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SOLD ON KĀPITI



Stage: PERMIT 28/03/2024
Residence A
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CAUTION
Plans have been digitally reproduced and may not be to scale.

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Received by
Kapiti Coast District Council
11/04/2024

**APPROVED
BY BUILDING**
Peter Thomas
6/05/2024

BOUNDARY LINES
The Owner/Builder is responsible for clearly defining the site boundary lines and pegs. This may require a survey.
NOTE: established fences are not necessarily on the site boundary.

ENGINEERS DESIGN
This project contains elements specifically designed by an engineer. The owner/builder is required to ensure the engineer inspects the work and provides KCDC with written evidence of the inspection.

**ENGINEER STRUCTURAL DESIGN
TAKES PRECEDENCE**

Noisy Equipment
It is the responsibility of the owner to ensure that no work with noisy equipment shall be carried out before 7:30 a.m. or after 6 p.m. Monday to Saturday. During the week there may be workers on site from 6:30 a.m. quietly preparing for work. Work with noisy equipment is not permitted on Sundays or public Holidays.



The following design elements have been specified by other designers: - Truss Design / Placemakers - Engineer design Foundation	Call 0800 A1homes 2 1 4 6 6 3 www.A1homes.co.nz	Proposed New Home for: Black Pearl Developments Ltd Address: 206 Manly Street Paraparaumu / Kapiti Coast	Job no: AW517A
	All documentation copyright to A1 Homes Ltd		Date: 28/03/2024

Foundation (SED)

Engineer design foundation

Construction R value 1.0 - NO ADDITIONAL INSULATION

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 @ 400crs max, nogs @ 800crs.
140 stacker slider wall
140x45 H1.2 frame + 140x45 top plate, studs @600crs max, nogs @ 800crs.

single storey: 90x45 studs @ 400crs max
lower storey (supporting upper floor): 90x45 studs @ 400crs max

Scyon Oblique Cladding:
• An extra stud is required in internal corners

MARSHALL WATERPROOFING Tektonbuilding 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

Bottom plate fixing - Hiandri packers:
Installed to the latest Manufacturers specifications.
Location of anchors as per NZS3604, using either cast insitu M12 bolts or M12x140 Trubolts, M12x135 through bolts, Hilti M12x150 screw bolts, M10x150 Ramset Anka screws, Bowmac M10x140 screwbolts, SIMPSON strong-tie THD M12x150 Screw Anchor. HIANDRI packers are to be installed to the underside of the bottom plate directly under supporting studs at 600crs max to match framing set-out. HIANDRI packers may be set back at corners of the frame by 90mm.

Exterior Cladding

James Hardie Vertical Oblique 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.

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.

Rockote Integra 50mm on ex50x25 H3.1 cavity 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.

Cavity Battens (ex50x25 H3.1 timber cavity battens fixed to studs):

- be nominal 20 mm thick (between limits of 18 mm and 25 mm in thickness)
- at least the same width as the stud
- minimum H3.1 IOSP treated in accordance with NZS 3640

Battens must be fixed over the building underlay/rigid air barrier to all studs, as follows:
If studs are at 400 mm centres battens must be fixed on studs only.
Horizontal battens should be used at the top of the wall to block the top of the cavity from venting into the roof space.
Cavity spacers (i.e. short pieces of cavity batten) may be used to support the bottom sheet edge (or provide intermediate support where required eg above window openings) but must allow water drainage to the outside. The cavity spacers must be fixed at a 5° minimum slope with a 50 mm minimum air gap at either side.

External Joinery

Aluminium joinery installed to comply with NZBC: E2/AS1.
Pre-primed jambs, architraves.
Approved window sealing tape to all openings.
Protecto Tapeflashing 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 fixings - Hiandri packers:
Installed to the latest Manufacturers specifications.
Fix the bottom plate of frames using either Ramset 90mm powder powered pins with a washer or a 97mm Hilti powderpowered pin and washer at max 500mm centres.

Midfloor Framing (SG8)

290x45 H1.2 Floor joists @ 450crs & 400crs, mid span blocking between 3.6mx1.2m
20mm KOPINE particleboard flooring. 19mm H3.2 construction ply in wet areas. Keep edges of sheets in from exterior frame 10mm. Nail sheet perimeters @ 150mm crs, nail centres @300mm crs.
Joists fixed to top plate of lower floor with 2/100 x 3.75mm skew nails.

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 @ 200crs 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 30° pitch H1.2 trusses @ 900crs Synthetic breathable self supporting underlay laid vertically 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)

Colorsteel valley trays fixed to ex 25mm H3.2 valley boards (see detail)

Lumberlok strip brace & tensioners tightened firmly across roof planes.

Longrun colorsteel roofing 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 = C2 fixing pattern = Hit 1, miss 1, hit 1, miss 2

8.4.8 Fixings: Corrugated
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 of AS 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.

Insulation

R7.0C pink Batts insulation to all ceilings, except garage.
Maintain a 25mm gap clearance between the insulation and roof underlay.
Insulation guard at perimeter.

R2.8W pink Batts insulation to all exterior wall cavities excluding garage, however including walls between house & garage. Friction fitted.

R3.2C pink Batts insulation to Garage ceiling.

Joinery Thermally Broken ALU - R 0.50

Foundation Construction R value = 1.00

Soffit

4.5mm Hardiflex soffit lining fixed to 90x45 soffit bearers & 90x45 stringer at wall. extensions.

100 eaves all round, excluding gable ends (refer roof plan), 25x19pp soffit mould.

Colorsteel Fascia & spouting with Marley Downpipe system.

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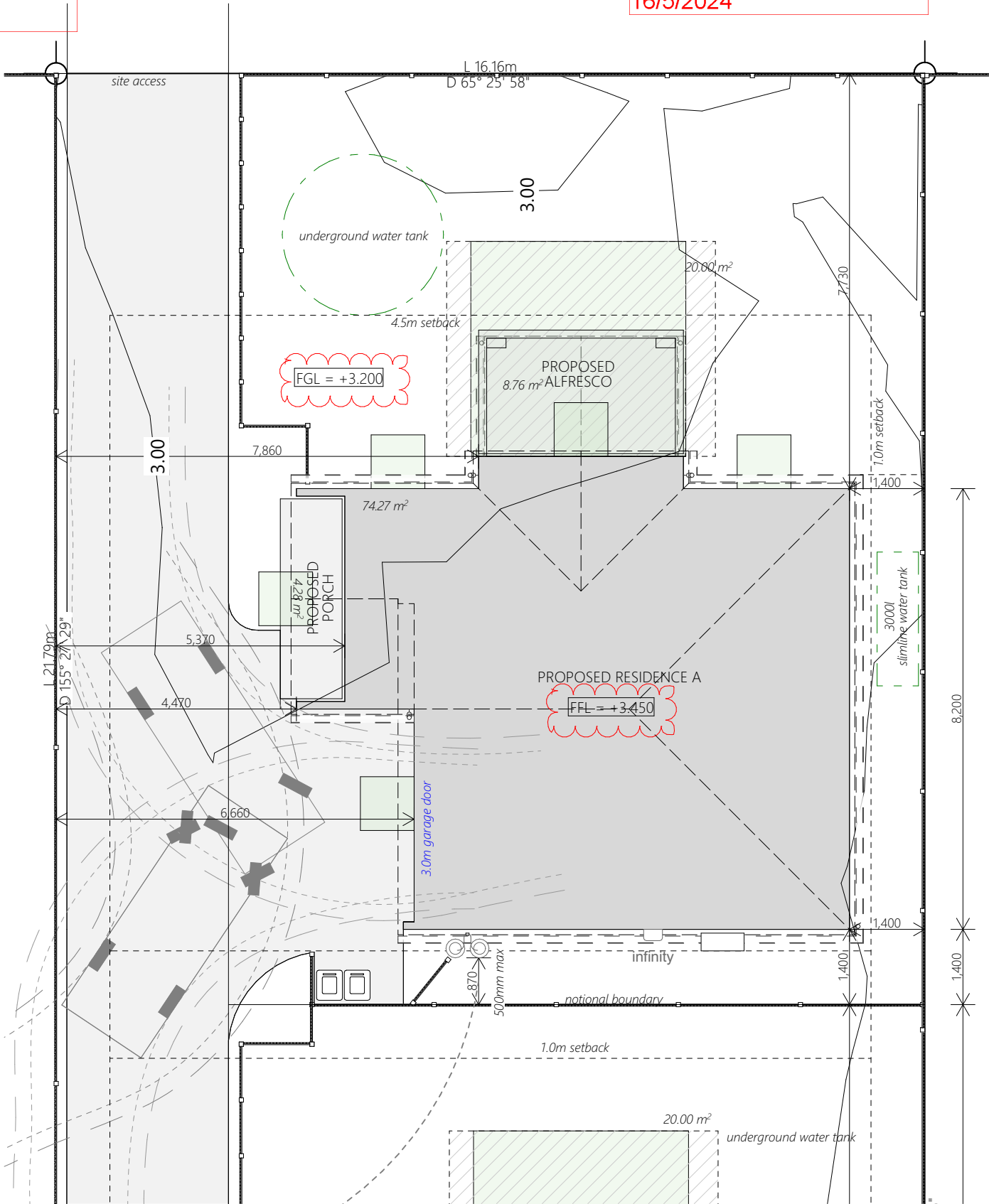
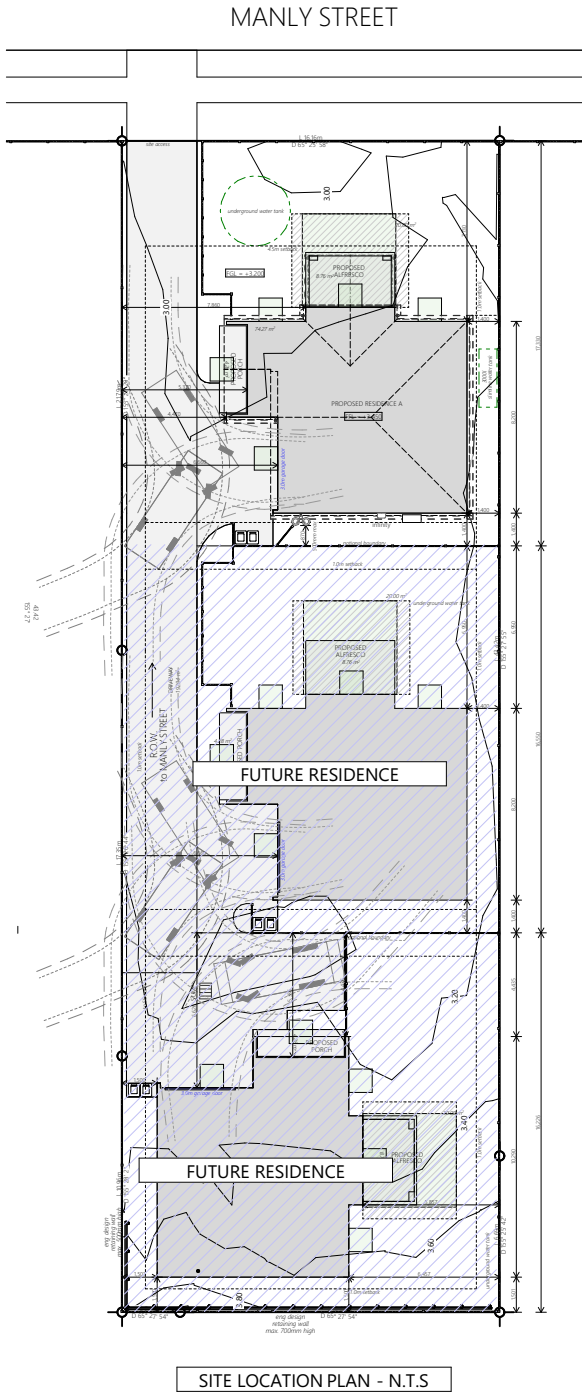
ARCHITECTURAL DRAWINGS TO BE READ IN
CONJUNCTION WITH ALL RELEVANT
PRODUCER STATEMENTS AND
MANUFACTURERS SPECIFICATIONS.

	DO NOT scale off drawings. Cross reference all drawings. Any discrepancies MUST be clarified with the designer immediately before commencing works or ordering. NO construction or site works are to commence until Building Consent becomes unconditional.	Plan Notes					Scale:	Sheet no: 1	Client Details: Black Pearl Developments Ltd Job no: AW517A Address: 206 Manly Street Paraparaumu / Kapiti Coast New Design	
							Rev:			
		Design: spacelab.	Drawn: MPP/UP	Check: UP	LBP: UP	Date: 28/03/2024				
		Wind: VERY HIGH	Earthq: 3	Exposure: D (SS)	Snow: N1	Climate: 3	Call 0800 A1homes 2 1 4 6 6 3 www.A1homes.co.nz			

APPROVED BY
PLANNING
kirsties
17/05/2024

All works to be
in accordance
with BC240180

BC240180
Further Information Received
16/5/2024



Note:
ensure gas storage location to complies with NZS5601.1:2022.

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.

Any fill to be dry & approved by engineer & compacted down in accordance with NZS.3604.2011

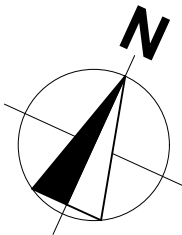
Contractor to

- confirm ground has adequate bearing to comply with NZS 3604: 2011, except in the case of SED design, or when using Firth RibRaft Floor System (refer Ribraft manual).
- 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.

Retaining Walls
It is the retaining wall contractor's responsibility to ensure short term stability of the retaining wall cuts during construction. An appropriate construction methodology should be employed to ensure the safety of people on site and the stability of the cut faces. This could include shuttering, batters, or installing the walls in short sections

Lot: 18
DP: 25239
Site Area: 224.42 m² approx. (excludes R.O.W)
Gross Plan Area: 86.32m² (incl. covered alfresco & porch)
Site Coverage: 38.5% (50% maximum)
Impermeable Area: 109.63/224.42=48.9% (60% maximum)
Maximum Building Ht: 11m
Territorial Authority: Kapiti Coast District Council
Planning Zone: Residential MDRS

Roof gutter profile calculations:
Metalcraft Squareline Gutter
Cross sectional area of gutter (CSAG) = 5520mm². 40m² of plan roof area (based on 100mm/hr.)

