

STAGE: CONSENT

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idesignarchitecture

The following design elements have been specified by other designers:

- Truss Design / Placemakers

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Proposed New Home for:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**

Date: 4/11/2026

Foundation (NZS3604 block ring foundation).

100mm thick conc. slab, SE62 500E reinforcing mesh, min 225mm lap on 0.25 polythene.

Min. 5mm - 25mm max. sand blinding to cover hardfill to ensure the vapour barrier is protected from any granular protrusions
Malthoid under all bottom plates, overlapping timber by min. 6mm.

External Walls (SG8)

90x45 H1.2 frame + 90x45 top plate, studs @ 600crs max, nogs @ 800crs.
Cedar Cladding nogs @ 480crs max

140x45 H1.2 frame +140x45 top plate, studs @ 600crs max, nogs @ 480crs.
Cedar Cladding nogs @ 480crs max

Scyon Stria OR Oblique Cladding:
• An extra stud is required in internal corners
• Pre-nail to add; nog at soffit line

MARSHALL WATERPROOFING Tekton building wrap to all exterior frames

Standard 10mm GIB linings throughout, except wet areas. Fixed to comply with the latest Winstones GIB Manual - level 4 paint finish

Wall framing behind cavities
Where stud spacing's are greater than 400 mm, and flexible wall underlay's only are used, an intermediate means of restraining the flexible wall underlay and insulation from bulging into the drained cavity shall be installed.
An acceptable method to achieve this is using one of the following:
• intermediate cavity batten between the studs.
• 75mm galvanised mesh.
• Polypropylene tape or galvanized wire at 300 mm centres fixed horizontally and drawn taut

Bottom plate fixing: Refer to Ramset table (or equivalent fixing installed as per manufacturers specs). M12x140mm bolt/screw with 50mmx3mm sq washer min 90mm embedment. 150 mm off each end of the plate and be spaced at a max. of 900crs, or 600crs when used on slab edges formed by masonry header

Exterior Cladding

James Hardie Stria Vertical weatherboards installed, flashed and finished to the latest James Hardie specifications and in accordance with NZBC: E2/AS1 External Moisture. Merchant to include all flashings & fixings as required by cladding system.

James Hardie horizontal cavity battens: Horizontal cavity battens (2700mm long, 45mm wide and 20mm thick, H3.1 timber cavity battens):
• are minimum 20mm thick and 45mm wide.
• fixed horizontally to nogs.
• fixed vertically to studs at corners and openings.
• must be fixed by the cladding fixings to the main framing over the flexible underlay. Therefore until claddings are fixed the battens only need to be tacked to framing by 40 x 2.8mm or longer nails at 800mm c/c;
• permit air circulation and water drainage
• Pre-nail to add; nog at soffit line

Selected Cedar Vertical Shiplap, Various sized cladding on CAVIBAT battens, installed, flashed and finished to the latest Manufacturers specifications and in accordance with NZBC: E2/AS1 External Moisture. Merchant to include all flashings & fixings as required by cladding system.
• Pre-nail to add; nog at soffit line

External Joinery

Aluminium joinery installed to comply with NZBC: E2/AS1.
Pre-primed jambs, architraves.
Approved window sealing tape to all openings.
Protecto Tape flashing tape over flashing fixings. Do not fix cladding through flashings.
Glazing to comply with NZS:4223:2008/2016 amendments.

Internal walls (incl. LBW) (SG8)

90x45 H1.2 frame + 90x45 top plate, studs @ 600crs max, nogs @ 800crs.
Standard 10mm gib linings throughout, except wet areas. Fixed to comply with the latest Winstones Gib Manual.- level 4 paint finish
Bottom plate fixing: Ramset HD875 drive pin + washer (or equivalent) @ 600crs (150 off each end) (or equivalent fixing installed as per manufacturers specs)

Wet Areas

Floor finish: Refer to Floor Plan, 'Floor Finishes Key'
Non-slip vinyl lining over sealed floor. Minimum slip resistance co-efficient for level surface between 0.25 - 0.50 acceptable in accordance with NZBC: D1/AS1 Access.
Option 1 - Cove vinyl up wall 100mm, fix skirting or vinyl smooth edge to wall junction
Option 2 - Waterproof seal vinyl to edge of painted skirting, contractor to comply with NZBC: E3/AS1 Internal Moisture.

Wall & Ceiling finish: BATHROOM & ENSUITE
GIB Aqualine: 10mm to walls and 13mm to ceilings 1/coat GIB Sealer with 2/coats semi-gloss or gloss, acrylic enamel paint

Ceilings (SG8)

Rondo battens on clips fixed to trusses as per manufacturers specifications @ 600crs. Ensure battens are straight prior to lining. 13mm Gib linings with 32mm x 6g GIB® Grabber™Screws @ 600crs. Glue daubs to be minimum of 200mm from centre screw. Do not screw where you glue. 32mm x 6g GIB® Grabber™ Screws @ 300crs around the perimeter. Gib stopping to level 4 paint finish. 1/850sq ceiling access to roof space.
Bottom chord restraints are required as per truss design.
Fix 90x45 runners to top of bottom chords.

Roof (SG8)

Truss Design:
Pre-fabricated GANGNAIL 8° pitch H1.2 trusses @ 900crs - galv wire netting with synthetic breathable type self supporting underlay laid horizontally with min 150mm lap.

70x45 H1.2 purlins, spanning 900mm.
Purlin spacings - End Span - 600mm, Intermediate Span - 900ctrs.
Fixing - Type T - 1/10g self-drilling screw, 80mm long purlin/truss connection (2.4KN fixing)

Lumberlok strip brace & tensioners tightened firmly across roof planes.

Longrun colorsteel Maxam roofing (BMT 0.40) as per elevations. Roofing fixed with compatible roofing nails or screws and sealing washers, by qualified persons with flashings as required to all junctions - flashings fixed with compatible roofing screws and sealing washers
Fixing pattern = T1 fixing pattern = fix every crest
Note: every sheet of roof cladding to span at least 3 supports)

8.4.8 Fixings:
Fixings shall be as shown in Tables 11, 12, 14 and 15, and shall be a minimum 12-gauge screw, as shown in Figure 39, which complies with Class 4 ofAS 3566: Part 2.
8.4.8.1 Fixing requirements
Fixings shall:
a) Be fixed through crests,
b) Penetrate purlins by a minimum of 40 mm for nail fixings and 30 mm for screw fixings,
c) Include sealing washers of:
i) neoprene (having a carbon black content of 15% or less by weight),
ii) profiled washer and EPDM washer where required to allow for expansion of the profiled metal roof cladding.

NZBC E2/AS1 8.4.10 Allowance for Expansion
Allowance shall be made for expansion of corrugated and trapezoidal roof cladding as shown in Table 16.
Refer also to the latest NZ metal roof & wall cladding code of practice

Insulation

R7C Pink Batts insulation to all ceilings, except garage.
Maintain a 25mm gap clearance between the insulation and roof underlay.
Notch over trusses.
R3.2C Pink Batts insulation to perimeters.
Maintain a 25mm gap clearance between the insulation and roof underlay.
Notch over trusses.
R2.8W Pink Batts insulation to all 90mm exterior wall cavities excluding garage, however including walls between house & garage. Friction fitted.
R3.2W Pink Batts insulation to all 140mm exterior wall
R0.50 Joinery. (Low E_4 glass, Thermally broken frame, Argon gas)
R0.46 Internal hollow core garage door
R2.78 Expol Thermaslab (H) Concrete Slab (100mm)

Skylights: R0.36

Soffit

4.5mm Hardiflex soffit lining fixed to underside of truss top chord extensions.

Refer to roof plan for eave widths, 25x19pp soffit mould.

Colorsteel Fascia & spouting with Marley Downpipe system.

Snow straps as required: Standard Metalcraft 30mm .55 gauge colorsteel straps fixed to roof with Tex screws and riveted to the gutter, fixed @ 600 crs.

Soffit linings framed & fixed in accordance with 'EAVES & SOFFITS by James Hardie, Installation Manual'

ARCHITECTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH ALL RELEVANT PRODUCER STATEMENTS AND MANUFACTURERS SPECIFICATIONS.

All Construction in accordance with NZS 3604:2011 & NZBC

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PLAN NOTES

Scale:
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Sheet no: **1**

Design: A1	Drawn: JD/TN	Check: AC	LBP: AC	Date: 4/11/2026

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HIGH	3	B	N5 - 1.5kPa	6

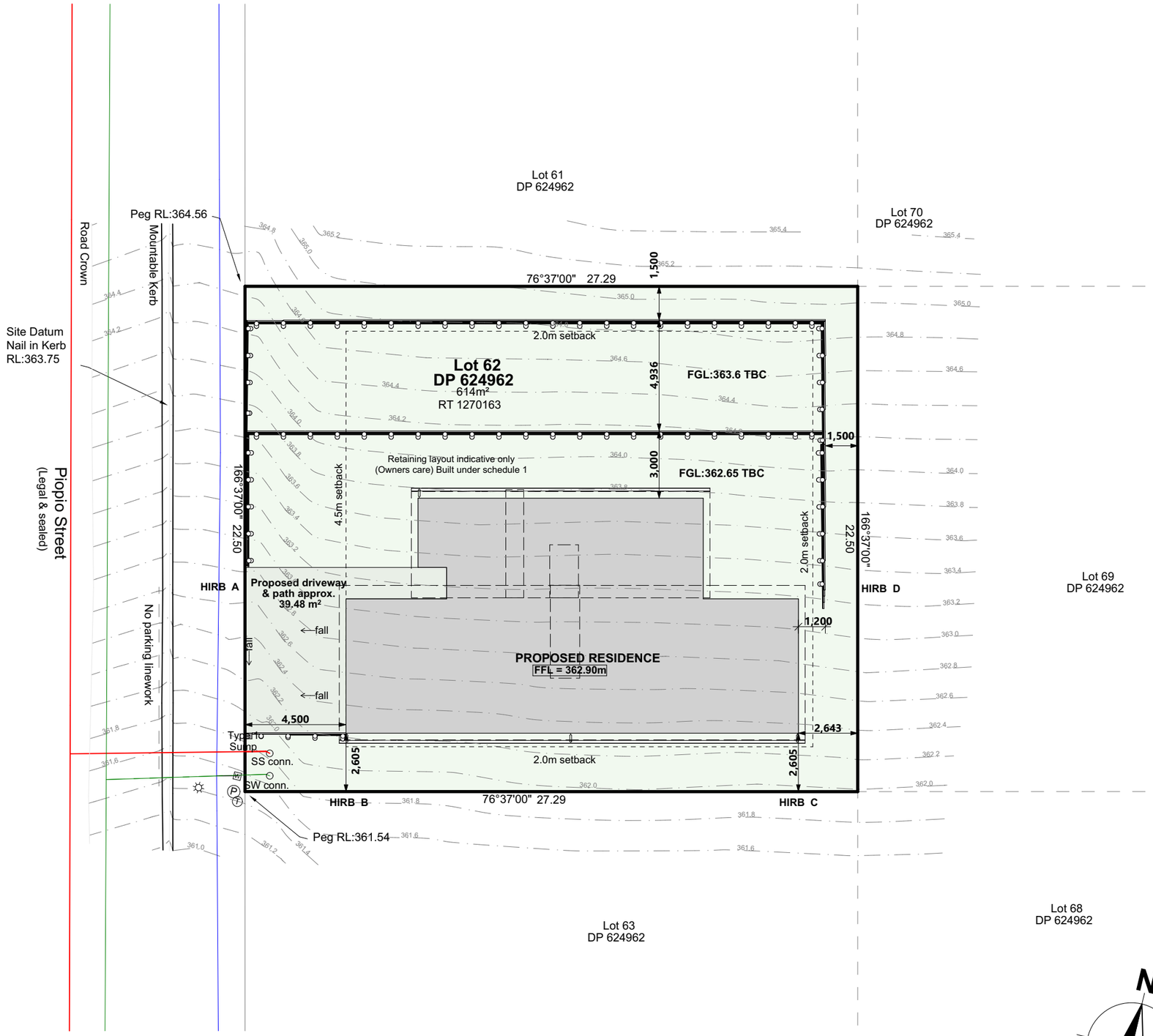
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Cautionary Notes:
BUILDING CONTRACTOR TO ASSESS SITE TO ENSURE DAYLIGHTING & BUILDING RESTRICTIONS ARE COMPLIED WITH.
NO LIABILITY FOR ENCROACHMENT SHALL BE HELD BY DESIGNER IF SITE IS NOT SURVEYED BY A REGISTERED SURVEYOR PRIOR TO COMMENCEMENT OF FOUNDATIONS.

Construction Notes:
Before building is erected on site, all rubbish, noxious matter and organic matter shall be removed from the area to be covered by the building.
Ensure final building platform & finished ground have an even fall away from building to ensure water not be allowed to accumulate in buildings subfloor.
Any fill to be dry & approved by engineer & compacted down in accordance with NZS.3604.2011

Contractor to
- confirm ground is 'Good Ground' 300kPA bearing to comply with NZS 3604: 2011, except in the case of SED design.
- locate all service connections points on site prior to commencement of works. Check invert levels or pipes and manholes.
- confirm plumbing route and fixture positions on site prior to commencement of works.
- locate all electrical and water services on site.
- confirm on site all boundary bearings, lengths & peg locations on site prior to commencement of works, to ensure house position is correct.

HIRB = Height in Relation to Boundary

Sediment Control:
- No building work will be started on this project until the construction of an approved stormwater outfall has been completed for this proposed Lot
- All erosion and sediment control structures are to be inspected and maintained daily
- Prevent any backfill or debris from washing onto council or neighbouring properties
- All ground cover vegetation outside the immediate building area to be preserved during the building phase
- All erosion and sediment control measures are to be installed prior to commencement of earthworks
- Stockpiles of clay and materials are to be covered with impervious sheeting
- Roof water downpipes to be connected to the main stormwater system as soon as roof sheathing & spouting is installed

NZBC F5:
Construction and Demolition Hazards
Acceptable Solution F5/AS1

1.0 Work-Site Barriers
1.0.1 The necessity for barriers will depend mainly on the site location.
The need will be greater in areas with high levels of pedestrian traffic (i.e. in Central Business Districts), than in industrial or rural areas.
Barriers are not necessary for domestic dwellings up to 2 storeys above ground level unless specific hazards exist.
At all work-sites hazard evaluation will take account of:
1. Pedestrian counts adjacent to the site.
2. Car parking adjacent to the site.
3. Location of neighbouring buildings.
4. Presence of neighbouring work-sites or recreation areas.
5. Proximity to schools or early childhood centres.
6. Proximity to housing.
7. The depth of a water hazard.
8. The period of time for which ponded water will be present.
9. The accessibility and 'visibility' of the site.

1.0.2 If a work-site is not completely enclosed, and unauthorised entry by children is likely, it is acceptable for specific hazards to be fenced only when workers are absent from the immediate vicinity.

1.1 Site Fences and Hoardings
1.1.1 Fences and hoardings shall extend at least 2.0 m in height from ground level on the side accessible to the public.
1.1.2 An acceptable fence may be constructed with galvanised chainlink netting having a maximum sized grid of 50 mm x 50 mm. Post spacing shall be a maximum of 2.5 m, and the gap between the bottom of the fence and ground no greater than 100 mm.

Finished Floor Level (FFL) shall be:
a) For sites level with or above the road, no less than 150 mm above the road crown on at least one cross-section through the building and roadway
b) For sites below the road, no less than 150 mm above the lowest point on the site boundary
c) FGL to be a minimum of 225mm below FFL with a fall away from the building
d) FFL to be a minimum of 150mm above paving level at foundation, with a fall away from building
e) Minimum FFL required by council/ consent notices etc.. to be confirmed by main contractor

Lot:	**62**
DP:	**624962**
Site Area:	**614m²**
Gross Plan Area:	**175.62m² (includes covered areas)**
Site Coverage:	**28.6% (40% maximum)**
Maximum Building Ht:	**8m**
Territorial Authority:	**Queenstown Lakes District Council**
Planning Zone:	**Suburban Residential Zone**

All Construction in accordance with NZS 3604:2011 & NZBC

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SITE PLAN

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Rev:
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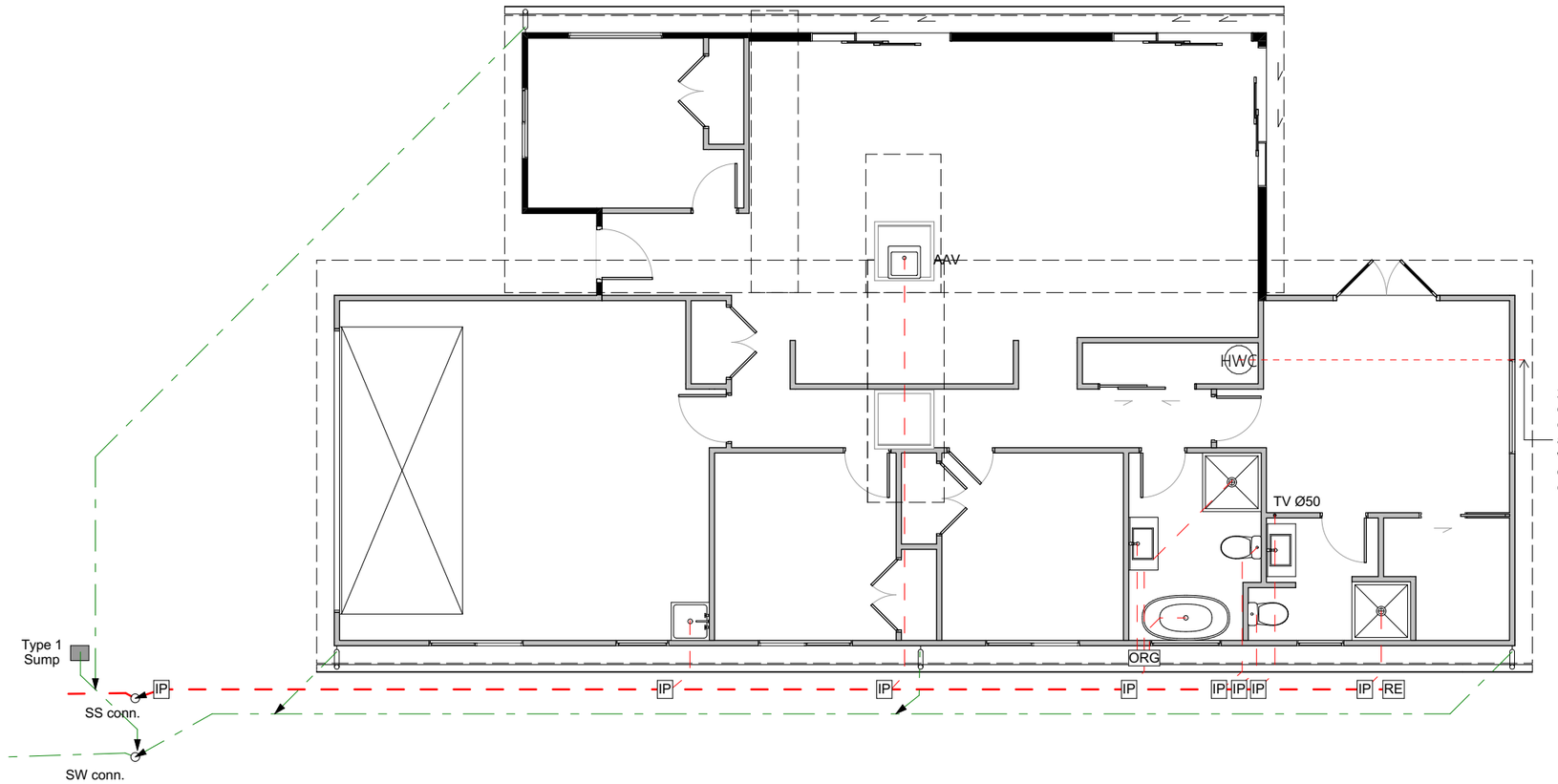
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Construction Notes:

Plumbing to AS/NZS:3500.2.2 (min 1:60 pipe gradient) by qualified tradesman.
Contractor to locate all service connections on site prior to earthworks confirm all boundary setbacks & restrictions comply with current regulations prior to commencement of foundations.
All waste pipes PVC. Sizes, fall, venting & discharge to be confirmed by NZ qualified plumber. Confirm positions of available services cabling etc on site prior to any excavation

Water Supply:

Internal water pipes to Polybutylene.
All pipework and pipes exposed to freezing to be lagged with closed cell foam
- Closed cell foam polymer insulation or fibre glass insulation which is preformed to the shape of the pipe and not less than 13 mm thick, is acceptable material for preventing pipes less than or equal to 40 mm diameter from freezing. Any insulation material that absorbs moisture shall be protected in a waterproof membrane.

Fixture unit rating: 20 units
Bathroom Group- 6 (x2)
Laundry tub - 5
Kitchen sink - 3

Table 3.9.3.1 — Size and rating of vents

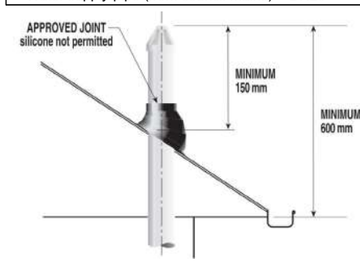
Size of vent pipe DN	Fixture units discharging to drain		Vent rating
40	> 1	≤ 10	0.5
50	> 10	≤ 30	1
65	> 30	≤ 175	2
80	> 175	≤ 400	3
100	> 400	≤ 600	6

TV min 50mm Ø NZS3500

Plumbing Legend as per AS/NZS 3500 part 2 : 2021

Symbol	Item	Symbol	Item
IP	Inspection point		DN100 uPVC SS pipe, DN100 min water closets (ref specs) min 1:60 gradient
	Downpipe		DN100 uPVC SW pipe, min 1:120 gradient
HT *	Hose Tap		min uPVC fixture waste pipe sizes: DN40 basins, single head showers, baths, sinks, dishwasher & ldy tubs, DN50 multiple heads showers, sinks + dishwashers, Ldy tub + washing machine (combined) DN65 unvented branch drains exceeding 2.5m long (max 5 fixture unit rating) DN65 to all wastes discharging directly into drain under slab min 1:40 gradient. 20mm HWC vent drain (copper)
org	Overflow relief gully		
oTV	Terminal vent		

Water supply pipe (from council mains) = DN20



NZBC: E1 Surface Water

3.7 Access for maintenance
3.7.1 Access for maintenance shall be provided on all drains. Access is to be achieved via an inspection point, rodding point, inspection chamber or access chamber, complying as appropriate with Figures 10, 11 or 12.
3.7.2 Points of access shall be spaced at no further than:
a) 50 m where rodding points are used.
b) 100 m where inspection points, inspection chambers or access chambers are used.
3.7.3 Points of access are required at:
a) Changes in direction of greater than 45°,
b) Changes in gradient of greater than 45°,and
c) Junctions of drains other than a drain, serving a single downpipe, that is less than 2.0 m long.
3.7.4 Inspection chambers or access chambers (see Figures 11 and 12) shall be provided where changes in both gradient and direction occur and where either is greater than 22.5°.
3.7.5 Where the depth to the invert of the drain exceeds 1.0 m, an inspection chamber is not acceptable and an access chamber shall be used.

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DRAINAGE PLAN

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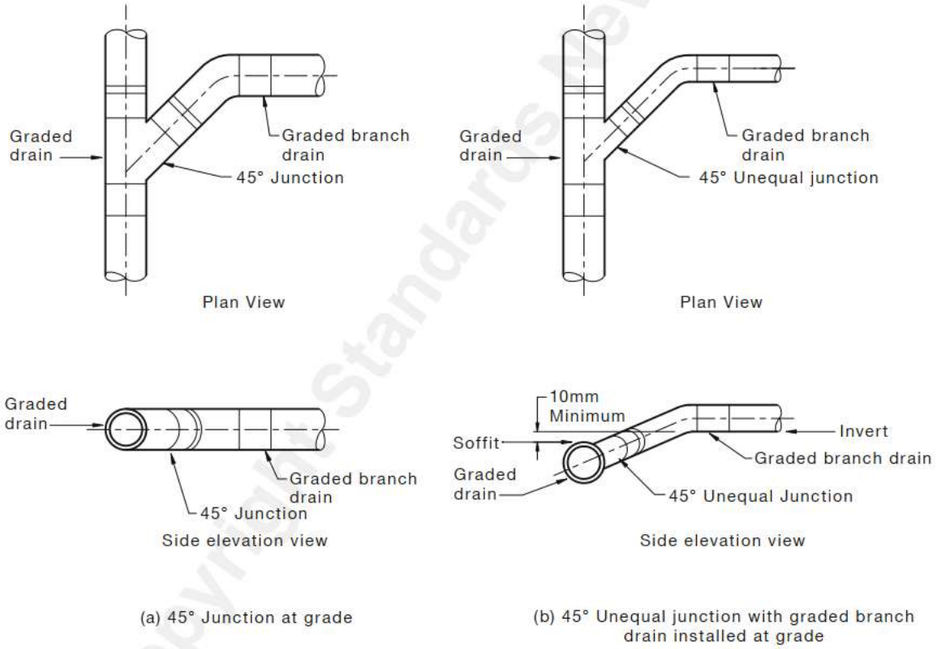
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4.26 JUNCTIONS IN DRAINS



(a) 45° Junction at grade

(b) 45° Unequal junction with graded branch drain installed at grade

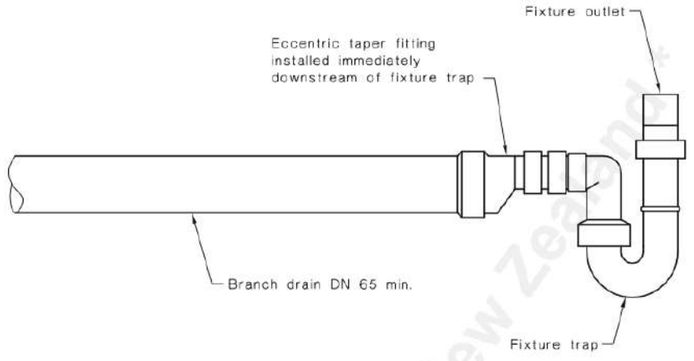
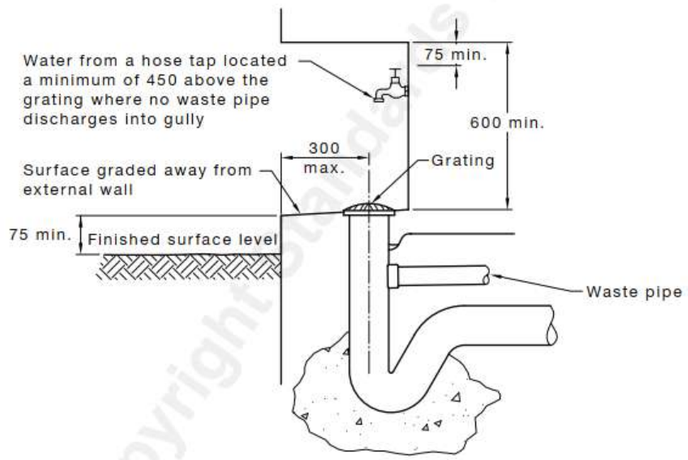


FIGURE 4.9.4 CONNECTION OF FIXTURE TRAPS (DN 40 OR DN 50) ON GRADE, TO BRANCH DRAINS

OVERFLOW RELIEF GULLY (ORG)

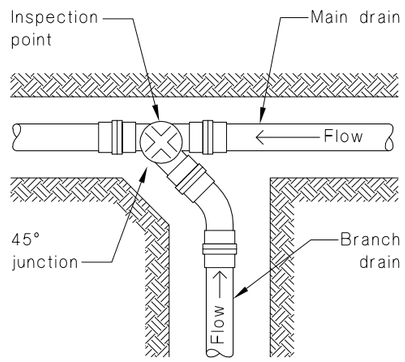


(b) Typical detail of overflow relief gully positioned in recess

DIMENSIONS IN MILLIMETRES

FIGURE 4.36.6.5 POSITIONING OF OVERFLOW RELIEF GULLY

Figure 9: **Inspection points**
Paragraph 5.7.3



Access points
All drains shall be laid to allow easy access for maintenance and the clearance of blockages.
Drains shall be provided with access points to facilitate cleaning and the clearance of blockages. Such access points shall be constructed to prevent the ingress of ground water and tree roots.
Access points may comprise access chambers, inspection chambers, rodding points or inspection points.

Access points shall be provided at the following locations:
a) Immediately prior to drain outfalls,
b) Immediately inside the boundary of the property served,
c) At the junction of every drain with another drain except that no access point is required where the branch drain is less than 2.0 m long and only serves a gully trap,
d) Every change in horizontal direction of greater than 45°,
e) Every change in gradient greater than 45°,
f) At intervals (on straight lines) of no less than:
i) 50 m where rodding points are used, or
ii) 100 m where access chambers, inspection chambers or inspection points are used, and
g) Within 2.0 m outside the building where a drain enters or exits from under a building.

