SITE DETAILS

ADDRESS:	23 Te Rata Blvd, Paerata Rise Paerata
DURABILITY ZONE:	C
EARTHQUAKE ZONE:	1
WINDZONE:	High
LEGAL DESCRIPTION:	LOT 45, DP 567764
SITE AREA:	435m²
ZONING:	Residential Mixed Housing Zone - Urban Franklin 2 precinct

BUILDING COVERAGE

MAX. 40% OF 435m²
= 174.0m²

BUILDING AREA inc. eaves over 600mm 168.9m²

38.8% complying

IMPERVIOUS AREA

MAX. 60% OF 435m²
= 261m²

BUILDING AREA inc. eaves over 600mm 168.9m²

PAVED AREA 31.6m²

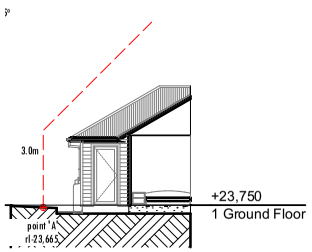
IMPERVIOUS AREA 46.1%

LANDSCAPED AREA

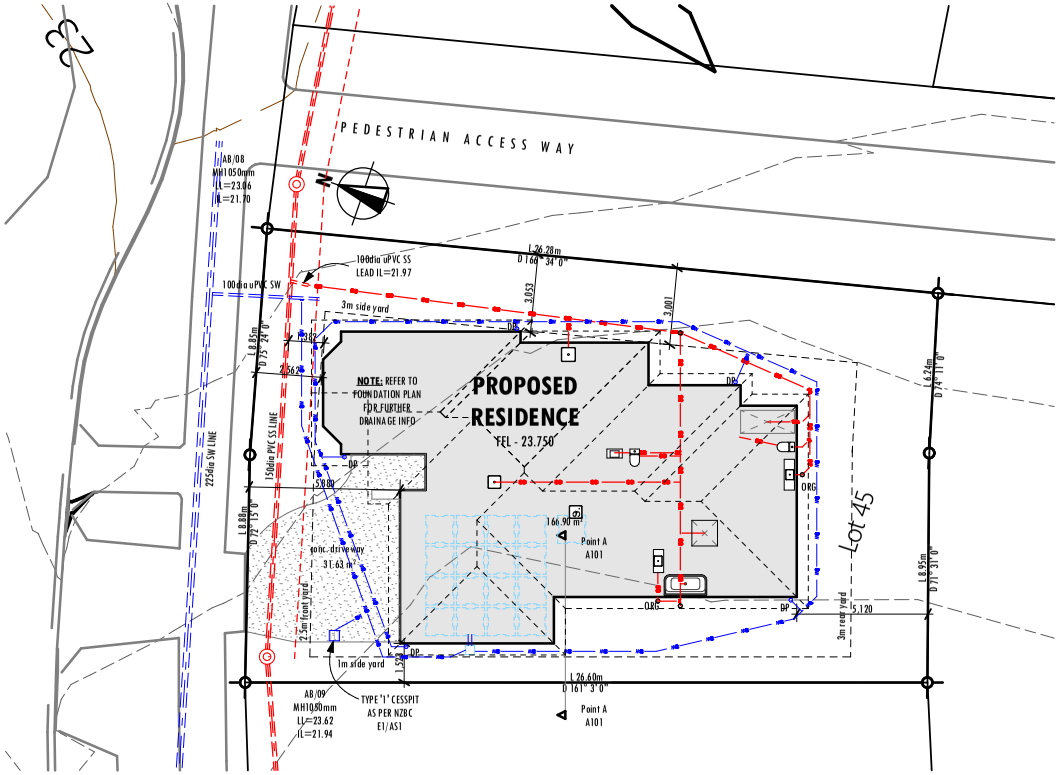
MIN. 35% OF 435m²
= 152.3m²

BUILDING AREA 166.9m²
PAVED AREA 31.6m²
435 - 166.9 - 31.6 = 236.5m²

LANDSCAPED AREA 54.4%



HIRB Point A 1:200



Site Plan 1:200

Layout	Sheet Name
Working Drawings	
	Cover Page
A1 Plans	
A101	Site Plan
A102	Earthworks Plan
A103	Floor Plans
A104	Lintel Plan
A105	Lintel Fixing Details
A106	Bracing Plan
A107	Gib Board Details
A108	Gib Board Details
A109	Bracing Details
A110	Foundation Plan
A111	Roof Framing Plan
A112	Wall Connection Details
A2 Sections	
A201	Sections
A3 Elevations	
A301	Elevations
A302	Elevations
A4 Details	
A401	Foundation Details
A402	Foundation Details
A403	Roof Details
A404	Roof Details
A405	Roof Details
A406	Roof Details
A5 Wet Area Details	
A501	Wet Area Details
A502	Wet Area Details
A503	Gib Aqualine Details
A6 Schedules	
A601	~~Door & Window Schedule~~
A7 Cladding Details	
A701	Cladding Details
A702	Cladding Details
A703	Cladding Details
A704	Cladding Detail
A705	Velux Details

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Site Plan SHEET No: A101

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

All construction shall be in accordance with NZBC handbook and approved documents, NZS3604:2011 and local territorial authority requirements. All plans & building work is subject to council approval. All dimensions & underground service locations to be checked prior to commencement of all works. DO-NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering any materials. Contractor must locate relevant boundary pegs before commencing any works.

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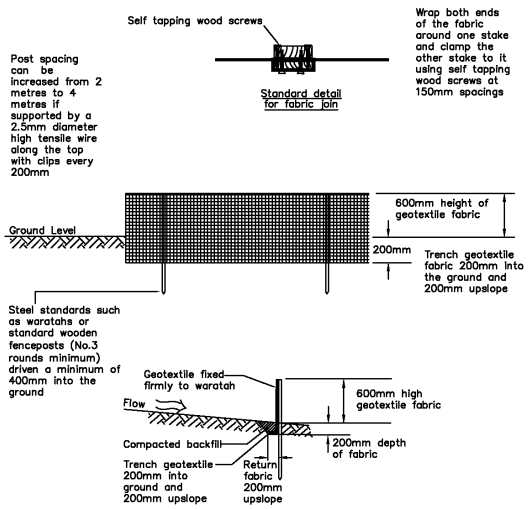
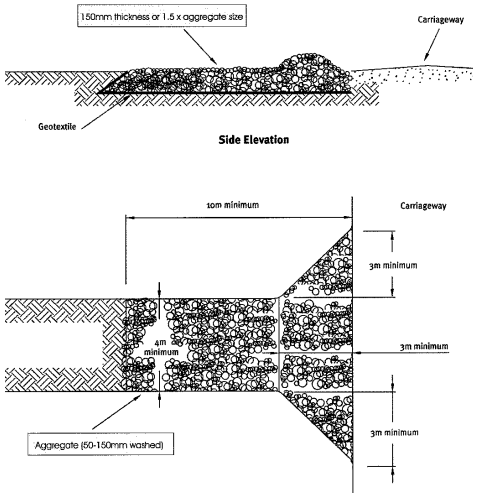
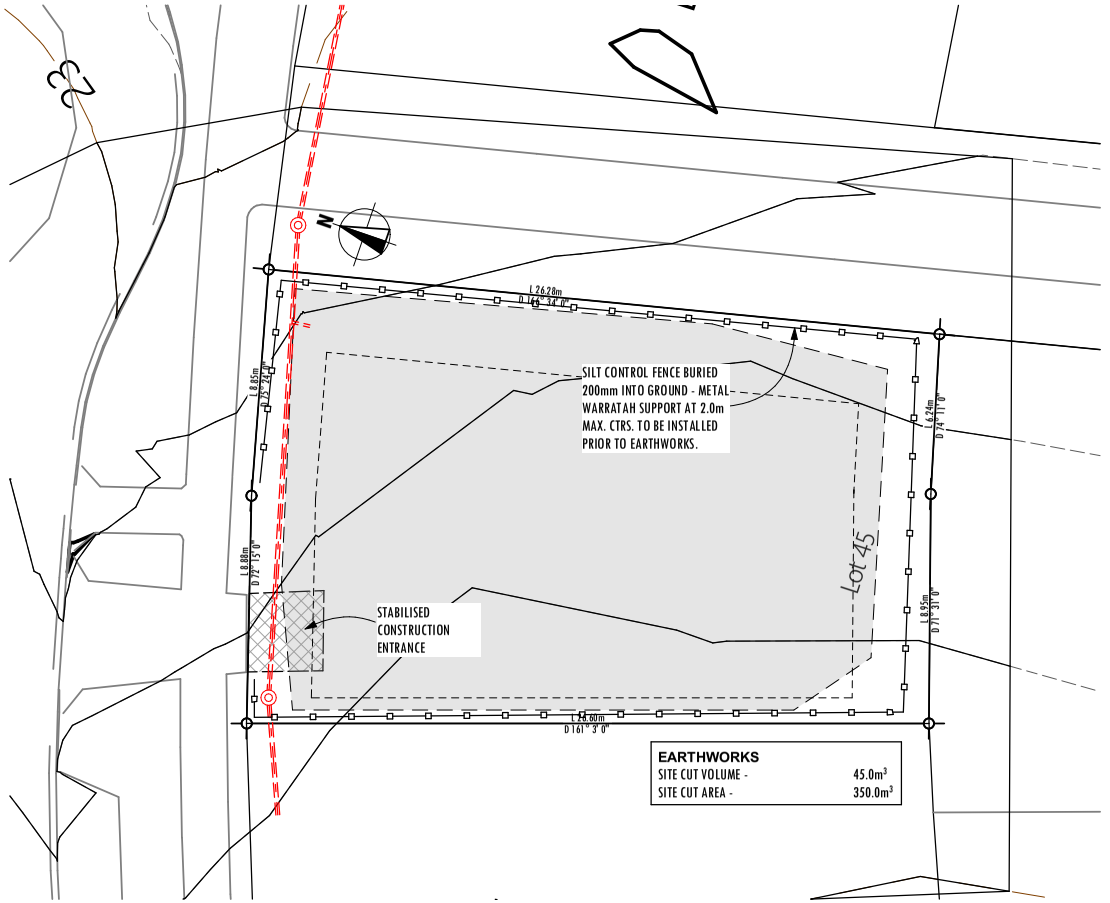


Silt Fence Detail



Entrance Way Detail



1 Earthworks Plan 1:200

NZBC F5/AS1 COMPLIANCE

SITE AREA IS FULLY FENCED - 1.8m HIGH TEMPORARY WIRE FENCING TO REMAIN IN PLACE FOR THE DURATION OF THE CONSTRUCTION PERIOD

SEDIMENT CONTROL PLAN

THE CONTRACTOR MUST PREVENT ANY SEDIMENT WHICH IS A RESULT FROM DEMOLITION OR GROUND WORKS, FROM ENTERING THE EXISTING STORMWATER DRAINAGE SYSTEM.

ALL SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO ANY EARTHWORKS AND ARE TO BE CHECKED AND MAINTAINED EVERY DAY.

USE THE FOLLOWING STEPS:

RETAIN VEGETATIVE BUFFER ZONES INSIDE SITE BOUNDARIES, TO ALL SIDES OF PROJECT. OR REPLACE WITH 'SILT SOCKS' OR 'TURF FILLER STRIPS' WHERE NOT POSSIBLE.

AND
PLACE APPROPRIATE 'SILT' SOCK SEDIMENT CONTROL AT LOCATIONS WITH INCREASED RUN OFF POTENTIAL

AND
INSTALL TEMPORARY FILTER CLOTH UNDER THE GRATING OF THE RELEVANT LOCAL CATCH PITS (CARRY OUT WATER RUN OFF TESTS IF NECESSARY TO DETERMNE AFFECTED PITS).

VEHICLES
PROVIDE STABLISED ENTRY PAD & WASH DOWN AREA FOR CONTRACTOR VEHICLES IN ACCORDANCE WITH ECAN SEDIMENT CONTROL FOR SMALL SITES

VEHICLES INVOLVED IN THE EXCAVATION WILL BE DELIVERED TO SITE AND THEN REMOVED VIA TRUCK.

EXCESS SOIL
EXCAVATED TOPSOIL IS TO BE SPREAD AROUND THE SITE AND FLATTENED WHERE POSSIBLE. WHILE STORED ON SITE ALL SOIL IS TO BE COVERED WITH IMPERVIOUS SHEET

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Earthworks Plan

SHEET No: A102

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

All construction shall be in accordance with NZBC handbook and approved documents, NZS3604:2011 and local territorial authority requirements. All plans & building work is subject to council approval. All dimensions & underground service locations to be checked prior to commencement of all works. DO-NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering any materials. Contractor must locate relevant boundary pegs before commencing any works.

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WALL FRAMING:

EXTERIOR WALLS & INTERNAL LOADBEARING:
2.7m - 90 x 45 STUDS AT 600CRS
NOGS @ 800¢ UNLESS OTHERWISE STATED.

INTERNAL NON LOADBEARING WALLS:
90 x 45 STUDS AT 600 CRS.
NOGS @ 800¢ UNLESS OTHERWISE STATED.

EXTERIOR & LOAD BEARING FRAMING SHALL HAVE:
- 90 x 45 TOP PLATES WITH AN ADDITIONAL
90 X 45 PLATE.
- 90 X 45 BOTTOM PLATE

INSTALL ADDITIONAL DWANGS AS REQUIRED FOR WALL MOUNTED JOINERY, GRAB RAILS, SHOWER SCREENS AND THE LIKE.

TOP PLATE FIXING
TYPE 'B' 2/90 x 3.15 END NAILS, PLUS 2 WIRE DOGS, 4.7kN FIXING (TABLE 8.18 NZS 3604:2011)

BOTTOM PLATE FIXING TYPICAL:
(ON CONCRETE FLOOR)
90 x 45 BOTTOM PLATES SHALL BE FIXED TO THE CONCRETE FLOOR WITH:
PROPRIETARY POST FIXED ANCHORS WITHIN 150mm OF EACH END OF THE PLATE & BE SPACED AT A max. OF 900mm ¢, OR 600mm ¢ WHEN USED ON SLAB EDGES FORMED BY MASONRY HEADER BLOCKS

FOR EXTERNAL WALLS, PROPRIETARY ANCHORS SHALL HAVE A MINIMUM CAPACITY WHEN TESTED IN ACCORDANCE WITH 2.4.7 OF NZS 3604:2011AS FOLLOWS:
(A) HORIZONTAL LOADS IN THE PLANE OF THE WALL - 2 kN;
(B) HORIZONTAL LOADS OUT OF PLANE OF THE WALL - 3 kN;
(C) VERTICAL LOADS IN AXIAL TENSION OF THE FASTENER - 7 kN.

FOR INTERNAL WALLS, PROPRIETARY ANCHORS SHALL HAVE A MINIMUM CAPACITY WHEN TESTED IN ACCORDANCE WITH 2.4.7 OF NZS 3604:2011AS FOLLOWS:
(A) IN THE PLANE OF THE WALL - 2 kN;
(B) OUT OF THE PLANE OF THE WALL - 2 kN.

TREATMENT REQUIREMENTS FOR FRAMING TIMBER AND WOOD BASED PRODUCTS (AS PER NZS 3602:2003):

ROOF:		
TRUSS FRAMING	H1.2 KD	SG8
LVL MEMBERS	H3.1	
PURLINS	H1.2 KD	SG6
RIDGE AND HIPS	H1.2 KD	SG6
VALLEY BOARDS	H1.2 KD	SG6
WALLS:		
EXTERIOR WALLS	H1.2 KD	SG8
EXTERIOR WALLS LINTELS	H1.2 KD	SG8
LVL LINTELS	H3.1	
CAVITY BATTENS	H3.1	
INTERIOR WALLS	H1.2 KD	SG8
WET AREA WALLS	H1.2 KD	SG8
LANDSCAPING:		
FENCE PAILINGS BATTENS & RAILS	H3.2 WET	SG6
FENCE POST	H4 WET	SG6

THERMAL INSULATION:
REFER SPEFICATIONS FOR H1 REPORT
WALL: R2.8 PINK BATTS OR EQUIVALENT
CEILING: R3.6 PINK BATTS OR EQUIVALENT

WALL LINTEL NOTES

REFER TO SHEET A103 FOR LINTEL SIZES

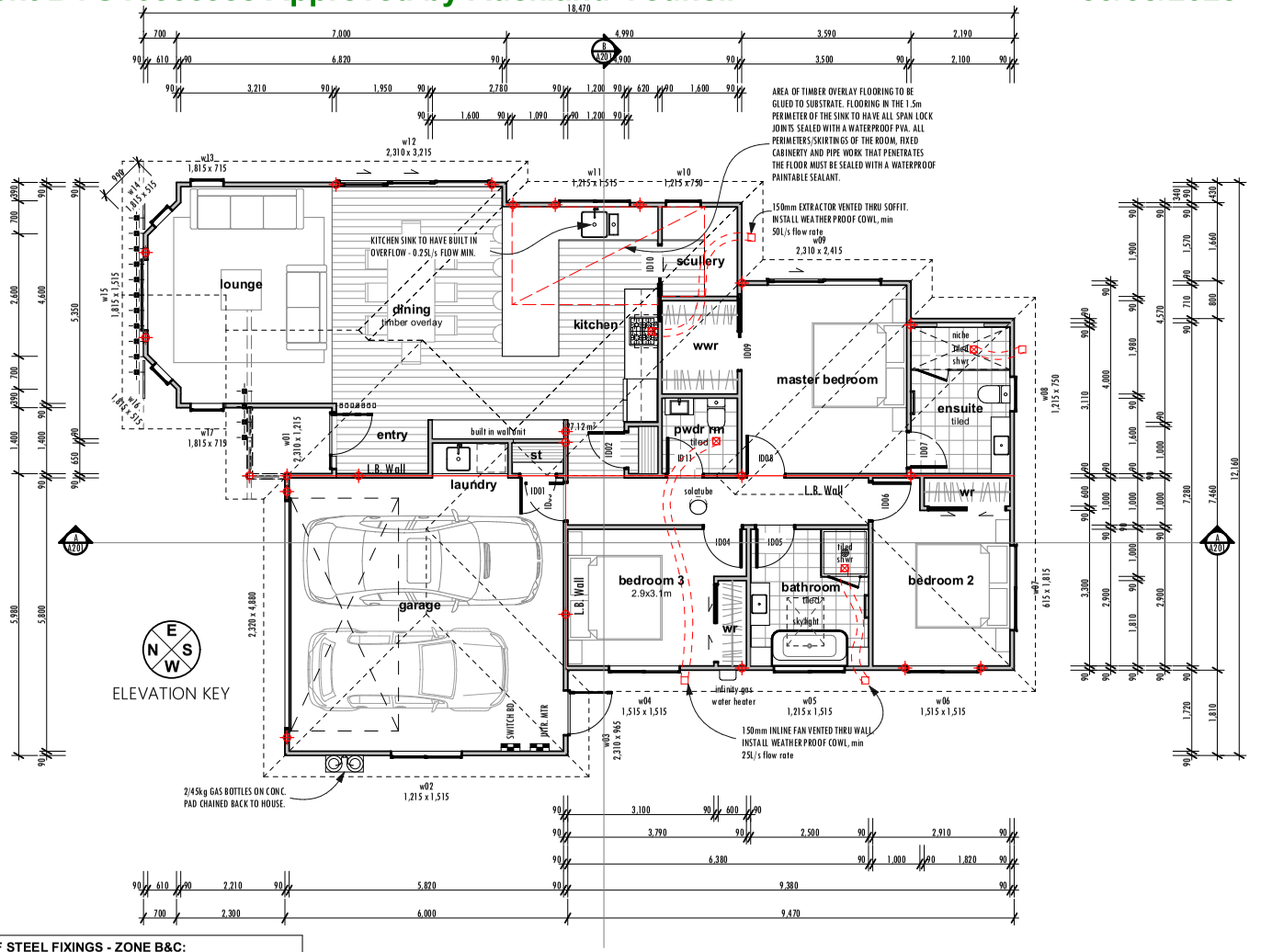
INSTALL IN ACCORDANCE WITH NZS3604:2011, SECTION 8.6.1.8; EACH LINTEL REQUIRED BY TABLE 8.14 TO BE SECURED AGAINST UPLIFT SHALL BE FIXED AT EACH END TO A TRIMMING STUD WHICH IN TURN SHALL BE FIXED TO THE FLOOR FRAMING. EACH FIXING TO BE AS SHOWN IN FIGURE 8.12, OR AN ALTERNATIVE FIXING OF 7.5KN CAPACITY IN TENSION ALONG THE LINE OF THE TRIMMING STUD. REFER NZS3604:2011 FIGURE 8.12

E3 INTERNAL MOISTURE:

WET ROOMS SHALL HAVE TILED FLOORING WHERE SHOWN, LAID WALL TO WALL OVER ARDEX SUPERFLEX WATERPROOFING MEMBRANE.

WET ROOM WALL LININGS TO BE GIB AQUALINE, FINISHED WITH AN IMPERVIOUS COATING THAT IS EASILY CLEANED.

BENCH TOP/VANITY TO WALL JUNCTION SHALL BE SILICONE SEALED.



Floor Plan 1:100

PROTECTION OF STEEL FIXINGS - ZONE B&C:

-All structural fixings in 'exposed' areas or within 600mm of ground shall be Type 304 Stainless steel.

-All structural fixings in 'sheltered' areas shall be Hot-dipped galvanised steel.

-Nail plates in 'closed' areas including roof spaces shall be Continuously coated Galvanised steel

-Wire dogs & bolts in 'closed' areas including roof spaces shall be Hot-dipped galvanised steel.

LEGEND:

(SD) TYPE 1 DOMESTIC SMOKE ALARM, INSTALL IN ACCORDANCE WITH NZS 4514:2009 AND F7/AS1

DOUBLE STUDS UNDER ALL POINT LOADS (GIRDER TRUSSES, BEAMS) UNLESS OTHERWISE STATED

(DS) DS = 2/90 x 45 SG8 STUDS

(TS) TS = 3/90 x 45 SG8 STUDS

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Floor Plans

SHEET No: A103

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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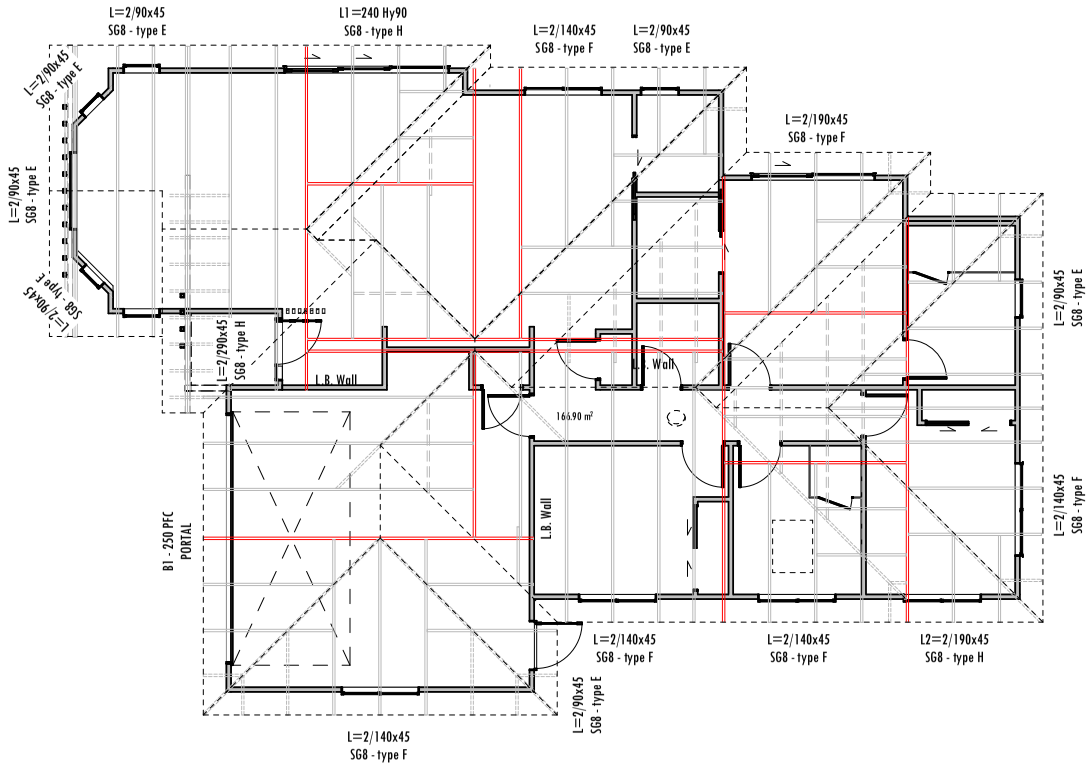

Lintel Plan 1:100

LINTEL/ BEAM SIZES

AS PER TRUSS DESIGN BY CARTERS - REFER SEPC
MiTek GANGNAIL LINTEL SELECTION CHARTS & DESIGNIT SOFTWARE.