Rainfall intensity = 70mm/hr.

Plan Roof area 1= 58.30m²
Modified Plan Roof Area =58.30 x 70 / 100 = 40.81 m²
Number of downpipes required to accomodate Modified Roof Area:
40.81 / 40 = 1.02 (2 DP)

Plan Roof area 2= 19.78m²
Modified Plan Roof Area =19.78 x 70 / 100 = 13.85 m²
Number of downpipes required to accomodate Modified Roof Area:
13.85 / 40 = 0.35 (1 DP)

Plan Roof area 3= 4.90m²
Modified Plan Roof Area =4.90 x 70 / 100 =3.43 m²
Number of downpipes required to accomodate Modified Roof Area:
3.43 / 40 = 0.09 (1 DP)

Plan Roof area 4= 3.94m²
Modified Plan Roof Area =3.94 x 70 / 100 = 2.76 m²
Number of downpipes required to accomodate Modified Roof Area:
2.76 / 40 = 0.07 (1 DP)

Plan Roof area 5= 3.94m²
Modified Plan Roof Area =3.94 x 70 / 100 = 2.76 m²
Number of downpipes required to accomodate Modified Roof Area:
2.76 / 40 = 0.07 (1 DP)

Therefore minimum number of downpipes required = 6
Number of DP's provided = 6

Downpipe calculations: NZBC:E1
Plan area of roof per single downpipe for roof pitch 25-30° = 70m² of roof area for DN74 downpipe.

Plan Roof area 1 =58.30m²
Calc. - Plan Roof area/area served by DP = DP's required
58.30/ 70 = 0.83 = 1 DP

Plan Roof area 2 =19.78m²
Calc. - Plan Roof area/area served by DP = DP's required
19.78/ 70 = 0.28 = 1 DP

Plan Roof area 3 =4.90m²
Calc. - Plan Roof area/area served by DP = DP's required
4.90/ 70 = 0.07 = 1 DP

Plan Roof area 4 =3.94m²
Calc. - Plan Roof area/area served by DP = DP's required
3.94/ 70 = 0.06 = 1 DP

Plan Roof area 5 =3.94m²
Calc. - Plan Roof area/area served by DP = DP's required
3.94/ 70 = 0.06 = 1 DP

Therefore minimum number of downpipes required = 6
Number of DP's provided = 6

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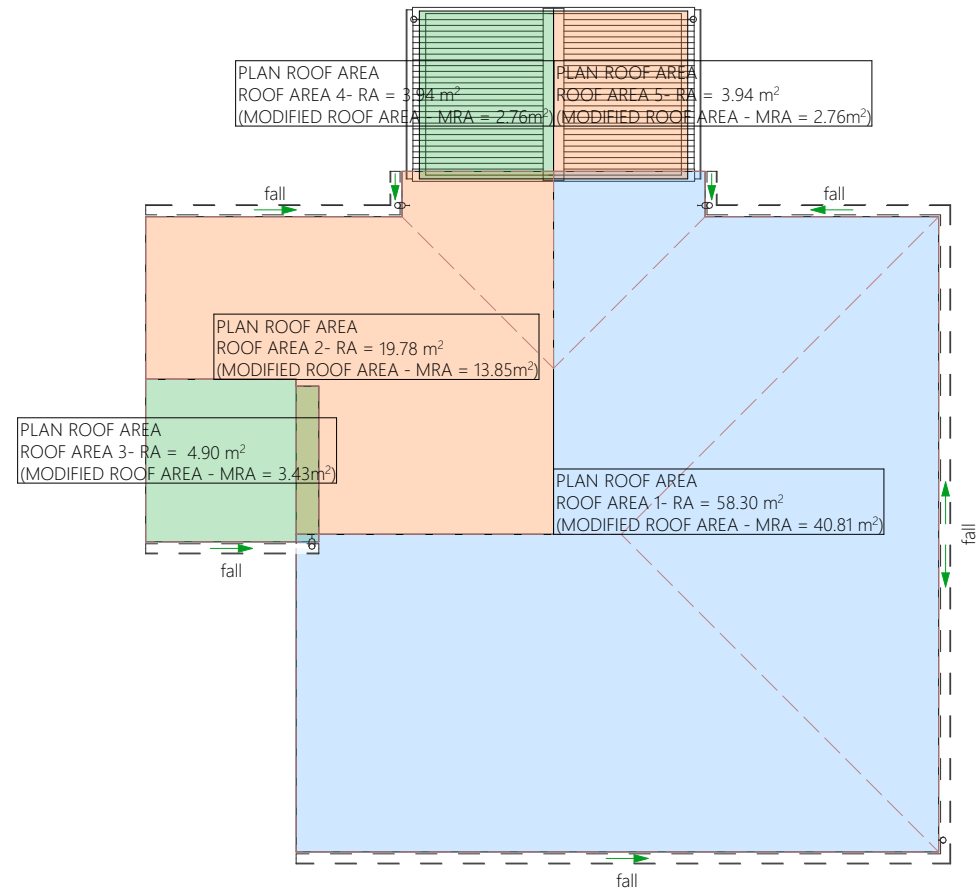
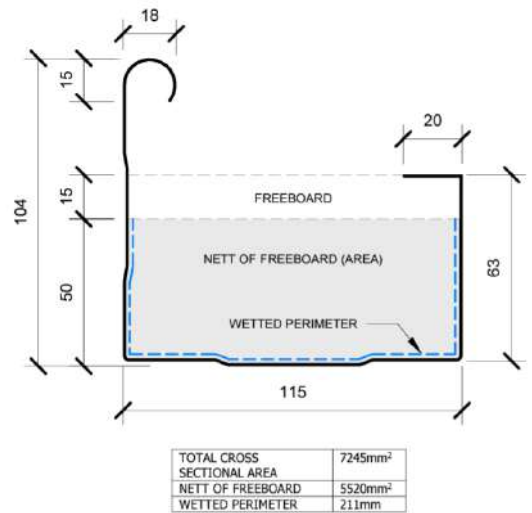


Table 5: Downpipe Sizes for Given Roof Pitch and Area
Paragraph 4.2.1

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	90	70	60
75 x 75 rectangular	110	90	80	65

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

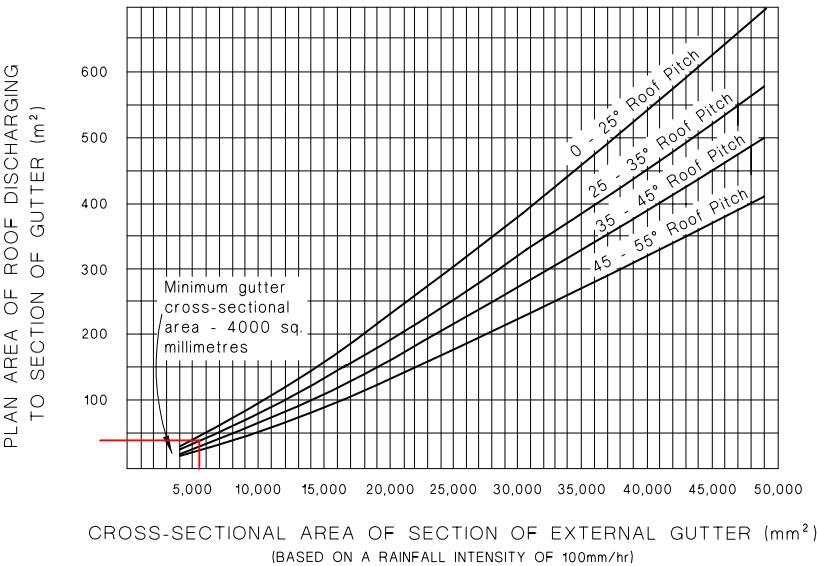
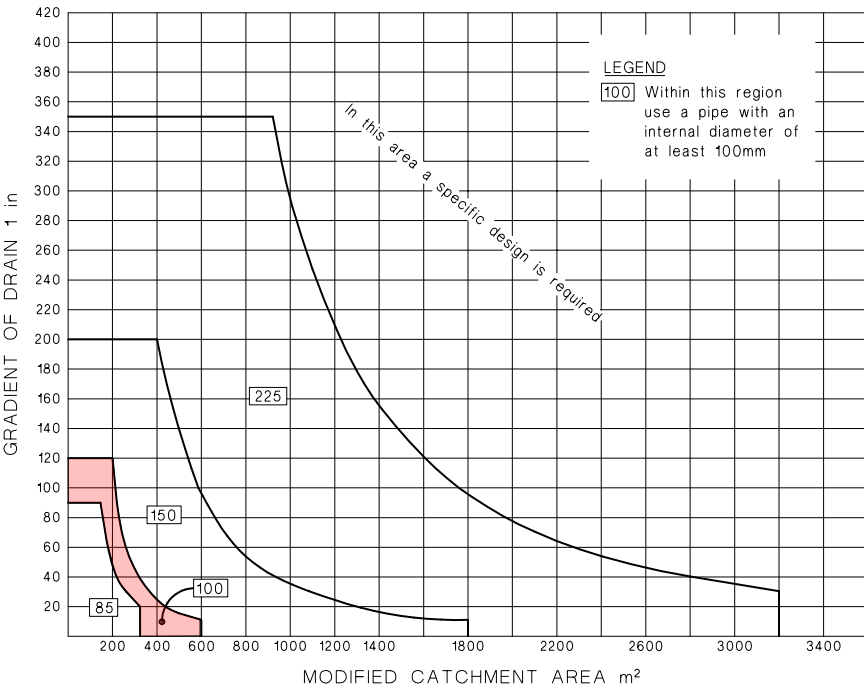


Figure 3: Sizing of Surface Water Drains
Paragraphs 3.2.2 and 3.2.3



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Roof Drainage Plan

Design: spacelab.	Drawn: MPP/UP	Check: UP	LBP: UP
Wind: VERY HIGH	Earthq: 3	Exposure: D (SS)	Snow: N1

Scale: 1:100

Rev:

Date: 28/03/2024

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Sheet no:

3

Client Details:
Black Pearl Developments Ltd

Address:
206 Manly Street
Paraparaumu / Kapiti Coast

Job no: AW517A

New Design



Engineers storm water attenuation design supplied attached to BC doc's
Install water tanks to his design

NOTE:

3.4 Backflow protection

3.4.1 Backflow protection shall be provided where it is possible for water or contaminants to backflow into the potable water supply system.

3.0 Protection of Potable Water

3.1 Drawn water not to be returned

3.1.1 Water drawn from the water main shall be prevented from returning to that system by avoiding cross connections or backflow.

3.2 Cross connections prohibited

3.2.1 The water supply system shall be installed so that there is no likelihood of cross connection between:

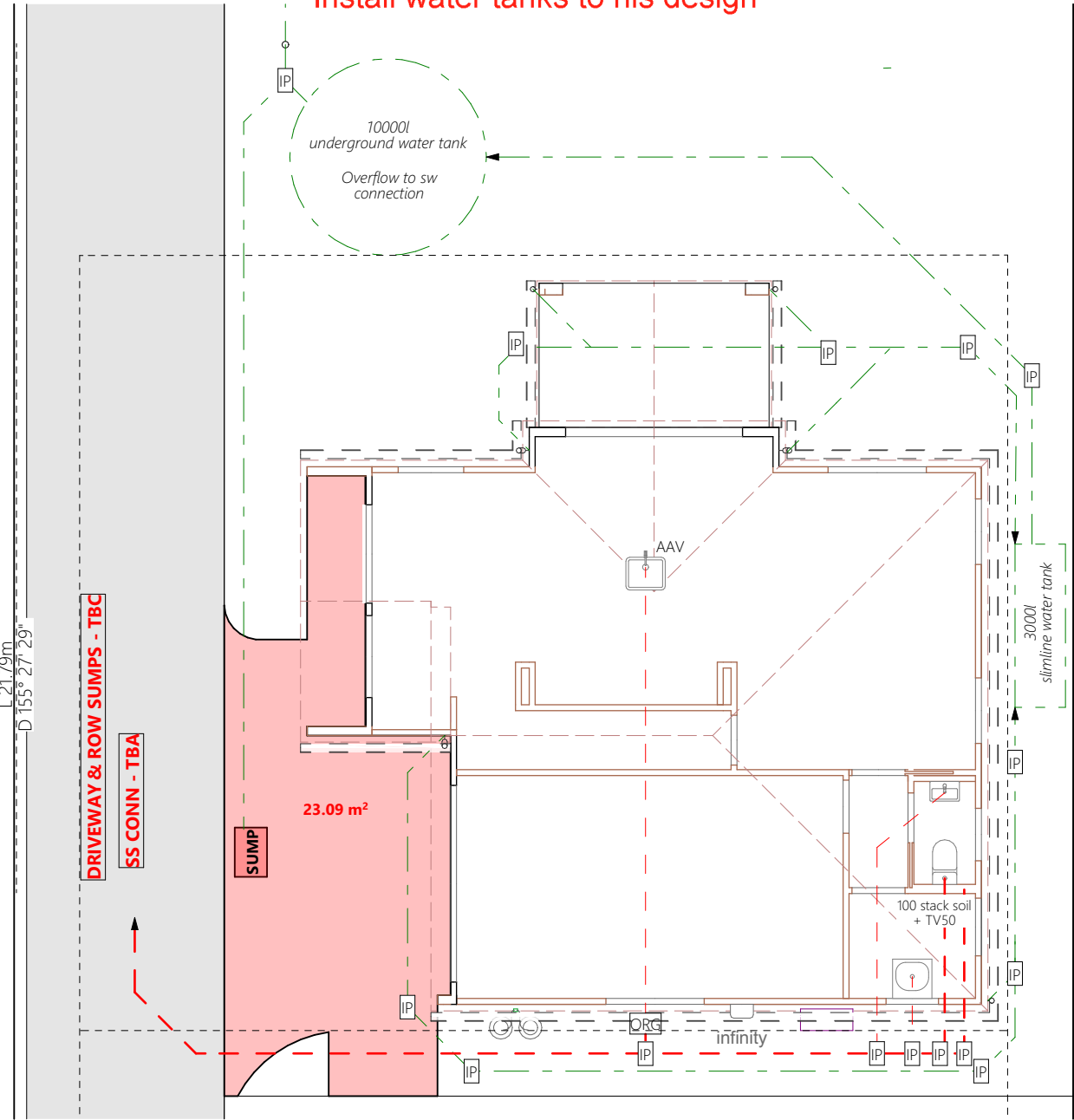
- a) A potable water supply system and a non-potable water supply system,
- b) A potable water supply system connected to a water main, and any water from another source including a private water supply,
- c) A potable water supply system and any bathing facilities including swimming, spa or paddling pools, and
- d) A potable water supply system and pipes, fixtures or equipment (including boilers and pumps) containing chemicals, liquids, gases or other non-potable substances.