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DRAINAGE ASNZ/3500.5

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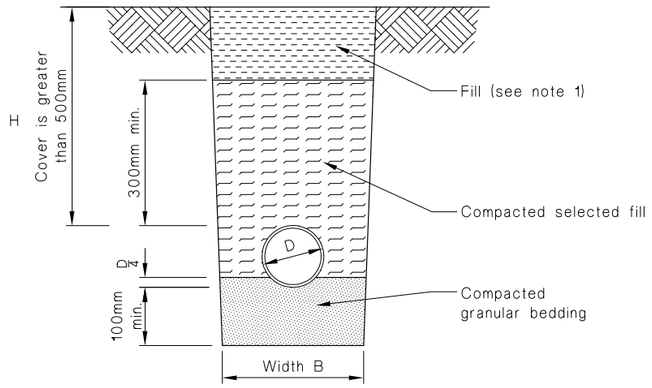
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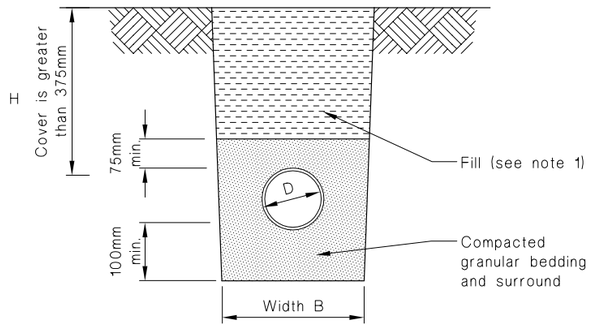
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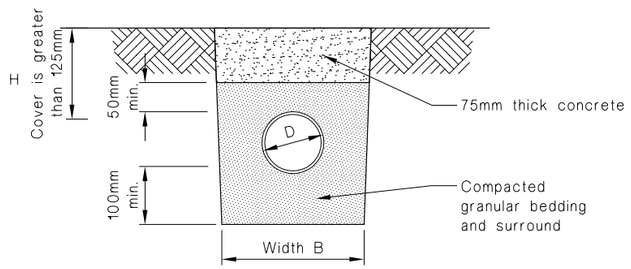
Figure 7: **Bedding and backfilling**
Paragraphs 2.1.1, 5.2.1, 5.3.1 and 5.4.1



(a) Cover greater than 500 mm



(b) Cover greater than 375 mm

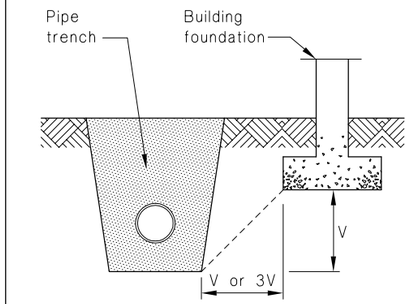


(c) Cover greater than 125 mm

NOTE:
1. Fill shall be:
-Ordinary fill where drains are located below gardens and open country.
-Compacted selected fill where the drains are located below residential driveways and similar areas subject to light traffic.

Proximity of trench to building
3.9.7 Proximity of trench to building
For light timber frame and concrete masonry buildings founded on good ground and constructed in accordance with NZS 3604 or NZS 4229, pipe trenches which are open for no longer than 48 hours shall be located no closer than distance 'V' (see Figure 14) to the underside of any building foundation. Where the trench is to remain open for periods longer than 48 hours, the minimum horizontal separation shall increase to 3V in all ground except rock.

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



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

NZBC: E1 Surface water:
3.9 Bedding and backfilling
3.9.1 General
NZBC B1 requires all drains be constructed to withstand the combination and frequency of loads likely to be placed upon them without collapse, undue damage, undue deflection or undue vibration.
In addition, adequate support needs to be provided to prevent gradients becoming less than those required as a result of:
a) Differential settlement, or
b) Deflection of an unsupported span.
3.9.2 Bedding and backfilling
Figure 13 gives acceptable solutions for the bedding and backfilling of the drainage pipes
except where:
a) The trench is located within or above peat, or
b) Scouring of the trench is likely due to unstable soils, or
c) The horizontal separation between any building foundation and the underside of the pipe trench is less than that required by Paragraph 3.9.7, or
d) The cover H to the pipe is more than 2.5 m.
3.9.3 Trench slope
Where the slope of the trench is 1 in 8 or greater, anti-scour blocks shall be provided.
These anti-scour blocks shall be:
a) Constructed from 150 mm thick concrete (17 MPa),
b) Keyed into the sides and floor of the trench by 150 mm,
c) Extended to 300 mm above the drain or to ground level where the drain cover is less than 300 mm, and
d) Spaced at:
i) 7.5m centres for trench slopes between 1 in 8 and 1 in 5, or
ii) 5.0m centres for trench slopes greater than 1 in 5.
3.9.4 Trench width
The width B of the trench shall be no less than the pipe diameter D plus 200 mm.
Trench width at the top of the pipe shall be no more than 600 mm unless the pipe(s)
in the trench are covered with concrete, as shown in Figure 13 (c).
3.9.5 Acceptable materials
Acceptable fill materials shown in Figure 13 are:
a) Bedding material of clean granular noncohesive material with a maximum particle size of 20 mm, or
b) Selected compacted fill of any fine-grained soil or granular material which is free from topsoil and rubbish and has a maximum particle size of 20 mm, or
c) Ordinary fill which may comprise any fill or excavated material.
3.9.6 Placing and compacting
a) Granular bedding and selected fill shall be placed in layers of no greater than 100 mm loose thickness and compacted.
b) Up to 300 mm above the pipe, compaction shall be by tamping by hand using a rod with a pad foot (having an area of 75 ± 25 mm by 75 ± 25 mm) over the entire surface of each layer to produce a compact layer without obvious voids.
c) More than 300 mm above the pipe, compaction shall be by at least four passes of a mechanical tamping foot compactor (whacker type) with a minimum weight of 75 kg.

All Construction in accordance with NZS 3604:2011 & NZBC

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BEDDING AND BACKFILLING

Scale:
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Sheet no: **5**
Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

www.A1homes.co.nz

Client Details:
Richard Joyce
Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**
KH175

Downpipe calculations: NZBC:E1
Plan area of roof per single downpipe for roof pitch 0-25° = 85m² of roof area for (minimum internal size) DN74 downpipe.

Plan Roof area 1 =64.13m²
Calc. - Plan Roof area/area served by DP = DP's required
64.13/ 85 = 0.75 = 1 DP

Plan Roof area 2 =43.18m²
Calc. - Plan Roof area/area served by DP = DP's required
43.18/ 85 = 0.51 = 1 DP

Plan Roof area 3 =43.18m²
Calc. - Plan Roof area/area served by DP = DP's required
43.18/ 85 = 0.51 = 1 DP

Plan Roof area 4 =43.18m²
Calc. - Plan Roof area/area served by DP = DP's required
43.18/ 85 = 0.51 = 1 DP

Therefore minimum number of downpipes required = 4
Number of DP's provided = 4

Roof gutter profile calculations:
Metalcraft Quarter Round Gutter
Cross sectional area of gutter (CSAG) = 6290mm². 55m² of plan roof area (based on 100mm/hr.)

Rainfall intensity = 50mm/hr.

Plan Roof area 1= 64.13m²
Modified Plan Roof Area = 64.13 x 50 / 100 = 32.07 m²
Number of downpipes required to accomodate Modified Roof Area:
32.07 / 55 = 0.58 (1 DP)

Plan Roof area 2= 43.18m²
Modified Plan Roof Area = 43.18 x 50 / 100 = 21.59 m²
Number of downpipes required to accomodate Modified Roof Area:
21.59 / 55 = 0.39 (1 DP)

Plan Roof area 3= 43.18m²
Modified Plan Roof Area = 43.18 x 50 / 100 = 21.59 m²
Number of downpipes required to accomodate Modified Roof Area:
21.59 / 55 = 0.39 (1 DP)

Plan Roof area 4= 43.18m²
Modified Plan Roof Area = 43.18 x 50 / 100 = 21.59 m²
Number of downpipes required to accomodate Modified Roof Area:
21.59 / 55 = 0.39 (1 DP)

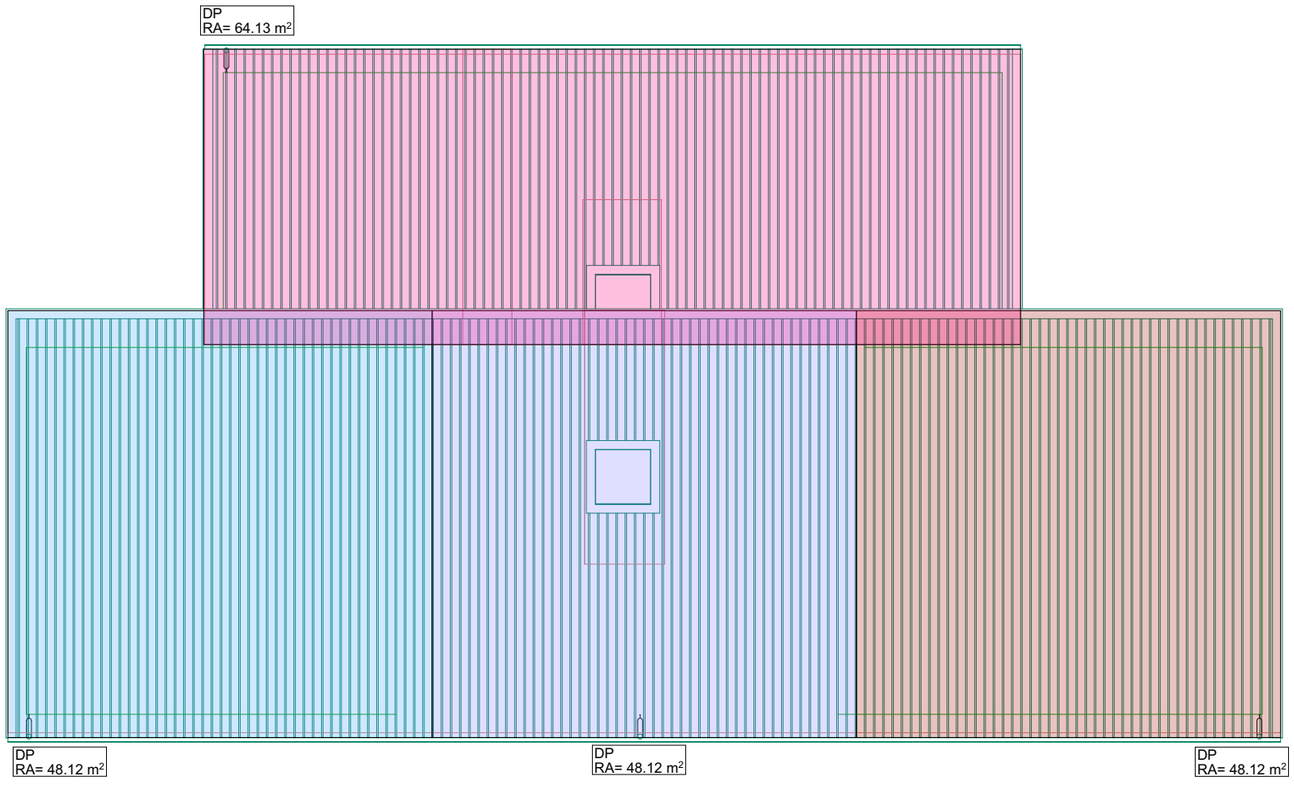


Table 5: Downpipe Sizes for Given Roof Pitch and Area
Paragraph 4.2.1

Downpipe size (mm) (minimum internal sizes)	Roof pitch 0-25°	25-35°	35-45°	45-55°
	Plan area of roof served by the downpipe (m²)			
63 mm diameter	60	50	40	35
74 mm diameter	85	70	60	50
100 mm diameter	155	130	110	90
150 mm diameter	350	290	250	200
65 x 50 rectangular	60	50	40	35
100 x 50 rectangular	100	80	70	60
75 x 75 rectangular	110	90	80	65
100 x 75 rectangular	150	120	105	90

Figure 15: Cross-sectional Area of External Gutter
Paragraphs 5.1.2 and 5.1.3

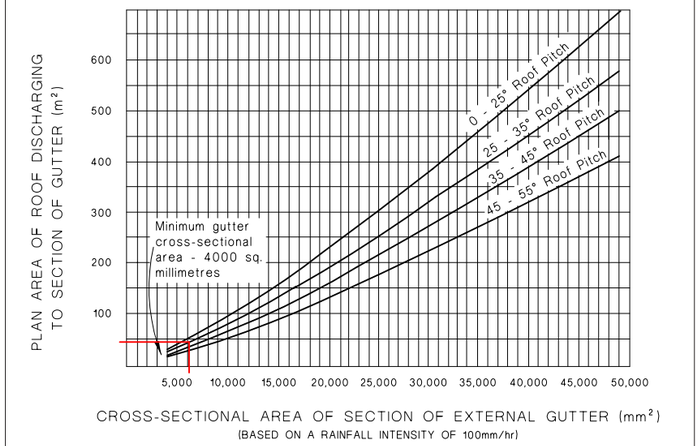
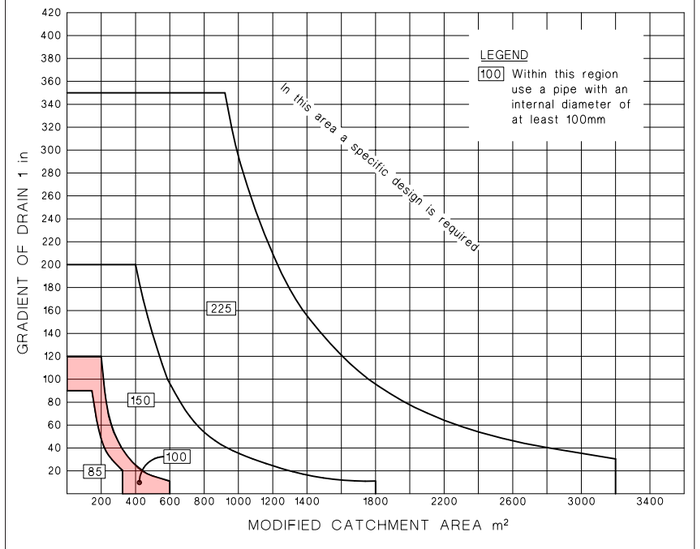


Figure 3: Sizing of Surface Water Drains
Paragraphs 3.2.2 and 3.2.3



All Construction in accordance with NZS 3604:2011 & NZBC

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ROOF DRAINAGE PLAN

Scale: 1:100
Rev:
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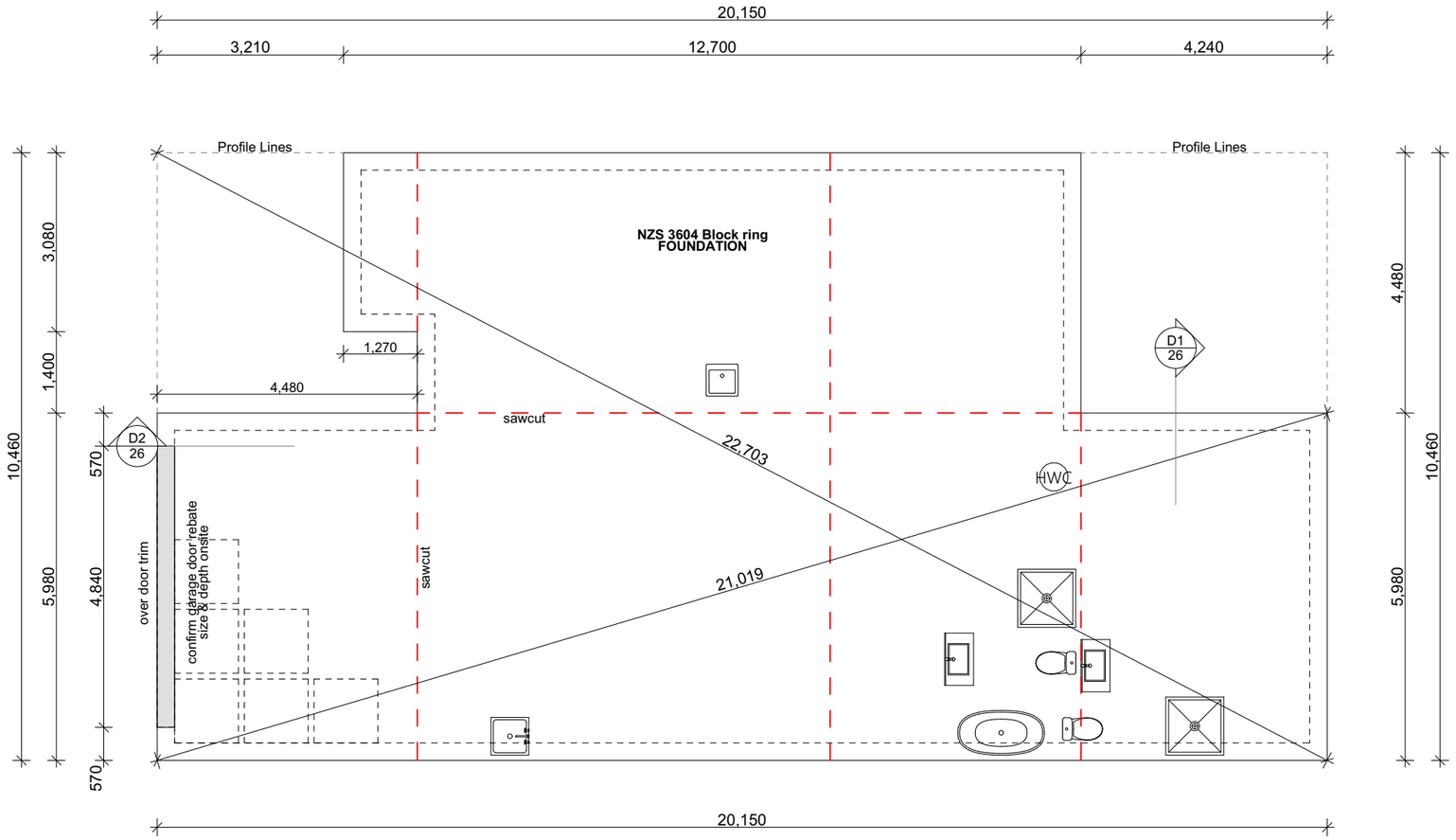
Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

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Client Details:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**
KH175



Cautionary Notes:
Always cross reference the foundation plan with the framing plan prior to setting out

The contractor shall accurately locate the position of all public drains on site prior to starting work, If any discrepancies are found in these drawings then the contractor must contact A1 Homes before proceeding with any further works.

Construction Notes:
• The site requirements of NZS 3604: 2011 are concerned with soil conditions under or adjacent to the building.
If a site does not comply with the definition of 'Good Ground' 300kPA, the foundations shall be the subject of specific engineering design (SED) and investigation as appropriate.
• All foundations shall bear upon solid bottom in undisturbed good ground material or upon firm fill for which a certificate of suitability has been issued under NZS 4431
Where good ground is at a depth greater than 0.6 m, the excavation between the good ground and the foundation base may be filled with mass concrete having a minimum strength of 10 MPa at 28 days.
• Granular fill material complying with 7.5.3.2 shall be placed and compacted in layers of 150 mm maximum thickness, over the area beneath the proposed ground slab, so that the total thickness of granular base is not less than 75 mm nor more than 600 mm.
Compact each layer until the material is tightly bound together and does not visibly deform under the weight of a pressed adult heel. SED is required if filling is in excess of 600 mm.

7.5.3.2
Granular fill material shall be composed of rounded gravel, crushed rock, scoria or approved material.
(a) Not more than 5 % shall pass through a 2.2 mm sieve with the exception of the conditions in 7.5.3.3;
(b) 100 % shall pass either:
(i) A 19 mm sieve for any fill thickness; or
(ii) A 37.5 mm sieve for a fill thickness exceeding 100 mm.
Where it can be demonstrated that site conditions ensure that capillary water is unlikely to reach the underside of the slab, then the requirements of 7.5.3.2(a) can be waived.

• Min. 5mm - 25mm max. sand blinding to cover hardfill to ensure the vapour barrier is protected from any granular protrusions. Conc. floor to comply with NZS.3109, surface tolerances, & NZS.3114, maximum deviations of 3mm

Shrinkage control joints - 3mm wide x 25mm deep saw cuts to form bays
NZS3604:2011 - Section 7: floors 7.5.8.6.4
The bay dimensions formed by either construction or shrinkage control joints shall be limited to a maximum length:width ratio of 2:1. Maximum bay dimensions in exposed concrete, vinyl or tiled areas to be 6m x 6m.
Free Joint required in concrete slabs where exceeding 24m for NZS3604:2011 slabs

Steel reinforcing within concrete floors and walls of rooms that contain a bath or shower must be bonded to the earth system as per AS/NZS 3000:2007 Electrical Installations. See clause 5.6.2.5

Confirm layout & fittings of kitchen & bathrooms etc before foundation commences

Always cross reference the foundation plan with the floor plan prior to setting out. If any discrepancies occur contact: admin@idesignarchitecture.co.nz immediately.

All Construction in accordance with NZS 3604:2011 & NZBC

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FOUNDATION PLAN

Scale: 1:100
Rev:
Date: 4/11/2026
Sheet no: 7

Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC

Wind:	Earthq:	Exposure:	Snow:	Climate:
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Client Details:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

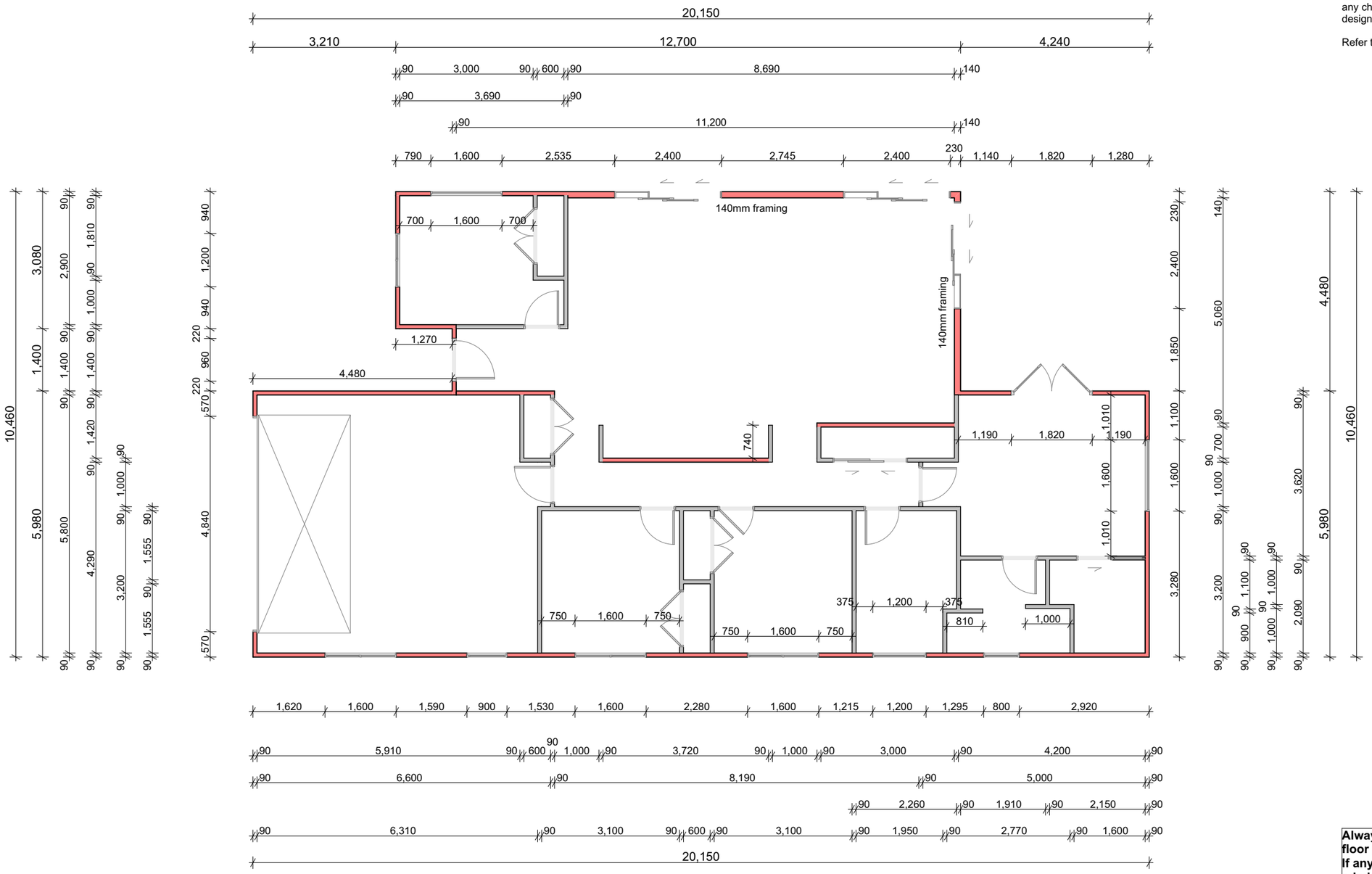
Job no: **OS016**
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Cautionary Notes:
Always cross reference the foundation plan with the framing plan prior to setting out

Window & Door Joinery dimensions are shown to the unit itself, shown are box sizes & are preliminary only.
Confirm soffit drop & fascia height prior to site measure.

Site measure and confirm all joinery sizes, reporting to designer any changes, PRIOR to ordering joinery. No liability shall be held by designer for incorrect supply of joinery.

Refer to all written dimensions, DO NOT scale off drawings.



Always cross reference the foundation plan with the floor plan prior to setting out.
If any discrepancies occur contact:
admin@idesignarchitecture.co.nz immediately.

Note:
2420 stud ht. throughout

All Construction in accordance with NZS 3604:2011 & NZBC

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FRAMING PLAN

Scale: 1:100
Rev:
Sheet no: 8

Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

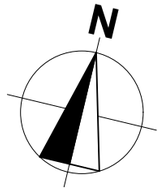
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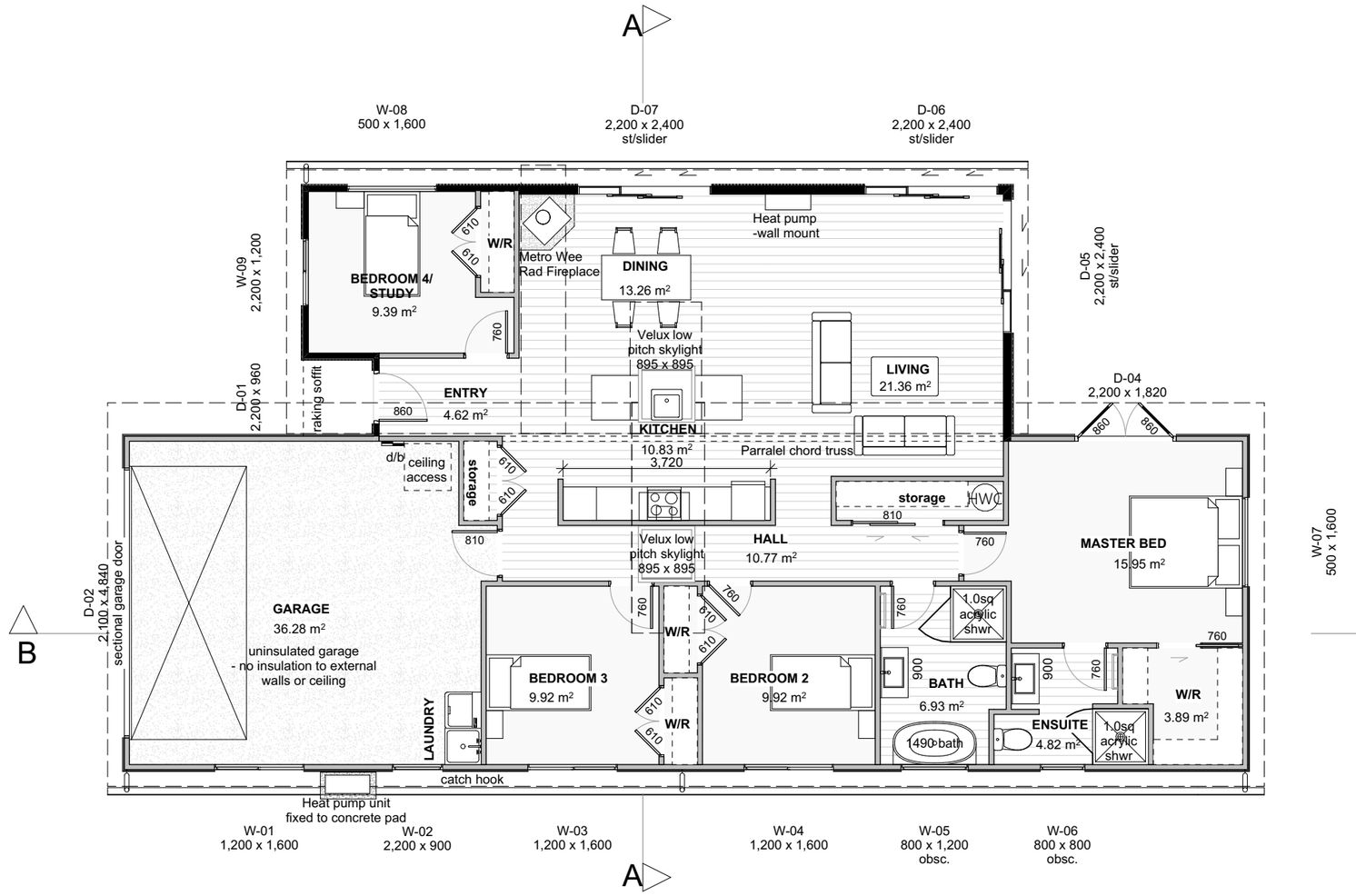
Client Details:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**

KH175





Carpet
Master Bedroom
Bedroom 2, 3, 4
W/R

Laminate Flooring
Bath
Ensuite
Laundry
Kitchen
Dining
Living
Hall
Storage

Concrete
Garage
Laundry

FLOOR AREAS:

Garage area =	137.82 m²
o/frame area =	37.79 m²
Total floor area =	175.62 m²

CLADDING KEY:
JH Stria Vertical
Vertical Shiplap Cedar

Note:
2420 stud ht. throughout

Cautionary Notes:

Always cross reference the foundation plan with the framing plan prior to setting out

Joinery sizes shown are box sizes & are preliminary only.
Site measure and confirm all joinery sizes, reporting to designer any changes, PRIOR to ordering joinery. No liability shall be held by designer for incorrect supply of joinery.

Refer to all written dimensions, DO NOT scale off drawings.

Construction Notes:

Electric hobs with vented r/hood.
Polybutylene water supply pipes.
Hot water supply pipes shall be thermally insulated to comply with H1/AS1 5.0
Mains pressure 250L HWC with tempering valve & seismic restraint in accordance with NZBC: 2004 section G12.
The delivered hot water temperature at any sanitary fixture used for personal hygiene shall not exceed 50°C
*Check cylinder height for under stair locations

Tapered edge joints in ceilings
To reduce the risk of cracks caused by substrate movement, back-blocking of tapered edge joints is required in the following situations.
• When timber battens have been used:
Any area containing 3 or more tapered joints
• When steel battens have been used:
Any area containing 6 or more tapered joints

Please confirm layout & fittings of kitchen & bathrooms etc before foundation commences

Note:

- Kitchen layout diagramatic and only to be used for drainage reference, refer to kitchen plans for exact design.

Separation between electric hob and the Gib lined wall:
Cut out for hob: min. 55mm from back of bench top.
Overhead clearances: not less than 650mm from hob surface to range hood
Side clearances: Where dimension to any vertical combustible surface is less than 150 mm, surface shall be protected to a min. height of 150 mm above hob for full dimension (width or depth) of cooking surface area.
Protection of combustible surfaces: 5mm thick ceramic tiles or graphic glass is suitable to protect 10mm Gib board.

