

Project

Proposed Dwelling - Franz Josef

Address

Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

Client

Friday Homes

#### **BUILDING CONSENT**

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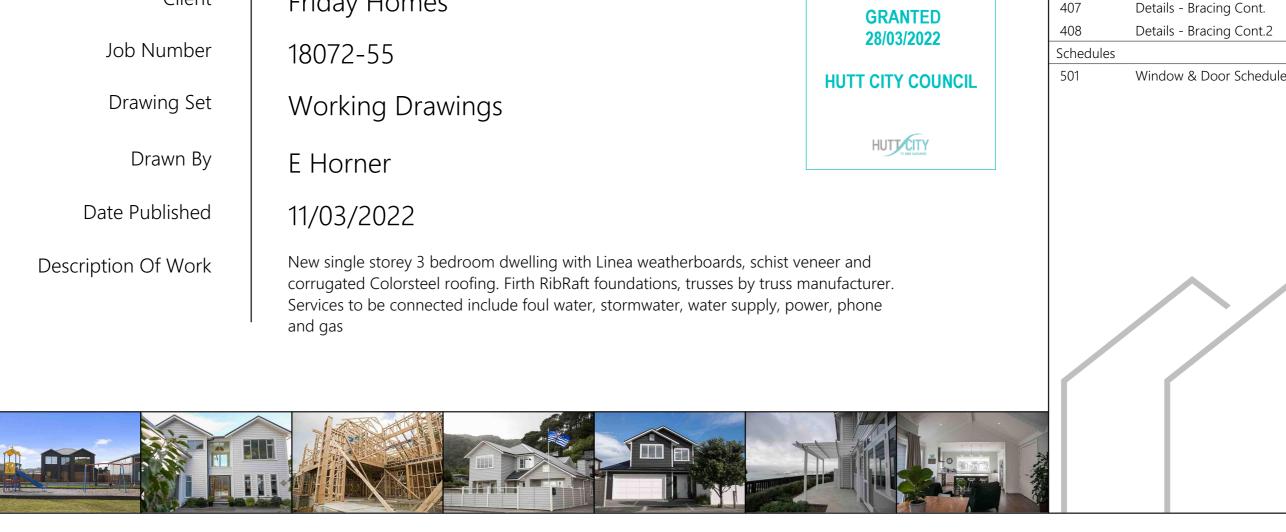
406

Sections 201

Elevations

BC220141

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BC220141	Cladding		Construction		Planning & Zoning
Linea WB over cavity	Wall Cladding Type 1	Rib-Raft Foundation	Foundation Type	Lot 55 DP TBC	Lot / DP Number
Eldorado Stone Schist Veneer	Wall Cladding Type 2	Thermakraft Black DPM	DPM	age 2 Kelson Heights, Kelson, Lower Hutt	Address Lot 55, S
N/A	Wall Cladding Type 3	N/A	Underslab Insulation	TBC	Easements
Corrugate Metal	Roof Cladding	2.4m	Stud Height	Residential	District Plan Zone
Metal	Fascia Type	Aluminium	Joinery Type	H as per NZS 3604:2011, C & 3	Wind, Corrosion & Earthquake Zone
		2m	Typical Joinery Height	TBC	Relevant Consent Notices
	Fitout	2m	Typical Internal Door Height	484.13m <sup>2</sup>	Site Area
Carpet	Flooring Type 1	N/A	Rebated Joinery	158.18m² / 32.7%	Site Coverage
Vinyl plank	Flooring Type 2	Thermakraft WaterGate Plus	Wall Underlay	156.98m <sup>2</sup>	Floor Area
N/A	Flooring Type 3	90mm R2.2 Earthwool Wall	Wall Insulation		
Acrylic	Shower Type	Thermakraft 215	Roof Underlay		Consultants
TBC	Heating	150mm R3.2 Earthwool Ceiling	Ceiling Insulation	MacroVentures	Topographical Survey
HWC	Water Heating	N/A	Wet Area Membrane	N/A	Structural Engineer
				Paraparaumu Prenail	Truss Manufacturer
					Revisions
					ID Sheet Description

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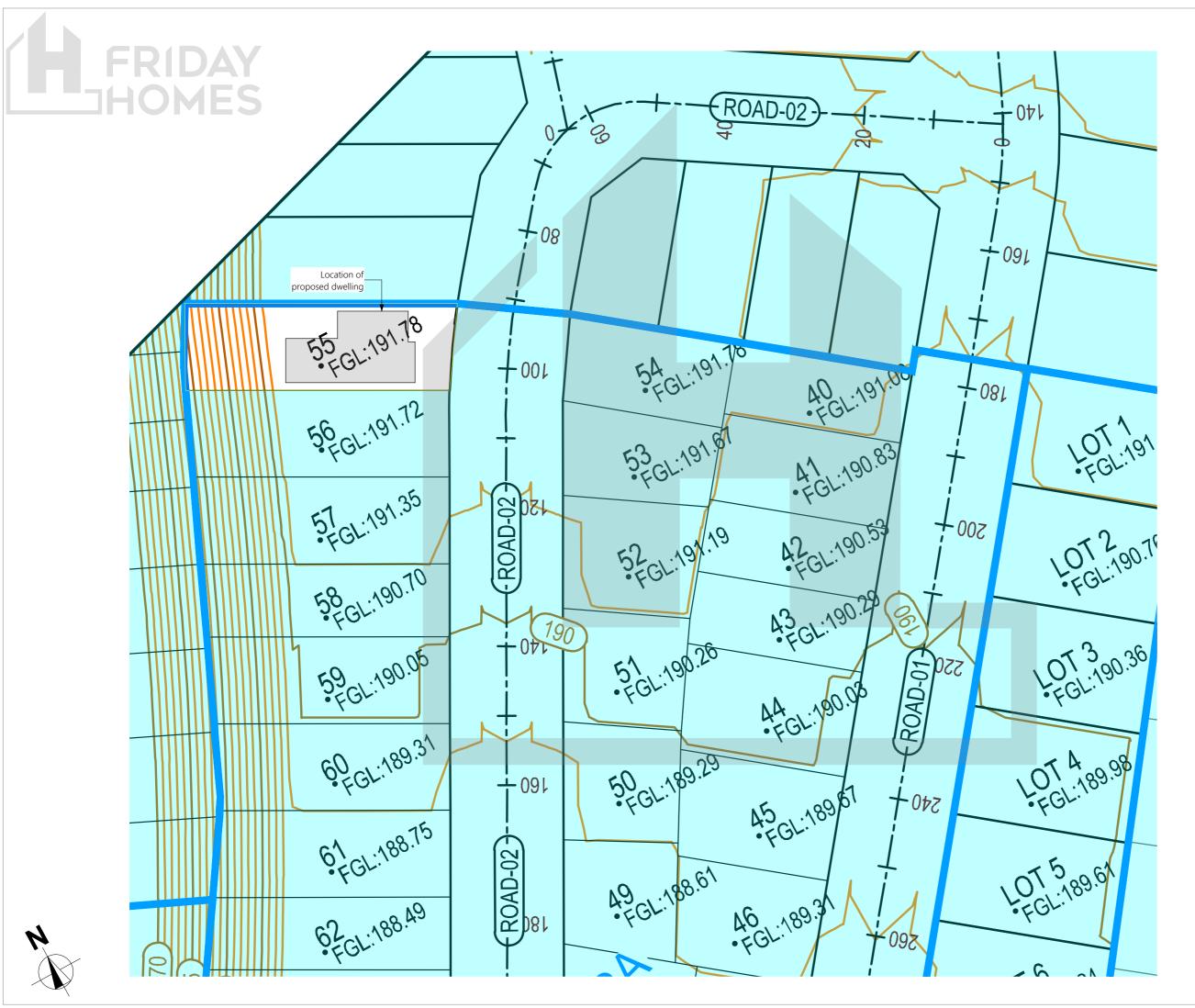


Project Specifications

ISSUE 11/03/2022 REV. DATE: 18072-55 SHEET NO.

SCALES (A3):

