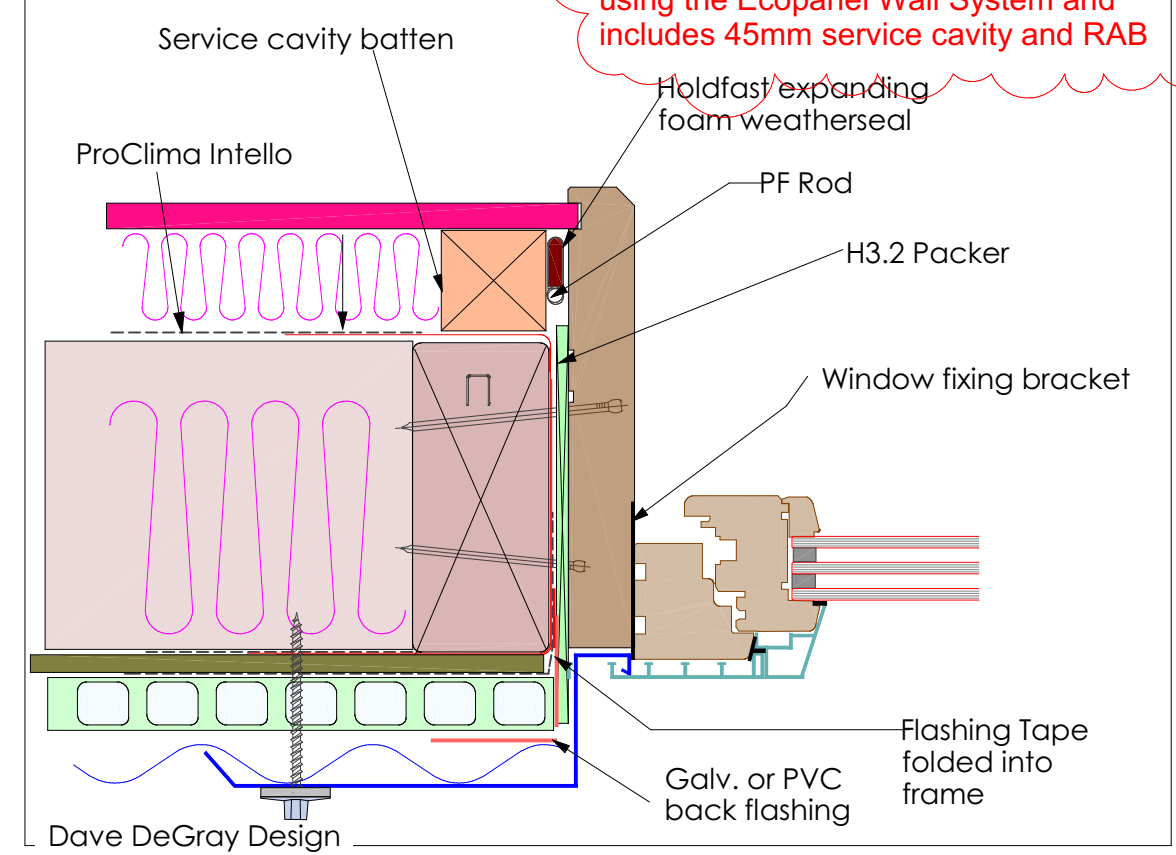
Window head Coloursteel on cavity



All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

Dave DeGray Design

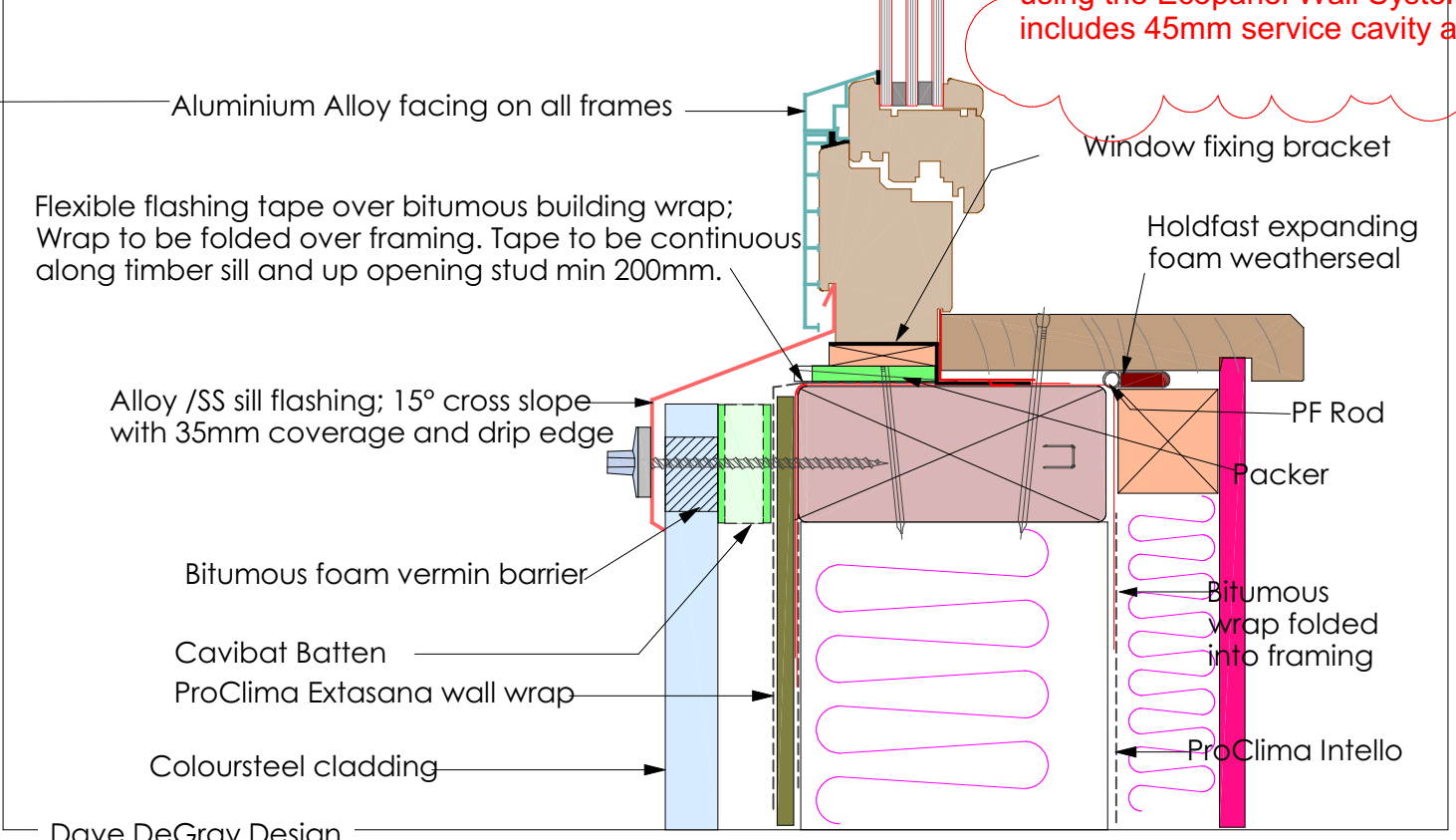
Window and door Jamb Coloursteel on Cavity



All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

Dave DeGray Design

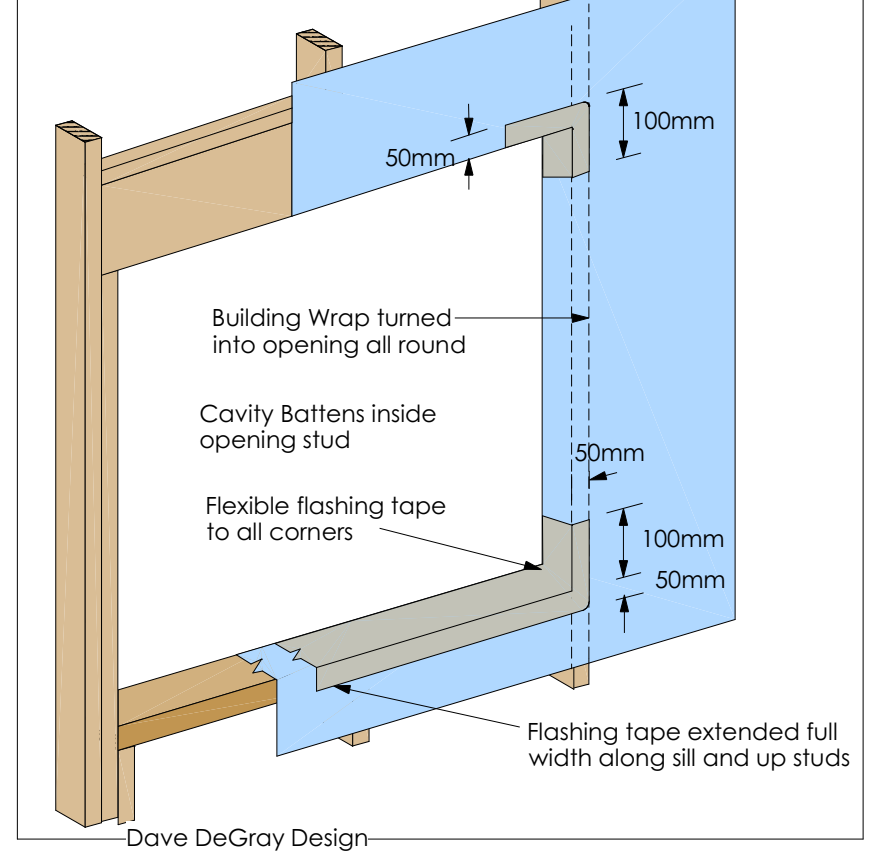
Window Sill Coloursteel on Cavity



All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

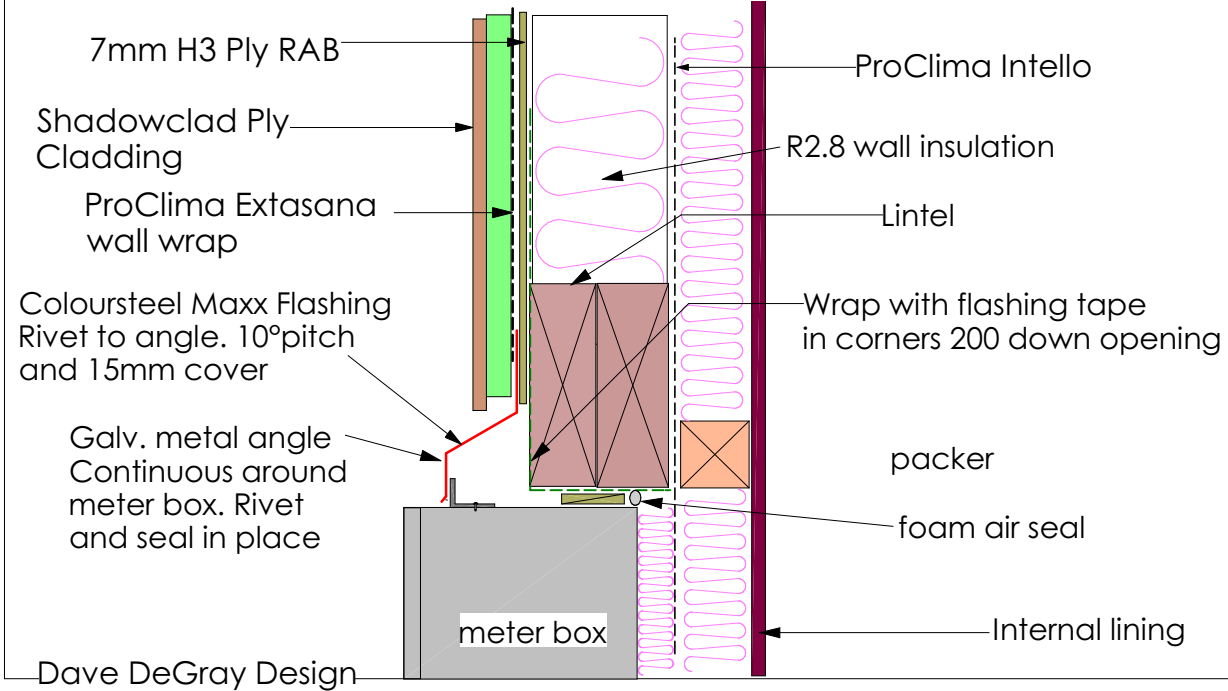
Dave DeGray Design

Flexible flashing tape to openings Cavity system

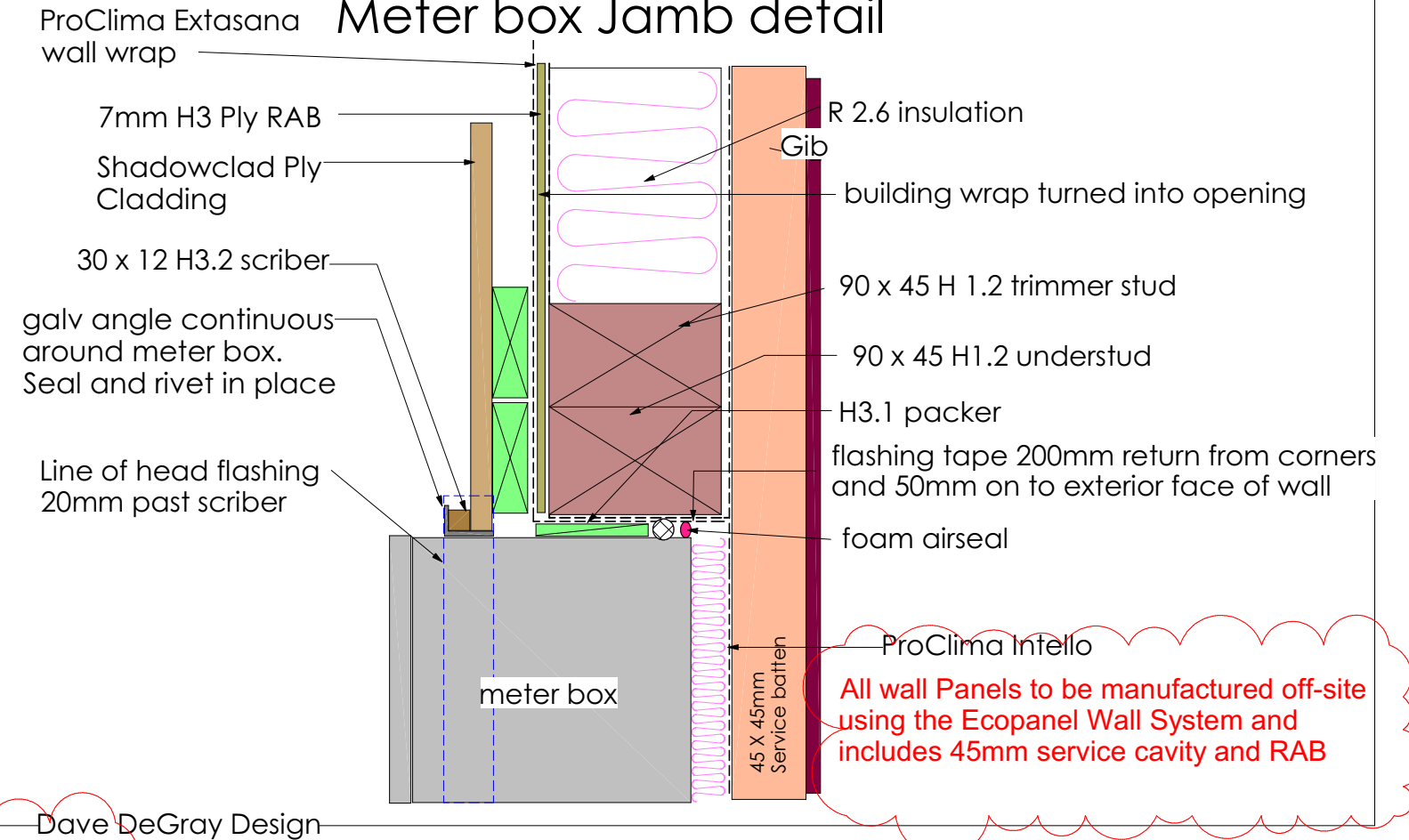


Dave DeGray Design

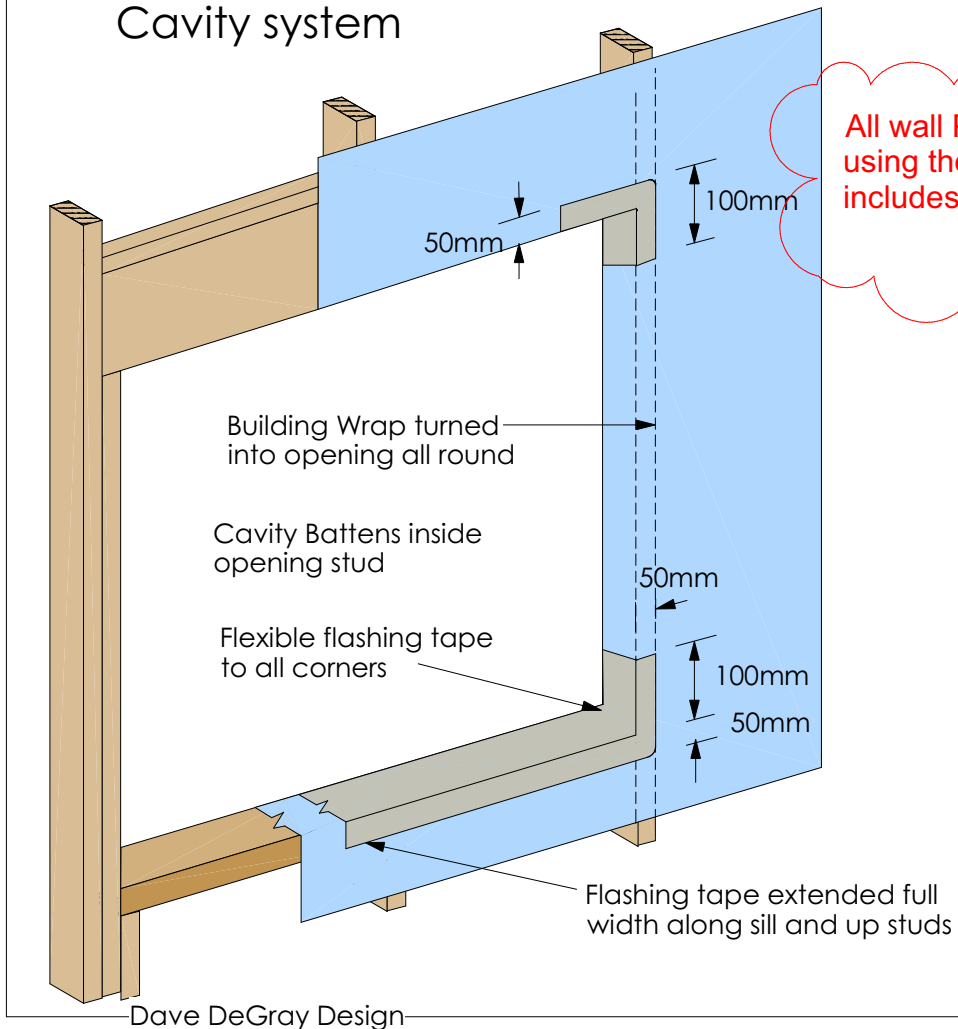
Shadowclad Ply on Cavity Meter box head detail



Shadowclad ply on Cavity Meter box Jamb detail

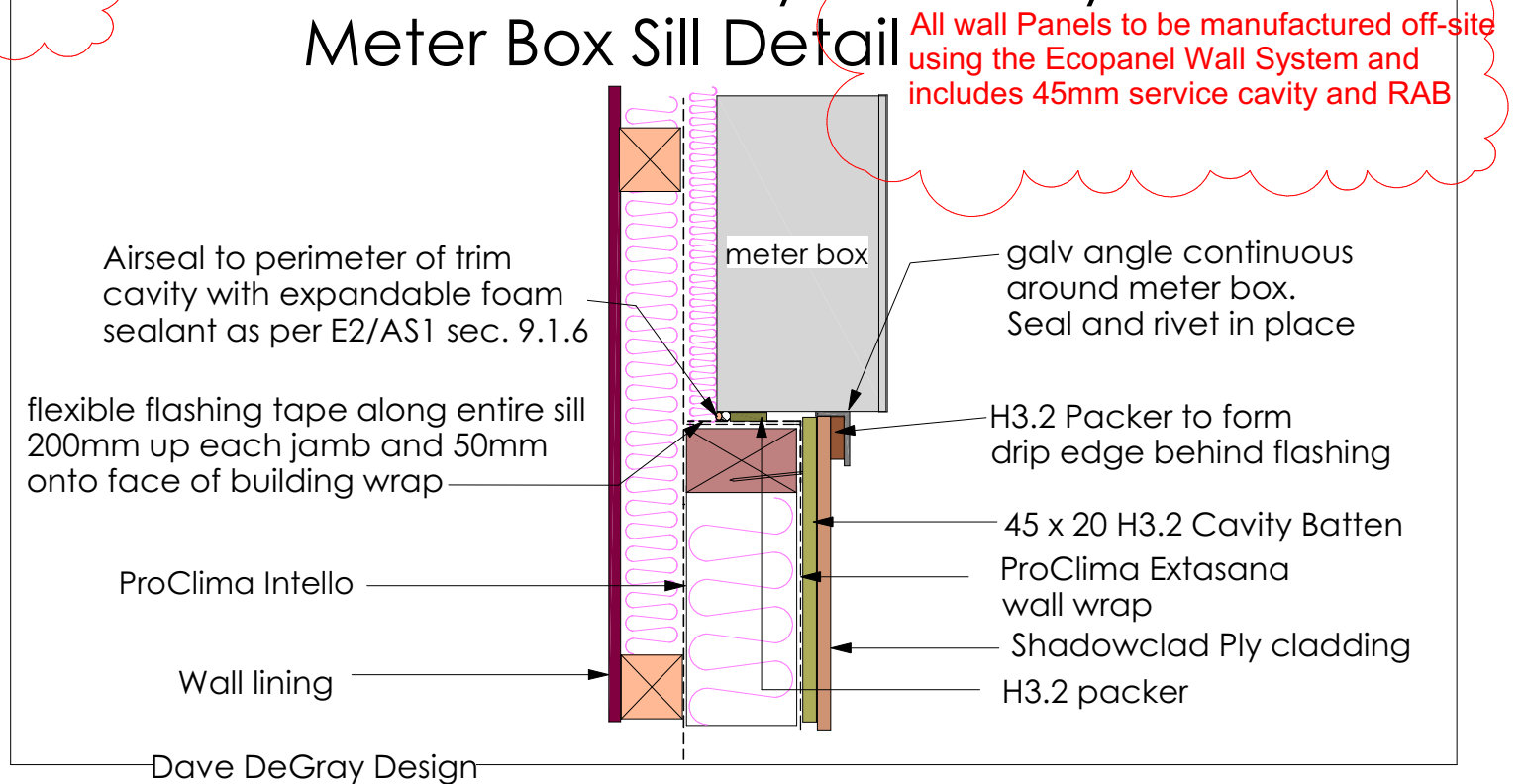


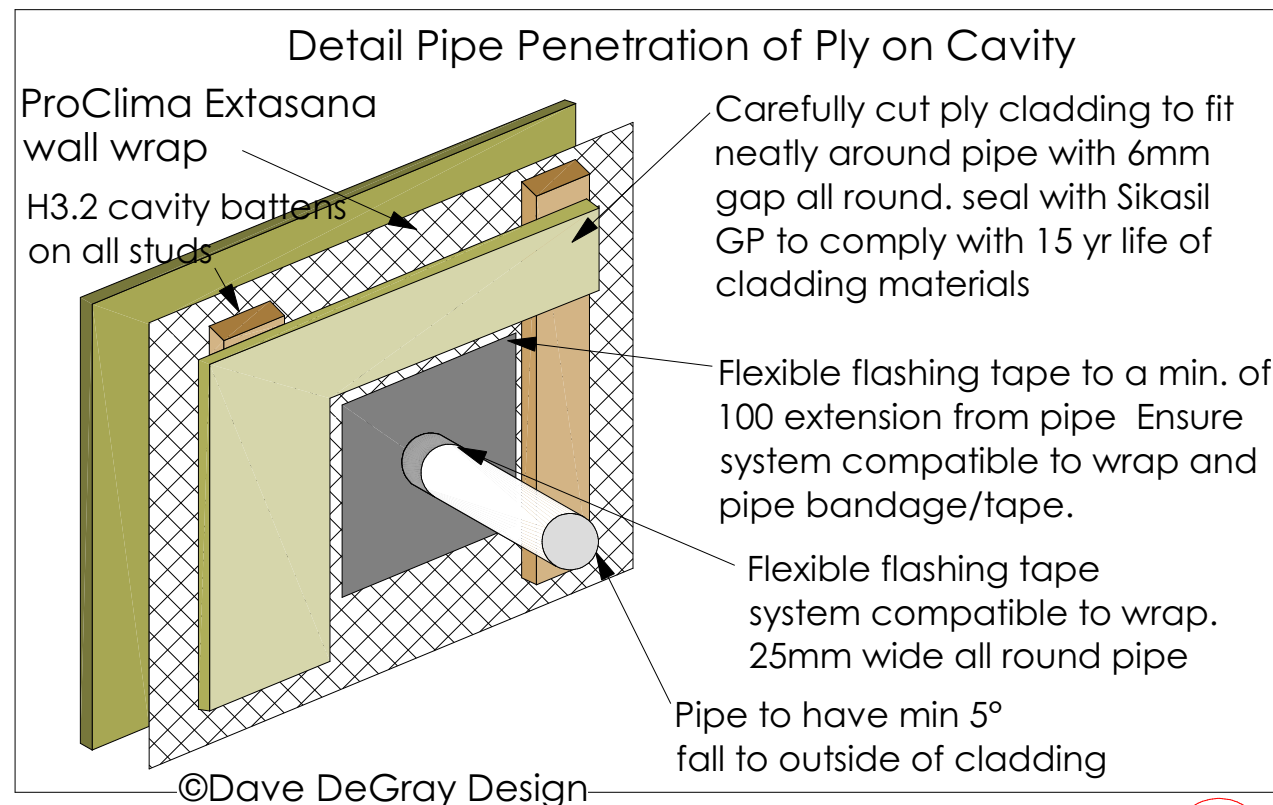
Flexible flashing tape to openings Cavity system