G3/AS1
1.1.3 Food preparation surfaces shall be easily maintained in a hygienic condition. Stainless steel, decorative high pressure laminate, and tiles are examples of suitable materials for these surfaces.

1.6 Wall linings
Wall linings adjacent to appliances and facilities shall have surfaces that can be easily maintained in a hygienic condition. Stainless steel, decorative high pressure laminate, tiles, wallboards with painted or applied impervious coatings or films, are examples of suitable materials for these surfaces.

Log Burner Fireplace:

Installed strictly to manufacturers specifications
Considerations:
- minimum clearance to walls from appliance
- minimum flue clearance
- minimum flue height
- hearth dimensions & distance from front of appliance

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FLOOR PLAN

Scale: 1:100
Rev:
Sheet no: **9**
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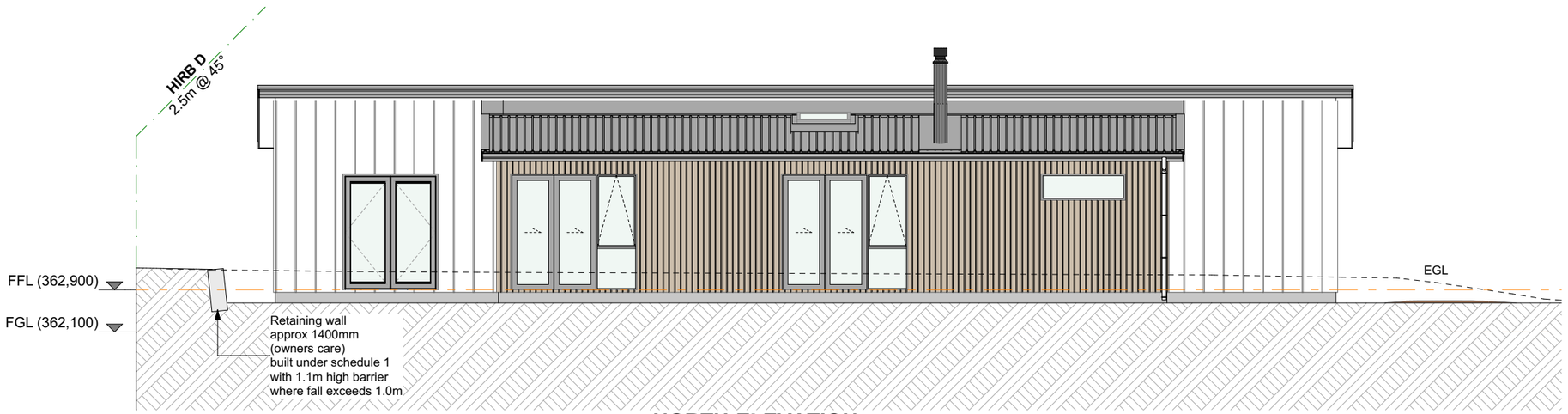
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HIGH	3	B	N5 - 1.5kPa	6

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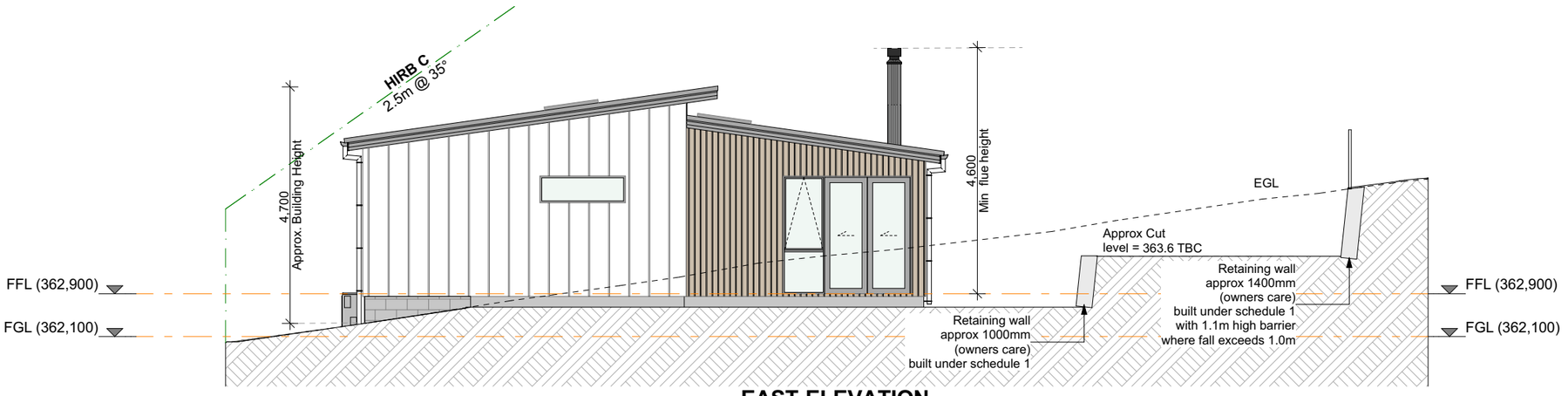
Client Details:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**
KH175



NORTH ELEVATION



EAST ELEVATION

General Notes:

Any encroachments shown are to be confirmed by a registered surveyor prior to commencement of foundations. No liability shall be held by designer with this confirmation.

Cautionary Notes:
BUILDING CONTRACTOR TO ASSESS SITE TO ENSURE DAYLIGHTING & BUILDING RESTRICTIONS ARE COMPLIED WITH.
NO LIABILITY FOR ENCROACHMENT SHALL BE HELD BY DESIGNER IF SITE IS NOT SURVEYED BY A REGISTERED SURVEYOR PRIOR TO COMMENCEMENT OF FOUNDATIONS.

Construction Notes:
Glazing in accordance with NZS 4223:2008/2016 plus amendments
All glazing low-e clear float except for obscure glass to bathrooms & wc
Double glazing to all window and door joinery

Aluminium joinery head heights as per joinery schedule
Refer to floor plan for door & window sizes. Joinery schedule & sizes to be confirmed by pre-cut manufacturer & joinery fabricator PRIOR to manufacture by way of communication via e-mail, phone or other.

HIRB = Height in Relation to Boundary

NZBC D1/AS1 Access Routes:
Concrete (min 150mm below FFL, max 190mm) or H5 timber step to all access points (owners care)
Acceptable Slip Resistance for Walking Surfaces:
• Portland cement concrete
- Broomed (Class 5 or 6) or wood float finish (Class U2)
Concrete surface finishes complying with NZS 3114.
- Coated and sand/grit impregnated
The sand/grit, which is sprinkled over the complete surface of the final paint coating, should be a hard angular material such as silica sand or calcined bauxite. The particle size should not be less than 0.2 mm so that it is not submerged by the coating and not greater than about 2–3 mm so that it remains tightly bound to the surface.
- Exposed aggregate finish
crushed aggregate
• Asphaltic concrete
• Concrete pavers
- Dry press concrete
- Interlocking concrete block paving to NZS 3116.
• Anti-slip tapes
- will normally require regular replacement to remain effective. To ensure foot contact, tapes should be placed at right angles to the line of travel and be spaced at no more than 150 mm centres.

Risk Factor	Description	Risk	Score
Wind Zone	High	M	1
Number of Storeys	Single Storey	L	0
Roof/Wall Intersection Design	Fully exposed (e.g. parapets, exposed boundaries or eaves at greater than 90 degrees to soffit lining)	H	3
Eaves Width	100mm - 450mm wide	H	2
Envelope Complexity	Moderately complex shape with no more than 2 cladding types.	M	1
Deck Design	None	L	0
			Total Score: 7

Selected Claddings:
1. Fibre cement weatherboard over nominal 20mm drained cavity
2. Rusticated timber weatherboard over nominal 20mm drained cavity

Foundation:
NZS3604 Block ring Foundation

Wall Cladding:
James Hardie Stria Vertical
Vertical Shiplap Cedar - Western Red HP55

Roof Cladding:
8° pitch. NZS Colorsteel MAXAM Trapezoidal profile

Fascia and Spouting:
Metalcraft 185 Colorsteel fascia
Metalcraft Quadline spouting
Colorsteel 80mmØ round downpipes

Joinery:
APL Residential suite Aluminium joinery

All Construction in accordance with NZS 3604:2011 & NZBC

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ELEVATIONS

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Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

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Client Details:
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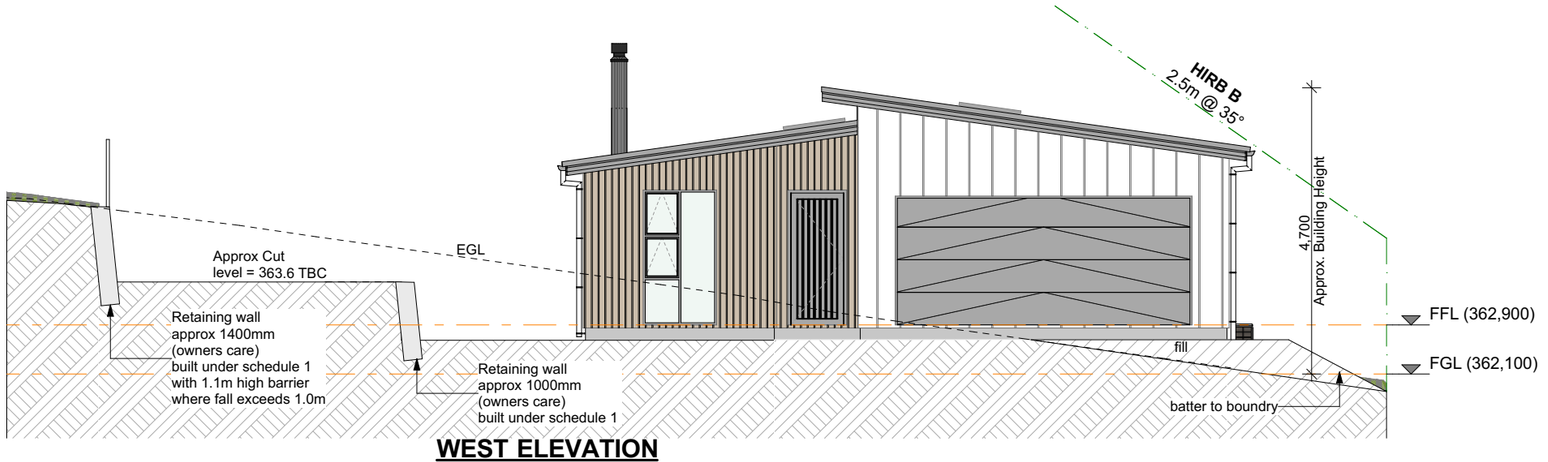
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KH175

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SOUTH ELEVATION



WEST ELEVATION

General Notes:

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Cautionary Notes:
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NO LIABILITY FOR ENCROACHMENT SHALL BE HELD BY DESIGNER IF SITE IS NOT SURVEYED BY A REGISTERED SURVEYOR PRIOR TO COMMENCEMENT OF FOUNDATIONS.

Construction Notes:
Glazing in accordance with NZS 4223:2008/2016 plus amendments
All glazing low-e clear float except for obscure glass to bathrooms & wc
Double glazing to all window and door joinery

Aluminium joinery head heights as per joinery schedule
Refer to floor plan for door & window sizes. Joinery schedule & sizes to be confirmed by pre-cut manufacturer & joinery fabricator PRIOR to manufacture by way of communication via e-mail, phone or other.

HIRB = Height in Relation to Boundary

NZBC D1/AS1 Access Routes:
Concrete (min 150mm below FFL, max 190mm) or H5 timber step to all access points (owners care)
Acceptable Slip Resistance for Walking Surfaces:
• Portland cement concrete
- Broomed (Class 5 or 6) or wood float finish (Class U2)
Concrete surface finishes complying with NZS 3114.
- Coated and sand/grit impregnated
The sand/grit, which is sprinkled over the complete surface of the final paint coating, should be a hard angular material such as silica sand or calcined bauxite. The particle size should not be less than 0.2 mm so that it is not submerged by the coating and not greater than about 2–3 mm so that it remains tightly bound to the surface.
- Exposed aggregate finish
crushed aggregate
• Asphaltic concrete
• Concrete pavers
- Dry press concrete
- Interlocking concrete block paving to NZS 3116.
• Anti-slip tapes
- will normally require regular replacement to remain effective. To ensure foot contact, tapes should be placed at right angles to the line of travel and be spaced at no more than 150 mm centres.

Risk Factor	Description	Risk	Score
Wind Zone	High	M	1
Number of Storeys	Single Storey	L	0
Roof/Wall Intersection Design	Fully exposed (e.g. parapets, exposed boundaries or eaves at greater than 90 degrees to soffit lining)	H	3
Eaves Width	100mm - 450mm wide	H	2
Envelope Complexity	Moderately complex shape with no more than 2 cladding types.	M	1
Deck Design	None	L	0
			Total Score: 7

Selected Claddings:
1. Fibre cement weatherboard over nominal 20mm drained cavity
2. Rusticated timber weatherboard over nominal 20mm drained cavity

Foundation:
NZS3604 Block ring Foundation

Wall Cladding:
James Hardie Stria Vertical
Vertical Shiplap Cedar - Western Red HP55

Roof Cladding:
8° pitch. NZS Colorsteel MAXAM Trapezoidal profile

Fascia and Spouting:
Metalcraft 185 Colorsteel fascia
Metalcraft Quadline spouting
Colorsteel 80mmØ round downpipes

Joinery:
APL Residential suite Aluminium joinery

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ELEVATIONS

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HIGH	3	B	N5 - 1.5kPa	6

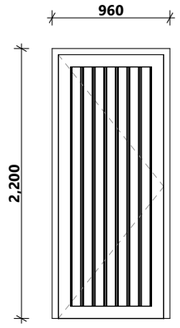
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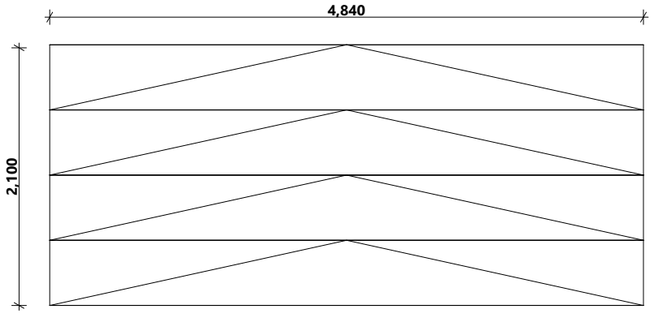
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Job no: **OS016**
KH175

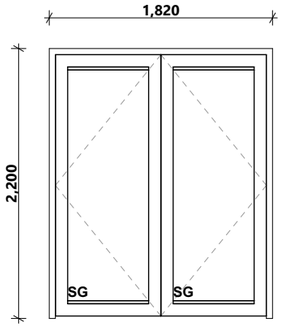
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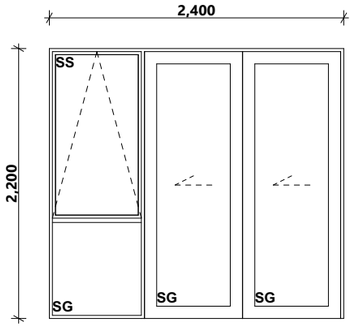
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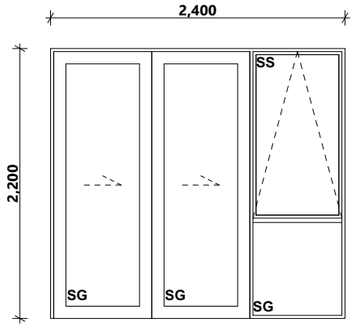
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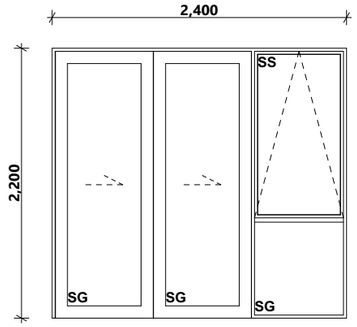
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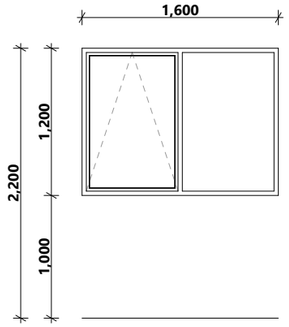
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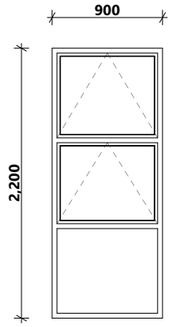
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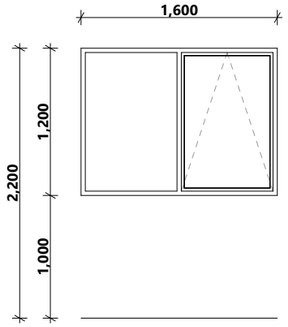
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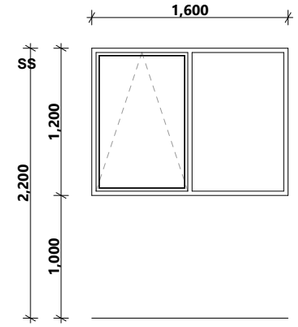
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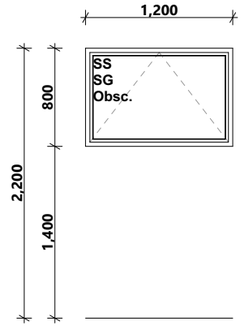
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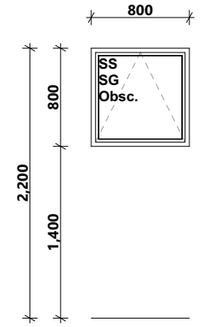
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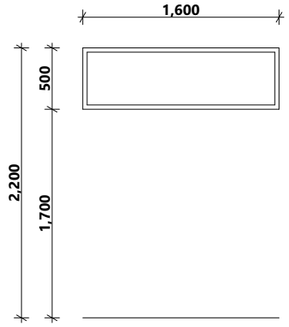
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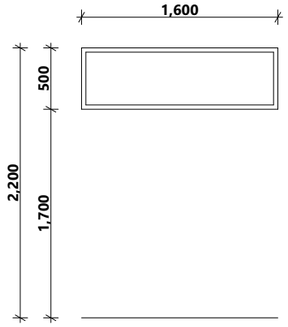
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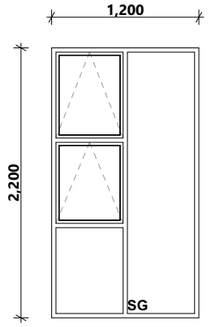
W-06



W-07



W-07



W-08

SAFETY GLASS & OR TOUGHENED GLASS SPECIFIED BY ACCREDITED JOINERY MANUFACTURER IN ACCORDANCE WITH NZS 4223: 2016
REFER TO ATTACHED MANUFACTURERS JOINERY SCHEDULE. Joinery Manufacturer to verify all trim openings & unit final dimensions prior to manufacture

Safety restrictor stays:
ss = safety stays
- a restrictor fitted to limit the maximum opening so that a 100mmø sphere cannot pass through

Window restrictors are required to the following sized openings where the adjacent Ground Level is 1.0m below FFL or greater;
- openings less than 1.0m wide with sill ht within 760mm of FFL
- openings more than 1.0m wide with sill ht within 1000mm of FFL

Window restrictors are also required to outward opening windows that may protrude into walk paths
- Refer to Site plan for 'walk paths'
sg = safety glass

All Construction in accordance with NZS 3604:2011 & NZBC

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JOINERY SCHEDULE

Scale: 1:50
Rev:
Sheet no: **12**
Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

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Client Details:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**
KH175

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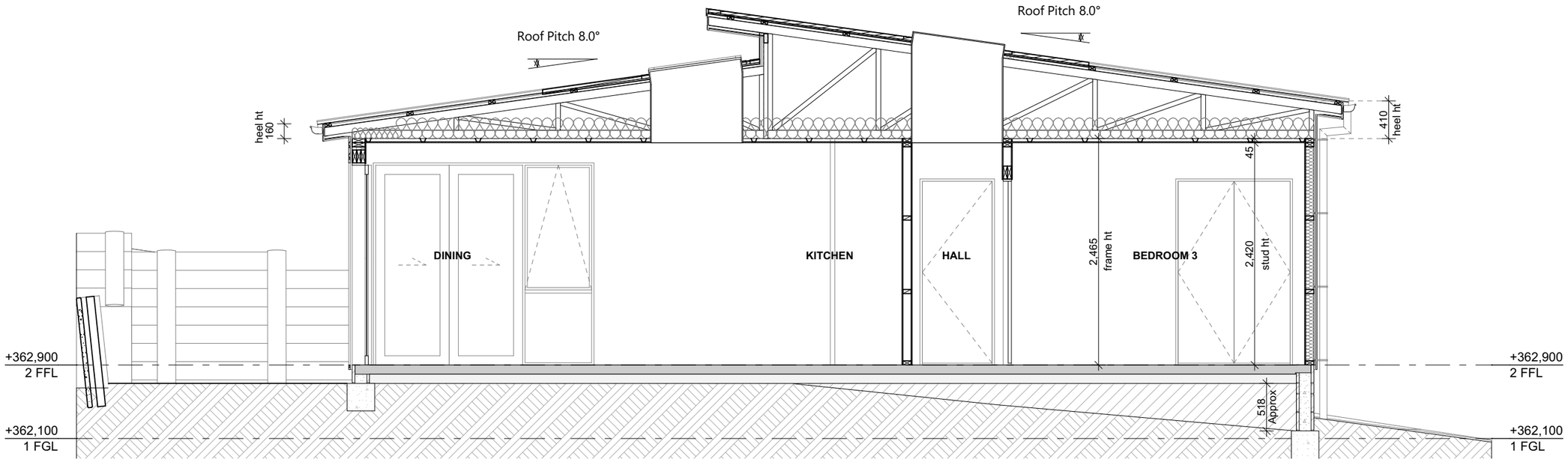


Table 4 – Allowable moisture content (%)(1) at time of installation or in the case of framing timber at time of enclosure

	Use category level of finish	Air-conditioned or centrally heated buildings	Intermittently heated buildings(2)	Unheated buildings
1	Timber to which linings are attached to achieve a "level of finish" 4 to 5	8 – 18	12 – 18	12 – 18
2	Enclosed framing (including roof trusses) to achieve a "level of finish" 0 to 3	12 – 18	12 – 24	12 – 24
3	Load-bearing lintels and beams	8 – 18	12 – 20	12 – 20
4	Weatherboards, exterior joinery and finishing timbers	14 – 18	14 – 18	14 – 18
5	Flooring exposed to ground atmosphere	10 – 14	12 – 16	14 – 18
6	Interior joinery and finish, furniture, corestock	8 – 12	10 – 14	12 – 16
7	Flooring not exposed to ground atmosphere	8 – 12	10 – 14	12 – 16

NOTE –
(1) Allowable ranges of moisture content are specified on the basis that 90 % of pieces shall be within the specified range, the remainder shall be within a further 2 % moisture content above or below. The moisture content of individual boards shall be normally distributed within the range allowed. In special circumstances, e.g. flooring exposed in rooms with large window area, the upper limits may be reduced.

(2) Buildings periodically heated by open fires, electric heaters, etc., such as most domestic buildings.

Acceptable Solution E2/AS1
10.0 Construction Moisture

10.1 Moisture in materials
Moisture contained in the building structure at completion of construction shall not be permitted to damage the building elements.
Construction moisture includes the moisture contained in:
a) Timber products as a result of a treatment or manufacturing process,
b) Green timber, and timber or other materials that have been exposed to the weather, and
c) Concrete, mortar or plaster that is not completely cured.

10.2 Maximum acceptable moisture contents
The maximum moisture contents shall be:
a) For timber framing at the time of installing interior linings, the maximum acceptable moisture content shall be the lesser of:
i) 20% for insulated buildings, 24% for non-insulated buildings, or
ii) as specified in NZS 3602,
b) For timber weatherboards and exterior joinery, 20% at the time of painting,
c) For reconstituted wood products, 18% at all times, and
d) For concrete floors, sufficiently dry to give a relative humidity reading of less than 75%
at the time of laying fixed floor coverings.

• Where nail popping, joint peaking and ridges formed by stud warping and twisting are undesirable on the finished surfaces within 12 months of installation of wall linings, kiln dried timber shall be used, or alternatively the timber framing shall be dried to less than 18 % moisture content before wall linings are installed.

• Where timber framing is installed green or kiln dried timber that is wetted and allowed to dry, those members which are likely to deflect under their own weight shall be propped until they dry below a moisture content of 20 %.

Microclimatic Considerations:
In addition to exposure zones, evidence of local environmental effects (microclimates), and those produced by the erection of a structure or installation of equipment, shall be considered.

Significant acceleration of the corrosion of structural fasteners and fixings beyond what could be expected from the geographical location can occur in the following circumstances:

(a) Industrial contamination & corrosion atmospheres;

(b) Contamination from agricultural chemicals or fertilisers; and

(c) Geothermal hot spots. Hot spots are defined as being within 50m of a bore, mud pool, steam vent, or other souce.

Microclimatic conditions (a) to (c) require specific engineer design.

Plans Not Approved

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CROSS SECTION AA

Scale: 1:50
Rev:
Sheet no: 13
Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

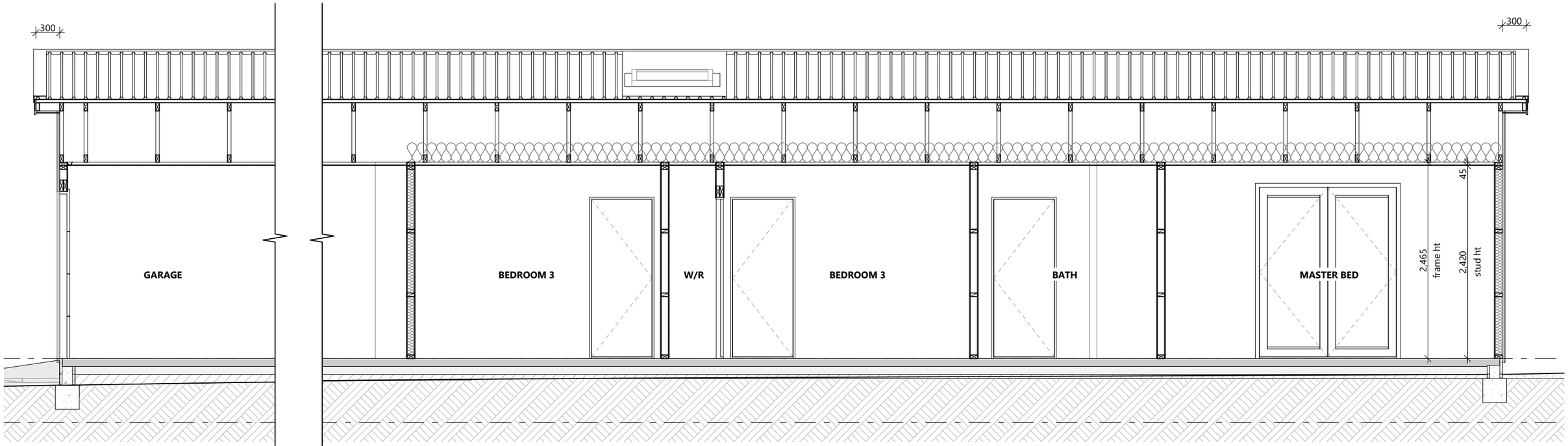
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Richard Joyce

Address:
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Lake Hawea

Job no: **OS016**
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Note: Exposure Zone B
(exposure environments as defined by NZS 3604 : fig 4.2 & table 4.1)

Fixings & Fastenings (excludes nails and screws):
Nail Plates - In 'closed' & 'roof space' environments = continuously coated galv. steel
Wire Dogs & Bolts - In 'closed' & 'roof space' environments = hot-dip galv. steel
All other structural fixings - In 'closed' environments = mild steel (uncoated, non-galvanized)

All other structural fixings (except fabricated brackets (1))
- In sheltered environments = hot-dip galv. steel
- In exposed environments = type 304 stainless steel

Nails & screws used for framing & cladding:
Non-structural cladding (15 year durability) = galv. steel
Framing in 'closed' areas including roof spaces = mild steel (3)
Framing in 'exposed or sheltered' areas = galv. steel (3)

*1. - "fabricated brackets" shall be made from 5mm (minimum thickness) mild steel and shall be hot-dip galv.
*3. - steel fixings and fastenings in contacts with timber treated with copper-based timber preservatives (H3.2 or higher) shall be minimum of type 304 stainless steel (exposed and Sheltered environments), and hot-dip galv. steel (all other locations)

Minimum concrete strength after 28 days shall be:
20 MPa

Concrete Masonry:
(a) comply with the provisions of NZS 4210
(b) Minimum cover to steel reinforcement from an uncoated masonry external face 45mm
(c) Minimum grout strength, 17.5MPa (interior conditions and Zone B)

Fixing Materials: (as per Acceptable Solution E2/AS1) - for definitions refer to E2/AS1
Hidden/Exposed/Sheltered:
Aluminium , or Bronze, or type 304 stainless steel
Nails = galv. steel
Screws = galv. steel, Painted or unpainted to AS 3566: Part 2

* The use of stainless steel fixings is not recommended by steel manufacturers for use with coated steel in severe marine and industrial environments, as they are considered to cause deterioration

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CROSS SECTION BB

Scale: 1:50
Rev:
Sheet no: 14
Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

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HIGH	3	B	N5 - 1.5kPa	6

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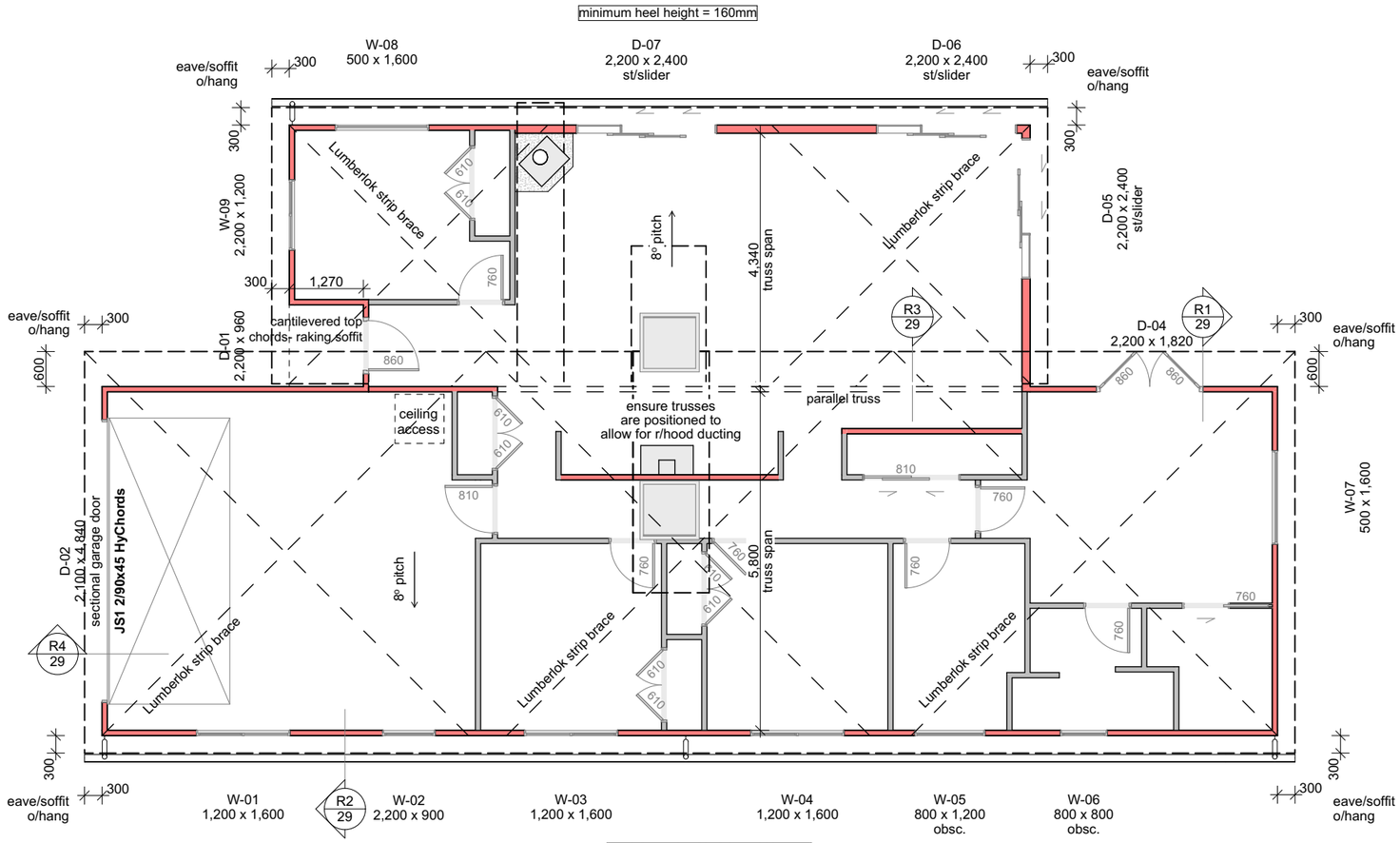
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Lake Hawea

Job no: **OS016**
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NOTE TO PRENAIL:
Please clearly identify and advise of any Engineer designed members on plans and by email



Cautionary Notes:
This layout is preliminary. Read in conjunction with final PS1 & pre-cut design & documents. Truss manufacturer to inform designer of any further load bearing footing / slab thickenings (piles or bearer lines) that are required to support roof loads. If a discrepancy occurs contact I Design Architecture immediately.