-55 CODE: 102



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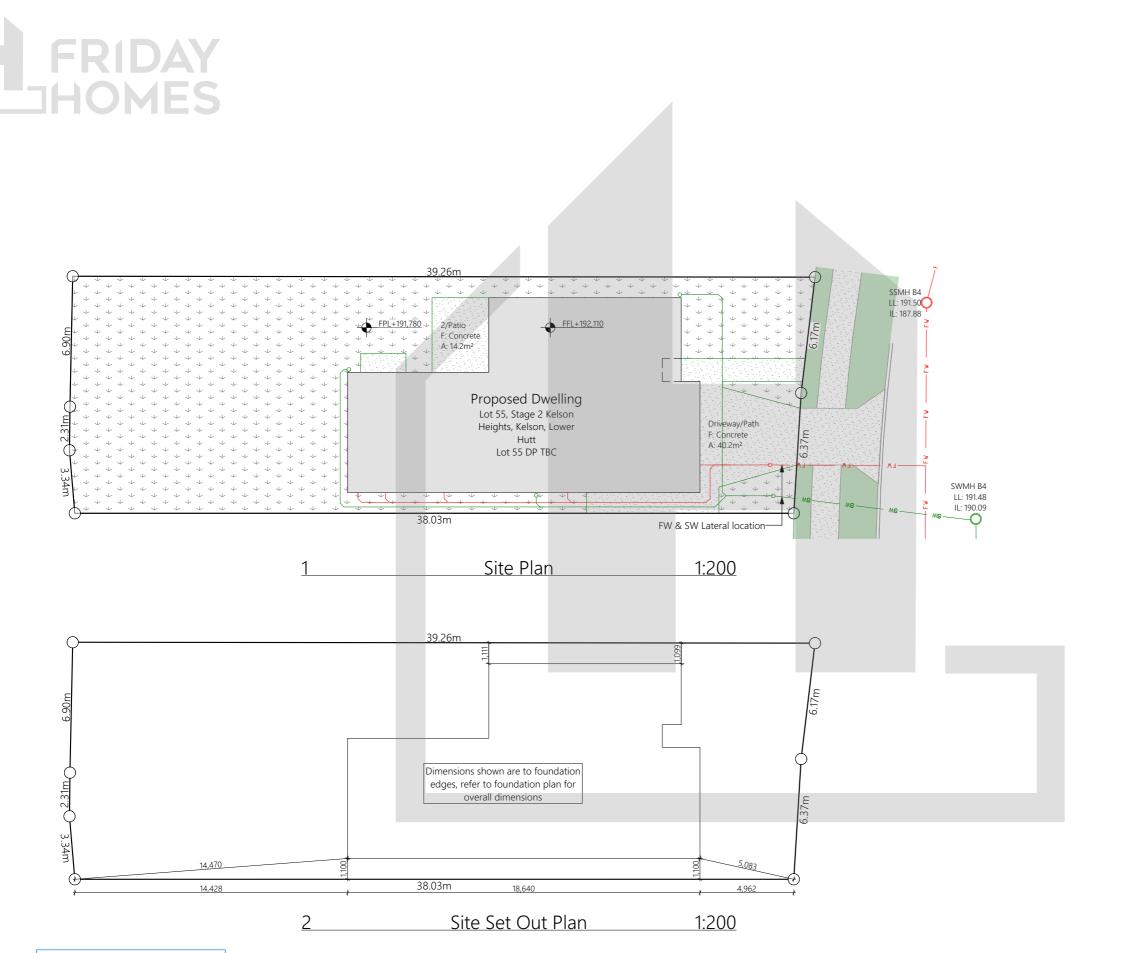
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Proposed Dwelling - Franz Josef Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

Site Location Plan

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1:500			



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Site Information

Site Area 484.13m²

Site Coverage Area 158.18m²

Site Coverage Percent 32.7%

#### Site Notes



#### Permanent paving

Permanent paving including driveway, entry paths & patios to be 100mm thick 20MPa concrete, ensure all concrete is laid to fall @ 1:25 away from house for a distance of at least 1 metre. Where site conditions do not readily allow such a 1m wide strip to be formed, then permanent paving shall be laid to the falls and dimensions shown in NZS3604:2011 figure 7.12

Access & accessible routes only subject to wetting & not constructed to drain water to have a fall between 1:50 & 1:100.

Minimum slip resistance co-efficient for level surface between 0.25 and 0.50 acceptable in accordance with NZBC: D1/AS1 Access.

#### Site levels

Site levels and datum have been provided by subdivision scheme plan via MacroVentuters. If there are any inaccuracies or inconsistencies, please contact designer for clarification prior to commencing work

#### Boundary information

Boundary information has been provided by subdivision scheme plan via MacroVentuters. If there are any inaccuracies or the building position in relation to district plan constraints is critical, please consult designer prior to commencing work. Site safety

All precautions are to be undertaken to prevent unauthorised access to the site, including access outside working hours. Any site fencing shall comply with NZBC F5/AS1 Construction and demolition hazard.

Where a construction site contains any hazard which might be expected to attract the unauthorised entry of children, the hazard shall be enclosed to restrict access by children.

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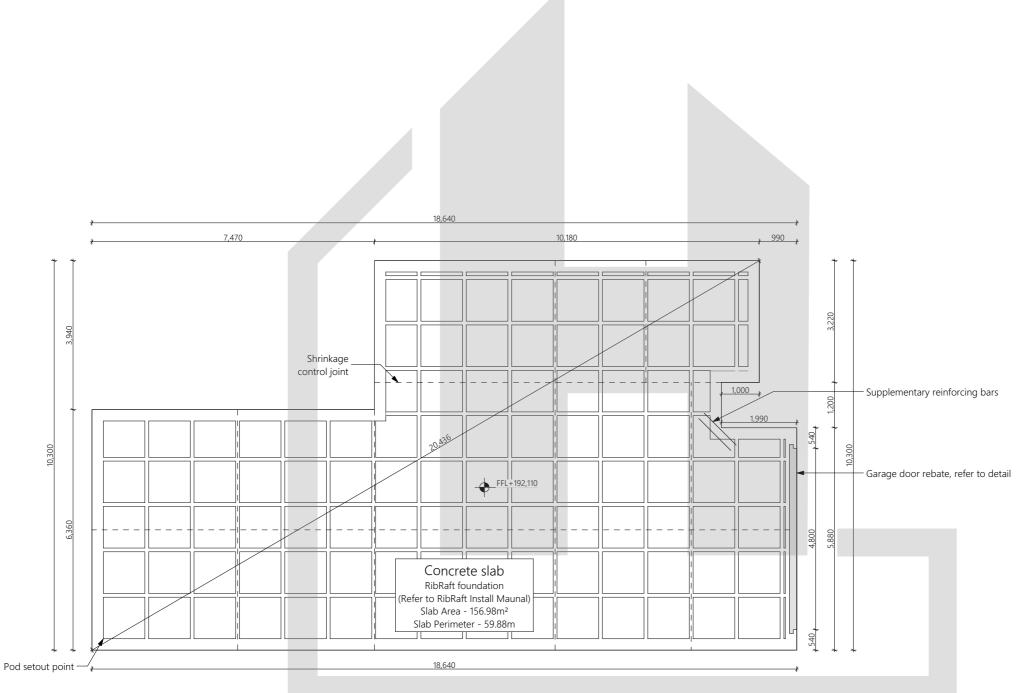
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Proposed Dwelling - Franz Josef Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

#### Site Plan

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## Foundation Notes



Firth RibRaft foundations - general

Refer to Firth ribRaft technical manual for any specific footing, steel requirements and construction details.

Raftmix 20MPa concrete.

Excavate 330mm approximately from finished floor level.

Thermakraft Black damp-proof membrane (250 micron), over 25mm sand blinding and compacted granular fill

1100x1100 polystyrene pods in a grid pattern at 1200mm centres as per foundation plan.

Firth 300mm spacers for edge beams. Firth 100mm spacers for standard internal ribs.

Reinforcing bars and mesh positioned and installed as per Firth Ribraft manual.

Typically, 85mm thick slab with 300mm wide slab edge beam around perimeter.

Foundation plan for dimensions only

2-HD12 bars (Grade 500E) supplementary reinforcing bars 1.2m long @ 200mm ctrs with 50mm cover from corner to internal corners as shown, tied to the top of the mesh.

25mm deep saw cut @ 5m intervals max as shown.

Bowmac Screw Bolts to be 150mm max of each end of plate spaced @ 900mm crs max to comply with NZS3604:2011 clause

90mm wide Thermakraft Supercourse 500 DPC under all external & internal bottom plates.

All bracing element bottom plate fixings shall be installed to comply with GIB Ezybrace System 2016 Refer to bracing plan for bracing element requirements.

Finished floor level to be 150mm min above permanent paving or 225mm min above unpaved ground to comply with NZBC E2/AS1



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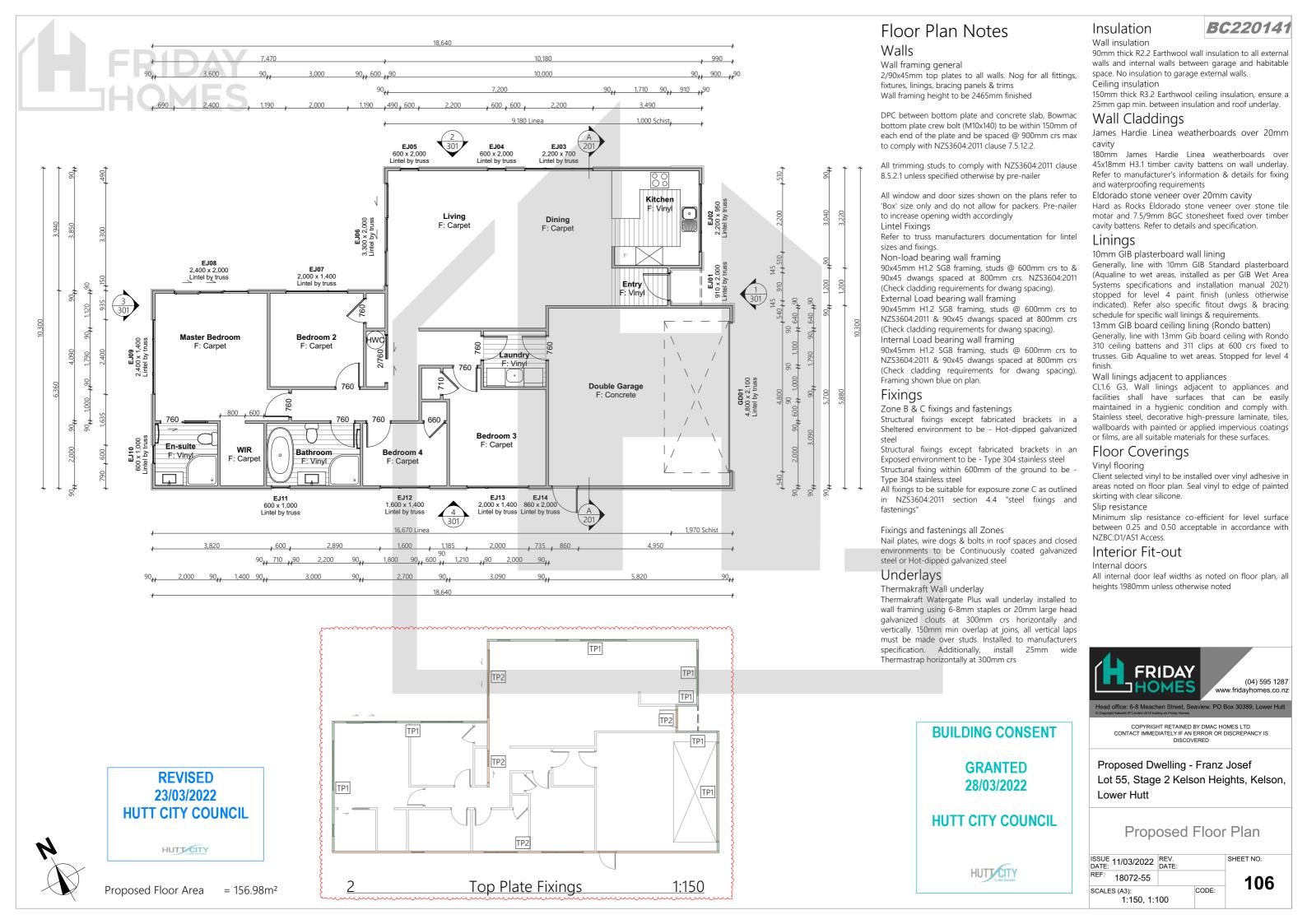
Proposed Dwelling - Franz Josef Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

