

Approved Building Consent documents

Please note: A copy of the stamped approved documents must be available on site for all inspections.

Inspection booking timeframes

Call received	before 3pm inspection will be done	after 3pm inspection will be done
Monday	Wednesday	Thursday
Tuesday	Thursday	Friday
Wednesday	Friday	Monday
Thursday	Monday	Tuesday
Friday	Tuesday	Wednesday

Please ensure all work for inspection is ready the day before.

Incomplete work requiring re-inspection will incur an additional inspection fee.

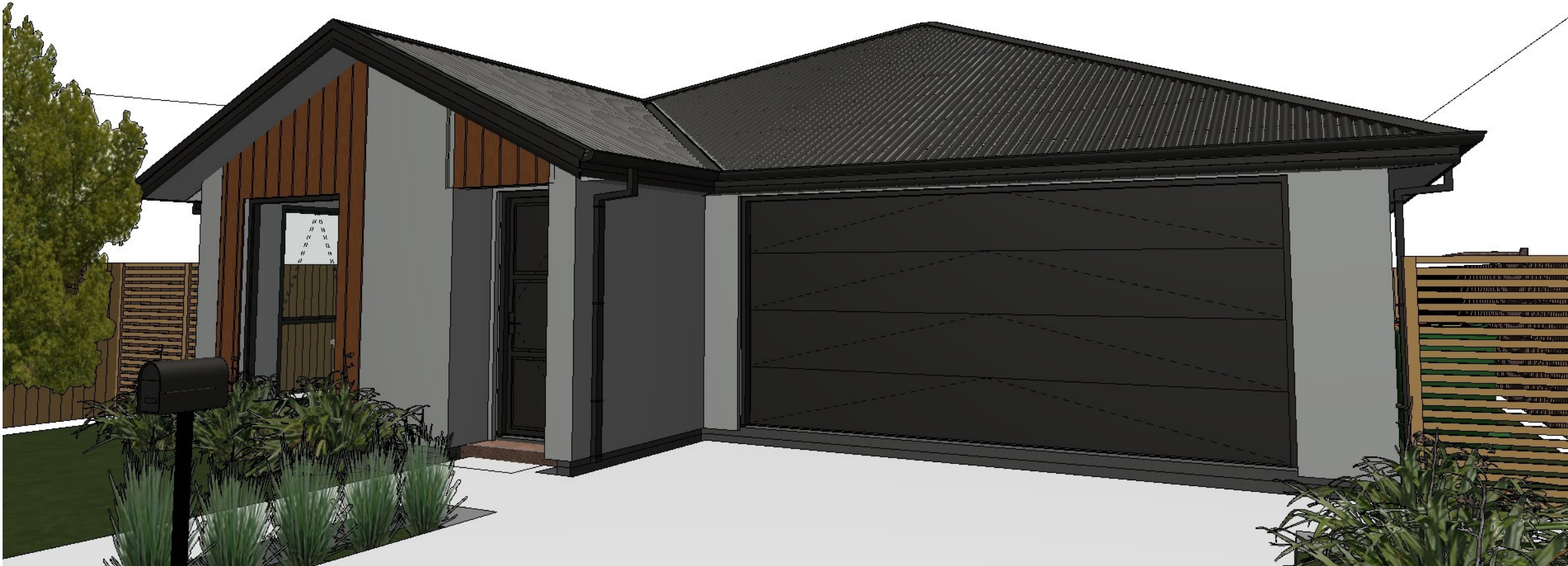
For building inspections and enquiries phone ContactUs on:
03 347 2800.

Proposed New Dwelling
for
Lot 360 - Arbour green

SDC - Approved Building Consent Document

2019/2024
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BC2429941

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ARTIST IMPRESSION ONLY



ARTIST IMPRESSION ONLY



Ilaisa Design Limited
13 Henare Drive, iZone, Rolleston
7614
Email: admin@ilaisadesign.co.nz



Project:
Lot 360 - Arbour green
Project Address:
Lot 360 - Arbour green - Buxus Way, Rolleston, Selwyn

Drawing Title:
3d Floor plan
Job No: 24063
Client: KAD Build LTD
Stage: Detailed Design

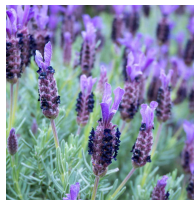
Designer: IT
Drawn By: PS
Technician: PS

Rev	Date	Description
V0	24/07/24	Client Changes
V1	16/08/24	Client Changes
V1	28/8/24	Developed Design
V1	9/2/24	Detailed Design
-	-	-

Scale @ A3:
A0.02
Print Date
19/12/2024
Rev:
-V1

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Scale @ A3: 1:100	Print Date 20/12/2024
Sheet No: A1.01	Rev: -V1



Lavander



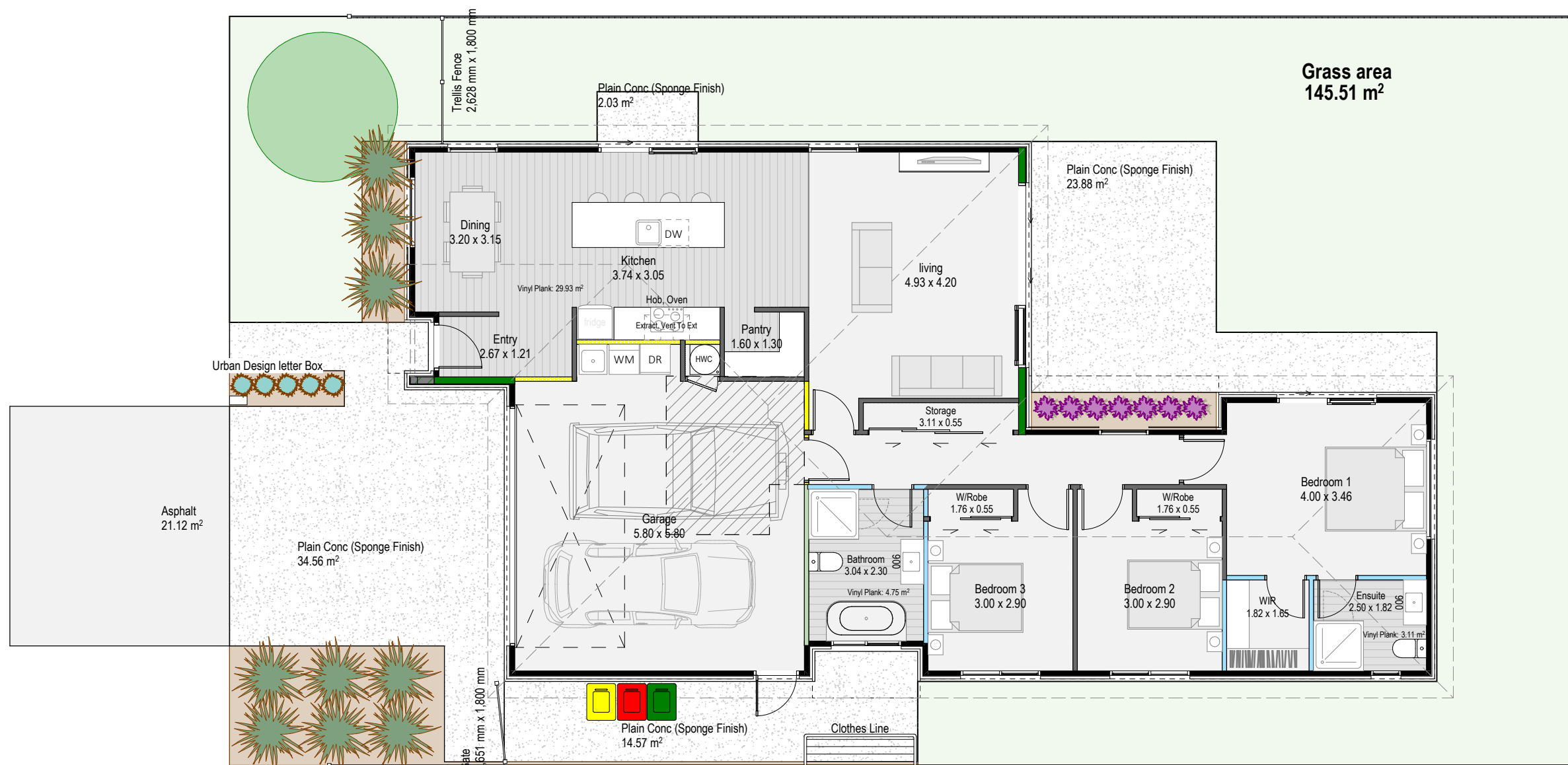
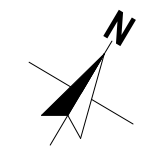
PHORMIUM TENAX



Fraxinus griffithii 'Evergreen Ash'
Tree' - 2m High when Planted



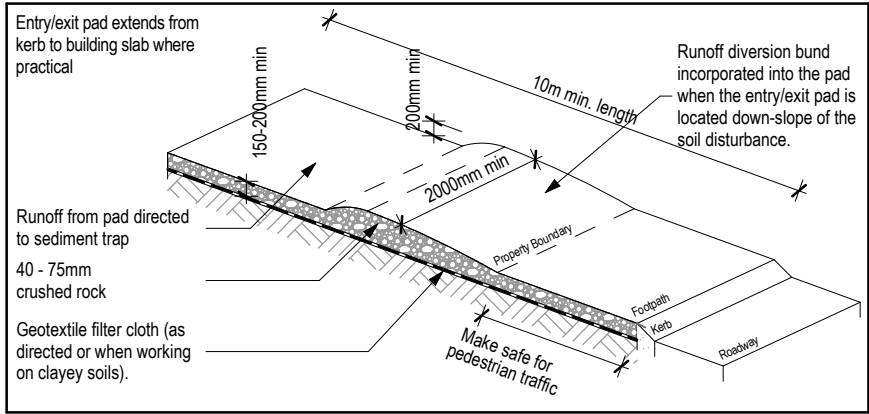
Rosa 'Emerald Gem'
Shrub - 500 mm crs max



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Sediment Control

- Rumble pad to be created at point of entry & exit on site (Removed on completion of formed driveway)
 - Rumble pad to be created in accordance to guidelines provided by the local Council & maintained in good condition throughout it's period of use.
 - All ground cover/vegetation outside of immediate build area to be maintained throughout period of house build. This includes grass verges on the street frontage.
 - Any stockpiles of soil or excavated material are to be kept to the rear of the site & covered with impervious sheets.
 - Roof downpipes are to be connected to the installed stormwater drainage as soon as practical once roof cladding has been installed. Until this point ensure water run-off from downpipes is directed away from build area but not on to neighbouring properties.
- No building work will be started on this project until the construction of an approved stormwater outfall has been completed for this proposed lot.



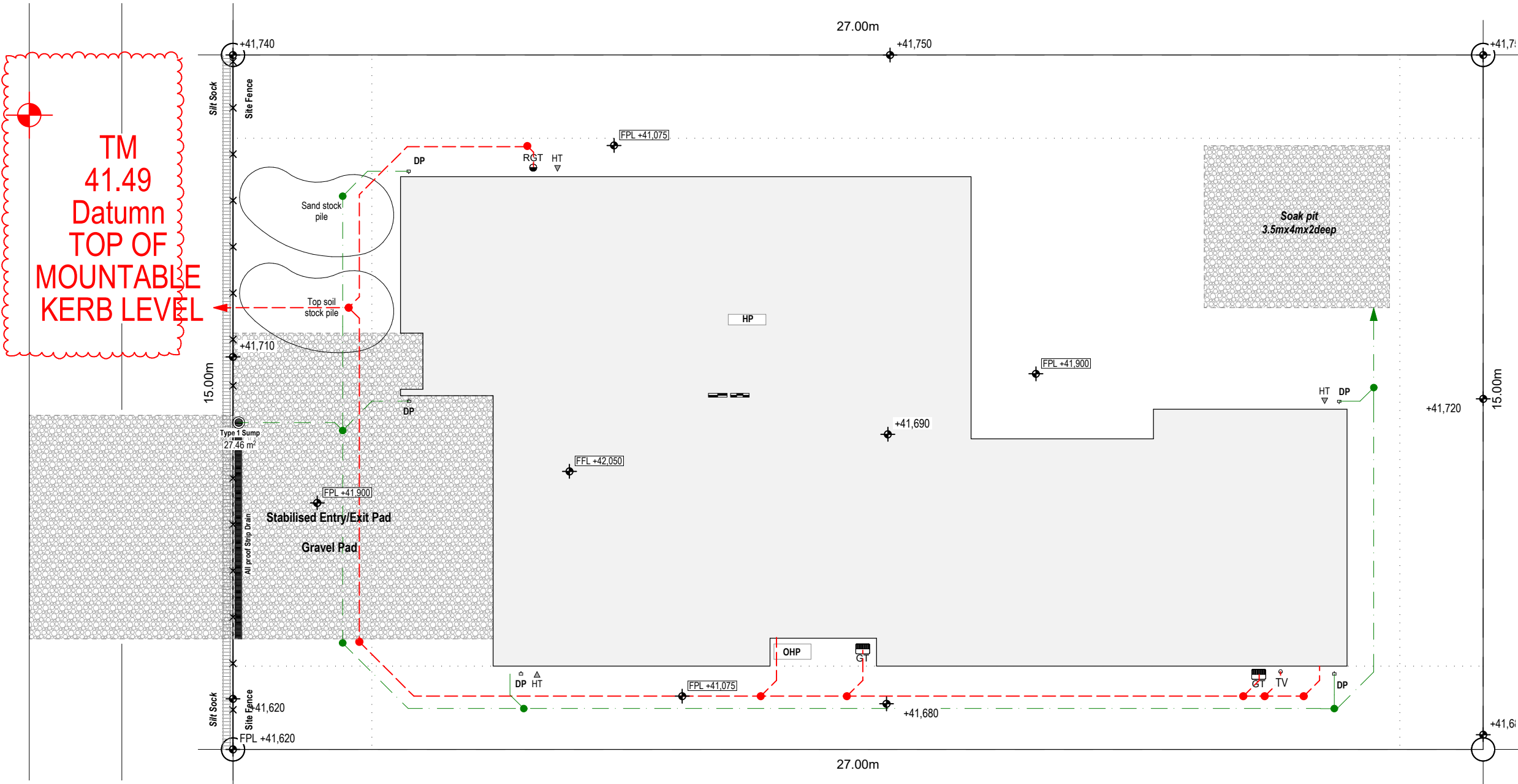
Stabilised Entry/Exit Pad

Site Plan Legend

- Site fencing:
- Main contractor to provide 2m min. high chain link fence (min. size 50 x 50mm) to prevent unauthorised entry to the site. All fencing to comply with F5 including relevant hazard signage.
- Main contractor to provide on site a specific Health & Safety policy which is to be viewed & signed by all persons entering the site.

Legend G13/AS1/AS2

- 100mm uPVC surface water drain at 1:100 gradient to Soak Pit. (SW) inspection point
- Discharge
- 100mm uPVC foul water drain at 1:60 gradient to existing laterals at boundary (FW) inspection point
- Discharge



1:100 Sediment Control Plan

Scale 1:100

Foundation Notes:

- Standard NZS3604:2011 Single Pour foundation system with 50mm Poly underslab (300-400mm depth or 300kpa as per geo tech report)

-200mm wide concrete foundation footing reinforced with 2/D16 bars & D10 starters @ 600mm crs max, extending 400mm min into slab.
-20MPa 100mm thick concrete floor reinforced with SE62 mesh on 0.25mm thick polythene DPM, 50mm H Grade EPS Polystyrene underslab, 5- 25mm max sand blinding layer and 150mm layers compacted AP40 granular fill.

- Slab & footings to be 20MPa @ 28 days of standard curing.
- 1/4 deep saw cut into concrete slab @ 6m crs. max. @ ratio of 1:2 max. - Shrinkage control joints may be cut at an angle as long as the included angle is not less than 60°. In accordance with NZBC 3604:2011 clause 7.5.8.6.1
- Avoid construction joints & shrinkage controls under tiled areas. No shrinkage control cuts to be placed under framing that is to be used as a bracing element.

- Supplementary reinforcing to internal corners where shrinkage controls do not meet the internal corner.

- For doors with more than one finished level, ensure step in foundation is constructed with 20MPa concrete in accordance with NZBC D1/AS1. Minimum tread depth 280mm, maximum riser height 190mm

- WC riser locations have a typical offset of 140mm from internal line of framing to centre of waste. (Manufacturers technical specifications should be consulted to confirm offset)

- Vanity & Tub riser locations have a typical offset of 45mm to centre line of wall framing to centre of waste.

- Mesh in floor slab must be earthed. Earth with 16mm REO rod brought up into garage wall below meterbox & wired to the mesh. At prewire, connect a clamp & piece of wire to rod & earth it to the meterbox.

- Minimum heights of concrete slab on ground above surrounding ground levels to be: All other cladding - 150mm to sealed surface & 225mm to unsealed ground as per NZBC E2

- Finished floor level to be 150mm minimum above crown of road as per NZBC E1/AS1 Figure 1 or the lowest point of the boundary as per Figure 2, E1/AS1.

- Confirm layout of fittings of kitchen & bathroom etc. before foundation commences.

-CONFIRM FFL WITH Flood Assessment Certificate (SELWYN ONLY)

Contractor to Confirm

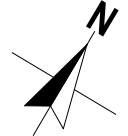
-Overall Slab Dimensions with Framing plan Prior to set out

-Confirm Down pipe locations with Roof Plan

-Confirm Cladding Rebates with Elevations & Groundfloor Plan.

-Confirm Drain location with fixture type.

Overall DIM
Overall DIM
Rebate DIM
Framing DIM



Make allowances in slab for earthing of Meter board. Run Earth Wire through PVC pipe as per Pipe Penetration detail.

Heat pump drain pipe to discharge over the nearest Planting Area. HP

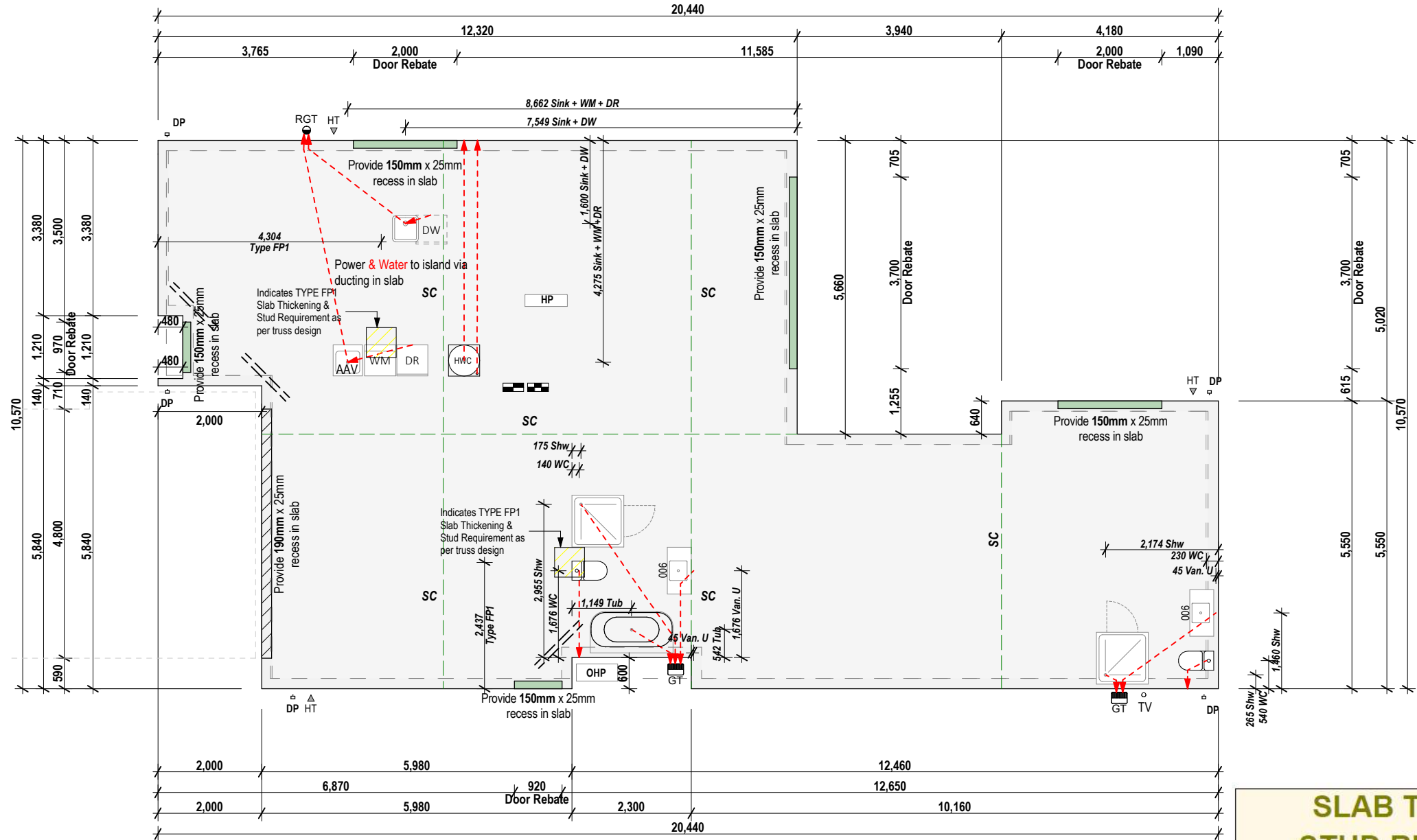
HWC on safe tray. 25mm copper overflow relief pipe & 40mm Tray discharge pipe with vermin proofing, to discharge to nearest planting area/Gully Trap. HWC

Saw Cut SC

150x25mm deep door rebate. Width to be confirmed with joinery supplier

Provide 190mm x 25mm recess in slab for garage door. Confirm requirements with garage door supplier

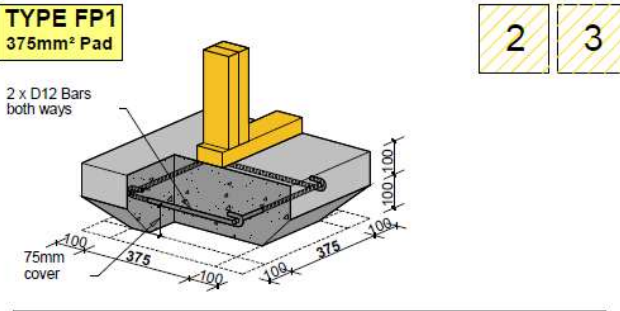
2/1.2m long Supplementary reinforcing bars



Ground Floor Foundation Plan

Scale 1:100

SLAB THICKENING & STUD REQUIREMENTS



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Legend G13/AS1/AS2

Indicates Discharge Pipe

Ref	Fixture	Waste Size	Gradient
WC	Water Closet	100mm	1:60
B	Bath	40mm	1:20
SHW	Shower	40mm	1:20
S+DW	Kitchen Sink + DW	50mm	1:40
Van.U	Vanity Unit	40mm	1:20
WHB	Wash Hand Basin	40mm	1:20
TUB+WM	Laundry Tub + WM	50mm	1:40
HWC	Hot Water Cylinder	20mm	1:40
WM	Washing Machine	Discharge to TUB	
GT	Gully Trap		
RGT	Relief Gully Trap		
TV	Terminal Vent	80mm	
AV	Branch Vent	40mm	
DP	Downpipe	-75X55 mm Colorsteel Downpipes	
IP	Inspection Point		
AAV	Air Admittance Valve	Discharge pipe more than 3.5m to GT	
HT	Hose Tap		
HP	Heat Pump		

- Note:
- Relief Gully Trap is to be positioned so that the top of the gully dish is no less than 150mm below the overflow level of the lowest sanitary fixture served by the drainage system.
 - Position of drain connections at street laterals to be confirmed on site.
 - Allow to thermally insulate all exterior pipework & valves exposed to external weather conditions.
 - Heat pump drain pipe to discharge over the nearest Planting Area.
 - Drain pipes discharging to GT:
 - 25mm min air gap between all pipes & GT.

All plumbing and drainage to comply with Acceptable Solutions G13/AS1/AS2 by qualified tradesman. Allow to check all dimensions and falls of drains onsite prior to installation.

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.

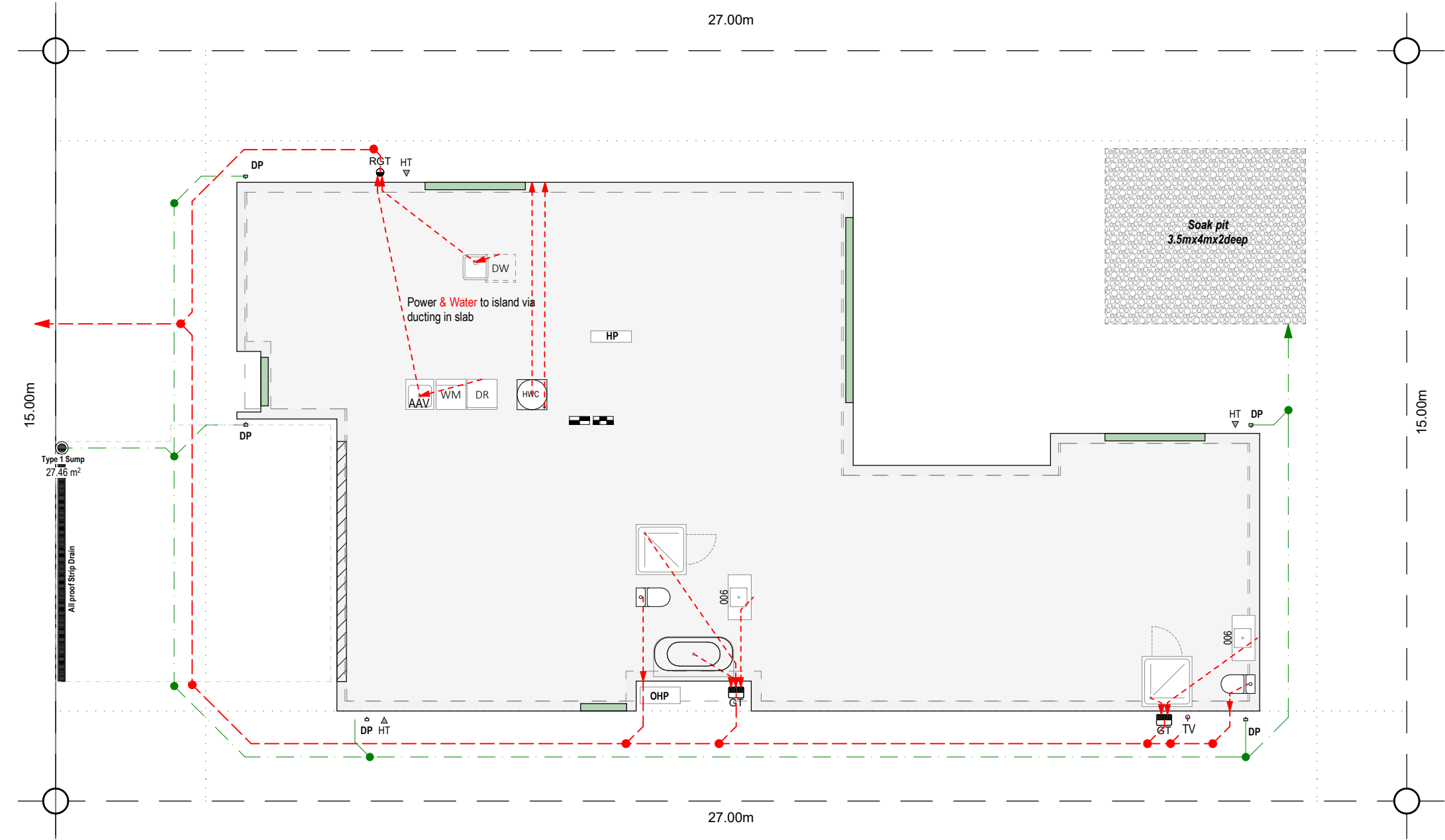
All waste pipes PVC. Sizes, fall, venting & discharge to be confirmed by NZ qualified plumber. Confirm positions of available services cabling etc. on site prior to any excavation.