4.0 Non-potable Supply

4.1 Protection of non-potable water supplies

4.1.1 Where non-potable water supplies are used for personal hygiene they shall be protected from High and Medium hazards (see Paragraph 3.3). Where backflow protection is required it shall be in accordance with Paragraphs 3.1 to 3.8 of this Acceptable Solution.

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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.

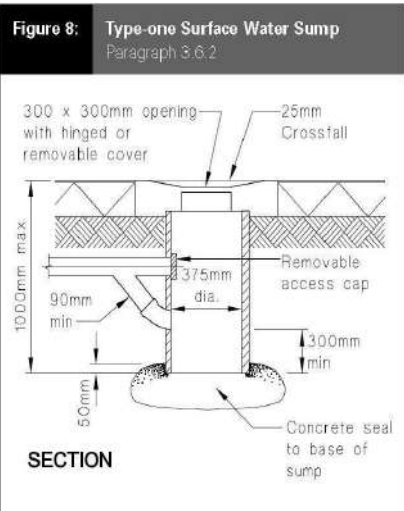
Fixture unit rating: 25 units
Bathroom Group- 6 (x2)
WC- 4
Basin - 1
Laundry tub - 5
Kitchen sink - 3

TABLE 3.5
SIZE AND RATING OF VENTS

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

TV min 50mm Ø NZS3500

Plumbing Legend as per AS/NZS 3500			
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)
ORG	Overflow relief gully	---	DN65 unvented branch drains exceeding 2.5m long (max 5 fixture unit rating)
oTV	Terminal vent 50mm	---	DN65 to all wastes discharging directly into drain under slab min 1:40 gradient. 20mm HWC vent drain (copper)
Water supply pipe (from council mains) = DN20			



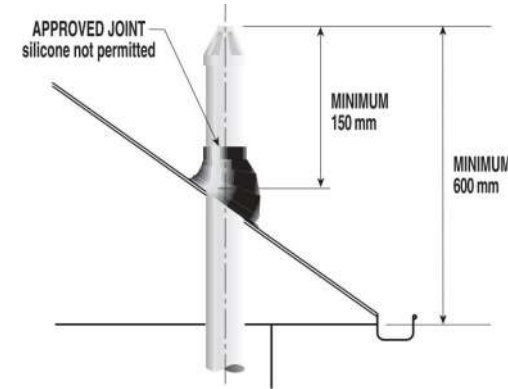
Sump calculation
Type 1 capacity (based on 100mm/hr) = 45m² catchment area
Rainfall intensity = 70mm/hr.
Catchment Area = 23.09m²
Modified Catchment Area = 23.09 x 70 / 100 = 16.32 m²
Number of Type 1 Sumps to accommodate Modified Roof Area: 16.16/ 45 = 0.36
Therefore 1 type 1 sump required.



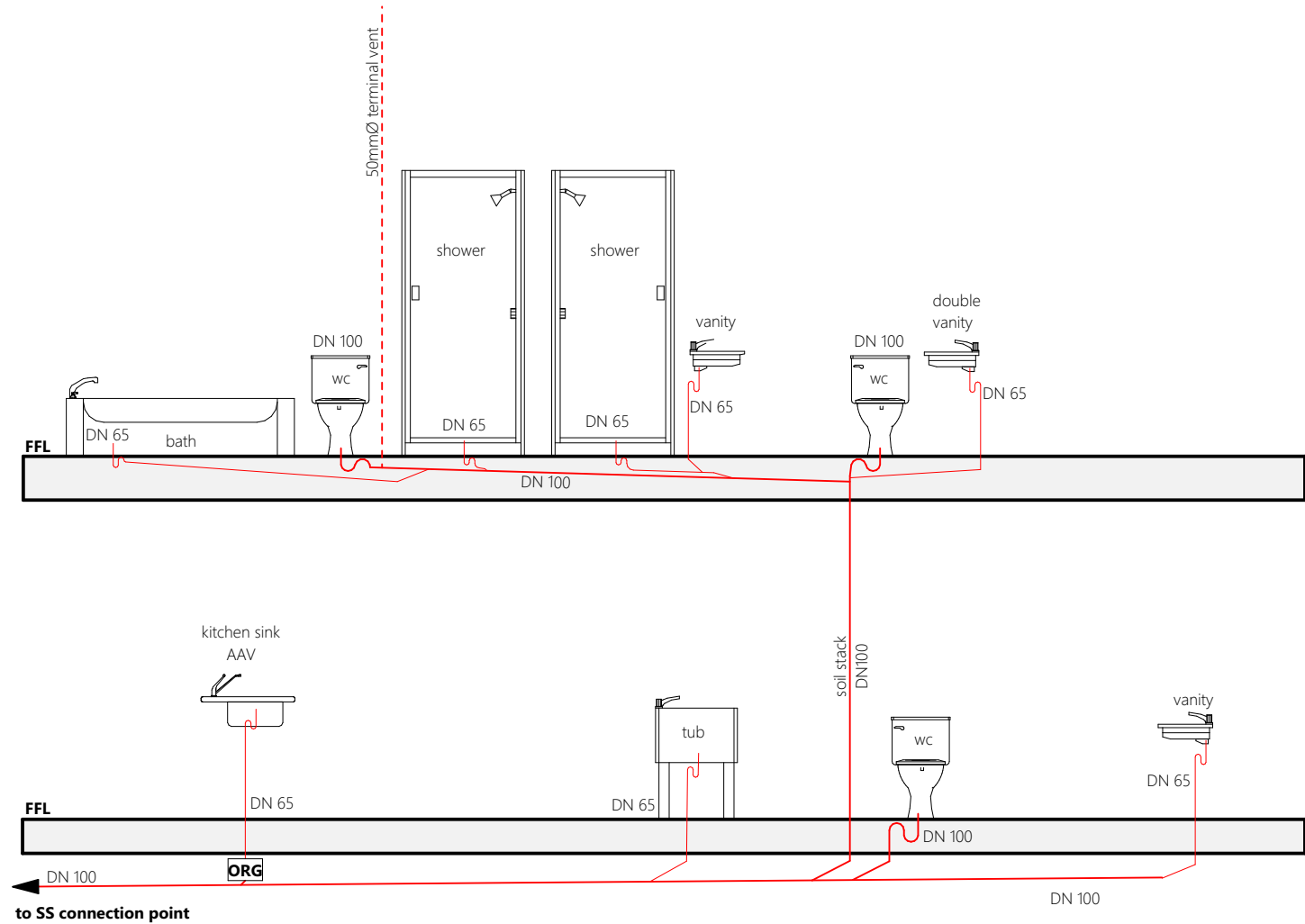
Non-potable water supply shall be -
Non-potable water supply is to be from on-site water tank and connected ONLY to external hose taps & toilet cisterns.
Non-potable water supply fittings are to be labelled as non-potable in accordance with G12 requirements.

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 SCHEMATIC

TABLE 7.2
MAXIMUM LOADINGS ON STACKS IN FIXTURE UNITS

Size of stack DN	Maximum loading per floor level	Maximum loading per stack
(a) Four or more floor levels		
40	4	16
50	9	36
65	14	56
80	20	80
100	125	500
125	250	1 000
150	600	2 400
225	1 750	7 000
(b) Three or fewer floor levels		
40	2	6
50	5	15
65	6	18
80	13	40
100	65	195
125	150	450
150	250	750
225	950	2 850

Fixture unit ratings:
Soil Stack:
Bathroom group - 6 x 2

Total = 12 units

7.4 SIZE OF STACKS
Stacks shall be sized in accordance with the following:
• The sum of the fixture unit ratings of all fixtures connected to any stack shall constitute the loading on the stack.
• the total loading on any stack shall not exceed the maximum given in Table 7.2
• Where a DN 80 stack is installed as a fully vented modified system, the maximum number of water closet pans and slop hoppers connected to any graded pipe or branch shall not exceed two.

Connections of stacks to graded pipes or drains above ground shall be made by:
a) a 45° junction installed on grade and a bend as the base of the stack in accordance with Clause 6.7.4; or
b) a 45° junction installed in the vertical plane with an extended branch so that the vertical projection of the stack, on the graded pipe or drain above the ground, is wholly outside the junction area, as shown in Figure 6.5 (Sheet 31)

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6.7.1 Connections to drains or graded pipes:
Discharge pipes shall connect to a drain or a graded pipe in accordance with Figure 6.4 and the following:
For Stacks of two levels or less:
a) no connection shall be made closer than 500mm downstream or upstream of the base of the stack; and
b) no discharge pipe connecting a fixture upstream of a junction that connects a stack to a drain or graded pipe shall be within 500mm within the base of the stack

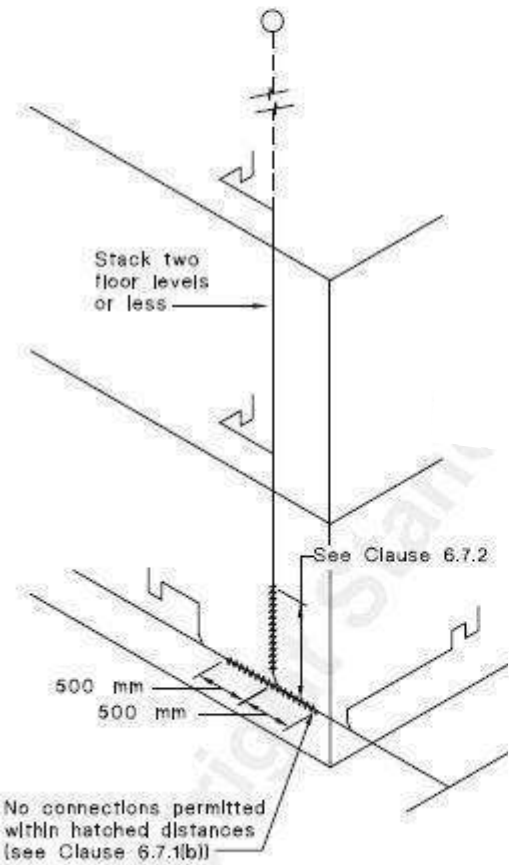


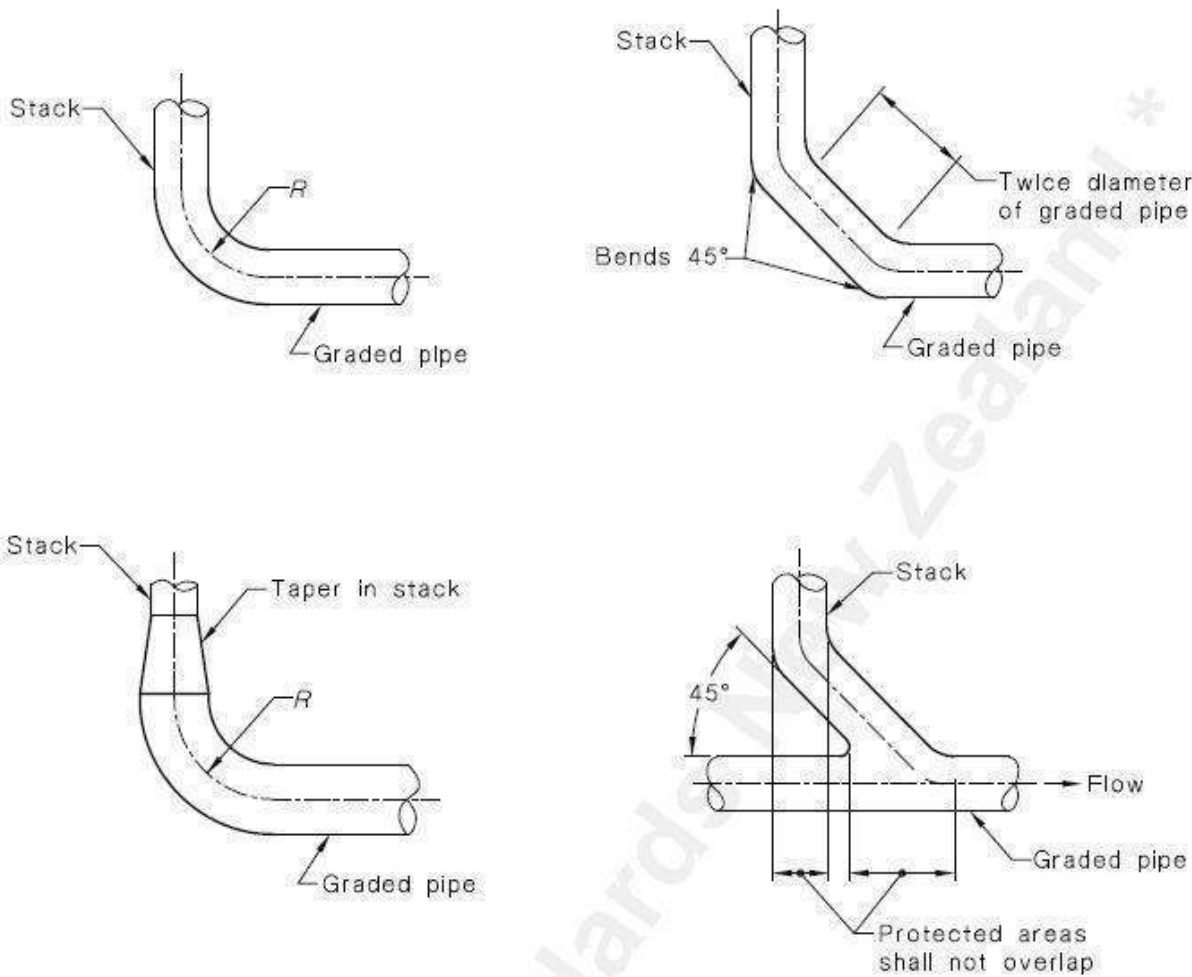
FIGURE 6.4 PROHIBITED CONNECTIONS AT OR NEAR BASE OF STACK

6.7.2 Connections above base of stack (see Figure 6.4)
Branches shall not connect to a stack within the following distances measured vertically from the base of the stack to the invert of the branch:
(a) 600 mm for stacks that extend not more than five floor levels above the base of the stack.

