



Tasman District Council

189 Queen Street, Richmond 7020

building.support@tasman.govt.nz

03 543 8400

BC190480

Alpha ID: 190480

Application Type: Building Consent

Site Address: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Project Status: Code Compliance Certificate Issued

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File Notes

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Date Submitted: Thursday, 25 April 2019



Form 2

Application for project information memorandum and/or building consent

Section 33 or section 45, Building Act 2004

The building

Street address of building:	31 Pineview Way Tasman 7196
Legal description of land where building is located:	Lot 10 DP519728
Building name:	Main Building
Location of building within site/block number:	31 Pineview Way Tasman 7196
Number of levels:	No information provided
Level/unit number:	No information provided
Area:	Total: 154.00 m2, Change: 154.00 m2
Current, lawfully established, use:	2.0 Housing: 2.0.2 Detached Dwelling
Year first constructed:	2019

The owner

Name of owner:	Sam Mcloud & Toni Evans
Mailing address:	168 McBrydie Road Tasman 7175
Street address/registered office:	No information provided
Phone number:	Landline: 0211103643 Mobile: N/A
Daytime:	Landline: 0211103643 Mobile: N/A
After hours:	Landline: 0211103643 Mobile: N/A
Facsimile number:	No information provided
Email address:	themotlot@gmail.com
Website:	No information provided

The following evidence of ownership is attached to this application:

No files attached

Agent

Name of agent: Greg Benjamin
 Mailing address: 30 Citrus Lane
 Enner Glynn
 Nelson
 7011
 Street address/registered office: N/A
 Phone number: Landline: 0211449153 Mobile: N/A
 Daytime: Landline: 0211449153 Mobile: N/A
 After hours: Landline: 0211449153 Mobile: N/A
 Facsimile number: No information provided
 Email address: gregsdesign@outlook.com
 Website: No information provided
 Relationship to owner: Application made on owners behalf
 First point of contact for communications with the council/building consent authority:
 Full name: Greg Benjamin
 Mailing address: 30 Citrus Lane
 Enner Glynn
 Nelson
 Nelson 7011
 Phone number(s): 0211449153
 Facsimile number(s): N/A
 Email address(es): gregsdesign@outlook.com

Application

I request that you issue a building consent for the building work described in this application.

Signature of agent on behalf of and with the authority of the owner:

GREG BENJAMIN

Date: 25 Apr 2019

space for council use

Application Type: Building Consent only
 Reference Key: 56137137BB
 Name: Greg Benjamin
 Application Role: Agent

The project

Description of the building work:

New dwelling with self contained unit & a sleepout

Will the building work result in a change of use of the building? No

Intended life of the building if less than 50 years: 50 years

List building consents previously issued for this project (if any): No information provided

Estimated value of the building work on which the building \$280,000

levy will be calculated (including goods and services tax):

Restricted building work

Will the building work include any restricted building work? Yes

If Yes, provide the following details of all licensed building practitioners who will be involved in carrying out or supervising the restricted building work:

Name	Gregory Benjamin
Licensing class	Carpentry License
Licensed building practitioner number (or registration number if treated as being licensed under section 291 of Act)	BP105877

Building consent

The following plans and specifications are attached to this application:

No files attached

The building work will comply with the building code as follows:

Main Building

B1 - Structure	AS1
B2 - Durability	AS1
C1 - C6 - Protection from Fire (current)	AS1
D1 - Access Routes	AS1
E1 - Surface Water	AS1
E2 - External Moisture	AS1
E3 - Internal Moisture	AS1
F7 - Warning Systems	AS1
G1 - Personal Hygiene	AS1
G2 - Laundering	AS1
G3 - Food Preparation	AS1
G4 - Ventilation	AS1

G5 - Interior Environment	AS1
G7 - Natural Light	AS1
G8 - Artificial Light	AS1
G9 - Electricity	AS1
G11 - Gas as an Energy Source	AS1
G12 - Water Supplies	AS1
G13 - Foul Water	AS1
H1 - Energy Efficiency	AS1
Waiver / Modification Required:	N/A

Compliance schedule

There are no specified systems associated with this project.

Attachments

The following documents are attached to this application:

No attachments

Date Submitted: Thursday, 25 April 2019

FORM PLG 1

National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health

For assistance in answering these questions please refer to (PLG 1A)

Please note that any inaccuracies may result in the applicant being in breach of the Resource Management Act 1991 and/or exposed to liability if the site is subsequently found to be contaminated, including being liable for remedial works.

Is the building work and all associated activities:

Changing the use of the land?

YES

(Please note that "changing the use of the land" includes erecting a dwelling on an area of land which previously had no dwelling erected upon it.)

Disturbing soil?

NO

*(more than 25m³ per 500m² of land) or removing soil? (more than 5m³ per 500m² of land)
 (e.g.: foundations, on-site effluent treatment and disposal systems, wells or bores)*

Is the land currently being used, has been used in the past, or is likely to have been used for an activity described on the HAIL?

NO

For more information on this process please contact the Duty Planner on or go the Ministry for the Environment website: <http://www.mfe.govt.nz/laws/standards/contaminants-in-soil/>

**Signature**

The name below as AGENT has the authority for the application to proceed to processing and accept the associated charges.

Signed By:

Greg Benjamin

25 Apr 2019

The Agent will be the first point of contact for communications with the Council/Building Consent authority regarding this application / building work and will receive all correspondence including all invoices.



**RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD
Search Copy**



R. W. Muir
Registrar-General
of Land

Identifier **827607**
Land Registration District **Nelson**
Date Issued 12 October 2018

Prior References

791841

Estate Fee Simple
Area 4170 square metres more or less
Legal Description Lot 10 Deposited Plan 519728

Registered Owners

Samuel John McLeod and Toni Robynne Evans

Interests

168137.1 Gazette Notice (1975/1978) declaring adjoining road (Motueka Valley Highway) a Limited Access Road - 24.10.1975 at 2:24 pm

Appurtenant hereto is a right of way and a right to transmit telephonic communications, electricity and/or other signals, impulses or electronic data specified in Easement Certificate 357979.7 - 1.5.1996 at 3:00 pm

The easements specified in Easement Certificate 357979.7 are subject to Section 243(a) Resource Management Act 1991

Appurtenant hereto is a right of way specified in Easement Certificate 379219.3 - 22.7.1998 at 9:40 am

The easement specified in Easement Certificate 379219.3 is subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right of way and a right to transmit electricity and telephone messages created by Easement Instrument 5501603.9 - 27.2.2003 at 9:00 am

The easements created by Easement Instrument 5501603.9 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 7142723.2 - 4.12.2006 at 9:00 am

Appurtenant hereto is a right of way created by Easement Instrument 8484396.17 - 14.5.2010 at 3:43 pm

The easements created by Easement Instrument 8484396.17 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right of way created by Easement Instrument 8484396.20 - 14.5.2010 at 3:43 pm

The easements created by Easement Instrument 8484396.20 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right of way and a right to convey water, electricity, telecommunications and computer media and a right to drain water created by Easement Instrument 9529951.9 - 1.10.2013 at 11:29 am

The easements created by Easement Instrument 9529951.9 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 9529951.12 - 1.10.2013 at 11:29 am

Land Covenant in Easement Instrument 9529951.13 - 1.10.2013 at 11:29 am

Appurtenant hereto is a right of way created by Easement Instrument 9819557.9 - 21.8.2014 at 2:49 pm

The easements created by Easement Instrument 9819557.9 are subject to Section 243 (a) Resource Management

Identifier 827607

Act 1991

Appurtenant hereto is a right of way created by Easement Instrument 9924117.6 - 17.12.2014 at 10:31 am

The easements created by Easement Instrument 9924117.6 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right of way created by Easement Instrument 10198908.4 - 6.11.2015 at 7:54 am

The easements created by Easement Instrument 10198908.4 are subject to Section 243 (a) Resource Management Act 1991

10455642.1 Surrender of the Land Covenant in Easement Instrument 9529951.12 as appurtenant to Lot 1 and 22 DP 462516, Lot 52 DP 462516, Lot 18 DP 472122, Lot 19, 20 and 21 DP 477654 and Lot 2, 9 and 27 DP 486139 - 2.8.2016 at 9:02 am

10455642.2 Surrender of the Land Covenant in Easement Instrument 9529951.13 as appurtenant to Lot 1 and 22 DP 462516, Lot 52 DP 462516, Lot 18 DP 472122, Lot 19, 20 and 21 DP 477654 and Lot 2, 9 and 27 DP 486139 - 2.8.2016 at 9:02 am

Land Covenant in Easement Instrument 10857993.1 - 30.8.2017 at 3:11 pm

Land Covenant in Easement Instrument 10857993.4 - 30.8.2017 at 3:11 pm

11031365.13 Compensation Certificate pursuant to Section 19 Public Works Act 1981 by Tasman District Council - 16.2.2018 at 12:51 pm

10995285.1 Surrender of the Land Covenant as to parts subject to and appurtenant to Lot 1 DP 462516, Lot 20 DP 477654 and Lot 2 DP 486139 created by Easement Instrument 9529951.12 - 7.3.2018 at 2:56 pm

10995285.2 Surrender of the Land Covenant as to parts subject to and appurtenant to Lot 1 DP 462516, Lot 20 DP 477654 and Lot 2 DP 486139 created by Easement Instrument 9529951.13 - 7.3.2018 at 2:56 pm

Appurtenant hereto is a right of way created by Easement Instrument 11112911.2 - 15.5.2018 at 9:01 am

11014338.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 12.10.2018 at 10:25 am

Subject to a right to drain water over part marked AD on DP 519728 created by Easement Instrument 11014338.5 - 12.10.2018 at 10:25 am

Appurtenant hereto is a right of way, and a right to drain water, and a right to convey electricity, telecommunications and computer media created by Easement Instrument 11014338.5 - 12.10.2018 at 10:25 am

The easements created by Easement Instrument 11014338.5 are subject to Section 243 (a) Resource Management Act 1991

Land Covenant in Easement Instrument 11274602.1 - 7.11.2018 at 2:14 pm

Land Covenant in Easement Instrument 11274602.2 - 7.11.2018 at 2:14 pm

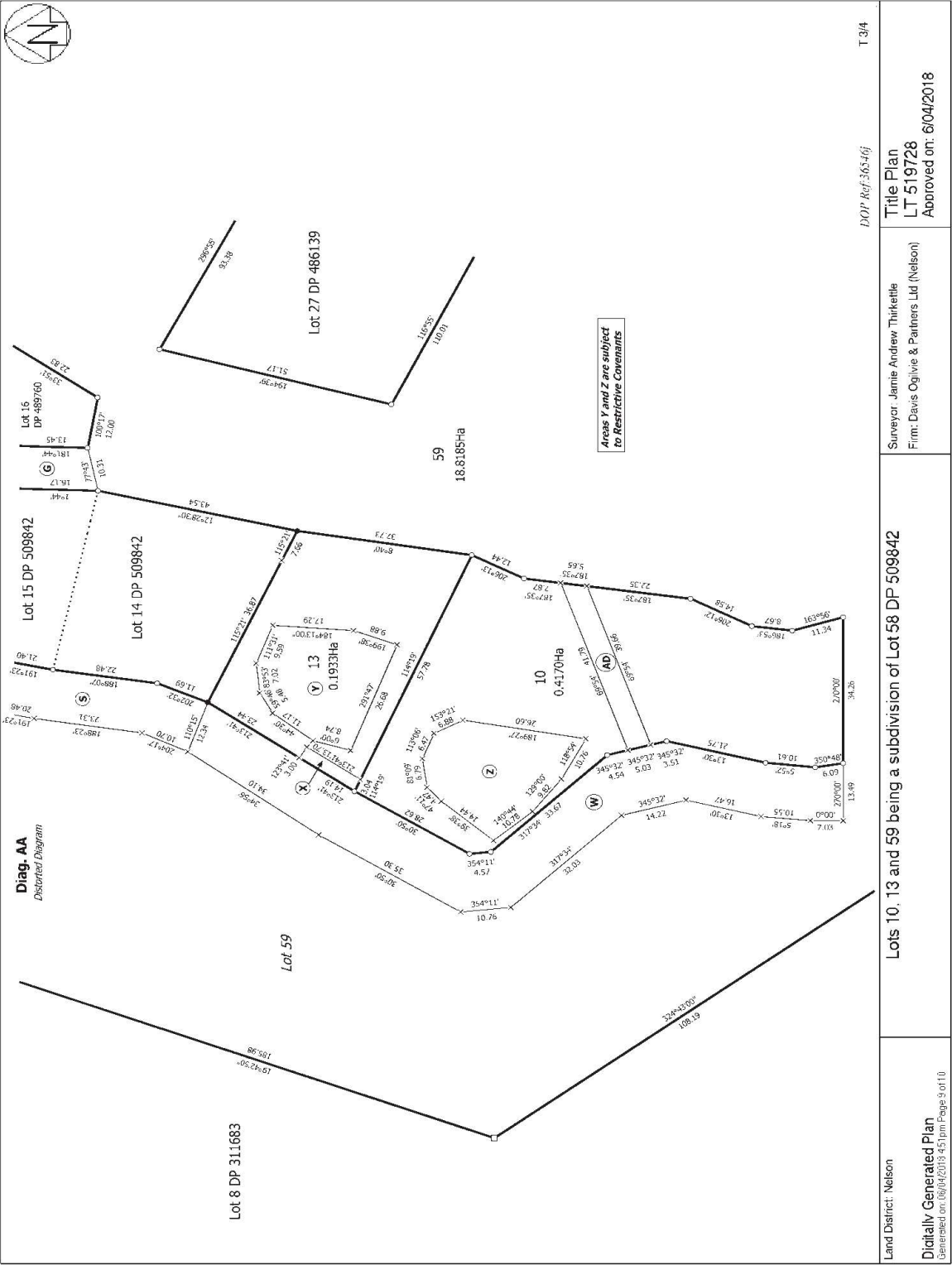
Land Covenant in Easement Instrument 11268011.1 - 8.11.2018 at 3:40 pm

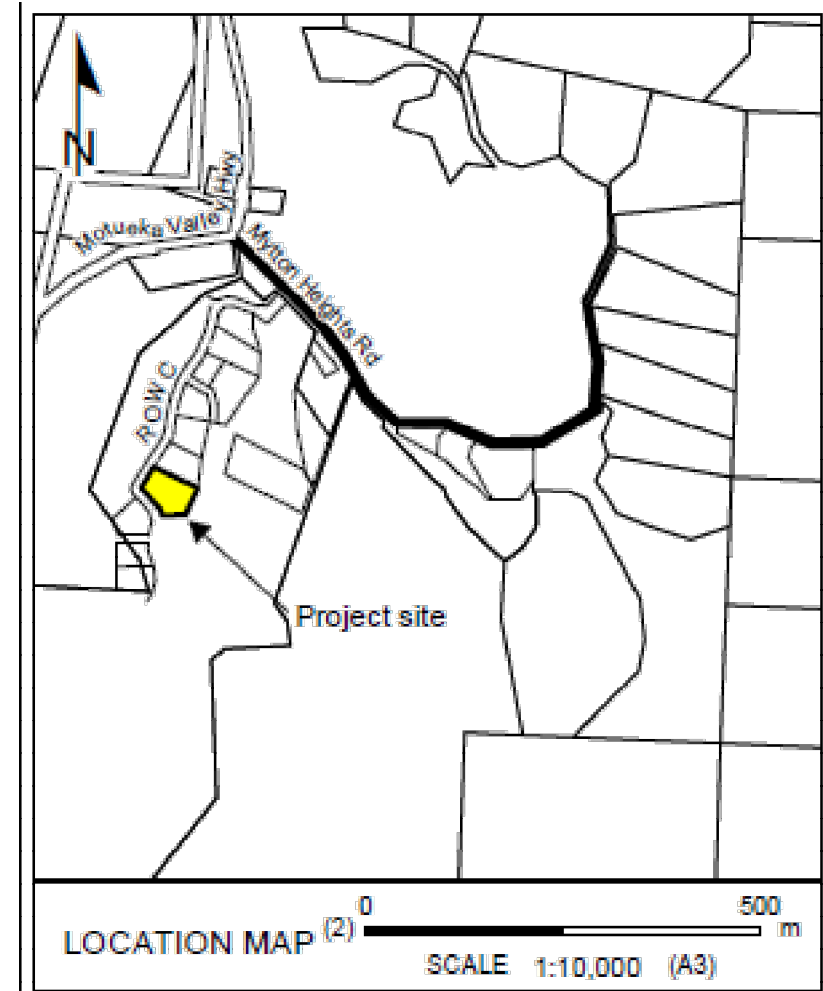
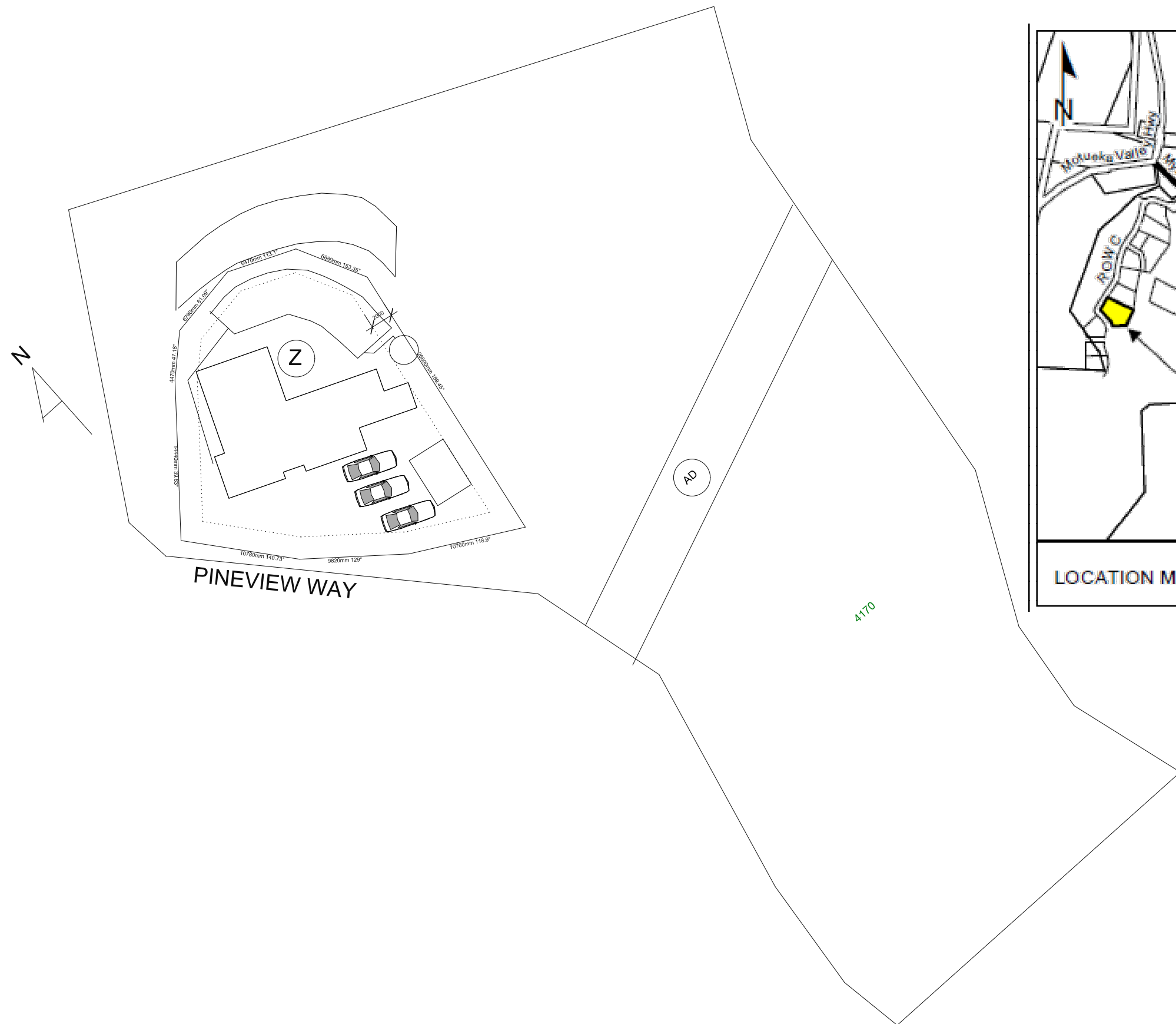
Land Covenant in Easement Instrument 11268011.2 - 8.11.2018 at 3:40 pm

Fencing Covenant in Transfer 11268011.3 - 8.11.2018 at 3:40 pm

11268011.4 Mortgage to the Nelson Building Society - 8.11.2018 at 3:40 pm

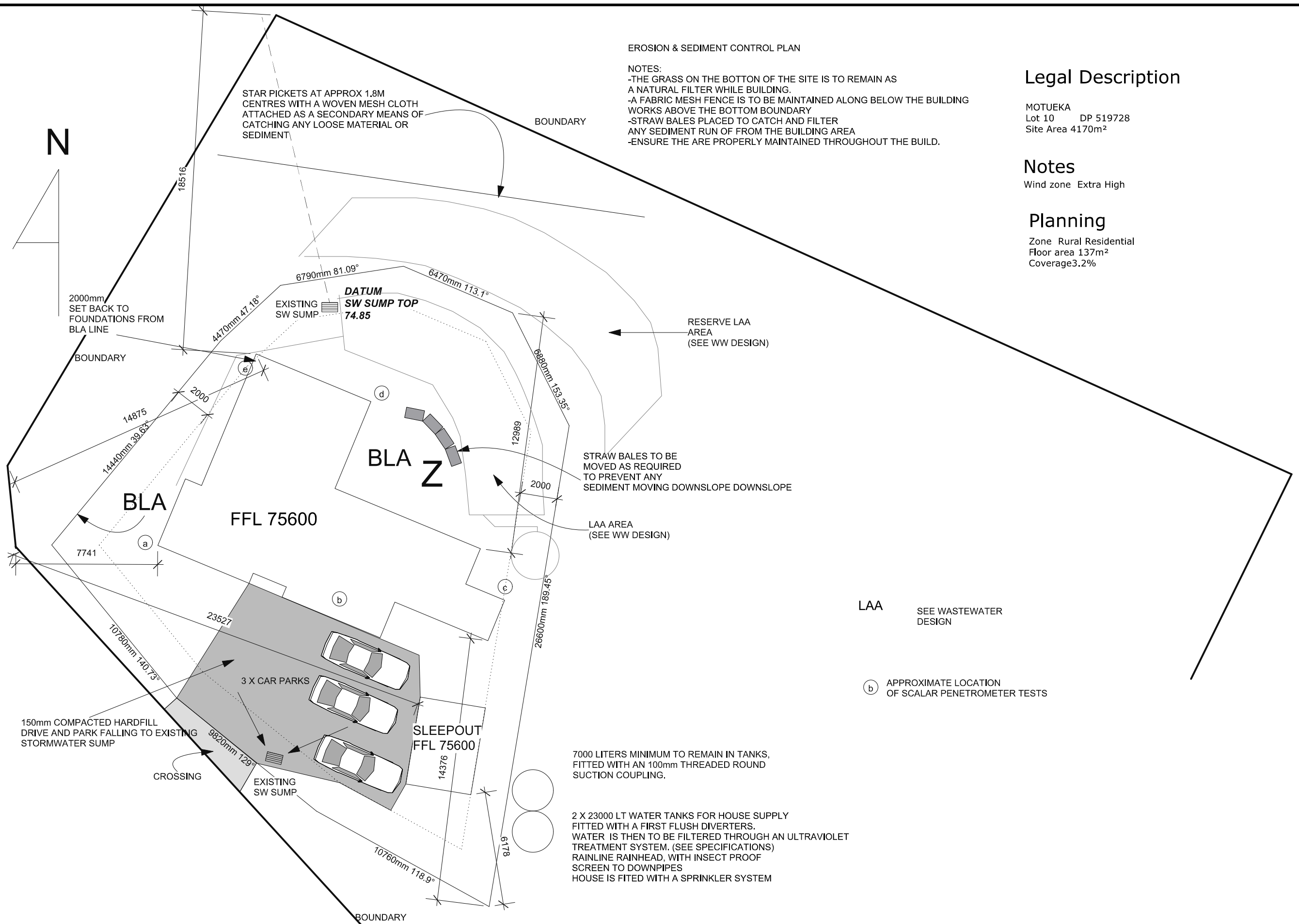
Identifier 827607





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PAGE 3 -DRAINAGE PLAN
PAGE 4- FOUNDATION PLAN
PAGE 5-JOIST PLAN
PAGE 6- FLOOR PLAN
PAGE 7- ELEVATIONS
PAGE 8-SECTION
PAGE 9- ROOF PLAN
PAGE 10 -DETAILS
PAGE 11 DETAILS
PAGE 12 SLEEP-OUT FLOOR & FOUNDATIONS
PAGE 13 SLEEP-OUT ELEVATIONS
PAGE 14 SLEEP-OUT SECTIONS
TRUSS DESIGN

FOUR BEDROOM DWELLING WITH SLEEP-OUT	LOCATION PLAN	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:400 @A3 REVISION	1/14
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FOUR BEDROOM DWELLING
WITH SLEEPOUT

SITE PLAN

FOR S MCLOUD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

SCALE 1:200
@A3
REVISION

2/14

Sanitary Fixture	Discharge Pipe	Minimum gradient
Basin/Vanity	40 DIA	1:40
Bathtub	40 DIA	1:40
Shower	40 DI	1:40
WC	100 DIA	1:40
KItchen Sin	50 DI	1:40
Laundry Tub	50 DIA	1:40

WATER SUPPLY PIPE 25mm BLUELINE
HWC PIPE INSULATION 'ARMOURFLEX FR'
PIPE IN DWELLING BUTELINE 20mm HOT & COLD
TO COMPLY WITH G13/AS1

Downpipe Calculation

1/ 80 dia per 75m²
roof
Roof area 176m²
3/ 80mm dia downpipes
required.

FOUR BEDROOM DWELLING WITH SLEEPOUT

DRAINAGE PLAN

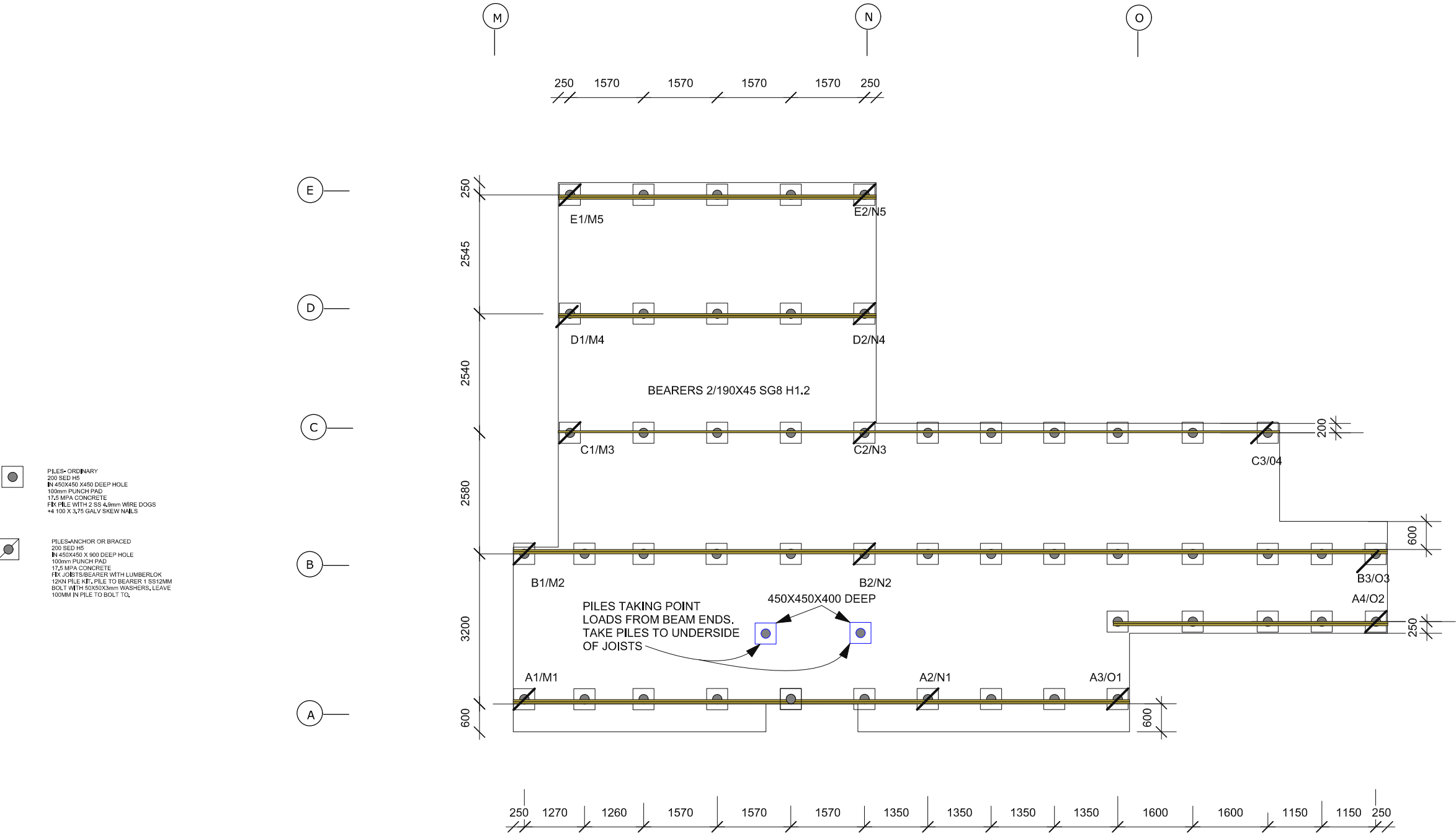
FOR S MCLOUD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153

DATE 28/01/2019

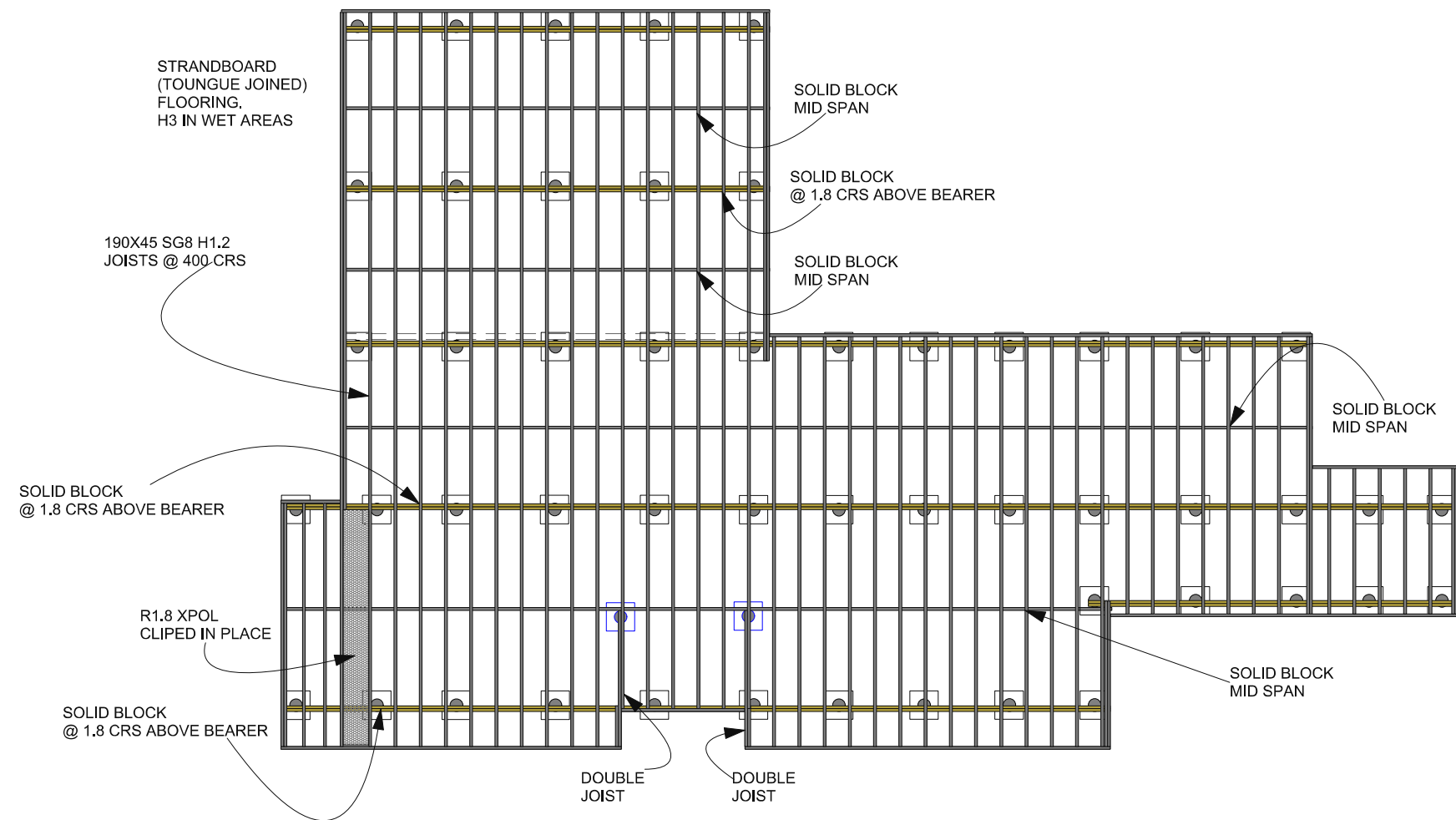
SCALE 1:100
@A3
REVISION

3/14



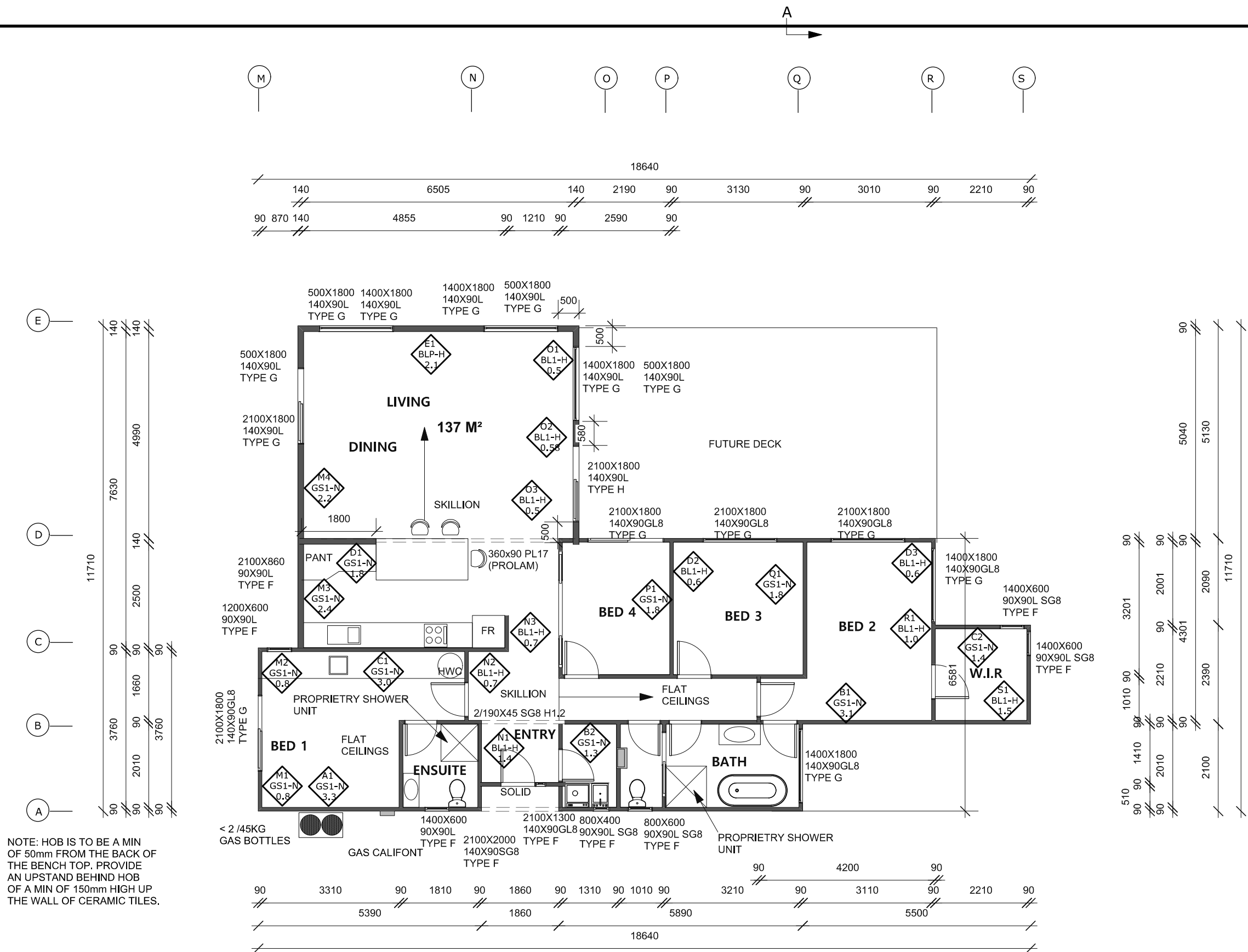
FOUNDATION PLAN
1:100

FOUR BEDROOM DWELLING WITH SLEEPOUT	PILE PLAN	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:100 @A3 REVISION	4/14
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JOIST PLAN
1:100

FOUR BEDROOM DWELLING WITH SLEEPOUT	PILE PLAN	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:100 @A3 REVISION	5/14
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Bracing Notes

<div><div>A1</div><div>GS1A</div><div>1.8</div></div>	Bracing number Brace Type Brace Lengyh
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Hot Water Cylinder

Electric HWC complete with Tempering Valve, Pressure reducing and relief valves and Seismic restraints.
Safe tray Sludge pipe to discharge to a safe place.
Gas califont for self contained rooms water heating.

Wet Areas Wall Lining

Wet areas wall lining to be finished with Semi Gloss or Gloss paint as per acceptable solutions E3/AS1 3.1.2 Walls (f)

Legend

Type C = Lintel fixing type
140x90L = Lintel size
2100x2400 = Opening size (HxW)

WET AREAS FLOOR

FLOORS SHALL BE COATED WITH 3 COATS OF POLYURETHANE E3/AS1 3.1.1 (F)

H1 COMPLIANCE

WALL INSULATION R2.6
FLOOR EXPOL R 1.8
CEILING R 3.6
WINDOWS DOUBLE GLAZED .26

GAS

GAS FOR SOME WATER HEATING AND COOKING TO BE INSTALLED BY A LICENCED FITTER AND ISSUED WITH A PRODUCER STATEMENT OF COMPLIANCE

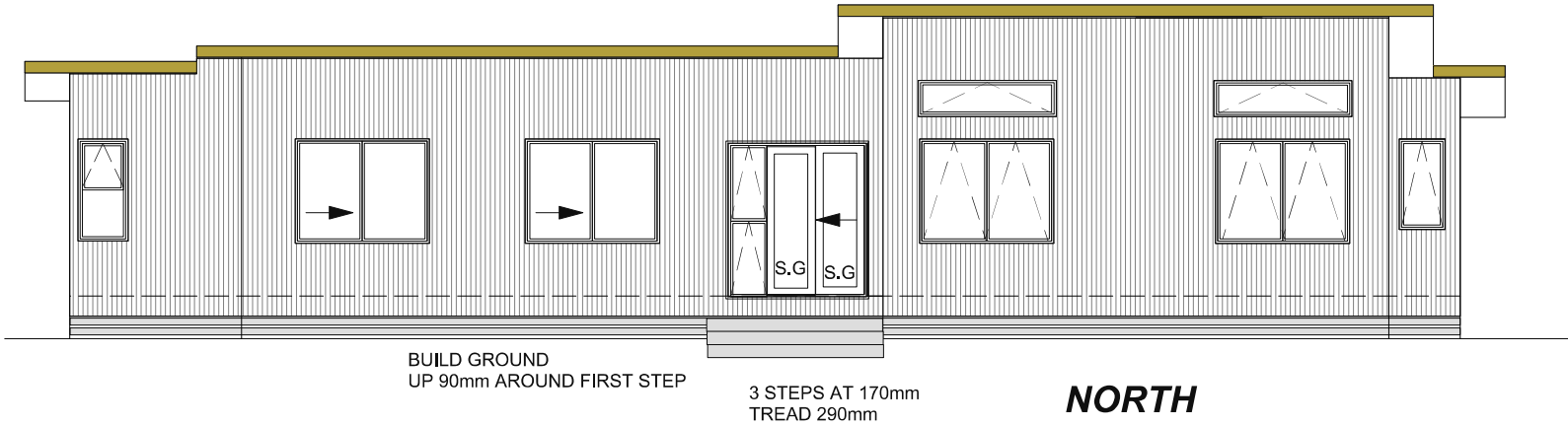
CONFIRM ALL DIMENSIONS ON SITE
ANY DISCREPANCIES CONTACT DESIGNER IMMEDIATELY

DO NOT SCALE OFF PLAN

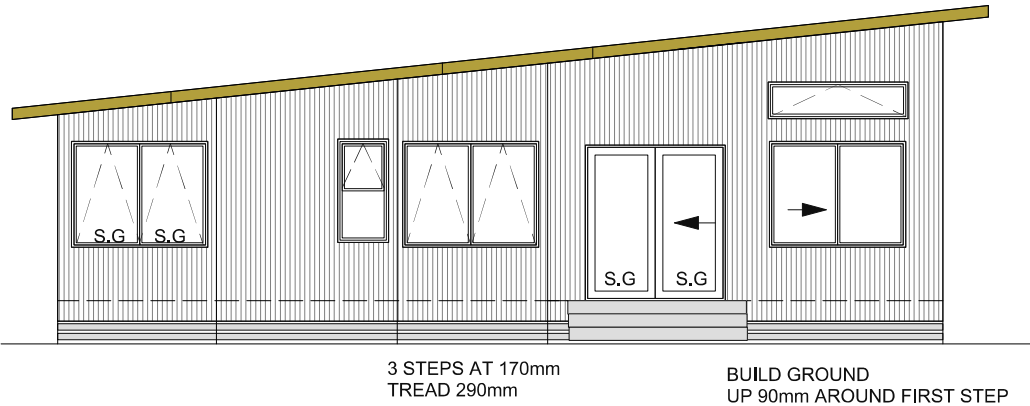
FOUR BEDROOM DWELLING WITH SLEEPOUT	FLOOR PLAN	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:100 @A3 REVISION	6/14
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RISK FACTOR	LOW	MEDIUM	HIGH	X HIGH	SUB TOTALS
					N E S W
WIND ZONE	0	0	1	2	2 2 2 2
NO OF STORIES	0	1	2	4	0 0 0 0
ROOF/WALL	0	1	3	5	3 3 3 3
EAVES WIDTH	0	1	2	5	0 0 0 0
ENVELOPE COMPLEXITY	0	1	3	6	0 0 0 0
DECK DESIGN	0	2	4	6	0 0 0 0
TOTALS					5 5 5 5

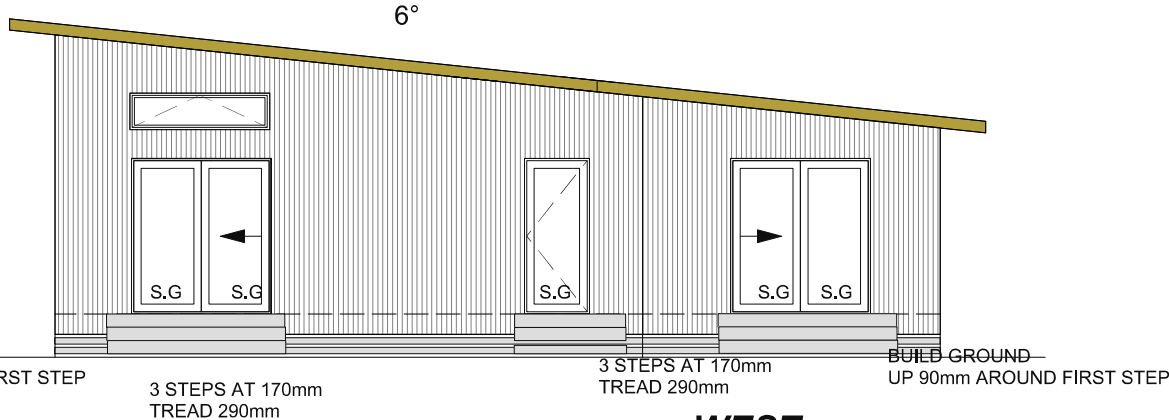
7-12 DIRECT FIXED VERTICAL PROFILED METAL ON
6mm PLY RAB



**NORTH
ELEVATION
1:100**



**EAST
ELEVATION
1:100**

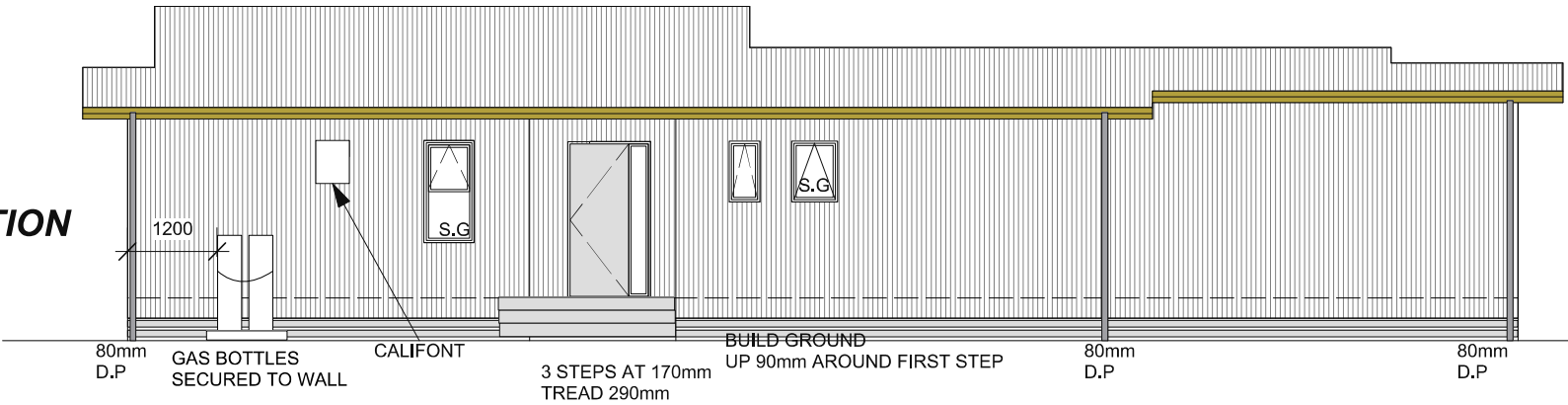


**WEST
ELEVATION
1:100**

Windows

All windows within the insulated envelope to be Double Glazed
All Glazing to comply with NZS 4223.

O = Obscure
SG = Grade A Safety Glass
RS = Sashes fitted with Restrictor Stays



**SOUTH
ELEVATION
1:100**

FOUR BEDROOM DWELLING
WITH SLEEPOUT

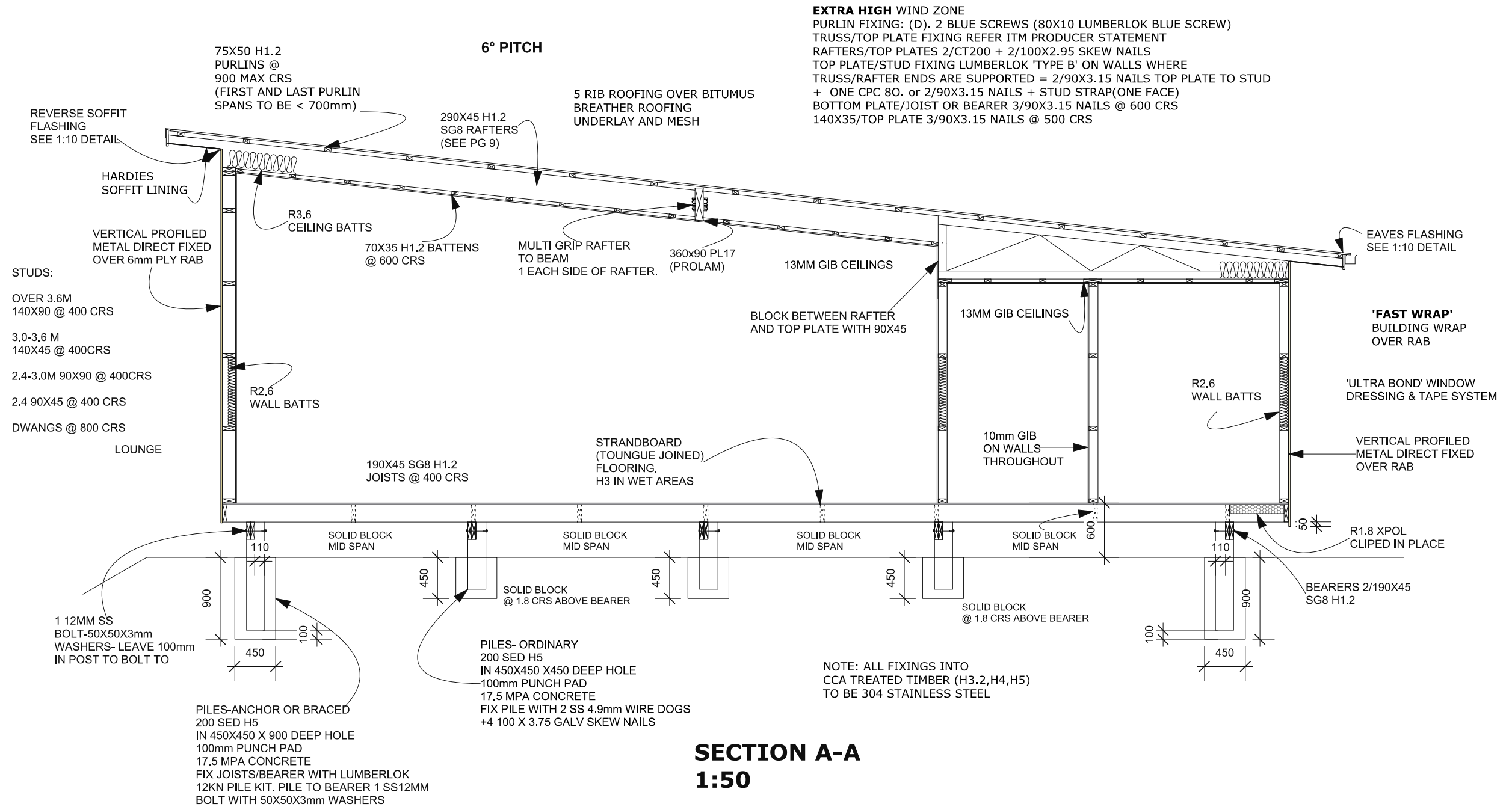
ELEVATIONS

FOR S MCLOUD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

SCALE 1:100
@A3
REVISION

7/14



FOUR BEDROOM DWELLING
WITH SLEEPOUT

SECTION

FOR S MCLOUD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN

DATE

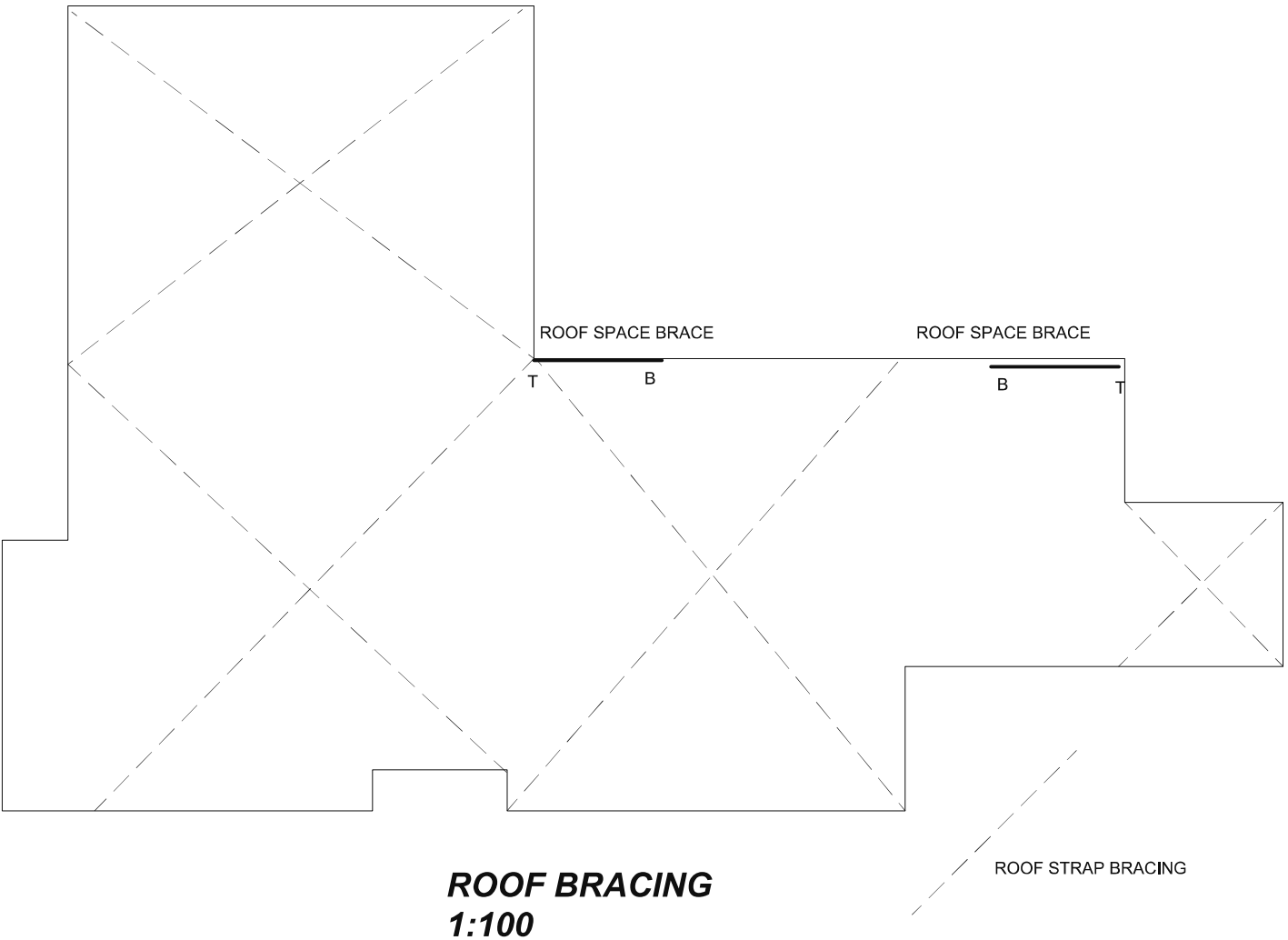
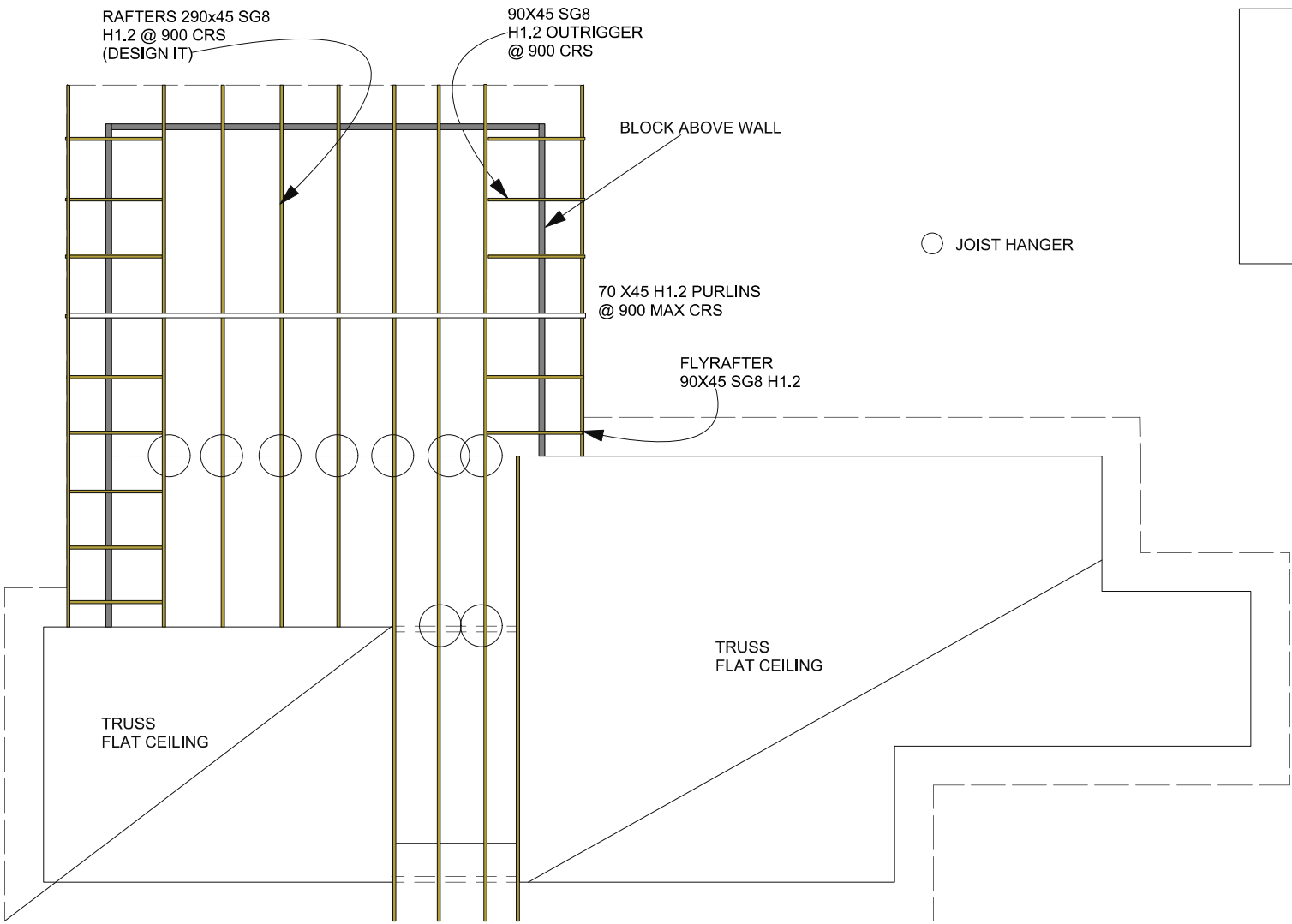
G BENJAMIN
0211449153
28/01/2019

SCALE 1:50
@A3

REVISION

8/14

RAFTER PLAN
1:100



FOUR BEDROOM DWELLING
WITH SLEEPOUT

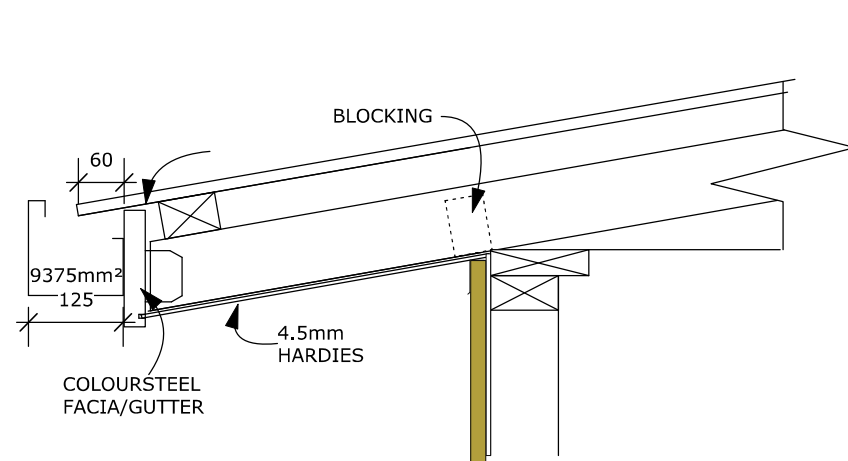
ROOF PLAN

FOR S MCLOUD & T EVANS
31 PINEVIEW WAY
MOTUEKA

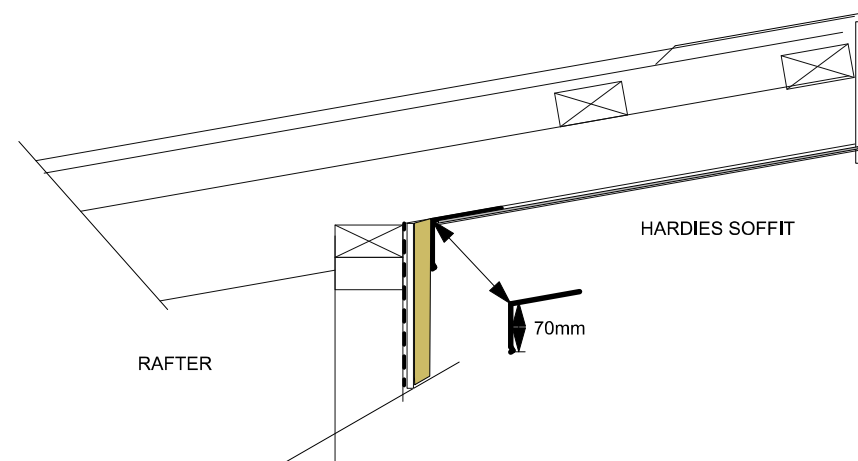
DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

SCALE AS SHOWN
@A3
REVISION

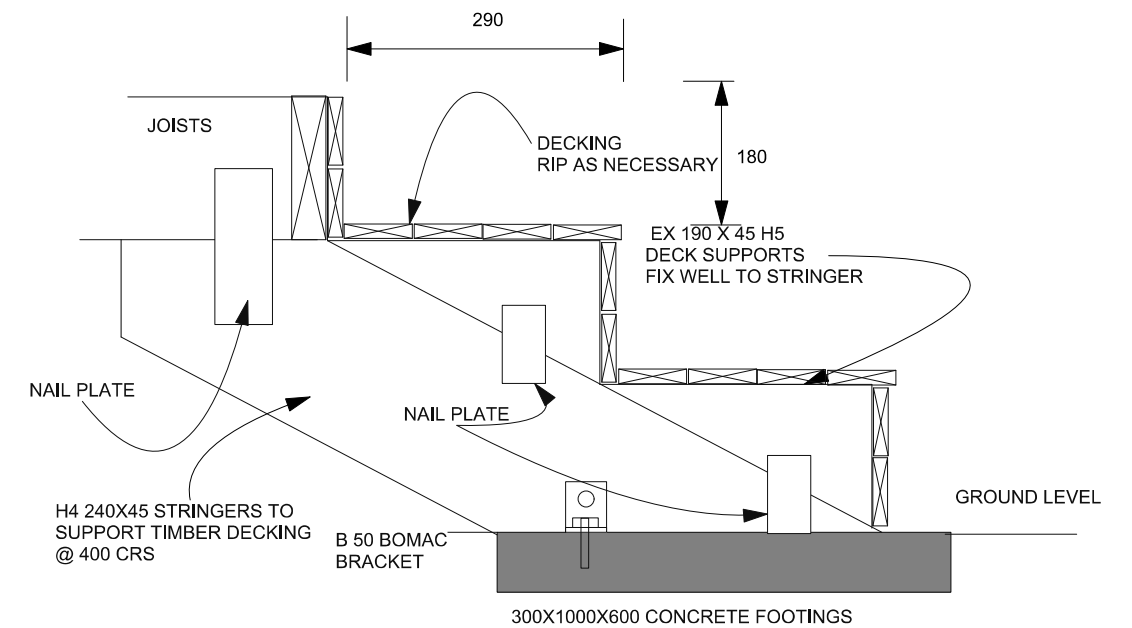
9/14



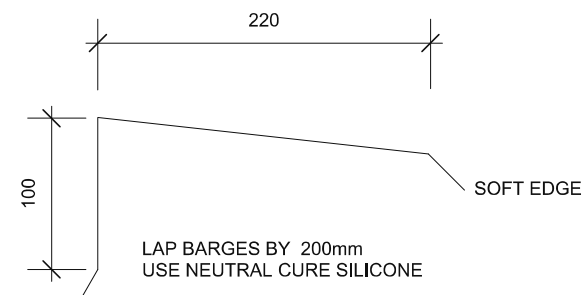
**TYPICAL EAVES FLASHING DETAIL
1:10**



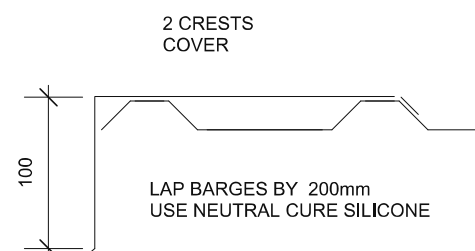
DETAIL O 1:10



**STEP DETAIL 'A'
1:10**



**RIDGE
1:5**



**BARGE
1:5**

FOUR BEDROOM DWELLING
WITH SLEEPOUT

DETAILS 1

FOR S MCLOUD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

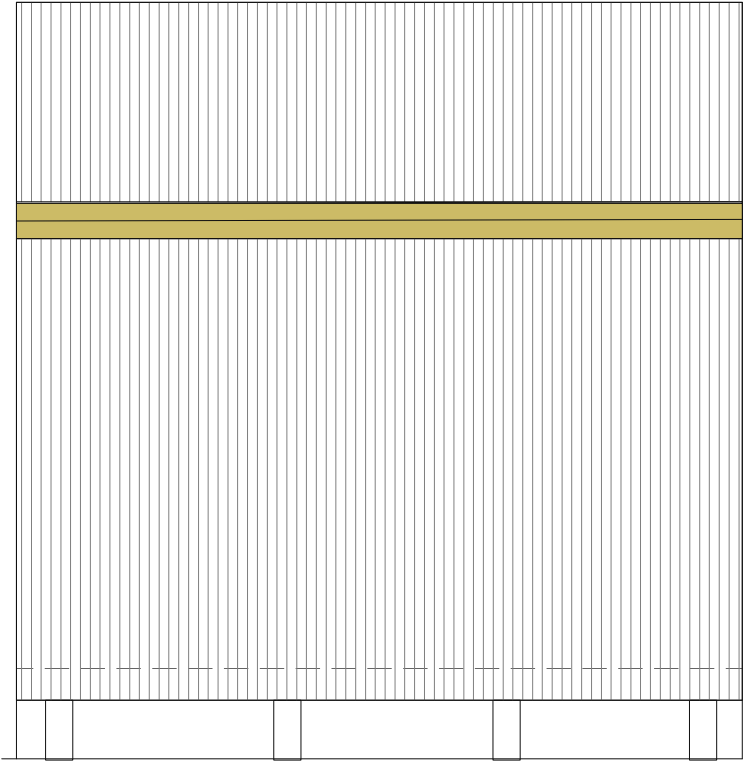
SCALE AS SHOWN
@A3
REVISION

10/14

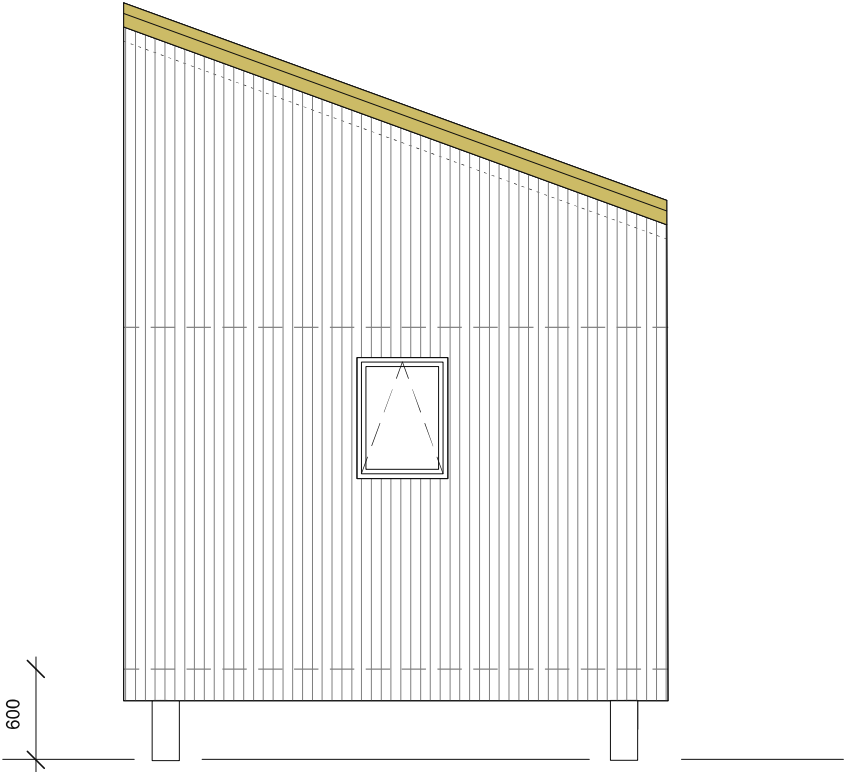
FOUR BEDROOM DWELLING WITH SLEEPOUT	DETAILS 2	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE AS SHOWN @A3 REVISION	11/14
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RISK FACTOR	LOW	MEDIUM	HIGH	X HIGH	SUB TOTALS
					N E S W
WIND ZONE	0	0	1	2	2 2 2 2
NO OF STORIES	0	1	2	4	0 0 0 0
ROOF/WALL	0	1	3	5	3 3 3 3
EAVES WIDTH	0	1	2	5	5 5 5 5
ENVELOPE COMPLEXITY	0	1	3	6	0 0 0 0
DECK DESIGN	0	2	4	6	0 0 0 0
TOTALS					10

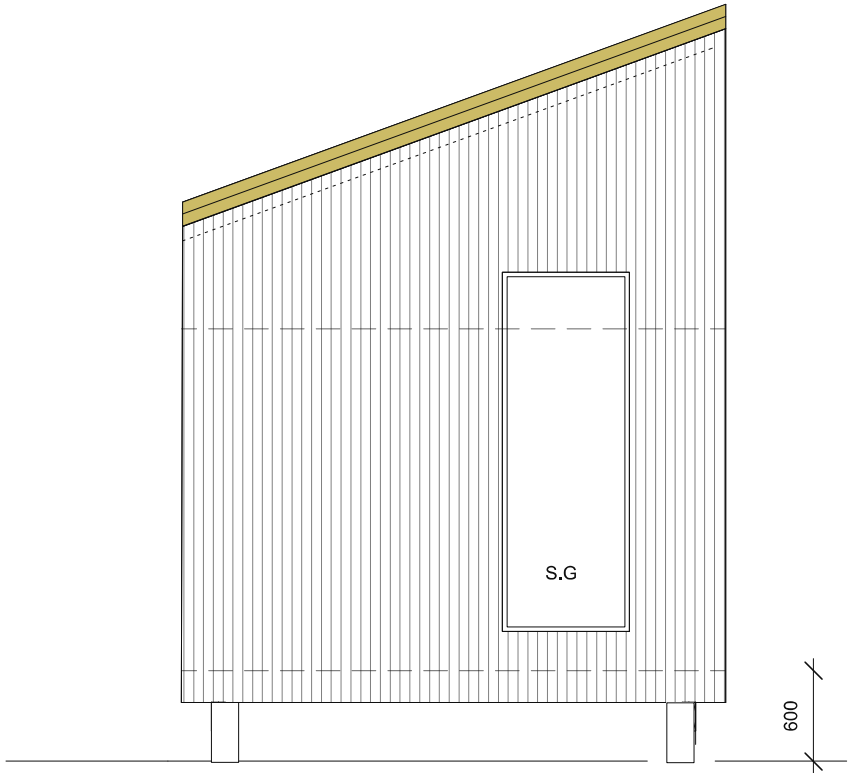
7-12 DIRECT FIXED VERTICAL PROFILED METAL ON
6mm PLY RAB



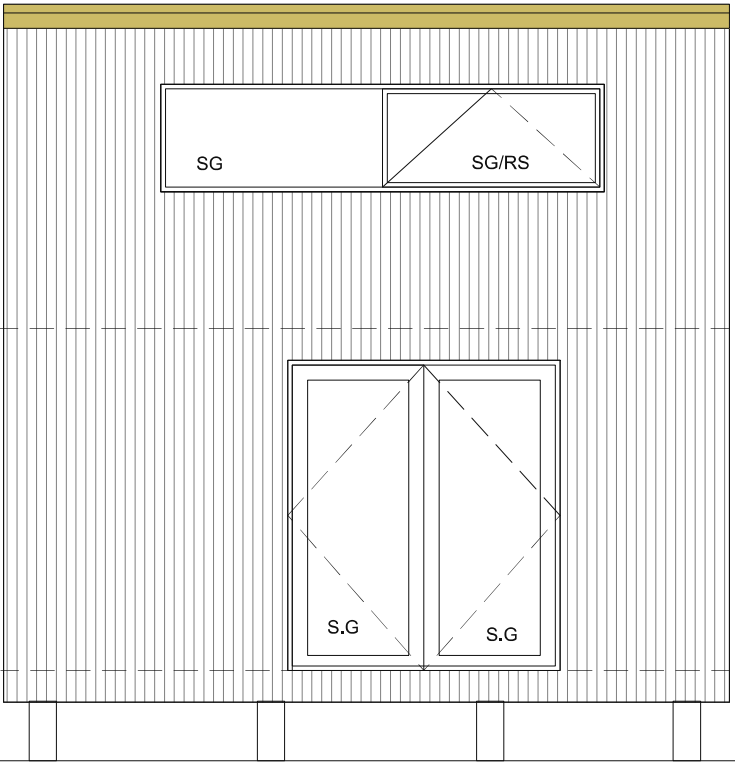
WEST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION

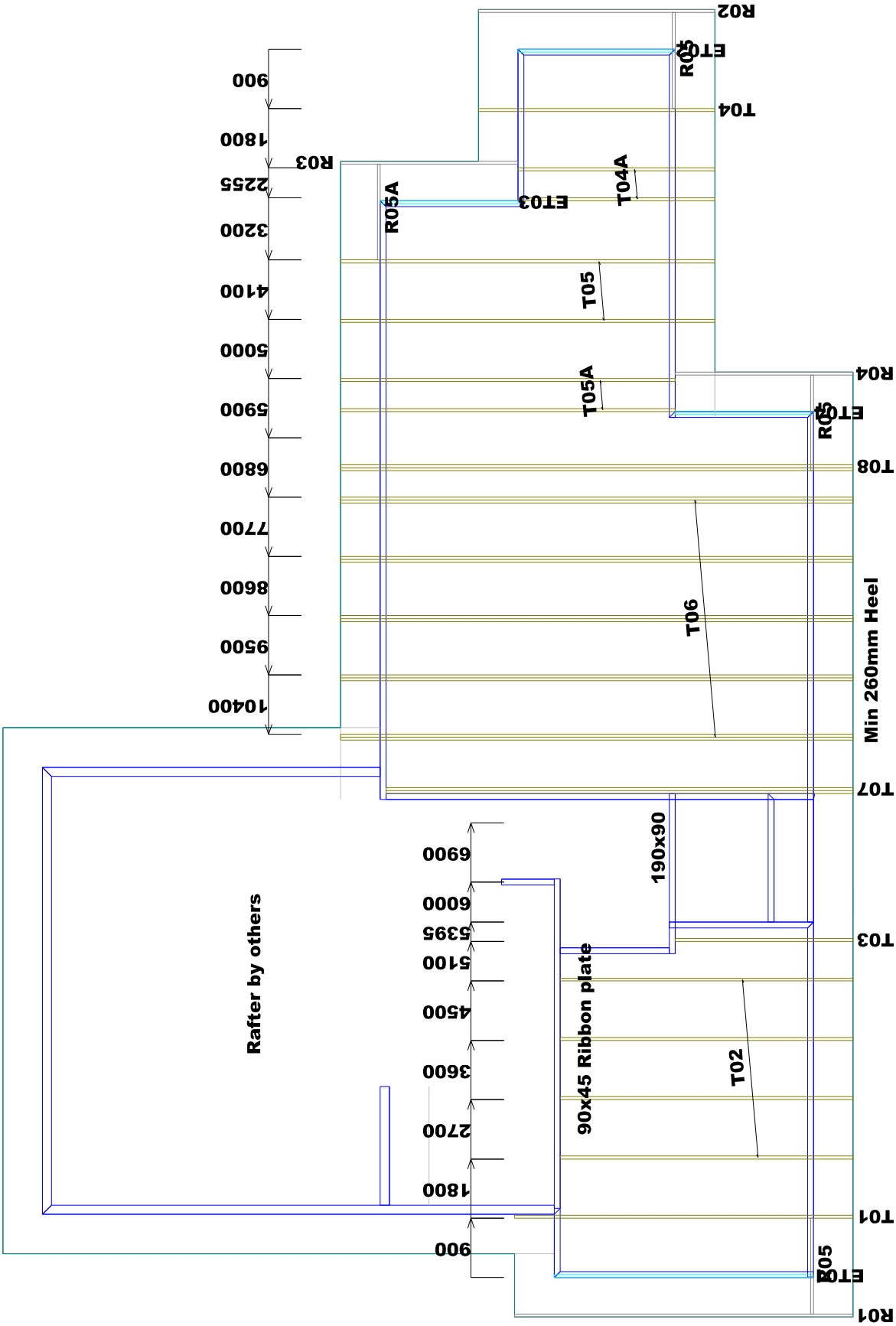
Windows

All windows within the
insulated envelope to
be Double Glazed
All Glazing to comply with
NZS 4223.