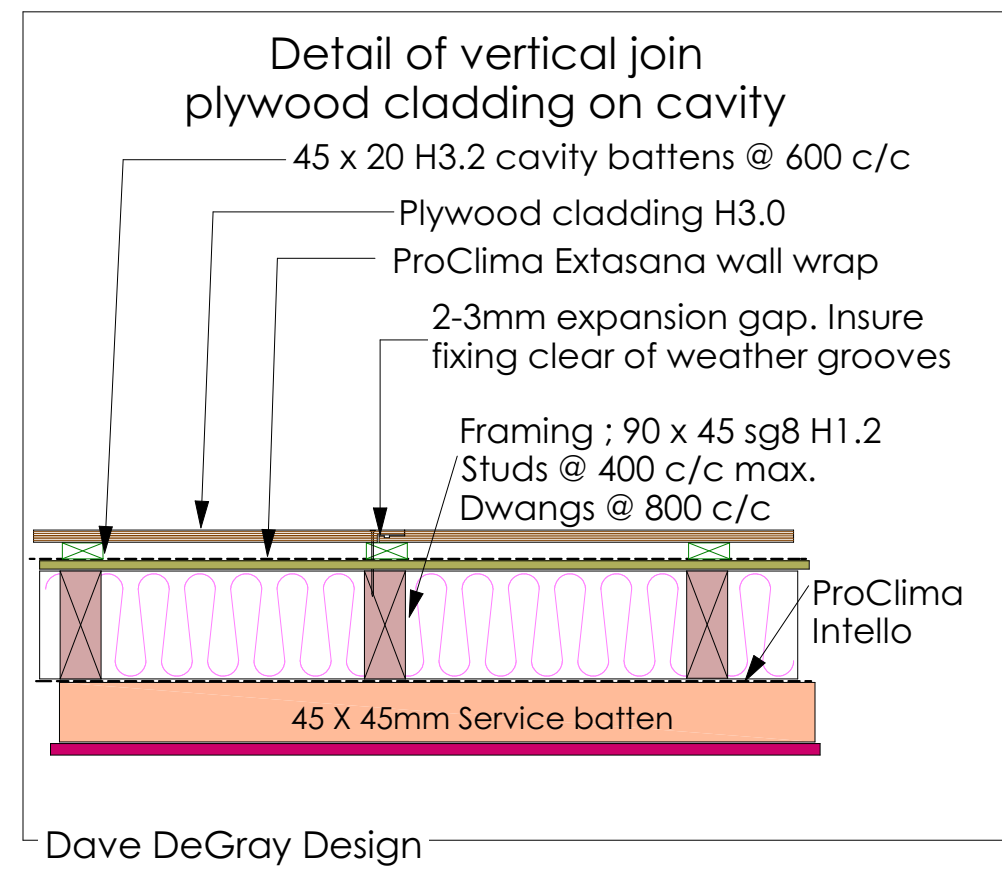
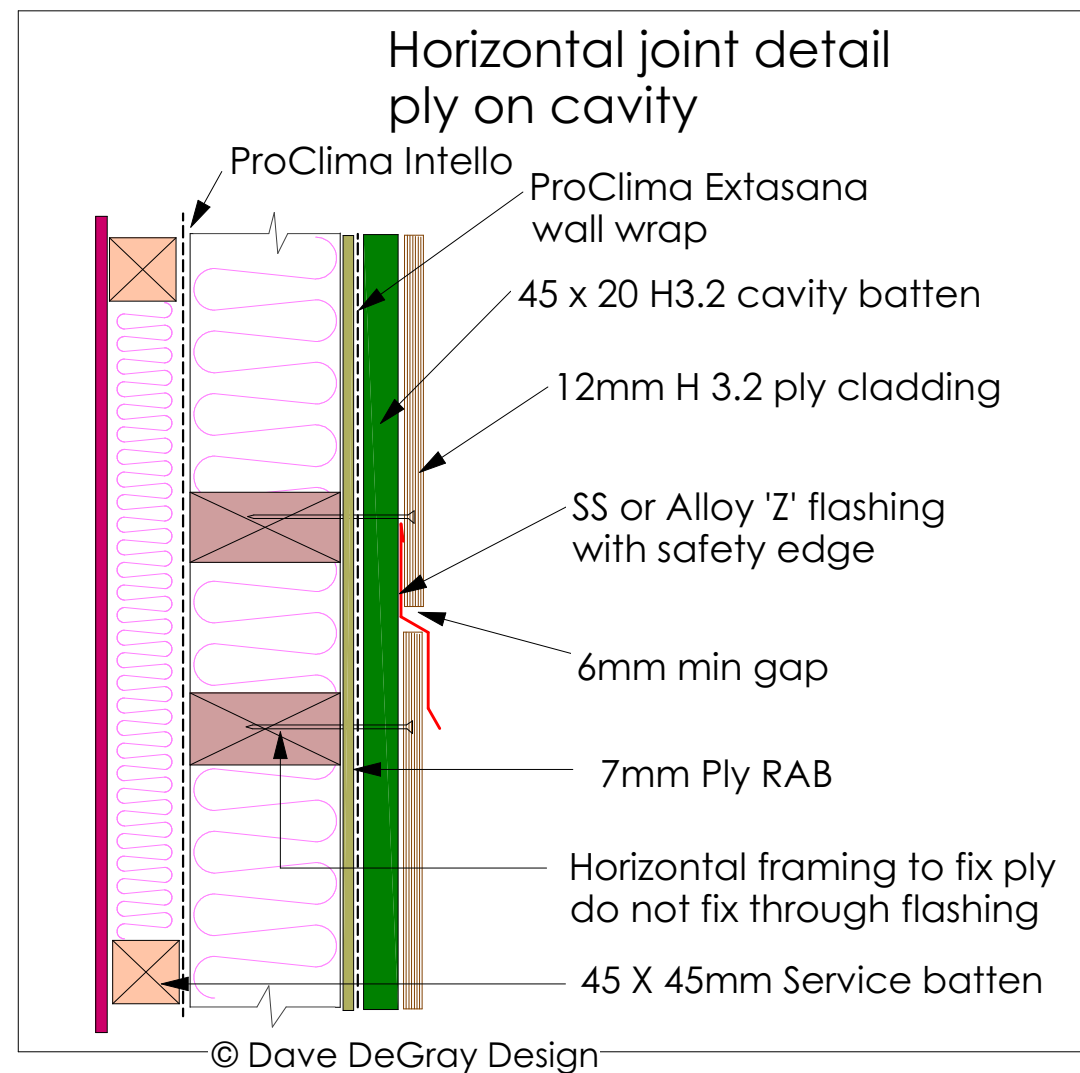
All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

Shadowclad Ply on cavity Meter Box Sill Detail

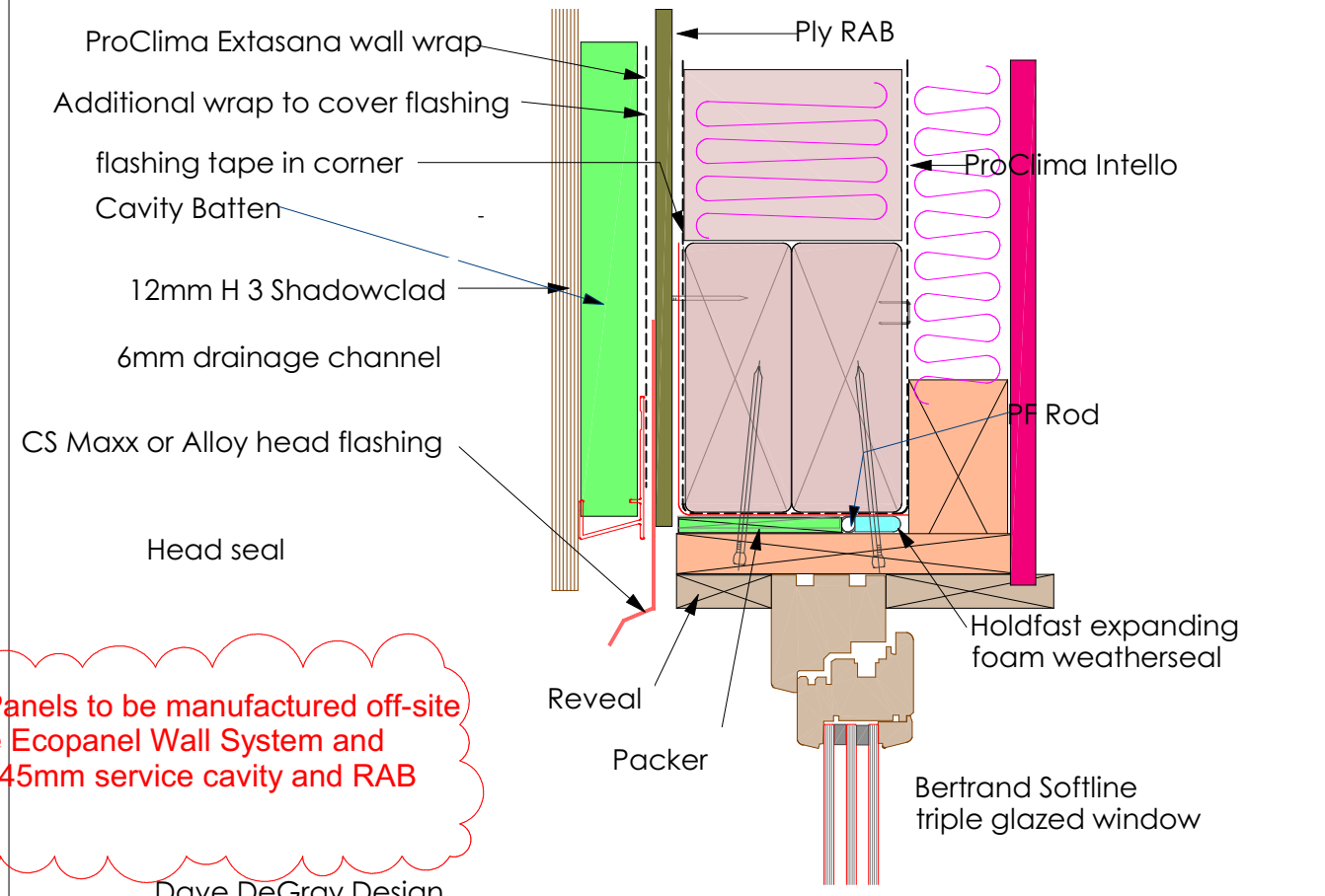




All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB



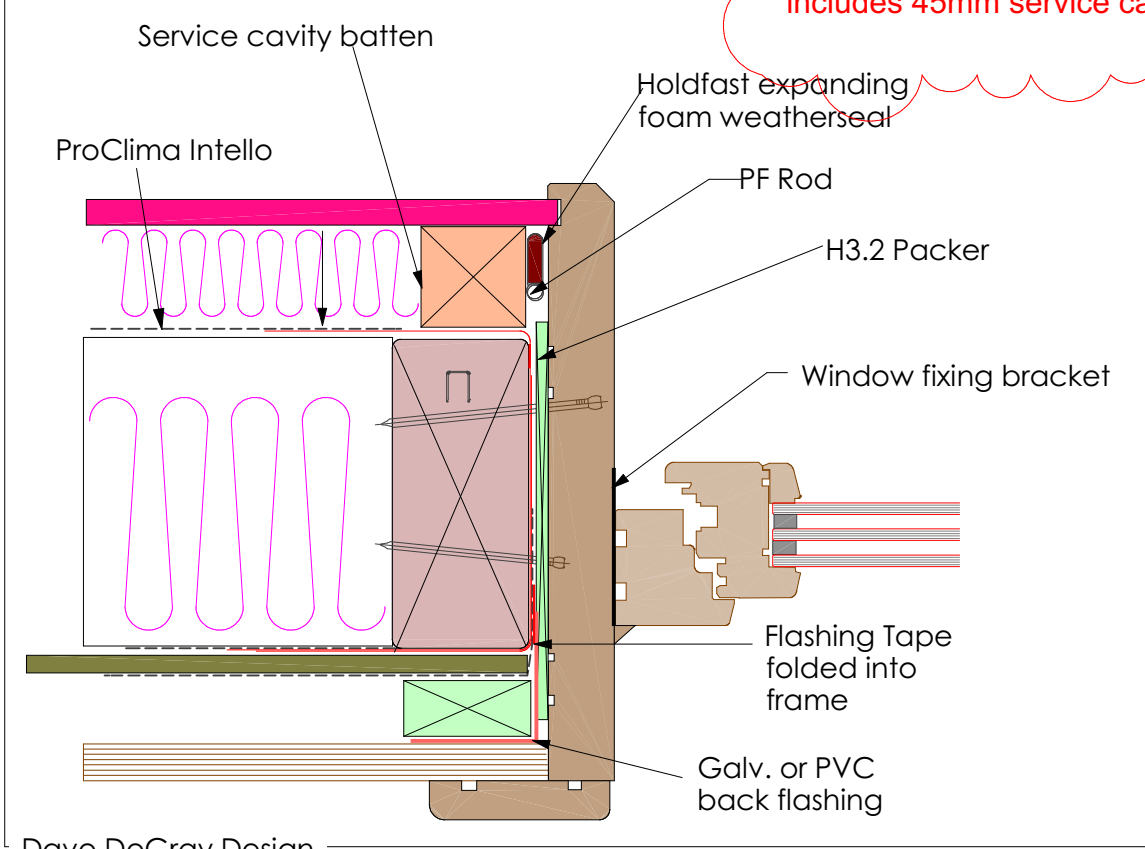
Window head Shadowclad on cavity



All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

Dave DeGray Design

Window and door Jamb Shadowclad on Cavity



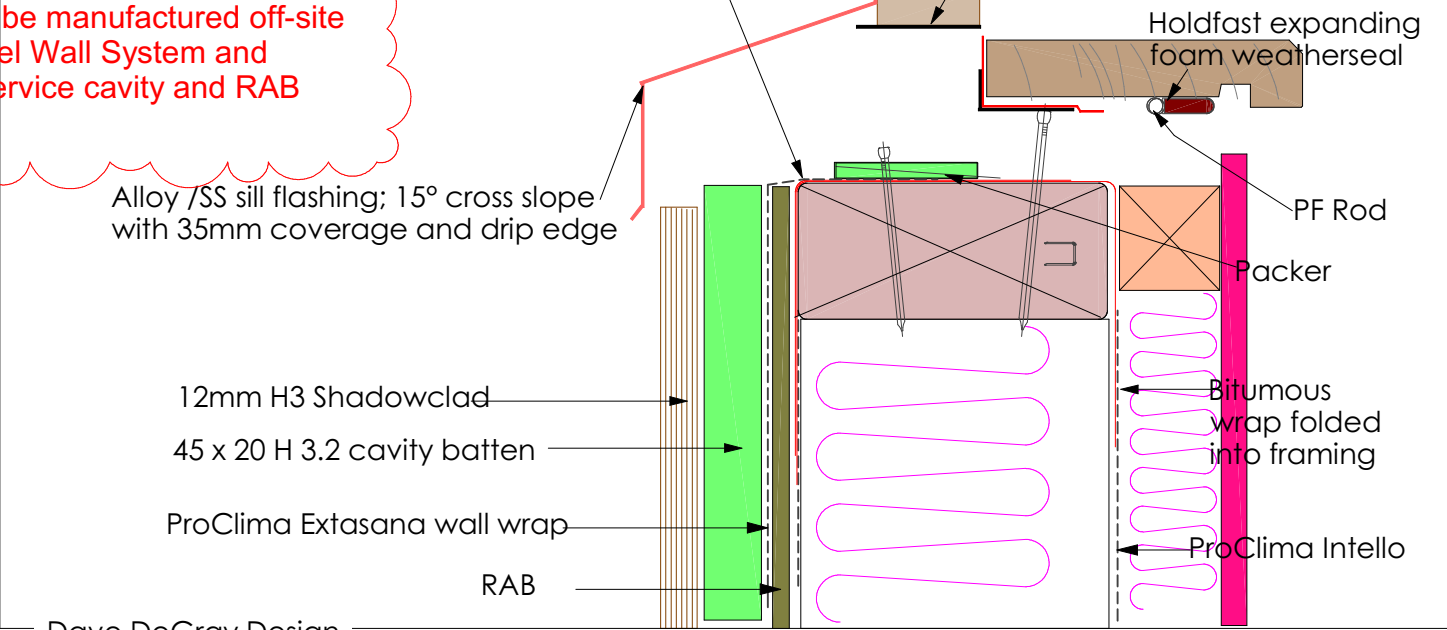
All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

Dave DeGray Design

Window Sill Shadowclad on Cavity

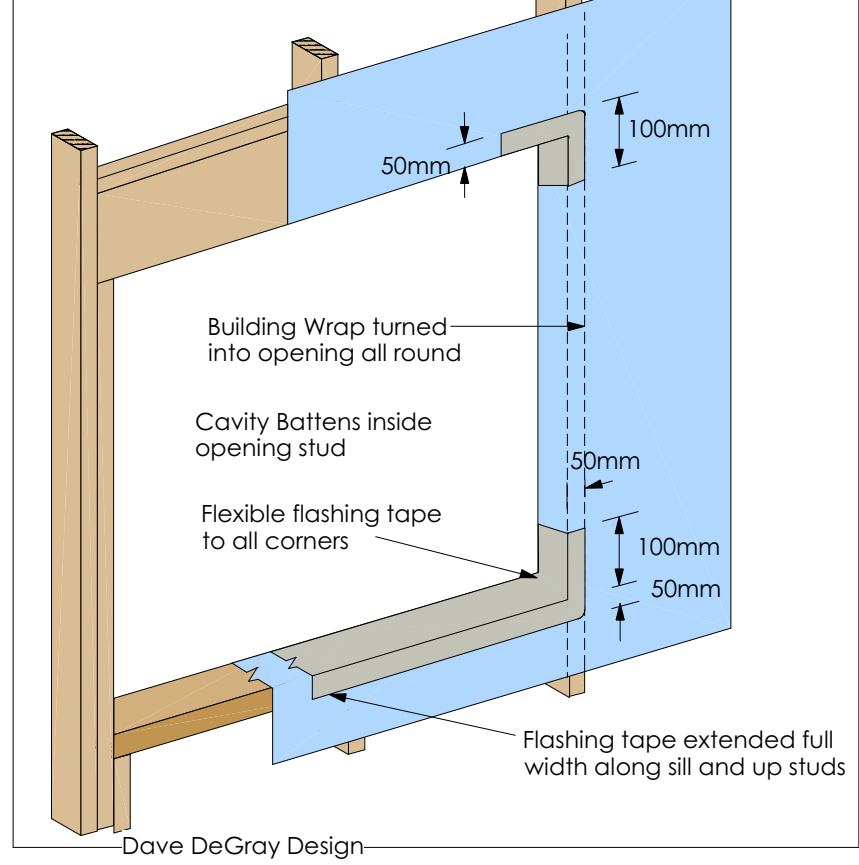
Flexible flashing tape over bitumous building wrap; Wrap to be folded over framing. Tape to be continuous along timber sill and up opening stud min 200mm.

All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

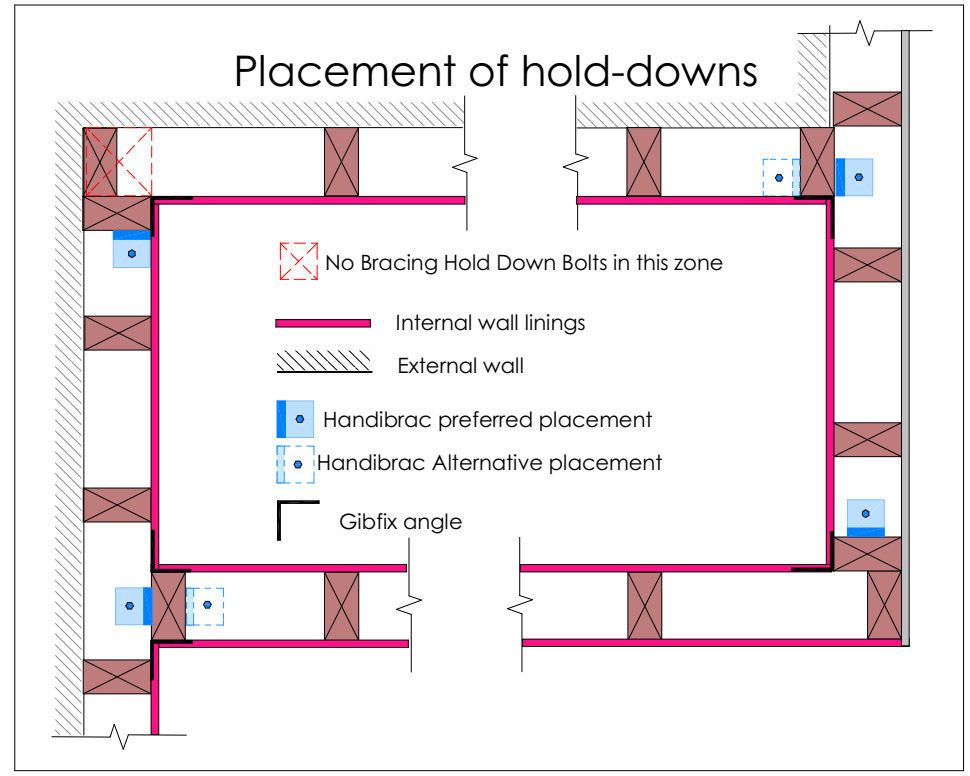
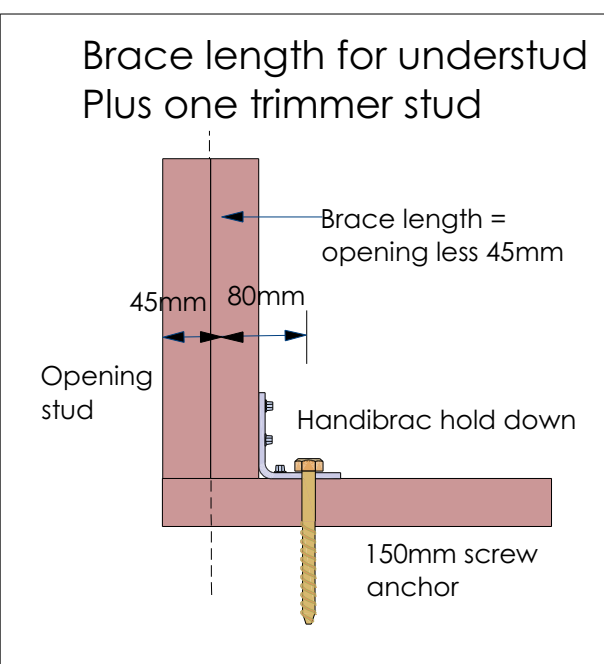
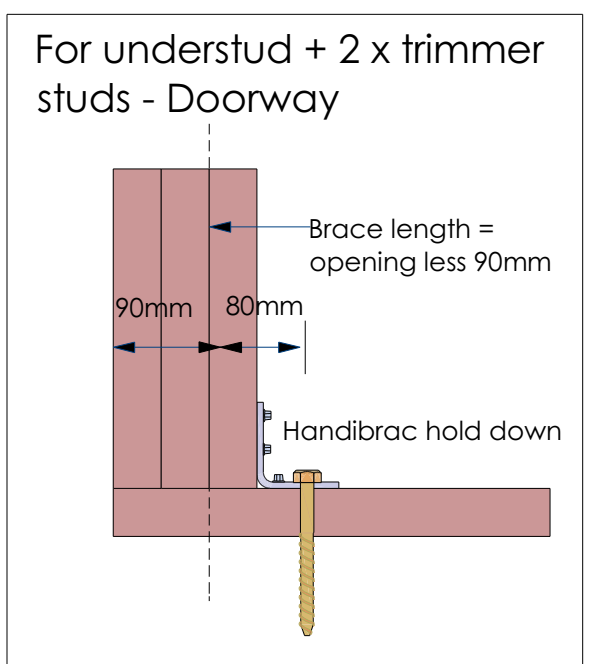
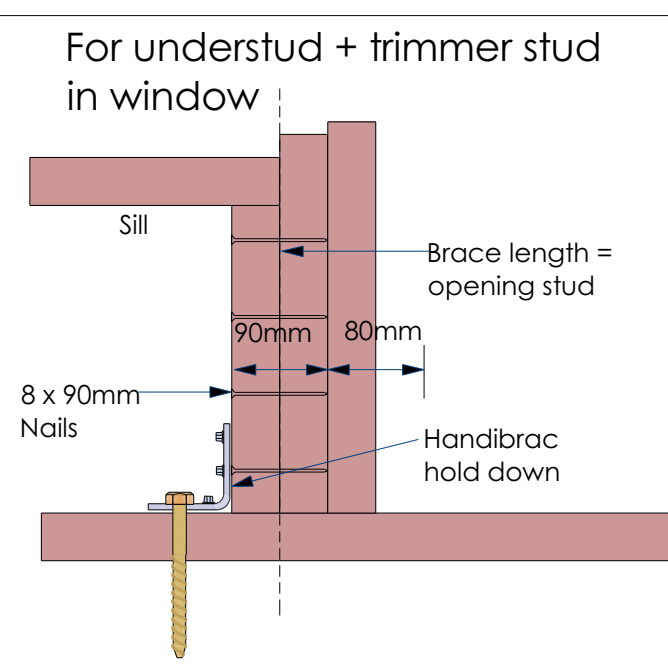
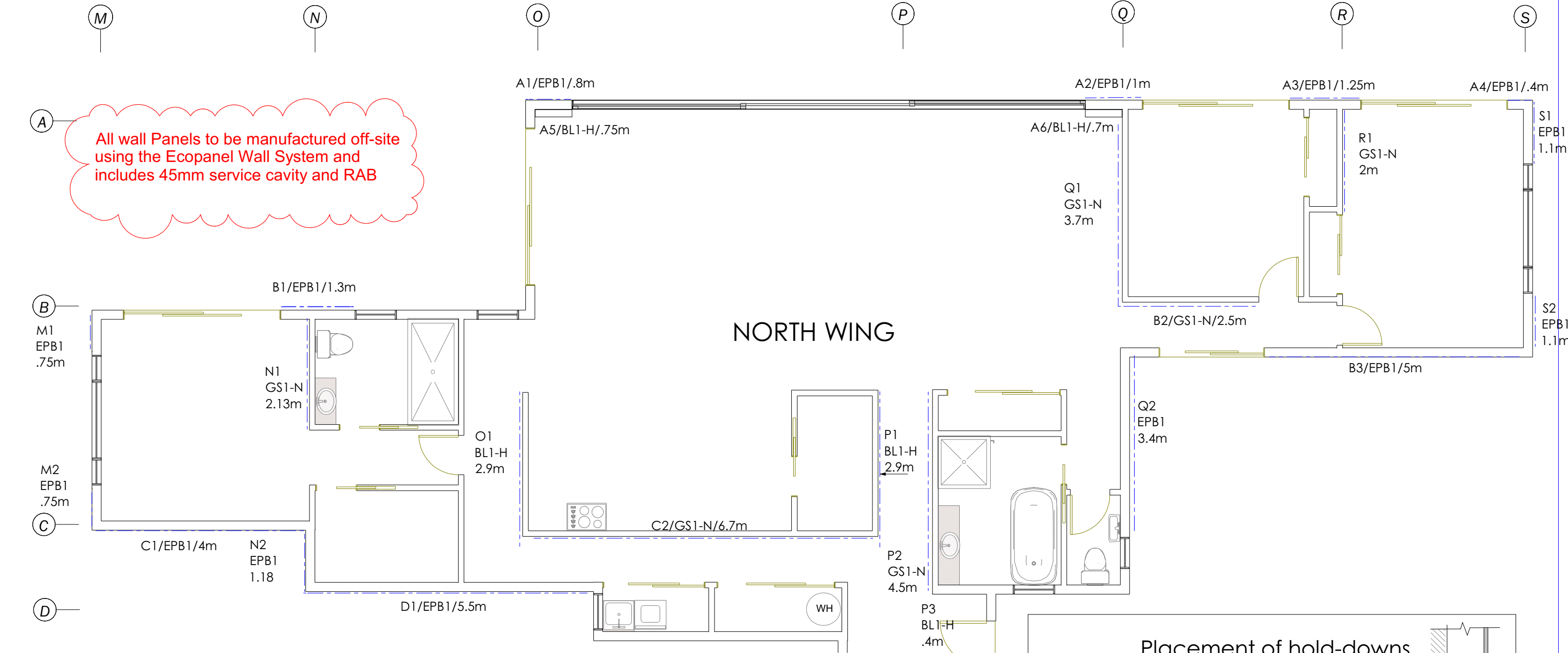