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
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DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Lintel Plan

SHEET No: A104

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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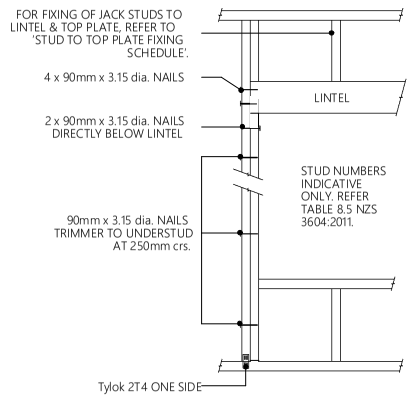
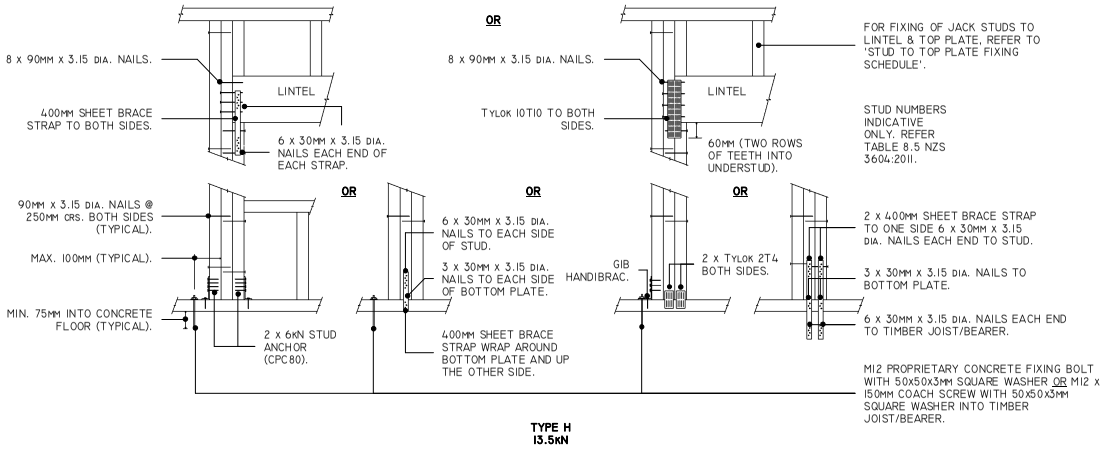
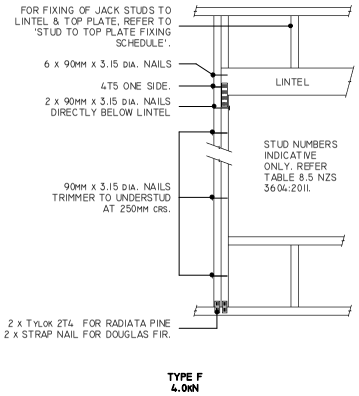


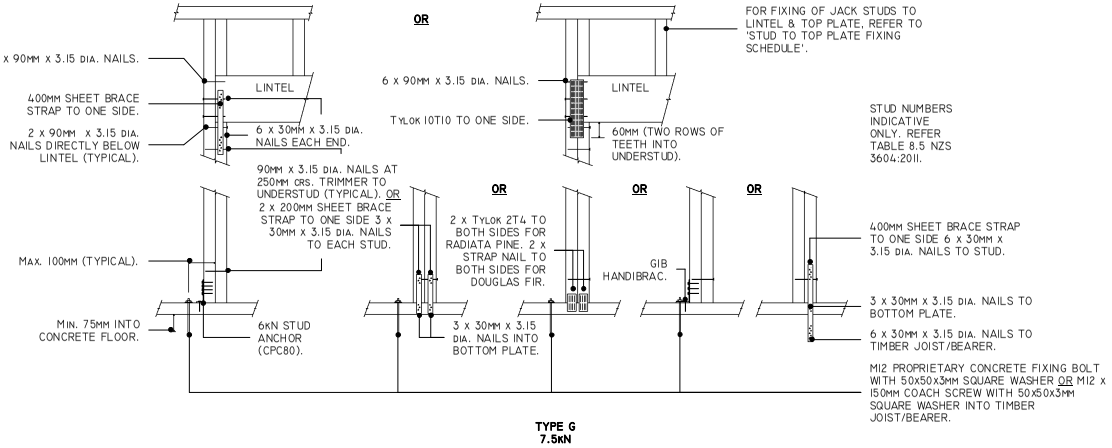
Lumberlok Lintel Fixing - Type E



Lumberlok Lintel Fixing - Type H



Lumberlok Lintel Fixing - Type F



Lumberlok Lintel Fixing - Type G

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Lintel Fixing Details

SHEET No: A105

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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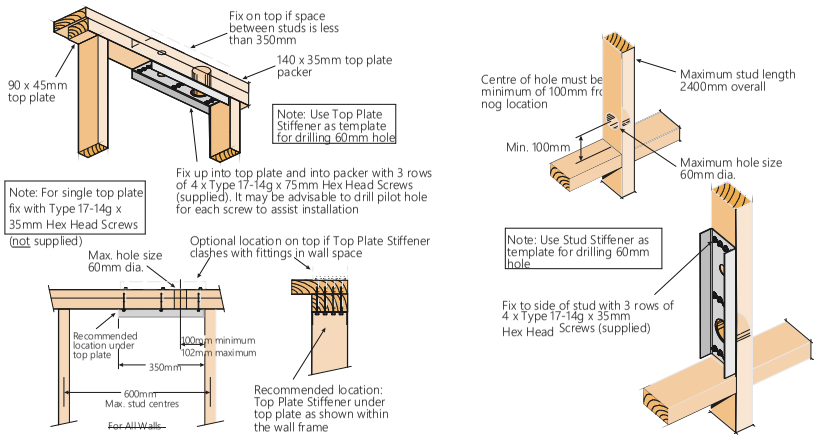
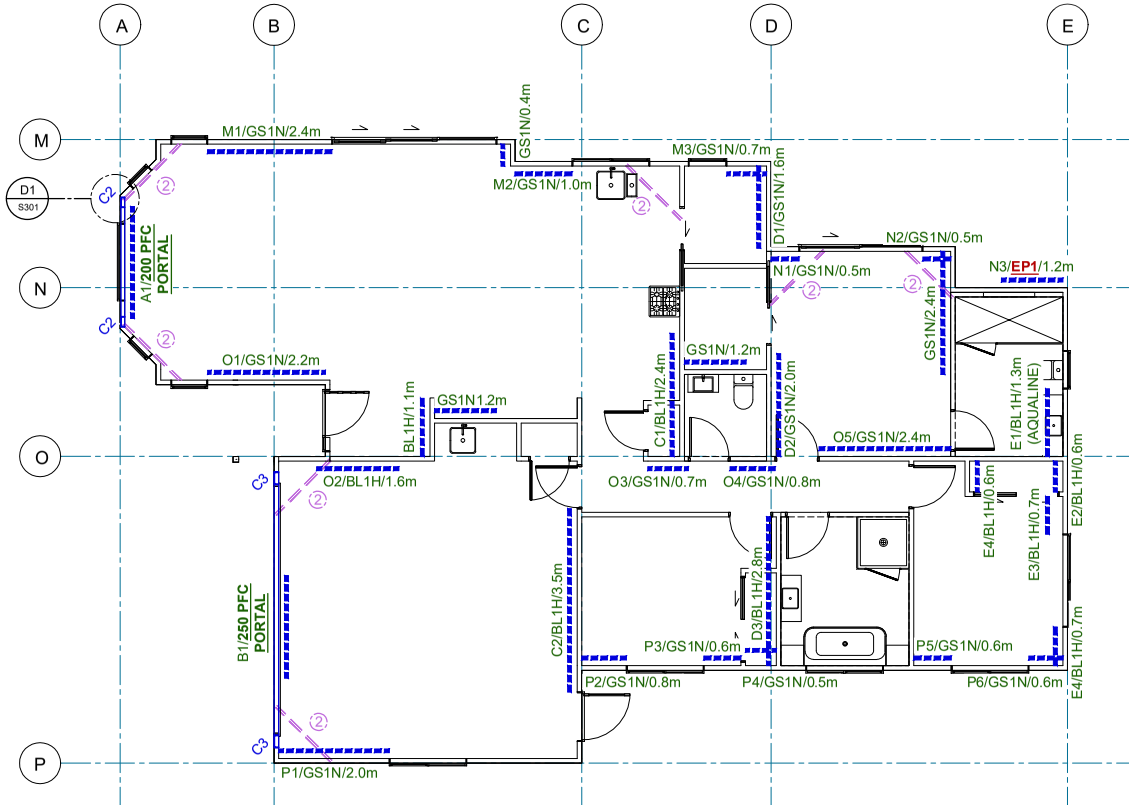


TOP PLATE STIFFNER DETAIL



Wall Bracing Plan 1:1

BRACING NOTES:

OPENINGS ARE ALLOWED WITHIN THE MIDDLE THIRD OF A WALL BRACING ELEMENT"S LENGTH AND HEIGHT. NEITHER OPENING DIMENSION SHALL BE MORE THAN ONE THIRD OF THE ELEMENT HEIGHT. WALL LININGS ARE FIXED TO OPENING TRIMMERS AT 150mm CENTRES. 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. A BLOCK MAY NEED TO BE PROVIDED ALONGSIDE THE PERIMETER STUD.

EXTERNAL PLYWOOD BRACING TO BE INSTALLED PRIOR TO INSTALLING CLADDING. REFER TO MANUFACTURER SPECIFICATION.

KEYS:

② 140x35 CEILING PLANE BRACE OR DRAGON TIES FIXED TO NZS3604

PORTAL SCHEDULE:

LABEL	SIZE	SUPPORT
A1	200 PFC PORTAL	C2
B1	250 PFC PORTAL	C3
C2	200 PFC PORTAL LEG	
C3	250 PFC PORTAL LEG	

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Bracing Plan

SHEET No: A106

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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GIB EzyBrace® Systems specification GS1-N

Specification code	Minimum length (m)	Lining requirement
GS1-N	0.4	Any 10mm or 13mm GIB® Standard plasterboard to one side only

WALL FRAMING
Wall framing to comply with;

- NZBC B1 — Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
- NZBC B2 — Durability B2/AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING
Timber floor
Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor
Internal Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75 x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and 600mm centres thereafter.

External Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for external wall bottom plate fixing.

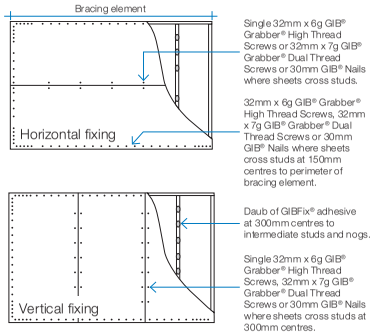
WALL LINING
- Any 10mm or 13mm GIB® plasterboard lining.
- Sheets can be fixed vertically or horizontally.
- Sheet joints shall be touch fitted.
- Use full length sheets where possible.

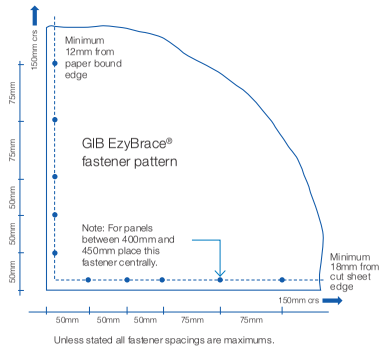
PERMITTED ALTERNATIVES
For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrace® Systems literature.

FASTENING THE LINING
Fasteners
32mm x 6g GIB® Grabber® High Thread Screws, 32mm x 7g GIB® Grabber® Dual Thread Screws or 30mm GIB® Nails. If using the GIBFix® Angle use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Fastener centres
50,100,150, 225, 300mm maximum from each corner and 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm maximum centres to intermediate sheet joints. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING
Joint strength is important in delivering bracing system performance. All fastener heads stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.





Unless stated all fastener spacings are maximums.

In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems

GIB SYSTEM SPECIFICATIONS

GIB EzyBrace® Systems specification BL1-H

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

WALL FRAMING
Wall framing to comply with;

- NZBC B1 — Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
- NZBC B2 — Durability B2/AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING
Timber floor
Use panel hold downs at each end of the bracing element. The GIB HandiBrac® is recommended. See details in GIB EzyBrace® Systems or GIB® Site Guide.

Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or Three power driven 90 x 3.15mm nails at 600mm centres.

Concrete floor
Use panel hold downs at each end of the bracing element. The GIB HandiBrac® is recommended. See details in GIB EzyBrace® Systems or GIB® Site Guide. Within the length of the bracing element bottom plates are to be fixed in accordance with the requirements of NZS 3604:2011.

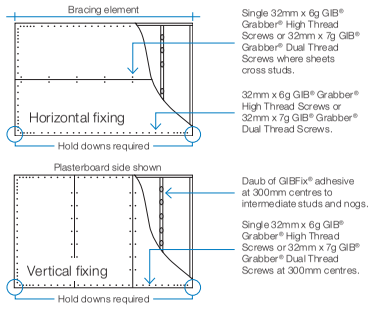
WALL LINING
- A layer of 10mm or 13mm GIB Braceline®
- Sheets can be fixed vertically or horizontally.
- Sheet joints shall be touch fitted.
- Use full length sheets where possible.

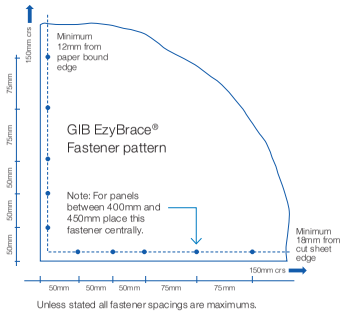
PERMITTED ALTERNATIVES
For permitted GIB® plasterboard alternatives refer to p. 5 in GIB EzyBrace® Systems literature.

FASTENING THE LINING
Fasteners
32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws. If using the GIBFix® Framing System or if fastening through GIBFix® Angles use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Fastener centres
50,100,150, 225, 300mm from maximum each corner and 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm maximum centres to the sheet joint. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIBFix® adhesive at 300mm maximum centres to intermediate studs. Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING
Joint strength is important in delivering bracing system performance. All fastener heads stopped and all sheet joints GIB® Joint Tape reinforced and stopped in accordance with the GIB® Site Guide.





Unless stated all fastener spacings are maximums.

In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Gib Board Details

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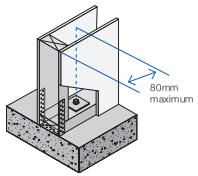
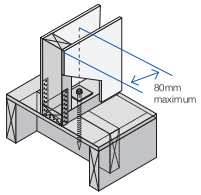
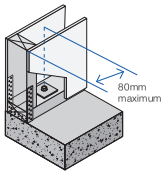
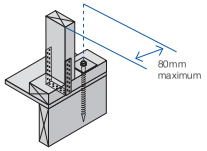
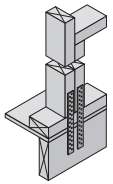
Bracing strap installation

Care needs to be taken with the installation of the bracing strap. It should be checked in to be flush with the face of the stud providing a flat substrate for the plasterboard and positioned in such a way that the corner fastenings of the bracing element are not affected by it. Keeping the strap to the edge of the end stud as shown will allow the corner fastenings to be installed without having to penetrate the bracing strap.

Concrete floor	Timber floor
400 x 25 x 0.9mm galvanised strap to pass under the plate and up the other side of the stud. Six 30 x 2.5mm flat head galvanised nails to each side of the stud. Three 30 x 2.5mm flat head galvanised nails to each side of the plate. Hold down bolt with 50 x 50 x 3mm washer to be fitted within 80mm of the end of the element.	
Internal wall	
 GEB004	 GEB005
External wall	
 GEB006	 GEB007
Note: Where applicable drawings have been produced for CAD design. These are identified by a unique number in the bottom corner of each detail box that can be found at gib.co.nz/library.	2/300 x 25 x 0.9mm galvanised straps with six 30 x 2.5mm flat head galvanised nails to each stud and into the floor joist and three nails to the plate. Block to nog fixed with 3/100 x 3.75mm nails to stud.
	 GEB008
Hold-down fastener requirements	
Concrete floor	Timber floor
A mechanical fastening with a minimum characteristic uplift capacity of 15kN fitted with a 50 x 50 x 3mm square washer within 80mm of the ends of the bracing element.	12 x 150mm galvanised coach screw fitted with a 50 x 50 x 3mm square washer within 80mm of the ends of the bracing element

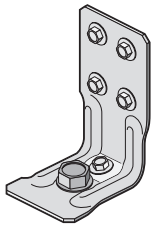
GIB DESIGN AND CONSTRUCTION

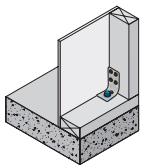
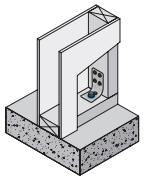
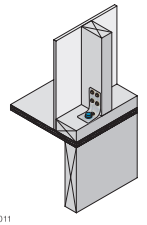
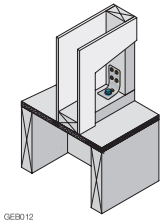
GIB HandiBrac® installation

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

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

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



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

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

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DRAWING INFO

Gib Board Details

SHEET No: A108

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7.7 ECOPLY® BARRIER BRACING SPECIFICATION – EPB1

Table 5: Sided Structural Plywood Brace

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

Framing

Wall framing must comply with:

- NZBC B1 - Structure: AS1 Clause 3 Timber (NZS 3604).
- NZBC B2 - Durability: AS1 Clause 3.2 Timber (NZS 3602).

Framing dimensions and height are as determined by the NZS 3604 stud and top plate tables for load bearing and non load bearing walls. Kiln dried verified structural grade timber must be used. Machine stress graded timber of minimum SG8, such as Laserframe®, is recommended.

Bottom Plate Fixing

Use GIB HandiBrac® hold-down connections at each end of the bracing element. Refer to manufacturer installation instructions supplied with the connectors for correct installation instructions and bolt types to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are fixed in accordance with the requirements of NZS 3604.

Lining

One layer of 7mm Ecoply® Barrier vertically fixed directly to framing. If part sheets are used, ensure nailing at required centres is carried out around the perimeter of each sheet or part sheet. A 2-3mm expansion gap should be left between sheets.

Fastening Ecoply® Barrier Panels

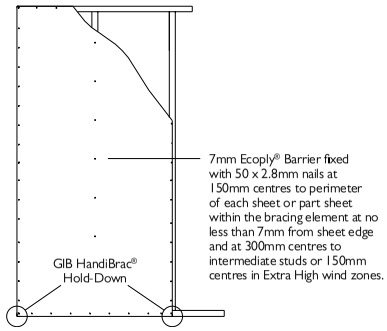
Fasteners

Fasten with 50 x 2.8mm galvanised or stainless steel flat head nails direct fix. Place fasteners no less than 7mm from sheet edges. Screws cannot be used. Power driven nails are suitable. Do not overdrive, nails must be full round head.

In certain circumstances stainless steel fasteners may be required. Refer to section 7.1 in the Ecoply Barrier Specification and Installation Guide for these circumstances and further fastener selection advice. Where stainless steel nails are required, annular grooved nails must be used.

Fastening Centres

Fasteners are placed at 150mm centres around the perimeter of each sheet and 300mm centres to intermediate studs or 150mm centres in Extra High wind zones. Where more than one sheet forms the brace element each sheet must be nailed off independently.



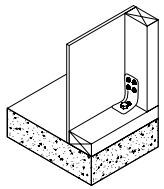
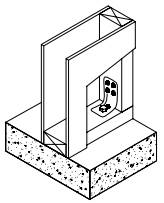
Ecoply Barrier Brace - EBP1

7.11 GIB HANDIBRAC® - RECOMMENDED INSTALLATION METHOD

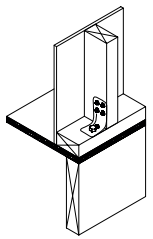
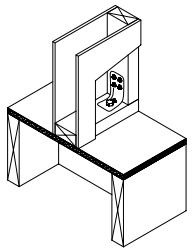
Developed in conjunction with MiTek®, the GIB HandiBrac® has been tested for use as a hold-down in all EPB bracing elements.

- The GIB HandiBrac® registered design provides for quick and easy installation.
- The GIB HandiBrac® provides a flush surface for the wall linings because it is fitted inside the framing. There is no need to check in the framing as recommended with conventional straps.
- The GIB HandiBrac® is suitable for both new and retrofit construction.
- The design also allows for installation and inspection at any stage prior to fitting internal linings.

Concrete Floor

External Walls	Internal Walls
	
Position GIB HandiBrac® as close as practicable to the internal edge of the bottom plate.	Position GIB HandiBrac® at the stud/ plate junction.
Hold-down Fastener Requirements	
A mechanical fastening with a minimum characteristic uplift capacity of 15kN or screw bolt supplied with the bracket.	

Timber Floor

External Walls	Internal Walls
	
Position GIB HandiBrac® in the centre of the perimeter joist or bearer.	Position GIB HandiBrac® in the centre of the floor joist or full depth solid block.
Hold-down Fastener Requirements	
M12 x 150mm galvanised coach screw or screw bolt supplied with the bracket.	

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Ecoply Barrier Hold Down Details

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

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DRAWING INFO

Bracing Details

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FOUNDATION NOTES

CONTRACTOR TO CROSS REFERENCE THE FOUNDATION PLAN WITH THE FLOOR PLAN PRIOR TO SETTING OUT SLAB.

FOUNDATION AS PER ENGINEERS DESIGN. ALL PLANS AND DETAILS TO BE READ IN CONJUNCTION WITH ADJOINING ENGINEERS DESIGN. IF ANY DISCREPANCIES OCCUR ENGINEERS DESIGN TO TAKE PRECEDENCE.

THE CONTRACTOR SHALL ACCURATELY LOCATE THE POSITIONS OF ALL PUBLIC DRAINS ON SITE PRIOR TO STARTING WORK. ANY DISCREPANCIES FOUND IN THESE DRAWINGS ARE TO BE MADE KNOW TO THE NAVIGATION HOMES BEFORE COMMENCING ANY FURTHER WORKS.

DRAINLAYER TO CONFIRM PLUMBING/ DRAINAGE ROUTES BEFORE POURING OF CONCRETE SLAB. PLUMBING/ DRAINAGE AS PER AS/NZS 3500.2.2:2003.

BAY DIMENSIONS FORMED BY SAWCUTS SHALL BE LIMITED TO A MAXIMUM RATIO OF LENGTH:WIDTH OF 2:1. SAWCUTS SHOULD BE CARRIED OUT ABOUT 24 HOURS AFTER SLAB HAS BEEN POURED.

CONTRACTOR TO ENSURE ALL CONCRETE ENCASED SERVICES ARE IN PLACE BEFORE POURING OF CONCRETE SLAB. WHERE SERVICE PIPES PASS THROUGH SLAB WRAP IN PROTECTIVE TAPE TO ALLOW FOR MOVEMENT. TAPE PIPES TO SEAL PENETRATIONS WHERE THEY PASS THROUGH THE DPM.