O = Obscure
SG = Grade A Safety Glass
RS = Sashes fitted with
Restrictor Stays

FOUR BEDROOM DWELLING WITH SLEEPOUT	ELEVATIONS	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:50 @A3 REVISION	13/14
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FOUR BEDROOM DWELLING WITH SLEEPOUT	SECTIONS	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:50 @A3 REVISION	14/14
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PrimeCad v4.7.301

Job Title : 9631

Sheet : 1

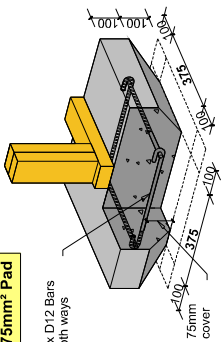
Revision Number :

VOID IF ITM FRAME AND TRUSS ARE NOT FABRICATORS

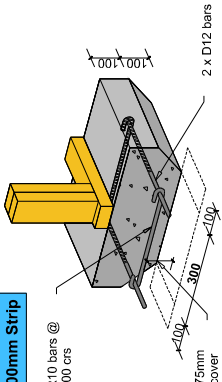
FRAME & TRUSS	Site Address : McLoud/Evans 31 Pineview Way Motueka	Job Details: Roof Pitch : 6.000 Deg Roof Material : Galv Iron .5mm Ceiling Material : Gib Board 12mm Wind Zone : Extra High Roof Snow Load : 0.400 kPa	Truss Centres : 900 mm Roof Live Load : 0.250kPa Floor Live Load : kPa Wind Speed : 55.0 m/s
	For Building Consent Buildable Truss Layout	Roof Pitch : 6.000 Deg Roof Material : Galv Iron .5mm Ceiling Material : Gib Board 12mm Wind Zone : Extra High Roof Snow Load : 0.400 kPa	Truss Centres : 900 mm Roof Live Load : 0.250kPa Floor Live Load : kPa Wind Speed : 55.0 m/s

SLAB THICKENING & STUD REQUIREMENTS

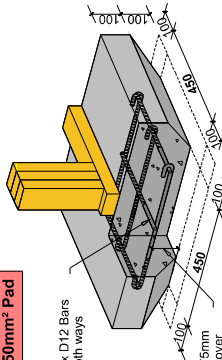
TYPE FP1
375mm² Pad



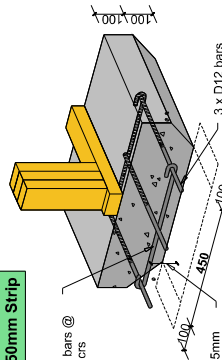
TYPE FS1
300mm Strip



TYPE FP2
450mm² Pad



TYPE FS2
450mm Strip



Concrete Slab Thickening Guide



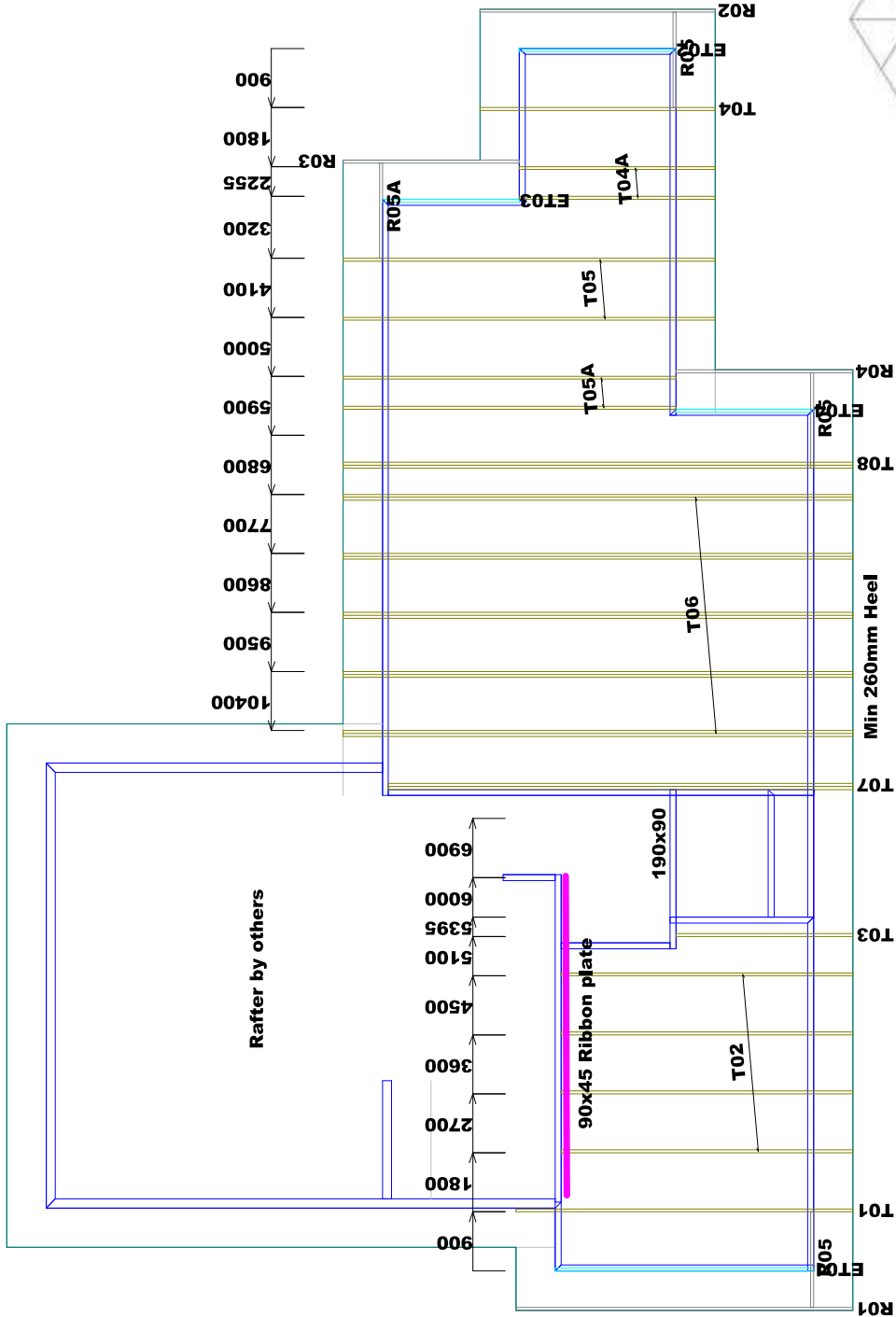
Notes:
- The numbers found in the hatched areas are the numbers of studs required below each truss
- Standard 100mm reinforcing concrete slab, as per NZS3604:2011

Refer to:
MITek Internal Load Bearing on Concrete Floor Slabs 10/2011
MITek Structural Fixings On-Site Guide for Building Code Compliance

Site Address:
McLoud/Evans
31 Pineview Way
Motueka



Load bearing wall. Indicates loads from trusses only.
Loads from trusses are less than -10Kn ULSL.
Bearer line required to support wall



NO SLAB THICKENING REQUIRED

Job Title:	Truss Centres	900	mm
Job Title:	Roof Live Load	0.250	kPa
Job Title:	Floor Live Load		kPa
Job Title:	Wind Speed	55.0	m/s
Job Title:	Roof Pitch	6.000	Deg
Job Title:	Roof Material	Galv Iron	.5mm
Job Title:	Ceiling Material	Gib Board	12mm
Job Title:	Wind Zone	Extra High	
Job Title:	Roof Snow Load	0.400	kPa

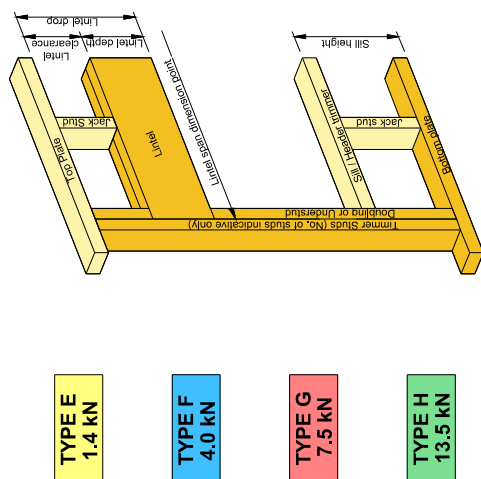
PrimeCuts v4.7.301

Job Title: 9631

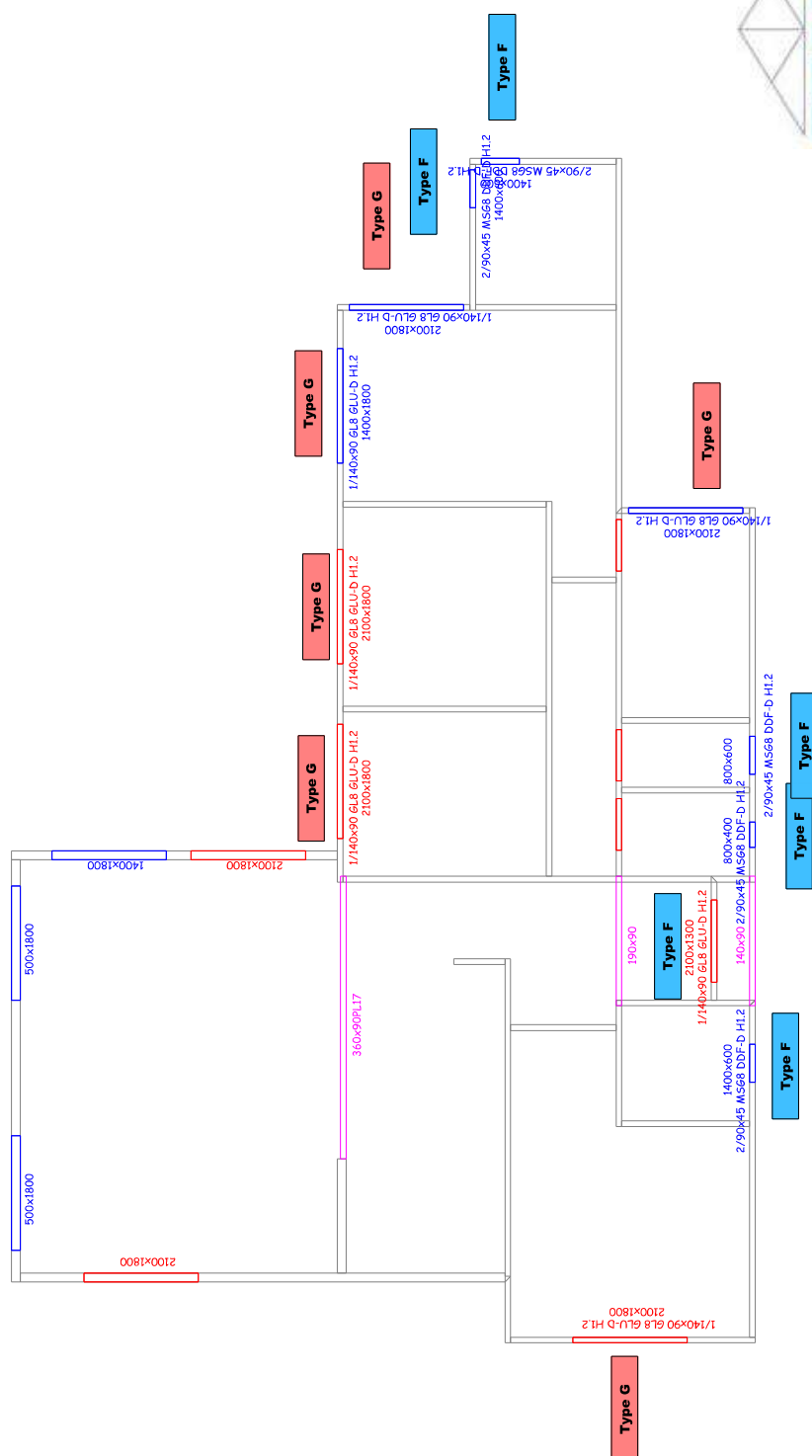
Sheet: 2

Revision Number:

MITek



Refer to:
LUMBERLOK Lintel Fixing Schedule 10/2011
MITek Structural Fixings **On-Site Guide** for Building Code Compliance
(Alternative to Table 8.14 & Figure 8.12 NZS 3604:2011)



Site Address :

McCloud/Evans
31 Pineview Way
Motueka



Sheet Title :

For Building Consent Lintel Sizes

Date: 15 Apr 2019

Date:	10 Apr, 2019	Exam: MRCES: CRAT
Scale:	1:100	System: MITek 20/20

Job Details:

Roof Pitch : 6.000 Deg
Roof Material : Galv Iron .5mm
Ceiling Material : Gib Board 12mm
Wind Zone : Extra High
Roof Snow Load : 0.400 kPa

Truss Centres : 900 mm
Roof Live Load : 0.250 kPa
Floor Live Load : kPa
Wind Speed : 55.0 m/s

PrimeCad v4.7.301

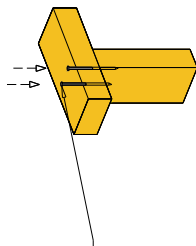
Job Title :

Sheet: _____

3

Revision Number :

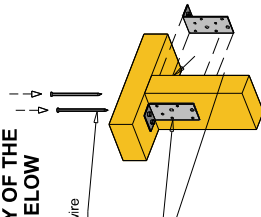
TYPE A
0.7 kN



2 x 90mm x 3.15 Ø plain
steel wire nails driven
vertically into stud.

TYPE B
4.7 kN

CHOOSE ANY OF THE 3 OPTIONS BELOW

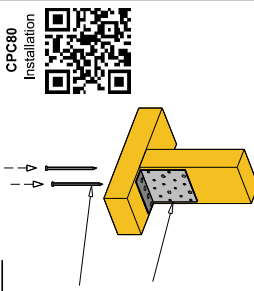


2 x 90mm x 3.15 Ø plain steel wire
nails driven vertically into stud.

2 x LUMBERLOK
CPC40

Recommended for internal wall options to avoid lining issues

OR

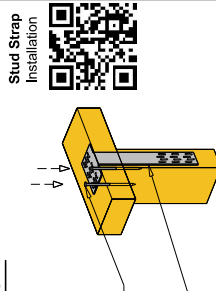


2 x 90mm x 3.15 Ø plain steel w
nails driven vertically into stud.

1 x LUMBERLOK 6 kN Stud Anchor
(CPC80)

Recommended for internal wall options to avoid lining issues

OR



2 x 90mm x 3.15 Ø pl
steel wire nails driven
vertically into stud.

**1 x LUMBER
Stud Strap**

Plate to Top Plate Fixing Schedule

Refer to:
LUMBERLOK Stud to Top Plate Fixing Selection Chart 09/2011
MiTek Structural Fixings **On-Site Guide** for Building
Code Compliance
(Alternative to NZS 3604:2011 Table 8.18)

Site Address :
McCloud
31 Pine
Motueka



FRAME & TRUSS

Sheet Title :

For Building Consent Stud To Top Plate Fixing

Date: 15 Apr. 2019

Drawn : Marcel Stutz

Date:	10 Apr, 2019	System: MitiTek 20/20
Scale:	1:100	

Job Details:

Roof Pitch : 6.000 Deg
Roof Material : Galv Iron .5mm
Ceiling Material : Gib Board 12mm
Wind Zone : Extra High
Roof Snow Load : 0.400 kPa

Truss Centres : 900 mm
Roof Live Load : 0.250kPa
Floor Live Load : kPa
Wind Speed : 55.0 m/s



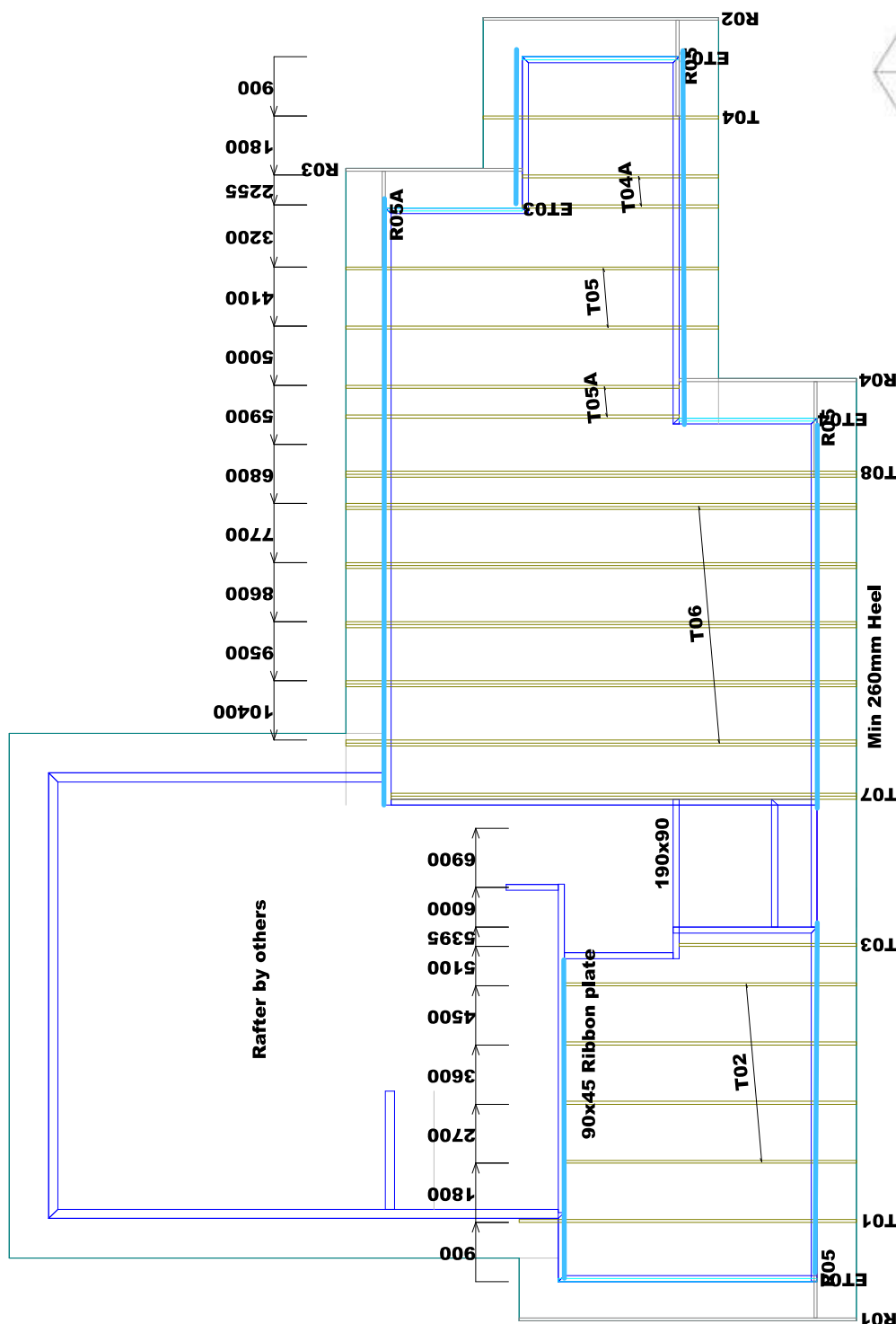
PrimeCad v4.7.301

Job Title :

Sheet:

4

Revision Number :



Form 2A

Memorandum from licensed building practitioner: Certificate of design work
Section 30C or section 45, Building Act 2004

The building

Street address of building:

31 Pineview Way**Motueka****The owner**

Name: T Evans & S Mcloud

Address: as above

Telephone number: 0211103643

Email address: themotlot@gmail.com

Identification of design work that is restricted building work

I carried out or supervised the following design work that is restricted building work:

Design work that is restricted building work	Description	Carried out/ supervised	Reference to plans and specifications
<i>[Tick]</i>	<i>[If appropriate, provide details of the restricted building work]</i>	<i>[Specify whether you carried out this design work or supervised someone else carrying out this design work]</i>	<i>[If appropriate, specify references]</i>

Primary structure

Foundations and subfloor framing	(/)		(/) Carried out () Supervised	3604/11
Walls	(/)		(/) Carried out () Supervised	3604/11
Roof	/)	<i>Some only</i> <i>(truss ps1)</i>	(/) Carried out () Supervised	3604:11
Columns and beams	(/)		(/) Carried out () Supervised	3604/11 Design IT Prolam
Bracing	(/)	<i>Some only</i>	(/) Carried out () Supervised	easybrace
Other	()		() Carried out () Supervised	

External moisture management systems

Damp proofing ()		() Carried out () Supervised	
Roof cladding or roof cladding system (/)		(/) Carried out () Supervised	E2/AS1
Ventilation system (for example, subfloor or cavity) (/)		(/) Carried out () Supervised	E2/AS1
Wall cladding or wall cladding system (/)		(/) Carried out () Supervised	E2/AS1
Waterproofing ()		() Carried out () Supervised	
Other ()		() Carried out () Supervised	

Fire safety systems

Emergency warning systems, evacuation and fire service operation systems, suppression or control systems, or other ()		() Carried out () Supervised	
--	--	-----------------------------------	--

Note: The design of fire safety systems is only restricted building work when it involves small-to-medium apartment buildings as defined by the Building (Definition of Restricted Building Work) Order 2011.

Note: continue on another page if necessary.

Are waivers or modifications of the building code required? () Yes (/) No

If Yes, provide details of the waivers or modifications below:

Clause	Waiver/modification required
<i>[List relevant clause numbers of building code]</i>	<i>[Specify nature of waiver or modification of building code]</i>

Note: continue on another page if necessary.

Issued by

Name: G Benjamin

LBP or registration number: 105877

The practitioner is a: (/) Design LBP () Registered () Chartered professional

architect

engineer

Mailing address: 15 Sunnybank Rise, Nelson

Street address or registered office:

Phone number: Landline:

Mobile:
0211449153

Daytime:

After hours:

Fax number:

Email address: gregsddesign@outlook.com


Website:

Declaration

I Gregory John Benjamin *[name of practitioner]*

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 described on this form and that based on this I also state that the RBW

(a) complies with the building code; or

Signature: 

Date: 02.04.2017

SPECIFICATIONS

FOR	S Mcloud & T Evans
AT	31 Pineview Way
	Motueka
LOT	Lot 10
DP	519728
	02/04/2019

CONTENTS

General Specifications

H1 Calculations

Bracing Calculations

PS1's

Construction Details (Flashings etc)

Standards

The method of construction and the type, quality and sizes of materials used to complete the work shall not be less than laid down in the NZ Building Code, Approved Documents, Verification Methods, together with any other relevant standards referred to therein.

Nett Sums

The nett sums allowed in this Specification are “nett” including GST and the Contractor or Sub-Contractor must allow for all cartage and profit he requires to all such items.

Completion

Throughout the construction period the Contractor shall keep the site as tidy as possible and give due consideration to the occupants of neighbouring properties, particularly in the question of obstruction and noise.

On completion of the work the whole site shall be left clear and the building, paths and steps etc clean and ready for use.

Insurance

Throughout the construction period the Contractor shall hold himself and the Owner covered against all claims and losses that may arise in connection with the Contract.

Temporary Services

The Contractor shall arrange for all temporary services, pay all fees in connection therewith and remove same on completion of Contract.

Workmanship

The whole of the works shall be executed by competent tradesmen in accordance with best trade practice with materials of the grades and qualities as specified.

Progress Payments

The rates of payment shall be 90% of certified value of the work actually done and 90% of the certified value of materials on the site which are to be included in the permanent work.

Retention during the maintenance period shall be at the rate of 5%.

Tender

This Contract is a lump sum contract which is to be inclusive of Goods and Services Tax.

Time for Completion

The tenderer in his Tender shall state his date for the completion of the whole of the Contract. The Contractor must accept responsibility for his Sub-Contracts being completed on time.

Claims for extension of time due to abnormal weather conditions, site conditions, fire, strikes, earthquakes will be considered.

Drawings and Specifications

Any written dimensions on the Drawings shall be taken in preference to measurements by scaling.

Any contradictions on the Drawings shall be notified to the Designer as soon as discovered.

The subdivision of the Specification into sections and clauses is for convenience only and has no bearing on the interpretation of any clause. All clauses in all sections apply to the entire Contract and whereas reasonable care is taken to classify under each trade the onus is on each trade to make themselves conversant with all clauses which may affect their work.

Where work is indicated on Drawings but not in Specification or vice versa it shall be deemed to be included in Contract as if it were included in both.

Drainage

All existing drainage and connection points have been ascertained from existing records or on site inspection where this has been possible. The Drawings provide no guarantee that existing drains are located exactly where shown. It shall be the Contractor's responsibility in all cases to ensure that these drains are located on site by excavation before any building work is commenced.

EXCAVATION

Allow for all bulk excavation as indicated in Drawings.

All excavated material except top soil shall be removed from the site daily as part of the Contract unless otherwise advised.

Excavate for all foundations and driveway as required.

Should any soft patches be discovered, The Contractor may be required to carry out additional work, to be paid for as an extra to the Contract.

The Contractor shall place and consolidate backfilling round all foundations.

CONCRETE

Construct all concrete work as shown on the Drawings.

Concrete shall be pre-mixed or site mixed and provide 20MPa crushing strength at 28 days standard cured.

CARPENTRY AND JOINERY

General

Particular reference shall be made to NZ Building Code, Approved Documents including B1, E1, E2, E3, and G1 and also to NZS 3604.

Timber

The following types and grades of timber shall be used:

Roof framing	Trusses D Fir H1.2	Purlins H1.2	Rafters D Fir H1.2
Wall framing	External D Fir H1.2 SG 8	Internal D Fir SG8 H1.2	

Provide and fix continuous two-ply bituminous fabric damp-course between all timber and concrete which would otherwise be in contact.

Gauging

All framing timbers in walls and partitions shall be gauged in width to produce regular plane surfaces to linings.

Priming

Before fixing, prime all joints, laps and abutting of exterior finishing timbers, all surfaces of external timber door and window frames.

Finish

All exposed timber shall be dressed to a smooth surface. Internal joinery and finishing timbers shall be brought to a smooth and even surface by sandpapering.

Claddings

Materials shall be applied with the highest standard of workmanship and made entirely weatherproof. All materials shall be fixed in strict accordance with the manufacturer's recommendations.

Exterior -Vertical profiled metal direct fixed.(on 6mm ply RAB)

Schedule of Finishes – Interior

Room	Wall Lining		Ceiling Lining	
	Material	Finish	Material	Finish
Kitchen	Gib	Paint	Gib	Paint
Dining	"	"	"	"
Living	"	"	"	"
Bedrooms	"	"	"	"
Hall	"	"	"	"
Laundry	"	"	"	"
WC	"	"	"	"
Bathroom	"	"	"	"

Finishings

Cornice 60 x 18 Single Bevel MDF

Skirtings 60 x 12 bevel (supplied by owner)

Windows

Note: All windows within the building envelope to be double glazed.

All windows shall be standard Aluminium construction complete with stays, catches and with condensation sill channel and drainage.

All reveals shall be of Treated Pine or Timber supplied by owner.

Glazing shall be in accordance with NZS 4223.

Windows to bathroom, WC etc shall be glazed in Grade A safety glazing in accordance with table 3.1 (308.1 (b). Obscure glass where shown.

Sliding / hinged doors and sidelights – 5 mm annealed glass.

All other windows	<1.5m ²	- 3mm annealed
	1.5m ² to 2.75m ²	- 4mm annealed
	2.75m ² to 4.4m ²	- 5mm annealed

Doors

Internal frames	MDF / Timber chosen by owner
External frames	Radiata Pine H1 clears or finger jointed
Exterior	selected timber panel (main entrance) in timber frame aluminium – 5mm annealed glass

Wardrobe

Interior flush doors Hollow core, MDF paint quality

All flush doors shall be hung on loose pin f.b. hinges.

Hardware

Allow the nett sum of \$2600.00 for supply of hardware.

Wardrobes

One ex 300 x 25 shelves and 20 diameter galvanised pipe hanging rail.

Linen Cupboard

Four full depth 18 mm MDF shelves.

Kitchen Cupboards

To later detail.

Ceiling Manhole

Provide 600 x 600 lift-out type to each roof space.

Insulation

Fibreglass batts

Ceiling R 3.6 min rating

Exterior Walls R2.6 rating

Floor xpol R1.8

Roofing

Trapezoidal coloursteel .

PLUMBING AND DRAINLAYING

General

All work shall be done according to best trade practice and in accordance with NZ Building Code Approved Documents particularly E1, G1, G2, G12 and G13 shall be complied with.

Stormwater and Sewer

Connect as shown. Pipes shall be UPVC 110mm O.D. laid in accordance with manufacturers recommendations.

Plumbing

Spouting	Colorsteel
Downpipes	PVC (to be painted)

Wastes and Traps

Connect all fittings with appropriate size Dux polypropylene wastes and traps in accordance with Dux Code of Practice.

Water Supply

All water pipes shall be in Buteline.

Supply Tank: NA

Mains pressure system

Hot Water Cylinder:
260 Litre mains pressure

Gas califont

Bath

To be selected.

All hot water pipes are to be lagged

Shower

Proprietary units

W C Pan

Opal 2000 (two of).

Shower Mixing Valves

Methven valves with rose fitted. Two

Taps

Single lever faucet to kitchen sink, Methven
Two hose taps

Vanity and Hand Basin

1x Tripple Cashmere, 2x Double Cashmere (759 & 900mm)
1x small recessed

ELECTRICAL

General

All work shall be carried out in strict accordance with the NZ Electrical Wiring Regulations and local Authority Requirements.

Main

Bring power supply from Local Authority reticulation by underground route to main switch / meter board.

Main shall be 16mm² neutral screen cable. To be confirmed on site as being suitable by registered Electrician

All trenching and backfilling undertaken by Drainlayer.

Cabling in trenches must be inspected by Power Authority before backfilling.

Switch / Meter Board

Provide and install recessed metal cabinet with hinged front and complete with meters and 60 amp main switch.

Switchboard

Provide and install recessed metal switchboard cabinet with hinged front and complete with labelled circuit breakers – size of cabinet to allow for at least 2 spare MCBs.

Cables

All heat circuits to be run in 2.5 mm TPS twin and earth.

All light circuits to run in 1.0 mm TPS twin and earth.

Lights

Install all lighting shown on the drawings.

Switches shall be PDL 500 series.

Incandescent lighting shall be PDL batten holders fixed to ceiling with 100 watt lamps and 230 mm plastic conical shades.

Socket Outlets

Provide and install single or double PDL 500 series 10 amp at a height of XXX mm except to laundry, kitchen etc.

Electric oven

Allow the nett sum of \$2500 for supply only of Hob & Oven.

PAINTING AND PAPERHANGING

Paint to various surfaces where used shall be as follows:

Refer to the Schedule of Finishes under "Carpentry". All colours shall be selected by the Owner. All paintwork shall be of three coat application unless otherwise stated.

Exterior

Exposed timbers	3 coats paint
-----------------	---------------

Interior

Ceilings and Walls	3 coats satin paint
Wet Area Walls	3 coats Gloss or Semi Gloss
Windows Reveals and doors/frames	3 coat



Design Navigator H1 Compliance Report

Project Summary

H1 Report created by:	
Project Name:	New Project
Client:	Evans & mcloud
Lot No:	10
Comment:	
Project Id:	121511
Report Date:	22/04/2019

Compliance Result

This report shows compliance of the design with Clause H1 Fourth edition Amendment 3 from January 2017 and the R-value targets of Clause E3 Second edition Amendment 6 from January 2017.

This building complies with H1 via the following methods:

- the Calculation Method in NZS4218:2009

H1 Compliance Details

NZS4218:2009 Calculation Method Compliance

The use of the Calculation Method is permitted .

In order to comply the Actual Heat Loss must be the same or smaller than the Reference Heat Loss AND all component R-values must be the same or larger than 50% of the R-values in the '50% Rule' table below. This design **complies** with the NZS4218:2009 Calculation Method.

HeatLoss:

Reference building	Proposed building
402	343

Minimum R-values ("50% rule"):

	Permitted Minimum	Proposed Minimum	
Floor:	0.65	2.03	✓
Non-solid Walls:	1	2.04	✓
Roof:	1.65	3.16	✓

The Reference building has the following areas and R-values.

		Non-solid	Solid Timber	Other Solid
		100.0	0.0%	0.0%
Floor:	Area: 137 m ² R-values:	1.3	1.3	1.5
Walls excl. glazing:	Area: 118.9 m ² R-values:	2	1.4	1.2
Glazing (up to 30%):	Area: 51 m ² R-values:	0.26	0.26	0.26
Glazing (surplus of 30%):	Area: 0 m ² R-values:	0.4	0.34	0.34
Roof:	Area: 137 m ² R-values:	3.3	3.5	3.5
Heat Loss:		402	426	426

For mixed constructions the heat loss of the reference building is calculated as the sum of the heat losses for each type of wall construction multiplied by the fraction of the wall area of each type. This approach is based on clause 4.2.6 of NZS4218:2009. There are no skylights in the reference building. The reference building roof area is the sum of the proposed building roof and skylight areas.

Compliance with Clause E3

This building complies with the R-value targets in NZBC Clause E3 .

Component	Minimum R-value	Project R-value
Framed wall constructions with cavities	1.5	
Single skin masonry wall without a cavity	0.6	
Solid timber wall no less than 60 mm thick	0.6	
Roof or ceilings	1.5	

Design Details

Building Dimensions

Floor Area	<input type="text" value="137"/> m ²
Gross Wall Area	<input type="text" value="169.9"/> m ²
Net Wall Area	<input type="text" value="124.9"/> m ²
Wall (North) Area	<input type="text" value="35.5"/> m ²
Wall (East, South and West) Area	<input type="text" value="89.4"/> m ²
Gross Roof Area	<input type="text" value="137"/> m ²
Net Roof Area	<input type="text" value="137"/> m ²
Glazing Area	<input type="text" value="45"/> m ²
Window (North) Area	<input type="text" value="17.2"/> m ²
Window (East, South and West) Area	<input type="text" value="27.8"/> m ²
Skylight Area	<input type="text" value="0"/> m ²

Glazing Areas

Total Vertical Glazing Percentage	<input type="text" value="26.5"/> %
East, South and West Window Percentage	<input type="text" value="23.7"/> %
Total over 30%	<input type="text" value="no"/>
East, South and West over 30%	<input type="text" value="no"/>
Total over 50%	<input type="text" value="no"/>
max. Skylight Area for Schedule Method	<input type="text" value="2.05"/> m ²
Skylights over Schedule Method Limit	<input type="text" value="no"/>
Decorative Glazing	<input type="text" value="0"/> m ²
Decorative Glazing over 3m ²	<input type="text" value="no"/>

Information required for BPI calculation

Living Floor Area	<input type="text" value="137"/> m ² Note: This includes also internal floors.
Average Room Height	<input type="text" value="2.9"/> m

Thermal Mass Level

Suspended timber floor with timber framed walls or a heavily carpeted slab floor with timber framed walls.

Climate

Location	<input type="text" value="Riwaka, Motueka & Takaka"/>
Climate Zone	<input type="text" value="3"/>

Heat Loss Details

	ID	Orient.	Width	Height	Gross Area	Net Area	R-value*	Heat Loss	Shad. Coeff.**	Solid Wall***
<u>Floors</u>										
	Floor 1				137.0	137.0	2.03	67.5		
<u>Walls</u>										
	Wall 1	N	6.7	3.6	24.1	17.3	2.04	8.5		C
	Window 1-1		1.8	0.5		0.9	0.26	3.5	0.00	
	Window 1-2		1.8	0.5		0.9	0.26	3.5	0.00	
	Window 1-3		1.8	1.4		2.5	0.26	9.7	0.00	
	Window 1-4		1.8	1.4		2.5	0.26	9.7	0.00	
	Wall 2	N	11.9	2.4	28.6	18.2	2.04	8.9		C
	Window 2-1		1.8	2.1		3.8	0.26	14.5	0.00	
	Window 2-2		1.8	1.4		2.5	0.26	9.7	0.00	
	Window 2-3		1.8	1.4		2.5	0.26	9.7	0.00	
	Window 2-4		0.6	1.2		0.7	0.26	2.8	0.00	
	Window 2-5		0.6	1.4		0.8	0.26	3.2	0.00	
	Wall 3	W	11.7	3.1	36.3	25.9	2.04	12.7		C
	Window 3-1		1.8	2.1		3.8	0.26	14.5	0.00	
	Window 3-2		1.8	0.5		0.9	0.26	3.5	0.00	
	Window 3-3		0.9	2.1		1.9	0.26	7.3	0.00	
	Window 3-4		1.8	2.1		3.8	0.26	14.5	0.00	
	Wall 4	S	18.6	2.4	44.6	40.3	2.04	19.7		C
	Window 4-1		0.6	1.4		0.8	0.26	3.2	0.00	
	Window 4-2		1.3	2.1		2.7	0.26	10.5	0.00	
	Window 4-3		0.4	0.8		0.3	0.26	1.2	0.00	
	Window 4-4		0.6	0.8		0.5	0.26	1.8	0.00	
	Wall 5	E	11.7	3.1	36.3	23.2	2.04	11.4		C
	Window 5-1		1.8	1.4		2.5	0.26	9.7	0.00	
	Window 5-2		0.6	1.4		0.8	0.26	3.2	0.00	
	Window 5-3		1.8	1.4		2.5	0.26	9.7	0.00	
	Window 5-4		1.8	2.1		3.8	0.26	14.5	0.00	
	Window 5-5		1.8	1.4		2.5	0.26	9.7	0.00	
	Window 5-6		1.8	0.5		0.9	0.26	3.5	0.00	
<u>Roofs</u>										
	Roof 1				58.0	58.0	3.68	15.8		
	Roof 2				79.0	79.0	3.16	25.0		
Total Heat Loss								342.6		

* Any concrete slab-on-ground floor regardless of its dimensions can be assumed to have an R-value of at least R-1.3 (H1/AS1 2.1.5).

** The Shading Coefficient is only required for BPI calculations.

*** C: Cavity Construction (any construction that is not solid), T: Solid Timber, S: Other Solid Construction (Note that the use of solid timber and other solid construction types is discretionary, i.e. solid timber walls and other solid walls can be treated as if they are non-solid (NZS4218:2009 section 4.1.3.).)

Floor Construction Details

Name:	Floortype 1	2.03 m ² °C/W
Type: Floor: Suspended Floor (no Lining)		
internal surface 0.09		
Flooring : 20mm Strandboard ▼ R-value: 0.17		
Timber Frame & Cavity : 190+ mm joists @ 400mm ▼		
Floor Frame Area: 11.3% Cavity Area: 88.7%		
Framing : R-value: 1.56	Insulation : 1.8	
Insulation value of the subfloor space		
Suspended floor area [m ²]:		
Perimeter length [m]:		
Perimeter height [m]:		
Perimeter type: Exposed floor (pole house) ▼		

Wall Construction Details

Name:	Walltype 1	2.04 m ² °C/W
Type: Wall: Timber Frame (direct fixed cladding)		
external surface 0.03		
Cladding : Metal weatherboard (corr. iron) ▼ R-value: 0.08		
Air Barrier : none ▼ R-value: 0.00		
Timber Frame & Cavity : 90mm, studs @ 400mm, dwangs @ 800mm ▼		
Wall Frame Area: 17.9% Cavity Area: 82.1%		
Framing : R-value: 0.75	Insulation : 2.6	
	still Airgap: none ▼ R-value: 0.00	
Wall Lining : Gypsum plasterboard 10mm ▼ R-value: 0.04		
internal surface 0.09		


Roof Construction Details

Name:

Rooftype 1

 3.68
m²°C/W

Type: Roof: Timber framed skillion or flat Roof


external surface 0.03	
Roofing : Corrugate iron with building paper ▼ R-value: 0.01	
Timber Frame & Cavity : 290mm rafters or joists @ 900mm, battens covered with insulation ▼	
Roof Frame Area: 5.0%	Cavity Area: 95.0%
Framing : R-value: 2.40	still Airgap : none ▼ R-value: 0.00
Thermal Break : none ▼ R-value: 0.00	Insulation : 3.6
Roof Lining : Gypsum plasterboard 10mm ▼ R-value: 0.04	
internal surface 0.09	
Non-IC-rated recessed downlights	
Ceiling Area [m ²]: <input type="text"/> Number of downlights: <input type="text"/> Clearance from lamp holder side [m]: <input type="text"/> 	

Name:

Rooftype 2

 3.16
m²°C/W

Type: Roof: Timber framed truss Roof, direct fixed or battened flat Ceiling

external surface 0.03	
Roofing : Corrugate iron with building paper ▼ R-value: 0.01	
Insulation : <input type="text"/>	
Timber Frame & Cavity : 90mm rafters or joists @ 600mm, battens covered with insulation ▼	
Roof Frame Area: 7.5%	Cavity Area: 92.5%
Roof space (still air) 0.11	Roof space (still air) 0.11
Framing : R-value: 0.75	Insulation : 3.6
Roof Lining : Gypsum plasterboard 13mm ▼ R-value: 0.06	
internal surface 0.09	
Non-IC-rated recessed downlights	
Ceiling Area [m ²]: <input type="text"/> Number of downlights: <input type="text"/> Clearance from lamp holder side [m]: <input type="text"/> 	

GIB EzyBrace® Bracing Software



Demand Calculation Sheet

Job Details

Name:	T Evans & S Mcloud
Street and Number:	31 Pineview Way
Lot and DP Number	
City/Town/District	Motueka
Designer	GB
Company	
Date	29.03.2019

Building Specification

Number of Storeys	1
Floor Loading	2 kPa
Foundation Type	Subfloor
Subfloor Cladding Weight	Light

Single

Cladding Weight	Light
Roof Weight	Light
Room in Roof Space	No
Roof Pitch (degrees)	6
Roof Height above Eaves (m)	1.5
Building Height to Apex (m)	4.5
Ground to Lower Floor (m)	0.6

Average Stud Height (m)	2.4
Building Length (m)	18.6
Building Width (m)	11.7
Building Plan Area (m²)	137

Building Location

Wind Zone = Extra 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	783	1053
Subfloor Level	1311	1679

Bracing Units required for Earthquake

	Along & Across
Single Level	1061
Subfloor Level	1380

GIB EzyBrace® Bracing Software



Single Level Along Resistance Sheet

Job Name: T Evans & S Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									783	1061
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	1218 155%	1099 104%
a	1	3.30		2.4	GS1-N	GIB®	228	198		
	External Length = 13.1								228 OK	198 OK
b	1	3.10		2.4	GS1-N	GIB®	214	186		
	2	1.30		2.4	GS1-N	GIB®	90	78		
	External Length = 5.5								304 OK	264 OK
c	1	3.00		2.4	GS1-N	GIB®	207	180		
	2	1.40		2.4	GS1-N	GIB®	97	84		
	External Length = 1								304 OK	264 OK
d	1	1.80		3.1	GS1-N	GIB®	96	84		
	2	0.60		2.4	BL1-H	GIB®	59	61		
	3	0.60		2.4	BL1-H	GIB®	59	61		
	External Length = 10.9								215 OK	205 OK
e	1	2.10		3.6	BLP-H	GIB®	168	168		
	External Length = 6.7								168 OK	168 OK

GIB EzyBrace® Bracing Software



Single Level Across Resistance Sheet

Job Name: T Evans & S Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									1053	1061
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	1246 118%	1124 106%
m	1	0.80		2.4	GS1-N	GIB®	49	47		
	2	0.80		2.4	GS1-N	GIB®	49	47		
	3	2.40		3.1	GS1-N	GIB®	128	111		
	4	2.20		3.4	GS1-N	GIB®	107	93		
	External Length = 11.7								333 OK	299 OK
n	1	1.40		2.4	BL1-H	GIB®	168	146		
	2	0.70		2.4	BL1-H	GIB®	73	71		
	3	0.70		3.2	GS1-N	GIB®	31	31		
									272 OK	247 OK
o	1	0.50		3.6	BL1-H	GIB®	31	34		
	2	0.58		3.4	BL1-H	GIB®	40	41		
	3	0.50		3.2	BL1-H	GIB®	35	38		
	External Length = 5.1								107 OK	112 OK
p	1	1.80		2.4	GS1-N	GIB®	124	108		
									124 OK	108 OK
q	1	1.80		2.4	GS1-N	GIB®	124	108		
	External Length = 2.1								124 OK	108 OK
r	1	1.00		2.4	BL1-H	GIB®	118	103		
	External Length = 2								118 OK	103 OK
s	1	1.40		2.4	BL1-H	GIB®	168	146		
	External Length = 2.2								168 OK	146 OK

GIB EzyBrace® Bracing Software



Subfloor Level Along Resistance Sheet

Job Name: T Evans & S Mcloud

									Wind	EQ
									Demand	
									1311	1380
									Achieved	
Line	Element	Length (m)	Angle (degrees)		Type	Supplier	Wind BUs	EQ BUs	NaN%	NaN%
A	1	4.00			Anchor Pile	NZS3604				
B	1	3.00			Anchor Pile	NZS3604				
C	1	3.00			Anchor Pile	NZS3604				
D	1	2.00			Anchor Pile	NZS3604				
E	1	2.00			Anchor Pile	NZS3604				

GIB EzyBrace® Bracing Software



Subfloor Level Across Resistance Sheet

Job Name: T Evans & S Mcloud

									Wind	EQ
									Demand	
									1679	1380
									Achieved	
Line	Element	Length (m)	Angle (degrees)		Type	Supplier	Wind BUs	EQ BUs	NaN%	NaN%
M	1	5.00			Anchor Pile	NZS3604				
N	1	5.00			Anchor Pile	NZS3604				
O	1	4.00			Anchor Pile	NZS3604				

GIB EzyBrace® Bracing Software



Custom Wall Elements

Supplier	System	Min. Length m	Wind BUs/m	EQ BUs/m
CHH	EP1	.6	130	130

Custom Subfloor Elements

Supplier	System	Min. Length m	Wind BUs or BUs/m	EQ BUs or BUs/m

5.0 GIB® PERFORMANCE SYSTEMS INSTALLATION

The GIB® Performance Systems section covers installation of GIB EzyBrace® and GIB Aqualine® Wet Area Systems. For other systems including

GIB Noise Control® Systems, GIB® Fire Rated Systems and GIB® Tough Systems refer to the appropriate GIB® systems literature.

5.1 GIB® BRACING SYSTEMS

This section covers the installation of GIB EzyBrace® Systems to timber framing to NZS 3604:2011. Full design details can be found in the GIB EzyBrace® Systems literature.

Bracing of steel framed walls is by specific design. For details visit www.nashnz.org.nz

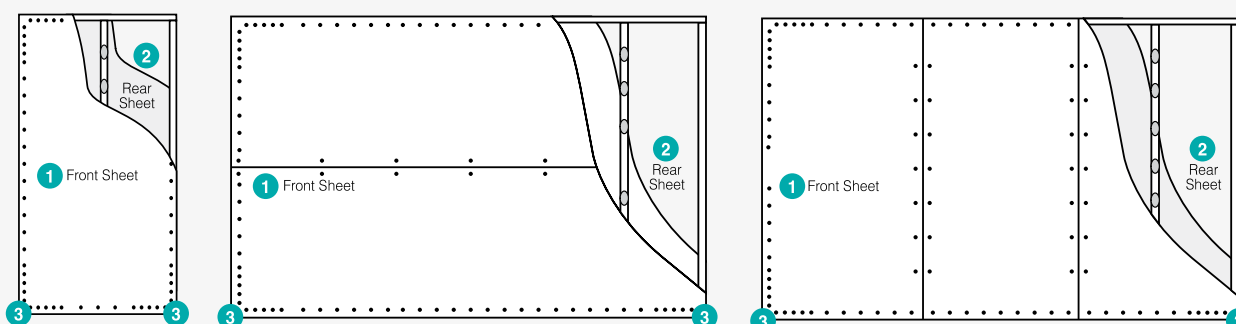
GIB® Bracing elements code system:

GS	GIB® Standard plasterboard or other similar thickness
BL	GIB Braceline®
P	7mm structural plywood manufactured to AS/NZS 2269:2012
1	Bracing element fixed to one side of the wall only
2	Bracing element fixed to both sides of the wall
N	Panel hold down not required
H	GIB HandiBrac® or metal strap and hold down bolt

5.1.1 INSTALLATION SUMMARY

Sheet Installation					
	Front Sheet ①		Rear Sheet ②		Panel Hold-Down Fixings ③
	Lining	Fasteners	Lining	Fasteners	
GS1-N	Any 10mm or 13mm GIB® plasterboard	30mm x 2.8mm GIB® Nails, 32mm x 6g GIB® Grabber® high thread screws or 32mm x 7g GIB® Grabber dual thread screws	Not Required	Not Required	Not Required
GS2-N			Any 10mm or 13mm GIB® plasterboard	30mm x 2.8mm GIB® Nails, 32mm x 6g GIB® Grabber® high thread screws	
GSP-H			Minimum 7mm structural plywood manufactured to AS/NZS 2269	50mm x 2.8mm flat head galvanised or stainless steel nails	Yes
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 x 2.8mm GIB® Nails, 32mm x 6g GIB® Grabber® high thread screws	
BLP-H			Minimum 7mm structural plywood manufactured to AS/NZS 2269	50mm x 2.8mm flat head galvanised or stainless steel nails	
					GIB® Plasterboard Corner fastening pattern as illustrated on p. 63 Fasteners at 150mm to bracing element perimeter and: at 300mm centres to intermediate sheet joints for vertical fixing, or at stud/sheet junction for horizontally fixed elements, and GIBFix® adhesive daubs at 300mm are to intermediate framing Structural Plywood 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

Installation Summary

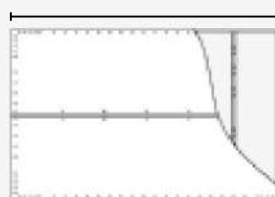


5.1.2 SYSTEM SPECIFICATIONS

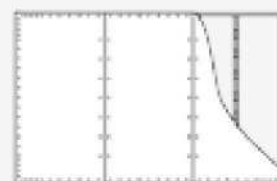
GS1-N

1. Any 10 or 13mm GIB® plasterboard to one side of the wall only
2. Corner fastening pattern applies (see p. 63)
3. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws or 30 x 2.8mm GIB® Nails at 150mm to perimeter
4. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
5. Panel hold downs not required
6. Joints and fastener heads must be stopped
7. GIB® tape must be used in joints
8. Sheets may be fixed horizontally or vertically

Bracing Element



Horizontal Fixing

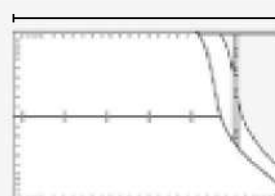


Vertical Fixing

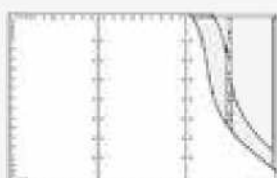
GS2-N

1. Any 10 or 13mm GIB® plasterboard to both sides of the wall. Both sides fixed as bracing elements
2. Corner fastening pattern applies (see p. 63)
3. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws or 30 x 2.8mm GIB® Nails at 150mm to perimeter
4. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
5. Panel hold downs not required
6. Joints and fastener heads must be stopped
7. GIB® tape must be used in joints
8. Sheets may be fixed horizontally or vertically

Bracing Element



Horizontal Fixing



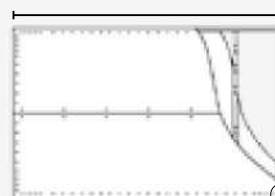
Vertical Fixing

GSP-H

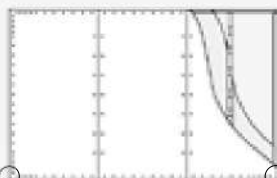
1. Any 10 or 13mm GIB® plasterboard to one side of the wall
2. 7mm structural plywood to the other side
3. Corner fastening pattern applies (see p. 63)
4. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws or 30 x 2.8mm GIB® Nails at 150mm to perimeter (plasterboard side) 50 x 2.8mm FH nails at 150mm to perimeter. Corner fastening pattern not applicable to ply side
5. Panel hold downs required
6. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
7. Joints and fastener heads must be stopped
8. GIB® tape must be used in joints
9. Sheets may be fixed horizontally or vertically

Bracing Element

Plasterboard side shown



Horizontal Fixing



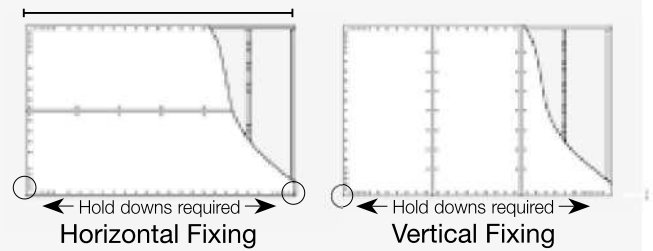
Vertical Fixing

5.1.2 SYSTEM SPECIFICATIONS

BL1-H

1. 10 or 13mm GIB Braceline® to one side of the wall only
2. Corner fastening pattern applies (see p. 63)
3. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws at 150mm to perimeter
4. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
5. Panel hold downs required
6. Joints and fastener heads must be stopped
7. GIB® tape must be used in joints
8. Sheets may be fixed horizontally or vertically

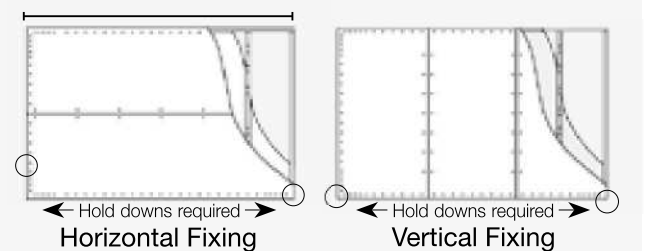
Bracing Element – Plasterboard side shown



BLG-H

1. 10 or 13mm GIB Braceline® to one side of the wall. Any 10 or 13mm GIB® plasterboard to the other side. Both sides fixed as bracing elements
2. Corner fastening pattern applies (see p. 63)
3. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws at 150mm to perimeter
4. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
5. Panel hold downs required
6. Joints and fastener heads must be stopped
7. GIB® tape must be used in joints
8. Sheets may be fixed horizontally or vertically

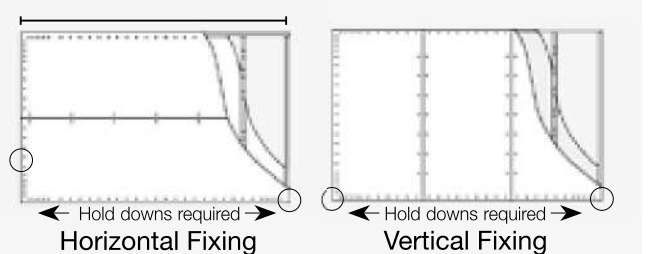
Bracing Element – Plasterboard side shown



BLP-H

1. 10 or 13mm GIB Braceline® to one side of the wall only
2. 7mm structural plywood to the other side
3. Corner fastening pattern applies (see p. 63)
4. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws at 150mm to perimeter (plasterboard side). 50 x 2.8mm FH nails at 150mm to plywood perimeter. Corner fastening pattern not applicable (plywood side)
5. Panel hold downs required
6. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
7. Joints and fastener heads must be stopped
8. GIB® tape must be used in joints
9. Sheets may be fixed horizontally or vertically

Bracing Element – Plasterboard side shown



For sheet substitution options refer to p. 16.

5.1.3 BOTTOM PLATE FIXING

Bottom Plate Fixings for GIB® Bracing Elements

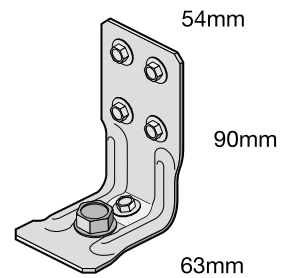
Brace Type	Concrete Slabs		Timber Floors
	External Walls	Internal Walls	External and Internal Walls
GS1-N	As per NZS 3604:2011 No specific additional fastening required	As per NZS 3604:2011. Alternatively use 75 x 3.8mm shot-fired fasteners with 16mm discs, 150mm and 300mm from each end of the bracing 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 pp. 62–63		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 In addition: GIB HandiBrac® fixings or metal wrap-around strap fixings and bolt as illustrated below
BLG-H	Not applicable	As for GSP-H, BL1-H, BLP-H on concrete slab as illustrated on p. 62 & 63	

5.1.4 PANEL HOLD-DOWN DETAILS

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 into 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 Floors		Timber Floors	
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 boundary joist	Position GIB HandiBrac® in the centre of floor joist or full depth solid block

Hold-Down Fastener Requirements

A mechanical fastening with a minimum characteristic uplift capacity of 15kN or use supplied BT 10/140 screw bolt in GIB HandiBrac® pack.

12 x 150mm galvanised coach screw or use supplied BT 10/140 screw bolt in GIB HandiBrac® pack.

Bracing Strap Installation

Care needs to be taken with the installation of the bracing strap. It should be checked in to be flush with the face of the stud providing a flat substrate for the plasterboard. 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.

Concrete Floors

Timber Floors

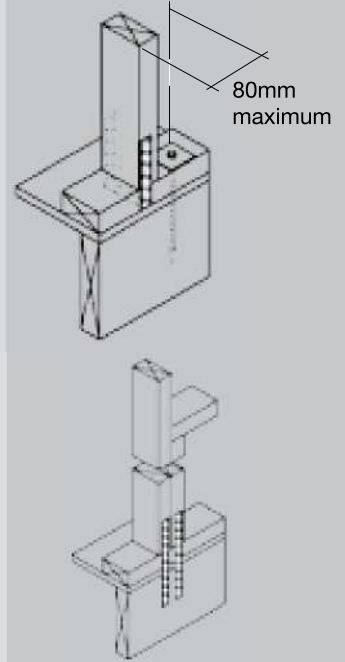
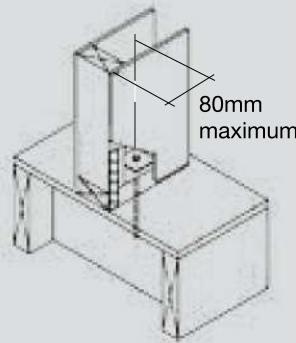
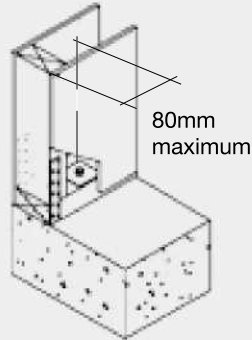
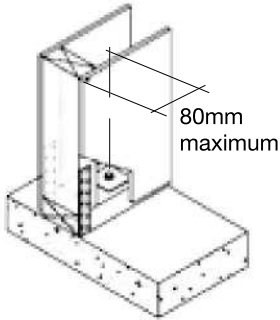
400 x 25 x 0.9mm galvanised strap to pass under the plate and up the other side of the stud. Six 30 x 2.5 flat head galvanised nails to each side of the stud. Three 30 x 2.5 flat head galvanised nails to each side of the plate. Hold down bolt with 50 x 50 x 3mm washer to be fitted within 80mm of the edge of the element.

Internal Walls

External Walls

Internal Walls

External Walls



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.

Hold-Down Fastener Requirements

Concrete Floors

A mechanical fastening with a minimum characteristic uplift capacity of 15kN fitted with a 50 x 50 x 3mm square washer within 80mm of the ends of the bracing element.

Timber Floors

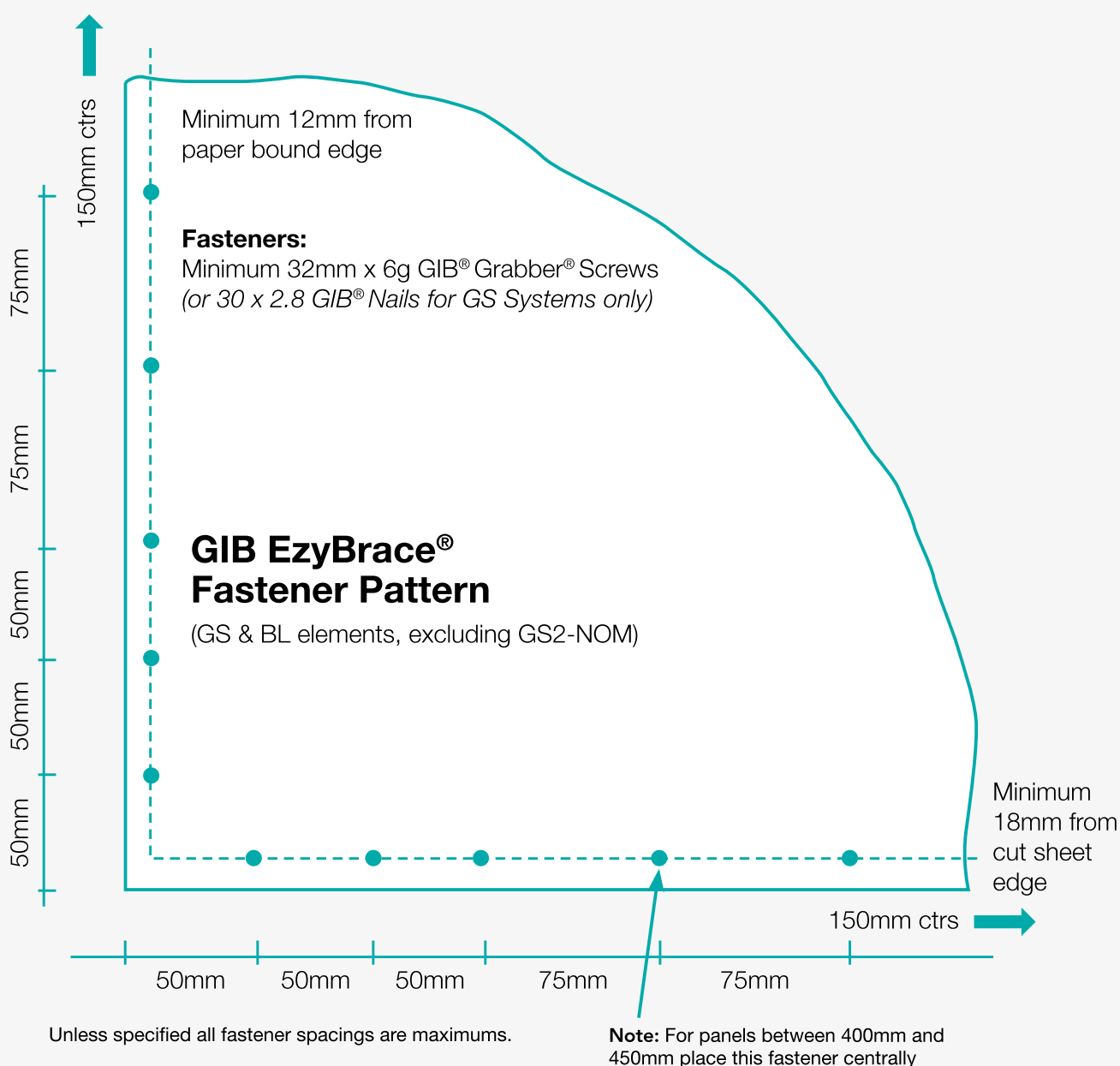
12 x 150mm galvanised coach screw fitted with a 50 x 50 x 3mm square washer within 80mm of the ends of the bracing element

5.1.5 GIB EZYBRACE® CORNER FASTENER PATTERN

Corner Fastener Pattern for ALL 4 CORNERS OF GIB® Bracing Elements (excluding GS2-Nom)

- ▶ All four corners of a GIB® plasterboard bracing element must be fastened at 50mm, 100mm, 150mm, 225mm and 300mm from the edge of the sheet
- ▶ Bracing element perimeter is then fastened at 150mm centres
- ▶ Fasteners must be no closer than 12mm from the paper enclosed edge and no closer than 18mm from sheet ends or cut edges of sheets

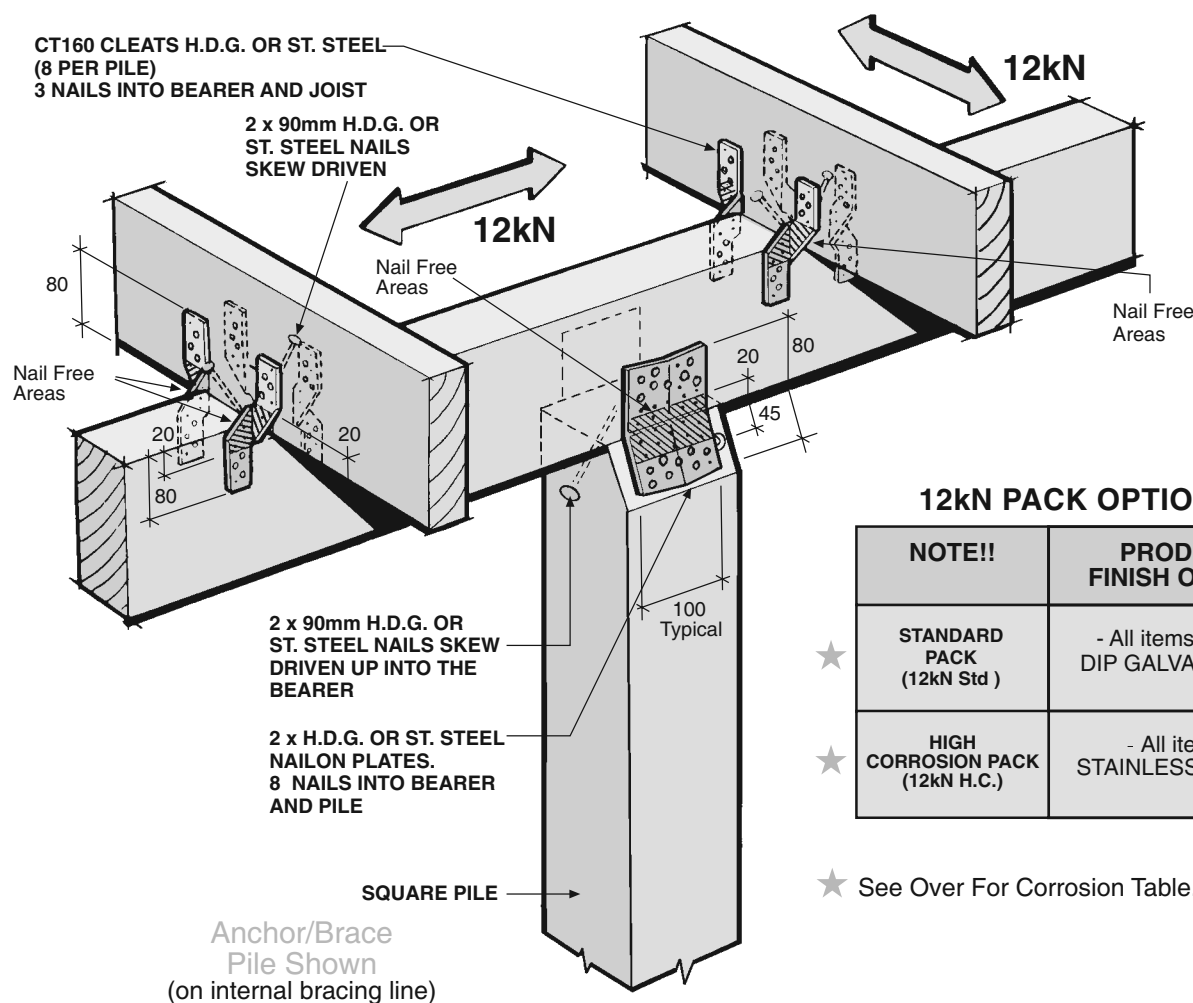
GIB EzyBrace® Corner Fastener Pattern





12kN PILE FIXING FOR BRACED PILES OR ANCHOR PILES

- ★ The 12kN Pile Fixing must be installed in accordance with this brochure
- ★ Auckland University Tested. Test Ref. 4613
- ★ All subfloor construction must be in accordance with NZS 3604:2011
- ★ NZS 3604 requires lines of lateral support to floor joists within 300mm of bearer or bracing lines, refer to Clause 7.1.2



12kN PACK OPTIONS

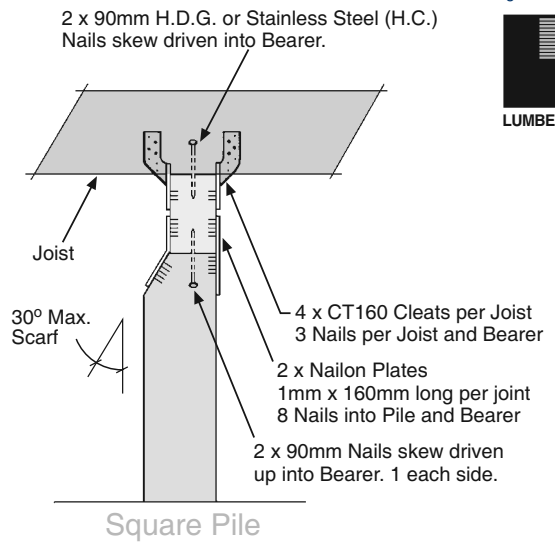
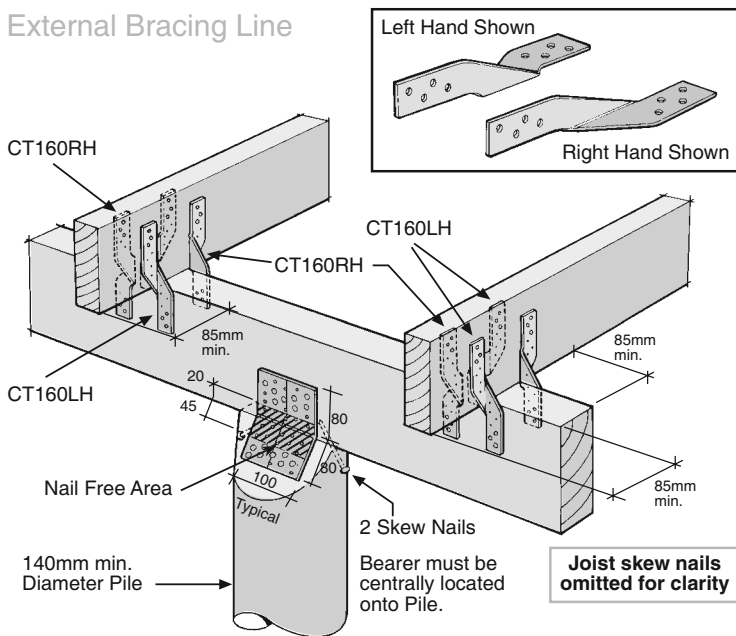
NOTE!!	PRODUCT FINISH OPTIONS
★ STANDARD PACK (12kN Std)	- All items HOT DIP GALVANISED
★ HIGH CORROSION PACK (12kN H.C.)	- All items STAINLESS STEEL

★ See Over For Corrosion Table.