6.7.3 Connections of stacks to graded pipes or drains above ground shall be made by:
a) a 45° junction installed on grade and a bend as the base of the stack in accordance with Clause 6.7.4; or
b) a 45° junction installed in the vertical plane with an extended branch so that the vertical projection of the stack, on the graded pipe or drain above the ground, is wholly outside the junction area, as shown in Figure 6.5

6.7.4 Bends at the base of stacks
Bends at the base of stacks shall be not smaller in size than the graded pipe or drain to which they connect. They shall—
(a) have a centre-line radius not less than that stated in Table 6.5;
(b) consist of two 45° bends separated by a straight pipe of length not less than twice the bore of the pipe; or
(c) consist of an 88° bend where a stack extends through no more than two floor levels.

Where a stack is smaller than the graded pipe, a taper fitting shall be installed in the vertical stack, as shown in Figure 6.5.

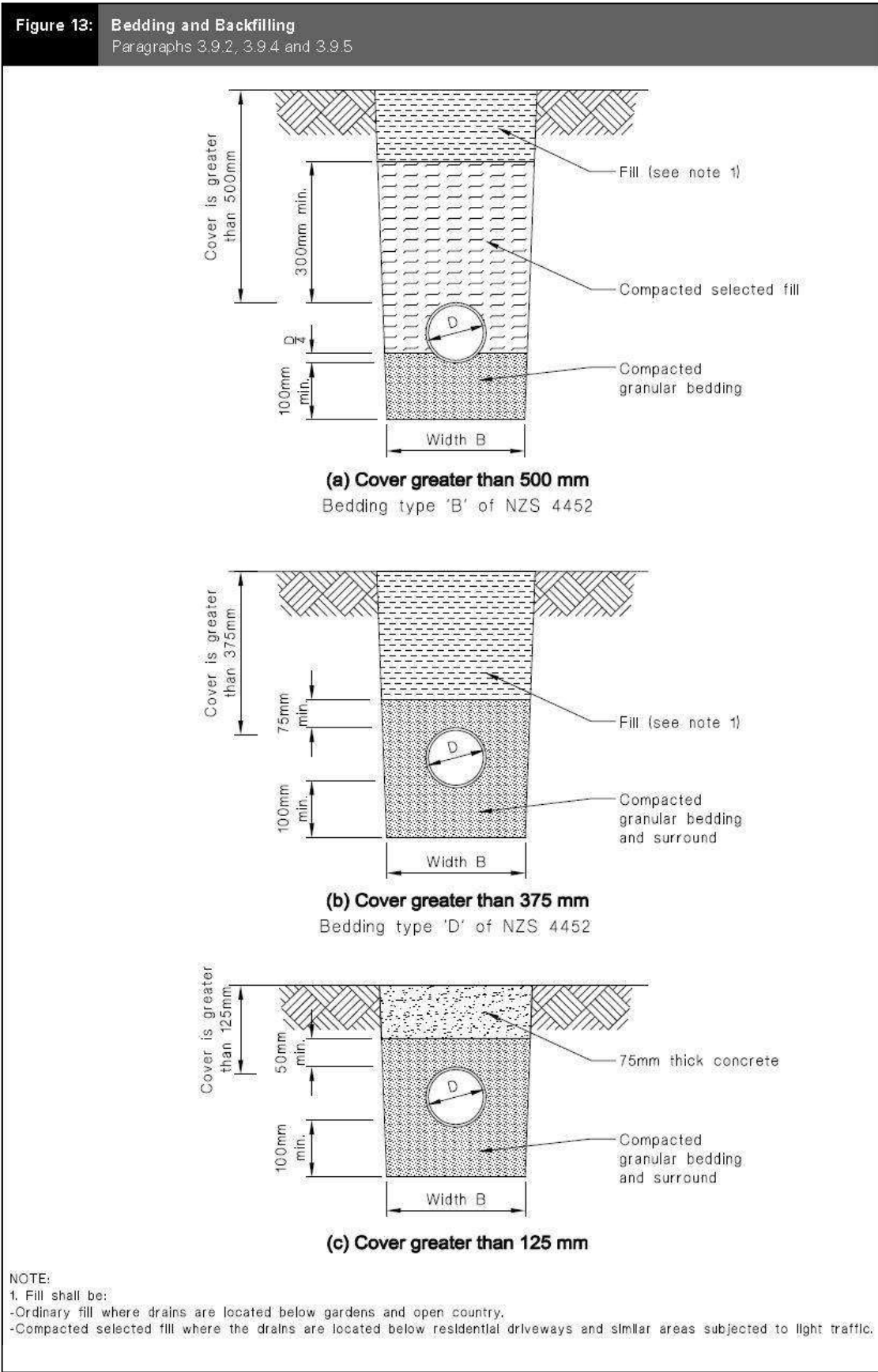


(a) Large radius stack bend (b) Alternative large radius stack bend

FIGURE 6.5 CONNECTION OF DISCHARGE STACKS TO GRADED DISCHARGE PIPES

TABLE 6.5
MINIMUM RADIUS FOR BENDS
AT THE BASE OF STACKS

Pipe size DN	Radius (R) mm
≤100	225
>100	300

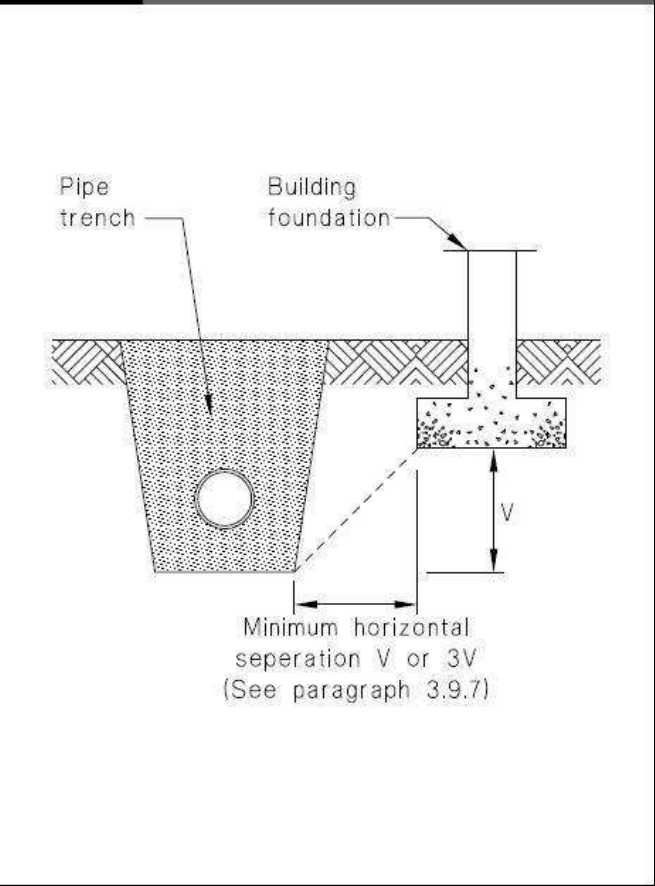


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Proximity of trench to building:

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 14: Relationship of Pipe Trench to Building Foundation
Paragraph 3.9.7



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.

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, the foundations shall be the subject of specific engineering design (SED) and investigation as appropriate. When using the Firth RibRaft Floor System, good ground may be established using Firth's approved Scala Penetrometer test (refer Ribraft Manual).
- 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

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

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ENGINEER DESIGN FOUNDATION

Plans to be read in conjunction with engineer design and producer statement

In case of discrepancies engineer design shall take precedence

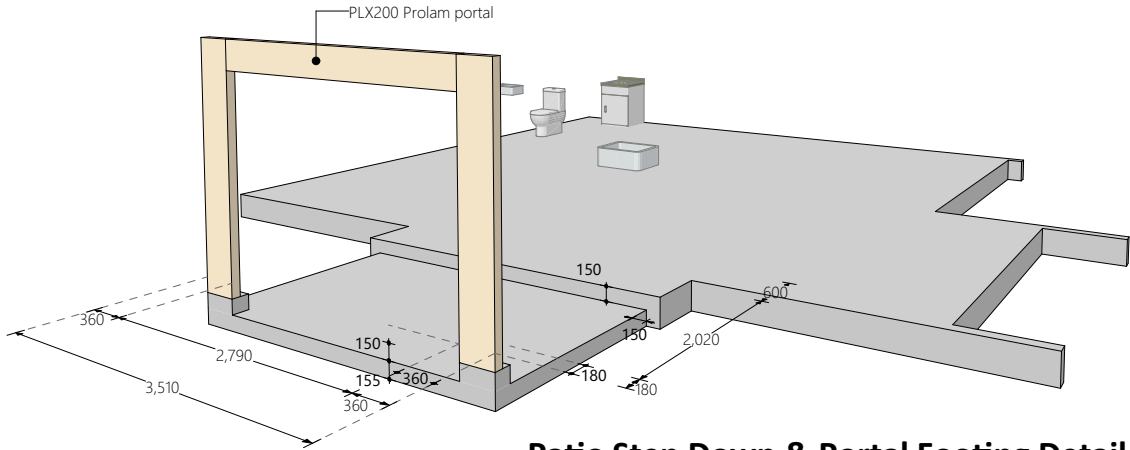
Plans to be read in conjunction with Geotechnical Report

Ground conditions do NOT meet the requirement of NZS3604.

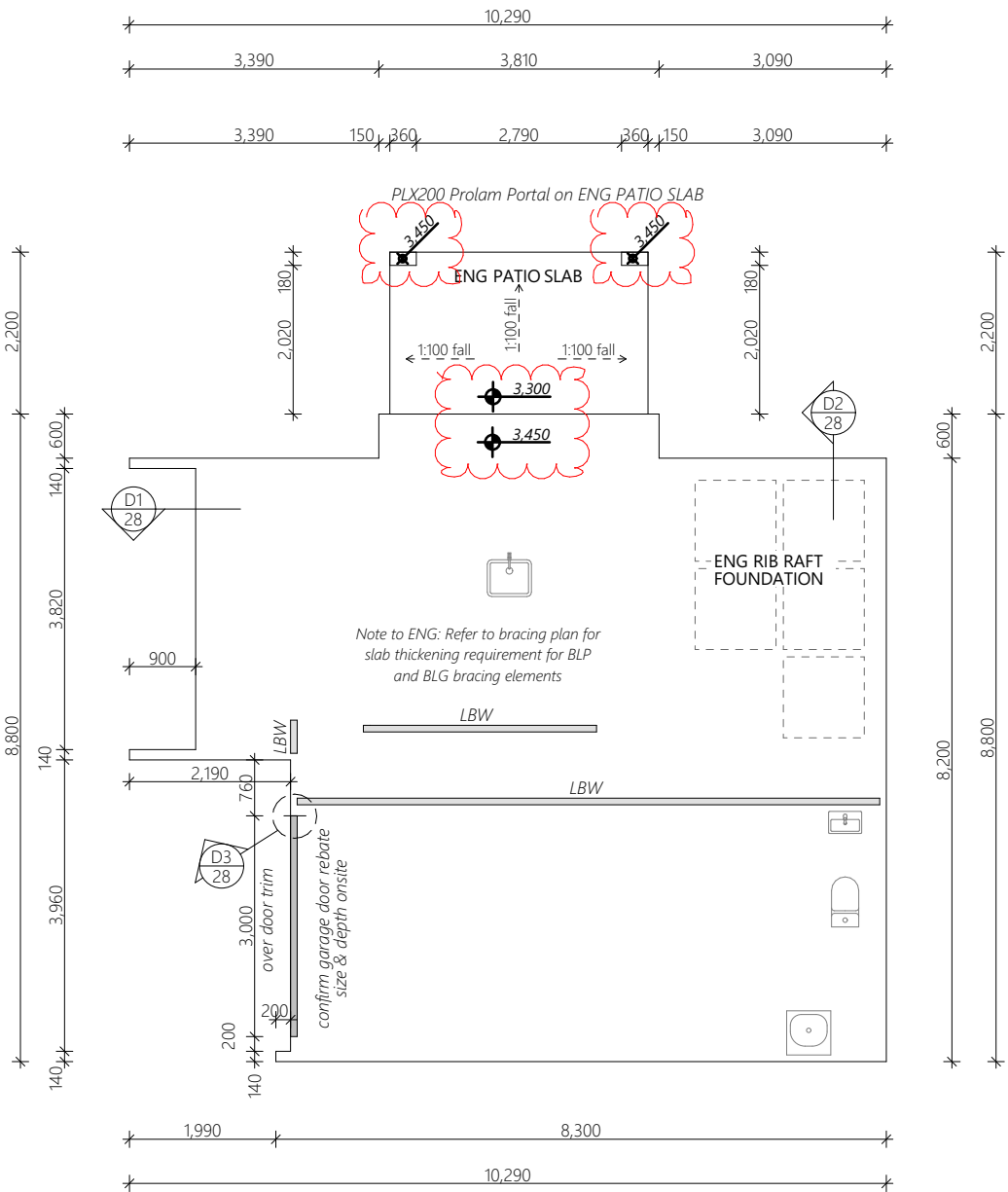
Engineer Design Foundations required.

Always cross reference the foundation plan with the floor plan prior to setting out. If any discrepancies occur contact:

admin@idesignarchitecture.co.nz immediately.