FOUNDATION PLUMBING NOTES

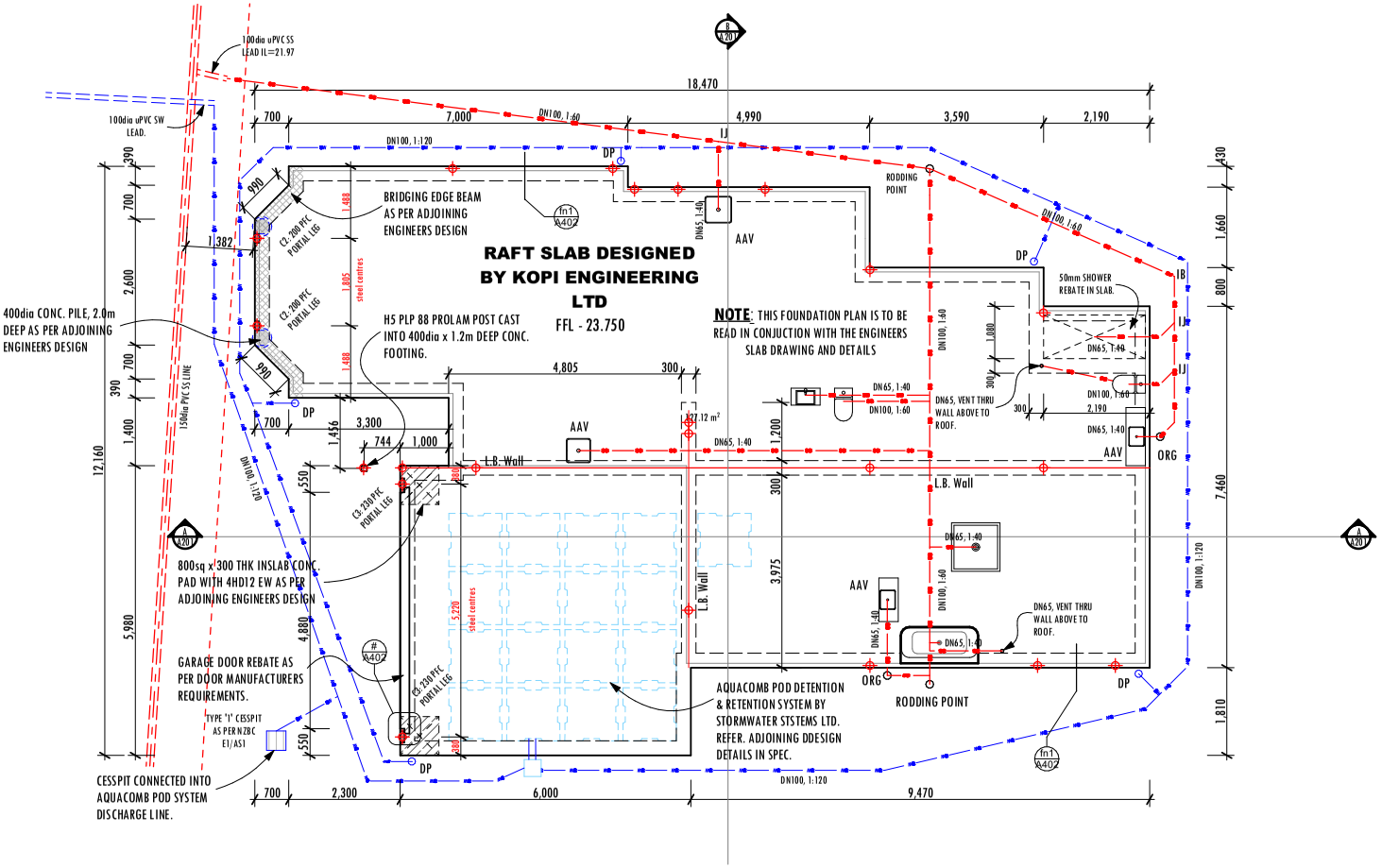
PLUMBING TO AS/NZS:3500.2.2 (min. 1:60 PIPE GRADIENT) BY QUALIFIED TRADESMAN.
CONTRACTOR TO LOCATE ALL SERVICE CONNECTION ON SITE PRIOR TO EARTHWORKS.

ALL WASTE PIPES PVC. SIZES, FALLS, VENTING, LOCATIONS AND DISCHARGE TO BE CONFIRMED BY NZ QUALIFIED PLUMBER.

MIN. PVC FIXTURE WASTE SIZES:
DN40 BASINS, DN40 SINGLE HEAD SHOWERS, BATHS, SINKS & LNDY TUBS.
DN50 MULTIPLE HEAD SHOWERS, DN65 UNVENTED BRANCH DRAINS MIN 1:40 GRADIENT
20mm HWC COPPER VENT DRAIN.
DN100 SOIL STACK DRAIN FROM UPPER FLOOR TO SLAB.

65mm DIA uPVC TERMINAL VENT AND CAP TO ROOF, WEATHERPROOF BY PLUMBER WITH COMPATIBLE FLASHING SEALED TO ROOF.

REVIEWED
By chande at 10:36 am, May 24, 2023



1 Foundation Plan 1:100

PROJECT	DRAWING ISSUE		
PROPOSED DWELLING	REV.	DATE	DESCRIPTION
23 Te Rata Blvd Paerata 23 Te Rata Blvd Paerata Auckland			

DRAWING INFO

Foundation Plan — SHEET No: A110

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ROOF PLAN NOTES

ROOF PITCH - 30deg
C/STEEL CORR. LONGRUN ROOFING
70x45 PURLINS AT 900crs
TIMBER TRUSSES DESIGNED BY MANUFACTURER
155 METALCRAFT FASCIA, COLOURSTEEL GUTTERING
OVERHANG - AS SHOWN, 4.5mm HARDIFLEX SOFFIT LINING WITH JOINTERS
PAINTED 80ø COLORSTEEL DOWNPIPES
WIND ZONE- HIGH

ROOF BRACING AS PER NZS3604:2011 TABLE 10.16

LIGHT PITCHED

ROOF PLANE DIAGONAL BRACE (RPB)
ONE PER 50m2 OF ROOF PLANE PLAN AREA

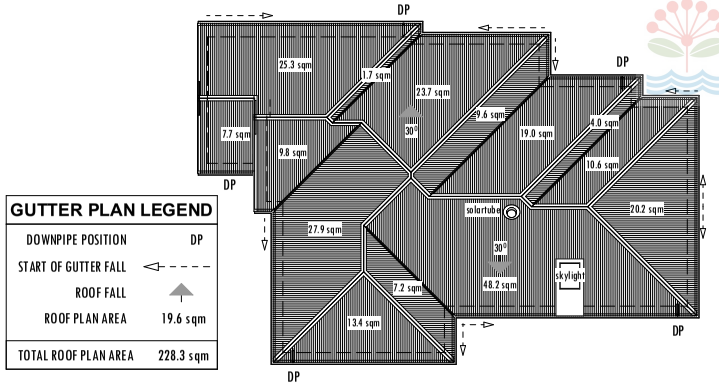
Each roof plane diagonal brace shall (see figure 10.22, NZS 3604):
(a) Run at 45deg to the ridge line and from the ridge to the supporting wall;
(b) Consist of either:
(i) A continuous length of 90 mm x 19 mm timber; or
(ii) A diagonally opposing pair of continuous steel strips each having a capacity of 8.0 kN in tension, fixed to each top chord or rafter that is intersected, and to the top plate.

INDICATES POINT LOADS

THIS TRUSS PLAN IS TO BE READ IN CONJUCTION WITH THE TRUSS MANUFACTURERS FINAL ROOF FRAMING DESIGN & SCHEDULE FOR NUMBER OF, AND TYPE OF FIXINGS REQUIRED. FIXINGS TO BE EQUIVALENT TO OR EXCEED THE MINIMUM REQUIREMENTS OF NZS.3604:2011. IF ANY DISCREPANCIES OCCUR CONTACT PRE-CUT MANUFACTURER OR DAVID REID HOMES IMMEDIATELY.

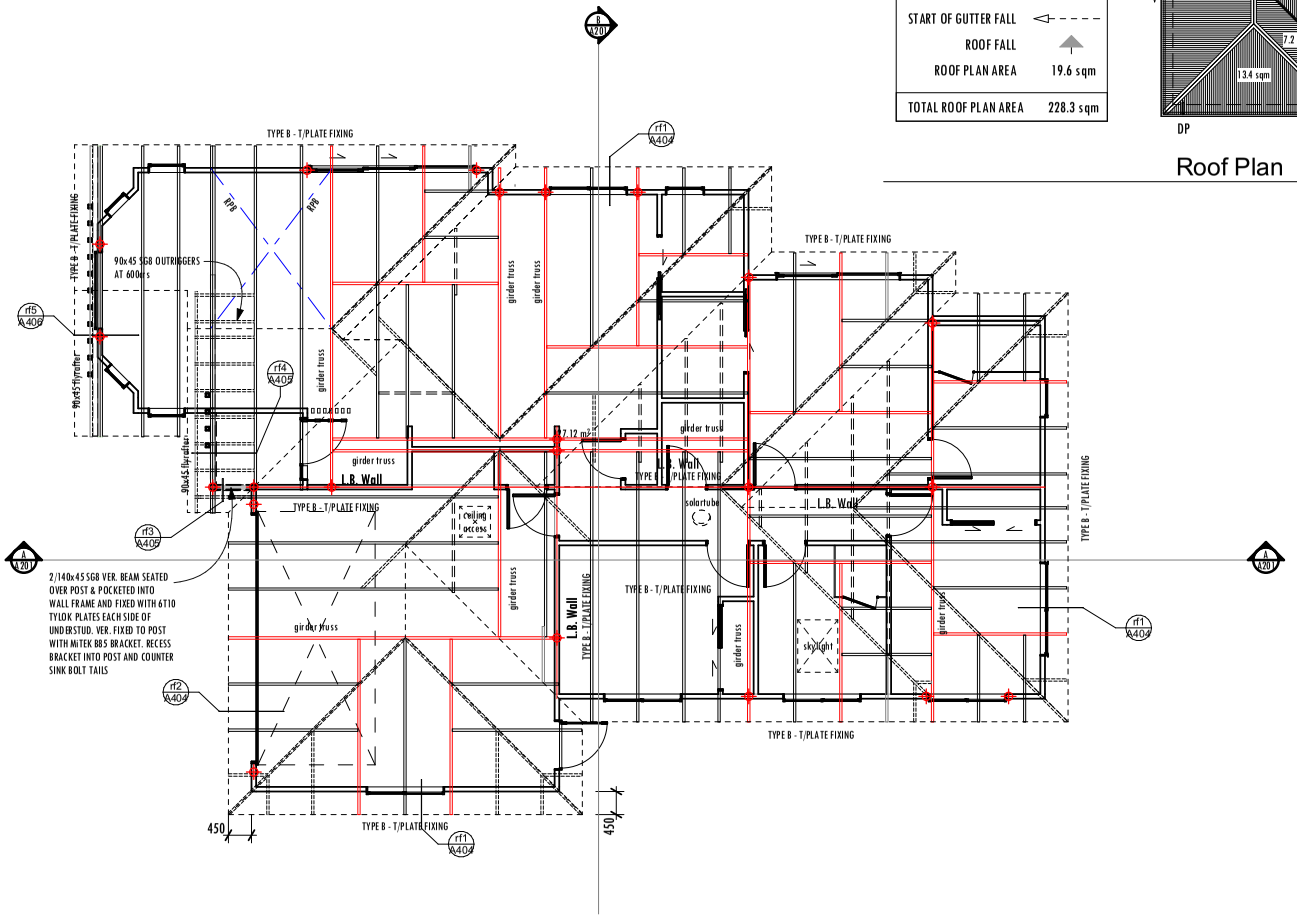
ROOF FIXINGS
HIGH WIND ZONE

ROOF MEMBER	FIXING DESCRIPTION	FIXING CAPACITY
TRUSSES	2/90x3.15 SKEW NAILS & 2 WIRE DOGS	4.7 kN
RAFTERS	2/90x3.15 SKEW NAILS & 2 WIRE DOGS	4.7 kN
BATTENS	1/10g SELF-DRILLING SCREW, 80mm LONG	2.4 kN



GUTTER PLAN LEGEND	
DOWNPIPE POSITION	DP
START OF GUTTER FALL	
ROOF FALL	
ROOF PLAN AREA	19.6 sqm
TOTAL ROOF PLAN AREA	228.3 sqm

Roof Plan 1:200



7 Roof Framing 1:100

PROJECT
PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Roof Framing Plan SHEET No: A111

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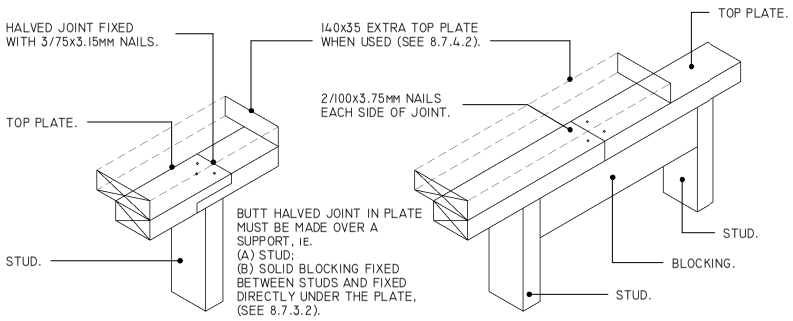
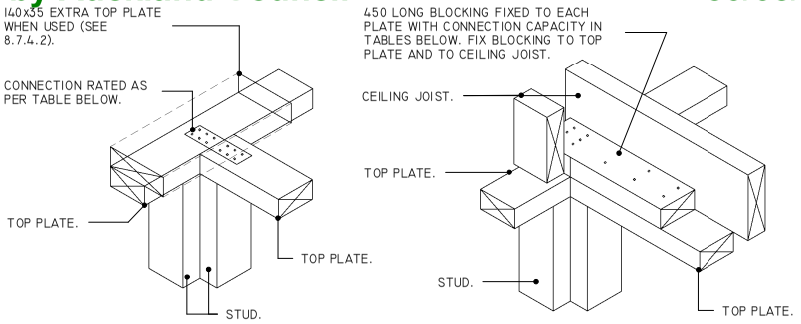


(A) HALVED JOINT **(B) BUTT JOINT**

CONNECTING TOP PLATES - WALLS NOT CONTAINING BRACING (SEE 8.7.3.2).

Top Plate Connection - Non Braced Walls Fig. 8.14



(A) BUTT JOINT

CAPACITIES OF METAL PLATE JOINTS	
UP TO 3kN	3/30x3.15MM NAILS PER SIDE
UP TO 6kN	6/30x3.15MM NAILS PER SIDE

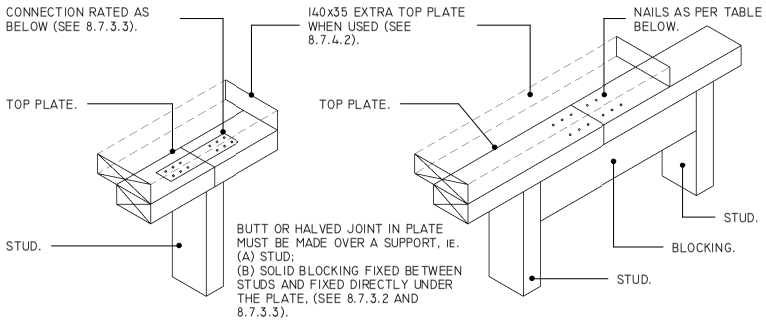
CONNECTING TOP PLATES TO EXTERNAL WALLS AT RIGHT ANGLES - WALLS CONTAINING BRACING (SEE 8.7.3.4).

(B) BUTT JOINT (WITH CEILING JOIST)

CAPACITIES OF NAILED JOINTS	
UP TO 3kN	3/100x3.75MM NAILS PER SIDE
UP TO 6kN	6/100x3.75MM NAILS PER SIDE

NOTE
(1) SEE SECTION 4 FOR DURABILITY REQUIREMENTS.

Top Plate Connection - Braced Walls Fig. 8.16



(A) BUTT JOINT OVER STUD

CAPACITIES OF METAL PLATE JOINTS (2)	
UP TO 3kN	3/30x3.15MM NAILS PER SIDE
UP TO 6kN	6/30x3.15MM NAILS PER SIDE

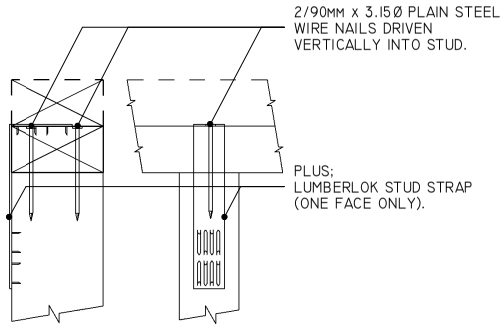
(B) BUTT JOINT OVER BLOCKING

CAPACITIES OF NAILED JOINTS (2)	
UP TO 3kN	3/100x3.75MM NAILS PER SIDE
UP TO 6kN	6/100x3.75MM NAILS PER SIDE

NOTE
(1) SEE SECTION 4 DURABILITY REQUIREMENTS.
(2) NOT REQUIRED WHEN EXTRA TOP PLATE IS USED.

CONNECTING TOP PLATES IN LINE - WALLS CONTAINING BRACING (SEE 8.7.3.3)

Top Plate Connection - Braced Walls Fig. 8.15



LUMBERLOK STUD-TOP PLATE FIXING

TYPE B

Lumberlok Top Plate Fixing Type B

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

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Wall Connection Details

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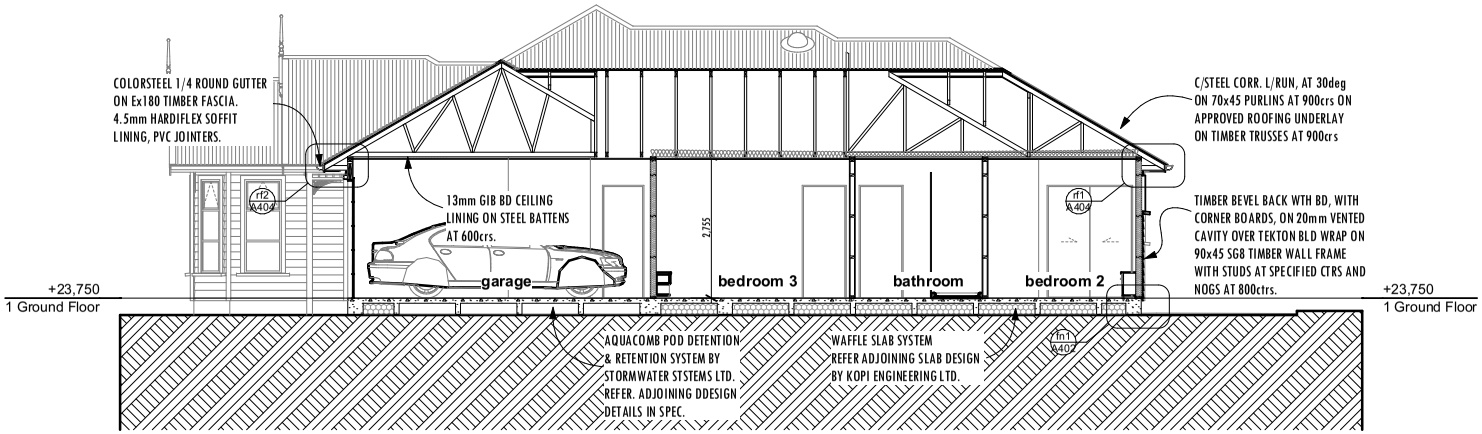
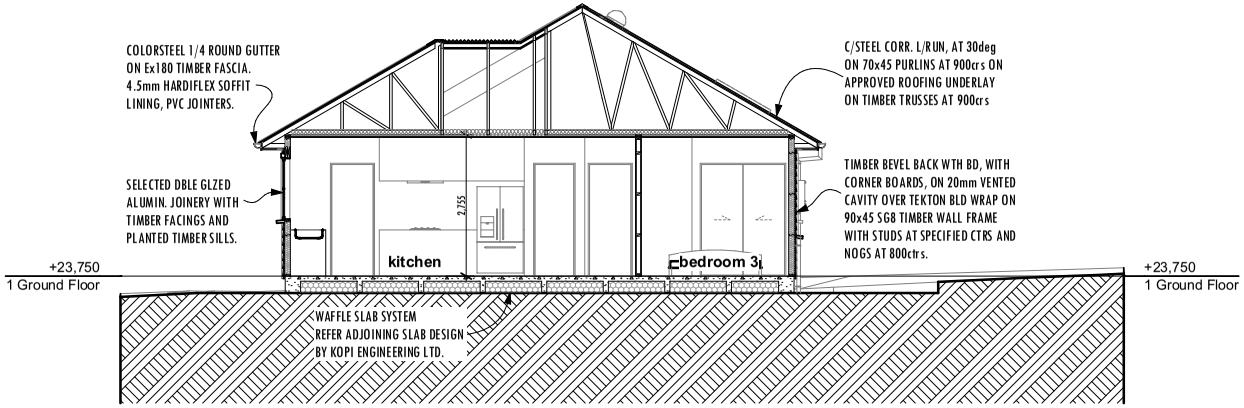


A Section A-A 1:100



B Section B-B 1:100

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Sections

SHEET No: A201

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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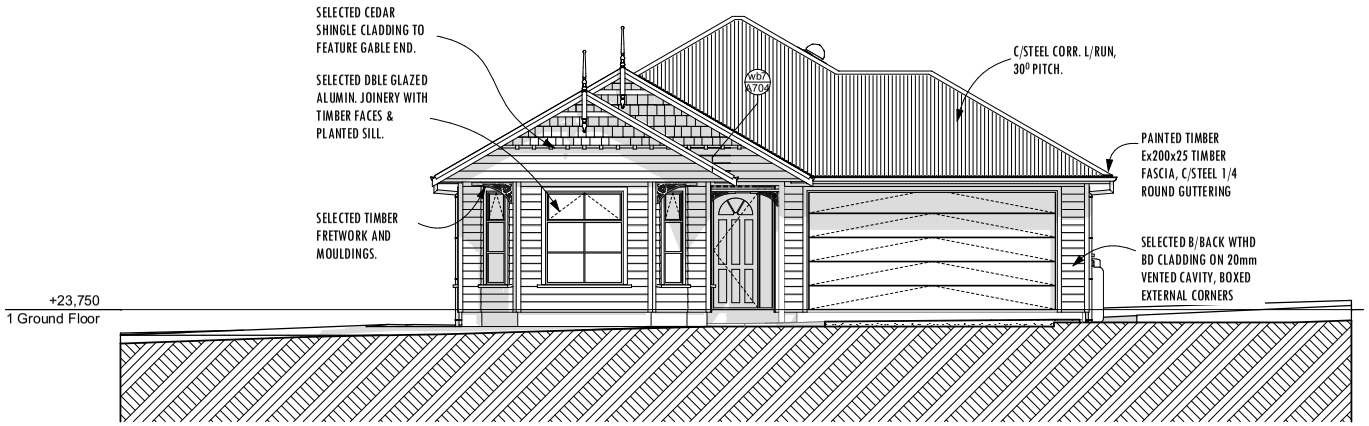

1 North Elevation 1:100

BUILDING ENVELOPE RISK MATRIX		
North 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	Very high risk	5
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		8

BUILDING ENVELOPE RISK MATRIX		
East 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 risk	0
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		3

2 East Elevation 1:100

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Elevations

SHEET No: A301

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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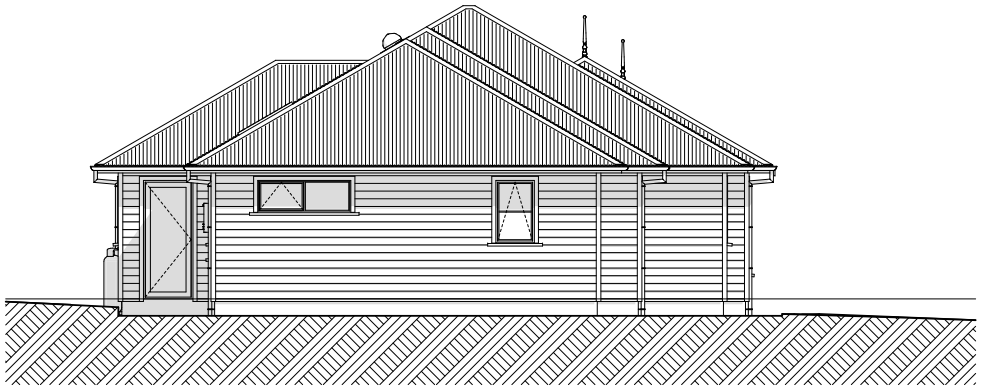

1 South Elevation 1:100

BUILDING ENVELOPE RISK MATRIX		
South 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 risk	0
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		3

BUILDING ENVELOPE RISK MATRIX		
West 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 risk	0
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		3

2 West Elevation 1:100

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Elevations

SHEET No: A302

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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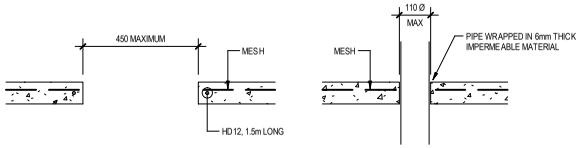
MAXIMUM DIAMETER OF PIPE SERVICES