## Foundation Plan

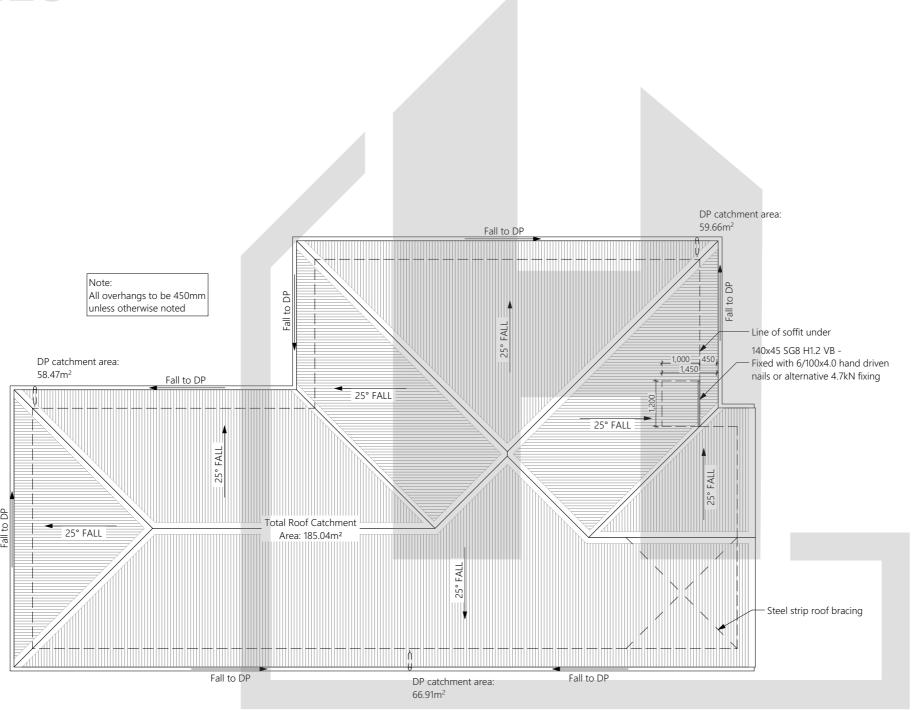
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## Roof Plan Note **\$6220141**General Notes

Roof framing general

Trusses designed by truss manufacturer, refer to manufacturer's documentation.

All enclosed framing to be H1.2 SG8 unless otherwise noted. Framing to comply with NZS3604:2011

155/185 Metal fascia.

Roof bracing to comply with NZS3604:2011 section 10.4 Zone B & C fixings and fastenings

Structural fixings except fabricated brackets in a Sheltered environment to be - Hot-dipped galvanized steel

Structural fixings except fabricated brackets in an Exposed environment to be - Type 304 stainless steel

All fixings be suitable for exposure zone C as outlined in NZS3604:2011 section 4.4 "steel fixings and fastenings"

Fixings and fastenings all Zones

Nail plates, wire dogs & bolts in roof spaces and closed environments to be continuously coated galvanized steel or Hot-dipped galvanized steel

Continuous spouting rainwater system

Continuous spouting rainwater system, spouting to have 4880mm² cross sectional area, DN80 downpipes unless otherwise noted.

#### Roof Bracing

Roof Bracing - Hip roofs

Roofs with hip and valley rafters and framed roofs to have at least 3 hips or valleys connected to the ridge and top plates. All additional hip and valley rafters shall be counted as roof plan braces as per NZS 3604:2011 section 10.3.

#### Underlay

Roof underlay

Thermakraft 215 bituminous self-supporting roof underlay run vertically over purlins & horizontally on roof pitches less than 10 degrees. Fix using stainless steel 8-12mm staples or 20mm flat head clouts at 300mm crs. 150mm min cover over vertical and horizontal joins. Refer to manufacturer's information.

#### **Roof Cladding**

Corrugated roof cladding on purlins

0.4mm BMT corrugated Colorsteel Endura (Maxx for exposure zone D) roof cladding over roof underlay on 70x45mm H1.2 SG8 purlins @ 900mm crs, fix purlins to trusses with 1/10g 80mm long self-drilling screw

#### Soffit Lining

4.5mm HardieFlex soffit lining

4.5mm James Hardie HardieFlex soffit lining fixed to 90x45mm H1.2 soffit framing using 40 x 2.8mm HardieFlex nails at 200mm crs. Soffits jointed with proprietary uPVC jointers.



Proposed Dwelling - Franz Josef Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

#### Roof Plan

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## **Bracing Legend**

Plasterboard Element

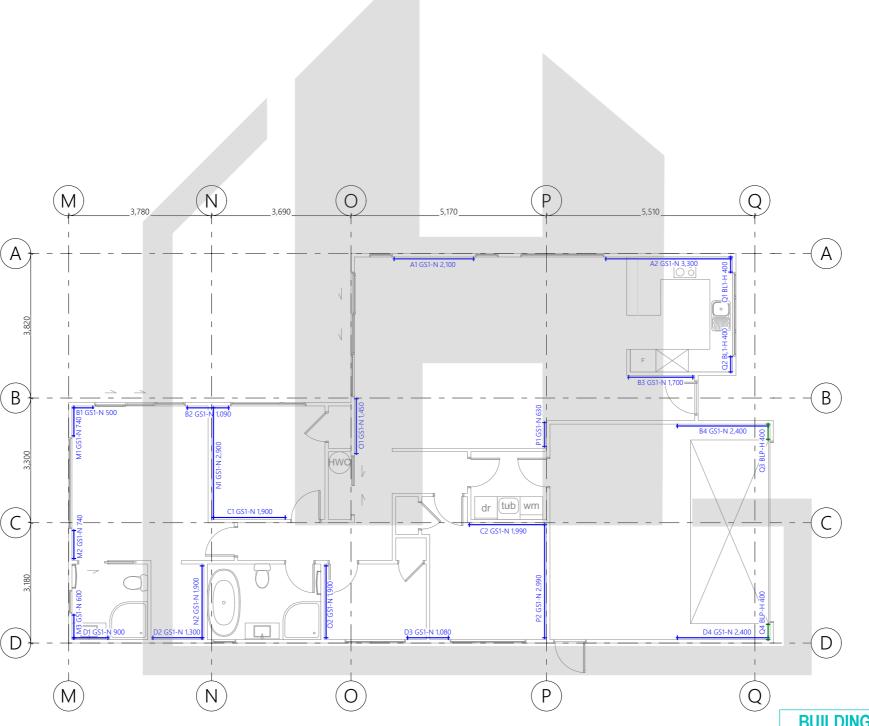
Plasterboard+Ply Element

Bracing Notes

General GIB & CHH bracing notes
Bracing has been designed with GIB Ezybrace calculator, refer to attached calculation sheets for more info. If there are any conflicts, please contact the designer.

All bracing elements to comply with NZS3604:2011, NZBC B1/AS1, GIB Ezybrace Systems 2016 & CHH Ecoply bracing maunal. Install all bracing elements in accordance with GIB & CHH product specification.

Ply Bracing Elements
Where external ply bracing elements are not to be installed as a ridgid wall underlay ply to be installed to entire wall face with selected flexible wall underlay to be installed over.



