

Project Number

10550

Building Consent Authority

Westland District Council

PIM Number

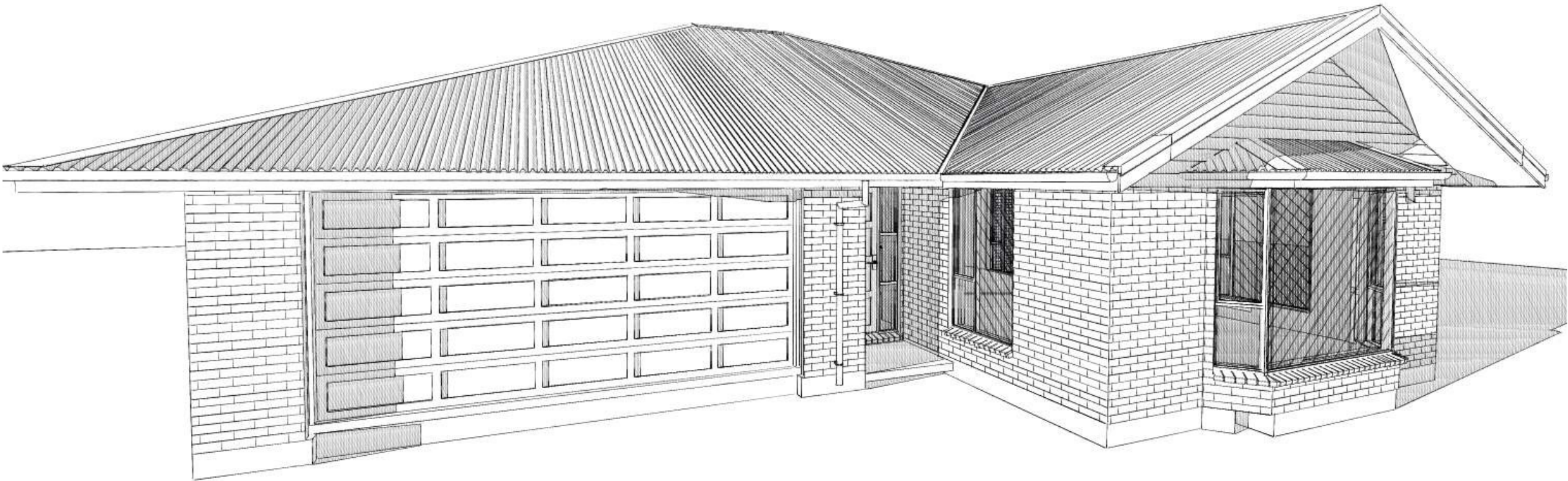
-

BC Number

- BC 130233

RC Number

-



GENERAL NOTES

**DIMENSIONS NOTED ON DESIGNER'S DRAWINGS ARE FROM STRUCTURAL SURFACES / MATERIALS AND NOT FINISHES, UNLESS OTHERWISE INDICATED**

Wherever possible the specialist contractor is to advise the Designer with regards to better fabrication and detailing alternatives prior to manufacture.

The Contractor is responsible for the correct setting out of the building on site with particular reference to boundaries and building lines. Boundary pegs are to be located, and all relevant levels, dimensions, and setting out points are to be verified on site against information provided by the Designer prior to any work commencing and any discrepancies are to be brought to the attention of the Designer.

The Contractor to verify and confirm all measurements, dimensions, and heights with the Designer prior to construction.

Details take precedent over other working drawings; any and all discrepancies between the two must be raised with the Designer. Large scale details to be used where available.

All dimensions are given in millimeters unless otherwise noted. Figured dimensions to be used as preference to scaled dimensions.

Where available, Engineer's drawings are to be read in conjunction with Designer's documentation, any discrepancies to be reported to the Designer.

The Designer accepts no responsibility for errors resulting from misinterpretation of the drawings.

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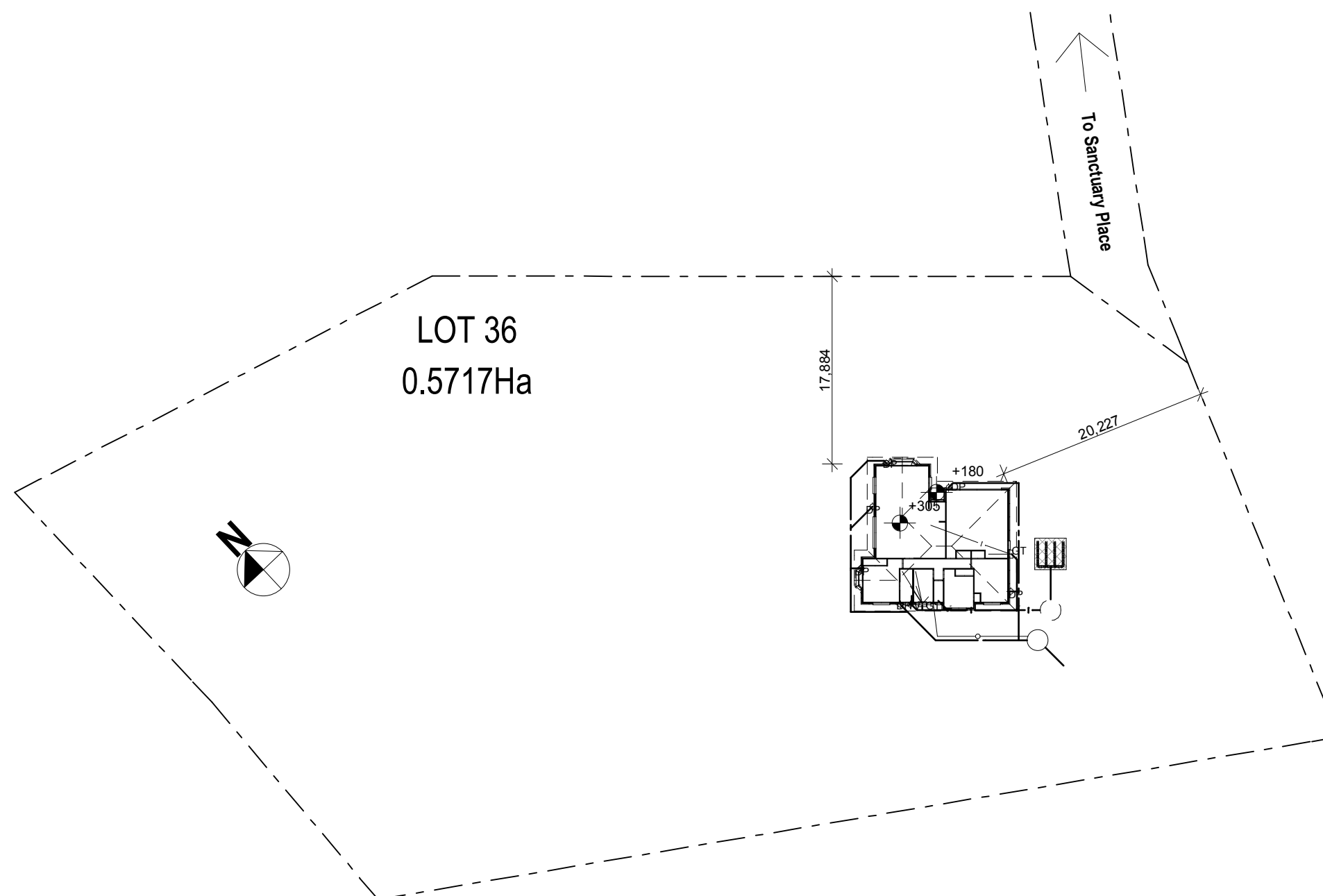
New Dwelling

for

Kumara Junction Developments

Lot 36, Sanctuary Place

Kumara



**Site Plan**  
Scale 1:500

<div><div><div>Design</div><div>HQ</div><div>+</div></div><div><div>www.designhq.co.nz</div><div>20A Bomford Street PO Box 442 Blenheim</div><div>Tel 03 577 5267 Mob 021 775 267 Fax 03 577 5268</div></div></div> <div>info@designhq.co.nz</div>	Project Description	Client	<div>NOTES</div> <div><div>SITE IDENTIFICATION</div><div>Legal Discription: Lot 36, Subdn of Lot 36, DP 437565</div><div>TA Zoning:</div><div>Zones</div><div>Wind : High Durability : C</div><div>Earthquake : 2 Climate : 3</div><div>Snow Loading : 1.0 kPa</div></div> <td>Technician</td> <td>Tony Fitzpatrick</td> <td>Drawing Title</td>	Technician	Tony Fitzpatrick	Drawing Title
	New Dwelling	Kumara Junction Developments		Designer	Tony Fitzpatrick	Site Plan
	Project Number	At		Creation Date	17/02/2014	Drawing Number
	10550	Lot 36, Sanctuary Place		Plot Date	18/02/2014	
	Reference:	Kumara		Project Status	Working Drawings	
	Bissett, Lot 36, Kumara Junction v2.pln			Scale (at A3)	1:500	
				Revision	Date 17/02/2014	
A-02 of 20						

DRAINAGE SCHEDULE			G13
Waste Pipe Sizes, Falls & Unvented Length			
Fixture	Min Size	Min Fall	Max. Unvented Length
Basin	32mmø	1:20	3.5m
Dishwasher	40mmø	1:40	3.5m
Laundry Tub	40mmø	1:40	3.5m
Shower	40mmø	1:40	3.5m
Sink	40mmø	1:40	3.5m
Washing Machine	40mmø	1:40	3.5m
WC	100mmø	1:60	6.0m

LEGEND	
Symbol	Description
	Hot water cylinder
	80mmØ uPVC downpipe
	Gully Trap
	Inspection Point
	100mmØ uPVC Soil Stack
	100mmØ uPVC Terminal Vent

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Project Description

New Dwelling

Client

Kumara Junction Developments

At

Lot 36, Sanctuary Place

Kumara

Project Number

10550

Reference:

Bissett, Lot 36, Kumara Junction v2.pln

Technician

Tony Fitzpatrick

Designer

Tony Fitzpatrick

Creation Date

17/02/2014

Plot Date

18/02/2014

Project Status

Working Drawings

NOTES

Existing services are indicative only. As the information reflects that which was received, the Designer takes no responsibility for incorrect positions. The plumber and/or drainlayer to verify shown positions prior to new work carried out.

Connection points & levels to be confirmed on Site by Drainlayer prior to commencement of work.

Drawing Title

Drainage Plan

Scale (at A3)

1:100

Revision

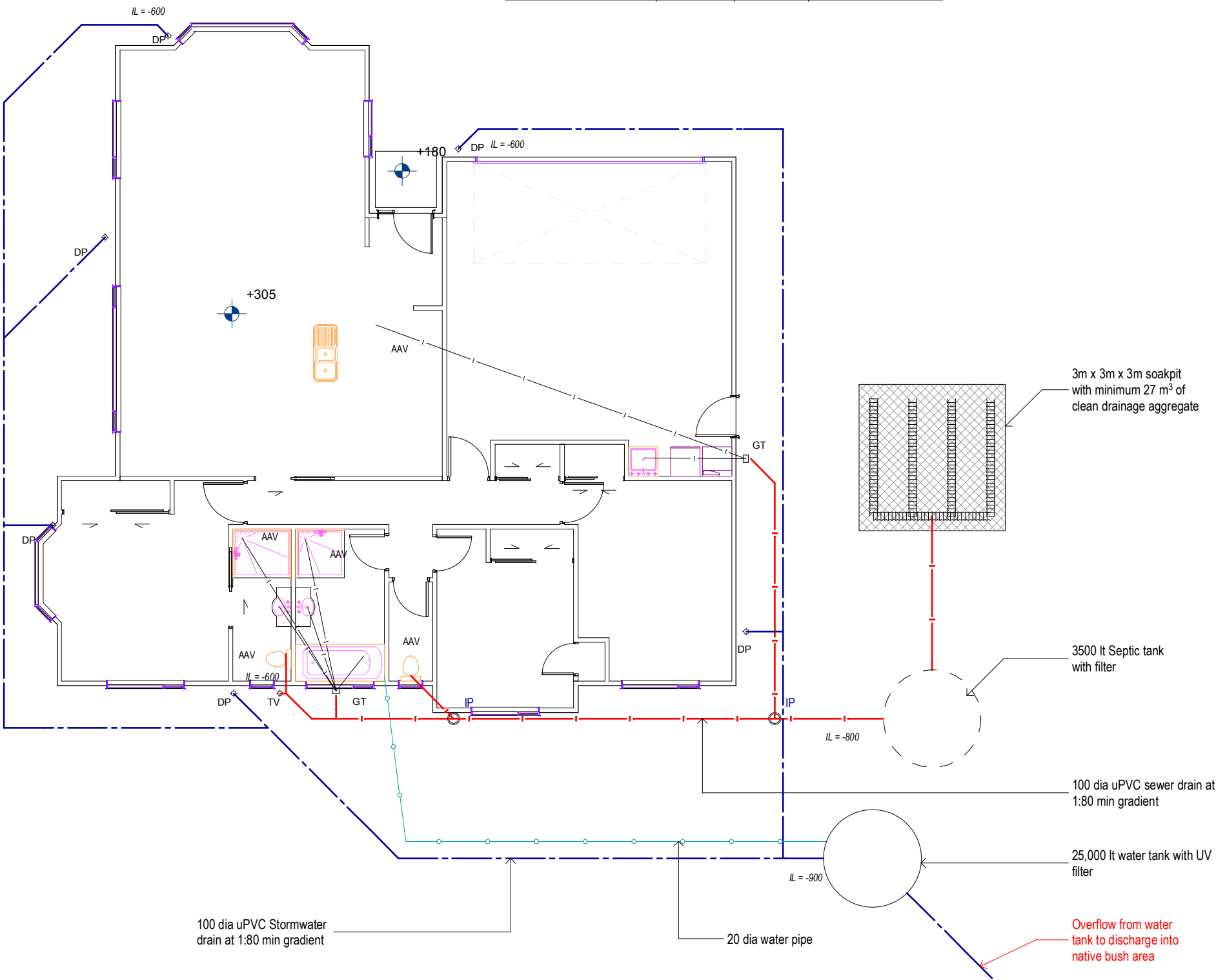
Date 17/02/2014

Drawing Number

A-03

of 20

ALL DIMENSIONS TO BE VERIFIED ON SITE



Drainage Plan  
Scale 1:100



STUD TO TOP PLATE FIXING SCHEDULE		
Fixing Ref	Fixing Details	Alternative Fixing capacity (kN)
(A)	2-90 x 3.33 plain steel nails driven vertically into stud	0.7
(B)	2-90 x 3.33 plain steel nails driven vertically into stud plus L/lok 6kN Stud Anchor (CPC80)	4.7
	2-90 x 3.33 plain steel nails driven vertically into stud plus 2 x L/lok CPC40	4.7
	2-90 x 3.33 plain steel nails driven vertically into stud plus L/lok Stud strap (one face only)	4.7

H1 COMPLIANCE

East, South and West Walls

Wall Area :	112.90m²
Glazing Area:	24.04m²
Percentage of glazing to wall area:	21.29%

Skylights

Glazing Area:	0.00m²
---------------	--------

Therefore dwelling complies with the Schedule Method

Construction R-Values to dwelling

**FLOOR**  
85mm Slab on 1100 x 1100 x 220 Polystyrene podformers on ground with 90mm Stud wall  
Area/perimeter ratio: 2.01  
Total Construction R-Value: **R1.93**

**WALLS**  
90mm Timber framed (cavity) with 70 series brick veneer - studs at 600crs, dwangs @ 800crs  
Insulation material R-Value: R2.8  
Total Construction R-Value: **R2.28**

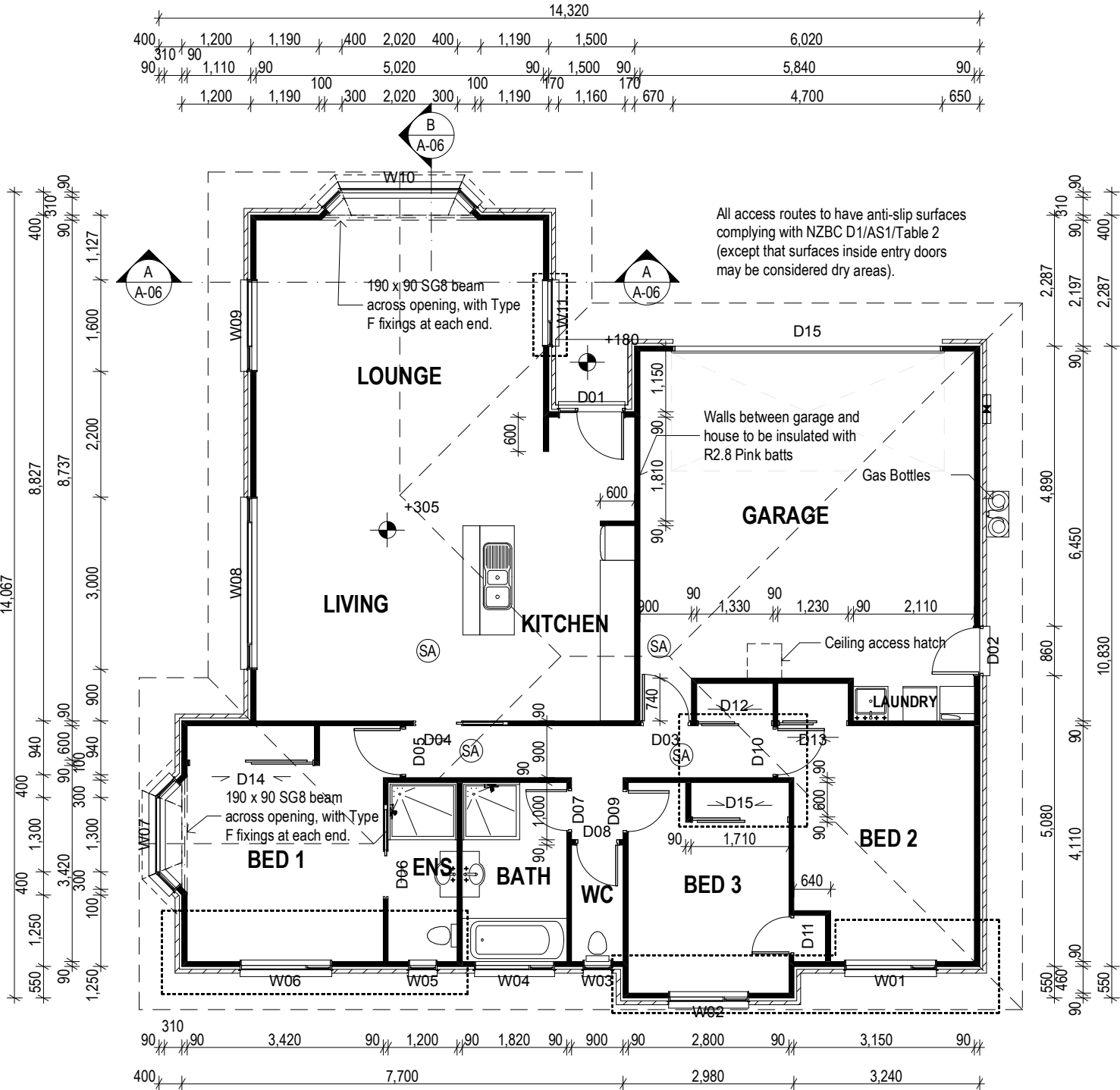
**GLAZING**  
All Vertical glazing to be IGU's with WERS R-Value of ≥ 0.26,  
All Skylights to be IGU's with WERS R-Value of ≥ 0.31