Internal water pipes to be Polybutylene. All pipework & pipes exposed to freezing to be lagged with closed cell foam.

Legend G13/AS1/AS2

- 100mm uPVC surface water drain at 1:100 gradient to Soak Pit. (SW) inspection point
- Discharge
- 100mm uPVC foul water drain at 1:60 gradient to existing laterals at boundary (FW) inspection point
- Discharge

- Make allowances in slab for earthing of Meter board. Run Earth Wire through PVC pipe as per Pipe Penetration detail.
- Heat pump drain pipe to discharge over the nearest Planting Area. HP
- HWC on safe tray. 25mm copper overflow relief pipe & 40mm Tray discharge pipe with vermin proofing, to discharge to nearest planting area/Gully Trap. HWC

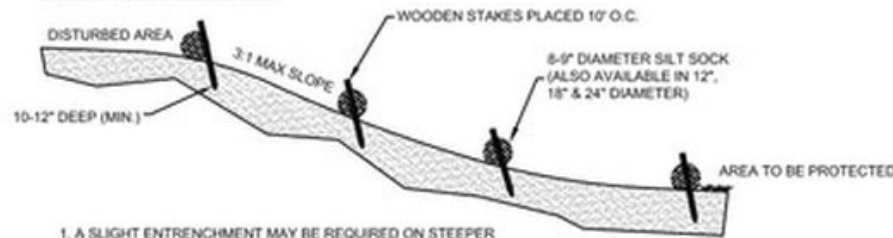


Ground Floor Plumbing Plan

Scale 1:100

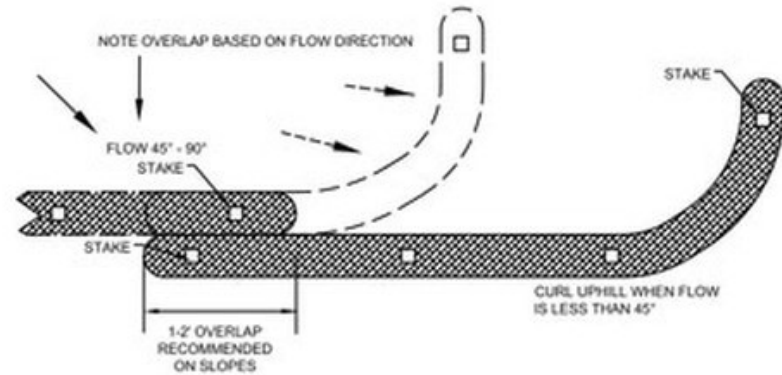
SILT SOCK INSTALLATION GUIDELINES

SLOPE INTERRUPTION

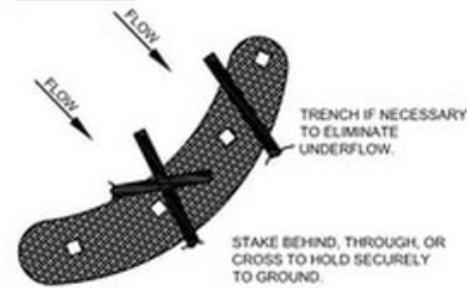


1. A SLIGHT ENTRENCHMENT MAY BE REQUIRED ON STEEPER SLOPES TO ENSURE INTIMATE GROUND CONTACT.
2. REMOVE SEDIMENT FROM THE UPSLOPE SIDE OF THE SILT SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF EFFECTIVE HEIGHT OF SOCK.
3. LOOSE FILTER MEDIA MAY BE BACKFILLED ON THE UPSLOPE SIDE OF SOCK TO ENHANCE PERFORMANCE.
4. HARDWOOD STAKES 2"x2"x24" (NOMINAL) ARE SUGGESTED.

PERIMETER CONTROL & OVERLAPPING



DITCH CHECK

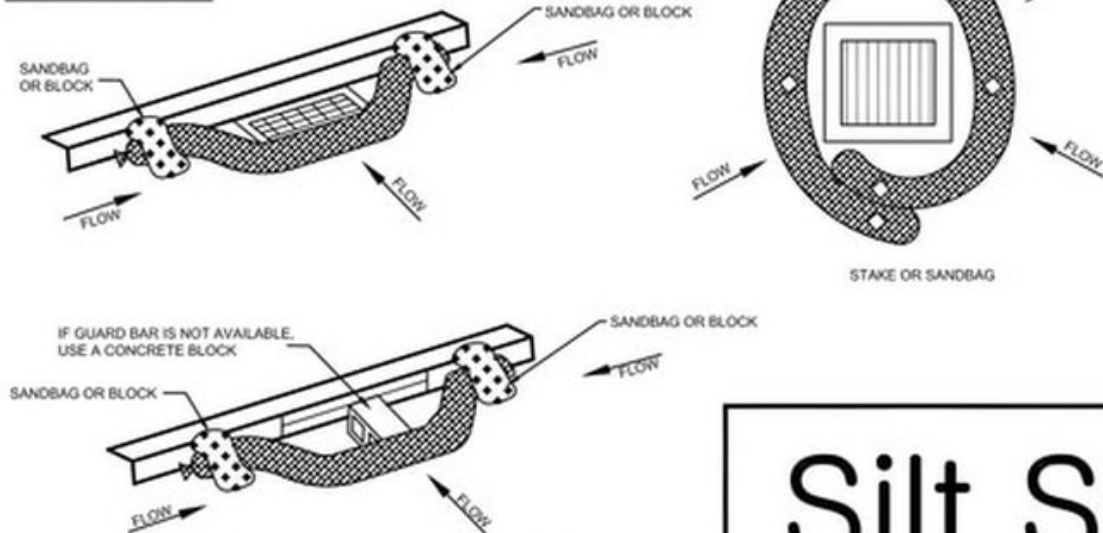


INSTALL SILT SOCK PERPENDICULAR TO FLOW WITH ENDS CURLED SLIGHTLY UPSTREAM TO PREVENT HIGH WATER FROM GOING AROUND THE ENDS. SLOW AND SPREAD WATER TO REDUCE CHANNELING AND EROSION.

PYRAMID INSTALLATION STAKING



INLET PROTECTION



1. THESE GUIDELINES ARE BASED UPON MANUFACTURERS RECOMMENDATIONS. PROJECT SPECIFICATIONS MAY SUPERSEDE THESE GUIDELINES.
2. REFER TO REGULATORY AUTHORITY OR PROJECT ENGINEER FOR DETAILED INSTALLATION PROCEDURES.
3. WOOD FILLER MATERIAL IS PROPERLY SIZED, BIODEGRADABLE, WEED, SEED & DISEASE FREE AND ENVIRONMENTALLY SOUND.

Silt Sock

EROSION CONTROL PRODUCTS

(608) 438-7625
WWW.SILT SOCK.NET

Soak Pit 1

Step 1	Get the soakage rate from the percolation test or Use 0mm/Hour		
Sr=Soakrate (mm/hr)		0	mm/hr

Step 2 Assess the stormwater catchment volume

Roof Area m ²	192.45	m ²
Paved area	27.46	m ²
A(Catchment Hectare Area)=	0.0220	ha

Use run-off coefficient (C) = 0.9 (from E1/VM1 Table 1 for hard surfaces)

Use the Formula $Rc=10 CxIx A$

C=(run-off coefficient)=	0.9	
I=(RainFall Intensity)	50	mm/hr
Rc=Total= $10xCxIx A$	9.90	m ³

Step 3: Calculate the volume of water

disposed by soakage (Vsoak)

Vsoak = $Asp \times Sr / 1000$	1000	
ASP=Area Base of soakpit	14	m ²
Vsoak=	0.0	m ³
Vstor=0.38xSoakpit Size	10.64	m ³

Step 4: Calculate storage volume required

Use the formula: $Vstor = Rc - Vsoak$

RC	9.90	m ³
Vsoak	0.00	m ³
Vstor=RC-Vsoak	9.90	m ³
Soak Pit sizes:m3	28	m ³
Soak Pit sizes L/W/D	3.5	4 2

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Total Ground Floor Area (Over Framing): 159.13 m²
Total Ground Floor Area (Over Foundation): 159.13 m²

Wall Cladding Materials
-WALL CLADDING 1: Resene 50mm Integra over 20mm cavity system installed as per manufacturer's specifications

-WALL CLADDING 2: Hermpac Vertical Shiplap weatherboards over 20mm cavity system installed as per manufacturer's specifications & E2/AS1 (Dwangs @ 400crs max)

Roofing Notes
-ROOF CLADDING 1:0.40 BMT Colorsteel Longrun Corrugate on Self-supporting building underlay

Roof Pitch 1 25°
Eaves Width 1 450mm
Gable Width 1 450mm

Soffit Lining
-43mm James Hardie Soffit Lining
Spouting & Fascia
Select colorsteel Quad spouting (5550mm²) cross sectional area fix to 185 Colorsteel fascia

Down Pipe (DP)
Wall Framing
Height to Underside Of Truss 2455mm
Lintel Height 1 2200mm
Internal Door Leaf Height 1 1980mm-2330mm (Wardrobe doors)
(Confirm Internal Door lintel height with Contractor)
Internal Door Leaf Width 810mm standard - as noted on plans

Plasterboard Materials
-10mm GIB plasterboard installed over timber framing as per manufacturer's specifications. GIB Aqualine to be used in wet areas.
-10mm GIB plasterboard ceiling lining fix to 70x35 Timber Battens @ 600crs, installed as per manufacturer's specifications.

Windows
Select powder-coated Low E. Argon, thermally Broken aluminium joinery double glaze with all glazing to comply with NZS 4223. (R0.50 Ug 1.10)

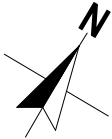
Heating
Heat pump to be fixed in position shown on the drawings.

Ventilations/Extraction System:
-Bathroom & Ensuite to vent directly to exterior
Dryer to vent directly to exterior through soffit lining.
(50L/s) Range Hood to exit through soffit lining.
Bathroom & Ensuite extraction systems to be automated and placed to adequately deal with steam.

General Notes:
- All glazing to comply with NZS4223
- All hard floor finishes to comply with NZBC D1/AS Table 2. Floor tiles to be non-slip & have a slip coefficient value of 0.35 - 0.65 for grit finished ceramic tiles.
- Hot water pipes to be sized according to NZBC G12 & NZS4305:1996. Mains pressure: 15mm dia. allows 12m max. pipe length. Pipe length beyond this must be lagged
- All food preparation areas & fixtures to comply with G3/AS1.
All kitchen fixtures to comply with G3/AS1 section 1.0. all splashbacks (linings adjacent to appliances & facilities) shall comply with G3/AS1 paragraph 1.6.
- 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.
Wet Area Note:
- Basin enamel wall finish to bathroom, ensuite & those walls adjacent to sinks etc. in kitchen & laundry. One row of tiles to be used above basins, vanities & benches.
Bottom edge to be filled with fungus/mold resistant sealant.

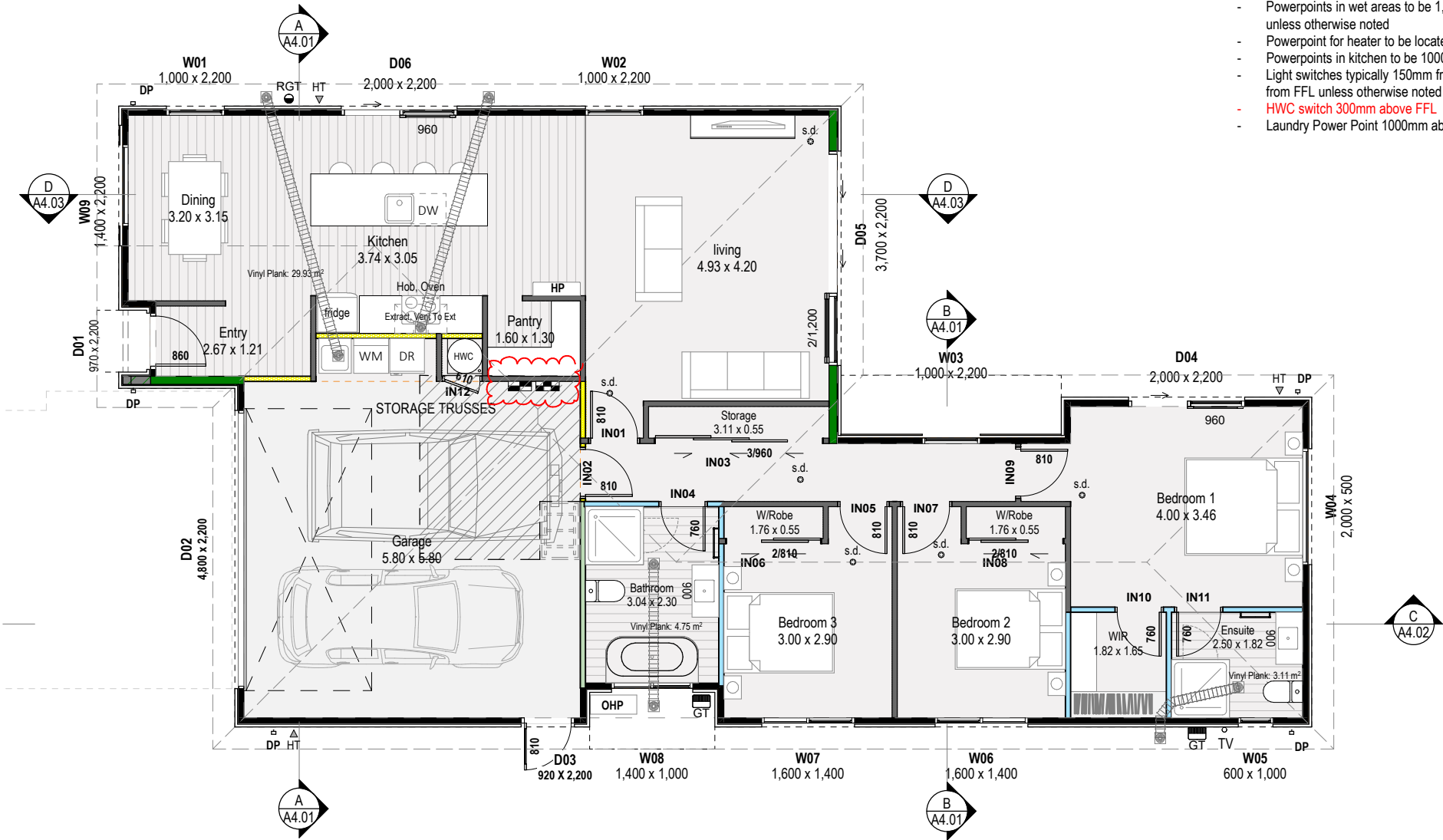
Smoke Alarms:
- All smoke alarms to comply with NZBC F7 and be manufactured to at least one of: S 3786, ISO 12239 or BS EN 14604, Required in all sleeping areas, family room and living/dining room, change in level & entry/exits as per NZS 4514:2021 & BRANZ Bulletin No 6061

Engineering
SA
Dimensions to be confirmed on site



Project Additional Notes:

Area Over Framing: 159.13 m²
Area over Foundation: 159.13 m²
Foundation Perimeter: 65,460.0 mm
Area Over Cladding and covered area: 170.63 m²
Habitable Area 124.24 m²
Main Dwelling



Electrical Notes

- Allow for single switched powerpoint for standard appliances: Fridge, Dishwasher, Waste Disposal, Rangehood, Hob, Oven. Refer to kitchen design for layout and positions of kitchen area sockets etc. All power points are indicative only and must be positioned and confirmed on site by architect and/or owner.
- All electrical installations to be in accordance with NZECP 51:2004
- Where downlights are to be installed, only IC or IC-F downlights are permitted in private or rental dwellings. (Note that IC downlights can only be used with insulation that passes the needle flame test of AS/NZS 60598 2.2 clause 11.5). Recessed downlights that are not labelled as above are not permitted to be installed into residential buildings.
- Total of 20 lux of illuminance for the total wattage required per m2 of floor area as shown in NZBC G8 / AS1 Table 1.
- Install lights to soffit or external wall on all access routes to the dwelling (external doors)
- Lighting and electrical by others, all positions and types to be selected and confirmed by client with contractor unless noted otherwise.
- Mechanical ventilation in housing removing moisture shall be vented outside (includes wet areas & cooker hoods). Refer to NZBC G4/AS1 1.3.C.ii, Mechanical Ventilation to be 150 dia 230 Cu M/H inline fan ducted to soffit. Auto extractor fans shall terminate through wall/soffit/roof with an extraction rate as set out in NZBC G4.

General Placement Notes

- Powerpoints typically 300mm from nearest corner & 300mm from FFL unless otherwise noted
- Powerpoints in wet areas to be 1,200mm high from FFL and vertically fixed unless otherwise noted
- Powerpoint for heater to be located 300mm below finished ceiling level
- Powerpoints in kitchen to be 1000mm high from FFL
- Light switches typically 150mm from nearest corner or door frame & 1,200mm from FFL unless otherwise noted
- **HWC switch 300mm above FFL**
- Laundry Power Point 1000mm above FFL

LEGEND

- Smart Meterboard
- Comms panel
- s.d. - s.d. Interconnected Smoke Detector
- Heated Towel Rail
- Outlet Grille
- Mechanical Vent / Ducting
- HWC Hot Water Cylinder on Safe tray
- HP Indoor Heat Pump Unit
- OHP Outdoor Heat Pump Unit on Conc Plinth
- GT Gully Trap
- HT Hose Tap
- 600x1300 Attic Ladder

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7614
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LICENSED BUILDING PRACTITIONER
BUILDING CONFIDENCE



KAD BUILD
A HOME FOR EVERYONE

Project:
Lot 360 - Arbour green
Project Address:
Lot 360 - Arbour green - Buxus Way, Rolleston, Selwyn

Drawing Title:
Ground Floor Plan
Job No: 24063
Client: KAD Build LTD
Stage: Detailed Design
Designer: IT
Drawn By: PS
Technician: PS

Rev	Date	Description
-V0-	24/07/24	Client Changes
-V1-	16/08/24	Client Changes
-V1-	28/8/24	Developed Design
-V1-	9/2/24	Detailed Design
-	-	-

Scale @ A3:
1:100
Print Date
19/12/2024
Sheet No:
A2.01
Rev:
-V1

Wall Framing:

Wind Zone High

-INTERNAL FRAMING - Up to 3m Stud Height: H1.2 treated SG8 90x45mm timber framing studs @ 600mm crs. max, Dwangs @ 800mm crs. max. (Refer to NZS3604 table 8.2)

-WALL FRAMING 1: Up to 2.4m Stud Height: H1.2 treated SG8 90x45mm timber framing studs @ 600mm crs. max, Dwangs @ 800mm crs. max. (Integra Panels) (Refer to NZS3604 table 8.2)

-WALL FRAMING 2: Up to 2.4m Stud Height: H1.2 treated SG8 90x45mm timber framing studs @ 600mm crs. max, Dwangs @ 400mm crs. max (Shiplap Cladding).

Wall Framing

Height To Underside Of Truss 2455mm
Lintel Height 1 2200mm
Internal Door Leaf Height 1 1980mm-2330mm (Wardrobe doors)
(Confirm Internal Door lintel height with Contractor)
Internal Door Leaf Width 810mm standard - as noted on plans

Plasterboard Materials

-10mm GIB plasterboard installed over timber framing as per manufacturer's specifications. GIB Aqualine to be used in wet areas.
-13mm GIB plasterboard ceiling lining fix to 70x35 Timber Battens @ 600crs ,installed as per manufacturer's specifications.

Windows

Selected powder-coated Low E. Argon, thermally Broken aluminium joinery double glaze with all glazing to comply with NZS 4223. (R0.50 Ug 1.10)

-WALL FRAMING 1: Up to 3.6m Stud Height: H1.2 treated SG8 140x45mm timber framing studs @ 600mm crs. max, Dwangs @ 800mm crs. max (Integra Panels) (Refer to NZS3604 table 8.2)

Exterior Bottom plate to concrete floor (Non-braced):

-Bottom plate fix to Slab with M12 bolts on 50x50x3 Square washers @ 900mm crs max (600crs max When using Masonry Header Blocks). Refer to supporting documents for further hold down requirements relating to each individual bracing element.

Interior bottom plate to concrete floor:

-5 x 30mm shot fired fastenings with 16mm washers @ 600mm crs within 150mm each end of plate. Refer to bracing plan for additional hold down fixings.

Typical Fixing Schedule:

Joint: Fixing:

(L.B.W.) Stud to Top plate:

-2/90x15 End nails+2 Wire Dogs at Stud Crs (4.7kn) As per NZS3604:2011 Or As per Truss design

-Single SL170 Plus 2/90mmX3.15 Dia Nails at Stud Crs (4.7KN) or As per truss design

Stud to Top plate:

-2/90x15 End Nails (0.7kn) in accordance to NZS3604:2011- Or As per Truss design

Stud to Bottom plate:

3/90 x 3.15mm end nails

Dwang to stud:

2/100 x 3.15mm skewed nails

Fish plate to Straightened stud:

4/60 x 2.8mm nails each side

Half Joint in top Plate:

4/100 x 3.15mm skewed nails

Lintel to trimming Stud:

4/100 x 3.15mm skewed nails

Standard soffit stringer to stud:

2/100 x 3.75mm nails

Stringer to trimming stud for:

Trimmer not exceeding 2400mm

3/100 x 3.75mm end nails

Trimmer not exceeding 3000mm

4/100x3.75mm end nails

Trimmer not exceeding 3600mm

2/100 x 3.75mm @ 500mm crs

Double top plate to top plate:

2/100 x 3.75mm @ 500mm crs

Trimming studs together at openings,

Studs blocking at wall intersections:

100 x 3.75mm nails @ 600mm crs

Trimming Stud to Doubling Stud immediately

under intels:

2/100 x 3.75mm nails

Trusses to Top Plate:

-Prefabricated roof trusses @ 900mm crs max fix to top plate with 2/100 x 3.75mm skewed

nails & 2/wiredogs each side in accordance to Manufacturer documents & producer

statement.

Timber Ceiling batten to bottom chord:

2/75 x 3.15mm nails

Outrigger to Gable Top Plate:

1/14g self drilling screw, 150mm long

Outrigger to Truss:

2/100 x 3.75mm end nails

Flashing batten to Outrigger:

2/100 x 3.75mm end nails

Outrigger Blocking to Top Plate:

4/100 x 3.75mm skewed nails

Purlin to Truss:

-70x45 H1.2 SG8 Purlins fixed to trusses/Rafter with 1/10g x 80mm self-drilling screw or

2/40 x 3.75mm skewed nails & 1/wiredog (Alt 2.4KN Fixing). Top & bottom purlins shall be

@ 600mm crs & 900crs to body.

Schedule of Framing Timbers - Grading & Treatment

Wall framing

Exterior walls & lintels SG8, H1.2, Pinus radiata

Interior walls (loadbearing) SG8, H1.2, Pinus radiata

Interior walls (non-loadbearing) SG8, H1.2, Pinus radiata

Cavity battens:

-Dry Cavity Merchantable, H3.1, Pinus radiata

-Wet Cavity Merchantable, H3.1, Pinus radiata

-Structural batten Merchantable, H3.2, Pinus radiata

Roof framing

Roof trusses - typical SG8, H1.2, Pinus radiata

Gable end truss SG8, H1.2, Pinus radiata

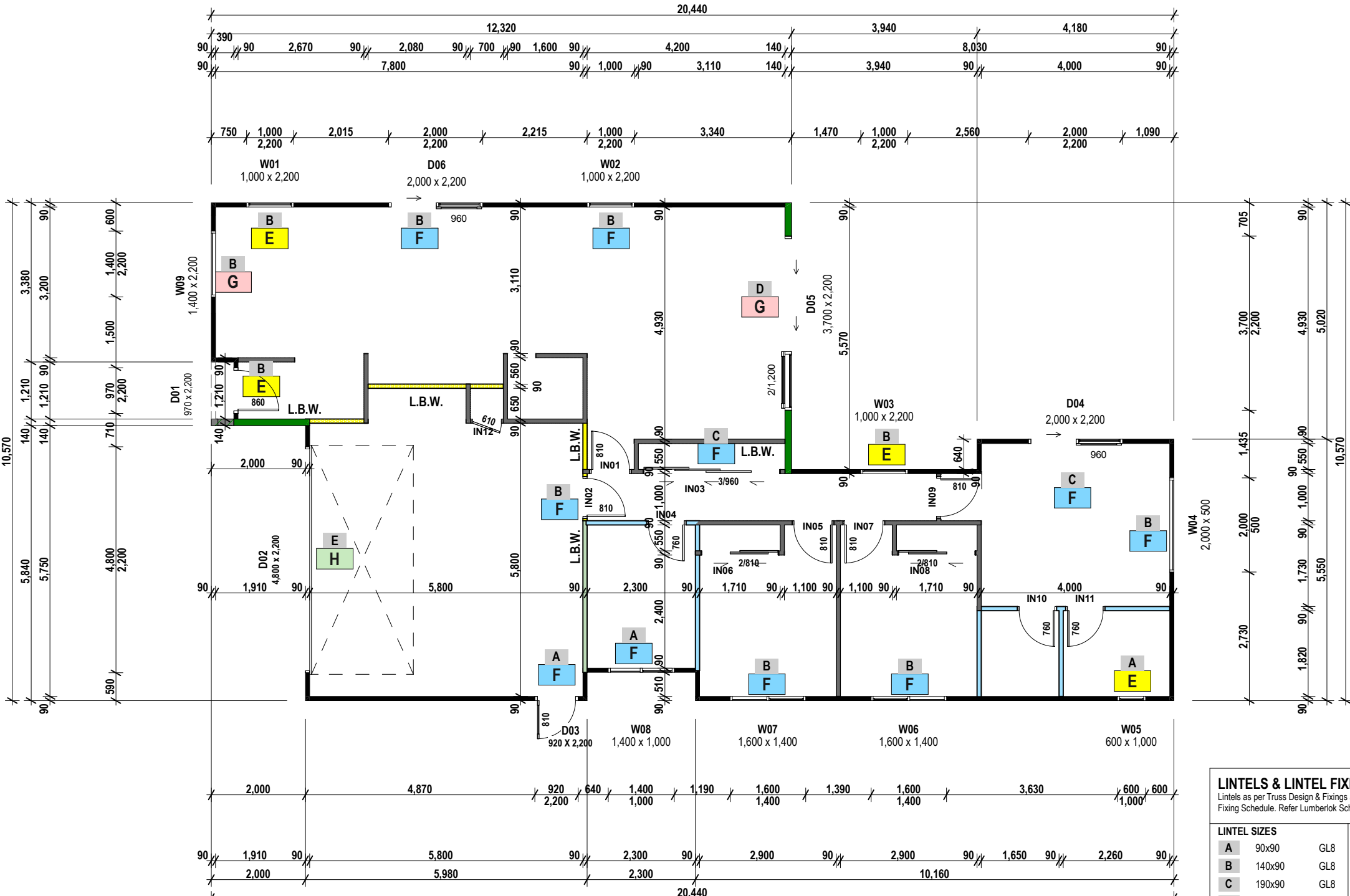
Coved or attic trusses SG8, H1.2, Pinus radiata

Purlins/Battens SG8, H1.2, Pinus radiata

Valley boards, barge boards Merchantable, H1.2, Pinus radiata

Windows

Framing and reveals Dressed, H3.1, Pinus radiata



Sizing of timber plates

Bottom Plate 45mm thick, width to match stud. SG8, H1.2, Pinus Radiata
Top Plate 45mm thick, width to match stud. Additional top plate 35mm thick, 90mm wide if 140mm wall, 140mm wide if 140mm wall. SG8, H1.2, Pinus Radiata

Plumbing fixtures shown to indicate wet areas. GIB Aqualine to all wet areas as standard.