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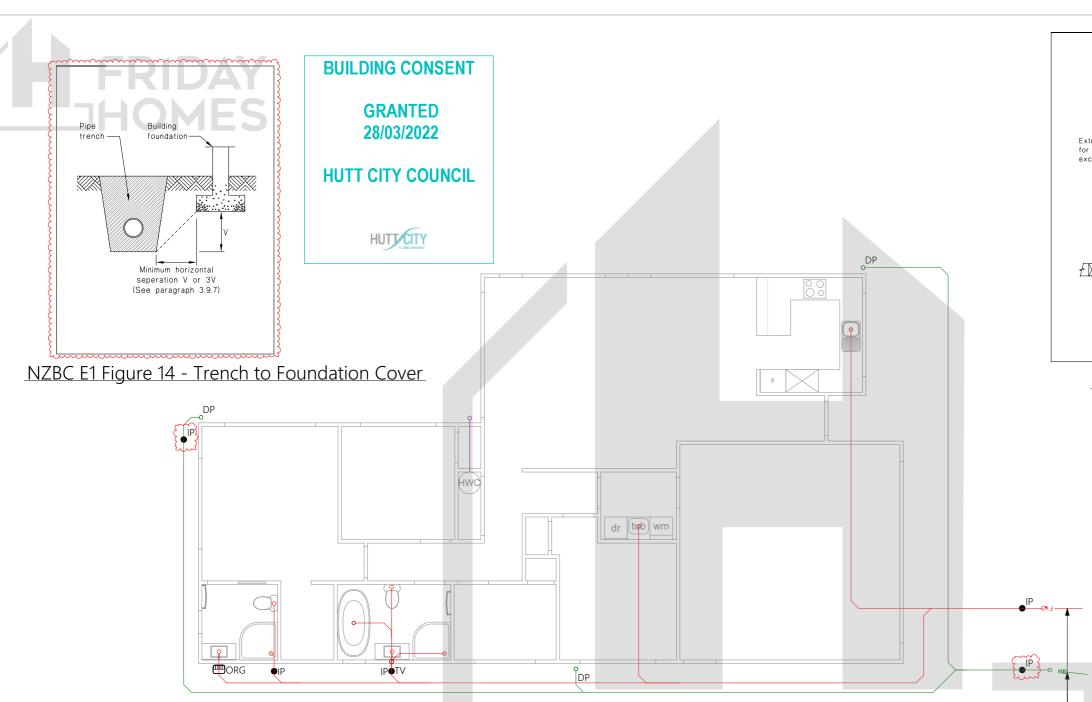
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## Bracing Plan

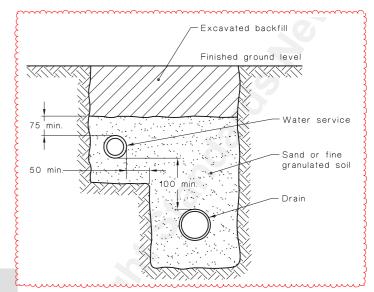
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Storage water heaters to be restrained with 25 x 1mm galvanised steel straps tensioned when fixed in place. Straps to be fixed to wall framing with: 1 No. 8mm coach screw with 30x2mm thick washer, or - 2 No. 20x2.5mm thick washers. Screws to penetrate timber framing Storage a minimum of 50mm. Extra centre strap water for water heatersexceeding 200 litres Storage 50x50mm vertical blocking Storage full height of water heater fixed to wall framing with water water 1 No. 100x3.75mm nail at

#### NZBC G12 Figure 14 - HWC Seismic Restraint



AS/NZS 3500.2 Figure 3.6.6 Shared Trench

## Plumbing & Drainage Notes

General plumbing notes

Contractor to ensure all work complies with the NZ Building Code and relevant standards, along with local territorial authorities' bylaws prior to work

All Foul Water plumbing work to comply with AS/NZS3500.2

All Storm Water plumbing work to comply with E1/AS1 & AS/NZS3500.3 All bends and junctions under slab must not be less than 45° (in plan).

Contractor/Plumber to submit as laid drainage plan to council upon completion of all plumbing/drainage works

Foul Water Drain: DN100 @ 1:60 Storm Water Drain: DN100 @ 1:120

WC Waste: DN100 @ 1:60 Bath Waste: DN65 @ 1:40 Vanity Waste: DN65 @ 1:40 Shower Waste: DN65 @ 1:40 Sink Waste: DN65 @ 1:40 Tub Waste: DN65 @ 1:40

Branch drain to be combined waste DN100 @ 1:60 where two or more fixtures connect into

Unvented branch drain to be 10m max from connection to main vented drain to weir of last fixture

#### Water supply

Water supply pipe materials to comply with G12/AS1 table 1: Hot & Cold: copper, galvanised steel or polybutylene

Cold only: uPVC or polyethylene

All hot and cold water pipework through slab shall be in DN65 uPVC conduit. All hot water piping shall be thermally insulated to comply with H1/AS1 clause 5.0 hot water systems

All water supply pipe sizes installed to comply with G12/AS1 table 4 Sink, laundry, bath, basin 15mmØ

Shower 20mmØ

Pipes based on a maximum pipe length of 20 metres

Ensure hot water temperature at any sanitary fixture used for personal hygiene does not exceed 55°

#### Fixture trap and waste sizes

Fixture traps for hand basins to be DN40 trap, DN65 drain pipe Fixture traps from sinks, bath, showers and tubs to be DN65 trap, DN65 drain. Fixture traps from WC to be DN100 trap and DN100 drain.

Continuous spouting rainwater system

Continuous spouting rainwater system, prefinished Colorcote spouting and downpipes, DN80 downpipes unless otherwise noted.

FW & SW Lateral location

#### Overflow Relief Gully

Top of ORG to be min. 150mm below the overlow level of the lowest sanitary fixture served by the drainage system.

The overflow level of ORG to be a min. 75mm above paved ground & 100m above unpaved ground

ORG to have a grating to allow for surcharge

Waste pipes discharging into ORG are arranged to permit easy cleaning of

180L electric hot water cylinder, make & model to be selected by owner. Installed to manufacturers specification. HWC to be installed over safe tray. Dn40 Relief valve drains to be of copper pipe, have no restrictions or valves, have a continuous fall from the relief valve to the outlet, discharged in a visible position which does not present a hazard or damage to other building elements, outlet to be protected by vernim trap.

#### Proprietary acrylic shower

Proprietary acrylic showers to be installed in accordance with E3 internal moisture. Acrylic wall linings shall extend to ceiling. Junctions used between the tray and wall linings shall be constructed in accordance with E3 Figure 4 (a) or (b) Refer details. All glazing within a wet area to be grade A safety glass. All showers 1mx1m unless otherwise noted.

## Plumbing Legend

DN80 downpipe

Overflow relief gully ORG

 $\nabla V$ DN50 terminal vent

Inspection point

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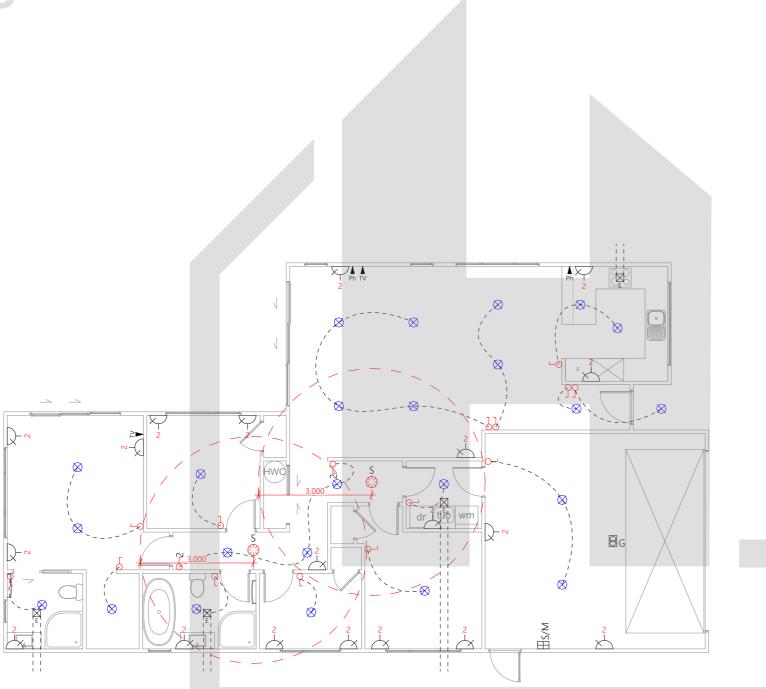
#### Plumbing Plan

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38.03m





## Electrical Legend

Light switch Two way light switch Recessed downlight Power point ⊞s/M Smart Meter Garage door motor

Smoke detector

Extractor fan

Phone outlet

Television outlet

## Electrical Notes **BC220141**

General electrical notes

Ensure all habitable rooms are fitted with a minimum of one light fixture. All habitable internal spaces are to have a minimum illuminance of 20 lux or a minimal total wattage required per m2 of floor area as shown in G8/AS1, Table 1. Lights in the stairwell to provide 100lux at tread level or a total wattage per m2 of floor plan area as shown in D1/AS1 table8,

All electrical works to be installed to comply with NZBC G9/AS1, AS/NZS 3000:2007, AS/NZS 3008.1.2:2010, AS/NZS 5000.2:2006

Recessed downlights Downlights to be CA135, CA180, IC, or IC-F to comply with AS/NZS 60598.2.2 Amendment A

#### Smoke detectors

Smoke detectors to be installed to comply with NZBC F7 and be located within 3m of each bedroom. Smoke detectors to meet at least one of the following standards: AS 3786, ISO 12239 or BS EN 14604

#### Mechanical ventilation

Extractor fans to be Manrose XF150 or similar, vent through soffit or wall as per manufacturer's installation instructions.

Rangehood to be ducted and vented through soffit or

Dryer to be vented seperately as per NZBC G4.