**ROOF**  
Pitched timber-framed roof with 90mm bottom chord @ 900crs  
Insulation material R-Value: R3.6  
Total Construction R-Value: **R3.39**

H1 COMPLIANCE (NZS 4305)

Approx. Pipe length from Hot Water Cylinder to Kitchen sink outlet: 0.00m  
Pipe must be insulated with a 12mm Closed Cell Foam Polymer insulation. R-value not less then 0.3m².°C/W

Nominal Pipe Size (mm)	10mmØ	15mmØ	20mmØ
Maximum Pipe length (m)	25m	12m	7m

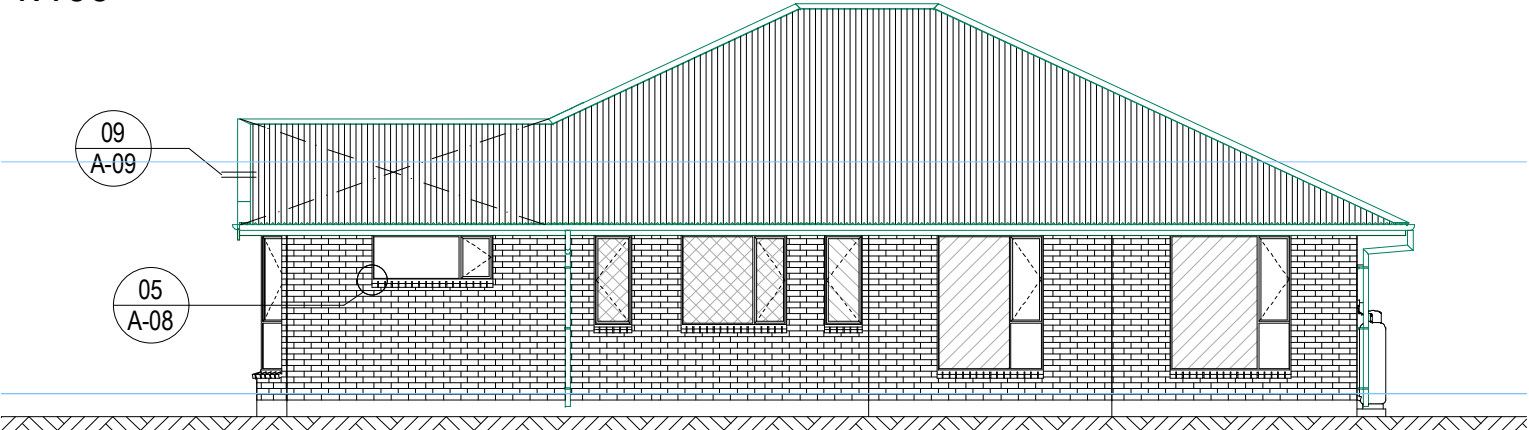


Proposed Floor Plan Layout  
Scale 1:100

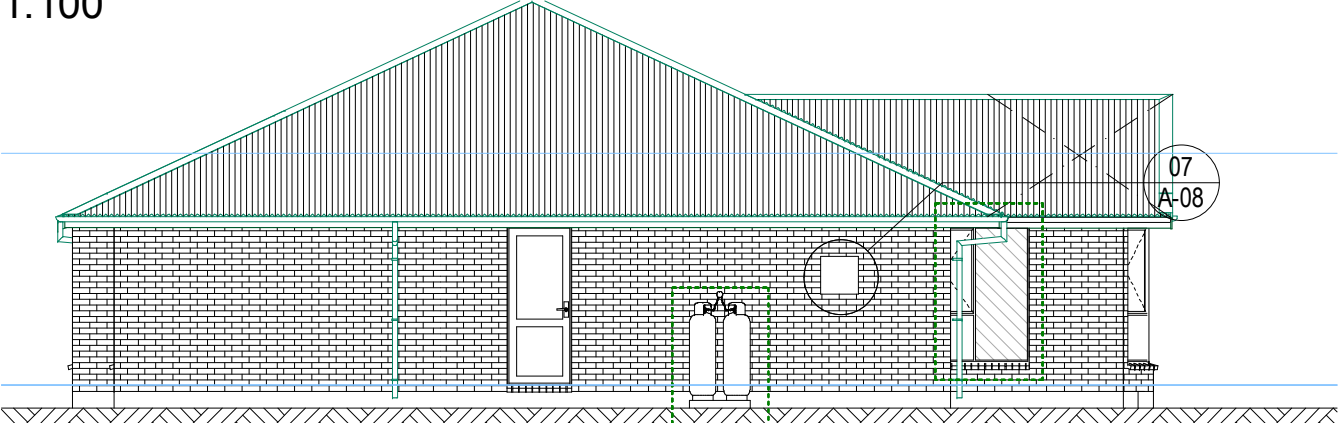
Project Description															
New Dwelling															
Client															
Kumara Junction Developments															
At															
Lot 36, Sanctuary Place															
Kumara															
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Creation Date	17/02/2014														
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NOTES															
<table><tr><th colspan="2">LEGEND</th></tr><tr><th>Symbol</th><th>Description</th></tr><tr><td>(SA)</td><td>Domestic Smoke Detector</td></tr><tr><td>(HWC)</td><td>Hot water cylinder</td></tr><tr><td>MB</td><td>Meter Box</td></tr><tr><td>DS</td><td>Double Stud</td></tr><tr><td>(CJ)</td><td>Control Joint to wall cladding as per Manufacturer's recommendations and specifications</td></tr></table> <p>All showers to be cubicle type units as selected by owner, and installed as per manufacturer's specifications. All studs to be fixed to Top Plates with Type B Fixings ALL DIMENSIONS TO BE CHECKED ON SITE</p>		LEGEND		Symbol	Description	(SA)	Domestic Smoke Detector	(HWC)	Hot water cylinder	MB	Meter Box	DS	Double Stud	(CJ)	Control Joint to wall cladding as per Manufacturer's recommendations and specifications
LEGEND															
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Drawing Title															
Floor Plan Layout															
Scale (at A3) 1:100															
Revision	Date 17/02/2014														
Drawing Number															
A-04															
of 20															
ALL DIMENSIONS TO BE VERIFIED ON SITE															



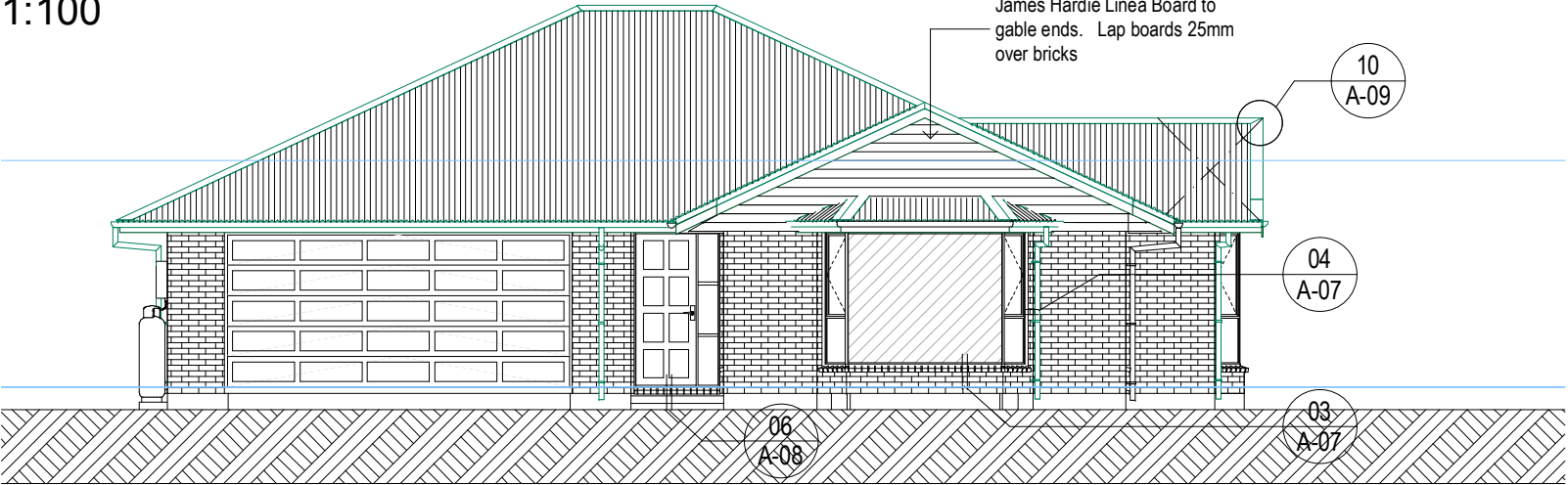
West Elevation  
1:100



South Elevation  
1:100



East Elevation  
1:100



North Elevation  
1:100

BUILDING ENVELOPE RISK MATRIX		
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	Low	0
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		1

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Project Description

New Dwelling

Client

Kumara Junction Developments

At

Lot 36, Sanctuary Place

Kumara

Project Number

10550

Reference:

Bissett, Lot 36, Kumara Junction v2.pln

Technician

Tony Fitzpatrick

Designer

Tony Fitzpatrick

Creation Date

17/02/2014

Plot Date

18/02/2014

Project Status

Working Drawings

NOTES

Drawing Title

Elevations

Scale (at A3)

1:100

Revision

Date 17/02/2014

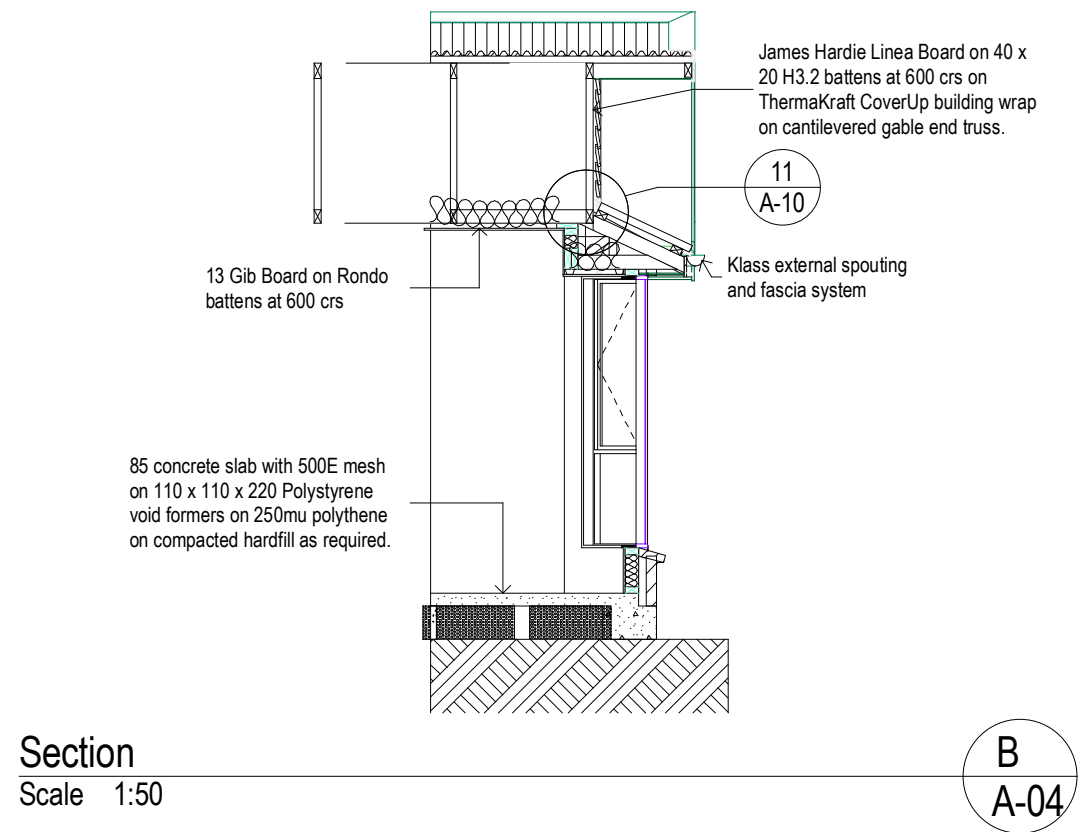
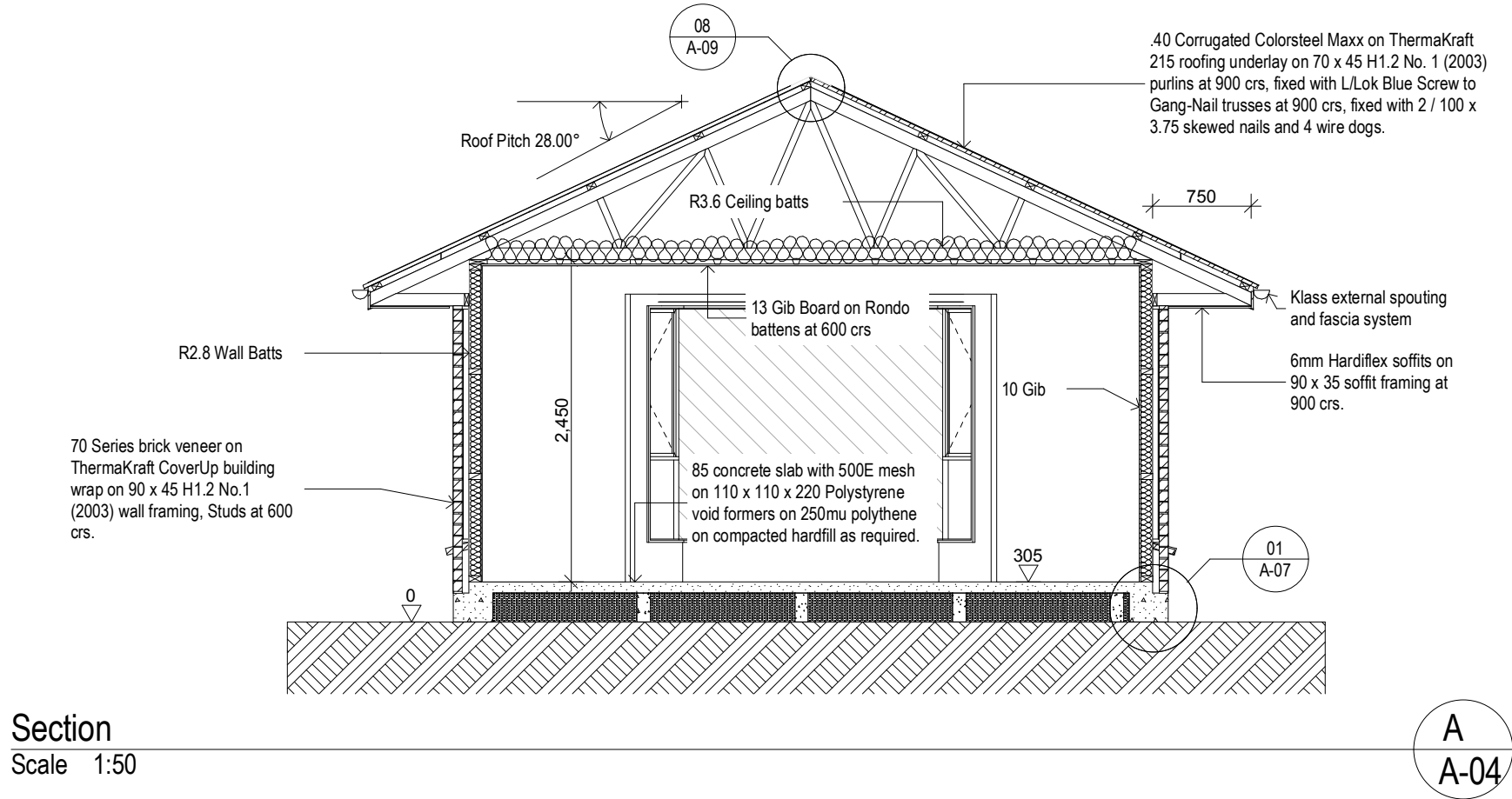
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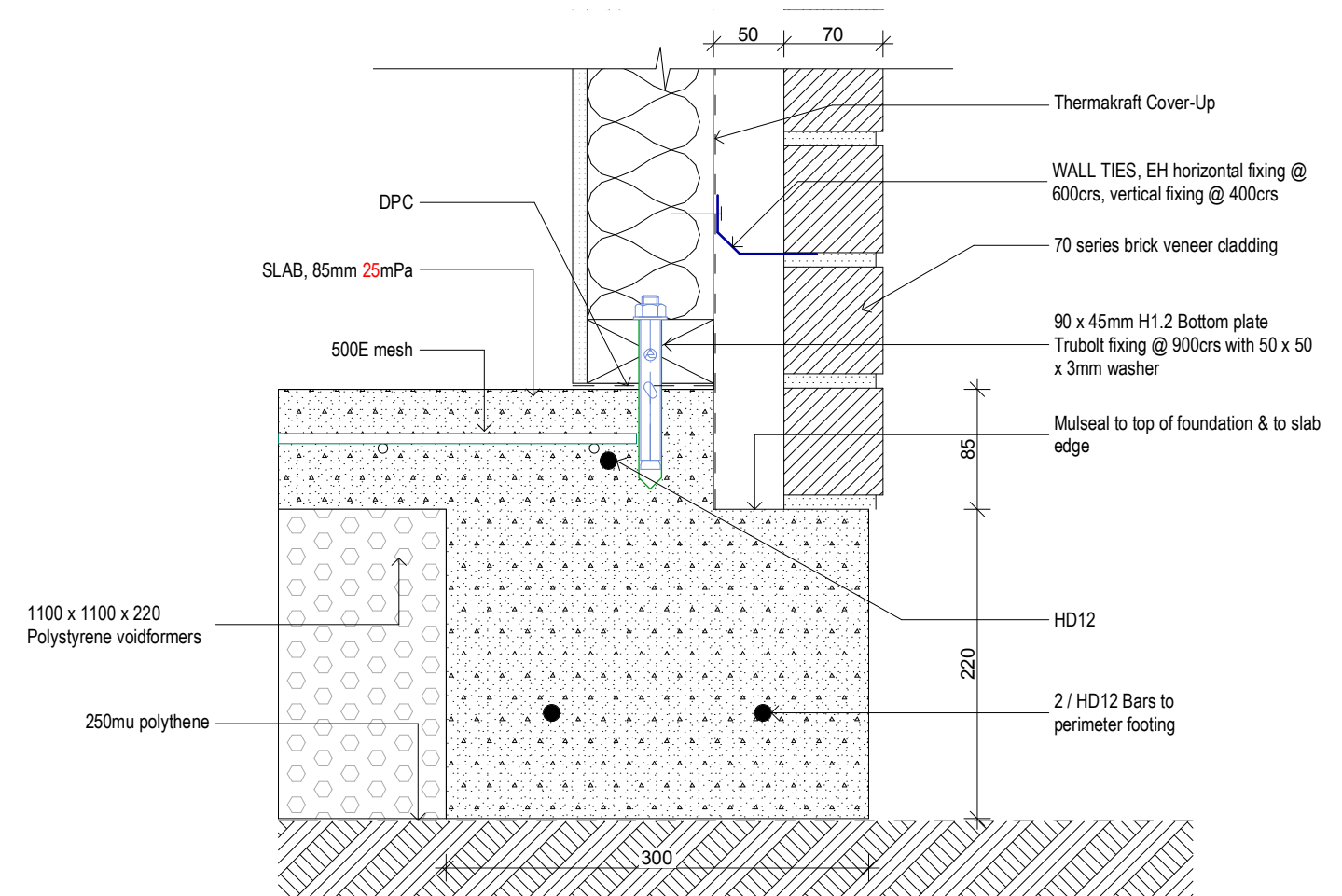
A-05