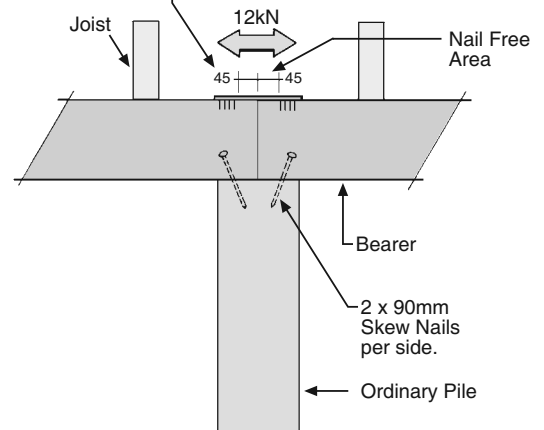
**Available from leading Builders Supply Merchants
throughout New Zealand**



External Bracing Line



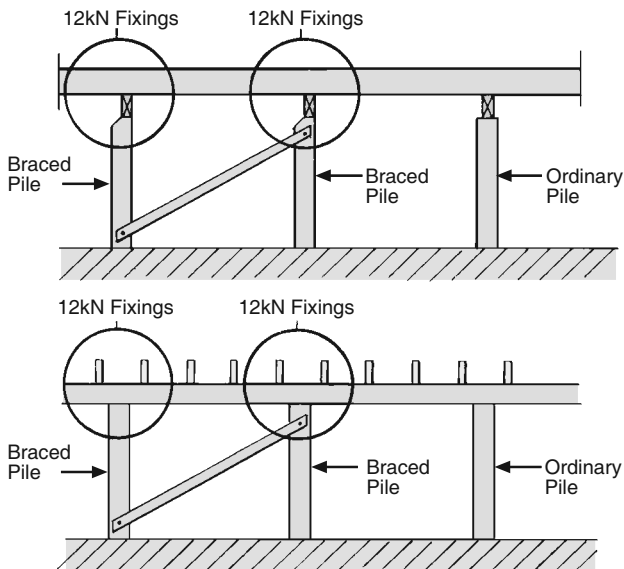
Nailon Plate 1mm x 160mm long (ex 12kN Pack)
8 Nails per end. No Nails within 18mm of timber edge.



12kN Bearer Splice

Clause 6.12.7.2
NZS 3604:2011

CORROSION HAZARD USE TABLE	
Standard Pack (12kN Std) - Zones B & C - All Fixings ABOVE 600mm from Ground level	All items Hot Dip Galvanised.
High Corrosion Pack (12kN HC) - Zone D - All Fixings BELOW 600mm from Ground level	All items Stainless Steel (304).



Sample Subfloor Elevations

12kN Fixing - Pile to Bearer
- Joists to Bearer

12kN Joint Fixing Schedule

PILE TO BEARER	<ul style="list-style-type: none"> - Nailon Plate (2 per joint) 1mm x 100mm (Typical) x 160mm long - 8 Nails per Plate into Pile - 8 Nails per Plate into Bearer - 2 Skew Nails 90mm (1 per face)
JOIST TO BEARER	<ul style="list-style-type: none"> - CT160 Cleats (4 per Joist) 160mm long - 3 Nails per Cleat into Joist - 3 Nails per Cleat into Bearer - 2 Skew Nails 90mm (1 per side)
NAILS	<ul style="list-style-type: none"> - 80 x 45mm x 3.55 dia. Spiral Nails - 6 x 90mm x 4 dia. St. Steel Nails (H.C. Pack only)

12kN Pile Set Contents

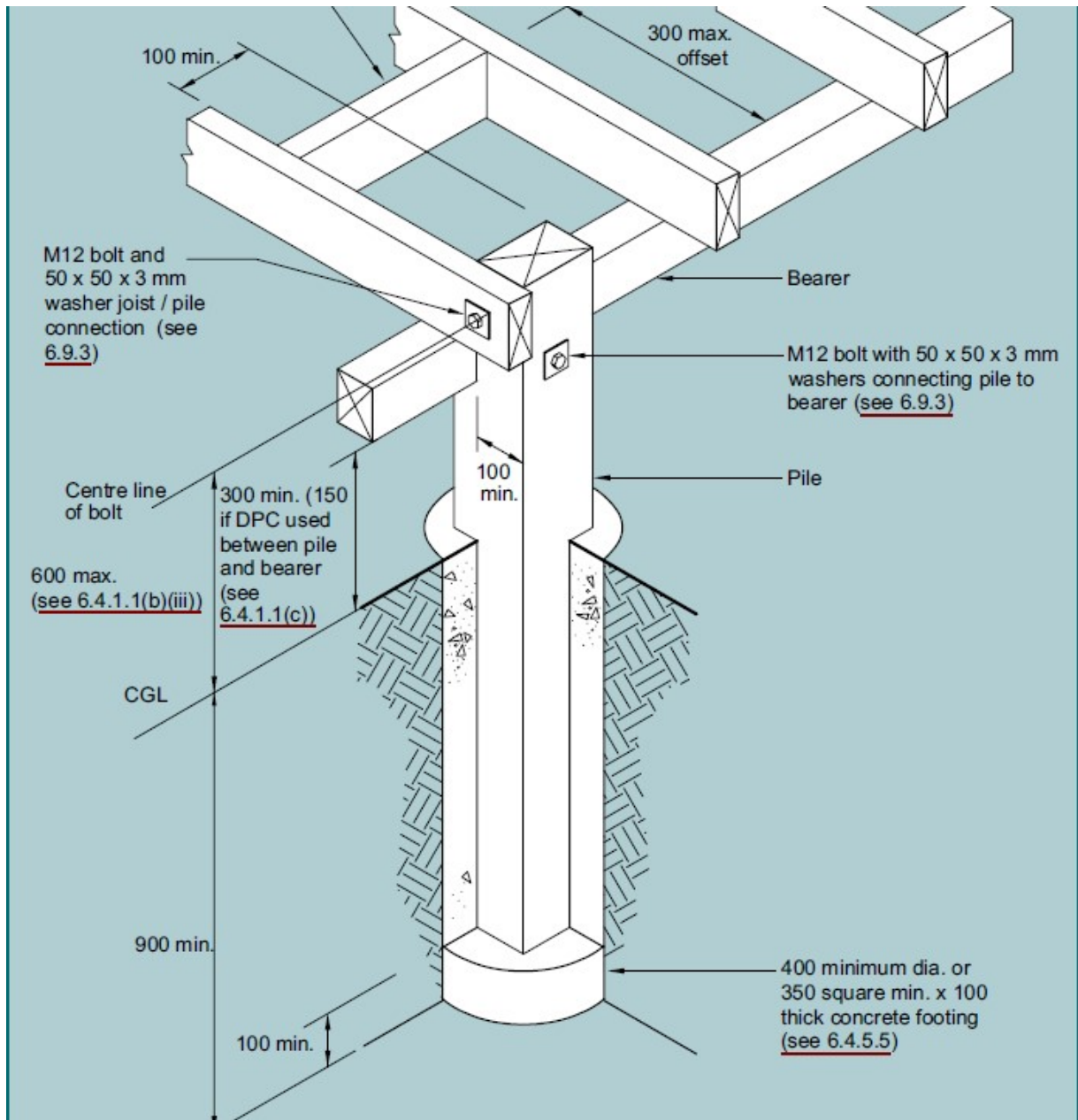
Each set represents 1 x 12kN Pile Fixing

(packed 4 sets per carton)

2 x Nailon Plates 160mm long
8 x CT160 Cleats
80 x 45mm x 3.55 dia. Spiral Nails
90mm x 4 dia. St. Steel Angular Groove
6 - H.C. Pack

Refer front page
for Product
Finish Options

90mm H.D.G. Nails
not included.



GIB EzyBrace® Bracing Software



Demand Calculation Sheet

Job Details

Name:	Evans & Mcloud
Street and Number:	31 Pineview Way
Lot and DP Number	
City/Town/District	Motueka
Designer	GJB
Company	
Date	18.04.2019

Building Specification

Number of Storeys	2	
Floor Loading	2 kPa	
Foundation Type	Subfloor	
Subfloor Cladding Weight	Light	
	Upper	Lower
Cladding Weight	Light	Light
Roof Weight	Light	Light
Room in Roof Space	No	No
Roof Pitch (degrees)	20	25
Roof Height above Eaves (m)	1.5	1.5
Building Height to Apex (m)	5	
Ground to Lower Floor (m)	0.6	
Lower to Upper Floor (m)		2.3
Average Stud Height (m)	1.2	2
Building Length (m)	3	4.8
Building Width (m)	3.6	3.6
Building Plan Area (m²)	11	17

Building Location

Wind Zone = Extra High

Earthquake Zone 2

Soil Type: D & E (Deep to Very Soft)
Annual Prob. of Exceedance: 1 in 1000 (x 1.3)

Bracing Units required for Wind

	Along	Across
Upper Level	130	77
Lower Level	309	325
Subfloor Level	488	564

Bracing Units required for Earthquake

	Along & Across
Upper Level	107
Lower Level	288
Subfloor Level	326

GIB EzyBrace® Bracing Software



Upper Level Along Resistance Sheet

Job Name: Evans & Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									130	107
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	325 250%	283 264%
a	1	3.00		.6	GS1-N	GIB®	207	180		
	External Length = 4.8								207 OK	180 OK
b	1	1.00		1.9	BL1-H	GIB®	118	103		
	External Length = 4.8								118 OK	103 OK

GIB EzyBrace® Bracing Software



Upper Level Across Resistance Sheet

Job Name: Evans & Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									77	107
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	336 436%	305 285%
m	1	3.40		1.2	GS1-N	GIB®	235	204		
	External Length = 3.6								235 OK	204 OK
n	1	0.55		4.0	BLP-H	GIB®	40	40		
	2	0.75		3.5	BLP-H	GIB®	62	62		
	External Length = 3.6								101 OK	101 OK

GIB EzyBrace® Bracing Software



Lower Level Along Resistance Sheet

Job Name: Evans & Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									309	288
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	381 123%	335 116%
A	1	3.10		2.1	GS1-N	GIB®	214	186		
	External Length = 4.8								214 OK	186 OK
B	1	0.90		2.1	GS1-N	GIB®	57	53		
	2	1.60		2.1	GS1-N	GIB®	110	96		
	External Length = 4.8								167 OK	149 OK

GIB EzyBrace® Bracing Software



Lower Level Across Resistance Sheet

Job Name: Evans & Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									325	288
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	457 141%	403 140%
M	1	1.50		2.1	GS1-N	GIB®	104	90		
	2	1.50		2.1	GS1-N	GIB®	104	90		
	External Length = 3.6								207 OK	180 OK
N	1	1.00		2.1	GS1-N	GIB®	65	60		
	2	1.00		2.1	GS1-N	GIB®	65	60		
									130 OK	119 OK
O	1	1.50		3.6	BL1-H	GIB®	120	104		
	External Length = 3.6								120 OK	104 OK

GIB EzyBrace® Bracing Software



Subfloor Level Along Resistance Sheet

Job Name: Evans & Mcloud

									Wind	EQ
									Demand	
									488	326
									Achieved	
Line	Element	Length (m)	Angle (degrees)		Type	Supplier	Wind BUs	EQ BUs	1280 262%	960 294%
A	1	4.00			Anchor Pile	NZS3604	640	480		
	External Length = 4.8								640 OK	480 OK
B	1	4.00			Anchor Pile	NZS3604	640	480		
	External Length = 4.8								640 OK	480 OK

GIB EzyBrace® Bracing Software



Subfloor Level Across Resistance Sheet

Job Name: Evans & Mcloud

									Wind	EQ
									Demand	
									564	326
									Achieved	
Line	Element	Length (m)	Angle (degrees)		Type	Supplier	Wind BUs	EQ BUs	1280 227%	960 294%
M	1	4.00			Anchor Pile	NZS3604	640	480		
	External Length = 3.6								640 OK	480 OK
N	1	4.00			Anchor Pile	NZS3604	640	480		
	External Length = 3.6								640 OK	480 OK

GIB EzyBrace® Bracing Software



Custom Wall Elements

Supplier	System	Min. Length m	Wind BUs/m	EQ BUs/m
CHH	EP1	.6	130	130

Custom Subfloor Elements

Supplier	System	Min. Length m	Wind BUs or BUs/m	EQ BUs or BUs/m

LUMBERLOK[®]
TRUSS FIXINGS

D - Pair of Wire Dogs and 2 x 90mm 3.15mm skew nails

X - LUMBERLOK JH47x90 Joist Hanger

Z - LUMBERLOK JH47x120 Joist Hanger

P - LUMBERLOK JH47x190 Joist Hanger

E - LUMBERLOK JH95x165 Joist Hanger

T - LUMBERLOK CT200 Ceiling Tie

O - Pair of LUMBERLOK CT200 Ceiling Ties

H - LUMBERLOK CT400 Cyclone Tie

B - LUMBERLOK CT600 Cyclone Tie

4 - LUMBERLOK Multi Grip

M - Pair of LUMBERLOK Multi Grips

NP - LUMBERLOK Nailon Plate

N - LUMBERLOK N21 Diagonal Cleat

V - LUMBERLOK CPC40 Cleat

W - Pair of LUMBERLOK CPC40 Cleats

K - LUMBERLOK TTP 16kN Truss to Top Plate set

G - LUMBERLOK TTP 9kN Truss to Top Plate set

Joist Hanger

Installation



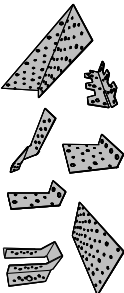
CT200 Truss to Top Plate Fixing

Installation



16kN & 9kN Truss to Top Plate Fixing

Installation



Notes:
All other areas must have the minimum 2 x 90mm 3.15mm skew nails and 2 x wire dogs for truss to top plate connections
Refer to:
LUMBERLOK Timber Connectors Characteristic Loadings Data Brochure 08/2014

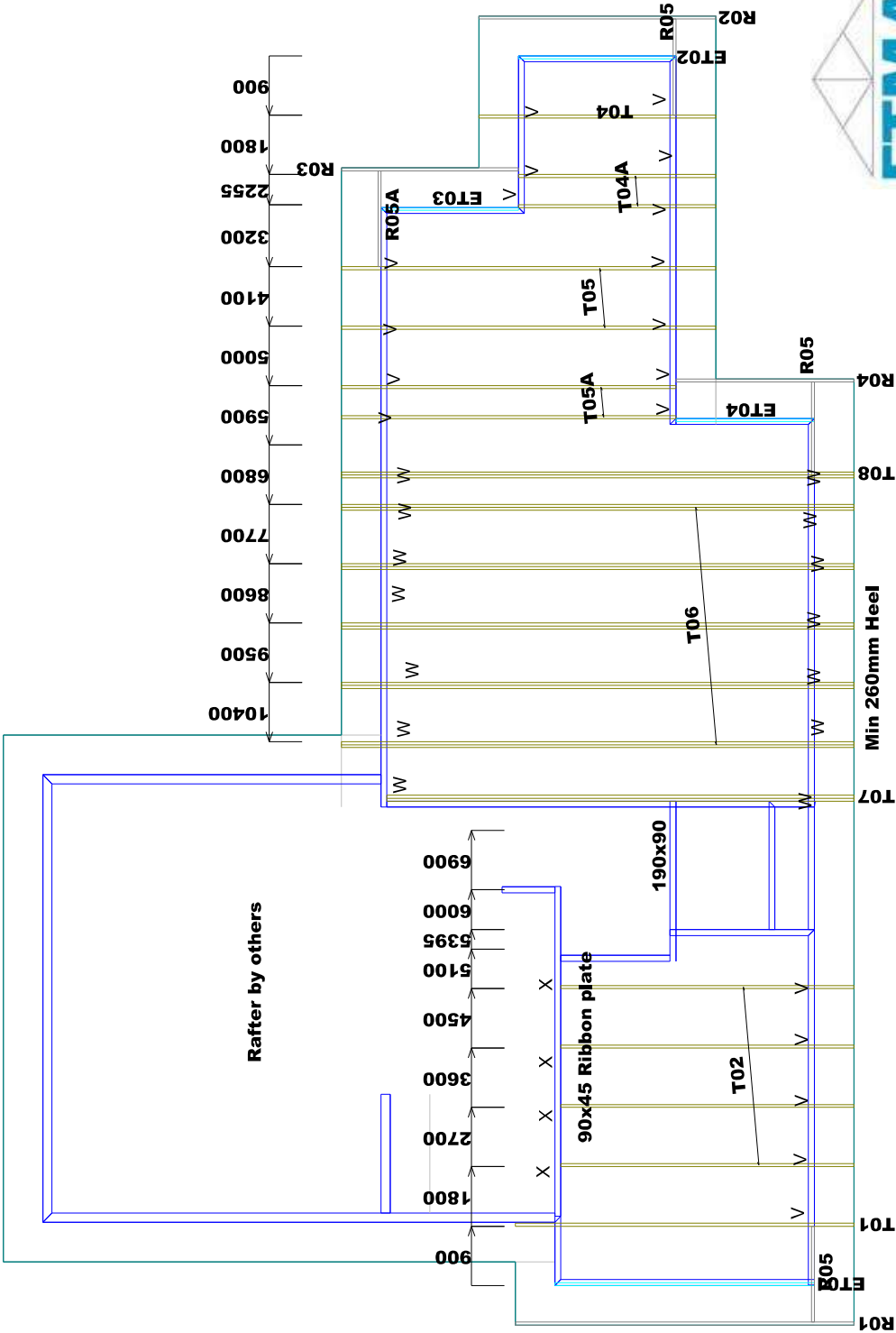
All truss to top plate fixings not labelled require a minimum of a pair of LUMBERLOK Wire Dogs.
All other areas must have a minimum of a pair of 90mm skew nails.

Fix all outriggers to gable trusses with a pair of LUMBERLOK Wire Dogs

Fix all stringers with a pair of LUMBERLOK Multi Grips at every stud.

Fix planted overhang rafters to top chord of truss with a pair of 90mm nails at 300mm centres.

Refer to:
LUMBERLOK Timber Connectors Characteristic Loadings Data brochure 03/04



Site Address :
McCloud/Evans
31 Pineview Way
Motueka



Sheet Title :

For Building Consent
Truss Fixings

Date : 15 Apr 2019
Drawn : Marcel Stutz
Scale : 1:100
System : MITek 2020

Job Details:

Roof Pitch : 6.000 Deg
Roof Material : Galv Iron .5mm
Ceiling Material : Gib Board 12mm
Wind Zone : Extra High
Roof Snow Load : 0.400 kPa

Job Title :

9631

Sheet :

5

Revision Number :

PrimeCare v4.7.201



Truss Centres : 900 mm
Roof Live Load : 0.250kPa
Floor Live Load : kPa
Wind Speed : 55.0 m/s



MiTek New Zealand Limited

Correspondence from : **AUCKLAND**
 40 Neales Road, East Tamaki 2013
 PO Box 58-014, Botany 2163
Phone: 09 274 7109
Fax: 09 274 7100

CHRISTCHURCH
 14 Pilkington Way, Wigram 8042
 PO Box 8387, Riccarton 8440
Phone: 03 348 8691
Fax: 03 348 0314

www.mitek.nz.co.nz

Printed: 08:55:14 16 Apr 2019

MiTek 20/20 Engineering 4.7.301.0

PRODUCER STATEMENT for MiTek 20/20® TRUSS DESIGN - Version 4.7

ISSUED BY: **MiTek New Zealand Limited**

TO: **Building ConneXion Ltd t/a ITM Building Centres**

IN RESPECT OF: **MiTek® Truss Designs**

This producer statement covers the MiTek 20/20® truss design and the structural performance of the GANG-NAIL® connector plate for the job reference **9631** and may be used by a Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

The MiTek 20/20® truss design program has been developed by MiTek New Zealand Limited for the design of MiTek® timber roof, floor and attic trusses in New Zealand. The truss designs computed by MiTek 20/20® are prepared using sound and widely accepted engineering principles, and in accordance with compliance documents of the New Zealand Building Code and Verification Method B1/VM1; and internationally accepted standard ANSI/TPI 1 - 2002 as an alternative solution, to satisfy the requirements of Clause B1 of the New Zealand Building Code.

On behalf of MiTek New Zealand Limited, and subject to:

- i) All proprietary products meeting their performance specification requirements
- ii) The provision of adequate roof bracing and overall building stability
- iii) Correct selection and placement of GANG-NAIL connector plates
- iv) Correct input of Truss Design Data as shown in the Fabricator Design Statement for this job
- v) The design being undertaken by the accredited fabricator under the terms of the software licence
- vi) Timber is graded to the requirements of NZS 3603:1993
- vii) Minimum timber treatment for these MiTek® trusses shall be in accordance with B2/AS1 Table 1A and the relevant sections of NZS 3602:2003

I believe on reasonable grounds that the trusses, if constructed in accordance with the MiTek 20/20® truss design and shop drawings, will comply with the relevant provisions of the New Zealand Building Code.

MiTek New Zealand Limited holds a current policy of Professional Indemnity Insurance no less than \$500,000.

On behalf of MiTek New Zealand Limited,

Date: Tuesday, 16 April 2019

In Ling Ng, BE (Hons), CPEng, IntPE, MIPENZ (ID: 146585)
TECHNICAL SERVICES MANAGER, MiTek New Zealand Limited

Building ConneXion Ltd t/a ITM Building Centres

Fabricator Design Statement : Page 1

Job: 9631

Client: Greg Benjamin
Phone:Site: McCloud/Evans
31 Pineview Way
MotuekaDescription:
Building Consent No.:
MiTek 20/20 Engineering 4.7.301.0

Phone:

Printed: 08:55:14 16 Apr 2019

MiTek New Zealand Limited

MITEK FABRICATOR DESIGN STATEMENT

This statement is issued by MiTek accredited fabricator **Building ConneXion Ltd t/a ITM Building Centres**, being licensed to use the MiTek 20/20® software, to the client listed above and may be used by the Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

MiTek 20/20® TRUSS DESIGN DATA

The MiTek 20/20® computer design for this job is based on the following design parameters entered into the program. The Fabricator shall ensure that these job details are current and relevant to the project for the design of the MiTek® trusses.

Job Details		Importance Level :	2	Design Working Life :	50 years
Roof Truss					
Timber Group:	DDF1.2	Pitch:	6.000 deg	Nominal Overhang:	600 mm
Roof		Ceiling		Wind	
Material:	Galv Iron .5mm	Material:	Gib Board 12mm	Area:	Extra High (55.0 m/s)
Dead Load:	0.210 kPa	Dead Load:	0.200 kPa	Pressure Coeff:	Cpe = varies; Cpi = -0.30, 0.20
Restraints:	900 mm centres	Restraints:	600 mm centres	Snow	
Live Load:	Qur = 0.250 kPa	Live Load:	Qc = 1.400 kN	Location:	Nelson (N3) at 220 m
	Qc = 1.100 kN			Open Ground Load:	0.300 kPa
				Basic Roof Load:	0.400 kPa

The minimum timber treatment for these MiTek® trusses shall be in accordance with B2/AS1 Table 1A and the relevant sections of NZS 3602:2003. The timber for these MiTek® trusses shall be graded to the requirements of NZS 3603:1993. Proprietary fixings and timber connectors shall be selected in accordance with NZS3604:2011 Section 4 - Durability.

MiTek® Truss List

Legend: * = detail only, ? = input only, ✕ = failed design, Ø = non certified, Unmarked trusses = designed successfully, LB = lateral bracing required
GB = gable brace required

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
ET01	1	3940	6.000	900	*R05	3	1455	0.000	900	T05A	2	4480	6.000	900
ET02	1	2390	6.000	900	*R05A	1	1455	0.000	900	T06	5D	6580	6.000	900
ET03	1	2090	6.000	900	T01	1	3940	6.000	900	T07	1D	6490	6.000	900
ET04	1	2100	6.000	900	T02	4	3850	6.000	900	T08	1D	6580	6.000	900
*R01	1	5140	6.000	900	T03	1	2100	6.000	900					
*R02	1	3590	6.000	900	T04	1	2390	6.000	900					
*R03	1	2690	6.000	900	T04A	2	2390	6.000	900					
*R04	1	2700	6.000	900	T05	2	4480	6.000	900					

Total quantity : 32**The computer design input has been carried out by:**Signed: *Marcel Stutz*

Date: Tuesday, 16 April 2019

Name of Detailer: Marcel Stutz

Qualifications and Title: Detailer

On behalf of: Building ConneXion Ltd t/a ITM Building Cent



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 February 2019

For further information or advice contact:

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

Specifier details:

Specifier:	G Benjamin
Business name:	G Design
Email:	gregsdesign@outlook.com

Project & site details:

Project:	4 Bedroom
Site address:	31 Pineview Way Motueka
For (owner/s):	Evans & Mcloud
Design wind zone	Extra high
Snow loading	Design snow zone: N0

MEMBER DESIGN DETAILS

Member 1

- | | |
|---------------------------------------|-------------------------------------|
| 1) Member code and description | R1 - Common rafters |
| 2) Date prepared | 28 March 2019 |
| 3) Serviceability criteria | AS 1720.1: 2010 and AS 1720.3: 2016 |

4) Design inputs

Span	5.1 m - single span
Rafter spacing	900 mm
Roof mass	35 kg/m ²
Lateral restraint condition	Bottom edge restrained by ceiling/ceiling battens at 600 crs max.

5) Member specification

Size, stress grade/product	Use 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 - $G + \Psi_L Q^*$	17.0 mm	9.1 mm (long term)	1.9
Live load - $\Psi_S Q$	20.4 mm	2.7 mm	7.5
Live load - $\Psi_S Q$	20.4 mm	3.6 mm	5.7
Wind load - W_S	34.0 mm	12.6 mm	2.7

*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	-1.4
1.2G + 1.5Q	0.80	-3.0
1.2G + W_u + $\Psi_c Q$	1.00	-3.9
0.9G + W_u	1.00	3.4

8) Installation requirements

- Minimum bearing - end supports, 30 mm.

Notes for interpretation of serviceability data

- '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.
- 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!

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

- '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 'k₁' 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
-

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 February 2019

For further information or advice contact:

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

Specifier details:

Specifier:	G Benjamin
Business name:	G Design
Email:	gregsdesign@outlook.com

Project & site details:

Project:	23 Washington Road
Site address:	NELSON
For (owner/s):	S & O WATSON
Design wind zone	High
Snow loading	Design snow zone: N0

MEMBER DESIGN DETAILS

Member 1

- | | |
|---------------------------------------|---|
| 1) Member code and description | L1 - Lintels in lower storey load bearing walls |
| 2) Date prepared | 25 March 2019 |
| 3) Serviceability criteria | AS 1720.1: 2010 and AS 1720.3: 2016 |

4) Design inputs

Span	2.2 m
Floor load width 'FLW'	4.5 m
Floor dead load	40 kg/m ²
Floor live load	1.5 kPa/1.8 kN
Wall type and height	Light wall: 2.7 m
Nominal wall thickness	90 mm
Roof load width 'RLW'	3.0 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

6) Serviceability

Load case	Limit ³ on average deflection ²	Estimated average deflection ²	Rigidity ratio ⁴
Long term load - G + $\Psi_L Q^*$	7.3 mm	3.8 mm (long term)	1.9
Live load - $\Psi_S Q$	6.1 mm	2.1 mm	3.0

*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	-9.3
1.2G + 1.5Q	0.80	-19.4
1.2G + W_u + $\Psi_c Q$	1.00	-10.4
0.9G + W_u	1.00	-2.0

8) Installation requirements

- Provide at least 40 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 'k1' 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
-



SN-R10116687

PROLAM SUMMARY

Customer/Project: Mcloud
Physical Address: 31 Pineview Way Motueka
Designer: Greg Benjamin
15 Sunnybank Rise, Nelson 7010
E: gregsd@outlook.com P: 0211449153

Lounge beam

Prolam Lintels Supporting Roof and Ceiling

Building Type	House	Roof Weight	Light with Ceiling
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	Extra High (55.0 m/s)
Roof Pitch	6 °	Snow Region	No Snow
Eaves	600 mm		
Roof Span	9.50 m		
Lintel Span	4.50 m		

Use Prolam PL17H1-400100 360 x 90mm PL17

Capacity Ratio	2.5
Long Term Deflection	< 1.0 mm
Max. Bearing Reaction	11.2 kN
Load Combination	1.2G + 1.5Q
Minimum Bearing Length	35 mm
Uplift Fixing Requirements	27.5 kN Characteristic Load

PRODUCER STATEMENT



Tasman Consulting Engineers Limited has been engaged by Prowood to provide design services for the development of the Prolam Online calculator.

The design has been carried out using sound and widely accepted engineering principles to the requirements of AS/NZS1170:2002, NZS3603:1993 and NZS3604:2011 using the timber properties for GL8, GL12 and GL17 glulam and LVL15.

I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.



David King

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050

27 March 2019

283 Waiwhero Rd P O Box 413 Motueka New Zealand Phone 03 526 7436 Fax 03 526 7437

Email: info@prowoodnz.com • www.prolamnz.com



TIMBER PROPERTIES IN USED SPAN TABLE CALCULATIONS

DRY USE

Characteristic Stresses and Elastic Moduli for Prolam (Glulam Grades)

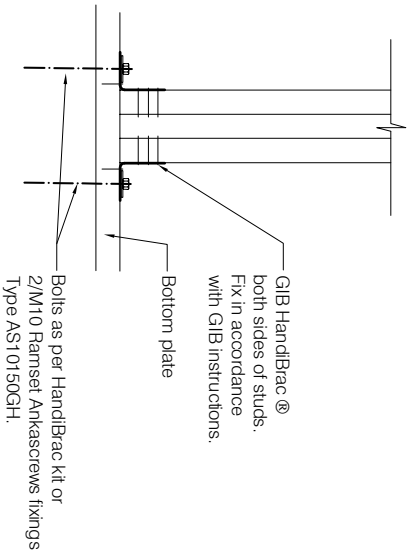
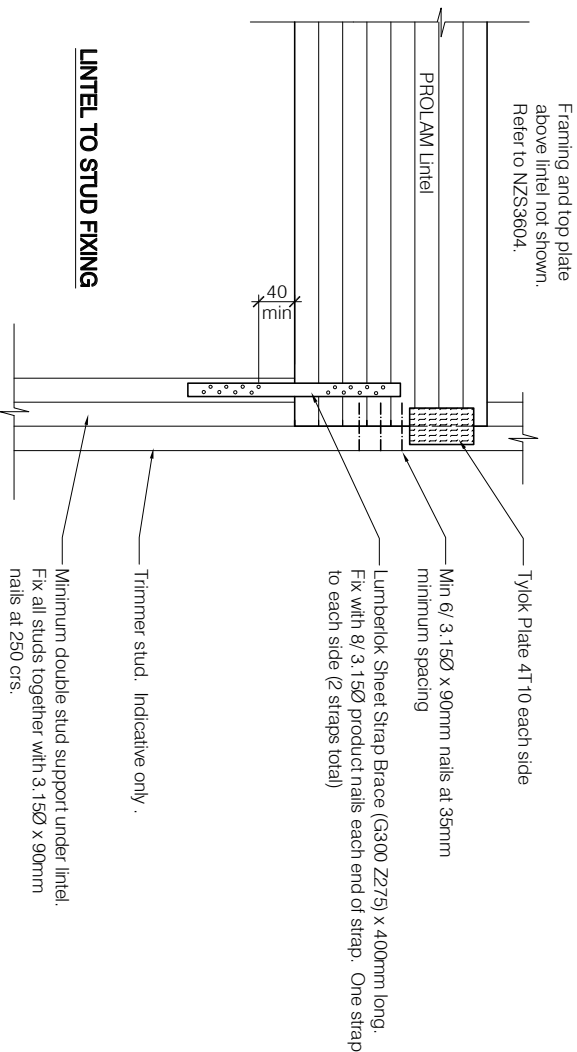
Characteristic Stresses (MPa)						Elastic Moduli (MPa)	
	PL Grade	Bending	Tension parallel to grain	Shear in Beam	Compression parallel to grain	Short modulus of elasticity parallel to the end grain	Short duration modulus of rigidity for beams
Prolam	PL 17	42	21	3.7	35	16700	1100
Prolam	PL 12	25	12.5	3.7	29	11500	770
Prolam	PL 8	19	10	3.7	24	8000	530
Prospan	LVL 15	59	35	4.2	39	15000	775

For compression perpendicular to the grain, use 8.9 MPa dry and 5.3 MPa wet as per NZS 3603 for Radiata Pine for all PL grades.

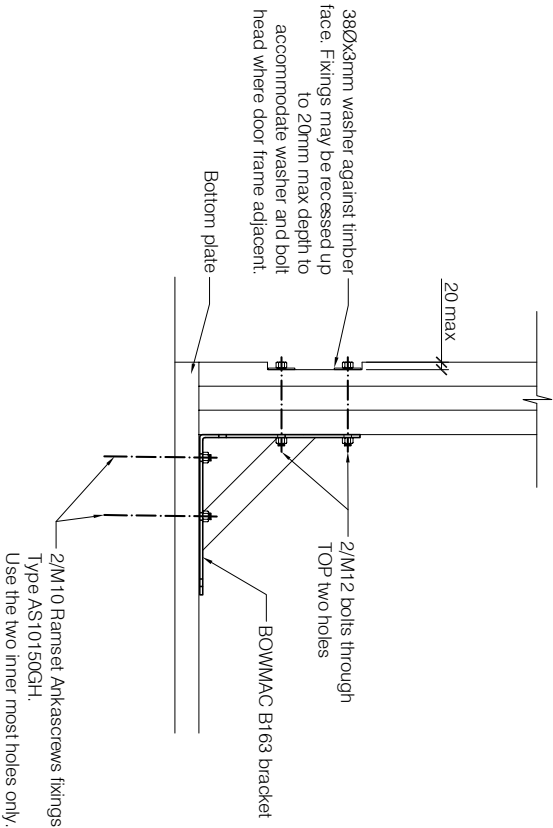
WET USE - (H3.2 treated)

Characteristic Stresses and Elastic Moduli for Glulam Grades

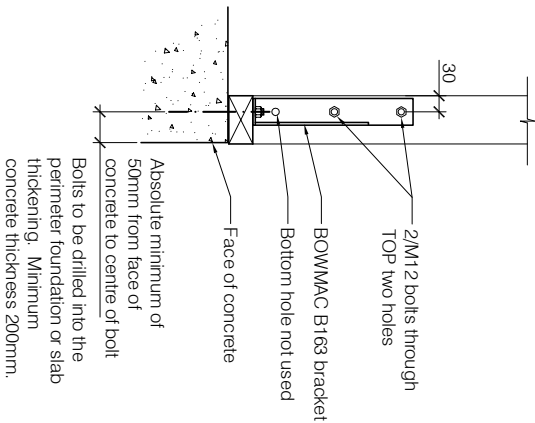
Characteristic Stresses (MPa)					Elastic Moduli (MPa)	
PL Grade	Bending	Tension parallel to grain	Shear in Beam	Compression parallel to grain	Short modulus of elasticity parallel to the end grain	Short duration modulus of rigidity for beams
PL 17	33.6	16.8	2.5	28.0	13400	880
PL 12	20.0	10.0	2.5	23.2	9200	610
PL 8	15.2	8.0	2.5	19.2	6400	420



ALTERNATIVE BASE FIXING FOR FRAMING BOTH SIDES OF STUDS



BASE FIXING FOR FRAMING TO ONE SIDE (eg at door frame)



TCE

Ltd

TASMAN

CONSULTING

ENGINEERS

195A Queen St

PO Box 3631

Richmond NELSON

Ph: (03) 544-6404

www.tcel.co.nz

PROLAM LINTELS - UPLIFT FIXING DETAILS

Reduced Ultimate Capacity 18kN for wind loads.

(Characteristic Capacity 22.5kN).

Scale	1:10	Sheet	S1
Date	Aug 2015	Original size A3	of 2
Drawn	DJK	File	14265

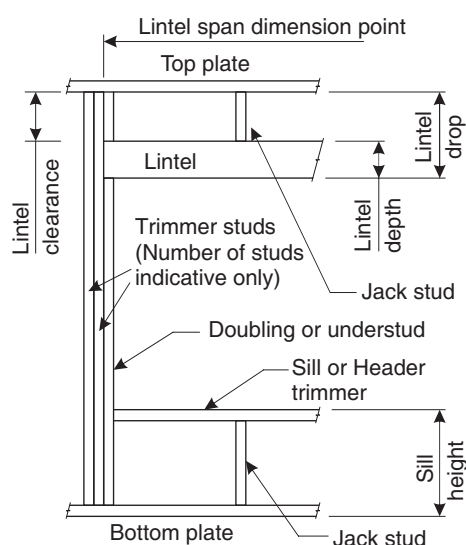


LINTEL FIXING SCHEDULE ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011

NOTE:

- ★ All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20 kPa.
- ★ 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	
8.6 m ²	G	G	H		G	G	H	
11.6 m ²	G	H	H		G	G	H	
12.1 m ²	G	H	H		G	H	H	
15.3 m ²	H	H	-		G	H	H	
19.1 m ²	H	-	-		G	H	-	
20.9 m ²	H	-	-		H	H	-	
21.8 m ²	H	-	-		H	-	-	
34.3 m ²	-	-	-		H	-	-	

Notes:

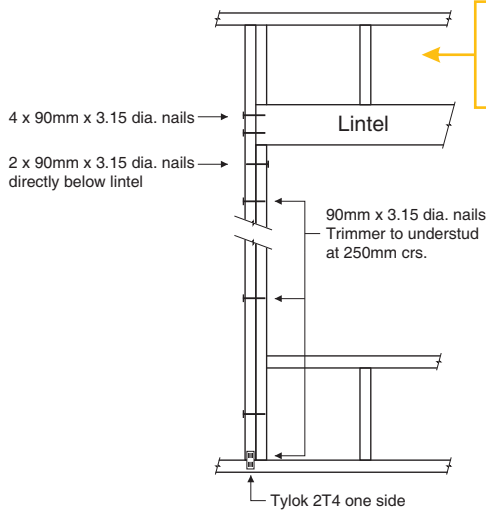
- 1) Roof Tributary Area = approx. 1/2 x (Total roof area on girder and rafter trusses supported by lintel)
- 2) Assumed girder truss is at mid-span or middle third span of lintel
- 3) Use similar fixings for both ends of lintel
- 4) All other cases require specific engineering design

SELECTION CHART FOR LINTEL FIXING

Lintel Span	Loaded Dimension (See Fig. 1.3 NZS 3604:2011)	Light Roof					Heavy Roof				
		Wind Zone					Wind Zone				
		L	M	H	VH	EH	L	M	H	VH	EH
0.7	2.0	E	E	E	E	F	E	E	E	E	E
	3.0	E	E	E	F	F	E	E	E	E	F
	4.0	E	E	F	F	F	E	E	E	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
0.9	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	E	F	F	F	E	E	F	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
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	F	G	H	H
2.4	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	G	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	F	G	H	H
	6.0	F	G	H	H	-	E	F	G	H	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	F	G	H	H
	5.0	F	G	H	H	-	E	F	G	H	H
	6.0	F	G	H	-	-	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	F	G	G	H
	4.0	F	G	H	H	-	E	F	G	H	H
	5.0	F	G	H	-	-	E	F	G	H	-
	6.0	G	H	H	-	-	E	F	H	-	-
4.2	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	H	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.5	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.4	F	G	H	H	-	E	F	G	H	-
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
4.8	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.2	F	G	H	H	-	F	F	G	H	-
	4.0	F	G	H	-	-	E	F	H	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-

LINTEL FIXING OPTIONS

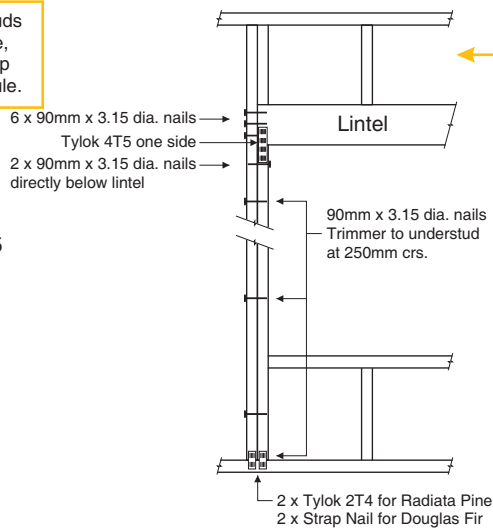
TYPE E 1.4 kN



For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

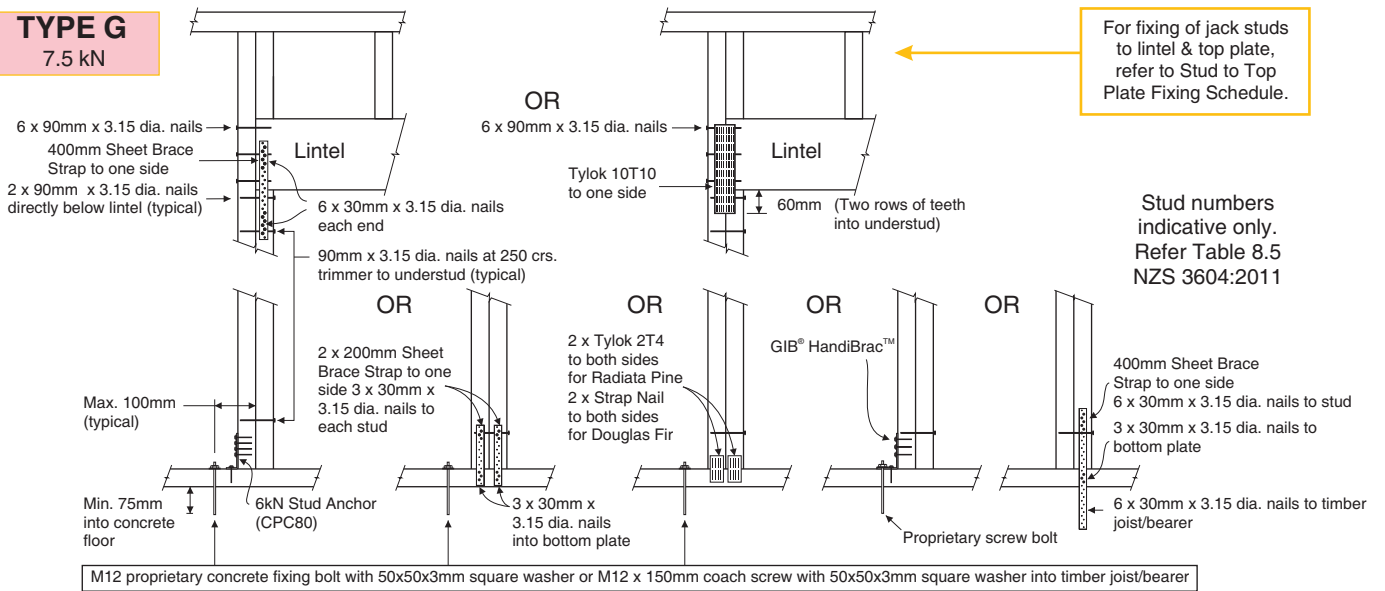
TYPE F 4.0 kN



For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

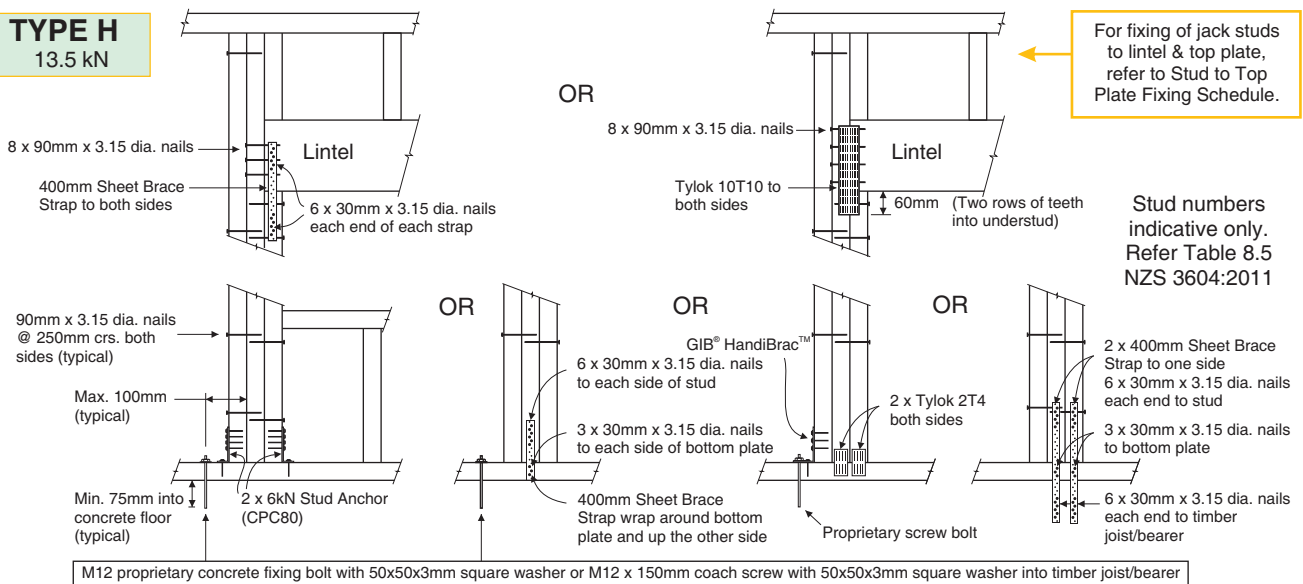
TYPE G 7.5 kN



For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

TYPE H 13.5 kN



For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011



PROLAM® products are manufactured to the requirements of AS/NZS 1328.1:1998 Glue Laminated Structural Timber, and AS/NZS 1491:1996 Finger Jointed Structural Timber under an approved quality system based on the ISO 9000 series of standards. As such if the product is used in accordance with **PROLAM®** product literature, it will meet the durability clauses of the New Zealand Building Code B2.

Subfloor Applications:

- ☒ **PROLAM®** may be used where approved practices for clearance and ventilation are used.

External Use:

- ☒ **PROLAM®** is recommended for weather exposed applications if sealed and maintained in accordance with **PROLAM®** literature.

Preservative Treatment:

- ☒ **PROLAM®** Beams are CCA H3.2 treated as defined by NZS 3640:2003, for weather exposed applications, such as verandah beams, deck bearers, and subfloor applications.
- ☒ **PROLAM®** Posts are CCA H5 treated as defined by NZS 3640:2003 for in-ground and weather exposed applications, such as deck piles, verandah posts and similar applications.

Storage of **PROLAM®**:

- ☒ To ensure **PROLAM®** remains straight and true at the time of installation, follow the below recommendations:
 1. Store under cover so that it remains dry until installation.
 2. Stack clear of the ground for good ventilation.
 3. Stack on bearers to keep flat and straight.

Branded **PROLAM®**:

- ☒ **PROLAM®** is branded for your protection. Look-alike materials may not perform to the standard of **PROLAM®**. For your protection do not accept unauthorized substitution

Rinnai

Installation guide

Rinnai INFINITY A-Series continuous flow water heaters

REU-A2626WG-ZK



REU-A2426WG-ZK



REU-A2024WG-ZK



REU-A1620WG-ZK



The Rinnai INFINITY A-Series models are not suitable for commercial or solar applications

Important

This appliance must be installed in accordance with:

- Manufacturer's installation instructions
- Current AS/NZS 3000, AS/NZS 3500, AS/NZS 5601.1 and G12/AS1

For use with Natural Gas or Universal LPG as indicated on the appliance.

Not suitable as a spa or swimming pool heater.

Not suitable for commercial or solar applications.

Appliance must be installed, commissioned and serviced by an authorised person, being in New Zealand a licensed gasfitter, in accordance with these instructions and all applicable local rules and regulations.

Warning

Improper installation, adjustment, alteration, service and maintenance can cause property damage, personal injury or loss of life.

For more information about buying, using, and servicing of Rinnai appliances call: 0800 RINNAI (0800 746 624).

Rinnai New Zealand Limited
105 Pavilion Drive, Mangere, Auckland
PO Box 53177, Auckland Airport, Auckland 2150

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Before installation

- **Check for damage:** Unpack the appliance and check for damage. DO NOT install any damaged items.
- **Check components and gas type:** Check all components have been supplied and that you have the correct gas type.
- **Read these instructions:** Get an overview of the steps required before starting the installation. Failure to follow these instructions could cause a malfunction of the appliance. This could result in serious injury and property damage.
- **Applicable models:** These instructions apply only to the Rinnai A-Series continuous flow water heater models listed on the cover page of this guide.

Appliance location

This appliance is designed for outdoor installations only. It MUST BE located above ground in open air with natural ventilation, without stagnant areas, where gas leakage and products of combustion can be rapidly dispersed by wind and natural convection.

The appliance MUST BE mounted on a vertical structure with the water and gas connections on the underside pointing downwards.

Location of the flue terminal MUST BE in accordance with Section 6 and Figure 6.2 of the AS/NZS 5601.

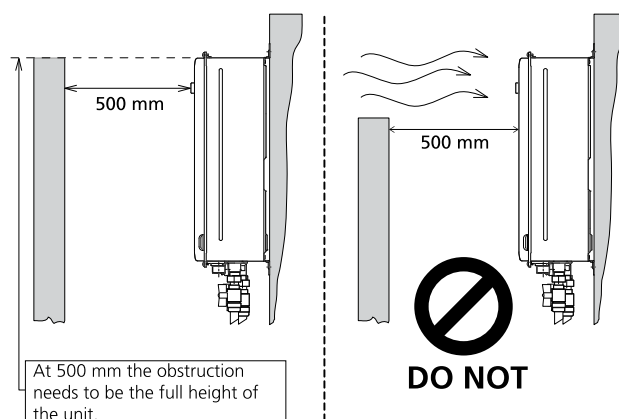
The appliance MUST BE placed **as close as practicable to the most frequently used hot water outlet** or outlets to reduce the delay time for hot water delivery¹. For installations where the distance between the water heater and the outlets is considerable, a flow and return system can be used to minimise the waiting time for hot water delivery. Alternatively multiple appliances can be strategically placed to serve outlets with minimal delay time.

An AC 230 V, 10 A earthed power point must be provided adjacent² to the appliance. This power point must be weatherproof. It must be clear of the gas and water connections to the appliance and also the flue exhaust and water pressure relief valve. The power cord of the appliance is 1.5 m long.

All appliances MUST BE installed to ensure access can be gained without hazard or undue difficulty for maintenance and servicing. Sufficient clearances shall allow access and removal of all serviceable components. Appliances should not be mounted more than 2.5 m above the ground or floor level unless the customer can arrange permanent and safe access, or can provide another means of safe access.

Horizontal obstructions

AS/NZS 5601 states a minimum horizontal clearance of 500 mm between a building structure and obstruction facing the terminal. At 500 mm the obstruction needs to be the full height of the unit (as shown), and not a partial obstruction. A partial obstruction of less than 1 m could result in wind pushing the flue gases back into the flue terminal.



¹ Rinnai recommend a maximum pipe run of 10 m.

² Power point can be within the pipe cover if a pipe cover is installed—must comply with AS/NZS Wiring rules

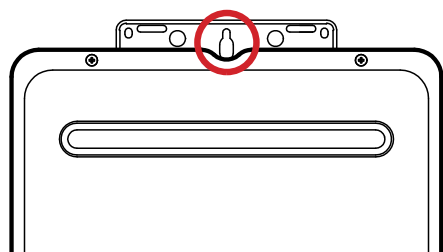
General installation information

Securing the Rinnai INFINITY

The wall or structure on which the units are mounted **MUST BE** capable of supporting the weight of the appliance and associated pipe work. Refer p. 7 for the specific model weight.

Ensure that suitable fixing screws or bolts are used to secure the unit to the wall, in accordance with AS/NZS 5601 section 6. Wooden plugs shall not be used.

The top bracket has a keyhole slot so that the appliance can be positioned by hanging it on one screw, once in position the appliance can then be secured with appropriate fittings.



The appliance can be mounted directly against the wall or structure. There is no need to use non-combustible sheeting between the appliance back panel and the wall or structure for the purposes of meeting the temperature hazard requirements of AS/NZS 5601.

Pipe sizing

If the gas pipe sizing is insufficient the appliance won't perform properly. Gas pipe sizing must consider the gas input into this appliance as well as other gas appliances in the premises. The gas meter and regulator must be specified for this gas rate.

An approved sizing chart such as the one in AS/NZS 5601 should be used. Refer p. 7 for model specific gas consumption details.

Water pipe sizing and layout should be performed in accordance with AS/NZS 3500. All hot water pipe work should be insulated to optimise performance and energy efficiency.

Water supply

The appliance is intended to be permanently connected to the water mains.

Refer p. 7 for model specific operational water pressure limitations. Approved pressure limiting valves may be required if the maximum rated water supply pressures are exceeded. To achieve the rated flow, the minimum water supply pressures must be met.

The A-Series water heaters will operate at lower pressures than the specifications, but will not achieve the rated flow. Contact Rinnai for gravity fed or low pressure installations.

Water chemistry and impurity limits are detailed in the operation guide within the warranty section. Most metropolitan water supplies fall within the requirements.

If you are unsure about your local water quality, contact your water authority. If sludge or foreign matter is present in the water supply, a suitable filter or strainer should be incorporated in the water supply to the Rinnai INFINITY.

Water delivery temperature

Requirements of AS/NZS 3500 MUST BE considered regarding the temperature limitations of hot water supplied to areas used primarily for personal hygiene. The temperature of these areas may be limited to 55 °C or less.

If the appliance is to deliver water primarily for the purposes of personal hygiene in an early childhood centre, school, nursing home or similar facility as defined in AS/NZS 3500.4, a Temperature Limiting Device (TLD), such as a tempering valve may be required, even if the appliance is set to 55 °C or less. For these types of applications contact Rinnai.

Requirements for Rinnai INFINITY units installed without controllers

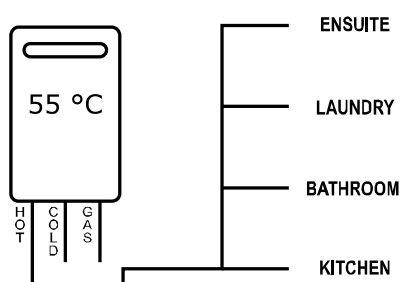


Diagram 1 - 55 °C Appliance

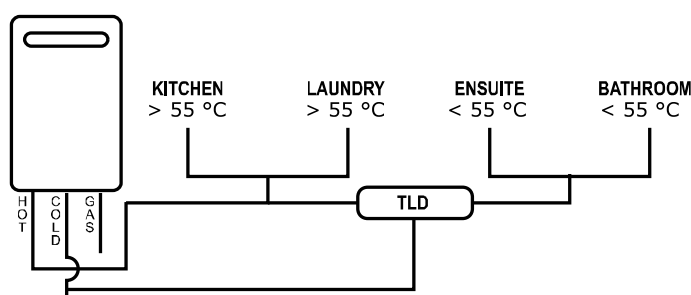
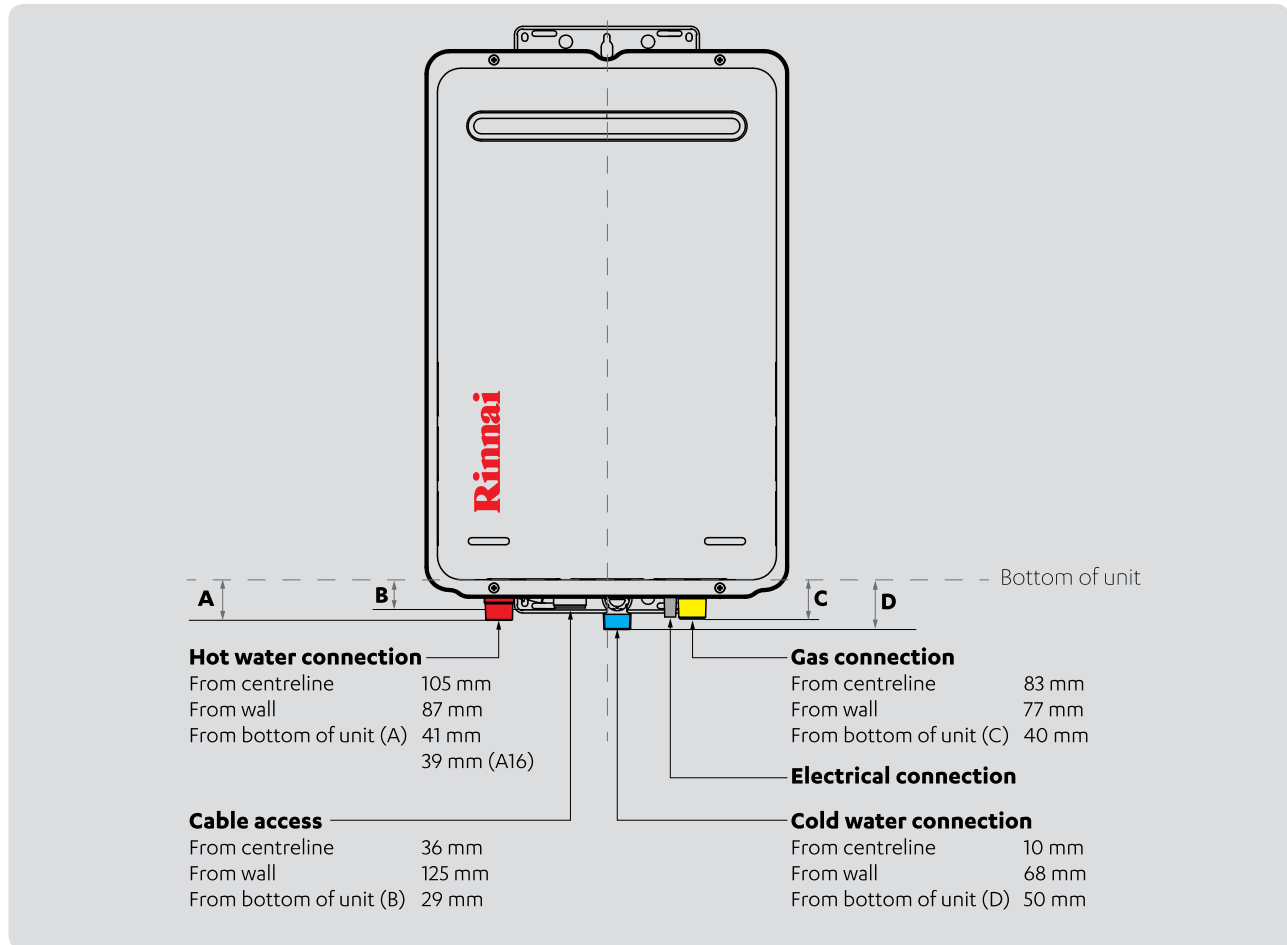


Diagram 2 - Not a 55 °C Appliance
(TLD = Temperature Limiting Device)

When the Rinnai INFINITY is set to deliver water at a temperature higher than 55 °C, it will be necessary to fit a Temperature Limiting Device for delivery to areas used for the purposes of personal hygiene.

Connections and fittings



Model	Gas consumption MJ/h	Water Supply kPa		Weight kg	Fittings		
		Min.	Max.		Hot	Cold	Gas
A16 external REU-A1620WG-ZK	16.3-124	120	1000	13	R $\frac{1}{2}$ (15 mm)	R $\frac{1}{2}$ (15 mm)	R $\frac{3}{4}$ (20 mm)
A20 external REU-A2024WG-ZK	19.9-156	160	1000	14	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)
A24 external REU-A2426WG-ZK	16.3-184	200	1000	15	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)
A26 external REU-A2626WG-ZK	16.3-199	200	1000	15	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)

Service connection points

An approved full flow isolation valve and disconnection union **MUST BE** fitted to the cold water inlet. A non-return valve is not required unless required by local regulations.

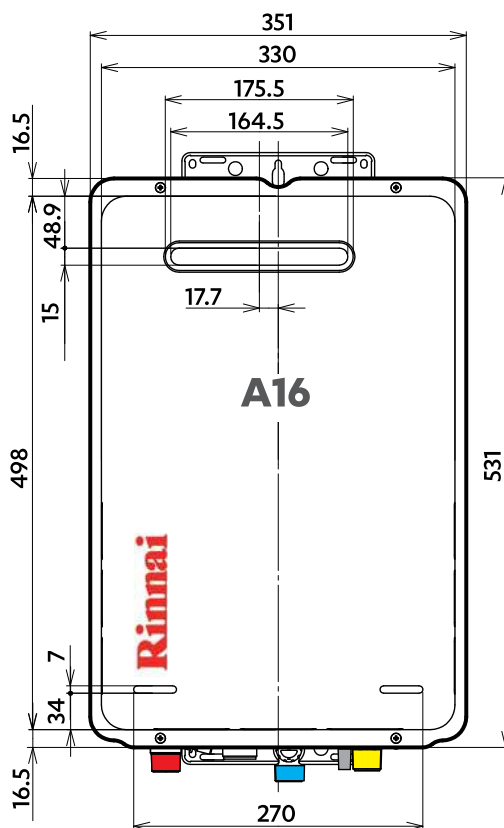
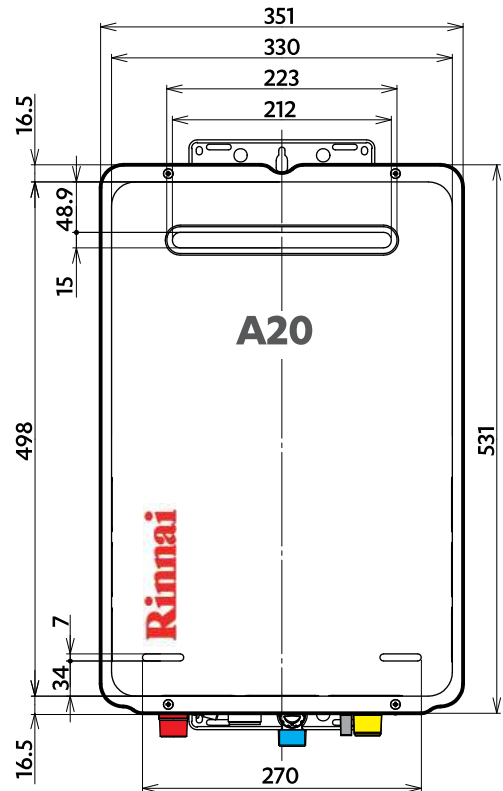
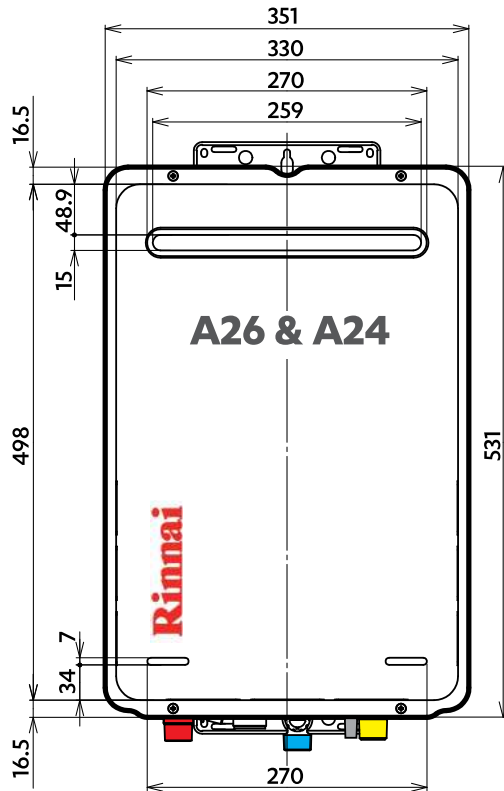
Isolation valves **MUST NOT** be fitted directly to the appliance.

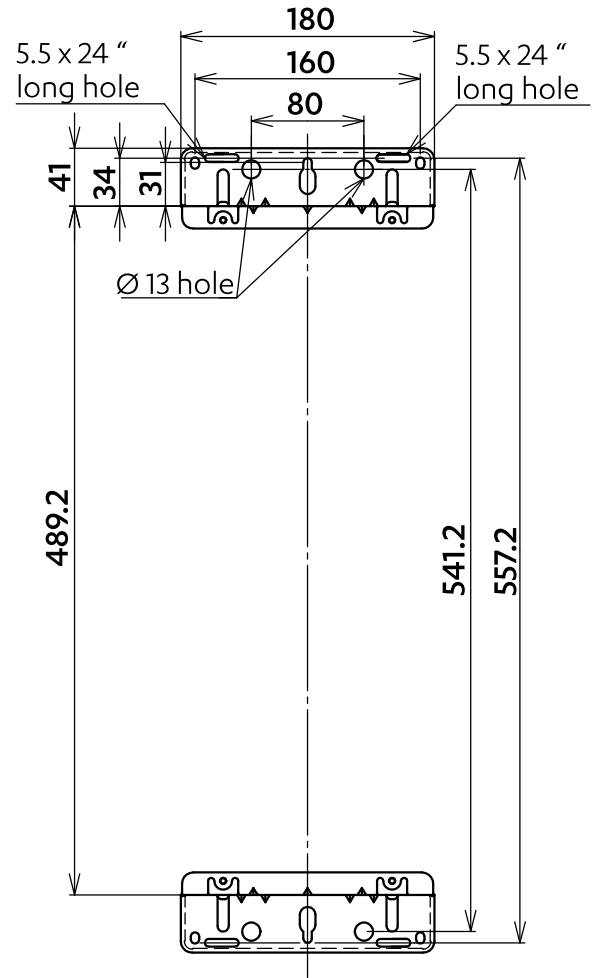
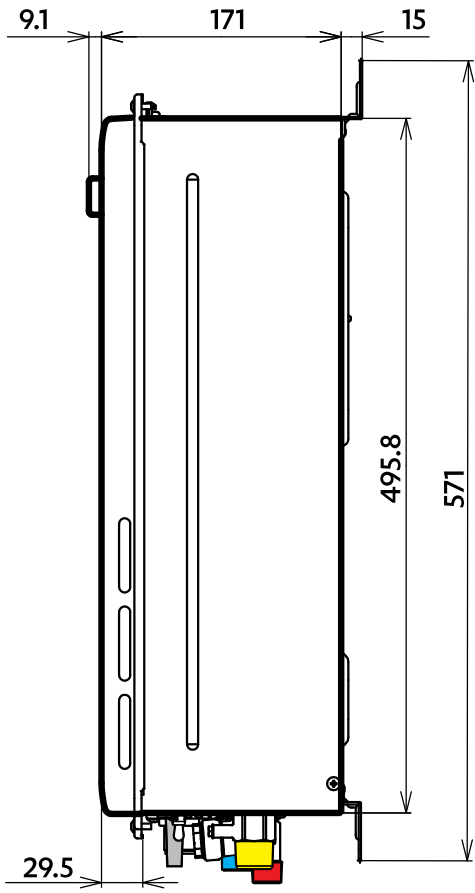
It may be necessary to fit a temperature limiting device for delivery to areas used primarily for the purposes of personal hygiene, refer previous page for 'Water delivery temperature' information.

Purge gas and cold water supply lines to remove air and swarf before final connection. Swarf in the gas or water supplies may cause damage, a common problem, which is not covered by warranty.

Dimensions (mm)

The basic dimensions, (height, width, and depth) are the same. The difference between the models are the dimensions and position of the flue outlet.





Commissioning

AS/NZS 5601.1, clauses 2.6.8 and 6.11.2, states that every part of a gas installation shall be commissioned prior to initial use. It is the installer's responsibility to ensure all current AS/NZS 5601 requirements are met. The URL's provided are links to short videos on how key steps are performed.



The appliance operation must be tested after installation. Ensure the building occupants do not have access to the hot water outlets during this procedure.

Please note

The Rinnai INFINITY A-Series comes with a factory preset outlet temperature of 55 °C. The high and low gas operating pressures are also factory preset. Under normal circumstances the operating pressures do not require adjustment during installation. Make adjustments ONLY if the unit is not operating correctly and all other possible causes for incorrect operation have been eliminated.

Inlet supply pressure to the appliance **MUST BE** checked and set within the operating parameters of the appliance in all instances.

If the appliance can not be adjusted to perform correctly call 0800 RINNAI (0800 746 624) for assistance.

Steps to commissioning a Rinnai INFINITY A-Series model

- 1 Flush water pipes, and gas line**
 Before final connection of the water heater flush the gas, hot and cold water supply lines. Swarf in the gas or water supplies may cause damage, a common problem, which is not covered by warranty.

- 2 Connect gas line**

- 3 Purge the gas line of air**

- 4 Final connection test**

- 5 Check supply pressure**
 Operate ALL other gas appliances at their maximum gas rate. With all gas appliances on maximum the supply pressure must read between 1.13-3.0 kPa on Natural Gas. On LPG the pressure must be 2.75-3.0 kPa.

 If the pressure is lower, the gas supply is inadequate and the appliance will not operate to specification. It is the installer's responsibility to check the gas meter, service regulator and pipe work for correct operation and sizing, and rectify as required.

6 **PCB and/or dip switch settings checked.**

Refer p.12-14.

PCB settings checked if the factory default temperature has been changed.

Dip switch settings checked if a flue diverter is fitted.

 Short video: <http://rinnai.co.nz/007>

7 **Operate and test for gas leaks**

Replace the appliance front cover otherwise the unit won't operate correctly, and operate and test for gas leaks using an electronic leak detector.

8 **Operational test—water flow and temperature at the hot water outlets**

Confirm the hot water delivery temperatures using a thermometer.

If water controllers are fitted, it is necessary to test their operation through the complete range of functions, refer separate instructions provided with the water controllers.

9 **Check cold water inlet filter**

Inspect and clean the water inlet filter. This may need to be repeated to ensure the filter remains clear, especially on new installations.

 Short video: <http://rinnai.co.nz/006>

If you feel the customer is capable of doing this check it would be beneficial to show them how to inspect and clean the filter as well.

10 **Customer handover**

After testing is completed, explain to the customer the functions and operation of the water heater and water controllers (if fitted).

Also talk to them about the gas, power, and water connections, how frost protection works, the procedure for draining the water heater, where to find the data plate, maintenance and servicing. If the customer is not there try and contact them by phone to relay the important points.

Ensure the installer details section is completed in the operation guide, the commissioning checklist has been completed and signed, and that guide and checklist are left with the customer.

PCB interface and dip switch settings

The PCB interface and dip switch settings must only be changed by a licensed gasfitter. They have been provided as there may be a requirement to change the temperature of the water delivered from the water heater or change the dip switch settings if fitting a flue diverter.



Care must be taken when changing the temperature or dip switch settings as they can be easily switched or bumped into the wrong position. Fully check the operation of the water heater before leaving including the temperature of the water delivered.

The cover of the water heater will need to be removed to carry out this operation. As this will expose live mains voltage wiring **please disconnect the power supply before removing the front cover.**

We wish to draw your attention to the requirements of the New Zealand Building Code and compliance document G12. This requires that water delivered to sanitary fixtures be no more than 55 °C. Increasing the water heater set temperature will require that you protect all sanitary fixtures to which the appliance is plumbed with suitable tempering valves or something similar.

Rinnai will accept no liability for issues arising out of the use of this information.

If you have any doubts about the performance of the water heater, please contact Rinnai by phoning 0800 RINNAI (0800 746 624).

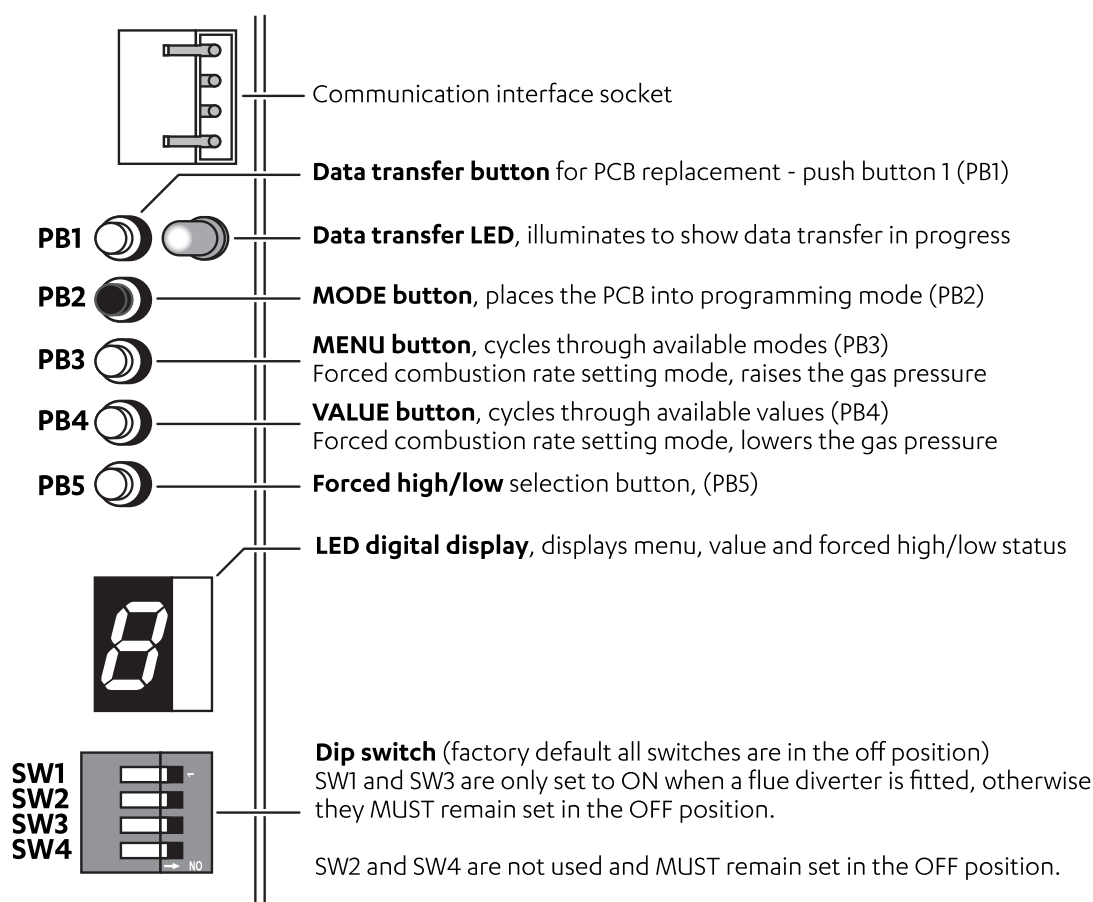
The following information details settings for the Rinnai INFINITY A-Series models only. They are not applicable for other models.