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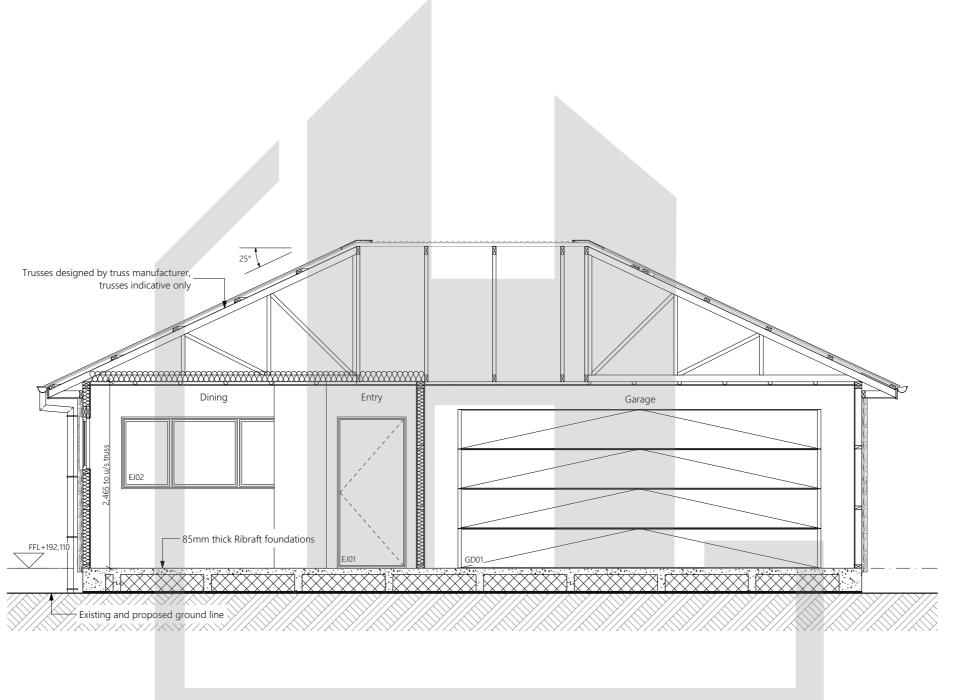
Proposed Dwelling - Franz Josef Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

#### Electrical Plan

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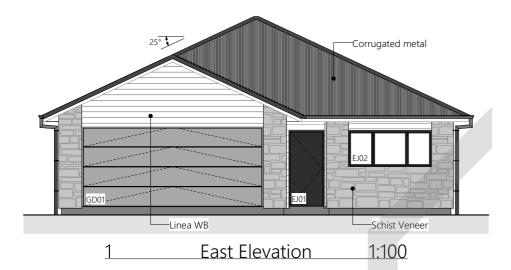
Proposed Dwelling - Franz Josef

Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

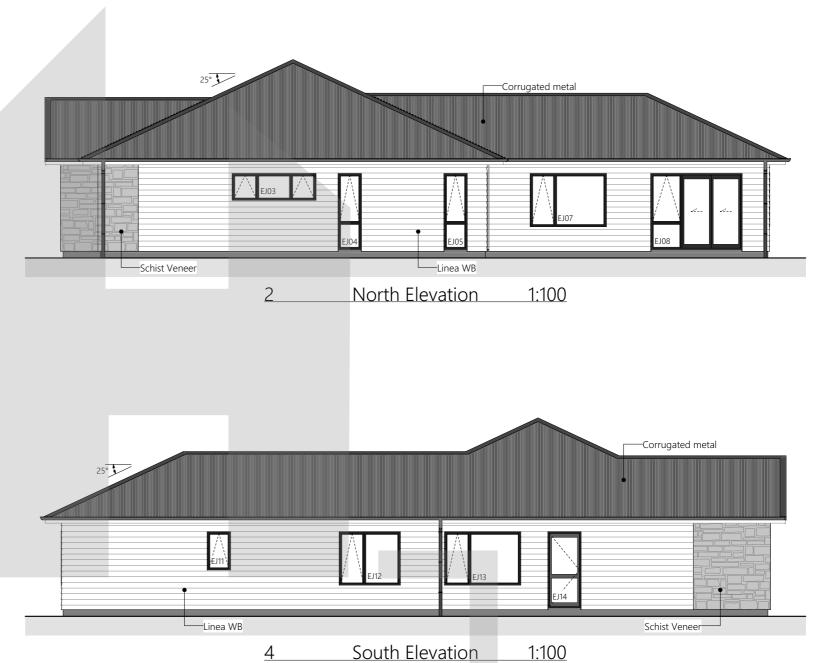
#### Section A

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# FRIDAY







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TE ANA KAIRANGI

H1 SCHEDULE METHOD	
Total Perimeter N, E, S, W walls	55.90m
Wall Area (2.455m wall height)	137.79m²
Total Glazing Area	29.83²
Total Glazing Area to Wall Area	21.65%
Total Perimeter E, S, W walls	55.90m
Wall Area (2.455m wall height)	137.79m²
Total Glazing Area	18.29m²
Total Glazing Area to Wall Area	13.27%

BUILDING ENVELOPE RISK MATRIX				
All Elevat	All Elevations			
Risk Factor	Risk Severity	Risk Score		
Wind zone (per NZS 3604)	High risk	1		
Number of storeys	Low risk	0		
Roof/wall intersection design	Low	0		
Eaves width	High risk	2		
Envelope complexity	Medium risk	1		
Deck design	Low risk	0		
Total Risk Score:		4		

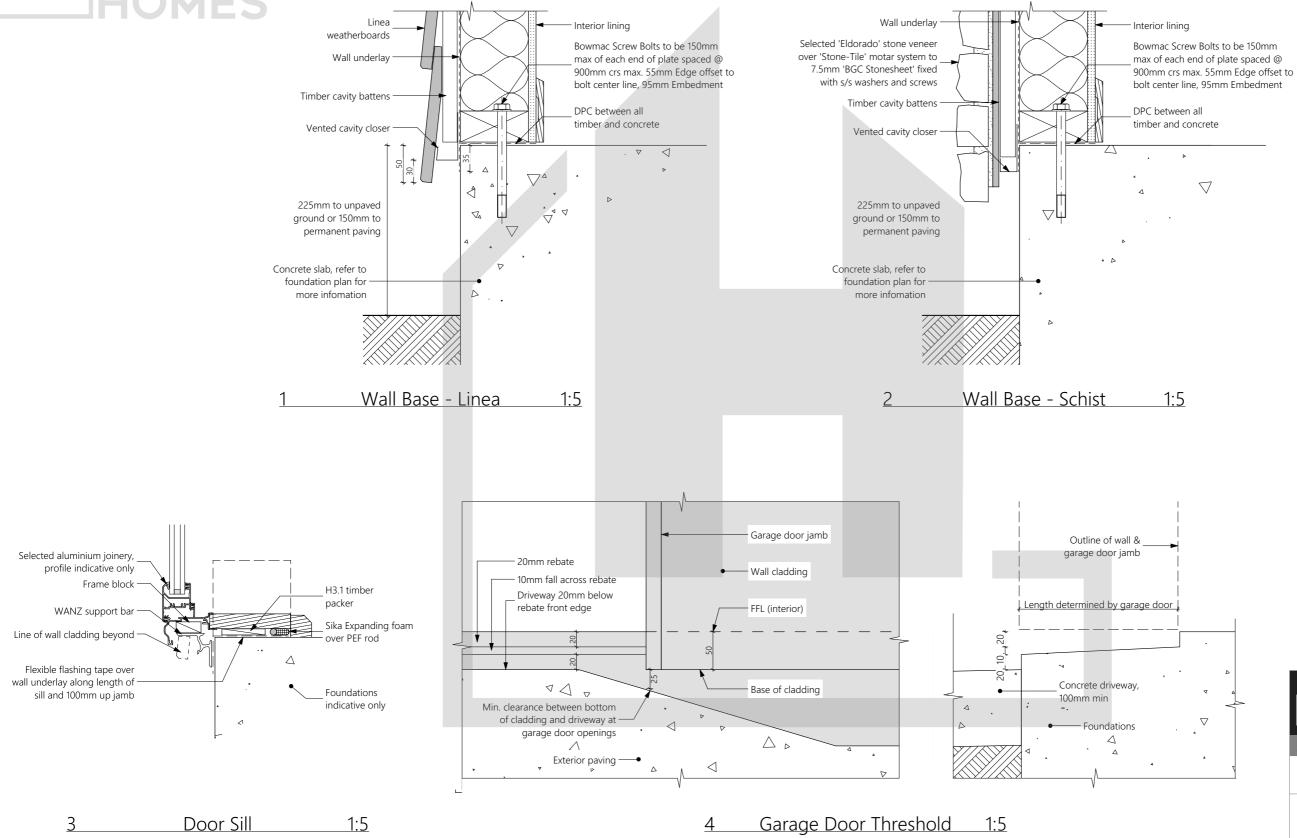


Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

Elevations + H1 Schedule

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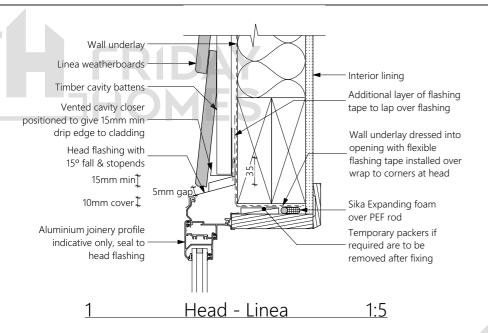
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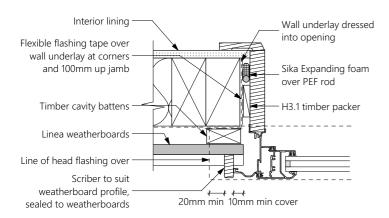
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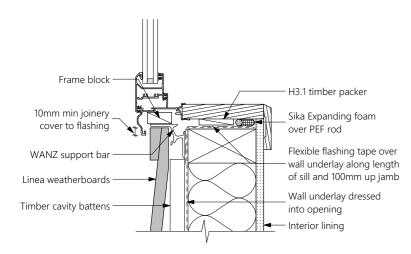
Details - Foundation