of 20

ALL DIMENSIONS TO BE VERIFIED ON SITE

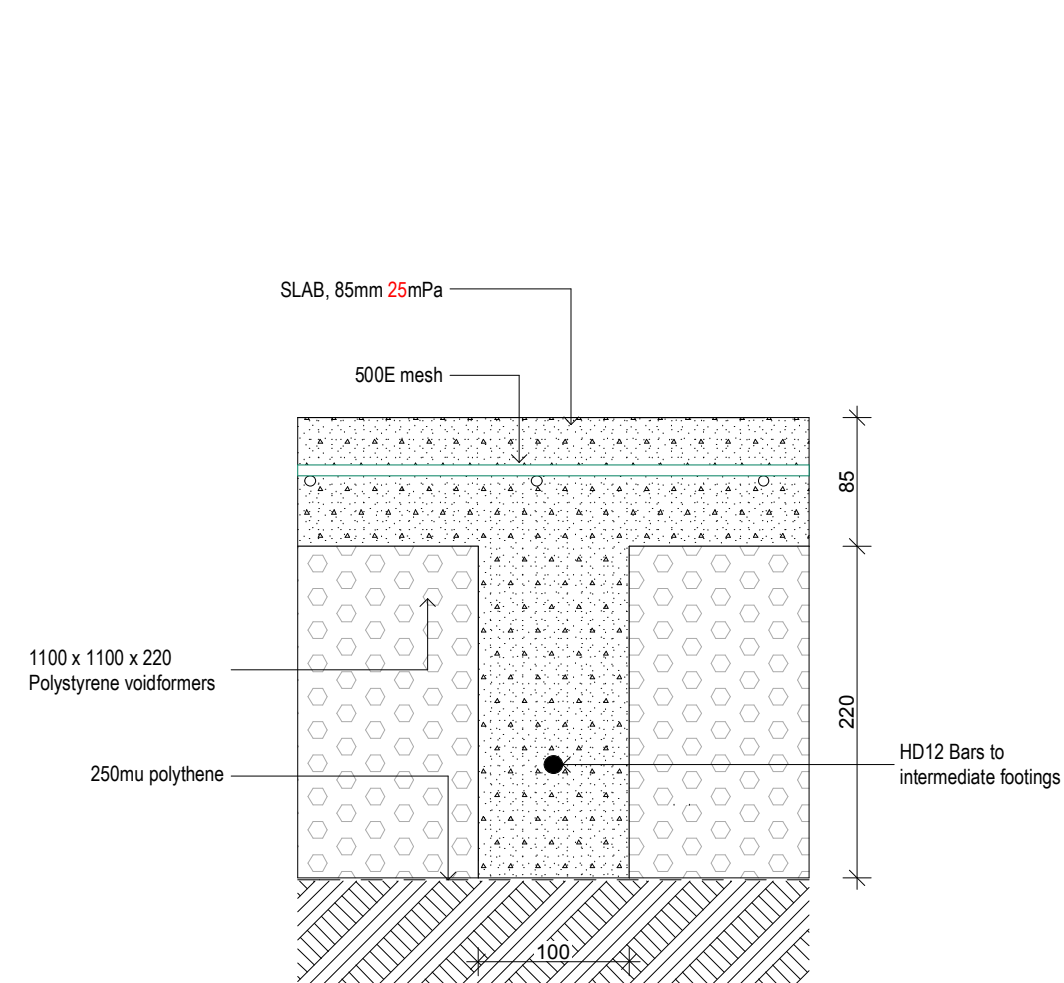
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New Dwelling	
Client	
Kumara Junction Developments	
At	
Lot 36, Sanctuary Place	
Kumara	
Project Number	10550
Reference: Bissett, Lot 36, Kumara Junction v2.pln	
Technician	Tony Fitzpatrick
Designer	Tony Fitzpatrick
Creation Date	17/02/2014
Plot Date	18/02/2014
Project Status	Working Drawings
NOTES	
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Drawing Title	
Sections	
Scale (at A3)	1:50
Revision	Date 17/02/2014
Drawing Number	
A-06	
of 20	
ALL DIMENSIONS TO BE VERIFIED ON SITE	





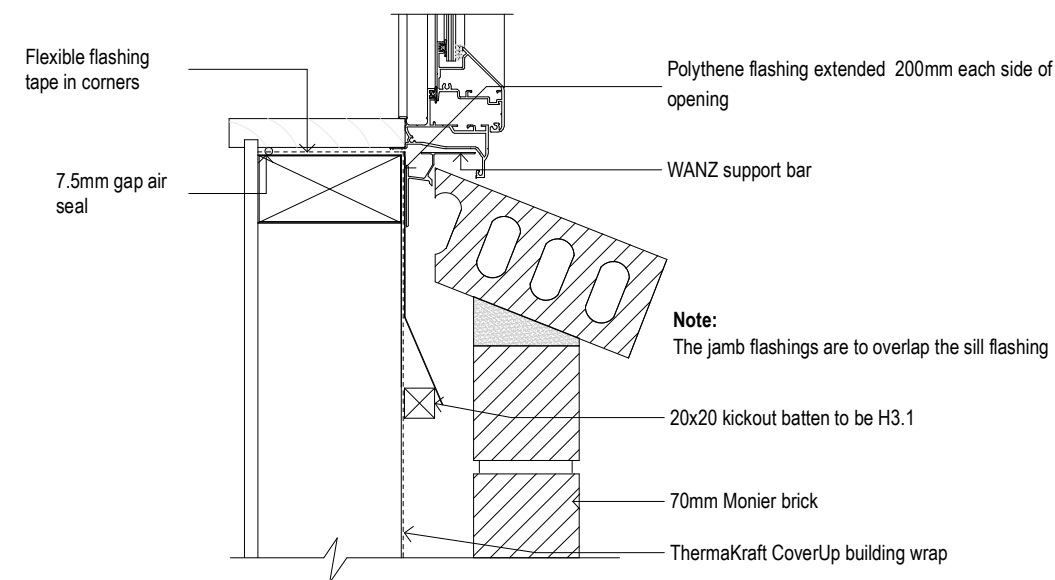
**Footing Detail**  
Scale 1:5

01  
A-06



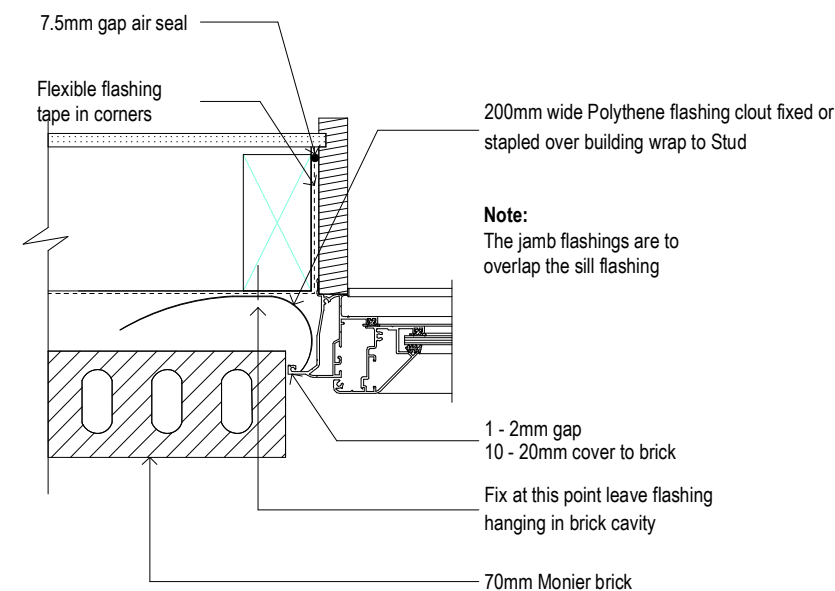
**Intermediate Foundation Rib Detail**  
Scale 1:5

02  
A-11



**Window Sill Flashing Detail**  
Scale 1:5

03  
A-05

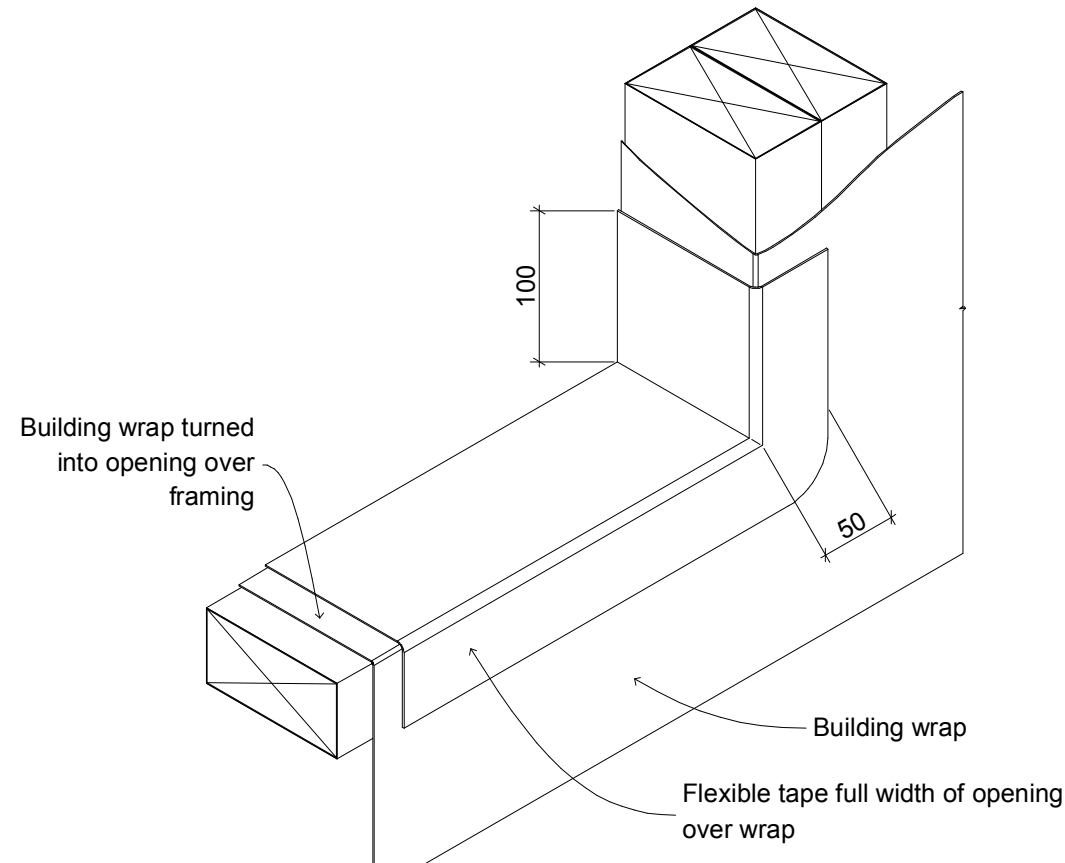


**Window Jamb Flashing Detail**  
Scale 1:5

04  
A-05

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	New Dwelling	Kumara Junction Developments		Designer	Tony Fitzpatrick	
	Project Number 10550	At Lot 36, Sanctuary Place Kumara		Creation Date	17/02/2014	Drawing Number <b>A-07</b> of 20
				Plot Date	18/02/2014	
				Project Status	Working Drawings	
Scale (at A3)	1:5					
Reference: Bissett, Lot 36, Kumara Junction v2.pln		Revision	Date 17/02/2014			