Construction Notes:
Ensure that all downpipes are positioned clear of Joinery units

Fixing Notes:
- refer to Lumberlok manual

Lintel Key:
190x90 - G ← Fixing
↑
└ Size

Trimming Studs:
JS1 = Jamb studs
- refer to CHH Design IT calcs
Refer to following page for trimming stud requirements
All Lintels GREATER than 1.8m span require an additional trimming stud

Rondo Clip System:
Bottom chord restraints are required as per truss design.
Fix 90x45 runners to top of bottom chords.

All Lintels and beams have been specified by Placemakers
- refer to documentation

8° pitch. NZS Colorsteel MAXAM Roofing

Roofing & associated flashings to comply with the
NZ Metal Roof & Wall Cladding Code of Practice

Stud to Top Plate Fixings:

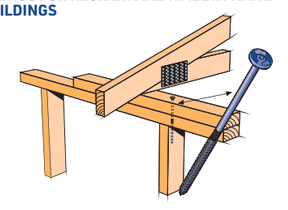
Stud to top plate:
As per Truss Design

MiTek BOWMAC

2024 EDITION V1

STUD-LOK SL170 (BLUE) TOP PLATE FIXING

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

All Construction in accordance with NZS 3604:2011 & NZBC

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ROOF PLAN

Scale: 1:100
Rev:
Sheet no: **15**

Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

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HIGH	3	B	N5 - 1.5kPa	6

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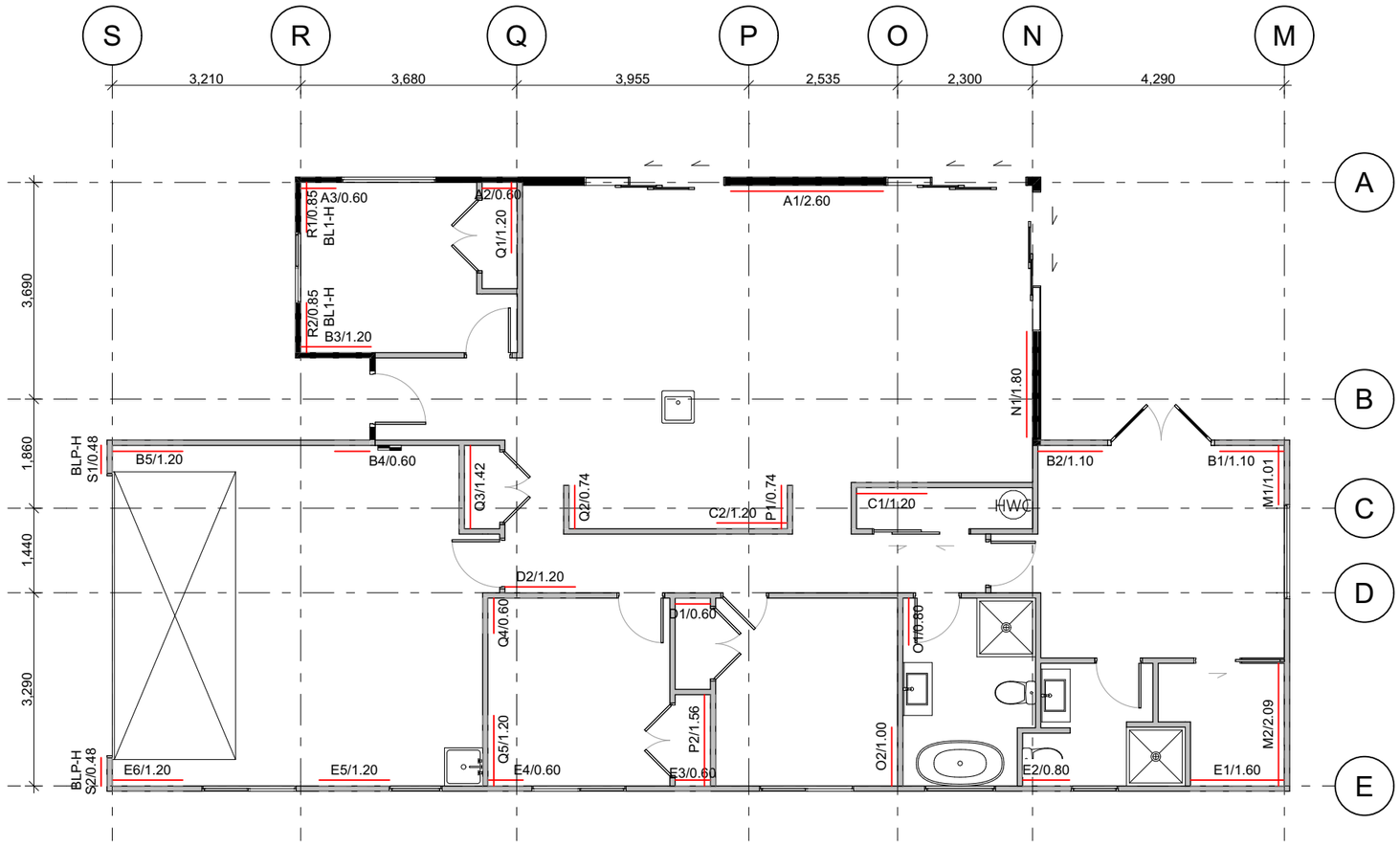
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All bracing elements are GS1-N unless otherwise stated



Cautionary Notes:
ALL GIB BRACES FIXED IN ACCORDANCE WITH THE LATEST WINSTONES GIB BRACING MANUAL & GIB SITE GUIDE

Bracing Element Table	
Brace Type	
GS1-N	10mm GIB std plasterboard on one side, min. length 0.4m
BLP-H	10mm GIB BRACELINE on one side Structural Plywood the other, min. length 0.4m + GIB Handibrac hold down ea. end
BL1-H	10mm GIB BRACELINE on one side, min. length 0.4m + GIB Handibrac hold down ea. end
All braces are GS1-N, unless otherwise stated	

Label No.
A1 / 1800
Brace Length

Openings in Bracing Elements
(as per GIB Ezybrace System)
SMALL OPENINGS
Small openings (e.g. power outlets) of 90 x 90mm or less maybe placed no closer than 90mm to the edge of the braced element. A block may need to be provided alongside the perimeter stud as shown below.
LARGE OPENINGS
Openings above 90 x 90mm such as switch boards, recessed cabinets and TV's etc. should be placed outside of the bracing element or locate bracing on the other side of the wall framing.

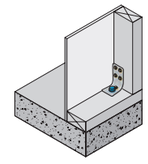
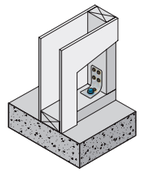
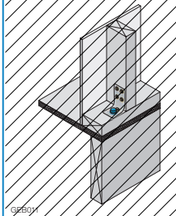
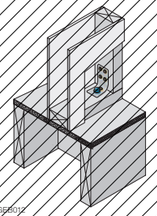
Connecting top plates to external walls:
Each wall that contains one or more wall bracing elements shall be connected at the top plate level, either directly, or through a framing member in the line of the wall, to external walls at right angles to it. - Refer to following page.

GIB HandiBrac® installation

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

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BRACING PLAN

Scale: 1:100
Rev:
Sheet no: **16**

Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

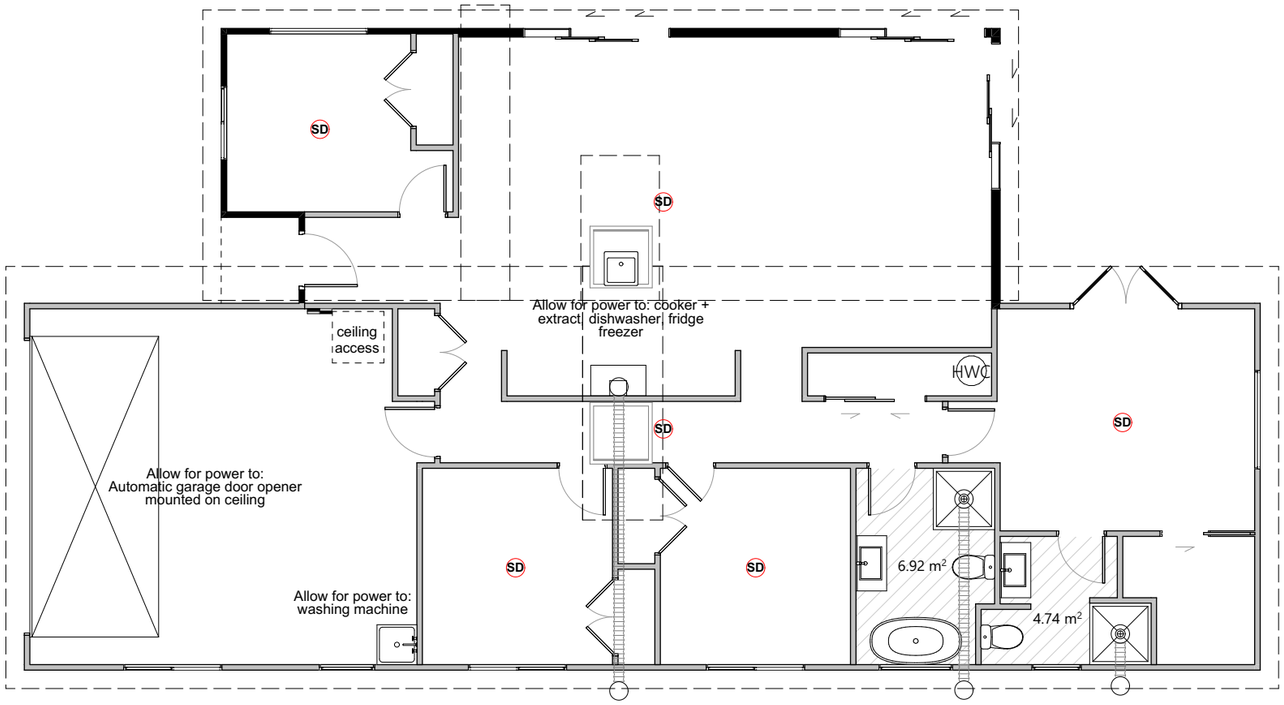
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Job no: **OS016**
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Rangehood extract vented out through soffit to manufacturers specifications

BATH/ENSUITE
Extractor fan system vented out through soffit to manufacturers specifications

Notes:

All electrical work & items to comply with:
NZBC F7/AS1, AS/NZS 3000, AS/NZS 3008, AS 3786, AS/NZS 5000.2: 2006

SD - Approved smoke detectors

Smoke alarms shall be located:
- in all bedrooms, living spaces, hallways, and landings within the building.
- not more than 5m from a wall and 10m from another smoke detector

10 year min battery wireless interconnected smoke alarms.

Where more than one smoke alarm is needed to meet the requirements of this standard, these smoke alarms shall all be interconnected so that when one activates, all smoke alarm devices in the household unit will sound.

Down lights to be IC-F or IC-4 Rated (max 1 per 5m²).

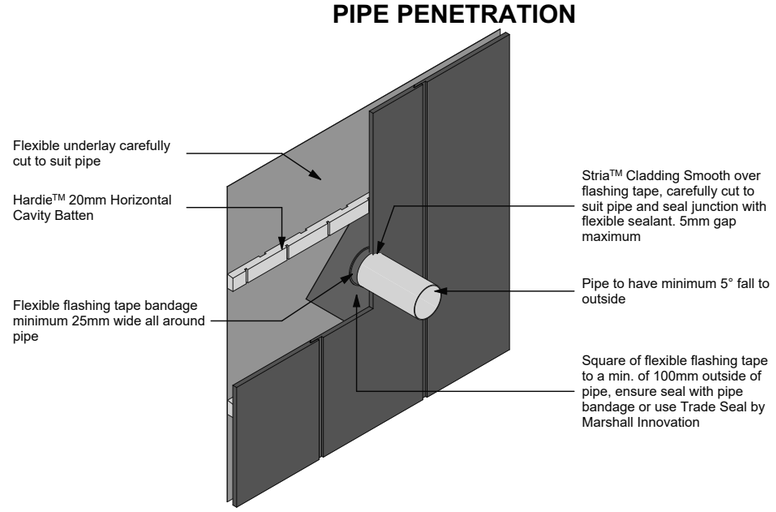
Ventilation system to vent ducts & r/hood to soffit outlet
Ventilation system to have mechanical exhaust rates in accordance with NZBC G4/AS1

Ventilation of Sanitary rooms
Percentage of ventilated opening to be minimum 5% of room floor area

Room	Floor Area	Window Opening	Percentage
Bath	6.92m²	800x1200 = 0.96m²	13.87%
Ensuite	4.74m²	800x800 = 0.64m²	13.50%

Lighting & Electrical
NZBC: Clause G8 Artifical Light
Requirement applys to: All access routes
Spaces within buildings used by people, shall be provided with adequate artificial lighting which, when activated in the absence of sufficient natural light
•Illuminance at floor level shall be no less than 20 lux. will allow safe movement

PIPE PENETRATION



Note:
All site cut edges to be primed

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ELECTRICAL PLAN

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Rev:
Sheet no: 17
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HIGH	3	B	N5 - 1.5kPa	6

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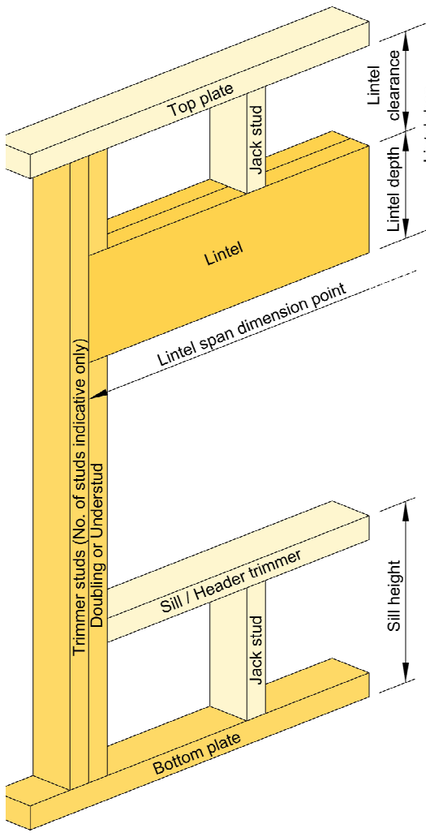
Client Details:
Richard Joyce

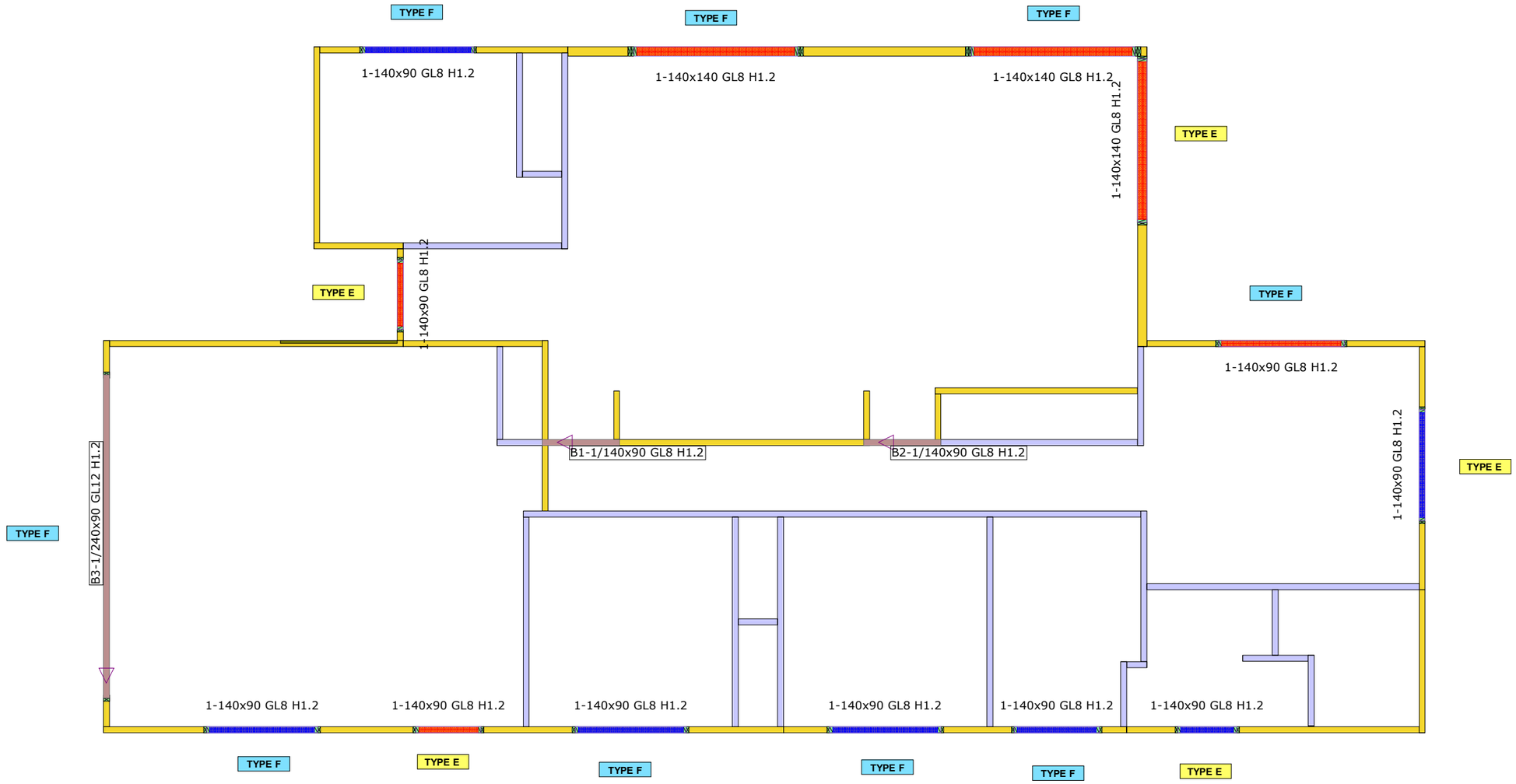
Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**
KH175

LINTEL FIXING

TYPE E	= 1.4kN
TYPE F	= 4.0kN
TYPE G	= 7.5kN
TYPE H	= 13.5kN
SED	= Specific Engineering Design





fer to:
MBERLOK Lintel Fixing Schedule 10/2011,
Tek Structural Fixings **On-Site Guide** for Building
de Compliance
ernative to Table 8.14 & Figure 8.12 NZS 3604:2011)

Heartland Prenail

2 Milward St
Washdyke Timaru 7910
New Zealand

OT No.: **0879PS1-Q-01**

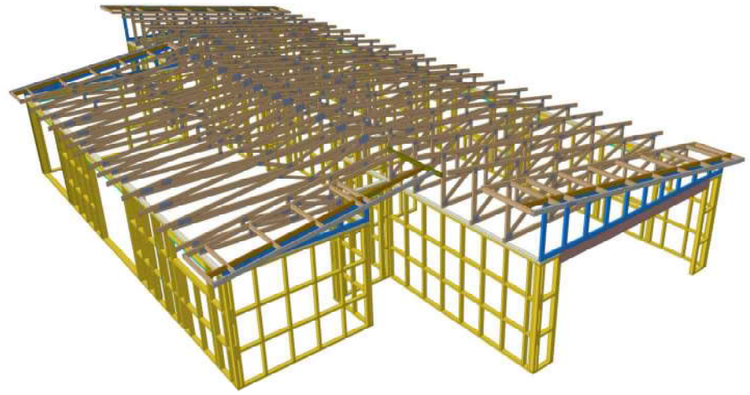
Name: OS016 - Joyce

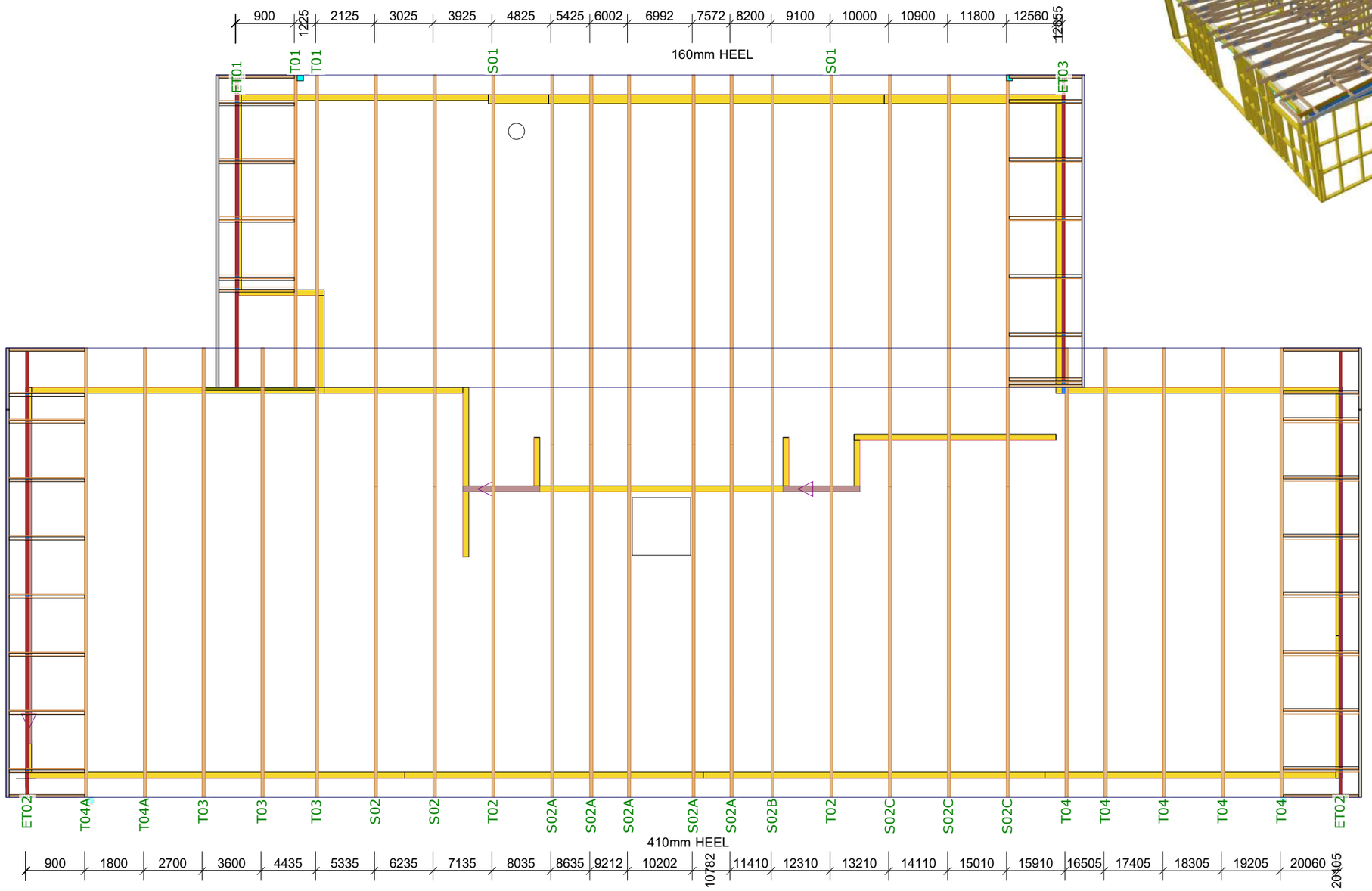
Address: 9 Piopio Street
Lake Hawea

Sheet Tittle: CONSENT - Lintel Fixing Layout			
Snow Zone:	Wanaka (N5)	Snow Altitude:	350.000 m
Wind Area:	High	Design Wind Speed:	44.0 m/s
TC Restraints:	900 mm	BC Restraints:	1800 mm
Roof Material:	Galv Iron 0.55mm	Ceiling Material:	Standard Ceiling on Suspended Battens
Roof Live Load:		Ground Snow Load:	1.200 kPa

MiTek SAPPHIRE
Better Technology. Better Building
Ver. 26.2.0.18

Building Consent No.:
Structure: 0879PS1-Q 1





Heartland Prenail 2 Milward St Washdyke Timaru 7910 New Zealand	OT No.: **0879PS1-Q-01** Name: Address: 9 Piopio Street Lake Hawea	Sheet Title: CONSENT - Truss Dimensions	MiTek SAPPHIRE Ver. 26.2.0.18 Better Technology. Better Building

Snow Zone:	Wanaka (N5)	Snow Altitude:	350.000 m
Wind Area:	High	Design Wind Speed:	44.0 m/s
TC Restraints:	900 mm	BC Restraints:	1800 mm
Roof Material:	Galv Iron 0.55mm	Ceiling Material:	Standard Ceiling on Suspended Battens
Roof Live Load:		Ground Snow Load:	1.200 kPa

Building Consent No.: | Structure: 0879PS1-Q 1

NZS 3604:2011 8.5.2 Trimming studs
A trimming stud shall be provided to each side of any opening as follows;
• must be the same width as the studs in the wall
• whether single or double, shall not contain holes, notches, checks, or cuts in the middle third of their length.
• Where a doubling stud which provides support for a lintel is shorter by 400 mm or more than the full stud height, its thickness shall not be included as contributing to the thickness of trimming studs from table 8.5

Table 8.5 – Trimming studs (see 8.5.2.1)

Maximum clear width of opening (span of lintel)	Stud thickness required for 600 mm spaced studs	Thickness of trimming studs*
(a) Single storey, top storey or non-loadbearing walls		
(m)	(mm)	(mm)
1.8	35	45
	45	45
	70	90
	90	115
3.0	35	45
	45	70
	70	90
	90	135
3.6	35	70
	45	90
	70	140
	90	180
4.2	35	105
	45	135
	70	210
	90	270
(b) Any other location		
0.9	35	45
	45	70
	70	90
	90	135
1.8	35	70
	45	70
	70	115
	90	135
3.0	35	70
	45	90
	70	140
	90	180

* For brick veneer openings add extra stud for fixing veneer ties.

NOTE – To use this table:

(1) Enter the row corresponding to the lintel span being considered.

(2) From the second column, select the thickness of the studs required for the body of the wall, assuming that they are spaced at 600 mm.

(3) Read the trimming stud thickness from the right side column.