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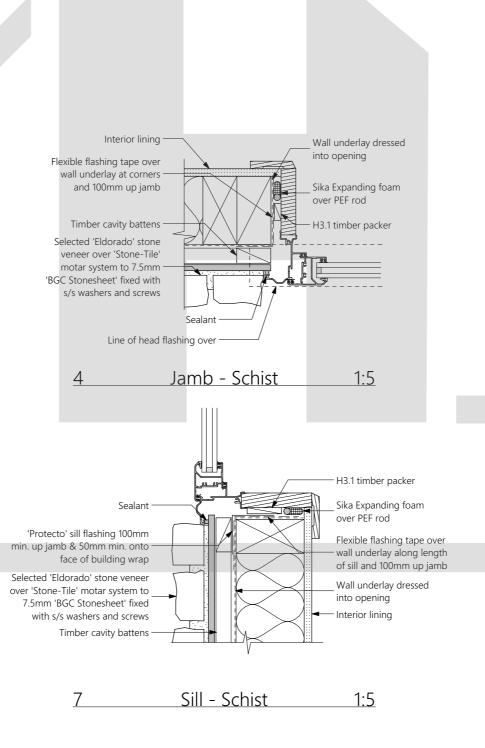


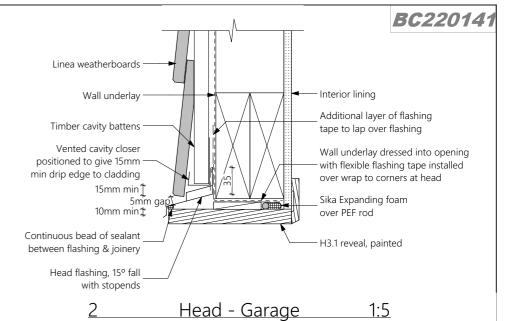


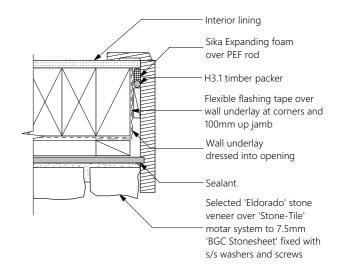
3 Jamb - Linea 1:5



6 Sill - Linea 1:5







5 Jamb - Garage 1:5

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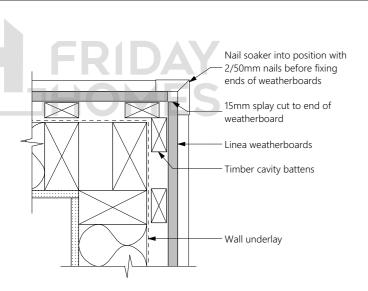
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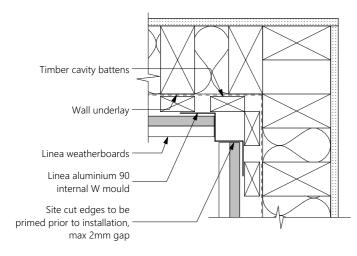
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Details - Window & Door

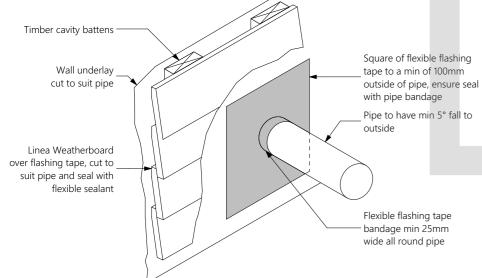
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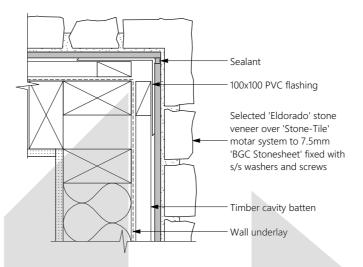
#### 1 External Corner - Linea



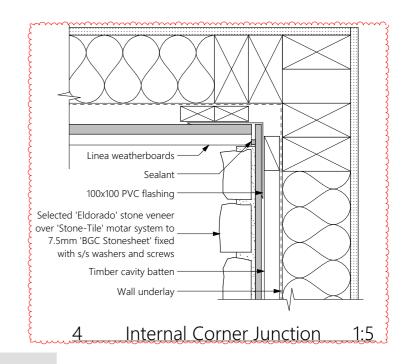
3 Internal Corner - Linea 1:5



5 Wall Pipe Penetration - Linea 1:5



2 External Corner - Schist 1:5



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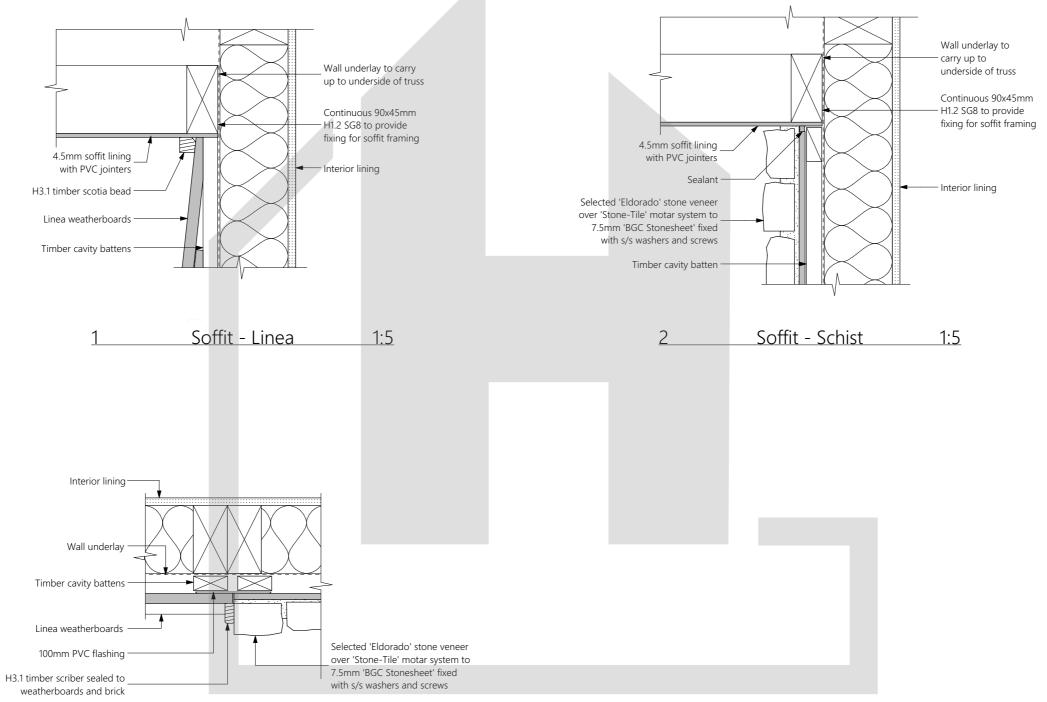


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Proposed Dwelling - Franz Josef
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Details - Cladding





3 Vertical Junction 1:5

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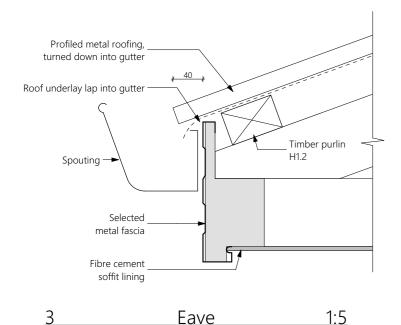


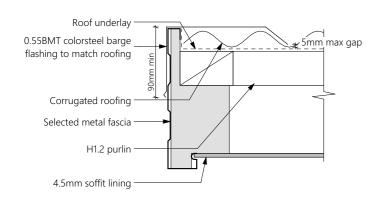
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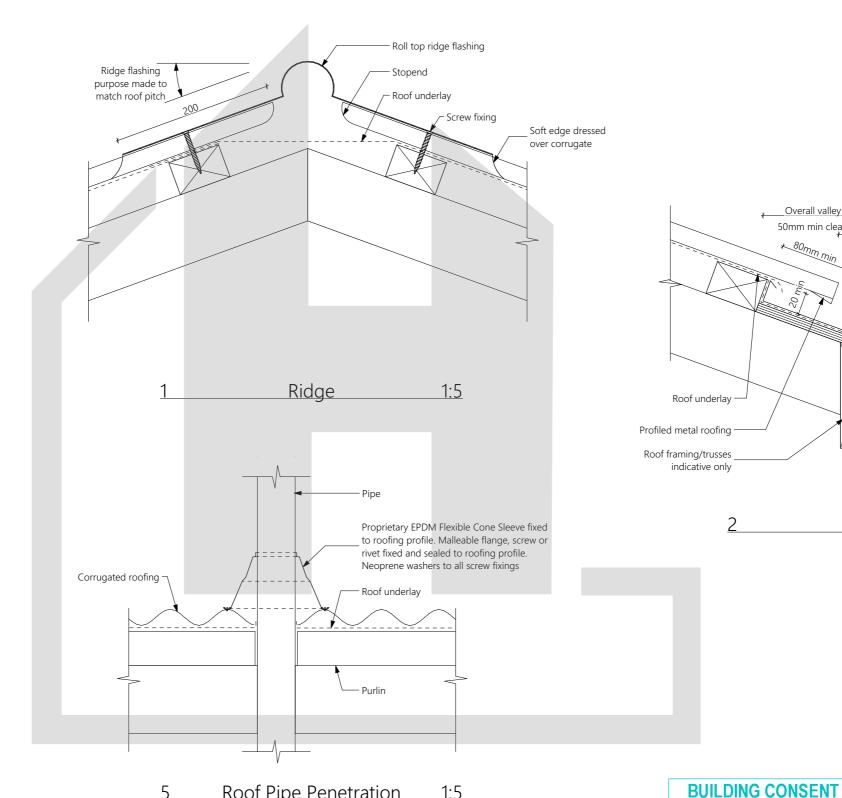
Details - Cladding Cont.