ELEMENT	VERTICAL SERVICE	HORIZONTAL SERVICE
300mm WIDE EDGE BEAM	50mm NOMINAL BORE PIPE	100mm NB PIPE
500mm LOCALIZED WIDE EDGE BEAM (1)	100mm NB PIPE	100mm NB PIPE
300mm WIDE INTERNAL LOAD BEARING RIB	50 NB PIPE	100mm NB PIPE
100mm WIDE INTERNAL RIB	NIL	100mm NB PIPE
SLAB	100 NB PIPE, OR FOR LARGE SERVICES 450mm SQUARE SEE ALSO NOTE 3	NIL

NOTES:

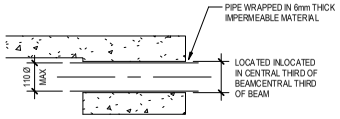
1. FOR SITUATIONS WHERE A 100mm DIAMETER PIPE IS REQUIRED TO PASS VERTICALLY THROUGH THE EDGE BEAM, THE EDGE BEAM SHALL BE LOCALLY INCREASED IN WIDTH TO A MINIMUM OF 500mm WIDE. THIS SHALL BE ACHIEVED BY KEEPING FLUSH THE OUTSIDE FACE OF THE EDGE BEAM AND REMOVING 200mm FROM THE POD. THE WIDTH SHALL REMAIN AT 500mm FOR A DISTANCE OF 600mm BEYOND THE SERVICE PIPE. REFER TO FIGURE 15 FOR DETAILS.
2. WHERE A GAS PIPE LINE RUNS THROUGH THE RIBRAFT® FLOOR SYSTEM, IN ADDITION TO THE REQUIREMENTS ABOVE, THE PIPELINE SHALL ENTER THE BUILDING THROUGH THE OUTSIDE FACE OF THE PERIMETER FOUNDATION BEAM AND BE LOCATED IN THE PLANE OF THE PODS. THE AIM BEING TO ENSURE THAT DAMAGE TO THE GAS PIPE WILL MOST LIKELY OCCUR OUTSIDE THE BUILDING ENVELOPE SHOULD MOVEMENT OCCUR BETWEEN THE GROUND AND RIBRAFT® IN A LARGE EARTHQUAKE.
3. LARGER PENETRATIONS OR VOIDS UP TO 450mm SQUARE (E.G. FOR SHOWER WASTE/TRAPS) ARE PERMITTED THROUGH THE SLAB PROVIDED ALL THE CONDITIONS OF THIS PARAGRAPH ARE MET. THESE OPENINGS SHALL BE TRIMMED WITH 1 HD12 (GRADE 500E) BAR 1500mm LONG PLACED ALONG EACH SIDE OF THE OPENING, TIED TO THE MESH. ONE SET OF PARALLEL BARS SHALL BE PLACED ON TOP OF THE MESH AND THE OTHER SET PLACED UNDER THE MESH. THESE OPENINGS SHALL NOT BE PLACED OVER A RIB OR EDGE BEAM. IF NECESSARY, THE RIB SPACING SHALL BE REDUCED OR THE POD LAYOUT ALTERED TO ENSURE THAT THE OPENING OCCURS SOLELY IN THE SLAB ABOVE A POLYSTYRENE POD. PENETRATIONS SUCH AS THESE SHALL NOT BE INSTALLED IN GARAGES OR OTHER AREAS WHERE LARGE (>3kN) POINT LOADS COULD BE PRESENT. ONLY ONE PENETRATION GREATER THAN 110mm IS PERMITTED IN THE SLAB ABOVE ANY SINGLE POD OR PART POD. WHERE TWO LARGE OPENINGS ARE REQUIRED TO BE IN CLOSE PROXIMITY, AN INTERNAL RIB SHALL SEPARATE THEM. FOR THESE LARGE PENETRATIONS/VOIDS IN THE SLAB, THE SERVICES SHALL NOT BE WITHIN 25mm OF THE EDGES OF THE VOID THROUGH WHICH THEY PASS, AND THE OPENING SHALL BE SEALED TO PREVENT MATERIALS ENTERING THE SUBFLOOR CAVITIES. (THIS TYPE OF OPENING IS NORMALLY ONLY REQUIRED FOR A SHOWER WASTE/TRAP AND THE INSTALLATION OF THE SHOWER WILL ENSURE THAT THE VOID IS SEALED/COVERED).

EXAMPLE OF DETAILING REQUIREMENTS FOR SERVICES

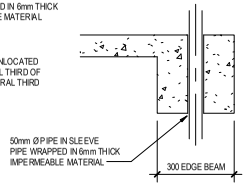


LARGE PENETRATION THROUGH SLAB (SHOWER/WASTE TRAPS)

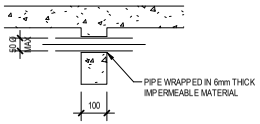
SMALL VERTICAL PENETRATION THROUGH SLAB



HORIZONTAL PENETRATION THROUGH EDGE BEAM



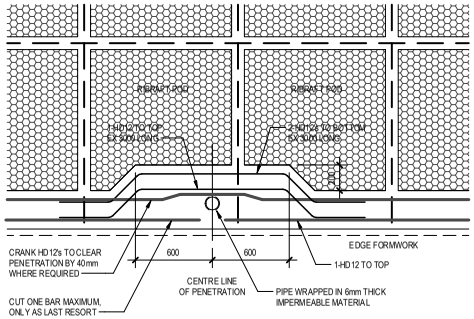
VERTICAL PENETRATION THROUGH EDGE BEAM



HORIZONTAL PENETRATION THROUGH INTERNAL BEAM

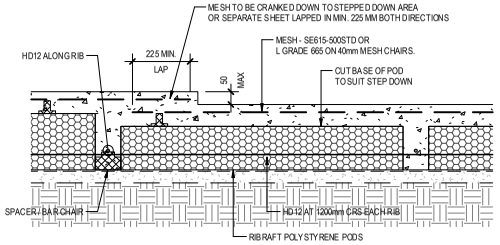
LOCALISED INCREASE IN WIDTH AT EDGE BEAM

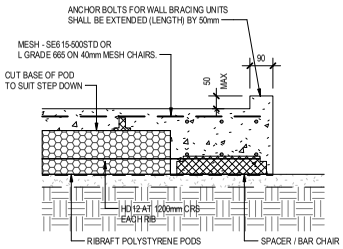
WHERE VERTICAL SERVICE UP TO 100mm DIAMETER ARE REQUIRED

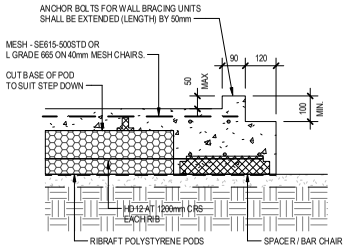


DETAILS WHERE RECESSES OF UP TO 50mm

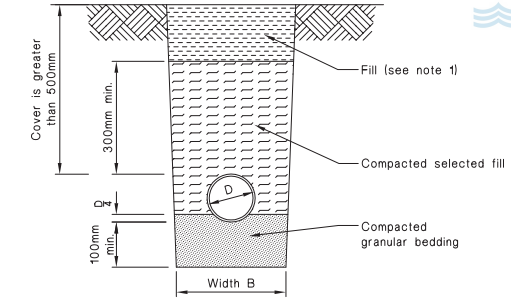
ARE REQUIRED FOR REBATED SHOWERS



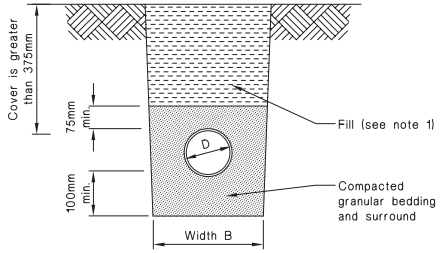




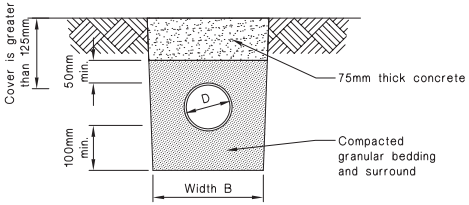
RIB RAFT FLOOR - SET-DOWN DETAIL FOR MAX. 50mm REBATED SHOWER



(a) Cover greater than 500 mm
Bedding type 'B' of NZS 4452



(b) Cover greater than 375 mm
Bedding type 'D' of NZS 4452



(c) Cover greater than 125 mm

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

Bedding and Backfilling

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Foundation Details

SHEET No: A401

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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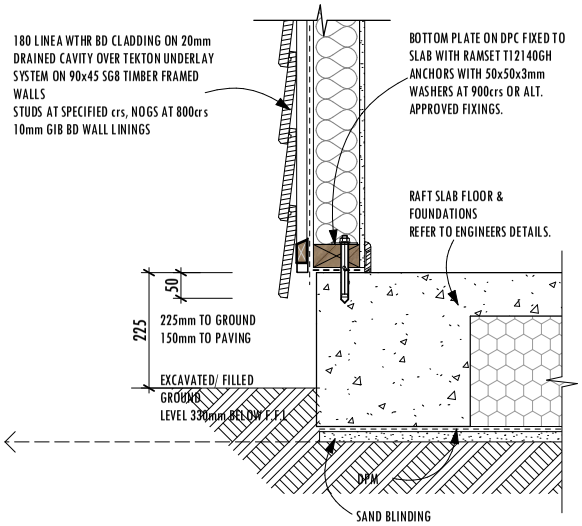
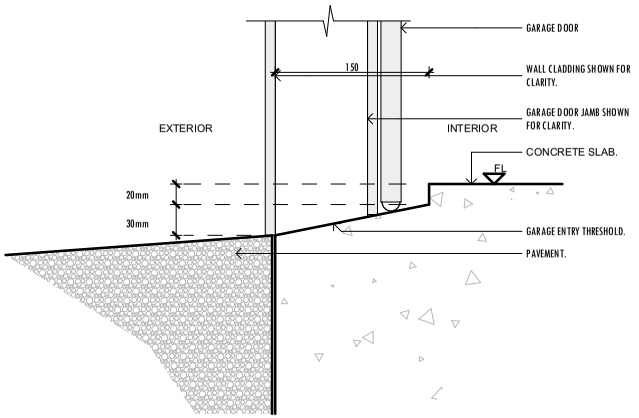


fn1 Foundation Detail 1:10



Garage Door Rebate Detail 1:5

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

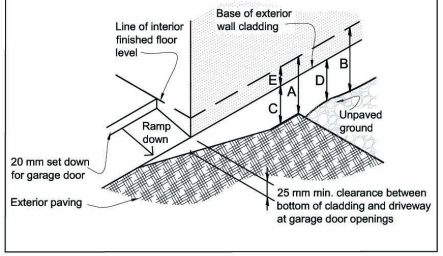


Table 18: Minimum clearances
Paragraphs 9.1.3, 9.1.3.1, 9.1.3.2, 9.1.3.3, 9.1.3.4, 9.1.3.5 and 9.2.7

Minimum clearances (mm)	Masonry veneer		Other claddings				
	A	B	A	B	C	D	E
Concrete slab	100	150	150	225	100	175	50

NZBC GARAGE OPEING THRESHOLD 1:5

PROJECT
PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO
Foundation Details
SHEET No: A402

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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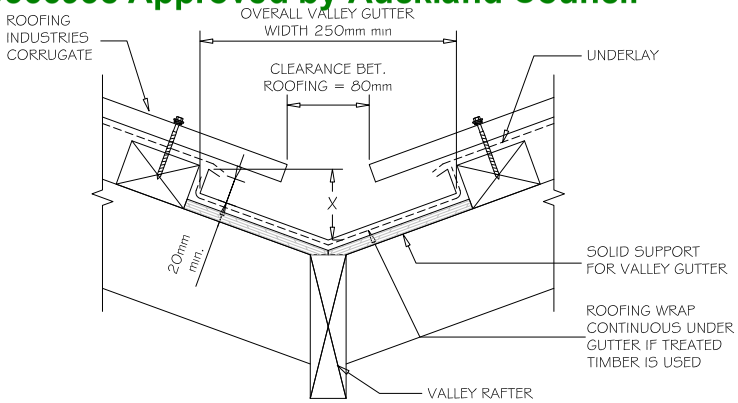
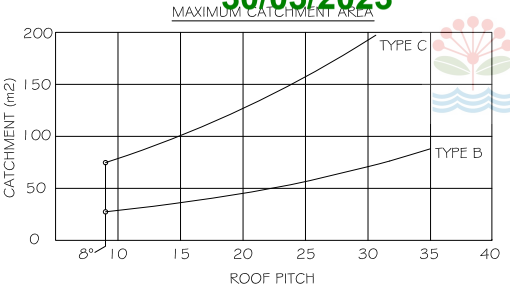
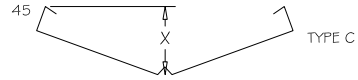
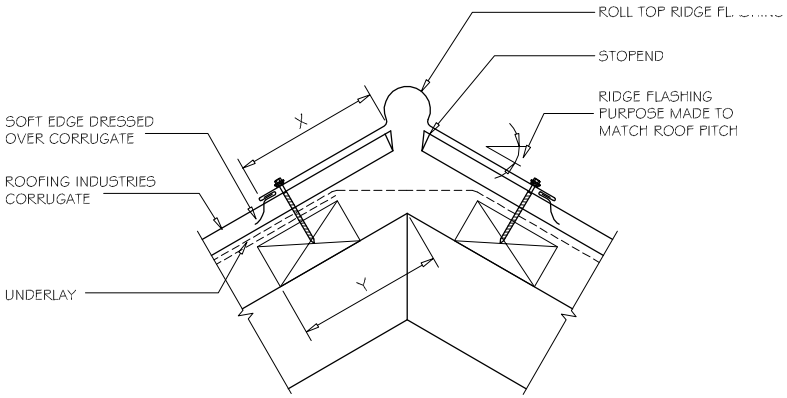


A – VALLEY GUTTER CORRUGATED PROFILE 1:5





NOTE:
(1) ADDITION OF CENTRAL BAFFLE RECOMMENDED
(2) ROOF PITCHES BELOW 8° REQUIRE AN INTERNAL GUTTER



A – ROLL TOP VERSION CORRUGATED PROFILE 1:5

SITE WIND ZONE (As per NZS3604)	MINIMUM mm (X)
	TRANSVERSE FLASHING OVER ROOFING
SITUATION 1 (1)	130 (3)
SITUATION 2 (2)	200 (3)

NOTES:

(1) SITUATION 1: IN LOW, MEDIUM OR HIGH WIND ZONES, WHERE ROOF PITCH IS 10° OR GREATER.
(2) SITUATION 2: FOR ALL ROOF PITCHES IN VERY HIGH AND EXTRA HIGH WIND ZONES, FOR ALL WIND ZONES WHERE ROOF PITCH LESS THAN 10°.
(3) EXCLUDING ANY SOFT EDGE OR TURN-DOWN TO ROOFING.

VALLEY DEPTH		
ROOF PITCH	TYPE B	TYPE C
8-12°	75	75
>12-35°	50	70
>35° (1)	50	70

ROOF PITCH	DISTANCE Y mm	
	SITUATION 1	SITUATION 2
8°	N/A	218
10°	167	217
15°	162	212
20°	156	206
25°	150	200
30°	143	193
35°	134	184
40°	125	175
45°	115	165

FOR STANDARD 50mm PURLINS ON FLAT

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

Roof Details

SHEET No: A403

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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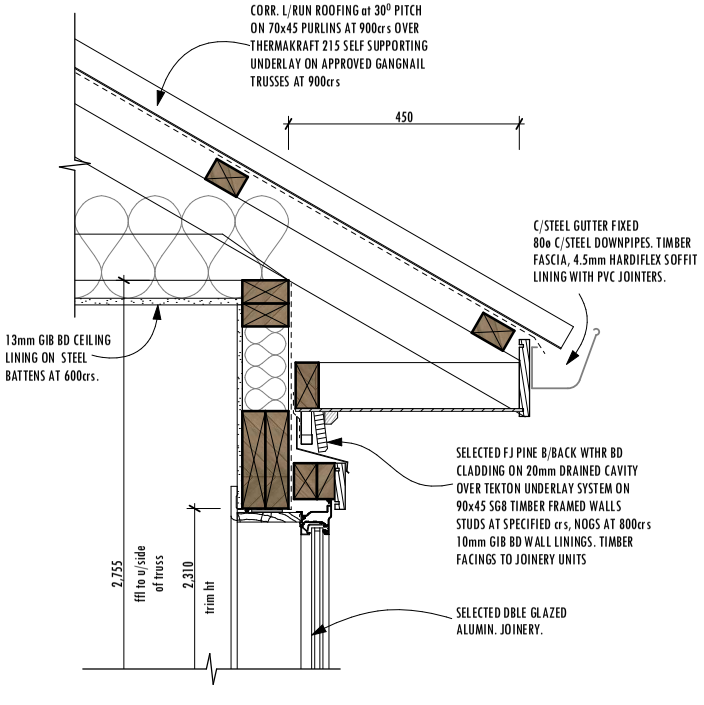
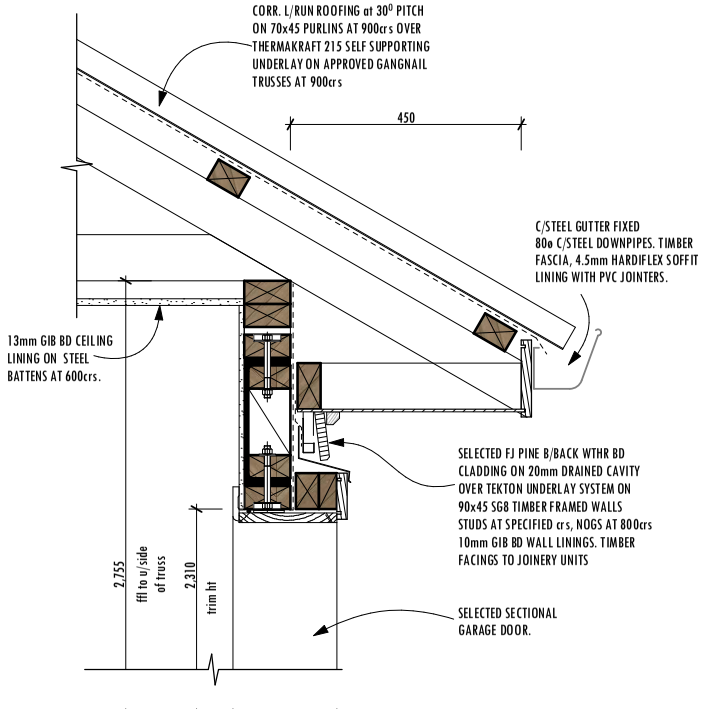


rf1 Eave Detail - Typical Soffit 1:10



rf2 Roof Detail - Garage Soffit 1:10

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Roof Details

SHEET No: A404

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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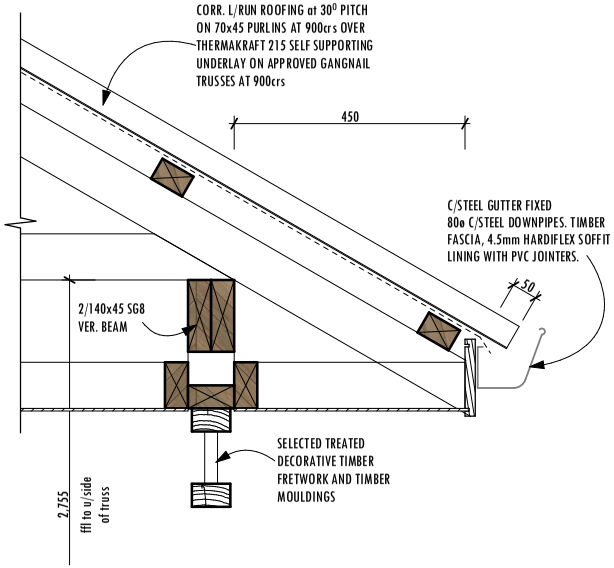
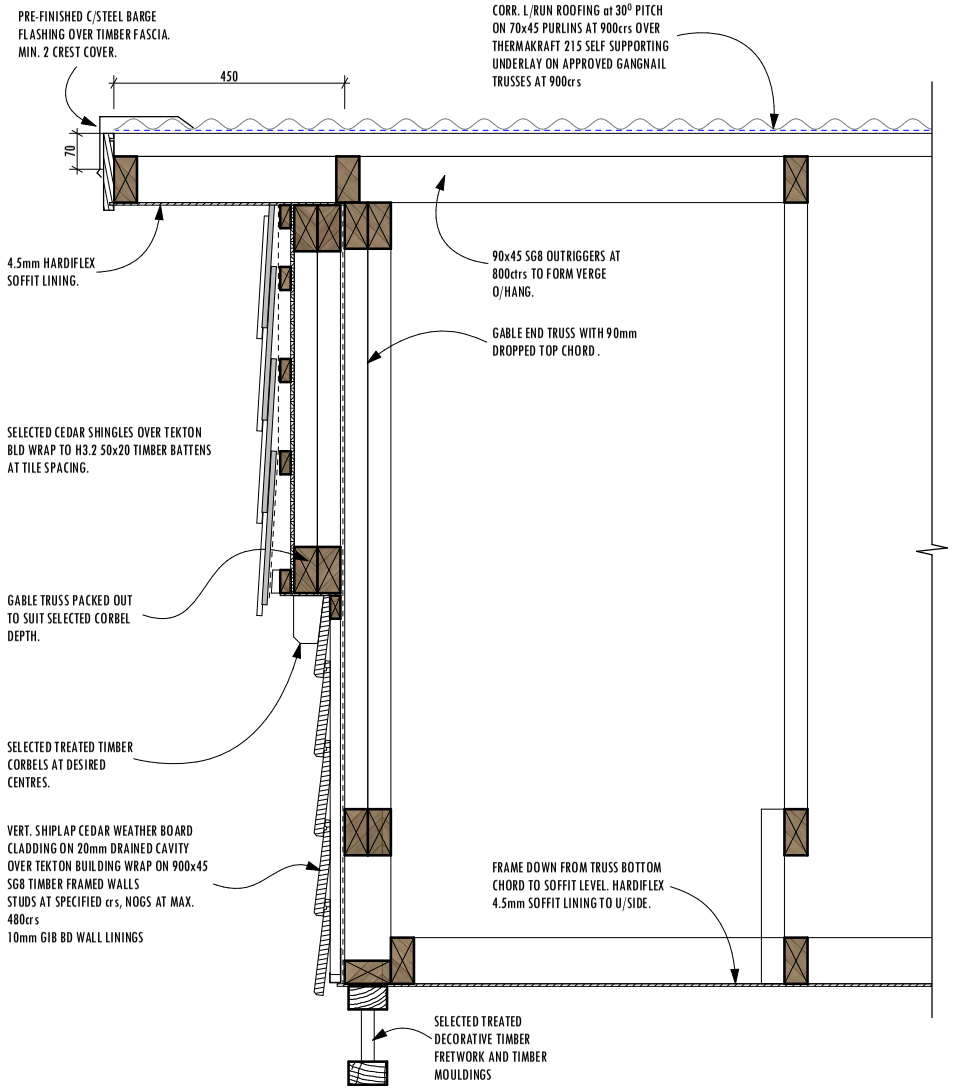