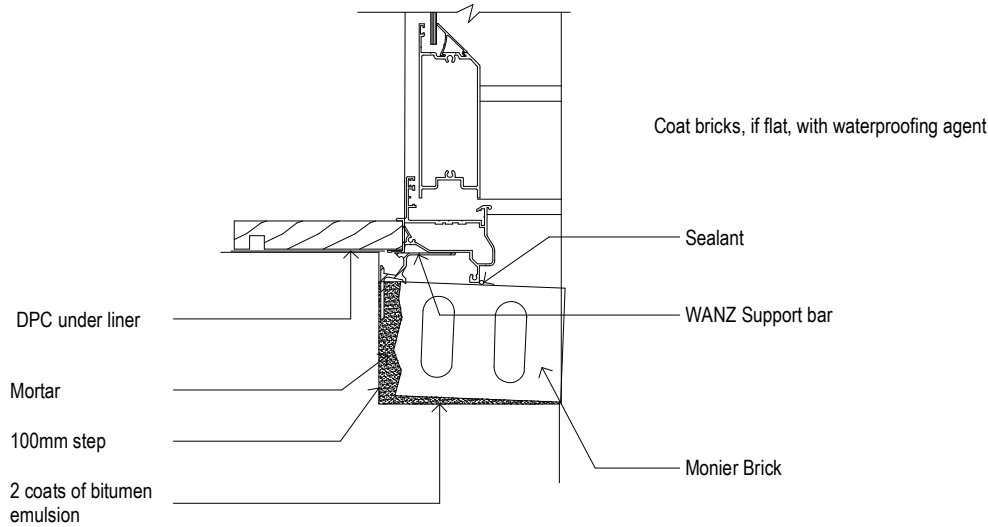




Typical Window Flashing Detail

Scale 1:5

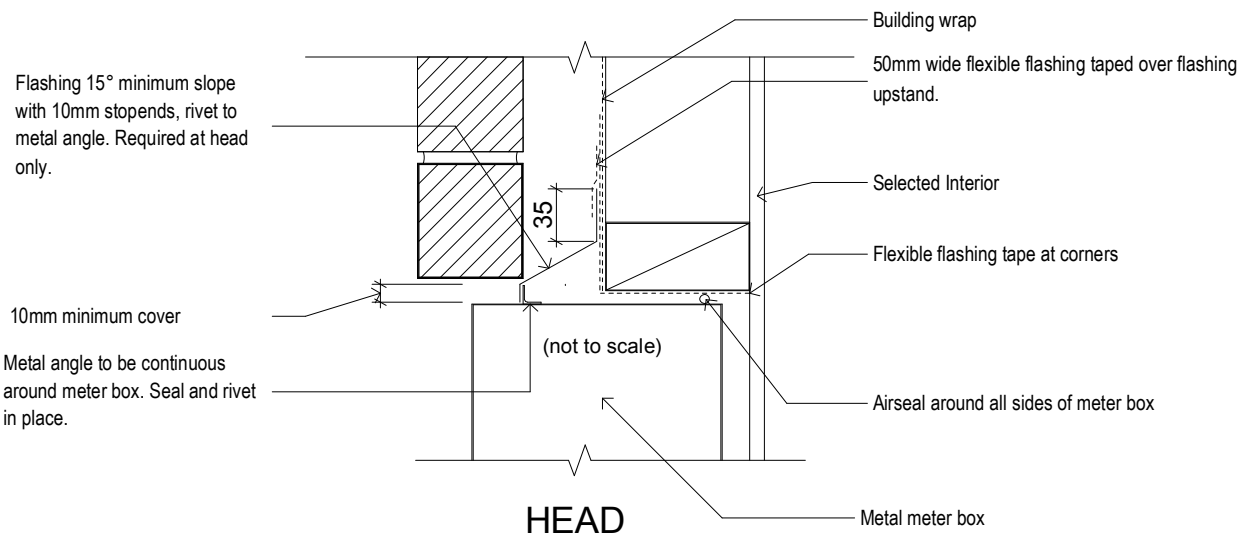
05  
A-05



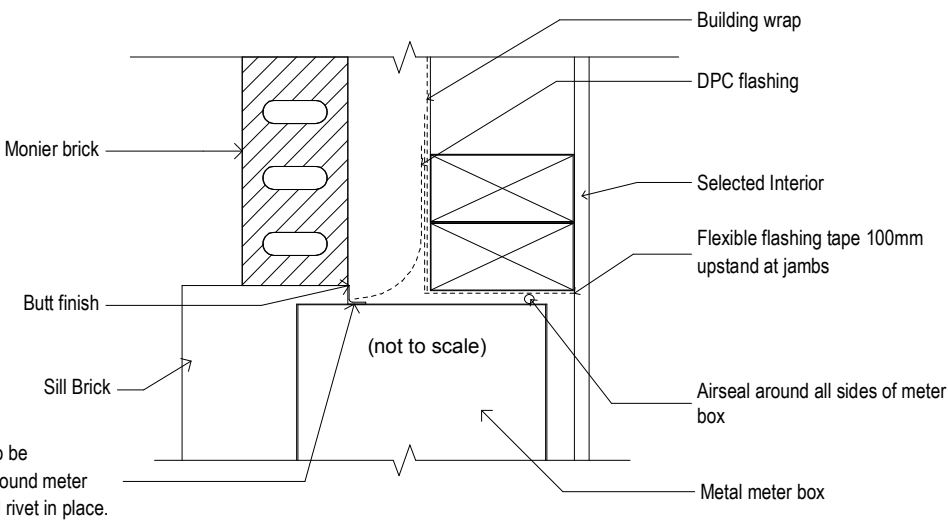
Door Sill Flashing Detail

Scale 1:5

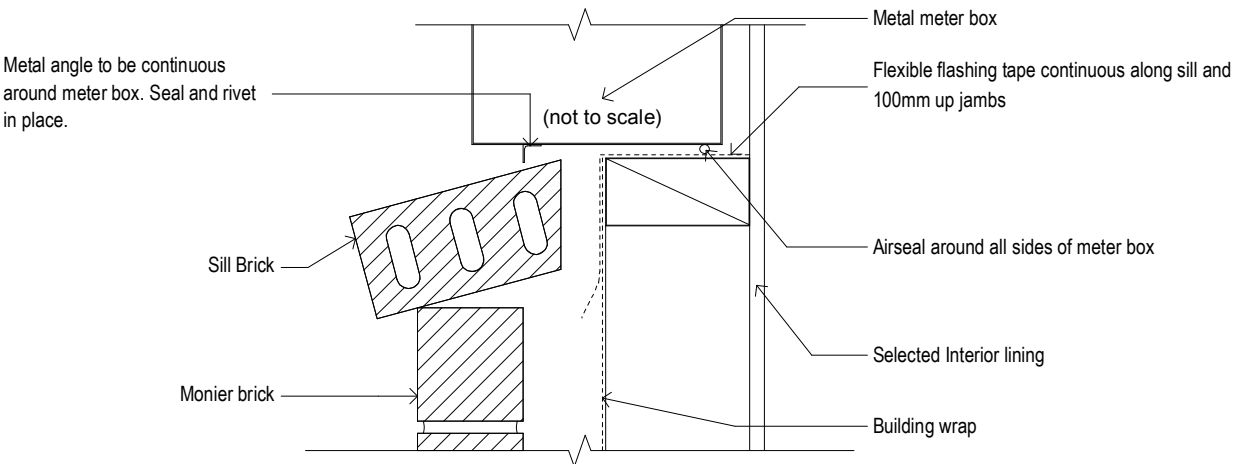
06  
A-05



HEAD



JAMB

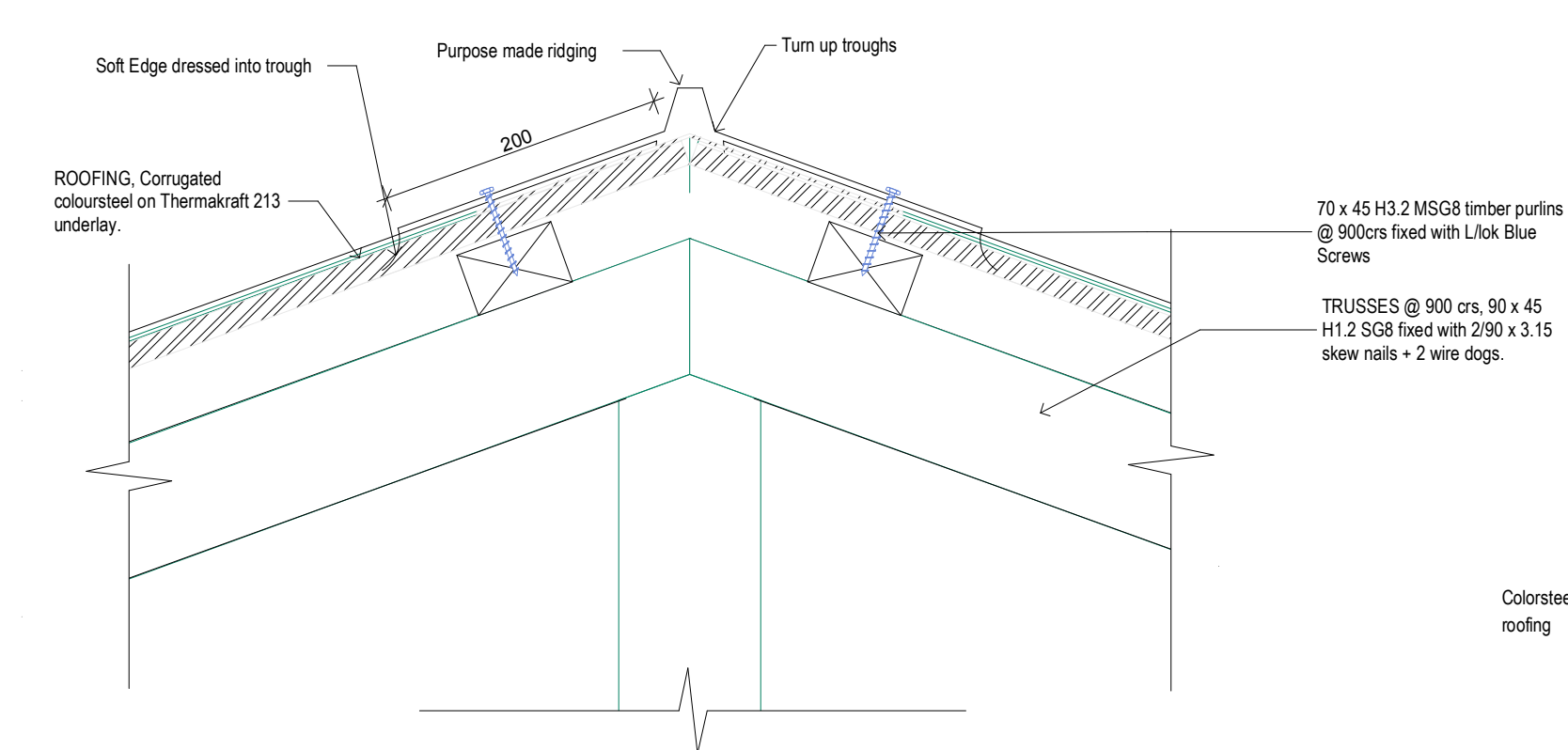


Meter Box Flashing Detail

Scale 1:5

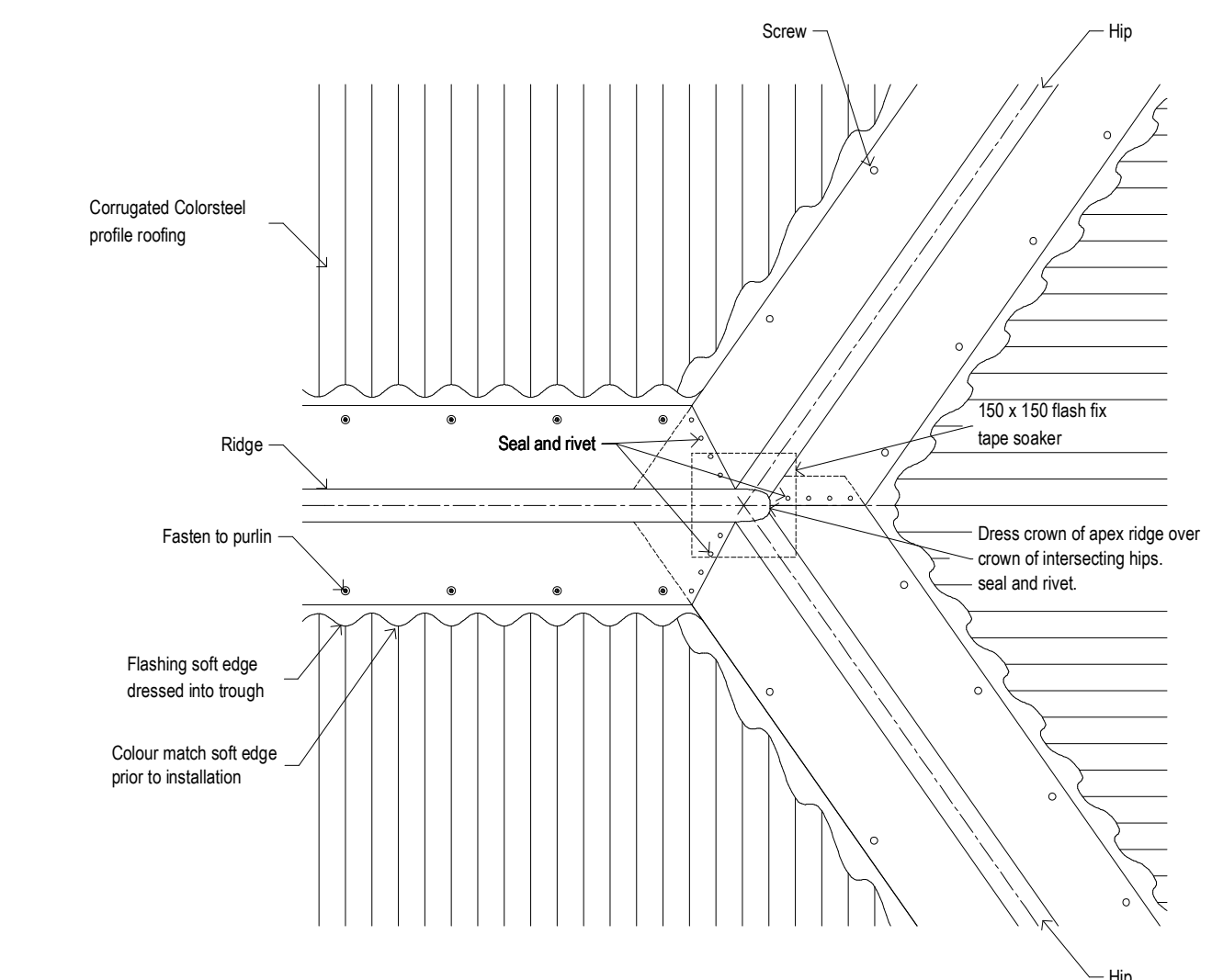
07  
A-05





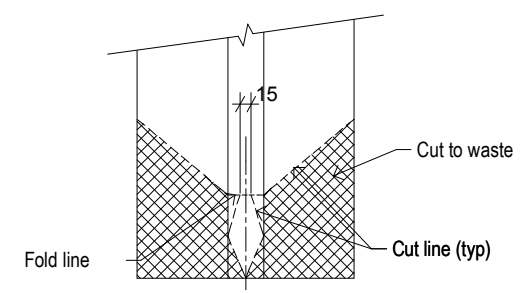
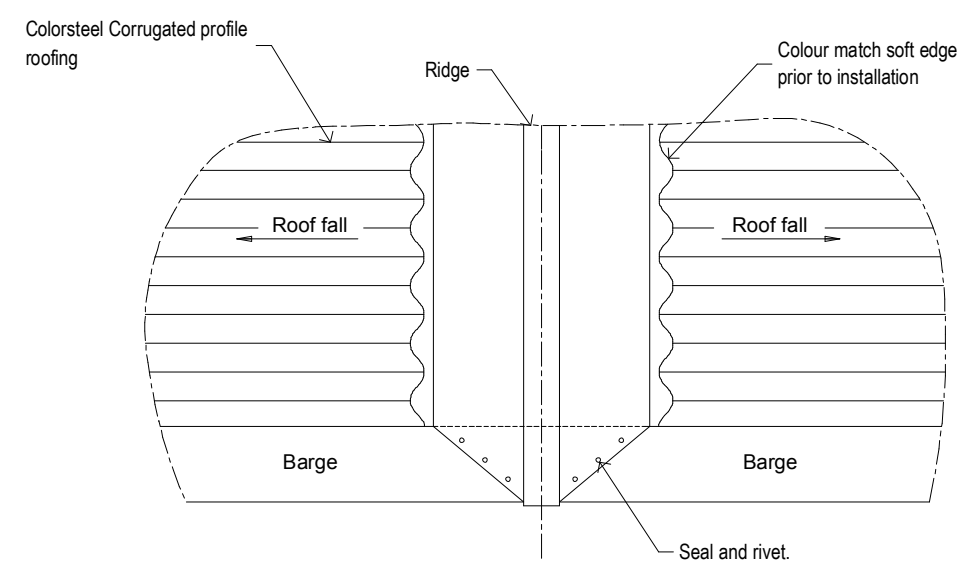
Ridge Flashing Detail  
Scale 1:5

08  
A-06

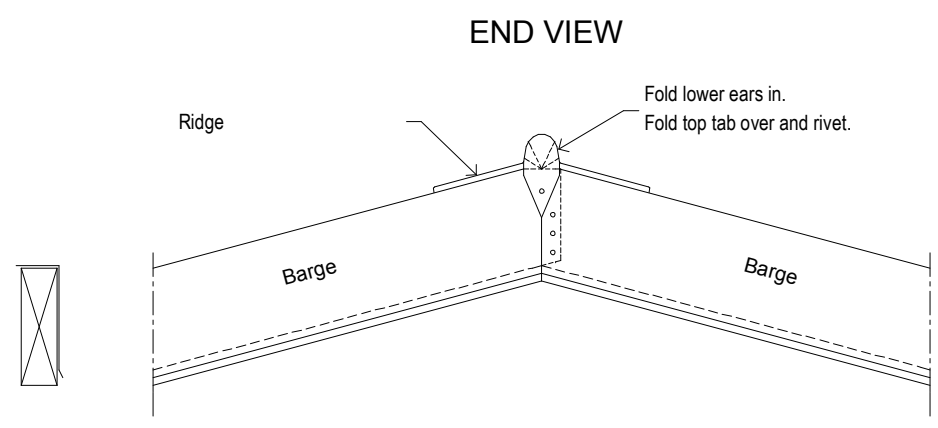


Hip Detail  
Scale 1:10

10  
A-05



DETAIL  
RIDGE END CUT



Barge Detail  
Scale 1:10

09  
A-05

Project Description  
New Dwelling

Client  
Kumara Junction Developments

At  
Lot 36, Sanctuary Place  
Kumara

Project Number 10550

Reference:	Bissett, Lot 36, Kumara Junction v2.pln
Technician	Tony Fitzpatrick
Designer	Tony Fitzpatrick
Creation Date	17/02/2014
Plot Date	18/02/2014
Project Status	Working Drawings

