



WHANGANUI
DISTRICT COUNCIL
Te Kaunihera a Rohe o Whanganui

IMPORTANT NOTE

These documents are required to be onsite for all inspections and must be a complete and full copy of the WDC stamped “Approved” documents.

Failure to have a full and legible set of documents may result in a terminated inspection. A terminated inspection will incur additional charges.



INSPECTION RECORD

This record, together with the Building Consent and approved plans, is to remain on the construction site at all times.

Project Location	TO BOOK AN INSPECTION PLEASE PHONE WDC BUILDING CONTROL	BCon22/0328
158A Cornfoot St WHANGANUI	ON 349 0001 AND QUOTE THE FOLLOWING APPLICATION NUMBER:	
Description of Work	Internal Alterations & new windows.	
Applicant	Design Lines 2000 Ltd 167 Mount View Road, Bastia Hill, Whanganui 4500	

SUMMARY OF CONDITIONS

Building Consent Number BCon22/0328

PIM Conditions

Code	Condition
	All work on the project must comply with the requirements of the NZ Building Code.
	A PIM only document is not an approval to build. A Building Consent is required before building work commences.
	W.D.C will follow up on building work not completed within two years of building consent issue.
	A Building Consent lapses and is of no effect if the building work has not been started within 12 months of the date of issue.
	If the building is public premises it may not be occupied until either a code compliance certificate or certificate for public use has been issued.
	Please note [Electrical, and Gasfitting subtrades do not form part of the building consent inspection process. However, Council is required to receive 'Energy Certificates' from both of these trades before issue of a Code Compliance Certificate].

Building Consent Information

Code	Information

Your project's inspections are listed on the next page...



Please Note: A minimum of 48 hours notice is required for the booking of an inspection. The inspection record sheet and accompanying building consent documentation must be on site for use by the inspector at the time of the inspection.

All inspections are to be carried out by BCA Building Inspectors unless prior arrangements have been made by the BCA to have an approved qualified person inspect specific items (eg. Engineer). Inspections shall be carried out in accordance with the attached schedule of inspection types. It is the owner's responsibility to ensure all necessary inspections are carried out as required. Please contact WDC if you are unsure what requires inspection – do not cover or enclose any building work without inspection.

Note: Further inspections may incur additional cost at time of Code Compliance Certificate issue.

Inspections Record For Building Consent Number BCon22/0328								
<i>Inspection</i>	<i>When to Request</i>	<i>Date</i>	<i>Inspector</i>	<i>Complies with Code</i>	<i>Reinspect</i>	<i>Notes</i>		
SOLID PLASTER INSPECTION	Stucco reinforcing and control joint check							
BUILDING PRELINE INSPECTION	Before Internal linings are fixed.					To check new insulation and beams		
POST LINE INSPECTION	To inspect fixings. Prior to covering up.							
PLUMBING PRELINE INSPECTION	Before Internal linings are fixed.							
FINAL BUILDING AND PLUMBING COMBINED INSPECTION	On Completion					Please submit electronically after Final Inspection the completed CCC application form and any energy certificates if required. Any requested As Built drainage plans. All LBP memos for RBW. Smoke alarms to be checked at time of final inspection.		



BUILDING CONSENT NUMBER BCon22/0328

Section 51, Building Act 2004

The building:

<i>Street address of building:</i>	<i>Legal description of land where building is located:</i>
158A Cornfoot St WHANGANUI	LOT 414 DP 3060 0.0836 Ha
<i>Building name:</i>	<i>Location of building within site/block number:</i>
<i>Level/unit number:</i>	
1.000000	

The owner:

<i>Name of Owner:</i>	
Mr GR Davis	
<i>Mailing address:</i>	<i>Street Address/registered Office:</i>
222 Somme Parade Aramoho Whanganui 4500	222 Somme Parade Aramoho Whanganui 4500

Phone numbers:

<i>Landline:</i>	045288559	<i>Mobile:</i>	0274288559
<i>Daytime:</i>	0272367855	<i>After hours:</i>	
<i>Facsimile number:</i>			
<i>Email address:</i>		<i>Website:</i>	

First point of contact for communications with the building consent authority:

<i>Contact Person:</i>	
Design Lines 2000 Ltd	
<i>Mailing address:</i>	<i>Street Address/registered Office:</i>
167 Mount View Road, Bastia Hill, Whanganui 4500	167 Mount View Road, Bastia Hill, Whanganui 4500

Phone number:

<i>Landline:</i>		<i>Mobile:</i>	0274578390
<i>Daytime:</i>	063438101	<i>After hours:</i>	
<i>Facsimile number:</i>	063438111		
<i>Email address:</i>		<i>Website:</i>	

Building Work

The following building work is authorised by this consent

<i>Project</i>
Internal Alterations & new windows.

101 Guyton Street
P O Box 637, Whanganui
Phone: (06) 349 0001
Fax: (06) 349 0000
Email: wdc@whanganui.govt.nz
Web: www.whanganui.govt.nz



**WHANGANUI
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Te Kaunihera a Rohe o Whanganui

<i>Intended Use</i>	<i>Intended Life</i>
Single Detached Residential	50+ Years
<i>Estimated Value (\$)</i>	
\$95000.00	

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty of responsibility under any other Act relating to or affecting the building (or proposed building). This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition or removal would be in breach of any other Act.



CONDITIONS OF BUILDING CONSENT NUMBER BCon22/0328

Section 51, Building Act 2004

This Building Consent is issued Subject to the following conditions:

Building Act 2004, Section 90:

Inspections by Building Consent Authorities

Agents authorised by the building consent authority for the purposes of this section are entitled, at all times during normal working hours or while building work is being done, to inspect

- (a) land on which building work is being or is proposed to be carried out; and
- (b) building work that has been or is being carried out on or off the building site; and
- (c) any building.

Compliance Schedule:

A compliance schedule (CS) is not required for this building.

#Attachments

‡Copies of the following documents are attached to this building consent:

- ‡Project information memorandum number BCon22/0328
- ‡Inspection record
- ‡Informative notes

Signed for and on behalf of the Whanganui District Council

GJ Hoobin
Building Control Manager

Date: 13 June 2022

101 Guyton Street
P O Box 637, Whanganui
Phone: (06) 349 0001
Fax: (06) 349 0000
Email: wdc@whanganui.govt.nz
Web: www.whanganui.govt.nz



**WHANGANUI
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BUILDING CONSENT NUMBER BCon22/0328

Informative notes:

- The Building Consent, conditions, inspection sheet, and approved plans must be kept on site at all times until completion of the project.
- Failure to request inspections will risk the non-issuing of a code compliance certificate and the structure may be deemed non-complying.
- Any inspection time required over and above that allowed may incur a further charge.
- Under Section 52, a building consent lapses and is of no effect if the building work to which it relates is not commenced within 12 months after the date of issue.
- Under Section 93, if the owner has not made application within 24 months, the BCA (Building Control Authority), must decide whether or not to issue a CCC (Code Compliance Certificate).

101 Guyton Street
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WHANGANUI
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Te Kaunihera a Rohe o Whanganui

PROJECT INFORMATION MEMORANDUM NUMBER BCon22/0328

Section 35, Building Act 2004

Design Lines 2000 Ltd
167 Mount View Road
Bastia Hill
Whanganui 4500

<i>Project Location</i>	<i>Assessment Number/Legal Description</i>
158A Cornfoot St WHANGANUI	LOT 414 DP 3060 0.0836 Ha
<i>Category</i>	<i>Description of Work</i>
General Building Consents	Internal Alterations & new windows.
<i>Intended Life</i>	<i>Estimated Value (\$)</i>
50+ Years	95000.00

This Project Information Memorandum is confirmation that the proposed work may be undertaken, subject to the provisions of the Building Act 2004 and any requirements of the Building Consent (number BCon22/0328), which has been granted.

This Project Information Memorandum is subject to the following conditions:

- **All work on the project must comply with the requirements of the NZ Building Code.**

Signed for and on behalf of the Whanganui District Council

GJ Hoobin
Building Control Manager

Date: 13 June 2022

Design Lines

2000 Limited

JIM RICHARDSON
Architectural Designer
and Associates

NZCAD

167 Mt View Road
WANGANUI
Phone (06) 343 8101
Mobile 0274 578 390
Email jim.r@gmx.com

10th June 2022

Kim Glentworth,
Whanganui District Council,
101 Guyton St.
WANGANUI.

Dear Kim,

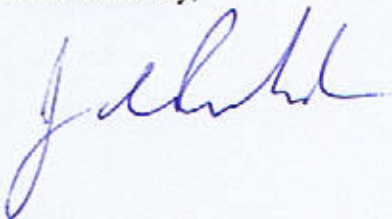
RE : BCon22/0328,
158A CORNFOOT ST, WANGANUI.

In response to the items raised in your letter of 9th June 2022:

1. See the revised calcs. This beam is what Design IT recommends, & is in place waiting inspection. Deflection is now noted as 12mm (but we don't get that info until printing off), but on site would be less than 5mm, loaded up. So if it's what Design IT recommends, it should be compliant!
2. The wall has been extended so we don't have a point load. See new Sheet 2R2.
3. The old existing insulation will be replaced with new R2.8 insulation.

We trust this is all satisfactory.

Yours sincerely,



JIM RICHARDSON
Architectural Designer

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RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy




R. W. Muir
Registrar-General
of Land

Identifier **WN694/44**
Land Registration District **Wellington**
Date Issued 28 March 1956

Prior References
WN419/113

Estate Fee Simple
Area 836 square metres more or less
Legal Description Lot 414 Deposited Plan 3060
Registered Owners
Gareth Robert Davis

Interests

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**Authorisation to act as my agent - 158A Cornfoot Street,
Castlecliff, Whanganui 4501**

From: "Gareth" <garethrdavis@hotmail.com>
To: "Jim Architect" <jim.r@gmx.com>
Date: Nov 15, 2021 4:08:30 PM

Hi Jim,

Please take this email to be authorisation to act as my agent with Whanganui District Council in respect of all consents for 158A Cornfoot Street, Castlecliff, Whanganui 4501.

Kind Regards,
Gareth Davis

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Memorandum from licensed building practitioner: Certificate of design work



Easy, accurate building compliance

Section 45 and section 30C, Building Act 2004

THE BUILDING	
Street address: 158A Cornfoot St	
Suburb: Castlecliff	
Town/City: Whanganui	Postcode: 4500

THE OWNER(S)	
Name: Gareth Davis	
Mailing address: 222 Somme Pde, Whanganui	
Suburb: Aramoho	PO Box/Private Bag:
Town/City: Whanganui	Postcode:
Phone number: 027 236 7855	Email Address: garethrdavis@hotmail.com

BASIS FOR PROVIDING THIS MEMORANDUM
Sole designer of all of the RBW design outlined in this memorandum – I carried out all of the RBW design work myself – no other person will be providing any additional memoranda for the project.

IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK (RBW)
I Jim Richardson carried out or supervised the restricted building work recorded on this form.

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PRIMARY STRUCTURE			
Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ☒ if included	If appropriate, provide details of the RBW	Tick whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Walls ☒	Timber framed walls: ☒ NZS 3604:2011	☒ Carried out ☒ Supervised	
Columns and Beams ☒	Timber: ☒ designIT System	☒ Carried out ☒ Supervised	
Bracing ☒	Bracing systems: ☒ Gib EasyBrace	☒ Carried out ☒ Supervised	

EXTERNAL MOISTURE MANAGEMENT SYSTEMS			
Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ☒ if included	If appropriate, provide details of the RBW	Tick whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Ventilation System ☒	Other: Manrose fan to Bathroom & Extractor for stove.	☒ Carried out ☒ Supervised	
Wall Cladding or Wall Cladding Systems ☒	Sheet cladding: ☒ E2/AS1	☒ Carried out ☒ Supervised	
Waterproofing ☒		☒ Carried out ☒ Supervised	

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FIRE SAFETY SYSTEMS C1 - C6

Design work that is RBW	Description of RBW	Carried out or supervised	Reference to plans and specifications
Tick ☒ if included	If appropriate, provide details of the RBW	Tick whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Emergency warning systems (F7) ☒	Alarm: ☒ NZS 4512:2010	☒ Carried out ☒ Supervised	

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise design work that is restricted building work.