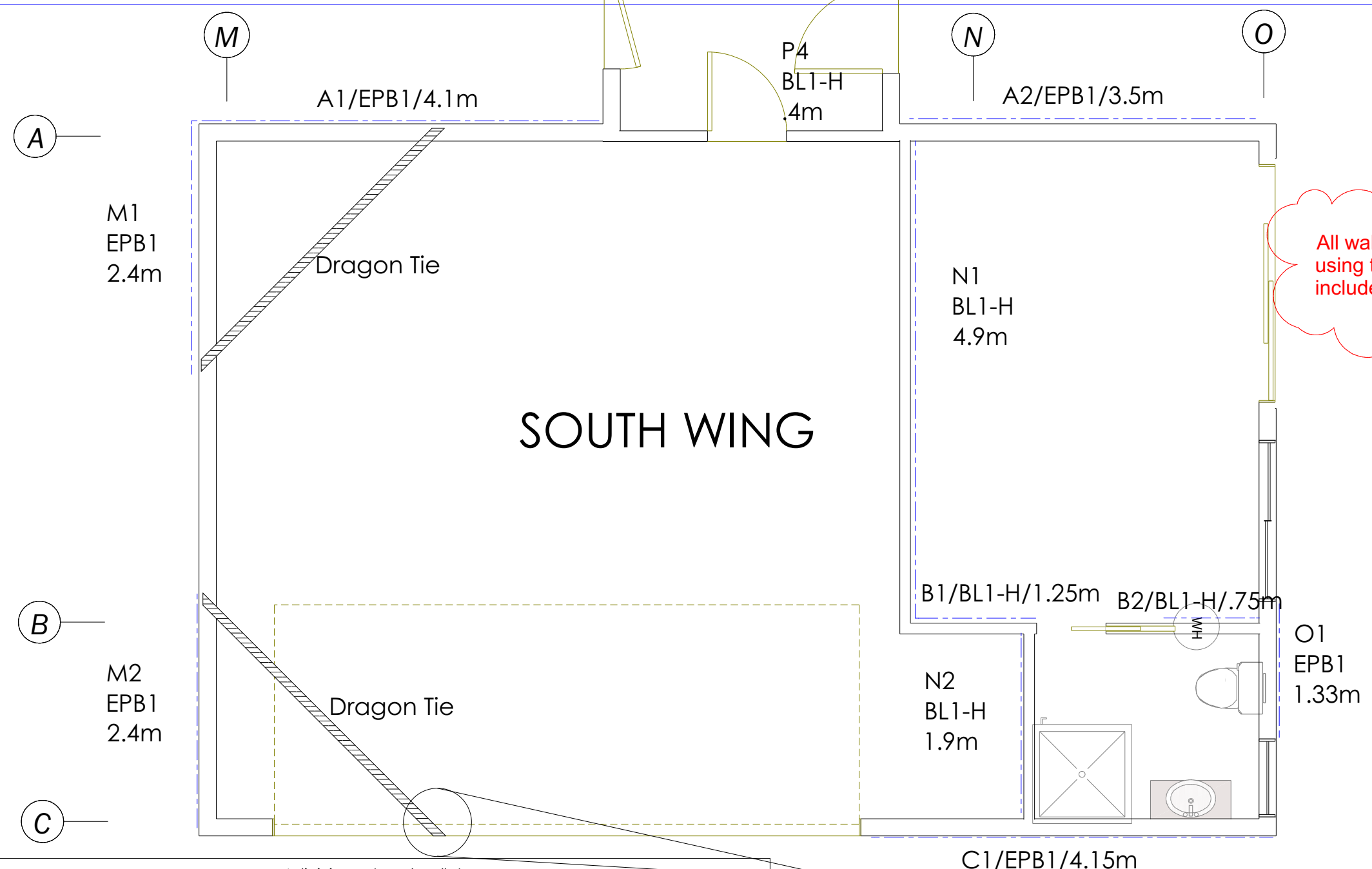
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Flexible flashing tape to openings Cavity system



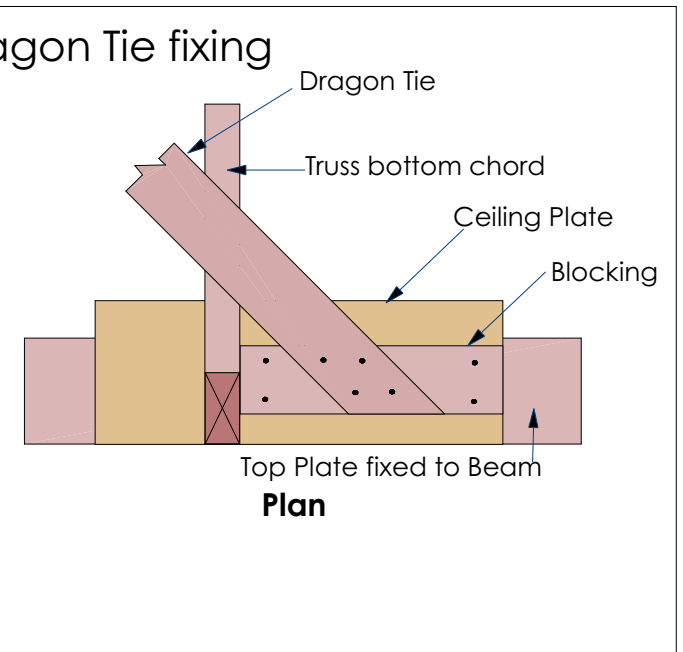
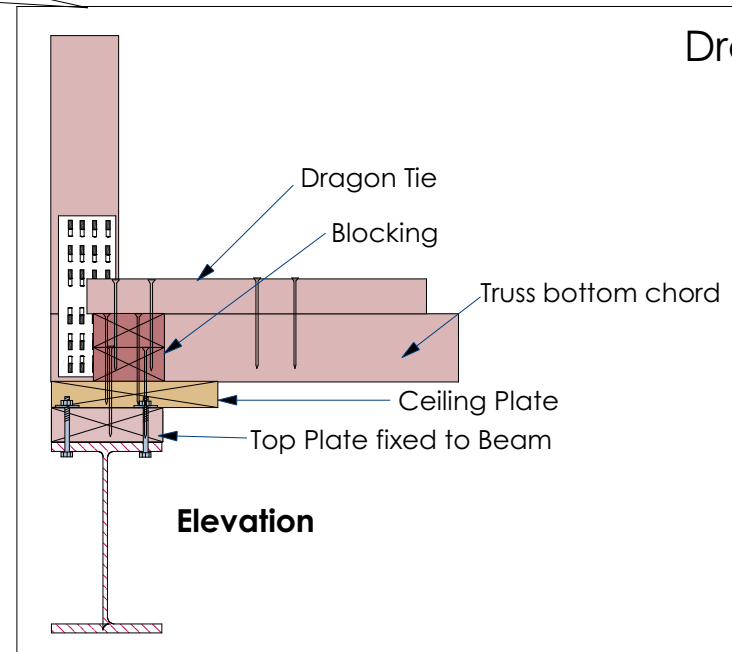
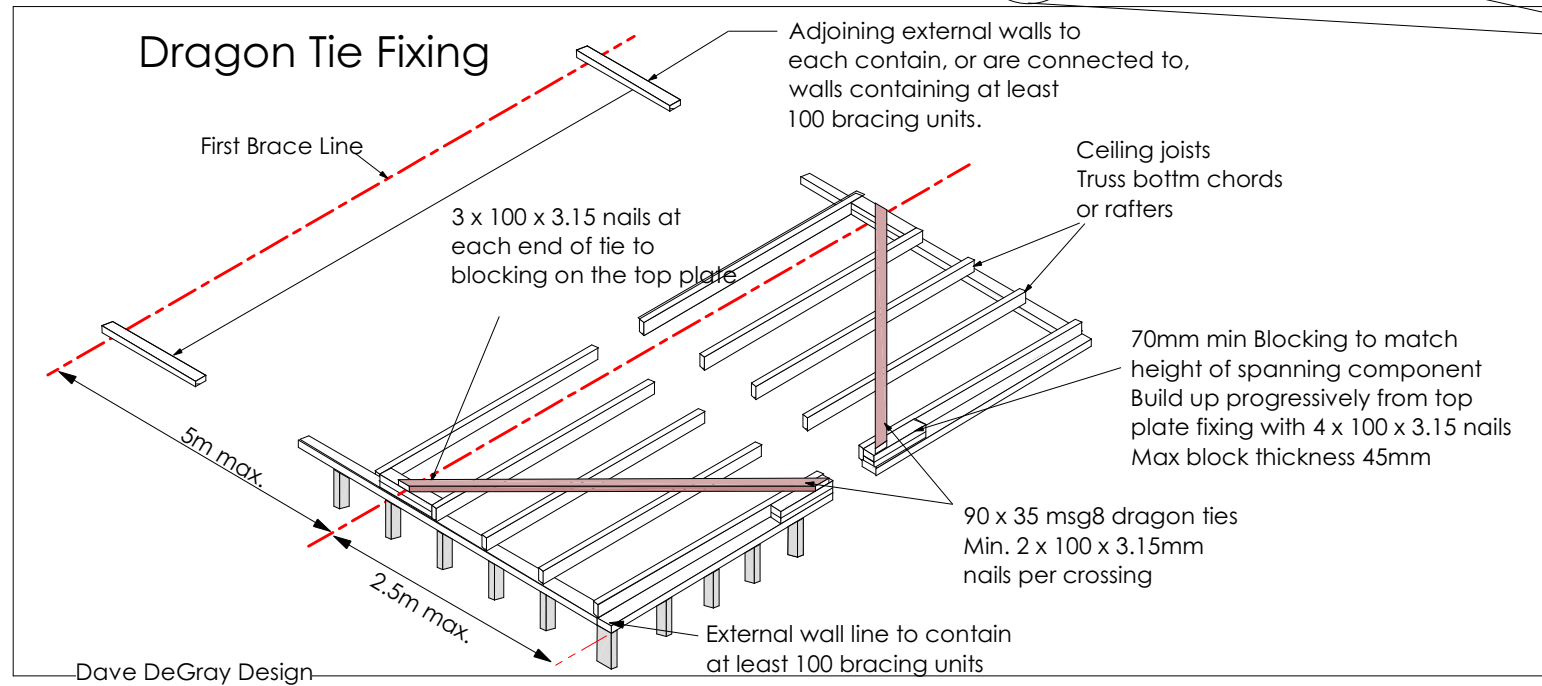
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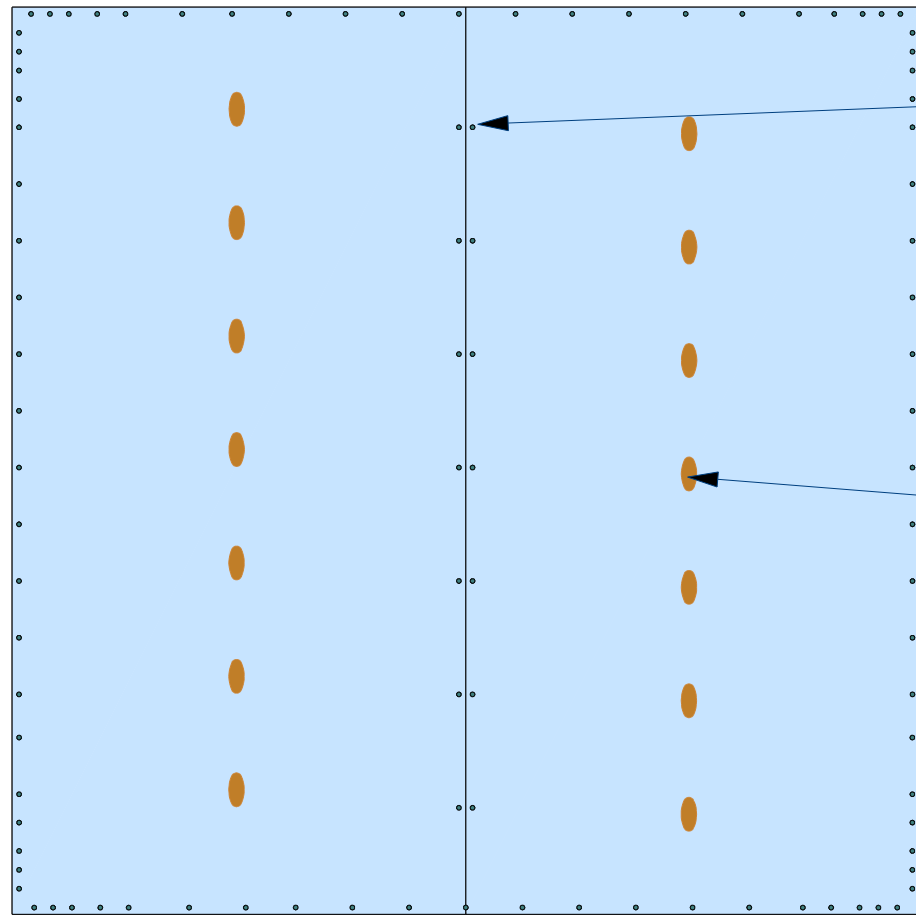




All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB

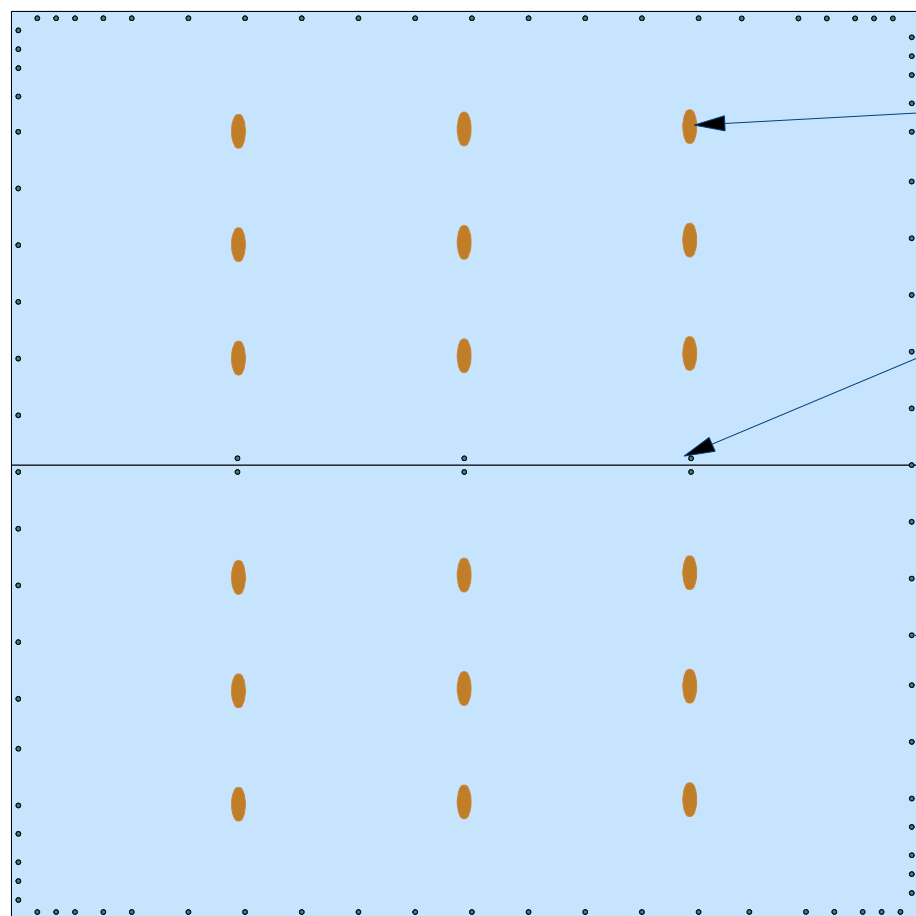
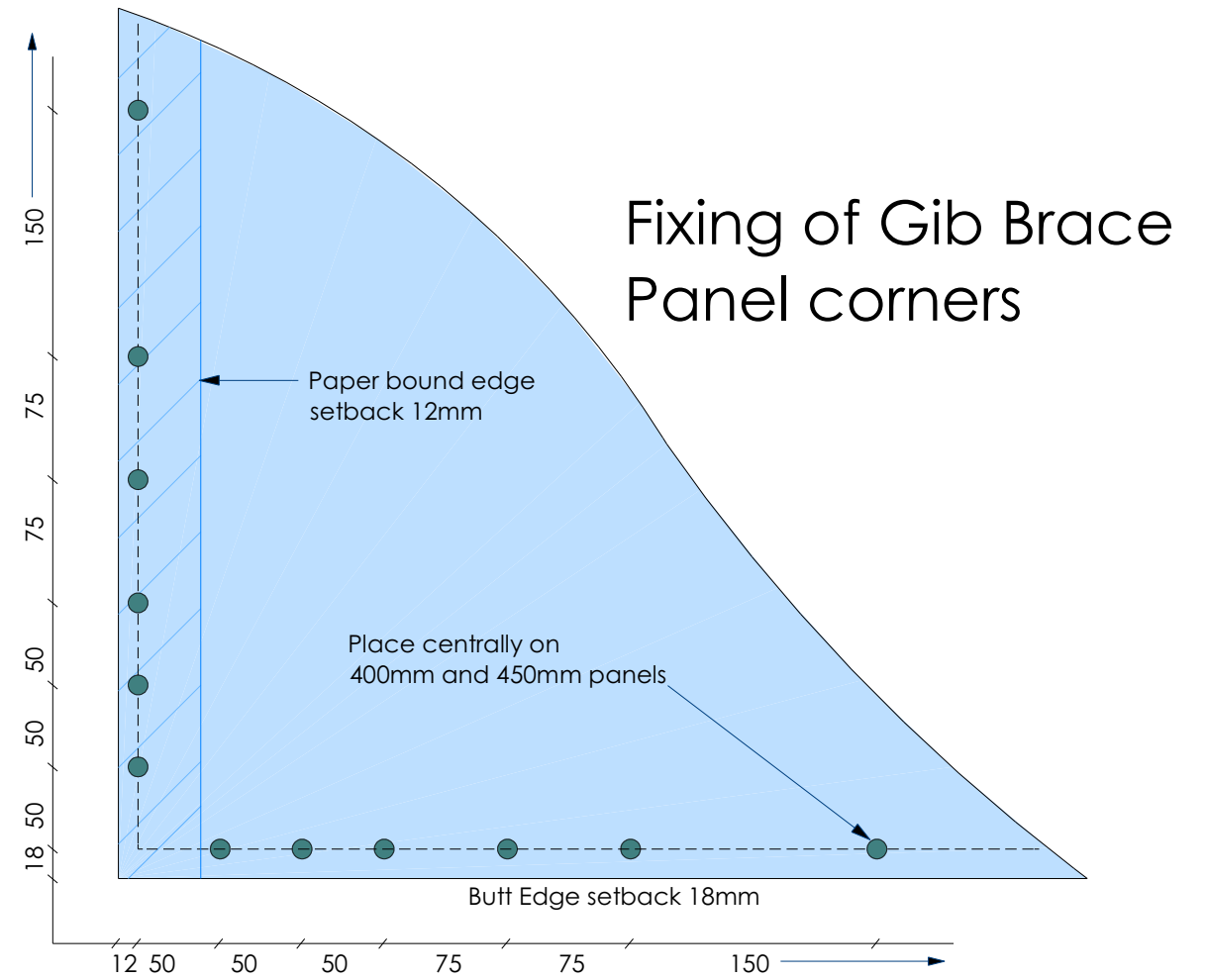
SOUTH WING





Single 32mm x 6g gib grabber high thread screws or 30mm gib nails at 300mm centres

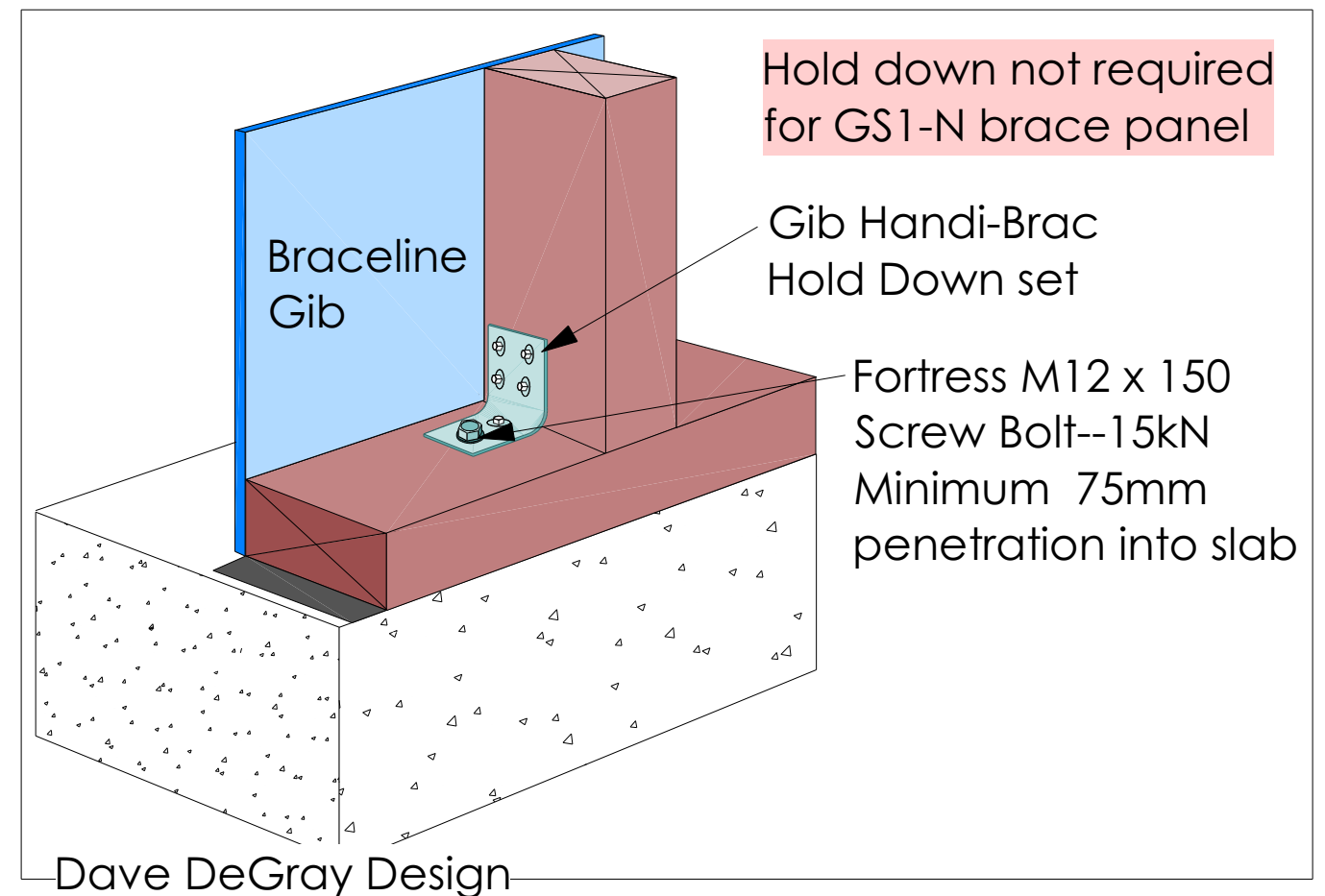
Apply Gibfix adhesive @300mm c/c to intermediate studs and nogs



Apply Gibfix adhesive @300mm c/c to intermediate studs and nogs

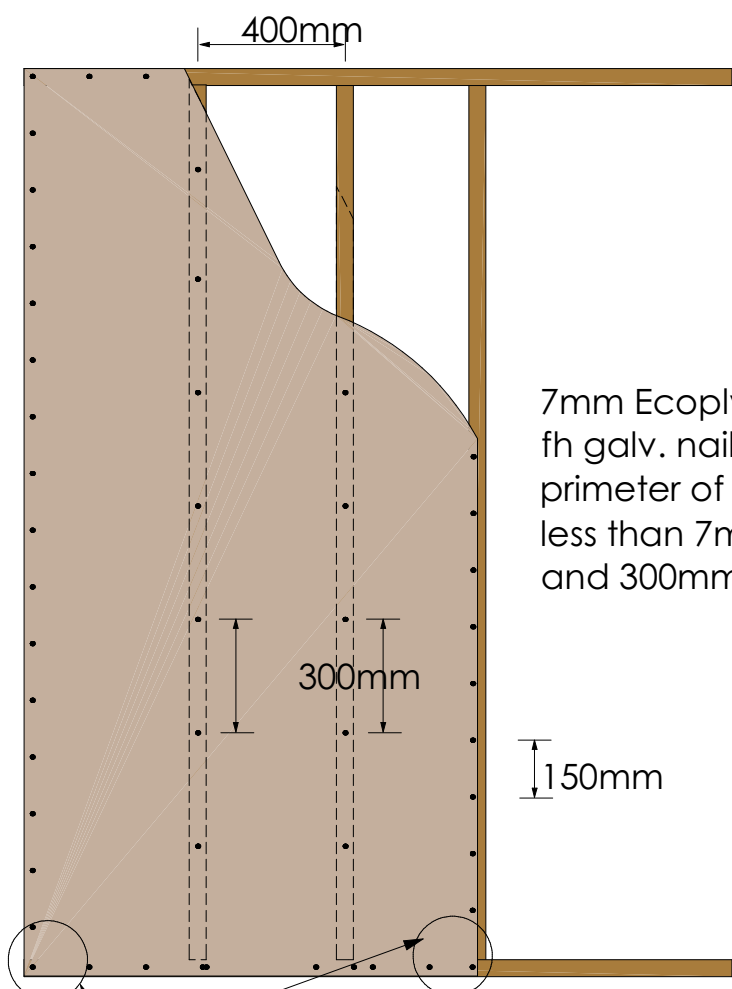
Single 32mm x 6g gib grabber high thread screws or 30mm gib nails where sheets cross studs

32mm x 6g gib grabber high thread screws or 30mm gib nails at 150mm centres to perimeter of bracing element



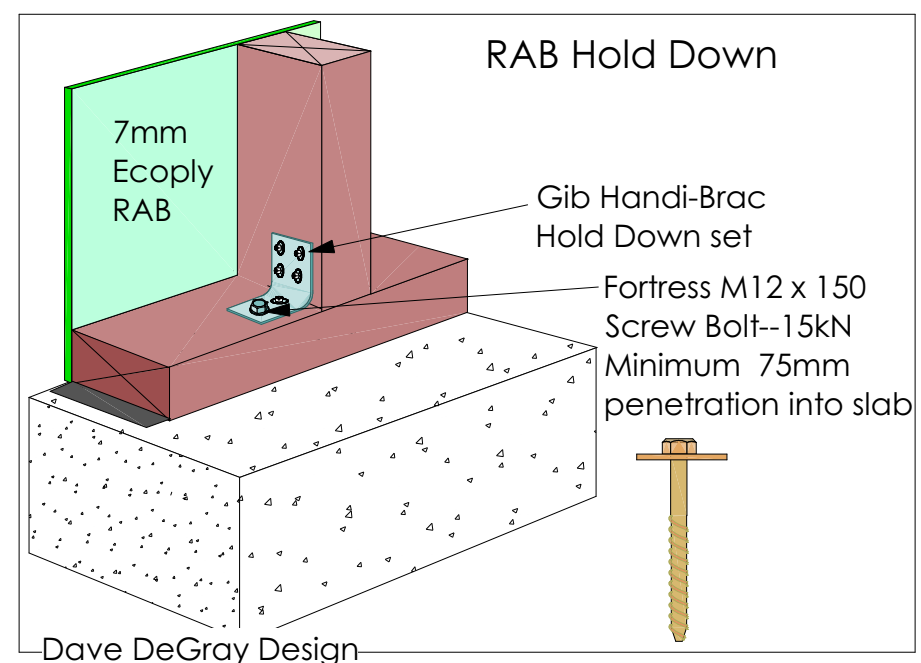
EPB1 brace fixing 400c/c

All wall Panels to be manufactured off-site using the Ecopanel Wall System and includes 45mm service cavity and RAB



7mm Ecoply Barrier fixed with 50 x 2.8 fh galv. nails at 150mm c/c to perimeter of bracing element at no less than 7mm from edge of sheet and 300mm c/c to intermediate studs.