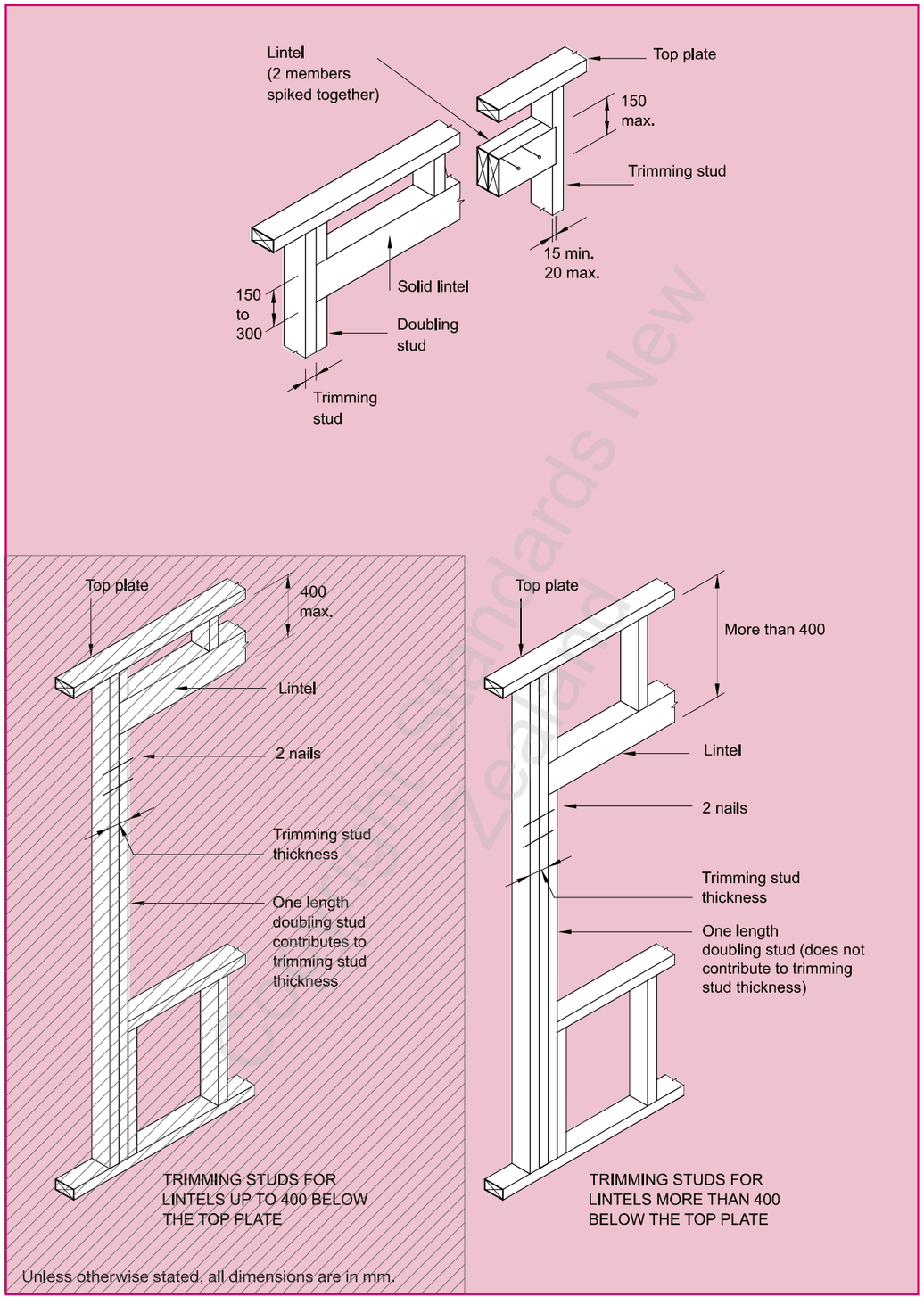


Figure 8.5 – Trimming studs and lintels (see 8.5.2.1)

All Construction in accordance with NZS 3604:2011 & NZBC

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TRIMMING STUDS

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HIGH	3	B	N5 - 1.5kPa	6

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Richard Joyce

Address:
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Lake Hawea

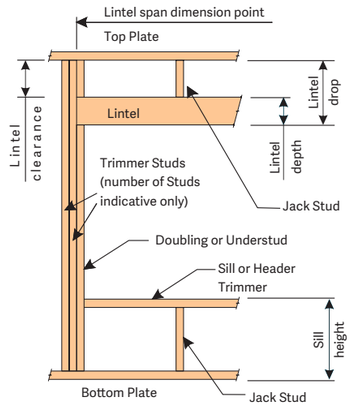
Job no: **OS016**

KH175

STUD-LOK LINTEL FIXING OPTIONS FOR ON-SITE

ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011

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



LINTEL SUPPORTING GIRDER TRUSSES

Roof Tributary Area	Light Roof – Wind Zone: Low, Medium, High	Light Roof – Wind Zone: Very High	Light Roof – Wind Zone: Extra High	Heavy Roof – Wind Zone: Low, Medium, High	Heavy Roof – Wind Zone: Very High	Heavy Roof – Wind Zone: Extra High
8.6m²	G	G	H	G	G	H
11.6m²	G	H	H	G	G	H
12.1m²	G	H	H	G	H	H
15.3m²	H	H	-	G	H	H
19.1m²	H	-	-	G	H	-
20.9m²	H	-	-	H	H	-
21.8m²	H	-	-	H	-	-
34.3m²	-	-	-	H	-	-

NOTES:

1. Roof Tributary Area = approx. 1/2 x (total roof area on girder and rafter trusses supported by lintel)

2. Assumed girder truss is at mid-span or middle third span of lintel

3. Use similar fixings for both ends of lintel

4. All other cases require specific engineering design

MiTek BOWMAC

SELECTION CHART FOR LINTEL FIXING

Lintel Span (m)	Loaded Dimension (m)	Light Roof – Wind Zone: Low	Light Roof – Wind Zone: Medium	Light Roof – Wind Zone: High	Light Roof – Wind Zone: Very High	Light Roof – Wind Zone: Extra High	Heavy Roof – Wind Zone: Low	Heavy Roof – Wind Zone: Medium	Heavy Roof – Wind Zone: High	Heavy Roof – Wind Zone: Very High	Heavy Roof – Wind Zone: Extra High
1.0	2.0	E	E	E	F	F	E	E	E	E	F
	3.0	E	E	F	F	F	E	E	E	F	F
	4.0	E	F	F	F	G	E	E	F	F	F
	5.0	E	F	F	G	G	E	E	F	F	G
	6.0	E	F	F	G	G	E	E	F	F	G
1.2	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	E	F	F	F	E	E	F	F	F
	4.0	E	F	F	G	G	E	E	F	F	G
	5.0	E	F	F	G	G	E	E	F	F	G
	6.0	F	F	G	G	H	E	E	F	G	G
1.5	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	F	F	F	G	E	E	F	F	F
	4.0	E	F	F	G	G	E	E	F	F	G
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	6.0	F	F	G	H	H	E	E	F	G	H
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	5.0	F	F	G	H	H	E	E	F	G	H
	6.0	F	G	G	H	H	E	F	G	H	H
2.4	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	G	H	E	E	F	G	G
	4.0	F	F	G	H	H	E	E	F	G	H
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	5.0	F	G	H	H	-	E	F	G	H	H
	6.0	F	G	H	-	-	E	F	G	H	-
3.6	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	F	G	H	H	E	F	G	G	H
	4.0	F	G	H	H	-	E	F	G	H	H
	5.0	F	G	H	-	-	E	F	G	H	-
	6.0	G	H	H	-	-	E	F	H	-	-
4.2	2.0	F	F	G	G	H	E	E	F	G	G
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	5.0	G	H	H	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.5	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
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	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.8	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.2	F	G	H	H	-	E	F	G	H	H
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	4.0	G	H	H	-	-	E	F	H	-	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	G	H	-	-

8. WALLS

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FIXING CHARTS

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HIGH	3	B	N5 - 1.5kPa	6

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Client Details:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**

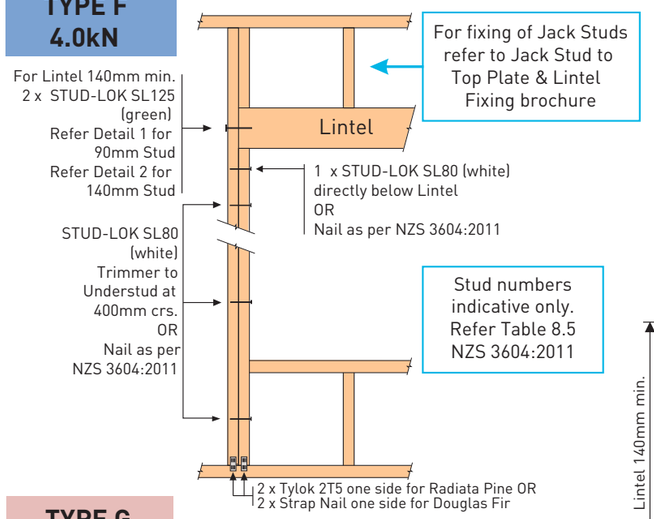
KH175

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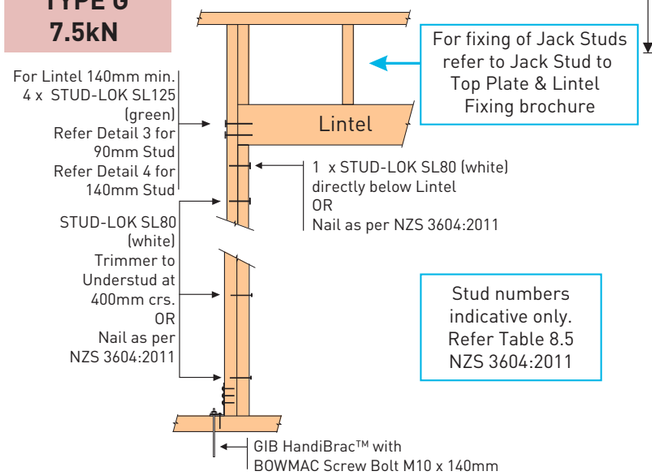
STUD-LOK LINTEL FIXING OPTIONS FOR ON-SITE

MiTek BOWMAC

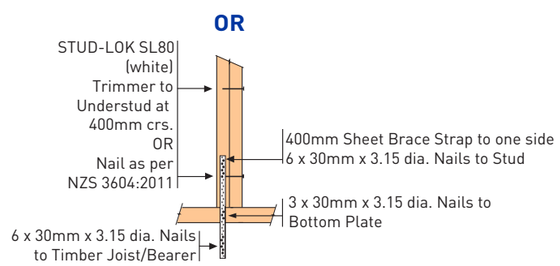
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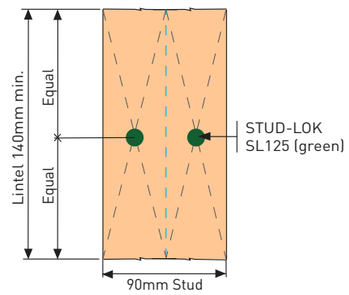
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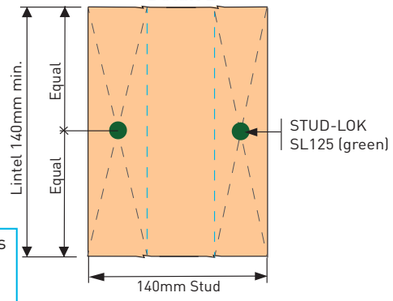
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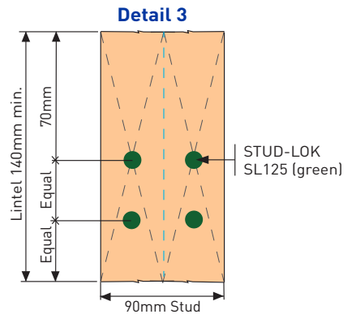
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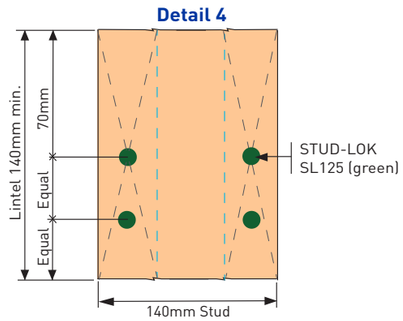
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Detail 3



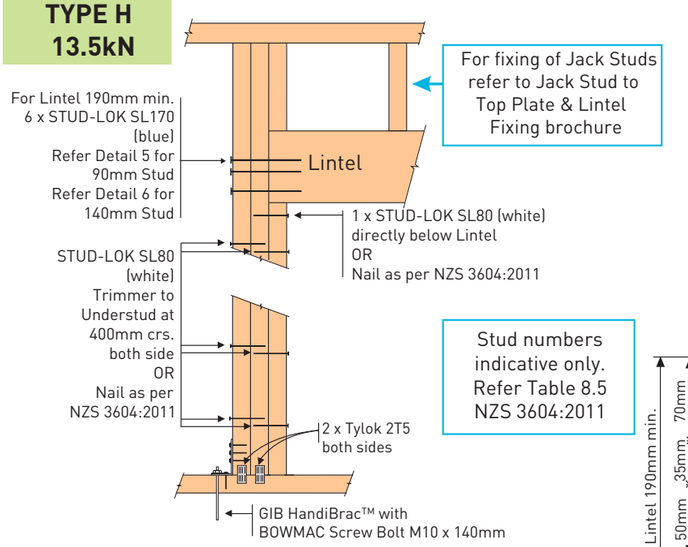
Detail 4



STUD-LOK LINTEL FIXING OPTIONS FOR ON-SITE

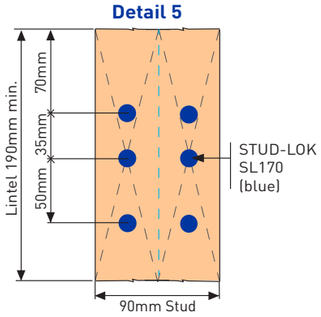
MiTek BOWMAC

TYPE H 13.5kN

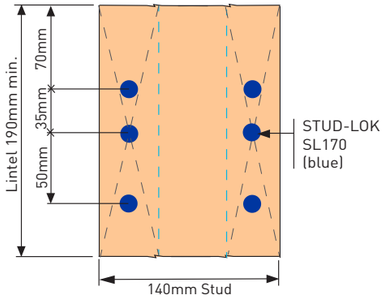


OR

Detail 5



Detail 6



NOTE: STUD-LOK TYPE F 4.0kN fixing can be used for TYPE E 1.4kN fixing

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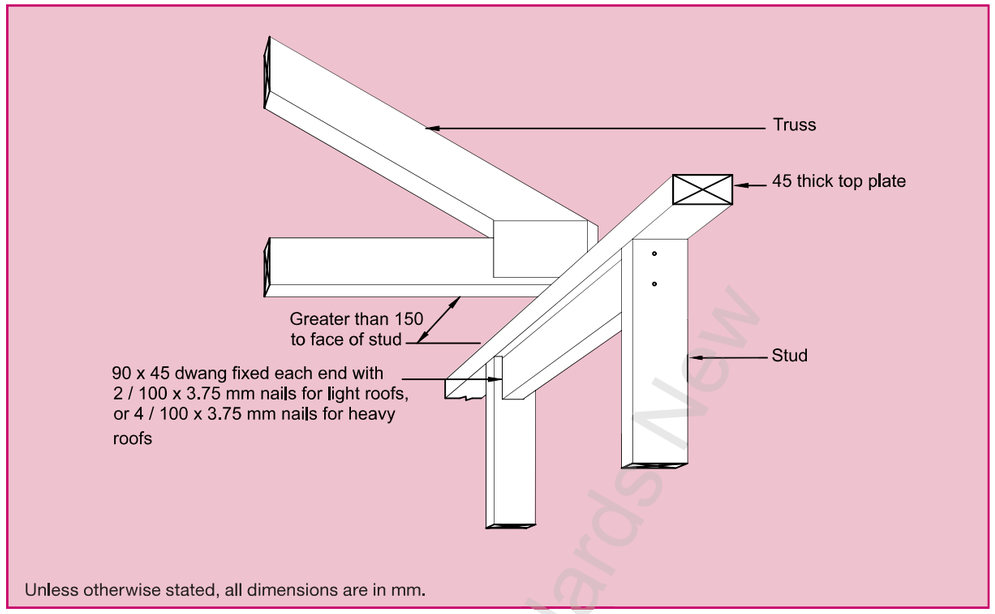


Figure 8.13 – Strengthening top plate (see 8.7.1.1 and table 8.16)

Joints in plates:
Joints in top plates shall be made only over supports being either a stud or blocking.
Joints in the top plate of a wall that does not contain any wall bracing elements (either in line or at wall intersections), shall be halved and nailed at the joints, see figure 8.14 (A), or be butted over blocking and nailed, see figure 8.14 (B), or be provided with an alternative fixing, having a capacity in tension or compression of 3 kN.

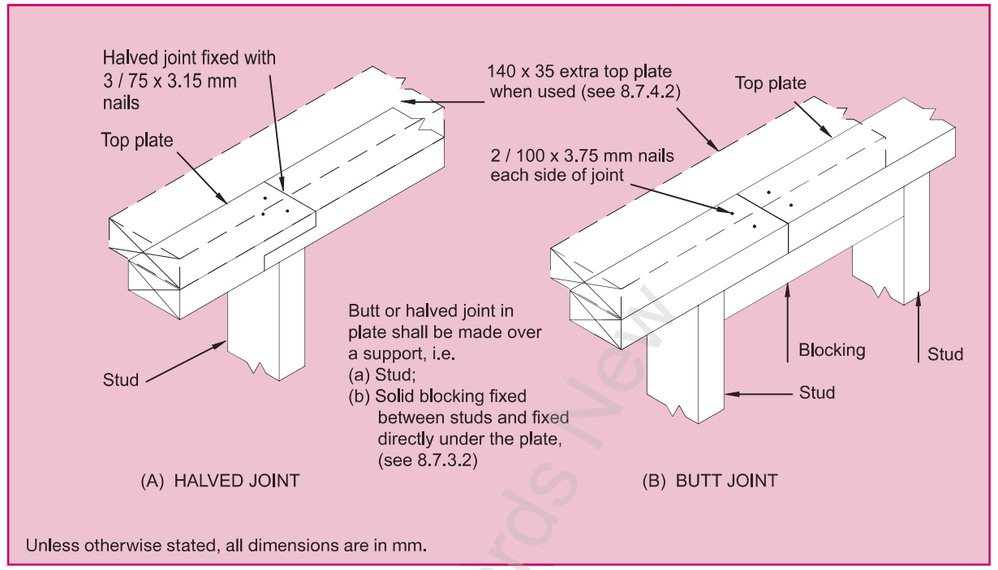


Figure 8.14 – Connecting top plates – Walls not containing bracing (see 8.7.3.2)

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TOP PLATE JOINTING

Scale:
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Sheet no: **23**

Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

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Address:
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Lake Hawea

Job no: **OS016**

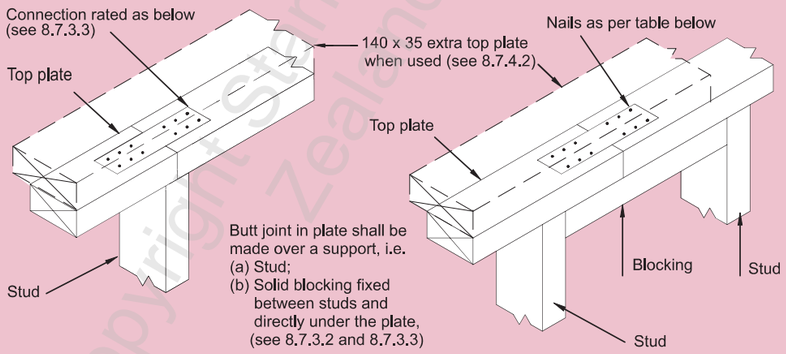
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Connecting top plates to external walls:

For single-storey buildings the connection in line of the top plate of a wall that contains one or more wall bracing elements shall be jointed according to the bracing capacity of the highest-rated individual wall bracing elements as follows:
(a) Bracing capacity not exceeding 100 bracing units: A 3 kN connection as shown in figure 8.15;
(b) Bracing capacity exceeding 100 bracing units: A 6 kN connection as shown in figure 8.15.
(c) Wall top plates to which ceiling diaphragms are attached:
A 6 kN connection as shown in figure 8.15

Each wall that contains one or more wall bracing elements shall be connected at the top plate level, either directly, or through a framing member in the line of the wall, to external walls at right angles to it. Top plate fixing(s) of the capacity in tension or compression along the line of the wall bracing element are given as follows:
(a) For each wall containing wall bracing elements with a total bracing capacity of not more than 125 bracing units: to at least one such external wall by a fixing as shown in figure 8.16 of 6 kN capacity;
(b) For each wall containing wall bracing elements with a total bracing capacity of not more than 250 bracing units: to at least 2 external walls by fixings as shown in figure 8.16 each of 6 kN capacity;
(c) For each wall containing wall bracing elements with a total bracing capacity of more than 250 bracing units: to at least 2 external walls by fixings as shown in figure 8.16 each having a rating of not less than 2.4 kN per 100 bracing units.



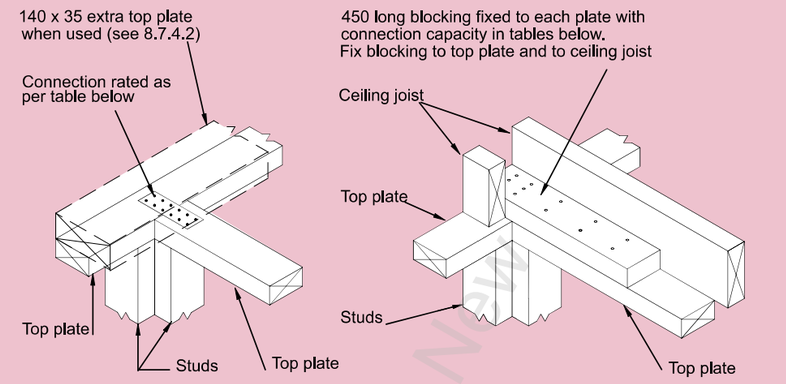
Capacities of metal plate joints(2)	
Up to 3 kN Up to 6 kN	3 / 30 x 3.15 mm nails per side 6 / 30 x 3.15 mm nails per side

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

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

Unless otherwise stated, all dimensions are in mm.

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



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

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

NOTE – See section 4 for durability requirements.

Unless otherwise stated, all dimensions are in mm.

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

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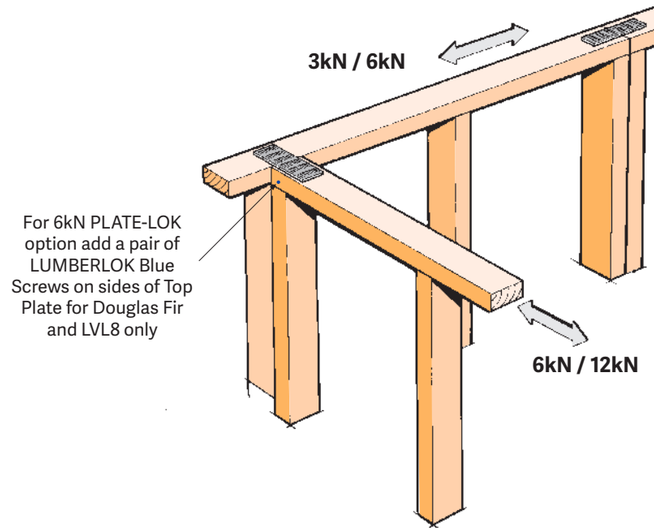
TOP PLATE JOINTING
AS PER CLAUSE 8.7.3 NZS 3604:2011

Top Plates at Right Angles

Connection capacity	LUMBERLOK Connector
6kN	Tylok 6T10 **OR** PLATE-LOK
12kN	2 x Sheet Brace Straps fixed with 6 x LUMBERLOK Product Nails 30mm x 3.15 dia. per end per strap (24 nails total)

Top Plates in Line

Connection capacity	LUMBERLOK Connector
3kN	Tylok 6T5
6kN	Tylok 6T10 **OR** PLATE-LOK



Available from leading Builders Supply Merchants throughout New Zealand

All Construction in accordance with NZS 3604:2011 & NZBC

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TOP PLATE CONNECTIONS

Scale:
Rev:
Sheet no: 24
Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

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Richard Joyce
Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**
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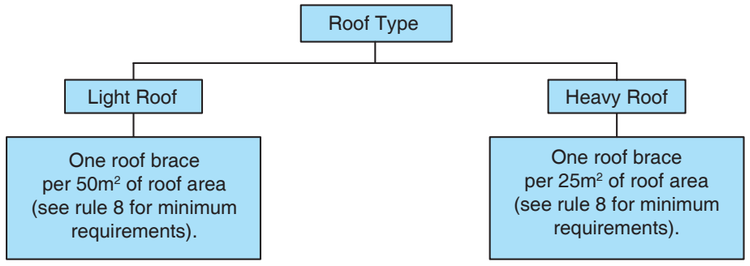
MiTek® LUMBERLOK®

2024 EDITION V1

ROOF BRACING SPECIFICATION
AS PER NZS 3604:2011

- Covers roof bracing requirements to resist horizontal loads as set out in Section 10 NZS 3604:2011
- A definitive guide to the description and installation of Roof Plane Braces and Roof Space Braces

Roof Bracing Requirements



Roof Bracing - Rules & Definitions

1. The bracing described in this brochure covers both framed roofs and fully trussed roofs.
2. Roof planes less than 6m² (e.g. dormers & porches) do not require bracing.
3. Roof braces can consist of either
   i) Roof Plane Brace or
   ii) Roof Space Brace or combination of the two.
4. Roof braces are not required on roofs where sarking is installed as per Clause 10.4.4 NZS 3604:2011 or where a ceiling diaphragm is installed and is attached to the rafters.
5. Roof area is the actual plan area of the roof and includes overhangs.
6. A hip or valley rafter running continuously from ridge to top plate can be classed as one roof plane brace.
7. A pair of crossed LUMBERLOK Strip Brace (preferred for ease of installation) can be classed as one roof plane brace and shall be installed as detailed in this brochure.
8. There must be at least one roof plane brace in each roof plane. Each ridge line shall have a minimum of two roof braces.
9. Every design effort should be made to distribute the roof braces as evenly as possible over the entire roof area and run alternately in opposite directions.

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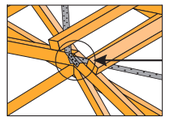
Roof Bracing Options

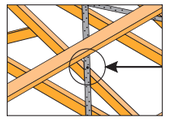
i) ROOF PLANE BRACE

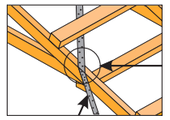
Each roof plane brace can be:
- A hip or valley rafter running continuously from ridge to the top plate in accordance with Clauses 10.2.1.3.2 or 10.2.1.3.3 NZS 3604:2011.

OR

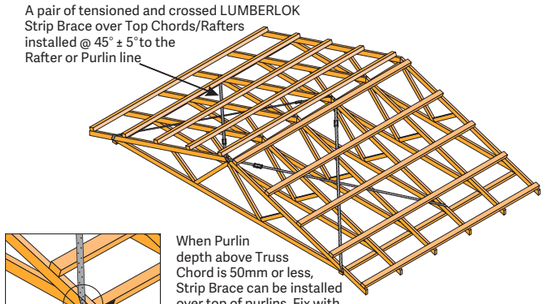
- A pair of tensioned and crossed LUMBERLOK Strip Brace running continuously from ridge to wall frame installed as detailed below.


5 x 30mm x 3.15 dia. Nails each end


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


5 x 30mm x 3.15 dia. Nails each end

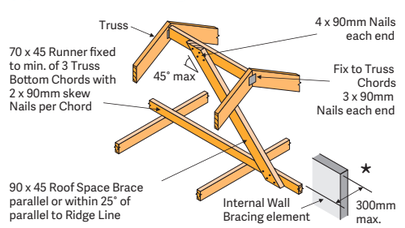
6 x 30mm x 3.15 dia. Nails to Wall Frame



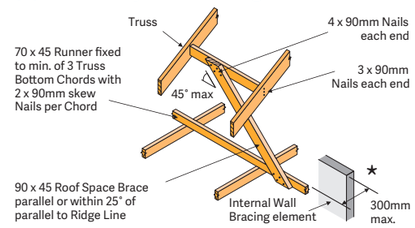
When Purlin depth above Truss Chord is 50mm or less, Strip Brace can be installed over top of purlins. Fix with 1 x 30mm x 3.15 dia. Nail at the Purlin closest to the Rafter/Truss crossing

ii) ROOF SPACE BRACE

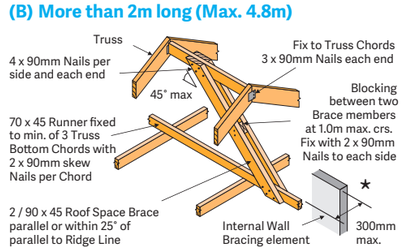
(A) Less than 2m long



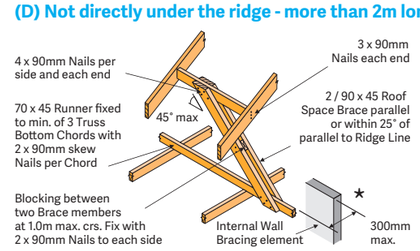
(C) Not directly under the ridge - less than 2m long



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



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



*Not required when a ceiling diaphragm complying with Clause 13.5 NZS 3604:2011 is used.