Basic operation of the PCB interface

- To place the PCB into programming mode press PB2 until the LED digital display shows **1**, noting that the current set value will be displayed shortly afterwards.
- To alter a value press PB4, each press of the button will select the next available value.
- To change to another menu, press PB3, each press of the button will select the next available menu.
- To exit the programming mode and save the selected settings press PB2 until the LED display goes blank.

Note:

- If no buttons are pressed the PCB will automatically exit programming mode after 10 mins.
- Exiting programming mode sets the value last viewed as the current value.



Menu	Menu description	Value							
		A	b	C	d	E	F	H	J
1	Gas type	ULPG	NG	N/A	N/A	N/A	N/A	N/A	N/A
2*	Model	2626	2426	2024	1620	N/A	N/A	N/A	N/A
3	Fixed / Max. temp	55 °C ¹	65 °C	60 °C	50 °C	42 °C	40 °C	N/A	N/A
4	OFF water flow rate	+ 3 °C ²	+ 6 °C	N/A	N/A	N/A	N/A	N/A	N/A
5	50 °C delivery adjustment temp.	Min Step 0	Increase Step 1	Increase Step 2	Increase Step 3	Increase Step 4	Increase Step 5	Increase Step 6	Increase Max

The temperature of outgoing hot water is constantly monitored by a built-in sensor. If the temperature of the outgoing hot water rises to more than 3 °C (6 °C #) above the selected temperature shown on the digital monitor or the preset limit when water controllers are fitted, the burner will automatically go out.

* Values in menu 2 cannot be adjusted.

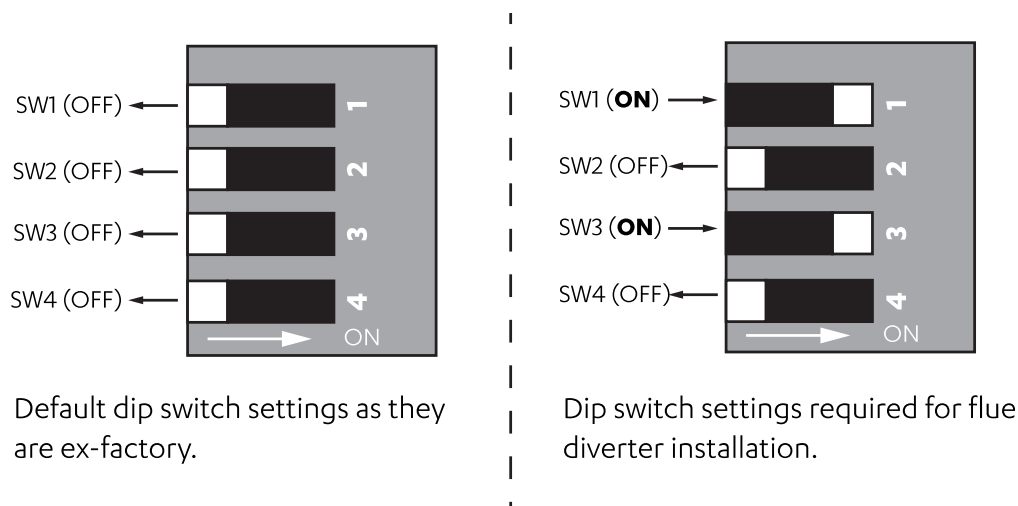
1 Factory default

2 OFF water flow rate (+3 °C, factory default)

Flue diverter dip switch changes

When delivered ex-factory, by default SW1, SW2, SW3, and SW4 of the DipSW are set to the OFF position.

If a flue diverter is installed onto the water heater, SW1 and SW3 of the DipSW must be set to the ON position.



The dip switch change for flue diverters is required to increase the combustion fan speed, which helps overcome the friction losses from have a flue diverter installed on the water heater.

Appendix 1:

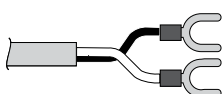
Water controller communication cables

Wired water controllers operate at an extra low voltage (12 V DC) which is supplied from the water heater, a 10 m long communication cable is supplied for connection to the water heater. Only Rinnai supplied communication cables may be used.

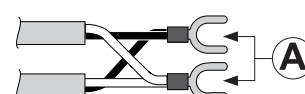
The water heater end of the cables is fitted with spade terminals. Only two pairs of cables (four spade connectors in total) may be terminated. When attaching three or four cables it is necessary to join the cable terminators as shown below.

For each pair cut off the existing spade connectors and re-terminate each pair into a new spade connector (A). Spade connectors are available from your local electrical component retailer

Single cables can be used when terminating up to two communication cables.



Paired cables are to be used when terminating three or four communication cables.

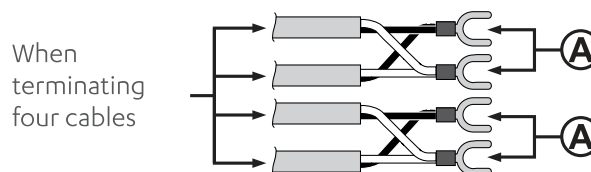
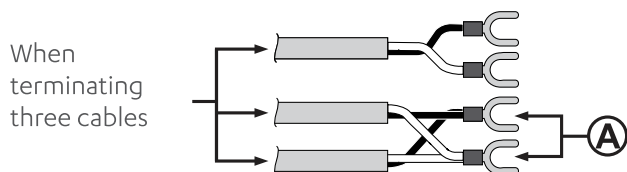


Connecting one or two communication cables

Follow steps one through five below to terminate the cables to the water heater.

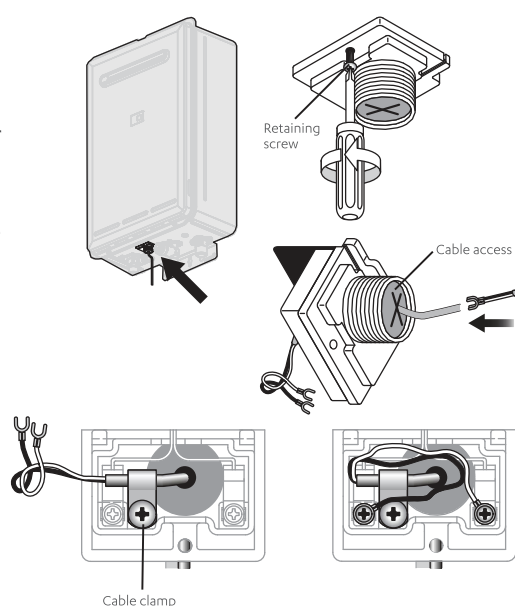
Connecting three or four communication cables

To connect three or four cables, separate all the cables to be fitted into pairs.



Follow steps one through five below to terminate the joined cable pairs to the water heater.

1. Isolate the power supply by switching the power point off and removing the power plug of the water heater from the electric power socket.
2. Removing the retaining screw of the cable connector at the base of the unit.
3. Swing the cable connector door open and thread the cable through the weather seal of the cable access hole, allowing sufficient cable length so that the sheath of the cable can be secured with the cable clamp supplied with the transceiver.
4. Loosen the screw terminals and connect the cable spade connectors to these terminals and re-tighten.
Polarity is not important, either wire colour can be connected to either terminal.
5. Return the cable connector to the original position, taking care not to damage the cable wires in the process, and replace the retaining screw.



a touch
of magic



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<http://www.youtube.com/rinnainz>

U340-1336(01)



INFINITY A-series

continuous flow gas hot water heaters

PTS

01:18

A Product Technical Statement (PTS) is a way to show how a product or system is fit for purpose for use in New Zealand and to demonstrate compliance with the New Zealand Building Code (Building Code Amendment Act 2013).

Product description

Designed and made in Japan, the Rinnai INFINITY A-series are continuous flow gas hot water heaters with inbuilt frost protection. They have electronic ignition and require electricity to operate. The temperature dip switch setting is factory preset at 55 °C.

The INFINITY A-series comes in a range of sizes, model selection is dependent on the number of outlets in the house. Click on any of the thumbnail images to view the product information.

Scope of use

Suitable for mains and medium pressure residential applications. They are designed to be externally mounted on an outside wall and located as close as practicable to the most frequently used hot water outlet(s), to reduce the delay for hot water delivery.

They are not suitable as a spa or swimming pool heater. They are also not suitable for commercial installations.

Hard or acidic water will need to be treated to use this product.

Available for connection to natural gas or LPG, this must be specified at the time of purchase.

Flue terminations must comply with the flue terminal locations shown in AS/NZS 5601.1.

Design guidelines

Specification and installation must be in accordance with Rinnai installation requirements and with the Building Code.

Rinnai specify that installation must be in compliance with AS/NZS 5601.1:2013, AS/NZS 3000:2007, and AS/NZS 3500.

Quality assurance

- ISO 9001 Certified System
- ISO 14001 Certified System



A16



A20



A24



A26



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INFINITY A-series

continuous flow gas hot water heaters

PTS

01:18

Compliance with the NZ Building Code

If specified, installed and maintained in accordance with all Rinnai requirements the INFINITY A-series will comply with the below provisions of the NZ Building Code. AS/NZS 5601.1 is an acceptable solution within the NZBC for gas installations as per NZBC G11/AS1 9.0.1.

Code clause	Evidence of compliance
B1.3.1 B1.3.2 B1.3.3 (a, b, c, h, , m)	The INFINITY A-series units are certified to AS/NZS 4552, a series of standards for safety, performance and energy efficiency in gas fired water heaters for hot water supply and/or central heating.
B.2.3.1 (c)	In service history.
C2.2 and C2.3	Certification of continuous flow gas water heaters to AS/NZS 4552.
E2.3.2	Achieved by following E2/AS1
G4.3.3 (f, i)	Achieved as long as the building complies with G4/AS1
G9.3.1 (a, b, c, d, f), G9.3.3	G9/AS1 as required by Rinnai installation guidance
G10.3.1 (a, b, c, d), G10.3.2, G10.3.3, G10.3.4, G10.3.5, G10.3.6	G10/AS1 (NZS 5442 natural gas) and (NZS 5435 LPG)
G11.3.1, G11.3.2, G11.3.3, G11.3.4	G11/AS1 (AS/NZS 5601.1) as required by Rinnai installation guidance
H1.3.4	Certification of continuous flow gas water heaters to AS/NZS 4552.2 (Minimum energy performance standards for gas water heaters).

Additional evidence to support the above statements

Energy Safety Supplier Declaration of Compliance:

- INFINITY A16: Declaration number - [1825920179](#)
- INFINITY A20: Declaration number - [1825820179](#)
- INFINITY A24: Declaration number - [1825720179](#)
- INFINITY A26: Declaration number - [1825620179](#)

Seismic restraint

Rinnai has prepared a seismic restraint calculation using NZS 4219. This can be accessed from the A-series product page (technical tab) on the Rinnai website.

Special conditions - installation requirements

Full appliance information can be found at www.rinnai.co.nz.

Limitations: To be installed in accordance with all Rinnai installation requirements and by a licensed gasfitter/plumber, and electrician. Upon completion of the installation, a final inspection and test to demonstrate that the gas appliance has been installed in accordance with Rinnai's instructions and in accordance with Gas (safety and measurement) Regulations 2013 is required by the installer. The gasfitter is to issue a certificate of compliance.

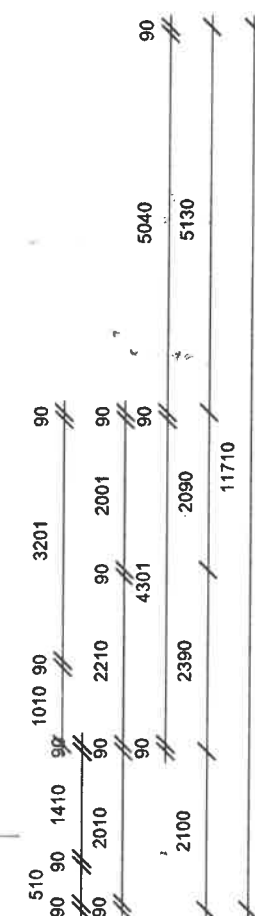
Special conditions - maintenance requirements

For reliable operation Rinnai INFINITY units should be serviced every two years. Installation, servicing and repair shall be carried out only by authorised personnel.



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— SPRINKLER PIPE

Sprinklers for **HOUSES: CALCULATION SHEET**

Project Title: S Mcloud & T Evans New Dwelling	Date: 07/04/2019
Address: 31 Pineview Way, Motueka	
STEP ONE:	MHD Sprinkler: WIR Flow: 49.2 l/m Pressure: 48 kPa
STEP TWO: Equivalent pipe lengths PEX Barrier pipe 28 mm OD using Speedfit Fittings	
Loop Coefficient: 0.14	

Section		Pipe	T-Branch	T-Flow	Elbow	Bend	Valve	Total
One MHD	Fittings	PEX 28	1		1			
	EPL	2	1.5		0.9			
	=	2	1.5		0.9			4.4
Two LOOP	Fittings	PEX 28	3	16	4			
	EPL	39.8	1.5	0.5	0.9			
	=	39.8	4.5	8	3.6			55.9x0.14=7.83
Three RISER	Fittings	PEX 28			2			
	EPL	3.6			0.9			
	=	3.6			1.8			5.4
Four	Fittings							
	EPL							
	=							
Five	Fittings							
	EPL							
	=							
	Fittings							
	EPL							
	=							

STEPS THREE AND FOUR

	Flow l/min	Pressure loss kPa/m	EPL m	Pressure loss kPa	Pressure loss at MHD sprinkler
Section One	49.2	2.06	4.4	9.07	9.07
Section Two	110	8.73	7.83	68.36	77.43
Section Three	110	8.73	5.4	47.14	124.57
Section Four					
Section Five					

STEP FIVE: Total pressure loss

Total pressure loss due to flows	125 kPa
Water meter loss	- kPa
Static pressure loss	30 kPa
Total pressure losses	155 kPa

STEP SIX: Checking available pressure

Pressure	Minimum Pressure Required at Riser inlet	259 kPa
Less total pressure losses		155 kPa
Available pressure at MHD sprinkler		104 kPa
Required pressure at MHD sprinkler		48 kPa

Domestic Sprinkler System for S Mcloud & T Evans

This domestic sprinkler system design has been designed to meet the requirements of NZS 4517:2010.

NOTE: A Horizontal Ceiling is regarded as a ceiling that does not exceed a slope of 9°.

Sprinkler Heads

Sprinkler Heads:	Victaulic V2742 K4.9 Concealed Residential Pendent
Sprinkler Head coverage:	4.9 m x 4.9 m
Sprinkler Head minimum flow:	49.2 l/min
Sprinkler Head minimum pressure:	48 KPa

The use of any other sprinkler head will affect the design calculations and the design would need to be recalculated.

Sprinkler Head Spacing:

The position of the sprinkler heads are marked on the attached plan. Installer to ensure that no sprinkler head is to be installed outside the following parameters.

Minimum spacing between heads	2.43 m
Maximum spacing between heads	4.9 m
Maximum distance to wall	2.43 m
Minimum distance from solid fuel heater and flue	1.5 m

The sprinkler head guide is enclosed for guidance with the installation of the heads.

The model to be used is highlighted and can be obtained from the local Plumbing Merchants.

The design requires 12 sprinkler heads in the dwelling and it is recommended that an additional 2 heads are kept as spares.

Most Hydraulically Disadvantaged Sprinkler

The MHD head is located in the MIR, with 2 m branch pipe from the loop (As marked on plan).

A minimum of 259 KPa supply pressure at the **riser inlet** is required to ensure the pressure required at the MHD sprinkler is sufficient.

Any changes to the sprinkler design as shown on the plans may affect the efficiency of the MHD sprinkler and will require the sprinkler design to be recalculated.

The sprinkler system has been designed with up to **5 domestic supplies** being taken from the loop these domestic supplies are to be used to flush the toilets and service the outside taps to help keep the water in the sprinkler system fresh and negate the need for a Back Flow Preventer.

Any additional supplies taken from the system will affect the efficiency of the system and will require the sprinkler design to be recalculated.

Sprinkler Pipe

The pipe used for the sprinkler system, which includes: the loop, riser and branch pipes is PEX Barrier Pipe 28 mm OD pipe and Speedfit Fittings. **(no crimp joiners to be used)**. The calculation sheet for that pipe is attached.

The parameters of the pipe are as follows:

PEX Barrier Pipe 28 mm OD

Supply, riser and loop piping:	28mm OD
Sprinkler branch pipes:	28mm OD
Supply pressure Riser Inlet:	259 KPa minimum (refer calculation sheet)

Water Pump

The pumpset used to deliver water for the domestic sprinkler system supply must be able to deliver a minimum flow of 110 L/min (almost 2 L/sec) at the minimum pressure required at the riser inlet.

There are several makes of 240v pumps that will meet these criteria.

Smoke Alarms

The installation of a domestic sprinkler system does not negate the need for smoke alarms to meet the Building Code. I would strongly recommend that smoke alarms should be installed in each Bedroom, Living Area and Hallway be 240v hard wired **photoelectric** smoke alarms. Your electrician can advise on installation.

The 240v hard wired smoke alarms gives the advantage of each smoke alarm being interconnected so that when one alarm activates they all sound which alerts all members of the building at the same time.

Before installation of the sprinkler heads a pressure test should be carried out to check for leaks and a **flow/pressure test** is also to be carried out at the MHD sprinkler head to ensure the sprinkler system parameters are met.

Domestic Sprinkler System Maintenance

Introduction

Routine checks should be provided to ensure that the system will perform as required. These may be carried out by the home owner. If the routine checks indicate conditions that may impact on the reliability of the system, specialist advice should be sought.

If any alterations to the building or changes to the water supply have occurred or are proposed specialist advice should be sought to ensure the sprinkler system will function as designed.

Monthly Checks

- 1) Check the sprinkler system water supply pressure gauge to ensure that the water supply pressure has not deteriorated below the minimum required water supply pressure.
- 2) Where the sprinkler system water pressure is reliant on a pump, check that the pump starts correctly.
- 3) Where pumps are used, clean the filters and check the pressure vessel, and
- 4) Ensure any isolation valves that affect the water supplies to the sprinkler system are fully open.
- 5) Ensure there is in excess of 7000 litres of water left in the supply tank.

Annual Checks

- 1) Inspect the sprinkler system to ensure that the sprinkler heads have not been damaged, covers have not been painted over or have any items hanging from the head or otherwise obstructing the head.

Should you have any questions about the design please contact me on 021654324.

Rob Dalton
Brnz Registered Sprinkler Designer
Registration Number 15
daltonh.design@gmail.com

Owner's Manual for an Automatic Home Multi-Purpose Fire Sprinkler System

S Mcloud & T Evans

As the owner of a fire sprinkler system, your home is protected 24 hours a day all year round for the life of your dwelling, from the threat of fire and the consequences of such an undesired event.

Each sprinkler head of your "Life Safety System" acts as a firefighter ready to apply water immediately and automatically onto a fire.

You have purchased a cost effective, low maintenance, high quality, durable, life safety system. The purpose of this manual is to provide you with useful information on your sprinkler system to enhance your safety within the home.

As the owner you are responsible for maintaining the fire protection system in proper operating condition.

1.0 Your Home Fire Sprinkler System Is Designed To:

- Activate at 57°C - 68°C within 75 seconds of this operating temperature being reached.
- Only discharge water from the sprinkler head that is activated by the fire.
- Discharge water at a rate of 49.2 litres per minute when activated.
- Prevent fire within the home becoming a threat to life.
- Allow you and other occupants of your home to escape from the fire.
- Use the same water for fire suppression that comes into the home for normal living use.
- Automatically extinguish or control a fire within a sprinkler protected compartment.

2.0 This Home Fire Sprinkler System Is Not Designed To:

- Provide early warning to the occupants by means of a water flow alarm. For this reason, smoke alarms are considered an integral part of the total life safety system within the home.
- Automatically notify the Fire Service.

- To be shut off or shut down separately from the normal domestic water supply.
- Automatically shut the sprinkler water flow off after activation.
- Fully control or extinguish a fire:
 - which originates in an unsprinklered area before spreading to a sprinklered compartment.
 - where combustible material is not the amount or type of materials normally found in a home.
 - where unauthorised changes have been made to the plumbing system after installation.

3.0 Sprinkler System Components

3.1 Water Supply

- The domestic water supply is used for both domestic use and for fire suppression via the sprinkler system if and when required.
- The amount of water required to allow the sprinkler heads to function correctly as recommended by the manufacturer has been obtained by calculations derived from water supply pressure/flow available, pipe diameter required and pipe-work layout to reduce friction losses.
- The system has also been operationally tested and has been certified as meeting all design specification requirements by the plumber at completion of the installation.
- If the main water supply is shut-off, the sprinkler system will not function.

3.2 Water Main Shut-Off Valve

- The main water shut-off valve outside of your house is the only valve that will shut off water to your sprinkler system. There are no other valves on the sprinkler system.

3.3 Sprinkler System Pipe-work

- The sprinkler system pipe-work are pipes that use the normal domestic water to supply the sprinkler heads. These pipes are the same types of pipes that supply water to the toilets, bathroom, laundry and kitchen areas but have a larger outside diameter.
- All pipe-work is normally full with water at all times.

3.4 “Residential” Sprinkler Head

- The fire sprinkler heads fitted in your home are “Quick Response” sprinklers and are small, high-sensitivity devices which are activated by heat that either melts a specialised solder link or shatters a small liquid filled bulb.
- “Quick response” means that the sprinkler head is fitted with a “Fast Response” element and must operate within 75 seconds under test conditions when the pre-set temperature is breached.

- Residential sprinkler heads have a high discharge trajectory to ensure coverage of walls and ceilings that may be constructed of or covered with combustible materials, as opposed to a conventional “umbrella” pattern given by sprinkler heads used for commercial applications.

- The sprinklers fitted into your home are:

Type	Residential Sprinkler
Temperature Rating	Cover Plate 57°C, Sprinkler head - 68°C
Manufacturer	Victaulic
Model	V2742
Model Specific Design Features	Dome Cover Plate Concealed Residential Sprinkler
Locations Where Fitted In Home	Covering all areas except Bathrooms, toilets, wardrobes and roof space.

3.5 Sprinkler System Cabinet

It is recommended that the home owner installs a cabinet which is used to contain essential information and spare parts for your sprinkler system.

- Spare sprinkler heads and covers so that the sprinkler heads can be replaced without delay after activation. The sprinkler heads are not reusable.
- Sprinkler wrench for use by an approved installer so that sprinkler heads can be changed without damaging the pipe-work or sprinkler head being installed. A half-inch socket drive is also normally required.
- As-built drawing that shows the layout of the internal pipe-work in case additional servicing or maintenance is required for the domestic plumbing.
- System completion records which document system information, when system installed/by whom, and when system tested by whom.
- Maintenance record that shows all maintenance that has been carried out on the sprinkler system to date.
- Manufacturers Technical Data Sheet for type of sprinkler heads fitted into the home.

3.6 Hard Wired Smoke Alarms

- Although not in any way connected to the sprinkler system, these smoke alarms form an integral and necessary part of the whole life safety system.
- It is recommended that smoke alarm coverage may extend to cover all bedrooms, lounge, living and dining areas and hallways.

- It is recommended that you familiarise yourself with the location of all smoke alarms.
- Care should be taken with any modification to a smoke alarm position or replacement of a smoke alarm due to the 240 Volt supply. It is recommended that a Registered Electrician carry out any electrical wiring work required.

4.0 Areas Not Covered By The Sprinkler System

The following areas have been assessed as not requiring sprinkler coverage:

- Wardrobes and Roof/Ceiling Void.
- Decision on whether or not to install sprinklers in these areas is made on the risk assessment that considers the likelihood of a fire in this type of space, based on past fire statistics, actual intended use of the space in question and floor area of the actual space itself.
- This does not mean that sprinklers cannot be fitted if required which will further increase degree of fire protection.

5.0 Modifications to Plumbing System After Installation

- Any system extension, modification or alteration to the domestic plumbing should be checked and carried out by an approved installer.

6.0 Domestic Sprinkler System Maintenance

Introduction

Routine checks should be provided to ensure that the system will perform as required. These may be carried out by the home owner. If the routine checks indicate conditions that may impact on the reliability of the system, specialist advice should be sought.

If any alterations to the building or changes to the water supply have occurred or are proposed specialist advice should be sought to ensure the sprinkler system will function as designed.

Monthly Checks

- 1) Check the sprinkler system water supply pressure gauge to ensure that the water supply pressure has not deteriorated below the minimum required water supply pressure.
- 2) Where the sprinkler system water pressure is reliant on a pump, check that the pump starts correctly.
- 3) Where pumps are used, clean the filters and check the pressure vessel, and
- 4) Ensure any isolation valves that affect the water supplies to the sprinkler system are fully open.

- 5) Ensure there is in excess of 7000 litres of water left in the supply tank.

Annual Checks

- 1) Inspect the sprinkler system to ensure that the sprinkler heads have not been damaged, covers have not been painted over or have any items hanging from the head or otherwise obstructing the head.

7.0 In The Event Of A Fire

- Ensure that all occupants are alerted, have exited the house and remain outside.
- Phone 111 and ask for the Fire Service. Give your address, nearest cross street and any other information required.
- The water supply should not be turned off until it is confirmed that the fire is completely out. Ideally this task should be left to the Fire Service.
- Sprinklers that have operated in fire cannot be re-assembled and must be replaced.
- Sprinklers that have been subjected to fire conditions but were not activated should also be replaced. Check with the approved installer for minimum replacement requirements.

8.0 Sprinkler Head Operation Under Fire Conditions

- During fire conditions, the temperature around a sprinkler head will approach the operating temperature as hot gases rise to the ceiling. At this time with concealed type sprinkler models, a *Cover Plate* will detach and fall away.
- Continued heating (75 seconds maximum) of an exposed sprinkler at the operating temperature will cause the *Fusible Link* to disengage or the *Quartzoid Bulb* to shatter, releasing the *Water Sealing Assembly*. On some low profile (flush or semi-recessed) models the *Deflector* may also drop into position at this time.
- Water will immediately flow through the sprinkler orifice and strikes the *Deflector*, forming a *Uniform Droplet Spray Pattern* over a specific area of coverage as determined by the water supply pressure and type of *Deflector* fitted.
- The *Uniform Droplet Spray Pattern* will cover an average area of approximately 4.9 metres by 4.9 metres. Because the water spray will immediately cool the hot gases from the fire, other adjacent sprinkler heads may not be activated. The water spray will reach the burning material, cooling it below its combustion temperature to extinguish or control the fire.

9.0 Sprinkler Facts and Figures

- A combined home sprinkler system does not require additional control valves or back-flow devices.

- This type of home sprinkler system does not require annual external servicing of components.
- Actual physical servicing of the sprinkler heads is required only after activation following a fire or when a sprinkler head has been mechanically damaged.
- Sprinklers are the most effective life fire safety device ever invented.
- Sprinklers reduce property damage because they control fires so quickly.
- Sprinklers will protect your family for the life of your home.
- Sprinklers can extinguish a fire in less time than it takes the Fire Service to arrive.
- Modern residential sprinklers are much smaller and have an inconspicuous lower profile than commercial sprinkler heads. They can be partially or fully recessed.
- Residential sprinklers come in common colours and may be custom painted by the manufacturer. They must not be painted after installation.
- Sprinklers rarely leak. Your system has been pressure tested by the installer.
- Sprinklers remain closed until needed and do not wear out.
- Only the sprinkler head that is affected by the fire will activate.
- Sprinkler heads are activated by heat only.
- Smoke without heat will not cause a sprinkler to activate.
- Sprinkler operation will cause less damage than the fire itself.
- A sprinkler will control a fire in its early stages and will use considerably less water than the Fire Service would use.
- Sprinklers have been in use since the late 1800's to protect lives and property - they are a proven technology.
- The odds of accidental sprinkler operation discharge due to a manufacturing defect are 1 in 16 million.
- 90% of fires are contained by the operation of one sprinkler.
- Almost 90% of fatal fires originate in bedrooms, lounge/dining rooms and kitchens.

V27, K4.9

Residential Concealed Pendant

V2742 QUICK RESPONSE

This Model V27 residential sprinkler is designed to meet the requirements of NFPA 13, 13D and 13R for residential use in a variety of room sizes, depending upon available operating pressure and room configuration. Model V2742 is UL Listed for use under smooth flat horizontal ceilings. The design incorporates state-of-the-art, heat responsive, frangible glass bulb design (quick response) for prompt, precise operation.

The die cast frame is more streamlined and attractive than traditional sand cast frames. It is cast with a hex-shaped wrench boss to allow easy tightening from many angles, reducing assembly effort. This sprinkler is available in various finishes to meet many design requirements.

The V27 sprinkler is now available with the aesthetically pleasing dome cover plate, which also is available in various finishes to meet many design requirements.



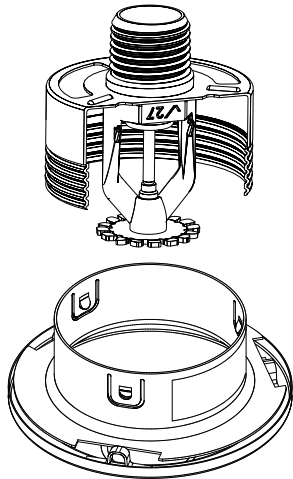
SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

**DOMES COVER PLATE
(V2742)****SPRINKLER OPERATION:**

The operating mechanism is a frangible glass bulb which contains a heat responsive liquid. During a fire, the ambient temperature rises causing the liquid in the bulb to expand. When the ambient temperature reaches the rated temperature of the sprinkler, the bulb shatters. As a result, the waterway is cleared of all sealing parts and water is discharged towards the deflector. The deflector is designed to distribute the water in a pattern that is most effective in controlling the fire.

COVERAGE:

Residential spray coverage up to 20 feet x 20 feet/6.1 m x 6.1 m room sizes per NFPA.

TECHNICAL SPECIFICATIONS:*Exaggerated for Clarity***Model:** V2742**Style:** Concealed Residential Pendant**Nominal Orifice Size:** 7/16"/12 mm**K-Factor:** V2742 – 4.9 Imp./7.1 S.I.^ for room sizes up to 20'/6.1 m**Nominal Thread Size:** 1/2" NPT/15 mm**Max. Working Pressure:** 175 psi/1200 kPa**Factory Hydrostatic Test:** 100% @ 500 psi/3450 kPa**Min. Operating Pressure:** 7 psi/48 kPa**Temperature Rating:** See chart on page 3**MATERIAL SPECIFICATIONS****Pendent Deflector:** Bronze per UNS C51000**Bulb:** Glass with glycerin solution.**Bulb Nominal Diameter:**

- Quick Response: 3.0 mm

Load Screw: Bronze per UNS C65100**Pip Cap:** Bronze per UNS C65100**Seal:** Teflon* tape**Frame:** Die cast brass 65-30**Cup:** Cold rolled steel, zinc-chrome plated.**Cover/Escutcheon:** Brass per UNS C26000**ACCESSORIES****Installation Wrench:** Concealed: V39/V27-2**Sprinkler Finishes:**

- Chrome plated
- Brass Plated
- White Painted
- Flat Black†
- Custom Painted†

For cabinets and other accessories refer to separate sheet.

^ For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.

*Teflon is a registered trademark of Dupont Co.

† These finishes require longer lead times. Contact Victaulic for details.

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

Date _____

www.victaulic.com

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REV_D



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V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**APPROVALS/LISTINGS**

Model	Orifice Size	Nominal K-Factor	Response	Deflector Type	Approved Temperature Ratings °F/°C ‡
	Inches mm	Imperial S.I. ^			cULus
V2742	7/16 12	4.9 7.1	Quick	Concealed Pendent	155 68

‡ Listings and approval as of printing.

^ For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.

RATINGS

All glass bulbs are rated for temperatures from –67°F/–55°C to those shown in table below.

Sprinkler		Sprinkler – V2742			Cover – V27		
Temperature Classification	Victaulic Part Identification	Temperature – °F/°C			Victaulic Part Identification	Cover Temperature – °F/°C	
		Nominal Temperature Rating	Maximum Ambient Temperature Allowed	Glass Bulb Color		Nominal Temperature Rating	Maximum Ambient Temperature Allowed
Ordinary	C	155 68	100 38	Red	A	135 57	100 38

WARNING**WARNING**

- Proper temperature rated cover must be used with the correct sprinkler rating per the Temperature Chart Ratings.
- The plastic shipping cap must be removed for the sprinkler to operate properly.
- If shipping cap is replaced over an installed sprinkler for purposes of painting or plastering, then the fire protection system shall be considered out of service, the Authority Having Jurisdiction notified, and a firewatch is suggested.

Failure to do so may result in failure of sprinkler to operate causing serious personal injury or property damage.

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**ORDERING INFORMATION**

Please specify the following when ordering:

Sprinkler Model Number	
Style	
Temperature Rating	
K-Factor	
Thread Size	
Quantity	
Cover Finish	
Wrench Model Number	

WARNING**WARNING**

- Always read and understand installation, care, and maintenance instructions, supplied with each box of sprinklers, before proceeding with installation of any sprinklers.
- Always wear safety glasses and foot protection.
- Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.
- Installation rules, especially those governing obstruction, must be strictly followed.
- Painting, plating, or any re-coating of sprinklers (other than that supplied by Victaulic) is not allowed.

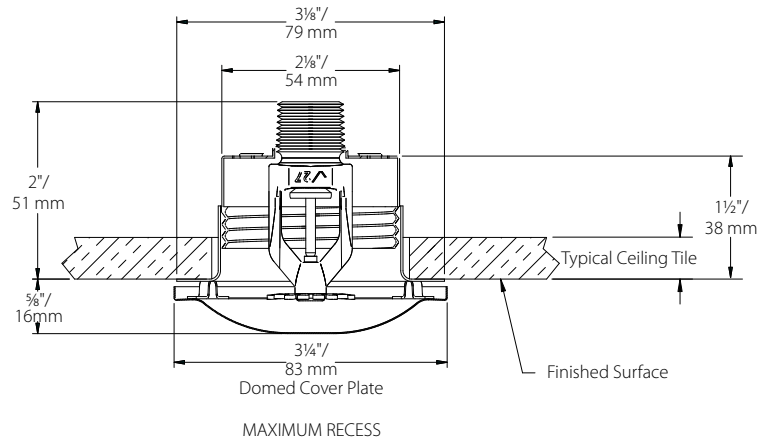
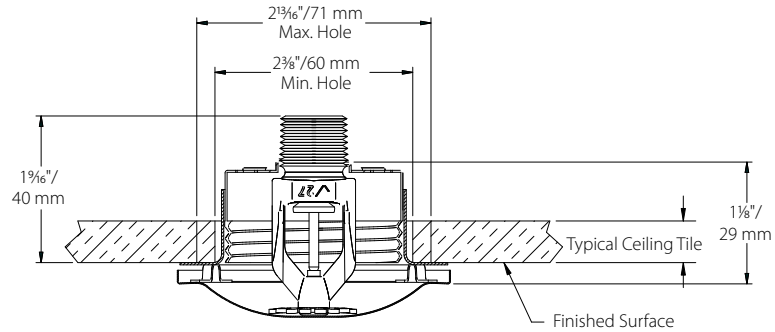
Failure to follow these instructions could result in serious personal injury and/or property damage.

The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to the current National Fire Protection Association pamphlet that describes care and maintenance of sprinkler systems. In addition, the authority having jurisdiction may have additional maintenance, testing, and inspection requirements that must be followed.

If you need additional copies of this publication, or if you have any questions about the safe installation of this product, contact Victaulic World Headquarters: P.O. Box 31, Easton, Pennsylvania 18044-0031 USA, Telephone: 001-610-559-3300.

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**DIMENSIONS****Model V2742 (drawing not to scale)**

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**ROOM SIZE**

Victaulic V2742, 4.9 K-Factor Concealed Pendent Sprinkler
For Ceiling types refer to NFPA 13, 13R or 13D 2013 Editions

Max. Coverage Area ^(a)	Ordinary Temp Rating 155°F/68°C		Intermediate Temp Rating 175°F/79°C		Deflector to Ceiling	Installation Type	Minimum Spacing
	Ft. x Ft. m x m	Flow ^(b) GPM L/min	Pressure ^(b) PSI bar	Flow ^(b) GPM L/min	Pressure ^(b) PSI bar		
12 X 12 3.7 X 3.7	13 49.2	7.0 0.48	N/A	N/A	N/A	Concealed Sprinkler using Model V27 Coverplate Assembly	8.0 2.4
14 X 14 4.3 X 4.3	13 49.2	7.0 0.48	N/A	N/A			
16 X 16 4.9 X 4.9	13 49.2	7.0 0.48	N/A	N/A			
18 X 18 5.5 X 5.5	17 64.3	12 0.83	N/A	N/A			
20 X 20 6.1 X 6.1	20 75.7	16.7 1.15	N/A	N/A			

Notes:

^ For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.

(a) For coverage area dimensions less than or between those indicated, use the minimum required flow for the next highest coverage area for which hydraulic design criteria are stated.

(b) For NFPA 13 residential applications, the greater of 0.1gpm/ft² over the design area of the flow in accordance with the criteria in the table must be used.

AVAILABLE WRENCHES

Sprinkler Type	Concealed
V2742 Concealed Pendent	V39/V27-2

V27, K4.9

Residential Concealed Pendent

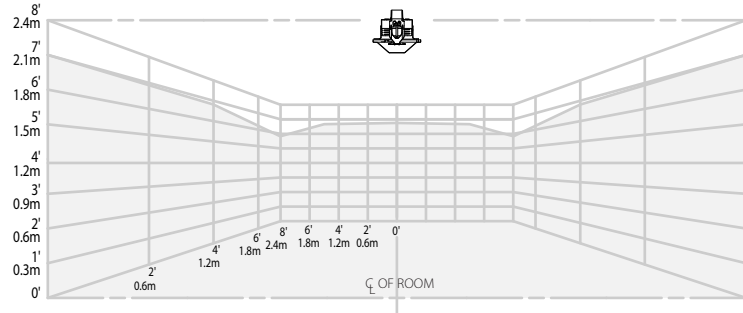
V2742 QUICK RESPONSE

NOMINAL WETTING PATTERNS

Model V2742

K4.9 residential concealed pendent

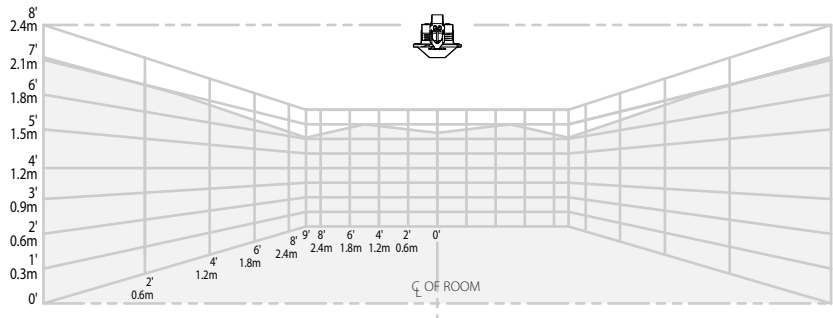
13 GPM/49.2 LPM – 16' x 16'/4.9 x 4.9m coverage area



Model V2742

K4.9 residential concealed pendent

17 GPM/64.3 LPM – 18' x 18'/5.5 x 5.5m coverage area



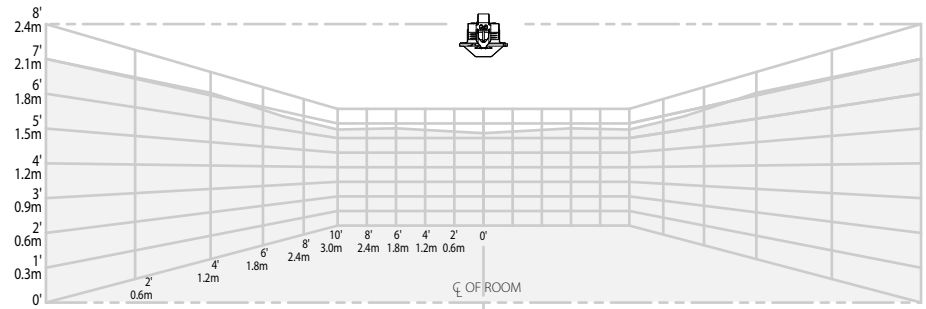
See notes on next page.

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**NOMINAL WETTING PATTERNS****Model V2742****K4.9 residential concealed pendent**

20 GPM/75.7 LPM – 20' x 20'/6.1 x 6.1 m coverage area

**NOTES:**

- 1 Data shown is approximate and can vary due to differences in installation.
- 2 These graphs illustrate approximate wall-wetting patterns for these specific Victaulic FireLock Automatic Sprinklers. They are provided as information for guidance and should not be used as minimum sprinkler spacing rules for installation. Sprinkler location shall be in accordance with the obstruction rules for residential sprinklers in NFPA 13 (2002 or later edition). Failure to follow these guidelines could adversely affect the performance of the sprinkler and will void all Listings, Approvals and Warranties.
- 3 All patterns are symmetric to waterway.

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**WARRANTY**

Refer to the Warranty section of the current Price List or contact Victaulic for details.

NOTE

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

For complete contact information, visit www.victaulic.com

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Onsite Wastewater Management Service Design Proposal

Report for

**Toni Evans and Sam McLeod
31 Pineview Way, Motueka Valley**

12 April 2019



**Prepared by
Kiwi Pioneer Co Ltd**

Document control sheet

Client		Toni Evans and Sam McLeod		Job #	190411D610
Project Title		Onsite wastewater management service design proposal			
Document Title		Wastewater Design Proposal			
Document Ref.		D610			
This Document Comprises		Total No. of Pages	List of Figures	List of Tables	No. of Appendices
		20	4	3	5
Ref.	Status	Author(s)	Review	Office of Origin	Issue Date
WDP	Draft	Andy Williams	Mike Copeland	Motueka	12 April 2019
WDP v.1	Client issue	Andy Williams	Environment Technology	Motueka	12 April 2019
WDP v.2	Client issue	Mike Copeland	Greg Benjamin	Motueka	15 April 2019
WDP v.3	Client issue	Mike Copeland		Motueka	19 April 2019



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1. Introduction

Kiwi Pioneer Co Ltd has been engaged by Toni Evans and Sam McLeod to provide a design proposal for the onsite wastewater management service (OWMS) of a proposed three-bedroom dwelling a one bedroom unit and one bedroom sleepout at 31 Pineview Way, Motueka Valley.

Site visits were undertaken by Kiwi Pioneer Co Ltd on 4 August 2018 and 8 March 2019. This report outlines the site and soil constraints, proposes an OWMS and assesses consent requirements. This proposal has been carried out in accordance with AS/NZS 1547:2012: *On-site domestic wastewater management* and the Tasman Resource Management Plan (TRMP) 2011.

Property owner	Toni Evans and Sam McLeod
Contact details:	PO Box 316 Motueka 7143 Ph. 021 110 3643 themotlot@gmail.com
Legal description:	Lot 10 DP 519728
Land area	0.35ha
Location	NZTM: E-1596149 - N-5445320
District Council:	Tasman

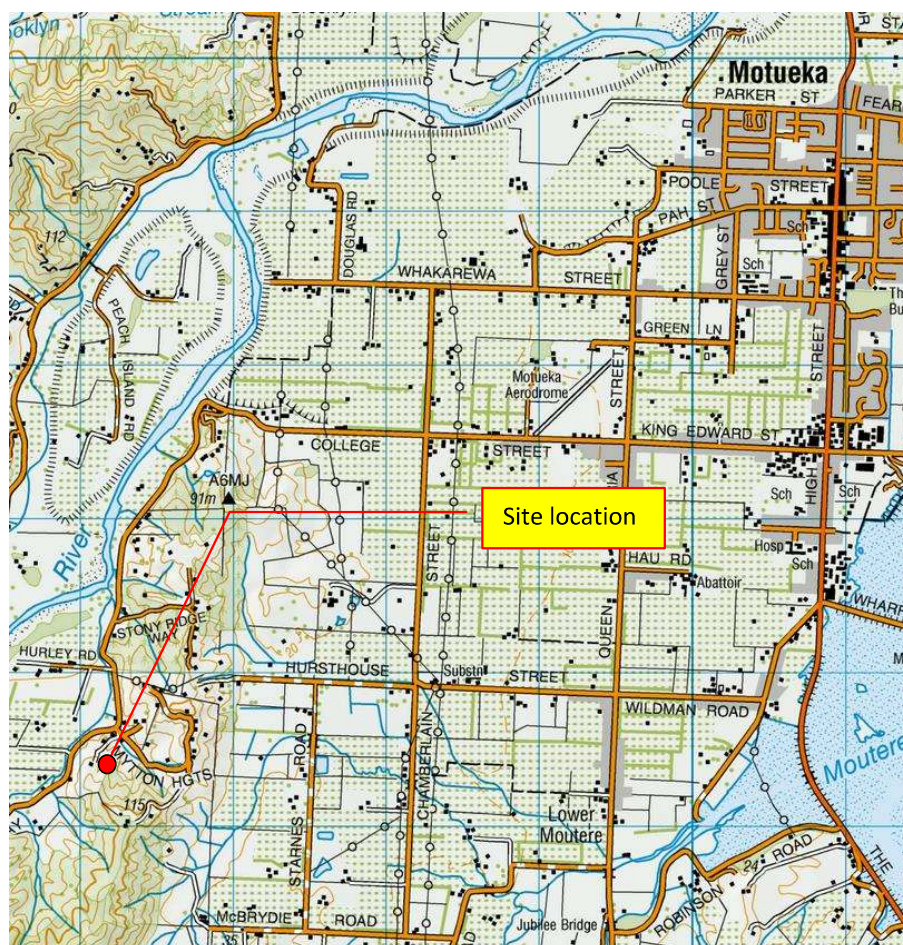


FIGURE 1: LOCATION OF SITE

TABLE 1: SPECIFICATION SUMMARY FOR PROPOSED OWMS

Area of property	0.35ha
No. of bedrooms	5 (3 Dwelling + 1 unit + 1 sleepout)
Design occupancy	9 population equivalents (pe) – 5 dwelling + 2 unit + 2 sleepout
Water supply	Roof supply
Soil type	Category 3 – Fine sandy loam (ASNZS1547:2012 Table E1)
Topography	Hillside slope
Proposed OWMS and design flow for dwelling and two units	
Proposed OWMS	Septic tank to AES sand bed
Septic tank capacity	5000L – Alpha Precasts ST5000 (ASNZS1547:2012 Table J1)
Daily wastewater flow rate	1305L – allowance is 145L/person/day - roof supply with standard water reduction fixtures installed. (ASNZS 1547:2012 Table H3)
Design loading rate (DLR)	20mm/day
AES sand bed area required	65m ²
Set backs	
Separation to nearest boundary	9m to western boundary
Separation to nearest surface water	300m north east to man-made pond on Mytton Heights
Separation to ground water	>2m
Separation to nearest well	n/a
Discharge consentability	
Discharge meets all conditions of TRMP Rule 36.1.2.4: permitted activity	

2. Site assessment

2.1 Soil investigation

Site visits were carried out by Kiwi Pioneer Co Ltd on 4 August 2018 and 8 March 2019. Six test pits (TP) were dug by hand with a shovel and soil auger to depths of up to 1000mm, however, only 3 were located where the proposed land application area (LAA) will be. For soil type TP5 was chosen as indicative of the soil at the site. For soil investigation results refer to Appendix A.

2.2 Key findings

The soil profile is well structured clay loam topsoil over compacted granite sand. For wastewater design purposes the soil is **Category 3, Fine sandy loam**, with no structure. This soil type has a design loading rate (DLR) of 30mm/day for secondary treated effluent (ASNZS 1547:2012 Table L1). However, due to the soil being compacted or less weathered, and thus less permeable, Kiwi Pioneer will use the lower DLR of 20mm at this site.

2.3 Topography

The site is set among rolling foot-hills. The proposed LAA is situated on an excavated building platform.

2.4 Water supply

The property is served by roof water supply.

2.5 Surface water, groundwater and wells

The nearest surface water is a pond 300m northeast, at its closest point, of the proposed land application area (LAA). Groundwater was not encountered during the soil investigation and is estimated to be >2m below ground level (BGL) at the LAA location. There are no wells within the vicinity with all local dwellings using roof water for supply.

3. Wastewater design flow allowances

In accordance with ASNZS 1547:2012, Table H3 the wastewater flow allowance for a dwelling on roof water supply with standard water reduction fixtures is 145 litres per person per day. The water reduction fixtures will comply with NZ's Water Efficiency Labelling Scheme (WELS):

- 4 star or better toilets
- 3 star or better shower head
- 5 star kitchen and bathroom tap ware
- 4.5 star dishwasher and washing machine

TABLE 2: WASTEWATER DESIGN FLOW ALLOWANCE: DWELLING + UNIT + SLEEPOUT

No. of bedrooms	5	
Maximum occupancy	9	Persons/day (ASNZS 1547:2012 Table J1)
Daily per capita flow	x 145	Litres/person/day, roof supply (ASNZS 1547: 2012, Table H3)
Daily flow allowance	= 1305	Litres/day

4. Proposed onsite wastewater management service

4.1 Influencing factors

– Soil type

The soil at the site is a Category 3, Fine sandy loam (weathered granite sand) with no structure. This soil type is suitable for receiving secondary treated effluent at a design loading rate of 20mm/day (AS/NZS 1547:2012, Table L1). An AES sand bed, with its secondary treatment processes, is a suitable wastewater disposal system for this soil type.

– Client's preference

The client's preference is to have a passive system. The proposed OWMS utilises an AES sand bed and will not require power and thus meets this requirement.

4.2 Proposed onsite wastewater management system

In consideration of the above factors the following OWMS is proposed:

Septic tank to AES sand bed; refer to Table 3 and Figures 2 - 4.

For OWMS component and installation specifications refer to Appendix B.

TABLE 3: PROPOSED ONSITE WASTEWATER MANAGEMENT SERVICE

Primary treatment system	Septic tank – Alpha Precasts ST5000 or similar	
LAA	Maximum daily flow rate	1305L/day
	Design loading rate (DLR)	÷ 20mm/day
	LAA area required (min.)	= 65m ²

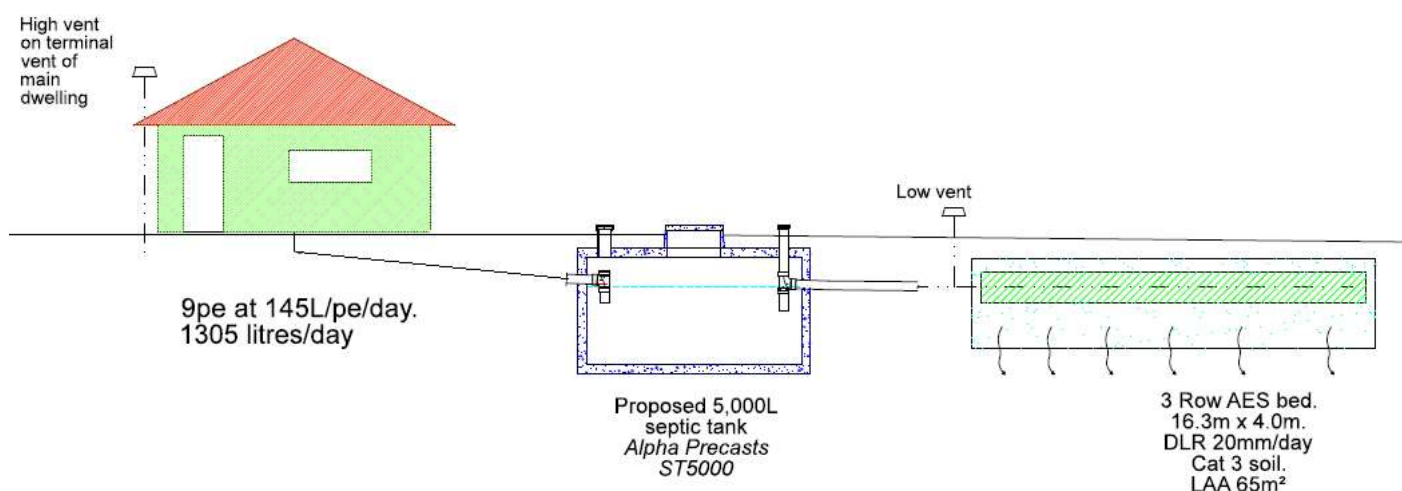


FIGURE 2: OWMS SCHEMATIC

4.3 Maintenance

The proposed wastewater service is a passive system and has been designed to operate with low maintenance requirements. For wastewater system management refer to Appendix C.

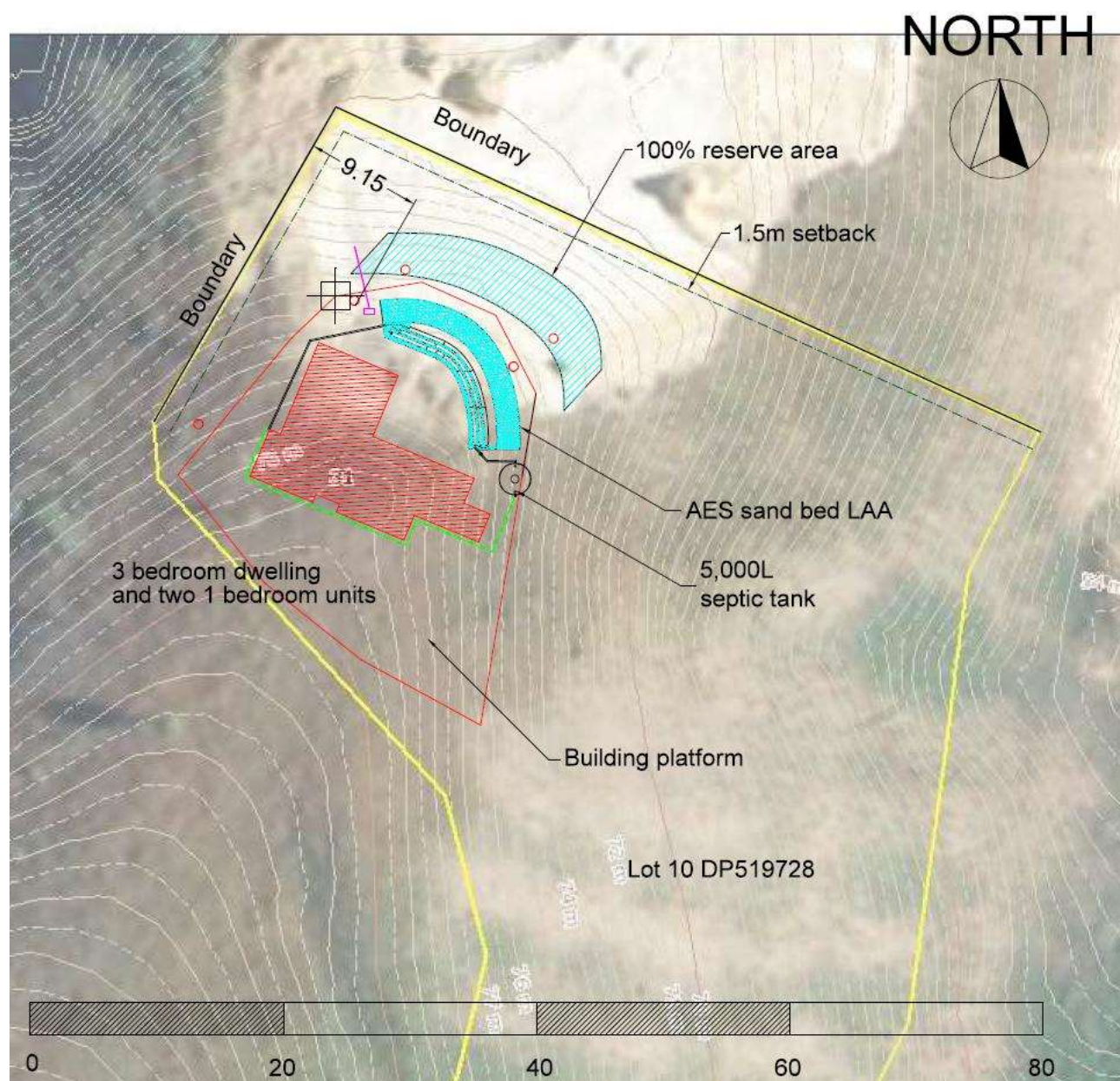


FIGURE 3: OWMS LOCATION WITHIN THE SITE

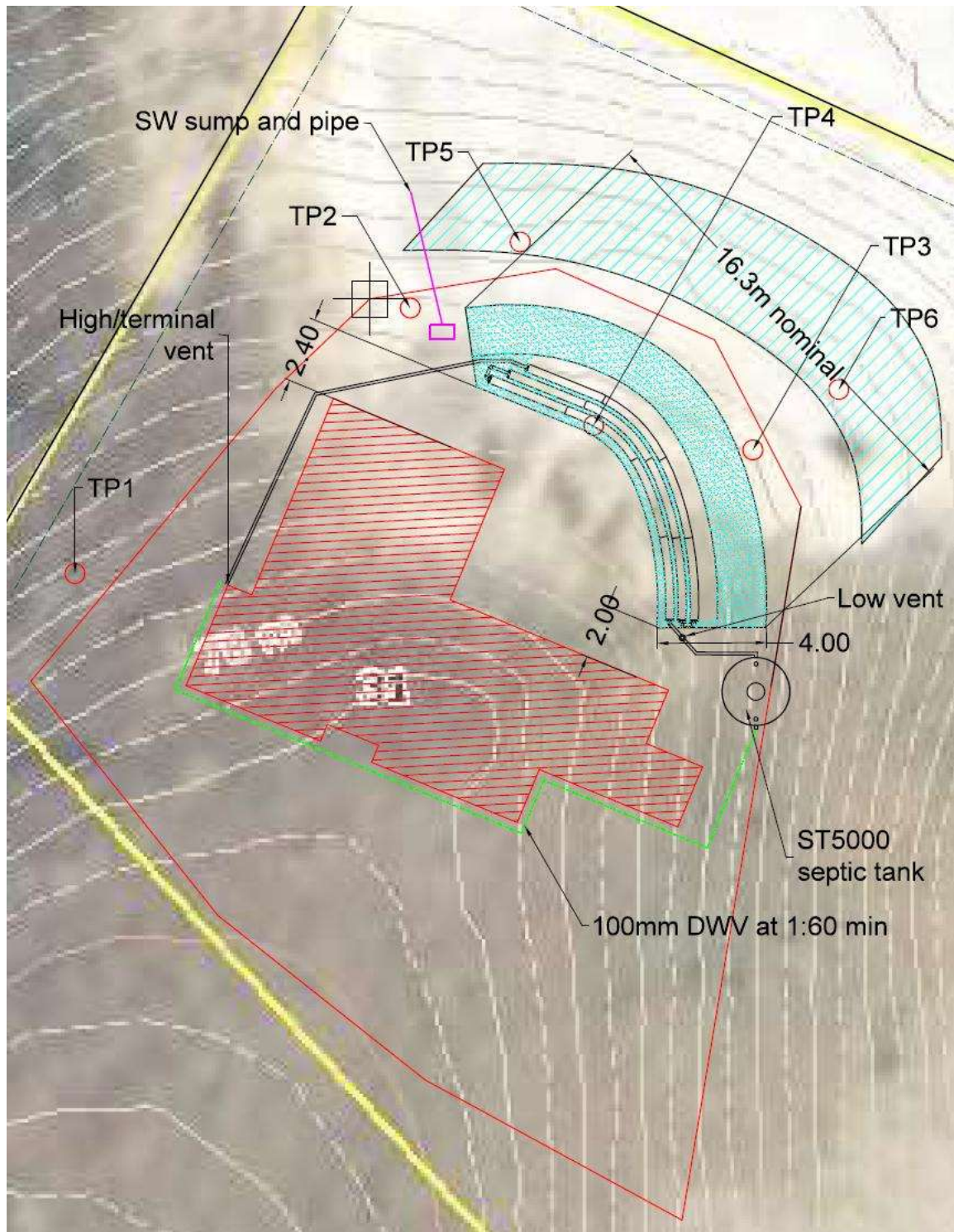


FIGURE 4: OWMS SITE MAP

5. Consent requirements

5.1 Tasman District Council Rules

The consentability of the proposed wastewater service has been assessed in terms of the TRMP Rule 36.1.2.4: *Discharge of Domestic Wastewater*.

It is Kiwi Pioneer Co's assessment that the proposed OWMS meets all conditions of Rule 36.1.2.4 and is therefore a **permitted activity**; refer to Appendix D.

5.2 Building Act 2004 and regulations

Kiwi Pioneer Co Ltd is satisfied that all Building Code requirements can be met; refer Appendix E.

6. Proposed OWMS Summary

The proposed OWMS meets all requirements of TRMP Rule 36.1.2.4 and achieves the required separation distances so there will be no adverse environmental effects on any groundwater, surface water, or neighbouring drain, or any threat to public, private or local ecosystem health.

7. Statement of Design

ISSUED BY: Kiwi Pioneer Co Ltd
TO: Toni Evans and Sam McLeod
TO BE SUPPLIED TO: Tasman District Council
IN RESPECT OF: On-site Wastewater Management Service for a proposed 3-bdrm dwelling attached 1 bedroom unit and 1 bedroom sleepout.
AT:
 NZ Grid Reference: NZTM2000 E-1596149 - N-5445320
 Legal Description: Lot 10 DP 519728
 District Council: Tasman
 Address: 31 Pineview Way,

Kiwi Pioneer Co Ltd has been engaged by Toni Evans and Sam McLeod to provide the technical design details for an on-site wastewater management service. The design has been carried out in accordance with AS/NZS 1547:2012: *On-site domestic wastewater management*.

Other resources used for this design are:

- ARC Environment 2004. *On-site wastewater disposal from households and institutions*. Auckland Regional Council. Technical Report 58.

For details of site assessment and design, refer to **Kiwi Pioneer Co Ltd Report 12 April 2019**.

This is an independent design, covered by a current policy of Professional Indemnity Insurance.

I BELIEVE ON REASONABLE GROUNDS that this design has been carried out accordance with best practice in wastewater design principles and procedures.

NOTE: This statement does not approve the installed system. Under certain conditions Kiwi Pioneer Co Ltd is available to certify the installed system. These conditions include:

- The technology supplier(s) takes full responsibility for the stated quality and performance of technologies and other hardware supplied;
- The installer(s) take full responsibility for installing the system as specified by Kiwi Pioneer Co Ltd report 12 April 2019 unless departure from the stated specification(s) are subsequently agreed between the installer and Kiwi Pioneer Co Ltd;
- Kiwi Pioneer Co Ltd is informed prior to installation, and is engaged, under separate contract, to supervise installation of all specified system components.
- Other conditions that may be specified by Kiwi Pioneer Co Ltd under the contract to supervise installation.

Disclaimer

The Client is to make full disclosure of relevant information on existing and/or proposed activities on the site that will influence estimation of likely daily wastewater quantity (potential number of bedrooms and other wastewater producing activities) and quality (in particular any chemicals in the water supply and/or wastewater stream potentially toxic to biological wastewater processes). This design is based on the site assessment carried out by Kiwi Pioneer Co Ltd. Subsequent changes to the site that might affect the topography and soil profiles are to be notified by the client. Failure, by the Client, to provide this information will invalidate this design producer statement.

Approval is to be sought from Kiwi Pioneer Co Ltd, should variations to the specification and layout in this report/drawing be considered necessary by the installer prior to or at the time of installation. Failure to do so will invalidate the Design Producer Statement and Kiwi Pioneer Co Ltd will no longer take responsibility for the design.



Date: 12 April 2019



Mike Copeland
Director: Kiwi Pioneer Co Ltd

Appendix A: Soil investigation results

Test pit 5



Total hole depth		1000mm
Sample taken at		700mm
Depth (mm)	Colour	Description
0 - 300		Top Soil. Well structured. 0% aggregates >2mm Colour – Brown
300 – 1000+		Weathered granite sand. No structure. 0% aggregates >2mm. Colour –Off white



Soil analysis

	Soil test
Pit or auger	TP 5
Sample depth	700
Colour	White
Structure	Nil
Bolus strength (coherence)	weak
Grittiness	High
Stickiness	Low
Sponginess	Low
Plasticity	Low
Stain	Low
Ribbon length (mm)	15
Soil type	Fine sandy loam
Soil category	3
Comments	Compacted

Test pit 6

Total hole depth		700mm
Depth (mm)	Colour	Description
0 – 200		Top soil. Well structured. 0% aggregates >2mm. Colour – Brown
200 - 700+		Granite sand. Less weathered than TP5. Auger can still penetrate. Colour – Off white

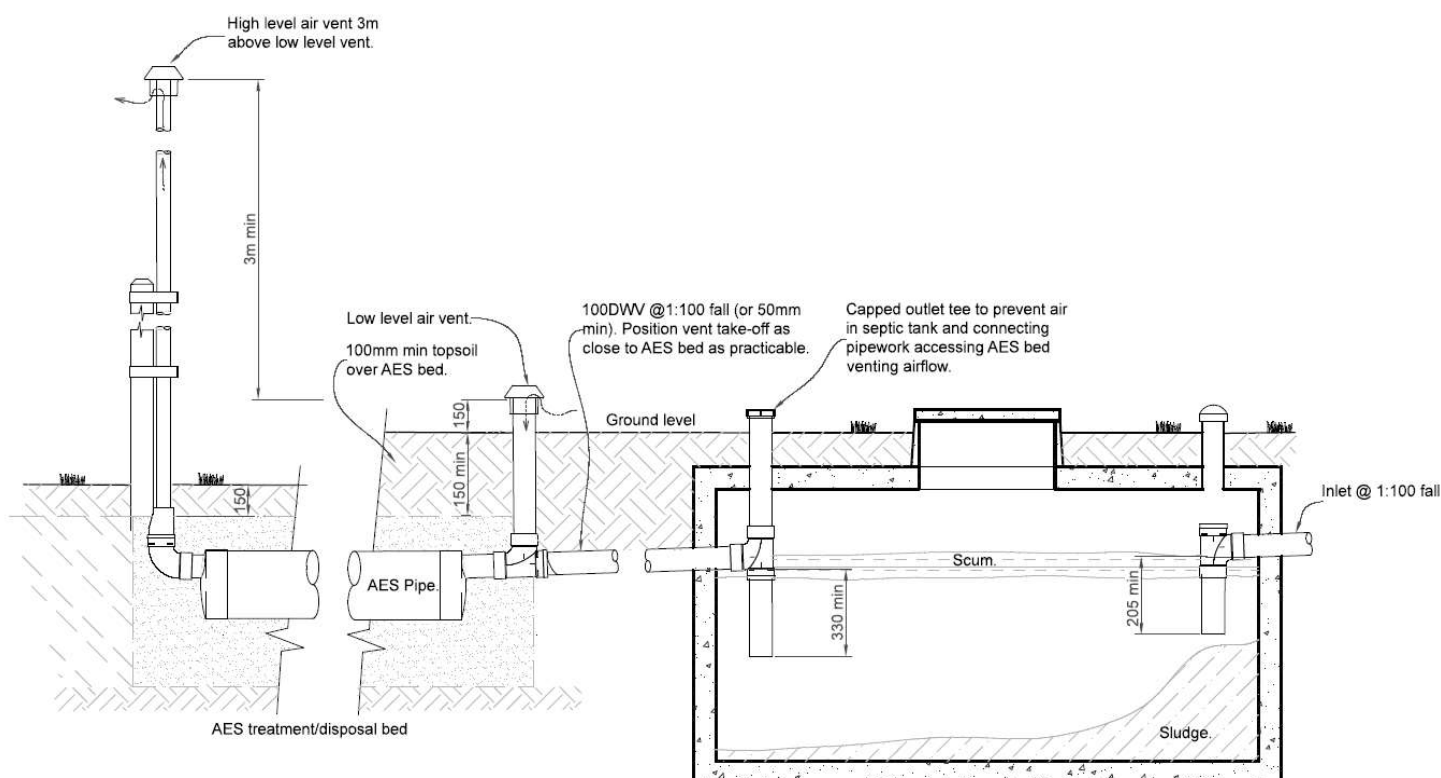


Appendix B: OWMS Components and Installation Specifications

1. Septic tank specifications

New tank	
Septic tank capacity	Alpha Precasts ST5000 or similar
Distance from buildings	Min. 3m
Inlet pipe diameter	100mm DWV pipe
Pipe gradient	1:100
Outlet filter	Not required
Outlet pipe diameter	100mm DWV
Installation Note: It is the installers responsibility to ensure the tank is anchored in the ground	

2. Septic tank and AES sand bed venting



Installation notes:

- The high vent is to be located at the back of the dwelling.
- Cap outlet tee to prevent airflow between septic tank and low vent. Failing this air entering the low vent may travel through the septic tank to the terminal vent, thereby precluding ventilation of the AES bed itself.

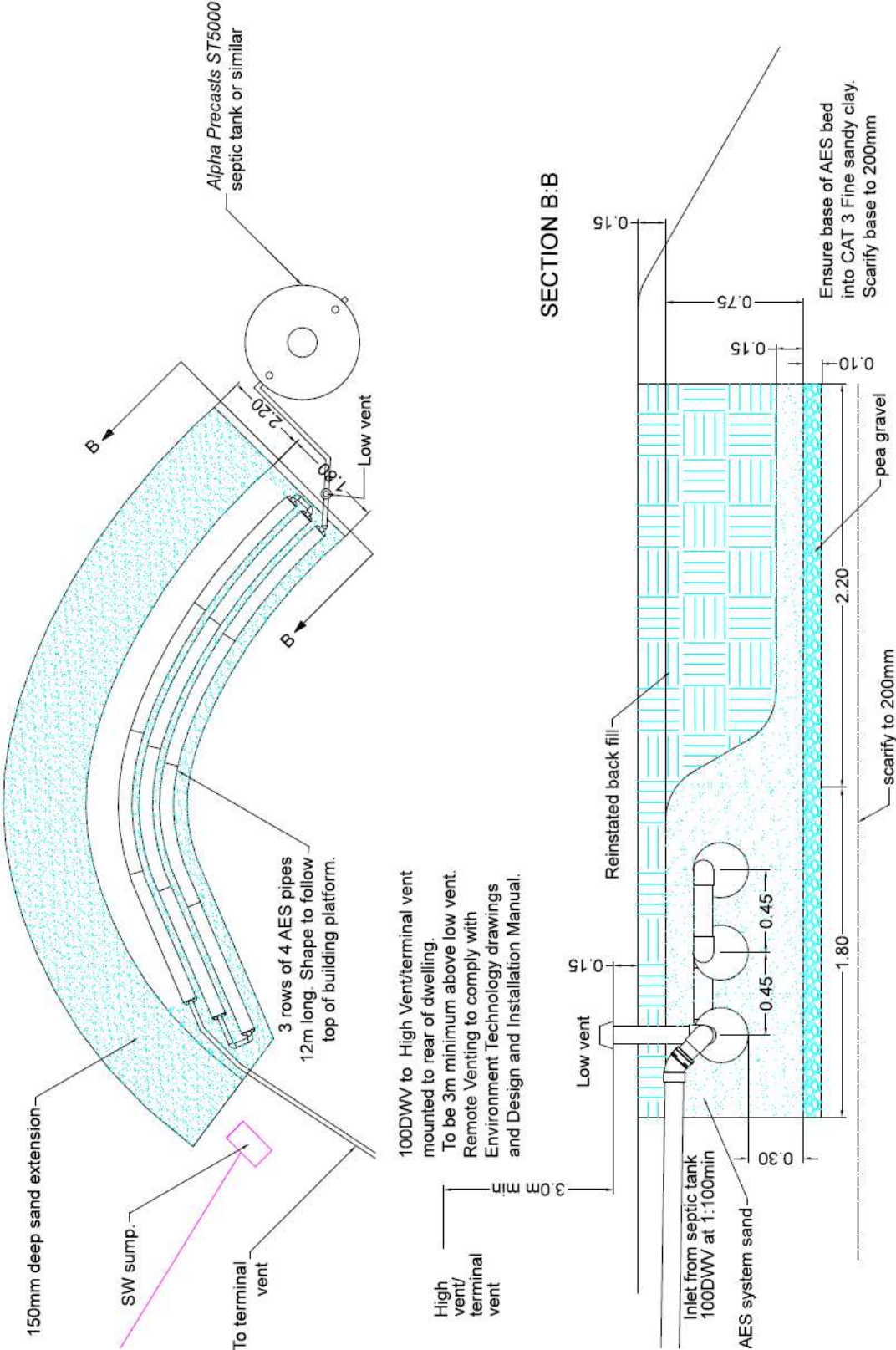
3. AES sand bed specifications

Delivery pipe from Septic tank	100mm DWV
Min. fall of delivery pipe	1:100
Design loading rate (DLR):	20mm/day (ASNZS1547:2012 Table L1)
Distance from property boundary	>1.5m
Low vents	100mm DWV 150mm above ground level
High vent	80-100mm DWV a minimum 3m above lower vent, located at back of the dwelling as terminal vent.
AES sand bed	
No. of AES pipe rows	3
No. of AES pipes per row	4
AES sand bed length	16.25m
AES sand bed width	4m (1.8m + 2.2m sand extension)
Total AES sand bed area	65m ²

4. Material quantities for AES sand beds with 1.3 bulking factor

Volume of system sand	34.4m ³
Volume of pea gravel	8.5m ³
Volume of top soil	reuse what is dug out
Number of AES pipes	12
Number of AES couplers	9
Number of AES off set adaptors	6
Oxygen demand vents	1

5. AES sand bed plan view and cross section



6. Installation Certificate

On-site Wastewater Completion of Works (PS3)

(To be completed by the installer)

Date:

Issues by:

To be supplied to: Tasman District Council

Site details

Address: 31 Pineview Way,
Legal Description: Lot 10 DP 519728
Client: Toni Evans and Sam McLeod

Description of OWMS:

- Installation of 5,000L septic tank;
- Installation of an AES sand bed: 4m x 16.25m = 65m²

Council consent number/date:.....