Mechanical fastening with a minimum characteristic uplift capacity of 15kN



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Stud to top plate Schedule

Alternative to Table 8.18 NZS 3604:2011

Fixing Type A
0.7 kN

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

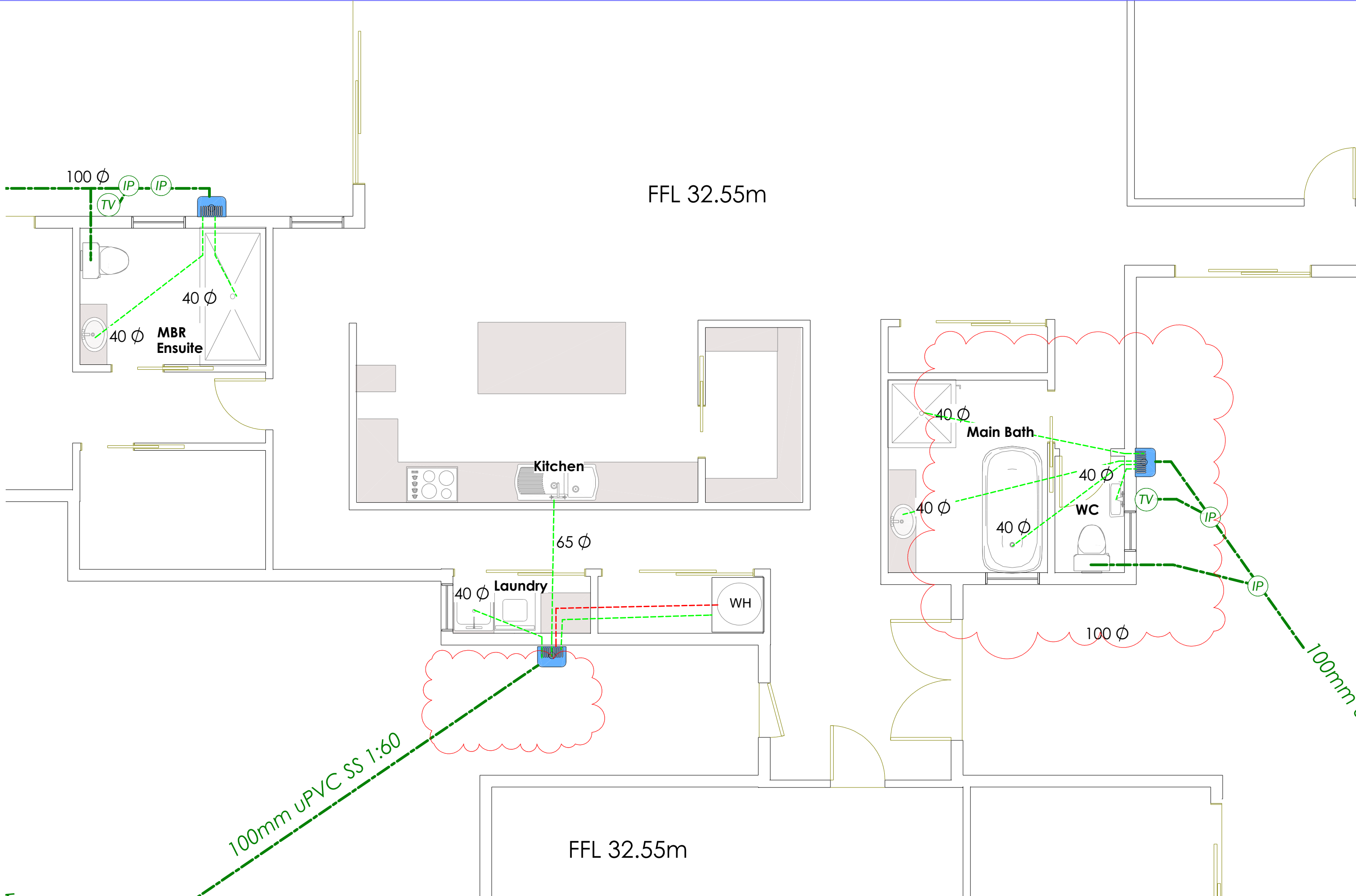
Stud to top plate Fixing

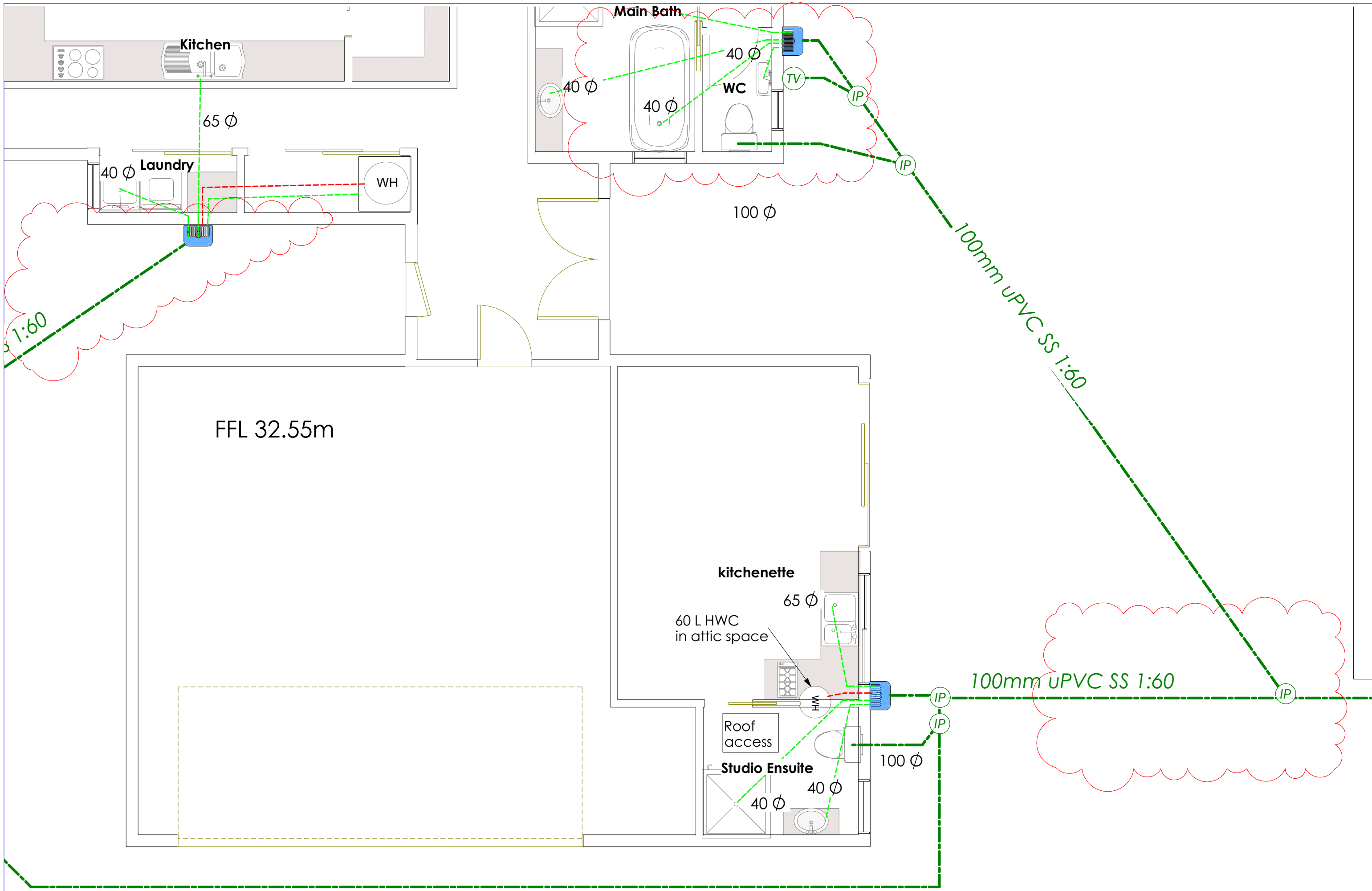
Alternative to Table 8.18 NZS 3604:2011

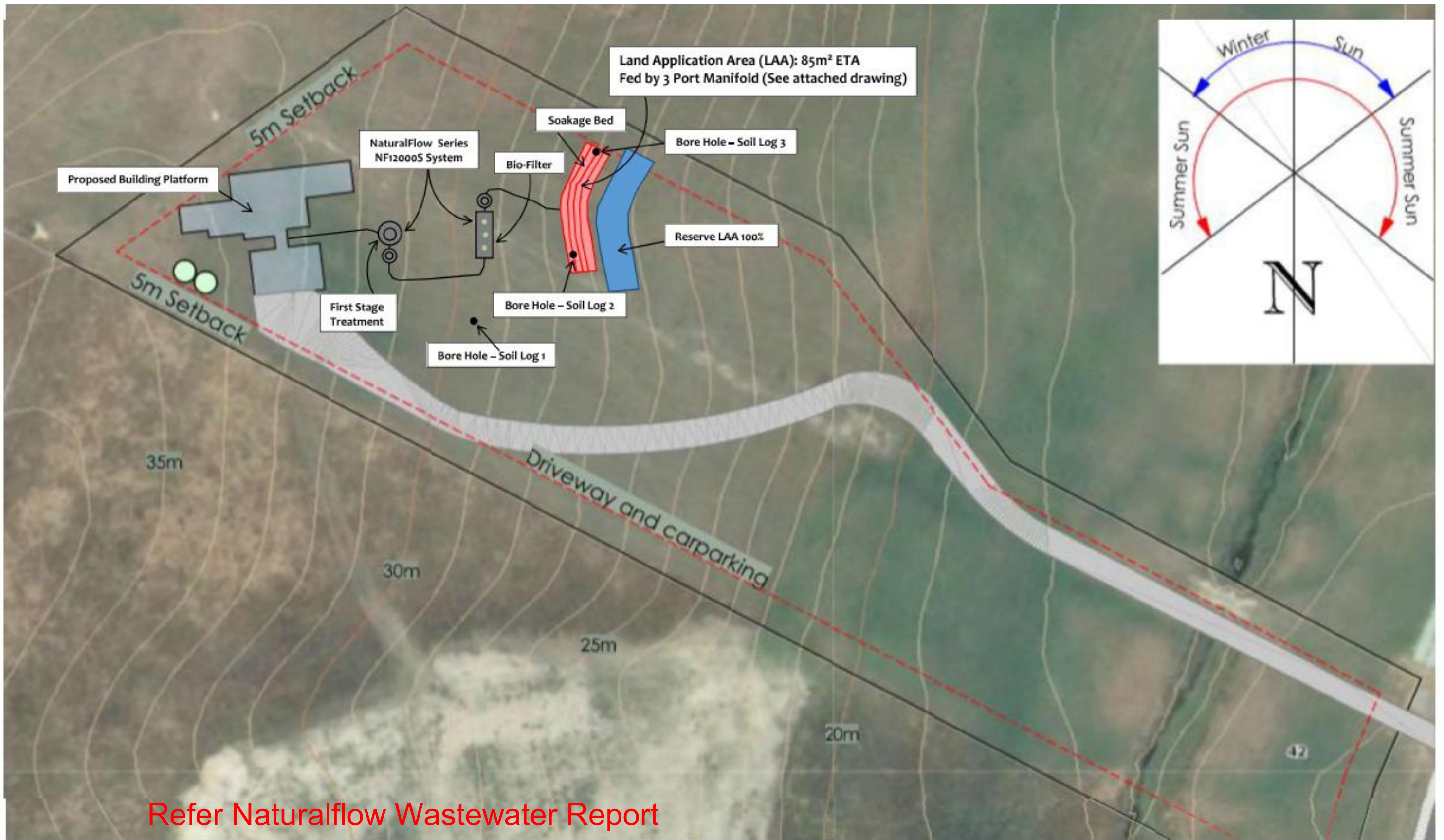
Fixing Type B
4.7 kN

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

Plus LUMBERLOK STUD STRAP one face only



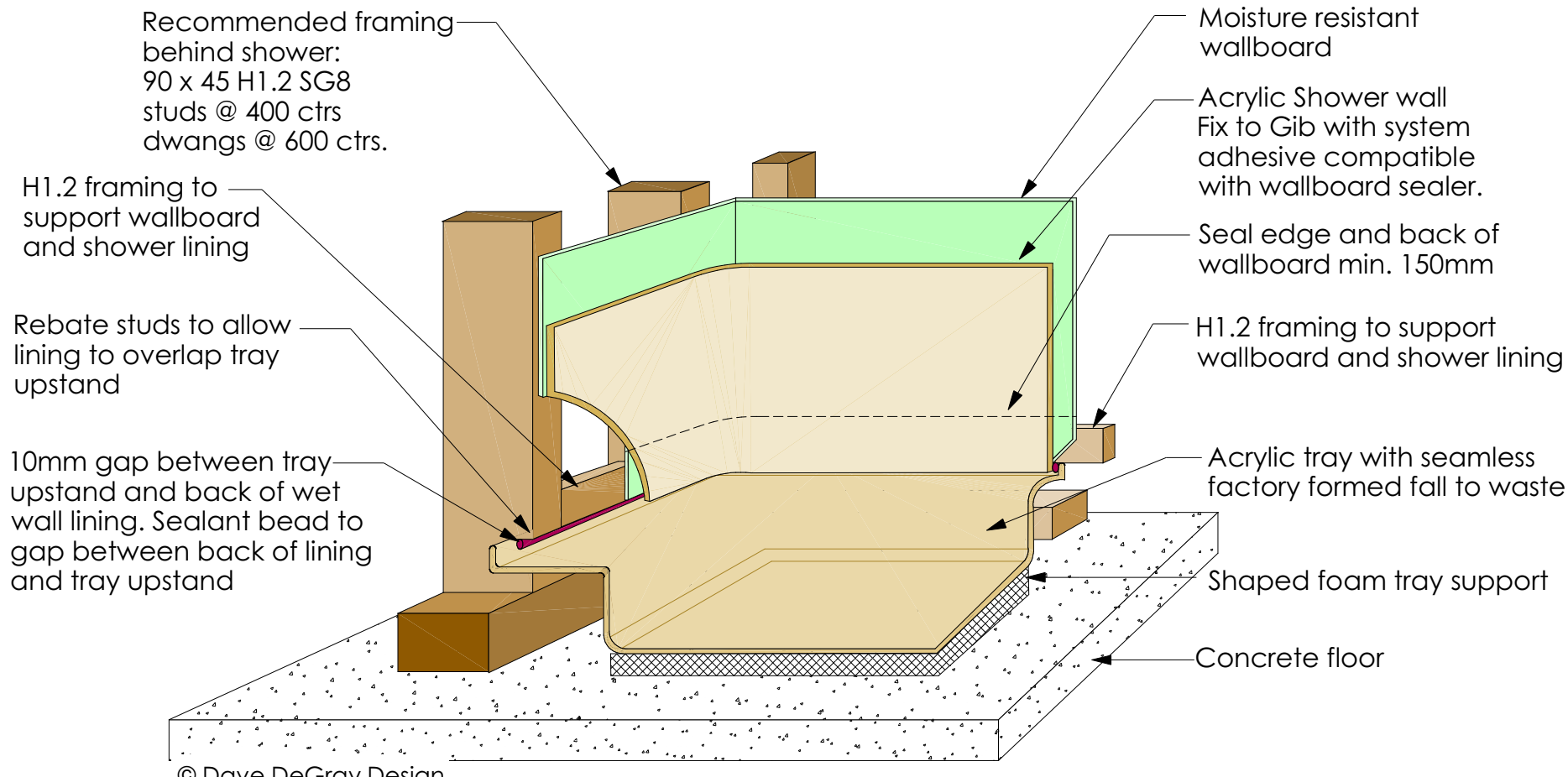




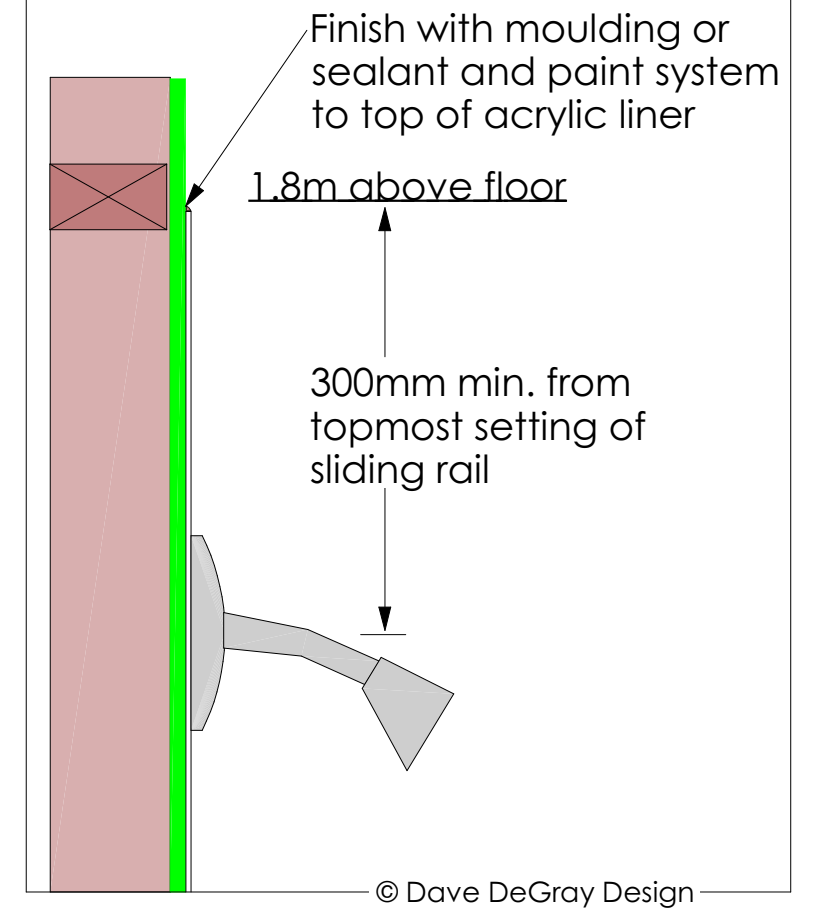
DATE DRAW: 01.03.2018
 PREPARED BY: Glyne Mclean
 REVISED: Consent

SITE LAYOUT PLAN:
 Brad Chandler
 42 Horton Road
 Tasman, Upper Moutere
 Lot 1, DP 461365
 10677m²

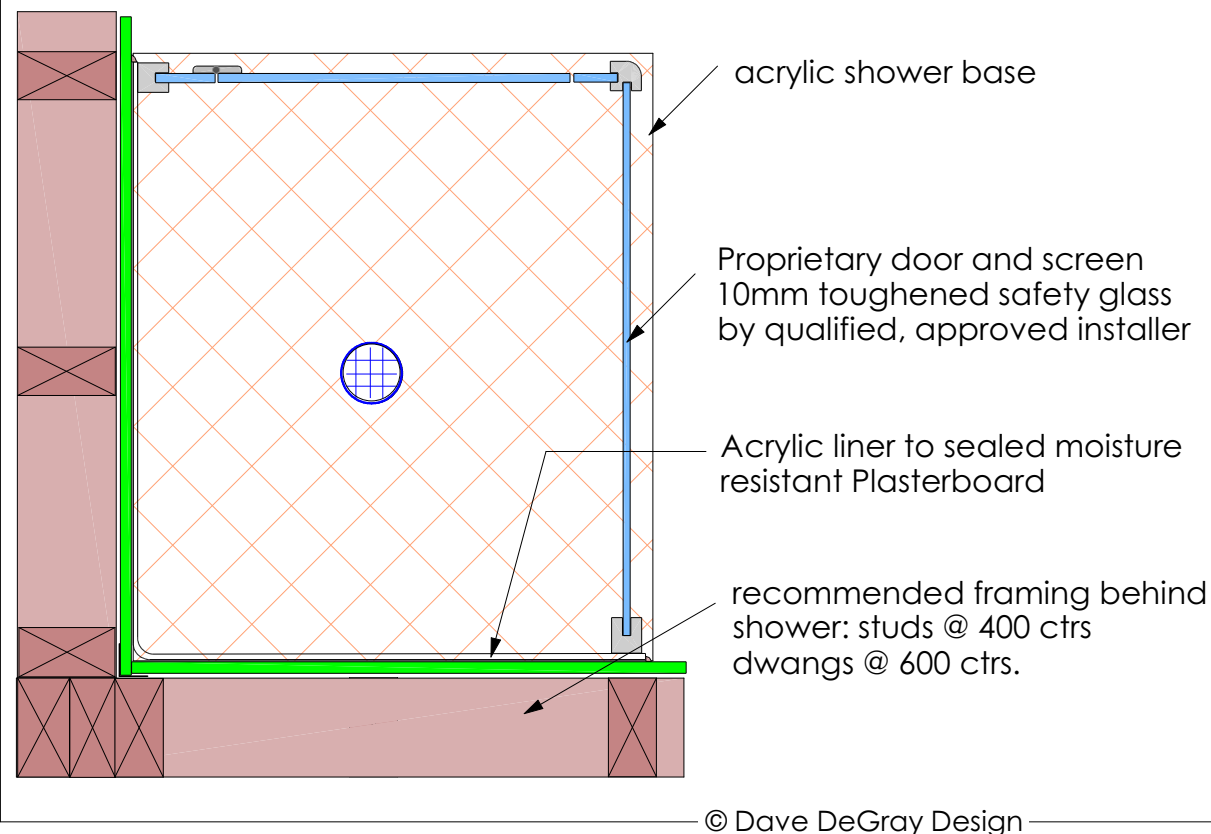
Proprietary Acrylic Shower



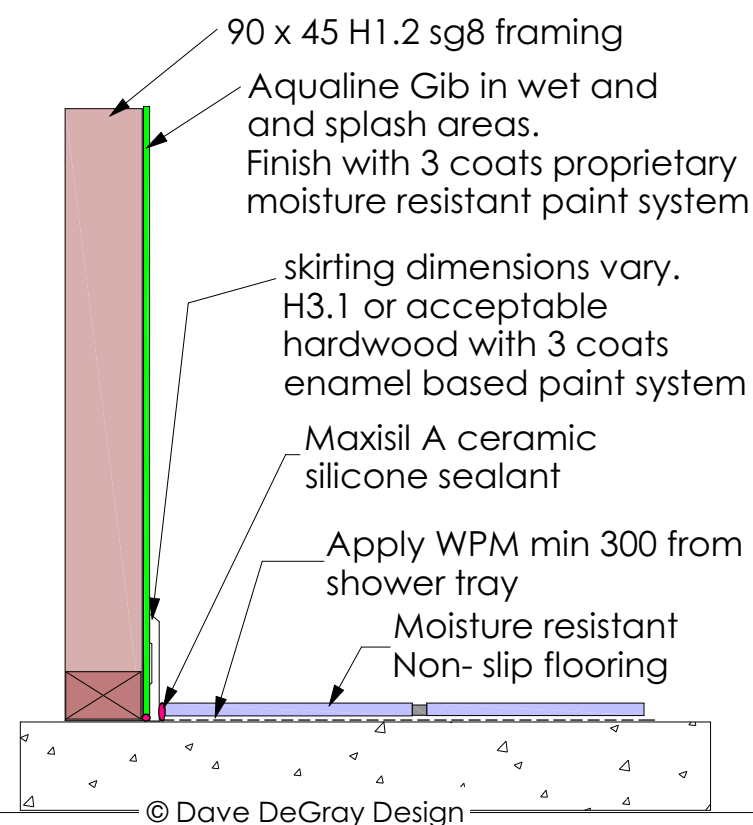
Top of acrylic lining and rose clearance