Patio Step Down & Portal Footing Detail

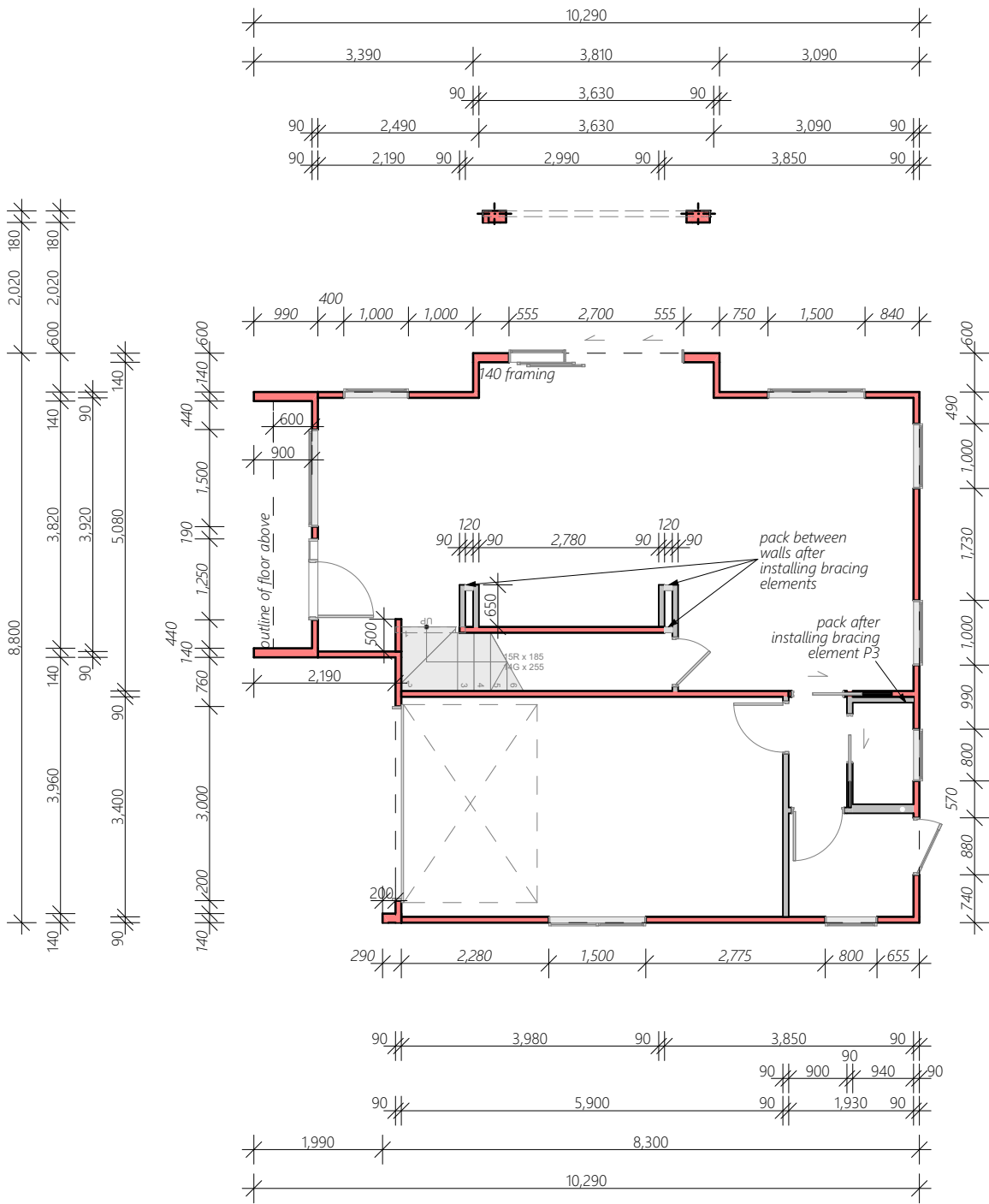


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Cautionary Notes:
Always cross reference the foundation plan with the framing plan prior to setting out

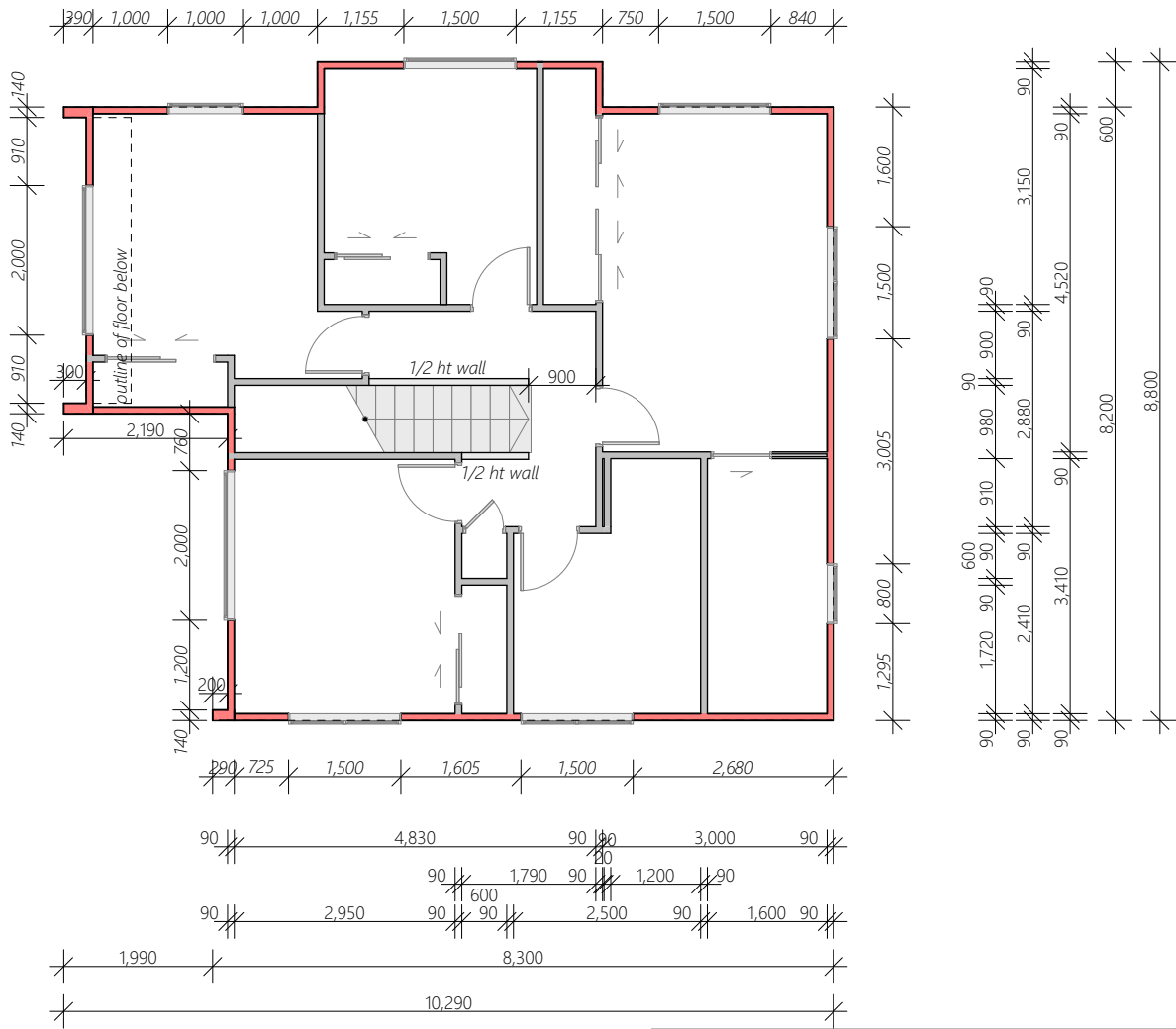
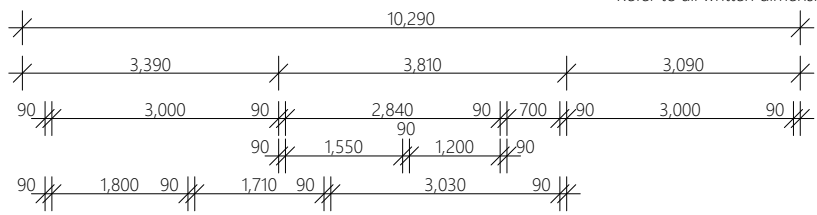
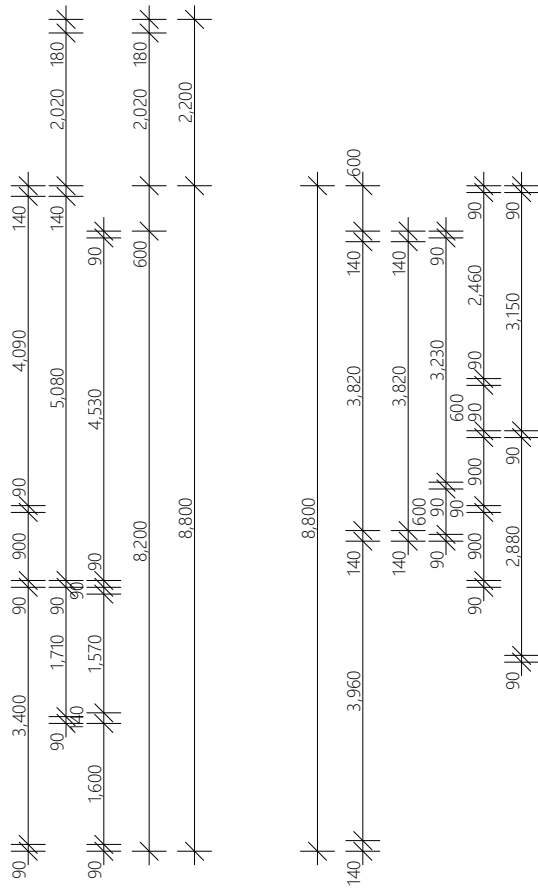
Joinery sizes shown are box sizes & are preliminary only.
Site measure and confirm all joinery sizes, reporting to designer any changes, PRIOR to ordering joinery. No liability shall be held by designer for incorrect supply of joinery.

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



external bracing elements to be checked into frame by frame manufacturer

bracing elements to be installed prior to wing walls framing



external bracing elements to be checked into frame by frame manufacturer

Always cross reference the foundation plan with the floor plan prior to setting out.
In the case of ANY discrepancies, call designer for clarification (07) 578 7345

Note:
2420 stud ht. throughout

James Hardie Vertical Oblique 300mm
Rockote Integra 50mm

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

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.
Ensure gas appliance installation complies to AS/NZS 5601:2013.
Polybutylene water supply pipes.
Hot water supply pipes shall be thermally insulated to comply with H1/AS1 5.0
The delivered hot water temperature at any sanitary fixture used for personal hygiene shall not exceed 55°C

gas bottles: 2/1250high x 375ø bottles to be mounted on conc. base & secured with seismic restraints (chains or fixed brackets) 1000mm from door, drain or air vent, 1500mm from any point of ignition, min 150mm below an opening window.
(gas fitter to confirm)

gas water heater: 300mm from any opening door or window, 75mm from down pipes, 500mm fuse or electric box, 1500mm from gas bottles, 300mm from wall or corner, 1500mm from ground.
(gas fitter to confirm)

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

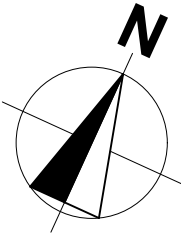
A landing min 900deep shall be provided at the top & bottom of every flight of stairs where the rise of the flight is more than 600mm. Handrails are required to one side of all stairs with 4 or more risers - NZBC D1/AS1: Access routes

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.

Stairs to comply with NZBC:D1 access; main private
max 190rise, min 280 tread. Wall mounted grab rail @900ht from tread nosing



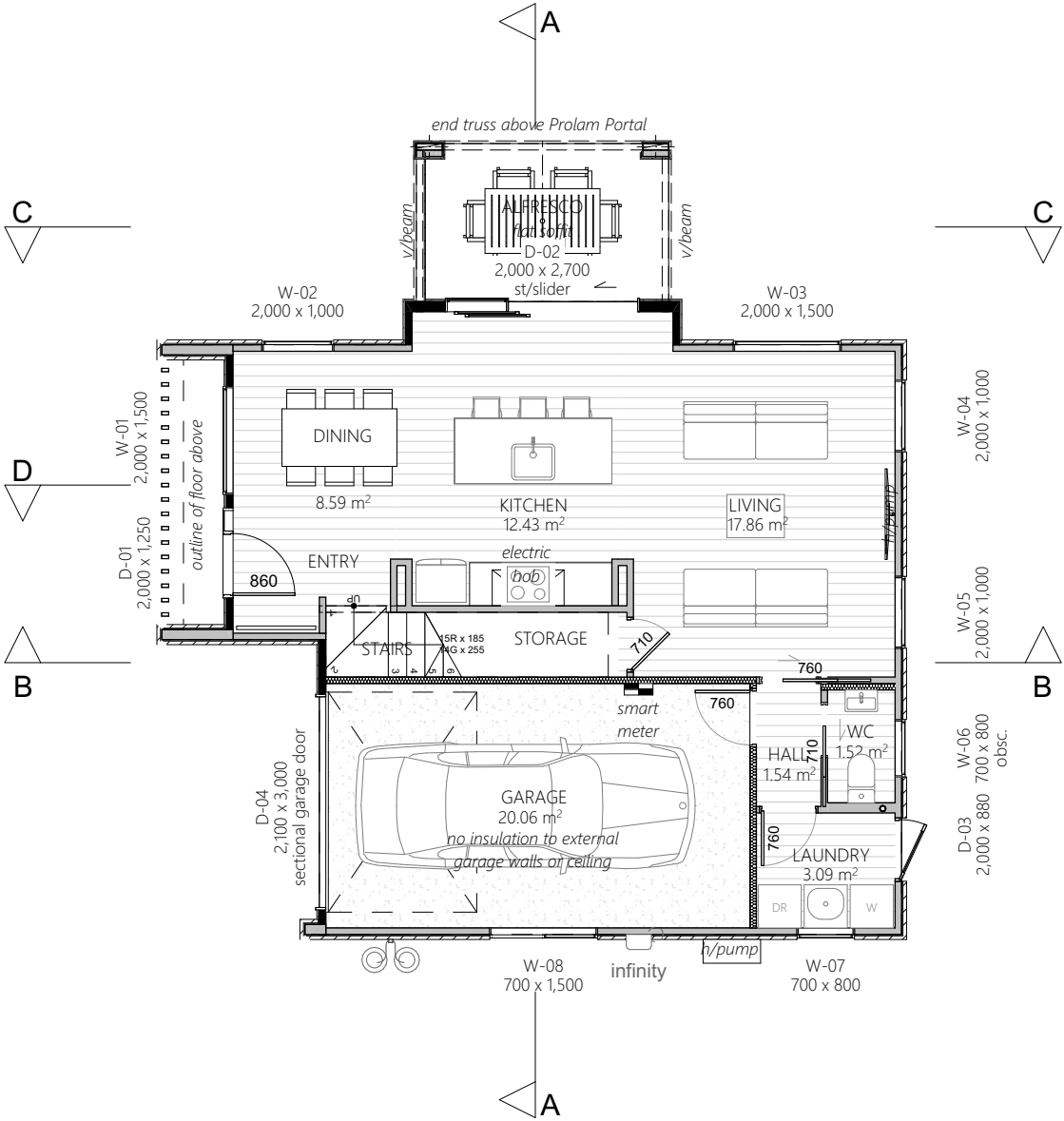
FLOOR FINISHES:

- Carpet
- Master Bedroom
- Hall
- Bedroom 2
- Bedroom 3
- W/R
- Tile
- Bath
- Ensuite
- Vinyl
- Kitchen
- Living
- Dining
- Hall
- WC
- Laundry
- Concrete
- Garage

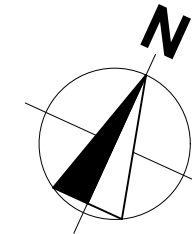
FLOOR AREAS:
o/frame area = 74.28 m²
TOTAL o/frame area = 147.30 m²

CLADDING KEY:
JH Linea Oblique Vertical
Rockote Integra 50mm

Note:
2420 stud ht. throughout



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FLOOR FINISHES:

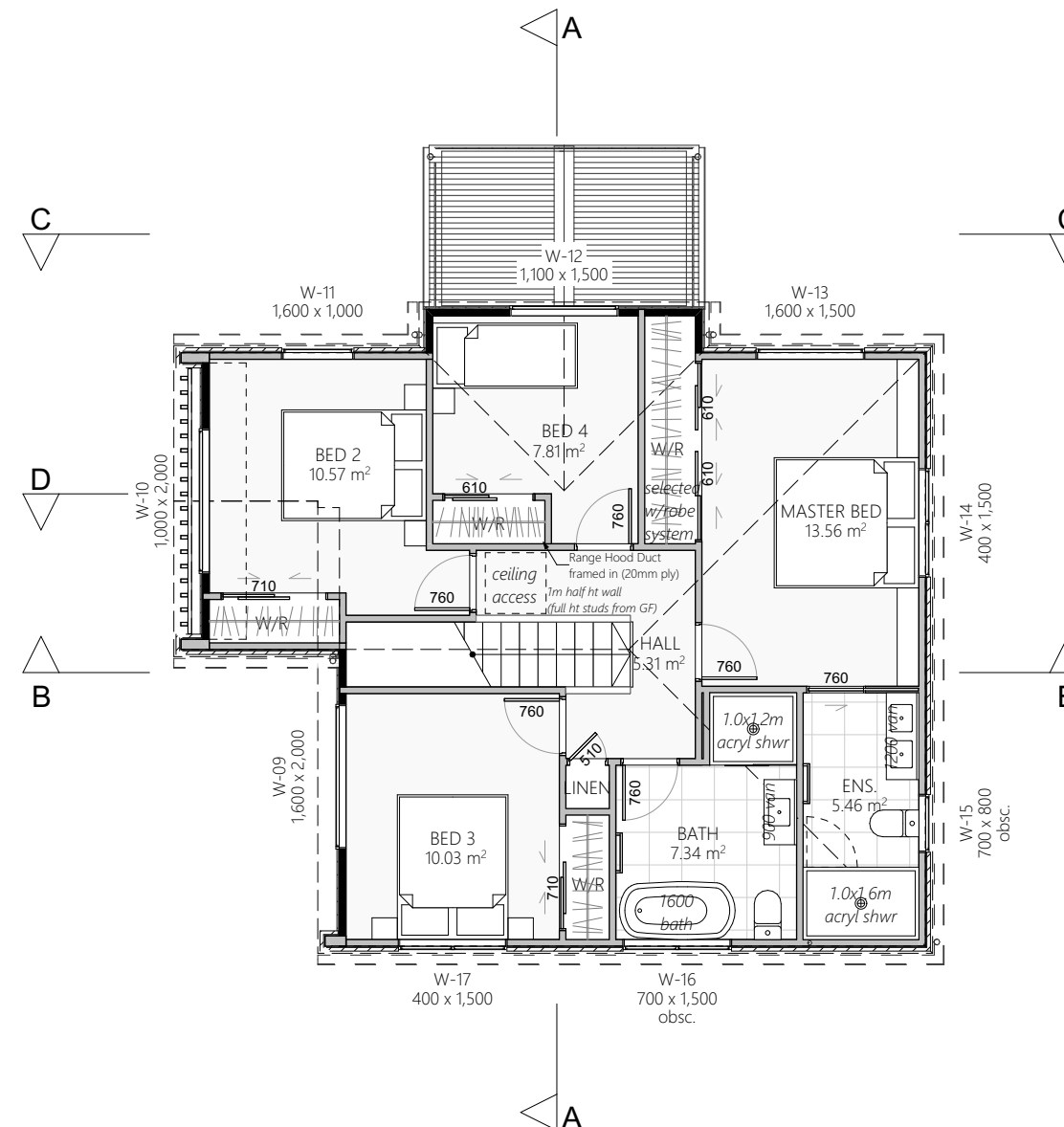
- Carpet
- Master Bedroom
- Hall
- Bedroom 2
- Bedroom 3
- Bedroom 4
- W/R
- Linen

- Tiles
- Bath
- Ens.

FLOOR AREAS:
o/frame area = 73.03 m²

- CLADDING KEY:
- JH Linea Oblique Vertical
 - Rockote Integra 50mm

Note:
2420 stud ht. throughout

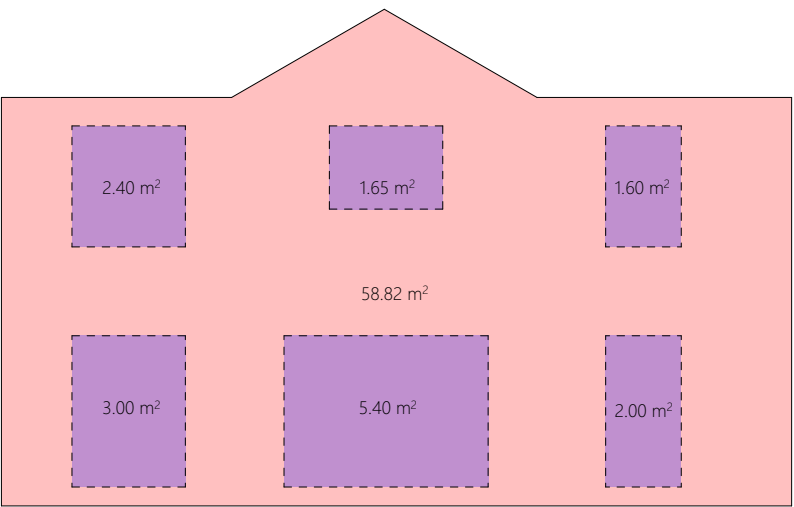


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NORTH ELEVATION



GLAZING - 16.05m²
FRONT FACADE - 58.82m²
16.05m² / 58.82m² = 27.3%

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.

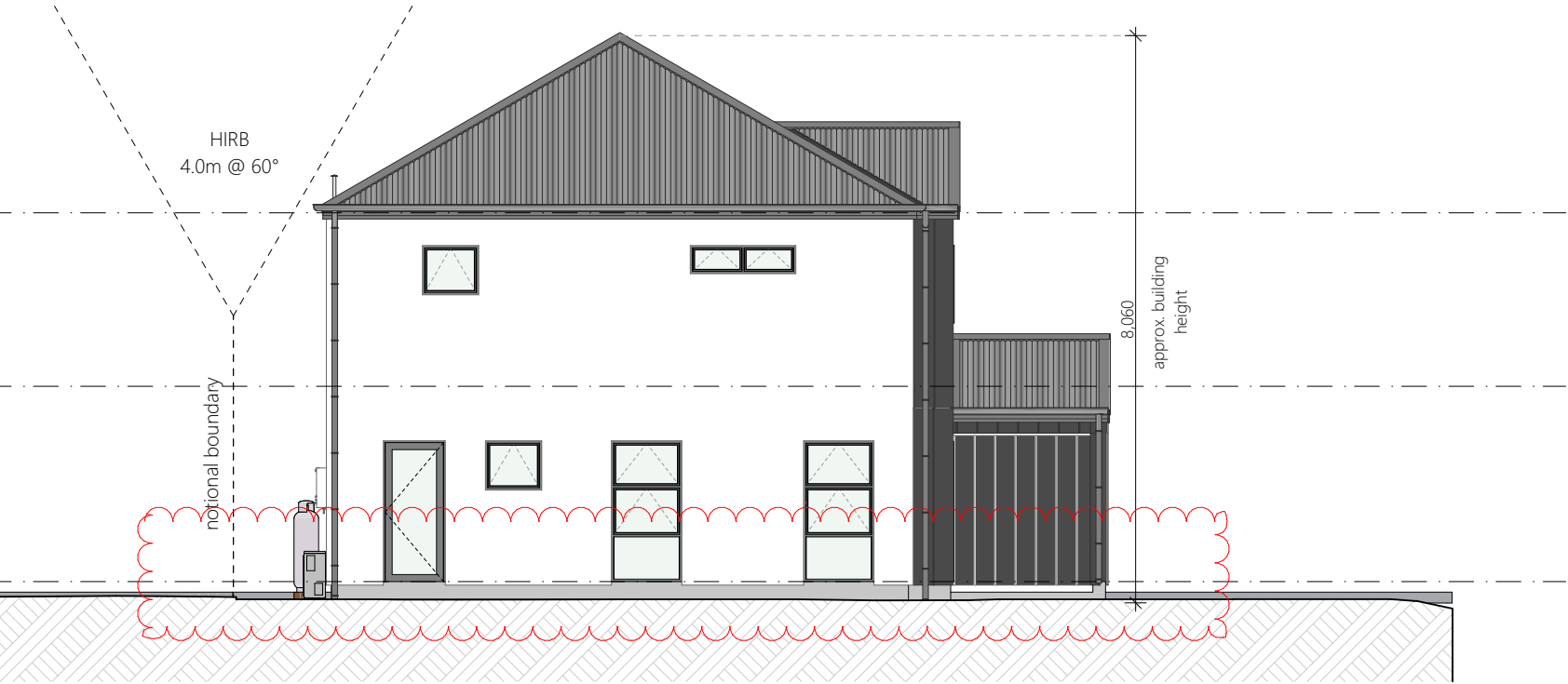
NZBC D1/AS1 Access Routes:
Concrete (min 150mm below FFL) or H5 timber step to all access points (owners care)
Acceptable Slip Resistance for Walking Surfaces:
• Portland cement concrete
• Broomed (Class 5 or 6) or wood float finish (Class U2)
Concrete surface finishes complying with NZS 3114.
• Coated 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.

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, double glazed high performance low-e (R 0.5) clear float
Thermally Broken Frame
(except for obscure glass to bathrooms & wc)

Double glazing to all window and door joinery.
Aluminium joinery head heights to be 2.0m
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



EAST ELEVATION

BUILDING ENVELOPE RISK MATRIX		
ALL ELEVATIONS		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	Very high risk	2
Number of storeys	High risk	2
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		15

Foundation:
ENG Design Foundation
Wall Cladding:
Rockote Integra 50mm
James Hardie Linea Oblique Vertical weatherboard - 300 mm
Roof Cladding:
30° pitch. NZS Colorsteel MAXX Corrugated profile
Fascia and Spouting:
Metalcraft 155 Colorsteel fascia
Metalcraft Quadline Gutter spouting
Marley PVC 80mmØ round downpipes
Joinery:
APL Residential suite Aluminium joinery

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Further Information Received
16/5/2024

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.

NZBC D1/AS1 Access Routes:
Concrete (min 150mm below FFL) 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.

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, double glazed high performance low-e (R 0.5) clear float Thermally Broken Frame
(except for obscure glass to bathrooms & wc)

Double glazing to all window and door joinery.