Lintels Can be substitute with:

2/90x45- 90x90
2/140x45- 140x90
2/190x45- 190x90
2/240x45- 240x90
2/290x45- 290x90

KEY

- Indicates insulated wall
- Indicates non-insulated wall
- Indicates insulated wall
- Indicates Aqualine lined wall
- Insulated Framing with Gib Aqualine
- Indicates Insulate 140mm Framing

L.B.W = Load Bearing Wall

Overall DIM
Framing DIM
Opening DIM

L.B.W. = Load Bearing Wall

LINTELS & LINTEL FIXING TYPES

Lintels as per Truss Design & Fixings as per Lumberliok Lintel Fixing Schedule. Refer Lumberliok Schedule attached.

LINTEL SIZES		FIXING TYPES	
A	90x90	GL8	E = 1.4 kN
B	140x90	GL8	F = 4.0 kN
C	190x90	GL8	G = 7.5 kN
D	315x90	GL12	H = 13.5 kN
E	360x90	PL17	

Lintel Sizes as per truss design - Truss Design to take precedence over these drawings.

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Roofing Notes
-ROOF CLADDING 1:0.40 BMT Colorsteel Longrun Corrugate on Self-supporting building underlay

Roof Pitch 1 25°
Eaves Width 1 450mm
Gable Width 1 450mm

Soffit Lining
-4.5mm James Hardie Soffit Lining

Spouting & Fascia
Selected colorsteel Quad spouting (5550mm²) cross sectional area fix to 185 Colorsteel fascia

Down Pipe (DP)
-75X55 mm Colorsteel Downpipes

TRUSSES
-Prefabricated roof trusses @ 900mm crs max fix to top plate with 2/100 x 3.75mm skewed nails & 2/wiredogs each side in accordance to Manufacturer documents & product statement.
Purlins
-100x45 mm H1.2 SG8 Purlins fixed to trusses/Rafter with 1/10g x 80mm self-drilling screw @ 2/100 x 3.75mm skewed nails & 1/wiredog (Alt 2.4KN Fixing). Top & bottom purlins shall be @ 600mm crs & 900crs to body.

Outriggers
-80x45 mm H1.2 treated SG8 outriggers @900crs max to gable verge to allow for overhang/leave width. Outriggers to span back to next truss. Outriggers to be fixed as per NZS3604:2011 Table 10.18:
-4/10 x 80mm self-drilling screw to wall framing.
-3/90 x 3.15mm nails to rafters.
-4/90 x 3.15mm skewed nails to blocking.

Roof Bracing
-Roof bracing to be 8.0kN diagonally opposed intersecting steel straps fixed to top chord & top plate as per NZS3604:2011, Section 10.3, 10.4 or refer to truss manufacturer's design for positions.

Roof Penetrations
-All roof penetrations shall be flashed as per NZBC E2/AS1 external moisture section 8.4.17 profiled metal roof cladding (8.4.17 Roof Penetrations) as shown in figure 53 & 54

Flashings
-All Flashings to be 0.55 BMT colorsteel fixed in accordance with NZS3604:2011 and meeting the durability requirements of NZBC E2/AS1 Table 20.21,22

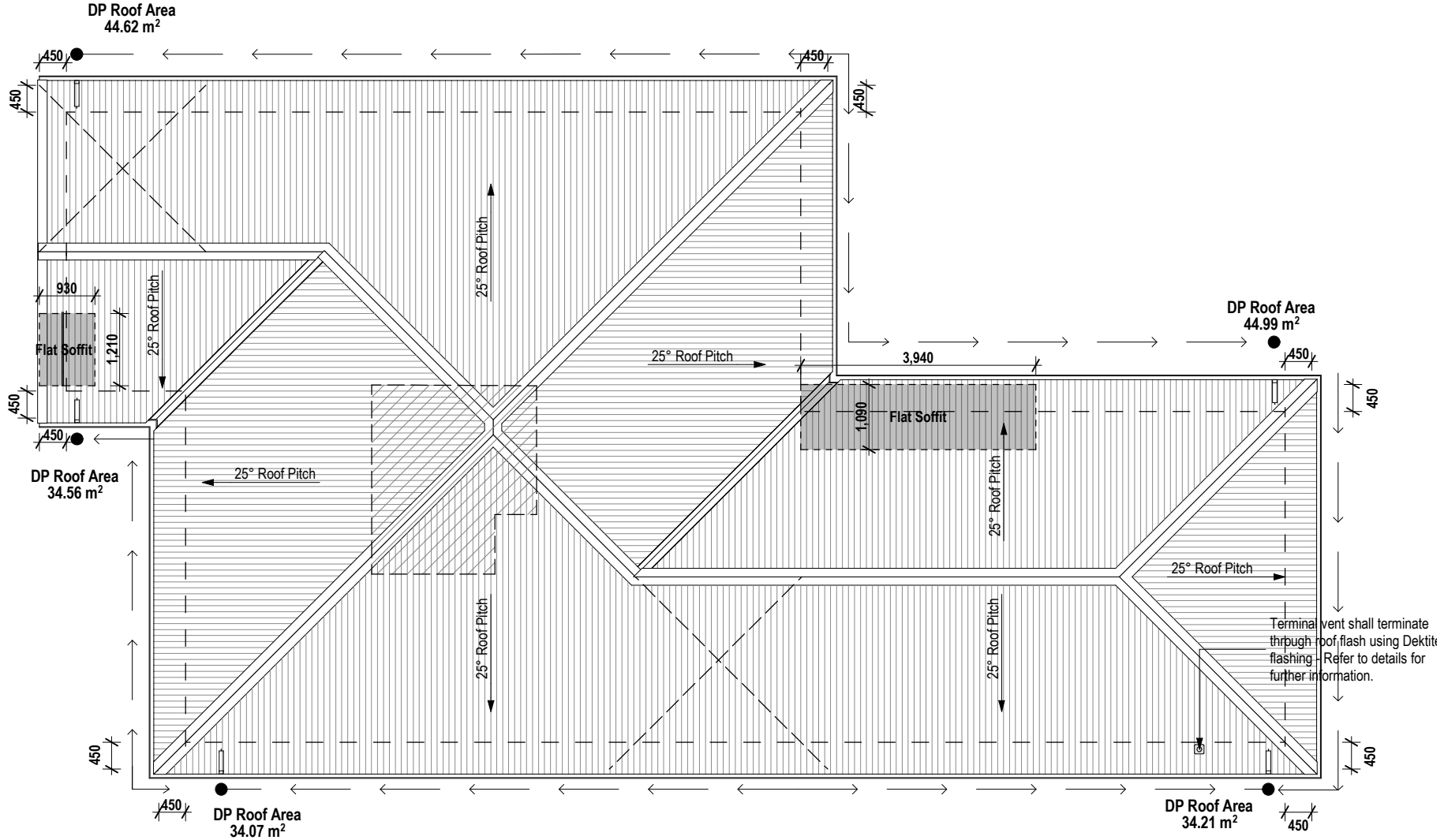
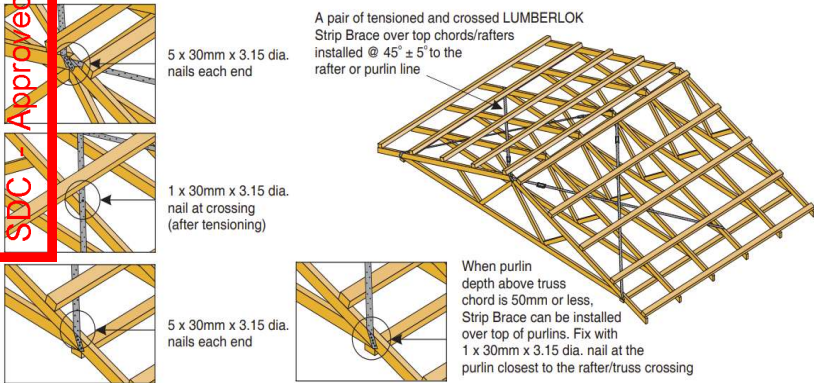
Straps
-Add Snow Straps as per NZMRCOP and E2/AS1 .

Roof Bracing Options

i) ROOF PLANE BRACE



Each roof plane brace can be:
• Chord or valley rafter running continuously from ridge to the top plate in accordance with Clauses 10.2.1.3.2 and 10.2.1.3.3 NZS 3604:2011.
OR
• A pair of tensioned and crossed LUMBERLOK Strip Brace running continuously from ridge to top plate installed as detailed below.



GENERAL KEY:

LUMBERLOK Strip roof bracing as per truss design:

Gutter Fall: → → →
TV Terminal Vent 80mm
BV Branch Vent 40mm
-Terminal & Branch vent shall terminate through roof flash using Deklite flashing
DP Downpipe -75X55 mm Colorsteel Downpipes

SDC Approved Building Consent Document - 2024/04/14 - phild - 2024/04/14

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ILAIISA DESIGN Ilaisa Design Limited 13 Henare Drive, iZone, Rolleston 7614 Email: admin@ilaisadesign.co.nz LICENSED BUILDING PRACTITIONER BUILDING CONFIDENCE KAD BUILD A HOME FOR EVERYONE	Project: Lot 360 - Arbour green Project Address: Lot 360 - Arbour green - Buxus Way, Rolleston ,Selwyn	Drawing Title: Roof Plan Job No: 24063 Client: KAD Build LTD Stage: Detailed Design	Designer: IT Drawn By: PS Technician: PS	<table><tr><th>Rev</th><th>Date</th><th>Description</th></tr><tr><td>-V0</td><td>-24/07/24</td><td>-Client Changes</td></tr><tr><td>-V1</td><td>-16/08/24</td><td>-Client Changes</td></tr><tr><td>-V1</td><td>-28/8/24</td><td>-Developed Design</td></tr><tr><td>-V1</td><td>-9/2/24</td><td>-Detailed Design</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></table>	Rev	Date	Description	-V0	-24/07/24	-Client Changes	-V1	-16/08/24	-Client Changes	-V1	-28/8/24	-Developed Design	-V1	-9/2/24	-Detailed Design	-	-	-	Scale @ A3: 1:10, 1:100 Sheet No: A2.03	Print Date 19/12/2024 Rev: -V1
	Rev	Date	Description																					
	-V0	-24/07/24	-Client Changes																					
	-V1	-16/08/24	-Client Changes																					
	-V1	-28/8/24	-Developed Design																					
-V1	-9/2/24	-Detailed Design																						
-	-	-																						

TABLE 1A - STRONGBACK LOCATION FOR WEBS @ 600MM CRS.

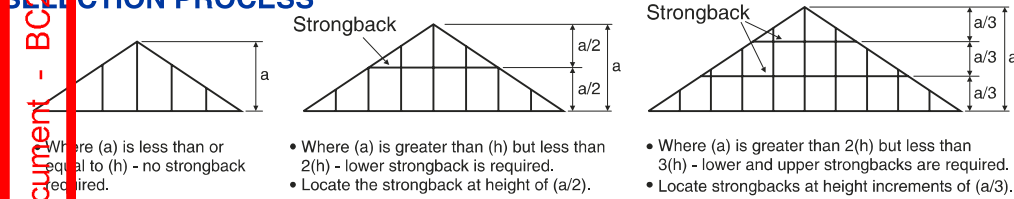
WIND ZONE	MAXIMUM STRONGBACK HEIGHT (h)											
	70x45 Web		90x45 Web		Double Component Gable End Webs				45x70 on flat		45x90 on flat	
					2/ 70x45		2/ 90x45					
	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8
LOW	1750	1950	1900	2100	2200	2450	2400	2650	2350	2600	2950	3150
MEDIUM	1600	1750	1750	1900	2000	2200	2200	2400	2150	2350	2750	2950
HIGH	1400	1500	1500	1650	1750	1900	1900	2100	1800	2050	2350	2650
VERY HIGH	1250	1400	1400	1500	1600	1750	1750	1900	1600	1900	2050	2400
EXTRA HIGH	1150	1350	1300	1450	1550*	1700*	1650*	1850*	1450	1700	1850*	2200*

TABLE 1B - STRONGBACK LOCATION FOR WEBS @ 400MM CRS.

WIND ZONE	MAXIMUM STRONGBACK HEIGHT (h)											
	70x45 Web		90x45 Web		Double Component Gable End Webs				45x70 on flat		45x90 on flat	
					2/ 70x45		2/ 90x45					
	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8	SG6	SG8
LOW	2000	2200	2200	2400	2550	2750	2750	2950	2700	2900	3250	3500
MEDIUM	1800	2000	2000	2200	2300	2550	2500	2750	2450	2700	3050	3300
HIGH	1600	1750	1750	1900	2000	2200	2200	2400	2150	2350	2750	2950
VERY HIGH	1450	1600	1600	1750	1850	2000	2000	2200	1950	2200	2500	2750
EXTRA HIGH	1400	1550	1500	1650	1750*	1950*	1900*	2100*	1800	2100	2300*	2650*

Use these values for full height brick veneer attached to gable end.
Please note that the maximum height of brick veneer on a gable end wall is 5.5m.

SELECTION PROCESS



STRONGBACK OPTIONS

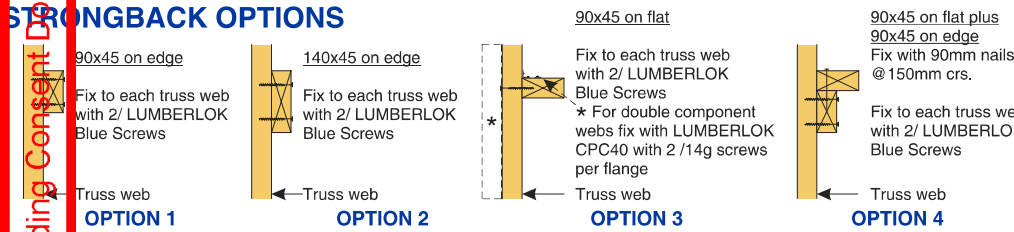
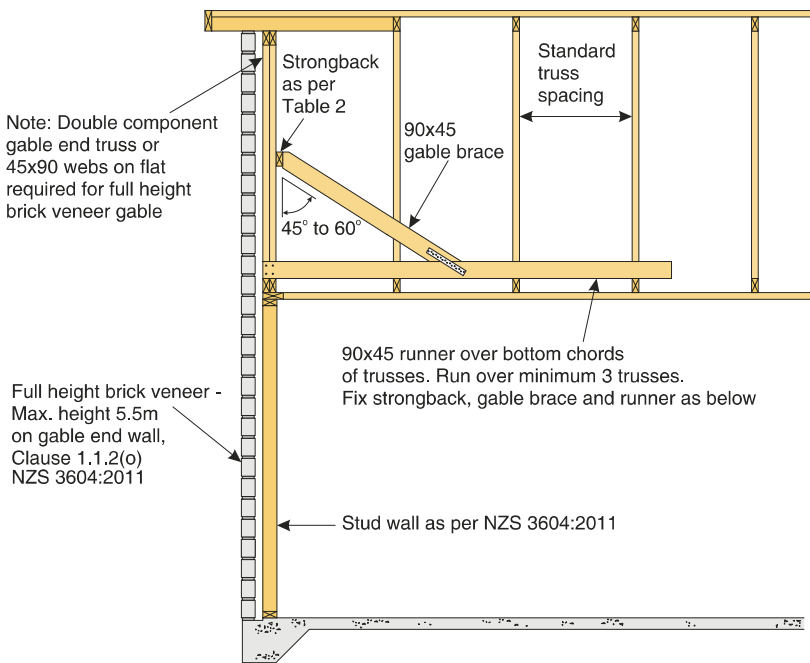
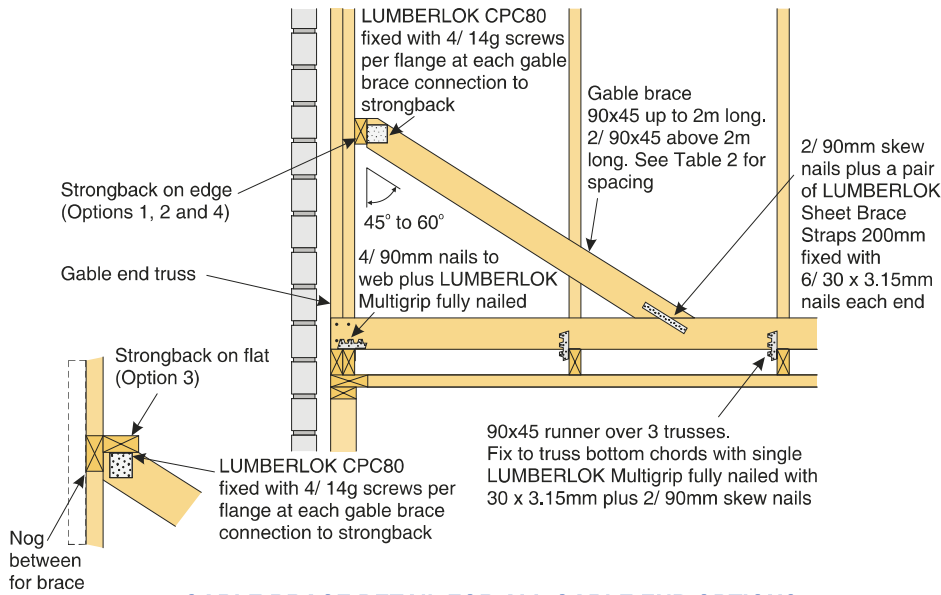


TABLE 2 - STRONGBACK SPAN AND GABLE BRACE LOCATION

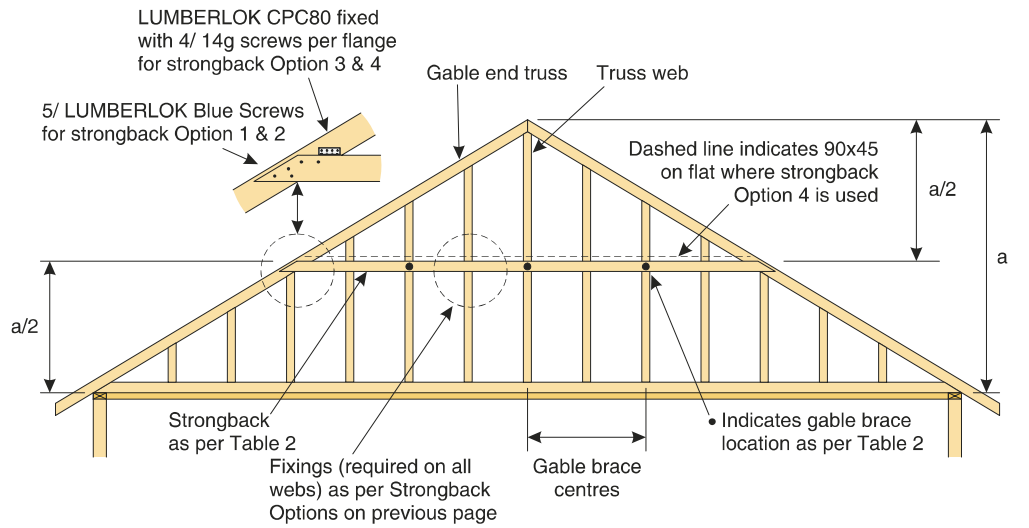
OPTION 1	OPTION 2	OPTION 3	OPTION 4
90x45 on edge	140x45 on edge	90x45 on flat	90x45 on flat plus 90x45 on edge
Max. span and/or gable brace location 1200mm	Max. span and/or gable brace location 1400mm	Max. span and/or gable brace location 1600mm	Max. span and/or gable brace location 2000mm



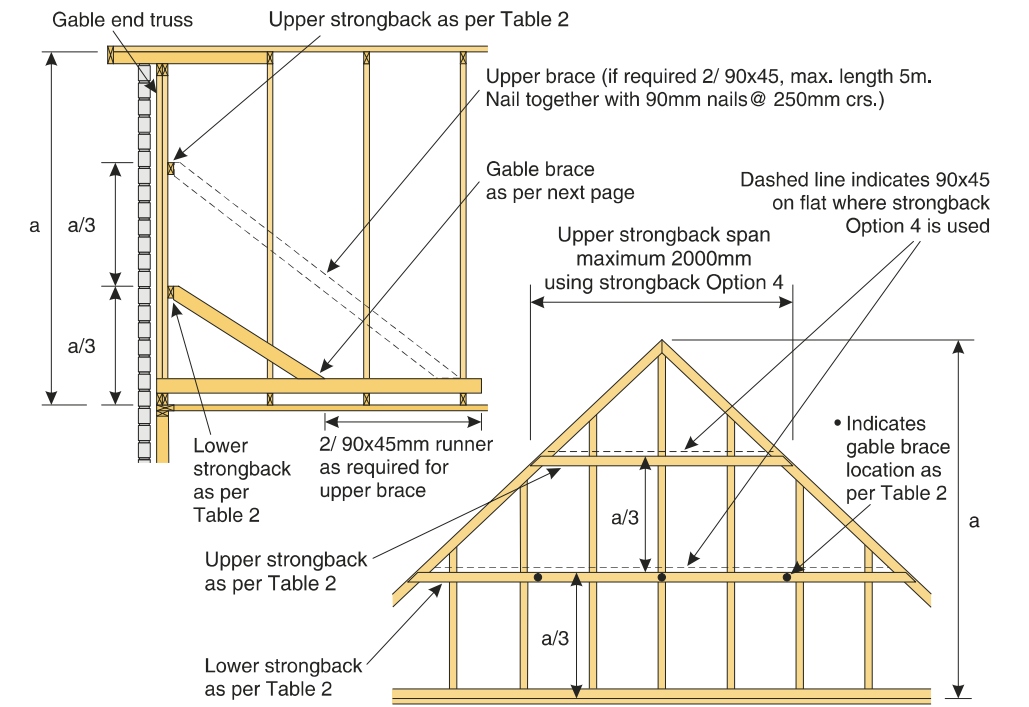
CROSS SECTION
(full height brick veneer option shown)



GABLE BRACE DETAIL FOR ALL GABLE END OPTIONS
(full height brick veneer option shown)



SINGLE STRONGBACK DETAILS



DOUBLE STRONGBACK DETAILS FOR ALL GABLE END OPTIONS
(full height brick veneer option shown)



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KAD BUILD
A HOME FOR EVERYONE

Project:
Lot 360 - Arbour green
Project Address:
Lot 360 - Arbour green - Buxus Way, Rolleston, Selwyn

Drawing Title:
Roof Bracing Details
Job No: 24063
Client: KAD Build LTD
Stage: Detailed Design

Designer: IT
Drawn By: PS
Technician: PS

Rev	Date	Description
-V0	24/07/24	Client Changes
-V1	16/08/24	Client Changes
-V1	28/8/24	Developed Design
-V1	9/2/24	Detailed Design
-	-	-

Scale @ A3:
Print Date: 19/12/2024
Sheet No: A2.04
Rev: -V1

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Bracing Notes:

Where the distance between bracing lines at right angles to the plate is between 5.0m & 6.0m, the 90 x 45mm top plate shall be strengthened by the addition of a 140 x 35mm plate of at least the same grade as the top plate. Refer to NZS 3604:2011, 8.7.4.2.

Note: 7mm Ply Notes

Where exterior ply bracing elements are used & not continued the entire length of the wall, allow to pack out the rest of the cavity battens to achieve an even straight-through cavity for the selected cladding.

Refer to supporting documents for 7mm minimum Structural Ply fixing requirements. Treatment to be a minimum of H3.2.

Stainless Steel Fixing to be used in Exposoure Zone D SEASPAY Zone.

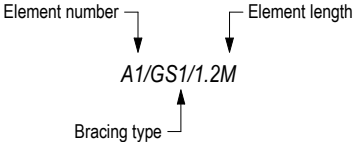
Openings in Bracing Elements:
(as per GIB EzyBrace System)

Openings are allowed within the middle third of a wall bracing element's length & height. Neither opening dimension shall be more than one third of the element height. Wall linings are fixed to opening trimmers at 150mm crs. Small openings (e.g. power outlets) of 90 x 90mm or less may be placed no closer than 90mm to the edge of the braced element.