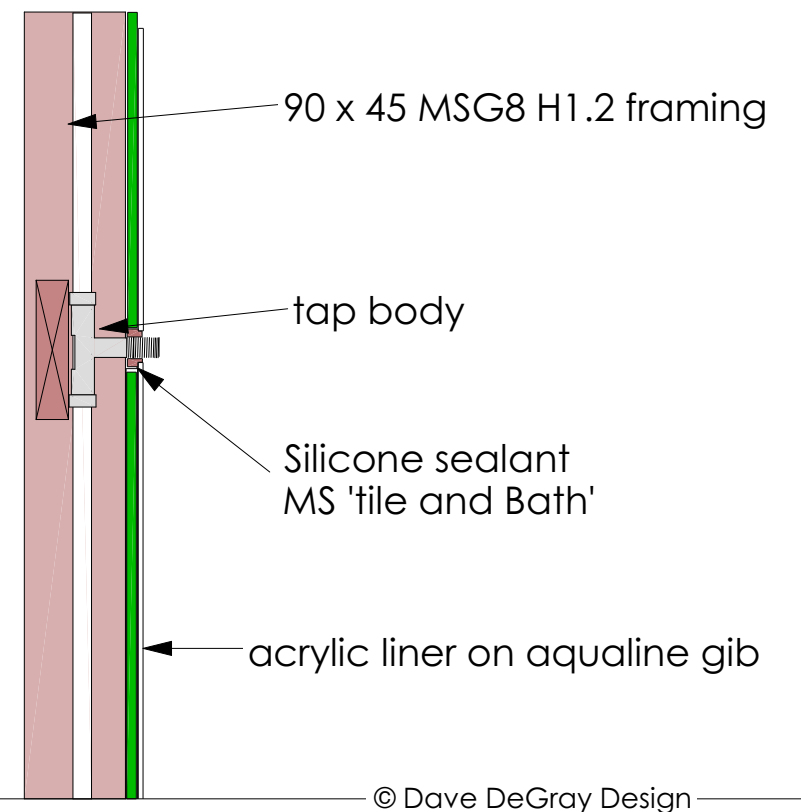
Plan view of acrylic shower



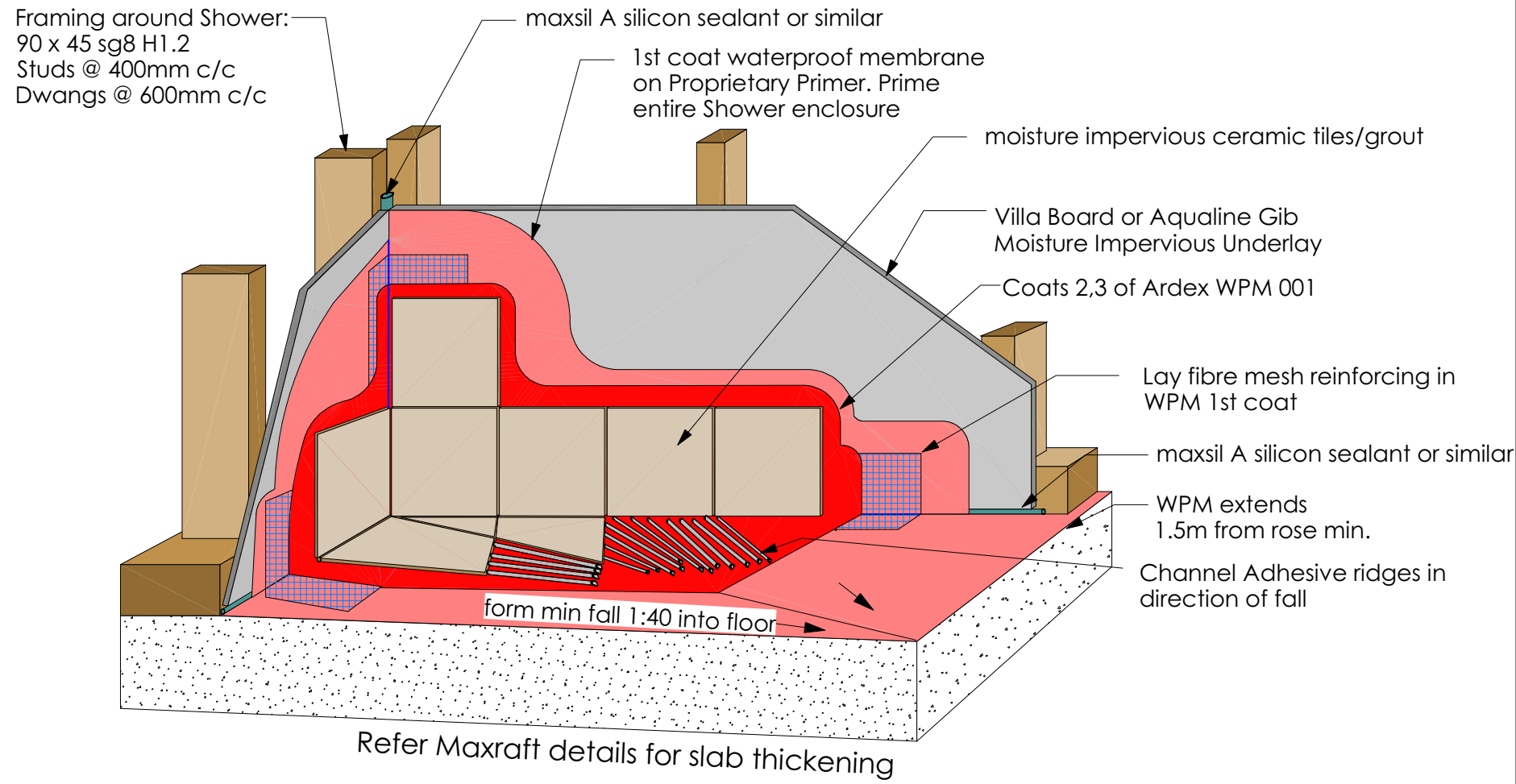
Finishing around shower base



Sealing around tap details



Level Entry Shower



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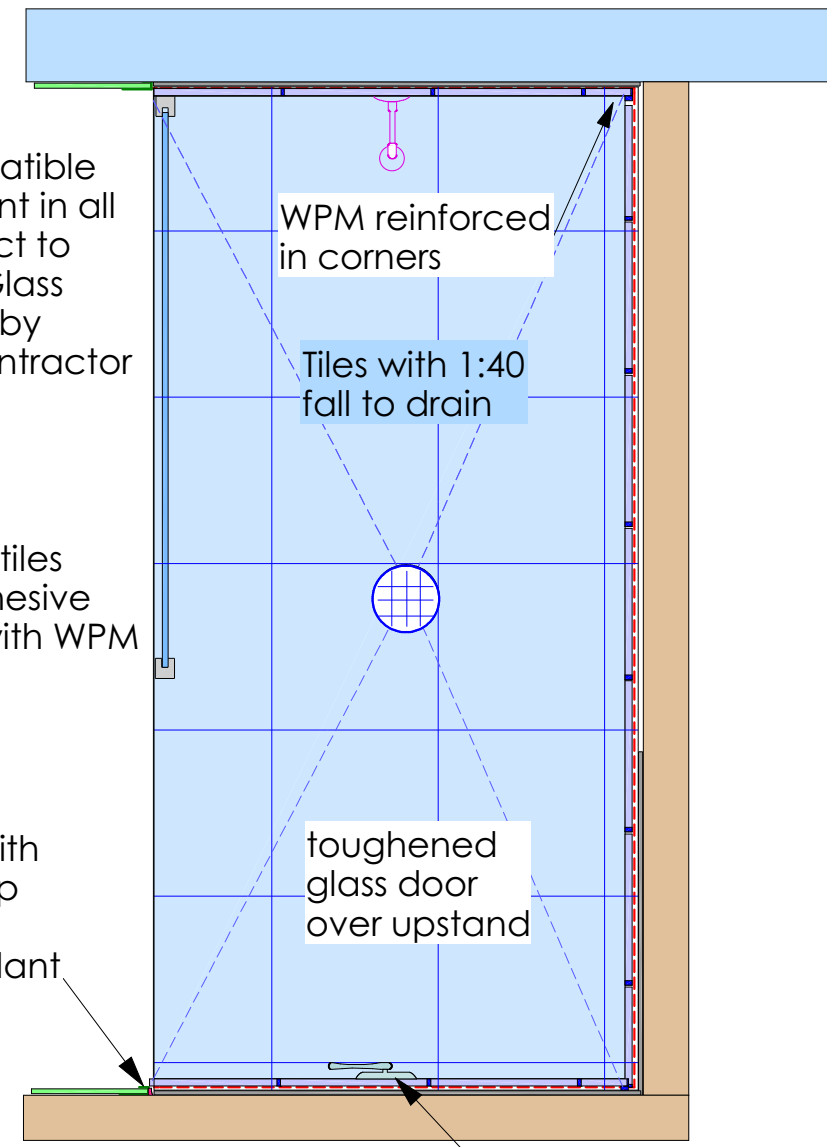
Plan view of Ensuite shower

Framing around shower:
140 x 45 sg8 H1.2
Studs @ 400mm c/c
dwangs @ 600mm c/c

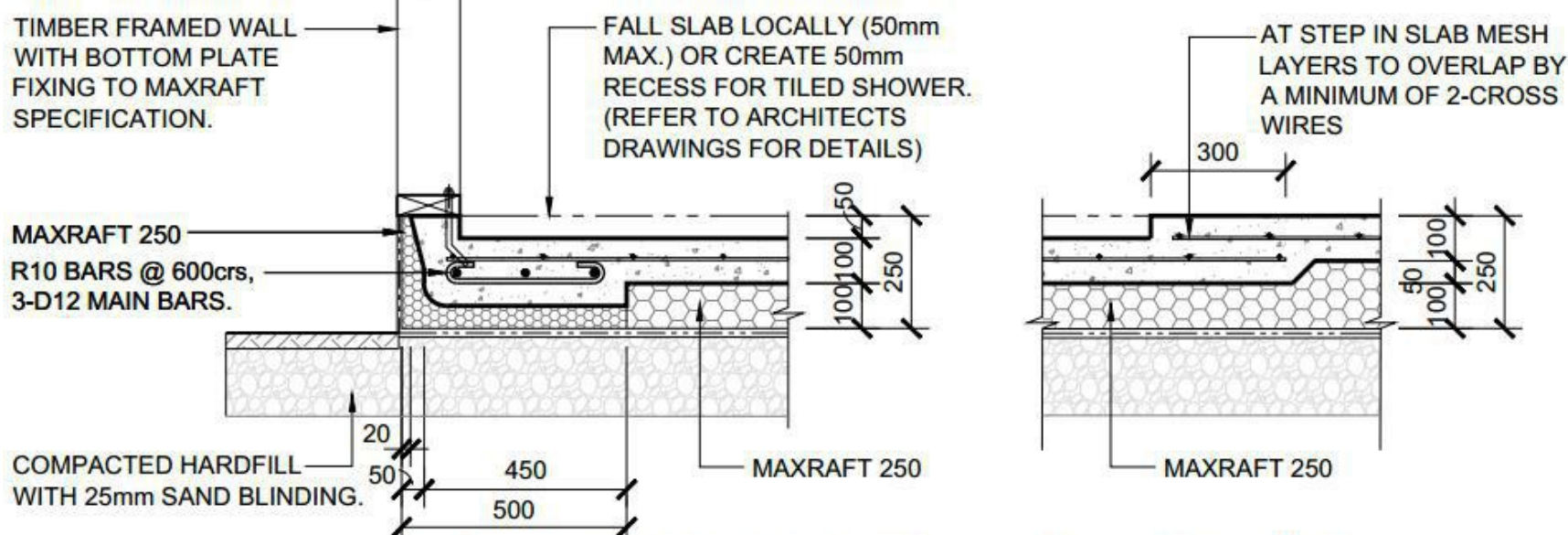
System compatible silicone sealant in all corners subject to movement. Glass screens fixed by approved contractor

Ceramic wall tiles fixed with adhesive compatible with WPM

Aqualine gib with pvc or alloy cap finish with Sika GP silicone sealant or similar

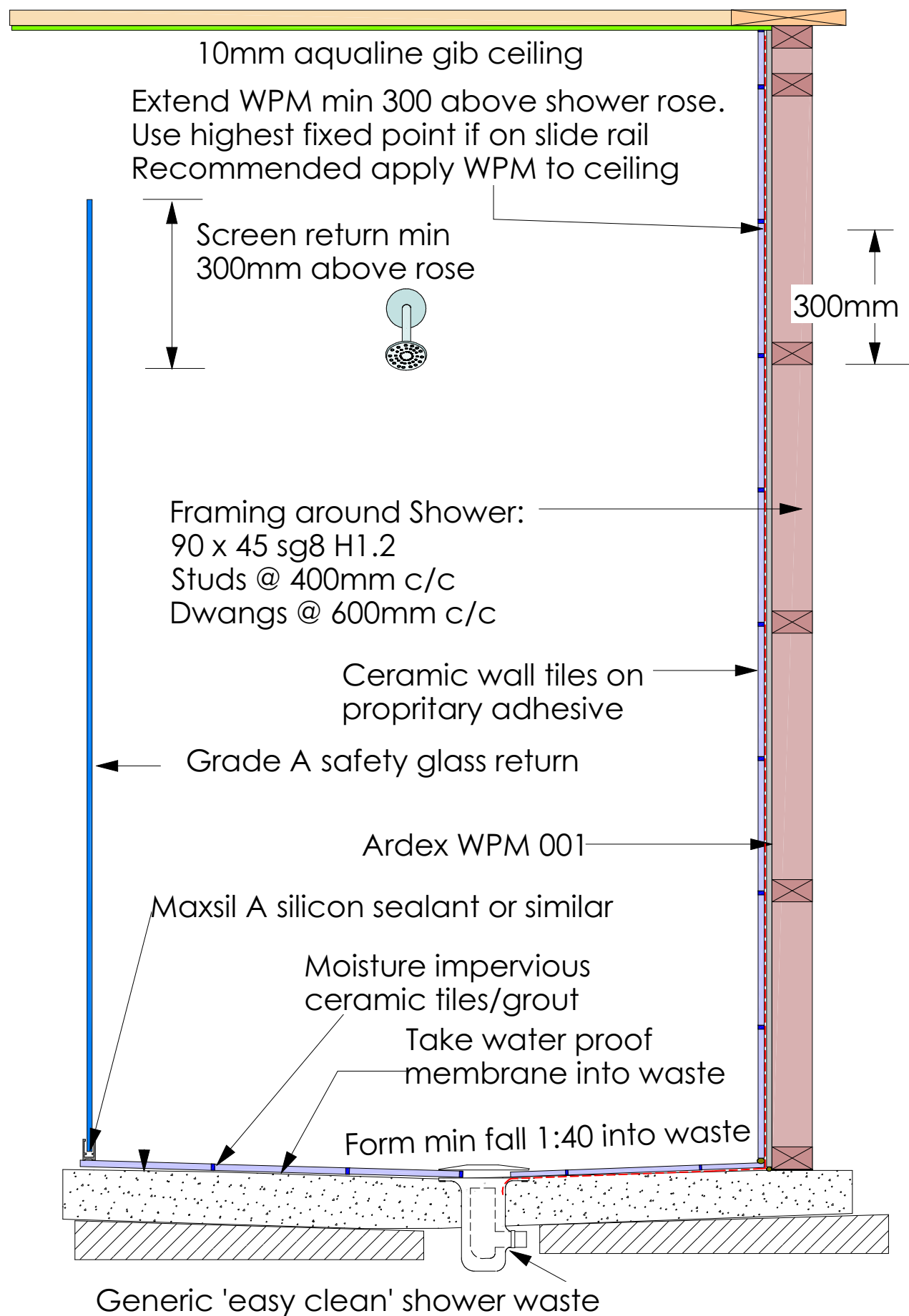


Intenal Framing around shower:
90 x 45 sg8 H1.2
Studs @ 400mm c/c
dwangs @ 600mm c/c

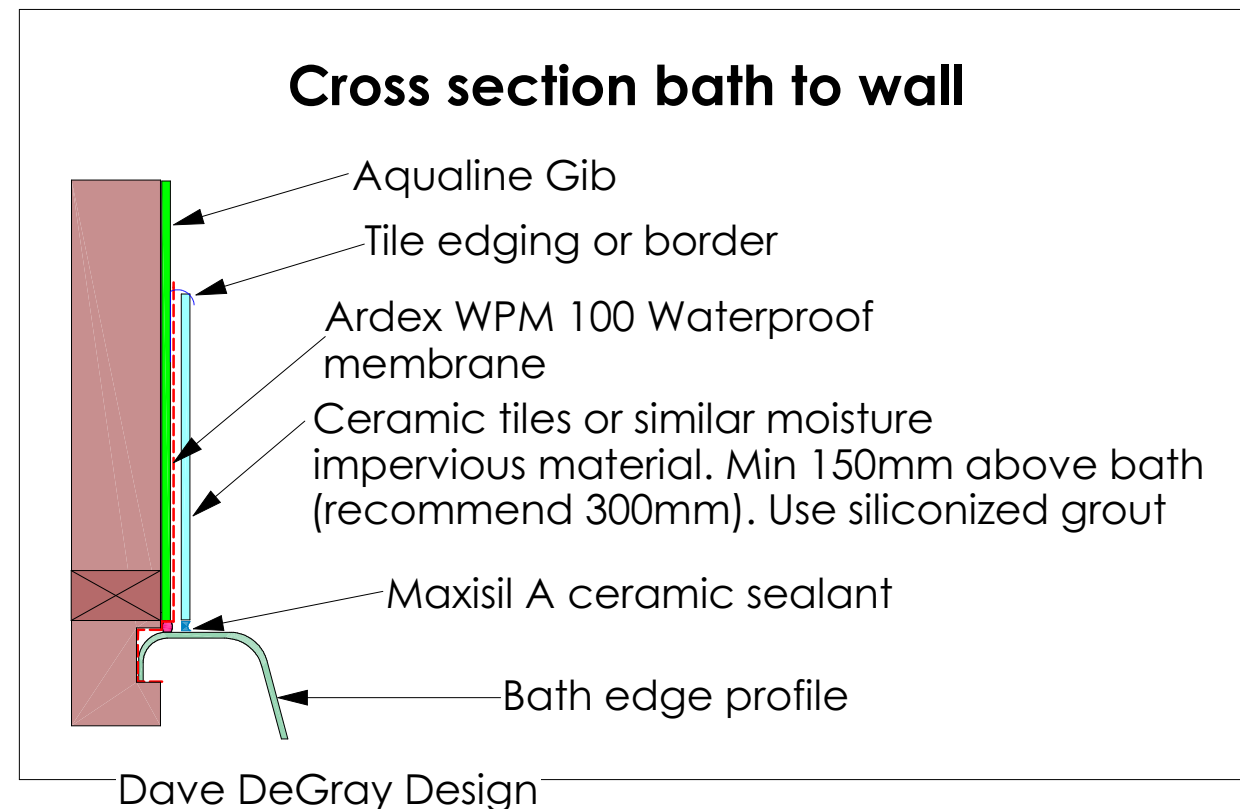
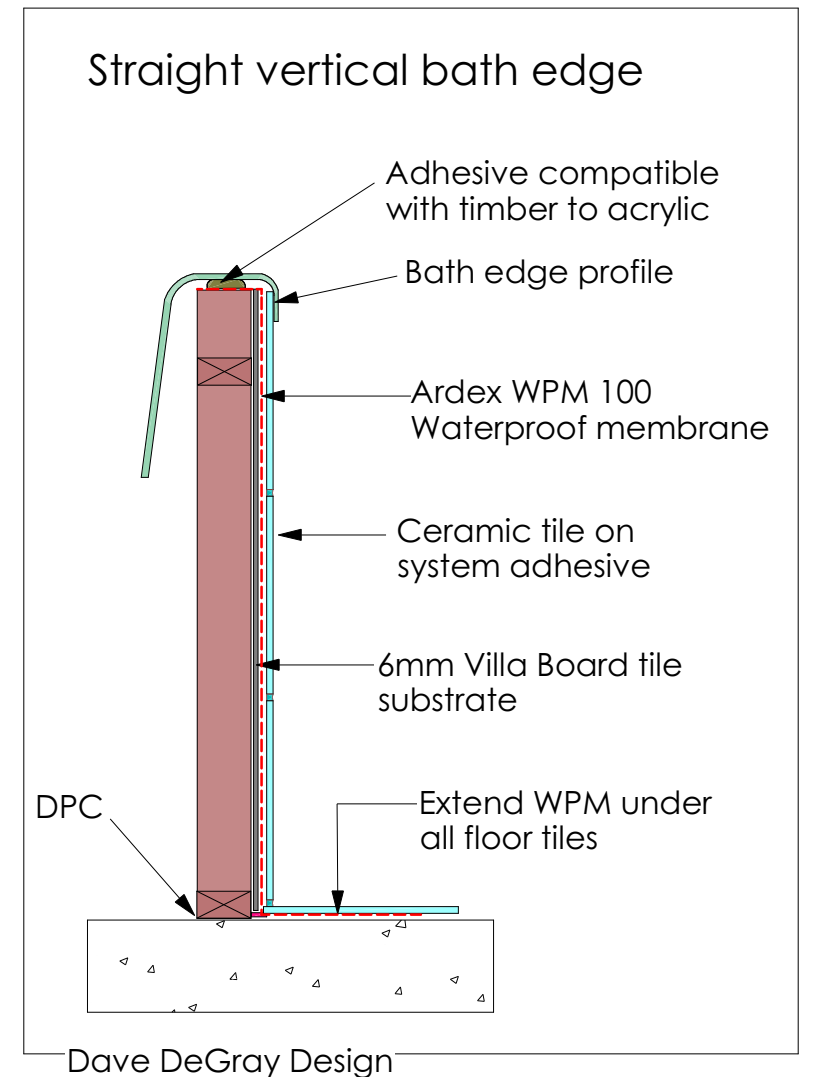
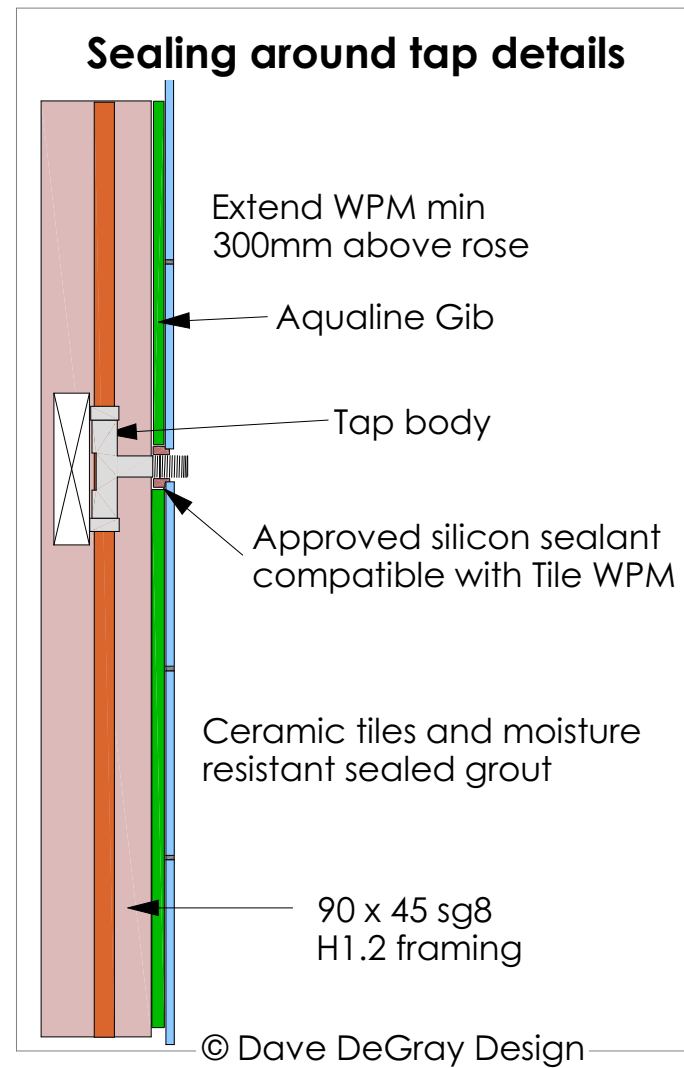


SHOWER RECESS DETAIL - 140mm FRAMING.
SCALE 1:20

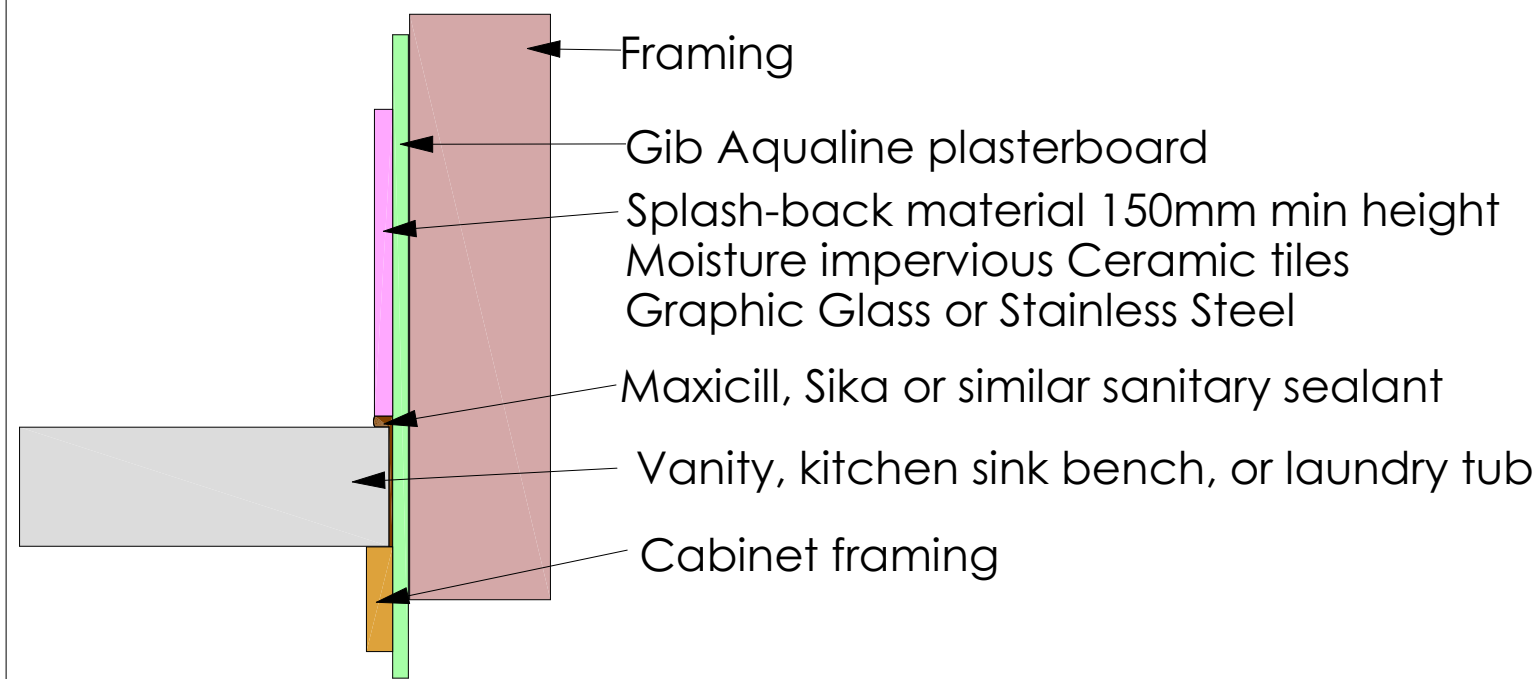
Cross section of tiled shower



Refer MaxRaft slab thickening detail

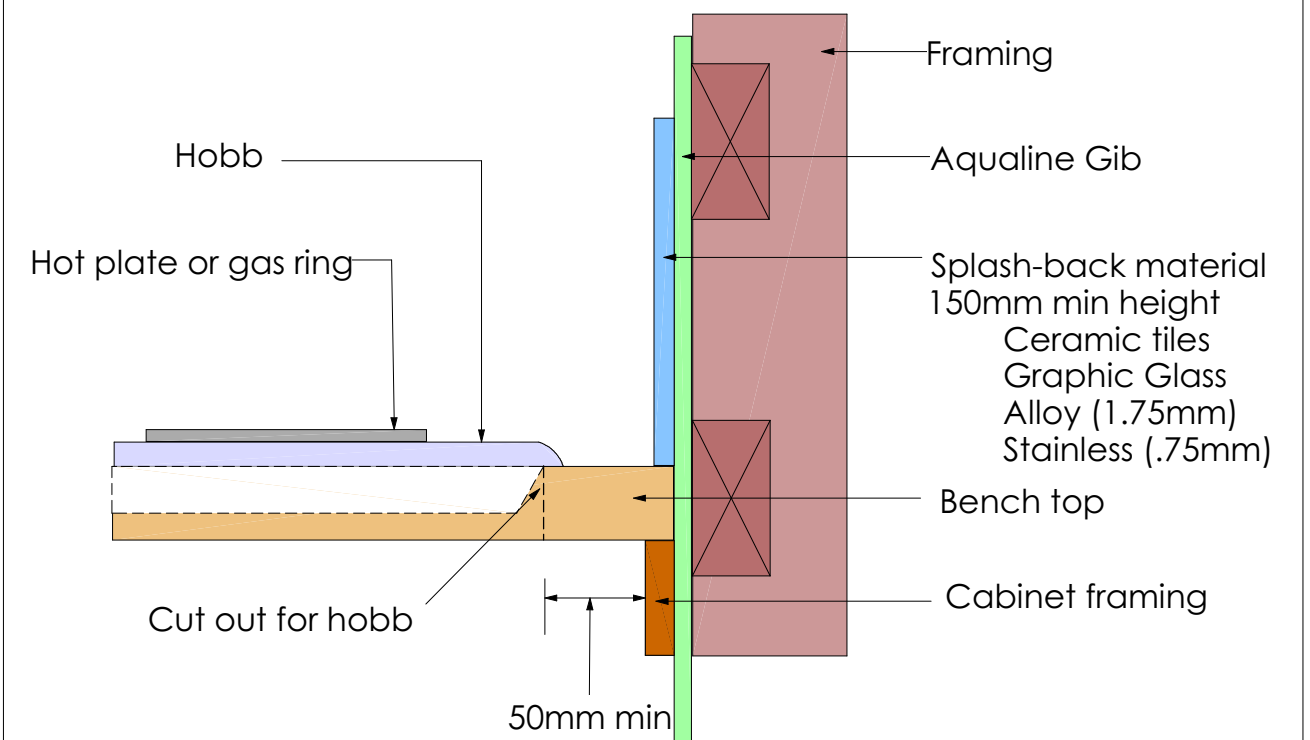


SPLASH-BACK DETAIL AROUND VANITY, LAUNDRY TUB, AND KITCHEN SINK



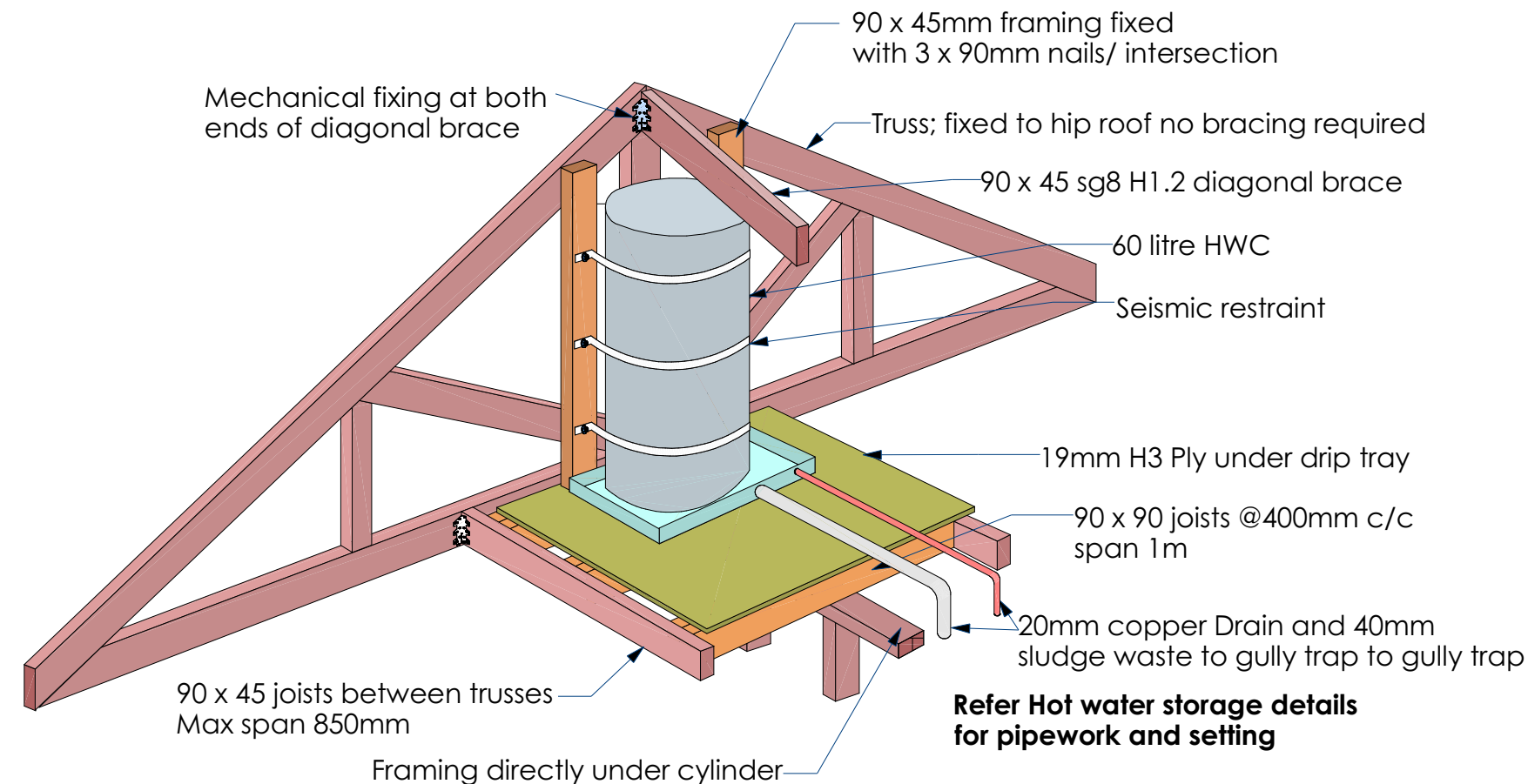
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PROTECTION OF GIB FROM HOBBS