Installed in accordance with: Kiwi Pioneer Co Ltd Report, 12 April 2019 and conditions specified in council consent.

Date of site installation inspection:

By:

Report variations (if any):

Declaration

I believe on reasonable grounds that all of the wastewater works have been completed in accordance with Kiwi Pioneer Co Ltd report, 12 April 2019.

Installer's name

Signed:

Appendix C: Operation and Management of On-site Wastewater Service

Property location: 31 Pineview Way,
Property owner: Toni Evans and Sam McLeod
Prepared by: Kiwi Pioneer Co Ltd, Motueka

Date: 12 April 2019

A failed or failing wastewater system is not only a health risk to occupants and members of the public using the site, but also neighbours. Failure can cause nuisance odours, ponding and can be costly to fix!

Taking care about what is flushed or drained into the treatment system

Care must be taken by occupants of the dwelling to ensure large quantities of toxic substances do not enter the drainage system.

Minimize discharging the following substances:

- Bleaches, whiteners, nappy soakers, stain removers, disinfectants.
- Antibiotics.
- Sanitary pads, tampons, disposable nappies, condoms and excessive quantities of paper.
- Excessive fats, cooking oils and greases.
- Antiseptics liquids.

Do not discharge the following into the wastewater system;

- Alkaline detergents such as caustic soda;
- Acids, pesticides, herbicides, chemicals;
- Paints, varnishes and paint thinners;
- Drugs and pharmaceuticals;
- Motor oil;
- Sanitary napkins and other hygiene products
- Toys, clothing, plastic bags.....

To support the living ecology in the treatment tank and in the land application area:

- Use biodegradable soaps;
- Use a low-phosphorus detergent;
- Use a low-sodium detergent;
- Use detergents in the recommended quantities.

Apply common sense – there are living organism in the system breaking down normal body waste products and heavy doses of toxic substances will kill these essential organisms and cause the system to fail.

Avoid excessive water volumes entering the treatment system. This system comprises a Septic tank and AES sand bed, which have been designed for no more than 1305L per day of wastewater. Volumes in excess of this for periods of longer than four days are to be avoided.

Regular Maintenance

Septic tank servicing

Septic tanks and on-site waste water treatment systems need regular maintenance to work properly. Public health risks and the impact on the local ecological systems will be minimised if the system is well-maintained.

Some key points to note:

- Protect the tank from vehicle access and damage.
- Ensure access covers of the septic tank are easily exposed.
- Check the sludge level and surface scum thickness in the septic tank annually.
- Pump out tanks when the sludge (build-up of material on bottom of tank) and the scum takes up 1/2 or more of volume of tank's first chamber (check yearly).

AES sand bed

The sand bed needs to be demarcated to discourage access by unauthorised people and vehicles. Ensure air vents do not become overgrown or damaged so as to prevent inflow of air to the AES pipe work.

Planting

Deep rooting trees or shrubs should not be planted within 5m of the sand bed

Record keeping

File this report, as-built reports and consent documents. Maintain operational and monitoring records and required by Regional Council Consent. Maintain a written record of problems, servicing and maintenance of the wastewater system.

Change of ownership

The consent notice for the wastewater treatment system, its specifications and site plan must be kept in a handy and safe place. These are to be given to a new owner, if and when, a property changes ownership.

Appendix D: TRMP 2011 Rule 36.1.2.4 – permitted activity conditions

The discharge of domestic wastewater into land from an on-site wastewater treatment disposal field is a permitted activity that may be undertaken without a resource consent, if it complies with the following conditions:		Complies ✓ or ✗
a.	Any discharge first commencing after 19 September 1998 is not in any Special Domestic Wastewater Disposal Area.	
b.	Any discharge first commencing after 20 December 2003 is not within the Wastewater Management Area.	✓
c.	The volume of effluent discharged is not more than a weekly averaged flow of 2,000 litres per day.	✓
d.	There is no discharge or run-off of effluent into surface water.	✓
e.	The disposal field is located not less than: (i) 20 metres away from any surface water body, or the coastal marine area; (ii) 20 metres from any bore for domestic water supply; (iii) 1.5 metres from any adjoining property.	✓ ✓ ✓
f.	The design and operation of the system must result in the depth of unsaturated soil between the effluent disposal field and the average winter level of groundwater or of the basement rock being no less than 500 millimetres or sufficient to ensure that the discharge does not result in any bacterial contamination of groundwater beyond the property boundary.	✓
g.	There is no discharge of effluent from the disposal field to the ground surface.	✓
h.	The septic tank must be regularly desludged so that the liquid volume (excluding sludge and scum) is maintained at not less than one-third of the tank volume.	✓
i.	The discharge does not create an offensive or objectionable odour discernible beyond the property boundary.	✓
j.	An access point to allow sampling of the effluent being discharged to the disposal field must be provided with any on-site wastewater disposal system installed after 19 September 1998.	✓
k.	The quality of the effluent being discharged into the disposal field does not exceed the following standards: – BOD-5: 150 milligrams per litre – Total suspended solids: 150 milligrams per litre	✓

Appendix E: Building Act 2004 requirements

Code/clause	Requirements	Assessment
B1 Structural	The proposed structures are to be of such a standard to ensure public safety and protection of property.	The wastewater treatment system is a significant structural component and is required to conform to B1
B2 Durability	To ensure the durability of the “building”. The code implies durability of materials.	Kiwi Pioneer Co is confident that all component materials will, within reason, meets the durability requirements of B2.
G13 Foul water	This code applies to above-ground non-pressure (gravity flow) sanitary plumbing for buildings having 3 levels or less and includes all pipe work for foul water within, or on the building, including any basements.	All conditions and requirements under G13 can be met.
E1 Surface water	(a) Safeguard people from injury or illness, and other property from damage, caused by surface water, and (b) Protect the outfalls of drainage systems	All stormwater is to be diverted away from the LAA.

PS2 AES Design Calculator - Residential*
Schedule of Materials


For use by consenting authorities - a signed calculator is a PS-2; proof of design review by ET.
 For use by wastewater system designers for sizing of AES wastewater treatment systems receiving residential strength wastewater. Supplied to ET with design/ drawings and then signed by ET

When ordering AES materials - installers please supply to ET a Design Calculator signed by ET and council consented plans.

Site Address	31 Pineview Way, Motueka Valley			
Client Name	Toni Evans and Sam McLeod			
Designed By	Kiwi Pioneer Co Ltd	Designer Phone #	021 654931	Designer AES Cert. #
Installer		Installer Phone #		Installer AES Cert. #
Council Area	Tasman District Council	Drainlayer Licence #		Date
				11.04.2019

Receiving soil category, surface water, water tables & all other site constraints to be addressed by designer.

System designer's site and soil data. Enter data in light blue fields.
NOTES

Number of bedrooms	5	>> Enter "NA" if this design is for a campground, office, cafe etc without bedrooms.
Number of people	9	
Daily wastewater design flow allowance per person (l/p/d)	145	>> Standard rate is 38 L/m AES pipe/d, averaged over a week. This is the NZ certified loading rate.
Loading rate for AES pipes (L/m AES pipe/d)	38.0	
Do you want to use cut AES pipes - eg. 3.5 AES pipes per row? Y or N	n	>> Longer AES beds increase contact area with surrounding soil.
AES bed - No. of rows to suit site - max. AES pipe row length 30m/ 10x3m lgth	3	
Soil Category (per AS/NZS 1547) from site & soil evaluation	3	>> Soil conditioning may be necessary. Ref AS/NZS 1547/ TP58/ GD06 & Notes below.
Design Loading Rate (DLR) based on soil category (mm/day)	20	
Sand depth beneath AES pipes - standard 300mm tested 3.5 FC Log reduction	300	>> Standard 300mm achieves 3.5Log reduction for FC**; increase sand depth to reduce FC further. Total expected FC Log reduction through AES system in this design: 3.5Log.
Is there a pump between the septic tank and the AES bed? Y or N	n	
Is this property sloping? Y or N	y	>> Ensure surface water is diverted away from AES bed.
Is this design vented to the building terminal vent (TV)? Y or N	y	
Diameter of high vent (mm)	100	>> 65mm, 80mm or 100mm.
Is sampling of the treated effluent required? Y or N	n	
Distribution Box required Y or N	n	Number of ports required, including inlet port, and port for air vent if so designed.

NOTES: Increasing the pipe loading rate reduces the buffer capacity/ total volume of the pipes. The total volume of the AES pipes is 20,352L, which still allows room peak flows to be discharged over a relatively short time.

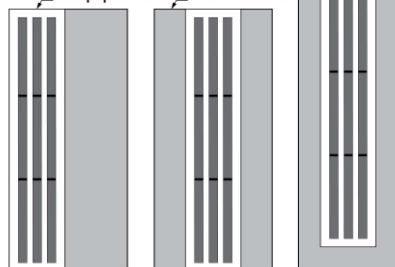
- Scarification of receiving surface is required in clay soil structures in Cat 4,5,6. In addition refer to AS/NZS 1547.2012, TP58 and GD06 (draft)
 Always excavate and scarify parallel to the site slope and the rows of AES pipe.

- All sloping sites require special consideration regarding design of AES bed, sand extensions, surface water and construction methods as per AS/NZS 1547.

- Drainlayers ensure good construction techniques ref. AS/NZS 1547 are especially important in these soil types. Ref AS/NZS1547 & AES installation Instructions.

Plan view: AES bed extensions

AES pipe bed AES bed ext.




One side

Two sides

Surrounding

AES Bed Design Calculator Outcomes		AES Bed dimensions	
Daily design flow (Q)	1305.00 L/d	AES Pipe Bed	Bed Extension Area
Min. length of AES pipe rows	11.45 m	Length (m)	12.60
No. of 3m AES pipes per row	4.00 lths	Width (m)	1.8
Total volume of AES pipes	2544.00 L	Sand Depth	0.75
		Area m2	22.68
			42.57
For 'Surrounding' extension or to increase bed length/ decrease width enter "Y" - otherwise leave blank:		If "Y" enter custom width (m) of AES bed - otherwise leave blank:	4
	Length (m)	Width (m)	Minimum AES footprint required 65.3m2
The dimensions of this AES bed with surrounding extension or increased bed length/ decreased width are:		16.3 x 4 =	65.3 m2 total

AES Bed Schedule of Materials
ET Signature box - ET Use Only

AES 3m length pipes required	12	lths	 Signed by: Environment Technology Date & Time: 15 Apr, 2019 04:48:08 p.m. Producer Statement PS-2 Design Review - approved by ET. (Does not cover site and soil assessment by designer.)
AES couplings required	9	ea	
AES offset adaptors	6	ea	
100mm vent cap with mesh	1	ea	
Vent cowl for high vent	1	ea - 100mm diam.	
80mm TV inspection with fittings			
Sample port not required			
Distribution box not required			
Total AES System Sand required (guide only)	22.9	m3	

To be used as a guide only; this AES Design Calculator is a design aid to assist calculating of the AES components and configuration. Site and Soil conditions as specified in NZS1547:2012 are calculated and designed by a **Qualified Designer**. Environment Technology has no responsibility for the soil evaluation, loading calculations or the DLR entered by the designer for this calculator.

*Residential Effluent is classed as having less than 300mg/L BOD5 and 350mg/L TSS prior to entry into the septic tank, and does not contain wastewater from industrial processes.
 AES pipes can be cut to length on site. AES pipes are supplied in 3 metre lengths only.

** AES-38 single pass system achieved 3.5 log reduction for FC in OSET-NTP Trial 12, 2016-17 benchmarking period.

***Microbial removal rates through medium sand - Pang (2009). *Microbial Removal Rates in Subsurface Media Estimated From Published Studies of Field Experiments and Large Intact Soil Cores*

To have a design reviewed and signed off by ET - Designers please email your AES Design Calculator and drawings to design@et.nz

To order AES components - installers please email your signed AES Design Calculator and council consented plans to info@et.nz

4. Proposed onsite wastewater management service

4.1 Influencing factors

– Soil type

The soil at the site is a Category 3, Fine sandy loam (weathered granite sand) with no structure. This soil type is suitable for receiving secondary treated effluent at a design loading rate of 20mm/day (AS/NZS 1547:2012, Table L1). An AES sand bed, with its secondary treatment processes, is a suitable wastewater disposal system for this soil type.

– Client's preference

The client's preference is to have a passive system. The proposed OWMS utilises an AES sand bed and will not require power and thus meets this requirement.

4.2 Proposed onsite wastewater management system

In consideration of the above factors the following OWMS is proposed:

Septic tank to AES sand bed; refer to Table 3 and Figures 2 - 4.

For OWMS component and installation specifications refer to Appendix B.

TABLE 3: PROPOSED ONSITE WASTEWATER MANAGEMENT SERVICE

Primary treatment system	Septic tank – Alpha Precasts ST5000 or similar	
LAA	Maximum daily flow rate	1305L/day
	Design loading rate (DLR)	÷ 20mm/day
	LAA area required (min.)	= 65m ²

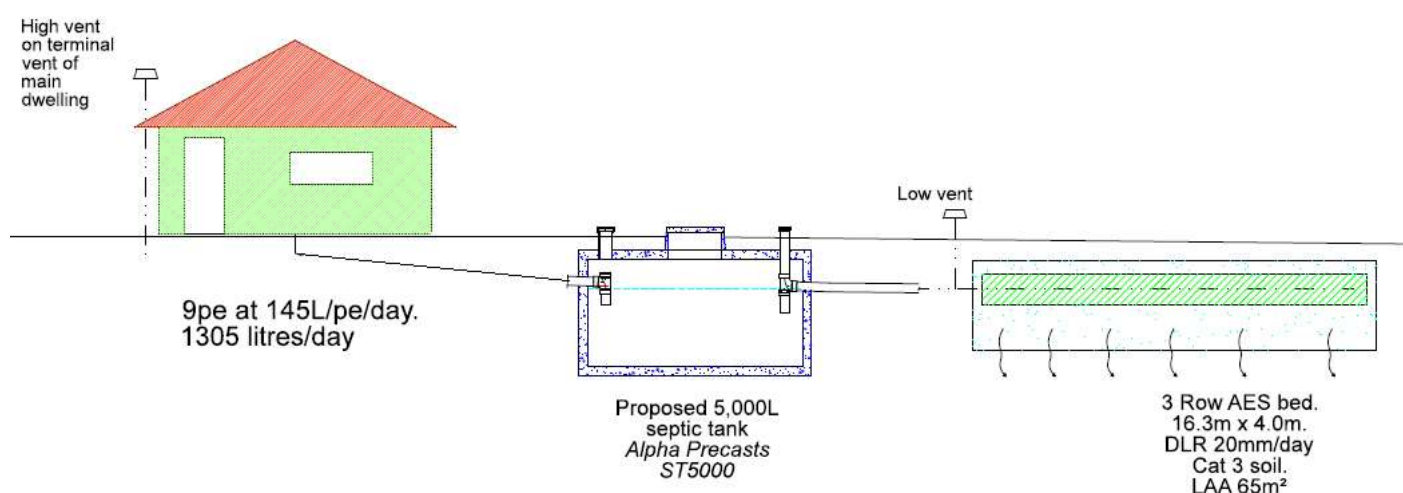


FIGURE 2: OWMS SCHEMATIC

4.3 Maintenance

The proposed wastewater service is a passive system and has been designed to operate with low maintenance requirements. For wastewater system management refer to Appendix C.

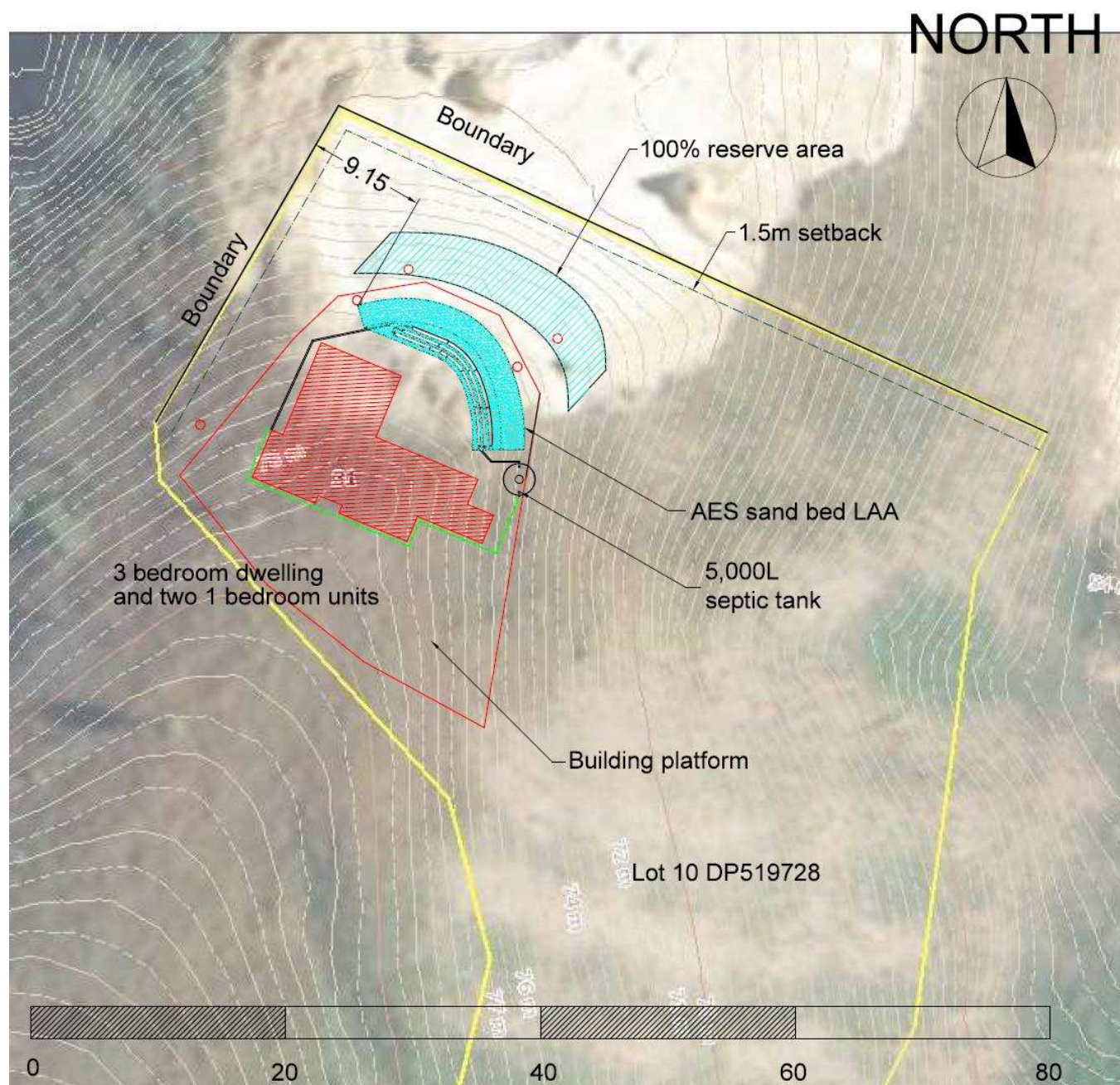


FIGURE 3: OWMS LOCATION WITHIN THE SITE

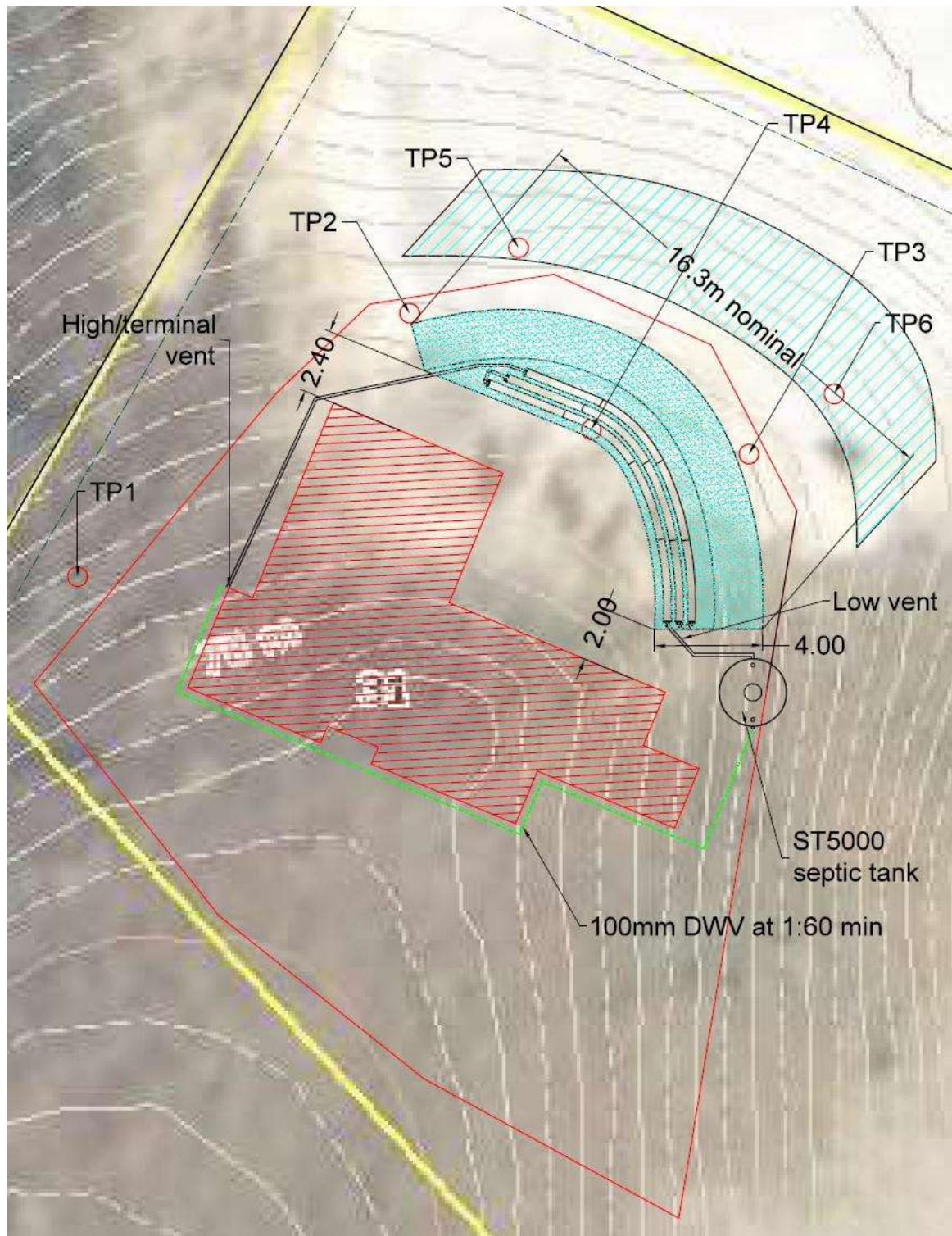


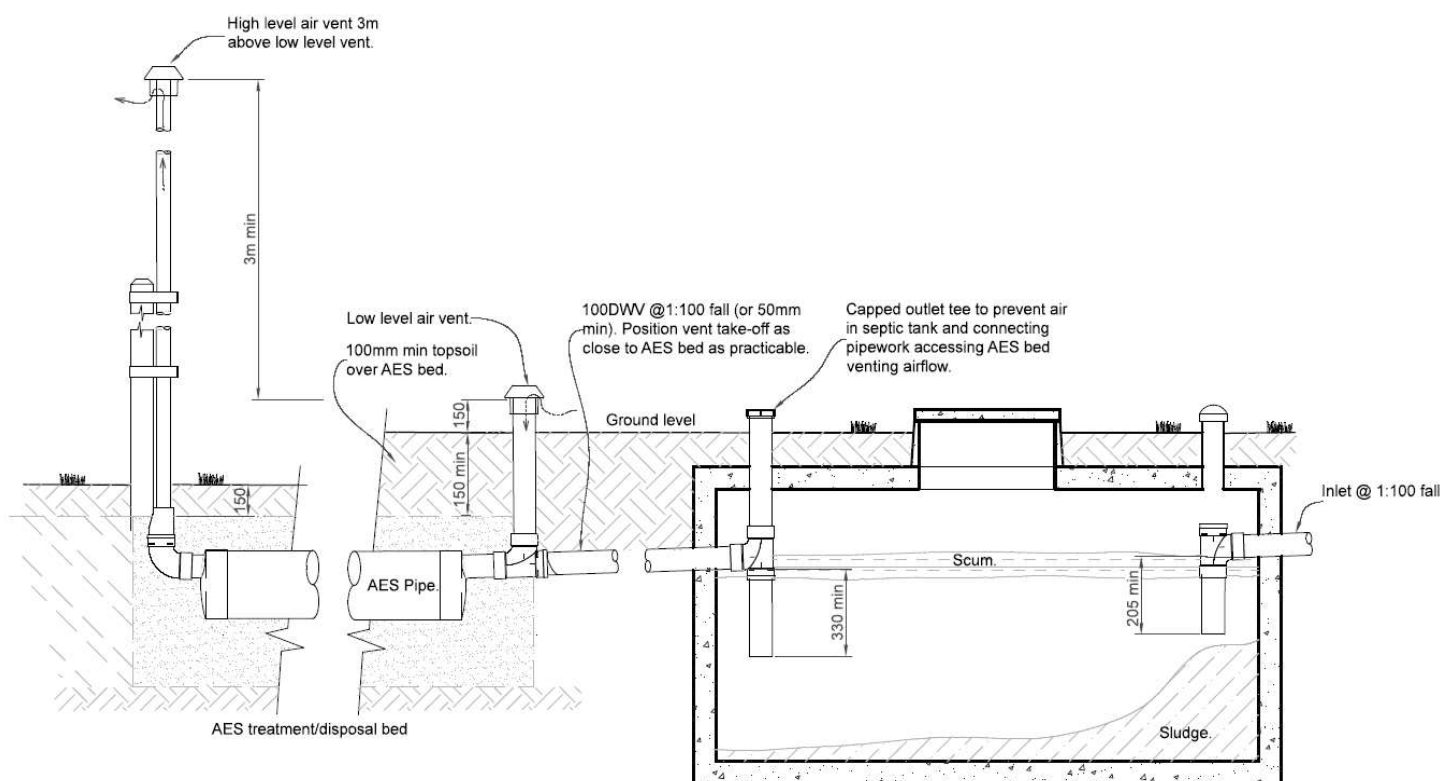
FIGURE 4: OWMS SITE MAP

Appendix B: OWMS Components and Installation Specifications

1. Septic tank specifications

New tank	
Septic tank capacity	Alpha Precasts ST5000 or similar
Distance from buildings	Min. 3m
Inlet pipe diameter	100mm DWV pipe
Pipe gradient	1:100
Outlet filter	Not required
Outlet pipe diameter	100mm DWV
Installation Note: It is the installers responsibility to ensure the tank is anchored in the ground	

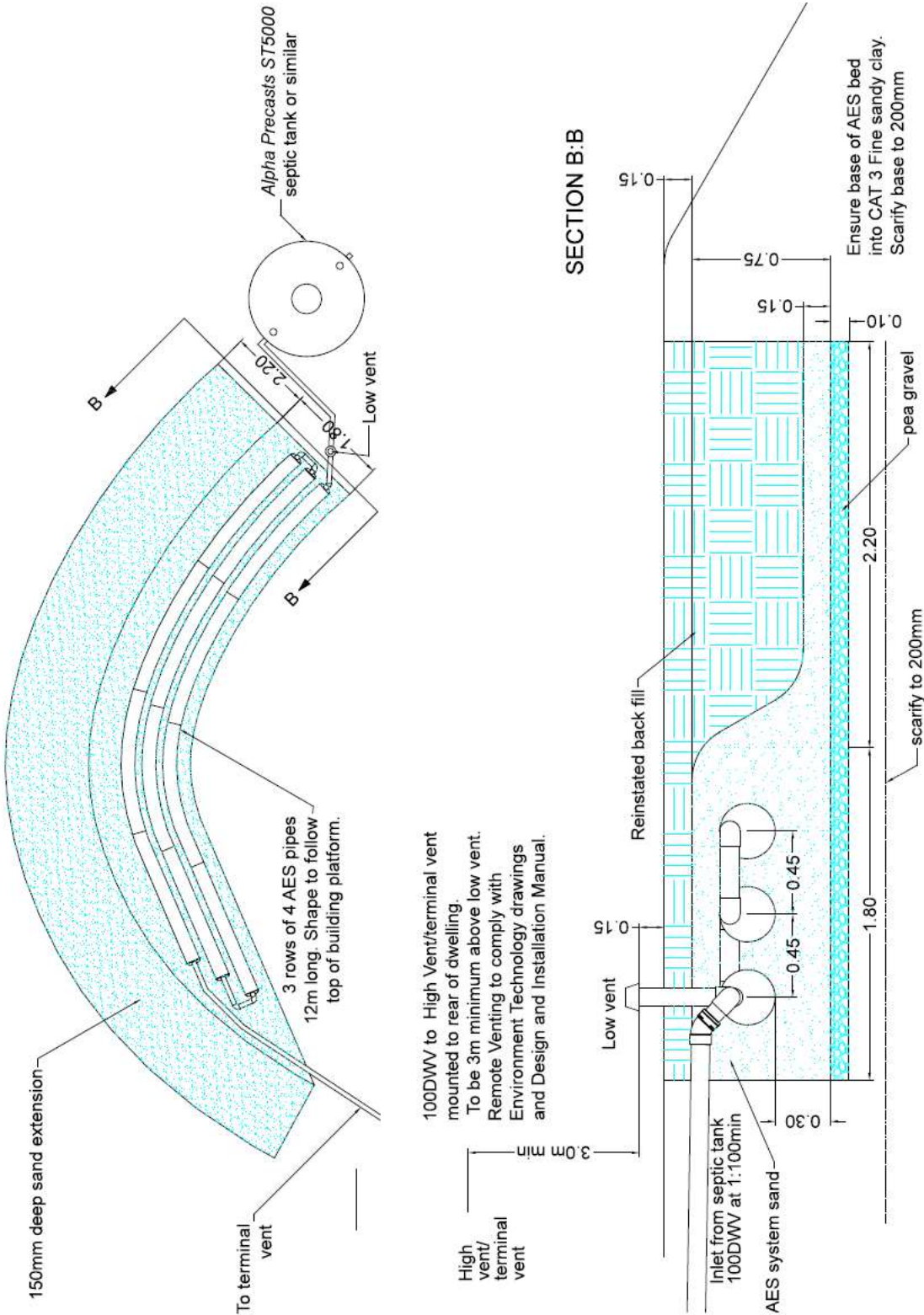
2. Septic tank and AES sand bed venting

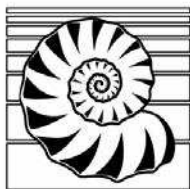


Installation notes:

- The high vent is to be located at the back of the dwelling.
- Cap outlet tee to prevent airflow between septic tank and low vent. Failing this air entering the low vent may travel through the septic tank to the terminal vent, thereby precluding ventilation of the AES bed itself.

5. AES sand bed plan view and cross section





GEO-LOGIC
L I M I T E D

7028.11

17 July 2018

The Engineering Manager
Tasman District Council
Private Bag 4
Richmond

Geotechnical Building Site Certification, Lot 10, ROW C; Hunu Hills Ltd, MOTUEKA

ISSUED BY: Geo-Logic Ltd
TO: Hunu Hills Ltd
SUPPLIED TO: Tasman District Council
IN RESPECT OF: Lot 10, ROW C
AT: Mytton Heights Road, MOTUEKA

We have carried out an investigation in accordance with sound engineering and geotechnical principles and practice on the above property and in accordance with Schedule 2A of NZS 4404:2004.

This certificate is submitted in conjunction with Geo-Logic Ltd ***Certification Site Plan*** dated 15 July 2018 defining an area suitable for the erection of a residential dwelling. Our work was undertaken to address Engineering Certification stipulated as a condition of Resource Consent for the Subdivision (RM130940):

Certification from a geotechnical engineer that the building platform is suitable for the erection of residential buildings..... The certificate shall define on each lot within the building location area that it is suitable for the erection of residential buildings and shall be in accordance with NZS4404:2004 Schedule 2A.

We visited the site on 16 February 2018 as a part of site certification. Our work has been completed in association with the project engineer Richard Walker of Engineering Sustainable Solutions Ltd (ESS) who prepared the engineering completion report (ESS, 2018). The lot boundaries surrounding the Project Area were supplied by BRV as referenced in the attached ***Certification Site Plan*** sheet 01.

Geo-Logic Ltd was not involved in the design or construction observation of the earthworks undertaken as a part of this site development which were carried out under the direction of the Project Engineer, Richard Walker of ESS as documented in his engineering completion report. For completeness that report should be read in conjunction with this site certification report.

ENGINEERING GEOLOGY & GEOTECHNICAL SERVICES

Tel 64-3-546 7425 Fax 64-3-546 7208 Email geoquest@geo-logic.co.nz

Web www.geo-logic.co.nz Postal PO Box 880, 17A Examiner Street, Nelson 7015, New Zealand

The engineering completion report notes *“The earthworks for the Lot 10 platform were constructed by Dr Dig Ltd between November 2017 and June 2018. All areas of the earthworks were stripped of topsoil and unsuitable material prior to the excavation for the building platform. All the earthworks for the Lot 10 platform required cut only.”* The Project Engineer *“...monitored the construction of the earthworks and drainage works for the construction of the Lot 10 platform and driveway with several site inspections during the course of the works between November 2017 and June 2018.”*

For the current geotechnical site certification, we undertook Scala penetrometer testing on the finished platform. The results of the Scala testing are attached. Scala test SP-10.1 and SP-10.2 both encountered effective refusal at or very near the finished ground surface suggesting competent ground exists at a shallow depth on the platform which is entirely in cut ground. The test results attached reflect ground conditions at the locations of the test on the test date. Ground conditions may vary at other locations not tested.

We have viewed the site on a number of occasions during development, while in the area for other work. Our services were provided as per an IPENZ Agreement dated 28 March 2017.

Certified Building Area Designation

A certified building area has been designated for Lot 10 as shown on the attached ***Certification Site Plan***, sheet 01. The approximate dimensions of the Certified Building Area are as indicated and the certified Building Area designated on the attached Certification Site Plan, sheet 01 has incorporated the Building Location for Lot 10 from the plan included in the Engineering Completion Works report (ESS, 2018).

The certified building area on Lot 10 is situated on a strong spur and granite bedrock is well exposed on the site and immediately upslope and along the access road (refer ***Photoplate 1.2***). The weathered granite bedrock consisting of white SILTY SAND exists at shallow depths on the platform which has been developed by cut. No ‘very soft’ soil was encountered. The site therefore meets the criteria set out in NZS1170.5 Earthquake Actions NZ, clause 3.1.3 *Site Subsoil Class*, for a subsoil class C, *shallow soil*, as depth to bedrock at all locations on the site is very likely to be less than 20m.

Appropriate plantings are recommended on the slopes to the northeast and west of the platform and review and maintenance of these slopes is recommended following intense or prolonged rainfall events until such time as vegetation is well established on the sloping ground. The site generally, and including the certified building area, exhibits a very high degree of stability.

In general buildings are to be set out a minimum of 2 metres from the edge of the platform *“Specific engineering investigation and design should be required for the foundations for any building less than 2 metres from the as built edge of the Lot 10 platform”* (ESS, 2018) as shown on the ***Certification Site Plan***. The Engineering Completion report specifies *“There should be a minimum of 5 metres between the west side of the watertanks and any building.”* Specific investigation and design areas are double hatched areas, as per the legend.

GROUNDWATER No seepages were observed on this site at the time of our most recent site visits is located on a strong spur. Seepages were noted in the vicinity of the western slopes prior to site development earthworks (Geo-Logic 2010, 2012). As groundwater levels may vary seasonally provision for collection and controlled discharge of groundwater must be incorporated in any/all retaining wall design.

FILL Lot 10 is entirely in cut. There is no fill except, as noted in the Engineering Completion Works report, “...a very small area of fill adjacent to the two water tanks at the south east corner of the building platform.”

ACCESS The building area is readily accessed from ROW C adjacent and to the west.

Please refer to the engineering completion report for further details of site development generally.

Certification

I am a geo-professional as defined in section 1.2.2 of NZS 4404 and was retained by the developer as the project geo-professional. It is our professional opinion, not to be construed as a guarantee, that there is an area (defined in Geo-Logic Ltd **Certification Site Plan** - Sheet 01) suitable for the erection of a residential building provided that:

1. Building shall be within the Certified Building Area designated on Geo-Logic’s **Certification Site Plan** – Sheet 01 dated 15 July 2018.
2. Foundations for any building on the platform shall extend through topsoil and subsoil and any areas of fill to bear in competent natural ground.
3. In general buildings are to be set out a minimum of 2 metres from the edge of the platform as shown on the **Certification Site Plan**. Otherwise specific investigation and design is required.
4. Provision shall be made for on-site stormwater mitigation in accordance with the report by Engineering Sustainable Solutions (ESS) Ltd, titled: “Proposed Subdivision South of Mytton Heights Road for Atamai Village Stage Three at Motueka Valley” dated December 2013.
5. Provision for collection and controlled discharge of groundwater must be incorporated in any/all retaining wall design.
6. Granite soils on the site are sensitive to erosion. Collection of water from roofs, paved areas, retaining walls and water storage system overflows shall be discharged in a controlled manner to avoid erosion. Adequate subsoil drainage is to be provided for collection and controlled discharge of groundwater in any/all retaining wall design.
7. Penetrometer tests should be carried out by a suitably qualified person to confirm suitable firm bearing as part of the application for building consent.
8. The site is located on the centre of a strong spur and exhibits a very high degree of stability. Weathered granite bedrock is present at shallow depth, and no ‘very soft’ soil was encountered. The site meets the criteria set out in NZS1170.5 Earthquake Actions NZ, clause 3.1.3 *Site Subsoil Class*, for a subsoil class C, shallow soil, as depth to bedrock at all locations on the site is very likely to be less than 20m.
9. The positioning and design of any effluent disposal to land is to be designed and constructed by a qualified engineer experienced in effluent disposal systems.
10. If unusual ground conditions are encountered the services of a Chartered Professional Engineer experienced in geotechnical engineering or an experienced Engineering Geologist shall be sought.

11. Planting of suitable vegetation on exposed slopes is recommended to minimise any erosion potential, stabilise the soil and control subsoil moisture. Review and maintenance of this slope is recommended following intense or prolonged rainfall events until such time as vegetation is well established on the sloping ground.
12. These conditions and recommendations relate to the general stability of the site and do not remove the need for inspection and design of foundations that would normally ensue in natural ground.

Limitations

This certificate is furnished to Tasman District Council. It is acknowledged that the Council is entitled to provide information contained in this certificate pursuant to Section 31 of the Building Act 1992 and Section 44A of the Local Government Official Information and Meetings Act 1987.

This certificate relates to geotechnical, slope stability and engineering considerations of the site only. Stormwater runoff, set backs from boundaries, provision of services, and building codes have not been considered in the issue of this certificate. It is recommended that the applicant seek further professional input on these other matters.

No liability is accepted by Geo-Logic Ltd or by any principal, or director, or any servant or agent of this firm, in respect of its use by any other person. Any other person who relies upon any matter contained in this report without consultation with and agreement by Geo-Logic Ltd as to its applicability to that persons intentions, does so entirely at their own risk. This disclaimer shall apply notwithstanding that the report be made available to any person in connection with any application for permission or approval, or pursuant to any requirement of law.

This certificate must be reviewed for applicability in the event that any substantial modifications are made to the site or adjacent properties such that site conditions are changed substantially from current site conditions. Other time limitations may be imposed by regulatory authorities.

References

ENGINEERING SUSTAINABLE SOLUTIONS LTD, 2018: Hunu Hills Subdivision RM 130940 – Stage 3H, Completion of Works for Building Platform for Lot 10 at Right Of Way C. Engineering report prepared for the Tasman District Council on behalf of Hunu Hills Ltd dated 28 June 2018 (ref ESS 1512).

GEO-LOGIC LTD, 2010: Geotechnical Investigation, Proposed 30 Lot Subdivision, Atamai Village – Stage 2, Motueka Valley Highway, Motueka. Consultant's report prepared for Atamai Village Council dated September 2010 (reference 7028.01)

GEO-LOGIC LTD, 2012: Geotechnical Review, Revised Atamai Village STAGE 2 Scheme Plan, Atamai Village, Mytton Heights Road, Motueka Valley, Motueka. Letter prepared for the Tasman District Council on behalf of Atamai Development dated 23 August 2012 (reference 7028.01)

If you have any queries or require clarification please contact me by phone or email.

Yours faithfully
GEO-LOGIC LIMITED



Paul Denton
Engineering Geologist

Attachments:

Certification Site Plan - sheet 01
Photoplate 01, Overviews of Lot 10
Scala Penetrometer test results (2 sheets)

CC: Hunu Hills Ltd
58C Mytton Heights Road
RD 1MOTUEKA 7196
Attention: Jeff Santa Barbara
jsantab5@gmail.com

Richard Walker
Pigeon Saddle
Wainui Bay
TAKAKA RD1
richard.essltd@gmail.com

Scalar Penetrometer

31 Pineview way

Motueka

22.04.2019

Conducted by

Greg Benjamin

09/04/2019

For Sam MCloud & Toni Evans

Geo-logic in their report dated 17.07.2018 asks in condition 7, for penetrometer tests to be done at building consent stage.

Ground bearing: NZS3604:2011 3.3.2

Conditions were dry when tested. The building location area is a flat cut area.

Five areas were tested, marked 'a-e' on the site plan, these areas encompass the area that will be built on. (apart from the sleepout)

All 5 penetrometer tests indicated 'good ground' as described in NZS3604:11 and having an ultimate bearing capacity of greater than 300kPa at pile depths.

Greater than 5 blows per 100mm was encountered at a depth of 250mm below the cut surface in all locations.

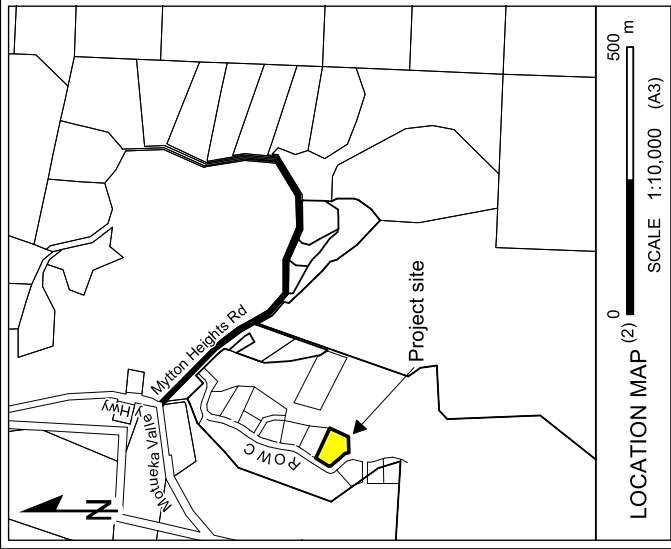
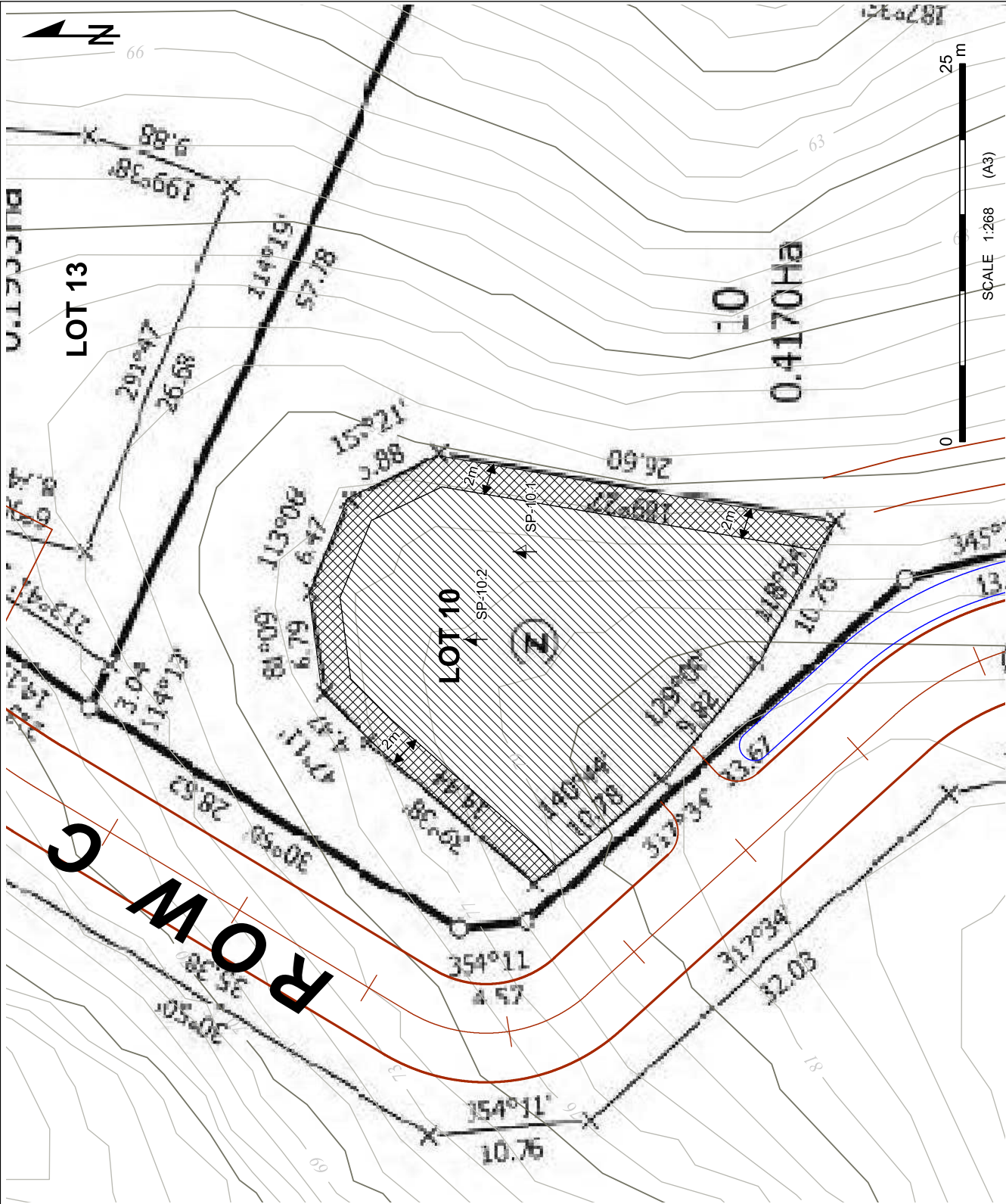
Refusal (or effectively refusal) was found in all locations at a maximum depth of 700mm.

These findings are consistent with the Geo-logic report which states 'refusal at or near the surface' on the two scalar penetrometer test they recorded.

Greg Benjamin

22.04.2019





Legend

- Certified Building Area.
- Double hatched area subject to further investigation and specific foundation design (approximate dimensions as shown)
- Approximate location of scale penetrometer test
- Approximate ground slope (below horizontal)⁽³⁾

NOTES:

(1) Basemap: "Plan of Building Locations Areas for Lots 10 and 13", "Hunu Hills Subdivision RM 130940 – Stage 3H, Completion of Works for Building Platform for Lot 10 at ROW C" prepared by Richard Walker (ESS) dated 28 June 2018

(2) Cadastral Information source from LINZ data, extracted 7 September 2010. Crown Copyright Reserved. Localised lot boundaries surrounding Project Area, supplied by BRV

(3) Refer to discussion in the text

(4) Original contour data shown, extracted from www.topofthesouthmaps.co.nz

		Hunu Hills Ltd Geotechnical Certification Lot 10, ROW C; Motueka Valley MOTUEKA		CERTIFICATION SITE PLAN LOT 10, ROW C	
REV	AMENDMENTS	DATE	INIT	Surveyed	BRV
				Designed	PCD
				Drawn	JAS
				Approved	PCD
				Status	CONCEPTUAL
				Date	15 July 2018
				File	G7028.11Lot10Splan01.mxd
				Project #	G7028.11
				Scales	1:250, 1:10,000 (A3)



GEO-LOGIC
L I M I T E D

Hunu Hills Ltd
Geotechnical Site Certification
Lot 10 – ROW C
Motueka Valley Highway
7028.11



1.1 Lot 10 building platform as of 16 Feb 2018. View looking north.



1.2 Excavation near of Lot 10 building platform as of 16 Feb 2018. View looking east.

Photoplate 01 *Overviews of Lot 10*

JOB	Hunu Hills		
LOCATION	Lot 10, ROW C		
WEATHER	Fine!		
BY:	PCD/JSB	DATE: Fri 16 February 2018	FILE: G7028.11

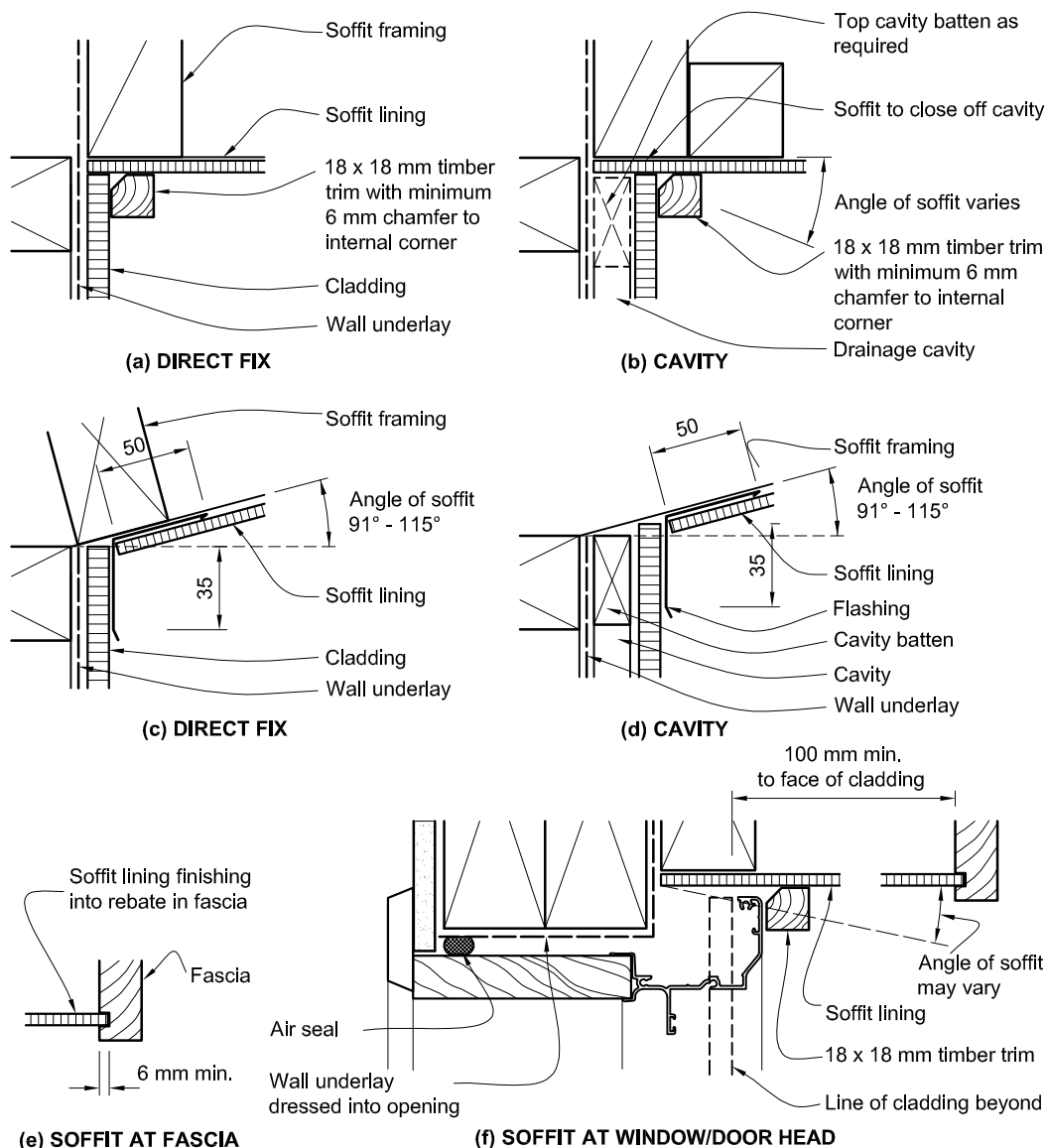
SCALA PENETROMETER TESTS

[illegible]

JOB	Hunu Hills		
LOCATION	Lot 10, ROW C		
WEATHER	Fine!		
BY:	PCD/JSB	DATE:	Fri 16 February 2018
		FILE:	G7028.11

SCALA PENETROMETER TESTS

[illegible]

Amend 5
Aug 2011**Figure 8A: Soffit/wall junction**
Paragraphs 5.3, 8.1.3.1, 8.4.6, 9.7.5, 9.8.6Errata 2
Dec 2011Amend 2
Jul 2005Amend 5
Aug 2011

- b) For profiled metal, incorporates *stopends* at the upper end of the *roof cladding* as per Paragraph 8.4.13,
- c) Provides a minimum clearance from the wall *cladding* to the roofing in accordance with Table 7, and
- d) Extends over the roofing by a minimum cover in accordance with Paragraph 4.6.1.1 and Table 7, depending on the:
- wind zone* and,
 - pitch of the *roof*.

COMMENT:

40 mm is the maximum upturn achievable with pressed metal tiles, meaning that a *flashing* is required.

Details for specific *wall cladding systems* are given in Paragraph 9.0.

Where the roof finishes within the length of an adjacent *wall*, a *kick-out* or *stopend* as detailed in Figure 8B shall be provided to direct water out from the *wall cladding* onto the *roof cladding* and gutter.

Amend 2
Jul 2005Amend 5
Aug 2011Amend 2
Jul 2005



BRANZ Appraised

Appraisal No. 615 [2017]

FAST WRAP BUILDING WRAP



Appraisal No. 615 [2017]

This Appraisal replaces BRANZ Appraisal No. 615 [2008].

BRANZ Appraisals

Technical Assessments of products for building and construction.



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T/A Paul Industries**

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BRANZ

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branz.co.nz



Product

- 1.1 Fast Wrap is a synthetic building underlay for use as a flexible wall underlay under wall claddings on timber and steel framed buildings. The product is manufactured from an ultra-violet (UV) light resistant non-woven, spun-bonded polypropylene and is coloured beige.

Scope

Flexible Wall Underlay

- 2.1 Fast Wrap has been appraised for use as a flexible wall underlay for timber and steel framed buildings within the following scope:
 - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
 - with direct fixed absorbent and non-absorbent wall claddings; or,
 - with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; or,
 - with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1 for timber framed buildings or to a specific design for steel framed buildings; and,
 - situated in NZS 3604 Wind Zones up to and including Very High.

Use over Rigid Wall Underlay

- 2.2 Fast Wrap has been appraised for use as a flexible wall underlay over rigid wall underlays on timber and steel framed buildings within the following scope:
 - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
 - with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; and,
 - with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1 for timber framed buildings or to a specific design for steel framed buildings; and,
 - situated in NZS 3604 Wind Zones up to and including Extra High.

Specific Design

- 2.3 Fast Wrap has also been appraised for use on buildings subject to specific weathertightness design. Building designers are responsible for the building design and for the incorporation of Fast Wrap into their design in accordance with the declared properties and the instructions of Paul Industries.

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Fast Wrap, if used, designed, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet, or contribute to meeting the following provisions of the NZBC:

Clause B2 DURABILITY: Performance B2.3.1 [a], not less than 50 years, B2.3.1 [b], 15 years and B2.3.2. Fast Wrap meets these requirements. See Paragraphs 9.1 and 9.2.

Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE: Performance C3.4 [c]. Fast Wrap meets this requirement. See Paragraph 10.1.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the cladding system, Fast Wrap will contribute to meeting this requirement. See Paragraphs 12.1 and 12.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Fast Wrap meets this requirement and will not present a health hazard to people.

Technical Specification

- 4.1 Fast Wrap is a beige, UV stabilised, non-woven spun-bonded polypropylene.
- 4.2 The product is supplied in rolls 1.370 m wide x 36.5 and 73 m long and 2.740 m wide x 18.5 and 36.5 m long. The product is printed with the Fast Wrap logo repeated along the length of the roll. The rolls are wrapped in clear polythene film.

Accessories

- 4.3 Accessories used with Fast Wrap which are supplied by the installer are:
- **Fixings** – staples, clouts, screws or proprietary underlay fixings, or other temporary fixings to attach the wall underlay to the framing.
 - **Wall underlay support** – 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to support the wall underlay in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5.

Handling and Storage

- 5.1 Handling and storage of the product, whether on or off site, is under the control of the installer. The rolls must be protected from damage and weather. They must be stored on end, under cover, in clean, dry conditions and must not be crushed.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Fast Wrap. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

- 7.1 Fast Wrap is intended for use as an alternative to conventional building papers which are fixed over timber or steel framed walls in order to limit the entry of wind into building cavities, and to act as a secondary barrier to wind-driven rain. Refer to Table 1 for material properties.
- 7.2 The material also provides a degree of temporary weather protection during early construction. However, the product will not make the building weathertight and some wetting of the underlying structure is always possible before the building is closed in. Hence, the building must be closed-in and made weatherproof before moisture sensitive materials such as wall or ceiling linings and insulation materials are installed.

- 7.3 Fast Wrap must not be exposed to the weather or ultra violet light for a total of more than 42 days before being covered by the wall cladding.
- 7.4 Fast Wrap is suitable for use as an air barrier where walls are not lined, such as attic spaces at gable ends, in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.4 [c].
- 7.5 In cavity installations where the cavity battens are installed at greater than 450 mm centres, the wall underlay must be supported between the battens to prevent the underlay bulging into the cavity space when bulk insulation is installed in the wall frame cavity in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5. Wall underlay support options include polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens.

Table 1: NZBC E2/AS1, Table 23 [NZS 2295] Requirements

NZBC E2/AS1, Table 23 [NZS 2295] Wall Underlay Properties	Property Performance Requirement	Actual Property Performance
Absorbency	$\geq 100 \text{ g/m}^2$	Pass
Vapour Resistance	$\leq 7 \text{ MN s/g}$	Pass
Water Resistance	$\geq 20 \text{ mm}$	Pass
pH of Extract	≥ 5.5 and ≤ 8	Pass
Shrinkage	$\leq 0.5\%$	Pass
Mechanical	Edge tear and tensile strength	Edge tear [Average]: Machine direction = 164 N Cross direction = 97 N Tensile strength [Average]: Machine direction = 3.4 kN/m Cross direction = 1.95 kN/m
Air Barrier	Air resistance: $\geq 0.1 \text{ MN s/m}^3$	Average 0.120 MN s/m^3 Fast Wrap is suitable for use as an air barrier.

Claddings

- 7.6 Fast Wrap is suitable for use under wall claddings as a wall underlay as called up in NZBC Acceptable Solution E2/AS1, Table 23 on timber framed buildings, including non-absorbent wall claddings such as vinyl and metal-based weatherboards in direct fixed situations. Fast Wrap is suitable for use under cavity based wall claddings as an absorbent synthetic wall underlay as called up in NZS 2295, Table 2.4 on steel framed buildings.

Stucco Plaster

- 7.7 Fast Wrap is suitable for use as a non-rigid backing material for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.5.1. The underlay must be supported with a 50 or 75 mm galvanised mesh or wire at 150 mm centres run across the cavity battens to limit deflection to a maximum of 5 mm.
- 7.8 Fast Wrap may also be used as a slip layer over rigid backings for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.3.1 [b].

Structure

- 8.1 Fast Wrap is suitable for use in all Wind Zones of NZS 3604 up to, and including, Very High when used as a stand-alone flexible wall underlay, and all Wind Zones of NZS 3604 up to, and including, Extra High when used as an overlay for rigid wall underlays.

Durability

- 9.1 Fast Wrap meets code compliance with NZBC Clause B2.3.1 [a], not less than 50 years for wall underlays used where the cladding durability requirement or expected serviceable life is not less than 50 years, e.g. behind masonry veneer, and code compliance with NZBC Clause B2.3.1 [b], 15 years for wall underlays used where the cladding durability requirement is 15 years.

Serviceable Life

- 9.2 Provided it is not exposed to the weather or ultra-violet light for a total of more than 42 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, Fast Wrap is expected to have a serviceable life equal to that of the cladding.

Control of Internal Fire and Smoke Spread

- 10.1 Fast Wrap has an AS 1530 Part 2 flammability index of not greater than 5 and therefore meets the requirements of NZBC Acceptable Solutions C/AS2 to C/AS6, Paragraph 4.17.8 b], for the surface finish requirements of suspended flexible fabric used as an underlay to exterior cladding that is exposed to view in occupied spaces. It may therefore be used with no restrictions in all buildings.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to Fast Wrap from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

- 12.1 Fast Wrap must only be used behind claddings that meet the requirements of the NZBC, such as those covered by NZBC Acceptable Solution E2/AS1, or claddings covered by a valid BRANZ Appraisal.
- 12.2 Fast Wrap, when installed in accordance with the Technical Literature and this Appraisal, will assist in the total cladding system's compliance with NZBC Clause E2.

Installation Information

Installation Skill Level Requirements

- 13.1 Installation must always be carried out in accordance with the Fast Wrap Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant Licence Class.

Underlay Installation

- 14.1 Fast Wrap must be fixed to all framing members at maximum 300 mm centres with large-head clouts 20 mm long, 6-8 mm staples, self drilling screws or proprietary underlay fixings. The membrane must be pulled taut over the framing before fixing.
- 14.2 Fast Wrap must be run horizontally and must extend from the upper-side of the top plate to the under-side of the bearers or wall plates supporting ground floor joists, or below bottom plates on concrete slabs. Horizontal laps must be no less than 150 mm wide, with the direction of the lap ensuring that water is shed to the outer face of the membrane. End laps must be made over framing and be no less than 150 mm wide.

- 14.3 The wall underlay should be run over openings and these left covered until windows and doors are ready to be installed. Openings are formed in the membrane by cutting on a 45 degree diagonal from each corner of the penetration. The flaps of the cut membrane must be folded inside the opening and stapled to the penetration framing. Excess underlay may be cut off flush with the internal face of the wall frame.
- 14.4 Fast Wrap can be added as a second layer over head flashings in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.10.3.
- 14.5 When fixing the product in windy conditions, care must be taken due to the large sail area created by wide roll widths.
- 14.6 Any damaged areas of Fast Wrap, such as tears, holes or gaps around service penetrations, must be repaired. Damaged areas can be repaired by covering with new material lapping the damaged area by at least 150 mm and taping, or by taping small tears.

Inspections

- 14.7 The Technical Literature must be referred to during the inspection of Fast Wrap installations.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

- 15.1 The following tests have been carried out on Fast Wrap in accordance with NZBC Acceptable Solution E2/AS1, Table 23: tensile strength, edge-tear resistance and resistance to water vapour transmission in accordance with AS/NZS 4200.1, shrinkage in accordance with AS/NZS 4201.3, resistance to water penetration in accordance with AS/NZS 4201.4, surface water absorbency in accordance with AS/NZS 4201.6, pH of extract in accordance with AS/NZS 1301.421s and air resistance to BS 6538.3. A range of these tests were completed before and after Fast Wrap was exposed to ultra-violet light.
- 15.2 The flammability index of Fast Wrap has been tested in accordance with AS/NZS 1530.2.

Other Investigations

- 16.1 A durability opinion was given by BRANZ technical experts.
- 16.2 An evaluation of the expected performance of Fast Wrap in direct contact with metal wall cladding has been completed by BRANZ.
- 16.3 Site inspections were carried out by BRANZ to assess methods used for the installation of Fast Wrap.
- 16.4 The marketer's Technical Literature, including installation instructions, has been examined by BRANZ and found to be satisfactory.

Quality

- 17.1 The manufacture of Fast Wrap has not been examined by BRANZ, but details of the methods adopted for quality control and the quality of the materials used, have been obtained and found to be satisfactory.
- 17.2 The quality of supply to the market is the responsibility of Paul Industries.
- 17.3 Building designers are responsible for the design of the building, and for the incorporation of the wall underlay into their design in accordance with the instructions of Paul Industries.
- 17.4 Quality of installation is the responsibility of the installer in accordance with the instructions of Paul Industries.

Sources of Information

- AS 1530.2: 1993 Test for flammability of materials.
- AS/NZS 1301.421s: 1998 Determination of the pH value of aqueous extracts of paper, board and pulp - Cold extraction method.
- AS/NZS 4200.1: 1994 Pliable building membranes and underlays - Materials.
- AS/NZS 4201.3: 1994 Pliable building membranes and underlays - Methods of test - Shrinkage.
- AS/NZS 4201.4: 1994 Pliable building membranes and underlays - Methods of test - Resistance to water penetration.
- AS/NZS 4201.6: 1994 Pliable building membranes and underlays - Methods of test - Surface water absorbency.
- BS 6538.3: 1987 Method for determination of air permeance using the Garley apparatus.
- NZS 2295: 2006 Pliable, permeable building underlays.
- NZS 3604: 2011 Timber-framed buildings.
- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture Clause E2, Ministry of Business, Innovation and Employment, Third Edition July 2005 [Amendment 7, 01 January 2017].
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.



In the opinion of BRANZ, **Fast Wrap Building Wrap** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Judea Holdings Ltd, T/A Paul Industries**, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the Technical Literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. **Judea Holdings Ltd, T/A Paul Industries:**
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions.
 - d) Warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by **Judea Holdings Ltd, T/A Paul Industries**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Judea Holdings Ltd, T/A Paul Industries** or any third party.

For BRANZ



Chelydra Percy

Chief Executive

Date of Issue:

24 August 2017



BRANZ Appraised
Appraisal No.853 [2014]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
No. 853 (2014)**

**FASTWRAP
ULTRA-BOND SILL
TAPE**

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Product

1.1 Fastwrap ULTRA-BOND Sill Tape is a flexible flashing tape system for use around framed joinery openings as a secondary weather resistant barrier.

1.2 The system is installed into and around the framed joinery opening over the wall underlay and exposed frame to cover both the face and edge of the opening framing. Fastwrap ULTRA-BOND Sill Tape is also used at joinery heads to seal flashing upstands to the wall underlay.



Scope

2.1 Fastwrap ULTRA-BOND Sill Tape has been appraised as a flexible flashing system for use around window and door joinery openings for buildings within the following scope:

- constructed with timber framing in accordance with the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; or,
- constructed with steel framing subject to specific engineering design with building height and floor plan area scope limitations in accordance with NZBC Acceptable Solution E2/AS1; and,
- with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
- with wall cladding systems complying with NZBC Acceptable Solution E2/AS1 or a valid BRANZ Appraisal that specifies a flexible flashing system; and,
- with flexible wall underlays compatible with the flashing tape and complying with the NZBC; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High (refer to Paragraph 7.3).

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Fastwrap ULTRA-BOND Sill Tape, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:

Clause B2 DURABILITY: Performance B2.3.1(b), 15 years and B2.3.2. Fastwrap ULTRA-BOND Sill Tape meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. Fastwrap ULTRA-BOND Sill Tape contributes to meeting this requirement. See Paragraphs 7.1 - 7.4 and 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Fastwrap ULTRA-BOND Sill Tape meets this requirement and will not present a health hazard to people.

3.2 This is an Appraisal of an **Alternative Solution** in terms of New Zealand Building Code compliance. See Paragraph 7.1.

Readers are advised to check the validity of this Appraisal by referring to the Valid Appraisals listing on the BRANZ website, or by contacting BRANZ.

Technical Specification

4.1 System components and accessories supplied by Paul Industries are:

- Fastwrap ULTRA-BOND Sill Tape is a white spun bonded polyethylene film faced, butyl rubber self-adhesive tape with a release backing paper. The tape is supplied in rolls 200, 150, 75 and 50 mm wide x 25 m long. The rolls are wrapped in clear polythene film.

4.2 Accessories used with the system which are supplied by the building contractor are:

- Flexible wall underlay – building paper complying with NZBC Acceptable Solution E2/AS1 Table 23, or breather-type membranes covered by a valid BRANZ Appraisal for use as wall underlays.

Handling and Storage

5.1 Handling and storage of all materials supplied by Paul Industries, whether on or off site, is under the control of the installer. Fastwrap ULTRA-BOND Sill Tape must be protected from damage and weather. Rolls must be stored under cover, in clean, dry conditions away from direct exposure to sunlight.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Fastwrap ULTRA-BOND Sill Tape. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

7.1 Fastwrap ULTRA-BOND Sill Tape has been assessed against the requirements of AC148: 2001 which is an alternative solution to the version of AC148 referenced by NZBC Acceptable Solution E2/AS1 Paragraph 9.1.5(b). The installation method for Fastwrap ULTRA-BOND Sill Tape is an alternative solution to the installation method shown within NZBC Acceptable Solution E2/AS1, Figures 72A and 72B.

7.2 Fastwrap ULTRA-BOND Sill Tape must not be exposed to the weather or ultra-violet light for a total of more than 30 days before being covered by the cladding system.

7.3 The use of flexible flashing systems around window and door joinery openings is critical to assist the overall weathertightness performance of window and door joinery installations.

7.4 Fastwrap ULTRA-BOND Sill Tape is suitable for use over flexible wall underlays compatible with the flashing tape in NZS 3604 Wind Zones up to and including Extra High. In the Extra High Wind Zone, the flexible underlay must be installed over a rigid underlay complying with NZBC Acceptable Solution E2/AS1, Table 23.

7.5 Fastwrap ULTRA-BOND Sill Tape is designed to prevent air leakage and water penetration around window and door openings at framing junctions (e.g. at the sill trimmer and opening stud junction), and to keep any water that gets past the cladding, or through the joinery, from direct contact with the framing timber.

7.6 Fastwrap ULTRA-BOND Sill Tape is not designed to overcome poor detailing and workmanship of the window or door joinery installation. The system must not be considered in isolation, but be considered as part of the wall cladding system. Fastwrap ULTRA-BOND Sill Tape is designed to be used in conjunction with air seals and joinery flashing systems, not as a substitute.

7.7 When Fastwrap ULTRA-BOND Sill Tape is used in conjunction with LOSP (light organic solvent preservative) treated timber, the solvent from the timber treatment must be allowed to evaporate (generally at least one week) prior to the installation of the system.

Durability

8.1 Assessment of durability to meet the NZBC is based on difficulty of access and replacement, and the ability to detect failure of Fastwrap ULTRA-BOND Sill Tape both during normal use and maintenance of the building.

Serviceable Life

8.2 Provided it is not exposed to the weather or ultra-violet light for a total of more than 30 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, Fastwrap ULTRA-BOND Sill Tape is expected to have a serviceable life equal to that of the cladding.

Maintenance

9.1 No maintenance is required for Fastwrap ULTRA-BOND Sill Tape. Regular checks, at least annually, must be made of the junctions between the joinery and wall cladding to ensure that they are maintained weathertight and that the primary means of weather resistance for the junction e.g. flashing, sealant, etc continues to perform its function, to ensure that water will not penetrate the cladding.

Prevention of Fire Occurring

10.1 Separation or protection must be provided to the Fastwrap ULTRA-BOND Sill Tape from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

11.1 Where a cladding manufacturer specifies the use of generic flashing tapes around window and door joinery openings at framing junctions as part of their system, or they specify the use of flexible flashing tapes that comply with NZBC E2/AS1, Paragraph 9.1.5(b), Fastwrap ULTRA-BOND Sill Tape may be used.

Installation Information

Installation Skill Level Requirements

12.1 Installation of Fastwrap ULTRA-BOND Sill Tape must be completed by tradespersons with an understanding of flexible flashing tape systems, in accordance with instructions given within Fastwrap ULTRA-BOND Sill Tape Technical Literature and this Appraisal.

General

13.1 The selected wall underlay must be installed in accordance with the manufacturer's instructions, and must completely cover the joinery opening. The underlay is then cut on a 45° angle away from each corner of the opening so the flaps can be folded into the opening and secured to the interior face of the timber framing.

13.2 Before the Fastwrap ULTRA-BOND Sill Tape is applied, the substrate surfaces must be clean, dry and free from any surface contaminants such as dust and grease that may cause loss of adhesion.