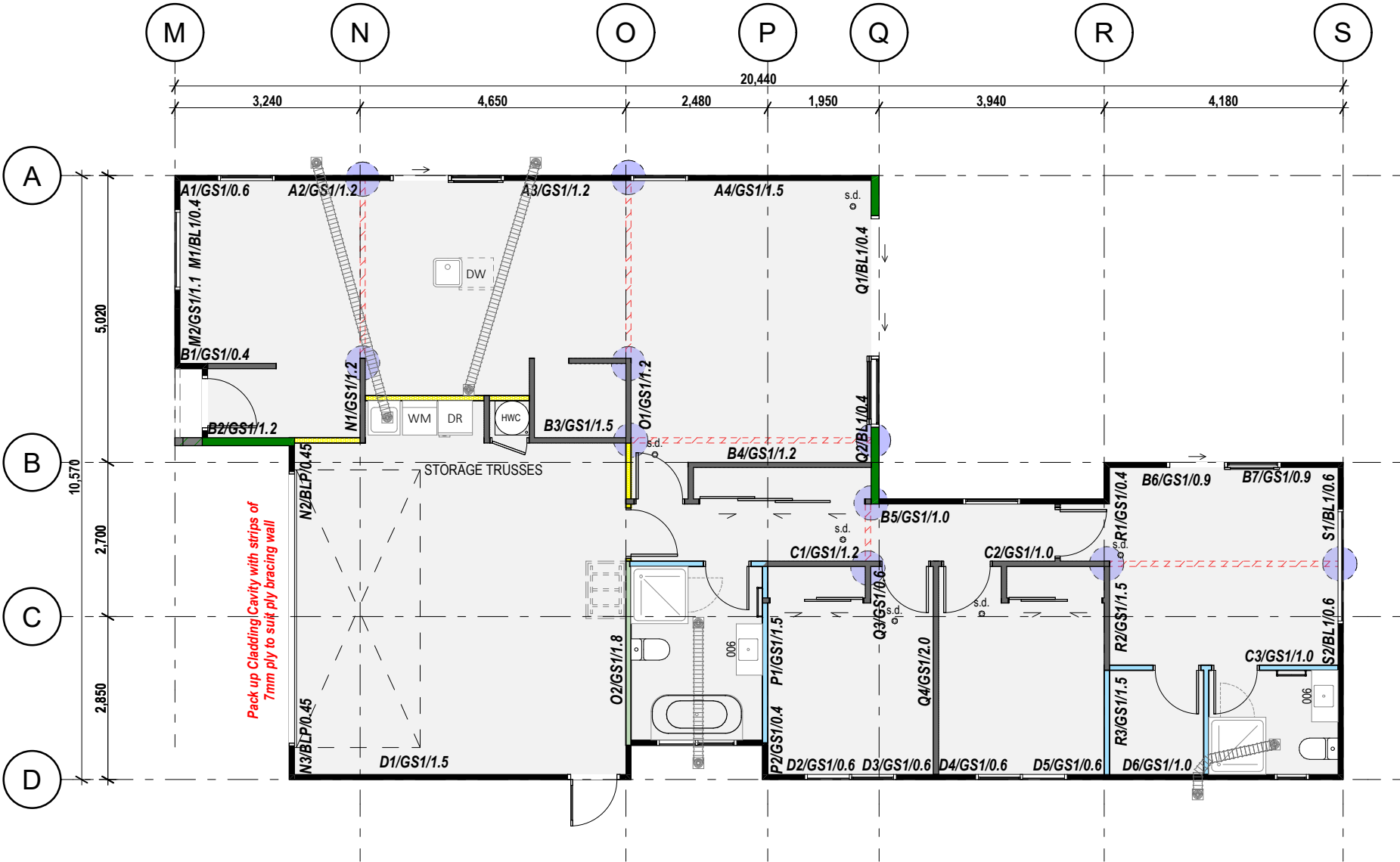
Reading the Bracing Plan:

GS1 - 0.4m min. length. Any 10mm or 13mm GIB Standard Plasterboard fixed to one side only.
BL1 - 0.4m min. length. 10mm or 13mm GIB Braceline fixed to one side only. GIB Handbracs to be installed each end of bracing element as per manufacturer's specifications - Refer to Supporting Documents for further information.
BLP - 0.4m min. length. 7mm minimum H3.2 Structural Ply fixed to exterior side of the wall framing. GIB Handbracs to be installed each end of bracing element as per manufacturer's specifications, 10mm or 13mm GIB Braceline Plasterboard fix to internal side (BL1 Fixing Pattern)

Indicates: Truss chord, Top plate or ceiling battens shall be continuous to exterior walls to allow for perimeter fixing for bracing element



GIB EzyBrace® Bracing Software									
Single Level Along Resistance Sheet									
Job Name: 24063 - Lot 360 Arbour Green - V1									
								Wind	EQ
								Demand	
								559	766
								Achieved	
								1290	1173
								231%	153%
a	1	0.60	0	2.4	GS1-N	GIB®	34	35	
	2	1.20	0	2.4	GS1-N	GIB®	83	72	
	3	1.20	0	2.4	GS1-N	GIB®	83	72	
	4	1.50	0	2.4	GS1-N	GIB®	104	90	
External Length = 12.320								303 OK	269 OK
b	1	0.40	0	2.4	GS1-N	GIB®	21	23	
	2	1.20	0	2.4	GS1-N	GIB®	83	72	
	3	1.50	0	2.4	GS1-N	GIB®	104	90	
	4	1.20	0	2.4	GS1-N	GIB®	83	72	
	5	1.00	0	2.4	GS1-N	GIB®	65	60	
	6	0.90	0	2.4	GS1-N	GIB®	57	53	
	7	0.90	0	2.4	GS1-N	GIB®	57	53	
External Length = 10.120								469 OK	423 OK
c	1	1.20	0	2.4	GS1-N	GIB®	83	72	
	2	1.00	0	2.4	GS1-N	GIB®	65	60	
	3	1.00	0	2.4	GS1-N	GIB®	65	60	
								213 OK	191 OK
d	1	1.50	0	2.4	GS1-N	GIB®	104	90	
	2	0.60	0	2.4	GS1-N	GIB®	34	35	
	3	0.60	0	2.4	GS1-N	GIB®	34	35	
	4	0.60	0	2.4	GS1-N	GIB®	34	35	
	5	0.60	0	2.4	GS1-N	GIB®	34	35	
	6	1.00	0	2.4	GS1-N	GIB®	65	60	
External Length = 18.440								305 OK	290 OK
Single Level Across Resistance Sheet									
Job Name: 24063 - Lot 360 Arbour Green - V1									
								Wind	EQ
								Demand	
								1169	766
								Achieved	
								1226	1154
								105%	151%
m	1	0.40	0	2.4	BL1-H	GIB®	36	40	
	2	1.10	0	2.4	GS1-N	GIB®	74	66	
External Length = 4.590								109 OK	106 OK
n	1	1.20	0	2.4	GS1-N	GIB®	83	72	
	2	0.45	0	2.4	BLP-H	GIB®	56	62	
	3	0.45	0	2.4	BLP-H	GIB®	56	62	
External Length = 5.840								195 OK	195 OK
o	1	1.20	0	2.4	GS1-N	GIB®	83	72	
	2	1.80	0	2.4	GS1-N	GIB®	124	108	
External Length = 0.6								207 OK	180 OK
p	1	1.50	0	2.4	GS1-N	GIB®	104	90	
	2	0.40	0	2.4	GS1-N	GIB®	21	23	
External Length = 0.6								125 OK	113 OK
q	1	0.40	0	2.4	BL1-H	GIB®	36	40	
	2	0.40	0	2.4	BL1-H	GIB®	36	40	
	3	0.60	0	2.4	GS1-N	GIB®	34	35	
	4	2.00	0	2.4	GS1-N	GIB®	138	120	
External Length = 5.6								243 OK	235 OK
r	1	0.40	0	2.4	GS1-N	GIB®	21	23	
	2	1.50	0	2.4	GS1-N	GIB®	104	90	
	3	1.50	0	2.4	GS1-N	GIB®	104	90	
External Length = 0.640								228 OK	203 OK
s	1	0.60	0	2.4	BL1-H	GIB®	59	61	
	2	0.60	0	2.4	BL1-H	GIB®	59	61	
External Length = 5.550								119 OK	121 OK



Ground Floor Bracing Plan

Scale 1:100

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Wall Cladding Materials
-WALL CLADDING 1: Resene 50mm Integra over 20mm cavity system installed as per manufacturer's specifications

-WALL CLADDING 2: Hermpac Vertical Shiplap weatherboards over 20mm cavity system installed as per manufacturer's specifications & E2/AS1 (Dwangs @ 400crs max)

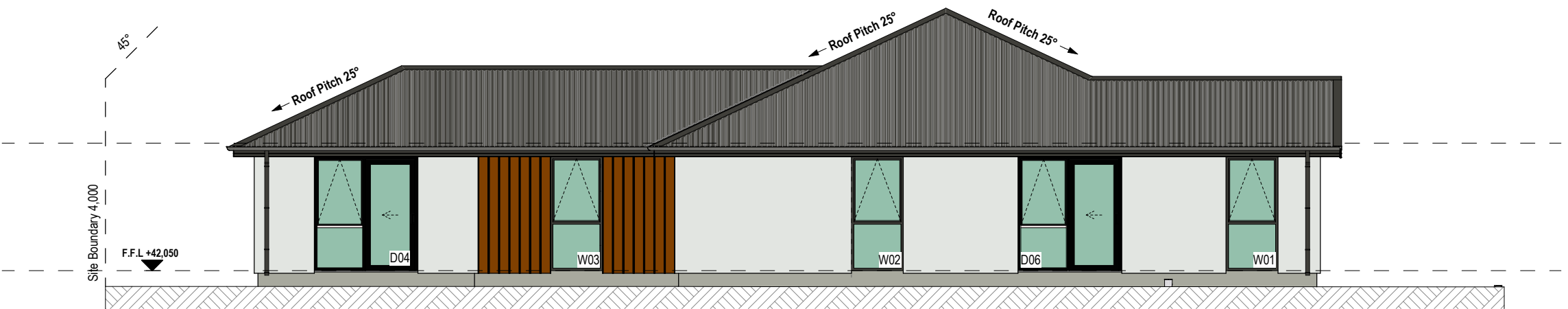
Roofing Notes
-ROOF CLADDING 1:0.40 BMT Colorsteel Longrun Corrugate on Self-supporting building underlay

Roof Pitch 1 25°
Eaves Width 1 450mm
Gable Width 1 450mm

Soffit Lining
45mm James Hardie Soffit Lining
Spouting & Fascia
Selected colorsteel Quad spouting (5550mm²) cross sectional area fix to 185 Colorsteel fascia
Down Pipe (DP)
75x55mm Colorsteel Downpipes
Windows
Selected powder-coated Low E. Argon, thermally Broken aluminium joinery double glaze with all glazing to comply with NZS 4223. (R0.50 Ug 1.10)

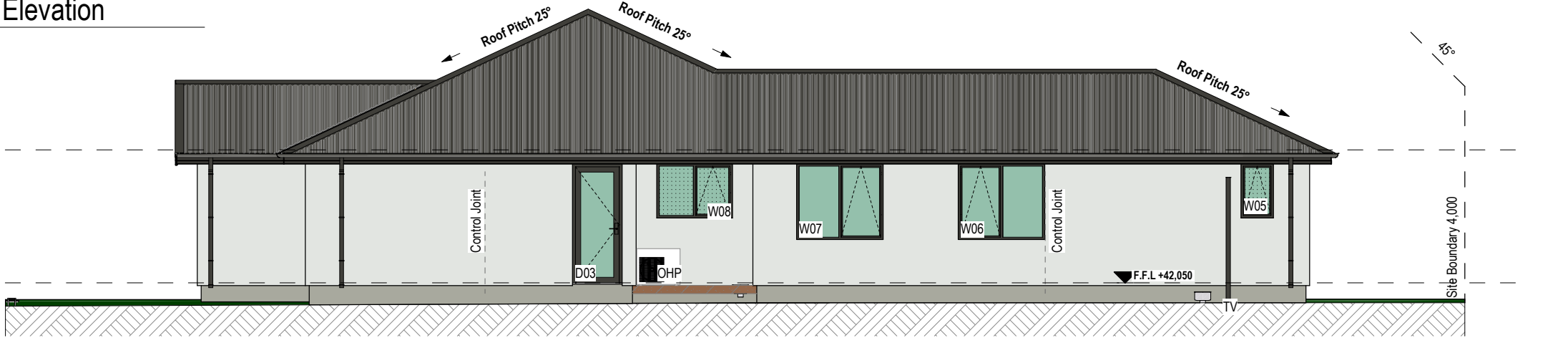
Glazing and glazed openings to comply with NZS 4223.3:2016 Glazing in buildings Part 3: Human impact safety requirements, NZS 4211:2008: Specification for performance of windows and New Zealand Building Code clauses: F2 Hazardous Building Materials & F4: Safety from Falling.

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



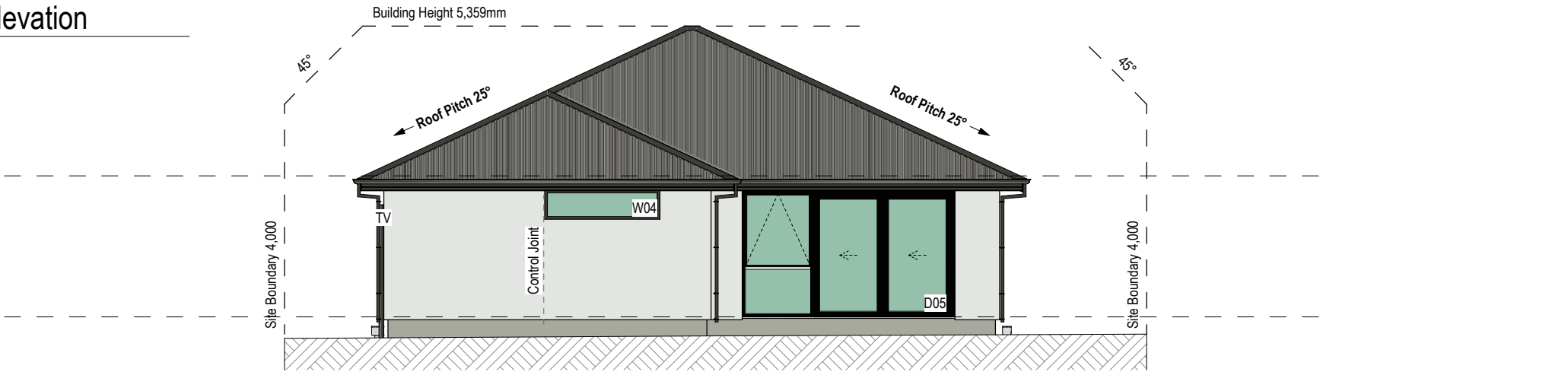
North Elevation

Scale 1:100



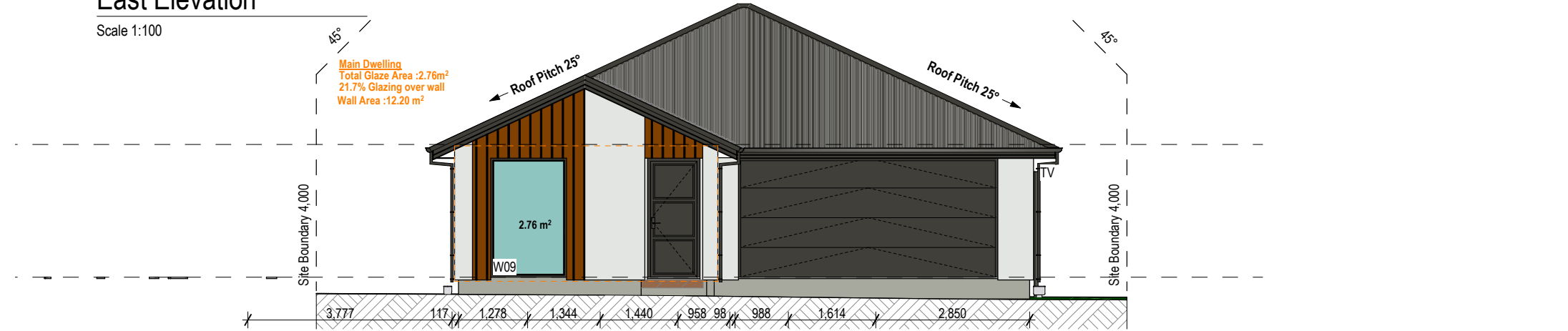
South Elevation

Scale 1:100



East Elevation

Scale 1:100



West Elevation

Scale 1:100

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LICENSED BUILDING PRACTITIONER
BUILDING CONFIDENCE



KAD BUILD
A HOME FOR EVERYONE

Project:
Lot 360 - Arbour green

Project Address:
Lot 360 - Arbour green - Buxus Way, Rolleston, Selwyn

Drawing Title:
Elevations

Job No: 24063

Client: KAD Build LTD

Stage: Detailed Design

Designer: IT

Drawn By: PS

Technician: PS

Rev	Date	Description
V0	24/07/24	Client Changes
V1	16/08/24	Client Changes
V1	28/8/24	Developed Design
V1	9/2/24	Detailed Design
-	-	-

Scale @ A3:
1:100

Sheet No:
A3.01

Print Date
19/12/2024

Rev:
-V1

Note:

- Confirm all opening sizes onsite prior to installation
- Sizes shown are rough opening sizes and & leaf sizes
- Client to confirm window & door style & finishes
- All doors & sliders are taken from External Elevation
- All windows are taken from External Elevation
- Refer to ground floor plan for accurate opening location

Internal Door Leaf Height 1980mm-2330mm (Wardrobe doors) (Confirm
Internal Door lintel height with Contractor)
Internal Door Leaf Width 810mm standard - as noted on plans

-Joinery:
All exterior window and door joinery to be **Selected powder-coated Low E. Argon, thermally Broken aluminium joinery double glaze with all glazing to comply with NZS 4223. (R0.50 Ug 1.10)** and dressed timber reveals unless noted otherwise. Refer to specification for full details.

-Internal Door Leaf Height: -1980mm-2330mm (Wardrobe doors) (Confirm Internal Door lintel height with Contractor)
-Internal Door Leaf Width: -810mm standard - as noted on plans(unless noted on plan).
-Garage Door: -Coloursteel sectional.
-Lintels: -Refer to the **Floor Plan/Truss Design** for lintel sizes.
-Safety Glazing (SG): -To all windows less than 800mm above FFL, unless a transom is less than 1.0m from FL.
-To all windows in wet areas less than 2.0m above FFL.
-To all doors (bottom pane only where a transom is used.)
-To Bathroom, WC and Ensuite
-Obscure Glazing (OB):
-Safety Glazing or Annealed Glass
Glass (SG or A) -Safety Glazing or Annealed Glass as per NZS 4223.3:2016
-Restrictor Stay (RS): -Restrictor stays fixed to window openings

Glazing and glazed openings to comply with NZS 4223.3:2016 Glazing in buildings - Part 3: Human impact safety requirements, NZS 4211:2008: Specification for performance of windows and New Zealand Building Code Clauses: F2 Hazardous Building Materials & F4: Safety from Falling

Standard glazing units used:

All Double Glazed Units
Comply with Table G2, table E1.1.1 in H1/AS1

Standard Unit - TBC window manufacture

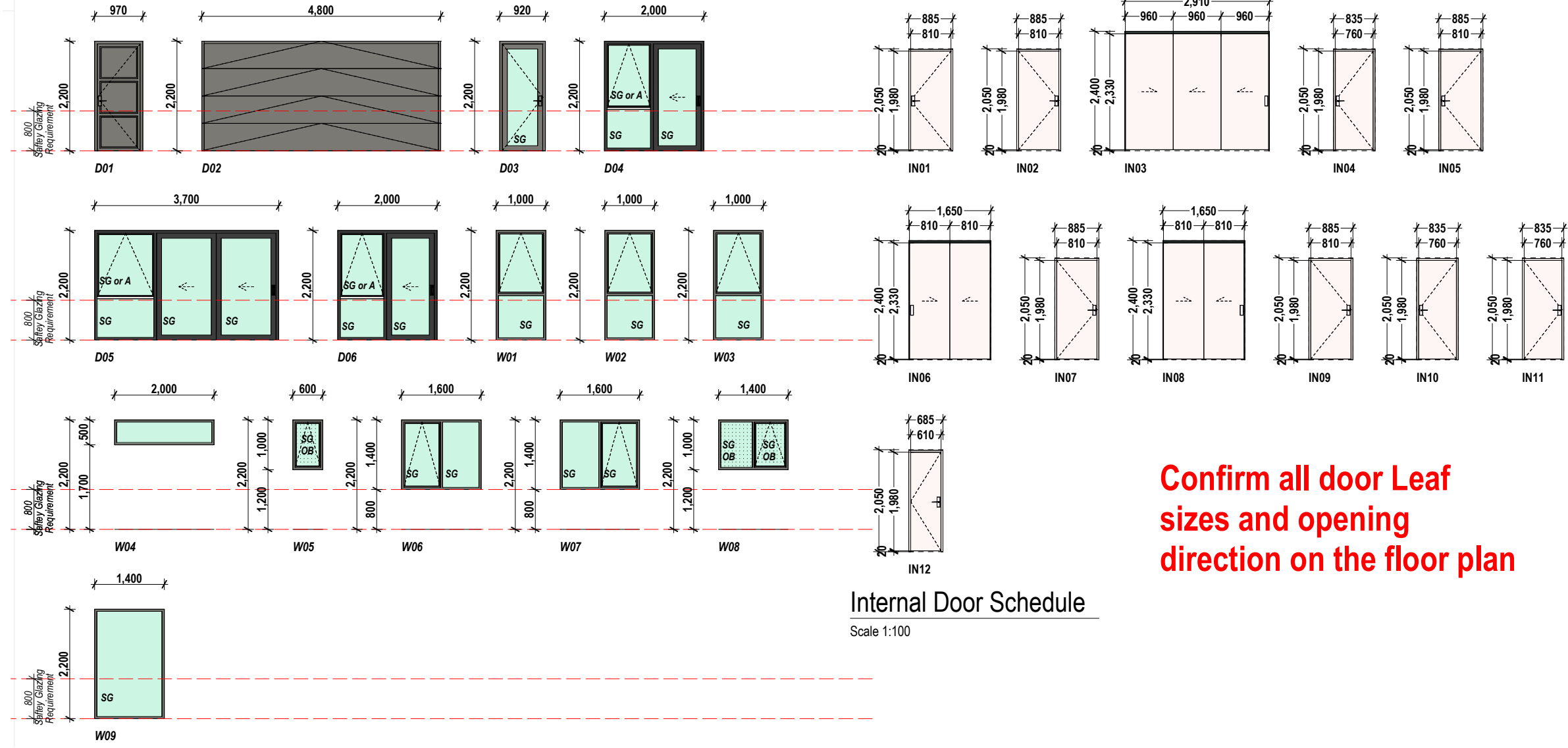
4mm Glass / 12mm Air Gap / 4mm Glass

Slider Unit -TBC window manufacture

5mm Glass / 8mm Air Gap / 5mm Glass

Safety Panel -TBC window manufacture

4mm Toughened / 8mm Air Gap / 6.38mm Laminate



Internal Door Schedule

Scale 1:100

Confirm all door Leaf sizes and opening direction on the floor plan

Door & Window Schedule

Scale 1:100

Natural Light:	Window Area/Room Area (Minimum 10%)			Ventilation:	Vented Area/Room Area (Minimum 5 %)		
Rooms	Window Area (Glazed)	Room Area	Total	Rooms	Window Area (Vented)	Room Area	Total
Living/Dining/kitchen	17.99	49.83	36%	Living/Dining/kitchen	11.98	49.83	24%
Bedroom 1	4.78	13.84	35%	Bedroom 1	3.17	13.84	23%
ensuite	0.4	4.11	10%	ensuite	0.46	4.11	11%
bedroom 2	1.82	9.4	19%	bedroom 2	0.96	9.4	10%
bathroom	1.08	6.98	15%	bathroom	0.58	6.98	8%
Bedroom 3	1.82	9.4	19%	Bedroom 3	0.96	9.4	10%
Hallway	1.77	7.44	24%	Hallway	1.11	7.44	15%

Insulation Requirements to meet H1 -Climate Zone 5

Foundations:

Standard NZS3604:2011 Single Pour foundation system with 50mm Poly underslab (300-400mm depth or 300kpa as per geo tech report)

Wall Insulation:

R2.6
R3.2 (140mm thick)

Window:

Selected powder-coated Low E. Argon, thermally Broken aluminium joinery double glaze with all glazing to comply with NZS 4223. (R0.50 Ug 1.10)

Ceiling Insulation:

-2Xlayers of R3.6

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Design Navigator H1 Compliance Report

Project Summary

H1 Report created by:	llaisadesignLTD
Project Name:	24063 - Lot 360 Arbour Green
Client:	KAD build
Lot No:	Lot 360
Comment:	
Project Id:	187619
Report Date:	19/09/2024

Compliance Result

This report shows compliance of the design with Clause H1 AS1 Fifth Edition from 4 August 2022 and the R-value targets of Clause E3 Second edition Amendment 7 from 5 November 2020.

This building **complies with Clause H1 AS1 Edition 5 Amendment 1 for all housing, and buildings up to 300m².**

In order to comply with Clause H1 the building needs to comply with at least one of the three compliance paths (Schedule, Calculation or Modelling Method). This design complies with the Calculation Method.

The building **complies** with Clause E3 Second Edition Amendment 7 from 5 November 2020.

* Note that all floor, wall and roof R-values are rounded to 1 decimal point, window and skylight R-values are rounded to 2 decimal points.

H1 Compliance Details

H1 AS1 Edition 5 - Calculation Method Compliance

The use of the Calculation Method is **permitted** because the vertical glazing area is **smaller** than 40% of the gross wall area.

In order to comply the heat loss of the proposed building must not be larger than the reference building heat loss AND all component R-values must be at least 50% of the R-values shown in the '50% Rule' table below. This design **complies** with the H1 Calculation Method.

HeatLoss:

Maximum permitted Heat Loss	Proposed Building Heat Loss
271 W/°C	265 W/°C
	✓

The reference building element areas and R-values are shown below. The last column shows the element areas of the proposed building.

Element	Reference Building Area	Reference Building R-value	Proposed Building Area
Roof	158.2 m²	6.6	158.2 m²
Wall	108.5 m²	2.0	106.2 m²
Slab Floor	159.1 m²	1.6	159.1 m²
Other Floor	0.0 m²	3.0	0.0 m²
Window and Door	46.5 m²	0.50	48.8 m²
Skylight	0.0 m²	-	0.0 m²

Minimum R-values ("50% rule"):

Element Type	Minimum permitted R-value	Minimum proposed R-value	
Roof	3.3	3.4	✓
Wall	1.0	2.1	✓
Slab Floor	0.8	1.6	✓
other Floor	1.5		✓

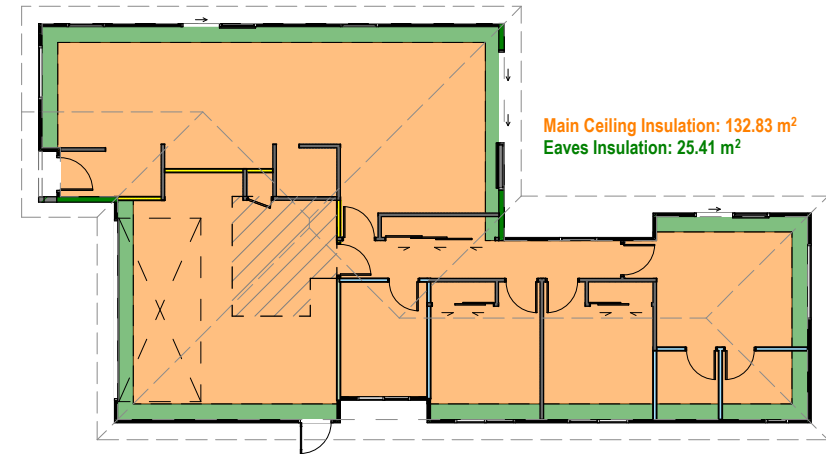
Lighting Power Density Compliance

Residential buildings are not required to comply with the lighting power density targets.

Compliance with Clause E3

This building **complies** with Clause E3 Second Edition Amendment 7 from November 2020.