rf3 Roof Detail - Entry 1:10



rf4 Verge Detail - Entry 1:10

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Roof Details

SHEET No: A405

PROJECT No:	22-017
SCALE AT A3	as shown
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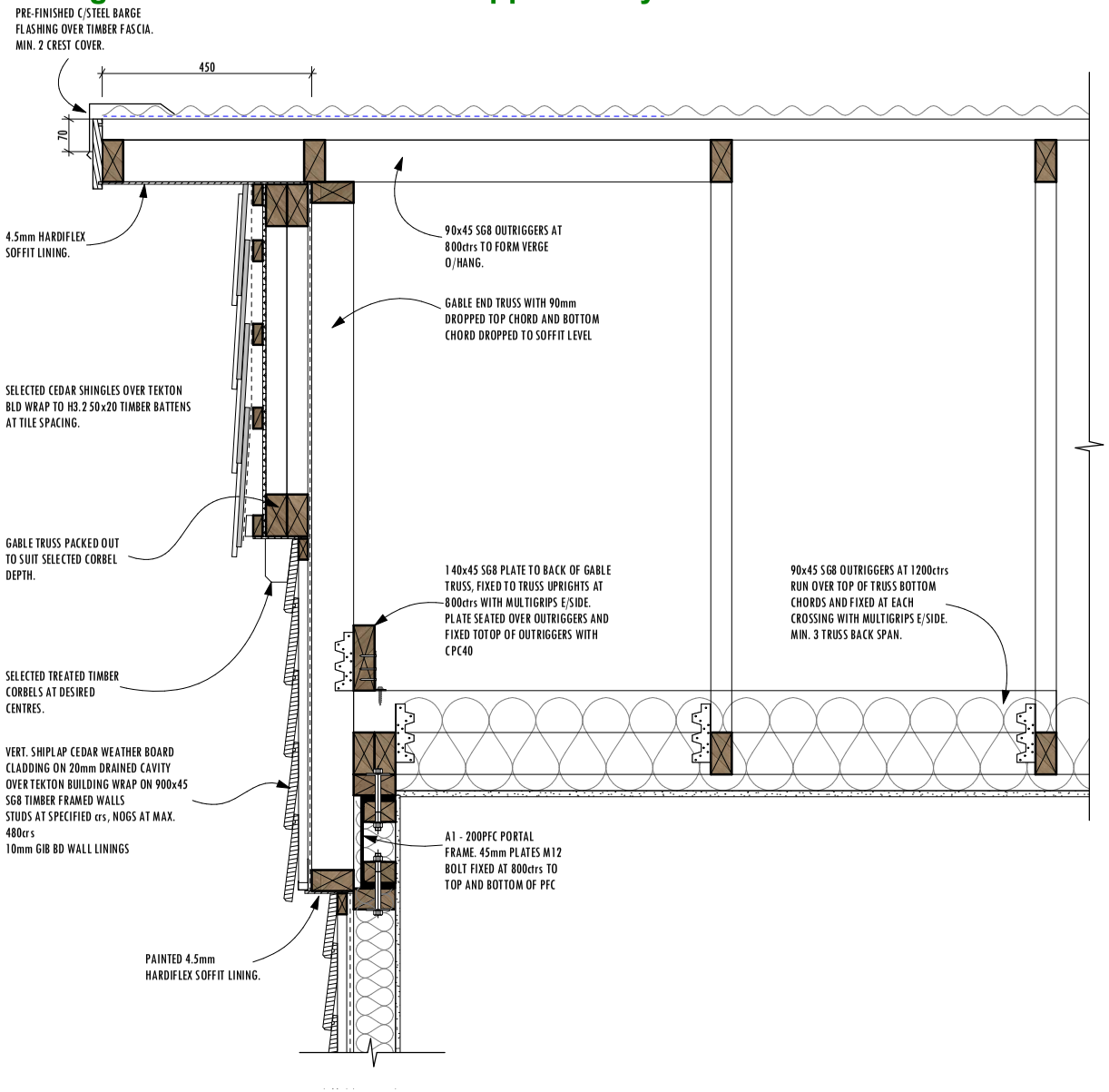

rf5 Verge Detail. 1:10

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Roof Details

SHEET No: A406

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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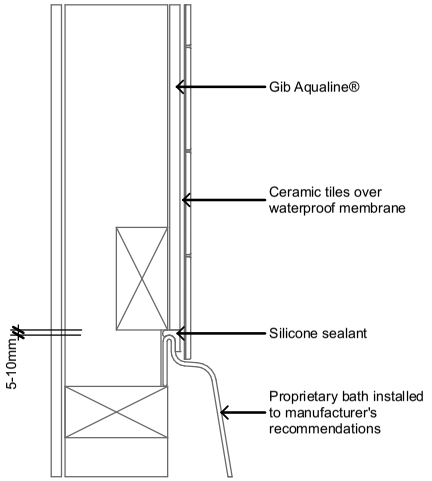
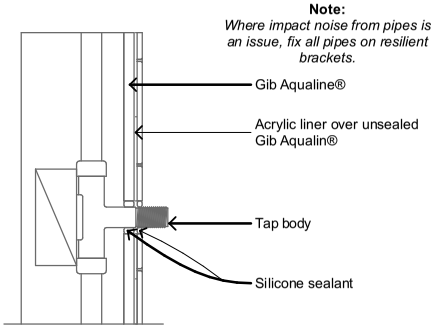
WET AREA WATERPROOFING

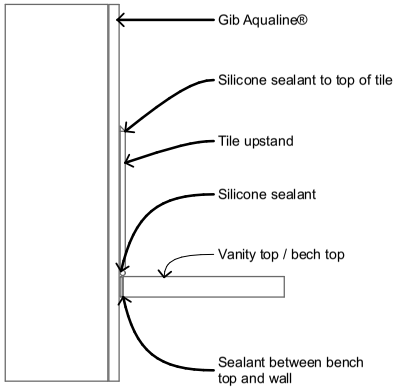
WET AREAS WATERPROOFED BEHIND TILES WITH DAVCO K10 PLUS WATERPROOFING MEMBRANE. MEMBRANE TO BE APPLIED IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.



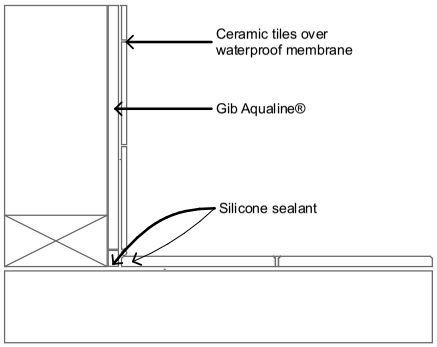
Bath/Wall Detail GAW-D006



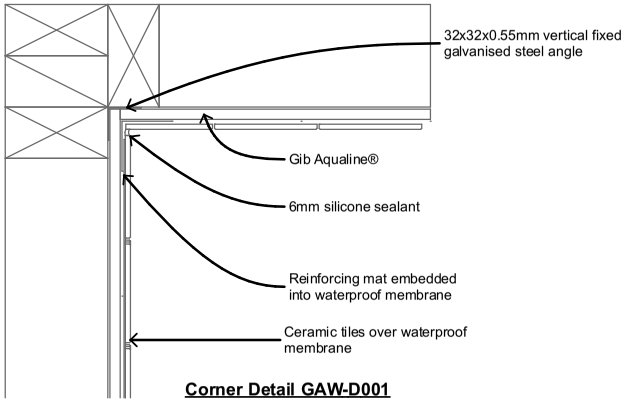
Penetration Detail GAW-D002



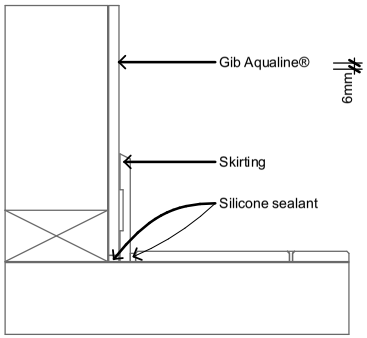
Bench Top/Wall Detail GAW-D031



Wall/Floor Detail GAW-D003



Corner Detail GAW-D001



Wall/Floor Detail GAW-D033

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Wet Area Details

SHEET No: A501

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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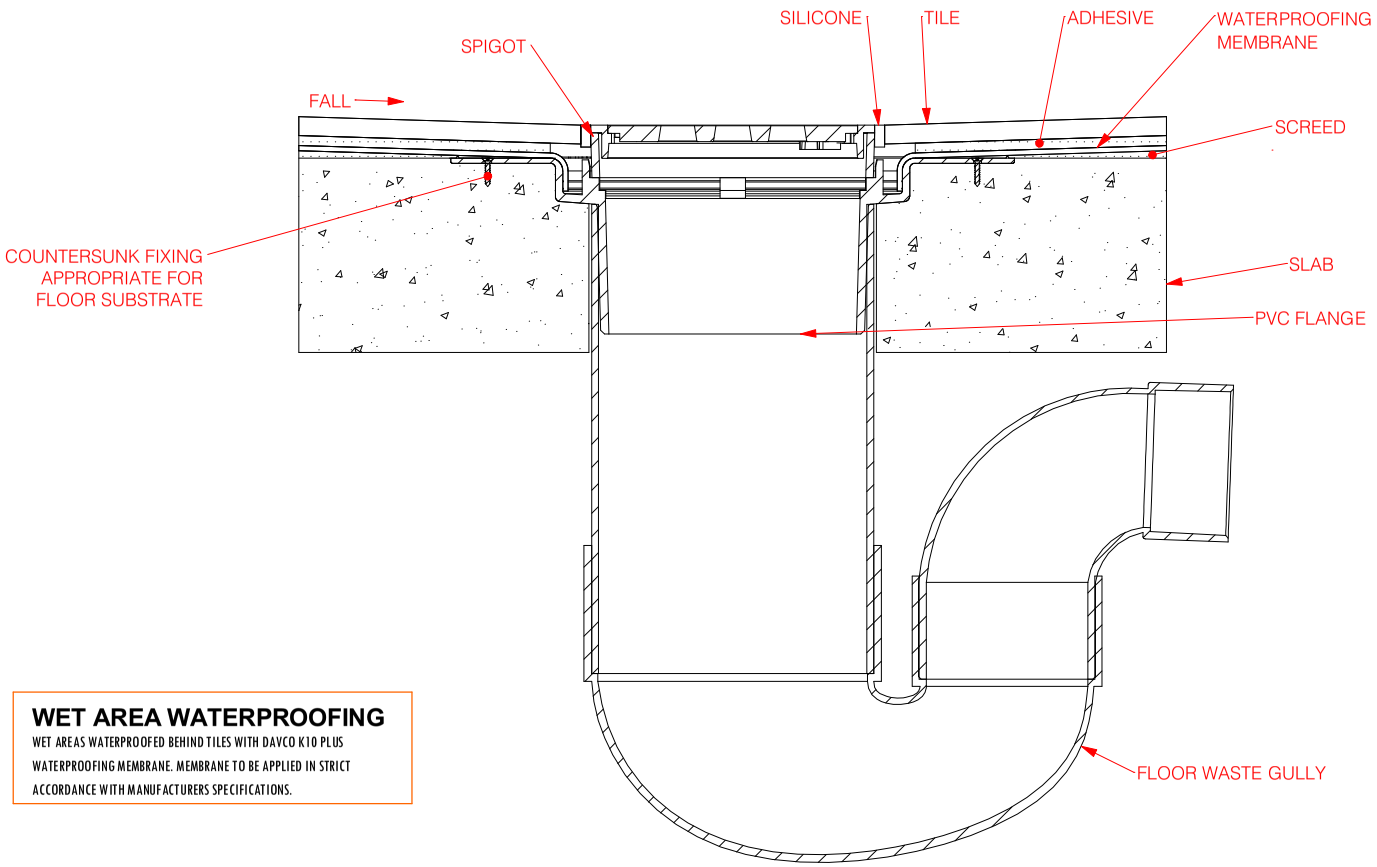

WET AREA WATERPROOFING

WET AREAS WATERPROOFED BEHIND TILES WITH DAVCO K10 PLUS WATERPROOFING MEMBRANE. MEMBRANE TO BE APPLIED IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

Tile Floor Install-Concrete (2) 1:1

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Wet Area Details

SHEET No: A502

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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NON-TILED WALLS – TIMBER FRAMING

TIMBER WALL FRAMING

Framing dimensions must comply with the requirements of NZS 3604:2011.

- The moisture content of timber framing shall be 18% or less at the time of lining
- Studs shall be spaced at 600mm centres maximum for both 10mm and 13mm GIB® plasterboard
- Nogs to be evenly spaced with a maximum spacing of 1350mm. Alternatively, nogs may be staggered 150mm maximum either side of a horizontal joint line
- Nogs are not required behind horizontal joints except in shower situations or specific fire or noise control systems

FASTENERS

- Minimum 32mm x 6g GIB®Grabber® High Thread screws.

FASTENER CENTRES

- 300mm centres to top and bottom plates and to perimeter studs
- Single fasteners to each stud where the horizontal joint crosses the studs
- Place fasteners 12mm from sheet edges and 18mm from sheet ends
- Daubs of GIBFix® adhesive at 300mm centres to intermediate studs
- Do not place adhesive at sheet edges or under fasteners. Sheet edges at door or window openings can be adhesive fixed unless forming part of the perimeter of a bracing element

For bracing, noise control or fire rating applications including fastener lengths consult the relevant GIB® technical publication.

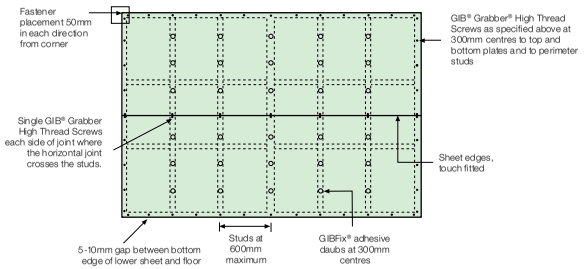
LINING

- Use minimum 10mm GIB®plasterboard
- Install the sheets leaving a 5-10mm gap at the floor line to allow for movement of the framing members and to allow for cleaning dirt and rubbish before sealing
- Sheets to be touch fitted.

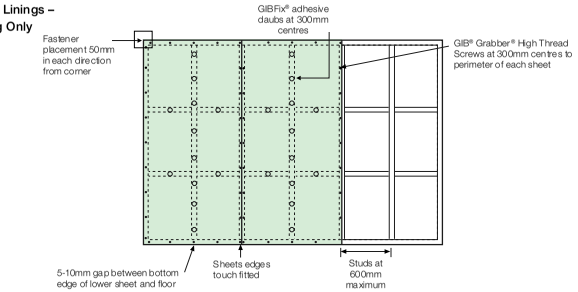
JOINTING

- Jointing shall be carried out in accordance with the instructions in the GIB® Site Guide.

Fastening the Linings – Horizontal Fixing Only



Fastening the Linings – Vertical Fixing Only



TILED WALLS – TIMBER FRAMING

TIMBER WALL FRAMING

Framing dimensions and spacing must be appropriate for the tile weight and comply with the requirements of NZS 3604:2011 Timber Framed Buildings, or relevant specific design Standard.

NOGS

For impact protection in shower cubicles or shower over bath situations it is important that all sheet joints are made on solid framing. This may require vertical fixing or the installation of additional nogs. Also provide nogs:

- Adjacent to each pipe penetration and behind sink and tub flashings
- Between all studs above bath flanges and preformed shower bases

CORNER REINFORCING

- Prior to lining in tiled areas (shower cubicles and shower over bath only) the internal corners shall be reinforced with a minimum
- 32 x 32 x 0.55mm NZ18 or 45 x 45 x 0.55mm GIBFix® Angle. Angles need to be temporarily held in place until secured by the lining fixings.

FASTENERS

- Minimum 32mm x 6g GIB® Grabber®High Thread Screws

FASTENER CENTRES

- 150mm centres to perimeter of wall and all intermediate studs
- Adhesive is not to be used in place of mechanical fasteners
- Place fasteners 12mm from sheet edges and 18mm from sheet ends
- Single fasteners to each stud where the horizontal joint crosses the studs
- Where relevant, fastener lengths must comply with the requirements of GIB® Fire Rated Systems or GIB®Noise Control Systems

For bracing, noise control or fire rating applications including fastener lengths consult the relevant GIB® technical publication.

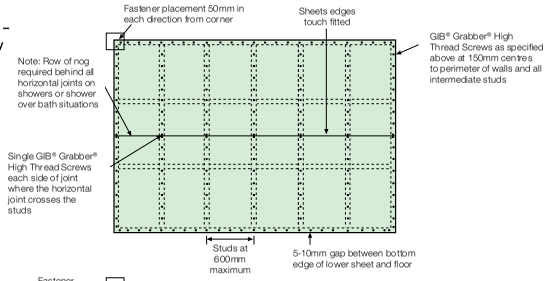
LINING AND TILE WEIGHTS

- Use minimum 10mm GIB® plasterboard
- For maximum permitted tile weights refer to pg 16 of this manual
- GIB® Wet Area linings may be fixed vertically or horizontally
- Sheets are touch fitted
- Provide a 5-10mm gap at the wall/floor junction and between the bottom edge of the lining and any bath rim or preformed shower base to allow for placement of sealant
- Do not tile on the resilient side of GIB Rail® or STWC Acoustic Clip (ST001) and channel noise control system
- GIB® Wet Area linings are suitable for tiling full height of walls, but if a wall is to be partially tiled (e.g. half high), only the area of wall under the tiles needs to be fixed as required for tiled areas. The remainder of the wall may be fixed as for non-tiled areas

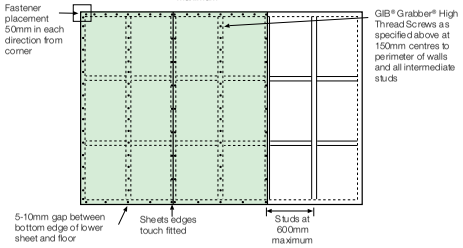
JOINTING

- Jointing shall be carried out in accordance with the instructions of the GIB®Site Guide

Fastening the Linings – Horizontal Fixing Only



Fastening the Linings – Vertical Fixing Only



PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Gib Aqualine Details

SHEET No: A503

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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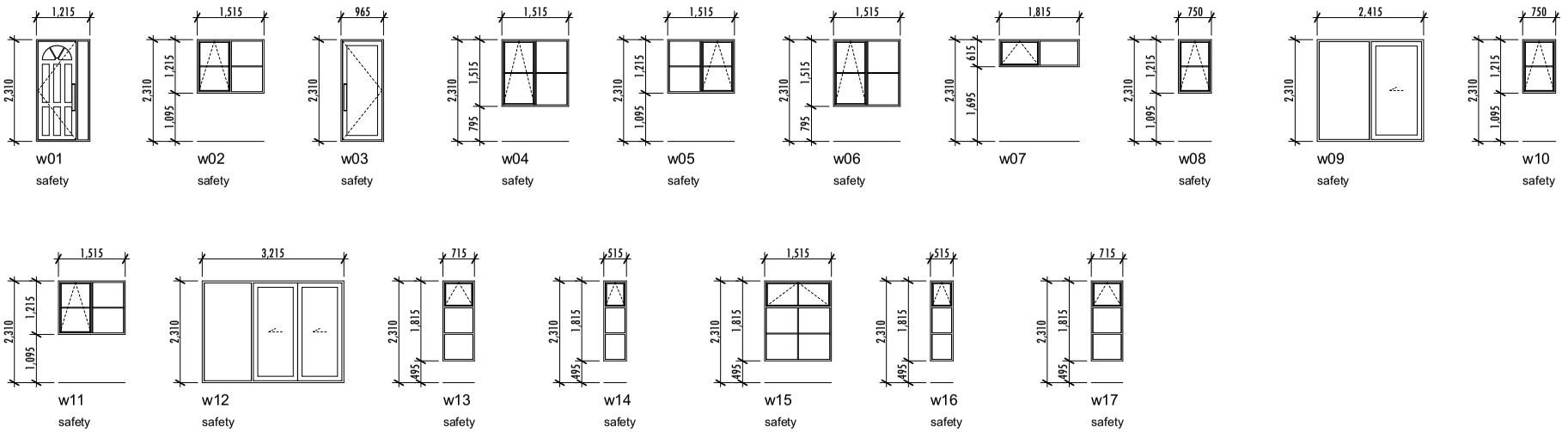
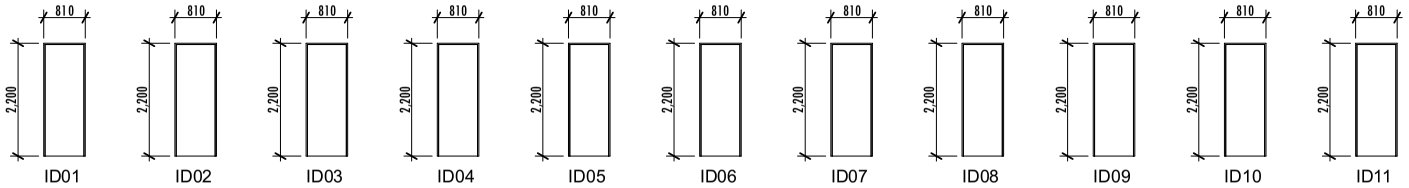


Window / Door Schedule 1:100



Internal Door Schedule 1:100

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Door & Window Schedule

SHEET No: A601

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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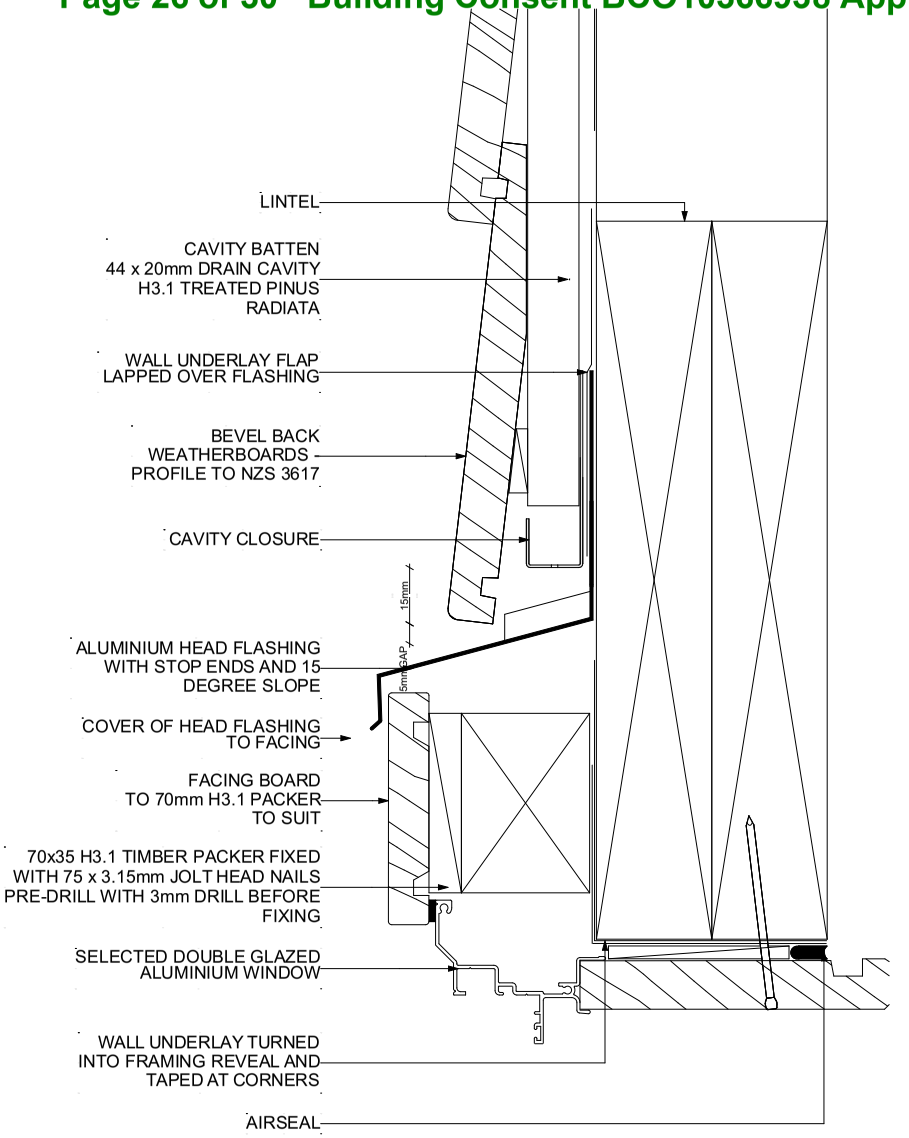
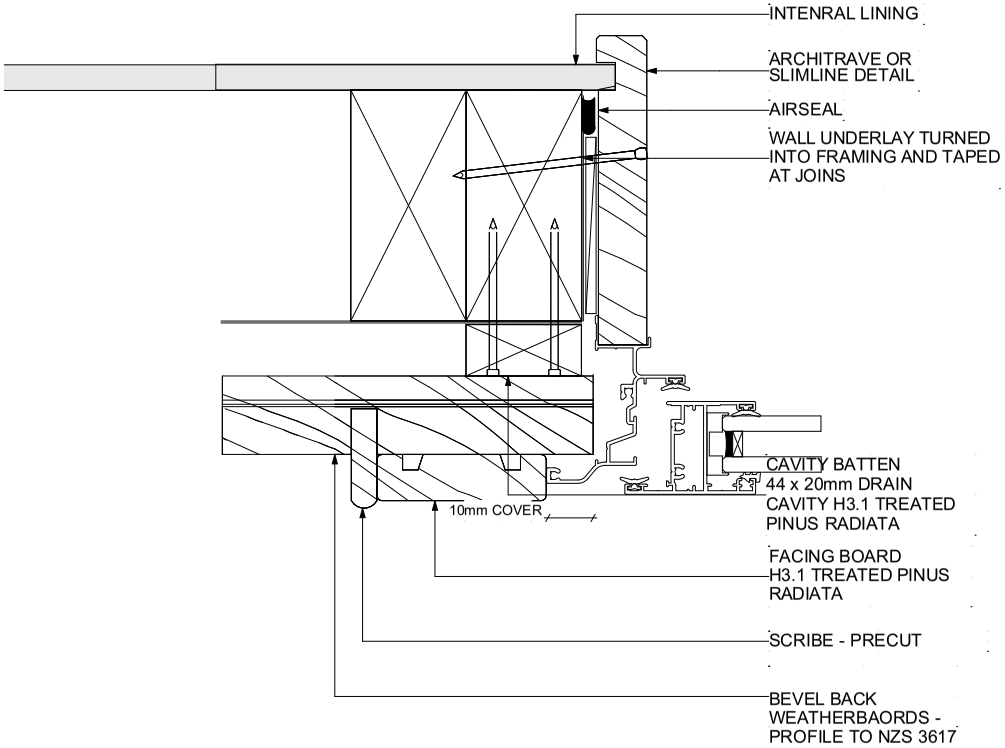