ISSUE 11/03/2022 DATE:	REV. DATE:		SHEET NO.	
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1:5				





1:5 Barge



Roof Pipe Penetration

Note:All details to be read in conjunction with attached manufacturer's installation guides and specifications.

Valley gutter, min upstands

20mm, min width 250mm

Roof underlay continuous

based treatments are used

- under gutter if copper

Valley boards

1:5

Roof details are for waterproofing purposes only, refer to roof plan and truss manufacturer's info for construction information and roof pitch.



Overall valley gutter width 250mm\_

50mm min clearance between roofing

Valley

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Proposed Dwelling - Franz Josef Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

Details - Roof

ISSUE 11/03/2022 REV. DATE: SHEET NO. 18072-55 405 CODE: SCALES (A3):



#### GIB® plasterboard linings

When fixing part sheets of GIB® plasterboard, a minimum sheet width of 300mm applies for bracing elements. Horizontal fixing is recommended. If fixing vertically, full height sheets shall be used where possible. Where sheet end butt joints are unavoidable they must be formed over nogs or over the studs and fastened at 200mm centres. Alternatively, and preferably, sheet end butt joints may be back-blocked.

When a GIB® Bracing element has been designated for a section of wall, BU ratings cannot be increased by incorporating additional proprietary bracing elements within that same section of wall.

#### LIMITATIONS

- GIB® plasterboard must be stacked flat and protected from the weather.
- GIB® plasterboard must be handled as a finishing material GIR® plasterboard in use must not be exposed to liquid. water or be installed in situations where extended exposure to humidities above 90% RH can reasonably be expected.
- GIB EzyBrace® Systems must not be used in showers or behind baths.
- It is highly recommended not to install GIB® plasterboard in any situation where external claddings are not in place or the property is not adequately protected from the elements.
- If GIB® plasterboard is installed under these conditions, the risk of surface defects such as joint peaking or cracking is greatly increased.

#### GIB EzyBrace® Systems in water-splash areas

When GIB® plasterboard is installed in locations likely to be frequently exposed to liquid water it must have an impervious finish. Examples are adhesive fixed acrylic shower linings or ceramic tiles over an approved waterproof membrane over GIB Aqualine. The NZBC requires 15 years durability in these situations. Bracing elements are required to have a durability of 50 years. Bracing elements are not to be located in shower cubicles or behind baths because of durability requirements, the likelihood of renovation, and practical issues associated with fixing bracing elements to perimeter framing members. Otherwise GIB EzyBrace® Systems can be used in watersplash areas as defined by NZBC Clause E3, provided these are maintained impervious for the life of the building.

For futher design details refer to the current GIB Aqualine® Wet Area Systems literature.

#### Renovation

When relining walls during the process of renovation, ensure that bracing elements are reinstated (check the building plans).

#### Openings in bracing elements

#### **SMALL OPENINGS**

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 as shown below.

#### LARGE OPENINGS

Openings above 90 x 90mm such as switch boards, recessed cabinets and TV's etc. should be placed outside of the bracing element or locate bracing on the other side of the wall framing

FIGURE 10: SMALL OPENINGS IN BRACING ELEMENTS

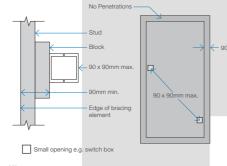
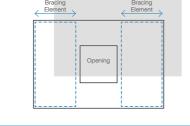


FIGURE 11: LARGE OPENINGS AND BRACING FLEMENTS



#### Timber framing

General framing requirements such as grade, spacings and installation shall comply with the provisions of NZS 3604:2011. To achieve the published bracing performance the minimum actual framing dimensions are 90 x 45mm for external walls and 70 x 45mm for internal walls.

As a minimum the use of Kiln Dried Stress Graded timber for all wall, roof and mid-floor framing members is recommended.

#### GIBFix® Framing System (alternative layout)

Practices recommended as part of the GIBFix® Framing System aim to increase timber framing efficiencies, reduce reliance on unnecessary framing at wall junctions and minimise surface imperfections that commonly arise from constructing plasterboard junctions over multiple timber members. GIBFix® Angles fixed to a single timber framing member are introduced to tie together plasterboard junctions, improving seismic resilience and decrease the risk of future defects due to timber movement. The GIBFix® Framing System can be used in conjunction with the GIB EzyBrace® System.

Note: GIBFix® Angles and 32mm x 7g GIB® Grabber® Dual Thread Screws may also be used in traditional wall framing layouts and in GIB EzyBrace® Systems.

When the GIBFix® Framing System is used a minimum of 2 equally spaced nogs for walls between 2.4m and 3m in height are required at corners and wall junctions.

When used in GIB EzyBrace® systems GIBFix® Angles must run from top to bottom on all applicable studs. If 2 GIBFix® Angles are required on a stud they must be overlapped by a minimum of 300mm with 2/32mm 7g GIB® Grabber® Dual Thread Screws penetrating through both GIBFix® Angles.

For full specification details refer to GIBFix® Framing System literature available at gib.co.nz/gibfix.

#### Guidelines for intersection walls

GIB® Bracing Elements may have intersecting walls with a minimum length of 200mm. Fasteners are required around the perimeter of the bracing element. Vertical joints at T-junctions shall be fixed and jointed as specified for intermediate sheet joints. The bracing element length must be no less than 900mm.

Where a Wall Bracing Element is interrupted by a T-junction the element is deemed to be continuous for the whole length (900mm minimum in the example illustrated).

When fixing part sheets of GIB® plasterboard to the side of a T-junction, a minimum width of 300mm applies for bracing elements. See figures 12 and 13.

#### FIGURE 12: WALL INTERSECTION (TRADITIONAL WALL FRAMING)

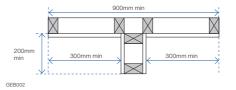


FIGURE 13: WALL INTERSECTION (GIBFIX® FRAMING SYSTEM)

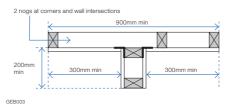


FIGURE 14: CORNER INTERSECTION (GIBFIX® FRAMING SYSTEM)

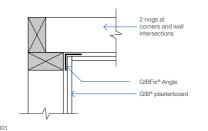
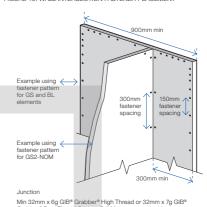


FIGURE 15: WALL INTERSECTION FASTENER PLACEMENT



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Proposed Dwelling - Franz Josef Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

**Details - Bracing** 

ISSUE 11/03/2022 REV. DATE: SHEET NO. 18072-55 406 CODE: SCALES (A3):

GIB EZYBRACE® SYSTEMS

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BUILDING CONSENT GRANTED 28/03/2022 **HUTT CITY COUNCIL** 



#### Top plate connections

For top plate connections refer to NZS3604:2011 section 8.7.3

#### Parapets and gable end walls

Bracing elements must be fixed from top plate to bottom plate. Fixing to a row of nogs is not acceptable unless either:

A continuous member such as an ex 90 x 45mm ribbon plate is fixed across the studs just above a row of nogs at the ceiling line, as shown in figure 16.

GIBFix® Angle as shown in figure 17. The angle is fixed to a row of nogs with 30 x 2.5mm galv flat head nails or 32mm x 7g GIB® Grabber® Dual Thread Screws at 300mm centres.

#### Bottom plate fixing

#### **TIMBER FLOOR**

Brace type

GS1-N

GS2-N

GSP-H

BL1-H

BLP-H

BLG-H

GS2-NOM

For elements with an 'N' specification use  $2/100 \times 3.75 \text{mm}$ hand or 3/90 x 3.15mm power-driven nails at 600mm centres.

In addition, for elements with an 'H' specification, use GIB HandiBrac® panel hold-down fixings at each end of the bracing element, see p.16.

#### CONCRETE FLOOR — EXTERNAL WALL BRACING **FLEMENTS**

For bracing elements with an 'N' specification fix external wall plates in accordance with NZS 3604:2011.

Use GIB HandiBrac® panel hold-down fixings at each end of bracing elements with an 'H' specification and minimum intermediate fixings as required by NZS 3604:2011.

> Concrete slabs External wall

As per NZS 3604:2011.

No specific additional

fastening required.

Not applicable

In addition

Not applicable

**BOTTOM PLATE FIXINGS FOR GIB® BRACING ELEMENTS** 

Internal wall

Intermediate fastenings to comply with NZS 3604:2011

GIB HandiBrac® fixings or metal wrap-around strap fixings

and bolt as illustrated on p.15 and 16.

As per NZS 3604:2011.

shot-fired fasteners with

16mm discs, 150mm and

bracing element and at 600mm thereafter.

Alternatively use 75 x 3.8mm

300mm from each end of the

As for GSP-H, BL1-H, BLP-H

on concrete slab as illustrated

on p.15 and 16.

#### **CONCRETE FLOOR — INTERNAL WALL BRACING FLEMENTS**

For bracing elements with an 'N' specification fix plates in accordance with NZS 3604:2011 or use 75 x 3.8mm shot-fired fasteners with 16mm discs spaced at 150 and 300mm from end-studs and 600mm centres thereafter.