Building Element	Minimum permitted R-value	Minimum project R-value	
Light timber frame wall or other framed wall constructions with cavities	1.5	2.1	✓
Single skin normal weight masonry based wall construction without a cavity	0.6		
Solid timber wall systems no less than 60 mm thick	0.6		
Roof or ceilings of any construction	1.5	3.4	✓



Ceiling Insulation Plan

Scale 1:200

Heat Loss Details

ID	Name	Orient.	Width	Height	Gross Area	Net Area	R	Heat Loss	Type	Heated	Construction
Floors											
F1	Standard NZS 3604:2011 Single Pour Foundation with 50mm Poly Underslab				159.1	159.1	1.56	102.0	slab		Floortype 3 - Standard NZS 3604:2011 Single Pour Foundation with 50mm Poly Underslab
Walls											
W1	North 1	N	16.50	2.40	39.6	26.4	2.33	11.3			Walltype 1 - 90mm framing - 50mm Resene AAC Integra Panel
Wi1-1	W01		1.00	2.20		2.2	0.50	4.4			Thermally Broken - Low E4, Argon (UG 1.10)
Wi1-2	D06		2.00	2.20		4.4	0.50	8.8			Thermally Broken - Low E4, Argon (UG 1.10)
Wi1-3	W02		1.00	2.20		2.2	0.50	4.4			Thermally Broken - Low E4, Argon (UG 1.10)
Wi1-4	D04		2.00	2.20		4.4	0.50	8.8			Thermally Broken - Low E4, Argon (UG 1.10)
W2	North 2	N	3.94	2.40	9.5	7.3	2.10	3.5			Walltype 2 - 90mm framing - Envira Vertical Shiplap Weatherboard
Wi2-1	W03		1.00	2.20		2.2	0.50	4.4			Thermally Broken - Low E4, Argon (UG 1.10)
W3	South 1	S	2.00	2.40	4.8	4.8	2.96	1.6			Walltype 3 - 140mm framing - 50mm Resene AAC Integra Panel
W4	South 2	S	18.44	2.40	44.3	35.8	2.33	15.3			Walltype 1 - 90mm framing - 50mm Resene AAC Integra Panel
Wi4-1	D03		0.92	2.20		2.0	0.50	4.0			Thermally Broken - Low E4, Argon (UG 1.10)
Wi4-2	W08		1.40	1.00		1.4	0.50	2.8			Thermally Broken - Low E4, Argon (UG 1.10)
Wi4-3	W07		1.60	1.40		2.2	0.50	4.5			Thermally Broken - Low E4, Argon (UG 1.10)
Wi4-4	W06		1.60	1.40		2.2	0.50	4.5			Thermally Broken - Low E4, Argon (UG 1.10)
Wi4-5	W05		0.60	1.00		0.6	0.50	1.2			Thermally Broken - Low E4, Argon (UG 1.10)
W5	East 1	E	5.75	2.40	13.8	5.7	2.96	1.9			Walltype 3 - 140mm framing - 50mm Resene AAC Integra Panel
Wi5-1	D05		3.70	2.20		8.1	0.50	16.3			Thermally Broken - Low E4, Argon (UG 1.10)
W6	East 2	E	6.15	2.40	14.8	13.8	2.33	5.9			Walltype 1 - 90mm framing - 50mm Resene AAC Integra Panel
Wi6-1	W04		2.00	0.50		1.0	0.50	2.0			Thermally Broken - Low E4, Argon (UG 1.10)
W7	West 1	W	2.08	2.40	5.0	1.9	2.10	0.9			Walltype 2 - 90mm framing - Envira Vertical Shiplap Weatherboard
Wi7-1	W09		1.40	2.20		3.1	0.50	6.2			Thermally Broken - Low E4, Argon (UG 1.10)
W8	West 2	W	9.59	2.40	23.0	10.3	2.33	4.4			Walltype 1 - 90mm framing - 50mm Resene AAC Integra Panel
Wi8-1	D01		0.97	2.20		2.1	0.50	4.3	opaque		Entry Door
Wi8-2	D02		4.80	2.20		10.6	0.69	15.3	opaque		Insulated Garage Door
W9	West 3	W	0.14	2.40	0.3	0.3	2.96	0.1			Walltype 3 - 140mm framing - 50mm Resene AAC Integra Panel
Roofs											
R1	Main Ceiling Insulation				132.8	132.8	7.27	18.3			Rooftype 1 - Main Ceiling Insulation
R2	Eaves Ceiling Insulation				25.4	25.4	3.37	7.5	perimeter		Rooftype 2 - Eaves ceiling insulation
Total Heat Loss								264.7			

* The floor and roof heatlosses are not included in the heatloss equation for commercial buildings (H1/AS2).

Floor Construction Details

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Name: Floorvtpe 3 - Standard NZS 3604:2011 Single Pour Foundation with 50mm Poly Underslab

Slab Floor ☒ heated ☐

1.56 m²°C/W

Type: Floor: Slab Floor - H1/AS1 Edition 5 and H1/AS2 Edition 1

Table F Slab Insulation (H1 Edition 5)
- [H1 Acceptable Solutions and Verification Methods](#)

Slab floor area [m²]: 159.13

Area Perimeter Ratio: 2.43

Underslab insulation: Full Expol SLABX200 R-1.5 (50mm) 1.5

Perimeter:

Length*	Masonry Veneer Wall	External Wall Thickness*	Edge Insulation
- 57.18 m	☐	90 mm	☐
- 8.28 m	☐	140 mm	☐

+
* required data. If empty the perimeter type will be ignored.

Wall Construction Details

Name: Walltype 1 - 90mm framing - 50mm Resene AAC Integra Panel

heated ☐

2.33 m²°C/W

Type: Wall: Timber Frame with vented Cavity

external surface 0.03

Cladding : Resene Construction Systems Integra 50mm
R-value: 0.29

Air Barrier : generic - Building paper
R-value: 0.01

Timber Frame & Cavity : 90mm, studs @ 600mm, dwangs @ 800mm
Wall Frame Area: 14.4% Cavity Area: 85.6%
15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08 15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08
Framing : R-value: 0.75 Pink(c)Batts(c) Ultra R2.6 90mm Wall 2.6
still Airgap: none
R-value: 0.00

Wall Lining : generic - gypsum Plasterboard 10mm
R-value: 0.04

internal surface 0.09

Name: Walltype 2 - 90mm framing - Envira Vertical Shiplap Weatherboard

heated ☐

2.10 m²°C/W

Type: Wall: Timber Frame with vented Cavity

external surface 0.03

Cladding : generic - Weatherboard Rusticated or Shiplap
R-value: 0.16

Air Barrier : generic - Building paper
R-value: 0.01

Timber Frame & Cavity : 90mm, studs @ 600mm, dwangs @ 400mm
Wall Frame Area: 19.6% Cavity Area: 80.4%
15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08 15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08
Framing : R-value: 0.75 Pink(c)Batts(c) Ultra R2.6 90mm Steel Wall 2.6
still Airgap: none
R-value: 0.00

Wall Lining : generic - gypsum Plasterboard 10mm
R-value: 0.04

internal surface 0.09

Name: Walltype 3 - 140mm framing - 50mm Resene AAC Integra Panel

heated ☐

2.96 m²°C/W

Type: Wall: Timber Frame with vented Cavity

external surface 0.03

Cladding : Resene Construction Systems Integra 50mm
R-value: 0.29

Air Barrier : generic - Building paper
R-value: 0.01

Timber Frame & Cavity : 140mm, studs @ 600mm, dwangs @ 800mm
Wall Frame Area: 14.4% Cavity Area: 85.6%
15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08 15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08
Framing : R-value: 1.17 Pink(c)Batts(c) Ultra R3.2 140mm Wall 3.2
still Airgap: none
R-value: 0.00

Wall Lining : generic - gypsum Plasterboard 10mm
R-value: 0.04

internal surface 0.09

Roof Construction Details

Name: Rooftype 1 - Main Ceiling Insulation

Ceiling Perimeter ☐ heated ☐

7.27 m²°C/W

Type: Roof: Timber framed truss Roof, direct fixed or battened flat Ceiling

external surface 0.03

Roofing : generic - Metal corrugate Iron with building paper
R-value: 0.01

Pink(c)Batts(c) R3.6 Ceiling 3.6

Timber Frame & Cavity : 90mm rafters or joists @ 900mm, battens covered with insulation
Roof Frame Area: 5.0% Cavity Area: 95.0%
Roof space (still air) 0.11 Roof space (still air) 0.11
Framing : R-value: 0.75 Pink(c)Batts(c) R3.6 Ceiling 3.6 notched to cover bottom chord

Roof Lining : generic - gypsum Plasterboard 13mm
R-value: 0.06

internal surface 0.09

Non-IC-rated recessed downlights

Ceiling Area [m²]: Number of downlights: Clearance from lamp holder side [m]:

Name: Rooftype 2 - Eaves ceiling insulation

Ceiling Perimeter ☒ heated ☐

3.37 m²°C/W

Type: Roof: Timber framed truss Roof, direct fixed or battened flat Ceiling

external surface 0.03

Roofing : generic - Metal corrugate Iron with building paper
R-value: 0.01

Insulation :

Timber Frame & Cavity : 90mm rafters or joists @ 900mm, battens covered with insulation
Roof Frame Area: 5.0% Cavity Area: 95.0%
Roof space (still air) 0.11 Roof space (still air) 0.11
Framing : R-value: 0.75 Pink(c)Batts(c) R3.6 Ceiling 3.6 notched to cover bottom chord

Roof Lining : generic - gypsum Plasterboard 13mm
R-value: 0.06

internal surface 0.09

Non-IC-rated recessed downlights

Ceiling Area [m²]: Number of downlights: Clearance from lamp holder side [m]:

Glazing Details

Name: Thermally Broken - Low E4, Argon (UG 1.10)

Opaque Door ☐

0.50 m²°C/W

Type: Thermally Broken Aluminium Frame

Glass Type : Double Pane: Low E4/Clear - Argon - Thermally improved Spacer (Ug 1.10)
R-value: 0.50
Solar Heat Gain Coefficient (SHGC): 0.41

Name: Insulated Garage Door

Opaque Door ☐

0.69 m²°C/W

Type: Doors

Door Type : Insulated Garage Door (panel R-1.3)
R-value: 0.69
Solar Heat Gain Coefficient (SHGC): 0.00

Name: Entry Door

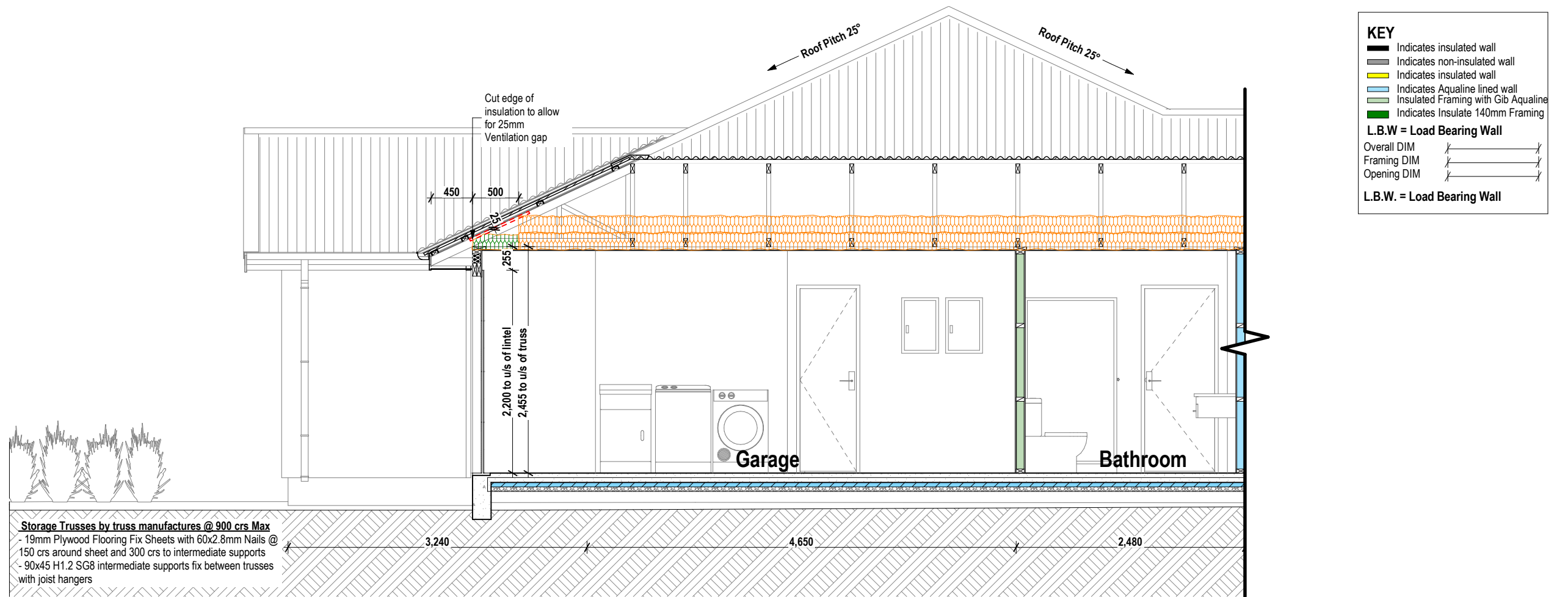
Opaque Door ☒

0.50 m²°C/W

Type: Thermally Broken Aluminium Frame

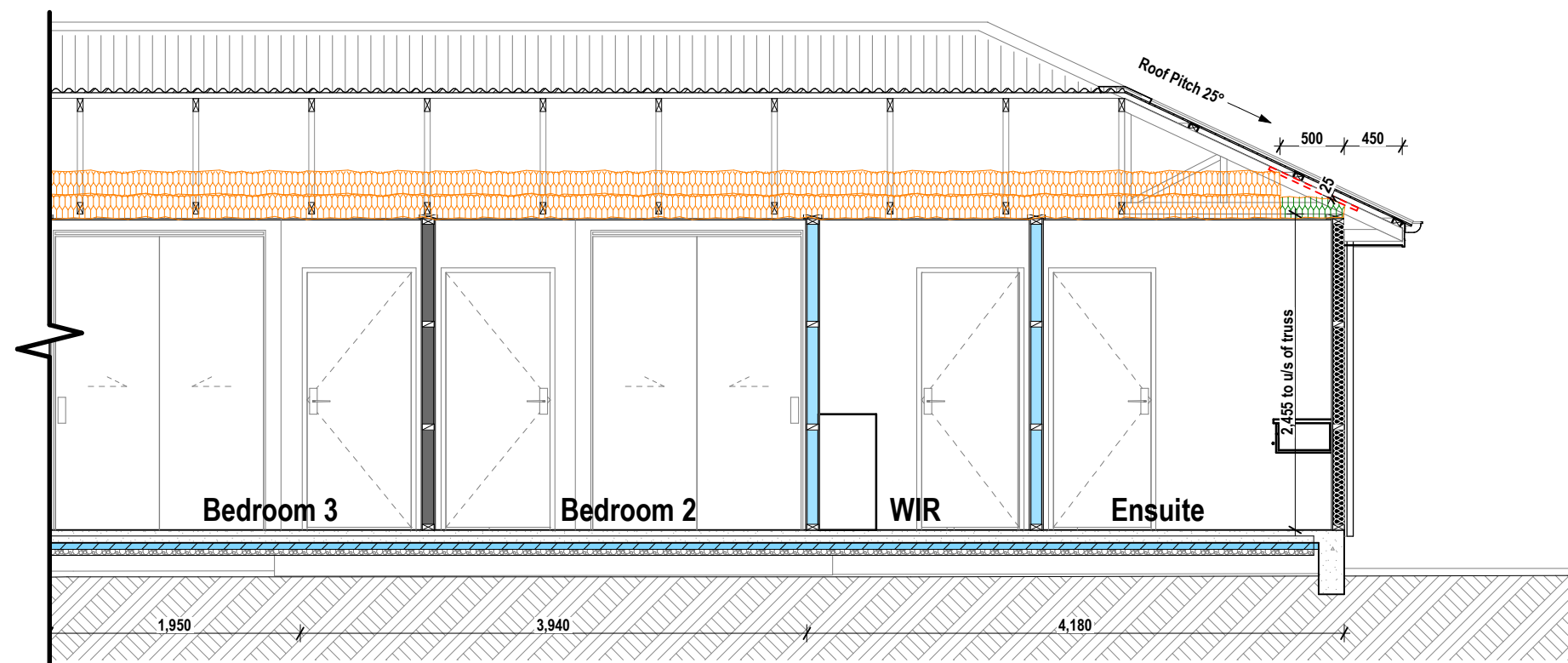
Glass Type : Double Pane: Low E4/Clear - Argon - Thermally improved Spacer (Ug 1.10)
R-value: 0.50
Solar Heat Gain Coefficient (SHGC): 0.41

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Section C

Scale 1:50



Section C

Scale 1:50

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KEY

Indicates insulated wall

Indicates non-insulated wall

Indicates insulated wall

Indicates Aqualine lined wall

Insulated Framing with Gib Aqualine

Indicates Insulate 140mm Framing

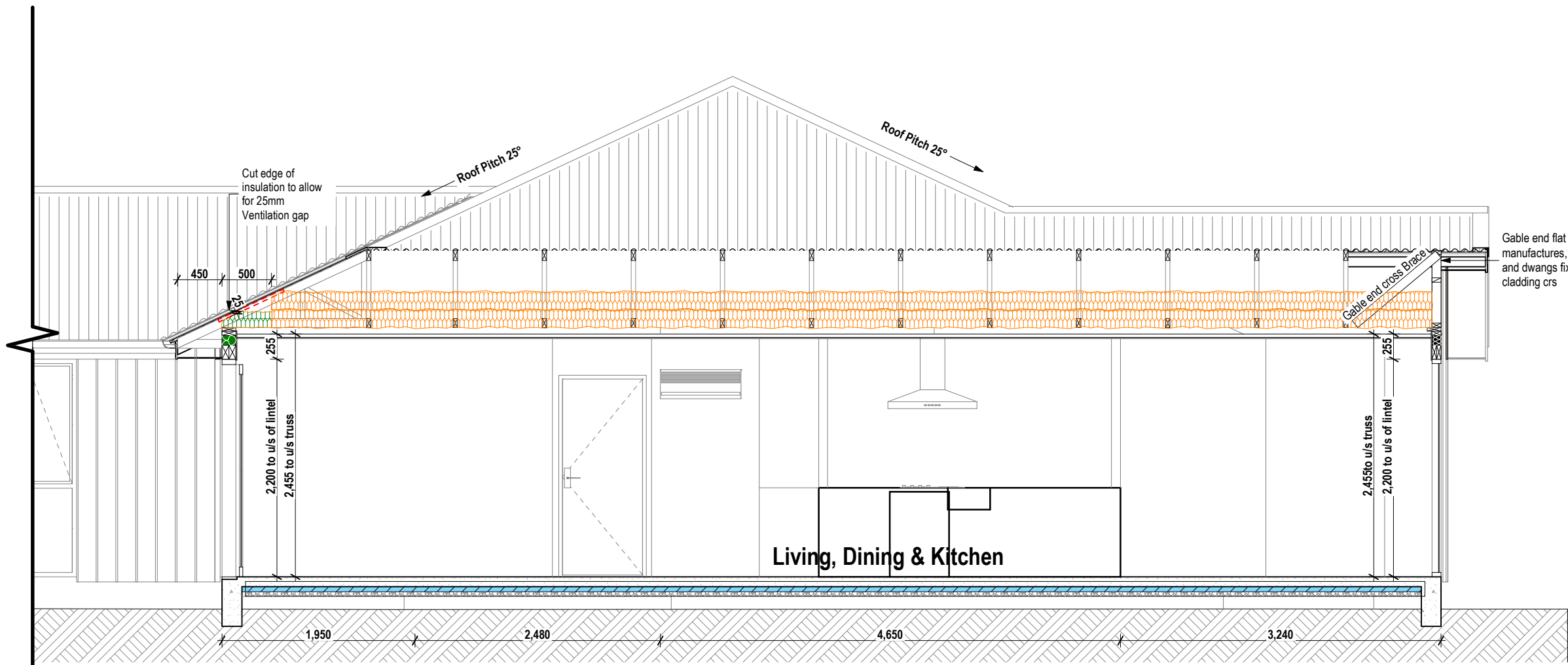
L.B.W = Load Bearing Wall

Overall DIM

Framing DIM

Opening DIM

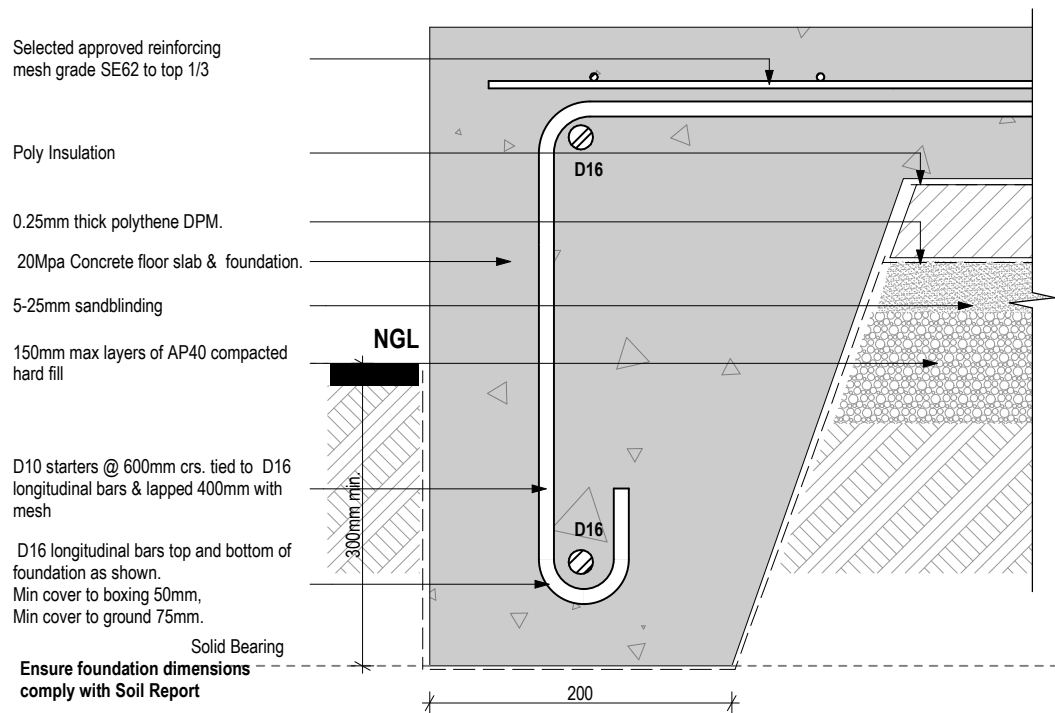
L.B.W. = Load Bearing Wall



Section D

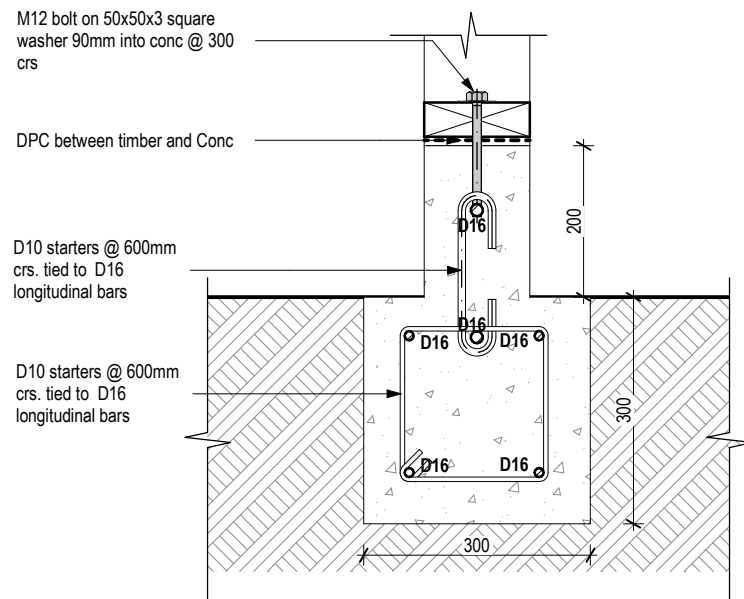
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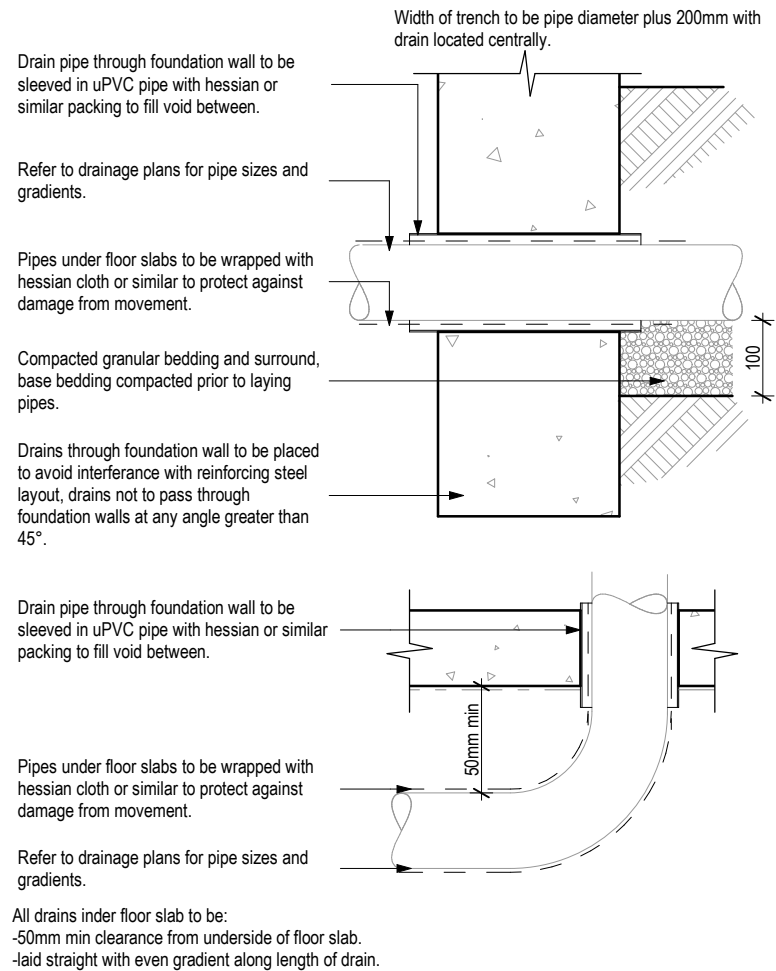
Foundation with 50mm Poly underslab Detail