NOTES

Drawing Title  
Details

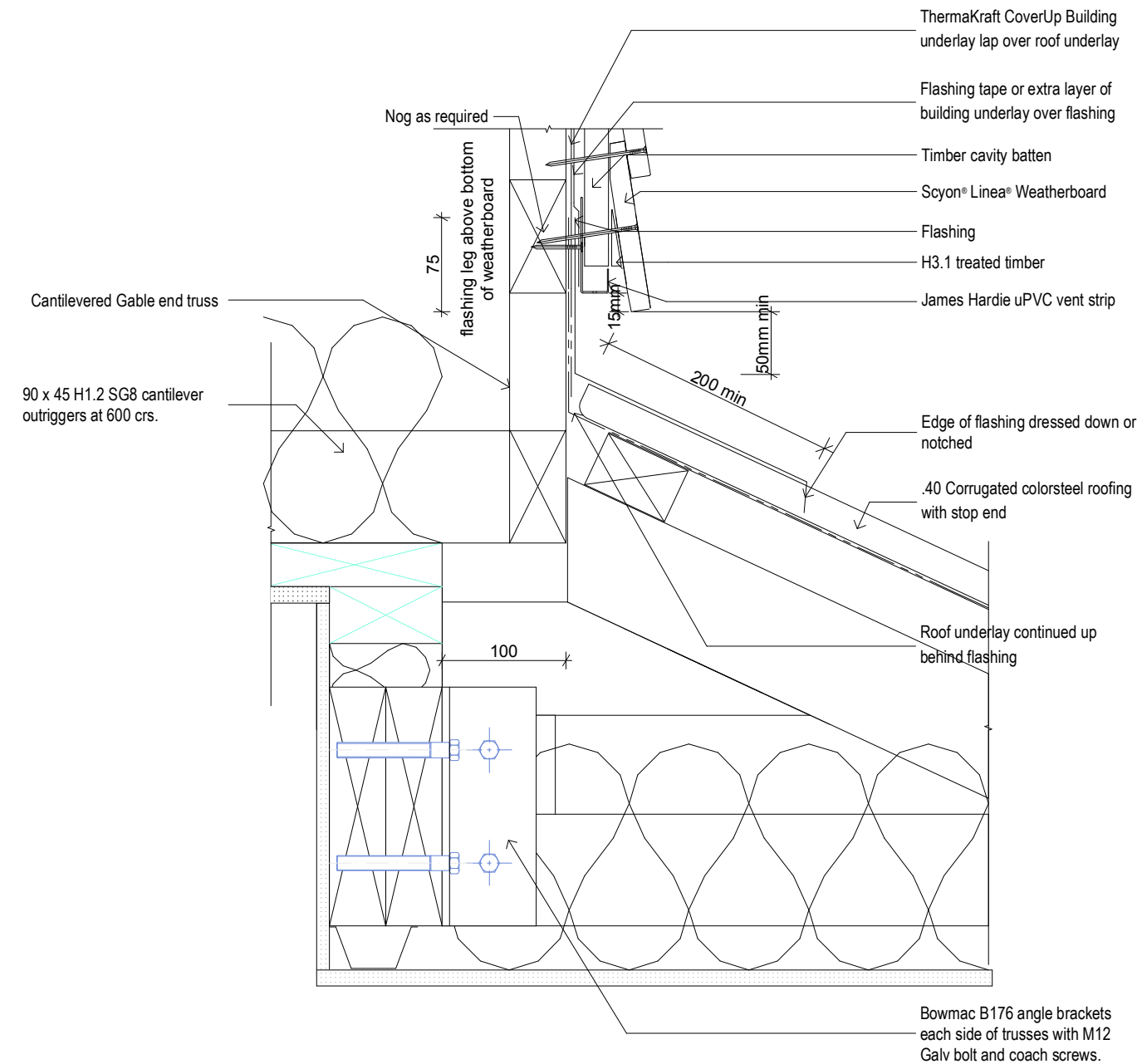
Scale (at A3) 1:5, 1:10

Revision Date 17/02/2014

Drawing Number

A-09  
of 20

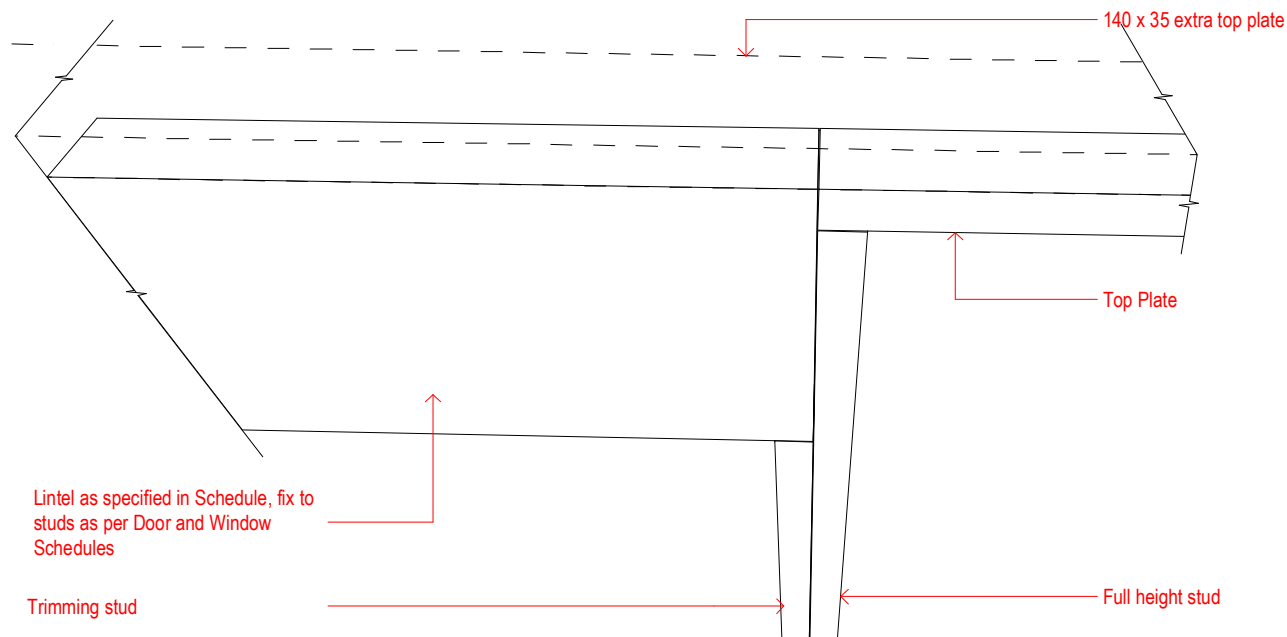
ALL DIMENSIONS TO BE VERIFIED ON SITE



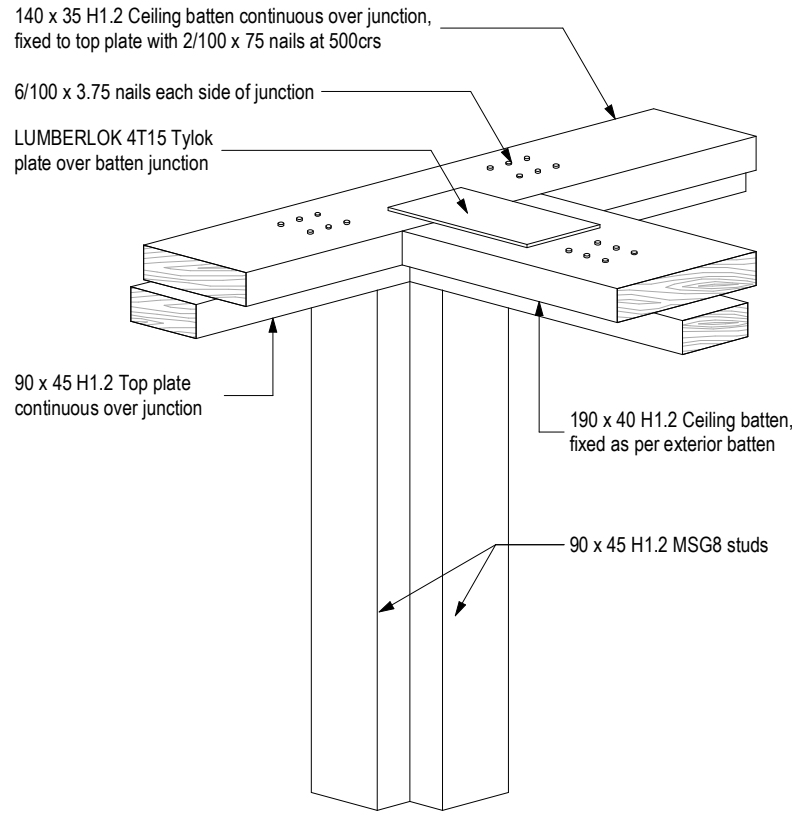
Apron Flashing Detail

Scale 1:5

11  
A-06



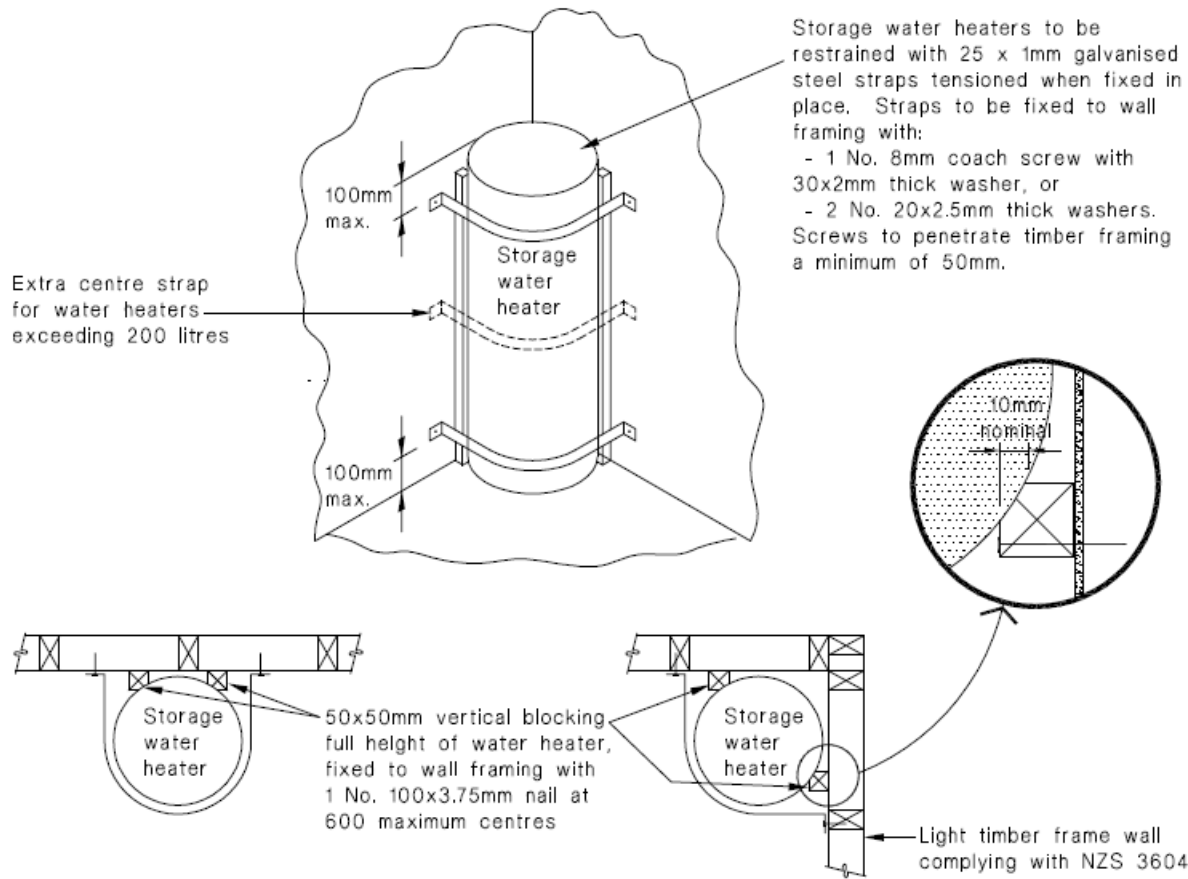
Lintel as Top Plate Detail



Typical Top Plate Junction Detail

Scale 1:10

12  
A-12



Hot Water Cylinder Restraint

Project Description  
New Dwelling

Client  
Kumara Junction Developments  
At  
Lot 36, Sanctuary Place  
Kumara

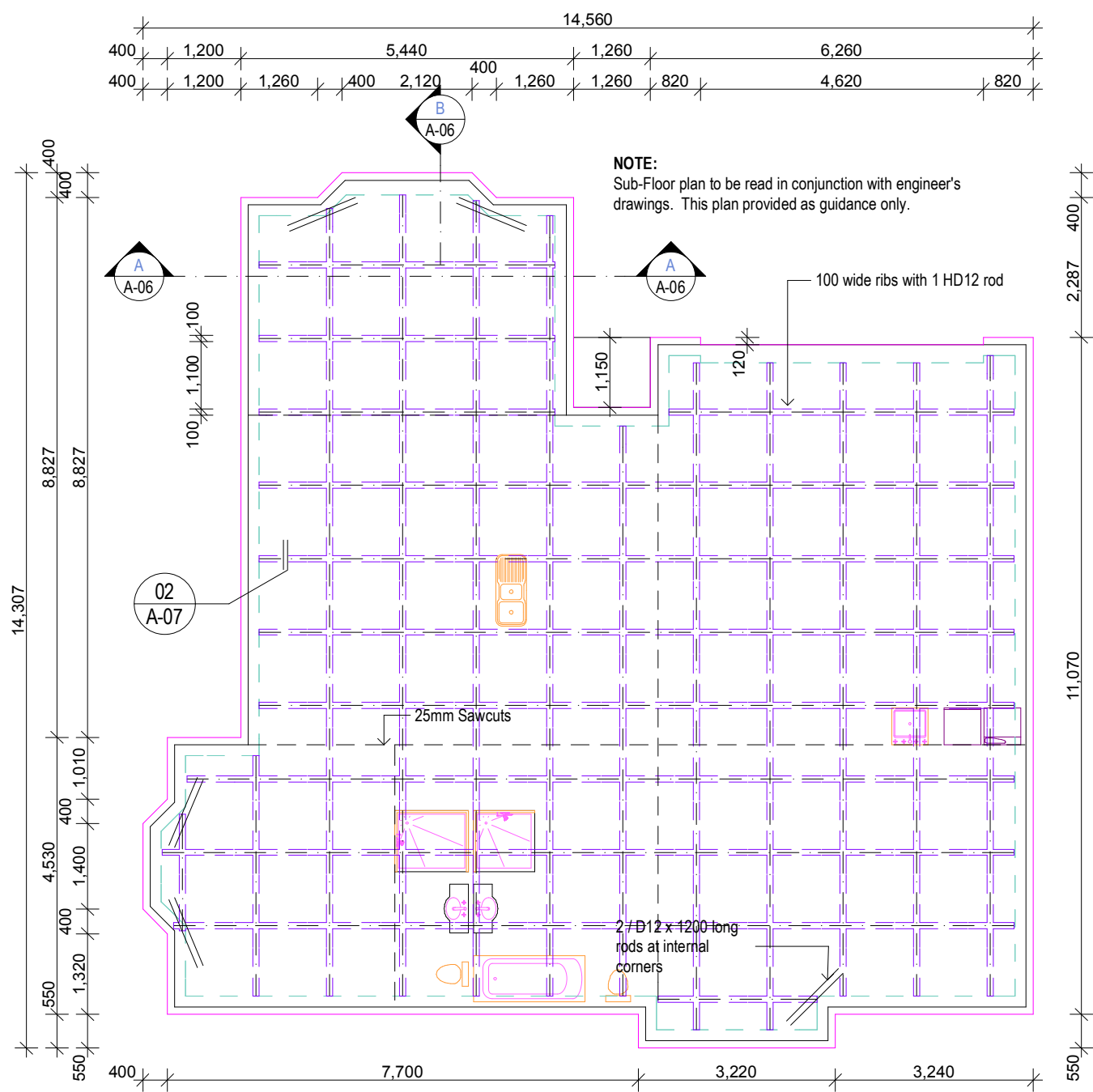
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Reference: Bissett, Lot 36, Kumara Junction v2.pln  
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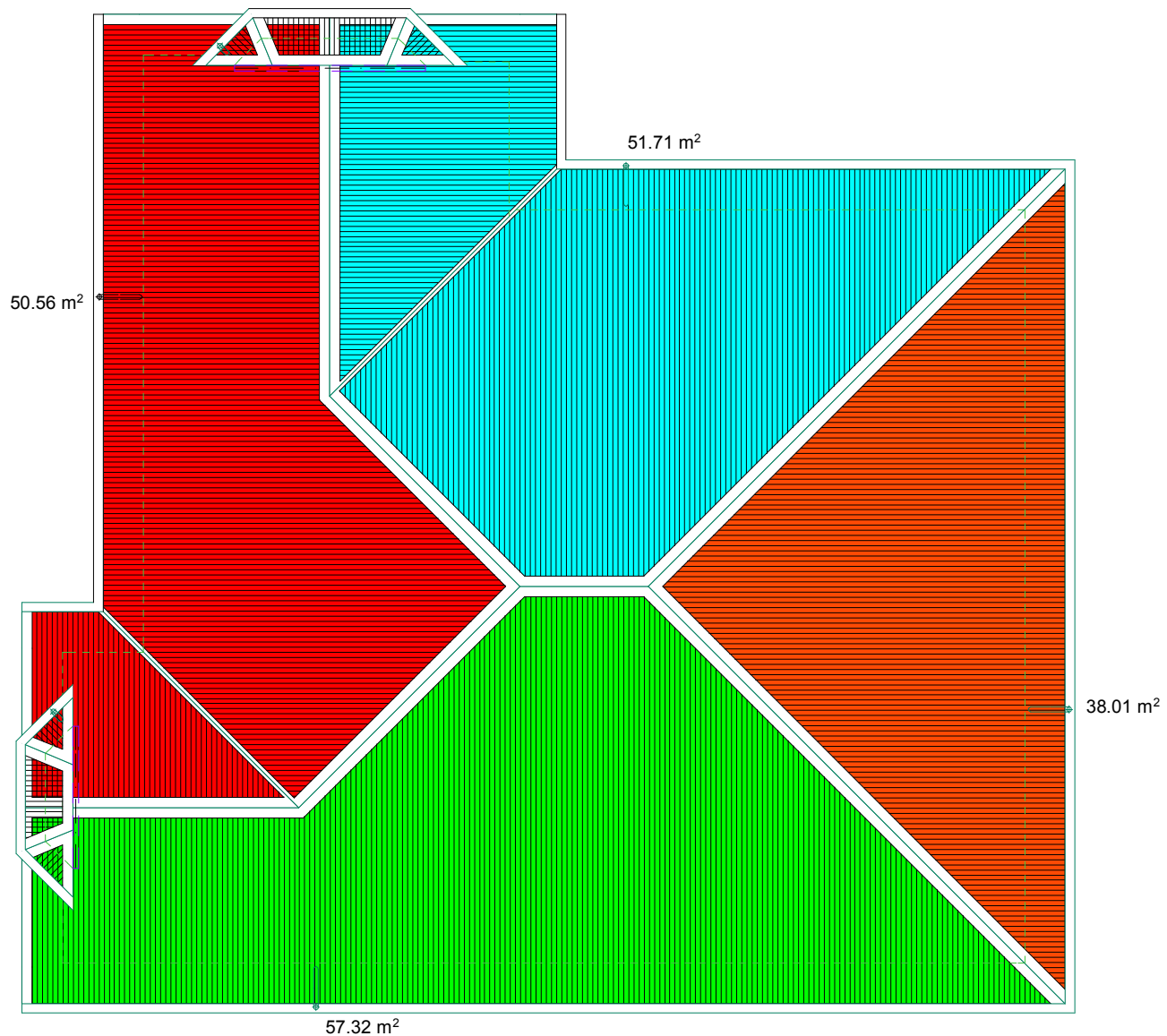
NOTES

Drawing Title  
Details  
Scale (at A3) 1:5, 1:10, 1:100, 1:200  
Revision Date 17/02/2014  
Drawing Number