13.3 A length of Fastwrap ULTRA-BOND Sill Tape must be cut to the length of the sill plus 400 mm. The tape is installed flush with the interior face of the opening and is applied along the entire length of the sill and 200 mm up each jamb. The overhanging tape is cut at the corner of the opening to allow the tape to be folded onto the face of the building underlay. A spatula or similar must be used to ensure that adequate adhesion of the tape is achieved and that the tape is installed tight into the sill/jamb junction.

13.4 A 400 mm length of Fastwrap ULTRA-BOND Sill Tape must be installed 200 mm down the jamb and 200 mm along the lintel at each of the top corners of the window or door joinery opening.

13.5 A 50 mm wide x 120 mm long sealing tape 'butterfly' must be installed at 45° across the corner of the head/jamb and sill/jamb junctions overlapping the corner by 3 mm to create a seal at the corner junction.

13.6 Fastwrap ULTRA-BOND Sill Tape must not be stretched. To avoid wastage, the tape can be lapped 100 mm minimum onto itself without reducing the performance of the Fastwrap ULTRA-BOND Sill Tape System.

13.7 If the Fastwrap ULTRA-BOND Sill Tape is exposed to the weather or UV light for more than 30 days, then it must be replaced.

Installation Temperature

13.8 Fastwrap ULTRA-BOND Sill Tape must not be installed at temperatures less than 5°C. *(Note: Paul Industries approve the installation of Fastwrap ULTRA-BOND Sill Tape within the temperature range of -17°C to +45°C. This has not been addressed by the BRANZ and is therefore outside the scope of the Appraisal.)*

Inspections

13.9 The Technical Literature must be referred to during the inspection of Fastwrap ULTRA-BOND Sill Tape installations.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

14.1 Testing of Fastwrap ULTRA-BOND Sill Tape has been completed by BRANZ to the requirements of ICC Evaluation Service Acceptance Criteria for Flashing Materials AC148:2001. The adhesion of Fastwrap ULTRA-BOND Sill Tape to black bituminous Kraft building paper complying with the requirements of NZBC Acceptable Solution E2/AS1, Table 23 and selected other synthetic wall underlays has been tested and found to be satisfactory.

Other Investigations

15.1 An assessment was made of the durability of Fastwrap ULTRA-BOND Sill Tape by BRANZ technical experts.

15.2 Site inspections were carried out by BRANZ to examine the practicability of installation.

15.3 The Technical Literature has been reviewed by BRANZ and found to be satisfactory.

Quality

16.1 The manufacture of Fastwrap ULTRA-BOND Sill Tape has not been examined by BRANZ, but details of the quality and composition of the materials used were obtained and found to be satisfactory. BRANZ undertakes an ongoing review of product quality on an inwards goods basis.

16.2 The quality of supply to the market is the responsibility of Paul Industries.

16.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and wall underlays in accordance with the instructions of the designer.

16.4 The quality of installation, handling and storage on site is the responsibility of the installer in accordance with the instructions of Paul Industries.

Sources of Information

- ICC Evaluation Service, Inc, AC148 Acceptable Criteria for Flexible Flashing Materials, July 2001.
- NZS 3604: 2011 Timber-framed buildings.
- Compliance Document for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005 (Amendment 6, 14 February 2014).
- The Building Regulations 1992.
- MBIE Record of Amendments, Compliance Documents and Handbooks.



BRANZ

In the opinion of BRANZ, **Fastwrap ULTRA-BOND Sill Tape** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Paul Industries**, and is valid until further notice, subject to the Conditions of Appraisal.

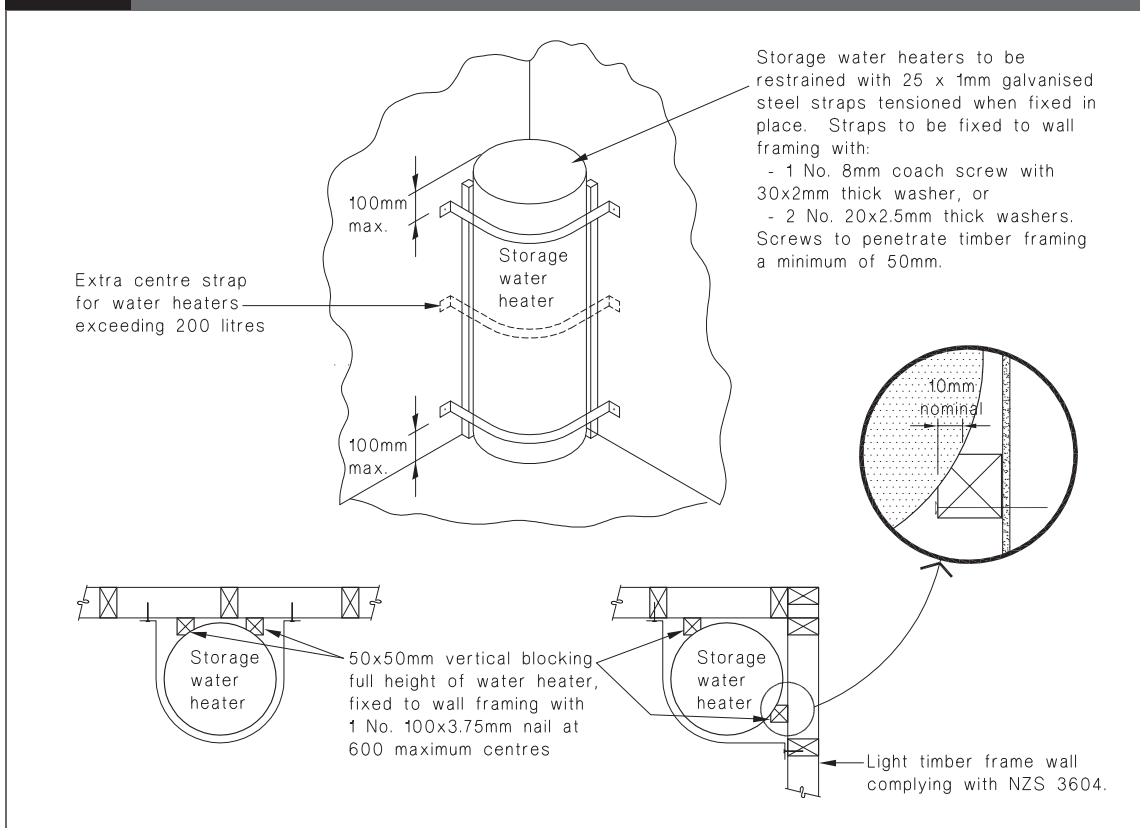
Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the technical literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. **Paul Industries**:
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions.
 - d) Warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by **Paul Industries**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Paul Industries** or any third party.

For BRANZ

C Percy
Chief Executive

Date of issue: 13 May 2014

Amend 5
Feb 2004**Figure 14: Seismic Restraint of Storage Water Heaters 90 – 360 litres**
Paragraph 6.11.4

6.11.4 Structural Support

NZBC B1.3.2 requires *building elements* (including *storage water heaters*) to be adequately supported including support against earthquake forces. The method illustrated in Figure 14 is acceptable for *water heaters* up to 360 litre capacity. Where fittings and pipework are attached to the *water heater* through the supporting platform or floor a 50 mm minimum clearance shall be provided between the fitting and the support structure.

6.11.5 Another acceptable solution for securing *storage water heaters* against seismic forces is given in Section 203 of NZS 4603.

6.12 Hot water pipe sizes

6.12.1 The *diameter* of hot water supply pipes from *storage water heaters* and to *sanitary fixtures* shall be no less than those required by Table 4.

6.13 Wet-back water heaters

6.13.1 Wet-back *water heaters* shall be:

- Connected only to *open vented storage water heaters*, or a water storage vessel (see Figure 15), and
- Made of copper.

6.13.2 Copper pipework shall be used between the wet-back and the *water tank*.

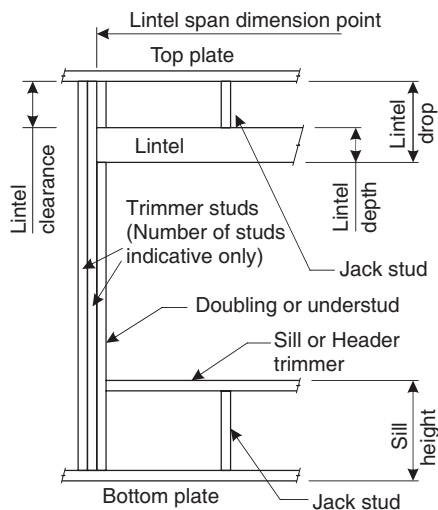
Third Edition
Dec 2007Amend 5
Feb 2004Amend 5
Feb 2004

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 0.20 kPa.
- ★ 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
8.6 m ²	G	G	H	G	G	H
11.6 m ²	G	H	H	G	G	H
12.1 m ²	G	H	H	G	H	H
15.3 m ²	H	H	-	G	H	H
19.1 m ²	H	-	-	G	H	-
20.9 m ²	H	-	-	H	H	-
21.8 m ²	H	-	-	H	-	-
34.3 m 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

SELECTION CHART FOR LINTEL FIXING

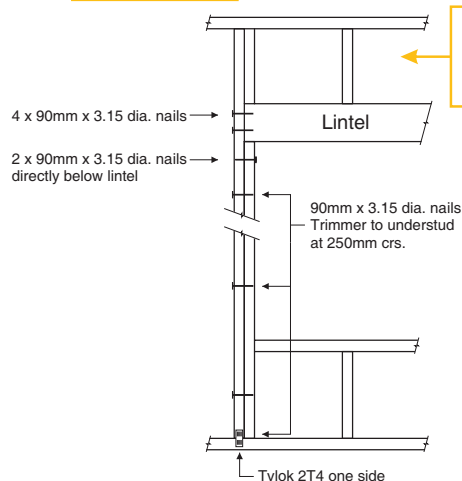
Lintel Span	Loaded Dimension (See Fig. 1.3 NZS 3604:2011)	Light Roof					Heavy Roof				
		Wind Zone					Wind Zone				
		L	M	H	VH	EH	L	M	H	VH	EH
0.7	2.0	E	E	E	E	F	E	E	E	E	E
	3.0	E	E	E	F	F	E	E	E	E	F
	4.0	E	E	F	F	F	E	E	E	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
0.9	2.0	E	E	E	F	F	E	E	E	E	F
	3.0	E	E	F	F	F	E	E	E	F	F
	4.0	E	E	F	F	F	E	E	F	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
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	F	G	H	H
2.4	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	G	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	F	G	H	H
	6.0	F	G	H	H	-	E	F	G	H	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	F	G	H	H
	5.0	F	G	H	H	-	E	F	G	H	H
	6.0	F	G	H	-	-	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	F	G	G	H
	4.0	F	G	H	H	-	E	F	G	H	H
	5.0	F	G	H	-	-	E	F	G	H	-
	6.0	G	H	H	-	-	E	F	H	-	-
4.2	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	H	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.5	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.4	F	G	H	H	-	E	F	G	H	-
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
4.8	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.2	F	G	H	H	-	F	F	G	H	-
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-



LINTEL FIXING OPTIONS

TYPE E

1.4 kN

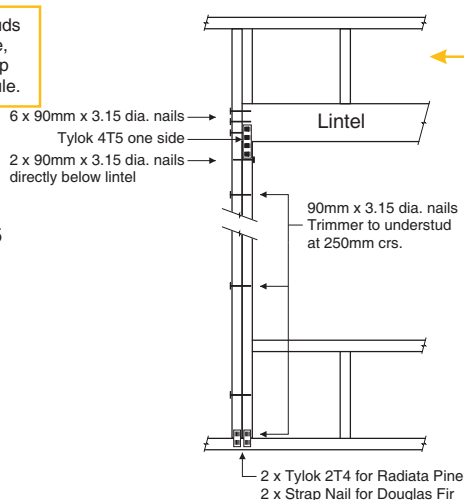


For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

TYPE F

4.0 kN

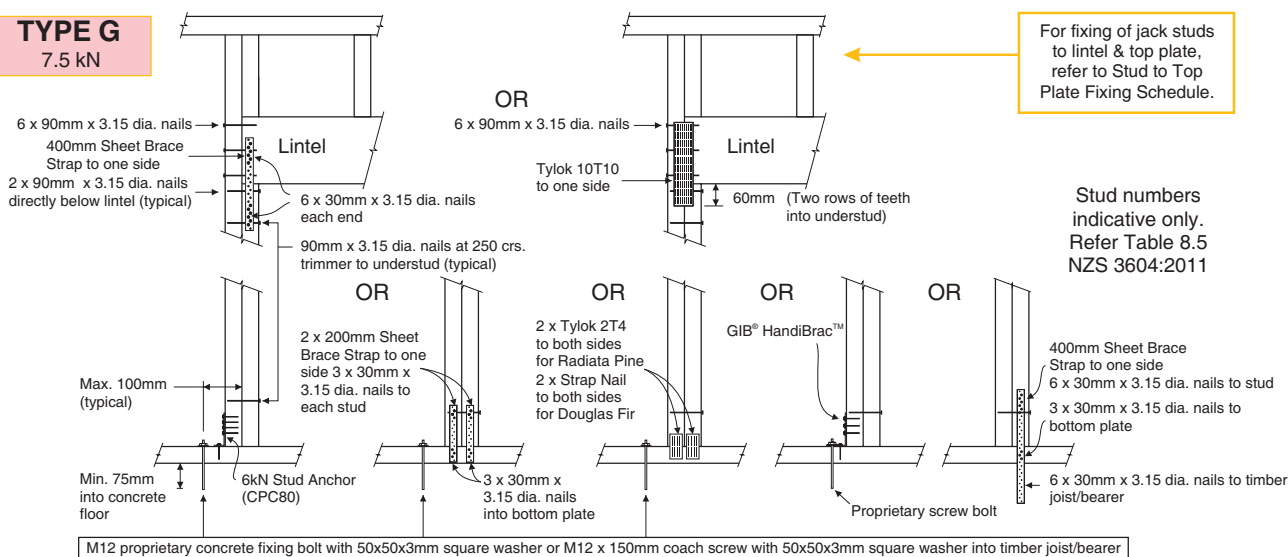


For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

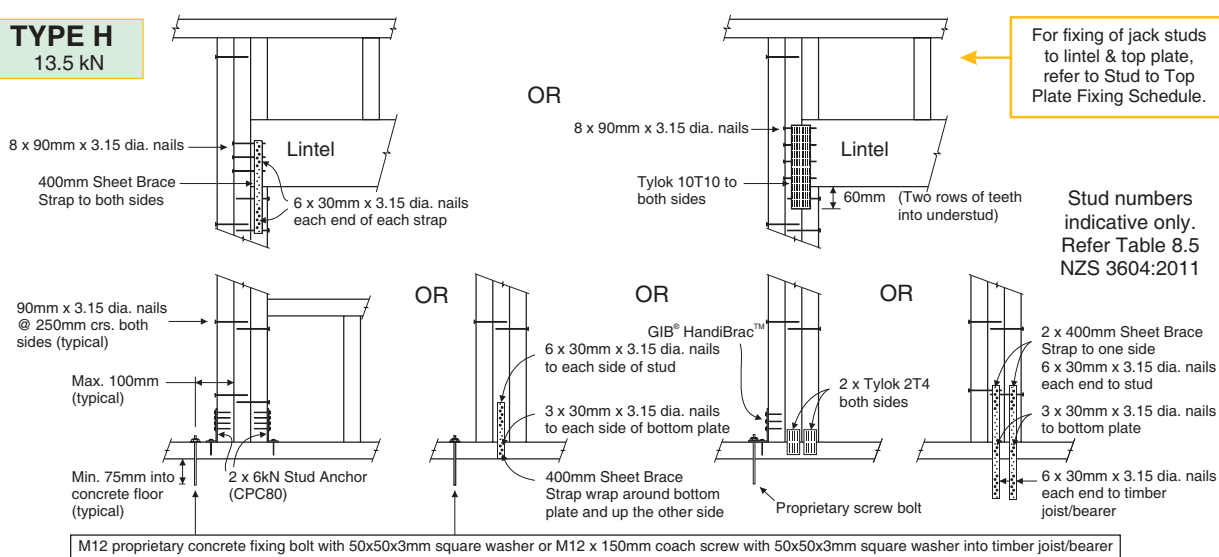
TYPE G

7.5 kN



TYPE H

13.5 kN

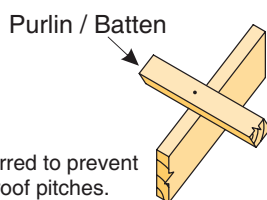


STANDARD FIXING OPTIONS

FIXING TYPE A 0.55kN

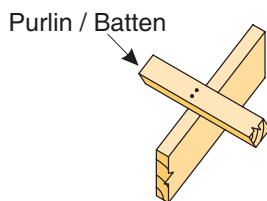
1 NAIL

Note: Two nails may be preferred to prevent batten rolling over with high roof pitches.



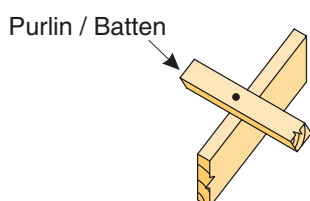
FIXING TYPE B 0.8kN

2 NAILS



FIXING TYPE C 2.4kN

1 BLUE SCREW

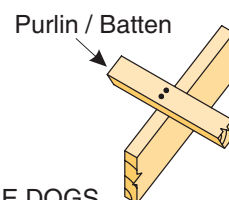


FIXING TYPE D 3.45kN

2 BLUE SCREWS

OR

2 SKEW NAILS plus 2 WIRE DOGS
(for purlin on edge)

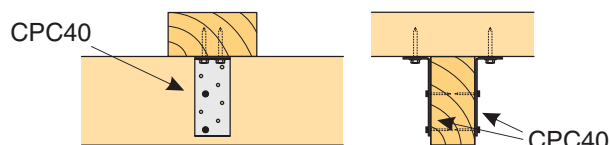


FIXING TYPE E 5.5kN

2 NAILS plus 1 CT200

OR

1 PAIR of CPC40



FIXING DEFINITIONS

NAIL = Either 90mm x 3.15 dia. power-driven nail or 100mm x 3.75 dia. hand-driven nail

BLUE SCREW = 80mm x 10 gauge LUMBERLOK BLUE SCREW

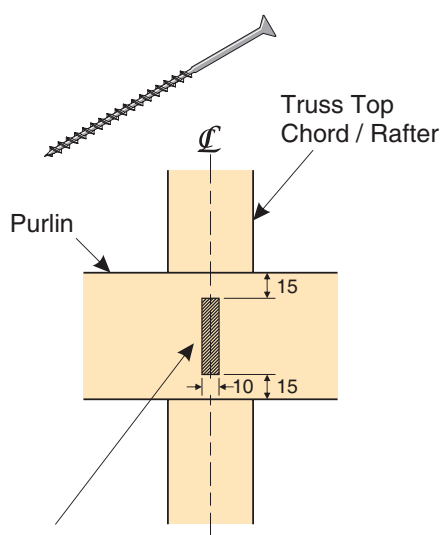
WIRE DOG = LUMBERLOK WIRE DOG either LH or RH

CT200 = LUMBERLOK Ceiling Tie CT200 bend over purlin, 4 x LUMBERLOK Product Nails 30mm x 3.15 dia. each end

CPC40 = LUMBERLOK CPC40 with 2 x Type 17-14g x 35mm Hex Head Screws per flange

FIXING TOLERANCES

LUMBERLOK BLUE SCREW



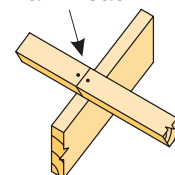
NOTE:

Locate fixings within the shaded area. Care to be taken to avoid over tightening of screws.

PURLIN / BATTEN SPLICE FIXING OPTIONS

FIXING TYPE A & B OVER PURLIN SPLICE

1 nail in each



NOTE:

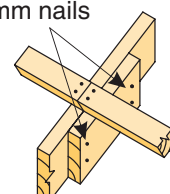
Skew nail when fixing to 35mm rafter or truss

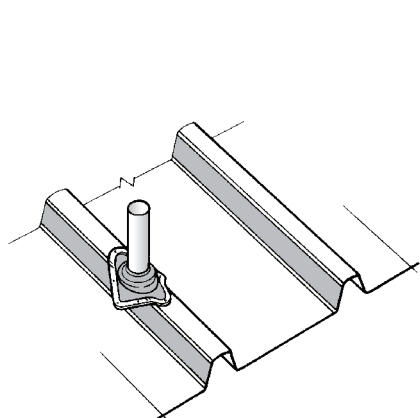
FIXING TYPE C, D or E OVER PURLIN SPLICE

90 x 35mm block fixed to chord or rafter with 4 x 75mm nails

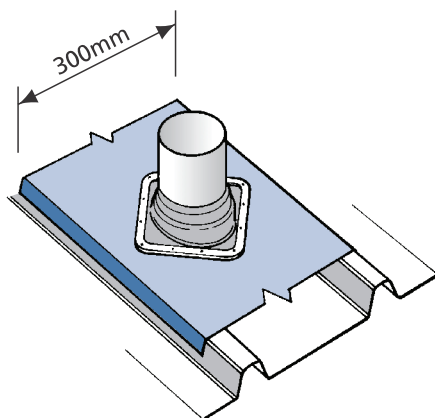
• TYPE C
1 SCREW
to each purlin

• TYPE D & E
1 NAIL plus 1 SCREW to each purlin



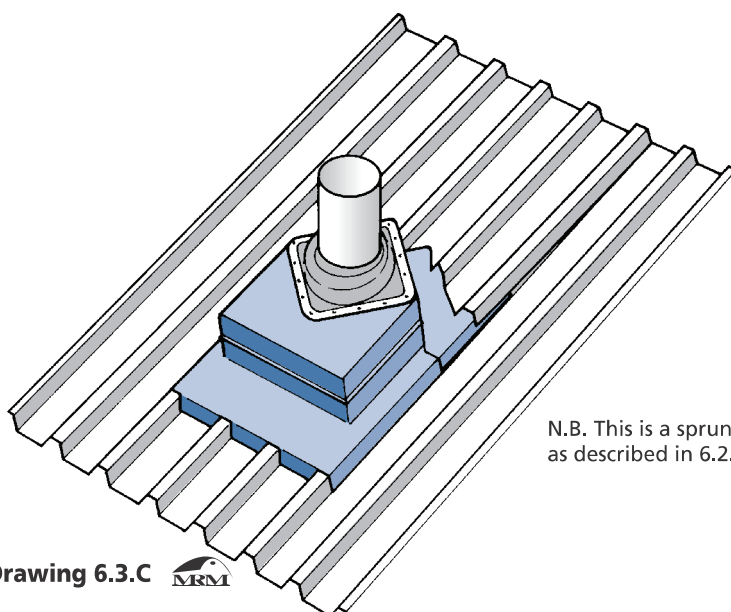


Drawing 6.3.A 



Drawing 6.3.B 

The flashings above can extend 8m maximum from the ridge.



Drawing 6.3.C 

N.B. This is a sprung roof flashing as described in 6.2.8.C.

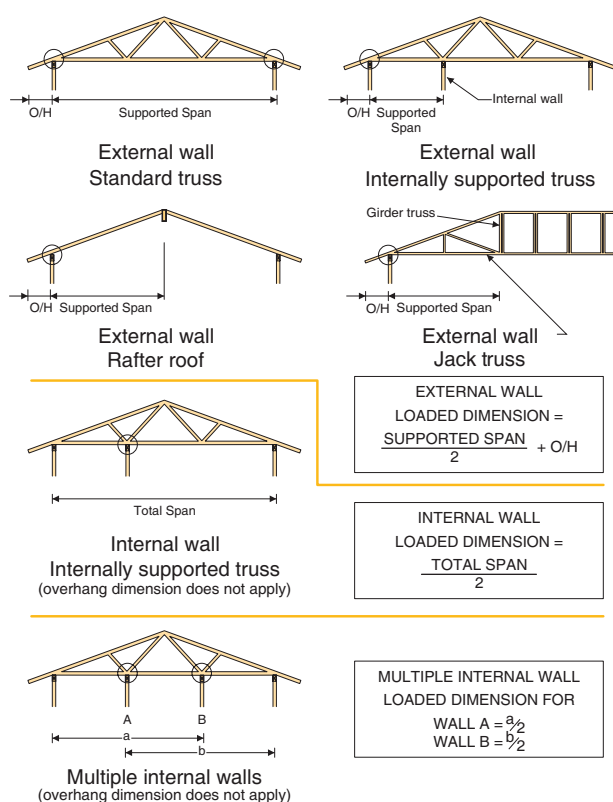
Drawing 6.3.C shows a large proprietary 250mm diameter EPDM flashing, which would obstruct drainage from the catchment above. It has been designed with a self cleansing 45° diverter flashing, while still providing the flexibility offered by this proprietary type of flashing.

STUD TO TOP PLATE FIXING SCHEDULE ALTERNATIVE TO TABLE 8.18 NZS 3604:2011

NOTE:

- ★ All fixings are designed to resist vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20 kPa.
- ★ Refer to Table 8.19 NZS 3604:2011 for nailing schedule to resist lateral loads.
- ★ These fixings assume the correct choice of rafter/truss to top plate connections have been made.
- ★ Gable end wall top plate/stud connections where the adjacent rafter/truss is located within 1200mm of gable end wall with a maximum verge overhang of 750mm, requires fixing type A as shown below.
- ★ All fixings assume top plate thickness of 45mm maximum.
- ★ Wall framing arrangements under girder trusses are not covered in this schedule.
- ★ All timber selections are as per NZS 3604:2011.

LOADED DIMENSION DEFINITION



FIXING SELECTION CHART

(Suitable for walls supporting roof members at 600, 900 or 1200mm crs.)

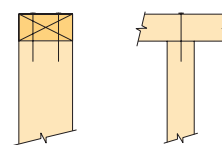
Wind Zones L, M, H, VH, EH, as per NZS 3604:2011

Loaded Dimension (m) Stud Centres			Light Roof Wind Zone					Heavy Roof Wind Zone				
300mm	400mm	600mm	L	M	H	VH	EH	L	M	H	VH	EH
3.0	2.3	1.5	A	A	B	B	B	A	A	B	B	B
4.0	3.0	2.0	A	A	B	B	B	A	A	B	B	B
5.0	3.8	2.5	A	B	B	B	B	A	A	B	B	B
6.0	4.5	3.0	A	B	B	B	B	A	A	B	B	B
7.0	5.3	3.5	A	B	B	B	B	A	A	B	B	B
8.0	6.0	4.0	A	B	B	B	B	A	A	B	B	B
9.0	6.8	4.5	B	B	B	B	B	A	A	B	B	B
10.0	7.5	5.0	B	B	B	B	B	A	A	B	B	B
11.0	8.3	5.5	B	B	B	B	B	A	A	B	B	B
12.0	9.0	6.0	B	B	B	B	B	A	A	B	B	B

FIXING OPTIONS

FIXING TYPE A 0.7 kN

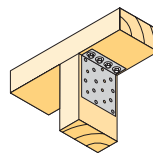
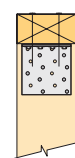
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



FIXING TYPE B 4.7 kN

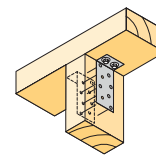
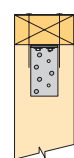
CHOOSE ANY OF THE 3 OPTIONS BELOW

2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
LUMBERLOK
6kN Stud Anchor
(CPC80)

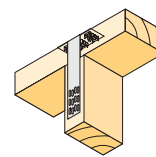
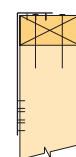
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
2 x LUMBERLOK
CPC40

Recommended for internal wall options to avoid lining issues

2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
LUMBERLOK
Stud Strap
(one face only)

Note:

To calculate the number of B type fixings required, divide the wall length by the stud centres, add 1 to this figure and locate this number of fixings as evenly as possible along the wall length. This figure includes the start and end studs in each wall length.

[Home](#) [Product Details](#) [Specifications](#) [Where to Purchase](#) [Support](#)[Your Inventions](#)

Product Details

The **UNITRAY** concept was born out of the desire to improve the speed and ease of installation of safe trays. installations are compliant with the AS3500 plumbing first time, every time. The **UNITRAY** reduces time, cost and unit.

UNITRAY SYSTEM Benefits:.

- Easily & rapidly assembled - representing significant labour cost savings over current methods.
- Design complies with and exceeds AS 3500 National Plumbing Code requirements.
- No soldering, brazing or gluing involved in tray assembly - threaded, HDPE fusion welded and welded.
- Tray design engineered and certified to support and exceed maximum load requirements.
- Manufactured from non-electrically conductive material for safe installation.
- Manufactured from Ultra Violet (UV) light stabilized materials suitable for long term external use.
- Circular space saving design fits into smaller positions where square type trays may not.
- Multiple size trays available to suit HWU's from 25 litre to 315 litre capacities.



ALL IN ONE SOLUTION

The Unitray is an all in one Hot Water Unit (HWU) installation solution. It includes the tray base, an integrated "Pizza base", a 50mm drainage outlet integrated into the tray, a "tee" piece and a tundish. All the parts come wasted trips getting forgotten parts. Easier quoting with less variables to consider.



In comparison, the current method requires the use of a copper or metal type tray, the latter of which is not a the effects of corrosion, further an drain outlet is required to be welded or sealed into the tray using time cor acetylene or silicone) note plumbers using plug and waste outlets are in contravention of the AS 3500 due to maintaining water within the tray due to the elevated lip on the waste outlet.

NO SPECIAL TOOLS REQUIRED

All that is required to assemble this product is a roll of Teflon tape, applied to three threads. No oxy-acetylen the product representing further time saving.

SAVES YOU TIME

The efficient use of time and materials is an ongoing challenge facing our competitive industry. The Unitray is assembled and ready to support a HWU within two minutes or less. To get to a similar stage in a traditional

BUILT TO LAST

The **UNITRAY** is made from top quality UV resistant polymer. When installed as intended it is built to outlast steel, glass lined cylinder hot water unit it supports. The **UNITRAY** has been engineer certified.

ACCESORIES

UNITRAY offer an optional elevating support post kit. These engineer certified posts are compliant for use if waste point is located directly below the hot water unit. They fit into multiple slots under the tray for ultimate



Current elevating options including stainless steel frames, concrete plinths or timber frames are costly and unsanitary. Compare the ease of purchasing an over the counter **UNITRAY** elevating post kit from your supplier to the cost of a stainless steel custom frame, or sourcing timber, nails, hand saw etc for a timber elevating platform. The choice is clear.

COMPLIANT EVERY TIME

The **UNITRAY** conforms with and exceeds all current AS 3500 standards (National Plumbing Code) relating to hot water units.

FLEXIBLE



Indoor Safetray Installation

All in one compliant safetray solution. Save time, save money, get it right first time.

Supplied with 50mm BSP female outlet coupling that can be trimmed to suit Fernco or fusion welded couplings as shown.



Indoor Safetray Installation

All in one compliant safetray solution. Save time, save money, get it right first time.

Supplied with 50mm BSP female outlet coupling that can be trimmed to suit Fernco or fusion welded couplings as shown.



Inc

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time

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26 April 2019

Dear Sir/Madam

REQUEST FOR FURTHER INFORMATION - VETTING

REFERENCE: BC190480

LOCATION: 31 Pineview Way, Motueka Valley

PROJECT: Construct new dwelling and detached sleepout

We have received and vetted your application and require the following information in order to commence processing.

Floor Plans

Floor plans do not provide sufficient information to enable a compliance decision. The smoke detectors do not appear to be marked on the plans. Can you please add them.

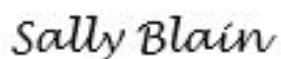
Specifications

Please provide a detailed contents page for the specifications with the relevant page numbers.

Please respond in full to this request, within 10 working days, as we cannot formally accept your application until adequate information is received and your application may be refused.

If we have overlooked any of the information, please advise its location so that it can be re-checked. Should you have any queries regarding this letter, please reply to this email or phone our Duty Building Officer on 03 543 8400.

Yours sincerely



Sally Blain

Administration Officer - Building Assurance
On behalf of Tasman District Council

BC190480 | 21 Sep 2022

Vetting Started Date: 26/04/2019 02:28 pm

Vetting Completed Date: 29/04/2019 01:52 pm

VETTING CHECKLIST - AUDIT	Y/N	User	Date	Notes
Application Form : Has the application form been properly completed?	Y	SBn	26/04/2019 03:52 pm	Application form is correct.
Deposit / Fee: Has the appropriate deposit / fee been paid?	N/A	SBn	26/04/2019 03:52 pm	(No Comments)
Evidence of Ownership / Owner's Permission: Is a current Certificate of Title / Record of Title or evidence of ownership provided that is in the owner's name; and if the application has been submitted by an agent is owner's permission provided? If Title is not yet available a subdivision scheme plan is required. If the legal description for subdivision is not available please ensure that the parent title is recorded on the application.	Y	SBn	26/04/2019 03:52 pm	Current evidence of ownership and owner's permission is provided.
LBP Details / Certificate of Work / Statutory Notice: If the proposal includes Restricted Building Work then is the application accompanied by: (a) names of each LBP involved AND; (b) Certificate of Work OR (c) Statutory Declaration? Select N/A if the application does not include Restricted Building Work.	Y	SBn	26/04/2019 03:52 pm	LBP Names are provided Certificate of Work is provided
Ground Condition / Geotechnical Report: Has a ground condition report been provided? This should be provided by a Chartered Engineer or qualified Geotechnical Engineer if conditions other than "good ground" exist.	Y	SBn	26/04/2019 03:53 pm	A ground condition report is provided.
Resource Management Information: Does RMA information include a plan showing site and land information with details site coverage, floor areas for each level of each building, and with elevations depicting recession / daylight planes and height compliance? Select N/A if the application does not require RMA input.	Y	SBn	26/04/2019 03:53 pm	Plans show: a) site and land information b) details site coverage, c) floor areas for each level of each building, and d) elevations depicting recession / daylight planes and height compliance.
Construction over an Easement: Has the building been located to ensure that it will not be constructed over an easement?	Y	SBn	26/04/2019 03:53 pm	The building is located to ensure that it will not be constructed over an easement.
Site Plans: Do site plans provide sufficient information to enable a compliance decision?	Y	SBn	26/04/2019 03:53 pm	The site plans provide sufficient information.
Floor Plans: Do floor plans provide the requisite information to enable a compliance decision? (ensure information includes the location of smoke detectors and electrical layout)	Y	SBn	26/04/2019 03:53 pm	Plans show the electrical layout and smoke detector locations.
	N	SBn	26/04/2019 03:56 pm	Floor plans do not provide sufficient information to enable a compliance decision. The smoke detectors do not appear to be marked on the plans. Can you please add them.
	VRFI	SBn	26/04/2019 03:59 pm	Floor plans do not provide sufficient information to enable a compliance decision. The smoke detectors do not appear to be marked on the plans. Can you please add them.
	Y	SBn	29/04/2019 01:51 pm	Plans show the electrical layout and smoke detector locations.
Elevations: Is sufficient information provided to enable a compliance decision?	Y	SBn	26/04/2019 03:56 pm	Elevations provide sufficient information to enable a compliance decision.
Bracing Detail: Is sufficient bracing information provided to enable a compliance decision?	Y	SBn	26/04/2019 03:56 pm	Sufficient bracing information is provided to enable a compliance decision.
Roof Frame Detail: Is sufficient information provided to enable a compliance decision?	Y	SBn	26/04/2019 03:56 pm	Sufficient roof frame information is provided to enable a compliance decision.
Construction & Weathertightness Detailing: Is sufficient detail provided to enable a compliance decision?	Y	SBn	26/04/2019 03:56 pm	Sufficient details are provided to enable a compliance decision.
Waterproofing Details: Is there sufficient waterproofing information to enable a compliance decision?	Y	SBn	26/04/2019 03:56 pm	Documentation provides sufficient waterproofing information to enable a compliance decision.
Plumbing & Drainage Detailing: Is sufficient plumbing and drainage information provided to enable a compliance decision?	Y	SBn	26/04/2019 03:57 pm	Sufficient information is provided to enable a compliance decision. WW report provided.
Specifications: Are specifications project specific and do they identify project location, scope of work for each trade, materials, finishes, workmanship; and the appropriate Standards that apply to this project?	N	SBn	26/04/2019 03:57 pm	Please provide a detailed contents page for the specifications with the relevant page numbers.
	VRFI	SBn	26/04/2019 03:59 pm	Please provide a detailed contents page for the specifications with the relevant page numbers.
	Y	SBn	29/04/2019 01:52 pm	Adequate information is provided.
Hazardous Substances: If storage and use of hazardous substances occurs in this building then are the hazard identified along with the location and quantities that are proposed to be stored?	N/A	SBn	26/04/2019 03:57 pm	There is no declaration of hazardous substances associated with this project.
Approvals from Other Authorities: Does this application involve approvals from other Authorities; and if so have these been provided?	N/A	SBn	26/04/2019 03:57 pm	This question does not apply to this project.

VETTING CHECKLIST - AUDIT	Y/N	User	Date	Notes
Engineer Verification: Is Specific Engineer Design (SED) accompanied by sufficient information to enable a compliance decision?	N/A	SBn	26/04/2019 03:57 pm	No SED or Calcs associated with this work.
Energy Efficiency: Does information provided demonstrate how H1 energy efficiency provisions have been met?	Y	SBn	26/04/2019 03:57 pm	H1 information is provided.
Compliance Schedule: Do plans identify the location of all specified systems within the building, and have inspection and maintenance procedures and Standards for inclusion on the compliance schedule been provided? An R1 or R2 building that is used wholly as a single household unit will only require a compliance schedule if it has a cable car attached to it or servicing it. Select N/A if the building is R1 or R2 and does not have a cable car attached (ref. BA sec. 100 (2).)	N/A	SBn	26/04/2019 03:57 pm	There is no CS associated with this project.
Solid Fuel Appliance: Is adequate documentation provided?	N/A	SBn	26/04/2019 03:57 pm	This question does not apply to this project.
Liquid Fuel Appliance: Is adequate documentation provided?	N/A	SBn	26/04/2019 03:58 pm	This question does not apply to this project.
Solar Water Heating System: Is adequate, quality documentation provided to enable lodgement?	N/A	SBn	26/04/2019 03:58 pm	This question does not apply to this project.
Swimming / Spa Pool: Does the information provided include construction details, fencing and gate latch details and details about the back-flow location and type?	N/A	SBn	26/04/2019 03:58 pm	This question does not apply to this project.
Swimming Pool Register: The Applicant has identified that there is a Swimming Pool on this site. Please tick to confirm that the Swimming Pool is identified on the Council Swimming Pool Register.	N/A	SBn	26/04/2019 03:58 pm	The owner has identified that there is not a swimming pool on this site.
Relocate Building: Has a building condition report identifying the current condition of the structure, been provided by a suitably qualified person? Please ensure that photos of all elevations are attached to the report.	N/A	SBn	26/04/2019 03:58 pm	This question does not apply to this project.



01 May 2019

Sam Mcloud & Toni Evans
168 McBrydie Road
RD 2
Upper Moutere 7175

Dear Sir or Madam,

Request for Further Information on PIM / RMA Matters

Reference Number: BC190480

Project Location: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Processing of your PIM / Building Consent application is currently in progress. To enable this work to be completed the following additional information / clarification is required to ensure compliance with the Resource Management / District Scheme provisions is demonstrated. Your application has been temporarily put on hold pending receipt of this information.

Hi Greg

Please supply Consent Notice 11014338.2 which is listed on your title Identifier 827607 for Lot 10 DP 519728

The RMA check can not be started until this has been received please.

Regards

Julie Panes
Consents Officer

Replying to your further information letter? Please follow these simple steps:-

When responding to further information requested please do so by replying to this email and ensure that:

- Drawing amendments are clearly identified and document changes referenced;
- Ensure all attached files are in PDF format and all documents are printable at the correct scale;
- Maximum document size for printing is A3. (Any associated printing costs will be charged to the building consent);
- All information is to be supplied within 20 days (or the application may be refused). Please keep us informed if additional time is required.

Yours sincerely,

Julie Panes

Consents Officer

On behalf of: Tasman District Council



02 May 2019

Sam Mcleod & Toni Evans
PO Box 316
Motueka 7143

Dear Sir or Madam,

Request for Further Information on PIM / RMA Matters

Reference Number: BC190480

Project Location: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Processing of your PIM / Building Consent application is currently in progress. To enable this work to be completed the following additional information / clarification is required to ensure compliance with the Resource Management / District Scheme provisions is demonstrated. Your application has been temporarily put on hold pending receipt of this information.

Hi Greg

Please show compliance with Consent notice 11014338.2

Condition d) Landscape plan required.

g) External colours required LRV values for Roff 25% or less and walls 50% LRV or less.

h)(i) All water tanks as far as practicable be buried within the ground or screened.

Replying to your further information letter? Please follow these simple steps:-

When responding to further information requested please do so by replying to this email and ensure that:

- Drawing amendments are clearly identified and document changes referenced;
- Ensure all attached files are in PDF format and all documents are printable at the correct scale;
- Maximum document size for printing is A3. (Any associated printing costs will be charged to the building consent);
- All information is to be supplied within 20 days (or the application may be refused). Please keep us informed if additional time is required.

Yours sincerely,

Julie Panes

Consents Officer

On behalf of: Tasman District Council

05 June 2019

Sam Mcleod & Toni Evans
PO Box 316
Motueka 7143

Dear Sam Mcleod & Toni Evans

REQUEST FOR FURTHER INFORMATION

REFERENCE: BC190480

LOCATION: 31 Pineview Way, Motueka Valley

PROJECT: Construct new dwelling and detached sleepout

Your building consent application has been assessed and the following information or clarification is required in order to demonstrate compliance with the Building Act 2004.

The 20 day statutory clock is currently suspended awaiting a full response to all items below:

Main Building

Siting

Within the Geo report from Geo-Logic Limited it is indicated on sheet 2 that "there should be a minimum of 5 meters between the west side of the water tanks and any building". Working off the site plan it indicates that the proposed sleep out is to the west side of the water tanks and using scale it would appear to be within 5m, please revise

B1: Pile

Pile Layout / Treatment / Type / Footing is compliant with NZS 3604:2011 6.4.5

Ordinary Piles: 200 SED H5 set in 450x450x450 deep hole with 100mm punch pad fixed with 2 SS 4.9mm wire dogs +4 100 x 3.75 galv skew nails

Anchor or Braced Piles: 200 SED H5 set in 450x450x900 deep hole with 100mm punch pad. Fix joist/bearer with Lumberlok 12kN pile kit. Pile to bearer 1 SS12mm bolt with 50x50x3mm washers.

17.5MPa Concrete proposed, suitable for Exposure Zone C - Refer to NZS 3604:2011 4.5.2

Pile Bracing: Demand is not satisfied. Please review and submit complying details.

Within the sub-floor bracing calculations provided [GIB Ezybrace] the calculation values have not been provided - please revise

Currently where you have indicated the sub-floor bracing gird lines [M,N and O] compliance of NZS3604:2011 section 5.5.2.1 [c] has not been achieved - please revise

Within the cross section it is indicated that the FFL from the GL is 600mm and that a 190mm joist is proposed meaning that compliance of NZS3604:2011 section 6.14.4 for assess has not been achieved, please revise

B1: Wall Framing

Within the specification the Prolam Producer Statement for the Prolam lintel [360x90 PL17] is "blank" - please provide

B1: Wall Bracing

Connections: Plans fail to indicate that all bracing elements are connected at top plate level either directly or via a framing member in the line of wall to external walls at right angles to it. This is not in accordance with the design solution nominated. Please review detailing and resubmit updated documentation demonstrating how compliance will be satisfied.

[Elements N2 and N3 applicable}

B1: Roof Frame

Please clarify the proposed fixing of the rafters and the outriggers to the top plate so compliance can be established

B1: Skillion Roofs - (incorporating B1, B2 & E2)

Within the design the length of the C/S profiled roofing material is roughly 12m in places - Please confirm how expansion of the material is to be addressed so compliance of E2/AS1 can be established

Within the cross section it indicates that the 360 deep prolam beam will close of the roof space, please indicate within the plans how compliance in relation to ventilation of the skillion roof is to be achieved

E1: Surface Water

Within sheet 3 it is indicated that the SW is to feed the 2 x water tanks and these tanks are to feed the potable water and the sprinkler system for the dwelling. BUT

1: Please indicate how the overflow from the tanks is to discharge so compliance can be assessed

2: Please indicate within the drainage plan a reference to compliance of consent notice [h] so compliance of the detailed installation and drainage requirements of the proposed tanks can be established during construction and inspection of the application

E2 - External Moisture

1: Please provide construction detailing of the internal and external flashing for the cladding system proposed so compliance can be established - for guidance refer to figure 94 of E2/As1 your indicated means of compliance of E2

2: Within the cross section of the plans it is indicated that a 6mm ply RAB is proposed. Please revise this to inline with the requirements of E2/AS1 section 9.1.7.2 [a], please also indicate within the cross section for clarity of construction and inspection that the proposed fastwrap is installed over the 7mm H3 RAB as required by section 9.1.7.2 [c] of E2/AS1

E3: Internal Moisture

Performance Clause E3.3.3 of the building code requires that floor surfaces of spaces containing sanitary fixtures or sanitary appliances be impervious and easily cleaned. Consent documentation fails to demonstrate this. Please indicate the proposed floor finish to the kitchen, bathroom/toilet and laundry spaces so compliance can be established

G4: Ventilation - Residential

Extract: Please demonstrate that spaces within the building have a means of collecting or otherwise removing the following products from the spaces in which they are generated;

1. Cooking fumes and odors,

G10 & G11: Piped Services & Gas as an Energy Source (R1 - R3 APPLICATIONS)

Please provide further information to demonstrate that the location and installation of the gas cylinders and appliances complies with AS/NZS 5601.1 - Cl. 2.6 and Appendix J in relation to the open sub-floor space

G12: Water Supply

Please provide the manufacturers installation specification for the required UV filtration system for the potable water supply and clearly indicate where it is to be installed so compliance can be assessed

Sleepout

B1: Pile

Within the cross section it is indicated that the FFL from the GL is 600mm and that a 190mm joist is proposed meaning that compliance of NZS3604:2011 section 6.14.4 for assess has not been achieved, please revise

B1: Wall Framing

Please indicate the stud sizing and centers as i cannot locate the relevant information within the cross section for the sleepout

B1: Roof Frame

240x45 H1.2 SG8 rafters at 900mm centers proposed spanning roughly 3.6m - compliance measured to table 10.1 of NZS3604:2011 and not achieved, please revise the design so compliance can be established

Please indicate the proposed bracing to the roof plane so compliance can be assessed and established

B1: Mid-floor Stringers / Floor Joists

Please refer to the following questions of compliance in relation to the mid floor framing

1: The GF plan does not indicate a lintel to the 2050x1400 opening meaning i have consider that the mid floor joists have a span of 3m for a 140x45 Sg8 joist, this is outside the scope of NZS3604:2011 table 7.1 - Please revise design for compliance

2: Cross section A-A indicates that a single joist is proposed to the 612mm load bearing wall, please revise so compliance of NZS3604:2011 section 7.1.3.1 can be established

C: SH - Fire Safety System [Para 2.2]

Please specify that a Type 1 smoke alarm system will be installed in accordance with F7/AS1 and show the complying location of the detector on the floor plans so compliance can be established .

D1: Access Routes - Residential

Please clarify within the elevations if the provided step detail A on sheet 10 is also applicable to the sleepout and to establish compliance of D1.3.1

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes (e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Please respond to this request within 20 working days or we may refuse to grant the consent. If you have any questions please contact me on 03 543 8400.

The 20 day statutory clock will be re-started when all the items above have been fully addressed.

You may receive requests for further information from other areas of Council, and these should be addressed separately to this request.

Yours sincerely

Brendon Guyton

**Building Technical Officer - Contractor
On behalf of Tasman District Council**

11 June 2019

Sam Mcleod & Toni Evans
PO Box 316
Motueka 7143

Dear Sam Mcleod & Toni Evans

REQUEST FOR FURTHER INFORMATION

REFERENCE: BC190480

LOCATION: 31 Pineview Way, Motueka Valley

PROJECT: Construct new dwelling and detached sleepout

Your building consent application has been assessed and the following information or clarification is required in order to demonstrate compliance with the Building Act 2004.

The 20 day statutory clock is currently suspended awaiting a full response to all items below:

Main Building

G12: Water Supply

Please provide the manufacturers installation specification for the required UV filtration system for the potable water supply and clearly indicate where it is to be installed so compliance can be assessed .

Not resolved - within the RFI response you have indicated the location of the first flush divertor and the UV filter system and provided the specification. But a question is still outstanding in relation to how the cross contamination from the sprinkler system to the potable water to dwelling is dealt with. The design does not clarify backflow prevention at the junction nor does it confirm that the sprinkler system is flushed with the WC within the loop. Please advise

B1: Wall Framing

Within the specification the Prolam Producer Statement for the Prolam lintel [360x90 PL17] is "blank" - please provide

Not resolved - within the RFI response you have indicated that "all required fields for the prolam calculator/PS1 have been filled out". this may be the case but for some reason this document is black within the specification provided with the application. Could you please re-submit it so i can assess and attach the relevant documentation to the Building Consent

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes (e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Please respond to this request within 20 working days or we may refuse to grant the consent. If you have any questions please contact me on 03 543 8400.

The 20 day statutory clock will be re-started when all the items above have been fully addressed.

You may receive requests for further information from other areas of Council, and these should be addressed separately to this request.

Yours sincerely

Brendon Guyton

Building Technical Officer - Contractor
On behalf of **Tasman District Council**

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
BUILDING ACT				
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Has the correct building complexity and classified use been allocated to this project and is it within the scope of your assessed competence? Do not select X or N/A. If complexity is incorrect please rectify by selecting the correct checklist (under Manage Buildings). If processing of this project is to be undertaken under supervision then ensure that this is recorded here.	Y	REe	29/05/2019 04:21 pm	Complexity is correctly assigned. I have the appropriate level of competence Risk Matrix = 5 - Checked against E2/AS1 Table 1 - Have calculated it to 6 (eaves) - Still makes it an R1 and so acceptable for direct fixed vertical profiled metal cladding.
	Y	BGn	31/05/2019 01:08 pm	Complexity is correctly assigned. I have the appropriate level of competence
Section 28: Warning and Bans: In terms of section 28 of the Building Act, can the building consent authority exercise its powers to issue building consent and code compliance certificate for the building work relating to this building consent? DO NOT select N/A for this question.	Y	REe	29/05/2019 04:22 pm	There are no warnings or bans posted on the Ministry's Warnings and Bans register that pertain to methods or building products used in this consent. Therefore in terms of section 28 of the Building Act; the building consent authority may exercise its powers to issue building consent for the building work relating to this building consent.
	Y	BGn	31/05/2019 01:08 pm	There are no warnings or bans posted on the Ministry's Warnings and Bans register that pertain to methods or building products used in this consent. Therefore in terms of section 28 of the Building Act; the building consent authority may exercise its powers to issue building consent for the building work relating to this building consent. There are no known building methods or product used in this project that may result in breach of a ban issued in accordance with section 26 of the Building Act.
	Y	BGn	31/05/2019 01:09 pm	There are no known building methods or product used in this project that may result in breach of a ban issued in accordance with section 26 of the Building Act.
Section 36: Development Contribution: Has a Development Contribution Notice been attached to the PIM? Please select N/A if a Development Contribution Notice is not required to be issued.	N/A	REe	29/05/2019 04:23 pm	There is no development contribution required for this project. Developer paid DCs, RM130940V2
Section 37: Resource Consent: Has a Resource Consent Certificate (Form 4) been attached to the PIM and have all conditions that affect issue of this building consent been satisfied? Please select N/A if Resource Consent is not required.	N/A	REe	29/05/2019 04:24 pm	The TA has not advised that a resource consent is required for this project.
	N/A	BGn	31/05/2019 01:21 pm	The TA has not advised that a resource consent is required for this project. Currently the RMA TAB has yet been completed and changed to Green
Section 67 - 69: Waiver / Modifications: Is adequate reasoning for request for waiver / modification provided, and have associated legal obligations been satisfied? Please select N/A if Waiver or Modification is not required.	N/A	REe	29/05/2019 04:25 pm	There is no request for waiver or modification associated with this building consent application.
	N/A	BGn	31/05/2019 01:21 pm	There is no request for waiver or modification associated with this building consent application.
Section 71 - 74: Natural Hazards: Have provisions of Sections 71 - 74 been considered, and can building consent be granted? MBIE has advised that seismic events do not fit within the definition of natural hazards.				
Section 71 - 74: Natural Hazards - Prompt List:	N	REe	29/05/2019 04:27 pm	

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
<p>1. Natural Hazards: Is the land on which building work is to occur free from natural hazards such as: Erosion (coastal, bank, sheet erosion), Falling debris (soil, rock, snow, ice), Subsidence, Inundation (flooding, overland flow, storm surge, tidal effects, ponding), Slippage? Please select N/A if the hazard has been already mitigated and/ or if the title has already been endorsed to reflect the presence of hazard/s.</p>	N	REe	29/05/2019 04:27 pm	<p>Territorial authority records indicate that the land on which building work is to occur is subject to; or likely to be subject to:</p> <p>a) Erosion (coastal, bank, sheet erosion)</p> <p>b) Falling debris (soil, rock, snow, ice)</p> <p>c) Subsidence</p> <p>d) Inundation (flooding, overland flow, storm surge, tidal effects, ponding)</p> <p>e) Slippage</p> <p>(delete hazards that do not apply).</p> <p>Unless information is provided to satisfy the building consent authority that adequate provision will be made to protect the land, building work or other property, OR</p> <p>to restore any damage to the land or to other property that results from the building work; then granting of building consent must be refused.</p> <p>To avoid refusal please provide further information identifying the provisions that will be initiated to mitigate or restore damage resulting from the building work.</p> <p>Appropriate Producer Statements are to be provided by a suitably qualified and experienced geo-professional (as defined in NZS4404) confirming the investigation, design and construction of the foundations and compliance with GEO-Logic Ltd site certification report (dated 17 July 2018), specifically the recommendations in Certification recommendations (page 3).</p>
2. Degradation: Is it unlikely that building work will likely accelerate, worsen, or result in a natural hazard occurring?	Y	REe	29/05/2019 04:27 pm	Consent documentation provides no evidence to suggest that building work will likely accelerate, worsen, or result in a natural hazard occurring.
3. Mitigation: If existing natural hazard/s exist, then is adequate mitigation provided to protect land, building work, or other property from the hazard/s?	N/A	REe	29/05/2019 04:27 pm	There are no known natural hazards associated with this site.
4. Evidence: If existing natural hazard/s exist, then does the consent documentation adequately demonstrate provision is or will be made to restore any damage to the land or other property as a result of the building work?	N/A	REe	29/05/2019 04:27 pm	This question does not apply to this application as there are no known natural hazards associated with this site.
5. Conditions: Where building consent is to be issued under section 72, then have all the conditions required under section 73 been completed and all notifications been made; and does a copy of any PIM that has been issued and that relates to this project accompany such notification?	N/A	REe	29/05/2019 04:27 pm	This question does not apply to this application as BA section 72 does not apply to this project.
Section 71 - 74: Natural Hazards - Prompt List:	N/A	BGn	31/05/2019 01:11 pm	
<p>1. Natural Hazards: Is the land on which building work is to occur free from natural hazards such as: Erosion (coastal, bank, sheet erosion), Falling debris (soil, rock, snow, ice), Subsidence, Inundation (flooding, overland flow, storm surge, tidal effects, ponding), Slippage? Please select N/A if the hazard has been already mitigated and/ or if the title has already been endorsed to reflect the presence of hazard/s.</p>	N/A	BGn	31/05/2019 01:11 pm	<p>Natural Hazards</p> <p>Thursday, 30 May 2019 12:08 pm</p> <p>Assets Input: No natural hazard issues provided the works are undertaken in accordance with the GEO-Logic Ltd site certification report (dated 17 July 2018), specifically the recommendations in Certification recommendations (page 3).</p>
2. Degradation: Is it unlikely that building work will likely accelerate, worsen, or result in a natural hazard occurring?	N/A	BGn	31/05/2019 01:11 pm	This question does not apply to this project.
3. Mitigation: If existing natural hazard/s exist, then is adequate mitigation provided to protect land, building work, or other property from the hazard/s?	N/A	BGn	31/05/2019 01:11 pm	There are no known natural hazards associated with this site.
4. Evidence: If existing natural hazard/s exist, then does the consent documentation adequately demonstrate provision is or will be made to restore any damage to the land or other property as a result of the building work?	N/A	BGn	31/05/2019 01:11 pm	This question does not apply to this application as there are no known natural hazards associated with this site.

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
5. Conditions: Where building consent is to be issued under section 72, then have all the conditions required under section 73 been completed and all notifications been made; and does a copy of any PIM that has been issued and that relates to this project accompany such notification?	N/A	BGn	31/05/2019 01:11 pm	This question does not apply to this application as BA section 72 does not apply to this project.
Section 75 - 83: More than 1 Allotment: Is the building constructed on more than one allotment, and if so, have the provisions of sections 75 - 83 been satisfied? Please select N/A if building work is only on one allotment.	N/A	REe	29/05/2019 04:27 pm	The building is located on a single allotment therefore this question is not applicable.
	N/A	BGn	31/05/2019 01:21 pm	The building is located on a single allotment therefore this question is not applicable.
Section 84 - 89: Restricted Building Work: Has the applicable restricted building work been properly identified, and have the names of owner-builders, and/or licensed building practitioners that are supervising or carrying out such work been notified to the BCA?				
Section 84 - 89: Restricted Building Work - Prompt List:	<u>Y</u>	REe	30/05/2019 08:50 am	
1. Is the design certificate/s correctly completed and is the scope of each practitioners work clearly identified?	Y	REe	30/05/2019 08:50 am	Design Cert and practitioner scope is correct. Certificates supplied from the following: LBP Designer - Greg Benjamin - 105877 - Design 1 - Design & Carpentry - Current. Entire RBW design apart from Truss Design Engineer - In Ling Ng - MiTek NZ Ltd - 146585 - Structural and Current Truss Design
2. Do the applicable LBP's that are nominated or involved in the project hold current and correct classes of license?	Y	REe	30/05/2019 08:50 am	Nominated LBP's are current and class of license is correct. Checked on the relevant registers and as above.
3. If restricted work is intended to be carried out by the Owner/Builder, then has the statutory declaration as to Owner/Builder status been provided?	N/A	REe	30/05/2019 08:50 am	Section 87A does not apply to this project.
4. If the building work relates to fire safety systems of small to medium apartments then does the designer have the appropriate design license class for this work?	N/A	REe	30/05/2019 08:50 am	This question does not apply to this project.
Section 84 - 89: Restricted Building Work - Prompt List:	<u>Y</u>	BGn	31/05/2019 01:12 pm	
1. Is the design certificate/s correctly completed and is the scope of each practitioners work clearly identified?	Y	BGn	31/05/2019 01:12 pm	Design Cert and practitioner scope is correct. Certificates supplied from the following: LBP Designer - Greg Benjamin - 105877 - Design 1 - Design & Carpentry - Current. Entire RBW design apart from Truss Design Engineer - In Ling Ng - MiTek NZ Ltd - 146585 - Structural and Current Truss Design
2. Do the applicable LBP's that are nominated or involved in the project hold current and correct classes of license?	Y	BGn	31/05/2019 01:12 pm	Nominated LBP's are current and class of license is correct. Checked on the relevant registers and as above.
3. If restricted work is intended to be carried out by the Owner/Builder, then has the statutory declaration as to Owner/Builder status been provided?	N/A	BGn	31/05/2019 01:12 pm	Section 87A does not apply to this project.
4. If the building work relates to fire safety systems of small to medium apartments then does the designer have the appropriate design license class for this work?	N/A	BGn	31/05/2019 01:12 pm	This question does not apply to this project.
Section 92: Application for a Code Compliance Certificate: Please just tick this question as it triggers a question in the final inspection to check if application for CCC has been received.	Y	REe	30/05/2019 08:50 am	Ticking this question triggers a question applicable at time of final inspection.
	Y	BGn	31/05/2019 01:12 pm	Done, because the prompt requires me to
Section 96: COA or Other Incompleted Building Consents: Are there any COA's or incomplete building consents associated with this project?	Y	REe	30/05/2019 08:52 am	No outstanding issues found in the property file in association with this project.
	Y	REe	30/05/2019 08:52 am	No other building consents associated to this site.
	N/A	BGn	31/05/2019 01:12 pm	Have checked NCS no issues identified
Section 112 (1): Alterations to Buildings: If the proposal involves alteration to an existing building, then does the solution demonstrate on reasonable grounds that after alteration the building will comply, as nearly as is reasonably practicable with provisions that relate to: Select N/A if the proposal is not an alteration to an existing building.				
Section 112 (1): Alterations to Buildings - Prompt List:	<u>N/A</u>	REe	30/05/2019 08:52 am	This question does not apply to this application.
(i) Means of escape from fire				

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
(ii) Access & facilities for people with disabilities: (if required by Section 118)?				
(iii) Continue to comply with the other provisions of the building code to at least the same extent as before the alteration?				
Section 112 (1): Alterations to Buildings - Prompt List:	N/A	BGn	31/05/2019 01:21 pm	This question does not apply to this application.
(i) Means of escape from fire				
(ii) Access & facilities for people with disabilities: (if required by Section 118)?				
(iii) Continue to comply with the other provisions of the building code to at least the same extent as before the alteration?				
Section 112 (2): Alterations to Buildings - TA Function: Have the provisions of section 112 (2) been satisfied? Select N/A if the Territorial Authority does not need to consider section 112 (2).	N/A	REe	30/05/2019 08:52 am	This question does not apply to this project as TA input is not required
	N/A	BGn	31/05/2019 01:22 pm	This question does not apply to this project as TA input is not required
Section 112 (3): TA Function - Buildings subject to EPB Notice: Is the alteration to an existing building that is subject to an EPB Notice, and if so have provisions of section 133AT been satisfied? Select N/A if the building is not an alteration to an existing building that is subject to an EPB Notice.	N/A	REe	30/05/2019 08:52 am	The building is not an alteration that is subject to an EPB Notice so this question does not apply to this project.
	N/A	BGn	31/05/2019 01:22 pm	The building is not an alteration that is subject to an EPB Notice so this question does not apply to this project.
Section 113: Specified Intended Life: Is the specified intended life of the building less than fifty years? Please select N/A if the specified intended life is fifty years or more.	N/A	REe	30/05/2019 08:52 am	The intended life of the building is fifty or more years.
	N/A	BGn	31/05/2019 01:22 pm	The intended life of the building is fifty or more years.
Section 115: Change of Use: Does the proposal provide adequate evidence to enable the TERRITORIAL AUTHORITY to be satisfied, on reasonable grounds that: Please select N/A if there is no change of use occurring.				
Section 115: Change of Use - Prompt List:	N/A	REe	30/05/2019 08:52 am	This question does not apply to this application.
(a) Where the change involves the incorporation in the building of 1 or more household units where household units did not exist before; that the building, in its new use, will comply, as nearly as is reasonably practicable, with the building code in all respects?				
(b) In other cases; the building will comply, as nearly as is reasonably practicable, with every provision of the building code that relate to either or both of the following: A (i) Means of escape from fire, (ii) Protection of other property, (iii) Sanitary facilities, (iv) Structural performance, and (v) Fire rating performance. B (i) Access and facilities for people with disabilities (if required under BA Sec. 118) and (ii) Continues to comply with the other provisions of the building code to at least the same extent as before the change of use?				
Section 115: Change of Use - Prompt List:	N/A	BGn	31/05/2019 01:22 pm	This question does not apply to this application.
(a) Where the change involves the incorporation in the building of 1 or more household units where household units did not exist before; that the building, in its new use, will comply, as nearly as is reasonably practicable, with the building code in all respects?				
(b) In other cases; the building will comply, as nearly as is reasonably practicable, with every provision of the building code that relate to either or both of the following: A (i) Means of escape from fire, (ii) Protection of other property, (iii) Sanitary facilities, (iv) Structural performance, and (v) Fire rating performance. B (i) Access and facilities for people with disabilities (if required under BA Sec. 118) and (ii) Continues to comply with the other provisions of the building code to at least the same extent as before the change of use?				
Section 116: Extension of Life: Does the proposal demonstrate compliance with provisions of Section 116? Please select N/A if the application does not apply to a building that currently has a specified intended life.	N/A	REe	30/05/2019 08:52 am	This question does not apply to this application.

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
	N/A	BGn	31/05/2019 01:22 pm	This question does not apply to this application.
Section 116A: Subdivision: Is the proposal accompanied by a Certificate issued by The TERRITORIAL AUTHORITY under Section 224 (f) of the Resource Management Act 1991 giving effect to the proposed subdivision affecting the building or part of the building? Please select N/A if the application does not apply to a building that is currently undergoing subdivision.	N/A	REe	30/05/2019 08:52 am	This question does not apply to this application.
	N/A	BGn	31/05/2019 01:22 pm	This question does not apply to this application.
Section 116B: Unsafe/ Insanitary or Inadequate means of escape from fire: Is the building safe and sanitary for its intended use and does it have adequate means of escape from fire? Please select N/A if this is an application for a new building.	N/A	REe	30/05/2019 08:52 am	This question does not apply to this project.
	N/A	BGn	31/05/2019 01:22 pm	This question does not apply to this project.
Section 268 - 272: Product Certificates: If the proposal includes a product certificate issued by an accredited product certification body under BA sec. 261; then is the certificate current and the proposal within the scope of the product certificate? Please check MBIE register and record the product Authorization Number; or select N/A if there no certified building methods or products.	Y	REe	30/05/2019 11:12 am	Product Certificates are current, fit for use in the context of this application, and issued by an accredited certification body. BRANZ Appraisal No. 853 (2014) - Fastwrap Ultra-Bond Sill Tape - Not current. BRANZ Appraisal No. 615 (2017) - Fastwrap Building Wrap - Current.
	N/A	BGn	31/05/2019 01:18 pm	Within the application no product certificates provided so compliance has not been assessed Note: BRANZ appraisals are not product certificates as defined by the BA04
PRELIMINARY				
Compliance / Documentation: Has the means of compliance been properly completed on the building consent application form?	Y	REe	30/05/2019 11:13 am	Means of compliance is correctly completed.
	Y	BGn	31/05/2019 01:19 pm	Means of compliance is correctly completed. But F2 not indicated but have used F2/AS1 as the measure within the processing of the application plus G5/AS1 indicated but is not applicable to the scope of the application
Preconstruction Meeting: Is a pre-construction meeting required? Please select N/A if a Pre-construction meeting is not required.	N/A	REe	30/05/2019 11:13 am	A pre-construction meeting is not required.
	N/A	BGn	31/05/2019 01:19 pm	A pre-construction meeting is not required.
Siting : Is sufficient information provided to ensure building work will be correctly sited? See Reference Notes to identify when a building location certificate (survey certificate) may be required and to identify which Advice Note to apply to each Council.	Y	REe	30/05/2019 11:14 am	Boundary lines clearly documented. Buildings to be constructed within the BLA.
	N	BGn	31/05/2019 01:29 pm	Within the Geo report from Geo-Logic Limited it is indicated on sheet 2 that "there should be a minimum of 5 meters between the west side of the water tanks and any building". Working off the site plan it indicates that the proposed sleep out is to the west side of the water tanks and using scale it would appear to be within 5m, please revise
	RFI	BGn	05/06/2019 04:29 pm	Within the Geo report from Geo-Logic Limited it is indicated on sheet 2 that "there should be a minimum of 5 meters between the west side of the water tanks and any building". Working off the site plan it indicates that the proposed sleep out is to the west side of the water tanks and using scale it would appear to be within 5m, please revise
	Y	BGn	11/06/2019 01:33 pm	RFI Response: Within the RFI response the designer has indicated that a site measure has been preformed on site and the plans have now been revised to indicate the proposed separation of over 7m - SORGed compliance now established
Services: Have the effects of building work on existing services been properly considered?	Y	REe	30/05/2019 11:18 am	Effects of building work on existing services has been considered
	Y	BGn	04/06/2019 01:40 pm	Effects of building work on existing services has been considered - Existing SW connection indicated within GIS, not effected by building

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
B1: Liquefaction Susceptibility: If the land on which the building work is to occur is deemed susceptible to liquefaction, then please confirm whether a geotechnical report been provided? Please add Advice Note AN 33 if the land is deemed susceptible to liquefaction.		Y	REe	30/05/2019 11:40 am	<p>A geotechnical engagement letter has been provided. Geo-Logic Ltd Signed and Dated by Paul Denton (Engineering Geologist) 17 July 2018.</p> <p>Investigation and Scala Penetrometer Testing done on Lot 10.</p> <p>BLA designation / Appropriate plantings are recommended on slopes to the NE and West of the platform and review and maintenance of these slopes is recommended following intense or prolonged rainfall events until such time as vegetation is well established on the sloping ground.</p> <p>Site suitability confirmed for a residential building.</p>
B1 & E1: Slope Suitability / Overland Flow Paths: Have the effects of sloping ground in relation to building stability or effects of overland flow paths been properly considered?		Y	REe	30/05/2019 11:41 am	<p>The effects of sloping ground in relation to building stability</p> <p>OR</p> <p>Effects of overland flow paths been properly considered.</p> <p>The effects of sloping ground in relation to building stability</p> <p>A geotechnical engagement letter has been provided. Geo-Logic Ltd Signed and Dated by Paul Denton (Engineering Geologist) 17 July 2018.</p> <p>Investigation and Scala Penetrometer Testing done on Lot 10.</p> <p>BLA designation / Appropriate plantings are recommended on slopes to the NE and West of the platform and review and maintenance of these slopes is recommended following intense or prolonged rainfall events until such time as vegetation is well established on the sloping ground.</p> <p>Site suitability confirmed for a residential building.</p>
B1: Demolition / Excavation / Construction / Sediment Control: Have the effects that construction activity may have on people or other properties been properly considered / mitigated i.e. demolition / excavation / sediment control etc.?		Y	REe	30/05/2019 11:46 am	<p>The effects have been properly considered.</p> <p>Geo-Logic Ltd Signed and Dated by Paul Denton (Engineering Geologist) 17 July 2018.</p> <p>Investigation and Scala Penetrometer Testing done on Lot 10.</p> <p>BLA designation / Appropriate plantings are recommended on slopes to the NE and West of the platform and review and maintenance of these slopes is recommended following intense or prolonged rainfall events until such time as vegetation is well established on the sloping ground.</p> <p>Site suitability confirmed for a residential building.</p> <p>The Engineering Completion Report notes: "The earthworks for the Lot 10 platform were constructed by Dr Dig Ltd between November 2017 and June 2018. All areas of the earthworks were stripped of topsoil and unsuitable material prior to the excavation for the building platform. All the earthworks for the Lot 10 platform required cut only."</p> <p>The Project Engineer "...monitored the construction of the earthworks and drainage works for the construction of the Lot 10 platform and driveway with several site inspections during the course of the works between November 2018 and June 2018.</p>
E1: Drainage Easement: Is an easement required for drains that affect other properties?	Y	REe	30/05/2019 11:47 am	A complying easement is provided.	
		BGn	04/06/2019 01:41 pm	Easement AD as indicated within the CT is applicable but the building work proposed will have no effect on it	
Finished Floor Levels: Is compliance with code provisions for finished floor levels in relation to finished ground levels demonstrated?		Y	REe	30/05/2019 11:53 am	<p>Compliance with FFL / FGL provisions is satisfied - (+150 mm clearance provided between FFL and FGL).</p> <p>Demonstrates compliance with E1/AS1 Figure 2</p> <p>FFL = 75.600 / Datum point referenced - Existing SW Sump</p> <p>Top - Level 74.85 - easily identified on Site Plan - Sheet 2</p>
Specified Systems: If specified systems are proposed, then have these been correctly specified with with complying maintenance and inspection requirements and with each systems location identified on the plans?					

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
Specified Systems - Prompt List:	N/A	REe	30/05/2019 11:53 am	This question does not apply to this application.	
SS 1. Automatic systems for fire suppression					
SS 2. Automatic or manual emergency warning systems for fire or other dangers					
SS 3. Electromagnetic or automatic doors or windows					
SS 4. Emergency lighting systems					
SS 5. Escape route pressurisation systems					
SS 6. Riser mains for use by fire services					
SS 7. Automatic back-flow preventers connected to a potable water supply					
SS 8. Lifts, escalators, travelators, or other systems for moving people or goods within buildings					
SS 9. Mechanical ventilation or air conditioning systems					
SS 10. Building maintenance units providing access to exterior or interior walls of buildings					
SS 11. Laboratory fume cupboards					
SS 12. Audio loops or other assistive listening systems					
SS 13. Smoke control systems					
SS 14. Emergency power systems for, or signs relating to, a system or feature specified in any of SS to SS 13 above					
SS 15. Other fire safety systems or features (systems for communicating information intended to facilitate evacuation, final exits, fire separations, signs.					
SS 14/2 & SS 15/4. Signs					
SS 16. Cable Cars					
Miscellaneous - Other: Please select the cross if you wish to raise an RFI for an item that may not clearly fit into any other category.	N/A	REe	30/05/2019 11:53 am	Not required No other issues to raise within this section.	
B1: STRUCTURE					
B1 - Structure					
B1: Foundation / Piles / Floors					
B1: Ground Bearing: Is evidence provided to confirm that ground bearing capacity is adequate to support imposed loads; and have construction monitoring / site verification requirements been applied (if required)? Apply Advice Notes as required - TCC apply AN 51	N	REe	29/05/2019 03:03 pm	Appropriate Producer Statements are to be provided by a suitably qualified and experienced geo-professional (as defined in NZS4404) confirming the investigation, design and construction of the foundations and compliance with GEO-Logic Ltd site certification report (dated 17 July 2018), specifically the recommendations in Certification recommendations (page 3). and as per Consent Notice 11014338 (c) for both the proposed Dwelling and Sleepout.	
	N	REe	29/05/2019 03:34 pm	Appropriate Producer Statements are to be provided by a suitably qualified and experienced geo-professional (as defined in NZS4404) confirming the investigation, design and construction of the foundations and compliance with GEO-Logic Ltd site certification report (dated 17 July 2018), specifically the recommendations in Certification recommendations (page 3). and as per Consent Notice 11014338 (c) for both the proposed Dwelling and Sleepout. This property is within the Separation Point Granite area and so requires SED Foundation Design for all buildings. Specific Engineer Design, PS1's and Inspection Schedules are required for both buildings from a suitably qualified professional as above.	