Scale 1:5



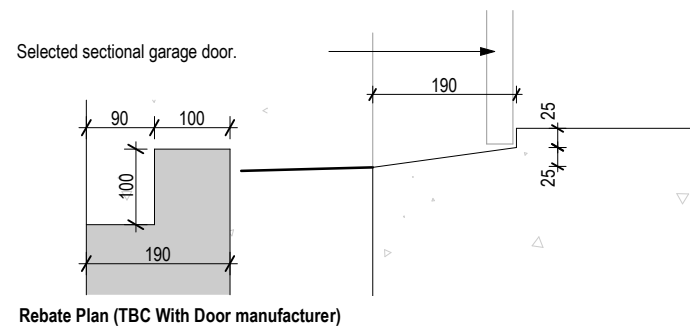
Post Strip Footing Detail

Scale 1:10



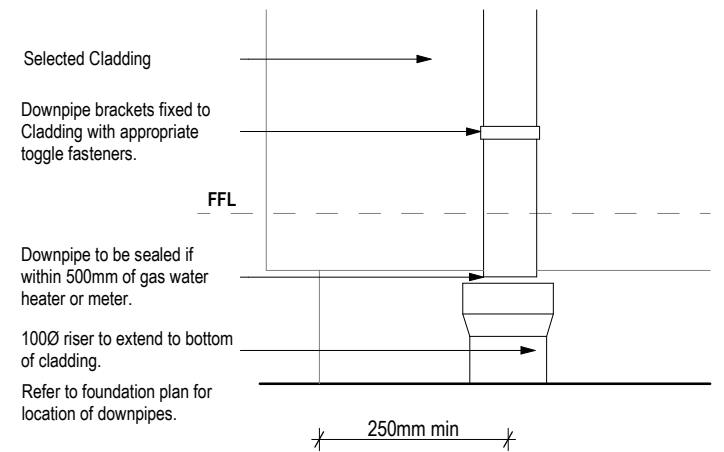
Pipe penetration Detail

Scale 1:10



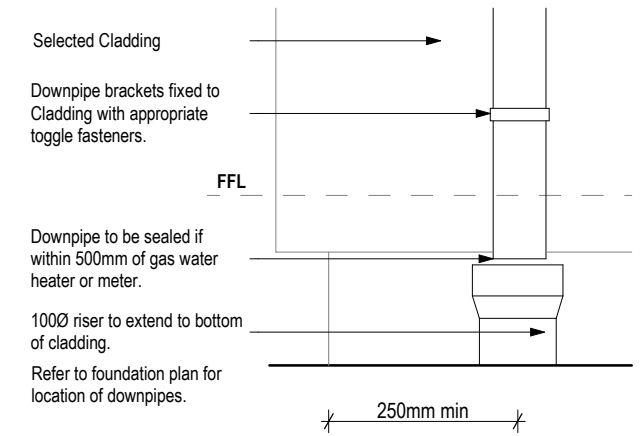
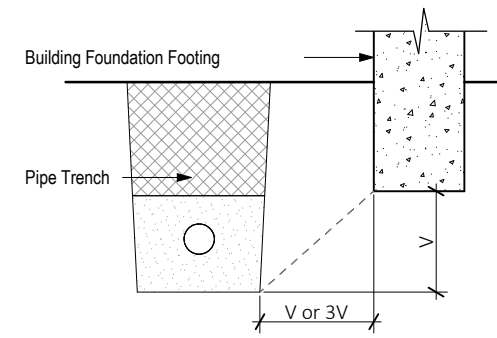
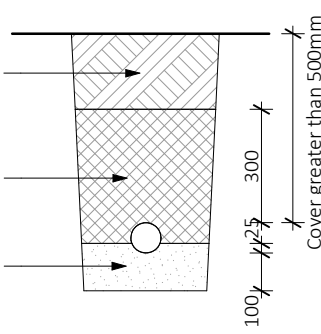
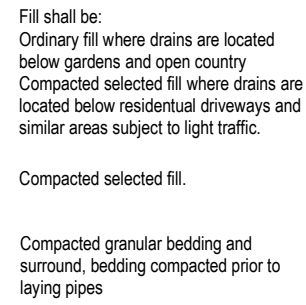
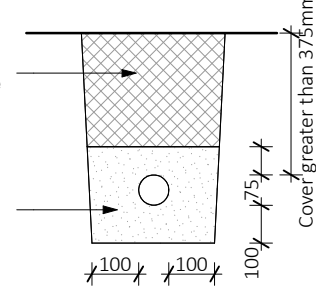
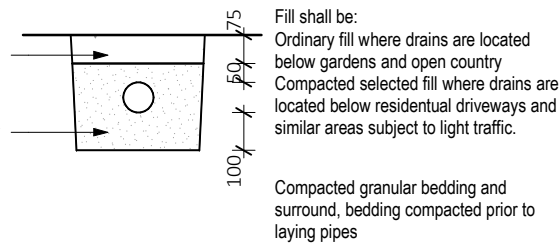
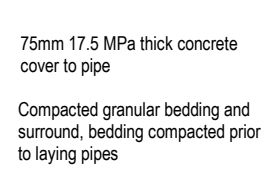
190 Garage Rebate Detail

Scale 1:10



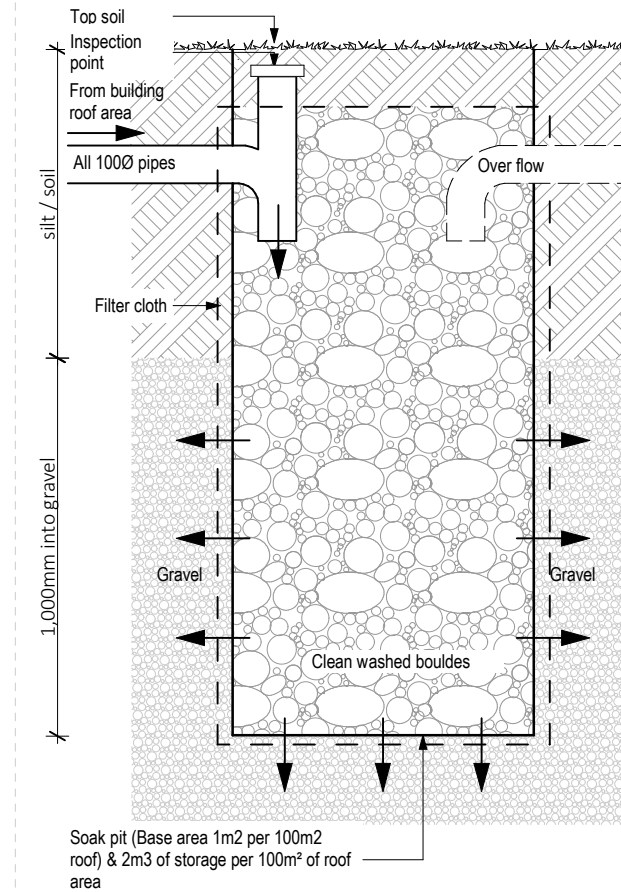
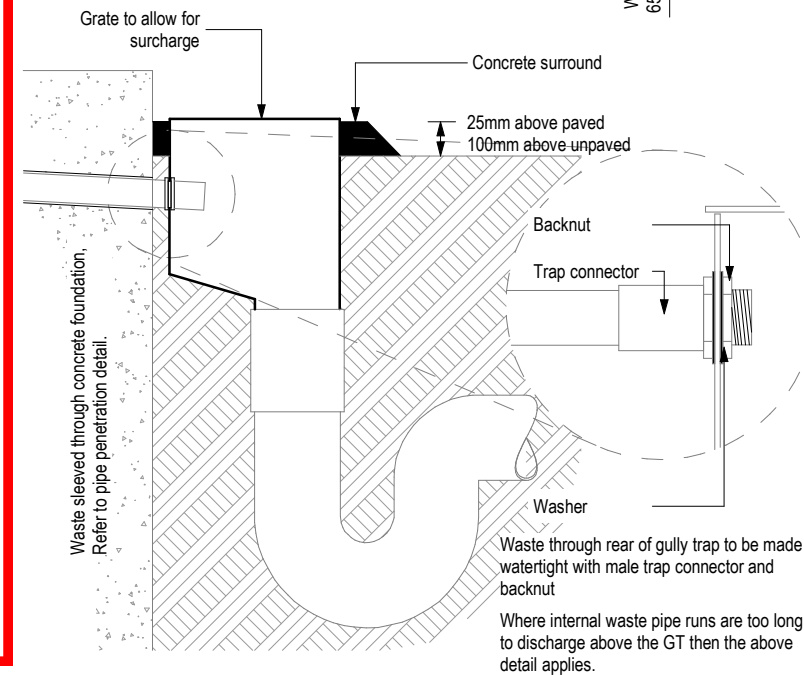
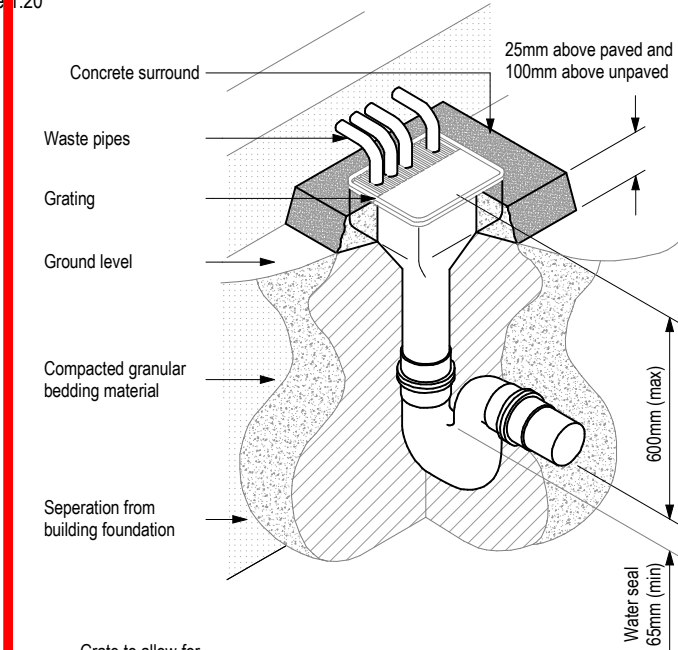
Downpipe Offset Detail

Scale 1:10



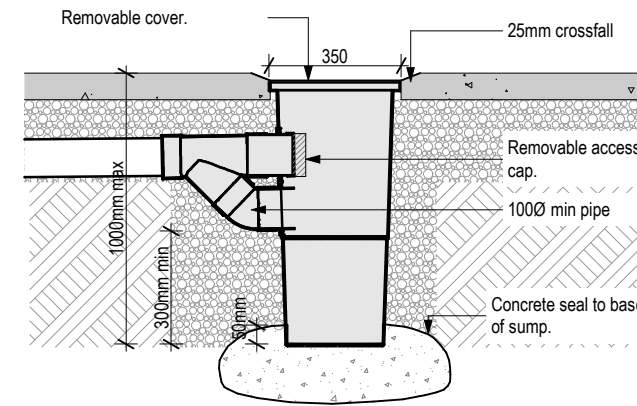
Bedding & Back Fill

Scale 1:20



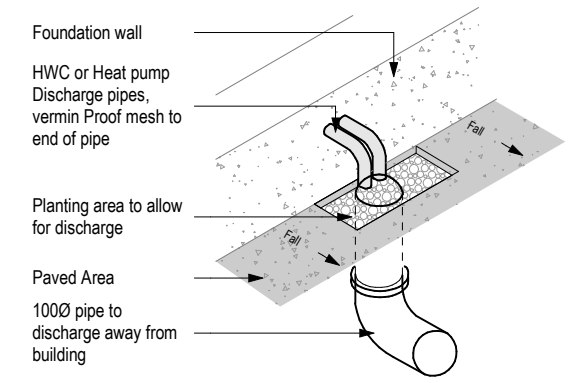
Soak Pit Detail

Scale 1:20



Type 1 Sump Detail

Scale 1:20

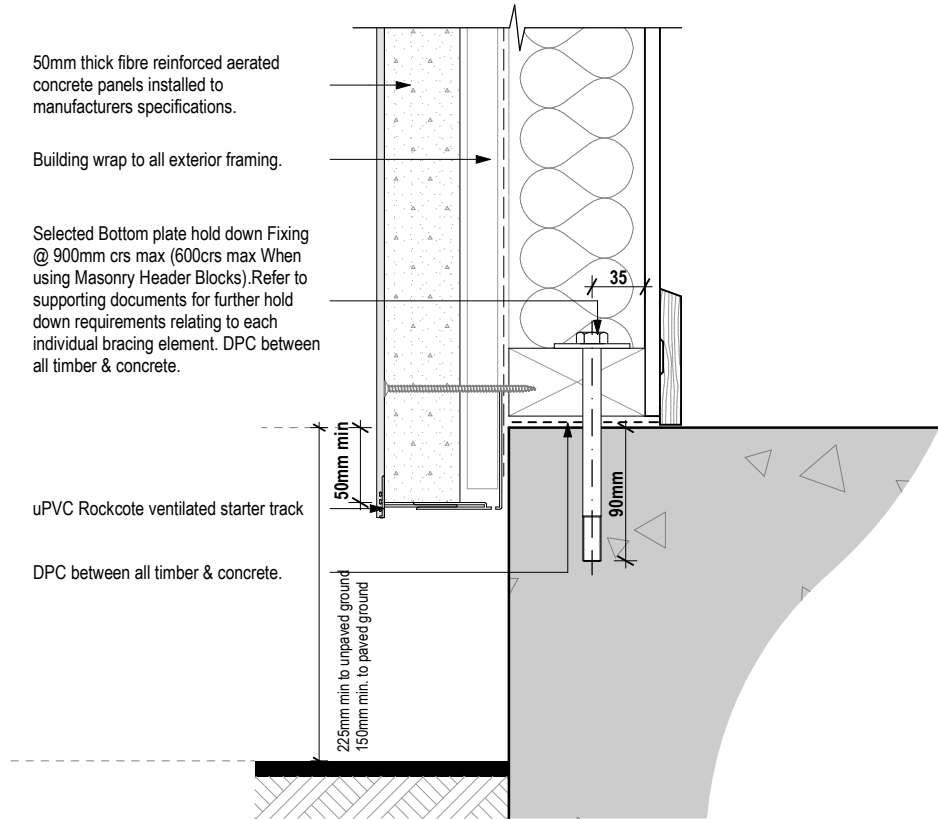


HWC Discharge Pipe to paved area

Scale 1:50

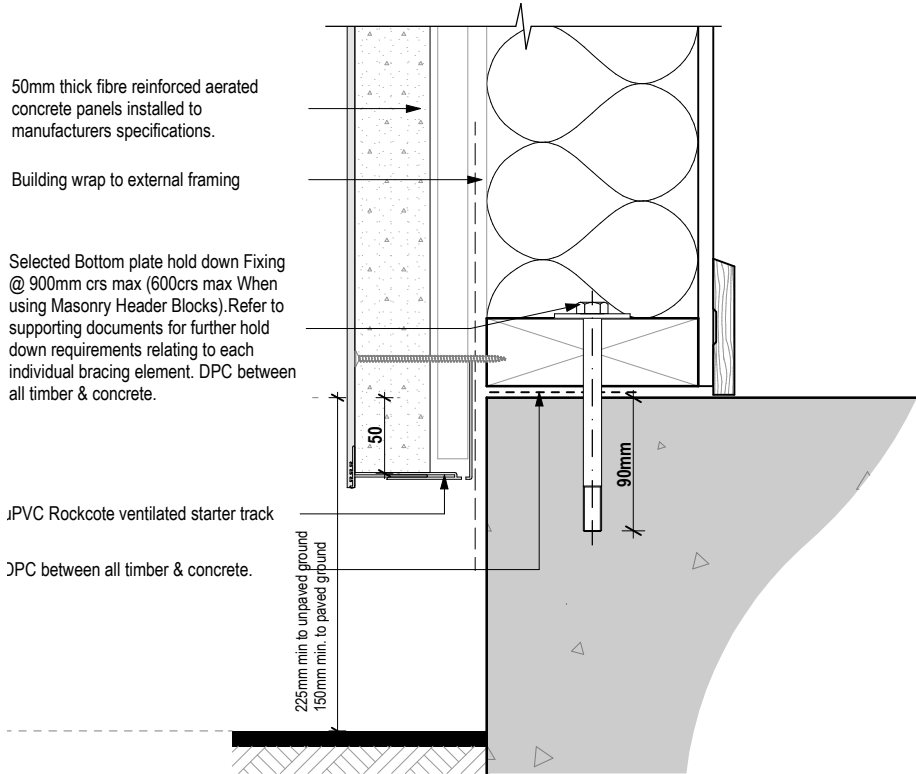
Typical Gully Trap

Scale 1:50



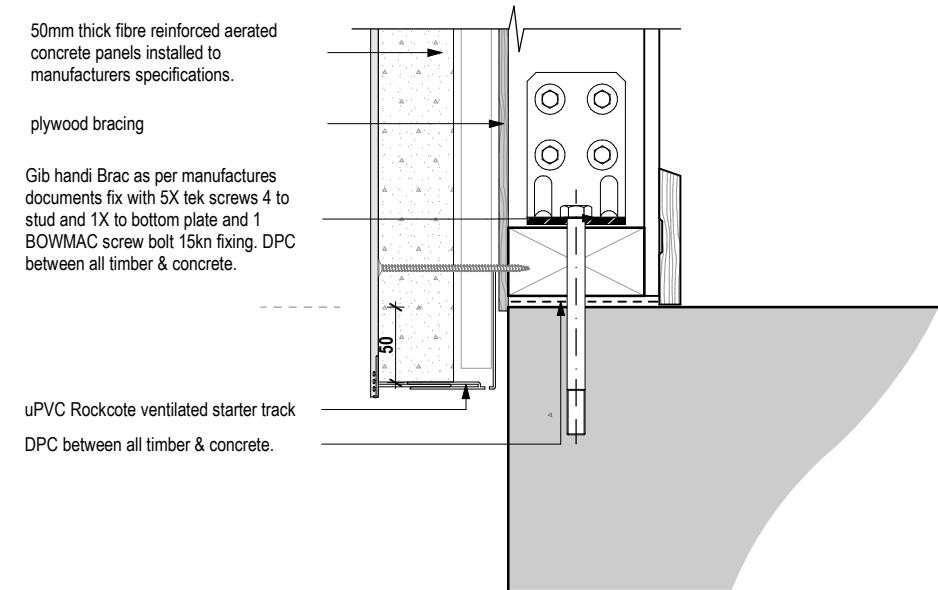
90mm Frame Integra Base Cladding Details

Scale 1:5



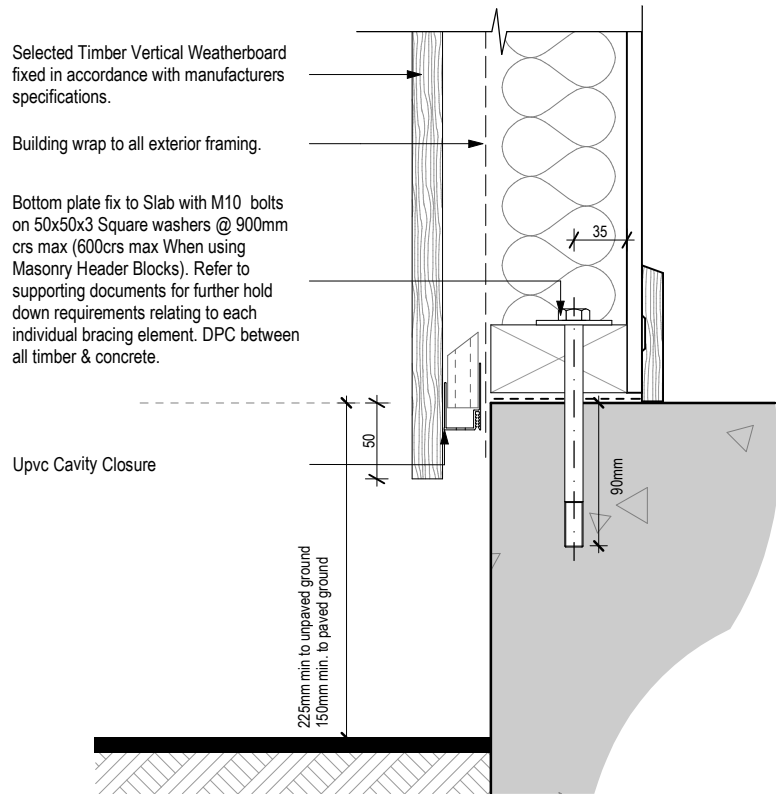
140mm Frame Integra Base Cladding Details

Scale 1:5



Garage Door with ply Bracing Details

Scale 1:5



Vertical Shiplap Base Details

Scale 1:5

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H3.1 20mm Pine reveal
Note: reveal fixed to slab with 8gx75mm screws driven into rawl plugs or similar. Pre fill holes with sealant prior to installation of fixings @ 450mm crs. and 150mm from each corner

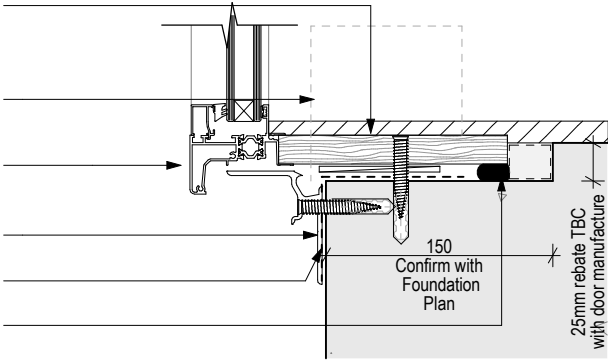
Turn up flashing tape 100mm min. at trimmer studs

Selected colour powder-coated Thermally Broken aluminium joinery with all glazing to comply with NZS 4223.

WANZ support bar as per window manufactures specifications.

Flashing tape

Sealant and fill gap with floor leveling compound



90mm Frame Rebated Door Sill

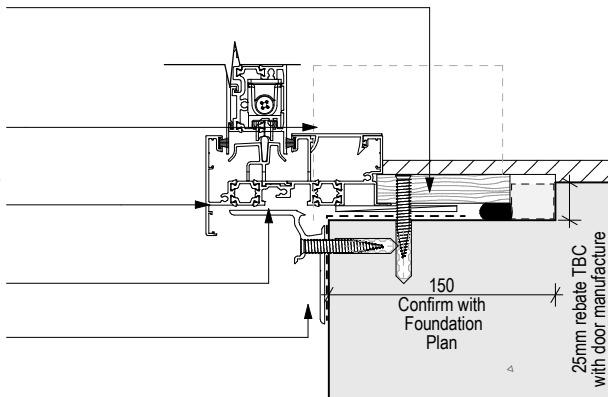
H3.1 20mm Pine reveal
Note: reveal fixed to slab with 8gx75mm screws driven into rawl plugs or similar. Pre fill holes with sealant prior to installation of fixings @ 450mm crs. and 150mm from each corner

Turn up flashing tape 100mm min. at trimmer studs

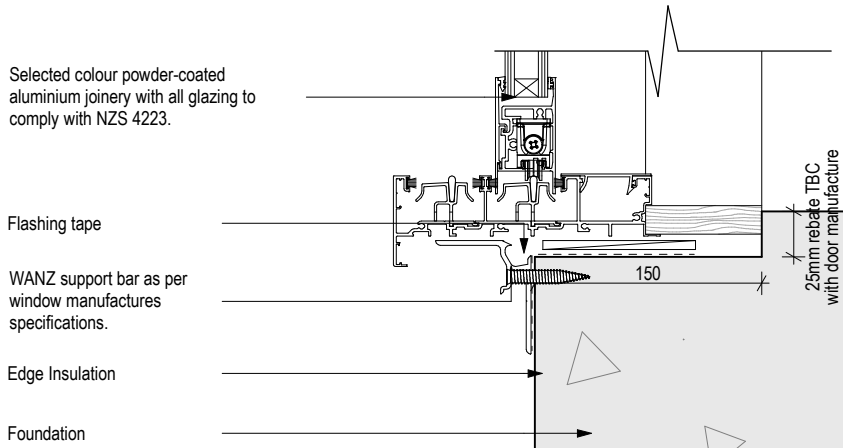
Selected colour powder-coated Thermally Broken aluminium joinery with all glazing to comply with NZS 4223.

WANZ support bar as per window manufactures specifications.

Flashing tape



Rebated Door Sill Details (Single Sliding Door)



Rebated Door Sill Details (Double Sliding Door)

Subject to council approval, All measurements to be confirmed on site by the contractor prior to the commencement of work. No part of this work may be reproduced or copied in any form or by any means without the written permission of Ilaisa Tabukovu

NOTE:
(1) Max. roof pitch for flashing 60°, minimum pitch 3° if base of flange covers one or more complete troughs. 0-35mmØ Pipe
(2) For pipes above 35mmØ, Roof pitch 45° Max.

Pipe

Malleable flange screw or rivet fixed, and sealed to roofing profile. Fit neoprene washers to all screw fixings.

EPDM flexible cone sleeve

Flashing fixed diagonally to roofing profile to minimise holding of discharge water.

Roof Penetration Detail

Scale 1:10

Roofing manufacturers 0.55mm BMT rolled colour coated steel ridge flashing c/w malleable edge folded over profiles.

Selected Longrun coloursteel roofing

Building wrap overlapped at ridge.

70x45mm H1.2 treated SG8 purlins at 900mm crs max fixed to trusses with 1/10g x 8mm self-drilling screw.

Ridge Capping

Scale 1:10

For other ridge to hip flashings, refer to New Zealand Metal Roof and Wall Cladding code of practice.

Ridge flashing

Soff edge dressed over corrugate

Build under-flashing to ridge and hip flashings.

Preformed 3-way roll cap or site made flashing

Hip flashing

Soff edge dressed over corrugate

Hip Junction

Scale 1:10

Selected Longrun coloursteel roofing

Self-supporting roof underlay

190mm H1.2 Solid timber support for valley gutter

Roof wrap continuous under gutter if copper based treatments are used

Valley rafter

Valley Gutter

Scale 1:10

Selected Longrun coloursteel roofing over Self-supporting roof underlay H1.2
70x45mm purlins @ 600mm crs. top and bottom, 900crs max. to body. Fix to trusses with 1/10g x 80mm self-drilling screw up to VH wind zone.

Truss/Rafter to top plate fixing shall be 2/90mm x 3.15mm skew nails plus 2/ wiredogs. (Alt. fixing 4.7Kn) - Refer to Truss design for additional fixings.

Selected Coloursteel fascia and spouting. Add Snow Straps as per NZMRCOP and E2/AS1.

4.5mm thick soffit lining fixed to eave framing. MS Sealant between soffit lining & AAC Panel.

50mm thick fibre reinforced aerated concrete panels installed to manufacturers specifications

Building wrap to external framing

Ceiling batts. Trim to maintain 25mm air gap between insulation & roof underlay.

Integra Eaves Details

Scale 1:10

Selected Longrun coloursteel roofing over Self-supporting roof underlay H1.2
70x45mm purlins @ 600mm crs. top and bottom, 900crs max. to body. Fix to trusses with 1/10g x 80mm self-drilling screw up to VH wind zone.

Truss/Rafter to top plate fixing shall be 2/90mm x 3.15mm skew nails plus 2/ wiredogs. (Alt. fixing 4.7Kn) - Refer to Truss design for additional fixings.

Add Snow Straps as per NZMRCOP and E2/AS1.

Selected Coloursteel fascia and spouting.

4.5mm thick soffit lining. Sealant Between Soffit & Cladding

H3.2 Scotia bead (optional).

James Hardie Vertical Linea Oblique fixed in accordance with manufacturers specifications.

Building wrap to all exterior framing.
Ceiling batts. Trim to maintain 25mm air gap between insulation & roof underlay.

Vertical Shiplap Eaves Details

Scale 1:10

0.40mm BMT selected corrugated coloursteel roofing over self-supporting roof underlay

H1.2 70x45mm purlins Fix to trusses with 1/10g x 80mm self-drilling screw up to VH wind zone.

Selected coloursteel barge flashing with kick out

Selected coloursteel barge

H1.2 90x45mm outriggers @ 900mm crs max

4.5mm thick James Hardie soffit lining MS Sealant between soffit lining & AAC Panel.

Wire-dog fixing outrigger to top chord of gable end framing

Gable end framing

Building wrap to all exterior framing.

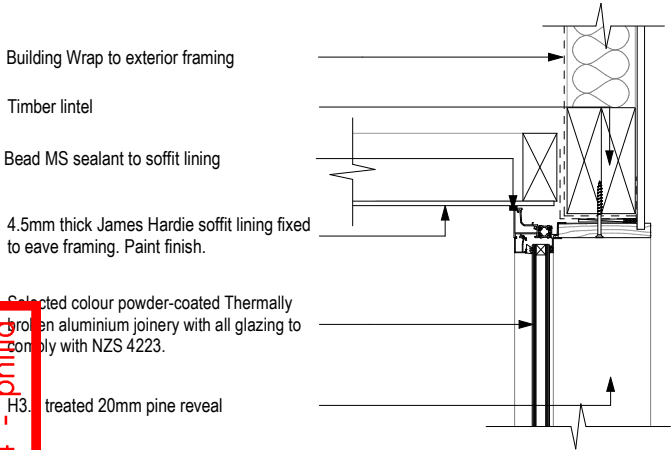
50mm thick AAC panel on 20mm cavity, installed to manufacturers specifications.