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ROOF BRACING					Scale:	Sheet no: 25
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Wind: HIGH	Earthq: 3	Exposure: B	Snow: N5 - 1.5kPa	Climate: 6	www.A1homes.co.nz	

Client Details:
Richard Joyce

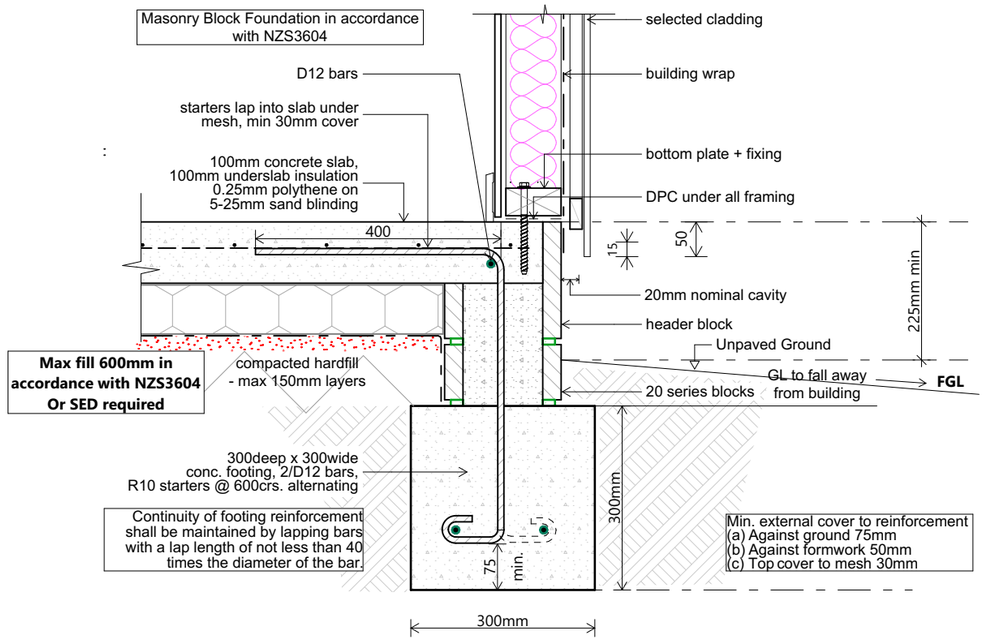
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D1 FOUNDATION EDGE



D2 GARAGE DOOR REBATE

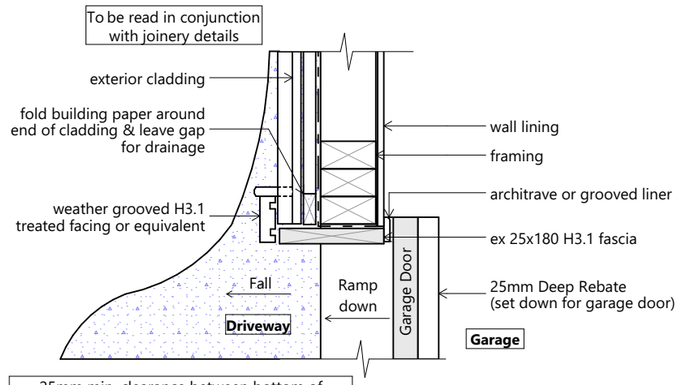


Figure 65: Levels and garage openings
Paragraphs 9.1.3, 9.1.3.4, 9.2.5, Table 18

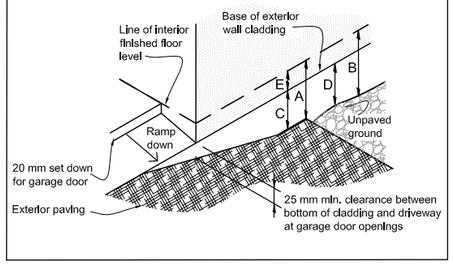


Table 18: Minimum clearances
Paragraphs 9.1.3, 9.1.3.1, 9.1.3.2, 9.1.3.3, 9.1.3.4, 9.1.3.5 and 9.2.7

Minimum clearances (mm)	Masonry veneer		Other claddings				
	A	B	A	B	C	D	E
Concrete slab	100	150	150	225	100	175	50
Timber floor Refer Note 1)					100	175	502)

NOTE: 1) Refer to NZS 3604 for requirements.
2) Cladding to extend minimum 50 mm below bearer or lowest part of timber floor framing.

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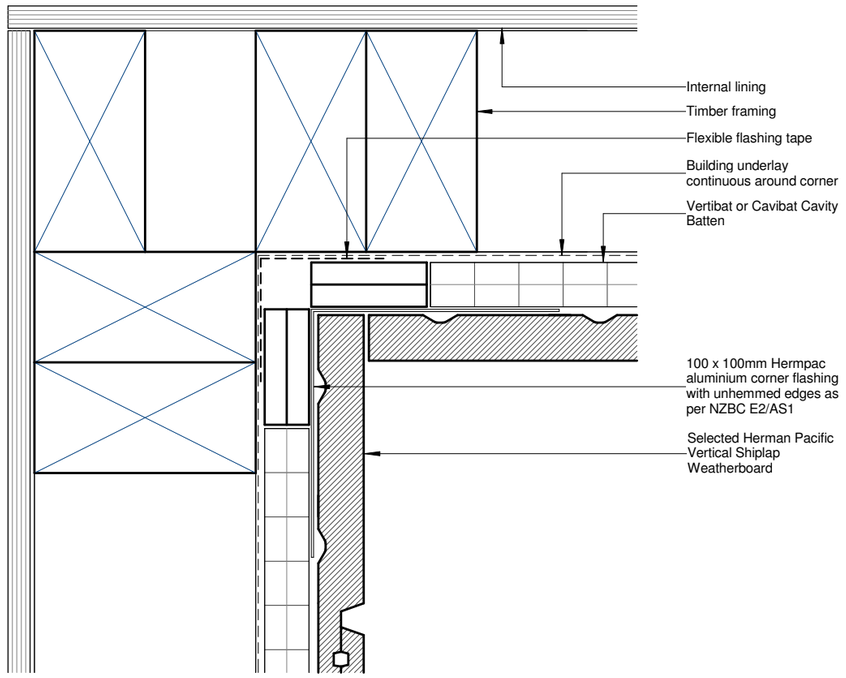
Client Details:
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Lake Hawea

Job no: **OS016**

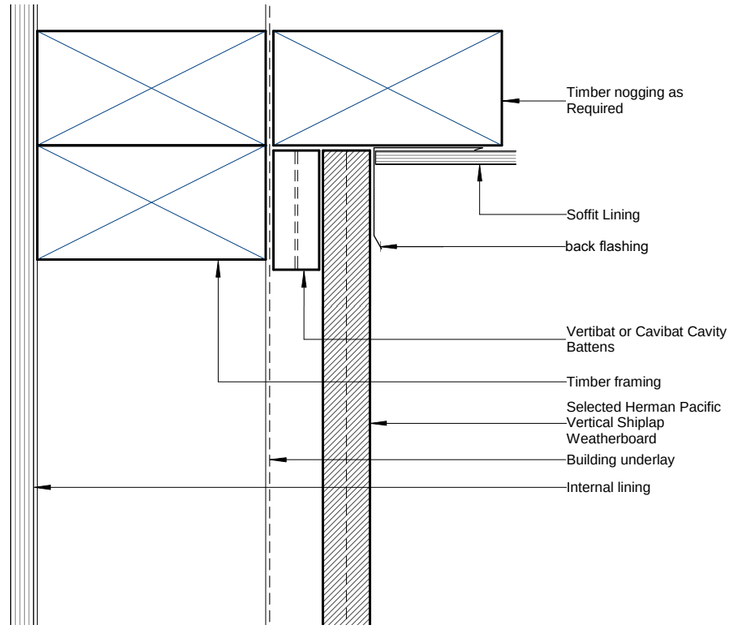
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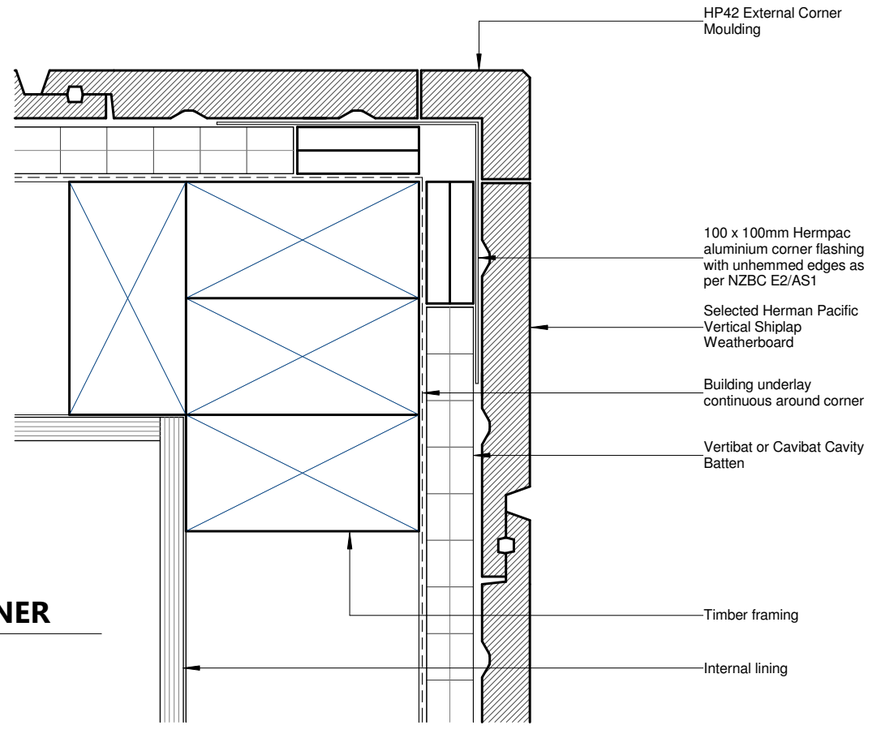
Notes:
- All nail fixings pre-drilled minimum 1mm diameter smaller than the nail gauge.
- All HermanPacific timber products to be precoated & cut ends and edges and all fresh cut surfaces double coated and sealed before fixing.
- All materials and fixtures are to comply with E2/AS1 Clause 2.2
- For non-hemmed corner flashings, ensure a minimum 75mm cover to Weatherboards beyond the point where BRANZ bulletin 411 compliant Weatherboard lap or rebate combinations terminate at the corner junction. In Extra High Wind Zone and above, the 75mm cover requirement remains and hemmed edges must also be used.
- Refer to NZBC Acceptable Solution E2/AS1 Table 21 for the separation requirements between CCA treated battens and metal flashings.



CEDAR INTERNAL CORNER

CEDAR SOFFIT





CEDAR EXTERNAL CORNER

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CLADDING DETAILS

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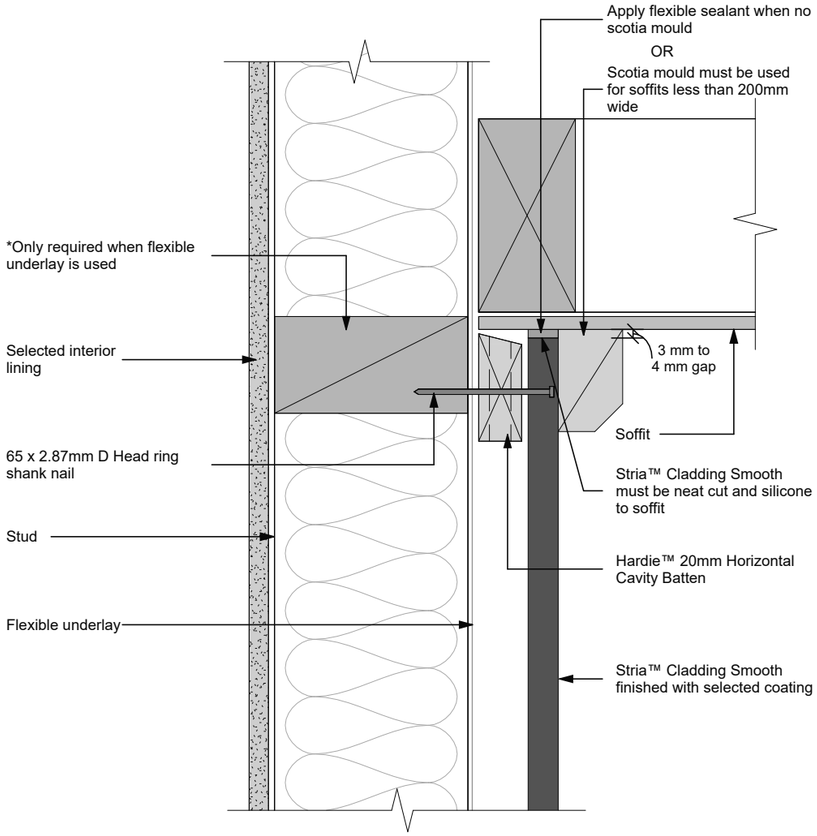
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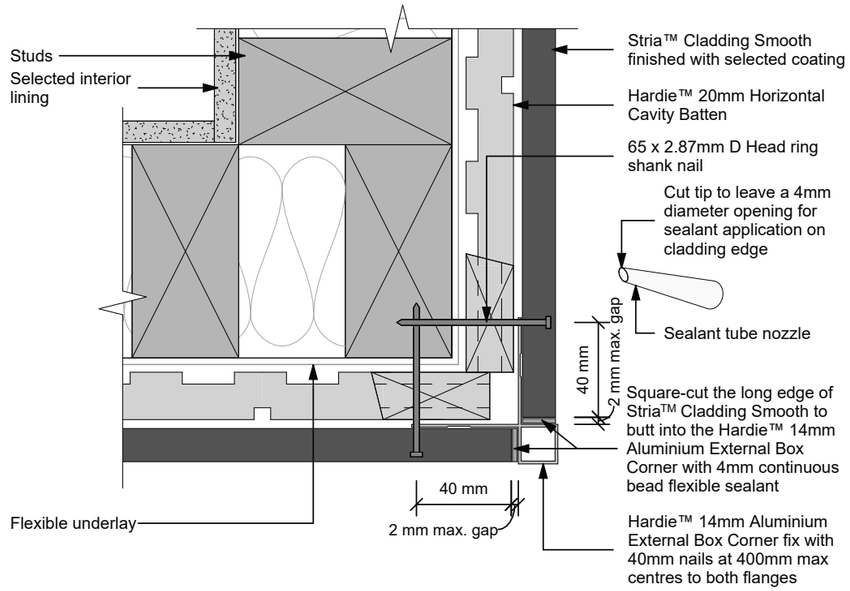
Job no: **OS016**

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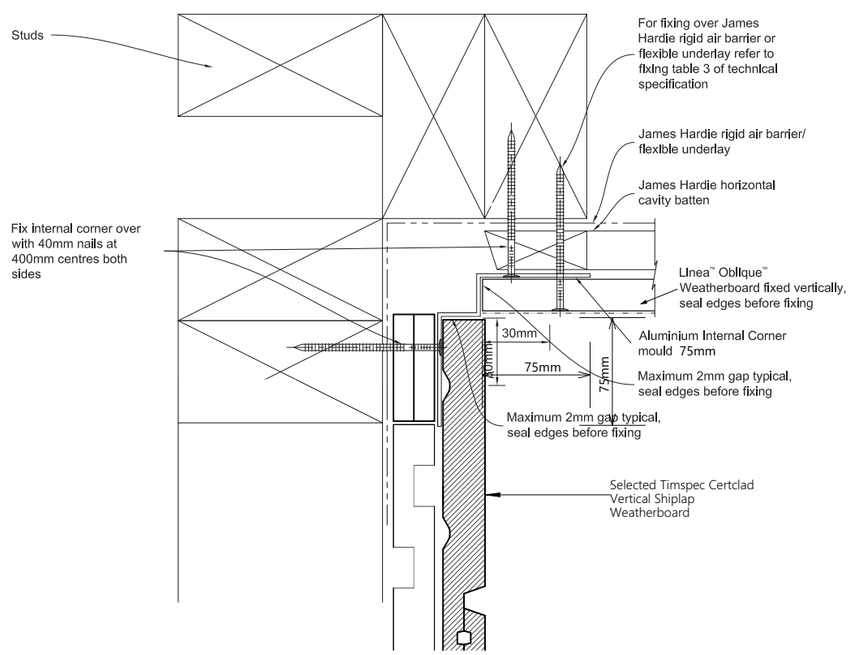
Note:
- Site cut edges to be primed

VERTICAL STRIA SOFFIT DETAIL



Note: Site cut edges to be primed

VERTICAL STRIA EXTERNAL CORNER



VERTICAL STRIA /CEDAR INTERNAL CORNER

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Rev:

Sheet no: **28**

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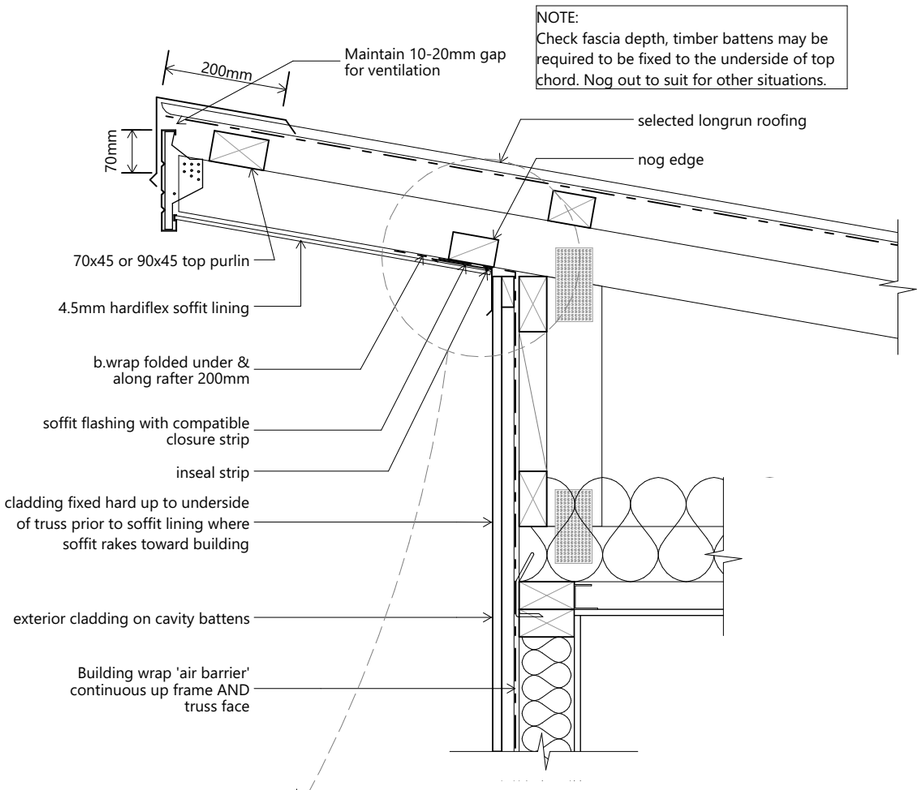
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Richard Joyce

Address:
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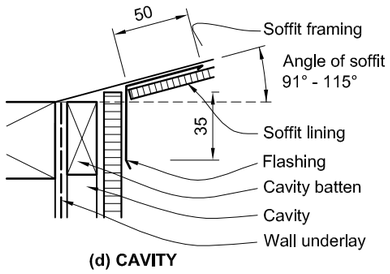
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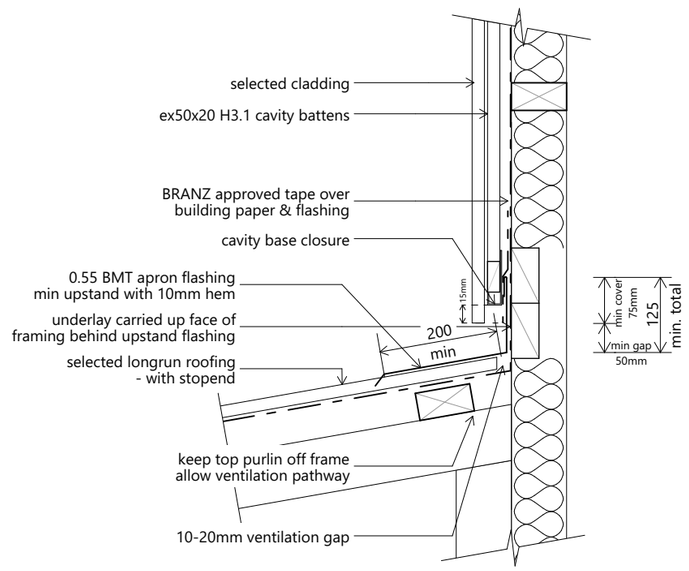
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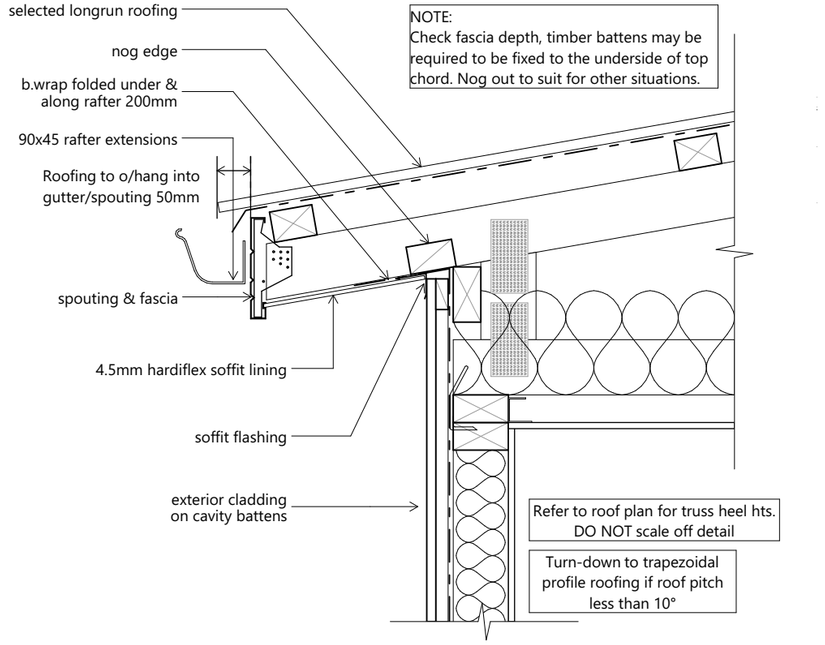
R1 UPPER RAKING EAVE



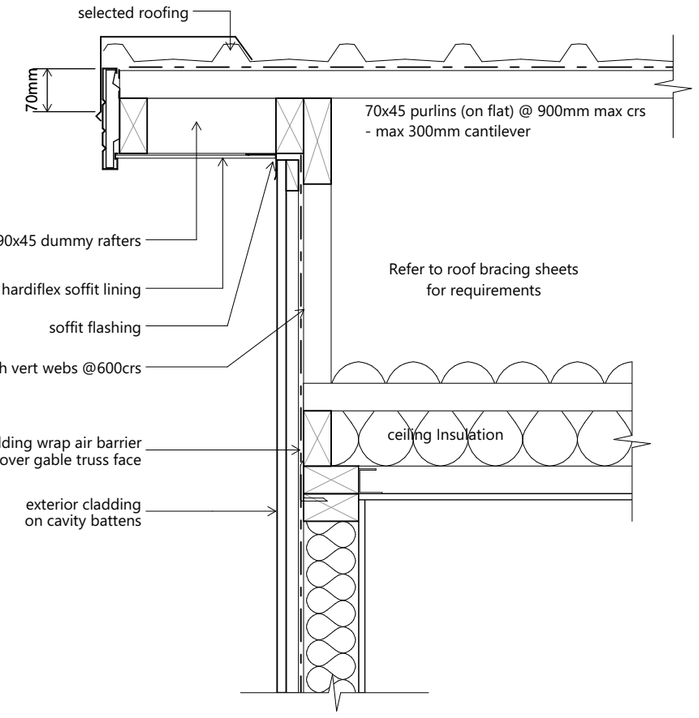
(d) CAVITY



R3 APRON FLASHING - RAKING



R2 LOWER RAKING EAVE



R4 GABLE EAVE

Roofing & associated flashings to comply with the NZ Metal Roof & Wall Cladding Code of Practice

All Construction in accordance with NZS 3604:2011 & NZBC

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ROOF DETAILS

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Sheet no: 29
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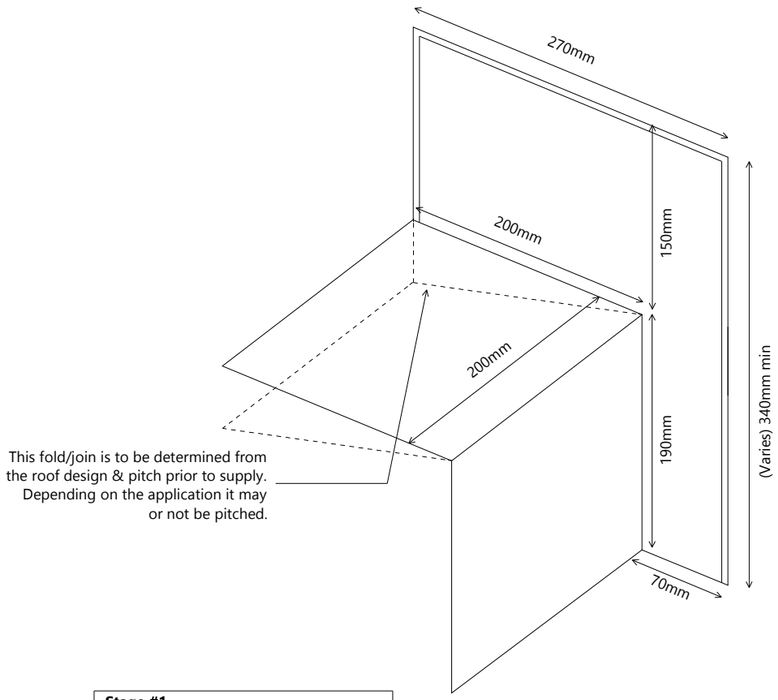
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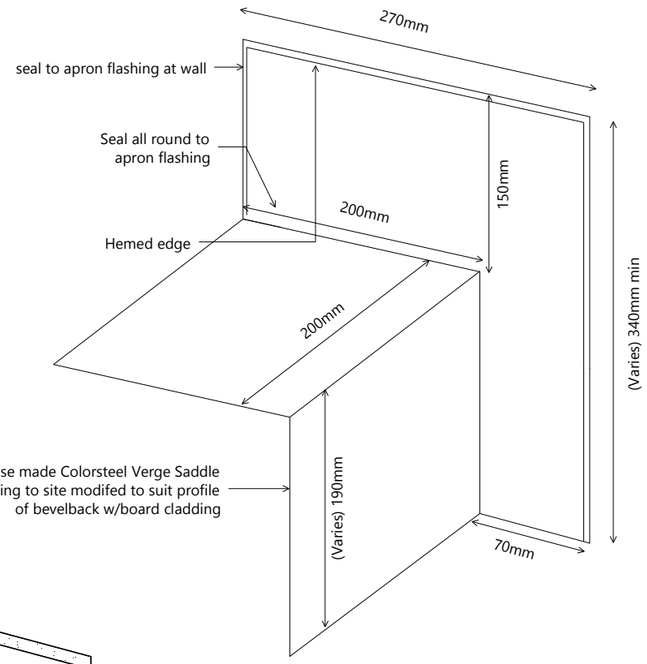
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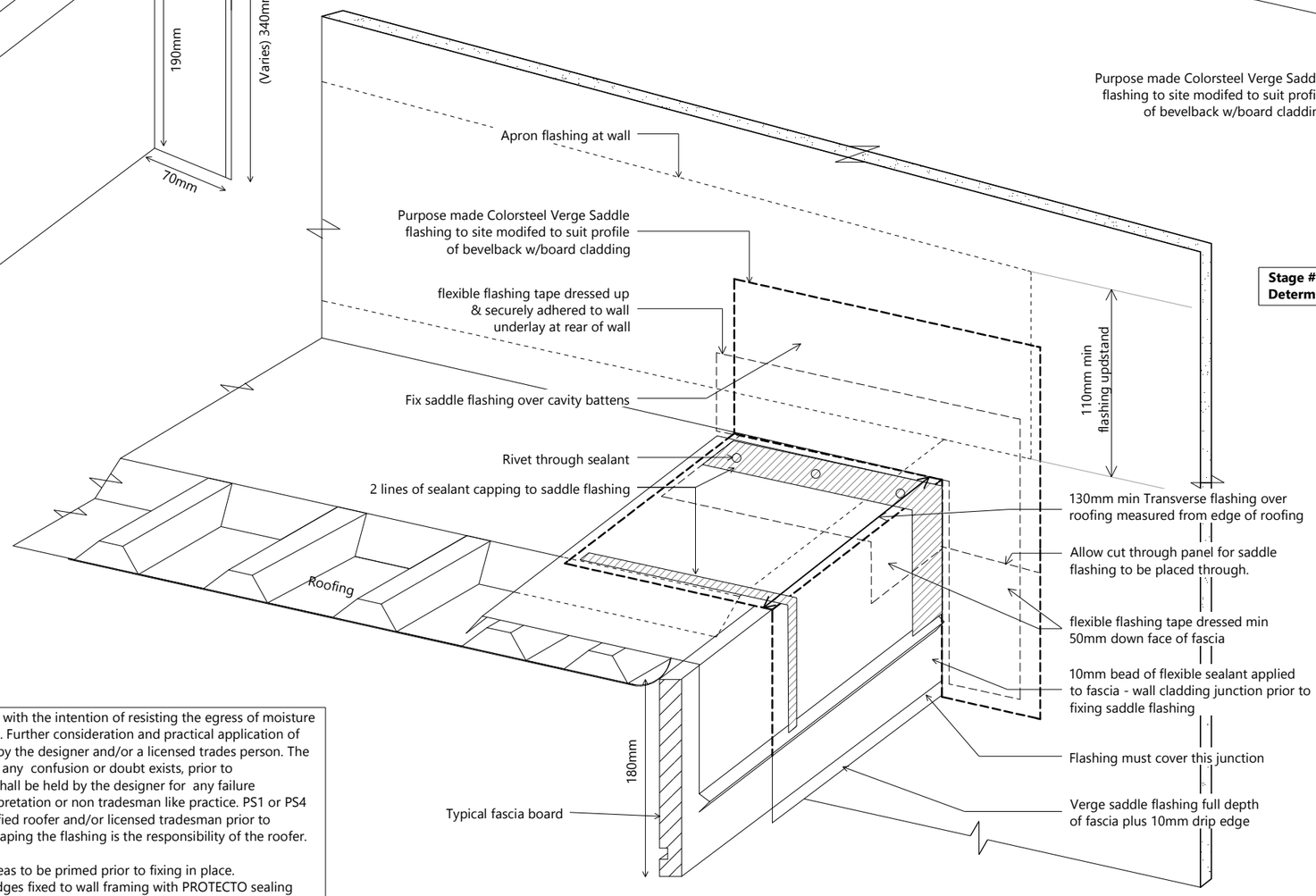
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Stage #1
Determine the application - location of flashing & preliminary shape required



Stage #2
Determine and carry out the final shape



Stage #3
Apply flashing in conjunction with cladding, roofing, other flashings, sealants, rivets, folds, laps as required

This detail has been designed with the intention of resisting the egress of moisture at the soffit/cladding junction. Further consideration and practical application of this design may be required by the designer and/or a licensed trades person. The designer is to be notified of if any confusion or doubt exists, prior to commencement. No liability shall be held by the designer for any failure whatsoever due to miss-interpretation or non tradesman like practice. PS1 or PS4 shall be supplied by the qualified roofer and/or licensed tradesman prior to completion. Obtaining and shaping the flashing is the responsibility of the roofer.

All cut cladding edges and areas to be primed prior to fixing in place.
Seal off edge of all flashing edges fixed to wall framing with PROTECTO sealing tape or approved equal product.