Name: **Jim Richardson**LBP or Registration number: **112960**The practitioner is a: ☒ Design LBPStreet address: **167 Mt View Road,**Suburb: **Whanganui**Town/City: **Whanganui**Postcode: **4500**

DECLARATION

I **Jim Richardson** LBP, state that I have applied the skill and care reasonably required of a competent design professional in carrying out or supervising the Restricted Building Work (RBW) described in this form, and that based on this, I also state that the RBW:

- Complies with the building code, or
- ~~Complies with the building code subject to any waiver or modification of the building code recorded on this form~~

Signature: *Jim Richardson*Date: **15/11/2021**

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External Moisture Risk Matrix

Project Name / Facade ID: 158 Cornfoot St

Wall type: ☐ Parapet or enclosed balustrade
☒ Other

Risk Scores		Low	Medium	High	Very High
A. Wind Zone:		☐ Low = 0	☐ Medium = 0	☒ High = 1	☐ Very High = 2 ☐ Extra High = 2
B. Number of Storeys:	+	☒ Low = 0	☐ Medium = 1	☐ High = 2	☐ Very High = 4
C. Roof/Wall Intersection Design:	+	☒ Low = 0	☐ Medium = 1	☐ High = 3	☐ Very High = 5
D. Eaves Width:	+	☐ Low = 0	☒ Medium = 1	☐ High = 2	☐ Very High = 5
E. Envelope Complexity:	+	☒ Low = 0	☐ Medium = 1	☐ High = 3	☐ Very High = 6
F. Deck Design:	+	☒ Low = 0	☐ Medium = 2	☐ High = 4	☐ Very High = 6

Total Risk Score:

2

low risk 0 up to 6	medium risk 7 up to 12	high risk 13 up to 20	very high risk over 20
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this wall

Display Results Table

Download Results Table (HTML)

This wall can use any of the wall cladding types which have a green tick ☒. Claddings with red crosses ☒ are not permitted under the Acceptable Solution E2/AS1.

Direct fixed to framing	Over nominal 20 mm drained cavity
☒ Timber weatherboard - all types ☒ Timber weatherboard - bevel backed ☒ Fibre cement weatherboards ☒ Vertical profiled metal - corrugated and symmetrical trapezoidal ☒ Vertical profiled metal - corrugated only ☒ Vertical timber board and batten ☒ Fibre cement sheet jointed finish (except stucco over fibre cement backing) ☒ Plywood sheet ☒ EIFS	☒ Masonry veneer ☒ Stucco ☒ Horizontal profiled metal - corrugated and trapezoidal only ☒ Rusticated weatherboards ☒ Fibre cement weatherboards ☒ Fibre cement sheet - flush finish ☒ Fibre cement sheet - jointed finish ☒ Plywood sheet ☒ EIFS ☒ Bevel backed weatherboards

This table is based on Table 3 of E2/AS1. The claddings which have not received a green tick should not be used in this situation.

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Demand Calculation Sheet

Job Details

Name: Gareth Davis
 Street and Number: 158 Cornfoot St
 Lot and DP Number
 City/Town/District: Whanganui
 Designer: Jim Richardson
 Company: Design Lines 2000 Ltd
 Date: 511.21

Building Specification

Number of Storeys: 1
 Floor Loading: 2 kPa
 Foundation Type: Subfloor
 Subfloor Cladding Weight: Medium
 Cladding Weight: Single
 Roof Weight: Light
 Room in Roof Space: No
 Roof Pitch (degrees): 15
 Roof Height above Eaves (m): 1.4
 Building Height to Apex (m): 4.3
 Ground to Lower Floor (m): 0.6
 Average Stud Height (m): 2.4
 Building Length (m): 11.2
 Building Width (m): 10.6
 Building Plan Area (m²): 101.5

Building Location

Wind Zone = High

Earthquake Zone 2

Soil Type:

D & E (Deep to Very Soft)

Annual Prob. of Exceedance:

1 in 500 (Default)

Bracing Units required for Wind

	Along	Across
Single Level	438	385
Subfloor Level	764	719

Bracing Units required for Earthquake

	Along & Across
Single Level	793
Subfloor Level	1045

GIB EzyBrace® Bracing Software



Single Level Along Resistance Sheet

Job Name: Gareth Davis

Timber Floor Limit of 120 BUs/m Applied

Wind	EQ
Demand	
438	793
Achieved	
1050 240%	963 121%

Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	1050 240%	963 121%
a	1	1.20		2.4	GS1-N	GIB®	83	72		
	2	1.20		2.4	GS1-N	GIB®	83	72		
	3	1.20		2.4	GS1-N	GIB®	83	72		
	4	0.80		2.4	GS1-N	GIB®	49	47		
	External Length = 11.2								297 OK	263 OK
b	1	1.70		2.4	GS1-N	GIB®	117	102		
	2	1.50		2.4	GS1-N	GIB®	104	90		
	3	1.50		2.4	GS1-N	GIB®	104	90		
	4	1.40		2.4	GS1-N	GIB®	97	84		
	External Length = 11.2								421 OK	366 OK
c	1	0.60		2.4	BL1-H	GIB®	59	61		
	3	0.60		2.4	GS1-N	GIB®	34	35		
	3	0.60		2.4	GS1-N	GIB®	34	35		
	4	0.60		2.4	BL1-H	GIB®	59	61		
	External Length = 11.2								187 OK	191 OK
d	1	0.70		2.4	BL1-H	GIB®	73	71		
	2	0.70		2.4	BL1-H	GIB®	73	71		
	External Length = 4.3								145 OK	142 OK

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GIB EzyBrace® Bracing Software



Single Level Across Resistance Sheet

Job Name: Gareth Davis

Timber Floor Limit of 120 BUs/m Applied

Wind	EQ
Demand	
385	793
Achieved	

Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	1319 342%	1167 147%
m	1	0.80		2.4	GS1-N	GIB®	49	47		
	2	0.80		2.4	GS1-N	GIB®	49	47		
	3	1.40		2.4	GS1-N	GIB®	97	84		
	4	1.40		2.4	GS1-N	GIB®	97	84		
	External Length = 8.2								291 OK	262 OK
n	1	3.00		2.4	GS1-N	GIB®	207	180		
	2	0.60		2.4	GS1-N	GIB®	34	35		
	External Length = 8.2								241 OK	215 OK
o	1	3.00		2.4	GS1-N	GIB®	207	180		
	2	1.70		2.4	GS1-N	GIB®	117	102		
	3	0.50		2.4	GS1-N	GIB®	28	29		
	External Length = 10.6								352 OK	311 OK
p	1	2.40		2.4	GS1-N	GIB®	166	144		
	3	3.90		2.4	GS1-N	GIB®	269	234		
	External Length = 10.6								435 OK	378 OK

DESIGN CERTIFICATE

Technical basis for structural design methodology contained in designIT for houses - New Zealand.

designIT for houses, New Zealand has been developed by experienced timber engineers to assist designers in selecting appropriate sizes of structural laminated veneer lumber products manufactured by Carter Holt Harvey LVL Limited (including hySPAN, hy90, hyONE and hyJOIST) and other generic stress grades of timber, to be used as structural elements for the construction of buildings that fall within the scope of NZS 3604.

The design methodology used for the software complies with the loading and general design requirements contained within AS/NZS 1170 and with timber structural design in accordance with NZS 3603:1993 including Amendment 4 (Verification method B1/VM1, 6.1).

designIT relies on the accurate input of span and loading information by the user. Where accurate inputs are submitted the product and/or stress grade and the size given will comply with the structural requirements of the New Zealand Building Code (NZBC), provided the installation is in accordance with the installation requirements provided by designIT and/or in product literature and/or NZS 3604, or specific engineering design, as appropriate.

Futurebuild LVL and SG8 components, when used and treated to the required treatment levels prescribed in NZS 3602 and NZS 3604, as modified by Acceptable Solution B2/AS1, will comply with the requirements of the NZBC (Acceptable Solution B2/AS1, 3.2).

References:

1. NZS 3603:1993 Timber Structures Standard.
2. NZS 3604:2011 Timber-framed buildings.
3. AS/NZS 1170:2002 Structural design actions, Parts 0 and 1.
4. AS/NZS 1170:2011 Structural design actions, Part 2: Wind actions.
5. AS/NZS 1170:2003 Structural design actions, Part 3: Snow and ice actions.
6. AS 1720.1:2010 Timber structures. Part 1: Design methods.
7. AS 1720.3:2016 Timber structures. Part 3: Design criteria for timber-framed residential buildings.

This Design Certificate, and any associated warranty/certification, is void where there has been substitution of alternate products not detailed within the Member Specification.

Version date: 6 January, 2022

For further information or advice contact:

Carter Holt Harvey LVL Limited,
173 Captain Springs Road, Orehunga, Auckland
Telephone: 0800 808 131
Email: designit@futurebuild.co.nz
Web: <https://futurebuild.co.nz/>

Specifier details:

Specifier:	Jim Richardson
Business name:	Design Lines 2000 Ltd
Email:	jim.r@gmx.com

Project & site details:

Project:	Gareth Davis
Site address:	158 Cornfoot St Whanganui
Design wind zone	High
Snow loading	Design snow zone: N1, Altitude: 22 m (sub-alpine), Ground snow load, $S_g^{1.2} = 0.0$ kPa

1. designIT does not include any allowance for the effects of drifting and sliding of snow.
2. Snow loads are applied to roofed over structures only, the design of exposed floors/decks are not covered by designIT.

MEMBER DESIGN DETAILS

Member 1

1) Member code and description	SB2 - Strutting beams - Supporting underpurlins and hanging beams
2) Date prepared	09 June 2022
3) Serviceability criteria	AS 1720.1: 2010 and AS 1720.3: 2016

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4) Design inputs

Span	3.1 m
Hanging beam span (average)	4.1 m
Roof area supported	11.0 m ²
Roof type and mass	Light roof and ceiling - 40 kg/m ²

5) Member specification

Size, stress grade/product	Use 2/290 x 45 SG8
Material type	Dry softwood, machine stress graded and verified (NZS 3622)
Assumed design density	< 480 kg/m ³

6) Serviceability

Load case	Limit ³ on average deflection ²	Estimated average deflection ²	Rigidity ratio ⁴
Long term load - $G + \Psi_L Q^*$	10.3 mm	5.7 mm (long term)	1.8
Live load - $\Psi_S Q$	10.3 mm	1.7 mm	6.0

*Critical serviceability load case

See 'Notes for interpretation of serviceability data' at the end of this report

7) Reactions

Load case	k_1^1	Limit States Design Reaction ^{2,3}
		End kN ⁴
1.35G	0.60	-4.1
1.2G + 1.5Q	0.80	-6.8
1.2G + W_u + $\Psi_c Q$	1.00	-9.0
0.9G + W_u	1.00	5.8

8) Installation requirements

- Design assumes that hanging beams provide intermediate lateral restraint
- Provide at least 30 mm bearing at end supports
- Provide end restraint - see Detail H8
- Vertical lamination required - refer AS 1684

Member 2

1) Member code and description

RB3 - Bressumer

2) Date prepared

09 June 2022

3) Serviceability criteria

AS 1720.1: 2010 and AS 1720.3: 2016

4) Design Inputs

Span	4.1 m - single span
Roof load width 'RLW'	3.2 m
Roof type and mass	Light roof and ceiling - 40 kg/m ²

5) Member specification

Size, stress grade/product	Use 2/290 x 45 SG8 ✓
Material type	Dry softwood, machine stress graded and verified (NZS 3622)
Assumed design density	< 480 kg/m ³