Aluminium joinery head heights to be 2.0m
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

BUILDING ENVELOPE RISK MATRIX		
ALL ELEVATIONS		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	Very high risk	2
Number of storeys	High risk	2
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		15

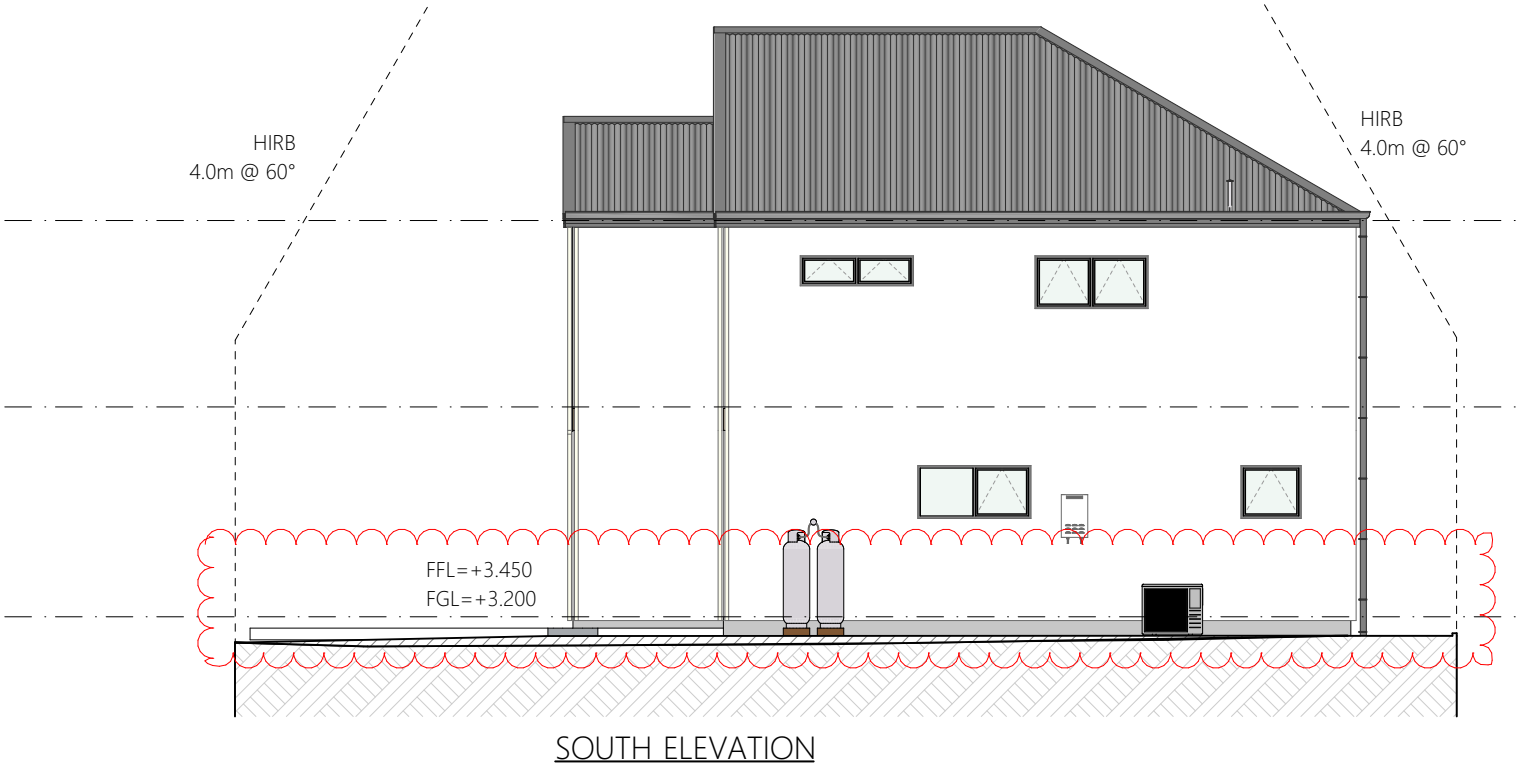
Foundation:
ENG Design Foundation

Wall Cladding:
Rockote Integra 50mm
James Hardie Linea Oblique Vertical weatherboard - 300 mm

Roof Cladding:
30° pitch. NZS Colorsteel MAXX Corrugated profile

Fascia and Spouting:
Metalcraft 155 Colorsteel fascia
Metalcraft Quadline Gutter spouting
Marley PVC 80mmØ round downpipes

Joinery:
APL Residential suite Aluminium joinery



DO NOT scale off drawings. Cross reference all drawings. Any discrepancies MUST be clarified with the designer immediately before commencing works or ordering. NO construction or site works are to commence until Building Consent becomes unconditional.

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Elevations

Design: spacelab. Drawn: MPP/UP Check: UP LBP: UP

Wind: VERY HIGH Earthq: 3 Exposure: D (SS) Snow: N1 Climate: 3

Scale: 1:100 Rev: B Date: 15/05/2024

Call 0800 A1homes 2 1 4 6 6 3 www.A1homes.co.nz

Sheet no: 13

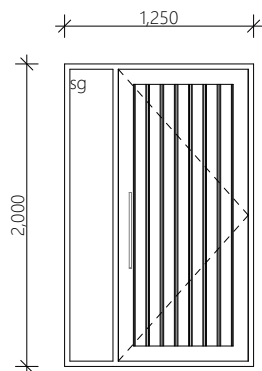
Client Details: Black Pearl Developments Ltd

Address: 206 Manly Street Paraparaumu / Kapiti Coast

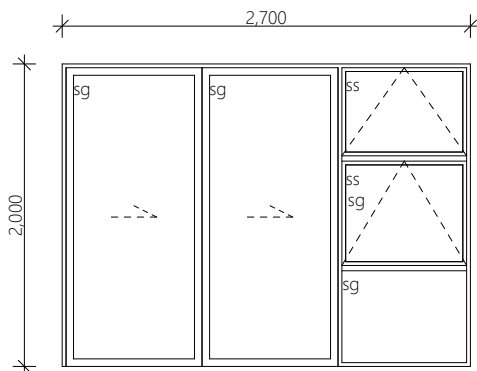
New Design

Job no: AW517A

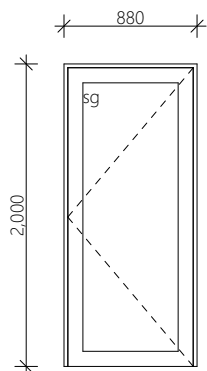




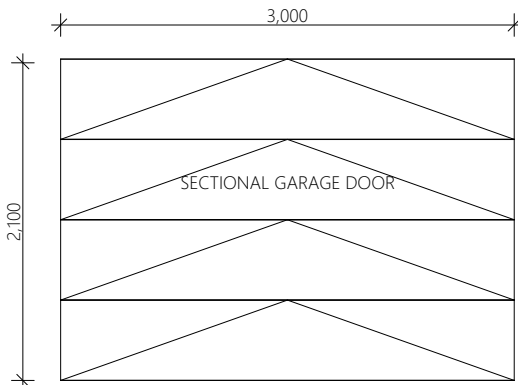
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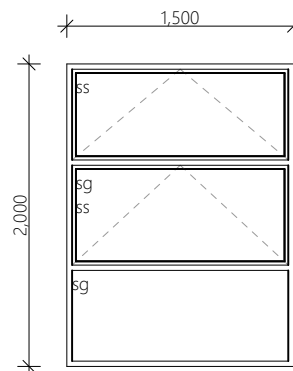
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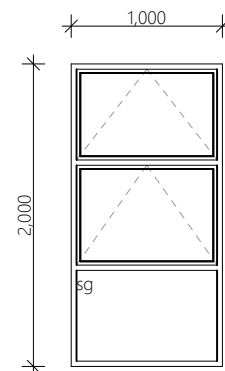
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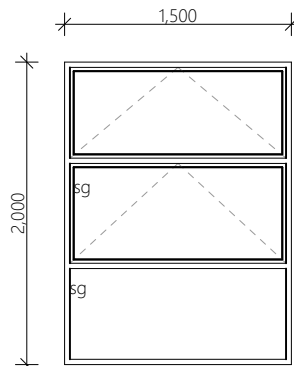
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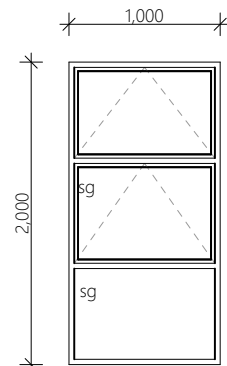
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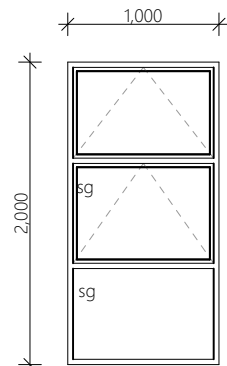
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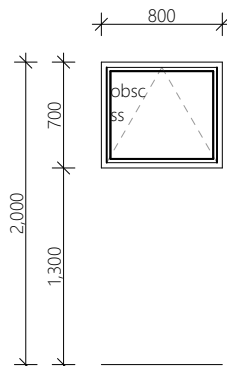
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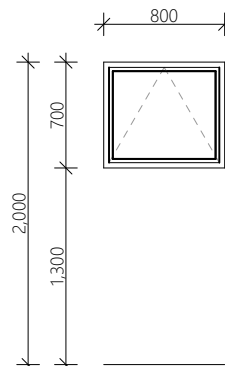
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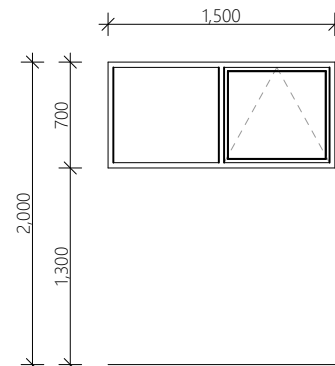
W-05



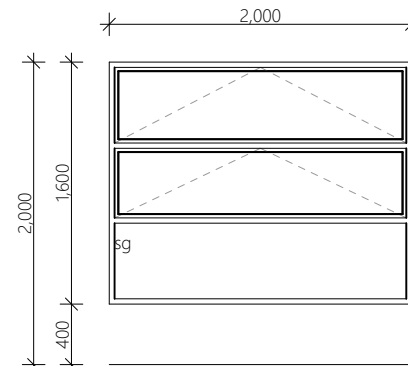
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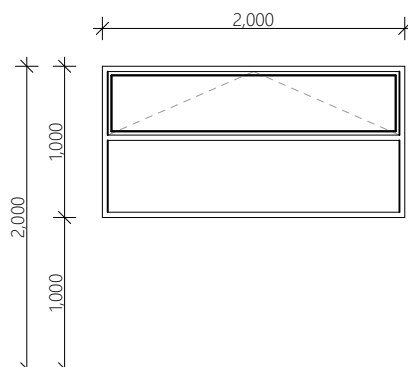
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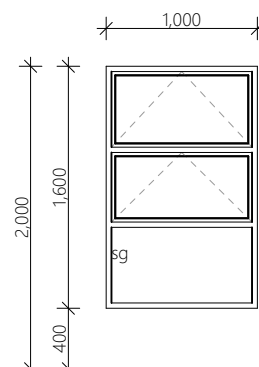
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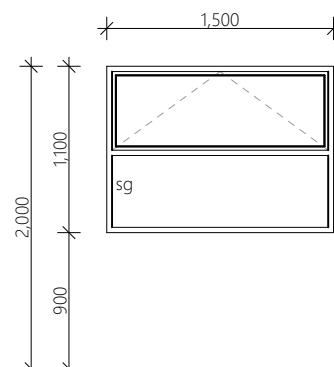
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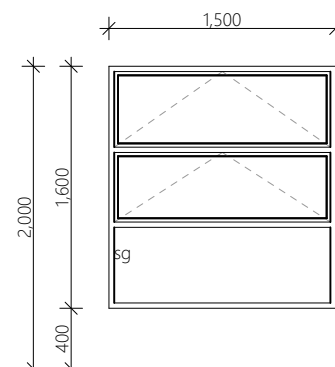
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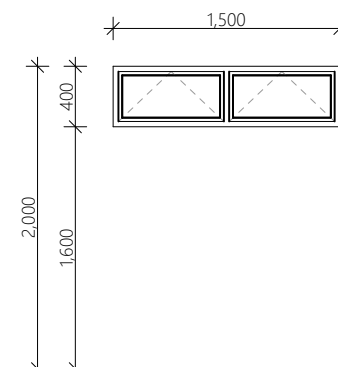
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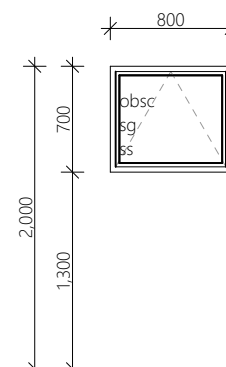
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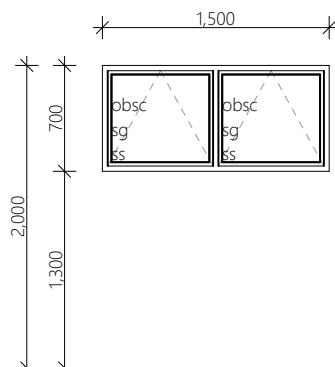
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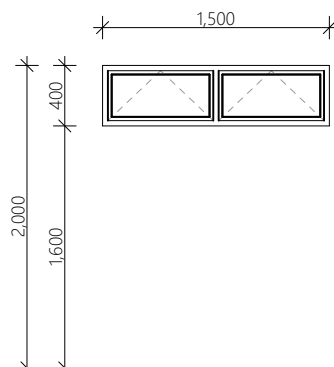
W-14



W-15



W-16



W-17

BC240180
Received by
Kapiti Coast District Council
11/04/2024

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

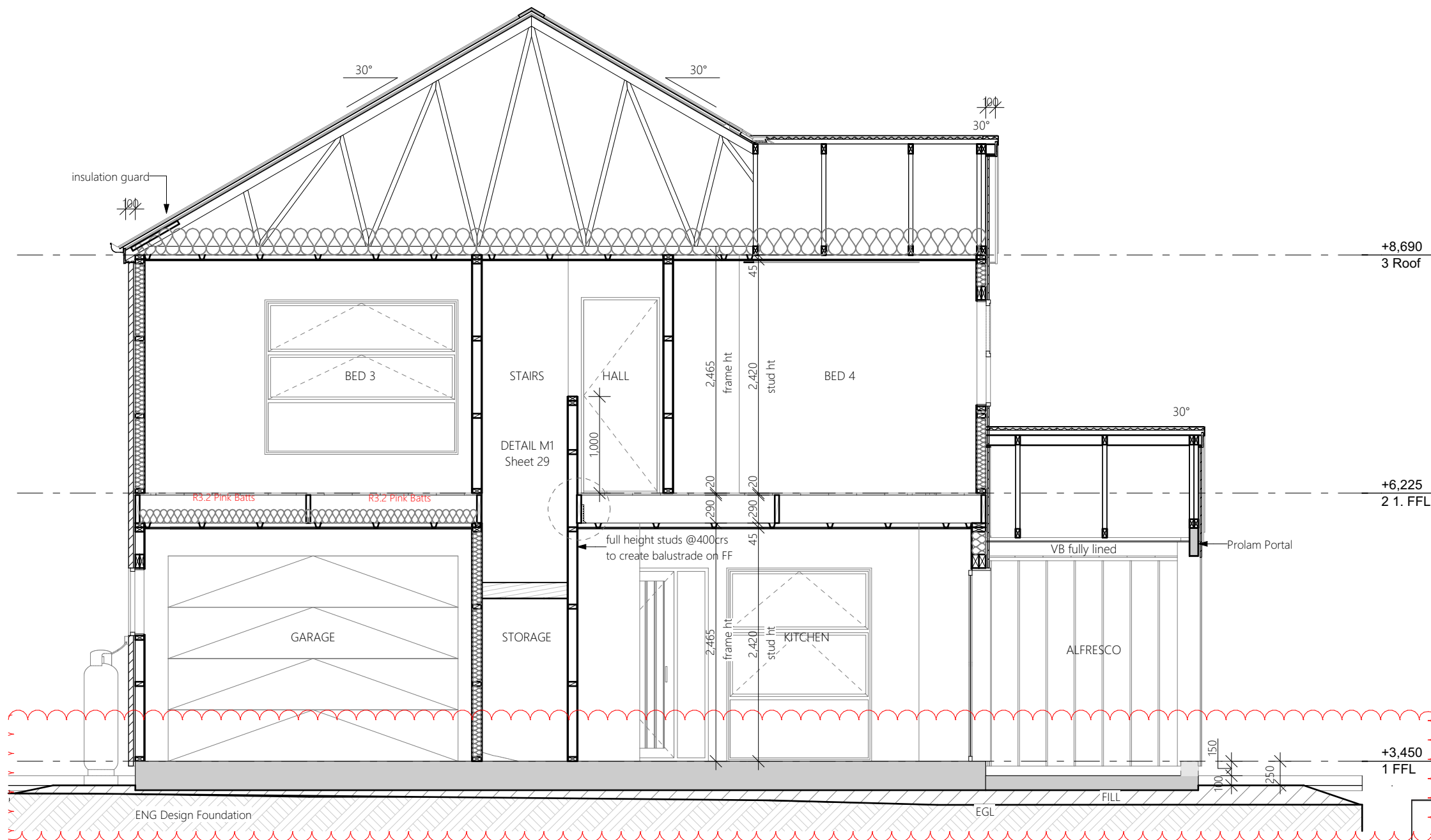
Window restrictors are required to the following sized openings where the adjacent Ground Level is 1.0m below FFL or greater;
- openings less than 1.0m wide with sill ht within 760mm of FFL
- openings more than 1.0m wide with sill ht within 1000mm of FFL

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

Joinery:
Thermally Broken Frame R 0.50

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							Rev:				
		Design: spacelab.	Drawn: MPP/UP	Check: UP	LBP: UP	Date: 28/03/2024	Call 0800 A1homes 2 1 4 6 6 3 www.A1homes.co.nz				
		Wind: VERY HIGH	Earthq: 3	Exposure: D (SS)	Snow: N1	Climate: 3					



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.