wb1 Window Head - Option A 1:2



wb2 Window Jamb 1:2

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Cladding Details

SHEET No: A701

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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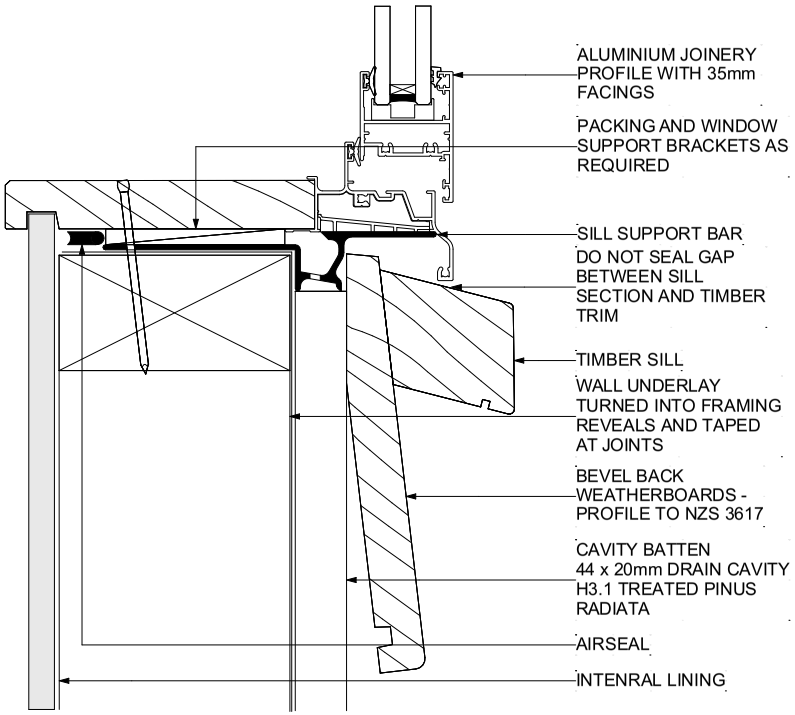
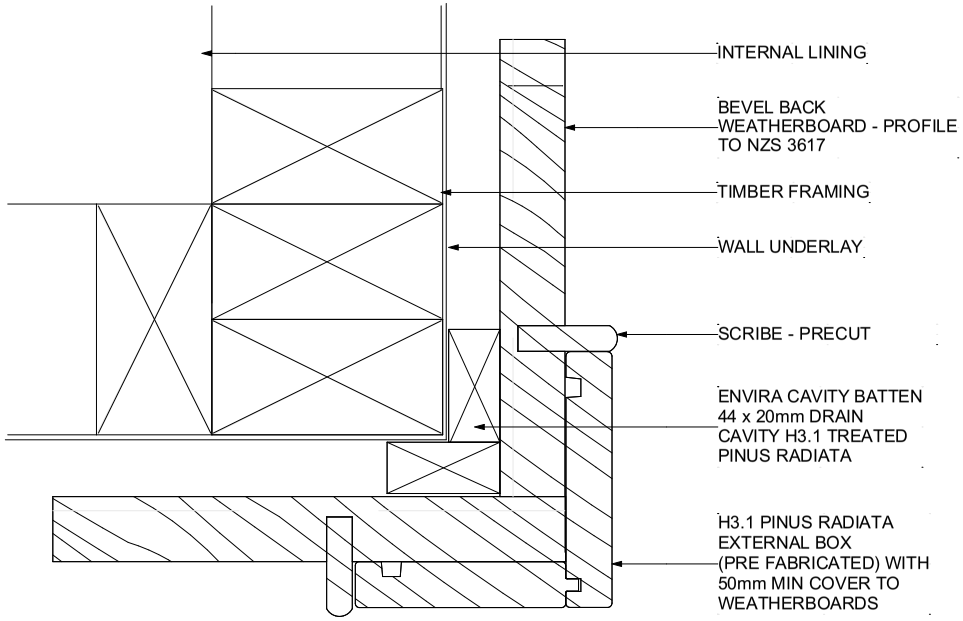


wb3 Window Sill support Bar 1:2



wb4 External Corner 1:2

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Cladding Details

SHEET No: A702

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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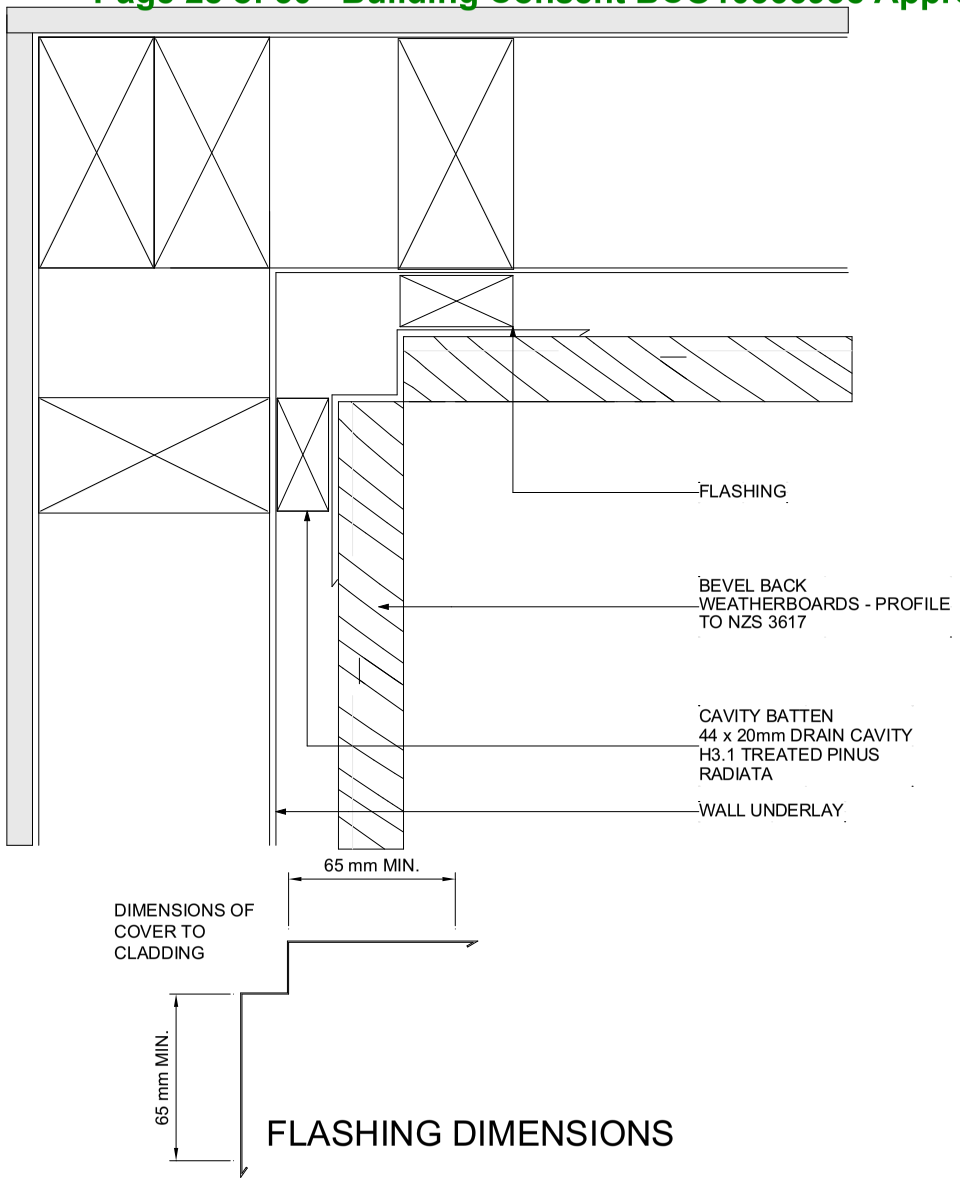
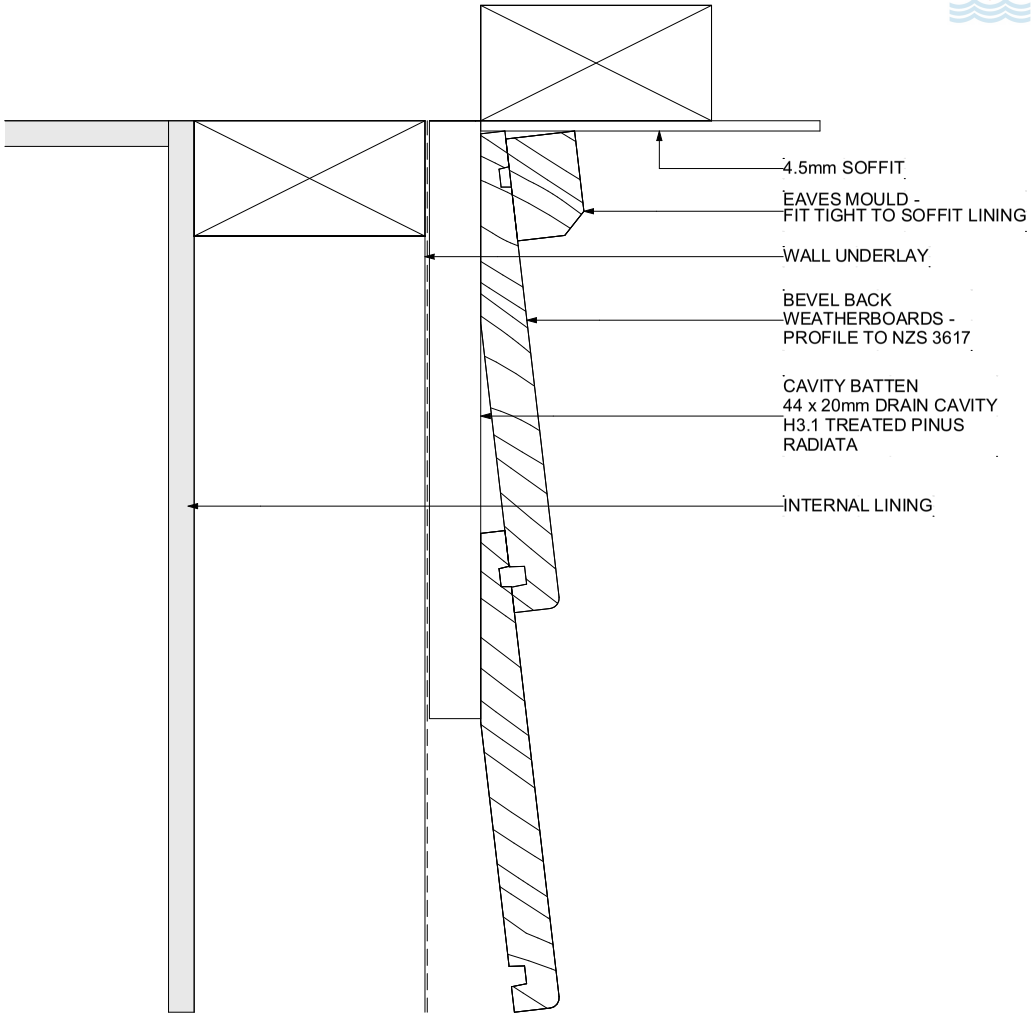


wb5 Internal Corner 1:2



wb6 Soffit 1:2

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Cladding Details

SHEET No: A703

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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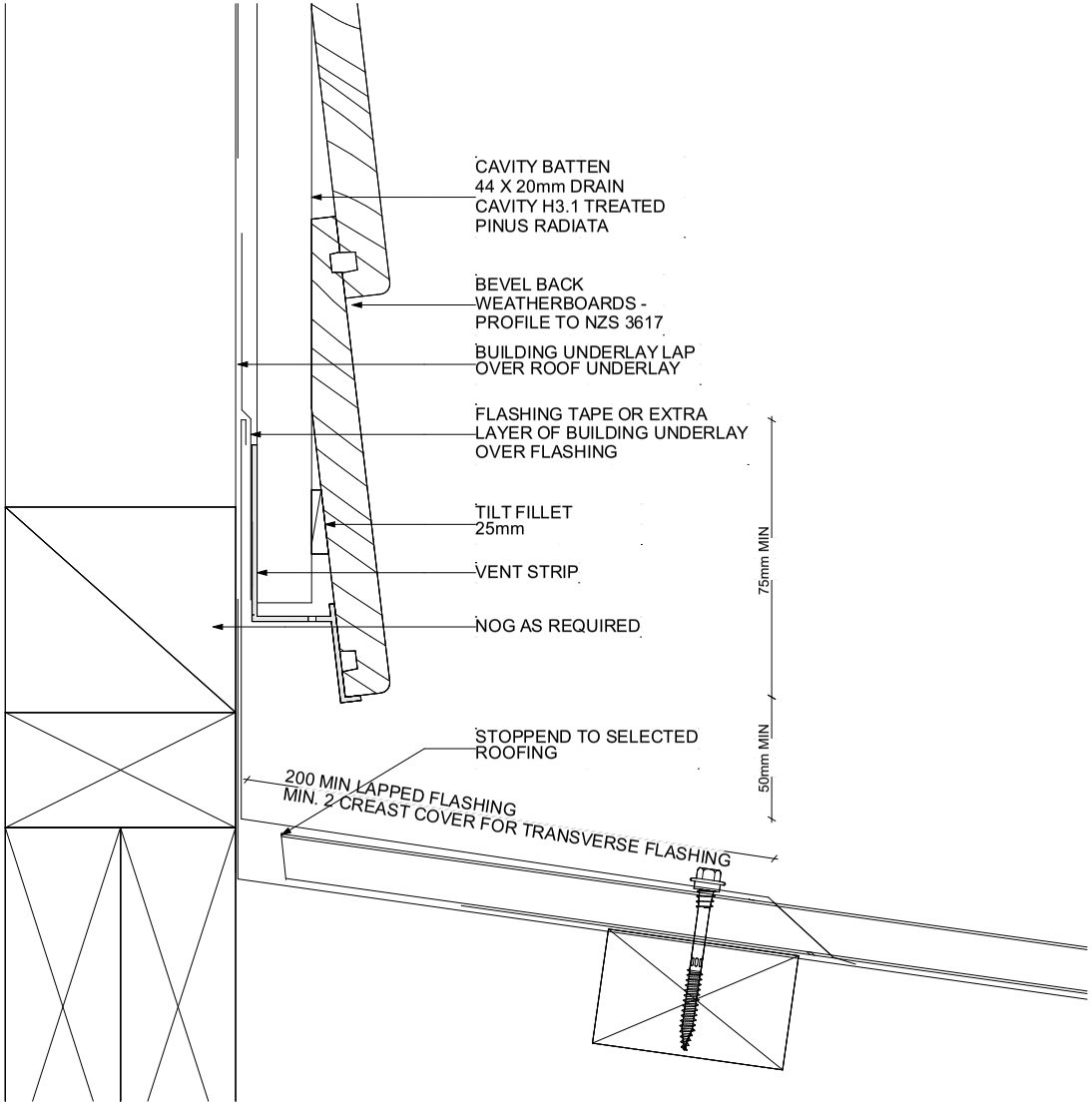
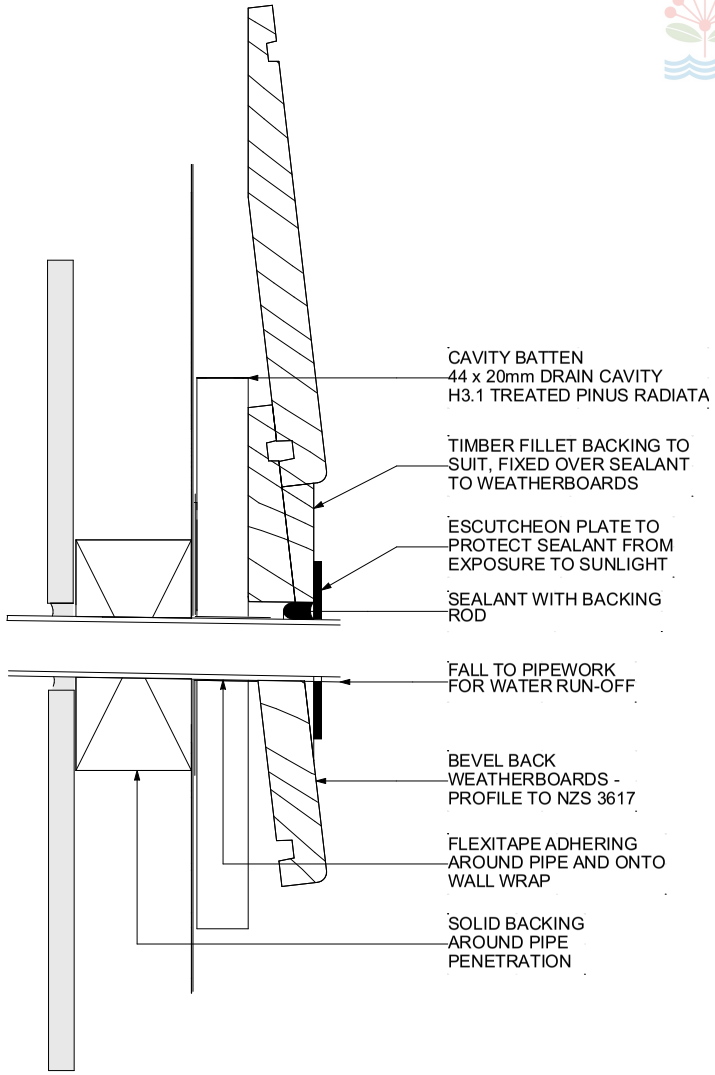


wb7 Fix Apron 1:2



Pipe Penetration 1:2

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Cladding Detail

SHEET No: A704

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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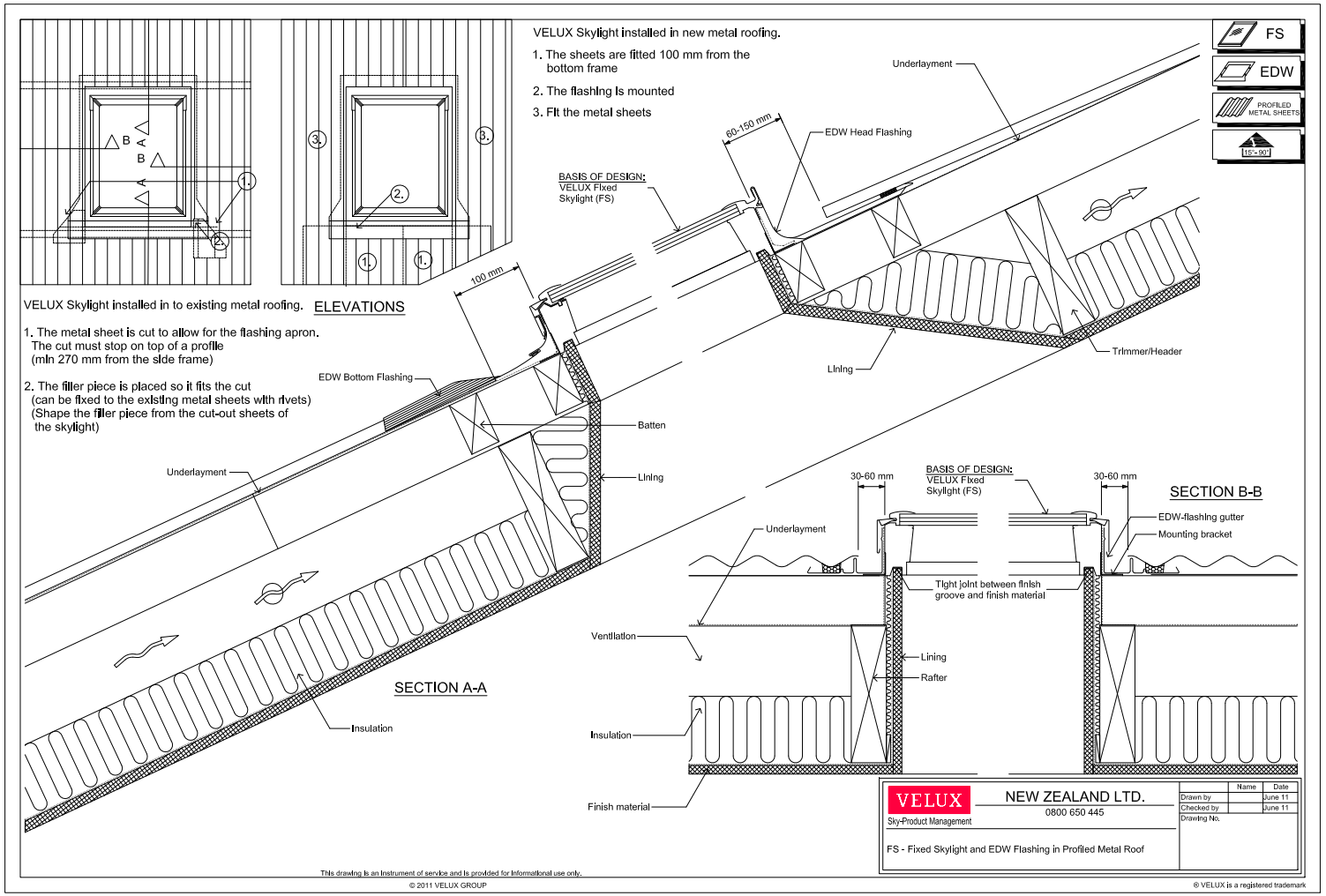

FS - Fixed Skylight and EDW flashing in Profiled Metal Roof 1:1

PROJECT

PROPOSED DWELLING

23 Te Rata Blvd
Paerata
23 Te Rata Blvd Paerata Auckland

DRAWING ISSUE

REV.	DATE	DESCRIPTION

DRAWING INFO

Velux Details

SHEET No: A705

PROJECT No:	22-017
SCALE AT A3	as shown
DRAWN BY:	RM
DATE PRINTED:	Wednesday, 26 April 2023

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STRUCTURAL DRAWINGS FOR

PROPOSED NEW DWELLING

23 TE RATA BOULEVARD PUKEKOHE

KOPI ENGINEERING LIMITED
FOR SPECIFIC ELEMENT(S) RELEVANT TO OUR CALCULATION AND PRODUCER STATEMENT PS1 (DESIGN) ON THIS DRAWING ONLY