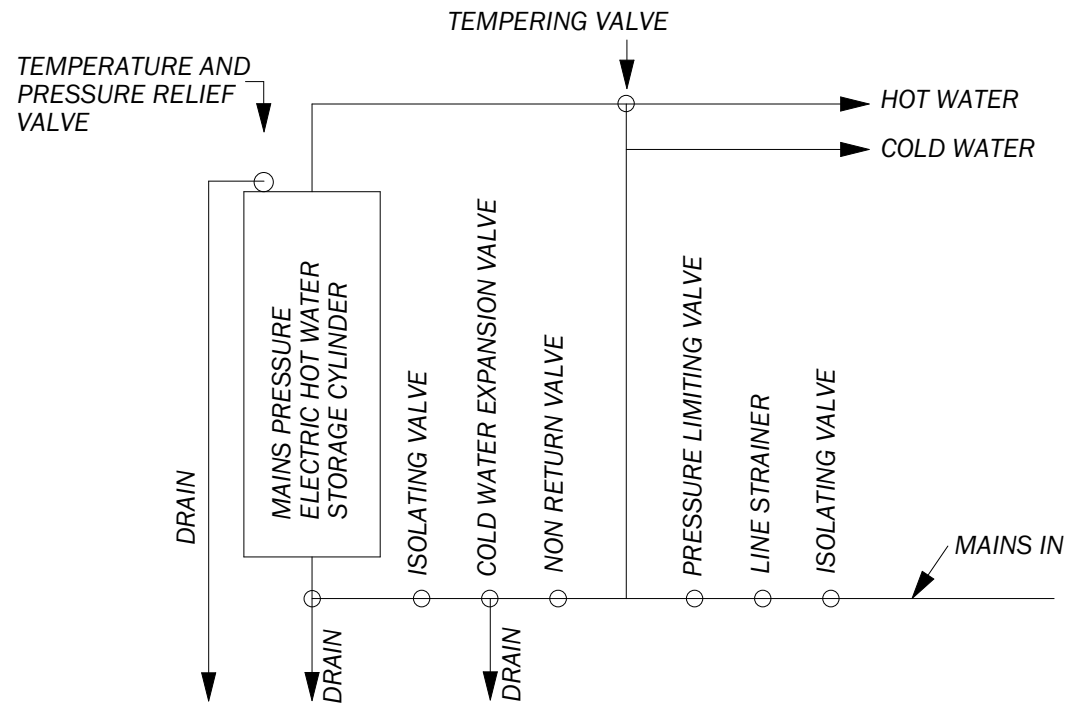
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Fixing of HWC in roof space-Studio



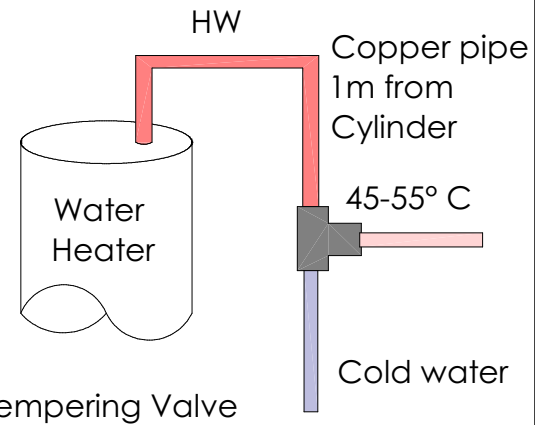
Dave DeGray Design

HOT WATER SYSTEM DIAGRAM

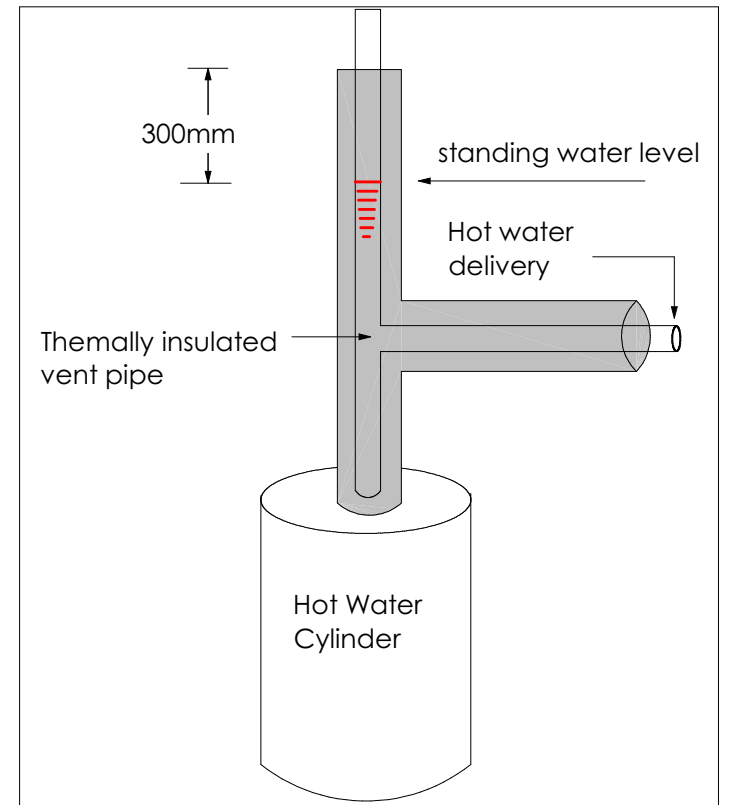


Installation of Tempering Valve

Where all hot water is tempered



- 1 Minimum 1m copper pipe from storage heater to tempering valve
- 2 Vent HWC to comply with Paragraph 6.32 or 6.34 G12 Water Supplies



Hot Water Pipework:

Insulation to be installed on all pipework carrying hot or warm water. Pipework to have an R-value not less than 0.3m².C/W. Insulation material includes ~closed cell foam with nom thickness of 12mm ~Preformed fibreglass with nom. thickness of 12mm. Insulate pipe to pressure relief valve or to 300mm above standing water level in open vent pipe.

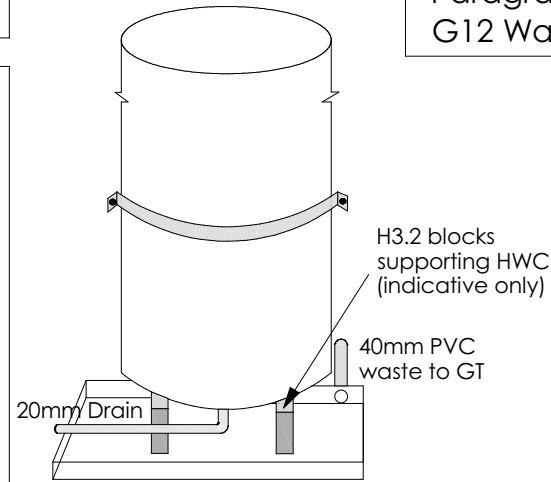
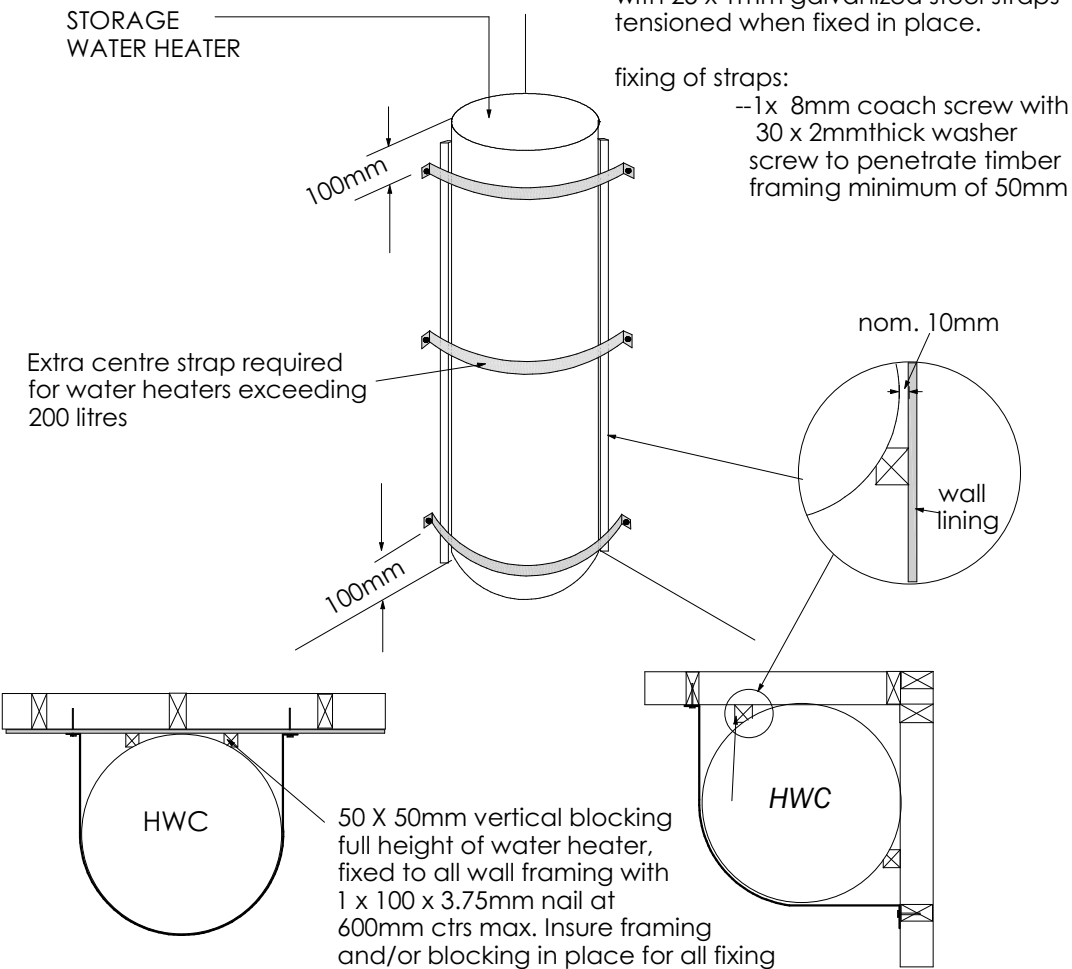
- All hot water storage and installation to comply with:
- G10/AS1 Piped services
 - G12/AS1 Water supplies
 - NZS 4305 Energy Efficiency

SEISMIC RESTRAINT OF STORAGE WATER HEATERS

New and Existing 90-300 litres

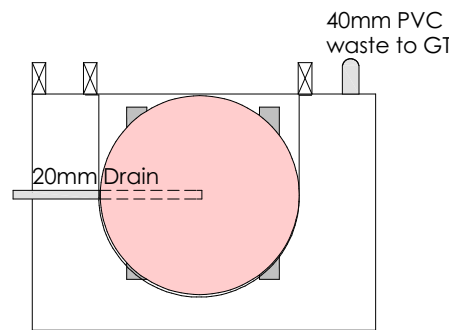
Storage water heaters to be restrained with 25 x 1mm galvanized steel straps tensioned when fixed in place.

fixing of straps:
 --1x 8mm coach screw with 30 x 2mm thick washer screw to penetrate timber framing minimum of 50mm



Safe tray with 75mm upstand fitted under HWC

Plan view of HWC and tray



Safe tray with 75mm upstand fitted under HWC

HOT WATER STORAGE ACCEPTABLE FLOW RATES

Sanitary fixture	Flow rate and temperature l/s and °C	How measured
Bath	0.3 at 45°C	Mix hot and cold water to achieve 45°C
Sink	0.2 at 60°C* (hot) and 0.2 (cold)	Flow rates required at both hot and cold taps but not simultaneously
Laundry tub	0.2 at 60°C* (hot) and 0.2 (cold)	Flow rates required at both hot and cold taps but not simultaneously
Basin	0.1 at 45°C	Mix hot and cold water to achieve 45°C
Shower	0.1 at 42°C	Mix hot and cold water to achieve 42°C

* The temperatures in this table relate to the temperature of the water used by people in the daily use of the fixture.
 Note:
 The flow rates required by Table 3 shall be capable of being delivered simultaneously to the kitchen sink and one other fixture.

Rafters
Fixing type F (7kN)

Steel beam by engineer
max span 9.9m, 2.6m LD

Double wall to accomodate leg between door and fixed window

290 x 90 sg8 H1.2 rafters
900mm c/c spacing
5.45m Span

Steel legs supporting
lintel by engineer

FFL 32.55m

Steel beam by engineer
Max span 5.1m, 5.3m LD

Trusses

Trusses

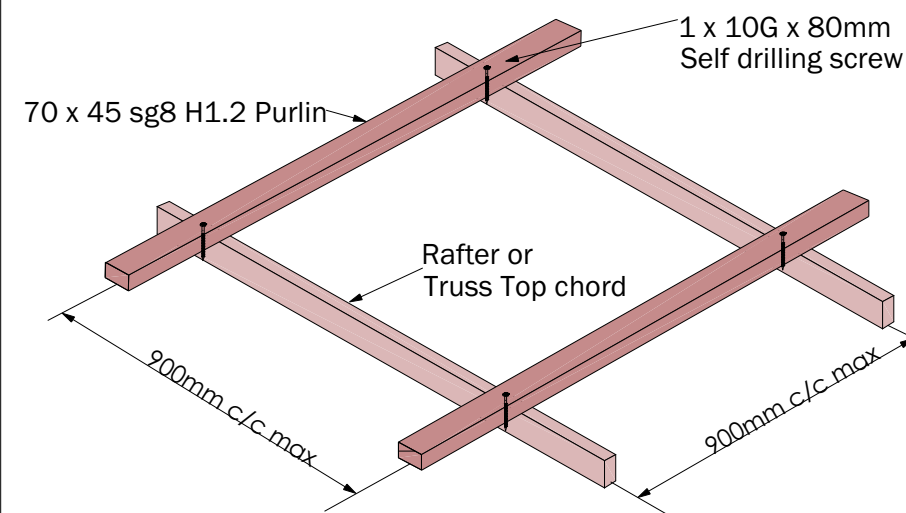
Trusses

Roof plane diagonal bracing: Diagonally opposed continuous strap. 0.55 x 27mm G550 Galv steel. Each strap has capacity for 8.0 kN tension. Fix each end to top plate, preferably on to studs, fix to each top chord or rafter intersection

190 x 45 sg8 Rafters
@900mm c/c
Fixing type F (7kN)

Purlin Fixing
NZS 3604 2011
Fixing capacity 2.4kN

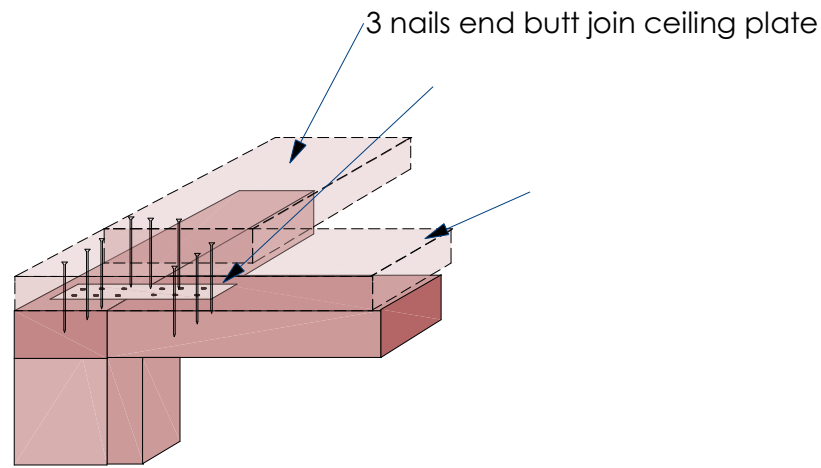
Steel beam by engineer
Max span 7.1, 3.6m LD



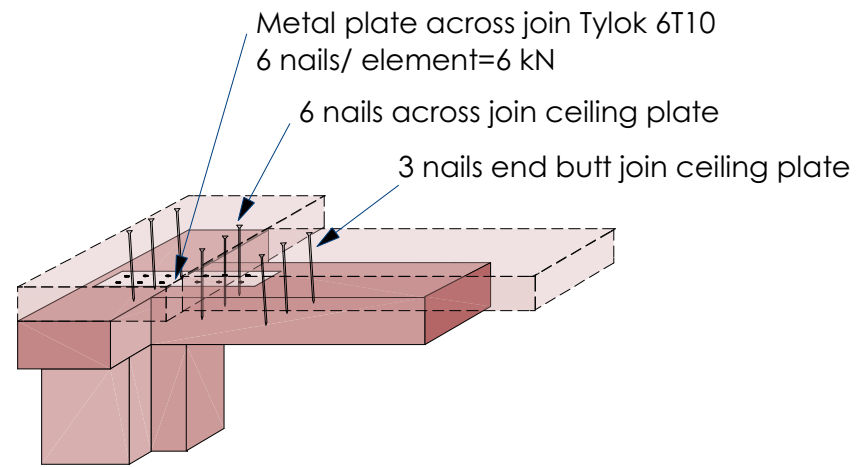
Steel beam by engineer
Max span 6m, 2.2m LD

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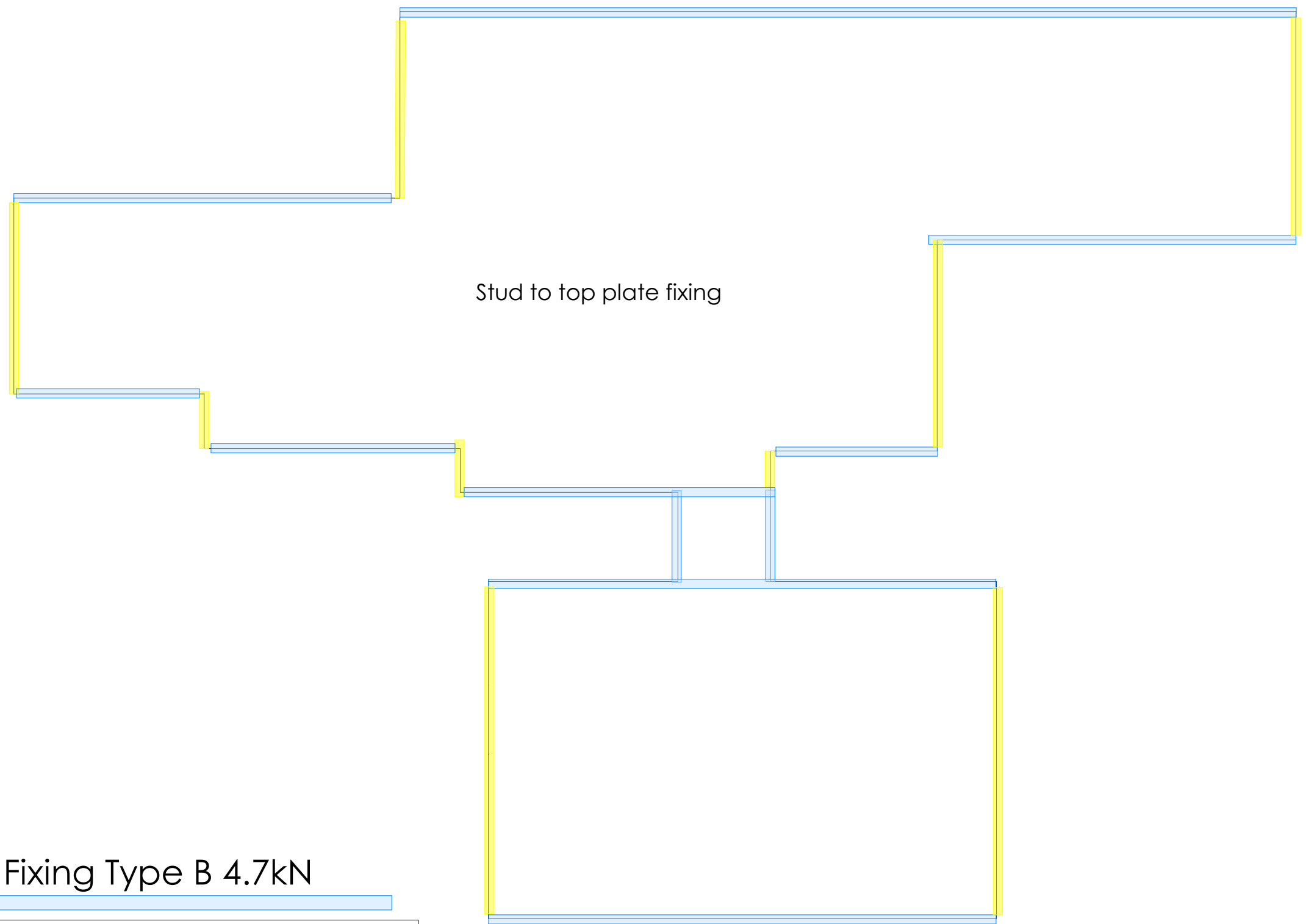
External wall Corner 6 kN