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6) Serviceability

Load case	Limit ¹ on average deflection ²	Estimated average deflection ²	Rigidity ratio ⁴
Long term load - $G + \Psi_L Q^*$	13.7 mm	12.0 mm (long term)	1.1
Live load - $\Psi_S Q$	16.4 mm	3.0 mm	5.5
Live load - $\Psi_S Q$	16.4 mm	1.6 mm	10.3
Wind load - W_S	27.3 mm	8.9 mm	3.1

*Critical serviceability load case

See 'Notes for interpretation of serviceability data' at the end of this report

7) Reactions

Load case	kN ¹	Limit States Design Reaction ^{2,3}
1.35G	0.60	-4.5
1.2G + 1.5Q	0.80	-6.5
1.2G + W_U + $\Psi_C Q$	1.00	-8.8
0.9G + W_U	1.00	4.6

8) Installation requirements

- Provide at least 30 mm bearing at end supports
- Vertical lamination required - refer AS 1684

Member 3

1) Member code and description	RB4 - Bressumer
2) Date prepared	09 June 2022
3) Serviceability criteria	AS 1720.1: 2010 and AS 1720.3: 2016
4) Design inputs	
Span	4.1 m - single span
Roof load width 'RLW'	4.0 m
Roof type and mass	Light roof and ceiling - 40 kg/m ²
5) Member specification	
Size, stress grade/product	Use 300 x 45 hySPAN
Material type	Structural Laminated Veneer Lumber to AS/NZS 4357

6) Serviceability

Load case	Limit ¹ on average deflection ²	Estimated average deflection ²	Rigidity ratio ⁴
Long term load - $G + \Psi_L Q^*$	13.7 mm	11.0 mm (long term)	1.2
Live load - $\Psi_S Q$	16.4 mm	2.8 mm	6.0
Live load - $\Psi_S Q$	16.4 mm	1.2 mm	13.9
Wind load - W_S	27.3 mm	8.2 mm	3.3

*Critical serviceability load case

See 'Notes for interpretation of serviceability data' at the end of this report

7) Reactions

Limit States Design Reaction ^{2,3}

Load case	k_1	End kN^1
1.35G	0.60	-5.5
1.2G + 1.5Q	0.80	-8.0
1.2G + W_u + $\Psi_c Q$	1.00	-10.9
0.9G + W_u	1.00	5.7

8) Installation requirements

- Provide at least 30 mm bearing at end supports

Notes for interpretation of serviceability data

1. 'average deflection' is an engineering concept based upon a notional estimated load, notional member rigidity and, in some cases, an approximate model of material response to environmental conditions. These parameters are, 'standardised' in AS 1170 and AS 1720.

2. Deflection is the flexural response to load 'out-of-level' measurements of installations are not necessarily deflections and can incorporate 'initial out-of-straightness', whether intended or not. Furthermore, loads can be higher/lower than the notional estimate and in any comparison with measured levels, material variability needs to also be considered. AS 1720 gives the following basis for estimation of upper bound deflections for various materials.

No 1 Framing – visually graded to NZS 3631	Average + 100%
SG grades – mechanically graded to AS/NZS 1748	Average + 43%
GL grades for glulam to AS 1328	Average + 33%
LVL to AS/NZS 4357 (includes hySPAN and hyJOIST)	Average + 18%

As can be seen, comparison of the 'average deflection' for different materials, even if calculated on the same basis, does not give the whole picture!

3. The limits referred are those specified in AS 1720.3 for the stated load case.

4. 'Rigidity ratio' expresses the rigidity of the specified beam relative to the rigidity of a notional beam just meeting the serviceability requirements detailed.

Notes for interpretation of reaction data

1. Duration of load factor ' k_1 ' for strength as per NZS 3603:1993
2. Negative (-) reactions relate to the 'gravity' or 'downwards' force on the support
3. Positive reactions relate to the 'upwards' forces or 'tie-down' requirement on the support
4. End reaction includes allowance for overhang/cantilever where one has been designed

CONTENTS OF DOCUMENT PACKAGE.

BUILDING CONSENT SET.

A3 SIZE

SHEET 1 – SCOPE OF WORKS/SPECIFICATIONS & COVER SHEET

SHEET 2 – NEW FLOOR PLAN & BEAMS

SHEET 3 – ELEVATIONS

SHEET 4 - BRACING PLAN

SHEET 5 – EXISTING PLAN

SHEET 6 - DRAINAGE

A4 SIZE

WEATHERTIGHTNESS MATRIX

E2 DETAILS (5 pages)

BRACING INFO (5 pages)

DESIGN IT INFO (4 pages)

FIXING INFO (2 pages)

SHOWER DETAILS

HI INFO

SCOPE OF WORKS:

This document must be read in conjunction with, and form part of the Contract Drawings, Please read carefully!

- Open up Kitchen & Dining area, to create a larger, open living space/Dining Room. Remove walls & replace with a beam & bracing, as shown. Install a proprietary shower in the existing bathroom.
- Close in the existing Back Porch, include in new Kitchen with a Laundry area.
- Upgrade with a new Kitchen, with a Ranchslider to the rear yard, for access.
- Remove some internal walls, & add beams & new bracing. Add piles below if necessary.
- Replace all with windows with Aluminium double glazed units.
- The Wind Zone is considered High. There is no increase in the size of the house, so no Site Coverage or HRP issues.

SPECIFICATIONS:

1. All work shall be to:
 - NZ Building Code, NZS 3604:2011 & subsequent amendments,
 - B1 for Structure, B2 for Durability, E2 for External Moisture, E3 for Internal Moisture, F2 for Hazardous building materials, F7 for Warning Systems (in house), G4 for Ventilation, G9 for Electricity, G12 for Water Supplies, G13 for Sanitary Plumbing (AS1 for Sanitary plumbing, AS2 for Drainage & AS3 - AS/NZS 3500), & H1 for Energy Efficiency.
 - Manufacturers written instructions, & the enclosed drawings and specifications.
 - NZS 3910:2003 (Conditions of Contract) where applicable, and good trade practice.
 - All Glazing shall be to NZS 4223:Part 3 for Human Contact. – ie Toughened glass to shower screens, & low windows.
 - Check all dimensions on site prior to fabrication. Install shall mean supply and fix. Make good all surfaces on completion of work, and to match existing. The Owner has written a comprehensive fittings list for the builder. Please refer to this!
 - All painting to Resene or Dulux 1 line specs.
2. The Risk Matrix is 2. Make good the existing stucco walls & repaint with a suitable paint finish.
3. Remove redundant fireplace. Make good the existing floor, ceiling & roof.
4. Frame the new walls with 90 x 45 H1.2 GS8 framing at 600mm crs with dwangs at 0.8M crs, for 2.4M high studs under the existing roof framing. All lining have been removed & will be replaced with 10mm Gib to walls & 13mm Gib to ceilings. Stop to a Level 4 finish.
5. Make good the existing floor in the Kitchen/Dining area.
6. An H1 evaluation is included. Where walls or ceiling access is available, insulation will be upgraded to R2.8 & R3.2 respectively, as a minimum. Underfloor insulation will be upgraded to R2.6 Snugfloor, where accessible.
7. Bolt or screw the new bottom plates to the floor joists, with 12mm galv bolts at 900mm crs. Fix double studs under each beam or lintel, & secure with nail on strap top & bottom. Ensure adequate support is under beam support, internally in house, & add extra piles if necessary.
8. Hot water is supplied from a controlled Gas Infinity unit. The plumbing fittings generally connect to existing connections.
9. Install a 50mm PVC Shower waste to the gulley trap, at a fall of 1 in 40. Extend existing plumbing system with Polybutylene piping with crimped joints as necessary. Add all necessary valves.
10. Fit 150mm Manrose fan in Bathroom & dryer vent in Laundry area, venting through the ceiling to the soffit. Fit extract hood in Kitchen, venting out as above, under the soffit.
11. Ensure a smoke detector is within 3M of each sleeping space, within the house.
12. All painting shall be to Resene 1 line specs or similar Dulux Spec.

Design Lines
2000 Limited

JIM RICHARDSON

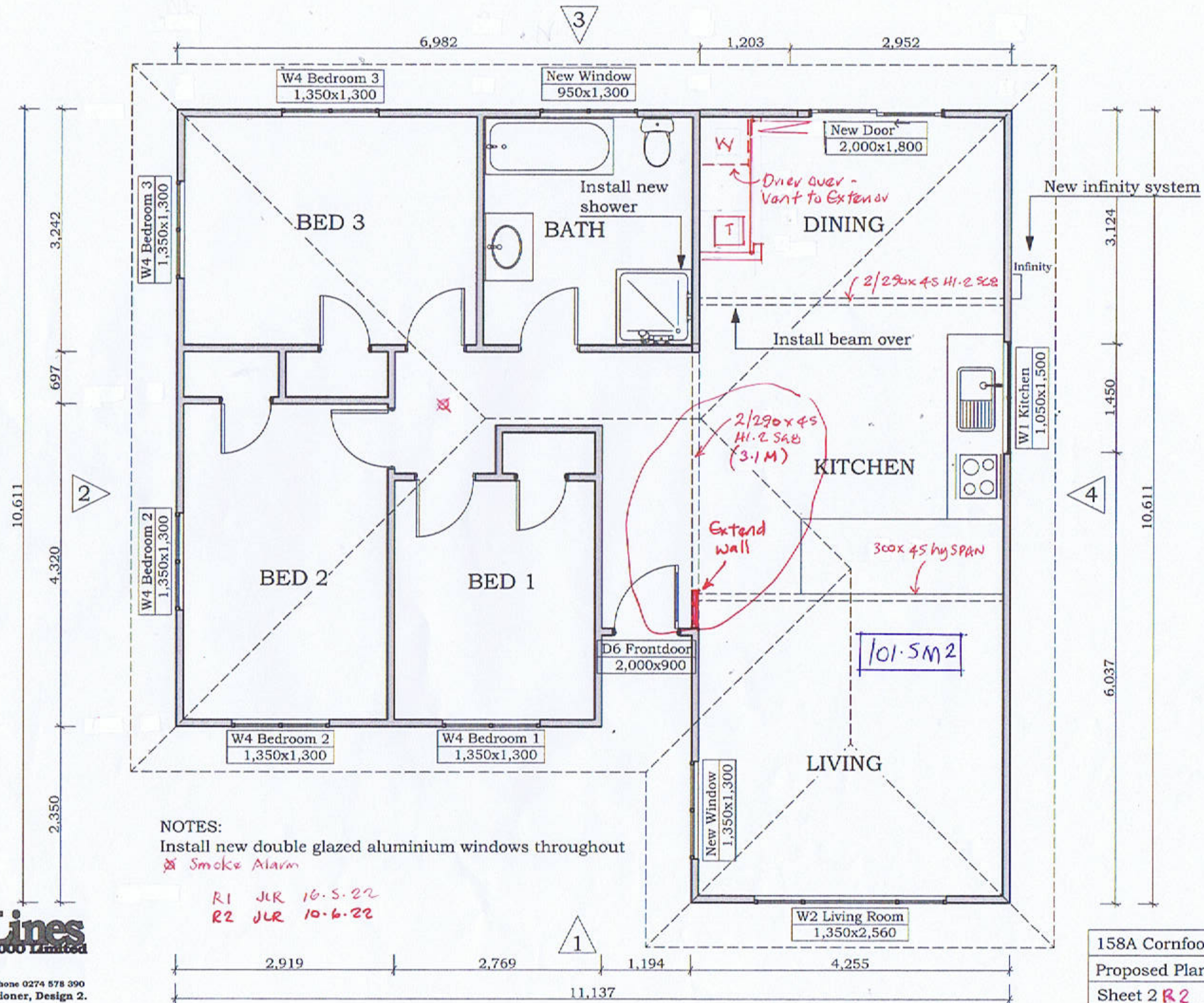
Architectural Designer Phone 0274 578 390
Licensed Building Practitioner, Design 2.

**ALTERATIONS,
158 CORNFOT STREET,**

WHANGANUI.