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
		RFI	REe	29/05/2019 03:35 pm	<p>Appropriate Producer Statements are to be provided by a suitably qualified and experienced geo-professional (as defined in NZS4404) confirming the investigation, design and construction of the foundations and compliance with GEO-Logic Ltd site certification report (dated 17 July 2018), specifically the recommendations in Certification recommendations (page 3).</p> <p>and as per Consent Notice 11014338 (c) for both the proposed Dwelling and Sleepout.</p> <p>This property is within the Separation Point Granite area and so requires SED Foundation Design for all buildings. Specific Engineer Design, PS1's and Inspection Schedules are required for both buildings from a suitably qualified professional as above.</p>
		Y	REe	30/05/2019 12:01 pm	<p>Evidence is provided to confirm that ground bearing capacity is adequate to support imposed loads; and have construction monitoring / site verification requirements been applied (if required)?</p> <p>Geo-Logic Ltd Signed and Dated by Paul Denton (Engineering Geologist) 17 July 2018.</p> <p>Investigation and Scala Penetrometer Testing done on Lot 10.</p> <p>Certified Building Area has been designated for Lot 10 as shown on the attached Certification Site Plan - Sheet 01 (Viewed). The approximate dimensions of the Certified Building Area are as indicated and the certified Building Area designated on the attached Certification Site Plan, Sheet 01 has incorporated the Building Location for Lot 10 from the plan in the Engineering Completion Works Report (ESS, 2018).</p> <p>The certified building area on Lot 10 is situated on a strong spur and granite bedrock is well exposed on the site and immediately upslope and along the access road. The weathered granite bedrock consisting of white Silty Sand exists at shallow depths on the platform which has been developed by cut. No &#039;very soft&#039; soil was encountered. The site therefore meets the criteria set out in NZS1170.5 Earthquake Actions NZ, clause 3.1.3 Site Subsoil Class, for a subsoil class C, shallow soil, as depth to bedrock at all locations on the site is very likely to be less than 20m.</p> <p>Foundations for any building on the platform shall extend through topsoil and subsoil and any areas of fill to bear in competent natural ground.</p>
		Y	BGn	04/06/2019 01:48 pm	<p>The proposed buildings are within the indicated and approved certified building area - NZS3604:2011 pile foundations proposed and to be seated on natural ground to achieve the required 300Kpa loading - to be verified via the BCA inspection process.</p>
B1: Footings & Foundations (Concrete and Concrete Masonry): Does the design comply with the nominated design solution and satisfy the requirements for imposed loads? Note: Foundation walls that are retaining more than 600 mm of fill or soil shall be subject to specific design or provisions of NZS 4229.					
B1: Footings & Foundations (Concrete and Concrete Masonry) - Prompt List:		<u>N/A</u>	<u>REe</u>	<u>30/05/2019 12:01 pm</u>	This question does not apply to this application.
1. Foundation Footings: Are footing sizes and detailing compliant?					
2. Foundation Walls: Are foundation wall dimensions and detailing compliant?					
3. Sub-floor Ventilation: Is the size and location of sub-floor vents compliant?					

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4. Reinforcing: Is reinforcing detailing compliant? (check grade, size, cover, lap, support)				
5. Concrete Strength: Is concrete strength & cover compliant? (check suitability for the exposure zone)				
6. SED / Construction Monitoring: Does the Specific Engineer Design information demonstrate compliance and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.				
E2: External Tanking (below ground): Does the design demonstrate compliance with the solution nominated and with Functional Requirement E2.2? Do not use this question to assess tanking of veneer rebates - assess these under E2.				
E2: External Tanking (below ground) - Prompt List:	<u>N/A</u>	<u>REe</u>	<u>30/05/2019 12:01 pm</u>	This question does not apply to this application.
1. Compatibility: Is the proposed tanking system compatible with the substrate it is in contact with?				
2. Sub-Ground Drainage: Does documentation demonstrate provision for sub-ground drainage with complying falls that flow to an approved outfall?				
3. Installation: Does documentation demonstrate how the tanking system is to be installed and confirm that it will be protected to prevent damage or rupture during and after installation, and that it will be well adhered to walls, weathertight and will be finished above ground level?				
4. Surface Drainage / Ground Levels: Have all other surface or ground drainage matters that may affect the external tanking been considered and does documentation reflect that finished ground levels will fall away from the tanking system and will finish below the top of the tanking system?				
B1: Pile: Does the pile design comply with the design solution nominated, and with B1 & B2?				
B1: Pile - Prompt List:	<u>N</u>	<u>REe</u>	<u>30/05/2019 01:38 pm</u>	
1. Layout/ Treatment / Type / Footing/ Height: Is compliance demonstrated?	N	REe	30/05/2019 01:38 pm	<p>Pile Layout / Treatment / Type / Footing is compliant with NZS 3604:2011 6.4.5</p> <p>Ordinary Piles: 200 SED H5 set in 450x450x450 deep hole with 100mm punch pad fixed with 2 SS 4.9mm wire dogs +4 100 x 3.75 galv skew nails</p> <p>Anchor or Braced Piles: 200 SED H5 set in 450x450x900 deep hole with 100mm punch pad. Fix joist/bearer with Lumberlok 12kN pile kit. Pile to bearer 1 SS12mm bolt with 50x50x3mm washers.</p> <p>17.5MPa Concrete proposed. Not suitable for Exposure Zone C - Please revise and amend - Refer to NZS 3604: 2011 4.5 for guidance.</p>
2. Bracing: Is pile bracing demand satisfied?	N	REe	30/05/2019 01:38 pm	<p>Pile Bracing: Demand is not satisfied. Please review and submit complying details.</p> <p>There are two Bracing Calculations which conflict with the subfloor plan provided and cannot assess it. Please note: Bracelines cannot be over 5m apart. Braceline O is not in line with 2 braces. The Plan looks ok with braced piles around the outside and corners, just some of the bracelines need adjusting and correct bracing calculations need to be provided.</p>

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3. Load Paths: Are the piles correctly located to support imposed loads?	Y	REe	30/05/2019 01:38 pm	Load Paths: Compliance is satisfied. Yes, checked against Foundations Plan and Floor Plan Foundation Plan - Piles taking point loads from beam ends, take piles to underside of joists / Location of these piles under entry beam.
4. Pile - Fixing: Are pile fixing assembly and durability details compliant and appropriate for the pile type?	Y	REe	30/05/2019 01:38 pm	Pile Fixings: Pile fixing assembly and durability details are compliant. Pile Fixings: Pile fixing assembly and durability details are compliant. Sheet 16 - anchor pile, Lumberlok anchor pile fixings and configurations for boundary, corner and internal pile - 12kN as per MITEK / Lumberlok structural fixings.
5. Sub-floor - Access / Ventilation: Is sub-floor access and ventilation compliant?	Y	REe	30/05/2019 01:38 pm	Sub-floor - Access / Ventilation provisions are satisfied. MIN 450 CLEARANCE UNDER FLOOR JOISTS TO PERMIT VISUAL INSPECTION OF ALL SUBFLOOR MEMBERS. Baseboards shown on Elevation Plan - BI to check on site.
6. Driven Piles / SED / Construction Monitoring: Does Specific Engineer Design information demonstrate compliance, and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.	N/A	REe	30/05/2019 01:38 pm	This question is not applicable to this project.
B1: Pile - Prompt List:	N	BGn	04/06/2019 02:08 pm	
1. Layout/ Treatment / Type / Footing/ Height: Is compliance demonstrated?	N	BGn	04/06/2019 02:08 pm	Pile Layout / Treatment / Type / Footing is compliant with NZS 3604:2011 6.4.5 Ordinary Piles: 200 SED H5 set in 450x450x450 deep hole with 100mm punch pad fixed with 2 SS 4.9mm wire dogs +4 100 x 3.75 galv skew nails Anchor or Braced Piles: 200 SED H5 set in 450x450x900 deep hole with 100mm punch pad. Fix joist/bearer with Lumberlok 12kN pile kit. Pile to bearer 1 SS12mm bolt with 50x50x3mm washers. 17.5MPa Concrete proposed, suitable for Exposure Zone C - Refer to NZS 3604:2011 4.5.2 [b]
2. Bracing: Is pile bracing demand satisfied?	N	BGn	04/06/2019 02:08 pm	Pile Bracing: Demand is not satisfied. Please review and submit complying details. Within the sub-floor bracing calculations provided [GIB Ezybrace] the calculation valves have not been provided - please revise Currently where you have indicated the sub-floor bracing gird lines [M,N and O] compliance of NZS3604:2011 section 5.5.2.1 [c] has not been achieved - please revise
3. Load Paths: Are the piles correctly located to support imposed loads?	Y	BGn	04/06/2019 02:08 pm	Load Paths: Compliance is satisfied. Yes, checked against Foundations Plan and Floor Plan Foundation Plan - Piles taking point loads from beam ends, take piles to underside of joists / Location of these piles under entry beam.

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
4. Pile - Fixing: Are pile fixing assembly and durability details compliant and appropriate for the pile type?	Y	BGn	04/06/2019 02:08 pm	<p>Pile Fixings: Pile fixing assembly and durability details are compliant.</p> <p>Pile Fixings: Pile fixing assembly and durability details are compliant. Sheet 16 - anchor pile, Lumberlok anchor pile fixings and configurations for boundary, corner and internal pile - 12kN as per MITEK / Lumberlok structural fixings.</p>
5. Sub-floor - Access / Ventilation: Is sub-floor access and ventilation compliant?	Y	BGn	04/06/2019 02:08 pm	<p>Within the cross section it is indicated that the FFL from the GL is 600mm and that a 190mm joist is proposed meaning that compliance of NZS3604:2011 section 6.14.4 for assess has not been achieved, please revise</p>
6. Driven Piles / SED / Construction Monitoring: Does Specific Engineer Design information demonstrate compliance, and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.	N/A	BGn	04/06/2019 02:08 pm	<p>This question is not applicable to this project.</p>
B1: Pile - Prompt List:	N	BGn	05/06/2019 08:38 am	
1. Layout/ Treatment / Type / Footing/ Height: Is compliance demonstrated?	N	BGn	05/06/2019 08:38 am	<p>Pile Layout / Treatment / Type / Footing is compliant with NZS 3604:2011 6.4.5</p> <p>Ordinary Piles: 200 SED H5 set in 450x450x450 deep hole with 100mm punch pad fixed with 2 SS 4.9mm wire dogs +4 100 x 3.75 galv skew nails</p> <p>Anchor or Braced Piles: 200 SED H5 set in 450x450x900 deep hole with 100mm punch pad. Fix joist/bearer with Lumberlok 12kN pile kit. Pile to bearer 1 SS12mm bolt with 50x50x3mm washers.</p> <p>17.5MPa Concrete proposed, suitable for Exposure Zone C - Refer to NZS 3604:2011 4.5.2 [b]</p>
2. Bracing: Is pile bracing demand satisfied?	N	BGn	05/06/2019 08:38 am	<p>Pile Bracing: Demand is not satisfied. Please review and submit complying details.</p> <p>Within the sub-floor bracing calculations provided [GIB Ezybrace] the calculation valves have not been provided - please revise</p> <p>Currently where you have indicated the sub-floor bracing gird lines [M,N and O] compliance of NZS3604:2011 section 5.5.2.1 [c] has not been achieved - please revise</p>
3. Load Paths: Are the piles correctly located to support imposed loads?	Y	BGn	05/06/2019 08:38 am	<p>Load Paths: Compliance is satisfied.</p> <p>Yes, checked against Foundations Plan and Floor Plan Foundation Plan - Piles taking point loads from beam ends, take piles to underside of joists / Location of these piles under entry beam.</p>
4. Pile - Fixing: Are pile fixing assembly and durability details compliant and appropriate for the pile type?	Y	BGn	05/06/2019 08:38 am	<p>Pile Fixings: Pile fixing assembly and durability details are compliant.</p> <p>Pile Fixings: Pile fixing assembly and durability details are compliant. Sheet 16 - anchor pile, Lumberlok anchor pile fixings and configurations for boundary, corner and internal pile - 12kN as per MITEK / Lumberlok structural fixings.</p>

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5. Sub-floor - Access / Ventilation: Is sub-floor access and ventilation compliant?	N	BGn	05/06/2019 08:38 am	Within the cross section it is indicated that the FFL from the GL is 600mm and that a 190mm joist is proposed meaning that compliance of NZS3604:2011 section 6.14.4 for assess has not been achieved, please revise
6. Driven Piles / SED / Construction Monitoring: Does Specific Engineer Design information demonstrate compliance, and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.	N/A	BGn	05/06/2019 08:38 am	This question is not applicable to this project.
B1: Pile - Prompt List:	N	BGn	11/06/2019 01:36 pm	RFI Response
1. Layout/ Treatment / Type / Footing/ Height: Is compliance demonstrated?	Y	BGn	11/06/2019 01:36 pm	<p>Pile Layout / Treatment / Type / Footing is compliant with NZS 3604:2011 6.4.5</p> <p>Ordinary Piles: 200 SED H5 set in 450x450x450 deep hole with 100mm punch pad fixed with 2 SS 4.9mm wire dogs +4 100 x 3.75 galv skew nails</p> <p>Anchor or Braced Piles: 200 SED H5 set in 450x450x900 deep hole with 100mm punch pad. Fix joist/bearer with Lumberlok 12kN pile kit. Pile to bearer 1 SS12mm bolt with 50x50x3mm washers.</p> <p>17.5MPa Concrete proposed, suitable for Exposure Zone C - Refer to NZS 3604:2011 4.5.2 [b]</p> <p>This question should have never gone out - for some reason it pulled through, it was raised from the previous TDC processor who started the application, the designer has quite rightly pointed out this question is NOT relevant</p>
2. Bracing: Is pile bracing demand satisfied?	N	BGn	11/06/2019 01:36 pm	<p>Pile Bracing: Demand is not satisfied. Please review and submit complying details.</p> <p>Within the sub-floor bracing calculations provided [GIB Ezybrace] the calculation values have not been provided - please revise</p> <p>Currently where you have indicated the sub-floor bracing gird lines [M,N and O] compliance of NZS3604:2011 section 5.5.2.1 [c] has not been achieved - please revise</p>
3. Load Paths: Are the piles correctly located to support imposed loads?	Y	BGn	11/06/2019 01:36 pm	<p>Load Paths: Compliance is satisfied.</p> <p>Yes, checked against Foundations Plan and Floor Plan Foundation Plan - Piles taking point loads from beam ends, take piles to underside of joists / Location of these piles under entry beam.</p>
4. Pile - Fixing: Are pile fixing assembly and durability details compliant and appropriate for the pile type?	Y	BGn	11/06/2019 01:36 pm	<p>Pile Fixings: Pile fixing assembly and durability details are compliant.</p> <p>Pile Fixings: Pile fixing assembly and durability details are compliant. Sheet 16 - anchor pile, Lumberlok anchor pile fixings and configurations for boundary, corner and internal pile - 12kN as per MITEK / Lumberlok structural fixings.</p>
5. Sub-floor - Access / Ventilation: Is sub-floor access and ventilation compliant?	N	BGn	11/06/2019 01:36 pm	Within the cross section it is indicated that the FFL from the GL is 600mm and that a 190mm joist is proposed meaning that compliance of NZS3604:2011 section 6.14.4 for assess has not been achieved, please revise

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6. Driven Piles / SED / Construction Monitoring: Does Specific Engineer Design information demonstrate compliance, and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.	N/A	BGn	11/06/2019 01:36 pm	This question is not applicable to this project.
B1: Pile - Prompt List:	N	BGn	11/06/2019 01:38 pm	RFI Response
1. Layout/ Treatment / Type / Footing/ Height: Is compliance demonstrated?	Y	BGn	11/06/2019 01:38 pm	<p>Pile Layout / Treatment / Type / Footing is compliant with NZS 3604:2011 6.4.5</p> <p>Ordinary Piles: 200 SED H5 set in 450x450x450 deep hole with 100mm punch pad fixed with 2 SS 4.9mm wire dogs +4 100 x 3.75 galv skew nails</p> <p>Anchor or Braced Piles: 200 SED H5 set in 450x450x900 deep hole with 100mm punch pad. Fix joist/bearer with Lumberlok 12kN pile kit. Pile to bearer 1 SS12mm bolt with 50x50x3mm washers.</p> <p>17.5MPa Concrete proposed, suitable for Exposure Zone C - Refer to NZS 3604:2011 4.5.2 [b]</p> <p>This question should have never gone out - for some reason it pulled through, it was raised from the previous TDC processor who started the application, the designer has quite rightly pointed out this question is NOT relevant</p>
2. Bracing: Is pile bracing demand satisfied?	Y	BGn	11/06/2019 01:38 pm	<p>Pile Bracing: Demand is not satisfied. Please review and submit complying details.</p> <p>Within the sub-floor bracing calculations provided [GIB Ezybrace] the calculation values have not been provided - please revise</p> <p>Currently where you have indicated the sub-floor bracing gird lines [M,N and O] compliance of NZS3604:2011 section 5.5.2.1 [c] has not been achieved - please revise</p> <p>Resolved - within the RFI response the designer has provided new bracing calculations and added new gird lines to the design so compliance can now be established</p>
3. Load Paths: Are the piles correctly located to support imposed loads?	Y	BGn	11/06/2019 01:38 pm	<p>Load Paths: Compliance is satisfied.</p> <p>Yes, checked against Foundations Plan and Floor Plan Foundation Plan - Piles taking point loads from beam ends, take piles to underside of joists / Location of these piles under entry beam.</p>
4. Pile - Fixing: Are pile fixing assembly and durability details compliant and appropriate for the pile type?	Y	BGn	11/06/2019 01:38 pm	<p>Pile Fixings: Pile fixing assembly and durability details are compliant.</p> <p>Pile Fixings: Pile fixing assembly and durability details are compliant. Sheet 16 - anchor pile, Lumberlok anchor pile fixings and configurations for boundary, corner and internal pile - 12kN as per MITEK / Lumberlok structural fixings.</p>
5. Sub-floor - Access / Ventilation: Is sub-floor access and ventilation compliant?	N	BGn	11/06/2019 01:38 pm	<p>Within the cross section it is indicated that the FFL from the GL is 600mm and that a 190mm joist is proposed meaning that compliance of NZS3604:2011 section 6.14.4 for assess has not been achieved, please revise</p>

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6. Driven Piles / SED / Construction Monitoring: Does Specific Engineer Design information demonstrate compliance, and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.		N/A	BGn	11/06/2019 01:38 pm	This question is not applicable to this project.
B1: Pile - Prompt List:		Y	BGn	11/06/2019 01:39 pm	RFI Response
1. Layout/ Treatment / Type / Footing/ Height: Is compliance demonstrated?		Y	BGn	11/06/2019 01:39 pm	<p>Pile Layout / Treatment / Type / Footing is compliant with NZS 3604:2011 6.4.5</p> <p>Ordinary Piles: 200 SED H5 set in 450x450x450 deep hole with 100mm punch pad fixed with 2 SS 4.9mm wire dogs +4 100 x 3.75 galv skew nails</p> <p>Anchor or Braced Piles: 200 SED H5 set in 450x450x900 deep hole with 100mm punch pad. Fix joist/bearer with Lumberlok 12kN pile kit. Pile to bearer 1 SS12mm bolt with 50x50x3mm washers.</p> <p>17.5MPa Concrete proposed, suitable for Exposure Zone C - Refer to NZS 3604:2011 4.5.2 [b]</p> <p>This question should have never gone out - for some reason it pulled through, it was raised from the previous TDC processor who started the application, the designer has quite rightly pointed out this question is NOT relevant</p>
2. Bracing: Is pile bracing demand satisfied?		Y	BGn	11/06/2019 01:39 pm	<p>Pile Bracing: Demand is not satisfied. Please review and submit complying details.</p> <p>Within the sub-floor bracing calculations provided [GIB Ezybrace] the calculation valves have not been provided - please revise</p> <p>Currently where you have indicated the sub-floor bracing gird lines [M,N and O] compliance of NZS3604:2011 section 5.5.2.1 [c] has not been achieved - please revise</p> <p>Resolved - within the RFI response the designer has provided new bracing calculations and added new gird lines to the design so compliance can now be established</p>
3. Load Paths: Are the piles correctly located to support imposed loads?		Y	BGn	11/06/2019 01:39 pm	<p>Load Paths: Compliance is satisfied.</p> <p>Yes, checked against Foundations Plan and Floor Plan Foundation Plan - Piles taking point loads from beam ends, take piles to underside of joists / Location of these piles under entry beam.</p>
4. Pile - Fixing: Are pile fixing assembly and durability details compliant and appropriate for the pile type?		Y	BGn	11/06/2019 01:39 pm	<p>Pile Fixings: Pile fixing assembly and durability details are compliant.</p> <p>Pile Fixings: Pile fixing assembly and durability details are compliant. Sheet 16 - anchor pile, Lumberlok anchor pile fixings and configurations for boundary, corner and internal pile - 12kN as per MITEK / Lumberlok structural fixings.</p>

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5. Sub-floor - Access / Ventilation: Is sub-floor access and ventilation compliant?	Y	BGn	11/06/2019 01:39 pm	<p>Within the cross section it is indicated that the FFL from the GL is 600mm and that a 190mm joist is proposed meaning that compliance of NZS3604:2011 section 6.14.4 for assess has not been achieved, please revise</p> <p>Resolved - within the RFI response the designer has raised the FFL by 60mm in order to achieve the required crawl space</p>
6. Driven Piles / SED / Construction Monitoring: Does Specific Engineer Design information demonstrate compliance, and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.	N/A	BGn	11/06/2019 01:39 pm	This question is not applicable to this project.
B1: Floor Slab: Does floor slab detailing demonstrate compliance with the nominated design solution and with NZBC B1 & B2? When assessing specific design (e.g. raft slab construction) ensure that V/M questions (1, 8) and relevant Producer Statement sections (select !) are completed.				
B1: Floor Slab - Prompt List:	N/A	REe	30/05/2019 12:01 pm	This question does not apply to this application.
1. Foundation: Is the slab foundation detailing compliant and is this located more than 3 m from any fill that exceeds 600 mm in depth? If not then obtain specific engineering design input.				
2. Hard-fill / Blinding / DPM / Insulation: Is detailing for these elements compliant?				
3. Reinforcing: Are reinforcing details compliant i.e. grade / size / spacing / lap / cover / placement, support / supplementary bars comply? Refer reference notes.				
4. Control Joints: Does the detailing of control joints demonstrate compliance?				
5. Point loads: Does support of point load and location of slab thickenings demonstrate compliance?				
6. Durability: Is detailing of concrete strength and concrete cover compliant with durability provisions?				
7. Services: Does the detailing for services below, through and within the slab demonstrate compliance?				
8. SED / Construction Monitoring: Does the design demonstrate compliance with B1 & B2, and confirm that the floor system is suitable for site ground bearing conditions, and have construction monitoring requirements been determined and entered into the system? Please review inspections and add further inspections as required to suit method of construction.				
B1: Suspended / Mid Floor Slab: Does mid-floor / suspended floor slab design and detailing demonstrate compliance with the nominated design solution and with NZBC B1 & B2?				
B1: Suspended / Mid Floor Slab - Prompt List:	N/A	REe	30/05/2019 12:01 pm	This question does not apply to this application.
1. Design: Does slab thickness, concrete strength and reinforcing detailing and concrete cover comply? See reference notes.				
2. Methodology: Does methodology indicate that slab will be properly supported prior to pouring and properly cured afterwards?				
3. Point Loads: Is point loads & thickenings detailing compliant?				
4. Shrinkage: Is shrinkage control & supplementary bar detailing compliant?				
5. Services: Is detailing for the installation of services below and through the slab compliant?				
6. SED / Construction Monitoring: Does the Specific Engineer Design information demonstrate compliance and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.				
B1: Sub-floor and Deck Framing and Flooring				

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B1: Bearers / Stringers: Do bearers and stringers comply with the design solution nominated, and with NZBC B1 & B2?	Y	REe	30/05/2019 01:45 pm	Bearer / stringer design demonstrates compliance - 2/190x45 H1.2 SG8 Bearers comply with NZS3604:2011 Table 6.4 for Span of 1.650 max and LD of 2.8m
B1: Floor Joists: Does the floor joist design comply with the design solution nominated, and with NZBC B1 & B2?				
B1: Floor Joists - Prompt List:		REe	30/05/2019 01:49 pm	
1. Floor Loads: Is floor load correctly identified?	Y	REe	30/05/2019 01:49 pm	Declared floor load is correct - 1.5kPa
2. Joist Layout: Are joist layout and details correct? - (species, grade, treatment, size, span, spacing, fixing and treatment)	Y	REe	30/05/2019 01:49 pm	Floor joist layout and detailing is correct 190x45mm H1.2 SG8 Floor Joists @ 400mm max crs Fix joists/bearers with Lumberlok 12kN Pile Kit. Comply as per NZS3604:2011 - Table 7.1
3. Lateral Support: Is lateral support / blocking details correct?				
4. Point Loads: Are point loads / load bearing walls correctly supported?				
5. Cantilever Joists: Are cantilever joists and projections complying?				
6. Build-ability: Has build-ability of sub-floor services & joist layout been considered?				
7. SED: Does Specific Engineer Design information demonstrate compliance?				
B1: Floor Joists - Prompt List:	Y	REe	30/05/2019 02:07 pm	
1. Floor Loads: Is floor load correctly identified?	Y	REe	30/05/2019 02:07 pm	Declared floor load is correct - 1.5kPa
2. Joist Layout: Are joist layout and details correct? - (species, grade, treatment, size, span, spacing, fixing and treatment)	Y	REe	30/05/2019 02:07 pm	Floor joist layout and detailing is correct 190x45mm H1.2 SG8 Floor Joists @ 400mm max crs Fix joists/bearers with Lumberlok 12kN Pile Kit. Comply as per NZS3604:2011 - Table 7.1
3. Lateral Support: Is lateral support / blocking details correct?	Y	REe	30/05/2019 02:07 pm	Lateral support provisions are satisfied. End of joists boundary joist, or blocking or strutting at 1.8m crs. Blocking or strutting between joists @ 1.8m max crs over subfloor lines of support. Solid block mid span.
4. Point Loads: Are point loads / load bearing walls correctly supported?	Y	REe	30/05/2019 02:07 pm	Point loads are correctly supported and distributed on load paths. Uniform point loads from roof to external walls / load bearing wall support provided. Double joists under loadbearing walls. Sheet 5 and Roof and Truss Design.
5. Cantilever Joists: Are cantilever joists and projections complying?	N/A	REe	30/05/2019 02:07 pm	This question does not apply to this project.
6. Build-ability: Has build-ability of sub-floor services & joist layout been considered?	Y	REe	30/05/2019 02:07 pm	Build-ability of sub-floor services and floor joist layout is satisfactory.
7. SED: Does Specific Engineer Design information demonstrate compliance?	N/A	REe	30/05/2019 02:07 pm	This question does not apply to this project.
B1: Floor Joists - Prompt List:	Y	BGn	04/06/2019 02:10 pm	
1. Floor Loads: Is floor load correctly identified?	Y	BGn	04/06/2019 02:10 pm	Declared floor load is correct - 1.5kPa
2. Joist Layout: Are joist layout and details correct? - (species, grade, treatment, size, span, spacing, fixing and treatment)	Y	BGn	04/06/2019 02:10 pm	Floor joist layout and detailing is correct 190x45mm H1.2 SG8 Floor Joists @ 400mm max crs Fix joists/bearers with Lumberlok 12kN Pile Kit. Comply as per NZS3604:2011 - Table 7.1 - max span of 3.55m applicable
3. Lateral Support: Is lateral support / blocking details correct?	Y	BGn	04/06/2019 02:10 pm	Lateral support provisions are satisfied. End of joists boundary joist, or blocking or strutting at 1.8m crs. Blocking or strutting between joists @ 1.8m max crs over subfloor lines of support. Solid block mid span.

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4. Point Loads: Are point loads / load bearing walls correctly supported?	Y	BGn	04/06/2019 02:10 pm	Point loads are correctly supported and distributed on load paths. Uniform point loads from roof to external walls / load bearing wall support provided. Double joists under loadbearing walls. Sheet 5 and Roof and Truss Design.
5. Cantilever Joists: Are cantilever joists and projections complying?	N/A	BGn	04/06/2019 02:10 pm	This question does not apply to this project.
6. Build-ability: Has build-ability of sub-floor services & joist layout been considered?	Y	BGn	04/06/2019 02:10 pm	Build-ability of sub-floor services and floor joist layout is satisfactory.
7. SED: Does Specific Engineer Design information demonstrate compliance?	N/A	BGn	04/06/2019 02:10 pm	This question does not apply to this project.
B1: Sub-floor Wall Framing: Does the subfloor wall framing design demonstrate compliance with the solution nominated, and with NZBC B1 & B2?				
B1: Sub-floor Wall Framing - Prompt List:	N/A	BGn	04/06/2019 02:16 pm	This question does not apply to this application.
1. Materials: Is treatment of materials / fixings compliant?				
2. Framing: Are framing details - (size, grade, spacing, fixings) compliant and correctly specified?				
3. Elements: Are building elements correctly supported & braced?				
B1: Sub-floor Bracing: Does the subfloor bracing design demonstrate compliance with the solution nominated, and with NZBC B1 & B2?				
B1: Sub-floor Bracing - Prompt List:	N	REe	30/05/2019 02:18 pm	
1. Bracing: Is sub-floor bracing design within scope of design solution?	N	REe	30/05/2019 02:18 pm	Sub-floor Bracing: The design does not comply with the design solution nominated. Please review and resubmit updated documentation which should include ... wind / earthquake demand/ distribution of bracing elements/ construction of bracing elements... Pile Bracing: Demand is not satisfied. Please review and submit complying details. There are two Bracing Calculations which conflict with the subfloor plan provided and cannot assess it. Please note: Bracelines cannot be over 5m apart. Braceline O is not in line with 2 braces. The Plan looks ok with braced piles around the outside and corners, just some of the bracelines need adjusting and correct bracing calculations need to be provided.
2. Earthquake: Is earthquake and wind demand satisfied?	N	REe	30/05/2019 02:18 pm	Earthquake and Wind Demand: This does not comply with the design solution nominated. Please review and resubmit updated documentation. Pile Bracing: Demand is not satisfied. Please review and submit complying details. There are two Bracing Calculations which conflict with the subfloor plan provided and cannot assess it. Please note: Bracelines cannot be over 5m apart. Braceline O is not in line with 2 braces. The Plan looks ok with braced piles around the outside and corners, just some of the bracelines need adjusting and correct bracing calculations need to be provided.
3. Brace Values: Are brace values and calculations compliant?	N	REe	30/05/2019 02:18 pm	Brace Values and Calculations: These do not comply with the design solution nominated. Please review and resubmit updated documentation. Pile Bracing: Demand is not satisfied. Please review and submit complying details. There are two Bracing Calculations which conflict with the subfloor plan provided and cannot assess it. Please note: Bracelines cannot be over 5m apart. Braceline O is not in line with 2 braces. The Plan looks ok with braced piles around the outside and corners, just some of the bracelines need adjusting and correct bracing calculations need to be provided.

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4. Distribution: Does the distribution of bracing elements comply?	N	REe	30/05/2019 02:18 pm	Pile Bracing: Demand is not satisfied. Please review and submit complying details. There are two Bracing Calculations which conflict with the subfloor plan provided and cannot assess it. Please note: Bracelines cannot be over 5m apart. Braceline O is not in line with 2 braces. The Plan looks ok with braced piles around the outside and corners, just some of the bracelines need adjusting and correct bracing calculations need to be provided.
5. Fixing: Are connections correctly detailed / specified?	Y	REe	30/05/2019 02:18 pm	Connection details comply. Lumberlok 12kN Pile Fixings with Details within Specs.
6. Diaphragm: Does size, ratio, material and fixings comply?	N/A	REe	30/05/2019 02:18 pm	This question does not apply to this project.
7. B2: Has durability of elements been satisfied - (check fixings & location in relation to wet areas)?	Y	REe	30/05/2019 02:18 pm	Durability requirements are satisfied.
B1: Sub-floor Bracing - Prompt List:	<u>Y</u>	BGn	04/06/2019 02:12 pm	
1. Bracing: Is sub-floor bracing design within scope of design solution?	Y	BGn	04/06/2019 02:12 pm	Refer to the question raised within the pile section of the checklist and the resolution of for compliance
2. Earthquake: Is earthquake and wind demand satisfied?	Y	BGn	04/06/2019 02:12 pm	Refer to the question raised within the pile section of the checklist and the resolution of for compliance
3. Brace Values: Are brace values and calculations compliant?	Y	BGn	04/06/2019 02:12 pm	Refer to the question raised within the pile section of the checklist and the resolution of for compliance
4. Distribution: Does the distribution of bracing elements comply?	Y	BGn	04/06/2019 02:12 pm	Refer to the question raised within the pile section of the checklist and the resolution of for compliance
5. Fixing: Are connections correctly detailed / specified?	Y	BGn	04/06/2019 02:12 pm	Connection details comply. Lumberlok 12kN Pile Fixings with Details within Specs.
6. Diaphragm: Does size, ratio, material and fixings comply?	N/A	BGn	04/06/2019 02:12 pm	This question does not apply to this project.
7. B2: Has durability of elements been satisfied - (check fixings & location in relation to wet areas)?	Y	BGn	04/06/2019 02:12 pm	Durability requirements are satisfied.
B1: Sub-floor Ground Clearance: Does sub-floor ground clearance comply with the design solution nominated and with NZBC B1 & B2 i.e. min. 450 mm clearance between ground and services and 600 mm between ground and particle board flooring?	Y	REe	30/05/2019 02:18 pm	Sub-floor ground clearance complies with the design solution i.e. min. 450mm clearance between ground and services and 600mm between ground and particle board flooring. BI to check onsite.
	Y	BGn	04/06/2019 02:12 pm	Refer to the question raised within the pile section of the checklist and the resolution of for compliance
B1: Sub-floor Cross-Flow Ventilation & Access: Does sub-floor ventilation and access comply with the design solution nominated?	Y	REe	30/05/2019 02:18 pm	Cross-flow ventilation and access is in accordance with the design solution nominated. Minimum 450mm clearance under floor joists to permit visual inspection Elevations show base boards - BI to check 20mm gap between boards and access.
B1: Flooring & Decking: Does the proposal for flooring and / or decking comply with the design solution nominated, and comply with NZBC B1 & B2?				
B1: Flooring & Decking - Prompt List:	N/A	REe	30/05/2019 02:22 pm	This question does not apply to this application.
1. Framing: Is timber grade, span, size correctly specified?				
2. Flooring: Is the flooring / decking adequately supported?				
3. B2: Is the treatment of timber & fixings compliant?				
4. Maintenance: Is decking provided with adequate separation from the building to allow drainage and drying and to enable maintenance (painting) of the cladding behind or below?				
B1: Flooring & Decking - Prompt List:	<u>Y</u>	REe	30/05/2019 02:23 pm	
1. Framing: Is timber grade, span, size correctly specified?	N/A	REe	30/05/2019 02:23 pm	This question does not apply to this project.
2. Flooring: Is the flooring / decking adequately supported?	Y	REe	30/05/2019 02:23 pm	Strandboard flooring / H3 in wet areas.
3. B2: Is the treatment of timber & fixings compliant?	N/A	REe	30/05/2019 02:23 pm	This question does not apply to this project.
4. Maintenance: Is decking provided with adequate separation from the building to allow drainage and drying and to enable maintenance (painting) of the cladding behind or below?	N/A	REe	30/05/2019 02:23 pm	This question does not apply to this project.
B1: Flooring & Decking - Prompt List:	<u>Y</u>	BGn	04/06/2019 02:12 pm	
1. Framing: Is timber grade, span, size correctly specified?	N/A	BGn	04/06/2019 02:12 pm	This question does not apply to this project.
2. Flooring: Is the flooring / decking adequately supported?	Y	BGn	04/06/2019 02:12 pm	Strandboard flooring - 20mm / H3 in wet areas.
3. B2: Is the treatment of timber & fixings compliant?	N/A	BGn	04/06/2019 02:12 pm	This question does not apply to this project.

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4. Maintenance: Is decking provided with adequate separation from the building to allow drainage and drying and to enable maintenance (painting) of the cladding behind or below?	N/A	BGn	04/06/2019 02:12 pm	This question does not apply to this project.
B1: Separation: Is adequate and complying separation provided between timber framing and concrete to prevent transference of moisture, and / or between framing and external walls to enable drainage and drying?	Y	REe	30/05/2019 02:32 pm	Satisfied. DPC to be used between pile and bearer. All fixings into CCA treated timber to be 304 SS.
	Y	REe	30/05/2019 02:39 pm	Satisfied. Provide and fix continuous two-ply bituminous fabric damp-course between all timber and concrete which would otherwise be in contact.
		BGn	04/06/2019 02:16 pm	Greater than 150 from GL to bearer cut - no DPC separation required
B1: Midfloor Framing				
B1: Mid-floor Bracing Diaphragm: Does the floor bracing diaphragm demonstrate compliance with the solution nominated, and with NZBC B1 & B2?	N/A	REe	30/05/2019 02:33 pm	This question does not apply to this project.
	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
B1: Mid-floor Stringers / Floor Joists: Does the mid-floor stringer and joist design comply with the design solution nominated, and NZBC B1 & B2?				
B1: Mid-floor Stringers / Floor Joists - Prompt List:	N/A	REe	30/05/2019 02:33 pm	This question does not apply to this application.
1. Floor Loads: Is floor load correctly identified?				
2. Stringers: Are stringer sizes compliant?				
3. Joist Layout: Is joist layout and details compliant? - (species, grade, treatment, size, span, spacing, fixing and treatment)				
4. Support: Is lateral support / blocking details for joists compliant?				
5. Point Loads: Is support of point loads / load bearing walls compliant?				
6. Trimmers: Are Trimmer joist detailing compliant? - (check species, grade, size and span)				
7. Cantilever Joists: Are cantilever joists and projections complying?				
8. Build-ability: Has build-ability of sub-floor services & joist layout been considered?				
9. SED: Does Specific Engineer Design information demonstrate compliance?				
B1: Mid-floor Stringers / Floor Joists - Prompt List:	N/A	BGn	04/06/2019 02:17 pm	
1. Floor Loads: Is floor load correctly identified?	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
2. Stringers: Are stringer sizes compliant?	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
3. Joist Layout: Is joist layout and details compliant? - (species, grade, treatment, size, span, spacing, fixing and treatment)	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
4. Support: Is lateral support / blocking details for joists compliant?	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
5. Point Loads: Is support of point loads / load bearing walls compliant?	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
6. Trimmers: Are Trimmer joist detailing compliant? - (check species, grade, size and span)	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
7. Cantilever Joists: Are cantilever joists and projections complying?	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
8. Build-ability: Has build-ability of sub-floor services & joist layout been considered?	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
9. SED: Does Specific Engineer Design information demonstrate compliance?	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
B1: Mid-floor Flooring / Decking: Does the proposal for flooring and / or decking comply with the design solution nominated, and NZBC B1 & B2?				
B1: Mid-floor Flooring / Decking - Prompt List:	N/A	REe	30/05/2019 02:33 pm	This question does not apply to this application.
1. B2: Is treatment of materials and fixings compliant?				
2. B1: Is support of elements compliant?				
3. Maintenance: Is decking provided with adequate separation from building to allow cladding maintenance?				
4. SED: Does Specific Engineer Design information demonstrate compliance?				
B1: Mid-floor Flooring / Decking - Prompt List:	N/A	BGn	04/06/2019 02:17 pm	
1. B2: Is treatment of materials and fixings compliant?	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
2. B1: Is support of elements compliant?	N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.

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3. Maintenance: Is decking provided with adequate separation from building to allow cladding maintenance?		N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
4. SED: Does Specific Engineer Design information demonstrate compliance?		N/A	BGn	04/06/2019 02:17 pm	This question does not apply to this project.
B1: Wall Framing					
B1: Wall Framing: Does wall framing design demonstrate compliance with the design solution nominated, and with NZBC B1 & B2? (check that LBP details are recorded)					
B1: Wall Framing - Prompt List:		N	REe	30/05/2019 03:28 pm	
1. Treatment: Is treatment of framing & fixings appropriate for environment?		Y	REe	30/05/2019 03:28 pm	Durability of fixings and materials complies. H1.2 specified for new framing - B2/AS1, Table 1A. External and Internal Wall Framing - D Fir H1.2 SG8.
2. Plates: Is top and bottom plate sizes, grade and treatment compliant and are these properly secured?		Y	REe	30/05/2019 03:28 pm	Plates: Framing details demonstrate compliance. Truss/Top Plate Fixing - Refer to ITM Mitek Design - Sheet 4 / Lumberlok Stud to Top Plate Fixing Schedule in Specs / Rafters/Top Plates 2/CT200 + 2/100x2.95 skew nails / Top Plate/Stud Fixing Lumberlok "Type B" on walls where Truss/Rafter ends are supported = 2/90x3.15 nails top plate to stud + one CPC 80 or 2/90x3.15 nails + stud strap (one face). Complies with NZS3604:2011 Table 10.14 for EH Wind Zone. Bottom Plate/Joist or Bearer 3/90x3.15 nails @ 600 crs / 140x35/Top Plate 3/90x3.15 nails @ 500 crs.
3. Studs / Dwangs (Nogs): Is stud and nog sizes, spacing, treatment, grade and fixings compliant?		N	REe	30/05/2019 03:28 pm	Stud and nog sizes, spacing, treatment, grade and fixings are at variance to the design solution nominated. Please provide further information identifying how compliance will be achieved.
4. Lintels / Trimmers: Are lintel and trimmer sizes, spacing, treatment, grade, fixing and support compliant?		Y	REe	30/05/2019 03:28 pm	Lintel and sill details are correct - provide plan reference. Trimmer and trimmer stud details are correct. MiTek Design - Sheet 3 - and Floor Plan - Sheet 6 document Lintel sizing and fixings. Lintel Fixing Schedule provided in Specs. CCH Design IT Certificates, Prolam Summary, TCEL PS1 and Prolam Lintels - Uplift Fixing Detail Sheet provided.
5. Point Loads: Is point load support and distribution complying?		Y	REe	30/05/2019 03:28 pm	Point Loads: Support and distribution of point loads is complying.
6. Blocking: Is blocking provided to support flashing systems?		Y	REe	30/05/2019 03:28 pm	Blocking for flashing support is detailed.
B1: Wall Framing - Prompt List:		N	BGn	04/06/2019 02:32 pm	
1. Treatment: Is treatment of framing & fixings appropriate for environment?		Y	BGn	04/06/2019 02:32 pm	Durability of fixings and materials complies. H1.2 specified for new framing - B2/AS1, Table 1A. External and Internal Wall Framing - D Fir H1.2 SG8.
2. Plates: Is top and bottom plate sizes, grade and treatment compliant and are these properly secured?		Y	BGn	04/06/2019 02:32 pm	Plates: Framing details demonstrate compliance. Truss/Top Plate Fixing - Refer to ITM Mitek Design - Sheet 4 / Lumberlok Stud to Top Plate Fixing Schedule in Specs / Rafters/Top Plates 2/CT200 + 2/100x2.95 skew nails / Top Plate/Stud Fixing Lumberlok "Type B" on walls where Truss/Rafter ends are supported = 2/90x3.15 nails top plate to stud + one CPC 80 or 2/90x3.15 nails + stud strap (one face). Complies with NZS3604:2011 Table 10.14 for EH Wind Zone. Bottom Plate/Joist or Bearer 3/90x3.15 nails @ 600 crs / 140x35/Top Plate 3/90x3.15 nails @ 500 crs.
3. Studs / Dwangs (Nogs): Is stud and nog sizes, spacing, treatment, grade and fixings compliant?		Y	BGn	04/06/2019 02:32 pm	Within the cross section of sheet 8 the designer has indicated the size and spacing of the studs proposed depend on the height for the wind zone [EH] - measured to NZS3604:2011 table 8.2 and SORGed compliance established
4. Lintels / Trimmers: Are lintel and trimmer sizes, spacing, treatment, grade, fixing and support compliant?		N	BGn	04/06/2019 02:32 pm	Within the specification the Prolam Producer Statement for the Prolam lintel [360x90 PL17] is "blank" - please provide

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5. Point Loads: Is point load support and distribution complying?	Y	BGn	04/06/2019 02:32 pm	Point Loads: Support and distribution of point loads is complying. Prolam lintel loaded within 200mm of pile location
6. Blocking: Is blocking provided to support flashing systems?	Y	BGn	04/06/2019 02:32 pm	Blocking for flashing support is detailed.
Supplementary Processing Notes:		BGn	04/06/2019 02:32 pm	Item 4: Lintel sizes correct for the wind zone and loaded dimension, applicable MiTek fixing also indicated for the wind and loading - refer to sheet 6
B1: Wall Framing - Prompt List:	N	BGn	11/06/2019 02:11 pm	RFI Response
1. Treatment: Is treatment of framing & fixings appropriate for environment?	Y	BGn	11/06/2019 02:11 pm	Durability of fixings and materials complies. H1.2 specified for new framing - B2/AS1, Table 1A. External and Internal Wall Framing - D Fir H1.2 SG8.
2. Plates: Is top and bottom plate sizes, grade and treatment compliant and are these properly secured?	Y	BGn	11/06/2019 02:11 pm	Plates: Framing details demonstrate compliance. Truss/Top Plate Fixing - Refer to ITM Mitek Design - Sheet 4 / Lumberlok Stud to Top Plate Fixing Schedule in Specs / Rafters/Top Plates 2/CT200 + 2/100x2.95 skew nails / Top Plate/Stud Fixing Lumberlok "Type B" on walls where Truss/Rafter ends are supported = 2/90x3.15 nails top plate to stud + one CPC 80 or 2/90x3.15 nails + stud strap (one face). Complies with NZS3604:2011 Table 10.14 for EH Wind Zone. Bottom Plate/Joist or Bearer 3/90x3.15 nails @ 600 crs / 140x35/Top Plate 3/90x3.15 nails @ 500 crs.
3. Studs / Dwangs (Nogs): Is stud and nog sizes, spacing, treatment, grade and fixings compliant?	Y	BGn	11/06/2019 02:11 pm	Within the cross section of sheet 8 the designer has indicated the size and spacing of the studs proposed depend on the height for the wind zone [EH] - measured to NZS3604:2011 table 8.2 and SORGed compliance established
4. Lintels / Trimmers: Are lintel and trimmer sizes, spacing, treatment, grade, fixing and support compliant?	N	BGn	11/06/2019 02:11 pm	Within the specification the Prolam Producer Statement for the Prolam lintel [360x90 PL17] is "blank" - please provide Not resolved - within the RFI response you have indicated that "all required fields for the prolam calculator/PS1 have been filled out". this may be the case but for some reason this document is black within the specification provided with the application. Could you please re-submit it so i can assess and attach the relevant documentation to the Building Consent
5. Point Loads: Is point load support and distribution complying?	Y	BGn	11/06/2019 02:11 pm	Point Loads: Support and distribution of point loads is complying. Prolam lintel loaded within 200mm of pile location
6. Blocking: Is blocking provided to support flashing systems?	Y	BGn	11/06/2019 02:11 pm	Blocking for flashing support is detailed.
B1: Wall Framing - Prompt List:	Y	BGn	12/06/2019 02:22 pm	RFI Response
1. Treatment: Is treatment of framing & fixings appropriate for environment?	Y	BGn	12/06/2019 02:22 pm	Durability of fixings and materials complies. H1.2 specified for new framing - B2/AS1, Table 1A. External and Internal Wall Framing - D Fir H1.2 SG8.
2. Plates: Is top and bottom plate sizes, grade and treatment compliant and are these properly secured?	Y	BGn	12/06/2019 02:22 pm	Plates: Framing details demonstrate compliance. Truss/Top Plate Fixing - Refer to ITM Mitek Design - Sheet 4 / Lumberlok Stud to Top Plate Fixing Schedule in Specs / Rafters/Top Plates 2/CT200 + 2/100x2.95 skew nails / Top Plate/Stud Fixing Lumberlok "Type B" on walls where Truss/Rafter ends are supported = 2/90x3.15 nails top plate to stud + one CPC 80 or 2/90x3.15 nails + stud strap (one face). Complies with NZS3604:2011 Table 10.14 for EH Wind Zone. Bottom Plate/Joist or Bearer 3/90x3.15 nails @ 600 crs / 140x35/Top Plate 3/90x3.15 nails @ 500 crs.

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3. Studs / Dwangs (Nogs): Is stud and nog sizes, spacing, treatment, grade and fixings compliant?	Y	BGn	12/06/2019 02:22 pm	Within the cross section of sheet 8 the designer has indicated the size and spacing of the studs proposed depend on the height for the wind zone [EH] - measured to NZS3604:2011 table 8.2 and SORGed compliance established
4. Lintels / Trimmers: Are lintel and trimmer sizes, spacing, treatment, grade, fixing and support compliant?	Y	BGn	12/06/2019 02:22 pm	<p>Within the specification the Prolam Producer Statement for the Prolam lintel [360x90 PL17] is "blank" - please provide</p> <p>Not resolved - within the RFI response you have indicated that "all required fields for the prolam calculator/PS1 have been filled out". this may be the case but for some reason this document is black within the specification provided with the application. Could you please re-submit it so i can assess and attach the relevant documentation to the Building Consent</p> <p>Resolved - applicable Producer Statement and information now provided to establish compliance</p>
5. Point Loads: Is point load support and distribution complying?	Y	BGn	12/06/2019 02:22 pm	<p>Point Loads: Support and distribution of point loads is complying.</p> <p>Prolam lintel loaded within 200mm of pile location</p>
6. Blocking: Is blocking provided to support flashing systems?	Y	BGn	12/06/2019 02:22 pm	Blocking for flashing support is detailed.
B1: Wall Bracing: Does the wall bracing design demonstrate compliance with the design solution nominated, and with NZBC B1 & B2?				
B1: Wall Bracing - Prompt List:	N	REe	29/05/2019 03:32 pm	
1. Methodology: Has the bracing methodology for wings, blocks and discontinued floor levels been correctly applied (3604 - para 5.1.5)?				
2. Brace Demand: Has brace demand for soil, earthquake, & wind been correctly evaluated?	N	REe	29/05/2019 03:32 pm	The GIB Bracing Calculations and Carters DesignIT Certificates are incorrect. Will attach an example for your reference.
3. Brace Lines: Is brace line layout and top plate size compliant?				
4. Distribution: Is size and distribution of brace elements compliant?				
5. Construction: Are brace element construction details and fixings correctly specified?				
6. Allowances: Have correct allowance been applied for height variances and for changes of direction to bracing?				
7. Wet Areas: Are bracing elements clear of wet areas?				
8. Connections: Do the plans indicate that all bracing elements are connected at top plate level either directly or via a framing member in the line of wall to external walls at right angles to it (NZS 3604 8.7.3.4)?				
B1: Wall Bracing - Prompt List:	N	REe	29/05/2019 03:32 pm	2. The GIB Bracing Calculations and Carters DesignIT Certificates are incorrect. Will attach an example for your reference.
1. Methodology: Has the bracing methodology for wings, blocks and discontinued floor levels been correctly applied (3604 - para 5.1.5)?		REe	29/05/2019 03:32 pm	
2. Brace Demand: Has brace demand for soil, earthquake, & wind been correctly evaluated?	N	REe	29/05/2019 03:32 pm	
3. Brace Lines: Is brace line layout and top plate size compliant?		REe	29/05/2019 03:32 pm	
4. Distribution: Is size and distribution of brace elements compliant?		REe	29/05/2019 03:32 pm	
5. Construction: Are brace element construction details and fixings correctly specified?		REe	29/05/2019 03:32 pm	
6. Allowances: Have correct allowance been applied for height variances and for changes of direction to bracing?		REe	29/05/2019 03:32 pm	
7. Wet Areas: Are bracing elements clear of wet areas?		REe	29/05/2019 03:32 pm	
8. Connections: Do the plans indicate that all bracing elements are connected at top plate level either directly or via a framing member in the line of wall to external walls at right angles to it (NZS 3604 8.7.3.4)?		REe	29/05/2019 03:32 pm	
B1: Wall Bracing - Prompt List:	N	BGn	05/06/2019 09:34 am	

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1. Methodology: Has the bracing methodology for wings, blocks and discontinued floor levels been correctly applied (3604 - para 5.1.5)?	Y	BGn	05/06/2019 09:34 am	Winstones bracing system proposed and supported with a bracing plan and relevant bracing calculations using the GIB ezy brace system - applicable manufacturers installation specification provided to support application for construction and inspection - SORGed compliance established for method, demand, distribution and construction
2. Brace Demand: Has brace demand for soil, earthquake, & wind been correctly evaluated?	Y	BGn	05/06/2019 09:34 am	Refer to the comment above
3. Brace Lines: Is brace line layout and top plate size compliant?	Y	BGn	05/06/2019 09:34 am	Refer to the comment above
4. Distribution: Is size and distribution of brace elements compliant?	Y	BGn	05/06/2019 09:34 am	Refer to the comment above
5. Construction: Are brace element construction details and fixings correctly specified?	Y	BGn	05/06/2019 09:34 am	Refer to the comment above
6. Allowances: Have correct allowance been applied for height variances and for changes of direction to bracing?	Y	BGn	05/06/2019 09:34 am	Refer to the comment above
7. Wet Areas: Are bracing elements clear of wet areas?	N/A	BGn	05/06/2019 09:34 am	This question does not apply to this project.
8. Connections: Do the plans indicate that all bracing elements are connected at top plate level either directly or via a framing member in the line of wall to external walls at right angles to it (NZS 3604 8.7.3.4)?	N	BGn	05/06/2019 09:34 am	Connections: Plans fail to indicate that all bracing elements are connected at top plate level either directly or via a framing member in the line of wall to external walls at right angles to it. This is not in accordance with the design solution nominated. Please review detailing and resubmit updated documentation demonstrating how compliance will be satisfied. [Elements N2 and N3 applicable]
B1: Wall Bracing - Prompt List:	Y	BGn	11/06/2019 01:42 pm	RFI Response
1. Methodology: Has the bracing methodology for wings, blocks and discontinued floor levels been correctly applied (3604 - para 5.1.5)?	Y	BGn	11/06/2019 01:42 pm	Winstones bracing system proposed and supported with a bracing plan and relevant bracing calculations using the GIB ezy brace system - applicable manufacturers installation specification provided to support application for construction and inspection - SORGed compliance established for method, demand, distribution and construction
2. Brace Demand: Has brace demand for soil, earthquake, & wind been correctly evaluated?	Y	BGn	11/06/2019 01:42 pm	Refer to the comment above
3. Brace Lines: Is brace line layout and top plate size compliant?	Y	BGn	11/06/2019 01:42 pm	Refer to the comment above
4. Distribution: Is size and distribution of brace elements compliant?	Y	BGn	11/06/2019 01:42 pm	Refer to the comment above
5. Construction: Are brace element construction details and fixings correctly specified?	Y	BGn	11/06/2019 01:42 pm	Refer to the comment above
6. Allowances: Have correct allowance been applied for height variances and for changes of direction to bracing?	Y	BGn	11/06/2019 01:42 pm	Refer to the comment above
7. Wet Areas: Are bracing elements clear of wet areas?	N/A	BGn	11/06/2019 01:42 pm	This question does not apply to this project.
8. Connections: Do the plans indicate that all bracing elements are connected at top plate level either directly or via a framing member in the line of wall to external walls at right angles to it (NZS 3604 8.7.3.4)?	Y	BGn	11/06/2019 01:42 pm	Connections: Plans fail to indicate that all bracing elements are connected at top plate level either directly or via a framing member in the line of wall to external walls at right angles to it. This is not in accordance with the design solution nominated. Please review detailing and resubmit updated documentation demonstrating how compliance will be satisfied. [Elements N2 and N3 applicable] Resolved - within the RFI response the designer has revised sheet 6 to indicate the required fixing to establish compliance
B1: Timber Post / Beam : Does post / beam design demonstrate compliance with the design solution nominated, and NZBC B1 & B2?				
B1: Timber Post / Beam - Prompt List:	N/A	REe	30/05/2019 03:28 pm	This question does not apply to this application.
1. Materials: Are materials & fixings appropriate for environment?				
2. Footing: Is post footing size compliant? - (adequate mass to resist uplift)				
3. Base Details: Is the post / footing base detail / connection compliant?				
4. Post: Is post size, grade, spacing compliant?				
5. Beam: Is the beam size, grade, span compliant?				
6. Connections: Is the post / beam detail / connection compliant?				

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B1: Roof Structure					
B1: Roof Truss Certification, Layout & Bracing: Is complying roof truss design certification and layout provided that confirms compliance with NZBC B1 & B2?					
B1: Roof Truss Certification, Layout & Bracing - Prompt List:		<u>Y</u>	<u>REe</u>	30/05/2019 03:31 pm	
1. Truss: Does truss fabrication information include: name of person or organization responsible for the specific design of the truss / truss design reference number / truss layout showing span, spacing and location of all trusses / site location / eaves overhang / roof pitch / dead loads [identifying type of roof and ceilings], live loads specifying wind & snow loads / point loads and support / fixing details / grade and species of framing members / bracing details?		Y	REe	30/05/2019 03:31 pm	Fabrication information is correct and complete. MiTek Truss Design provided - Correctly designed for roof pitch - 6 degrees, wind zone - Extra high, overhang of eaves - 600mm.
2. Valley: Is valley board grade and size compliant?		N/A	REe	30/05/2019 03:31 pm	This question does not apply to this project.
3. Gable End: Does gable end bracing and support detailing demonstrate compliance? - [check strong-back size, span and brace location]		N/A	REe	30/05/2019 03:31 pm	This question does not apply to this project.
B1: Roof Truss Certification, Layout & Bracing - Prompt List:		<u>Y</u>	<u>BGn</u>	04/06/2019 02:35 pm	
1. Truss: Does truss fabrication information include: name of person or organization responsible for the specific design of the truss / truss design reference number / truss layout showing span, spacing and location of all trusses / site location / eaves overhang / roof pitch / dead loads [identifying type of roof and ceilings], live loads specifying wind & snow loads / point loads and support / fixing details / grade and species of framing members / bracing details?		Y	BGn	04/06/2019 02:35 pm	Fabrication information is correct and complete. MiTek Truss Design provided - Correctly designed for roof pitch - 6 degrees, wind zone - Extra high, overhang of eaves - 600mm. Strap bracing provided within sheet 9 to establish compliance with section 10.10 of NZS3604:2011 [some straps landing on internal wall, the wall is a brace wall]
2. Valley: Is valley board grade and size compliant?		N/A	BGn	04/06/2019 02:35 pm	This question does not apply to this project.
3. Gable End: Does gable end bracing and support detailing demonstrate compliance? - [check strong-back size, span and brace location]		N/A	BGn	04/06/2019 02:35 pm	This question does not apply to this project.
B1: Roof Frame: Does the roof frame design comply with the design solution nominated, and with NZBC B1 & B2?					
B1: Roof Frame - Prompt List:			<u>REe</u>	30/05/2019 03:38 pm	
1. Imposed Loads: Is the roof structure adequate for imposed loads - [wind, snow, earthquake]?		Y	REe	30/05/2019 03:38 pm	Support for imposed loads complies. Designed for the Wind Zone (Extra High), Snow Load (N3), EQ (Zone 2)
2. Roof members: Is the detailing of rafters, hips, valleys, ties, joists, ceiling runners, ridge, under purlins, struts and strutting beams compliant?		Y	REe	30/05/2019 03:38 pm	Detailing of roof members is compliant 290x45 H1.2 SG8 @ 900 crs (CCH DesignIT Certificate) Please confirm the rafter/outrigger fixings. Please confirm roof frame fixings to trusses and confirm the structural grade of the purlins.
3. Fixing: Does roof frame fixing detailing comply?					
4. Load Paths: Is load paths support compliant?					
5. Bracing: Is roof bracing compliant - check cladding roof weight/ wind / earthquake?					
B1: Roof Frame - Prompt List:		<u>N</u>	<u>BGn</u>	04/06/2019 02:47 pm	
1. Imposed Loads: Is the roof structure adequate for imposed loads - [wind, snow, earthquake]?		Y	BGn	04/06/2019 02:47 pm	Support for imposed loads complies. Designed for the Wind Zone (Extra High), Snow Load (N3), EQ (Zone 2)
2. Roof members: Is the detailing of rafters, hips, valleys, ties, joists, ceiling runners, ridge, under purlins, struts and strutting beams compliant?		Y	BGn	04/06/2019 02:47 pm	290x45 SG8 rafters at 900mm centers indicated within the roofing plan [sheet 9] CCH DesignIT Certificate provided indicating 5.1m span applicable [no span proposed greater than this. 90x45 outriggers proposed with 600mm soffit and 90x45 fly rafter [H1.2 SG8]
3. Fixing: Does roof frame fixing detailing comply?		N	BGn	04/06/2019 02:47 pm	Please clarify the proposed fixing of the rafters and the outriggers so compliance can be established

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4. Load Paths: Is load paths support compliant?	Y	BGn	04/06/2019 02:47 pm	Load paths are compliant. - All roof loads are transferred to the foundations
5. Bracing: Is roof bracing compliant - check cladding roof weight/ wind / earthquake?	Y	BGn	04/06/2019 02:47 pm	Refer to the note within the checklist under trusses for compliance for the roof bracing
B1: Roof Frame - Prompt List:	N	BGn	04/06/2019 03:44 pm	
1. Imposed Loads: Is the roof structure adequate for imposed loads - [wind, snow, earthquake]?	Y	BGn	04/06/2019 03:44 pm	Support for imposed loads complies. Designed for the Wind Zone (Extra High), Snow Load (N3), EQ (Zone 2)
2. Roof members: Is the detailing of rafters, hips, valleys, ties, joists, ceiling runners, ridge, under purlins, struts and strutting beams compliant?	Y	BGn	04/06/2019 03:44 pm	290x45 SG8 rafters at 900mm centers indicated within the roofing plan [sheet 9] CCH DesignIT Certificate provided indicating 5.1m span applicable [no span proposed greater than this]. 90x45 outriggers proposed with 600mm soffit and 90x45 fly rafter [H1.2 SG8]
3. Fixing: Does roof frame fixing detailing comply?	N	BGn	04/06/2019 03:44 pm	Please clarify the proposed fixing of the rafters and the outriggers to the top plate so compliance can be established
4. Load Paths: Is load paths support compliant?	Y	BGn	04/06/2019 03:44 pm	Load paths are compliant. - All roof loads are transferred to the foundations
5. Bracing: Is roof bracing compliant - check cladding roof weight/ wind / earthquake?	Y	BGn	04/06/2019 03:44 pm	Refer to the note within the checklist under trusses for compliance for the roof bracing
B1: Roof Frame - Prompt List:	Y	BGn	11/06/2019 01:43 pm	RFI Response
1. Imposed Loads: Is the roof structure adequate for imposed loads - [wind, snow, earthquake]?	Y	BGn	11/06/2019 01:43 pm	Support for imposed loads complies. Designed for the Wind Zone (Extra High), Snow Load (N3), EQ (Zone 2)
2. Roof members: Is the detailing of rafters, hips, valleys, ties, joists, ceiling runners, ridge, under purlins, struts and strutting beams compliant?	Y	BGn	11/06/2019 01:43 pm	290x45 SG8 rafters at 900mm centers indicated within the roofing plan [sheet 9] CCH DesignIT Certificate provided indicating 5.1m span applicable [no span proposed greater than this]. 90x45 outriggers proposed with 600mm soffit and 90x45 fly rafter [H1.2 SG8]
3. Fixing: Does roof frame fixing detailing comply?	Y	BGn	11/06/2019 01:43 pm	Please clarify the proposed fixing of the rafters and the outriggers to the top plate so compliance can be established Resolved - within the RFI response the designer has added a construction note to sheet 9 to establish the required fixing
4. Load Paths: Is load paths support compliant?	Y	BGn	11/06/2019 01:43 pm	Load paths are compliant. - All roof loads are transferred to the foundations
5. Bracing: Is roof bracing compliant - check cladding roof weight/ wind / earthquake?	Y	BGn	11/06/2019 01:43 pm	Refer to the note within the checklist under trusses for compliance for the roof bracing
B1: Skillion Roofs - (incorporating B1, B2 & E2): Is the design in accordance with the design solution nominated, and with NZBC B1, B2 & E2.2?				
B1: Skillion Roofs - (incorporating B1, B2 & E2) - Prompt List:	N	BGn	04/06/2019 03:40 pm	
1. Framing: Is span, spacing, size and fixing of framing / substrate members in accordance with the design solution nominated?	Y	BGn	04/06/2019 03:40 pm	Refer to the roof frame section of the checklist for compliance
2. Pitch: Is roof pitch suitable for the proposed membrane / cladding system?	Y	BGn	04/06/2019 03:40 pm	Refer to the roof frame section of the checklist for compliance
3. Treatment: Do the treatments and levels of finish for framing / substrate / fixings satisfy provisions of B2 - [check compatibility of cladding / substrate / underlay / insulation / materials]?	Y	BGn	04/06/2019 03:40 pm	Refer to the roof frame section of the checklist for compliance
4. Cladding: Are roof cladding / membrane material specifications and detailing compliant - [check treatment, thickness, grade, colour, fixings, expansion]?	N	BGn	04/06/2019 03:40 pm	Within the design the length of the C/S profiled roofing material is roughly 12m in places - Please confirm how expansion of the material is to be addressed so compliance of E2/AS1 can be established

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5. Flashing: Is flashing / penetration detailing compliant - [check junctions & transitions, support, fixing, compatibility, construction sequencing, effects of snow considered]?	Y	BGn	04/06/2019 03:40 pm	TV roof flashing detail provided within the specification document
6. Drainage: Is roof drainage detailing compliant and does it demonstrate that it is adequate to effectively drain water from the roof?	Y	BGn	04/06/2019 03:40 pm	STD CS fascia and gutter proposed - refer to sheet 10
7. Separation: Is appropriate separation provided between insulation and roofing underlay?	Y	BGn	04/06/2019 03:40 pm	290mm rafter proposed with a R3.6 batt in the ceiling with a insulate size of 180mm - 25mm gap between roofing underlay and underside of purlin provided for cross flow and some ventilation
8. Ventilation: Are ventilation provisions complying?	N	BGn	04/06/2019 03:40 pm	Within the cross section it indicates that the 360 deep prolam beam will close of the roof space, please indicate within the plans how compliance in relation to ventilation of the skillion roof is to be achieved
9. Penetrations: Is the roof space free from penetrations from spaces below?	N/A	BGn	04/06/2019 03:40 pm	This question does not apply to this project.
10. Maintenance: Are maintenance requirements compliant and correctly specified?	Y	BGn	04/06/2019 03:40 pm	Maintenance requirements comply.
B1: Skillion Roofs - (incorporating B1, B2 & E2) - Prompt List:	<u>Y</u>	<u>BGn</u>	<u>11/06/2019 01:46 pm</u>	RFI Response
1. Framing: Is span, spacing, size and fixing of framing / substrate members in accordance with the design solution nominated?	Y	BGn	11/06/2019 01:46 pm	Refer to the roof frame section of the checklist for compliance
2. Pitch: Is roof pitch suitable for the proposed membrane / cladding system?	Y	BGn	11/06/2019 01:46 pm	Refer to the roof frame section of the checklist for compliance
3. Treatment: Do the treatments and levels of finish for framing / substrate / fixings satisfy provisions of B2 - [check compatibility of cladding / substrate / underlay / insulation / materials]?	Y	BGn	11/06/2019 01:46 pm	Refer to the roof frame section of the checklist for compliance
4. Cladding: Are roof cladding / membrane material specifications and detailing compliant - [check treatment, thickness, grade, colour, fixings, expansion]?	Y	BGn	11/06/2019 01:46 pm	Within the design the length of the C/S profiled roofing material is roughly 12m in places - Please confirm how expansion of the material is to be addressed so compliance of E2/AS1 can be established Resolved - within the RFI response the designer has added a construction note to sheet 8 to establish compliance requirement of E2/AS1
5. Flashing: Is flashing / penetration detailing compliant - [check junctions & transitions, support, fixing, compatibility, construction sequencing, effects of snow considered]?	Y	BGn	11/06/2019 01:46 pm	TV roof flashing detail provided within the specification document
6. Drainage: Is roof drainage detailing compliant and does it demonstrate that it is adequate to effectively drain water from the roof?	Y	BGn	11/06/2019 01:46 pm	STD CS fascia and gutter proposed - refer to sheet 10
7. Separation: Is appropriate separation provided between insulation and roofing underlay?	Y	BGn	11/06/2019 01:46 pm	290mm rafter proposed with a R3.6 batt in the ceiling with a insulate size of 180mm - 25mm gap between roofing underlay and underside of purlin provided for cross flow and some ventilation
8. Ventilation: Are ventilation provisions complying?	Y	BGn	11/06/2019 01:46 pm	Within the cross section it indicates that the 360 deep prolam beam will close of the roof space, please indicate within the plans how compliance in relation to ventilation of the skillion roof is to be achieved Resolved - within the RFI response the design has indicated in sheet 8 that the beam is to be lowered so a 25mm gap gap can be achieved providing for cross flow ventilation
9. Penetrations: Is the roof space free from penetrations from spaces below?	N/A	BGn	11/06/2019 01:46 pm	This question does not apply to this project.
10. Maintenance: Are maintenance requirements compliant and correctly specified?	Y	BGn	11/06/2019 01:46 pm	Maintenance requirements comply.
B1: Parapet Construction, Cladding & Flashing (incorporating B2 & E2): Is the design in accordance with the design solution nominated, and with NZBC B1, B2 & E2.2?				
B1: Parapet Construction, Cladding & Flashing (incorporating B2 & E2) - Prompt List:	<u>N/A</u>	<u>BGn</u>	<u>04/06/2019 02:47 pm</u>	This question does not apply to this application.
1. Framing: Is span, spacing, size and fixing of framing / substrate members in accordance with the design solution nominated?				
2. B2: Is durability detailing compliant and correctly specified - (check timber treatment, fixing and material coatings, materials suitable for environmental conditions, compatibility is properly considered - run-off run-on)?				