A-10  
of 20  
ALL DIMENSIONS TO BE VERIFIED ON SITE



**Foundation Plan**  
Scale 1:100



**Roof Drainage Plan**  
Scale 1:100

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	New Dwelling		Kumara Junction Developments			Designer	Tony Fitzpatrick		
	Project Number		At Lot 36, Sanctuary Place Kumara			Creation Date	17/02/2014	Drawing Number	
	10550					Plot Date	18/02/2014		A-11 of 20
	Reference: Bissett, Lot 36, Kumara Junction v2.pln					Project Status	Working Drawings		
						Scale (at A3)	1:100		
						Revision	Date 17/02/2014		

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ALL DIMENSIONS TO BE VERIFIED ON SITE

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New Dwelling

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Kumara Junction Developments

At

Lot 36, Sanctuary Place  
Kumara

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Bissett, Lot 36, Kumara Junction v2.pln

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Tony Fitzpatrick

Designer

Tony Fitzpatrick

Creation Date

17/02/2014

Plot Date

18/02/2014

Project Status

Working Drawings

NOTES

TPJ

All junction indicated thus to be fixed as per the typical top plate junction detail

ALL DIMENSIONS TO BE CHECKED ON SITE

Drawing Title

Bracing Plan

Scale (at A3)

1:100

Revision

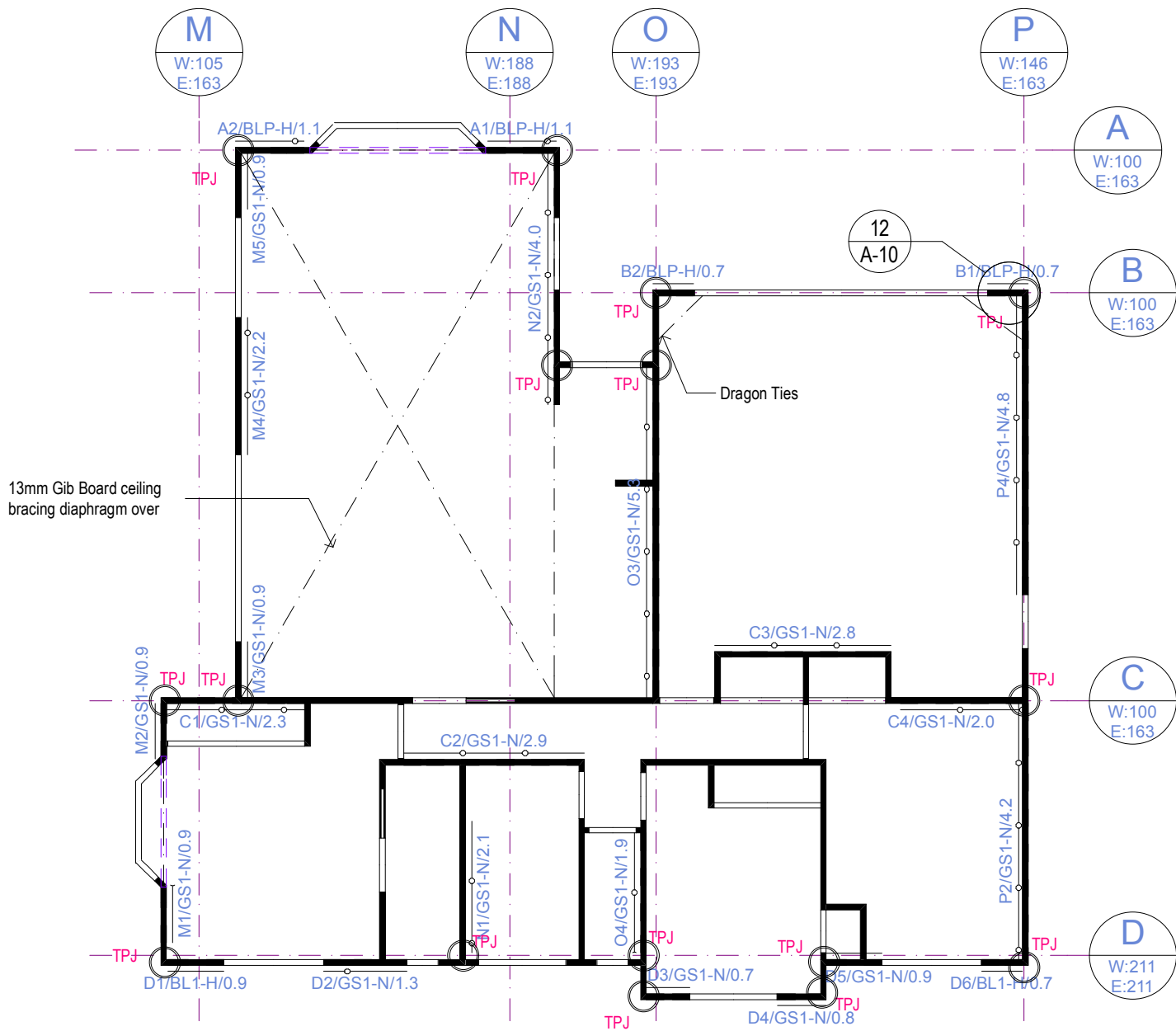
Date 17/02/2014

Drawing Number

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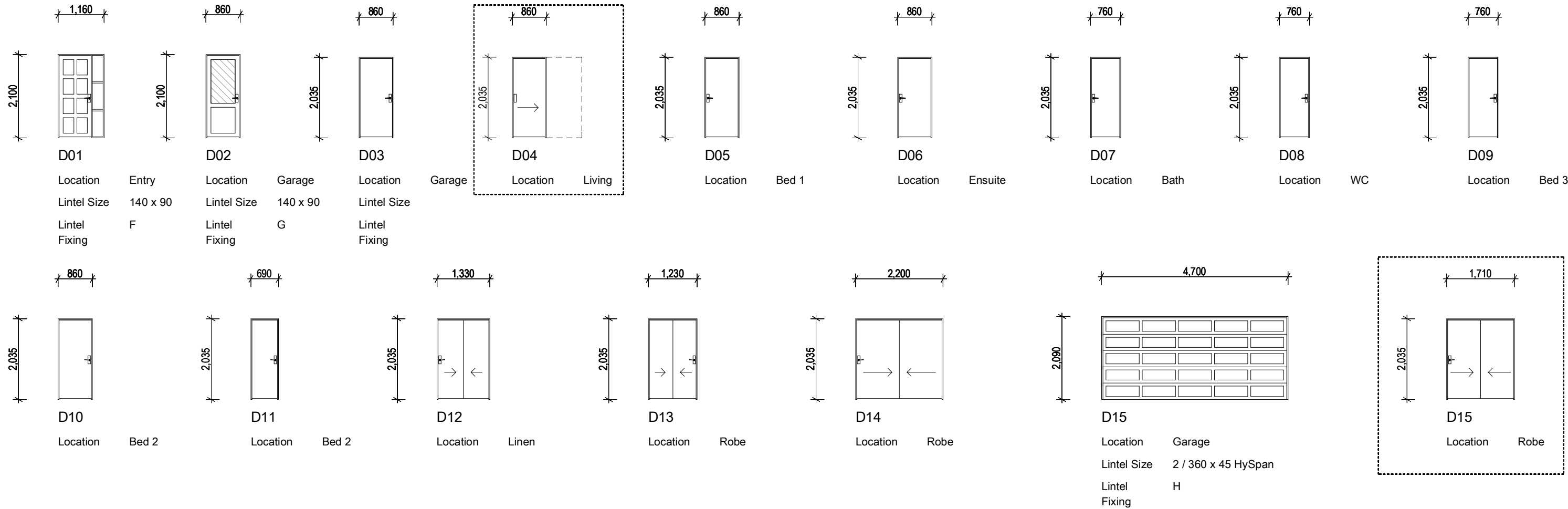
ALL DIMENSIONS TO BE VERIFIED ON SITE



Bracing Plan  
Scale 1:100

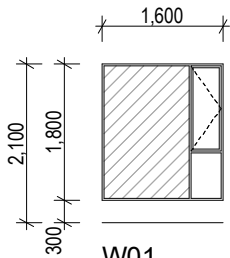
BRACING CALCULATIONS											
Location of Storey			Single		Floor Load			2kPa			
Floor Height to Apex			5.0 m		Roof Weight			Light			
Roof Height Above Eaves			3.0 m		Cladding Weights:						
Roof Pitch			26 - 45 °		- Subfloor			Concrete Floor			
Roof Style			Hip		- Wall Cladding			Heavy			
Building Length (BL)			14.0 m								
Building Width (BW)			12.9 m		Room in Roof Space			No			
Wind Zone			High		Soil Class			D - Deep or Soft			
W along			60.0 BUs/m		Gross Plan Area (GPA)			156.4 m2			
W across			60.0 BUs/m		Earthquake Zone			3			
W along x BW			774.0 BUs		EQ			9.0 BUs/m2			
W across x BL			842.4 BUs		EQ x GPA			1,407.2 BUs			
Calculations based on NZS 3604:2011											
ALONG											
Bracing Line			Bracing Elements Provided					Wind		Earthquake	
Line Label	Min BUs W	Min BUs E	Brace No.	Brace Type	Brace Length	Brace Angle	Brace Height	Rating BUs/m	BUs Achieved	Rating BUs/m	BUs Achieved
A	100	163	A1	BLP-H	1.1	0.0	2.4	135	148.5	135	148.5
			A2	BLP-H	1.1	0.0	2.4	135	148.5	135	148.5
B	100	163	B1	BLP-H	0.7	0.0	2.4	135	87.8	135	87.8
			B2	BLP-H	0.7	0.0	2.4	135	87.8	135	87.8
C	100	163	C1	GS1-N	2.3	0.0	2.4	70	160.3	60	137.4
			C2	GS1-N	2.9	0.0	2.4	70	203.0	60	174.0
			C3	GS1-N	2.8	0.0	2.4	70	198.1	60	169.8
D	211	211	C4	GS1-N	2.0	0.0	2.4	70	140.0	60	120.0
			D1	BL1-H	0.9	0.0	2.4	90	81.0	100	90.0
			D2	GS1-N	1.3	0.0	2.4	70	93.8	60	80.4
			D3	GS1-N	0.7	0.0	2.4	50	35.0	55	38.5
			D4	GS1-N	0.8	0.0	2.4	50	39.0	55	42.9
			D5	GS1-N	0.9	0.0	2.4	50	44.5	55	49.0
			D6	BL1-H	0.7	0.0	2.4	90	59.3	100	65.9
Totals Achieved								W	1,526.5	E	1,440.3
Totals Required								W	774.0	E	1,407.2
ACROSS											
Bracing Line			Bracing Elements Provided					Wind		Earthquake	
Line Label	Min BUs W	Min BUs E	Brace No.	Brace Type	Brace Length	Brace Angle	Brace Height	Rating BUs/m	BUs Achieved	Rating BUs/m	BUs Achieved
M	105	163	M1	GS1-N	0.9	0.0	2.4	50	46.4	55	51.0
			M2	GS1-N	0.9	0.0	2.4	50	44.4	55	48.8
			M3	GS1-N	0.9	0.0	2.4	50	45.0	55	49.5
			M4	GS1-N	2.2	0.0	2.4	70	154.0	60	132.0
			M5	GS1-N	0.9	0.0	2.4	50	45.0	55	49.5
N	188	188	N1	GS1-N	2.1	0.0	2.4	70	147.7	60	126.6
			N2	GS1-N	4.0	0.0	2.4	70	282.6	60	242.2
			O3	GS1-N	5.3	0.0	2.4	70	371.0	60	318.0
O	193	193	O4	GS1-N	1.9	0.0	2.4	70	134.4	60	115.2
			P2	GS1-N	4.2	0.0	2.4	70	294.0	60	252.0
P	146	163	P4	GS1-N	4.8	0.0	2.4	70	336.0	60	288.0
Totals Achieved								W	1,900.4	E	1,672.8
Totals Required								W	842.4	E	1,407.2





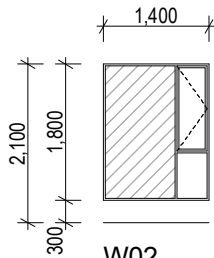
Door Schedule  
Scale 1:100

<div><div><div><div><div><span></span></div><div>Design</div></div><div><div>HQ</div><div>+</div></div></div><div><div><div><span></span></div><div>www.designhq.co.nz</div></div><div><div>20A Bomford Street</div><div>PO Box 442</div><div>Blenheim</div></div><div><div>Tel 03 577 5267</div><div>Mob 021 775 267</div><div>Fax 03 577 5268</div></div></div></div><div>info@designhq.co.nz</div></div>	<div>Project Description</div> <div>New Dwelling</div>	<div>Client</div> <div>Kumara Junction Developments</div> <div>At</div> <div>Lot 36, Sanctuary Place</div> <div>Kumara</div>	<div>NOTES</div> <div>All doors and windows are drawn as viewed from the outside</div> <div>All elevations are indicative of sizes ONLY. Exact appearances, materials and finishes to be confirmed by the Client. All glazing, gear &amp; ironmongery to be confirmed with the Client. Exact sizes of openings are to be confirmed on site before manufacture may begin.</div> <div>All glazing to be IGU's with WERS R-Value of ≥ 0.26 (double glazed), clear glass unless otherwise specified:</div> <div><div><div><div><div></div><div>SG</div></div><div>Safety Glazing</div></div><div><div><div><div></div><div>OG</div></div><div>Obscured Glass</div></div><div><div><div><div></div><div>RS</div></div><div>Obscured Safety Glazing</div></div><div><div><div><div></div><div>RS</div></div><div>Restrictor Stay</div></div></div></div></div></div></div>	<div>Technician</div> <div>Tony Fitzpatrick</div> <div>Designer</div> <div>Tony Fitzpatrick</div> <div>Creation Date</div> <div>17/02/2014</div> <div>Plot Date</div> <div>18/02/2014</div> <div>Project Status</div> <div>Working Drawings</div> <div>Scale (at A3)</div> <div>1:100</div> <div>Revision</div> <div>Date 17/02/2014</div>	<div>Drawing Title</div> <div>Door Schedule</div> <div>Drawing Number</div> <div>A-13</div> <div>of 20</div>
	<div>Project Number</div> <div>10550</div>				
	<div>Reference:</div> <div>Bissett, Lot 36, Kumara Junction v2.pln</div>				



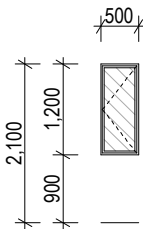
W01

Location      Bed 2  
Lintel Size    140 x 90  
Lintel          G  
Fixing



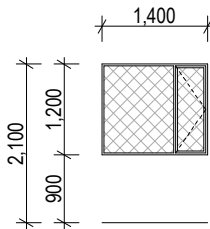
W02

Location      Bed 3  
Lintel Size    140 x 90  
Lintel          G  
Fixing



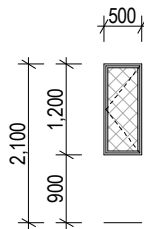
W03

Location      WC  
Lintel Size    90 x 90  
Lintel          F  
Fixing



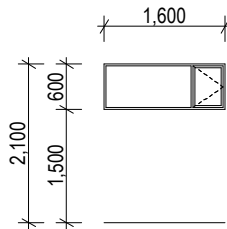
W04

Location      Bath  
Lintel Size    140 x 90  
Lintel          G  
Fixing



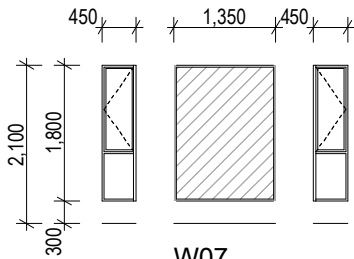
W05

Location      Ensuite  
Lintel Size    90 x 90  
Lintel          F  
Fixing



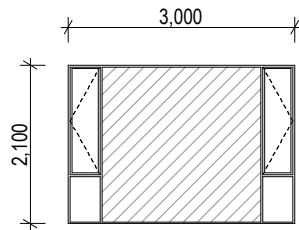
W06

Location      Bed 1  
Lintel Size    2/150 x 45 HySPAN  
Lintel          H  
Fixing



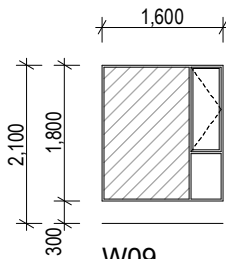
W07

Location      Bed 1



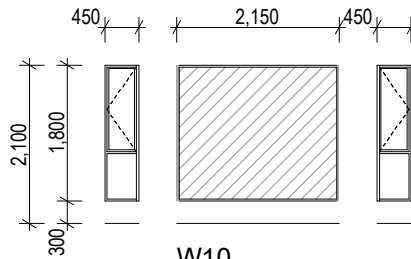
W08

Location      Living  
Lintel Size    290 x 90  
Lintel          H  
Fixing



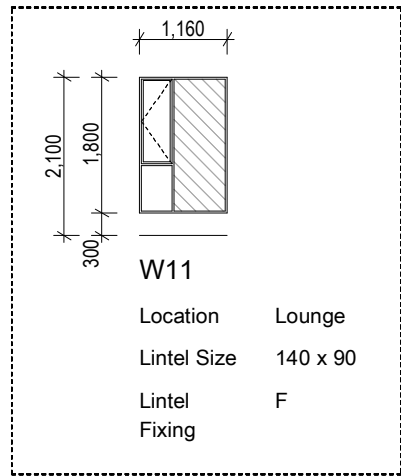
W09

Location      Lounge  
Lintel Size    140 x 90  
Lintel          F  
Fixing



W10

Location      Lounge



W11

Location      Lounge  
Lintel Size    140 x 90  
Lintel          F  
Fixing

## Window Schedule

Scale    1:100

### Project Description

## New Dwelling

### Client

Kumara Junction Developments

### At

Lot 36, Sanctuary Place  
Kumara

Project Number    10550

Reference:                      Bissett, Lot 36, Kumara Junction v2.pln

Technician                  Tony Fitzpatrick

Designer                    Tony Fitzpatrick

Creation Date              17/02/2014

Plot Date                    18/02/2014

Project Status              Working Drawings

### NOTES

All doors and windows are drawn as viewed from the outside

All elevations are indicative of sizes ONLY. Exact appearances, materials and finishes to be confirmed by the Client.