SPECIFICATION

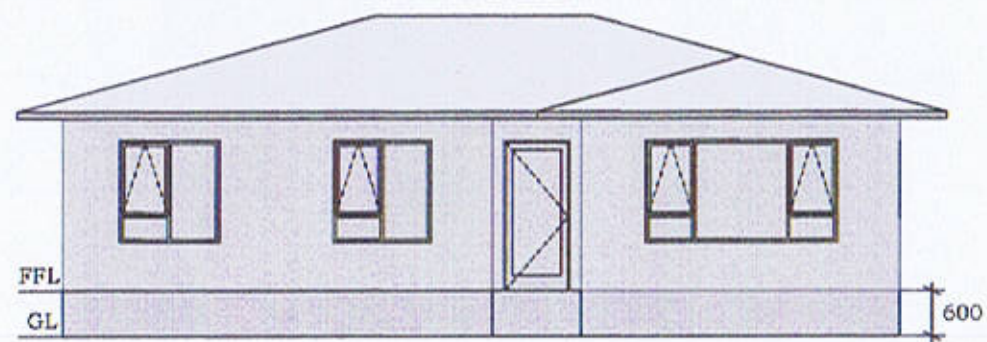
SHEET 1



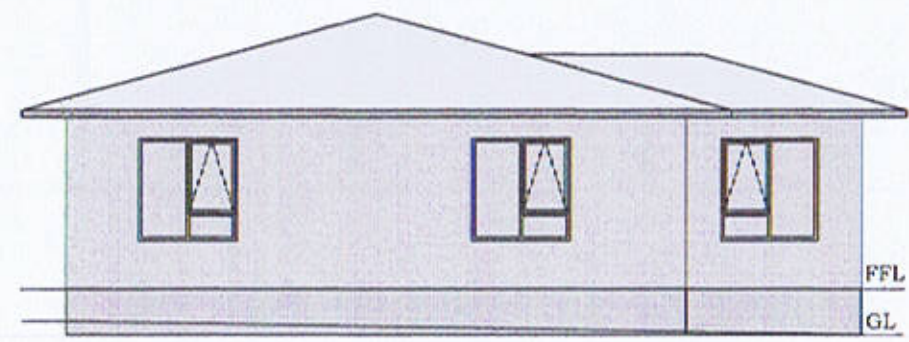
Design Lines
2000 Limited

JIM RICHARDSON
 Architectural Designer Phone 0274 578 390
 Licensed Building Practitioner, Design 2.

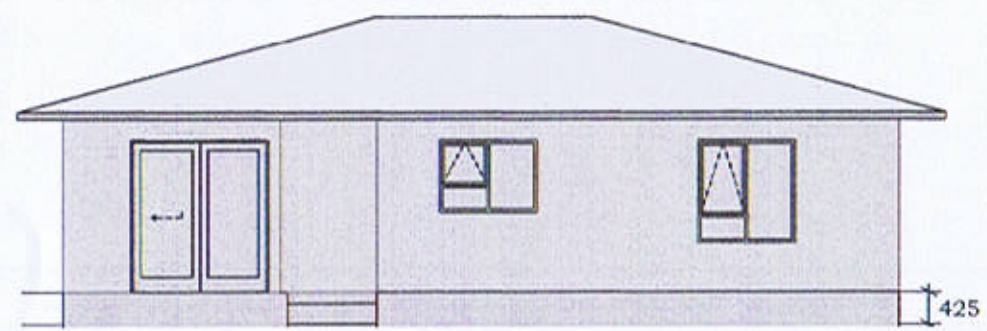
158A Cornfoot Street
 Proposed Plan 1:50
 Sheet 2 **R2** A3