Saddle Verge Flashing is fixed over apron flashing and fascia.
Birds beaked verge flashing is fixed over last and sealed at wall junction

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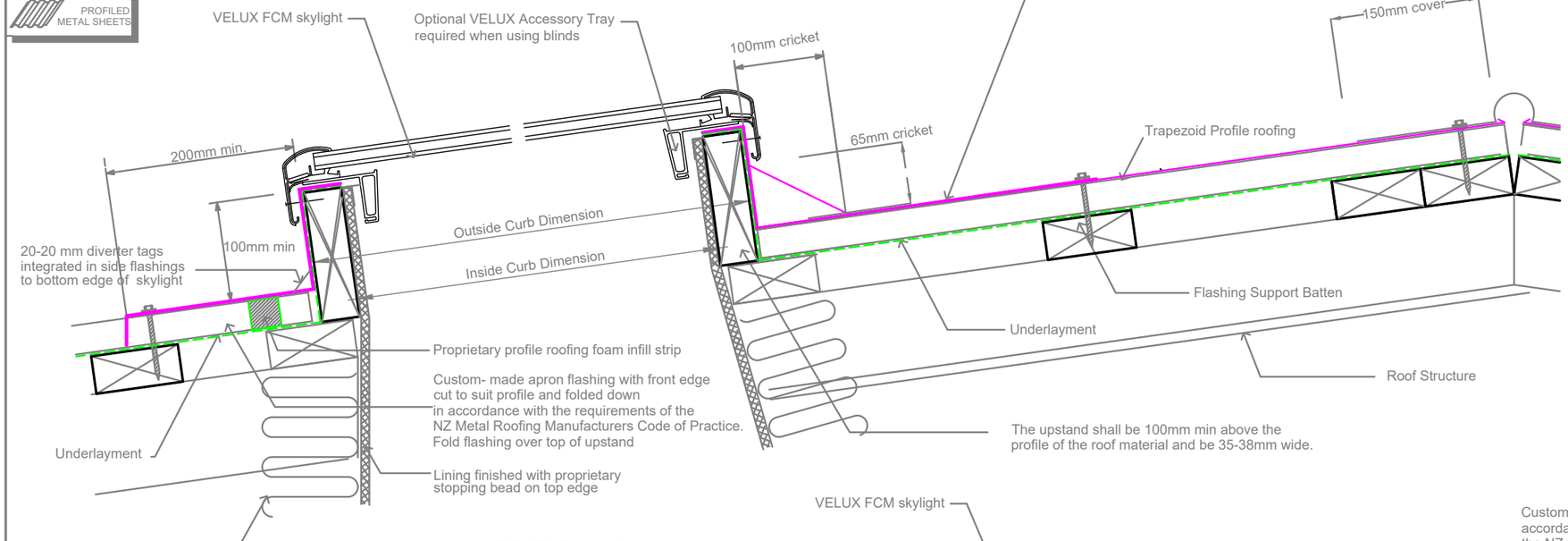
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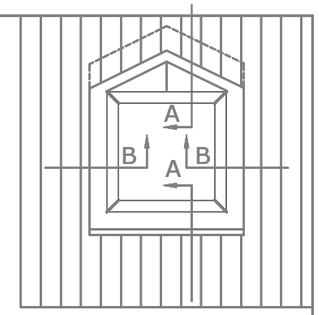
FCM

Custom

PROFILED METAL SHEETS

THIS DETAIL APPLIES TO METAL TRAPEZOID AND TROUGH ROOF PROFILES WITH ROOFPITCHES BETWEEN 3 AND 60 DEGREES.



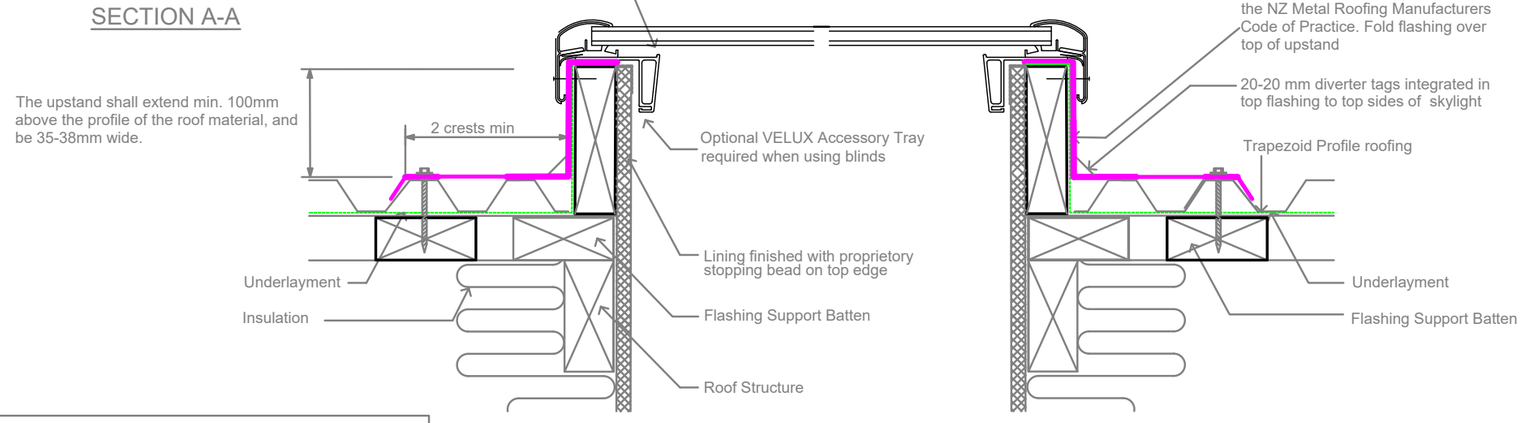


ELEVATION

Custom-made flashing in accordance with New Zealand Metal Roofing Manufacturers Code of Practice. Ensure all flashings meet the requirements for your projects' location.

Please note:
Below 15 degrees:- Any condensation that forms on the glass due to high humidity may drip

SECTION A-A



SECTION B-B

BRANZ APPRAISED CUSTOM WATER-SHED FLASHING

No cricket or diverter required when skylight is less than 600mm wide, and catchment less than 40 sqm.

Custom flashings must be designed to meet the requirements set out in the latest version of the New Zealand Metal Roof and Wall Cladding Code of Practice, and shall be manufactured and installed by a specialist flashing contractor to the latest trade practices.

The flashing and installation must be guaranteed against weathertightness by the specialist flashing contractor.

Insulation material meeting the requirements of NZBC/H1 is required in the cavities of the lightwell structure.

VELUX Sky-Product Management

NEW ZEALAND LTD.
0800 650 445

VELUX Low Pitch Fixed Skylight in Trapezoidal Steel Roof with metal water-shed flashing (3-60 degrees)

	Name	Date
Drawn by		Feb 19
Checked by		Feb 19
Drawing No.		

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All Construction in accordance with NZS 3604:2011 & NZBC

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SKYLIGHT DETAILS

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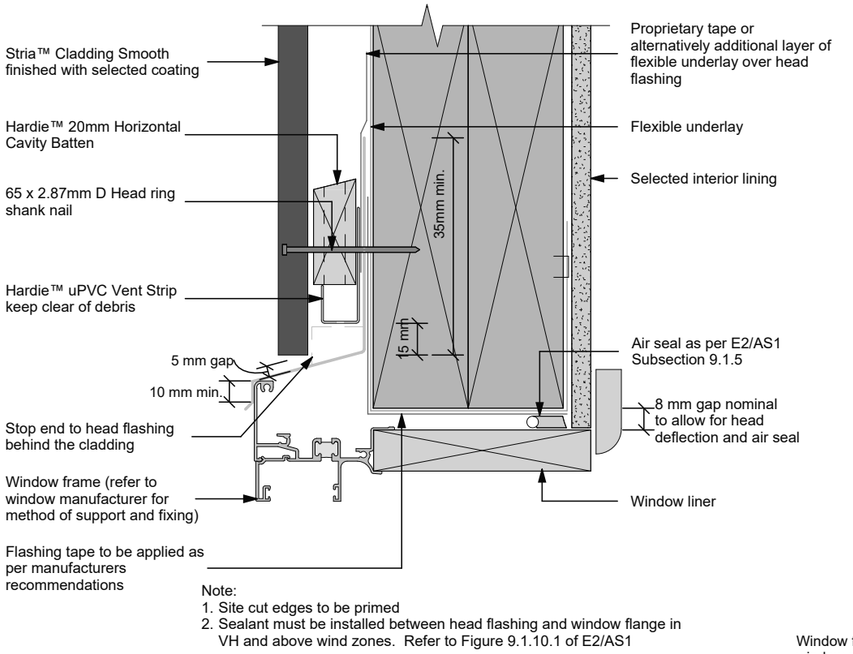
Client Details:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**

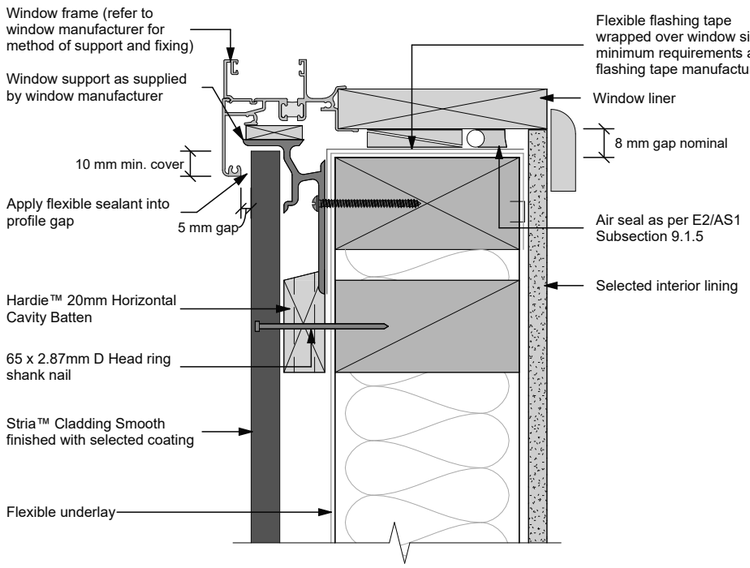
KH175

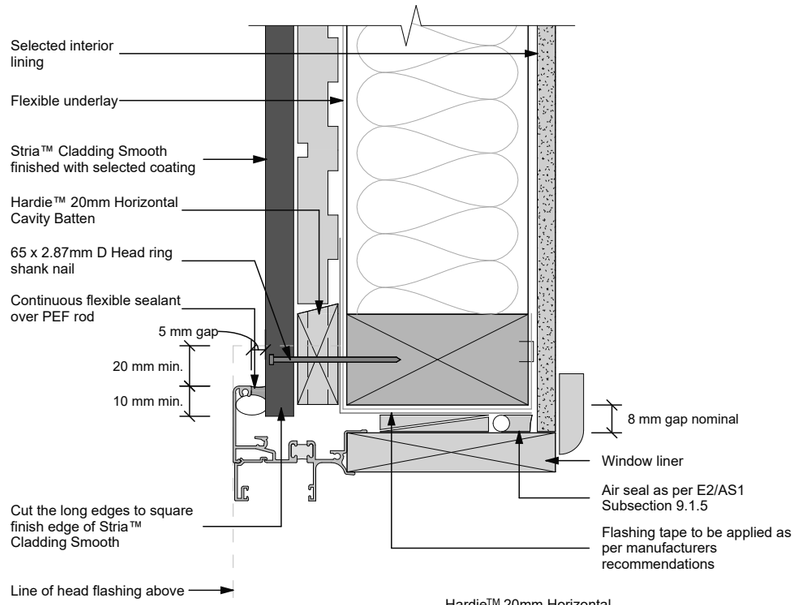
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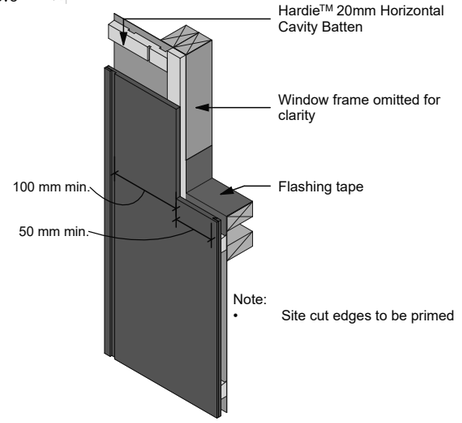


Note:
1. Site cut edges to be primed
2. Sealant must be installed between head flashing and window flange in VH and above wind zones. Refer to Figure 9.1.10.1 of E2/AS1

STRIA JOINERY HEAD DETAIL







STRIA JOINERY JAMB DETAIL

General notes
1. Flashing materials must be selected based on environmental exposure, refer to the NZS 3604 and Table C.1.1.1A of the NZBC E2/AS1
2. Flexible underlay must comply with acceptable solution E2/AS1
3. Flashing tape must have proven compatibility with the selected flexible underlay and other materials with which it comes into contact
4. When HomeRAB™ Pre-Cladding/RAB™ Board is used flashing tape to be applied to the entire window opening
5. Site cut edges to be primed
6. When using scribers by the jamb, the gap between joinery and cladding at the jamb and sill can be nil

STRIA JOINERY SILL DETAIL

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JOINERY DETAILS

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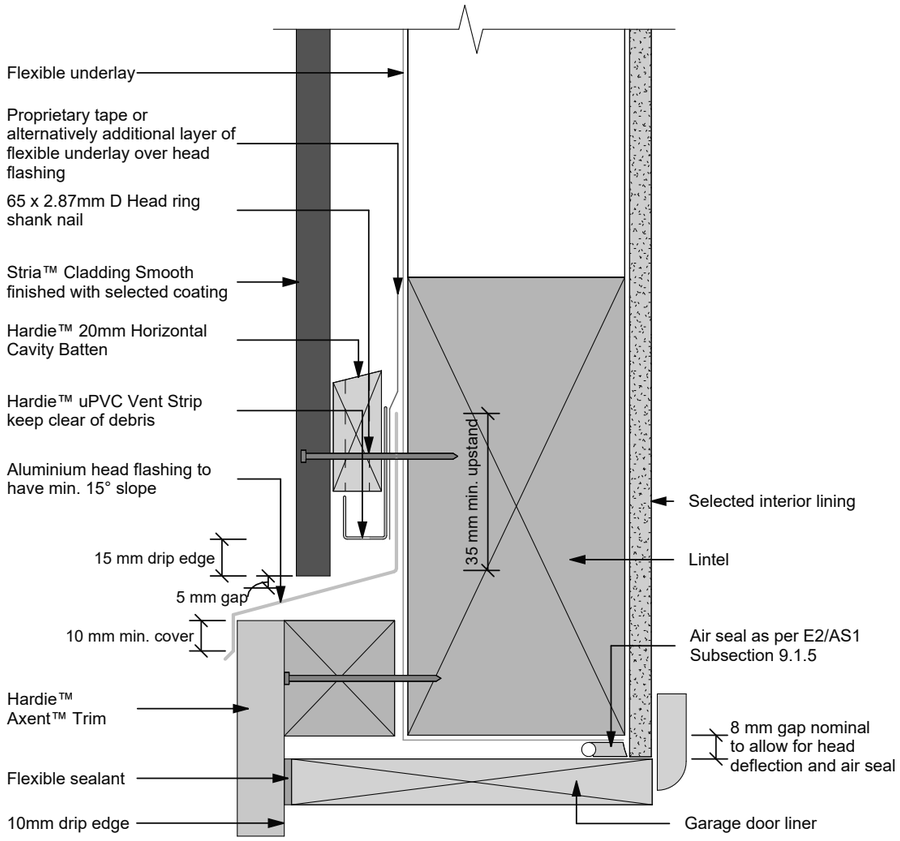
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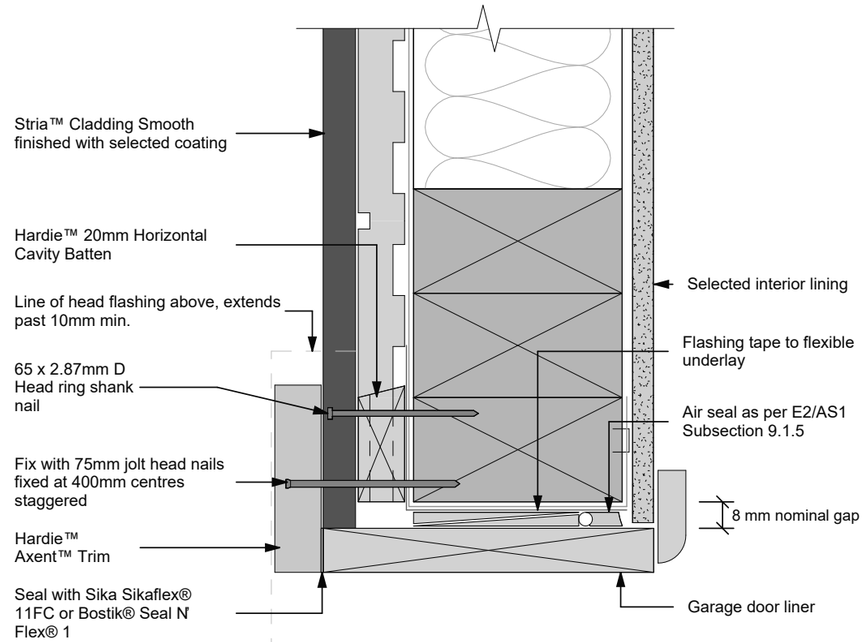
Job no: **OS016**

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- Sealant must be applied between head flashing and Hardie™ Axent Trim in VH wind zone
- Site cut edges to be primed

STRIA GARAGE HEAD DETAIL



Note: Site cut edges to be primed

STRIA GARAGE JAMB DETAIL

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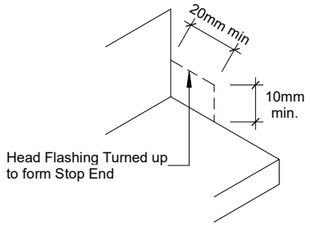
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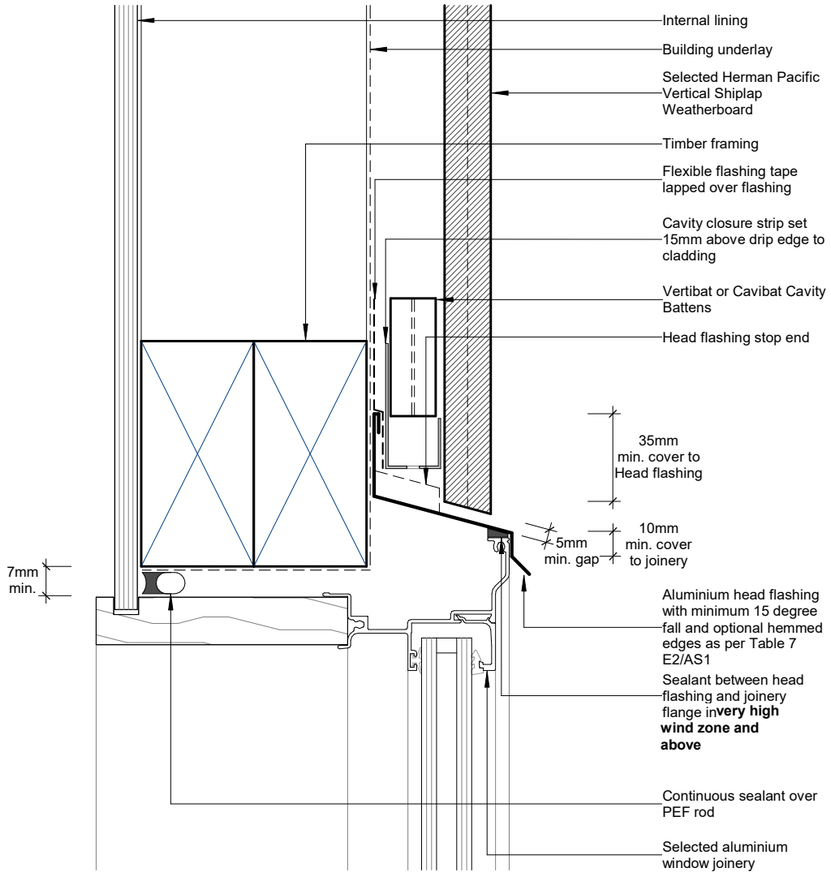
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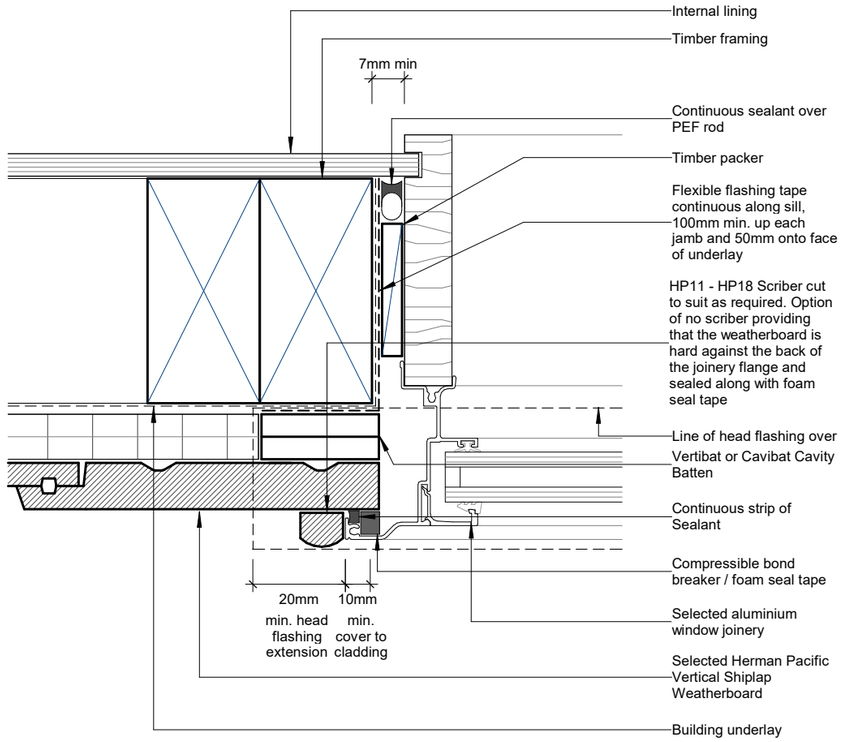
Notes:
- All nail fixings pre-drilled minimum 1mm diameter smaller than the nail gauge.
- All Herman Pacific timber products to be precoated & cut ends and edges and all fresh cut surfaces double coated and sealed before fixing.
- All materials and fixtures are to comply with E2/AS1 Clause 2.2
- For non-hemmed corner flashings, ensure a minimum 75mm cover to Weatherboards beyond the point where BRANZ bulletin 411 compliant Weatherboard lap or rebate combinations terminate at the corner junction. In Extra High Wind Zone and above, the 75mm cover requirement remains and hemmed edges must also be used.
- Refer to NZBC Acceptable Solution E2/AS1 Table 21 for the separation requirements between CCA treated battens and metal flashings.





CEDAR WINDOW HEAD

Notes:
- All nail fixings pre-drilled minimum 1mm diameter smaller than the nail gauge.
- All Herman Pacific timber products to be precoated & cut ends and edges and all fresh cut surfaces double coated and sealed before fixing.
- All materials and fixtures are to comply with E2/AS1 Clause 2.2
- For non-hemmed corner flashings, ensure a minimum 75mm cover to Weatherboards beyond the point where BRANZ bulletin 411 compliant Weatherboard lap or rebate combinations terminate at the corner junction. In Extra High Wind Zone and above, the 75mm cover requirement remains and hemmed edges must also be used.
- Refer to NZBC Acceptable Solution E2/AS1 Table 21 for the separation requirements between CCA treated battens and metal flashings.



CEDAR WINDOW JAMB

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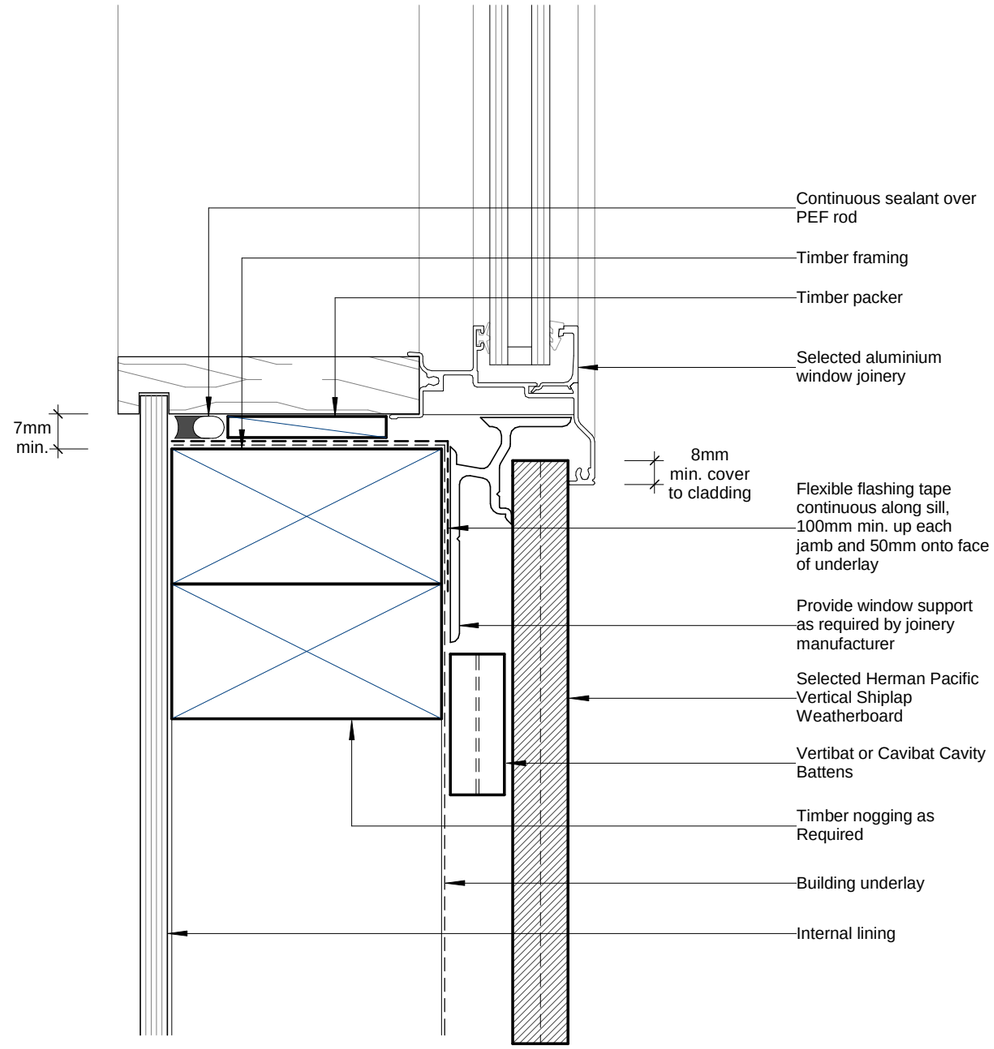
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Address:
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Lake Hawea

Job no: **OS016**

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- All nail fixings pre-drilled minimum 1mm diameter smaller than the nail gauge.
- All Herman Pacific timber products to be precoated & cut ends and edges and all fresh cut surfaces double coated and sealed before fixing.
- All materials and fixtures are to comply with E2/AS1 Clause 2.2
- For non-hemmed corner flashings, ensure a minimum 75mm cover to Weatherboards beyond the point where BRANZ bulletin 411 compliant Weatherboard lap or rebate combinations terminate at the corner junction. In Extra High Wind Zone and above, the 75mm cover requirement remains and hemmed edges must also be used.
- Refer to NZBC Acceptable Solution E2/AS1 Table 21 for the separation requirements between CCA treated battens and metal flashings.



CEDAR WINDOW SILL

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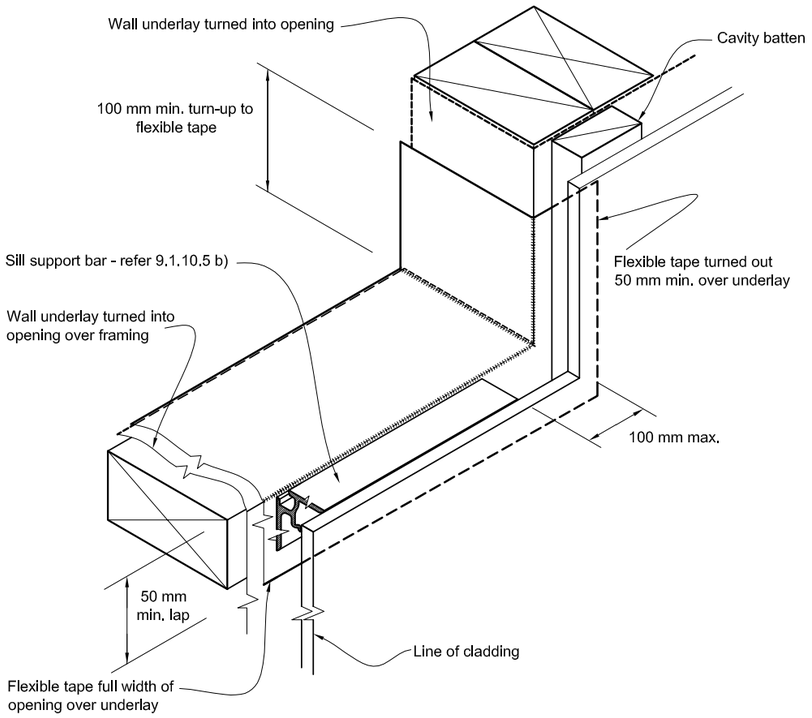
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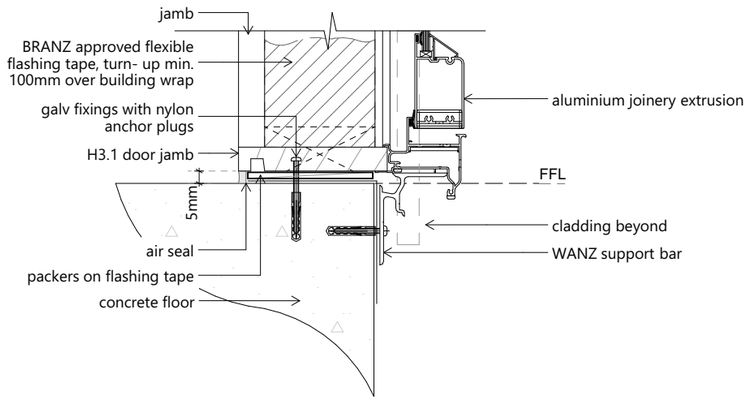
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Figure 72B: **General window and door opening with drainage cavity**
Paragraphs 9.1.5, 9.1.9.3, 9.1.10.2, Figures 73C, 76, 85, 86, 91, 99, 116 and 128

NOTE:
(1) Detailed *cladding* omitted for clarity, refer to specific *claddings*.
(2) Head to be treated similarly with continuous *wall underlay* and *flexible tape* at corners.
(3) Refer individual cladding details for jamb flashings.