FOR BUILDING CONSENT APPLICATION ONLY

DATE	REV	REVISION
03.2023	-	FOR CONSENT ONLY

KOPI ENGINEERING

PROPOSED NEW DWELLING
23 TE RATA BOULEVARD
PUKEKOHE

COVER SHEET

DESIGNED	IF	APPROVED	SC
CHECKED	NH	DRAWN	IF
JOB NO. 12102		SHEET G00	

REV -

GENERAL

1. ALL WORK TO BE IN ACCORDANCE WITH NEW ZEALAND BUILDING CODE. ALL CODES REFER TO THE CURRENT EDITION PLUS ALL AMENDMENTS.
2. STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS, CIVIL, ARCHITECT AND ENGINEERING SERVICES DOCUMENTS. NON-STRUCTURAL DETAILS MAY BE OMITTED FOR CLARITY.
3. CHECK ALL DIMENSIONS ON SITE BEFORE CONSTRUCTION. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM DRAWINGS. UNLESS NOTED OTHERWISE, ALL LEVELS ARE IN METRES, AND ALL DIMENSIONS ARE IN MILLIMETRES.
4. ALL DISCREPANCIES SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF ALL NECESSARY TEMPORARY WORKS TO ENSURE STRENGTH AND STABILITY OF THE STRUCTURE AND ADEQUATE SUPPORT TO THE EXISTING SERVICES THROUGHOUT THE COURSE OF THE WORKS.
6. TAKE PRECAUTIONS TO ESTABLISH LOCATION OF AND PROTECT EXISTING SERVICES AT SITE. SERVICES SHOWN ON DRAWINGS ARE IN APPROXIMATE LOCATIONS ONLY. SERVICES OTHER THAN THOSE SHOWN MAY EXIST ON SITE. HAND EXCAVATE SERVICES WITHIN ONE METRE OF SERVICES.
7. WHERE PROPRIETARY PRODUCTS ARE SPECIFIED IN THE DOCUMENTS THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE PRODUCT FOR APPROVAL.
8. ALL GROUT SHALL BE NON SHRINK CEMENTATIOUS GROUT. IE. SIKA 212 OR SIMILAR. STRENGTH AT 28 DAYS > 40 MPa.
9. PRODUCER STATEMENT PS4 WILL NOT BE SUPPLIED BY KOPI ENGINEERING WITHOUT UNDERTAKING SITE OBSERVATIONS.
10. ABBREVIATIONS ON THE DRAWINGS ARE AS FOLLOWS:

ALT	ALTERNATE	MIN	MINIMUM
CRS	CENTRES	NF	NEAR FACE
C/C	CENTRE TO CENTRE	NTS	NOT TO SCALE
C.O.S.	CONFIRMED ON SITE	REF	REFER
DIA	DIAMETER	RL	REDUCED LEVEL
DRG	DRAWING	STGD	STAGGERED
EF	EACH FACE	STRPS	STIRRUPS
EQV	EQUIVALENT	STRS	STARTERS
EW	EACH WAY	FL	FINISHED LEVEL
FF	FAR FACE	T/S	TOPSIDE
FFL	FINISHED FLOOR LEVEL	THK	THICK
FGL	FINISHED GROUND LEVEL	TYP	TYPICAL
FW	FILLET WELD	U/S	UNDERSIDE
FWAR	FILLET WELD ALL ROUND	UNO	UNLESS NOTED OTHERWISE
GALV	GALVANISED		
HD GALV	HOT DIP GALVANISED	VL	VARIOUS LENGTH
MAX	MAXIMUM		

CONCRETE

1. MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH NZS3109.
2. UNLESS NOTED OTHERWISE ON DRAWINGS, MINIMUM CONCRETE STRENGTHS SHALL BE 20 MPa (25 MPa IN SEA SPRAY ZONES).
3. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
4. SAW CUTS SHOULD BE CUT TO DEPTH OF 25 mm AND SHOULD BE CUT NO LATER THAN 24 HOURS IN SUMMER, OR 48 HOURS IN WINTER, AFTER CONCRETE IS PLACED AND HARDENING.
5. COVER:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	75mm
WITHIN RIBS, SIDE COVER	40mm

6. SURFACE FINISHES: (NZS3114:1987)

CONCEALED WORK	F1
EXPOSED EDGES OF FOUNDATION	F5
FLOOR SLAB	U3

7. NO PENETRATIONS, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

BUILDING PLATFORM & FOUNDATIONS

1. CONTRACTOR TO CHECK LOCATIONS OF EXISTING SERVICES PRIOR TO ANY PILING WORK. NOTIFY ENGINEER OF ANY CONFLICTS AND AWAIT APPROVAL BEFORE PROCEEDING.
2. UNLESS SPECIFICALLY ADDRESSED OTHERWISE, ULTIMATE BEARING CAPACITY OF 300 kPa (ULS) IS ASSUMED THROUGHOUT BUILDING PLATFORM (INCLUDING UNDERLYING LEVELING FILL). THIS SHALL BE CONFIRM ON SITE BY THE GEOTECHNICAL ENGINEER.
3. UNLESS NOTED OTHERWISE, ASSUMED ULTIMATE SKIN FRICTION OF 33 kPa OVER THE SOCKET (EFFECTIVE) LENGTH. TO BE CONFIRMED ON SITE BY THE ENGINEER.
4. COMPACTED HARDFILL IN ACCORDANCE WITH NZS3604:2011 IS RECOMMENDED FOR ANY FILL WITHIN 1.0m OF BUILDING PLATFORM. ALTERNATIVE EARTH FILL SHALL BE CONSTRUCTED IN ACCORDANCE WITH NZS 4431:1989. GEOTECHNICAL ENGINEER INPUT IS RECOMMENDED.
5. CONTRACTOR TO ENSURE THE STRUCTURAL INTEGRITY OF COMPLETED BUILDING PLATFORM IS NOT COMPROMISED THROUGHOUT THE CONSTRUCTION. ANY SIGNIFICANT DISTURBANCE (E.G. RETAINING WALLS OR STORMWATER TANK IN CLOSE PROXIMITY, ETC.) SHALL BE REVIEWED AND APPROVED BY OBSERVING GEOTECHNICAL ENGINEER.
6. REFER TO GEOTECHNICAL INVESTIGATION REPORT FOR THE OVERALL SITE STABILITY. THIS IS OUTSIDE THE SCOPE OF THIS DESIGN.
7. PILE SETTING OUT DIMENSIONS ARE TO CENTERLINE OF PILE AT UNDERSIDE OF PILECAP / FOOTING. TOLERANCE ON POSITION OF PILES TO BE ± 50 mm.
8. REMOVE TOPSOIL CONTAINING ORGANIC MATTER, RUBBLE AND / OR DEBRIS AND OTHER UNSUITABLE MATERIAL BELOW FOUNDATIONS.
9. BACKFILL AGAINST RETAINING WALLS ONLY AFTER MINIMUM CONCRETE STRENGTH IS ACHIEVED, AND/OR PERMANENT SUPPORT INSTALLED WHERE APPLICABLE.
10. BACKFILL FOR RETAINING WALLS TO BE FREE DRAINING GRANULAR MATERIAL. PROVIDE DRAINAGE BEHIND RETAINING WALLS COMPRISING CONTINUOUS SLOTTED DRAIN WITH GRANULAR SURROUNDING. CONNECTED TO RETICULATED STORMWATER DRAINAGE SYSTEM.

WAFFLE RAFT TYPE FOUNDATION

1. 220mm POLYSTYRENE PADS SHALL BE MINIMUM CLASS L TO AS 1366 PART3 PLACED ON 0.25mm DPC ON MAX. 45mm THICK SCREED LEVEL GAP7 EXTENDING 600mm PAST BUILDING LINE.
2. SUPPLEMENTARY REINFORCING BARS TO BE PLACED AT EACH INTERNAL CORNER, 2-HD12, 1.5 m LONG.
3. SLAB TO BE 100mm THICK WITH GRADE 500E DUCTILE MESH ON 40 mm MESH CHAIRS.
4. ALL REINFORCING BARS AND ALL WELDED MESH FABRIC REINFORCING SHALL CONFORM TO AS/NZS4671:2001
5. CONCRETE TO HAVE MIN. STRENGTH OF 20 MPa (25 FOR SEA-SPRAY ZONE). WITH 80mm SLUMP AND 13mm NOMINAL AGGREGATE SIZE.

MASONRY BLOCKWORK

1. ALL BLOCKWORK SHALL BE UNDER DIRECT SUPERVISION OF A REGISTERED MASON WHO SHALL PROVIDE CONTINUOUS INSPECTION. ALL WORK SHALL COMPLY WITH NZS4210 MASONRY MATERIAL AND WORKMANSHIP.
2. MASONRY IS TO BE CONSTRUCTED BY THE "HIGH LIFT" METHOD WITH CLEAN OUT PORTS AT EVERY VERTICAL BAR AND AT THE BOTTOM OF EVERY LIFT. BOTTOM COURSE TO BE OPEN ENDED BOND BEAM BLOCKS PLACED UPSIDE DOWN.
3. BLOCKWORK TO BE 12.5 MPa (GRADE "B") AND ALL CELLS FILLED WITH 20 MPa GROUT UNLESS NOTED OTHERWISE.
4. IF NOT SPECIFICALLY EXCLUDED ON DRAWINGS, WATERPROOFING SHALL BE APPLIED WHERE REQUIRED. REFER TO ARCHITECTS SPECIFICATIONS AND/OR ADOPT GOOD BUILDING PRACTICES.

REINFORCEMENT

1. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
2. ALL REINFORCEMENT TO BE MANUFACTURED IN ACCORDANCE WITH AS/NZS 4671:2001 OR EQUIVALENT.
3. MINIMUM REINFORCEMENT LAPS IN 20 MPa CONCRETE:

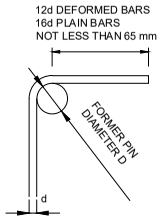
D	DEFORMED BARS GRADE 300E TO AS/NZS 4671 (300MPa)	= 35 x NOMINAL BAR DIAMETER
HD	DEFORMED BARS GRADE 500E TO AS/NZS 4671 (500MPa)	= 58 x NOMINAL BAR DIAMETER

NOTE: SPLICE LAP LENGTH SHALL BE INCREASED BY 30% FOR TOP REINFORCEMENT WHERE MORE THAN 300 mm OF CONCRETE IS CAST BELOW THE BAR.

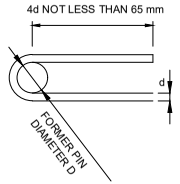
4. THE DEVELOPMENT OF PLAIN BARS (R AND HR) SHALL RELY ON HOOKS.
5. MINIMUM LAP FOR MESH FABRIC SHALL BE ONE MESH BAR SPACING PLUS 25 mm. OR ALTERNATIVELY APPROVED BY MESH SUPPLIER.
7. DEVIATION OF REINFORCEMENT FROM ITS SPECIFIED POSITION SHALL NOT EXCEED THE FOLLOWINGS:

- IN BEAMS, SLABS, WALLS	= ± 10 mm
- IN COLUMNS, SLAB ON GROUND	= ± 10 mm
- IN FOOTING CAST IN GROUND	= ± 30 mm
- VERTICAL BARS IN RETAINING WALLS	= ± 5 mm

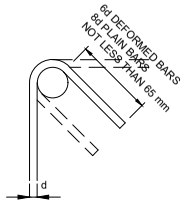
8. WELDING OF REINFORCEMENT IS NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.



STANDARD LEG



STANDARD HOOK



STANDARD TIE OR STIRRUP ANCHORAGE

STEELWORK / STRUCTURAL STEEL

1. CHECK AND VERIFY ALL DIMENSIONS AND LEVELS ON SITE BEFORE COMMENCING FABRICATION OF ANY STRUCTURAL STEELWORK.
2. ALL STRUCTURAL STEELWORK TO BE GRADE 300 UNLESS NOTED OTHERWISE. ALL PLATES AND CLEATS SHALL BE GRADE 250 UNO.
3. THE ENDS OF ALL HOLLOW SECTIONS SHALL BE SEALED WITH 3 mm MIN STEEL PLATE. SEAL WELDED.
4. ALL STEELWORK CLASSIFIED IN AN "EXPOSED" ENVIRONMENT TO HAVE SURFACE COATINGS COMPLYING WITH SNZ TS 3404:2018.
5. UNLESS OTHERWISE SHOWN ON DRAWINGS, BOLTS SHALL BE GRADE 8.8/S COMPLYING WITH NZS3404. THREAD TO BE EXCLUDED FROM SHEAR PLANE.
6. USE LOCK NUTS FOR BOLTS SUBJECT TO VIBRATION. WASHERS (TAPERED WHERE NECESSARY) ARE TO BE USED UNDER ALL NUTS AND BOLT HEADS.
7. UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL BASE PLATES SHALL BEAR DIRECTLY ON 25 mm OF FLOWABLE GROUT.
8. WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF NZS3404 AND AS/NZS 1554.1. ALL WELDS SHALL BE CATEGORY GP 6 mm FILLET WELD CONTINUOUS, UNO.
9. THIS SET OF STRUCTURAL DRAWINGS SHOW THE DESIGN INTENT. SHOP DRAWINGS REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
10. STEEL CONSTRUCTION AS PER AS/NZS 5131:2016 CONSTRUCTION CATEGORY CC2.

FOR BUILDING CONSENT APPLICATION ONLY

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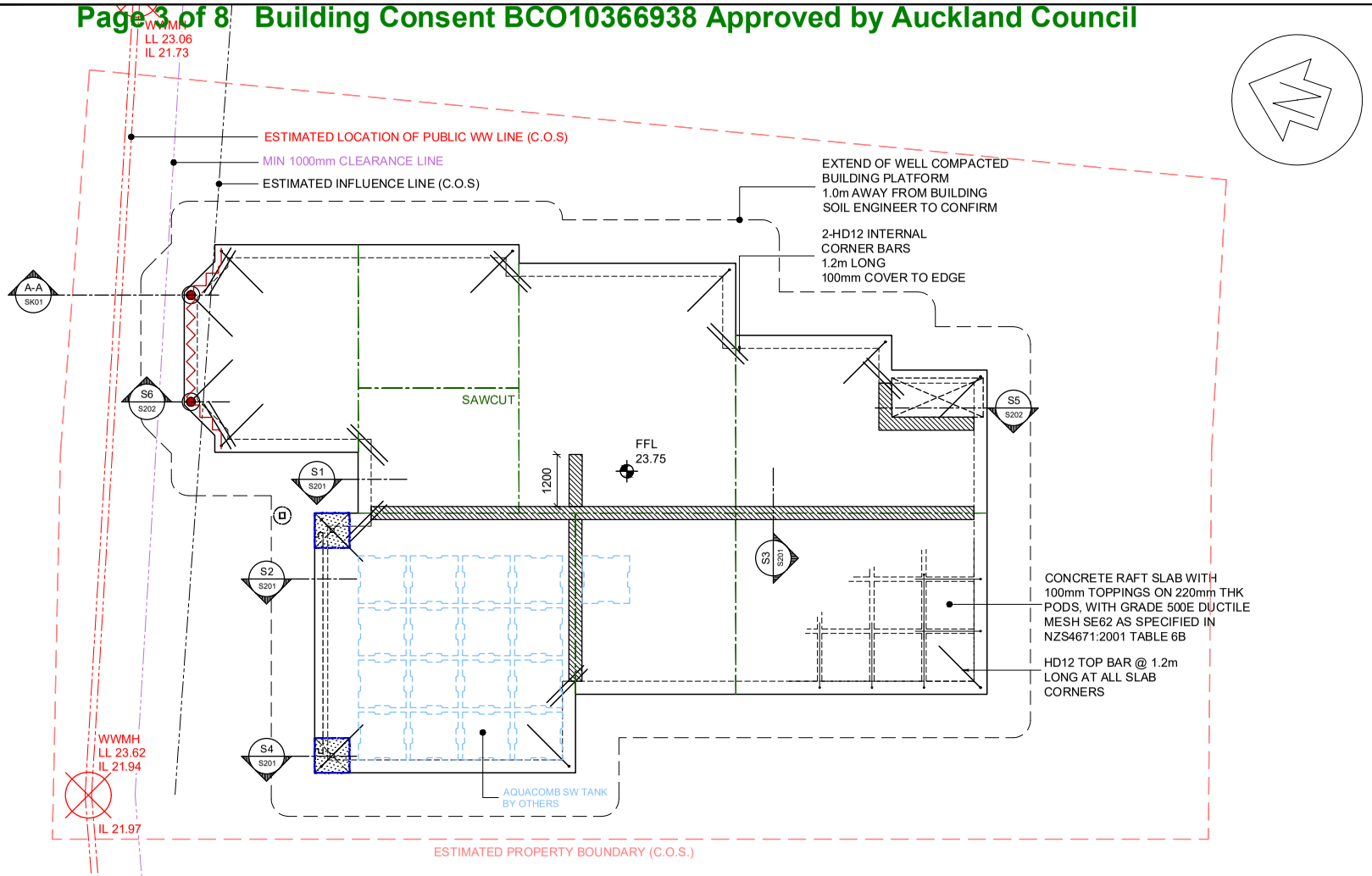
KOPI ENGINEERING

PROPOSED NEW DWELLING
23 TE RATA BOULEVARD
PUKEKOHE

GENERAL NOTES

DESIGNED	IF	APPROVED	SC
CHECKED	NH	DRAWN	IF
JOB NO. 12102		SHEET G01	

REV -



KEY:

- INTERNAL SLAB THICKENING 320mm THICK, 300mm WIDE
- STANDARD FOUNDATION PILE 125x125 SQ PILE IN Ø400mm CONCRETE 1.2m DEEP BELOW CGL (U.N.O.)
- 800 x 800 x 320 THK CONCRETE IN-SLAB PAD 4-HD12 E/W
- Ø400 CONCRETE PILE MIN 2.0m DEEP (U.N.O)
- BRIDGING EDGE BEAM 300mm WIDE, 320mm THICK 4-HD12 BARS WITH R6 @ 150mm c/c

IMPORTANT NOTE FOR RAFT SLAB FOUNDATION:

- BUILDING PLATFORM TO HAVE MINIMUM ULTIMATE BEARING CAPACITY OF 300kPa. "CLASS M" SOIL AS PER SOIL REPORT BY ENGEO LTD (REF:#12914.000.002), DATED 06/2022. SOIL ENGINEER TO CONFIRM.
- DESIGN ASSUMED NO LOCAL AND/OR GLOBAL LAND STABILITY ISSUES ON SITE. SOIL ENGINEER TO CONFIRM.
- CONTRACTOR TO CONFIRM EXACT LOCATION OF UNDERGROUND SERVICES PRIOR TO EXCAVATION.
- CONTRACTOR TO ENSURE ALL PLUMBING & DRAINAGE WORK SHALL BE CARRIED OUT AWAY FROM BUILDING PLATFORM, AND MUST NOT COMPROMISE THE STRUCTURAL INTEGRITY OF THE FOUNDATION & BUILDING PLATFORM.

WAFFLE SLAB FOUNDATION NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH GENERAL NOTES (SHEET G01), ARCHITECTURAL PLANS, SPECIFICATIONS, AND ENGINEERING CALCULATION.
2. ALL CONSTRUCTION TO COMPLY WITH NZS 3604, NZS 4229 AND / OR SPECIFIC ENGINEERING DESIGN.
3. PROPRIETARY PRODUCTS TO COMPLY WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
4. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS. DIMENSIONS SHOWN (IF ANY) ARE INDICATIVE ONLY.
5. OUTLINE OF BRICK REBATE, GARAGE DOOR REBATE OR OPENING SETBACK (WHERE REQUIRED) MAY NOT BE SHOWN FOR CLARITY. CONTRACTOR TO REFER TO ARCHITECT DRAWINGS FOR DETAILS.
6. BUILDING PLATFORM TO HAVE MINIMUM BEARING CAPACITY OF 300 kPa. CONTRACTOR TO CONDUCT TEST AND CONFIRM. SEEK ENGINEER APPROVAL IF IN DOUBT.
7. ALL FILL ON OR WITHIN 2.5m OF THE BUILDING PLATFORM SHALL BE CONSTRUCTED IN ACCORDANCE WITH NZS 4431:1989.
8. SUPPLEMENTARY REINFORCING BARS TO BE PLACED AT EACH INTERNAL CORNERS, 2-HD12, 1.2m LONG.
9. CONCRETE SLAB TO BE MIN. 100mm THICK WITH GRADE 500E DUCTILE MESH (SE62 OR EQV.) ON POLY POD, ON DPC, ON GAP 7 BLINDING, ON COMPACTED HARDFILL.
10. PROVIDE SAW CUTS (20mm DEEP) IN CONCRETE SLAB IN ACCORDANCE WITH NZS 3604.
11. ALL REINFORCING BARS AND STEEL MESH REINFORCING SHALL CONFORM TO NZS 4671:2001. LAP AND SPLICE IN ACCORDANCE WITH NZS REQUIREMENT.
12. PROVIDE CONTROL JOINTS TO BLOCKWORK (AT 6m CRS MAX) IN ACCORDANCE WITH RELEVANT NZ MASONRY STANDARDS. WORK TO BE SUPERVISED BY REGISTERED MASON.
13. COMPACTED AND LEVELED BUILDING PLATFORM TO EXTEND MIN 1000 mm PASS BUILDING ENVELOPE. FAILURE TO DO SO WOULD COMPROMISE THE CONSTRUCTION PROCESS.
14. CONTRACTOR TO ENSURE ALL PLUMBING, DRAINAGE WORK & STORMWATER MANAGEMENT DEVICES ETC. SHALL BE CARRIED OUT AWAY FORM BUILDING PLATFORM, AND MUST NOT COMPROMISE THE STRUCTURAL INTEGRITY OF THE FOUNDATION & PLATFORM.
15. CONCRETE STRENGTH TO HAVE MIN. 20 MPa IN 28 DAYS (OR 25 MPa FOR SEA SPRAY ZONES). WITH 80mm SLUMP AND 13mm NOMINAL AGGREGATE SIZE.
16. REPORT TO ENGINEER IMMEDIATELY IF ANY DISCREPANCY FOUND OR IN DOUBT, RE-DESIGN MAY BE NEEDED.

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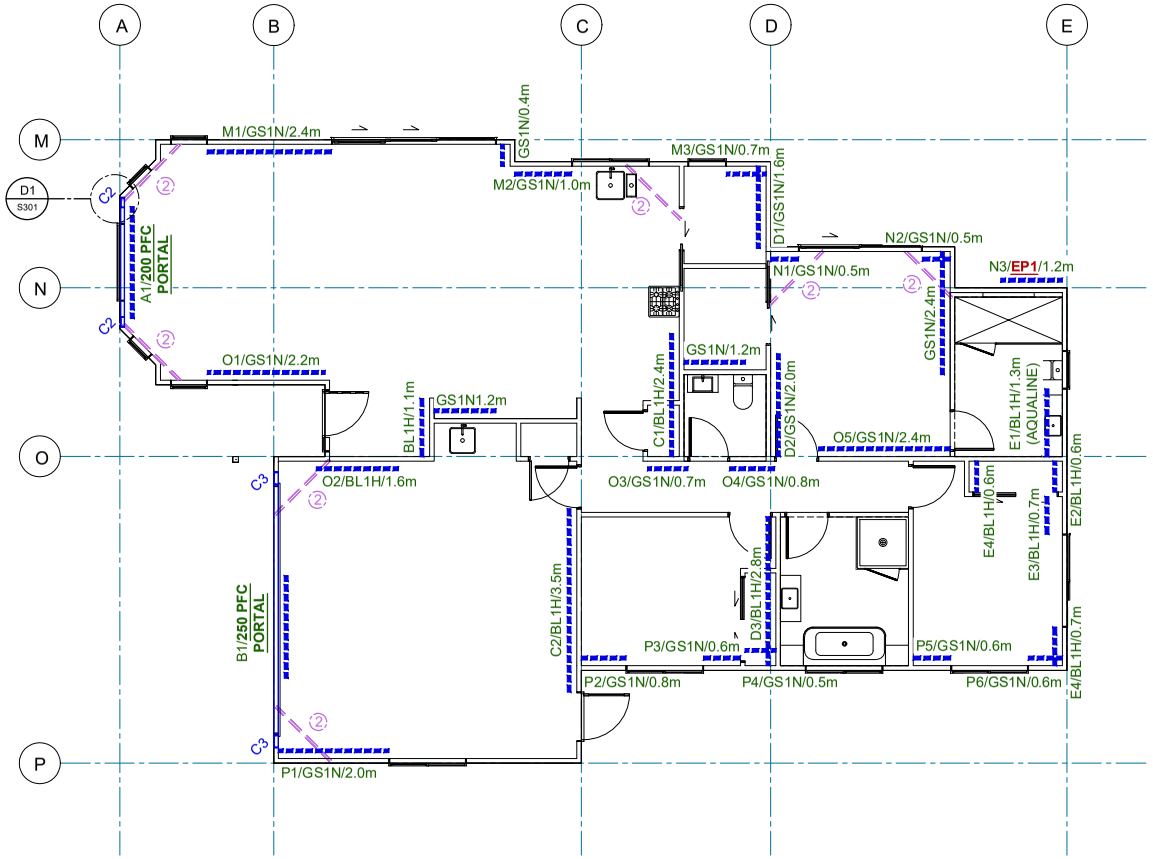
DATE	REV	REVISION

KOPI ENGINEERING

PROPOSED NEW DWELLING
23 TE RATA BOULEVARD
PUKEKOHE

FOUNDATION LAYOUT

DESIGNED	IF	APPROVED	SC
CHECKED	NH	DRAWN	IF
JOB NO. 12102		SHEET S101	
REV -		SCALE 1:100 (A3)	



GROUND FLOOR BRACING LAYOUT

EXTERNAL PLYWOOD BRACING TO BE INSTALLED PRIOR TO INSTALLING CLADDING. REFER TO MANUFACTURER SPECIFICATION.