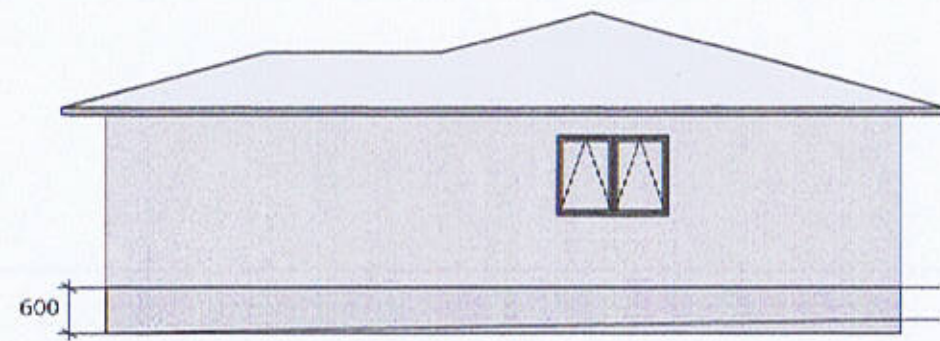
Proposed Elevation 1



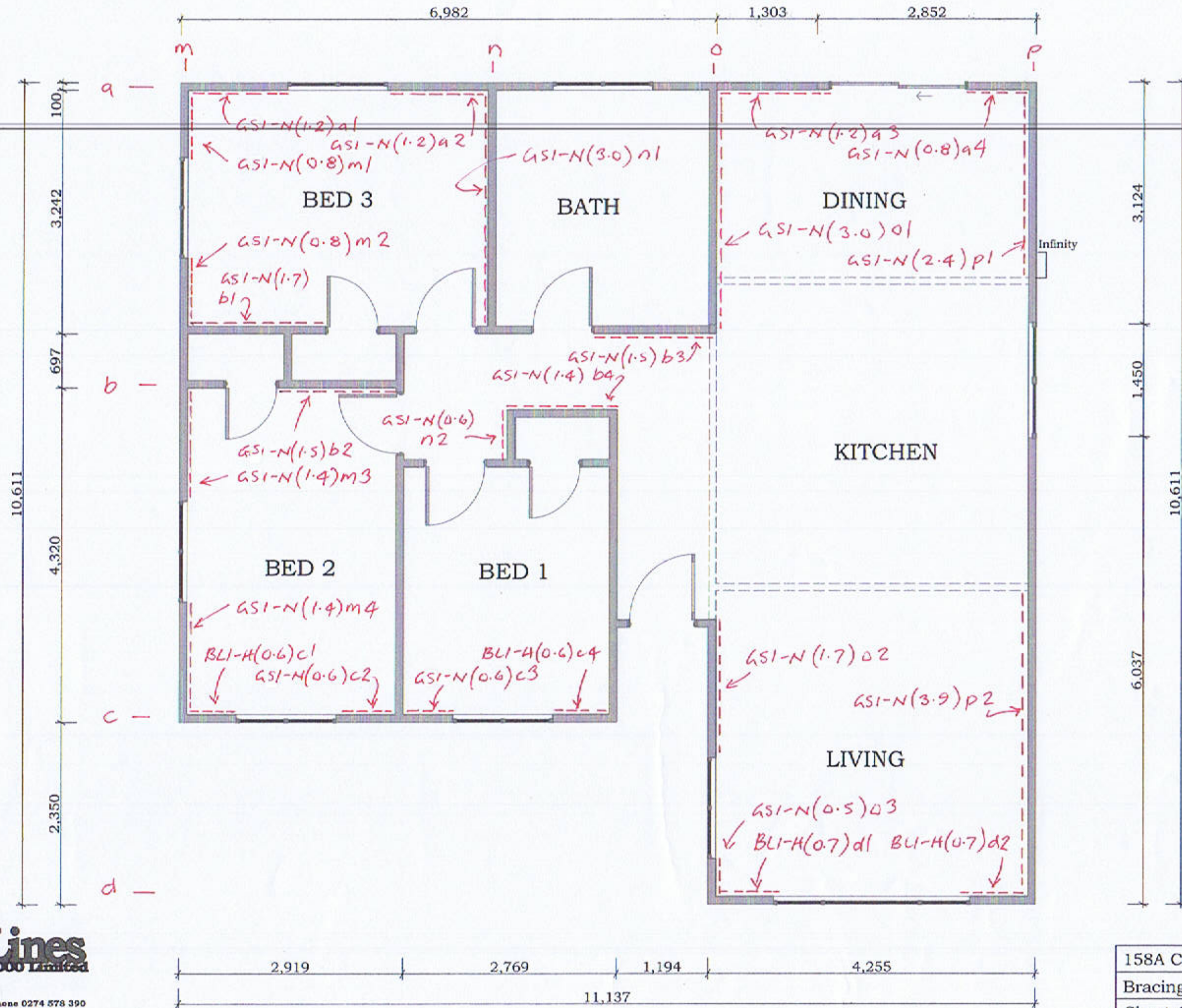
Proposed Elevation 2



Proposed Elevation 3



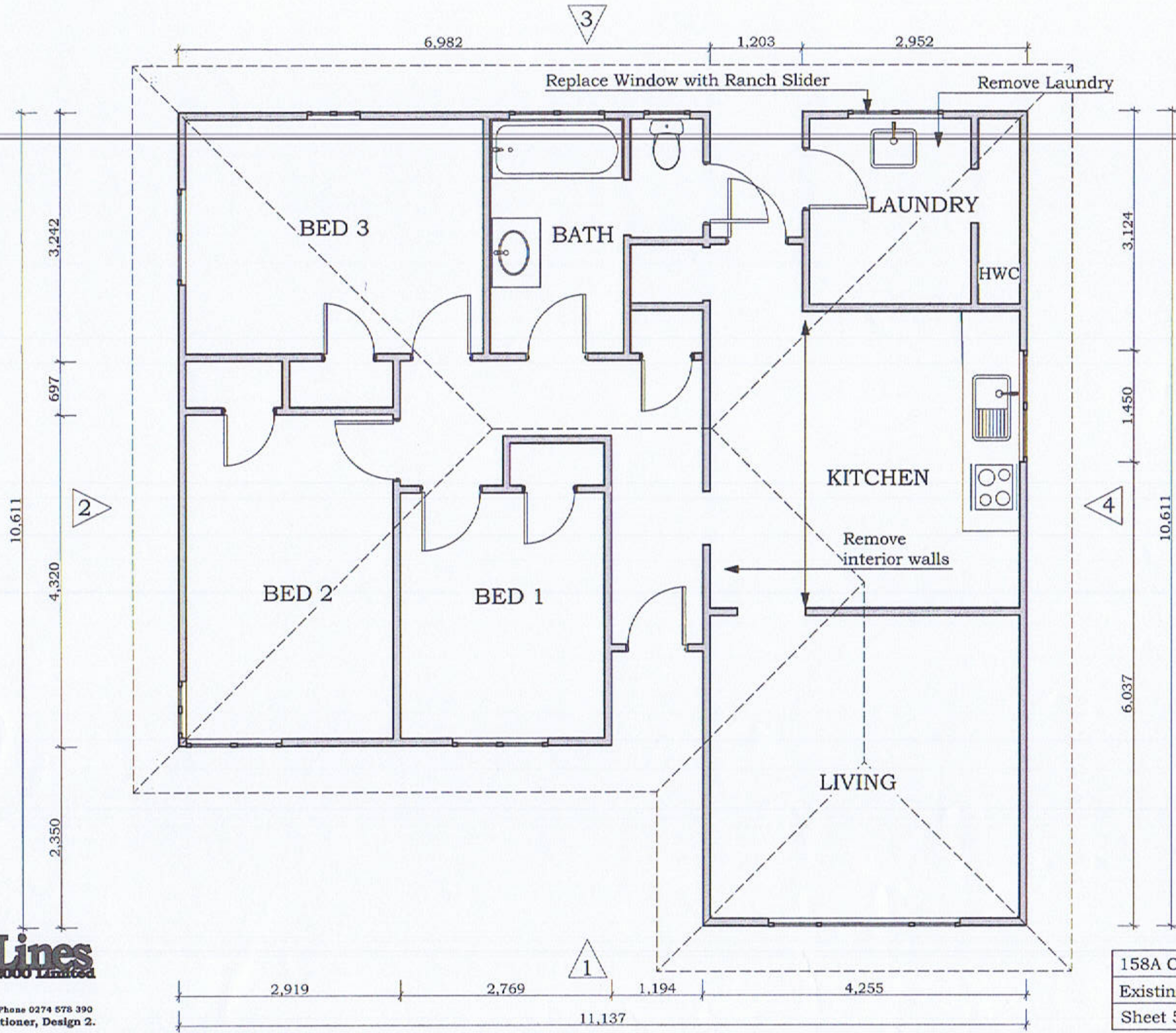
Proposed Elevation 4

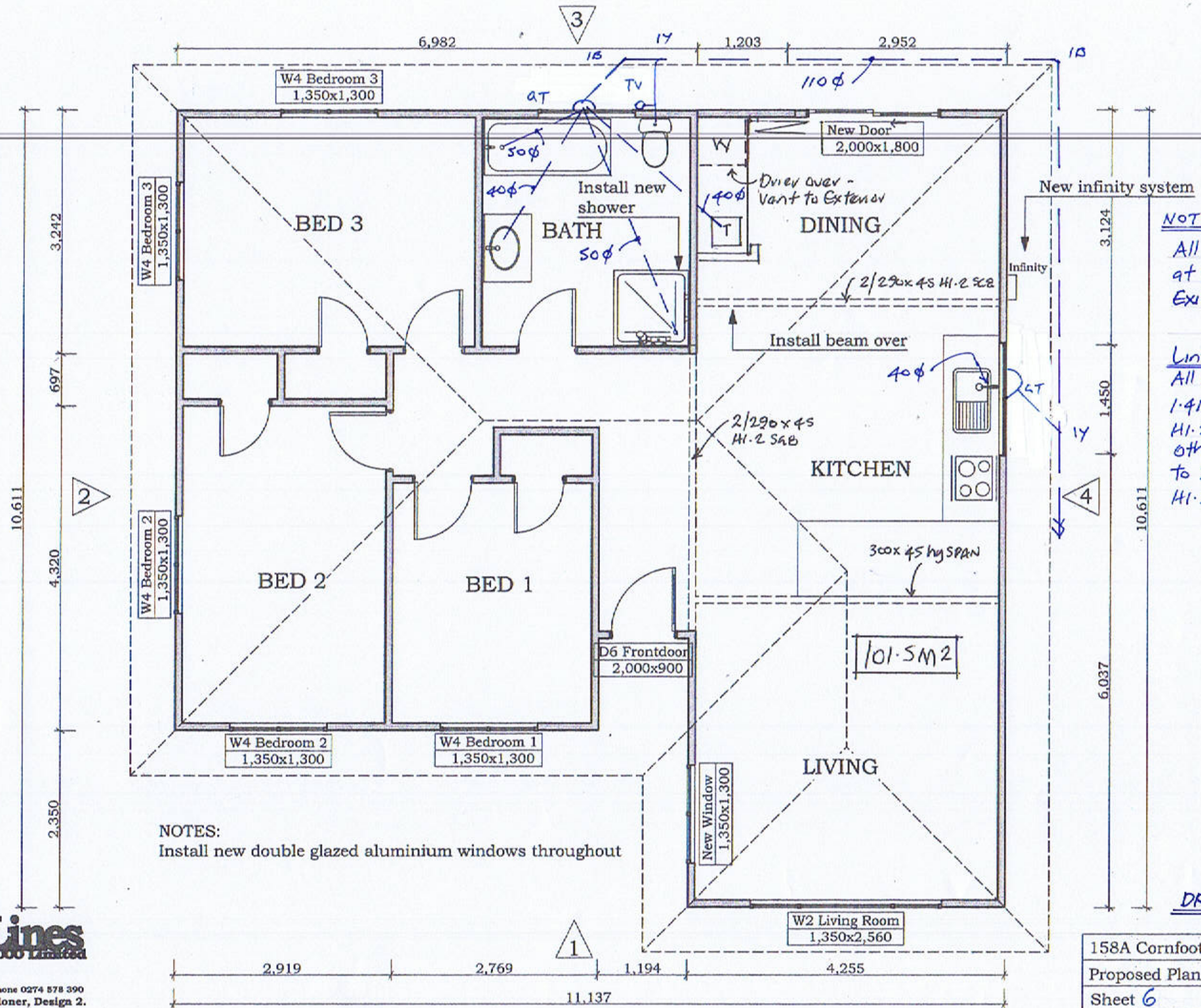


Design Lines
2000 Limited

JIM RICHARDSON
Architectural Designer Phone 0274 578 390
Licensed Building Practitioner, Design 2.

158A Cornfoot Street
Bracing Plan 1:50
Sheet 4 A3





NOTES:
All wastes PVC at 1m to fall Existing 110φ SS.

Lintels:
All lintels up to 1.4M = 2/90x45 H1.2 S&B.
Other lintels, up to 2M = 2/140x45 H1.2 S&B

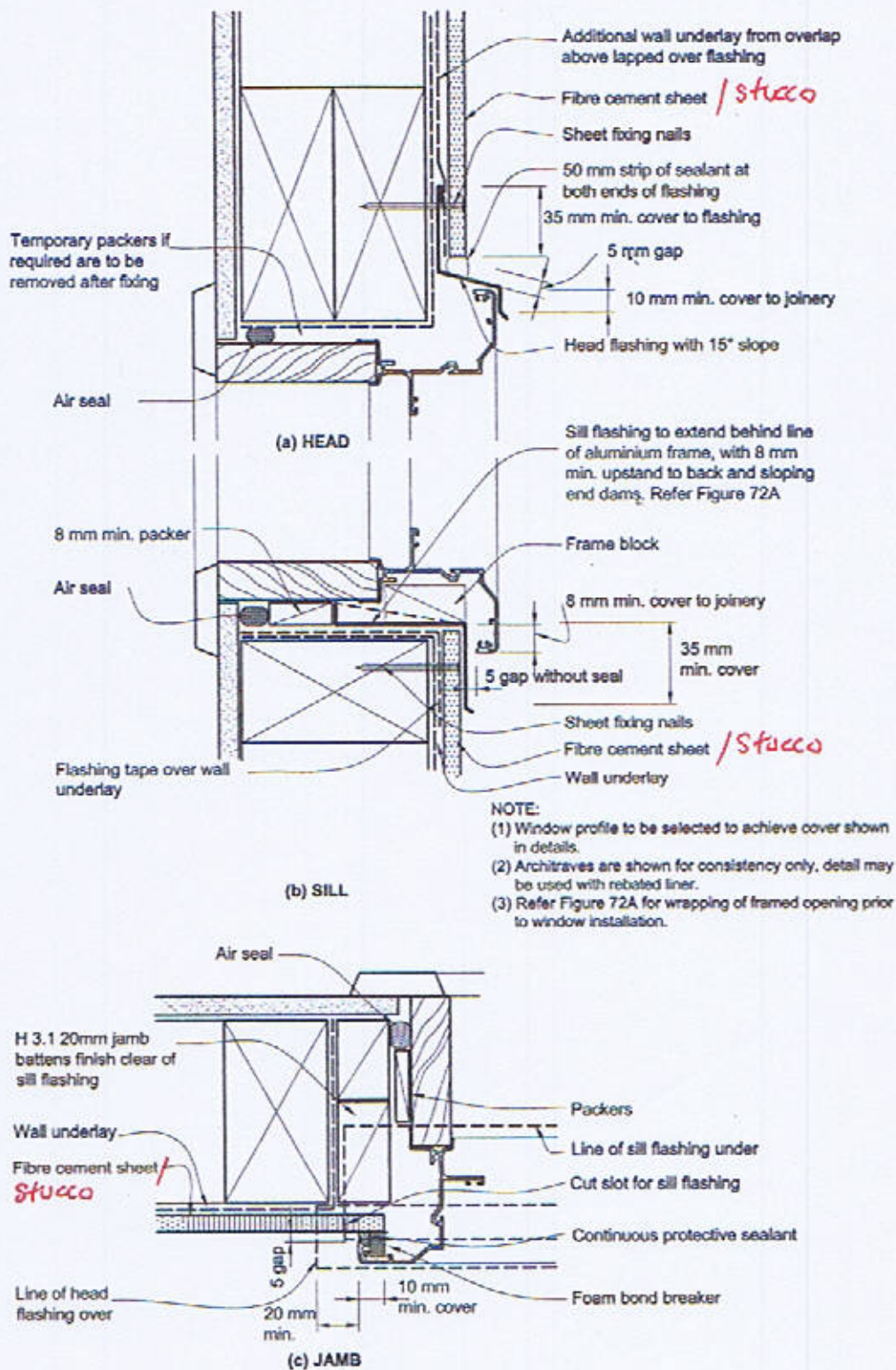
DRAINAGE

158A Cornfoot Street
Proposed Plan 1:50
Sheet 6
A3

Design Lines
2000 Limited

JIM RICHARDSON
Architectural Designer Phone 0274 578 390
Licensed Building Practitioner, Design 2.

Figure 115: Windows and doors for direct fixed fibre cement sheet
Paragraph 9.7.6



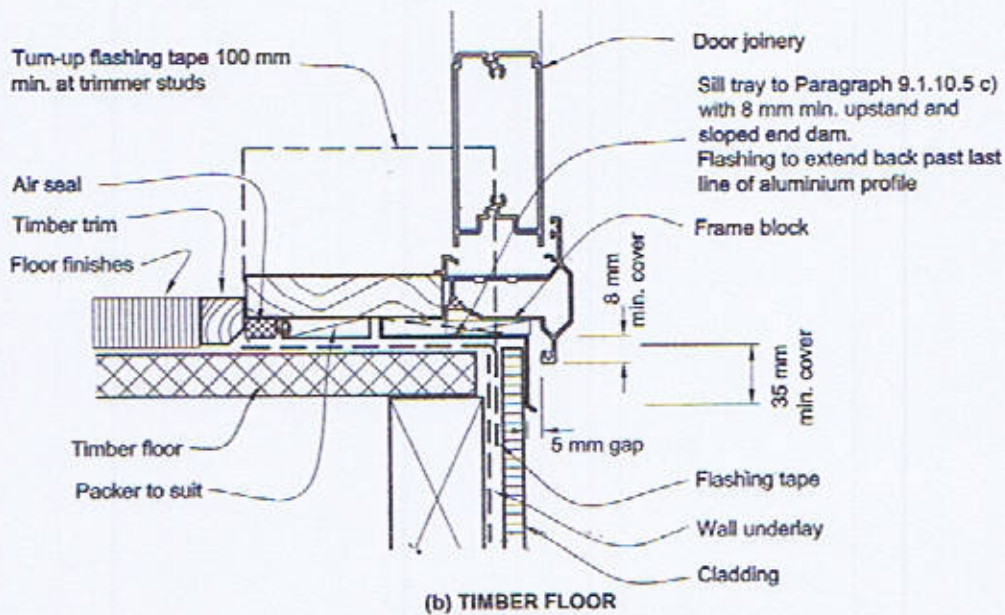
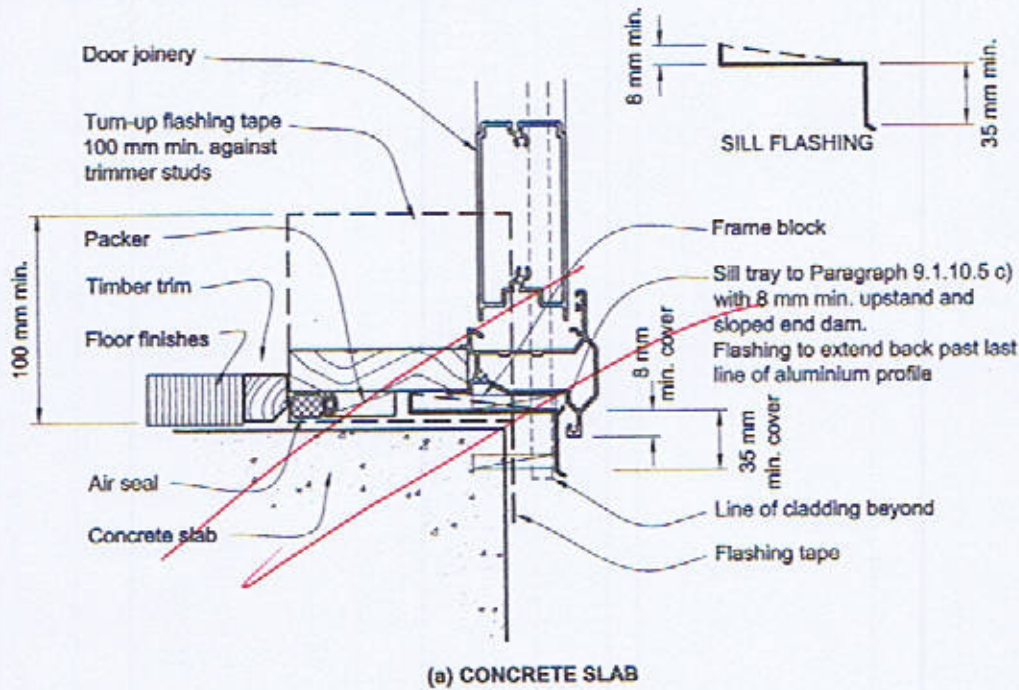
Amend 5
Aug 2011