Barge Details

Scale 1:10

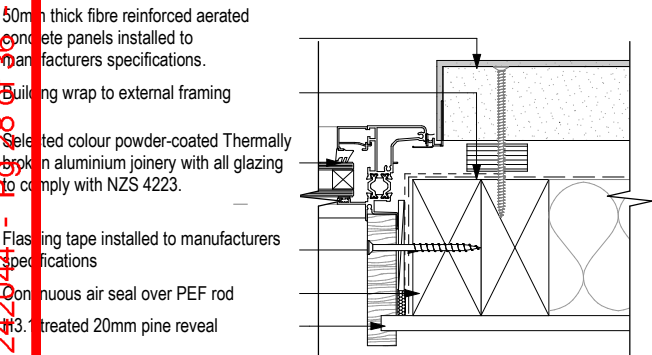
Subject to council approval, All measurements to be confirmed on site by the contractor prior to the commencement of work. No part of this work may be reproduced or copied in any form or by any means without the written permission of Ilaisa Tabukovu

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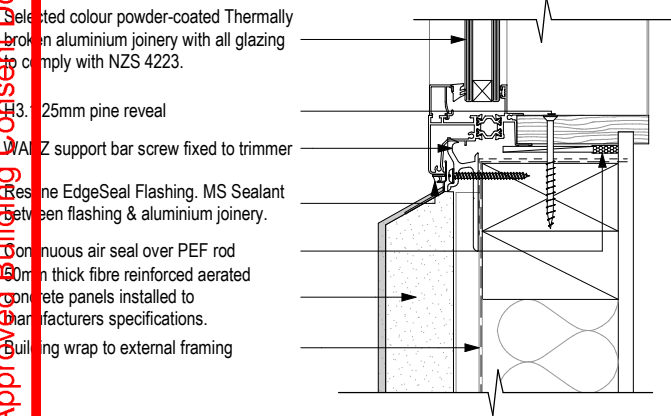
Typical joinery To Soffit Details

Scale 1:10



140mm Frame Joinery Sill Details

Scale 1:5



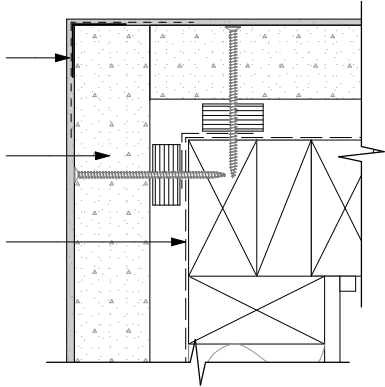
90mm Frame Joinery Sill Details

Scale 1:5

Premeshed Corner Flashing.

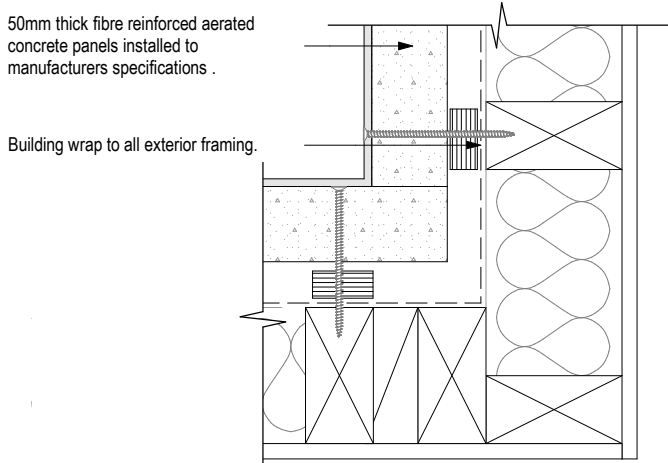
50mm thick fibre reinforced aerated concrete panels installed to manufacturers specifications.

Building Wrap to external framing



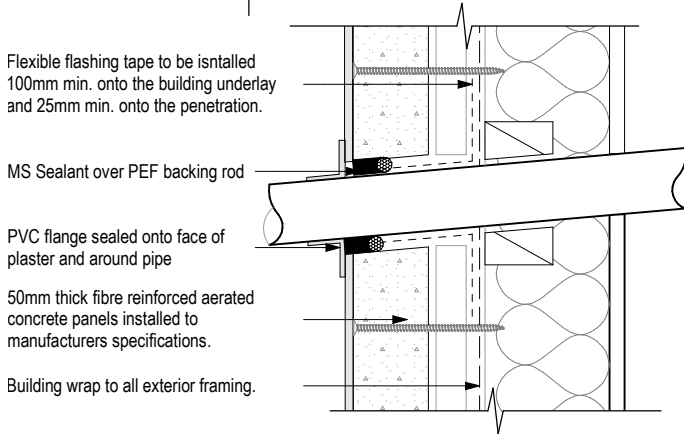
Integra Exterior Cladding Details

Scale 1:5



Integra Interior Cladding Details

Scale 1:5

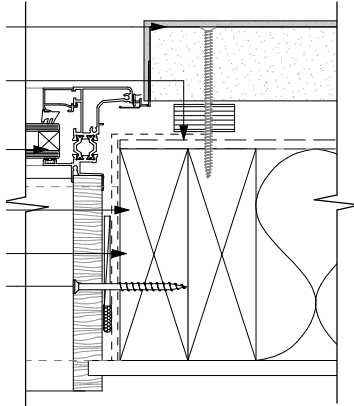


Pipe penetration Details

Scale 1:5

50mm thick fibre reinforced aerated concrete panels installed to manufacturers specifications.
Building wrap to all exterior framing.

Selected colour powder-coated Thermally broken aluminium joinery with all glazing to comply with NZS 4223.
Flashing tape installed to manufacturers specifications
Continuous air seal over PEF rod
H3.1 treated 20mm pine reveal



140mm Frame Joinery Jamb Details

Scale 1:5

Timber Lintel

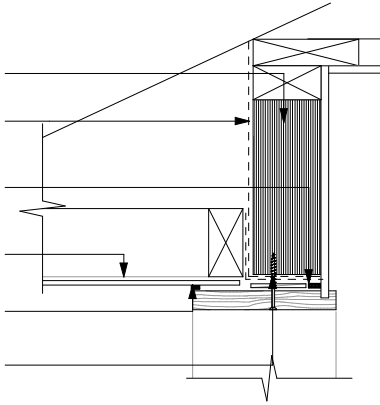
Building Wrap to exterior framing

H3.1 packing @ fixing crs with Continuous air seal over PEF rod

4.5mm thick James Hardie soffit lining fixed to eave framing. Paint finish.

Bead MS sealant to soffit lining

Flashing tape installed to manufacturers specifications



Garage door Head to soffit Details

Scale 1:10

Building wrap to all exterior framing.

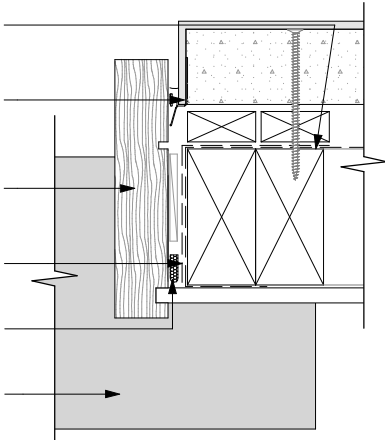
Resene EdgeSeal Flashing. MS Sealant between flashing & aluminium joinery.

H3.2 180 x 35mm Pre-primed garage door reveal

Flashing tape installed to manufacturers specifications

Continuous air seal on PEF backing rod

25mm deep rebate in slab to form step down for garage door



Garage Door Jamb Details

Scale 1:5

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Selected Timber Vertical Weatherboard fixed in accordance with manufacturers specifications.

Building to external framing

Flashing tape over colorsteel flashing

Upvc Cavity Closure

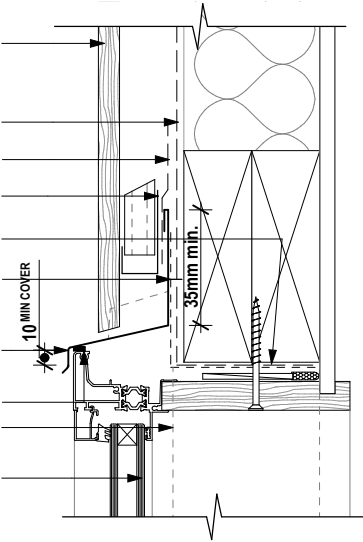
Continuous air seal over PEF rod

Flashing tape installed to manufacturers specifications

Colour steel Head flashing 15° fall min. Ends of head flashing to be turned up 20mm. Colour to match selected joinery.

Sealant Required for VH & EH windzone H3.1 treated 20mm pine reveal

Selected colour powder-coated Thermally broken aluminium joinery with all glazing to comply with NZS 4223.



Vertical Shiplap Typical Head Details

Scale 1:5

DPC behind cladding to joinery

Selected Timber Vertical Weatherboard fixed Vertical in accordance with manufacturers specifications.

J mould flashing

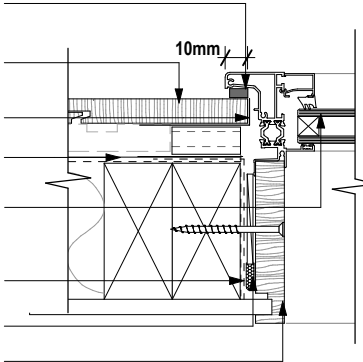
Building wrap to external framing

Selected colour powder-coated Thermally broken aluminium joinery with all glazing to comply with NZS 4223.

Flashing tape installed to manufacturers specifications

Continuous air seal over PEF rod

H3.1 treated 20mm pine reveal



Vertical Shiplap Typical Jamb Details

Scale 1:5

Selected colour powder-coated Thermally broken aluminium joinery with all glazing to comply with NZS 4223.

Turn up flashing tape 100mm min. at trimmer studs

H3.1 25mm pine reveal

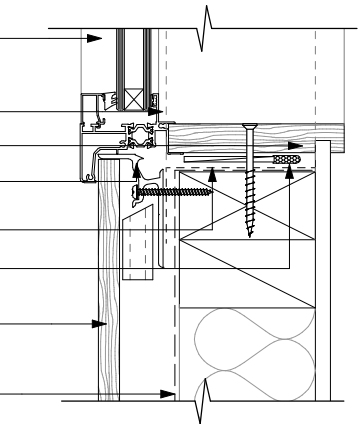
WANZ support bar screw fixed to trimmer

Flashing tape installed to manufacturers specifications

Continuous air seal over PEF rod

Selected Timber Vertical Weatherboard in accordance with manufacturers specifications.

Building Wrap to external framing



Vertical Shiplap Typical Sill Details

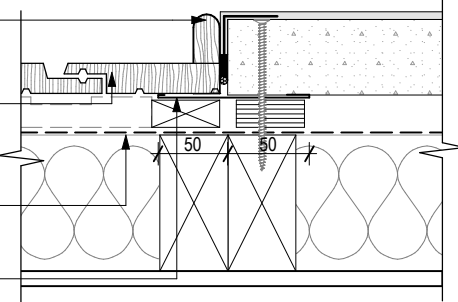
Scale 1:5

Suitable size pre primed scribe sealed to cladding with flexible sealant over PEF ROD

Selected shiplap timber weatherboards fixed in accordance with manufacturers specifications

Building Wrap to External framing

Galv. metal or PVC back flashing with hems to both ends. with 50mm min cover



Integra & Hermpac Cladding Junction Details

Scale 1:5

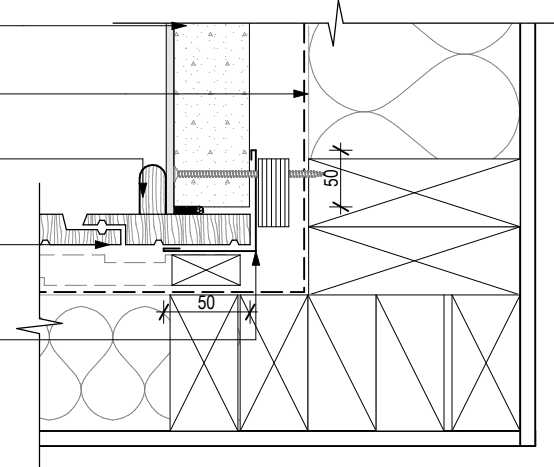
50mm thick fibre reinforced aerated concrete panels installed to manufacturers specifications.

Building Wrap to External framing

Suitable size pre primed scribe sealed to cladding with flexible sealant over PEF ROD

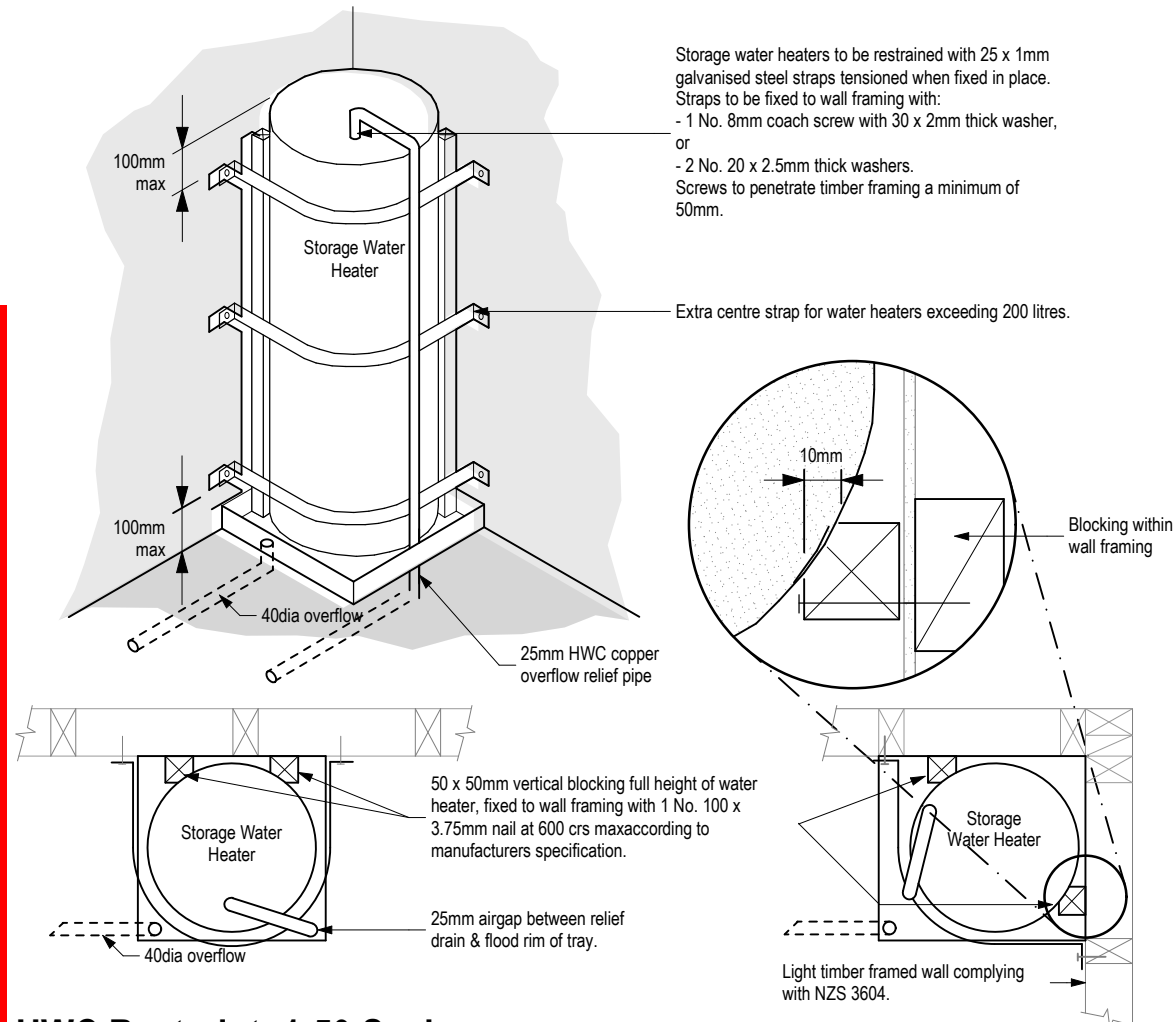
Selected shiplap timber weatherboards fixed in accordance with manufacturers specifications

Galv. metal or PVC back flashing with hems to both ends. with 50mm min cover

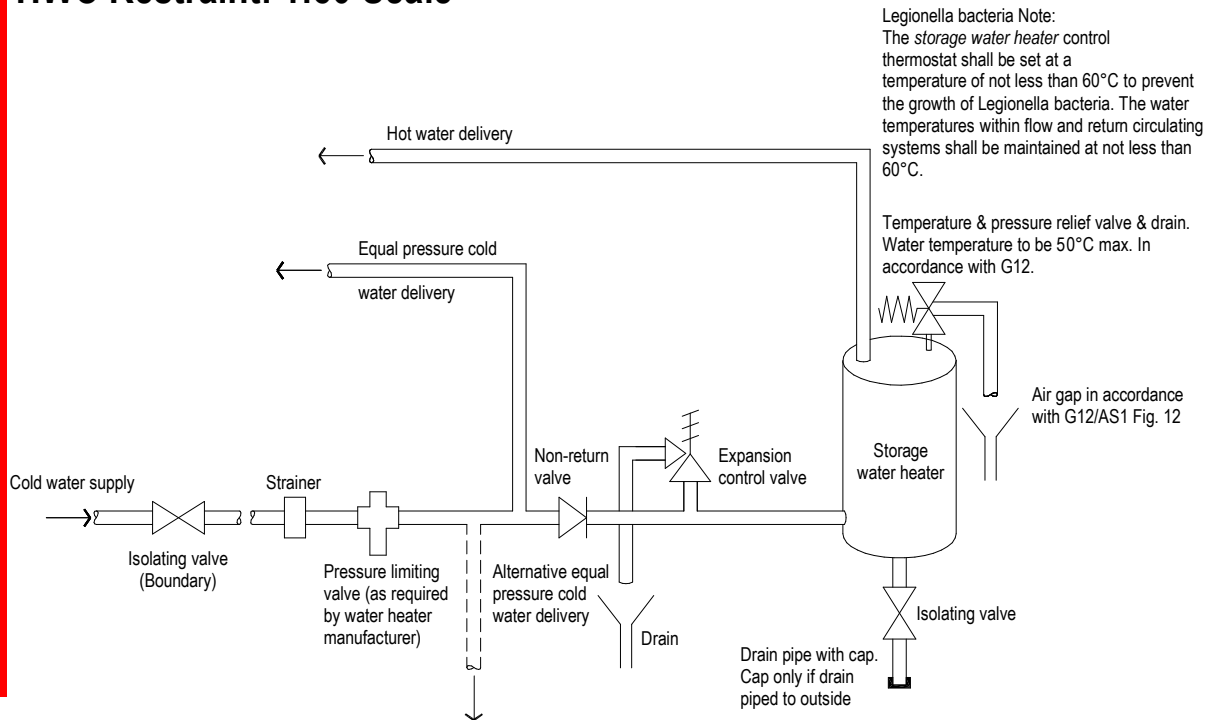


Integra & Hermpac Cladding Junction Details

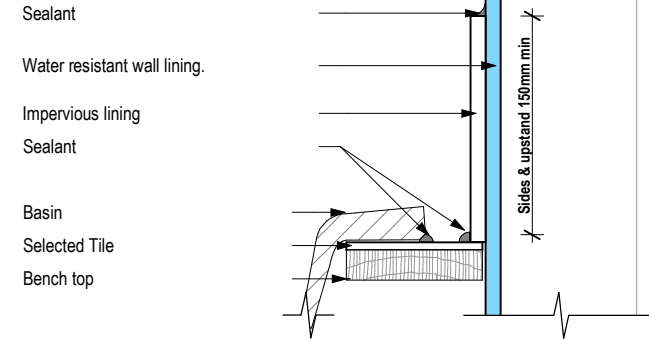
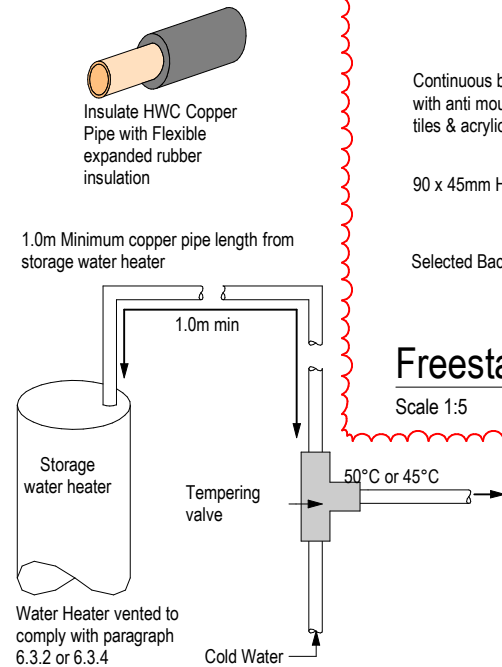
Scale 1:5



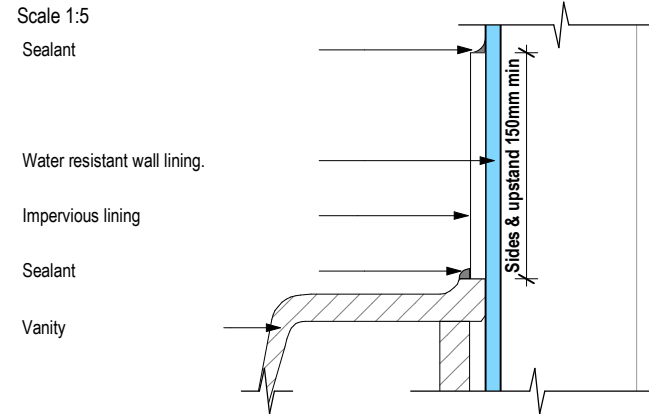
HWC Restraint: 1:50 Scale



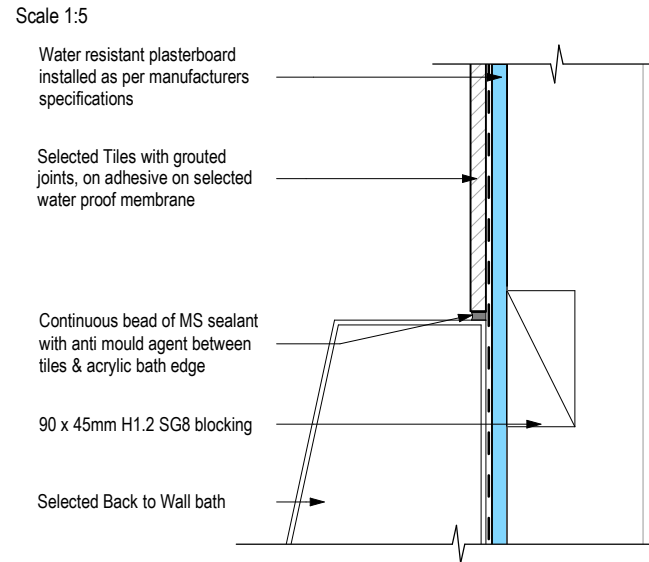
Plumbing Schematic Diagram: AS Per NZBC G12/Fig 8



Basin to Wall Details



Vanity to Wall Details



Freestanding Bath to Wall Details



Water resistant wall lining.

Sealant to edge & behind liner

Shower acrylic wall lining

Acrylic Shower Lining Junction

Scale 1:5

Water resistant wall lining.

Shower acrylic wall lining

Sealant to edge & behind liner

Tap Body. Sealant all round.

Note: Where impact noise from pipes is an issue, fix all pipes to resilient brackets.

Pipe Penetration Acrylic Shower Details

Scale 1:5

Note: Internal opening shall be 5mm wider than shower tray

Water resistant wall lining.

Shower acrylic wall lining

Sealant

Moulded plastic shower tray

Acrylic Shower Details

Scale 1:5

Water resistant wall lining.

Lap Vinyl up

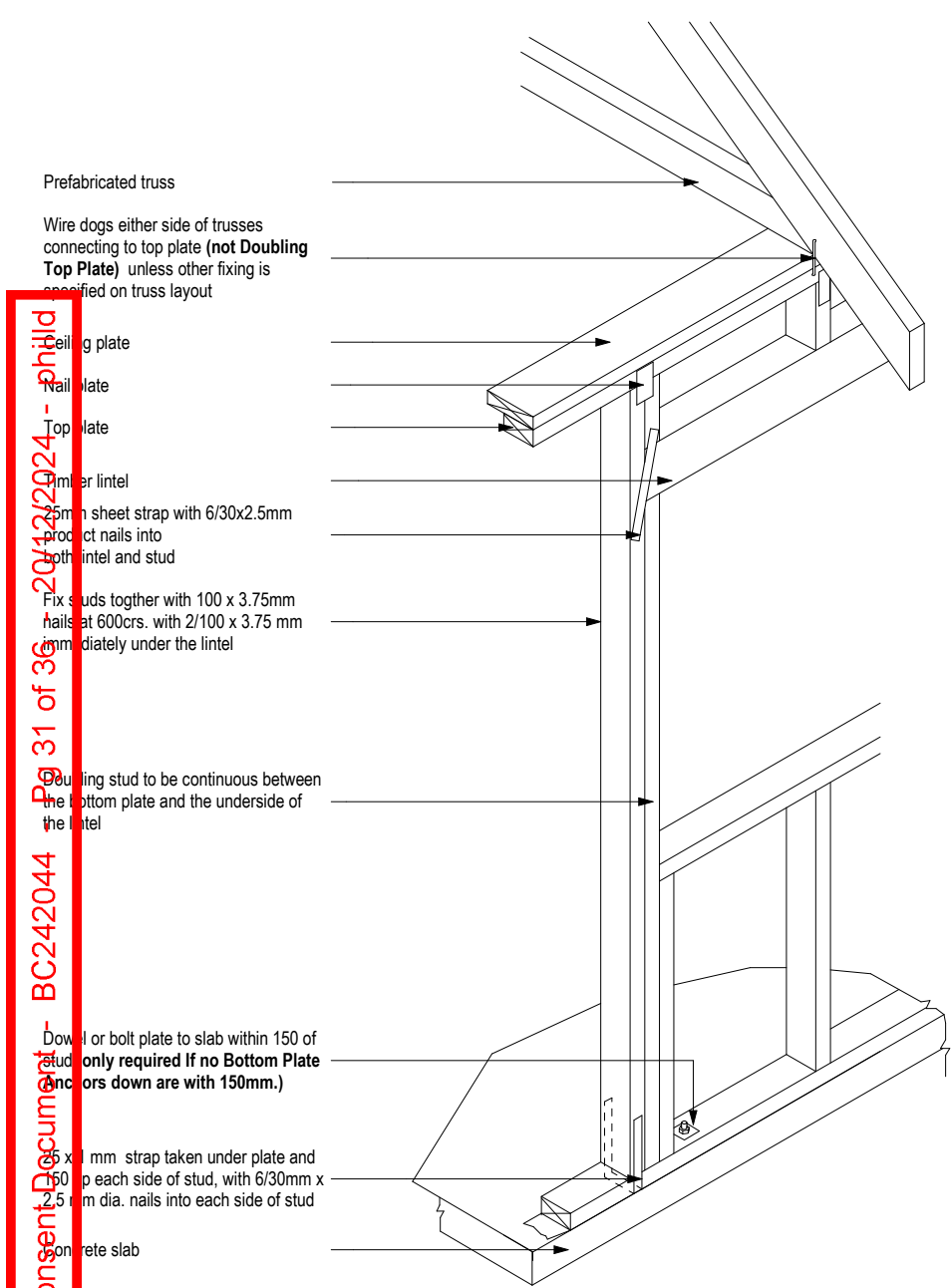
Water proof sealant.