DOOR SILL

Flexible air seals;
The air seal shall be installed over a closed cell polyethylene foam (PEF) backing rod, or similar and made of self-expanding polyurethane foam

Backing rods are used for self-expanding polyurethane foam as there is a danger foam will expand to the outside of the wall and form a moisture bridge to the interior.

9.1.10.8 Attachments for windows and doors
Install windows and doors using pairs of minimum 75 x 3.15 galvanised jolt head nails or 8 gauge x 65 mm stainless steel screws, through reveals into surrounding framing at:
a) Maximum 450 mm centres along sills, jambs and heads, and
b) Maximum 150 mm from reveal ends.
Install packers between reveals and framing at all fixing points, except between head reveals and lintels.

Flashing tape must be proven compatibility with selected building underlay
and other building materials with which it comes into contact as per table
21 of 'E2/AS1'

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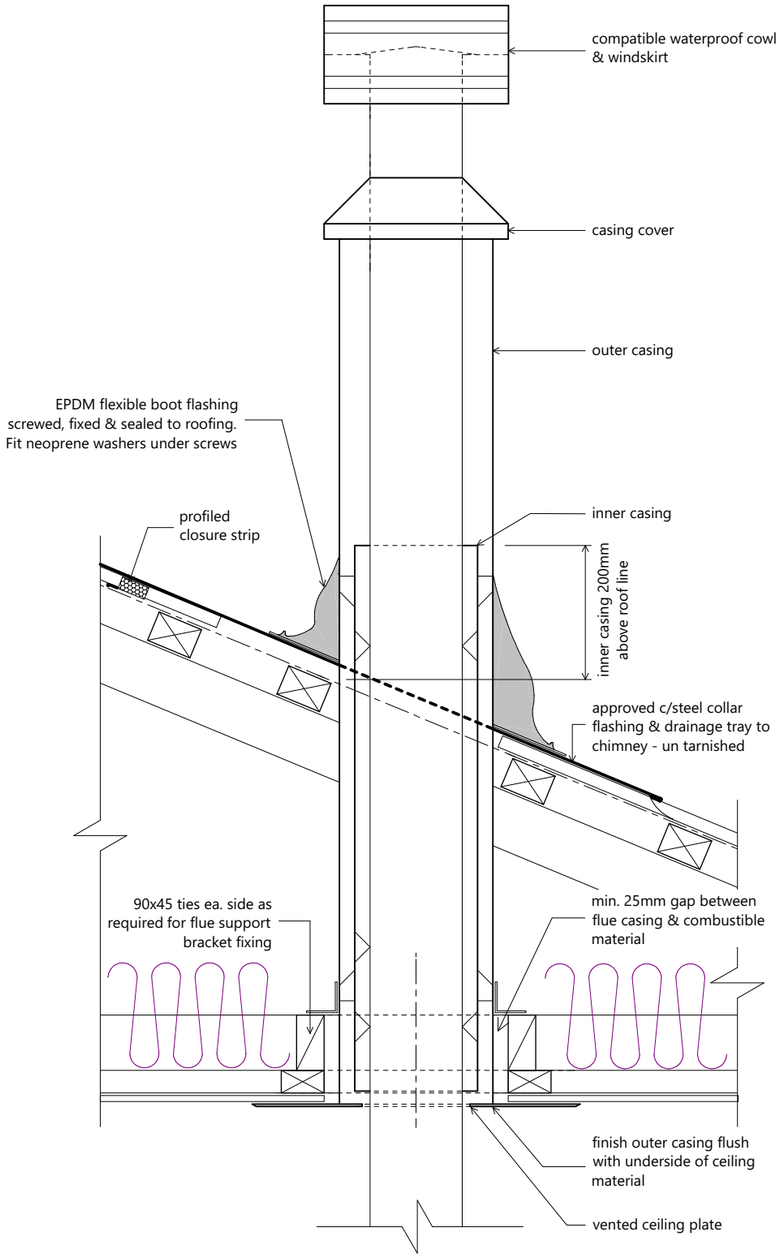
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Chimney/Flue Penetration

9.5.1B Over-flashed Boot with Soaker Level Curb on Trapezoidal Profile

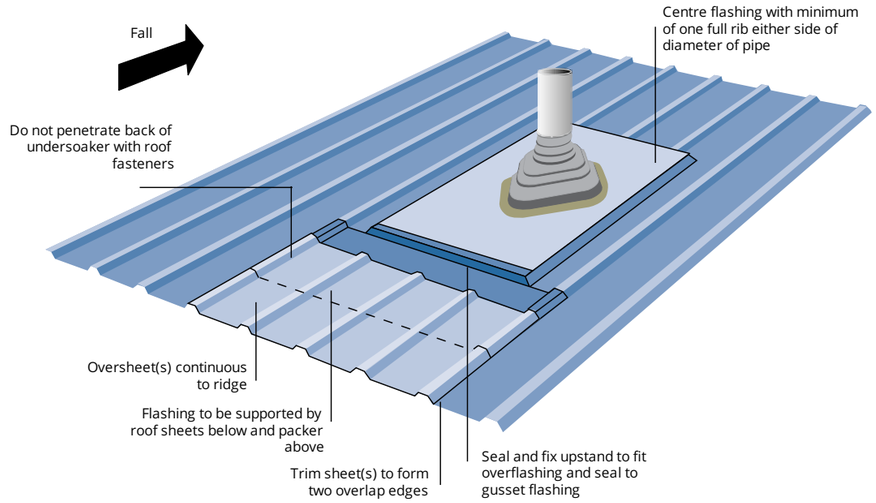
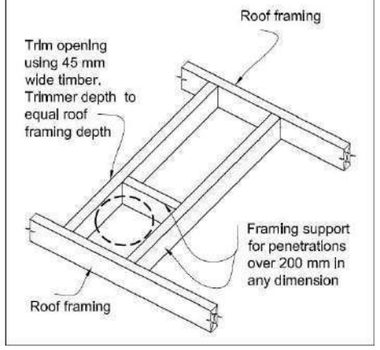
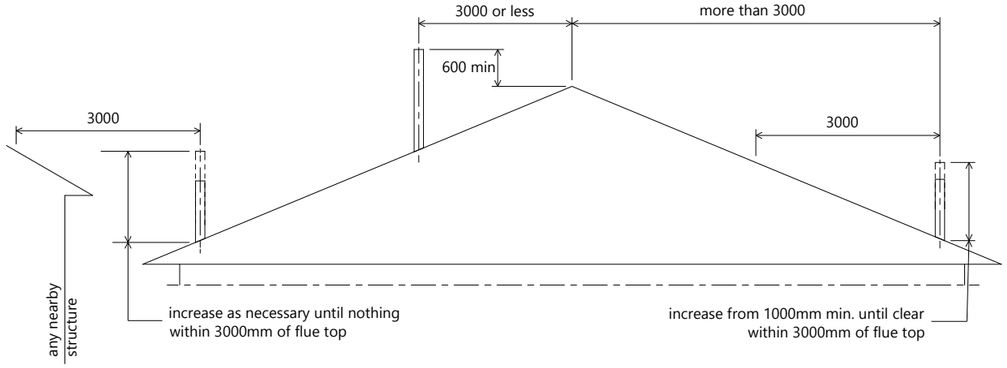


Figure 21: Penetration support
Paragraphs 8.1.7 and 8.4.17



As per AS/NZS 2918:2001 4.9.1 Fig 4.9



Minimum Flue Heights apply
- refer to Manufacturers Specification

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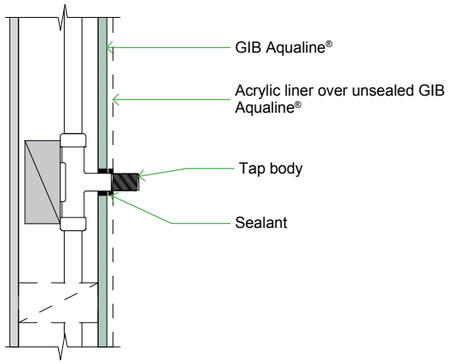
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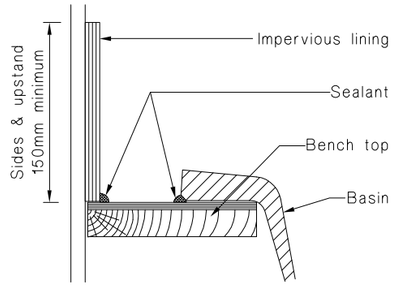
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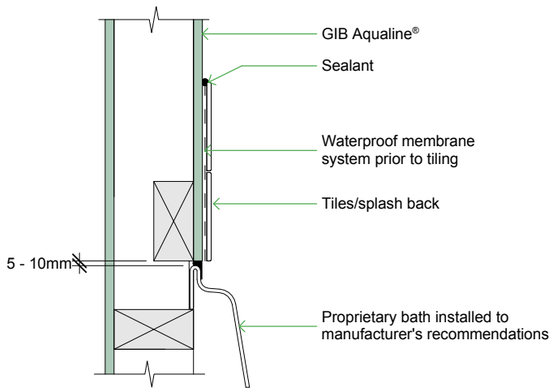
E: SEALING SEMI WET AREA PENETRATION





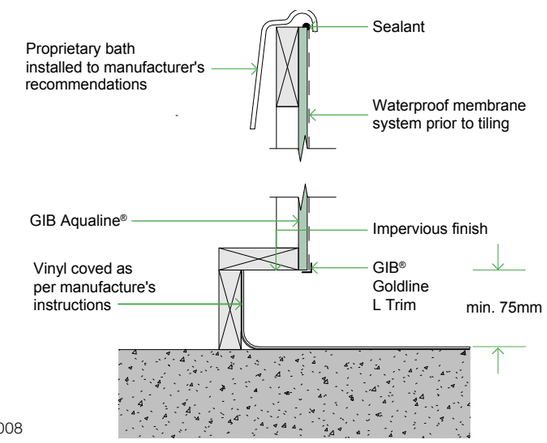
(b) Tub, sink and basin

D: BATH LINING JUNCTION



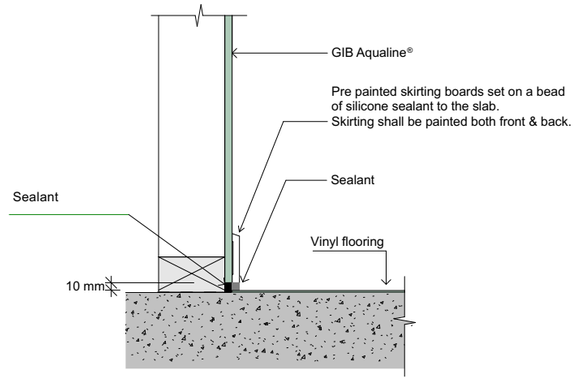
GAL-010

E: CRADLE VINYL LINING JUNCTION

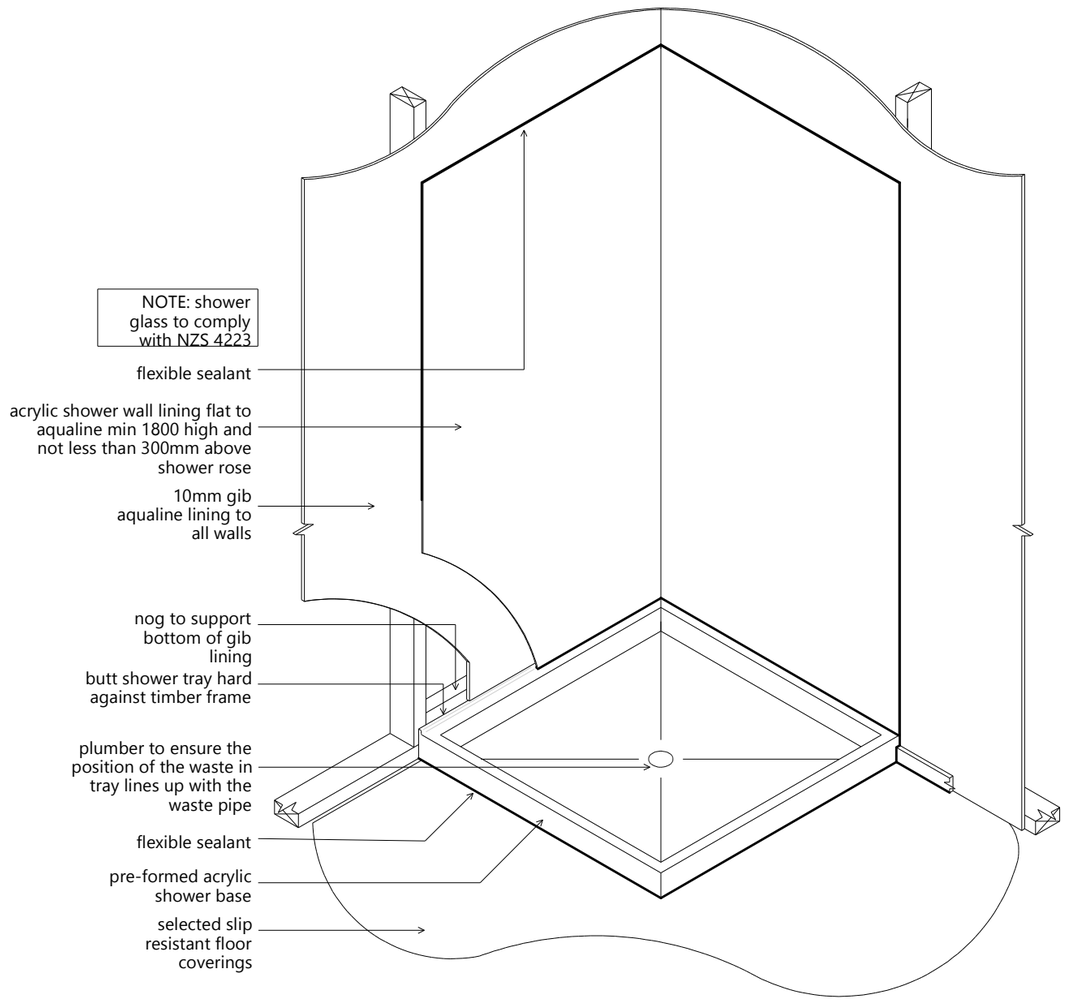


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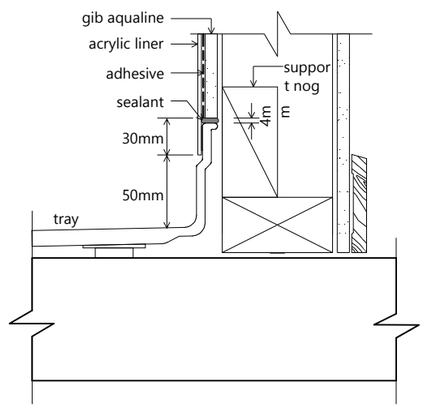
FLOOR LINING JUNCTION



Sealant:
Vinyl compatible, continuous bead of Branz appraised wet area clear silicone sealant.
Sealant & application to comply with E3/AS1 Section 2.1.1 & Section 3.0
(includes vertical joints of skirting at corner)



Acrylic Shower Tray + Wall Linings



Shower Tray

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Lake Hawea

Job no: **OS016**

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Table 4: **Tempering Valve or Thermostatic Mixing Valve and Nominal Pipe Diameters**
Paragraphs 5.4.1 and 6.12.1

	Low pressure (i.e. header tank supply or low pressure)	Low pressure unvented (valve vented) and open vented	Mains pressure
Pressure of water at Tempering Valve or Thermostatic Mixing Valve (kPa)	20 – 30	30 – 120	over 300
Metres head (m)	2 – 3	>3 – 12	over 30
Minimum Tempering Valve or Thermostatic Mixing Valve size	25 mm	20 mm	15 mm
Pipes to Tempering Valve or Thermostatic Mixing Valve	25 mm (see **Note 3**)	20 mm	20 mm (15 mm optional) (see **Note 1**)
Pipes to shower	20 mm	20 mm (see **Note 4**)	20 mm (see **Note 5**) (15 mm optional) (see **Note 1**)
Pipes to sink/laundry (see **Note 2**)	20 mm	20 mm	15 mm
Pipes to bath (see **Note 2**)	20 mm	20 mm	15 mm
Pipes to basins (see **Note 2**)	15 mm	15 mm	10 mm

Notes:

1. If supplied by separate pipe from *storage water heater* to a single outlet.
2. This table is based on maximum pipe lengths of 20 metres.
3. 2 m maximum length from *water heater* outlet to tempering valve or thermostatic mixing valve
4. 15 mm if dedicated line to shower.
5. 10 mm if dedicated line to shower.
6. Pipe sizes in this table have been calculated to deliver water simultaneously to the kitchen sink and one other *fixture.*

Figure 8(b): **Mains Pressure Storage Water Heater System (unvented) - Expansion Control Valve**
Paragraphs 6.1.2 and 6.2.1 c)

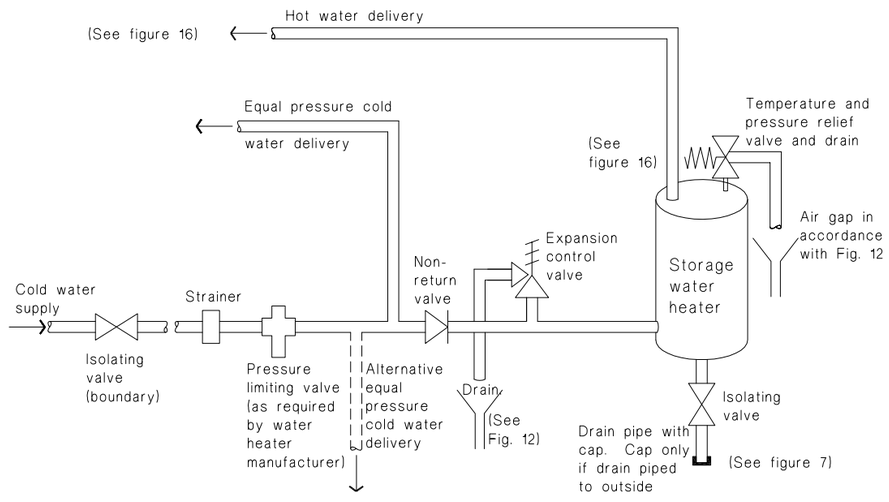
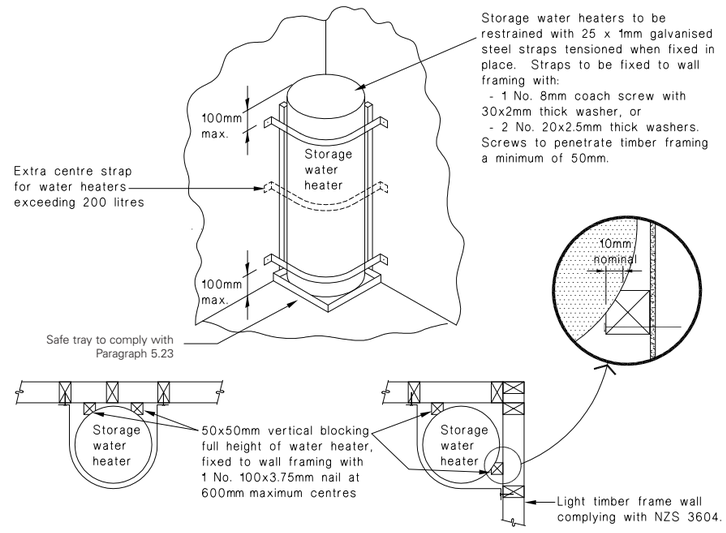


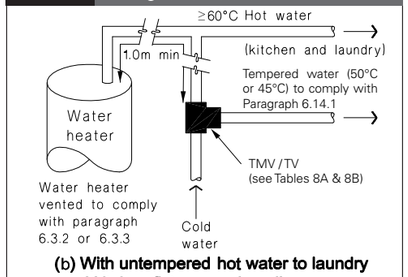
Figure 14: **Seismic Restraint of Storage Water Heaters 90 – 360 litres**
Paragraph 6.11.4



Notes:

1. An additional centre strap is required where a *storage water heater* is located more than 12 m above finished ground level.
2. Additional timber framing may be required in retrofit situations to ensure adequate strap fixing is available.
3. Straps shall not be installed where they clash with water heater inlets, outlets or controls.
4. Where the 100 mm maximum strap distance from the top or bottom of the *storage water heater* cannot be achieved, straps may be placed within the top and bottom 25% with one additional strap placed centrally for water heaters < 200 litres, and two additional evenly spaced straps for water heaters 200 - 360 litres.
5. A maximum total of four straps are required when complying with both Note 1 and Note 4.

Figure 16: **Tempering Valve or Thermostatic mixing Valve Installation**



(b) With untempered hot water to laundry and kitchen fixtures and appliances

Notes:

1. For optimum system efficiency the temperature control device, for other than a mains pressure system, may be located as low as practicable to achieve the manufacturer's recommended head, at the temperature control device.
2. 1.0 m minimum copper pipe length from storage water heater to temperature control device.

6.14.2 Hot water delivered from storage water heaters
a) An acceptable method of limiting hot water temperature delivered from storage water heaters is to install a mixing device between the outlet of the water heater and the sanitary fixture (see Figure 16).
b) Tempering valves shall comply with NZS 4617 or AS 1357.2.

Irrespective of whether a mixing device is installed, the storage water heater control thermostat shall be set at a temperature of not less than 60°C to prevent the growth of Legionella bacteria.

Safe trays for hot water cylinders shall be installed in accordance with the manufacturer's installation instructions

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HWC DETAILS

Scale:
Rev:
Sheet no: **39**

Design: A1 | Drawn: JD/TN | Check: AC | LBP: AC | Date: 4/11/2026

Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

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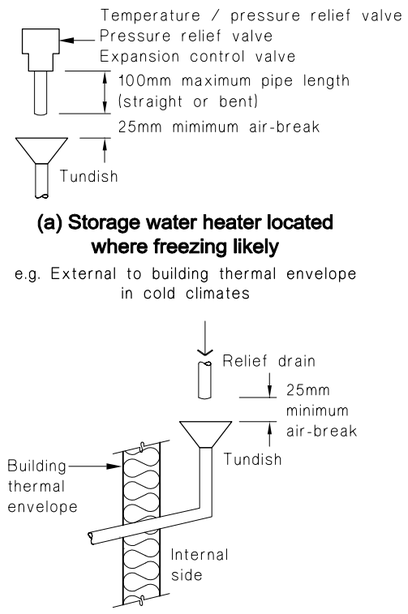
Client Details:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**

KH175

Figure 12: **Relief Valve Drains – Freezing Protection**
Paragraphs 6.7.1, 6.7.4 and 6.7.5



(a) Storage water heater located where freezing likely

e.g. External to building thermal envelope in cold climates

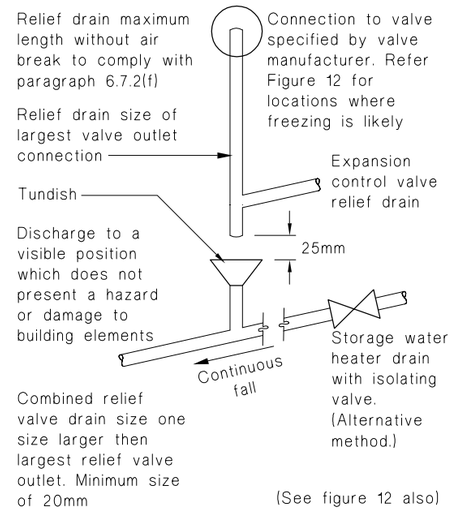
(b) Relief drain located where freezing likely

e.g. Internal storage water heater with drain discharging externally
(See figure 13 also)

Note: Tundishes and tundish drains shall be sized and installed to prevent overflow when the relief valve discharges.

6.7.5 Relief drains located where freezing is likely
Additional requirements for relief drains located where freezing is likely (see Figure 12) are that:
a) Relief valve drain pipes shall discharge over a tundish with a 25 mm air break before the drain pipe enters a zone where freezing is likely, and
b) Relief valve drains from a tundish shall be one size larger than the outlet diameter of the relief valve.

Figure 13: **Relief Valve Drains – Combined**
Paragraphs 6.7.1, 6.7.2 f) and 6.7.3



(See figure 12 also)

Note: Tundishes and tundish drains shall be sized and installed to prevent overflow when the relief valve discharges.

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HWC DETAILS

Scale:
Rev:
Sheet no: **40**

Design: A1	Drawn: JD/TN	Check: AC	LBP: AC	Date: 4/11/2026

Wind:	Earthq:	Exposure:	Snow:	Climate:
HIGH	3	B	N5 - 1.5kPa	6

www.A1homes.co.nz

Client Details:
Richard Joyce

Address:
9 Piopio Street
Lake Hawea

Job no: **OS016**

KH175

Notes:
- Service mains sourced from QLDC records and are indicative only.
- Boundary data has been sourced from DP 624962.
- Adjoining boundary data has been sourced from LINZ XML.
- Contours = 1.0m/0.2m.
- Refer to DP 624962 & Record of Title for any site encumbrances. Encumbrances have not been reviewed. Any height restrictions should be clarified with a surveyor prior to design.
- Heights in terms of NZVD 2016 (PIN 1 SO 559632 [F6LF] RL 367.652m)
- No occupation on boundaries at time of survey.



Lot 70
DP 624962

Lot 61
DP 624962

Peg RL:364.56

76°37'00" 27.29

166°37'00" 22.50

Road Crown

Mountable Kerb

Site Datum
Nail in Kerb
RL:363.75

Piopio Street
(Legal & sealed)

Lot 62
DP 624962
614m²
RT 1270163

166°37'00" 22.50

Lot 69
DP 624962

2m

4.5m

No parking linework

2m

76°37'00" 27.29

Peg RL:361.54

Lot 63
DP 624962

Lot 68
DP 624962

Legend:
- Tree
- Street Light
- Power Box
- Chorus
- Water Toby
- Boundary Peg
- Lot Boundary
- Adjoining Boundary
- QLDC (GIS) Water
- QLDC (GIS) Sewer
- QLDC (GIS) Stormwater

MEASURED LAND SURVEYS

www.measuredlandsurveys.co.nz

Rev	Description	Date
A	ORIGINAL	23/07/26

Topographical Survey
Lot 62 DP 624962
(9 Piopio Street, Lake Hāwea)

Client: Braden Joyce Building Ltd

Scale: 1 : 150 @ A3

Surveyed: JR 22/07/26

Drawn: JR 23/07/26

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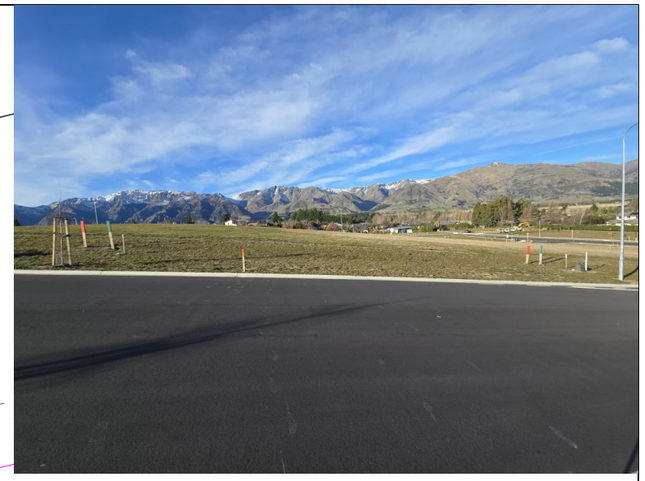
Datum: Lindis Peak 2000/NZVD16

Sheet: 1 of 1

Job #: 26120_T1

Rev: A

Notes:
- Service mains sourced from QLDC records and are indicative only.
- Boundary data has been sourced from DP 624962.
- Adjoining boundary data has been sourced from LINZ XML.
- Contours = 1.0m/0.2m.
- Refer to DP 624962 & Record of Title for any site encumbrances. Encumbrances have not been reviewed. Any height restrictions should be clarified with a surveyor prior to design.
- Heights in terms of NZVD 2016 (PIN 1 SO 559632 [F6LF] RL 367.652m)
- No occupation on boundaries at time of survey.



Lot 70
DP 624962

Lot 61
DP 624962

Lot 62
DP 624962
614m²
RT 1270163

Lot 69
DP 624962

Lot 68
DP 624962

Lot 63
DP 624962

Peg RL:364.56

Peg RL:361.54

Site Datum
Nail in Kerb
RL:363.75

76°37'00" 27.29

166°37'00" 22.50

166°37'00" 22.50

76°37'00" 27.29

Road Crown

Mountable Kerb

No parking linework

Piopio Street
(Legal & sealed)

Legend:
- Tree
- Street Light
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- Water Toby
- Boundary Peg
- Lot Boundary
- Adjoining Boundary
- QLDC (GIS) Water
- QLDC (GIS) Sewer
- QLDC (GIS) Stormwater

MEASURED LAND SURVEYS

www.measuredlandsurveys.co.nz

Rev	Description	Date
A	ORIGINAL	23/07/26

Topographical Survey
Lot 62 DP 624962
(9 Piopio Street, Lake Hāwea)

Client: Braden Joyce Building Ltd

Scale: 1 : 150 @ A3

Surveyed: JR 22/07/26

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Datum: Lindis Peak 2000/NZVD16

Sheet: 1 of 1

Job #: 26120_T1

Rev: A

Koreke Rise

LAKE HĀWEA

LAST SECTION FOR SALE







Jarrod Frazer
SALES MANAGER
027 251 2007
jarrod@willowridge.co.nz

willowridge.co.nz
WILLOWRIDGE
DEVELOPMENTS LTD

LAKEVIEW TERRACE

N
W
E
S
Kids Bush
Mt Maude
Grandview Mountain
Hawea Flat School

- District plan building height, two story
- 5.5m maximum building height, measured from the centre of the lot

KOREKE LOOP
KOREKE LOOP
KOREKE LOOP
KOREKE LOOP
PIOPIO STREET
POUĀKAI STREET
Reserve

1 SOLD
2 SOLD
3 SOLD
4 SOLD
5 SOLD
6 SOLD
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