All glazing, gear & ironmongery to be confirmed with the Client.

Exact sizes of openings are to be confirmed on site before manufacture may begin.

Wherever possible the specialist joiner is to advise the Architect with regards to better fabrication and detailing alternatives prior to manufacture.

All glazing to be IGU's with WERS R-Value of  $\geq 0.26$  (double glazed), clear glass unless otherwise specified:

	:	Safety Glazing
	:	Obscured Glass
	:	Obscured Safety Glazing
	:	Restrictor Stay

### LINTELS

Refer to Lumberlok wall fixing schedule and specification for details of fixings

This drawing is to be read in conjunction with the Floor Plan Layouts and all respective detail drawings where noted.

### Drawing Title

Window Schedule

Scale (at A3)    1:100

Revision                      Date 17/02/2014

Drawing Number

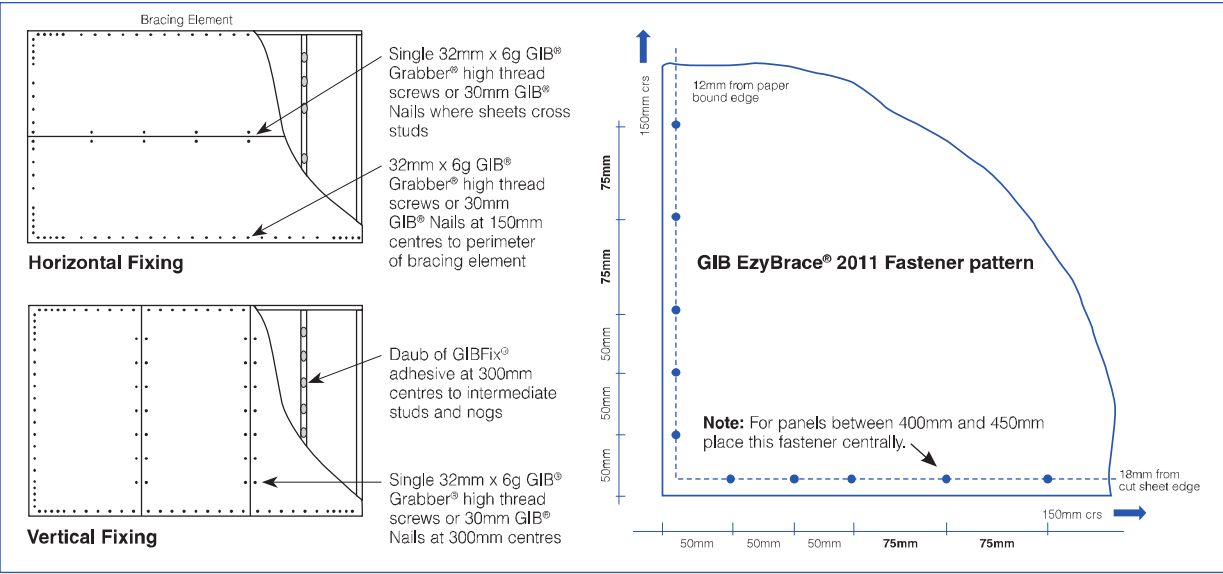
A-14

of 20

ALL DIMENSIONS TO BE VERIFIED ON SITE

Specification Code	Minimum Length (m)	Lining requirement
GS1-N	0.4	Any 10mm or 13mm GIB® Standard Plasterboard to one side only

<p><b>WALL FRAMING</b></p> <p>Wall framing to comply with;</p> <ul style="list-style-type: none"><li>NZBC B1 - Structure; AS1 Clause 3 Timber (NZS 3604:2011)</li><li>NZBC B2 - Durability AS1 Clause 3.2 Timber (NZS 3602)</li></ul> <p>Framing dimensions and height as determined by NZS 3604 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.</p> <p><b>BOTTOM PLATE FIXING</b></p> <p><b>Timber Floor</b></p> <p>Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or</p> <p>Three power driven 90 x 3.15 nails at 600mm centres.</p> <p><b>Concrete floor</b></p> <p><i>INTERNAL WALL BRACING LINES</i></p> <p>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.</p> <p><i>EXTERNAL WALL BRACING LINES</i></p> <p>In accordance with the requirements of NZS 3604 for external plate fixing.</p> <p><b>WALL LINING</b></p> <p>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.</p>	<p><b>PERMITTED SUBSTITUTION</b></p> <p>For permitted GIB® Plasterboard substitutions refer to Page 21 in GIB Ezybrace® Systems 2011.</p> <p><b>FASTENING THE LINING</b></p> <p><b>Fasteners</b></p> <p>32mm x 6g GIB® Grabber® high thread screws; or 30mm GIB® Nails.</p> <p><b>Fastener centres</b></p> <p>50,100,150, 225, 300mm from each corner and 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm centres to intermediate sheet joints. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIB Fix® 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.</p> <p><b>JOINTING</b></p> <p>All fastener heads stopped and all sheet joints paper tape reinforced and stopped in accordance with the GIB® Site Guide.</p>
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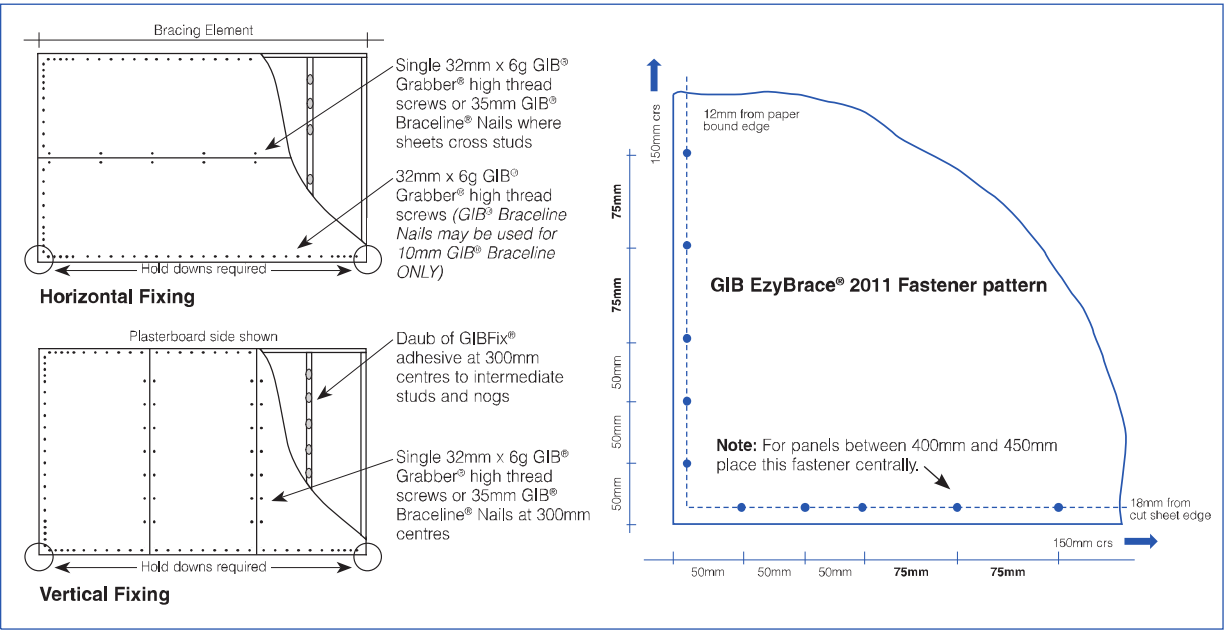


In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This Specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems 2011 and has been appraised in accordance with the BRANZ Appraisal No. 294 (2011).



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

<p><b>WALL FRAMING</b></p> <p>Wall framing to comply with;</p> <ul style="list-style-type: none"><li>NZBC B1 - Structure; AS1 Clause 3 Timber (NZS 3604:2011)</li><li>NZBC B2 - Durability AS1 Clause 3.2 Timber (NZS 3602)</li></ul> <p>Framing dimensions and height as determined by NZS 3604 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.</p> <p><b>BOTTOM PLATE FIXING</b></p> <p><b>Timber Floor</b></p> <p>Use panel hold downs at each end of the bracing element. The GIB HandiBrac® is recommended. See details in GIB Ezybrace® Systems 2011 or GIB® Site Guide. Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or</p> <p>Three power driven 90 x 3.15 nails at 600mm centres.</p> <p><b>Concrete floor</b></p> <p>Use panel hold downs at each end of the bracing element. The GIB HandiBrac® is recommended. See details in GIB Ezybrace® Systems 2011 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.</p> <p><b>WALL LINING</b></p> <p>One layer 10mm or 13mm GIB® Braceline. Sheets can be fixed vertically or horizontally. Sheet joints shall be touch fitted. Use full length sheets where possible.</p>	<p><b>PERMITTED SUBSTITUTION</b></p> <p>For permitted GIB® Plasterboard substitutions refer to Page 21 in GIB Ezybrace® Systems 2011.</p> <p><b>FASTENING THE LINING</b></p> <p><b>Fasteners</b></p> <p>32mm x 6g GIB® Grabber® high thread screws. (GIB Braceline® Nails may be used with 10mm GIB Braceline® only.)</p> <p><b>Fastener centres</b></p> <p>50,100,150, 225, 300mm from each corner and 150mm thereafter around the perimeter of the bracing element. For vertically fixed sheets place fasteners at 300mm centres to the sheet joint. For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud. Use daubs of GIB Fix® 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.</p> <p><b>JOINTING</b></p> <p>All fastener heads stopped and all sheet joints paper tape reinforced and stopped in accordance with the GIB® Site Guide.</p>
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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 2011 and has been appraised in accordance with the BRANZ Appraisal No. 294 (2011).



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Tel 03 577 5267 Mob 021 775 267 Fax 03 577 5268

Project Description	
New Dwelling	
Client	Kumara Junction Developments
At	Lot 36, Sanctuary Place Kumara
Project Number	10550
Reference:	Bissett, Lot 36, Kumara Junction v2.pln
Technician	Tony Fitzpatrick
Designer	Tony Fitzpatrick
Creation Date	17/02/2014
Plot Date	18/02/2014
Project Status	Working Drawings

NOTES

Drawing Title	Bracing Details
Scale (at A3)	1:1
Revision	Date 17/02/2014
Drawing Number	A-15
of 20	
ALL DIMENSIONS TO BE VERIFIED ON SITE	



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 Ecopy to the other side	Hold downs

**WALL FRAMING**

Wall framing to comply with;

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

Framing dimensions and height as determined by NZS 3604 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 2011 or GIB® Site Guide.  
Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or  
Three power driven 90 x 3.15 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 2011 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.

**WALL LINING**

One layer 10mm or 13mm GIB Braceline® to one side of the wall plus minimum 7mm Ecopy construction plywood manufactured to AS/NZS 2269:2004 to the other side. Plasterboard 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 SUBSTITUTION**

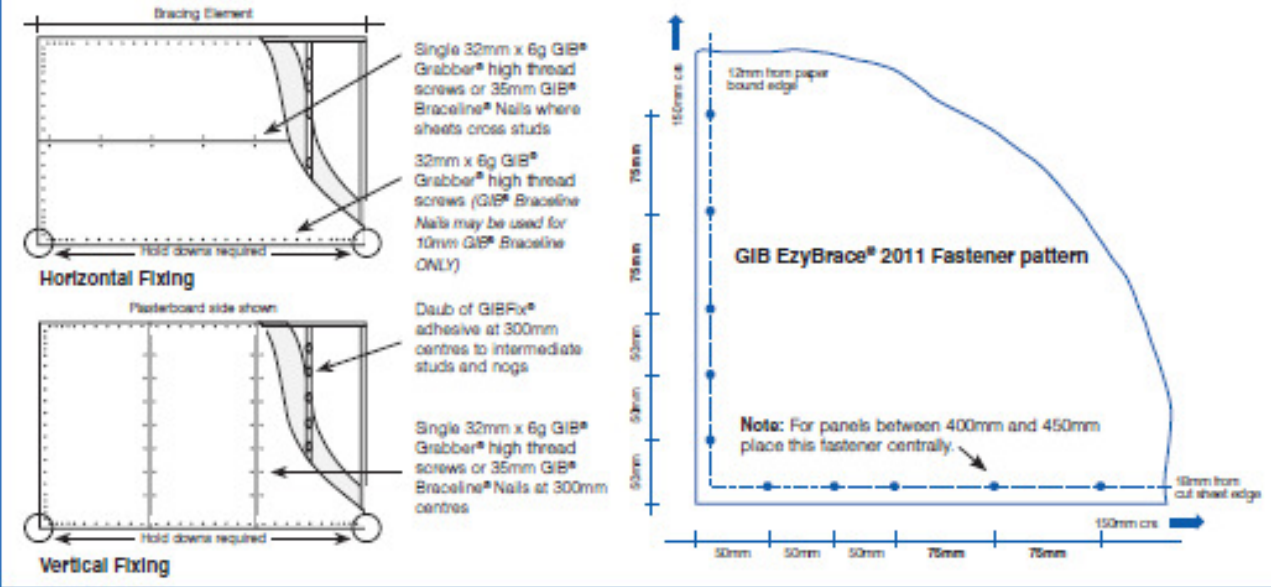
For permitted GIB® Plasterboard substitutions refer to Page 21 in GIB Ezybrace® Systems 2011.

**FASTENING THE LINING**

**Fasteners**  
*GIB Braceline® side*  
32mm x 6g GIB® Grabber® high thread screws.  
(GIB Braceline® Nails may be used with 10mm GIB Braceline® only)  
*Plywood*  
50 x 2.8mm Galv or Stainless steel FH nails.  
**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 GIB®Fix 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 out edge.  
*Plywood side*  
150mm centres to the perimeter of each sheet. GIB® corner fastener pattern does not apply to the plywood side. 300mm centres to intermediate studs.

**JOINTING**

All fastener heads stopped and all sheet joints paper tape reinforced and stopped in accordance with the GIB® Site Guide.

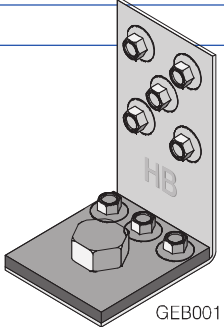


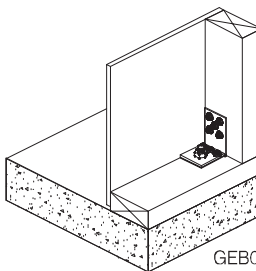
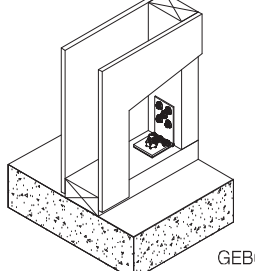
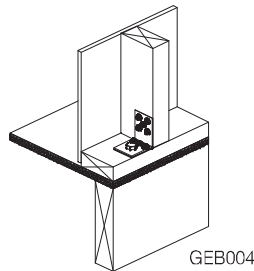
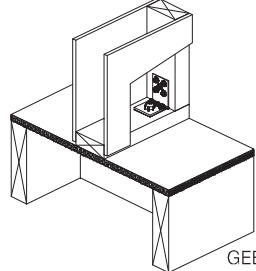
Bottom plate fixings for GIB® Bracing Elements			
Brace type	Concrete slabs		Timber floors
	External wall	Internal wall	External and Internal walls
GS1-N	As per NZS 3604:2011. No specific additional fastening required	As per NZS 3604:2011. Alternatively use 75 x 3.8mm shot-fired fasteners with 16mm washers, 150mm and 300mm from each end of the bracing element and at 600mm thereafter.	Pairs of 100 x 3.75mm flat head hand driven nails or 3 / 90 x 3.15mm power driven nails at 600mm centres in accordance with NZS 3604:2011
GS2-N	Not applicable		
GSP-H BL1-H BLP-H	Intermediate fastenings to comply with NZS 3604:2011.  In addition: GIB Handibrac® fixings or metal wrap-around strap fixings and bolt as illustrated on pages 19 and 20.		Pairs of 100 x 3.75mm flat head hand driven nails or 3 / 90 x 3.15mm power driven nails at 600mm centres in accordance with NZS 3604:2011.
BLG-H	Not applicable	As for GSP-N, BL1-H, BLP-H on concrete slab above	In addition: GIB Handibrac® fixings or metal wrap-around strap fixings and bolt as illustrated below.

**GIB HandiBrac® – RECOMMENDED METHOD**

Developed in conjunction with MiTek™ NZ, the GIB HandiBrac® has been designed and tested for use as a hold-down in GIB® BL and GSP 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		Timber Floor	
External walls	Internal walls	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	Position GIB HandiBrac® in the centre of the perimeter joist or bearer	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.		12x150mm galvanised coach screw	

Refer to gib.co.nz/cad for CAD details.

Project Description  
New Dwelling

Client  
Kumara Junction Developments

At  
Lot 36, Sanctuary Place  
Kumara

Project Number 10550

Reference:	Bissett, Lot 36, Kumara Junction v2.pln
Technician	Tony Fitzpatrick
Designer	Tony Fitzpatrick
Creation Date	17/02/2014
Plot Date	18/02/2014
Project Status	Working Drawings

NOTES

Drawing Title  
Bracing Details

Scale (at A3) 1:1

Revision Date 17/02/2014

Drawing Number

A-16 of 20

ALL DIMENSIONS TO BE VERIFIED ON SITE



Bracing strap Installation	
<p>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. It should be positioned in such a way that the important 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 important corner fastenings to be installed without having to penetrate the bracing strap.</p>	
Concrete Floor	Timber Floor
<p>400 x 25 x 0.9mm galvanised strap to pass under the plate and up the other side of the stud. Six 30x2.5mm flat head galvanised nails to each side of the stud. Three 30x2.5mm flat head galvanised nails to each side of the plate. Hold down bolt to be fitted within 100mm of the end of the element.</p>	
Internal wall	
<p>100mm maximum</p> <p>GEB006</p>	<p>100mm maximum</p> <p>GEB007</p>
External wall	
<p>100mm maximum</p> <p>GEB008</p>	<p>100mm maximum</p> <p>GEB009</p>
<p>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.</p>	
<p><b>NB: 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 the web address <a href="http://gib.co.nz/cad">gib.co.nz/cad</a></b></p>	<p>GEB010</p>
Hold-down fastener requirements	
Concrete floor	Timber floor
<p>A mechanical fastening with a minimum characteristic uplift capacity of 15kN fitted with a 50x50x3mm square washer within 100mm of the ends of the bracing element.</p>	<p>12x150mm galvanised coach screw fitted with a 50x50x3mm square washer within 100mm of the ends of the bracing element</p>

Refer to [gib.co.nz/cad](http://gib.co.nz/cad) for CAD details.