For bracing elements with an 'H' specification use GIB HandiBrac® panel hold-down fixings at each end of the element and minimum intermediate fixings as required by NZS 3604:2011

#### FIGURE 16: PARAPETS AND GABLE ENDS WITH RIBBON PLATE

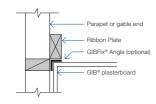


FIGURE 17: PARAPETS AND GABLE ENDS WITH GIBFIX® ANGLE

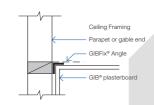
Timber floors

In addition

External and Internal walls

in accordance with NZS 3604:2011.

in accordance with NZS 3604:2011.



Pairs of 100 x 3.75mm flat head hand driven nails or

3/90 x 3.15mm power driven nails at 600mm centres

Pairs of 100 x 3.75mm flat head hand driven nails or

3/90 x 3.15mm power driven nails at 600mm centres

GIB HandiBrac® fixings or metal wrap-around strap

fixings and bolt as illustrated on p.15 and 16.

#### FIGURE 29: GS BRACING FLEMENTS (OPTION A)

Length of GIB EzyBrace®

The length of GIB EzyBrace® elements with an 'N' extension

end-stud to the opening face as illustrated in figures 29-32.

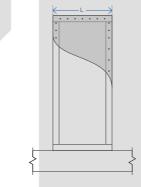
'N' type GIB EzyBrace® elements are identified by GIB®

specification numbers GS1-N, GS2-N and GS2-NOM

(requiring standard NZS3604:2011 plate connections) can be

taken as the full frame length measured from the outside of the

elements ('N' Type)



GS1-N, GS2-N elements 'L' indicates the length of the bracing element

FIGURE 31: GS BRACING ELEMENTS (OPTION C)

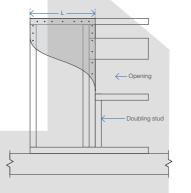
GS1-N. GS2-N elements 'L' indicates the length of the bracing element

#### The dimension 'L' shall not be less than 400mm

Perimeter bracing fixing for linings of both 'H' and 'N' type elements is along the top and bottom plates, end stud, and doubling stud immediately adjacent to the opening.

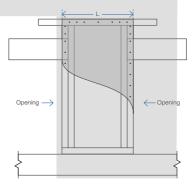
Fastener spacings and diagram scales shown in Figures 29-32 are indicative only. Refer to p.23-30 for construction details.

#### FIGURE 30: GS BRACING FLEMENTS (OPTION B)



GS1-N, GS2-N elements 'L' indicates the length of the bracing element

FIGURE 32: GS BRACING ELEMENTS (OPTION D)



GS1-N. GS2-N elements 'L' indicates the length of the bracing element

#### Length of GIB EzyBrace® elements ('H' Type)

GIB EzyBrace® elements with an 'H' extension (requiring special panel hold-down fixings) can be used when the dimension 'L' as illustrated in figures 33-36 is 400mm or more.

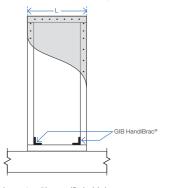
'H' type GIB EzyBrace® elements are identified by GIB® specification numbers GSP-H, BL1-H, BLG-H and BLP-H.

The length of an 'H' type element is not only determined by the sheet material, but also by the placement of the holddown fixings.

Hold-down fixings cannot be placed closer together than what is shown for the standard panel in figure 33.

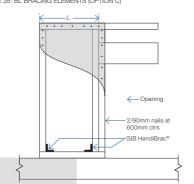
Hold-down fixings can be placed under windows provided sill trimming studs beneath the opening are connected to the bracing element using 8/90mm gun nails, as illustrated in figure 34.

#### FIGURE 33: BL BRACING ELEMENTS (OPTION A)



'H' type elements with specific hold downs 'L' indicates the length of the bracing element

#### FIGURE 35: BL BRACING ELEMENTS (OPTION C)



'H' type elements with specific hold downs 'L' indicates the length of the bracing element

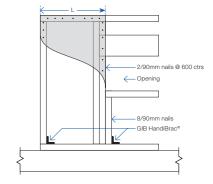
#### Spike doubling stud to trimming stud using a minimum of 2/90mm gun nails at 600mm centres. Lintel straps (where required for wind uplift) should be checked in and be located away from the bracing element fasteners.

Perimeter bracing fixing for linings of both 'H' and 'N' type elements is along the top and bottom plates, end stud, and doubling stud immediately adjacent to the opening as indicated in figures 34-36.

When using bracing straps, installed in accordance with p.17, fix the strap to the same framing member as shown for the GIB Handibrac® below, and install the adjacent anchor bolt in the same position as the GIB HandiBrac® bolt.

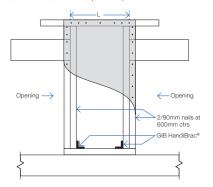
Fastener spacings and diagram scales shown in figures 33–36 are indicative only. Refer to p.23-30 for construction details.

#### FIGURE 34: BL BRACING ELEMENTS (OPTION B)



'H' type elements with specific hold downs 'L' indicates the length of the bracing element

#### FIGURE 36: BL BRACING ELEMENTS (OPTION D)



'H' type elements with specific hold downs 'L' indicates the length of the bracing element

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Proposed Dwelling - Franz Josef Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

Details - Bracing Cont.

ISSUE 11/03/2022 REV. DATE: SHEET NO. 18072-55

SCALES (A3):

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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

PERMITTED ALTERNATIVES

GIB EzyBrace® Systems literature.

**FASTENING THE LINING** 

from any sheet end or cut edge.

GIB EzyBrace®

fastener pattern

Dual Thread Screws.

**Fastener centres** 

**JOINTING** 

Single 32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread

Screws or 30mm GIB® Nails where sheets cross studs. 32mm x 6g GIB® Grabber

oss studs at 150m

Daub of GIBFix® adhesiv

mediate studs and nogs.

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

the GIB® Site Guide

**Fasteners** 

For permitted GIB® plasterboard alternatives refer to p. 5 in

32mm x 6g GIB® Grabber® High Thread Screws, 32mm x 7g

using the GIBFix® Angle use only 32mm x 7g GIB® Grabber®

GIB® Grabber® Dual Thread Screws or 30mm GIB® Nails. If

50,100,150, 225, 300mm maximum from each corner and

centres to intermediate sheet joints. For horizontally fixed

crosses the stud. Use daubs of GIBFix® adhesive at 300mm

maximum centres to intermediate studs. Place fasteners no

performance. All fastener heads stopped and all sheet joints

GIB® Joint Tape reinforced and stopped in accordance with

closer than 12mm from paper bound sheet edges and 18mm

sheets place single fasteners to the sheet edge where it

Joint strength is important in delivering bracing system

150mm thereafter around the perimeter of the bracing element.

For vertically fixed sheets place fasteners at 300mm maximum

#### **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.

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

#### WALL LINING

- Any 10mm or 13mm GIB® plasterboard lining.
- Sheets can be fixed vertically or horizontally.
- Sheet joints shall be touch fitted.

Horizontal fixing

Vertical fixing

- Use full length sheets where possible

Bracing element

#### 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<sup>®</sup>
- 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 EzyBrace® Systems specification BLP-H

Specification code	Minimum length (m)	Lining requirement	Other requirements
BLP-H	0.4	10mm or 13mm GIB Braceline® to one side of the frame plus minimum 7mm structural plywood manufactured to AS/NZ 2269.0 :2012 to the other side	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 EzvBrace® 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 AS/NZ 2269/0 :2012.

#### WALL LINING

- A layer of 10mm or 13mm GIB Braceline® to one side of the wall plus minimum 7mm structural plywood manufactured to AS/NZS 2269.0 :2012 to the other side. Sheets can be fixed vertically or horizontally
- Plywood is to be fixed vertically with edges supported. 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**

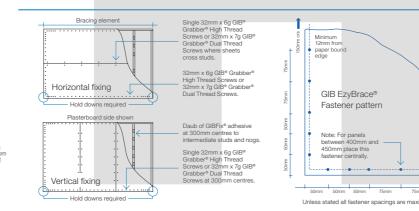
#### Fasteners

GIB Braceline® side: 32mm x 6g GIB® Grabber® High Thread Screws or 32mm x 7g GIB® Grabber® Dual Thread Screws. Plywood: 50 x 2.8mm Galv or Stainless steel annular grooved FH nails. If using the GIBFix® Framing System or if fastening through GIBFix® Angles use only 32mm x 7g GIB® Grabber® Dual Thread Screws

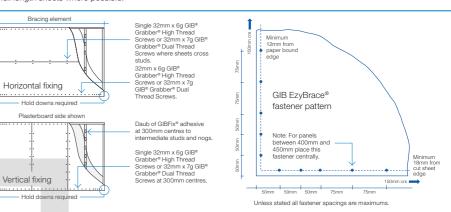
#### Fastener centres

GIB® Plasterboard side: 50,100,150, 225, 300mm from each corner and then 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm centres to the 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 centres to intermediate studs. Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge. Plywood side: 150mm centres to the perimeter of each sheet. GIR® corner. fastener pattern does not apply to the plywood side, 300mm centres to intermediate studs.

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.



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 ma nce. Follow the specifications. This specification sheet is issued in conjunction with the publication GIR EzyBrace® System



rmance. Follow the specifications. This specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems

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Proposed Dwelling - Franz Josef

Lot 55, Stage 2 Kelson Heights, Kelson, Lower Hutt

Details - Bracing Cont.2

ISSUE 11/03/2022 REV. DATE: SHEET NO. 18072-55 408 CODE: SCALES (A3):