KEYS:

② 140x35 CEILING PLANE BRACE OR DRAGON TIES FIXED TO NZS3604

PORTAL SCHEDULE:

LABEL	SIZE	SUPPORT
A1	200 PFC PORTAL	C2
B1	250 PFC PORTAL	C3
C2	200 PFC PORTAL LEG	
C3	250 PFC PORTAL LEG	

BRACING NOTES:

1. REFER TO ARCHITECTS DRAWING FOR ALL LAYOUT DIMENSIONS, REBATES AND SERVICES.
2. WALL BRACING TO BE READ IN CONJUNCTION WITH WALL BRACING CALCULATIONS.
3. WALLS, BRACING ELEMENTS, FIXING CONNECTIONS TO BE CONSTRUCTED IN ACCORDANCE WITH NZS 3604:2011, NZS 4229:1999 AND MANUFACTURERS' REQUIREMENTS.
4. PROPRIETARY ITEMS TO COMPLY WITH MANUFACTURERS' SPECIFICATIONS. IN THIS CASE, GIB EZYBRACE SYSTEM AND/OR CHH ECOPLY SYSTEM.
5. INSTALL SINGLE-SIDED BRACING PANELS AS INDICATED ON PLAN.
6. SHOULD ACTUAL CONSTRUCTION WORK PREVENTS THE INSTALLATION IN ACCORDANCE TO MANUFACTURERS SPECIFICATION, REFER TO DESIGNER FOR SPECIFIC INSTALLATION DETAILS AND / OR RE-ASSESSMENT.
7. BRACELINE HOLD-DOWN: GIB HANDIBRAC® AND A CONCRETE ANCHOR WITH A MINIMUM CHARACTERISTIC UPLIFT CAPACITY OF 15KN AT EACH END OF THE BRACING ELEMENT, OR METAL WRAP-AROUND STRAP AND A CONCRETE ANCHOR WITH A MINIMUM CHARACTERISTIC UPLIFT CAPACITY OF 15KN FITTED WITH A 50X50X3MM SQUARE WASHER WITHIN 80MM OF EACH END OF THE BRACING ELEMENT.
8. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL GIB & BRACELINE SHEETS ARE STANDARD 10mm THICK.
9. STRUCTURAL CEILING DIAPHRAGM CONSTRUCTION SHALL COMPLIED WITH CLAUSE 13.5 OF NZS3604:2011, AS WELL AS RECOMMENDATIONS FOR GIB CEILING DIAPHRAGM NAILING SCHEDULE.

BRACING DESIGN:

1. WIND ZONE	= HIGH
2. ROOFING	= LIGHT
3. CLADDING	= LIGHT
4. EQ. ZONE	= 1
5. SUBSOIL CLASS	= C (SHALLOW)

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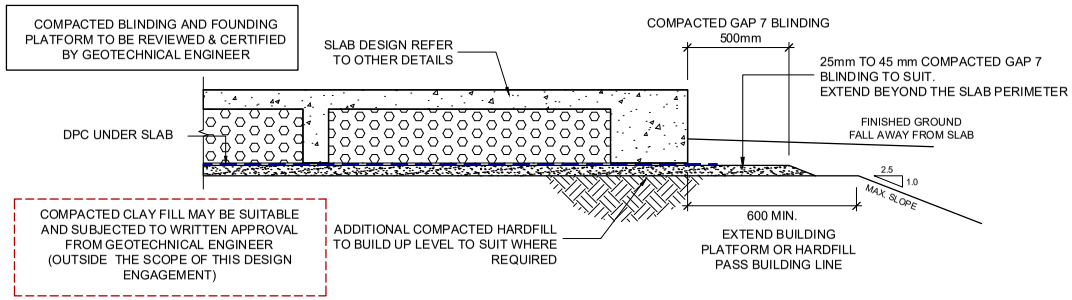
PUKEKOHE

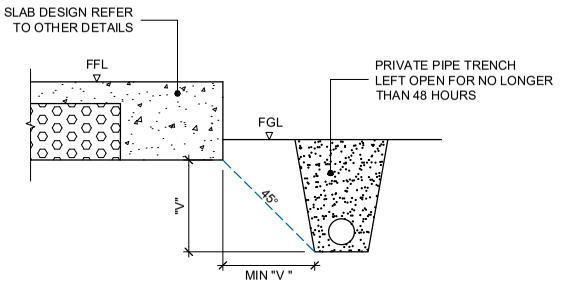
BRACING LAYOUT

DESIGNED	IF	APPROVED	SC
CHECKED	NH	DRAWN	IF
JOB NO. 12102		SHEET S102	
REV -		SCALE 1:100 (A3)	



TYPICAL WAFFLE RAFT FOUNDATION PLATFORM DETAILS

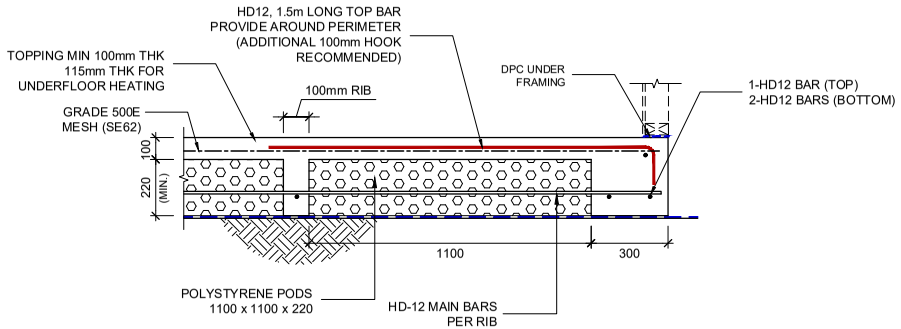
SCALE 1:20 (A3)



TYPICAL PIPE TRENCH TO BUILDING FOUNDATION

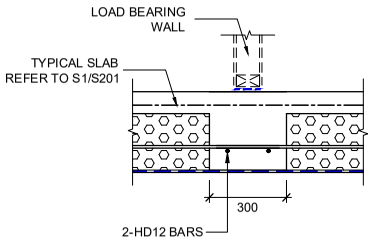
SCALE 1:20 (A3)

[ADOPTED FROM E1/AS1 FIGURE 14]



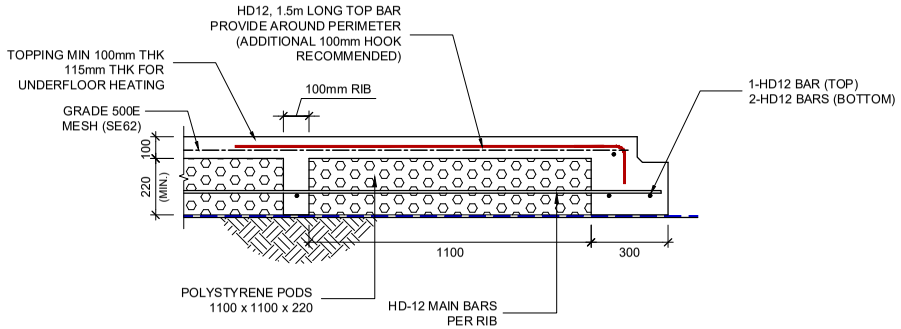
S1 / S101 STANDARD WAFFLE RAFT FOUNDATION

SCALE 1:20 (A3)



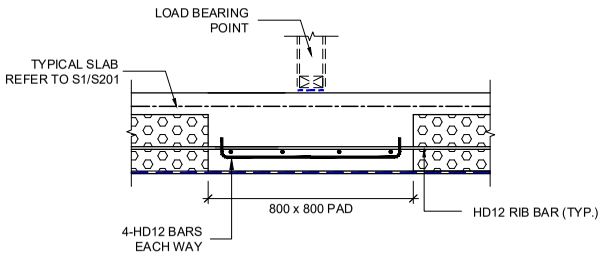
S3 / S101 INTERNAL BEAM

SCALE 1:20 (A3)



S2 / S101 STANDARD WAFFLE RAFT FOUNDATION

SCALE 1:20 (A3) [WITH GARAGE REBATE]



S4 / S101 IN SLAB PAD FOOTING

SCALE 1:20 (A3)

WAFFLE SLAB FOUNDATION NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH GENERAL NOTES (SHEET G01), ARCHITECTURAL PLANS, SPECIFICATIONS, AND ENGINEERING CALCULATION.
2. ALL CONSTRUCTION TO COMPLY WITH NZS 3604, NZS 4229 AND / OR SPECIFIC ENGINEERING DESIGN.
3. PROPRIETARY PRODUCTS TO COMPLY WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
4. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS. DIMENSIONS SHOWN (IF ANY) ARE INDICATIVE ONLY.
5. OUTLINE OF BRICK REBATE, GARAGE DOOR REBATE OR OPENING SETBACK (WHERE REQUIRED) MAY NOT BE SHOWN FOR CLARITY. CONTRACTOR TO REFER TO ARCHITECT DRAWINGS FOR DETAILS.
6. BUILDING PLATFORM TO HAVE MINIMUM BEARING CAPACITY OF 300 kPa. CONTRACTOR TO CONDUCT TEST AND CONFIRM. SEEK ENGINEER APPROVAL IF IN DOUBT.
7. ALL FILL ON OR WITHIN 2.5m OF THE BUILDING PLATFORM SHALL BE CONSTRUCTED IN ACCORDANCE WITH NZS 4431:1989.
8. SUPPLEMENTARY REINFORCING BARS TO BE PLACED AT EACH INTERNAL CORNERS, 2-HD12, 1.2m LONG.
9. CONCRETE SLAB TO BE MIN. 100mm THICK WITH GRADE 500E DUCTILE MESH (SE62 OR EQV.) ON POLY POD, ON DPC, ON GAP 7 BLINDING, ON COMPACTED HARDFILL.
10. PROVIDE SAW CUTS (20mm DEEP) IN CONCRETE SLAB IN ACCORDANCE WITH NZS 3604.
11. ALL REINFORCING BARS AND STEEL MESH REINFORCING SHALL CONFORM TO NZS 4671:2001. LAP AND SPLICE IN ACCORDANCE WITH NZS REQUIREMENT.
12. PROVIDE CONTROL JOINTS TO BLOCKWORK (AT 6m CRS MAX) IN ACCORDANCE WITH RELEVANT NZ MASONRY STANDARDS. WORK TO BE SUPERVISED BY REGISTERED MASON.
13. COMPACTED AND LEVELED BUILDING PLATFORM TO EXTEND MIN 1000 mm PASS BUILDING ENVELOPE. FAILURE TO DO SO WOULD COMPROMISE THE CONSTRUCTION PROCESS.
14. CONTRACTOR TO ENSURE ALL PLUMBING, DRAINAGE WORK & STORMWATER MANAGEMENT DEVICES ETC. SHALL BE CARRIED OUT AWAY FORM BUILDING PLATFORM, AND MUST NOT COMPROMISE THE STRUCTURAL INTEGRITY OF THE FOUNDATION & PLATFORM.
15. CONCRETE STRENGTH TO HAVE MIN. 20 MPa IN 28 DAYS (OR 25 MPa FOR SEA SPRAY ZONES). WITH 80mm SLUMP AND 13mm NOMINAL AGGREGATE SIZE.
16. REPORT TO ENGINEER IMMEDIATELY IF ANY DISCREPANCY FOUND OR IN DOUBT, RE-DESIGN MAY BE NEEDED.

FOR BUILDING CONSENT APPLICATION ONLY

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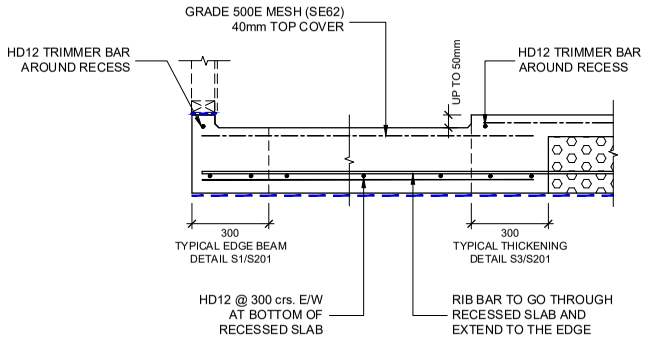
03.2023	-	FOR CONSENT ONLY

KOPI ENGINEERING

PROPOSED NEW DWELLING
23 TE RATA BOULEVARD
PUKEKOHE

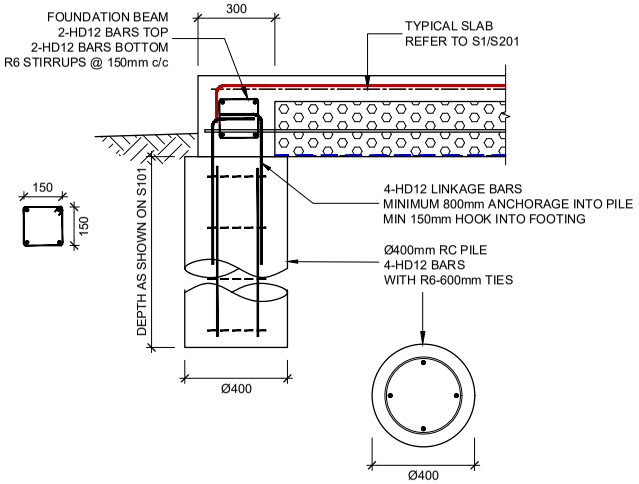
FOUNDATION DETAILS 1

DESIGNED	IF	APPROVED	SC
CHECKED	NH	DRAWN	IF
JOB NO. 12102		SHEET S201	
REV -		SCALE 1:20 (A3)	



S5 / S101 **SHOWER RECESS**

SCALE 1:20 (A2)



S6 / S101 **BRIDGING BEAM ON PILE**

SCALE 1:20 (A3)

WAFFLE SLAB FOUNDATION NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH GENERAL NOTES (SHEET G01), ARCHITECTURAL PLANS, SPECIFICATIONS, AND ENGINEERING CALCULATION.
2. ALL CONSTRUCTION TO COMPLY WITH NZS 3604, NZS 4229 AND / OR SPECIFIC ENGINEERING DESIGN.
3. PROPRIETARY PRODUCTS TO COMPLY WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
4. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS. DIMENSIONS SHOWN (IF ANY) ARE INDICATIVE ONLY.
5. OUTLINE OF BRICK REBATE, GARAGE DOOR REBATE OR OPENING SETBACK (WHERE REQUIRED) MAY NOT BE SHOWN FOR CLARITY. CONTRACTOR TO REFER TO ARCHITECT DRAWINGS FOR DETAILS.
6. BUILDING PLATFORM TO HAVE MINIMUM BEARING CAPACITY OF 300 kPa. CONTRACTOR TO CONDUCT TEST AND CONFIRM. SEEK ENGINEER APPROVAL IF IN DOUBT.
7. ALL FILL ON OR WITHIN 2.5m OF THE BUILDING PLATFORM SHALL BE CONSTRUCTED IN ACCORDANCE WITH NZS 4431:1989.
8. SUPPLEMENTARY REINFORCING BARS TO BE PLACED AT EACH INTERNAL CORNERS, 2-HD12, 1.2m LONG.
9. CONCRETE SLAB TO BE MIN. 100mm THICK WITH GRADE 500E DUCTILE MESH (SE62 OR EQV.) ON POLY POD, ON DPC, ON GAP 7 BLINDING, ON COMPACTED HARDFILL.
10. PROVIDE SAW CUTS (20mm DEEP) IN CONCRETE SLAB IN ACCORDANCE WITH NZS 3604.
11. ALL REINFORCING BARS AND STEEL MESH REINFORCING SHALL CONFORM TO NZS 4671:2001. LAP AND SPLICE IN ACCORDANCE WITH NZS REQUIREMENT.
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13. COMPACTED AND LEVELED BUILDING PLATFORM TO EXTEND MIN 1000 mm PASS BUILDING ENVELOPE. FAILURE TO DO SO WOULD COMPROMISE THE CONSTRUCTION PROCESS.
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16. REPORT TO ENGINEER IMMEDIATELY IF ANY DISCREPANCY FOUND OR IN DOUBT, RE-DESIGN MAY BE NEEDED.

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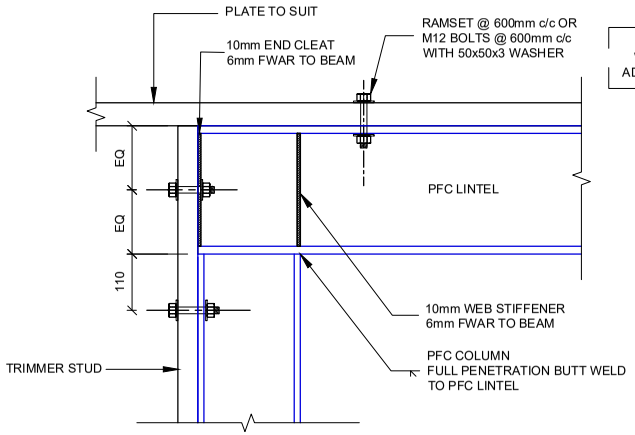
KOPI ENGINEERING

PROPOSED NEW DWELLING

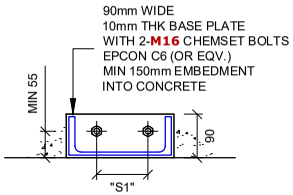
23 TE RATA BOULEVARD
PUKEKOHE

FOUNDATION DETAILS 2

DESIGNED	IF	APPROVED	SC
CHECKED	NH	DRAWN	IF
JOB NO. 12102		SHEET S202	
REV -		SCALE 1:20 (A3)	



STEEL BEAM / COLUMN
WITH M12 BOLTS AND/OR SCREWS TO
ADJACENT TIMBER FRAMING @ 600mm c/c



COLUMN SIZE	DISTANCE "S1"
C2: 200PFC	100
C3: 250PFC	100

D1 / S102 **PFC PORTAL FRAME**

SCALE 1:10 (A2)

IMPORTANT NOTES:
1. RECOMMENDED 6 mm WEB STIFFENER @ 2.0 m c/c THROUGHOUT ALL STEEL BEAMS & LINTELS.
2. DPC AND/OR NON-CONDUCTIVE COATING SHALL BE PROVIDED ON ALL INTERFACE BETWEEN STEEL, TIMBER AND CONCRETE.

TIMBER CONSTRUCTION NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH GENERAL NOTES (SHEET G01), ARCHITECTURAL PLANS, SPECIFICATIONS, AND ENGINEERING CALCULATION.
2. ALL CONSTRUCTION TO COMPLY WITH NZS 3604:2011 INCLUDING CLAUSE 2.4 (FASTENINGS & FABRICATION), NZS 4229:1999 AND/OR SPECIFIC ENGINEERING DESIGN.
3. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS.
4. ALL TIMBER LINTELS, STUDS AND JOISTS TO BE GRADE SG8 (STRUCTURAL GRADE).
5. TIMBER TREATMENT GRADE AS PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
6. ALL BEAMS TO BE SUPPPORTED ON MINIMUM 2/90x45 STUDS UNLESS NOTED OTHERWISE.
7. ALL STUDS AND DOUBLE MEMBERS (LINTELS OR JOISTS) TO BE WELL-SPIKED TOGETHER.
8. ALL TIMBER POSTS TO BE STRAIGHT, DRY AND KNOT FREE.
9. ALL STRUCTURAL STEEL TO BE MINIMUM GRADE 300.
10. ALL OPENINGS WITHIN FLOOR JOISTS AND BEAMS TO BE IN ACCORDANCE WITH THE LIMITS OF NZS 3604 AND / OR MANUFACTURER'S SPECIFICATIONS.
11. DIRECTION OF FLOOR JOISTS SPAN AS SHOWN ON PLAN.
12. PROVIDE BLOCKING BETWEEN JOISTS TO COMPLY WITH NZS3604. MAX SPACING BETWEEN BLOCKINGS TO BE 1.8m.
13. SOLID BLOCKING TO BE INSTALLED OVER INTERNAL LOAD BEARING WALLS RUNNING NORMAL TO JOISTS AND ALONG THE LINE OF EACH WALL THAT CONTAINS A WALL BRACING ELEMENT.

STRUCTURAL STEEL CONNECTION NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH GENERAL NOTES (SHEET G01), ARCHITECTURAL PLANS, SPECIFICATIONS, AND ENGINEERING CALCULATION.
2. ALL CONSTRUCTION TO COMPLY WITH NZS 3604:2011 AND/OR SPECIFIC ENGINEERING DESIGN.
3. CONTRACTORS TO CHECK AND VERIFY ALL DIMENSIONS AND LEVELS ON SITE BEFORE COMMENCING FABRICATION.
4. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS. DETAILS SHOWN MAY NOT BE TO SCALE, UNLESS SPECIFICALLY DIMENSIONED AS SHOWN.
5. ALL STUDS AND MULTIPLE TIMBER MEMBERS TO BE WELL-SPIKED TOGETHER.
6. ALL STRUCTURAL STEEL TO BE MINIMUM GRADE 300. ALL PLATES AND CLEATS SHALL BE GRADE 250 UNO.
7. OPENINGS WITHIN STEEL MEMBERS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY ENGINEER IN WRITING.
8. ALL BOLTS TO BE MINIMUM M12 GRADE 4.6/S UNLESS INDICATED OTHERWISE.
9. UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL WELDS TO BE 6mm FILLET WELD (CATERGORY GP). WELDING TO BE IN ACCORDANCE WITH NZS 3404 AND AS/NZS 1554.

FOR BUILDING CONSENT APPLICATION ONLY

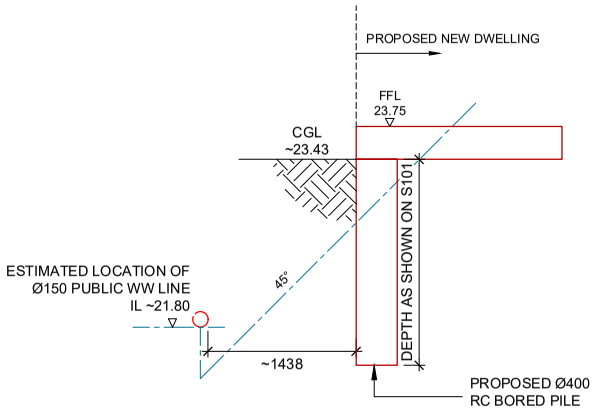
03.2023	-	FOR CONSENT ONLY
DATE	REV	REVISION

KOPI ENGINEERING

PROPOSED NEW DWELLING
23 TE RATA BOULEVARD
PUKEKOHE

CONNECTION DETAILS 1

DESIGNED	IF	APPROVED	SC
CHECKED	NH	DRAWN	IF
JOB NO. 12102		SHEET S301	
REV -		SCALE 1:10 (A3)	



SECTION A-A

NOT TO SCALE

IMPORTANT NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTURAL PLANS AND SPECIFICATIONS.
2. CONTENTS SHOWN HEREIN ARE FOR WATERCARE APPROVAL ONLY. DESIGN IS NOT INTENDED FOR BUILDING CONSENT NOR CONSTRUCTION PURPOSES.
3. DEPTH AND LOCATION OF ALL PUBLIC SERVICES MARKED ARE ADOPTED FROM ARCHITECTURAL SITE PLAN. THESE INFORMATION SHALL BE CONFIRMED ONSITE BEFORE COMMENCING ANY WORK.
4. DESIGN FOR FOUNDATION SLAB, BRIDGING BEAM AND PILES SHALL BE COMPLETED DURING BUILDING CONSENT STAGE.
5. FOUNDATION DESIGN MAY BE AMENDED DURING CONSENT PROCESS.
6. PILE LOCATION AND DEPTHS SHOWN HEREIN ARE PRELIMINARY ONLY. REFER TO CONSENTED PLANS FOR FINAL DESIGN.

FOR BUILDING CONSENT APPLICATION ONLY

03.2023	-	FOR CONSENT ONLY
DATE	REV	REVISION

KOPI ENGINEERING

PROPOSED NEW DWELLING
23 TE RATA BOULEVARD
PUKEKOHE

CROSS SECTION

DESIGNED	IF	APPROVED	SC
CHECKED	NH	DRAWN	IF
JOB NO. 12102		SHEET SK01	
REV -		SCALE 1:100 (A3)	