**Revised Fastener Pattern for all four corners of GIB EzyBrace® Elements**

As GIB Braceline® screws are no longer required for BL bracing elements, two additional fasteners must be installed in **all four corners** of GIB EzyBrace® GS and BL elements, as shown.

Fasteners must be placed no closer than 12mm from the paper bound sheet edge and no closer than 18mm from sheet ends or cut edges.

The diagram illustrates the fastener pattern for GIB EzyBrace® 2011 elements. It shows a rectangular panel with dimensions 150mm crs (vertical) and 150mm crs (horizontal). The fastener pattern is defined by a solid blue line. Key dimensions and locations include:

- 12mm from paper bound edge (top-left corner).
- 18mm from cut sheet edge (bottom-right corner).
- Fasteners: Minimum 32mm x 6g GIB® Grabber® Screws (or 30 x 2.8 GIB® Nails for GS systems only).
- NEW: Additional fastener required midway in first 150mm gap (indicated by a box and arrow pointing to a fastener at the midpoint of the 150mm crs gap).
- GIB EzyBrace® 2009 pattern (indicated by a dashed line and arrow pointing to the previous pattern).
- Note: For panels between 400mm and 450mm place this fastener centrally.

Dimensions shown on the left: 150mm crs, 75mm, 75mm, 50mm, 50mm, 50mm. Dimensions shown on the bottom: 50mm, 50mm, 50mm, 75mm, 75mm. A 150mm crs dimension is also shown at the bottom right.

GEB011

Refer to [gib.co.nz/cad](http://gib.co.nz/cad) for CAD details.

PERMITTED GIB® PLASTERBOARD SUBSTITUTIONS IN GIB EZYBRACE® SYSTEMS									
GIB Ezybrace® Systems have been designed and tested using only the products specified. Occasionally additional properties may be required to be provided by a different GIB® Plasterboard product. The following table provides acceptable substitution options.									
Specified	Permitted alternative GIB® Plasterboard products								
	GIB® Standard	GIB Ultraline®	GIB Braceline/ Noiseline®	GIB Aqualine®	GIB Toughline®	GIB Fyreline®			
						10mm	13mm	16mm	19mm
GIB® Standard		OK	OK	OK	OK	OK	NOTE 2		
GIB Braceline®	X	X		NOTE 1	OK	X	NOTES 1 and 2		

**NOTE 1** The element must be 900mm or longer. Use 32mm x 6g GIB® Grabber® drywall screws at **100mm** centres to the perimeter of the bracing element. The bracing corner fastening pattern, as illustrated above, applies to all four corners of the element. Panel hold-down fixings are required.

**NOTE 2** The fastener type and length must be as required for the relevant FRR system but the fixing pattern must be as shown above.

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## Project Description

## New Dwelling

Client

## Kumara Junction Developments

At

Lot 36, Sanctuary Place

Kumara

Project Number 10550

Reference:	Bissett, Lot 36, Kumara Junction v2.pln
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Technician	Tony Fitzpatrick
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Designer	Tony Fitzpatrick
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Creation Date	17/02/2014
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Plot Date	18/02/2014
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Project Status	Working Drawings
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## NOTES

Drawing Title
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### Bracing Details

Scale (at A3) 1:1

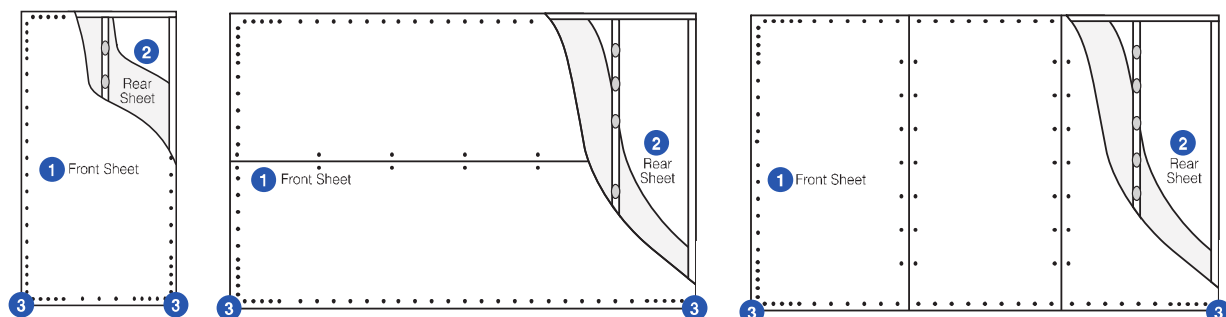
Revision	Date 17/02/2014
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Drawing Number

A-17

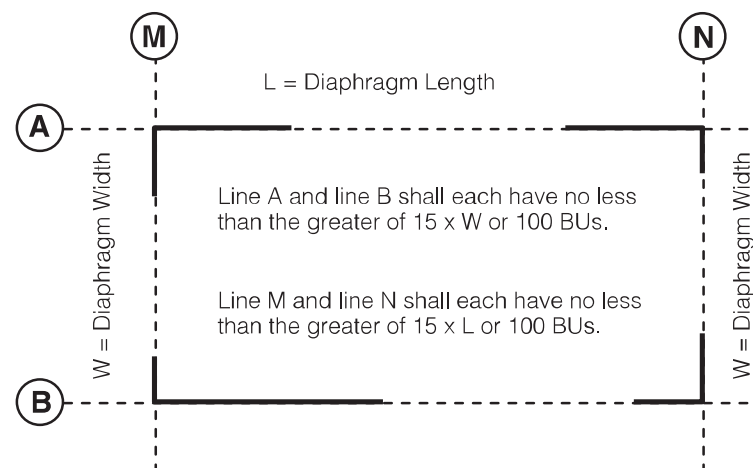
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ALL DIMENSIONS TO BE VERIFIED ON SITE



System	Lining one side ❶		Lining opposite side ❷		Panel Hold-Down Fixings ❸	Fastener spacing
	Lining	Fasteners	Lining	Fasteners		
GS1-N	Any 10mm or 13mm GIB® Plasterboard	30mm GIB® nails, or minimum 32mm x 6g GIB® Grabber® high thread screws	Not required	Not required	Not required	<i>GIB® Plasterboard</i>  Corner fastening pattern as illustrated above  Fasteners at 150mm to bracing element perimeter, and: <ul style="list-style-type: none"><li>• at 300mm centres to intermediate sheet joints for vertical fixing, or</li><li>• at stud / sheet junction for horizontally fixed elements, and</li><li>• GIBFix adhesive daubs at 300mm crs to intermediate framing</li></ul>
GS2-N			Any 10mm or 13mm GIB® Plasterboard	30mm GIB® nails, or minimum 32mm x 6g GIB® Grabber® high thread screws		
GSP-H			Minimum 7mm Ecoply manufactured to AS/NZS 2269	50mm x 2.8mm Flat head galvanised or stainless steel nails	Yes, see Pages 19 and 20	
BL1-H	10mm or 13mm GIB Braceline®	minimum 32mm x 6g GIB® Grabber® high thread screws	Not required	Not required		
BLG-H		Any 10mm or 13mm GIB® Plasterboard	30mm GIB® nails, or minimum 32mm x 6g GIB® Grabber® high thread screws			
BLP-H		GIB Braceline® Nails may be used for 10mm GIB Braceline® ONLY	Minimum 7mm Ecoply manufactured to AS/NZS 2269	50mm x 2.8mm flat head galvanised or stainless steel nails		
						<i>Plywood</i>  Fasteners at 150mm around the perimeter of every sheet and at 300mm centres to intermediate studs. Place fasteners no closer than 7mm from sheet edges. Plasterboard corner fastener pattern does not apply to plywood.

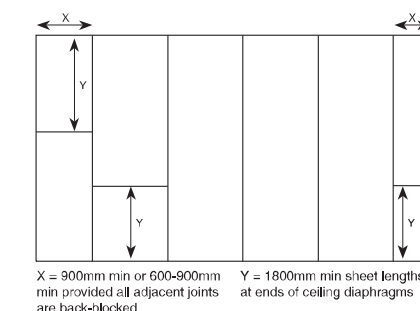
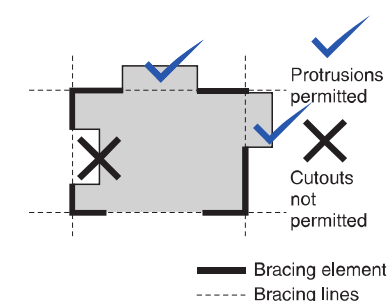
GIB® Ceiling Diaphragms are stiff and strong horizontal bracing elements which effectively transfer loads to bracing walls. They themselves do not have a bracing unit rating but are used when bracing lines exceed 6m separation. The basic shape of a ceiling diaphragm is square or rectangular. Protrusions are permitted but cut-outs are not. The length of a ceiling diaphragm shall not exceed twice its width. Dimensions are measured between supporting bracing lines. Supporting bracing lines shall have a bracing capacity no less than the greater of 100 bracing units or 15 bracing units per metre of diaphragm dimension, measured at right angles to the line being considered, as illustrated.



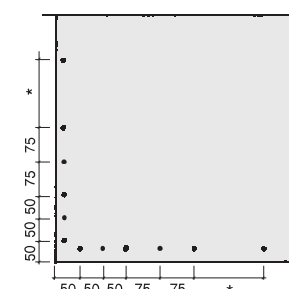
GIB® plasterboard ceiling diaphragms may be constructed as follows:

- For diaphragms not steeper than 15° and not exceeding 7.5m in length, any GIB® plasterboard may be used provided perimeter fixing is at 150mm centres
  - For diaphragms not steeper than 45° and not exceeding 7.5m in length and for diaphragms not steeper than 25° and not exceeding 12m in length, any GIB® plasterboard may be used provided perimeter fixing is at 100mm centres
- Otherwise construction is in accordance with the general fixing requirements for GIB® ceiling diaphragms outlined below.

- Linings shall be installed over the entire area of the diaphragm.
- Fastening shall be no less than 12mm from sheet edges and not less than 18mm from sheet end.
- Sheets shall be supported by framing members (e.g., ceiling battens) spaced at no more than 500mm centres for 10mm GIB® Plasterboard and at no more than 600mm centres for 13mm GIB® Plasterboard.
- Sheets within the diaphragm area may be fastened and finished conventionally in accordance with the publication entitled, "GIB® Site Guide". All joints shall be paper tape reinforced and stopped. It is recommended that sheet butt joints are formed off framing and back-blocked (see "GIB® Site Guide").
- Use full width sheets where possible. At least 900mm wide sheets with a length not less than 1800mm shall be used. Sheets less than 900mm wide but no less than 600mm may be used provided all joints with adjacent sheets are back-blocked (see "GIB® Site Guide").
- Openings are allowed within the middle third of the diaphragm's length and width. Fixing of sheet material to opening trimmers shall be at 150mm centres. Neither opening dimension shall exceed a third of the diaphragm width. Larger openings, or openings in other locations, require specific engineering design. Refer "Openings in Bracing Elements" page 17.
- Fasteners are placed at 150mm or 100mm centres around the ceiling diaphragm with the corners fastened using the GIB EzyBrace® 2011 fastener pattern.



### Sheet Widths and Lengths in Ceiling Diaphragms



### Fastening pattern for ceiling diaphragms

\* Perimeter centres at 150mm or 100mm depending on diaphragm limitations above

## New Dwelling

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Creation Date	17/02/2014
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Plot Date	18/02/2014
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Project Status	Working Drawings
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## NOTES

Drawing Title
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### Bracing Details

Scale (at A3) 1:1

Revision	Date 17/02/2014
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Drawing Number

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of 20

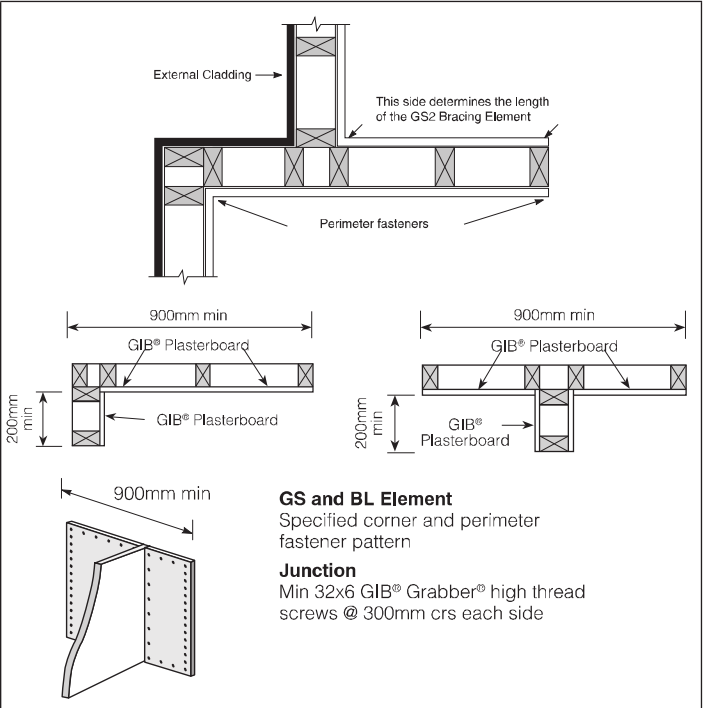
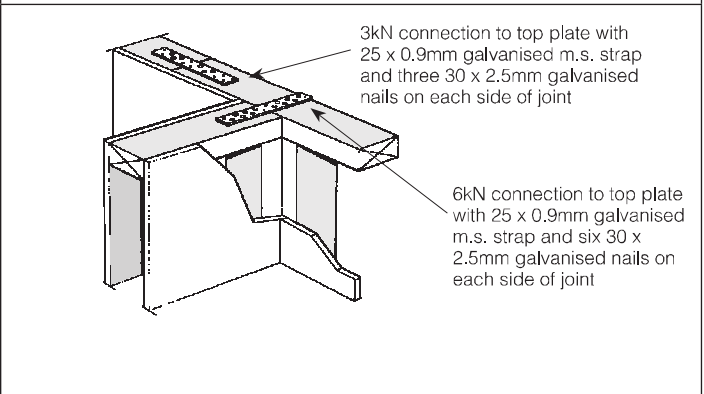
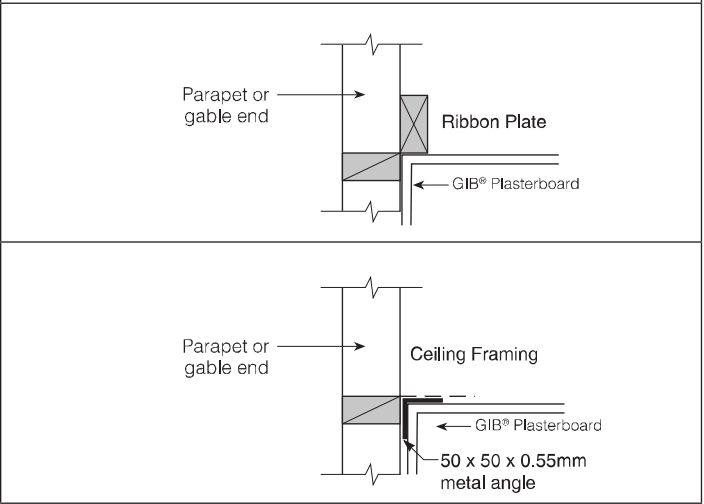
ALL DIMENSIONS TO BE VERIFIED ON SITE





Framing

General framing requirements such as grade, spacings and installation shall comply with the New Zealand Building Code and the provisions of NZS 3604:2011. To achieve the published bracing performance the minimum actual framing dimensions are 90 x 35mm for external walls and 70 x 45mm for internal walls. Wall bracing tests on GIB EzyBrace® Systems were undertaken without nogs. Nogs are not considered to add to the bracing performance of the wall.

<p><b>Guidelines for intersection walls</b></p> <p>Where the lining on a double lined internal GS2 Bracing Element is shorter on one side, the length of the element is taken as the shorter wall length but bracing fasteners can still follow the wall perimeter on both sides.</p> <p>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. <b>The bracing element length must be no less than 900mm.</b></p> <p>Where a Wall Bracing Element is interrupted by a T or L junction the element is deemed to be continuous for the whole length (900mm in the example illustrated).</p> <p>When fixing part sheets of GIB® Plasterboard, a minimum width of 300mm applies for bracing elements.</p>	
<p><b>Top Plate Connections</b></p> <p>The top plate of a wall that contains one or more wall bracing elements shall be jointed according to the rating of the highest-rated individual wall bracing element as follows:</p> <p>(a) Rating not exceeding 100 bracing units: A 3kN connection as shown or by an alternative fixing of 3kN capacity in tension or compression along the plate;</p> <p>(b) Rating exceeding 100 bracing units: A 6kN connection as shown or by an alternative fixing of 6kN capacity tension or compression along the plate.</p>	
<p><b>Parapets and Gable End Walls</b></p> <p>Bracing elements must be fixed from top plate to bottom plate. Fixing to a row of nogs is not acceptable unless either:</p> <p>A continuous member such as an ex 90x45mm ribbon plate is fixed across the studs just above a row of nogs at the ceiling line.</p> <p>OR</p> <p>A minimum 50x50x0.55mm metal angle is installed as shown. The angle is fixed to a row of nogs with 30x2.5mm galv FH nails at 300mm centres.</p>	

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Drawing Title	Bracing Details
Scale (at A3)	1:1
Revision	Date 17/02/2014
Drawing Number	A-20
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ALL DIMENSIONS TO BE VERIFIED ON SITE	