BC240180
Further Information Received
16/5/2024

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, peststock	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.

Microclimatic Considerations:

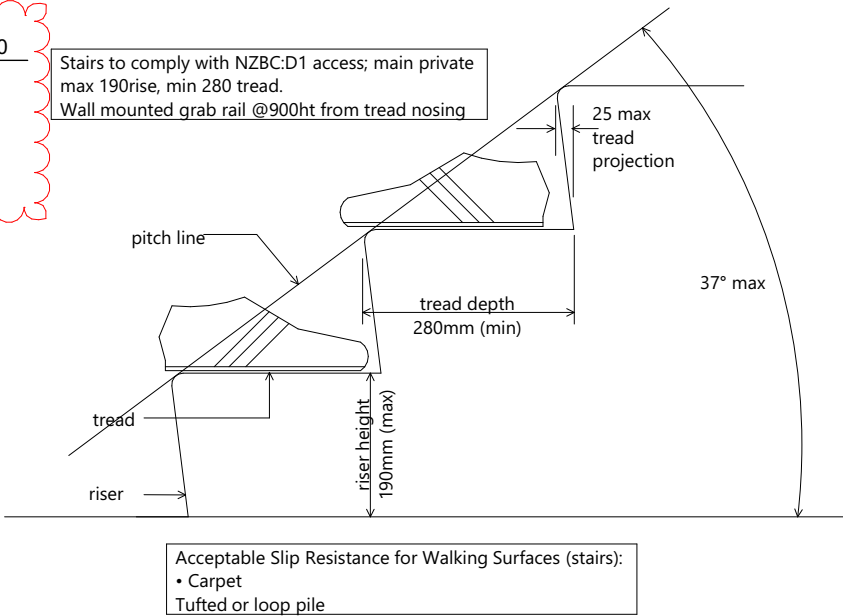
In addition to exposure zones, evidence of local environmental effects (microclimates), and those produced by the erection of a structure or installation of equipment, shall be considered.

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 source.

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

- 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 %.



Scale: 1:50 Sheet no: 17
Rev: B
Date: 15/05/2024
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Cross Section BB				
Design: spacelab.	Drawn: MPP/UP	Check: UP	LBP: UP	
Wind:	Earthq:	Exposure:	Snow:	Climate:
VERY HIGH	3	D (SS)	N1	3

Client Details:
Black Pearl Developments Ltd

Address:
206 Manly Street
Paraparaumu / Kapiti Coast

Job no: **AW517A**

New Design



Bracing Design

The PLX Portal has been independently tested using the BRANZ P21 test methodology for use for NZS3604 style residential buildings.

The PLX Portal has a ductility of $\mu = 3.0$, making it compatible with NZS3604 bracing systems.

The PLX Portal can be used for both timber and concrete subfloors in accordance with NZS3604 (refer to Detail 2).

Bracing values may be used for lintel spans up to 5.2m.

The walls adjacent to the portal shall be attached at top plate level with a 6kN connection as per NZS3603 cl. 8.7.3.3 (b)

PLPF200 Bracing Capacity						
Nominal Stud Height (m)	Max. Opening Height (m)	Max. Opening Width (m)	Max. Portal Height (m)	Max. Total Portal Width (m)	Wind Bracing (BUs)	Earthquake Bracing (BUs)
2.4	2.26	5.2	2.55	5.92	160	195
2.7	2.46	5.2	2.75	5.92	150	185
3.0	2.76	5.2	3.05	5.92	145	175

Notes: Refer product table for specification codes

1. The Portal height is taken from floor level to top of column. For different columns heights the values above may be interpolated.

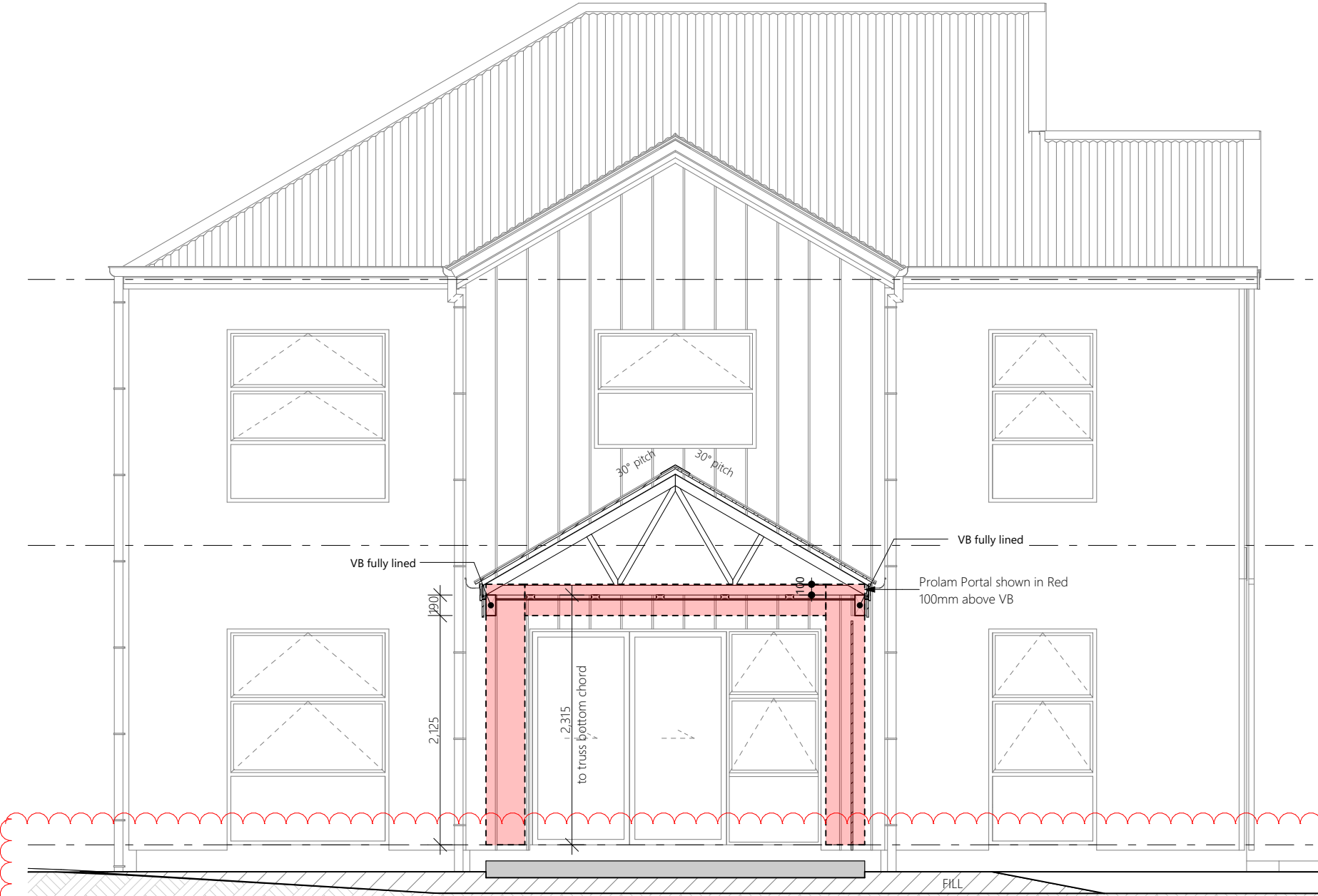
2. The same bracing units apply to shorter lintel spans.

PLX Portal Product Codes

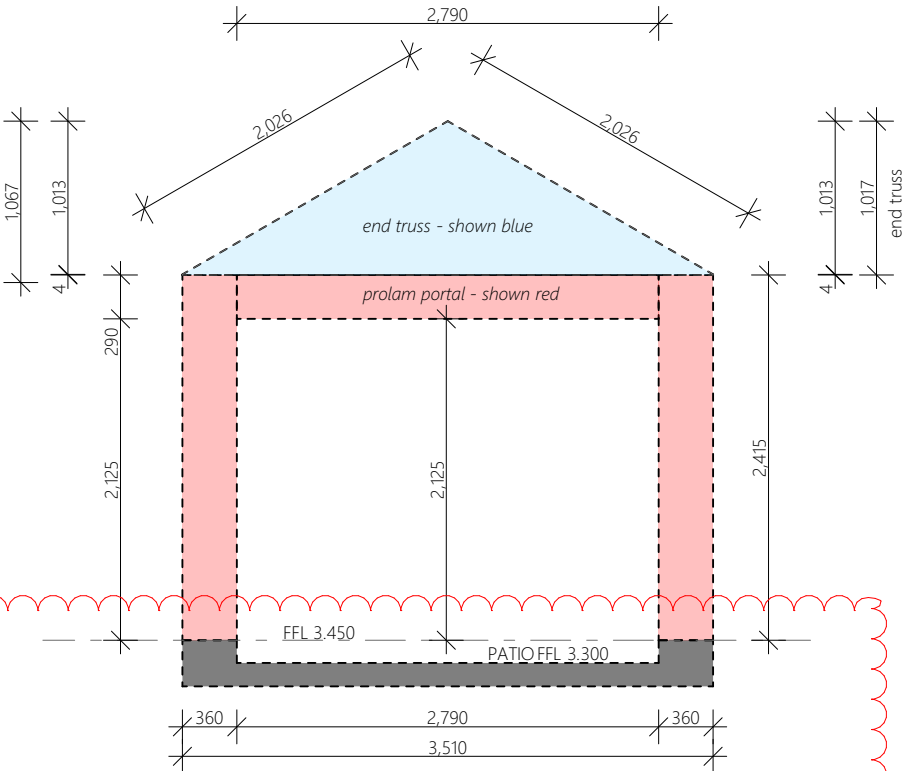
PLX Portal Product Codes			
Nominal Stud Height (m)	2.4	2.7	3.0
Max. Opening Height (m)	2.26	2.46	2.76
Max. Portal Height (m)	2.55	2.75	3.05
2.40 to 2.70	PLXP200H1-2.4H-2.7L	PLXP200H1-2.7H-2.7L	PLXP200H1-3.0H-2.7L
2.70 to 3.00	PLXP200H1-2.4H-3.0L	PLXP200H1-2.7H-3.0L	PLXP200H1-3.0H-3.0L
3.00 to 3.30	PLXP200H1-2.4H-3.3L	PLXP200H1-2.7H-3.3L	PLXP200H1-3.0H-3.3L
3.30 to 3.60	PLXP200H1-2.4H-3.6L	PLXP200H1-2.7H-3.6L	PLXP200H1-3.0H-3.6L
3.60 to 3.90	PLXP200H1-2.4H-3.9L	PLXP200H1-2.7H-3.9L	PLXP200H1-3.0H-3.9L
3.90 to 4.20	PLXP200H1-2.4H-4.2L	PLXP200H1-2.7H-4.2L	PLXP200H1-3.0H-4.2L
4.20 to 4.50	PLXP200H1-2.4H-4.5L	PLXP200H1-2.7H-4.5L	PLXP200H1-3.0H-4.5L
4.50 to 4.80	PLXP200H1-2.4H-4.8L	PLXP200H1-2.7H-4.8L	PLXP200H1-3.0H-4.8L
4.80 to 5.10	PLXP200H1-2.4H-5.1L	PLXP200H1-2.7H-5.1L	PLXP200H1-3.0H-5.1L
5.10 to 5.20	PLXP200H1-2.4H-5.4L	PLXP200H1-2.7H-5.4L	PLXP200H1-3.0H-5.4L

Notes: For PLXP200 allow 360mm each side of opening for portal legs (total portal width = opening width + 0.72m)

Height may be altered (legs shortened) as required to give reduced opening and total portal heights (total portal height = opening height + 0.29m).



Cross Section CC



Prolam Portal & EndTruss Detail

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Cross Section CC

Design: spacelab. Drawn: MPP/UP Check: UP LBP: UP

Wind: VERY HIGH Earthq: 3 Exposure: D (SS) Snow: N1 Climate: 3

Scale: Rev: B Date: 15/05/2024

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Sheet no: 18

Client Details: Black Pearl Developments Ltd

Address: 206 Manly Street Paraparaumu / Kapiti Coast

Job no: AW517A

New Design