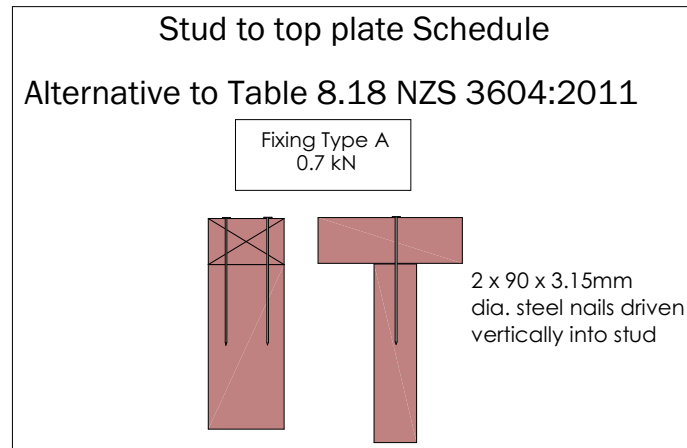
Internal to external wall 6 kN



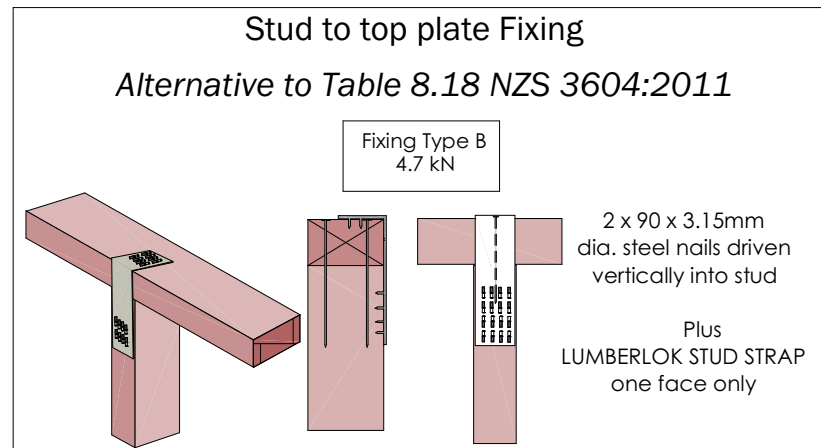
Dave DeGray Design

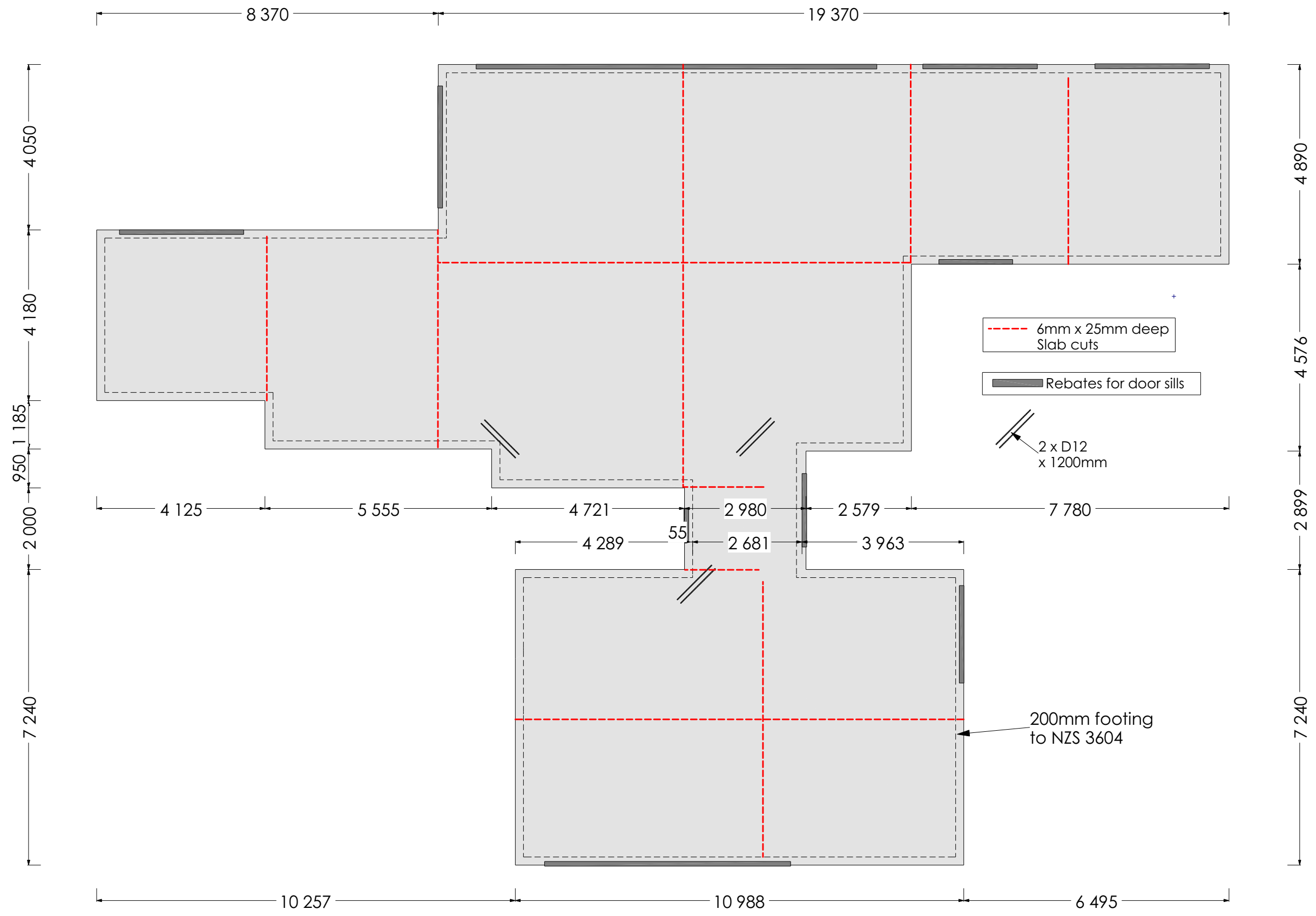


Fixing Type A 0.7kN

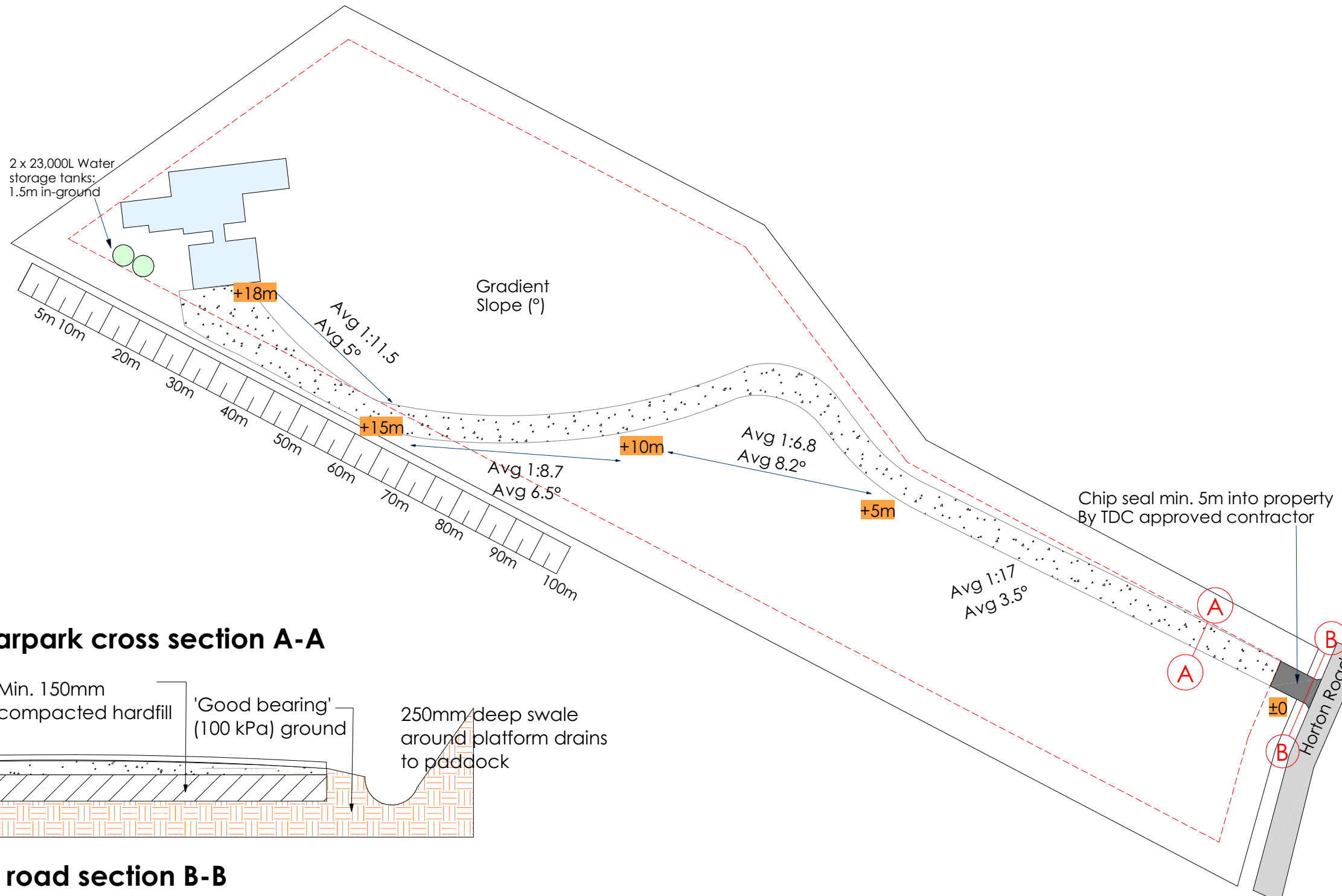


Fixing Type B 4.7kN

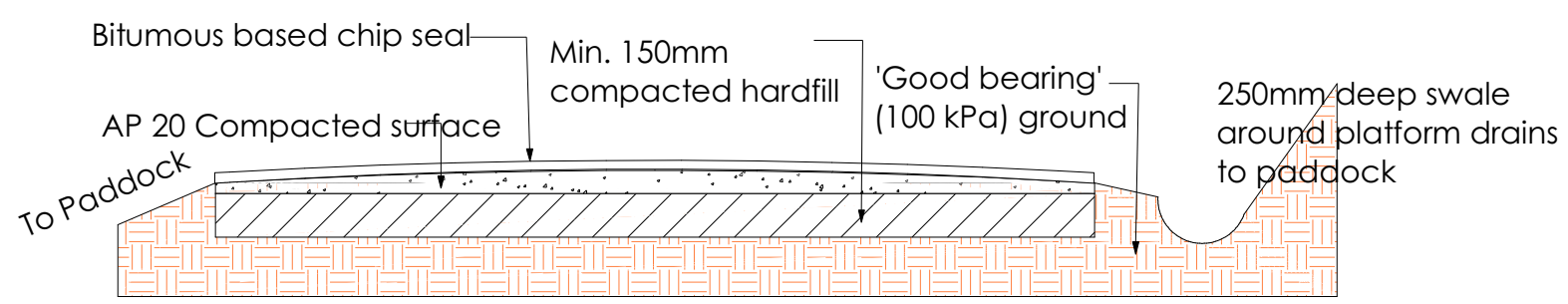




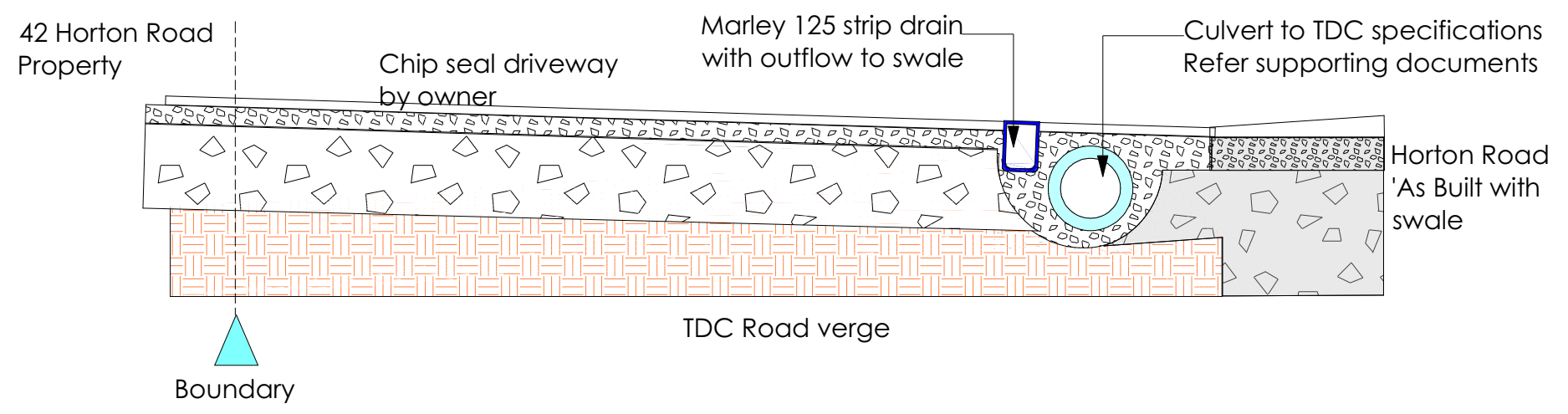
Refer MaxRaft details for slab construction



Drive/Carpark cross section A-A

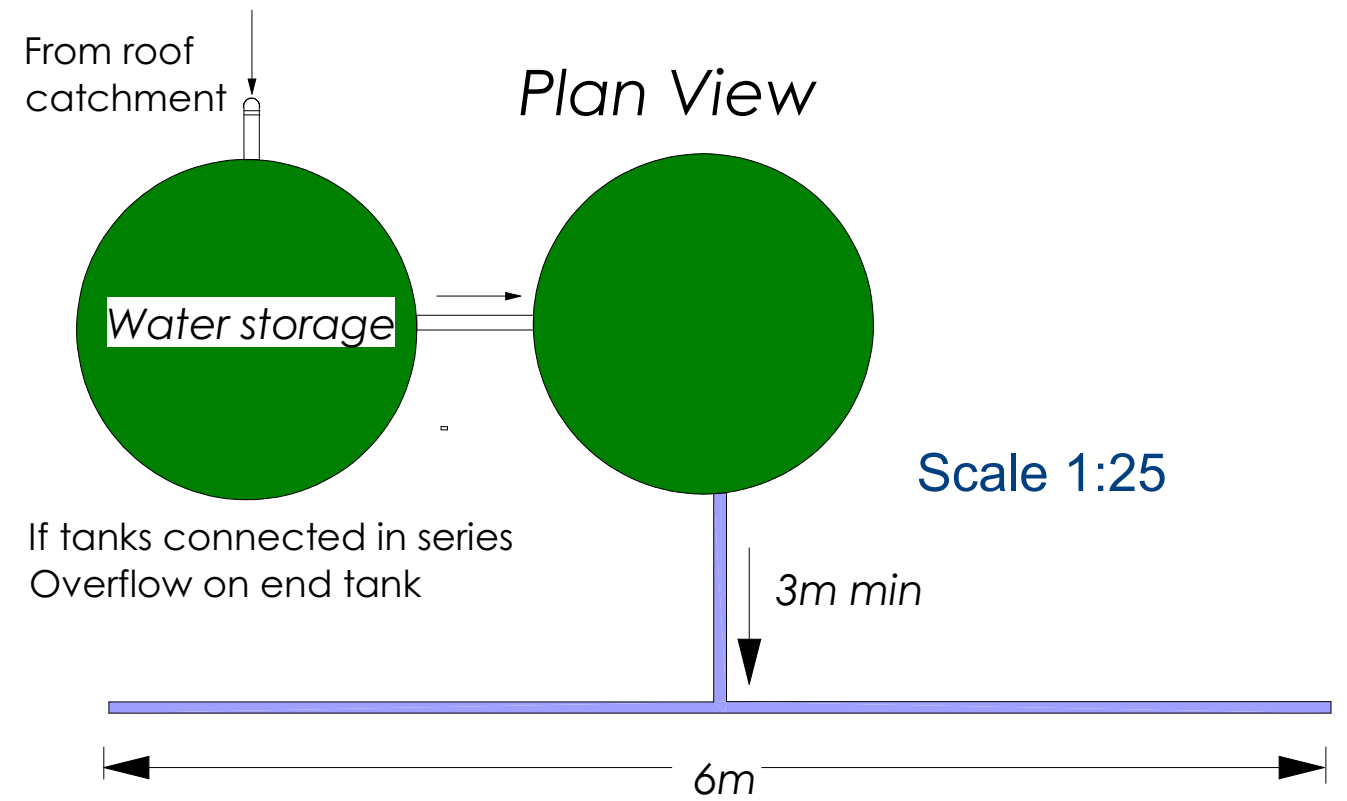
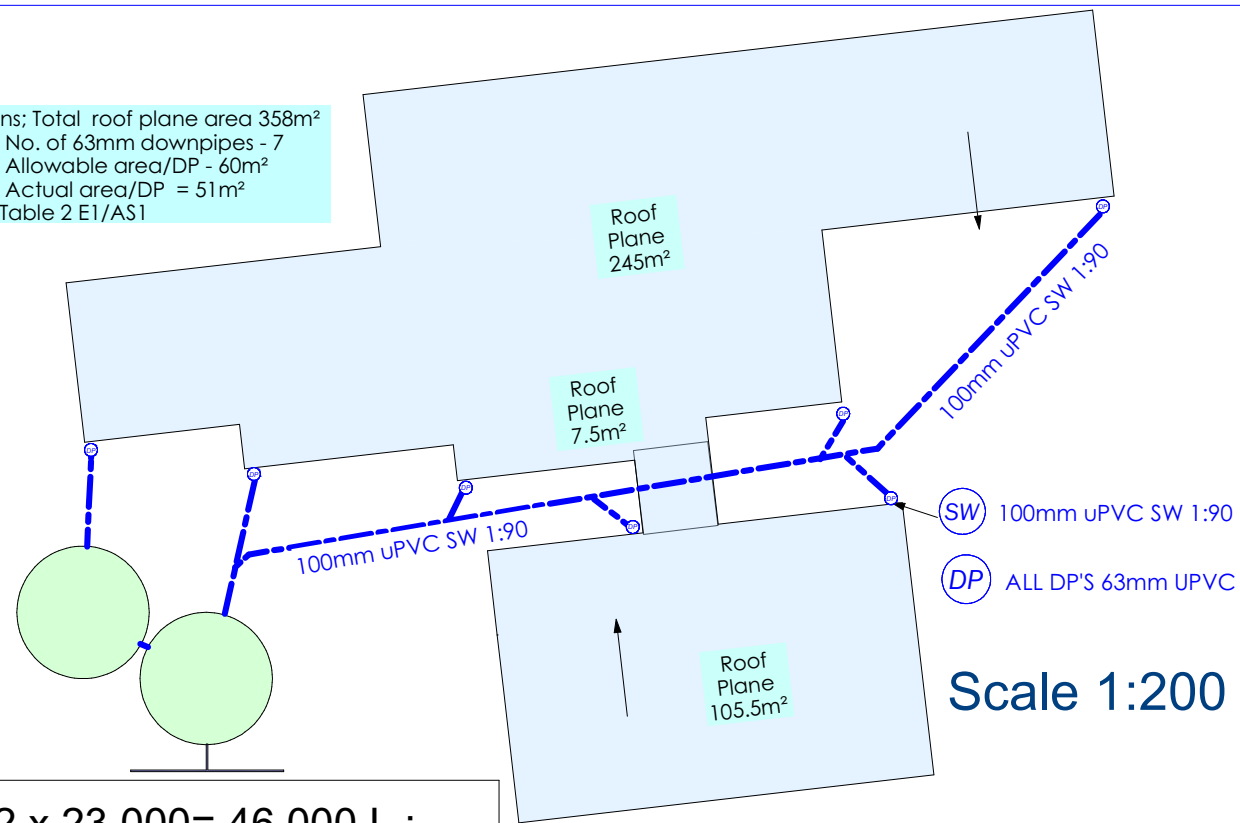


Drive to road section B-B



Chip seal min. 5m into property
By TDC approved contractor

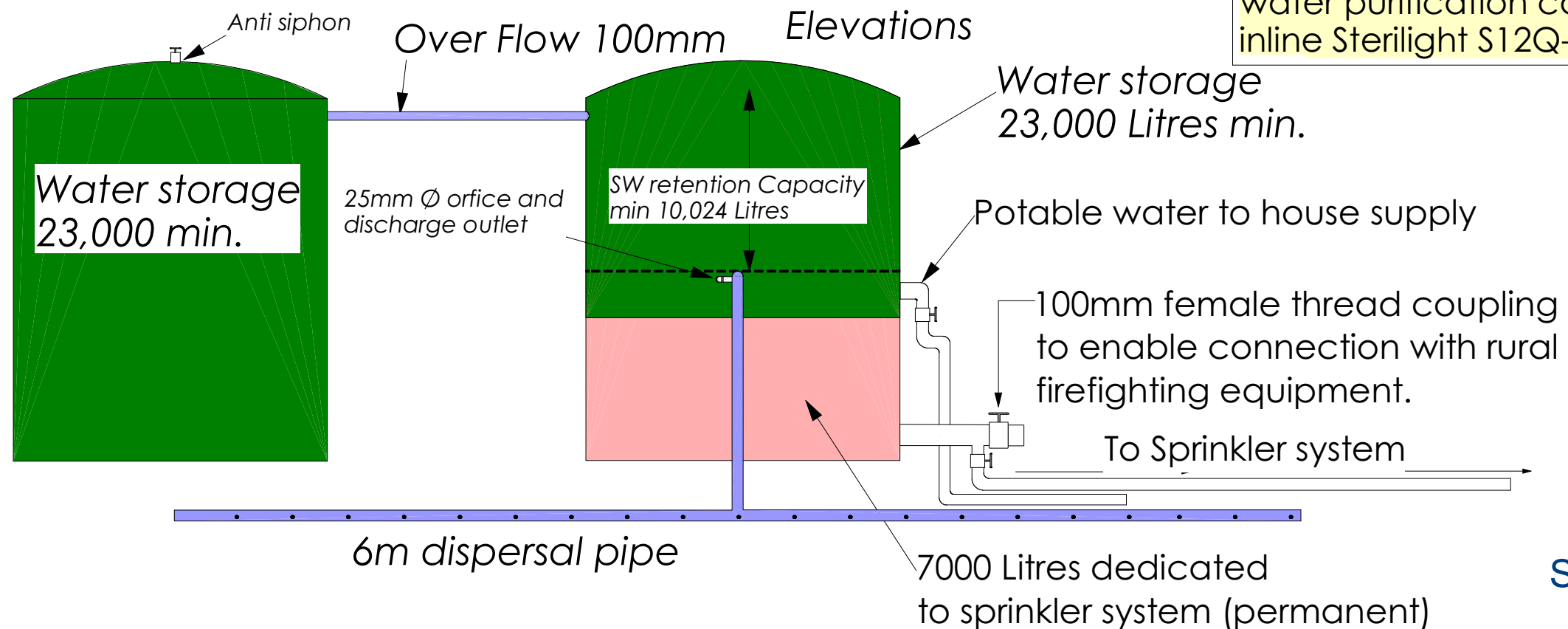
Down pipe calculations; Total roof plane area 358m²
 No. of 63mm downpipes - 7
 Allowable area/DP - 60m²
 Actual area/DP = 51m²
 Design complies with Table 2 E1/AS1

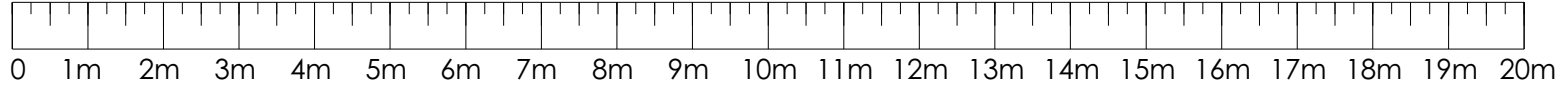
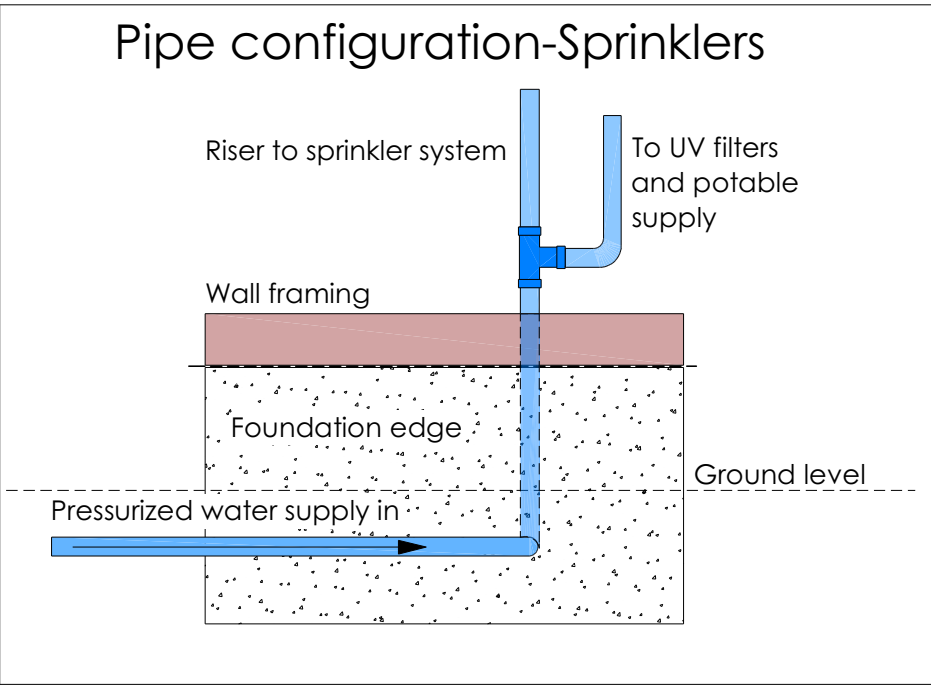
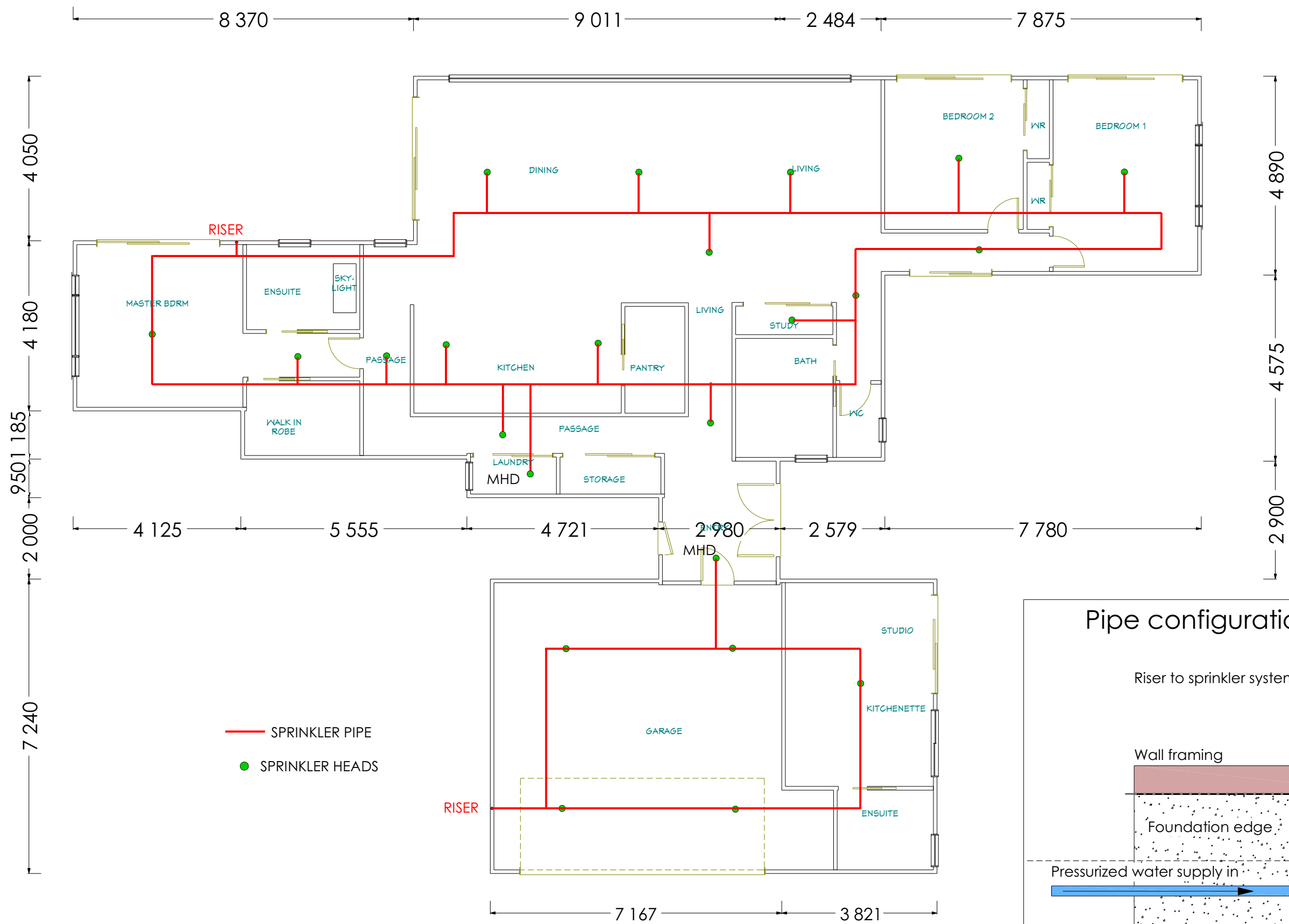


Min Storage 2 x 23,000 = 46,000 L ;
 Min. retention required from RM120600
 is 358m² x 28 = 10,024L; Therefore
 the design complies with RM 120600

Water to storage tanks fitted with Marley first flush diverter system. Water into house to be treated through 2 x Jumbo filter housings with 5 micron pleated filter cartridge, and 1 micron polyspun water purification cartridge. inline Sterilight S12Q-PA UV Sterilizer