Amend 2
Jul 2006

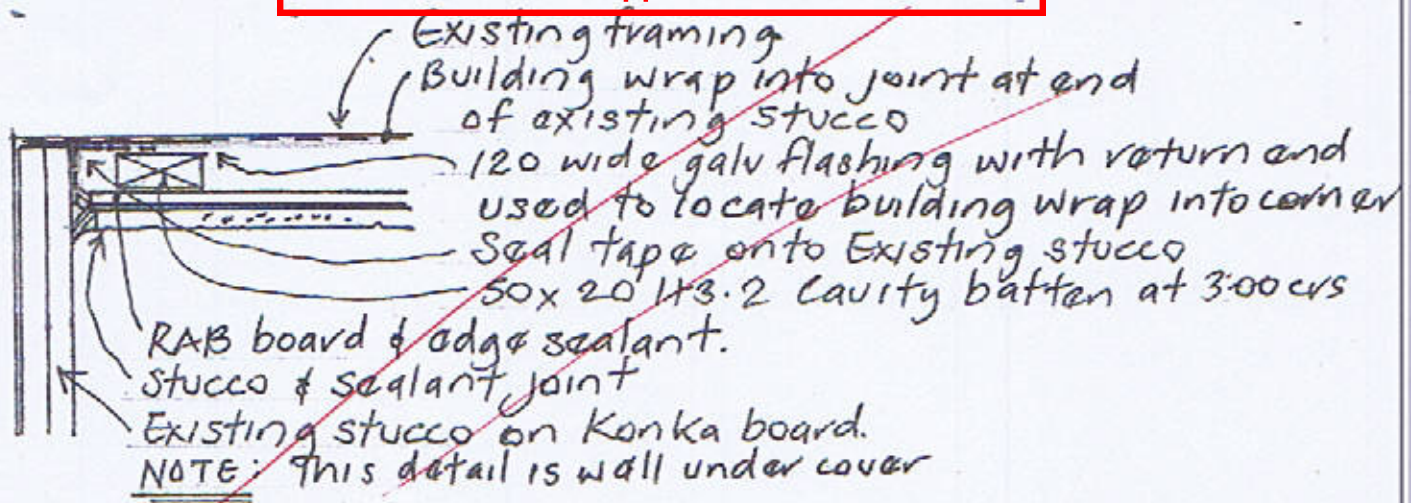
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Figure 17D: Door sills for direct fix

Paragraph 9.1.10.5, Figures 81, 82, 83, 84, 90, 95 and 115

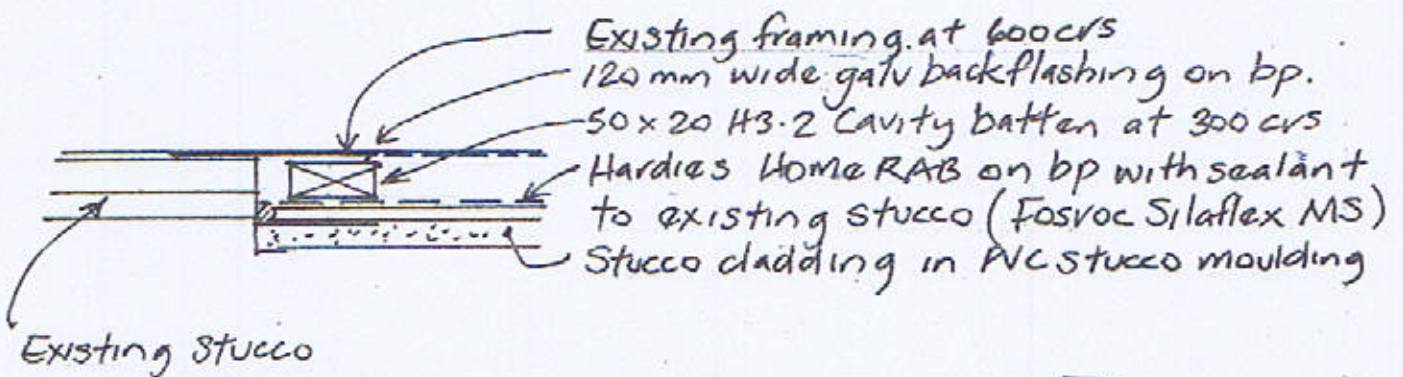
Amend 5
Aug 2011

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INTERNAL CORNER DETAIL 1:50

S1



EXISTING TO NEW STUCCO JOINT 1:50

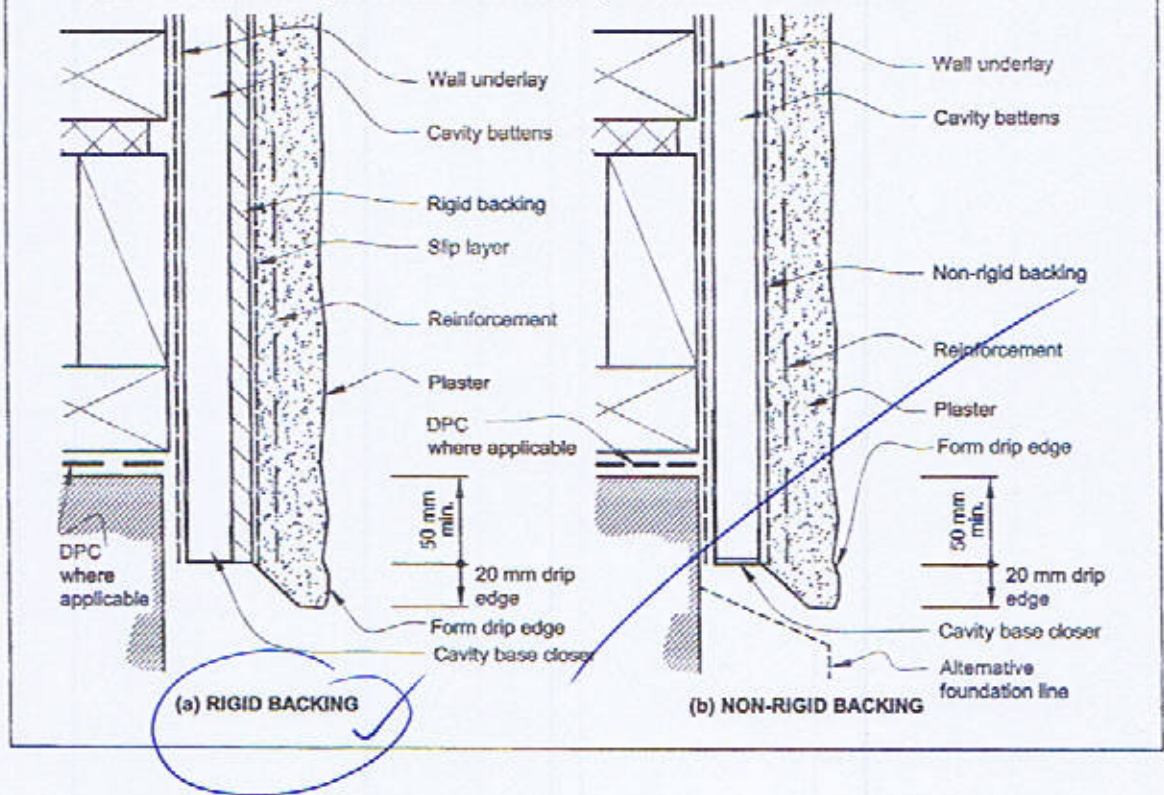
S2

STUCCO DETAILS
1 SEA CORN FOOT ST
WHANGANUI

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Figure 75: Bottom of stucco cladding
Paragraph 9.3.8

NOTE: 6 mm offset of framing to foundation is not necessary where *drained cavities* are used.



Amend 2
Jul 2005

Amend
Aug 20

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9.3 Stucco

9.3.1 Limitations

This Acceptable Solution is limited to the following types of *stucco cladding*:

- Solid plaster *cladding* with a non-rigid backing and a *drained cavity*, and
- Solid plaster *cladding* with a rigid backing and a *drained cavity*. Refer to Figure 74

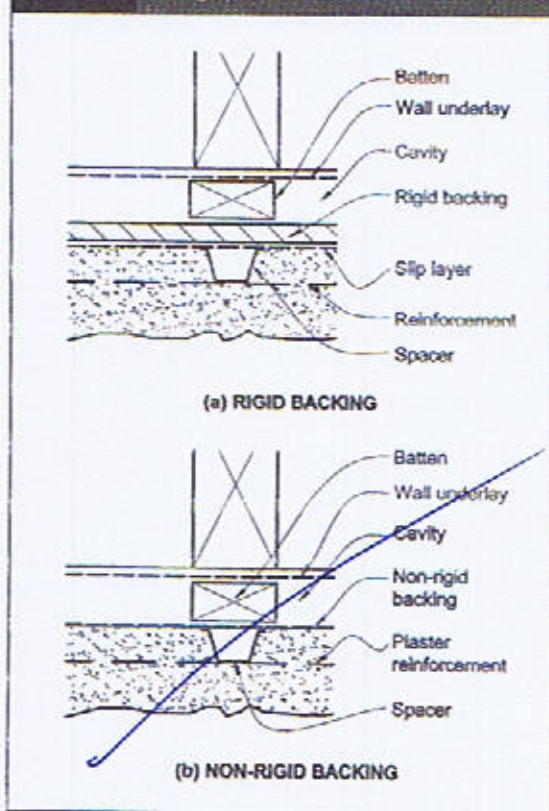
9.3.2 Structure

The timber *framing* of *external walls* supporting *stucco wall claddings* shall comply with NZS 3604 and NZS 4251. The *cladding system* shall be attached to the *wall framing*.

The *framing* for *buildings* using *stucco exterior cladding systems* shall be supported on a:

- Concrete slab-on-ground, or
- Continuous reinforced concrete foundation wall, or
- Reinforced concrete masonry foundation wall.

Figure 74: Types of stucco cladding
Paragraphs 9.3.1 and 9.3.3



Amend 5
Aug 2011

9.3.3 Stucco cladding system

All *stucco claddings* shall be used over a *drained cavity* as described in Paragraph 9.1.8, and shown in Figure 74.

9.3.3.1 All *stucco cladding* shall have *wall underlay* as specified in Table 23 and Paragraphs 9.1.5–9.1.7, and shall be:

- Fixed to the *framing* as specified in Table 23, and
- Provided as an overlay to rigid backings to provide a *slip layer* that permits the independent movement of plaster and backing.

9.3.3.2 Have plaster backing installed as in Paragraphs 9.3.5 and 9.3.6.

9.3.3.3 Have metal lath reinforcements for *stucco plaster* attached through the plaster backing as described in Table 24.

9.3.4 Installation

9.3.4.1 General

COMMENT:

Refer to Paragraph 1.5 for qualification of installers

Activities that will cause impact or vibration during plaster application are not permitted until all plastering is completed and fully cured.

The materials, proportions, mixes, thickness, reinforcement materials and fixing, *control joints*, and application and curing of plaster shall comply with NZS 4251.

9.3.4.2 Movement control joints

Movement *control joints* shall be as required in NZS 4251.