Selected vinyl flooring installed as per manufacturers specifications.

Vinyl Floor To Wall Details

Scale 1:5

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Typical Lintel Fixing - To Conc Slab
Scale 1:20

LUMBERLOK®

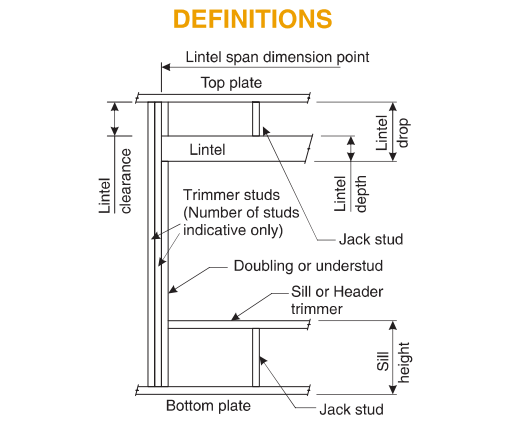
LINTEL FIXING SCHEDULE

ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12

NZS 3604:2011

NOTE:

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



Roof Tributary Area	Lintel Supporting Girder Trusses					
	Light Roof			Heavy Roof		
	Wind Zone			Wind Zone		
	L, M, H	VH	EH	L, M, H	VH	EH
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

Lintel Span (m)	Loaded Dimension (m) (See Fig. 1.3 NZS 3604:2011)	Light Roof Wind Zone					Heavy Roof Wind Zone				
		L	M	H	VH	EH	L	M	H	VH	EH
1.0	2.0	E	E	E	F	F	E	E	E	F	F
	3.0	E	E	F	F	F	E	E	F	F	F
	4.0	E	F	F	F	G	E	E	F	F	G
	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	F	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	F	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	F	F	G	G	H	E	E	F	G	G
	6.0	F	F	G	H	H	E	E	F	G	H
2.0	2.0	E	F	F	F	G	E	E	F	F	F
	3.0	E	F	F	G	G	E	E	F	F	G
	4.0	F	F	G	G	H	E	E	F	G	G
	5.0	F	F	G	H	H	E	E	F	G	H
	6.0	F	G	G	H	H	E	E	F	G	H
2.4	2.0	E	F	F	G	G	E	E	F	F	F
	3.0	F	F	G	G	H	E	E	F	G	G
	4.0	F	F	G	H	H	E	E	F	G	H
	5.0	F	G	G	H	H	E	E	F	G	H
	6.0	F	G	H	H	-	E	F	G	H	H
3.0	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	H	H	E	E	F	G	H
	4.0	F	G	G	H	H	E	E	F	G	H
	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	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	F	G	H	-	-	E	F	G	H	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.2	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	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
	3.4	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	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
	4.0	F	G	H	-	-	E	F	H	-	-
	5.0	G	H	-	-	-	E	F	H	-	-
5.1	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.5	F	G	H	-	-	E	F	G	H	-
	4.0	G	G	H	-	-	E	F	H	-	-
	5.0	G	H	-	-	-	E	F	H	-	-
5.4	2.0	F	F	G	H	H	E	E	F	G	H
	2.8	F	G	H	H	-	E	F	G	H	H
	3.0	F	G	H	-	-	E	F	G	H	-
	4.0	G	H	H	-	-	E	F	H	-	-
	5.0	G	H	-	-	-	E	F	H	-	-
6.0	2.0	G	H	-	-	-	E	G	H	-	-
	6.0	G	H	-	-	-	E	G	H	-	-

LINTEL FIXING OPTIONS

TYPE E 1.4kN

TYPE F 4.0kN

TYPE G 7.5kN

TYPE H 13.5kN

Subject to council approval, All measurements to be confirmed on site by the contractor prior to the commencement of work. No part of this work may be reproduced or copied in any form or by any means without the written permission of Ilaisa Tabukovu

Site Wind Zone: High

(Confirm flashing with Table below)

Amend 5
Aug 2011

1 August 2011

DEPARTMENT OF BUILDING AND HOUSING

Table 7:	Metal flashings – general dimensions Paragraphs 4.6, 4.6.1.1, 4.6.1.2, 4.6.1.3, 4.6.1.4, 4.6.1.5, 4.6.1.6, 4.6.1.7, 5.1, 6.4, 6.5, 7.4.4, .9.1.3, 9.1.10.2, 9.1.10.4 and 9.4.5.3					
Type	Description	All (1)	Situation 1 minimum mm	Situation 2 minimum mm	Situation 3 (3a) minimum mm	Figure reference (as example)
Aprons: general	Transverse flashing over roofing		130 (4)	200 (4)	200 mm	Figure 7 and Figure 44 (X values)
	Parallel flashing over roofing		Two crests , finish in next trough – refer 4.6.1.1b)			Figures 47, 48 (Y values)
Ridges/ rips	Transverse flashing over roofing		Refer Aprons: general			Figures 43, 45b, 46
Changes in roof pitch	Upper lap under roofing	250 mm min.			Not permitted under E2/AS1	Figure 44
	Transverse flashing over roofing		Refer Aprons: general			
Barges	Overlap to barge board		50 (8)	70 (8)	90 mm	Figure 47 (Z values)
Cappings	Overlaps to cladding		50 (8)	70 (8)	90 mm	Figure 10 (Z values)
	Slope to top: parapet and balustrade – metal capping	5° min.				Figures 10, 11, 12, 130
	Slope to balustrade – flush-finished EIFS and fibre cement (5)	10° min.				Figures 117, 129, 130
Roof or Deck to Wall	Overlaps to roofing		Refer Aprons: general			
See membranes below	Lap under cladding above	75 mm min.			90 mm	Figures 7, 26, 30, 35, 37, 44, 48, 50
	Clearance below cladding	35 mm min.				
	Total upstand	110 mm min.				

Amend 2
Jul 2005

Table 7: continued	Metal flashings – general dimensions Paragraphs 4.6, 4.6.1.1, 4.6.1.2, 4.6.1.3, 4.6.1.4, 4.6.1.5, 4.6.1.6, 4.6.1.7, 5.1, 6.4, 6.5, 7.4.4, .9.1.3, 9.1.10.2, 9.1.10.4 and 9.4.5.3					
Membrane roofs and decks	Lap under cladding above	115 min.				Figures 18, 62a, c, 64b
Type	Description	All (1)	Situation 1 minimum mm	Situation 2 minimum mm	Situation 3 (3a) minimum mm	Figure reference (as example)
Windows	Window flange clearance for direct fixed claddings and ply or fibre cement on cavities	5 mm				Eg. Figure 81
	Cover to window/ door jamb flange	10 mm (7) min.				Eg. Figure 81c
	Cover to window/ door sill flange	8 mm (7) min.				Eg. Figure 81c
Sills	Sill flashing slope (6)	Flat (6)				Eg. Figures 72a, 81b
Heads	Head flashing slope	15° min.				Eg. Figure 81a
	Lap under cladding above	35 mm min.			60 mm	Eg. Figure 81a
	Anti-capillary gap to cladding	5 mm				Eg. Figure 81a
	Total upstand	40 mm min.				
Corners	Corner flashings (1)	50 mm x 50 mm minimum			75 x 75 mm	Eg. Figure 79
Inter- storey junctions	Junction flashing : slope	15° min.				Figure 70
	Lap over cladding below (1)	35 mm min. (8)			60 mm	
	Lap under cladding above	35 mm min.			60 mm	
	Clearance under cladding	5 mm min.				
	Total upstand	40 mm min.				

- NOTES:
- (1) Unless otherwise dimensioned in details.
- (2) Situation 1: Low, Medium, Highwind zones , where roof pitch > 10° (X or Z values)
- (3) Situation 2: All roof pitches in Very High wind zones ,
Low, Medium and High wind zones where roof pitch < 10°. (X or Z values)
- (3a) Situation 3: For all roof pitches in Extra High wind zone .
- (4) Excluding any soft edge or turn-down to roofing.
- (5) For buildings other than housing, slope shall be as per F4/AS1.
- (6) For direct fixed window/doors, unless shown. Sill flashing must extend past the condensation channel. Ensure sill flashings are not installed with backwards slope.
- (7) Excluding drip edge .
- (8) Excluding drip edge .

Subject to council approval, All measurements to be confirmed on site by the contractor prior to the commencement of work. No part of this work may be reproduced or copied in any form or by any means without the written permission of Ilaisa Tabukovu

Site Wind Zone: High

(Confirm flashing with Table below)

Amend 5
Aug 2011

1 August 2011

DEPARTMENT OF BUILDING AND HOUSING

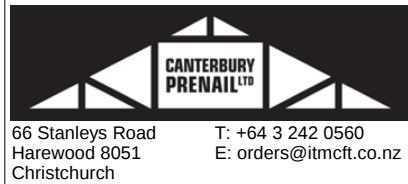
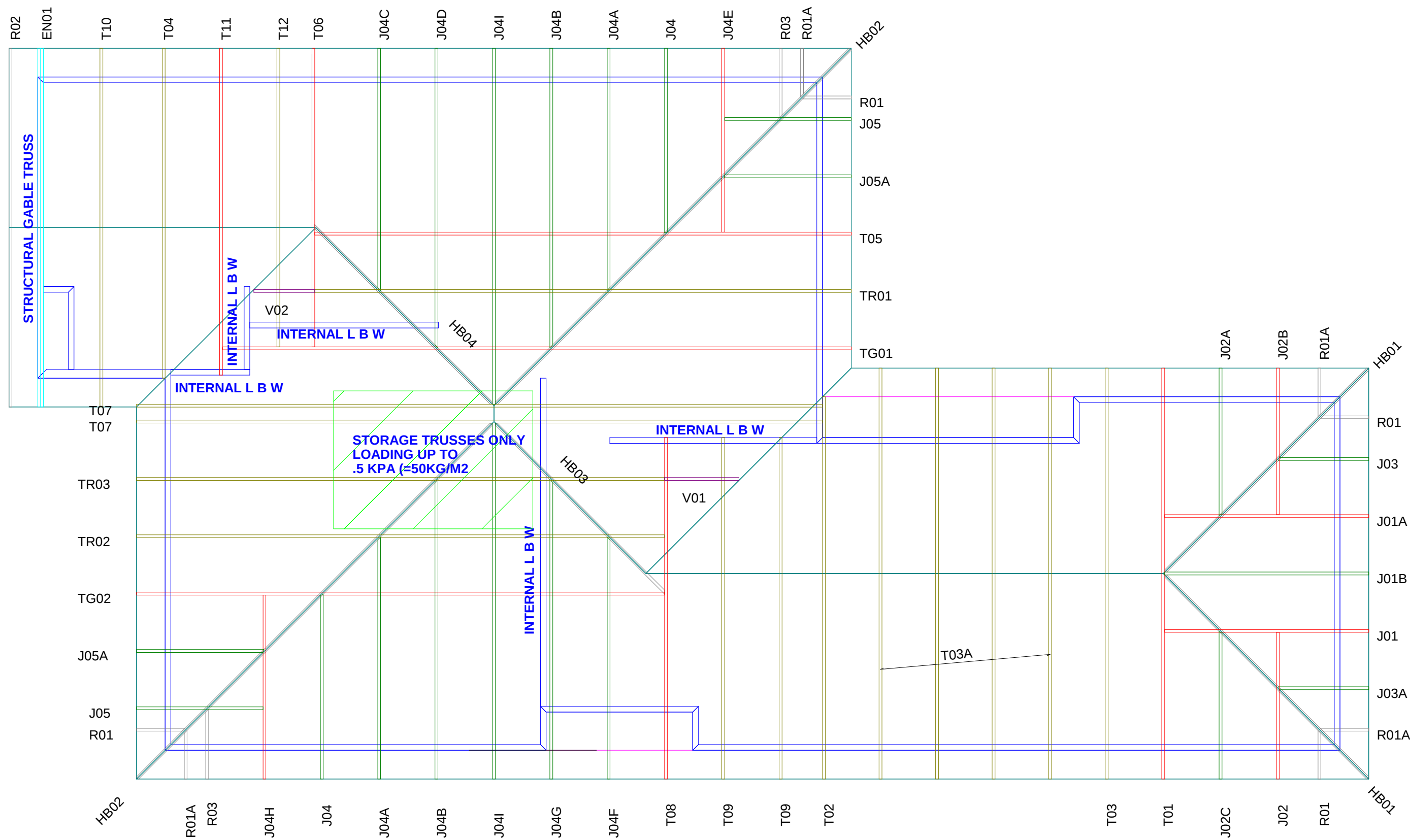
Table 7:	Metal flashings – general dimensions Paragraphs 4.6, 4.6.1.1, 4.6.1.2, 4.6.1.3, 4.6.1.4, 4.6.1.5, 4.6.1.6, 4.6.1.7, 5.1, 6.4, 6.5, 7.4.4, .9.1.3, 9.1.10.2, 9.1.10.4 and 9.4.5.3					
Type	Description	All (1)	Situation 1 minimum mm (2)	Situation 2 minimum mm (3)	Situation 3 (3a) minimum mm	Figure reference (as example)
Aprons: general	Transverse flashing over roofing		130 (4)	200 (4)	200 mm	Figure 7 and Figure 44 (X values)
	Parallel flashing over roofing		Two crests , finish in next trough – refer 4.6.1.1b)			Figures 47, 48 (Y values)
Ridges/ hips	Transverse flashing over roofing		Refer Aprons: general			Figures 43, 45b, 46
Changes in roof pitch	Upper lap under roofing	250 mm min.			Not permitted under E2/AS1	Figure 44
	Transverse flashing over roofing		Refer Aprons: general			
Barges	Overlap to barge board		50 (8)	70 (8)	90 mm	Figure 47 (Z values)
Cappings	Overlaps to cladding		50 (8)	70 (8)	90 mm	Figure 10 (Z values)
	Slope to top: parapet and balustrade – metal capping	5° min.				Figures 10, 11, 12, 130
	Slope to balustrade – flush-finished EIFS and fibre cement (5)	10° min.				Figures 117, 129, 130
Roof or Deck to Wall	Overlaps to roofing		Refer Aprons: general			
See membranes below	Lap under cladding above	75 mm min.			90 mm	Figures 7, 26, 30, 35, 37, 44, 48, 50
	Clearance below cladding	35 mm min.				
	Total upstand	110 mm min.				

Amend 2
Jul 2005

Table 7: continued	Metal flashings – general dimensions Paragraphs 4.6, 4.6.1.1, 4.6.1.2, 4.6.1.3, 4.6.1.4, 4.6.1.5, 4.6.1.6, 4.6.1.7, 5.1, 6.4, 6.5, 7.4.4, .9.1.3, 9.1.10.2, 9.1.10.4 and 9.4.5.3					
Membrane roofs and decks	Lap under cladding above	115 min.				Figures 18, 62a, c, 64b
Type	Description	All (1)	Situation 1 minimum mm (2)	Situation 2 minimum mm (3)	Situation 3 (3a) minimum mm	Figure reference (as example)
Windows	Window flange clearance for direct fixed claddings and ply or fibre cement on cavities	5 mm				Eg. Figure 81
	Cover to window/ door jamb flange	10 mm (7) min.				Eg. Figure 81c
	Cover to window/ door sill flange	8 mm (7) min.				Eg. Figure 81c
Sills	Sill flashing slope (6)	Flat (6)				Eg. Figures 72a, 81b
Heads	Head flashing slope	15° min.				Eg. Figure 81a
	Lap under cladding above	35 mm min.			60 mm	Eg. Figure 81a
	Anti-capillary gap to cladding	5 mm				Eg. Figure 81a
	Total upstand	40 mm min.				
Corners	Corner flashings (1)	50 mm x 50 mm minimum			75 x 75 mm	Eg. Figure 79
Inter- storey junctions	Junction flashing : slope	15° min.				Figure 70
	Lap over cladding below (1)	35 mm min. (8)			60 mm	
	Lap under cladding above	35 mm min.			60 mm	
	Clearance under cladding	5 mm min.				
	Total upstand	40 mm min.				

- NOTES:
- (1) Unless otherwise dimensioned in details.
- (2) Situation 1: Low, Medium, Highwind zones , where roof pitch > 10° (X or Z values)
- (3) Situation 2: All roof pitches in Very High wind zones ,
Low, Medium and High wind zones where roof pitch < 10°. (X or Z values)
- (3a) Situation 3: For all roof pitches in Extra High wind zone .
- (4) Excluding any soft edge or turn-down to roofing.
- (5) For buildings other than housing, slope shall be as per F4/AS1.
- (6) For direct fixed window/doors, unless shown. Sill flashing must extend past the condensation channel. Ensure sill flashings are not installed with backwards slope.
- (7) Excluding drip edge .
- (8) Excluding drip edge .

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Site Address :
Proposed Truss Design
Lot 360
Arbour Green
Buxus Way, Rolleston

Sheet Title :
For Building Consent
Truss Design Layout

Date : 17 Sep,2024	Drawn : Hamish Nicol
Scale : NTS	System : MiTek 20/20

Job Details:

Roof Pitch	: 25.00deg
Roof Material	: Galv Iron .5mm
Ceiling Material	: Gib Board 13mm
Wind Zone	: High
Roof Snow Load	: 0.441kPa

Truss Centres	: 900mm
Roof Live Load	: 0.250kPa
Floor Live Load	:
Wind Speed	: 44m/s
Overhang	: 450mm



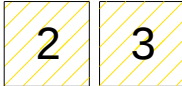
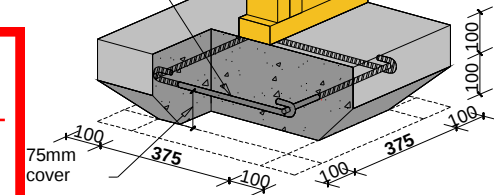
Job Title :
243573PS
Sheet :
1
Revision Number :

SDC - Approved Building Consent Document - BC242044 - Pg 35 of 36 - 20/12/2024 - phild

SLAB THICKENING & STUD REQUIREMENTS

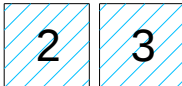
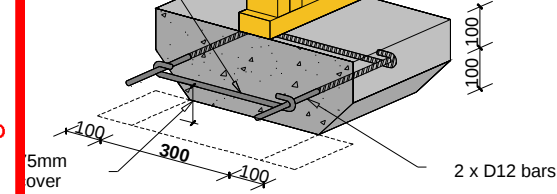
TYPE FP1 375mm² Pad

2 x D12 Bars
both ways



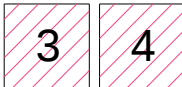
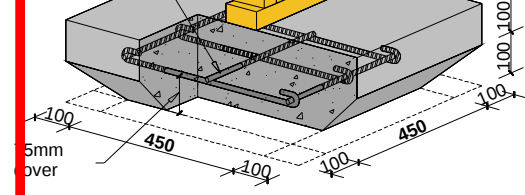
TYPE FS1 300mm Strip

10 bars @
600 crs



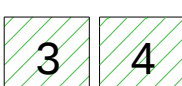
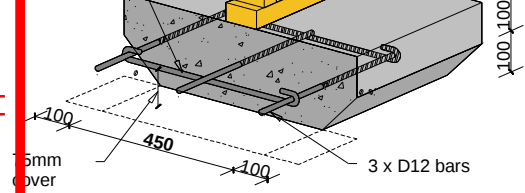
TYPE FP2 450mm² Pad

3 x D12 Bars
both ways



TYPE FS2 450mm Strip

10 bars @
600 crs



Notes:
- The numbers found in the hatched areas are the numbers of studs required below each truss
- Standard 100mm reinforcing concrete slab, as per NZS3604:2011

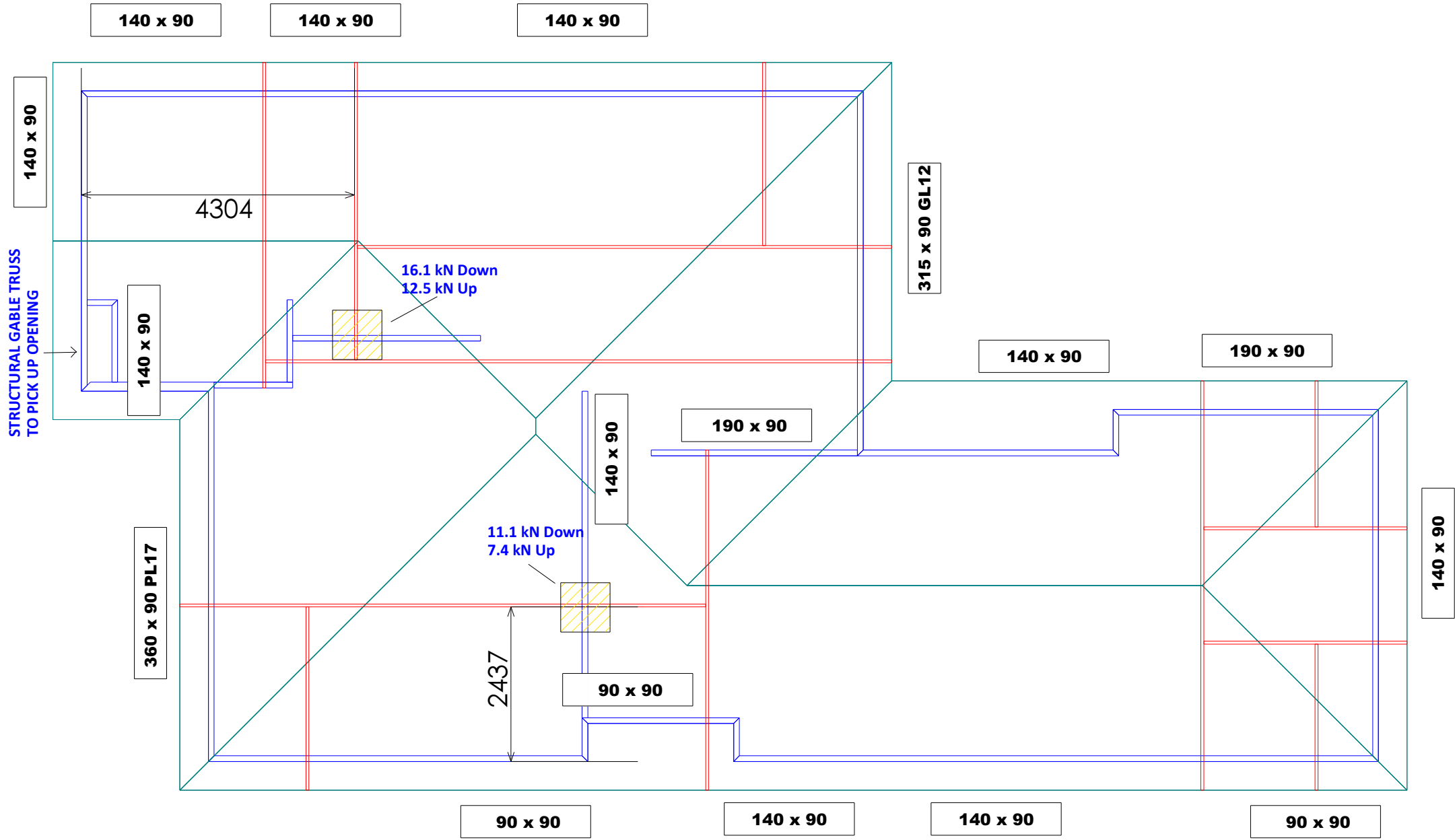
Refer to:
MiTek Internal Load Bearing on Concrete Floor Slabs 10/2011
MiTek Structural Fixings **On-Site Guide** for Building Code Compliance

Concrete Slab
Thickening
Guide



ALL LINTELS SIZED AS GL8S
UNLESS OTHERWISE SPECIFIED

SLAB THICKENING REQUIRED



CANTERBURY PRENAIL LTD

66 Stanleys Road
Harewood 8051
Christchurch

T: +64 3 242 0560
E: orders@itmct.co.nz

Site Address :
Proposed Truss Design
Lot 360
Arbour Green
Buxus Way, Rolleston

Sheet Title :
For Building Consent
Slab \ Lintel Layout

Date : 17 Sep,2024
Scale : NTS

Drawn : Hamish Nicol
System : MiTek 20/20

Job Details:

Roof Pitch : 25.00deg
Roof Material : Galv Iron .5mm
Ceiling Material : Gib Board 13mm
Wind Zone : High
Roof Snow Load : 0.441kPa

Truss Centres : 900mm
Roof Live Load : 0.250kPa
Floor Live Load :
Wind Speed : 44m/s
Overhang : 450mm



Job Title :
243573PS

Sheet :
2

Revision Number :

- Pair of Wire Dogs and 2 x 90mm 3.15mm skew nails
- LUMBERLOK JH47x90 Joist Hanger
- LUMBERLOK JH47x120 Joist Hanger
- LUMBERLOK JH47x190 Joist Hanger
- LUMBERLOK JH95x165 Joist Hanger
- LUMBERLOK CT200 Ceiling Tie
- Pair of LUMBERLOK CT200 Ceiling Ties
- LUMBERLOK CT400 Cyclone Tie
- LUMBERLOK CT600 Cyclone Tie
- LUMBERLOK Multi Grip
- Pair of LUMBERLOK Multi Grips
- LUMBERLOK Nailon Plate
- LUMBERLOK N21 Diagonal Cleat
- LUMBERLOK CPC40 Cleat
- Pair of LUMBERLOK CPC40 Cleats
- LUMBERLOK TTP 16kN Truss to Top Plate set
- LUMBERLOK TTP 9kN Truss to Top Plate set

Joist Hanger Installation



CT200 Truss to Top Plate Fixing Installation



16kN & 9kN Truss to Top Plate Fixing Installation



Notes:

All other areas must have the minimum 2 x 90mm 3.15mm skew nails and 2 x wire dogs for truss to top plate connections

Refer to:

LUMBERLOK Timber Connectors Characteristic Loadings Data Brochure
08/2014



66 Stanleys Road
Harewood 8051
Christchurch

Site Address :

Proposed Truss Design
Lot 360
Arbour Green
Buxus Way, Rolleston

Sheet Title :

For Building Consent Truss Fixing Layout

Date : 17 Sep 2024

Drawn : Hamish Nicol

Scale : NTS

System : MiTek 20/20

Job Details:

Roof Pitch	: 25.00deg
Roof Material	: Galv Iron .5mm
Ceiling Material	: Gib Board 13mm
Wind Zone	: High
Roof Snow Load	: 0.441kPa

Truss Centres : 900mm
Roof Live Load : 0.250kPa
Floor Live Load :
Wind Speed : 44m/s
Overhang : 450mm

PrimeCad v4.7.346



Job Title :

243573PS

Sheet :

3

Revision Number :