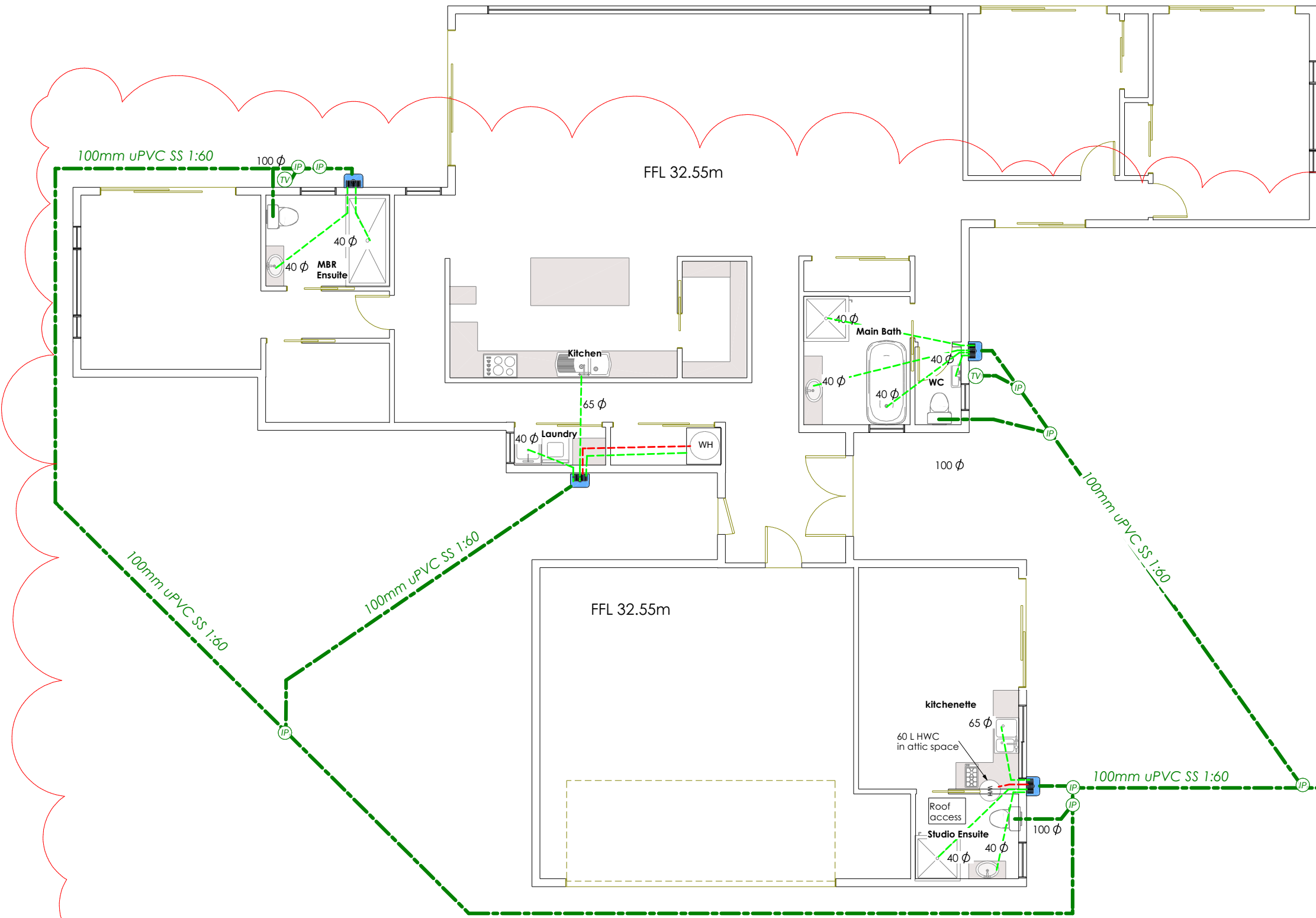
Water Storage over-flow dispersal system





PLUMBING AND DRAINAGE
 BUILDING CODE CLAUSE G13 FOUL WATER
 ACCEPTABLE SOLUTION AS1 SANITARY PLUMBING

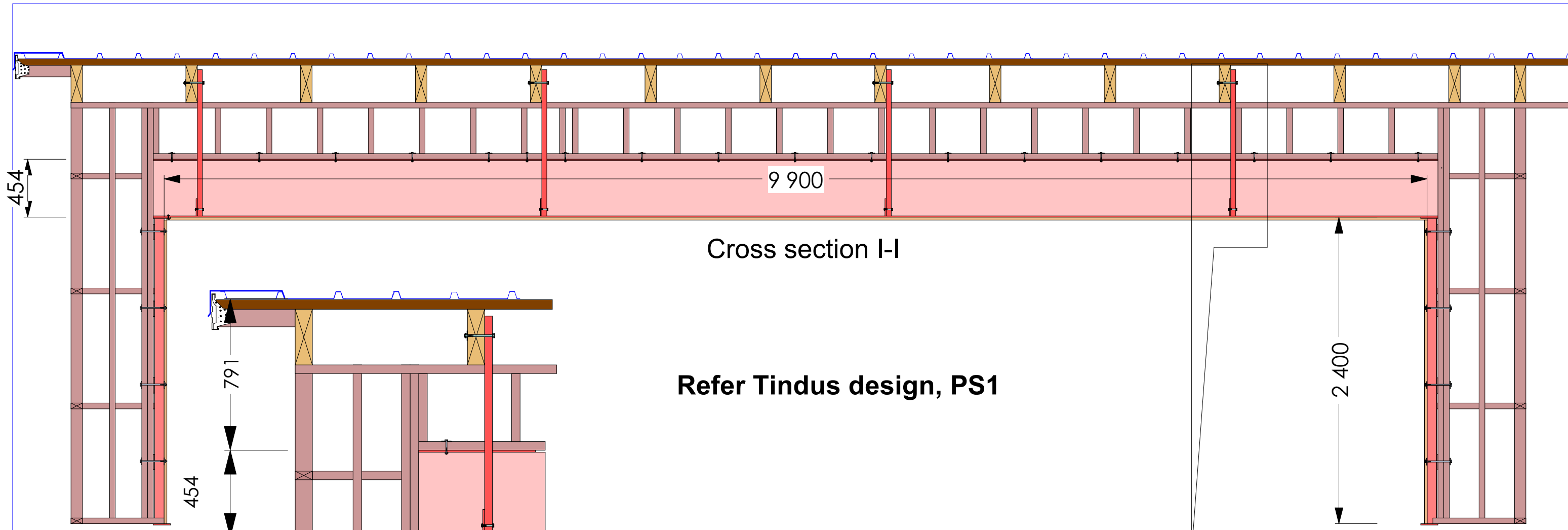
- RP Rodding Point
- IP Inspection Point
- TV Terminal Vent Diameter 80mm min.
- SS 100mm uPVC SS 1:60



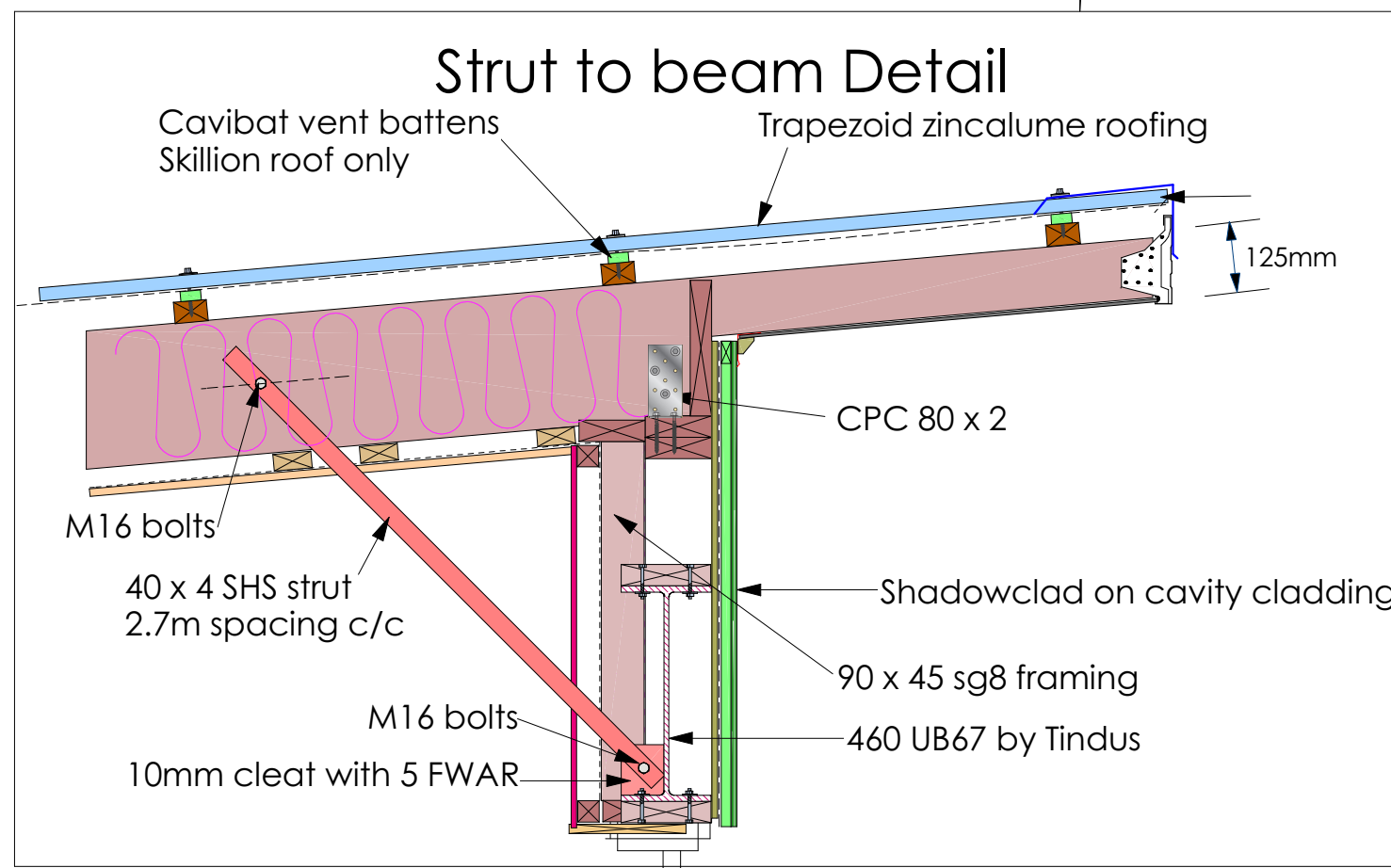
FIXTURE SPECIFICATIONS

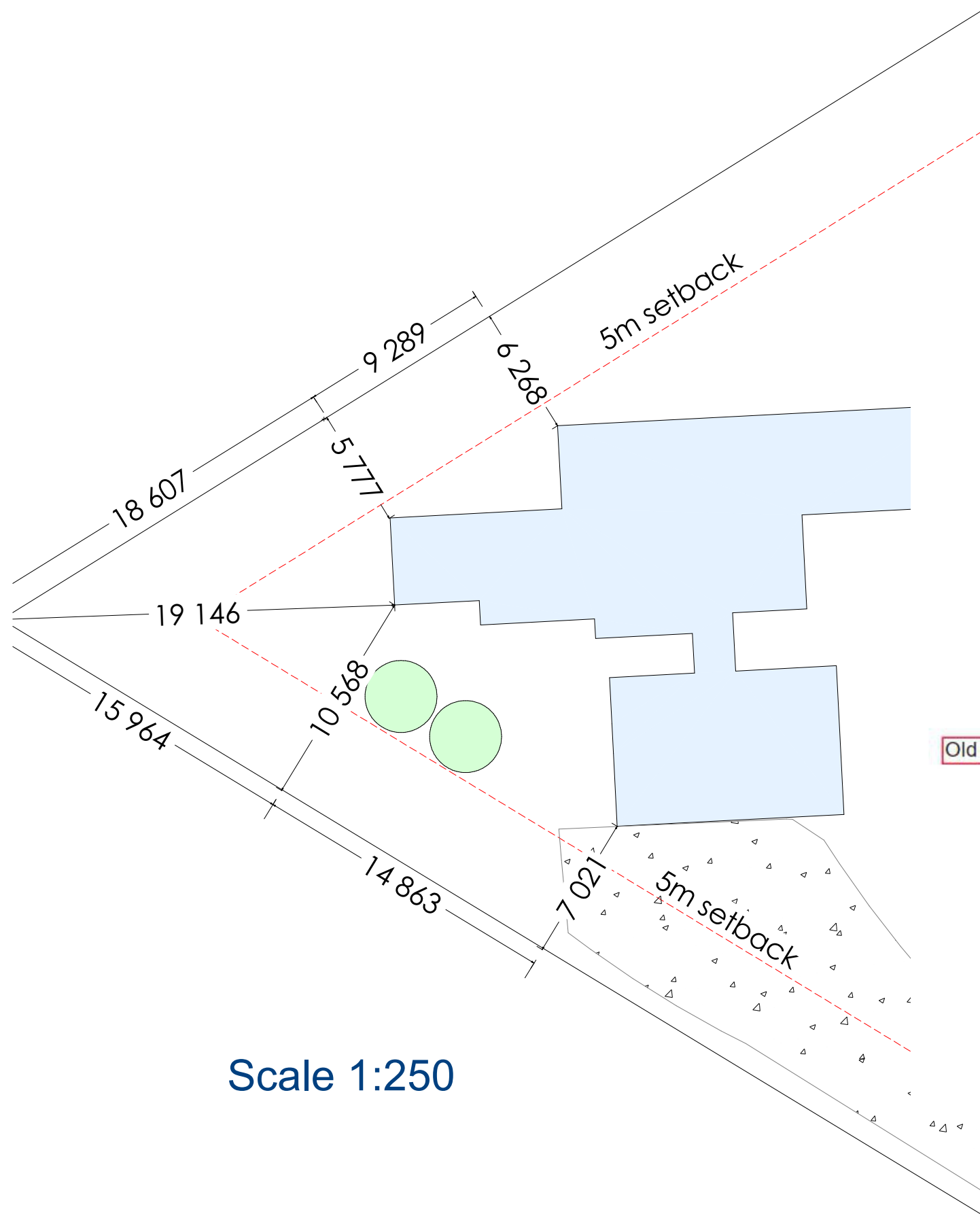
All fixture wastes min 1:40 fall

BATH		FFL 32.55m	
BATH	2.22m	40mm	
VANITY	3.45m	40mm	
SHOWER	3.32m	40mm	
WC		FFL 32.55m	
VANITY	.9m	40mm	
MBR ENSUITE		FFL 32.55m	
VANITY	2.587m	40mm	
SHOWER	1.25m	40mm	
STUDIO ENSUITE		FFL 32.55m	
VANITY	2.587m	40mm	
SHOWER	1.25m	40mm	
LAUNDRY		FFL 32.55m	
TUB	1.207m	40mm	
KITCHEN		FFL 32.55m	
SINK and DW	2.36m	65mm	AAV fitted
KITCHENETTE		FFL 32.55m	
SINK and DW	1.65m	65mm	
HOT WATER STORAGE x 2			
DRAIN	20mm copper	-----	
Sludge Overflow-	2.65m	40mm	

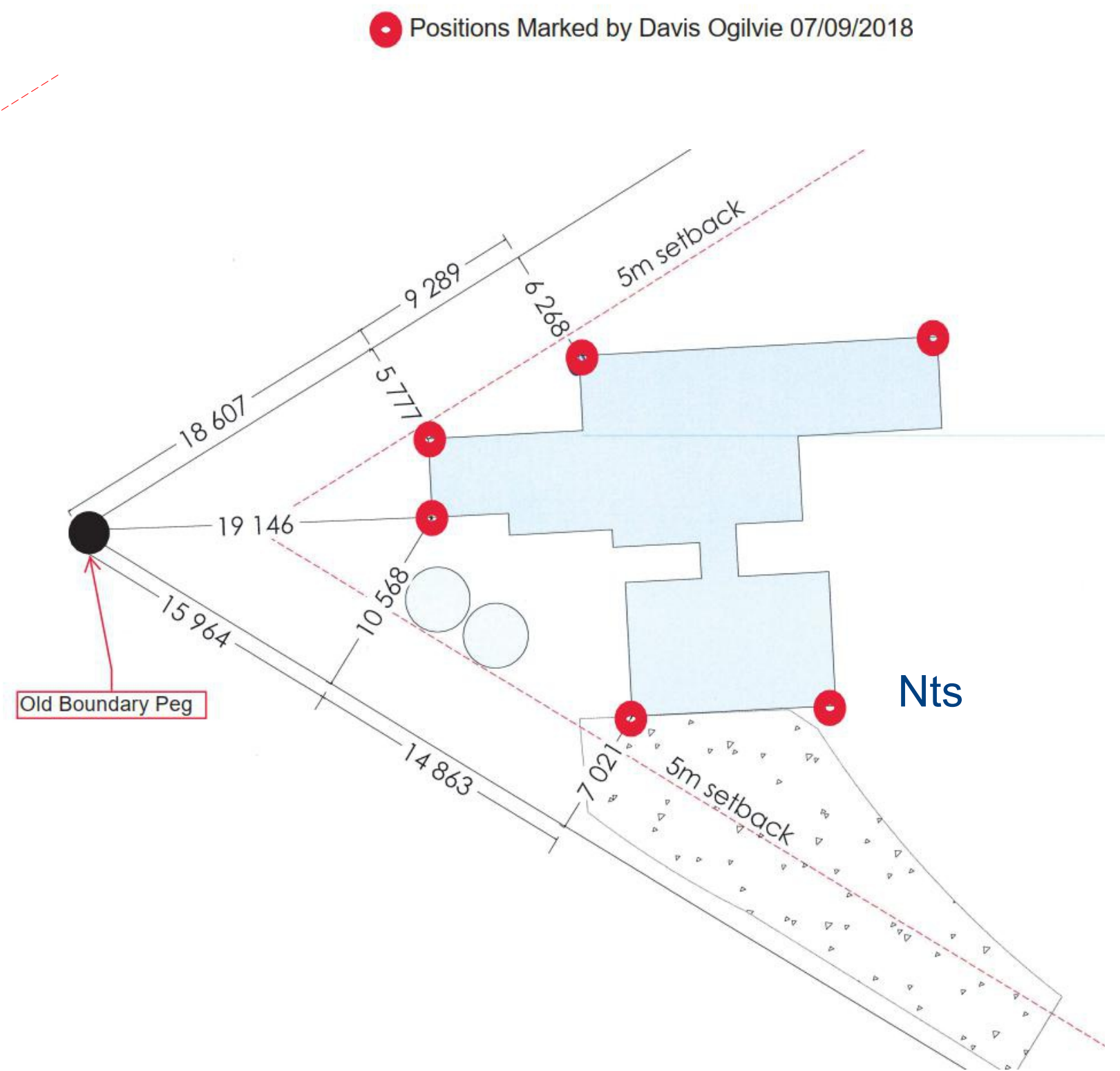


Refer Tindus design, PS1



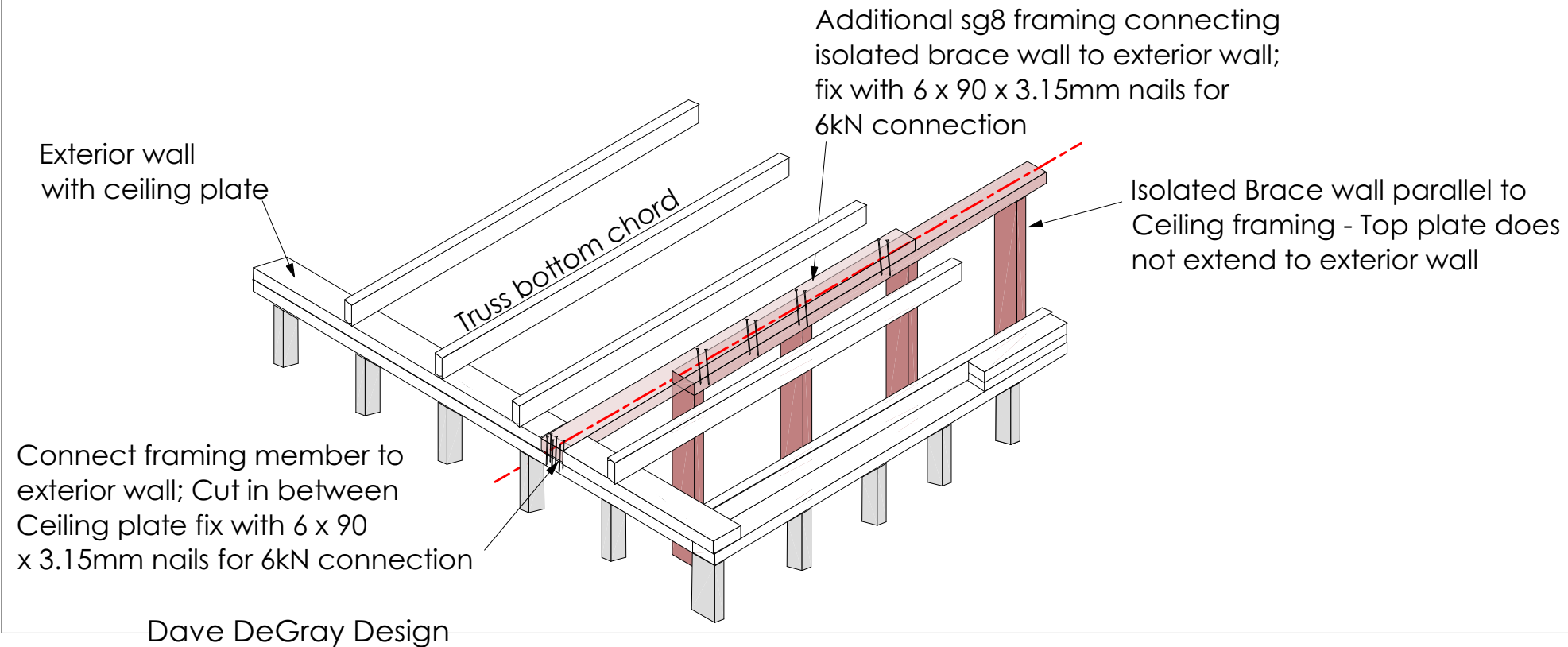


Scale 1:250

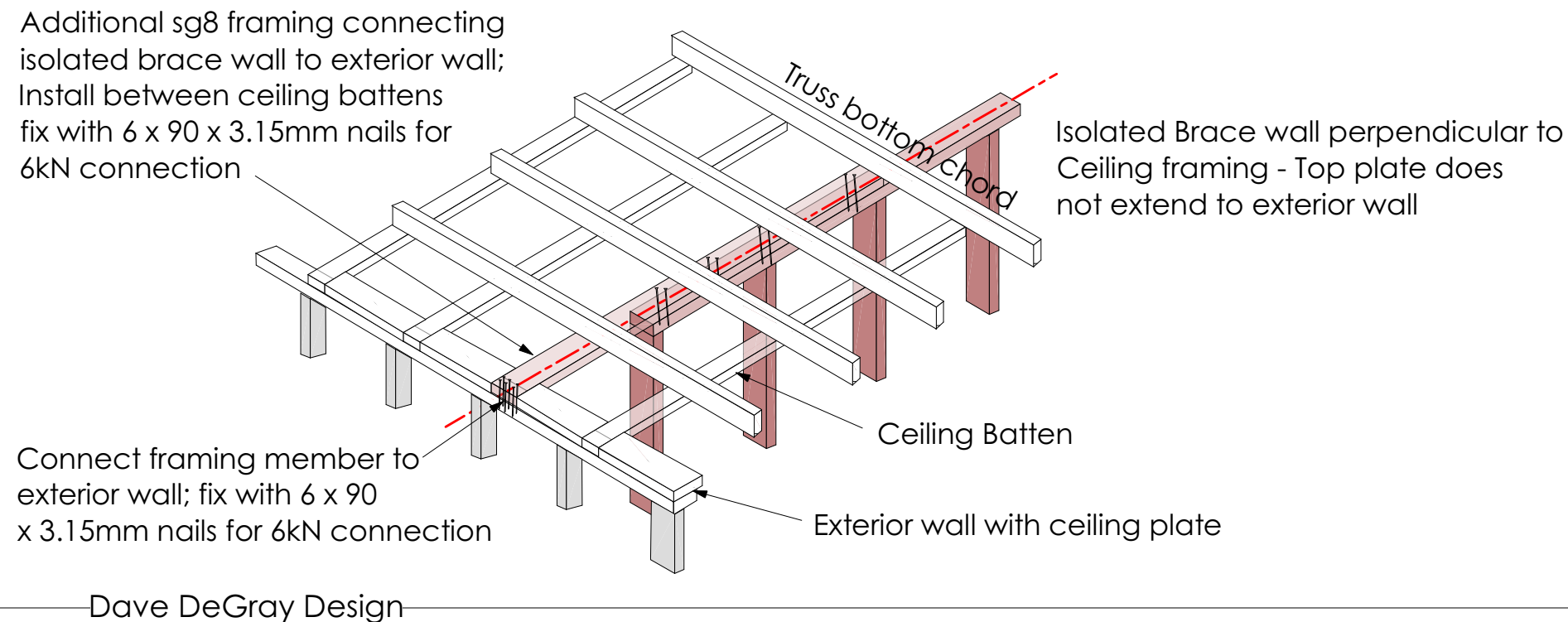


Davis Ogilvie set out 7/9/2018

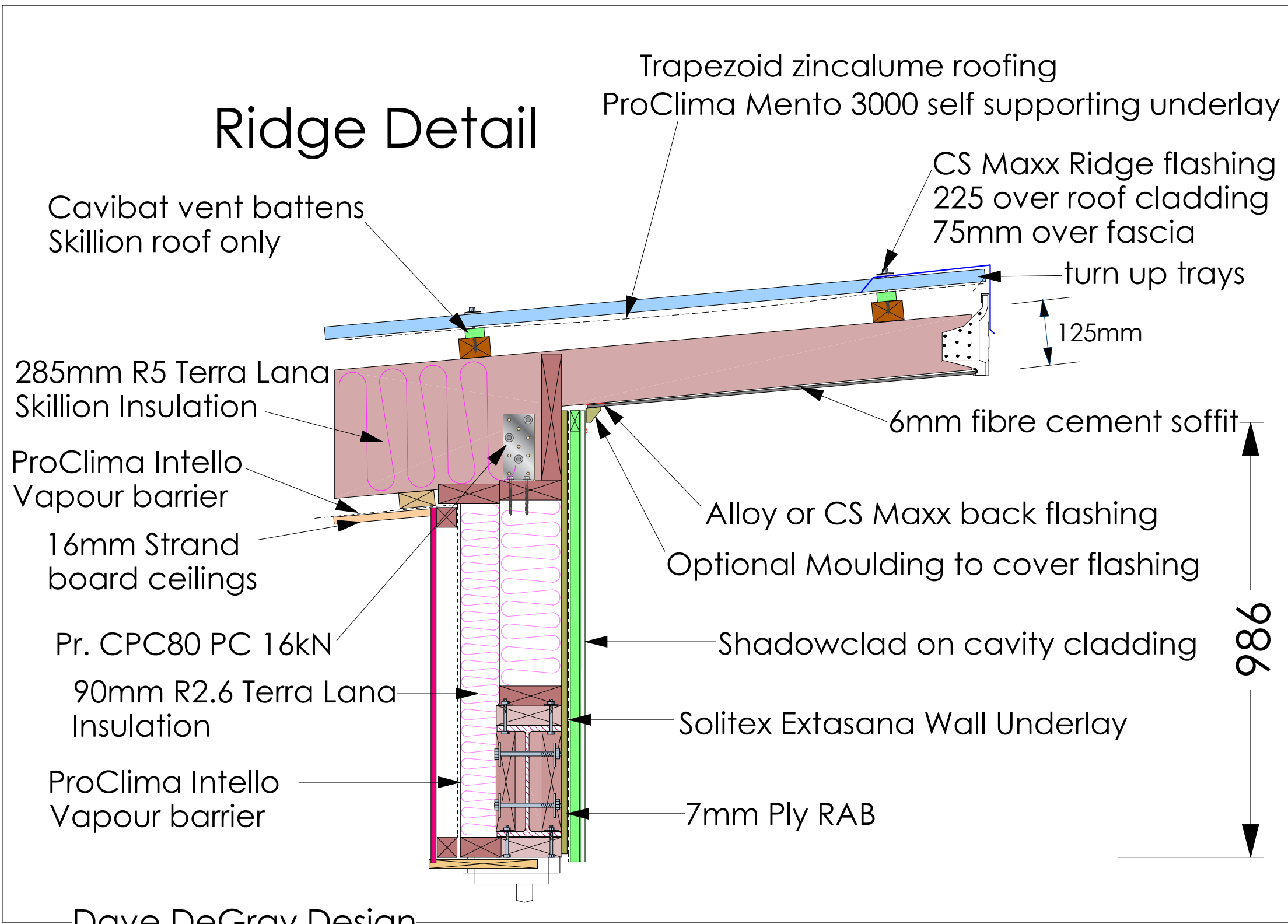
Brace wall connection parallel to ceiling framing



Brace wall connection perpendicular to ceiling framing



Ridge Detail



Dave DeGray Design