Errata 2
Dec 2011

Amend 5
Aug 2011

Amend 2
Aug 2011

Amend 2
Aug 2011

Amend 5
Aug 2011



GIB EzyBrace® Systems specification GS1-N

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

WALL FRAMING

Wall framing to comply with;

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

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

BOTTOM PLATE FIXING

Timber floor

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

Concrete floor

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

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

WALL LINING

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

PERMITTED ALTERNATIVES

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

FASTENING THE LINING

Fasteners

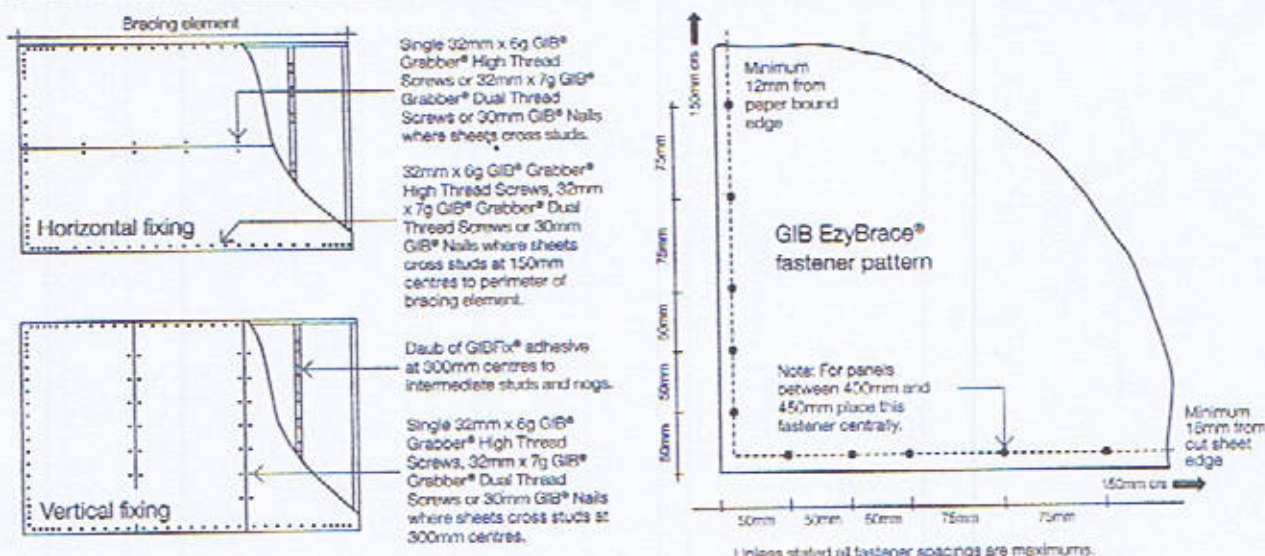
32mm x 6g GIB® Grabber® High Thread Screws, 32mm x 7g GIB® Grabber® Dual Thread Screws or 30mm GIB® Nails. If using the GIBFix® Angle use only 32mm x 7g GIB® Grabber® Dual Thread Screws.

Fastener centres

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

JOINTING

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



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



GIB EzyBrace® Systems specification BL1-H

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

WALL FRAMING

Wall framing to comply with;

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

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

BOTTOM PLATE FIXING

Timber floor

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

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

Concrete floor

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

WALL LINING

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

PERMITTED ALTERNATIVES

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

FASTENING THE LINING

Fasteners

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

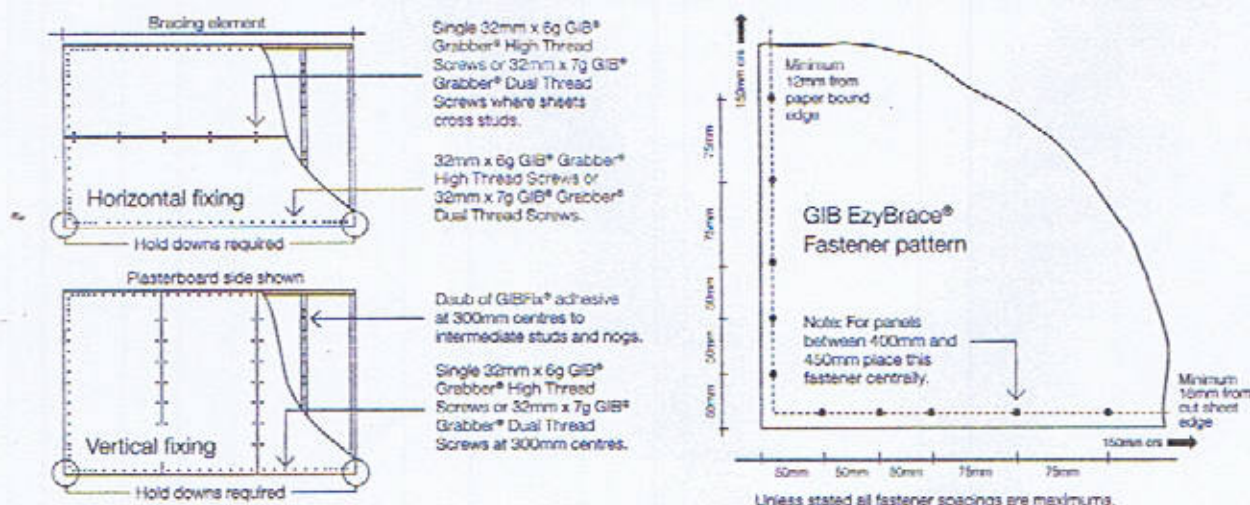
Fastener centres

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

JOINTING

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

RECEIVED 17/05/2022



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

WUMBERLOK

LINTEL FIXING SCHEDULE

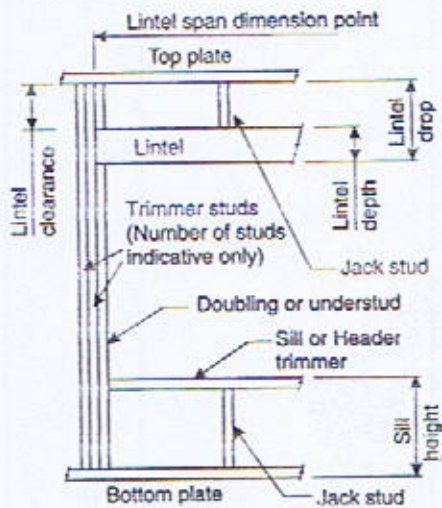
ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12

NZS 3604:2011

NOTE:

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

DEFINITIONS



Lintel Supporting Girder Trusses

Roof Tributary Area	Light Roof			Heavy Roof		
	Wind Zone			Wind Zone		
	L, M, H	VH	EH	L, M, H	VH	EH
8.6m ²	G	G	H	G	G	H
11.6m ²	G	H	H	G	G	H
12.1m ²	G	H	H	G	H	H
15.3m ²	H	H	-	G	H	H
19.1m ²	H	-	-	G	H	-
20.9m ²	H	-	-	H	H	-
21.8m ²	H	-	-	H	-	-
34.3m ²	-	-	-	H	-	-

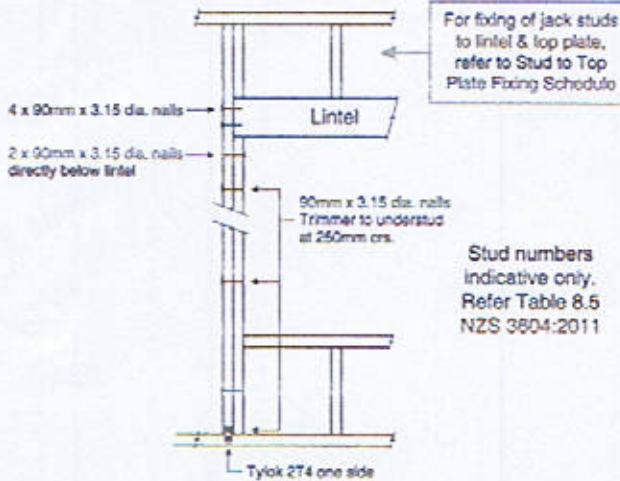
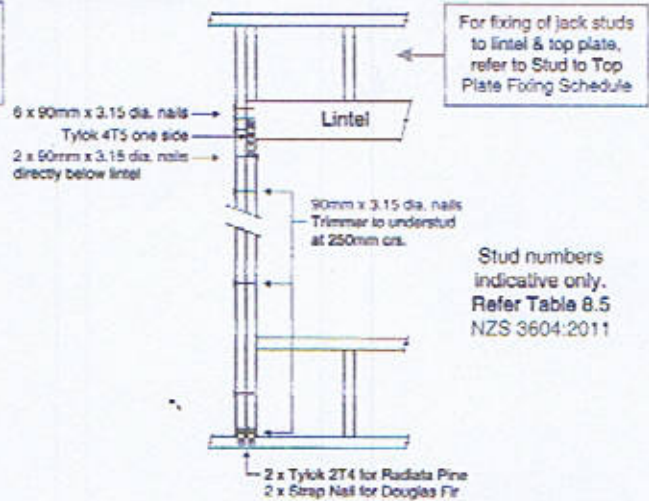
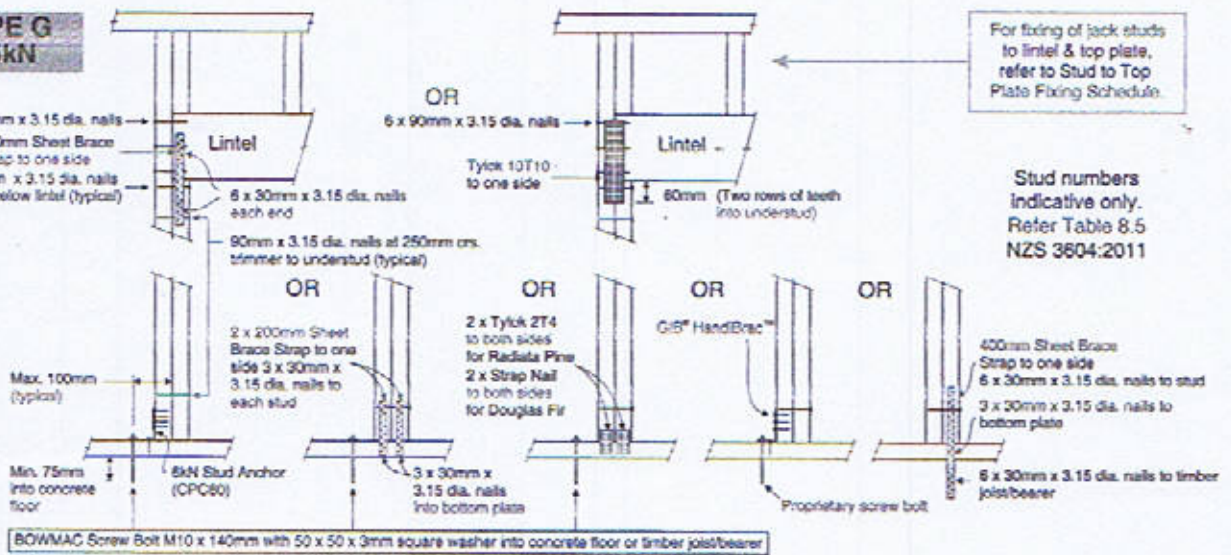
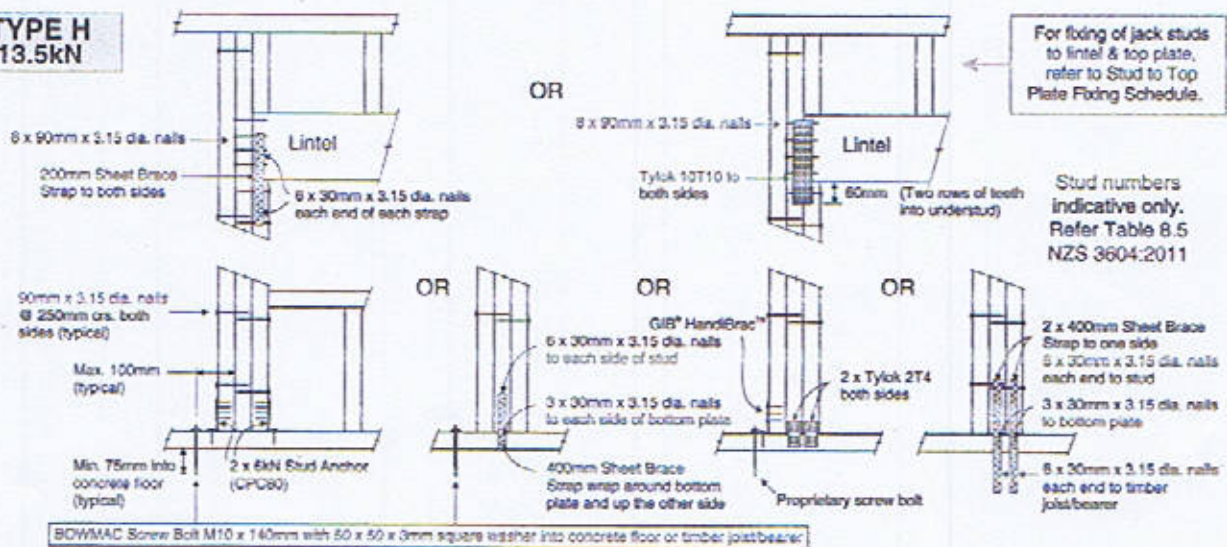
NOTES:

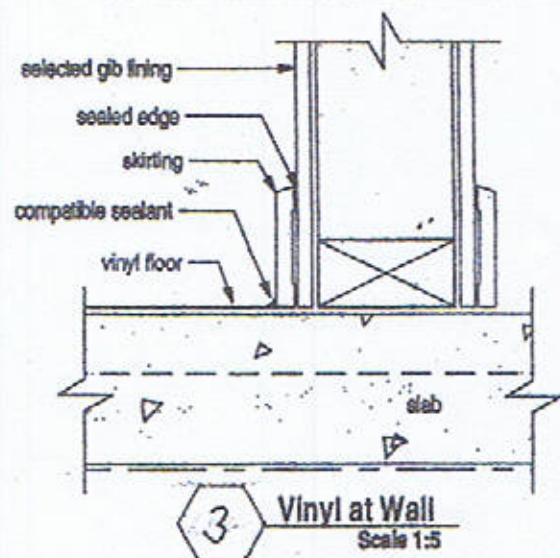
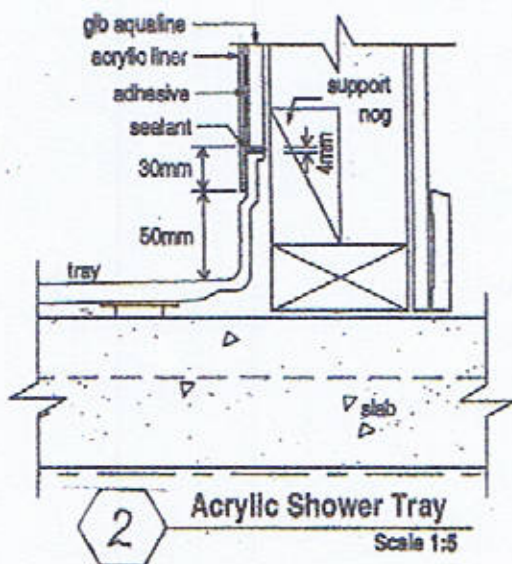
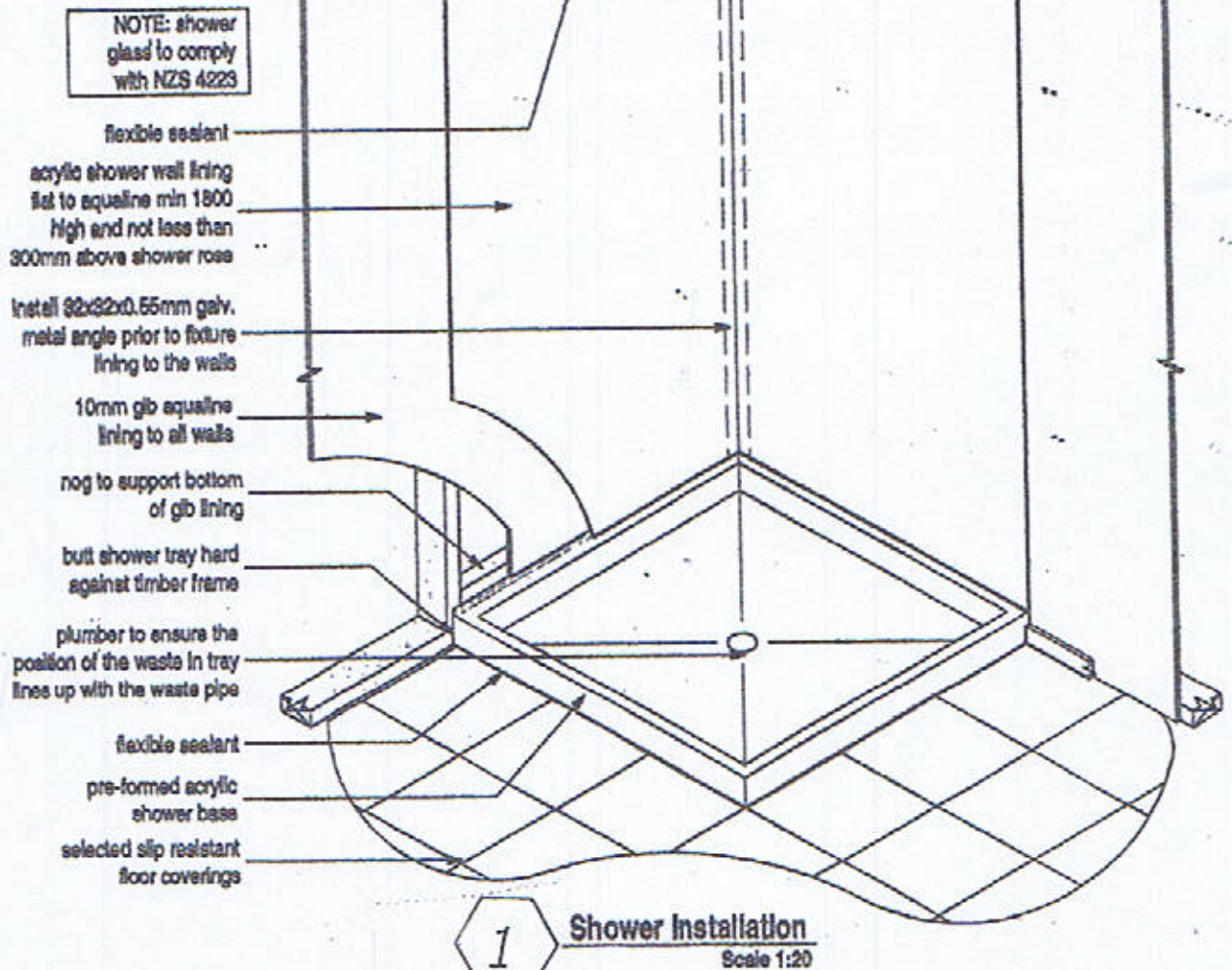
1. Roof Tributary Area = approx. 1/2 x (Total roof area on girder and rafter trusses supported by lintel)
2. Assumed girder truss is at mid-span or middle third span of lintel
3. Use similar fixings for both ends of lintel
4. All other cases require specific engineering design

Lintel Span (m)	Loaded Dimension (m) (See Fig. 1.3 NZS 3604:2011)	Light Roof Wind Zone					Heavy Roof Wind Zone				
		L	M	H	VH	EH	L	M	H	VH	EH
1.0	2.0	E	E	E	F	F	E	E	E	E	F
	3.0	E	E	F	F	F	E	E	E	F	F
	4.0	E	F	F	F	G	E	E	F	F	F
	5.0	E	F	F	G	G	E	E	F	F	G
	6.0	E	F	F	G	G	E	E	F	F	G
1.2	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	E	F	F	F	E	E	F	F	F
	4.0	E	F	F	G	G	E	E	F	F	G
	5.0	E	F	F	G	G	E	E	F	F	G
	6.0	F	F	G	G	H	E	E	F	G	G
1.5	2.0	E	E	F	F	F	E	E	E	F	F
	3.0	E	F	F	F	G	E	E	F	F	F
	4.0	E	F	F	G	G	E	E	F	F	G
	5.0	F	F	G	G	H	E	E	F	G	G
	6.0	F	F	G	H	H	E	E	F	G	H
2.0	2.0	E	F	F	F	G	E	E	F	F	F
	3.0	E	F	F	G	G	E	E	F	F	G
	4.0	F	F	G	G	H	E	E	F	G	G
	5.0	F	F	G	H	H	E	E	F	G	H
	6.0	F	G	G	H	H	E	E	F	G	H
2.4	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	H	H	E	E	F	G	G
	4.0	F	F	G	H	H	E	E	F	G	H
	5.0	F	G	G	H	H	E	E	F	G	H
	6.0	F	G	H	H	-	E	E	F	G	H
3.0	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	H	H	E	E	F	G	H
	4.0	F	G	G	H	H	E	E	F	G	H
	5.0	F	G	H	H	-	E	E	F	G	H
	6.0	F	G	H	-	-	E	E	F	G	H
3.6	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	F	G	H	H	E	E	F	G	H
	4.0	F	G	H	H	-	E	E	F	G	H
	5.0	F	G	H	-	-	E	E	F	G	H
	6.0	G	H	H	-	-	E	E	F	H	-
4.2	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	G	H	H	-	E	E	F	G	H
	4.0	F	G	H	-	-	E	E	F	G	H
	5.0	G	H	H	-	-	E	E	F	H	-
	6.0	G	H	-	-	-	E	E	F	H	-
4.5	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	E	F	G	H
	3.4	F	G	H	H	-	E	E	F	G	H
	4.0	F	G	H	-	-	E	E	F	G	H
	5.0	G	H	-	-	-	E	E	F	H	-
4.8	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	E	F	G	H
	3.2	F	G	H	H	-	E	E	F	G	H
	4.0	F	G	H	-	-	E	E	F	H	-
	5.0	G	H	-	-	-	E	E	F	H	-
5.1	2.0	F	F	G	H	H	E	E	F	G	G
	3.0	F	G	H	H	-	E	E	F	G	H
	3.5	F	G	H	-	-	E	E	F	G	H
	4.0	G	G	H	-	-	E	E	F	H	-
	5.0	G	H	-	-	-	E	E	F	H	-
5.4	2.0	F	F	G	H	H	E	E	F	G	G
	2.8	F	G	H	H	-	E	E	F	G	H
	3.0	F	G	H	-	-	E	E	F	G	H
	4.0	G	H	H	-	-	E	E	F	H	-
	5.0	G	H	-	-	-	E	E	F	H	-

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LINTEL FIXING OPTIONS

TYPE E
1.4kN**TYPE F**
4.0kN**TYPE G**
7.5kN**TYPE H**
13.5kN



PROPRIETARY SHOWER DETAILS

H1 Compliance Details

NZS4218:2004 Schedule Method Compliance

The use of the Schedule Method is permitted. In order to comply the R-Values for all the construction elements must be the same or larger than the permitted minimum R-Values. This design **complies** with the NZS4218:2004 Schedule Method.

Non-Solid Construction		
	Permitted Minimum	Proposed Minimum
Floor:	R1.3	R2.6
Non-Solid Walls:	R1.9	R2.8
Glazing in Non-Solid Walls:	R0.26	R0.26
Roof:	R2.9	R3.2
Skylights:	R0.26	N/A

If multiple solid wall types levels are used the table shows the requirements for the corresponding walls and windows in them. For solid timber and for other solid constructions two options are shown for each. But the components of these options can not be mixed. It is not permitted to use solid timber wall R-values from option 1 and the solid timber window R-values from option 2.