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3. RAB: Do materials and cavity construction details demonstrate compliance?				
4. Flashing: Do details demonstrate compliance - (check cover dimension, material / fixing / coating / expansion / laps & seal at joints / capillary breaks / penetrations / junctions & transitions / support / fixing (avoid vertical fixings) / compatibility / construction sequencing)?				
5. Maintenance: Are requirements specified and compliant?				
B1: Sarking: Is roof sarking correctly specified and detailed in accordance with the design solution and with NZBC B1 & B2?	N/A	BGn	04/06/2019 02:47 pm	This question does not apply to this project.
B1: Purlin / Tile Batten: Does purlin / batten design comply with the design solution nominated, and with NZBC B1 & B2? - [Check grade, size, span, spacing, fixing detail and treatment is appropriate for exposure and wind zones)	Y	BGn	04/06/2019 03:43 pm	C/S 5 rib iron proposed at 6 degrees, 70x45 H1.2 SG8 purlins at 900mm centers [700mm centers from the ridge and gutter] and connected via 2/10g self drilling screw 80mm long [3.45Kn] - SORGed compliance of B1 and B2 established
B1: Ceiling Batten: Does the ceiling batten type, size, grade, spacing, span, fixing and durability demonstrate compliance with NZBC B1 & B2?	Y	BGn	04/06/2019 03:44 pm	13mm gib ceiling lining proposed within the plans and the specification, timber 70x35 ceiling battens at 600mm centers proposed - design is within the manufacturers installation specifications for the proposed products
B1: Interior Linings				
B1: Wall & Ceiling Lining Construction: Are wall and ceiling linings fit for purpose and are specifications adequate to ensure complying installation?	Y	BGn	04/06/2019 03:46 pm	13mm gib ceilings proposed, 10mm STD gib to the walls and the plans indicate the use of semi gloss or gloss paint within the wet areas to achieve compliance with E3/AS1 3.1.2 [f]- SORGed compliance established
B1: Ceiling Diaphragm: Does the ceiling diaphragm design demonstrate compliance with the design solution nominated, and with NZBC B1 & B2?				
B1: Ceiling Diaphragm - Prompt List:	N/A	BGn	04/06/2019 03:46 pm	This question does not apply to this application.
1. Ceiling Diaphragm: Is the diaphragm(s) connected to wall bracing elements that satisfy minimum bracing unit requirements?				
2. Ratio: Does the ratio of the diaphragm comply?				
3. Materials: Is detailing / specification of materials and fixings compliant?				
4. Penetrations: Is detailing and location of penetrations / openings compliant?				
5. SED: Does Specific Engineer Design information demonstrate compliance?				
B1: Chimney		REe	29/05/2019 02:40 pm	Code Clause Disabled: Not applicable for this project.
B1: Masonry Construction		REe	29/05/2019 02:40 pm	Code Clause Disabled: Not applicable for this project.
B1: Specific Design Elements		REe	29/05/2019 02:40 pm	Code Clause Disabled: Not applicable for this project.
B2: DURABILITY				
B2: DURABILITY: Does the design demonstrate compliance with Functional Requirement - B2.2? Review inspections and add / delete / modify inspection questions as required.				
B2: DURABILITY - Prompt List:	Y	BGn	04/06/2019 03:52 pm	
1. B2.3.1a): Will building elements (including floors, walls and fixings) that provide structural stability to the building, or elements that are difficult to access or replace, or where failure of those elements would go undetected during normal use or maintenance, with only normal maintenance continue to satisfy the performance requirements for this code for the lesser of the stated intended life of the building or for 50 years?	Y	BGn	04/06/2019 03:52 pm	Dwelling - all of the structural elements are enclosed, SORGed with the treatments of structure and fixings that compliance will be achieved H1.2 enclosed wall and roof framing plus floor joists and bearers Note: Bearers within a sheltered area as defined within NZS3604:2011 H5 Piles
2. B2.3.1b): Will building elements (including the building envelope, exposed plumbing in the sub-floor space, and in-built chimneys and flues) that are moderately difficult to access or replace, or where failure of those elements would go undetected during normal use of the building, but would be easily detected during normal maintenance, with only normal maintenance continue to satisfy the performance requirements for this code for the lesser of the stated intended life of the building or for 15 years?	Y	BGn	04/06/2019 03:52 pm	Compliance with B2.3.1b) is satisfied - 15 year durability provisions are satisfied. - C/S cladding [roof and walls] - AL joinery

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3. B2.3.1c): Will building elements (including services, linings, renewable protective coatings, and fixtures) that are easy to access and replace, and where failure of those elements would be easily detected during normal use of the building, continue to satisfy the performance requirements for this code for the lesser of the stated intended life of the building or for 5 years?		Y	BGn	04/06/2019 03:52 pm	Compliance with B2.3.1c) is satisfied - 5 year durability provisions are satisfied.
4. B2.3.2: Do individual building elements that are components of a building system and are difficult to access or replace have all the same durability OR are installed in a manner that permits replacement of elements of lesser durability without removing elements that have greater durability and are not specifically designed for removal and replacement?		N/A	BGn	04/06/2019 03:52 pm	This question does not apply to this project.
B1 & B2: Wind / Earthquake / Corrosion Zone: Have the wind, earthquake and corrosion zones for this site been correctly determined and applied?		Y	BGn	04/06/2019 03:52 pm	Compliance established - wind zone is EH - checked to the BRANZ mapping and indicates EH Corrosion Zone is C - applicable for the location checked to NZS3604:2011 Earthquake Zone 2 - applicable for the location - checked to NZS3604:2011
C: FIRE SAFETY					
C/AS1: SH					
C: SH - Fire Safety System [Para 2.2]: Has the designer specified a complying Type 1 smoke alarm system and correctly identified the location of the smoke detectors?		Y	BGn	04/06/2019 03:53 pm	The designer has specified a complying Type 1 smoke alarm and identified the location of detectors correctly so compliance of F7/AS1 section 3 can be established
C: SH - Means of Escape [Part 3]: Does the building design demonstrate compliance with SH means of escape provisions?		Y	BGn	04/06/2019 03:53 pm	The DEOP for the dwelling is less than 25m
C: SH - Control of Internal Fire and Smoke Spread [Part 4]: Does the design demonstrate compliance with the Fire Code Acceptable Solution Part 4 provisions for control of Internal fire and smoke spread.					
C: SH - Control of Internal Fire and Smoke Spread [Part 4] - Prompt List:		N/A	BGn	04/06/2019 03:53 pm	This question does not apply to this application.
1. Fire Separations [Para 4.1.1 & 2.3]: Are these correctly located with the correct LIFE or PROPERTY ratings applied?					
2. Surface Finish [Para 4.2]: If foam plastics or combustible insulating materials form part of a wall or ceiling fire / smoke separation system, then will the completed system achieve a Group Number of not more than 3.					
3. Durability: Have maintenance requirements for the fire separations been specified and are durability provisions satisfied [50 years]?					
C: SH - Control of External Fire Spread [Part 5]: Does the design demonstrate compliance with the Fire Code Acceptable Solution Part 5 provisions for control of External fire spread?					
C: SH - Control of External Fire Spread [Part 5] - Prompt List:		N/A	BGn	04/06/2019 03:53 pm	This question does not apply to this application.
1. Fire Resistant Ratings [Para 5.1]: Do external walls that are within 1m of a relevant boundary have an FRR of no less than 30/30/30?					
2. Roof Projections [Para 5.2]: Do eaves projections of external walls that require an FRR, have an FRR of 30/30/30; or if not, does the walls fire rating extend up to the underside of the roof?					
3. Eaves Rating [Para 5.2.2]: In cases where the eaves extends to within 650 mm of a relevant boundary; is the entire eaves construction and the wall from which it projects provided with an FRR of not less than 30/30/30?					
4. Protection from Lower Roof [Para 5.3]: Has fire spread from a roof that is close to and lower than an external wall of an adjacent building been mitigated by providing a 30/30/30 fire rating to the part of the roof that is within 5.0m horizontally of the wall?					
5. Exterior Surface Finishes [Para 5.4]: Do exterior surface finishes comply with the provisions of C/AS1 Para 5.4? Not required if surface finishes are less than 1 mm thick and applied directly to non-combustible substrate.					
6. Carports and Similar Construction [Para 5.5]: Have provisions of C/AS1 Para 5.4 been satisfied?					
7. Specifications / Detailing: Is complying construction detailing and specifications for fire rated construction provided - (check framing & fixing size spacing, durability, compatibility of wrap, correct insulation, suitable materials, finishes, execution)?					

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8. Maintenance: Will the maintenance requirements provided ensure that the fire rated elements will achieve 50 years durability?					
C: SH - Firefighting [Part 6]: Does consent documentation confirm that the pavement is able to withstand laden weights of rescue vehicles, is traffic-able in all weather, is of appropriate width and height, and is provided with hard standing within 20 m of building entrance and inlets to sprinkler or hydrants?		N/A	BGn	04/06/2019 03:53 pm	This question does not apply to this project.
C: SH - Down Lights [Para 7.4]: Have the correct types of down lights been specified and do these comply with Para 7.4 of C1/AS1?					
C: SH - Down Lights [Para 7.4] - Prompt List:		<u>N/A</u>	<u>BGn</u>	<u>04/06/2019 04:04 pm</u>	This question does not apply to this application.
1. Type: Have complying types of down lights been specified?					
2. Clearance: Are insulation clearance distances specified?					
C: SH - Open Fire Chimney [Para 7.5]: Does the chimney design demonstrate compliance with Para 7.5 of C1/AS1? THIS PROMPT LIST DOES NOT ADDRESS COMPLIANCE WITH NZBC B1 OR B2 - GO TO STABILITY - B1 - CHIMNEY AFTER COMPLETING QUESTIONS LISTED IN THIS PROMPT LIST.					
C: SH - Open Fire Chimney [Para 7.5] - Prompt List:		<u>N/A</u>	<u>BGn</u>	<u>04/06/2019 04:04 pm</u>	This question does not apply to this application.
1. Construction: Do chimney construction details comply with C/AS1 - Table 7.1 & Figure 7.1?					
2. Fire bricks: Are these correctly sized (i.e. not less than 50 mm thick)?					
3. Fireplace Joints: Are these non-combustible and sealed against leaks?					
4. Chimney brickwork: Is this correctly specified (i.e. min. 90mm thick single skin with 6.5mm grout)?					
5. Expansion: Has a complying expansion gap been provided to chimneys containing flues?					
6. Flue Size: Is the cross-sectional area of flues correct?					
7. Flue linings: Are these correctly specified?					
8. Chimney clearance: Is the clearance above roof correctly specified?					
9. Number: Is a separate flue provided to each fireplace?					
10. Flue joints: Are flue joints of non-combustible materials sealed against air leakage?					
11. Hearth Construction: Is this correctly specified?					
12. Clearance: Is clearance between chimneys, hearths and combustible materials correctly specified?					
13. Ventilation: Is a min. of 50 mm ventilated space provided between the outer face of the chimney and any combustible material?					
D: ACCESS					
D1: Access Routes					
D1: Access Routes - Residential: Functional Requirement - Does the proposal comply with Functional Requirements D1.2.1 & D1.2.2? LoA - Requirement D1.2.1 shall not apply to Ancillary buildings or Outbuildings.					
D1: Access Routes - Residential - Prompt List:		<u>Y</u>	<u>BGn</u>	<u>04/06/2019 04:11 pm</u>	
1. D1.3.1: Does the proposal demonstrate that access routes enable people to: (a) Safely and easily approach the main entrance of buildings from the apron or construction edge of a building, (b) Enter buildings, (c) Move into spaces within buildings by such means as corridors, doors, stairs, ramps and lifts, (d) Manoeuvre and park cars, (e) Manoeuvre and park delivery vehicles required to use the loading space?		Y	BGn	04/06/2019 04:11 pm	The proposal demonstrates compliance with D1.3.1 provisions (a - e). Compacted hardfill from the relevant boundary [construction edge] to the main entry of the building - typical stair construction detail provided on sheet 10 [180mm rise and 290 going] - 3 steps in total meaning no handrail required to comply with section 6 of D1/AS1

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2. D1.3.3: Does the proposal demonstrate that access routes: (a) Have adequate activity space, (b) Are free from dangerous obstructions and from any projections likely to cause an obstruction, (c) Have a safe cross fall, and safe slope in the direction of travel, (d) Have adequate slip-resistant walking surfaces under all conditions of normal use, (e) Include stairs to allow access to upper floors irrespective of whether an escalator or lift has been provided, (f) Have stair treads, and ladder treads or rungs which: (i) provide adequate footing, and (ii) have uniform rise within each flight and for consecutive flights, (g) Have stair treads with a leading edge that can be easily seen, (h) Have stair treads which prevent children from falling through or becoming held fast between treads, where open risers are used, (i) Have smooth, reachable, and graspable handrails to provide support and to assist with movement along a stair or ladder, LoA - Clause (i) does not apply to isolated steps. (j) Have handrails of adequate strength and rigidity as required by Clause B1 "Structure", (k) Have landings of appropriate dimensions and at appropriate intervals along a stair or ramp to prevent undue fatigue, (l) Have landings of appropriate dimensions where a door opens from or onto a stair, ramp or ladder so that the door does not create a hazard, and (m) Have any automatically controlled doors constructed to avoid the risk of people becoming caught or being struck by moving parts?		Y	BGn	04/06/2019 04:11 pm	Refer to the comment above - this is the only applicable compliance consideration required for this application
3. D1.3.5: Does the proposal demonstrate vehicle spaces and circulation routes have: (a) Dimensions appropriate to the intended use, (b) Appropriate cross-fall, and slope in the direction of travel, (c) Adequate queuing and circulation space, and, (d) Adequate sight distances?		N/A	BGn	04/06/2019 04:11 pm	This question does not apply to this Project.
D2: Mech Installations for Access			BGn	04/06/2019 04:04 pm	Code Clause Disabled: Not applicable for this project.
E: MOISTURE					
E1: Surface Water					
E1: Surface Water: Functional Requirement - Does the proposal comply with Functional Requirement E1.2 and demonstrate on reasonable grounds that buildings and site work will be constructed in a way that protects people and other property from the adverse effects of surface water? Review inspections and add / delete / modify inspection questions as required.					
E1: Surface Water - Prompt List:		N	BGn	04/06/2019 04:32 pm	
1. E1.3.1: Does the proposal demonstrate that except as otherwise required under the Resource Management Act 1991 for the protection of other property, surface water, resulting from an event having a 10% probability of occurring annually and which is collected or concentrated by buildings or sitework, will be disposed of in a way that avoids the likelihood of damage or nuisance to other property? See Reference Notes.		Y	BGn	04/06/2019 04:32 pm	Compliance with E1.3.1 is demonstrated. - Existing cut site, the proposed building does direct or worsen the likelihood of damage or nuisance to other property
2. E1.3.2: Does the proposal demonstrate that surface water, resulting from an event having a 2% probability of occurring annually, will not enter buildings? LoA - only applies to Housing, Communal Residential and Communal Non-Residential buildings. See Reference Notes.		Y	BGn	04/06/2019 04:32 pm	Compliance with E1.3.2 is demonstrated. Dwelling is proposed on piles - 600mm from GL - SORGed compliance achieved
3. E1.3.3: Does the proposal demonstrate that drainage systems for the disposal of surface water are constructed to: (a) Convey surface water to an appropriate outfall using gravity flow where possible, (b) Avoid the likelihood of blockages, (c) Avoid the likelihood of leakage, penetration by roots, or the entry of ground water where pipes or lined channels are used, (d) Provide reasonable access for maintenance and clearing blockages, (e) Avoid the likelihood of damage to any outfall, in a manner acceptable to the network utility operator, and (f) Avoid the likelihood of damage from superimposed loads or normal ground movements? See Reference Notes.		N	BGn	04/06/2019 04:32 pm	Within sheet 3 it is indicated that the SW is to feed the 2 x water tanks and these tanks are to feed the potable water and the sprinkler system for the dwelling. BUT 1: Please indicate how the overflow from the tanks is to discharge so compliance can be assessed 2: Please indicate within the drainage plan a reference to compliance of consent notice [h] so compliance of the detailed installation and drainage requirements of the proposed tanks can be established during construction and inspection of the application
Supplementary Processing Notes:			BGn	04/06/2019 04:32 pm	Item 3: 100mm SW drain with 80mm dps [x2 for the roof area will meet the requirements of table 5 of E1/AS1] - SW drain is to feed the semi buried water tanks. First flush director is indicated to be installed on sheet 2
E1: Surface Water - Prompt List:		Y	BGn	11/06/2019 01:49 pm	RFI Response

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1. E1.3.1: Does the proposal demonstrate that except as otherwise required under the Resource Management Act 1991 for the protection of other property, surface water, resulting from an event having a 10% probability of occurring annually and which is collected or concentrated by buildings or sitework, will be disposed of in a way that avoids the likelihood of damage or nuisance to other property? See Reference Notes.		Y	BGn	11/06/2019 01:49 pm	Compliance with E1.3.1 is demonstrated. - Existing cut site, the proposed building does direct or worsen the likelihood of damage or nuisance to other property
2. E1.3.2: Does the proposal demonstrate that surface water, resulting from an event having a 2% probability of occurring annually, will not enter buildings? LoA - only applies to Housing, Communal Residential and Communal Non-Residential buildings. See Reference Notes.		Y	BGn	11/06/2019 01:49 pm	Compliance with E1.3.2 is demonstrated. Dwelling is proposed on piles - 600mm from GL - SORGed compliance achieved
3. E1.3.3: Does the proposal demonstrate that drainage systems for the disposal of surface water are constructed to: (a) Convey surface water to an appropriate outfall using gravity flow where possible, (b) Avoid the likelihood of blockages, (c) Avoid the likelihood of leakage, penetration by roots, or the entry of ground water where pipes or lined channels are used, (d) Provide reasonable access for maintenance and clearing blockages, (e) Avoid the likelihood of damage to any outfall, in a manner acceptable to the network utility operator, and(f) Avoid the likelihood of damage from superimposed loads or normal ground movements? See Reference Notes.		Y	BGn	11/06/2019 01:49 pm	<p>Within sheet 3 it is indicated that the SW is to feed the 2 x water tanks and these tanks are to feed the potable water and the sprinkler system for the dwelling. BUT</p> <p>1: Please indicate how the overflow from the tanks is to discharge so compliance can be assessed Resolved - within the RFI response the drainage plan has been revised to indicate the overflow to connection SW system</p> <p>2: Please indicate within the drainage plan a reference to compliance of consent notice [h] so compliance of the detailed installation and drainage requirements of the proposed tanks can be established during construction and inspection of the application Resolved - within the RFI response the designer has indicated that the installation of the water tanks are covered under the RC for the sub-division - no compliance consideration has been provided</p>
E1/VM 1: Drainage: Does the proposal demonstrate compliance with Verification Method E1/VM 1?					
E1/VM 1: Drainage - Prompt List:		N/A	BGn	04/06/2019 04:13 pm	This question does not apply to this application.
1. Run-off: Has the estimation of surface water run-off been correctly calculated?					
2. Sizing: Is the sizing of the surface water system in accordance with E1/VM1?					
3. Secondary Flow Paths: Does the design demonstrate that the effects of secondary flow paths have been correctly considered?					
4. Energy Loss: Does the design provide for energy loss through the drain structure?					
5. Flow Velocity: Does the design demonstrate that the drain shall satisfy minimum flow velocity as required by E1/VM1?					
6. Outflow Protection: Is compliance with outflow protection satisfied as required by E1/VM1?					
7. Drain Leak Test: Does the design identify the need for a drain leak test to occur?					
8. Soak Pit: Is evidence provided to demonstrate that the design for disposal to a soak pit satisfies the requirements of E1/VM1 Para 9.0?					
E2: External Moisture					
E2 - External Moisture: Does the proposal comply with Functional Requirement E2.2 and demonstrate on reasonable grounds that buildings and sitework are constructed to provide adequate resistance to penetration and accumulation of moisture from the outside? Review inspections and add / delete / modify inspection questions as required.					
E2 - External Moisture - Prompt List:		N	BGn	04/06/2019 05:01 pm	
1. E2.3.1: Does the proposal demonstrate that roofs shed precipitated moisture? In locations subject to snowfalls, roofs must also shed melted snow.		Y	BGn	04/06/2019 05:01 pm	C/S 5 rib profile proposed - dwelling at 6 degrees - all within the scope of E2/AS1

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2. E2.3.2: Does the proposal demonstrate that roofs and exterior walls prevent the penetration of water that could cause undue dampness, damage to building elements, or both?	N	BGn	04/06/2019 05:01 pm	<p>1: Please provide construction detailing of the internal and external flashing for the cladding system proposed so compliance can be established - for guidance refer to figure 94 of E2/AS1 your indicated means of compliance of E2</p> <p>2: Within the cross section of the plans it is indicated that a 6mm ply RAB is proposed. Please revise this to inline with the requirements of E2/AS1 section 9.1.7.2 [a], please also indicate within the cross section for clarity of construction and inspection that the proposed fastwrap is installed over the 7mm H3 RAB as required by section 9.1.7.2 [c] of E2/AS1</p>
3. E2.3.3: Does the proposal demonstrate that walls, floors, and structural elements in contact with, or in close proximity to, the ground will not absorb or transmit moisture in quantities that could cause undue dampness, damage to building elements, or both?	Y	BGn	04/06/2019 05:01 pm	Ground separations provided within the plans which in line with the requirements of E2/AS1 [225mm] - sub-floor construction FFL 600mm above GL, cladding cover over bottom plates in line with E2/AS1 - 50mm cover indicated
4. E2.3.4: Does the proposal demonstrate that building elements susceptible to damage will be protected from the adverse effects of moisture entering the space below suspended floors?	Y	BGn	04/06/2019 05:01 pm	Open sub-floor indicated within the cross section - cut level site - SORGed compliance established
5. E2.3.5: Does the proposal demonstrate that concealed spaces and cavities in buildings are constructed in a way that prevents external moisture being accumulated or transferred and causing condensation, fungal growth, or the degradation of building elements?	Y	BGn	04/06/2019 05:01 pm	Direct fix cladding system and the roof space has been indicated to be closed off
6. E2.3.6: Does the proposal demonstrate that excess moisture present at the completion of construction is capable of being dissipated without permanent damage to building elements?	Y	BGn	04/06/2019 05:01 pm	SORGed compliance with be achieved if the construction of the applicable elements are completed in accordance with the consent documents and the manufacturers specifications
7. E2.3.7: Does the proposal demonstrate that building elements will be constructed in a way that makes due allowance for the following: (a) The consequences of failure, (b) The effects of uncertainties resulting from construction or from the sequence in which different aspects of construction occur, (c) Variation in the properties of materials and in the characteristics of the site?	Y	BGn	04/06/2019 05:01 pm	SORGed compliance with E2.3.7 a-c considered within the design provided and the applicable manufacturers documentation and construction detailing
8. Construction Monitoring / Warranties: Have Construction Monitoring or Warranty requirements been entered into the system?	N/A	BGn	04/06/2019 05:01 pm	This question does not apply to this Project.
9. Miscellaneous: Please select the cross if you wish to raise an RFI for an item that may not clearly fit into any other category.	N/A	BGn	04/06/2019 05:01 pm	This question does not apply to this Project.
Supplementary Processing Notes:		BGn	04/06/2019 05:01 pm	<p>Item 2: The dwelling is proposed to be clad in a single cladding type.</p> <p>C/S corrugated vertical iron cladding. Applicable cladding details also provided in the plans for interfaces for compliance to be considered.</p> <p>Have measure roof flashing covers for the EH wind zone to table 7 of E2/AS1 can SORGed compliance achieved</p> <p>Reverse soffit flashing meets E2/AS1</p> <p>Joinery:</p> <p>Construction detailing provided for the cladding system, compliance of applicable sections of E2/AS1 has been demonstrated - over flashed system proposed</p> <p>Underlays:</p> <p>Roof: Plans indicate within the cross section that a bitumens breather roofing underlay to be used</p> <p>Wall: Ply RAB indicated within the cross section with a wrap separation between cladding and RAB</p>
E2 - External Moisture - Prompt List:	Y	BGn	11/06/2019 01:53 pm	RFI Response

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1. E2.3.1: Does the proposal demonstrate that roofs shed precipitated moisture? In locations subject to snowfalls, roofs must also shed melted snow.	Y	BGn	11/06/2019 01:53 pm	C/S 5 rib profile proposed - dwelling at 6 degrees - all within the scope of E2/AS1
2. E2.3.2: Does the proposal demonstrate that roofs and exterior walls prevent the penetration of water that could cause undue dampness, damage to building elements, or both?	Y	BGn	11/06/2019 01:53 pm	<p>1: Please provide construction detailing of the internal and external flashing for the cladding system proposed so compliance can be established - for guidance refer to figure 94 of E2/As1 your indicated means of compliance of E2 Resolved - within the RFI response the designer has provided a copy of the detail from E2/As1 which is to be merged into the specifications</p> <p>2: Within the cross section of the plans it is indicated that a 6mm ply RAB is proposed. Please revise this to inline with the requirements of E2/AS1 section 9.1.7.2 [a], please also indicate within the cross section for clarity of construction and inspection that the proposed fastwrap is installed over the 7mm H3 RAB as required by section 9.1.7.2 [c] of E2/AS1</p> <p>Resolved - clarification and verification of the above question has been addressed within the revised sheet 8 of the plans</p>
3. E2.3.3: Does the proposal demonstrate that walls, floors, and structural elements in contact with, or in close proximity to, the ground will not absorb or transmit moisture in quantities that could cause undue dampness, damage to building elements, or both?	Y	BGn	11/06/2019 01:53 pm	Ground separations provided within the plans which in line with the requirements of E2/AS1 [225mm] - sub-floor construction FFL 600mm above GL, cladding cover over bottom plates in line with E2/AS1 - 50mm cover indicated
4. E2.3.4: Does the proposal demonstrate that building elements susceptible to damage will be protected from the adverse effects of moisture entering the space below suspended floors?	Y	BGn	11/06/2019 01:53 pm	Open sub-floor indicated within the cross section - cut level site - SORGed compliance established
5. E2.3.5: Does the proposal demonstrate that concealed spaces and cavities in buildings are constructed in a way that prevents external moisture being accumulated or transferred and causing condensation, fungal growth, or the degradation of building elements?	Y	BGn	11/06/2019 01:53 pm	Direct fix cladding system and the roof space has been indicated to be closed off
6. E2.3.6: Does the proposal demonstrate that excess moisture present at the completion of construction is capable of being dissipated without permanent damage to building elements?	Y	BGn	11/06/2019 01:53 pm	SORGed compliance will be achieved if the construction of the applicable elements are completed in accordance with the consent documents and the manufacturers specifications
7. E2.3.7: Does the proposal demonstrate that building elements will be constructed in a way that makes due allowance for the following: (a) The consequences of failure, (b) The effects of uncertainties resulting from construction or from the sequence in which different aspects of construction occur, (c) Variation in the properties of materials and in the characteristics of the site?	Y	BGn	11/06/2019 01:53 pm	SORGed compliance with E2.3.7 a-c considered within the design provided and the applicable manufacturers documentation and construction detailing
8. Construction Monitoring / Warranties: Have Construction Monitoring or Warranty requirements been entered into the system?	N/A	BGn	11/06/2019 01:53 pm	This question does not apply to this Project.
9. Miscellaneous: Please select the cross if you wish to raise an RFI for an item that may not clearly fit into any other category.	N/A	BGn	11/06/2019 01:53 pm	This question does not apply to this Project.
E3: Internal Moisture				
E3: Internal Moisture: Does the proposal comply with Functional Requirement E3.2 and demonstrate on reasonable grounds that buildings are constructed to avoid the likelihood of (a) Fungal growth or the accumulation of contaminants on linings and other building elements; and (b) Free water overflow penetrating to an adjoining house hold unit; and (c) Damage to building elements being caused by the presence of moisture? Review inspections and add / delete / modify inspection questions as required.				
E3: Internal Moisture - Prompt List:	N	BGn	04/06/2019 05:07 pm	
1. E3.3.1: Does the design demonstrate that an adequate combination of thermal resistance, ventilation and space temperature is provided to all habitable spaces, bathrooms, laundry and other spaces where moisture is generated or may accumulate? LoA - does not apply to Communal Non-residential, Commercial, Industrial, Outbuildings or Ancillary buildings.	Y	BGn	04/06/2019 05:07 pm	Mechanical and passive ventilation has been provided to the applicable spaces in order for compliance to be established

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2. E3.3.2: Is freewater from accidental overflow from sanitary fixtures or sanitary appliances disposed of in a way that avoids loss of amenity or damage to household units or other property?		Y	BGn	04/06/2019 05:07 pm	SORged compliance of overflow to the proposed fixtures will be addressed via the construction [eg: basins] Safe tray proposed to be discharged to the outside of the building with a vermin flap fitted - refer to sheet 3
3. E3.3.3: Are floor surfaces of spaces containing sanitary fixtures or sanitary appliances impervious and easily cleaned?		N	BGn	04/06/2019 05:07 pm	Performance Clause E3.3.3 of the building code requires that floor surfaces of spaces containing sanitary fixtures or sanitary appliances be impervious and easily cleaned. Consent documentation fails to demonstrate this. Please indicate the proposed floor finish to the kitchen, bathroom/toilet and laundry spaces so compliance can be established
4. E3.3.4: Are wall surfaces adjacent to sanitary fixtures or sanitary appliances impervious and easily cleaned?		Y	BGn	04/06/2019 05:07 pm	Note on sheet 6 indicates that all wet areas are to have semi gloss or gloss paint as per E3/AS1 3.1.2 [f]
5. E3.3.5: Are surfaces of building elements that are likely to be splashed or become contaminated in the course of the intended use of the building, impervious and easily cleaned?		Y	BGn	04/06/2019 05:07 pm	Refer to the comment above for compliance
6. E3.3.6: Are surfaces of building elements that are likely to be splashed constructed in a way that prevents water splash from penetrating behind linings or into concealed spaces? Please give careful consideration to tile showers and membranes.		Y	BGn	04/06/2019 05:07 pm	Compliance with provisions of E3.3.6 is demonstrated. Proprietary showers proposed - SORged compliance will be established via construction and inspection
7. Construction Monitoring / Warranties: Have Construction Monitoring or Warranty requirements been entered into the system?		N/A	BGn	04/06/2019 05:07 pm	This question does not apply to this Project.
E3: Internal Moisture - Prompt List:		Y	BGn	11/06/2019 01:55 pm	RFI Response
1. E3.3.1: Does the design demonstrate that an adequate combination of thermal resistance, ventilation and space temperature is provided to all habitable spaces, bathrooms, laundry and other spaces where moisture is generated or may accumulate? LoA - does not apply to Communal Non-residential, Commercial, Industrial, Outbuildings or Ancillary buildings.		Y	BGn	11/06/2019 01:55 pm	Mechanical and passive ventilation has been provided to the applicable spaces in order for compliance to be established
2. E3.3.2: Is freewater from accidental overflow from sanitary fixtures or sanitary appliances disposed of in a way that avoids loss of amenity or damage to household units or other property?		Y	BGn	11/06/2019 01:55 pm	SORged compliance of overflow to the proposed fixtures will be addressed via the construction [eg: basins] Safe tray proposed to be discharged to the outside of the building with a vermin flap fitted - refer to sheet 3
3. E3.3.3: Are floor surfaces of spaces containing sanitary fixtures or sanitary appliances impervious and easily cleaned?		Y	BGn	11/06/2019 01:55 pm	Performance Clause E3.3.3 of the building code requires that floor surfaces of spaces containing sanitary fixtures or sanitary appliances be impervious and easily cleaned. Consent documentation fails to demonstrate this. Please indicate the proposed floor finish to the kitchen, bathroom/toilet and laundry spaces so compliance can be established Resolved - within the RFI response the designer has quite rightly indicated that the applicable compliance information is contained within the construction notes on sheet 6
4. E3.3.4: Are wall surfaces adjacent to sanitary fixtures or sanitary appliances impervious and easily cleaned?		Y	BGn	11/06/2019 01:55 pm	Note on sheet 6 indicates that all wet areas are to have semi gloss or gloss paint as per E3/AS1 3.1.2 [f]
5. E3.3.5: Are surfaces of building elements that are likely to be splashed or become contaminated in the course of the intended use of the building, impervious and easily cleaned?		Y	BGn	11/06/2019 01:55 pm	Refer to the comment above for compliance
6. E3.3.6: Are surfaces of building elements that are likely to be splashed constructed in a way that prevents water splash from penetrating behind linings or into concealed spaces? Please give careful consideration to tile showers and membranes.		Y	BGn	11/06/2019 01:55 pm	Compliance with provisions of E3.3.6 is demonstrated. Proprietary showers proposed - SORged compliance will be established via construction and inspection
7. Construction Monitoring / Warranties: Have Construction Monitoring or Warranty requirements been entered into the system?		N/A	BGn	11/06/2019 01:55 pm	This question does not apply to this Project.
F: SAFETY OF USERS					
F1: Hazardous Agents on Site			BGn	04/06/2019 05:08 pm	Code Clause Disabled: Not applicable for this project.
F2: Hazardous Building Materials					
F2: Hazardous Building Materials: Does the proposal demonstrate compliance with F2.2 and demonstrate on reasonable grounds that building materials which are potentially hazardous will be used in ways that avoid undue risk to people? Review inspections and add / delete / modify inspection questions as required.					
F2: Hazardous Building Materials - Prompt List:		Y	BGn	04/06/2019 05:09 pm	

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1. F2.3.1: (Harmful Concentrations) - Does the proposal identify that the quantities of gas, liquid, radiation or solid particles emitted by materials used in the construction of buildings, will not give rise to harmful concentrations at the surface of the material where the material is exposed, or in the atmosphere of any space?		N/A	BGn	04/06/2019 05:09 pm	This question does not apply to this Project.
2. F2.3.2: (Manifestation) - Does the proposal demonstrate that transparent panels capable of being mistaken for an unimpeded path of travel are marked to make them visible? LoA - This provision does not apply to Housing.		N/A	BGn	04/06/2019 05:09 pm	This question does not apply to this Project.
3. F2.3.3: (Impact) - Does the proposal demonstrate that glass or other brittle materials with which people are likely to come into contact will: (a) If broken on impact, break in a way that is unlikely to cause injury, or (b) Resist a reasonably foreseeable impact without breaking, or (c) Be protected from impact?		Y	BGn	04/06/2019 05:09 pm	Window and door schedule indicated within the elevations which indicates applicable joinery units as SG meeting the requirements NZS4223:part3 2016
4. Structural Glass Barriers: Do structural glass barriers satisfy provisions of section 22 of NZS 4223.3 2016 and B1/AS1 7.3.3 and 7.3.4 as amended 1 June 2016.? See Reference Notes.		N/A	BGn	04/06/2019 05:09 pm	This question does not apply to this Project.
5. Asbestos: Is the presence and location of asbestos identified; and if so, are safety procedures for working with the product provided? If there is no asbestos hazard then please turn off the requirement for a pre-construction meeting inspection and the requirement for an Asbestos Assessment Report (under Required Documents).		N/A	BGn	04/06/2019 05:09 pm	This question does not apply to this Project.
F4: Safety from Falling			BGn	04/06/2019 05:08 pm	Code Clause Disabled: Not applicable for this project.
F5: Construction and Demolition Hazards			BGn	04/06/2019 05:08 pm	Code Clause Disabled: TDC have a technical decision where by they do not consider compliance of F5 in relation to a RES building
F7: Warning System					
F7: Warning System: Does the proposal comply with Functional Requirement F7.2 and demonstrate on reasonable grounds that the building is provided with appropriate means of warning people to escape to a safe place in an emergency? Read these Questions in Conjunction with C/ AS1 - C/AS7 - PARA 2.2. Note: The Inspection requirements for these systems are driven from the C-Fire Safety section of the processing checklist.					
F7: Warning System - Prompt List:		Y	BGn	04/06/2019 05:09 pm	
1. F7.3.1: Does the proposal demonstrate that the means of warning will alert people to the emergency in adequate time for them to reach a safe place?		Y	BGn	04/06/2019 05:09 pm	The designer has specified a complying Type 1 smoke alarm and identified the location of detectors correctly so compliance of F7/AS1 section 3 can be established - within 3m of bedroom door and on the access route
2. F7.3.2: Does the proposal demonstrate that appropriate means of detection and warning for fire will be provided within each household unit?		Y	BGn	04/06/2019 05:09 pm	Refer to the comment above for compliance
3. F7.3.3: Does the proposal demonstrate that appropriate means of warning for fire and other emergencies are provided in buildings as necessary to satisfy the other performance requirements of this code?		Y	BGn	04/06/2019 05:09 pm	Refer to the comment above for compliance
4. Installation: Is adequate information provided to enable onsite compliance of the system to be determined?		Y	BGn	04/06/2019 05:09 pm	BCA to inspect compliance as part of the final inspection process before the issue of CCC
F9: Restricting Access to Residential Pools			BGn	04/06/2019 05:08 pm	Code Clause Disabled: Not applicable for this project.
G: SERVICES					
G1: Personal Hygiene					
G1: Personal Hygiene - Residential: Does the proposal comply with Functional Requirement G1.2 and demonstrate on reasonable grounds that buildings are provided with appropriate spaces and facilities for personal hygiene?					
G1: Personal Hygiene - Residential - Prompt List:		Y	BGn	04/06/2019 05:11 pm	
1. G1.3.1: (Number) - Does the proposal demonstrate that sanitary fixtures are provided in sufficient number and are appropriate for the people who are intended to use them?		Y	BGn	04/06/2019 05:11 pm	Compliance with G1.3.1 is satisfied - 2 x bathrooms provided with showers, toilets and hand basins

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2. G1.3.2: (Sanitary Fixtures) - Does the proposal demonstrate that sanitary fixtures are located, constructed and installed to: (a) Facilitate sanitation, (b) Avoid risk of food contamination, (c) Avoid harboring dirt or germs, (d) Provide appropriate privacy, (e) Avoid affecting occupants of adjacent spaces from unpleasant odors, accumulation of offensive matter, or other source of annoyance, (f) Allow effective cleaning, (g) Discharge to a plumbing and drainage system as required by Clause G13 when water-borne disposal is used, and (h) Provide a healthy safe disposal system when non-water-borne disposal is used?		Y	BGn	04/06/2019 05:11 pm	SORGed compliance of G1/AS1 has been achieved for the dwelling from the design proposed
3. G1.3.3: Does the proposal demonstrate that facilities for personal hygiene are provided in convenient locations?		Y	BGn	04/06/2019 05:11 pm	Yes - facilities provided within the dwelling which i would call convenient
G2: Laundering					
G2: Laundering - Residential: Does the proposal comply with Functional Requirement G2.2 and demonstrate on reasonable grounds that buildings are provided with adequate space and facilities for laundering?					
G2: Laundering - Residential - Prompt List:		<u>Y</u>	BGn	04/06/2019 05:11 pm	
1. G2.3.1: (Capacity) - Do the facilities have the capacity for the intended use and consist of fixtures or space and services for appliances?		Y	BGn	04/06/2019 05:11 pm	From the design provided i am SORGed that compliance of G2/AS1 figures 1, 2 and table 1
2. G2.3.2: (Space) - Is the space for laundering adequate in size to provide for the installation and use of fixtures or appliances?		Y	BGn	04/06/2019 05:11 pm	Refer to the comment above for compliance
G3: Food preparation and prevention of contamination					
G3: Food Preparation & Prevention of Contamination - Residential: Does the proposal demonstrate compliance on reasonable grounds with Functional Requirements G3.2.1, G3.2.2 & G3.2.3?					
G3: Food Preparation & Prevention of Contamination - Residential - Prompt List:		<u>Y</u>	BGn	04/06/2019 05:13 pm	
1. G3.2.1: Is the building provided with spaces & facilities for hygienic storage, preparation & cooking of food that are adequate for the intended use of the building?		Y	BGn	04/06/2019 05:13 pm	Compliance with G3.2.1 is satisfied - Kitchen area indicated within the floor plan
2. G3.2.2: Does the proposal demonstrate that building/s used for storage manufacture or processing of food, including animal products, are constructed in a manner that safeguards contents from contamination?		N/A	BGn	04/06/2019 05:13 pm	This question does not apply to this Project.
3. G3.3.1: Does the proposal demonstrate that food preparation facilities are hygienic & include: (a) Space for a refrigerator, or perishable food storage area capable of being cooled & protected from vermin or insects, (b) Means for food rinsing, utensil washing & waste water disposal, (c) Means for cooking food, and (d) Space and a surface for food preparation?		Y	BGn	04/06/2019 05:13 pm	Compliance with G3.3.1 is satisfied - Kitchen space indicates the location of the sink, cooking hob and space for the refrigerator and SORGed that the bench surface will be fit for purpose for food prep
4. G3.3.2: Do spaces used for food preparation and utensil washing have: (a) Interior linings and work surfaces that are impervious and easily cleaned, and (b) All building elements constructed with materials which are free from hazardous substances which could cause contamination to the building contents?		Y	BGn	04/06/2019 05:13 pm	Compliance with G3.3.2 is satisfied - internal wall linings indicated within the plans
5. G3.3.3: Is an adequate energy supply provided and is it appropriately located for use by cooking and refrigeration appliances?		Y	BGn	04/06/2019 05:13 pm	Compliance with G3.3.3 is satisfied - G9 applicable to the scope of the application and energy works certificate will be provided before CCC
6. G3.3.4: Are spaces & facilities conveniently located?		Y	BGn	04/06/2019 05:13 pm	Compliance with G3.3.4 is satisfied - SORGed compliance G3/AS1 fig 1 has been achieved
G4: Ventilation					
G4: Ventilation - Residential: Does the proposal comply with Functional Requirement G4.2 and demonstrate on reasonable grounds that spaces within buildings are provided with adequate ventilation consistent with their maximum occupancy, and intended use?					
G4: Ventilation - Residential - Prompt List:		<u>N</u>	BGn	04/06/2019 05:14 pm	
1. G4.3.1: (Air Changes) - Does the proposal demonstrate that spaces within the building have a means of ventilation with outdoor air that will provide an adequate number of air changes to maintain air purity?		Y	BGn	04/06/2019 05:14 pm	Yes - passive ventilation allowed for via the opening windows doors etc - common construction such as proposed will normally provided for 4-6 air changes per hour
2. G4.3.2: (Mechanical) - Does the proposal demonstrate that where mechanical air-handling systems are provided they will be constructed and maintained in a manner that prevents harmful bacteria, pathogens and allergens from multiplying within them?		N/A	BGn	04/06/2019 05:14 pm	This question does not apply to this Project.

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3. G4.3.3: (Extract) - Does the proposal demonstrate that the building has a means of collecting or otherwise removing the following products from the spaces in which they are generated: (a) Cooking fumes and odors, (b) Moisture from laundering, utensil washing, bathing and showering, (c) Odors from sanitary and waste storage spaces, (d) Gaseous by-products and excessive moisture from commercial or industrial processes, (e) Poisonous fumes and gases, (f) Flammable fumes and gases, (g) Airborne particles, (h) Bacteria, viruses or other pathogens, or (i) Products of combustion?	N	BGn	04/06/2019 05:14 pm	Extract: Please demonstrate that spaces within the building have a means of collecting or otherwise removing the following products from the spaces in which they are generated; 1. Cooking fumes and odors,
4. G4.3.4: (Dispersal) - Does the proposal demonstrate that contaminated air will be disposed of in a way which avoids creating a nuisance or hazard to people and other property?	N/A	BGn	04/06/2019 05:14 pm	This question does not apply to this Project.
5. G4.3.5: (Combustion) - Does the proposal demonstrate that the quantities of air supplied for ventilation will meet the additional demands of any fixed combustion appliances?	N/A	BGn	04/06/2019 05:14 pm	This question does not apply to this Project.
G4: Ventilation - Residential - Prompt List:	<u>Y</u>	BGn	11/06/2019 01:56 pm	RFI Response
1. G4.3.1: (Air Changes) - Does the proposal demonstrate that spaces within the building have a means of ventilation with outdoor air that will provide an adequate number of air changes to maintain air purity?	Y	BGn	11/06/2019 01:56 pm	Yes - passive ventilation allowed for via the opening windows doors etc - common construction such as proposed will normally provided for 4-6 air changes per hour
2. G4.3.2: (Mechanical) - Does the proposal demonstrate that where mechanical air-handling systems are provided they will be constructed and maintained in a manner that prevents harmful bacteria, pathogens and allergens from multiplying within them?	N/A	BGn	11/06/2019 01:56 pm	This question does not apply to this Project.
3. G4.3.3: (Extract) - Does the proposal demonstrate that the building has a means of collecting or otherwise removing the following products from the spaces in which they are generated: (a) Cooking fumes and odors, (b) Moisture from laundering, utensil washing, bathing and showering, (c) Odors from sanitary and waste storage spaces, (d) Gaseous by-products and excessive moisture from commercial or industrial processes, (e) Poisonous fumes and gases, (f) Flammable fumes and gases, (g) Airborne particles, (h) Bacteria, viruses or other pathogens, or (i) Products of combustion?	Y	BGn	11/06/2019 01:56 pm	Extract: Please demonstrate that spaces within the building have a means of collecting or otherwise removing the following products from the spaces in which they are generated; 1. Cooking fumes and odors, Resolved - within the RFI response the designer has revised sheet 6 and indicated a rangehood and mechanical ventilation via the soffit
4. G4.3.4: (Dispersal) - Does the proposal demonstrate that contaminated air will be disposed of in a way which avoids creating a nuisance or hazard to people and other property?	N/A	BGn	11/06/2019 01:56 pm	This question does not apply to this Project.
5. G4.3.5: (Combustion) - Does the proposal demonstrate that the quantities of air supplied for ventilation will meet the additional demands of any fixed combustion appliances?	N/A	BGn	11/06/2019 01:56 pm	This question does not apply to this Project.
G4: Windows: Does the proposal demonstrate compliance with the solution nominated, and with NZBC Clauses B1, B2, E2, F2, F4 & G4?				
G4: Windows - Prompt List:	<u>Y</u>	BGn	04/06/2019 05:14 pm	
1. B1: Does the proposal confirm that the window design is appropriate for site specific structural design actions - (dead load, live load, wind, snow, earthquake, rain, etc.)?	Y	BGn	04/06/2019 05:14 pm	The window design satisfies B1 requirements for the site as it is indicated within the specification to be constructed to the applicable AS/NZS standards
2. E2: Does flashing detail demonstrate compliance with provisions of E2?	Y	BGn	04/06/2019 05:14 pm	Refer to the comments and questions [if any] raised within the E2 section of this checklist for compliance
3. F4: Does design demonstrate that people are protected from injury caused by falling and that glazing thickness & size is adequate to resist damage from impact?	N/A	BGn	04/06/2019 05:14 pm	This question does not apply to this Project.
G5: Interior Environment		BGn	04/06/2019 05:10 pm	Code Clause Disabled: Not applicable for this project.
G7: Natural Light				
G7: Natural Light: Does the proposal comply with Functional Requirement G7.2 and demonstrate on reasonable grounds that habitable spaces provide adequate openings for natural light and for a visual awareness of the outside environment? LoA - only applies to Old People's Homes, Early Childcare Centres & Housing.				
G7: Natural Light - Prompt List:	<u>Y</u>	BGn	04/06/2019 05:15 pm	
1. G7.3.1: Does the proposal demonstrate that natural light will provide an illuminance of no less than 30 lux at floor level for 75% of the standard year?	Y	BGn	04/06/2019 05:15 pm	From the design provided i am SORGed compliance of this requirement will be achieved

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2. G7.3.2: Does the proposal demonstrate that openings to give awareness of the outside are transparent and provided in suitable locations?		Y	BGn	04/06/2019 05:15 pm	Compliance with G7.3.2 is satisfied - Window and door schedule indicated within the elevations which has been assessed to the requirements of G7/AS1 and SORGed compliance established
G8: Artificial Light					
G8: Artificial Light: Does the proposal comply with Functional Requirement G8.2 and demonstrate on reasonable grounds that spaces within buildings used by people are provided with adequate artificial lighting (min. 20 lux at floor level) which when activated in the absence of sufficient natural light, will enable safe movement? (Check location of lights and switches at top and bottom of stairs, exit ways and common spaces). LoA -Refer to G8 in reference notes and check limitations carefully		Y	BGn	04/06/2019 05:15 pm	Within the content of the electrical section of the specification i have based my decision that compliance will be achieved for a common dwelling construction proposed for the NZ environment
G9: Electricity					
G9: Electricity: Does the proposal comply with Functional Requirement G9.2 and demonstrate on reasonable grounds that where provided in a building, electrical installations shall be safe for their intended use; and does the proposal confirm that an energy works certificate verifying compliance of the completed installation of appliances and equipment will be provided?					
G9: Electricity - Prompt List:		<u>Y</u>	<u>BGn</u>	<u>04/06/2019 05:15 pm</u>	
1. G9.3.1: Does the proposal demonstrate that the electrical installation shall incorporate systems to: (a) Protect people from contact with parts of the installation which are live during normal operation, and to prevent parts of the installation or other building elements becoming live during fault conditions, (b) Permit the safe isolation of the installation and of electrical fittings and appliances, (c) Safeguard people from excessive temperatures resulting from either normal operation of electrical equipment, or from currents which could exceed the installation rating, (d) Safeguard people from injury which may result from electromechanical stress in electrical components caused by currents in excess of the installation rating, (e) Protect building elements from risk of ignition, impairment of their physical or mechanical properties, or function, due to temperature increases resulting from heat transfer or electric arc, (f) Operate safely in its intended environment, and (g) Safeguard against ignition of the surrounding atmosphere where it is potentially flammable or explosive?		Y	BGn	04/06/2019 05:15 pm	Compliance with G9.3.1, G9.3.2 and G9.3.3 satisfied - As part of the of the requirement of section 43 [3] of the BA04 the energy work within the application forms part of the Building Consent and as required by section 92[4] of the BA04 a energy works certificate is required to be supplied with the CCC application hence i am SORGed compliance of NZBC has been and will be established
2. G9.3.2: Does the proposal demonstrate that an electrical installation supplying an essential service shall: (a) Maintain the supply for a time appropriate to that service, and (b) Be capable of being isolated from the supply system, independently of the remainder of the installation?		Y	BGn	04/06/2019 05:15 pm	Refer to the comment made above for compliance
3. G9.3.3: Does the proposal demonstrate that an electrical installation connected to an electrical supply system, shall contain safeguards which protect the safety features of the external supply?		Y	BGn	04/06/2019 05:15 pm	Refer to the comment made above for compliance
4. G9.3.4: Does the proposal demonstrate that in buildings intended for use by people with disabilities, light switches and plug socket outlets shall be accessible and usable? LoA - this does not apply to Housing, Outbuildings, Ancillary Buildings, and to Industrial Buildings where no more than 10 people are employed.		N/A	BGn	04/06/2019 05:15 pm	This question does not apply to this Project.
G10: Piped Services & G11: Gas As An Energy Source					
G10 & G11: Piped Services & Gas as an Energy Source (R1 - R3 APPLICATIONS): Does the design demonstrate that provisions of G10.2 and G11.2 will be satisfied; and that an energy works certificate verifying compliance of the completed installation of appliances and equipment will be provided?					
G10 & G11: Piped Services & Gas as an Energy Source (R1 - R3 APPLICATIONS) - Prompt List:		<u>N</u>	<u>BGn</u>	<u>04/06/2019 05:19 pm</u>	
1. Documentation: Are appropriate and complying Standards for materials and installation referenced (AS/NZS 5601.1)?		Y	BGn	04/06/2019 05:19 pm	New Rinnai INFINITY A series continuous flow gas water heater proposed - no specification provided but a energy works certificate will be required to achieve compliance of section 92 [4] of the BA04 for the CCC app which will SORGed me that compliance of the Code will be achieved
2. Location: Does the location and installation of the gas cylinders and appliances demonstrate compliance with AS/NZS 5601.1?		N	BGn	04/06/2019 05:19 pm	Please provide further information to demonstrate that the location and installation of the gas cylinders and appliances complies with AS/NZS 5601.1 - Cl. 2.6 and Appendix J in relation to the open sub-floor space

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3. Penetrations: Are details provided to demonstrate that penetrations through the building envelope will satisfy provisions of E2 - (i.e. weather tight and durable)?	Y	BGn	04/06/2019 05:19 pm	Refer to the comments and questions [if any] raised within the E2 section of this checklist for compliance
G10 & G11: Piped Services & Gas as an Energy Source (R1 - R3 APPLICATIONS) - Prompt List:	<u>Y</u>	<u>BGn</u>	<u>11/06/2019 01:57 pm</u>	RFI Response
1. Documentation: Are appropriate and complying Standards for materials and installation referenced (AS/NZS 5601.1)?	Y	BGn	11/06/2019 01:57 pm	New Rinnai INFINITY A series continuous flow gas water heater proposed - no specification provided but a energy works certificate will be required to achieve compliance of section 92 [4] of the BA04 for the CCC app which will SORged me that compliance of the Code will be achieved
2. Location: Does the location and installation of the gas cylinders and appliances demonstrate compliance with AS/NZS 5601.1?	Y	BGn	11/06/2019 01:57 pm	Please provide further information to demonstrate that the location and installation of the gas cylinders and appliances complies with AS/NZS 5601.1 - Cl. 2.6 and Appendix J in relation to the open sub-floor space Resolved - within the RFI response the designer has revised the elevations [sheet 7] to now indicate the sub-floor space blocked off as required
3. Penetrations: Are details provided to demonstrate that penetrations through the building envelope will satisfy provisions of E2 - (i.e. weather tight and durable)?	Y	BGn	11/06/2019 01:57 pm	Refer to the comments and questions [if any] raised within the E2 section of this checklist for compliance
G12: Water Supplies				
G12: Water Supply: Does the proposal comply with Functional Requirement G12.2 and demonstrate on reasonable grounds that buildings provided with water outlets, sanitary fixtures or sanitary appliances have safe and adequate water supplies?				
G12: Water Supply - Prompt List:	<u>N</u>	<u>BGn</u>	<u>05/06/2019 08:16 am</u>	
1. G12.3.1: (Potable Water) - Does the proposal demonstrate that water intended for human consumption, food preparation, utensil washing or oral hygiene is potable? Apply Advice Note AN 14 if the potable water supply is not provided by a NUO (network utility operator).	N/A	BGn	05/06/2019 08:16 am	This question does not apply to this Project.
2. G12.3.2: (Potable Water Protection) - Does the proposal demonstrate that the potable water supply system will be: (a) Protected from contamination, (b) Installed in a manner which avoids the likelihood of contamination within the system and the water main, and (c) Installed using components that will not contaminate the water?	N/A	BGn	05/06/2019 08:16 am	This question does not apply to this Project.
3. G12.3.3: (Non-Potable Water) - Does the proposal demonstrate that a non-potable water supply system used for personal hygiene will be installed in a manner that avoids the likelihood of illness or injury being caused by the system?	N	BGn	05/06/2019 08:16 am	Please provide the manufacturers installation specification for the required UV filtration system for the potable water supply and clearly indicate where it is to be installed so compliance can be assessed
4. G12.3.4: (Non-Potable Pipework) - Does the proposal demonstrate that water pipes and outlets provided with non-potable water are clearly identified?	Y	BGn	05/06/2019 08:16 am	Compliance with G12.3.4 is satisfied - pipework and outlets containing non-potable water are identified as they are use for the domestic sprinkler system proposed - no need to label for the proposed use
5. G12.3.5: (Hot Water) - Does the proposal demonstrate that sanitary fixtures and sanitary appliances will be provided with hot water when intended to be used for: (a) utensil washing; and (b) personal washing, showering or bathing? LoA - G12.3.5 (b) only applies to housing, retirement homes, early childhood centers - Therefore; buildings that are not classified as housing, retirement homes or early childhood centers still require hot water if utensil washing will occur.	Y	BGn	05/06/2019 08:16 am	Compliance with G12.3.5 is satisfied - hot water supply provided to sanitary fixtures and appliances via a proposed HWC and a gas system
6. G12.3.6: (Temperature Control) - Does the proposal demonstrate that where hot water is provided to sanitary fixtures and sanitary appliances or used for personal hygiene, it will be delivered at a temperature that avoids the likelihood of scalding?	Y	BGn	05/06/2019 08:16 am	Compliance with G12.3.6 is satisfied - temperature control is provided to the hot water supply - regulated via the gas setting system and the notes on sheet 6 confirm the installation of a tempering valve to the HWC
7. G12.3.7: (Water Supply System) - Does the proposal demonstrate that water supply systems will be installed in a manner that: (a) Pipes water to sanitary fixtures and sanitary appliances at flow rates adequate for the correct functioning of those fixtures and appliances under normal conditions, (b) Avoids the likelihood of leakage, (c) Allows reasonable access to components likely to need maintenance, and (d) Allows the system and any backflow prevention devices to be isolated for testing and maintenance?	Y	BGn	05/06/2019 08:16 am	Compliance with G12.3.7 is satisfied - applicable verification of construction and AS/NZS standards identified within the specification to verify compliance of construction

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8. G12.3.8: (Pressure Relief) - Does the proposal demonstrate that vessels used for producing or storing hot water are provided with safety devices that: (a) Relieve excessive pressure during both normal and abnormal conditions, and (b) limit temperatures to avoid the likelihood of flash steam production in the event of rupture? tick N/A if the proposal uses a califont system i.e. Infinity Gas Water Heater.		Y	BGn	05/06/2019 08:16 am	Compliance with G12.3.8 is satisfied - pressure relief is indicated within the notes on sheet 6
9. G12.3.9: (Legionella) - Does the proposal demonstrate that a hot water system must be capable of being controlled to prevent the growth of legionella bacteria? tick N/A if the proposal uses a califont system i.e. Infinity Gas Water Heater.		Y	BGn	05/06/2019 08:16 am	Compliance with G12.3.9 is satisfied - hot water temperature is set to min 60C. for the HWC
10. G12.3.10: (Accessibility) - Does the proposal demonstrate that water supply taps are accessible and usable for people with disabilities? LoA - only applies to buildings identified under section 47 A of the Act.		N/A	BGn	05/06/2019 08:16 am	This question does not apply to this Project.
Supplementary Processing Notes:			BGn	05/06/2019 08:16 am	Item 3: one of the tank storage [23000l] is to be used for the sprinkler system as well as the feed for the water supply - first flush directors indicated before the feed to the tank.
G12: Water Supply - Prompt List:		N	BGn	05/06/2019 04:27 pm	
1. G12.3.1: (Potable Water) - Does the proposal demonstrate that water intended for human consumption, food preparation, utensil washing or oral hygiene is potable? Apply Advice Note AN 14 if the potable water supply is not provided by a NUO (network utility operator).		N/A	BGn	05/06/2019 04:27 pm	This question does not apply to this Project.
2. G12.3.2: (Potable Water Protection) - Does the proposal demonstrate that the potable water supply system will be: (a) Protected from contamination, (b) Installed in a manner which avoids the likelihood of contamination within the system and the water main, and (c) Installed using components that will not contaminate the water?		N/A	BGn	05/06/2019 04:27 pm	This question does not apply to this Project.
3. G12.3.3: (Non-Potable Water) - Does the proposal demonstrate that a non-potable water supply system used for personal hygiene will be installed in a manner that avoids the likelihood of illness or injury being caused by the system?		N	BGn	05/06/2019 04:27 pm	Please provide the manufacturers installation specification for the required UV filtration system for the potable water supply and clearly indicate where it is to be installed so compliance can be assessed
4. G12.3.4: (Non-Potable Pipework) - Does the proposal demonstrate that water pipes and outlets provided with non-potable water are clearly identified?		Y	BGn	05/06/2019 04:27 pm	Compliance with G12.3.4 is satisfied - pipework and outlets containing non-potable water are identified as they are use for the domestic sprinkler system proposed - no need to label for the proposed use
5. G12.3.5: (Hot Water) - Does the proposal demonstrate that sanitary fixtures and sanitary appliances will be provided with hot water when intended to be used for: (a) utensil washing; and (b) personal washing, showering or bathing? LoA - G12.3.5 (b) only applies to housing, retirement homes, early childhood centers - Therefore; buildings that are not classified as housing, retirement homes or early childhood centers still require hot water if utensil washing will occur.		Y	BGn	05/06/2019 04:27 pm	Compliance with G12.3.5 is satisfied - hot water supply provided to sanitary fixtures and appliances via a proposed HWC and a gas system
6. G12.3.6: (Temperature Control) - Does the proposal demonstrate that where hot water is provided to sanitary fixtures and sanitary appliances or used for personal hygiene, it will be delivered at a temperature that avoids the likelihood of scalding?		Y	BGn	05/06/2019 04:27 pm	Compliance with G12.3.6 is satisfied - temperature control is provided to the hot water supply - regulated via the gas setting system and the notes on sheet 6 confirm the installation of a tempering valve to the HWC
7. G12.3.7: (Water Supply System) - Does the proposal demonstrate that water supply systems will be installed in a manner that: (a) Pipes water to sanitary fixtures and sanitary appliances at flow rates adequate for the correct functioning of those fixtures and appliances under normal conditions, (b) Avoids the likelihood of leakage, (c) Allows reasonable access to components likely to need maintenance, and (d) Allows the system and any backflow prevention devices to be isolated for testing and maintenance?		Y	BGn	05/06/2019 04:27 pm	Compliance with G12.3.7 is satisfied - applicable verification of construction and AS/NZS standards identified within the specification to verify compliance of construction
8. G12.3.8: (Pressure Relief) - Does the proposal demonstrate that vessels used for producing or storing hot water are provided with safety devices that: (a) Relieve excessive pressure during both normal and abnormal conditions, and (b) limit temperatures to avoid the likelihood of flash steam production in the event of rupture? tick N/A if the proposal uses a califont system i.e. Infinity Gas Water Heater.		Y	BGn	05/06/2019 04:27 pm	Compliance with G12.3.8 is satisfied - pressure relief is indicated within the notes on sheet 6
9. G12.3.9: (Legionella) - Does the proposal demonstrate that a hot water system must be capable of being controlled to prevent the growth of legionella bacteria? tick N/A if the proposal uses a califont system i.e. Infinity Gas Water Heater.		Y	BGn	05/06/2019 04:27 pm	Compliance with G12.3.9 is satisfied - hot water temperature is set to min 60C. for the HWC

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10. G12.3.10: (Accessibility) - Does the proposal demonstrate that water supply taps are accessible and usable for people with disabilities? LoA - only applies to buildings identified under section 47 A of the Act.	N/A	BGn	05/06/2019 04:27 pm	This question does not apply to this Project.
Supplementary Processing Notes:		BGn	05/06/2019 04:27 pm	Item 3: Waiting on the RFI response in relation to the location of the filter system to understand whether the potable water will be contaminated with the non-potable for the sprinkler system Note: The sprinkler system has not been assessed for compliance as it is not a Code requirement
G12: Water Supply - Prompt List:	N	BGn	11/06/2019 02:19 pm	RFI Response
1. G12.3.1: (Potable Water) - Does the proposal demonstrate that water intended for human consumption, food preparation, utensil washing or oral hygiene is potable? Apply Advice Note AN 14 if the potable water supply is not provided by a NUO (network utility operator).	N/A	BGn	11/06/2019 02:19 pm	This question does not apply to this Project.
2. G12.3.2: (Potable Water Protection) - Does the proposal demonstrate that the potable water supply system will be: (a) Protected from contamination, (b) Installed in a manner which avoids the likelihood of contamination within the system and the water main, and (c) Installed using components that will not contaminate the water?	N/A	BGn	11/06/2019 02:19 pm	This question does not apply to this Project.
3. G12.3.3: (Non-Potable Water) - Does the proposal demonstrate that a non-potable water supply system used for personal hygiene will be installed in a manner that avoids the likelihood of illness or injury being caused by the system?	N	BGn	11/06/2019 02:19 pm	Please provide the manufacturer's installation specification for the required UV filtration system for the potable water supply and clearly indicate where it is to be installed so compliance can be assessed. Not resolved - within the RFI response you have indicated the location of the first flush diverter and the UV filter system and provided the specification. But a question is still outstanding in relation to how the cross contamination from the sprinkler system to the potable water to dwelling is dealt with. The design does not clarify backflow prevention at the junction nor does it confirm that the sprinkler system is flushed with the WC within the loop. Please advise
4. G12.3.4: (Non-Potable Pipework) - Does the proposal demonstrate that water pipes and outlets provided with non-potable water are clearly identified?	Y	BGn	11/06/2019 02:19 pm	Compliance with G12.3.4 is satisfied - pipework and outlets containing non-potable water are identified as they are used for the domestic sprinkler system proposed - no need to label for the proposed use
5. G12.3.5: (Hot Water) - Does the proposal demonstrate that sanitary fixtures and sanitary appliances will be provided with hot water when intended to be used for: (a) utensil washing; and (b) personal washing, showering or bathing? LoA - G12.3.5 (b) only applies to housing, retirement homes, early childhood centers - Therefore, buildings that are not classified as housing, retirement homes or early childhood centers still require hot water if utensil washing will occur.	Y	BGn	11/06/2019 02:19 pm	Compliance with G12.3.5 is satisfied - hot water supply provided to sanitary fixtures and appliances via a proposed HWC and a gas system
6. G12.3.6: (Temperature Control) - Does the proposal demonstrate that where hot water is provided to sanitary fixtures and sanitary appliances or used for personal hygiene, it will be delivered at a temperature that avoids the likelihood of scalding?	Y	BGn	11/06/2019 02:19 pm	Compliance with G12.3.6 is satisfied - temperature control is provided to the hot water supply - regulated via the gas setting system and the notes on sheet 6 confirm the installation of a tempering valve to the HWC
7. G12.3.7: (Water Supply System) - Does the proposal demonstrate that water supply systems will be installed in a manner that: (a) Pipes water to sanitary fixtures and sanitary appliances at flow rates adequate for the correct functioning of those fixtures and appliances under normal conditions, (b) Avoids the likelihood of leakage, (c) Allows reasonable access to components likely to need maintenance, and (d) Allows the system and any backflow prevention devices to be isolated for testing and maintenance?	Y	BGn	11/06/2019 02:19 pm	Compliance with G12.3.7 is satisfied - applicable verification of construction and AS/NZS standards identified within the specification to verify compliance of construction
8. G12.3.8: (Pressure Relief) - Does the proposal demonstrate that vessels used for producing or storing hot water are provided with safety devices that: (a) Relieve excessive pressure during both normal and abnormal conditions, and (b) limit temperatures to avoid the likelihood of flash steam production in the event of rupture? tick N/A if the proposal uses a califont system i.e. Infinity Gas Water Heater.	Y	BGn	11/06/2019 02:19 pm	Compliance with G12.3.8 is satisfied - pressure relief is indicated within the notes on sheet 6
9. G12.3.9: (Legionella) - Does the proposal demonstrate that a hot water system must be capable of being controlled to prevent the growth of legionella bacteria? tick N/A if the proposal uses a califont system i.e. Infinity Gas Water Heater.	Y	BGn	11/06/2019 02:19 pm	Compliance with G12.3.9 is satisfied - hot water temperature is set to min 60C. for the HWC

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10. G12.3.10: (Accessibility) - Does the proposal demonstrate that water supply taps are accessible and usable for people with disabilities? LoA - only applies to buildings identified under section 47 A of the Act.	N/A	BGn	11/06/2019 02:19 pm	This question does not apply to this Project.
G12: Water Supply - Prompt List:	Y	BGn	12/06/2019 02:21 pm	RFI Response
1. G12.3.1: (Potable Water) - Does the proposal demonstrate that water intended for human consumption, food preparation, utensil washing or oral hygiene is potable? Apply Advice Note AN 14 if the potable water supply is not provided by a NUO (network utility operator).	N/A	BGn	12/06/2019 02:21 pm	This question does not apply to this Project.
2. G12.3.2: (Potable Water Protection) - Does the proposal demonstrate that the potable water supply system will be: (a) Protected from contamination, (b) Installed in a manner which avoids the likelihood of contamination within the system and the water main, and (c) Installed using components that will not contaminate the water?	N/A	BGn	12/06/2019 02:21 pm	This question does not apply to this Project.
3. G12.3.3: (Non-Potable Water) - Does the proposal demonstrate that a non-potable water supply system used for personal hygiene will be installed in a manner that avoids the likelihood of illness or injury being caused by the system?	Y	BGn	12/06/2019 02:21 pm	<p>Please provide the manufacturers installation specification for the required UV filtration system for the potable water supply and clearly indicate where it is to be installed so compliance can be assessed .</p> <p>Not resolved - within the RFI response you have indicated the location of the first flush diverter and the UV filter system and provided the specification. But a question is still outstanding in relation to how the cross contamination from the sprinkler system to the potable water to dwelling is dealt with. The design does not clarify backflow prevention at the junction nor does it confirm that the sprinkler system is flushed with the WC within the loop. Please advise</p> <p>Resolved - additional information now documented within the plans to now establish compliance</p>
4. G12.3.4: (Non-Potable Pipework) - Does the proposal demonstrate that water pipes and outlets provided with non-potable water are clearly identified?	Y	BGn	12/06/2019 02:21 pm	Compliance with G12.3.4 is satisfied - pipework and outlets containing non-potable water are identified as they are use for the domestic sprinkler system proposed - no need to label for the proposed use
5. G12.3.5: (Hot Water) - Does the proposal demonstrate that sanitary fixtures and sanitary appliances will be provided with hot water when intended to be used for: (a) utensil washing; and (b) personal washing, showering or bathing? LoA - G12.3.5 (b) only applies to housing, retirement homes, early childhood centers - Therefore; buildings that are not classified as housing, retirement homes or early childhood centers still require hot water if utensil washing will occur.	Y	BGn	12/06/2019 02:21 pm	Compliance with G12.3.5 is satisfied - hot water supply provided to sanitary fixtures and appliances via a proposed HWC and a gas system
6. G12.3.6: (Temperature Control) - Does the proposal demonstrate that where hot water is provided to sanitary fixtures and sanitary appliances or used for personal hygiene, it will be delivered at a temperature that avoids the likelihood of scalding?	Y	BGn	12/06/2019 02:21 pm	Compliance with G12.3.6 is satisfied - temperature control is provided to the hot water supply - regulated via the gas setting system and the notes on sheet 6 confirm the installation of a tempering valve to the HWC
7. G12.3.7: (Water Supply System) - Does the proposal demonstrate that water supply systems will be installed in a manner that: (a) Pipes water to sanitary fixtures and sanitary appliances at flow rates adequate for the correct functioning of those fixtures and appliances under normal conditions, (b) Avoids the likelihood of leakage, (c) Allows reasonable access to components likely to need maintenance, and (d) Allows the system and any backflow prevention devices to be isolated for testing and maintenance?	Y	BGn	12/06/2019 02:21 pm	Compliance with G12.3.7 is satisfied - applicable verification of construction and AS/NZS standards identified within the specification to verify compliance of construction
8. G12.3.8: (Pressure Relief) - Does the proposal demonstrate that vessels used for producing or storing hot water are provided with safety devices that: (a) Relieve excessive pressure during both normal and abnormal conditions, and (b) limit temperatures to avoid the likelihood of flash steam production in the event of rupture? tick N/A if the proposal uses a califont system i.e. Infinity Gas Water Heater.	Y	BGn	12/06/2019 02:21 pm	Compliance with G12.3.8 is satisfied - pressure relief is indicated within the notes on sheet 6
9. G12.3.9: (Legionella) - Does the proposal demonstrate that a hot water system must be capable of being controlled to prevent the growth of legionella bacteria? tick N/A if the proposal uses a califont system i.e. Infinity Gas Water Heater.	Y	BGn	12/06/2019 02:21 pm	Compliance with G12.3.9 is satisfied - hot water temperature is set to min 60C. for the HWC
10. G12.3.10: (Accessibility) - Does the proposal demonstrate that water supply taps are accessible and usable for people with disabilities? LoA - only applies to buildings identified under section 47 A of the Act.	N/A	BGn	12/06/2019 02:21 pm	This question does not apply to this Project.

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
G13: Sanitary Plumbing & Foul Water Drainage					
G13: Foul Water: Does the proposal comply with G13.2 and demonstrate on reasonable grounds that buildings in which sanitary fixtures and sanitary appliances using water-borne waste disposal are installed will be provided with: (a) an adequate plumbing and draining system to carry foul water to appropriate outfalls, and (b) if no sewer is available, an adequate system for the storage, treatment, and disposal of foul water?					
G13: Foul Water - Prompt List:		Y	BGn	05/06/2019 08:18 am	
1. G13.3.1: (Sanitary Plumbing System) - Does the proposal demonstrate that the system will be constructed to: (a) Convey foul water from buildings to a drainage system, (b) Avoid the likelihood of blockage and leakage, (c) Avoid the likelihood of foul air and gases entering buildings, and (d) provide reasonable access for maintenance and clearing blockages?		Y	BGn	05/06/2019 08:18 am	Drainage plan provided and waste sizing and grade for wastes 40 and 50mm at 1:40 and WC 100mm at 1:40in accordance with the requirements of G13/AS1 - venting provided to the WCs as the main drain is proposed at 1:100
2. G13.3.2: (Foul Water Drainage System) - Does the proposal demonstrate that the system will: (a) Convey foul water to an appropriate outfall, (b) Be constructed to avoid the likelihood of blockage, (c) Be supported, jointed and protected in a way that will avoid the likelihood of penetration of roots or the entry of ground water, (d) Be provided with reasonable access for maintenance and clearing blockages, (e) Be ventilated to avoid the likelihood of foul air and gases accumulating in the drainage system and sewer, and (f) Be constructed to avoid the likelihood of damage from superimposed loads or normal ground movement?		N/A	BGn	05/06/2019 08:18 am	This question does not apply to this Project.
3. G13.3.3: (Sewer Connection Available) - Does the proposal demonstrate that the connection will be made in a manner that avoids damage to the sewer and to the approval of the network utility operator?		N/A	BGn	05/06/2019 08:18 am	This question does not apply to this Project.
4. G13.3.4: (Sewer Connection Unavailable) - Does the proposal demonstrate that facilities for the storage, treatment, and disposal of foul water will be constructed: (a) With adequate capacity for the volume of foul water and the frequency of disposal, (b) With adequate vehicle access for collection if required, (c) To avoid the likelihood of contamination of any potable water supplies in compliance with Clause G12 Water Supplies, (d) To avoid the likelihood of contamination of soils, ground water, and waterways except as permitted under the Resource Management Act 1991, (e) From materials that are impervious both to the foul water for which disposal is required, and to water, (f) To avoid the likelihood of blockage and leakage, (g) To avoid the likelihood of foul air and gases accumulating within or entering into buildings, (h) To avoid the likelihood of unauthorized access by people, (i) To permit easy cleaning and maintenance, (j) To avoid the likelihood of damage from superimposed loads or normal ground movement, and (k) If those facilities are buried underground, to resist hydrostatic uplift pressures? SDC - If this question is ticked please add advice note AN 15a to Form 5.		N/A	BGn	05/06/2019 08:18 am	This question does not apply to this Project.
G13: Existing Drains: Are there any existing drains being built over or connected into, and if so, does the proposal provide verification that these are in sound condition and will be after construction, and if being connected into; are these accessible?		N/A	BGn	05/06/2019 08:16 am	This question does not apply to this Project.
G13: Redundant Drains or Septic Tanks: Are there any drains or existing septic tanks on site that will become redundant as a result of the proposed building work; and if so ensure that this is clearly documented?		N/A	BGn	05/06/2019 08:16 am	This question does not apply to this Project.
G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson: Does the proposal demonstrate compliance with G13.2 and G13/VM 4 Foul Water: Onsite Disposal? Note: VM 4 provides for onsite disposal designs for the treatment of foul water for flow rates up to a maximum of 14,000 liters/ week from a population equivalent of up to 10 persons (A dwelling unit accommodating more than 10 persons is subject to Specific Engineer Design and is outside of VM 4).					
G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson - Prompt List:		SI	HLn	30/04/2019 09:43 am	(no comments)

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
1. Scope: Is the solution within the scope of G13/ VM4 and is the design flow volume nominated? Note: VM 4 provides for onsite disposal designs for the treatment of foul water for flow rates up to a maximum of 14,000 liters/ week from a population equivalent of up to 10 persons (A dwelling unit accommodating more than 10 persons is subject to Specific Engineer Design and is outside of VM 4).		HLn	30/04/2019 09:43 am	
2. Section 75: Is the on-site disposal system contained and constructed within a single allotment?		HLn	30/04/2019 09:43 am	
3. Plans: Are all components of the wastewater system located on the the site plan and floor plans and shown to scale and dimensioned? (ensure that the plans show the floor plans of all buildings serviced by the proposed waste water system and reserve fields).		HLn	30/04/2019 09:43 am	
4. Design Verification: Is the design accompanied by a Statement of Design from a suitably qualified person confirming compliance with AS/NZS 1547: 2012? (PS1 from CPEng or IPENZ)		HLn	30/04/2019 09:43 am	
5. Design Flow Allowances: Have the correct design flow allowances been applied for the proposed water source (see AS/NZS 1547:2012 Table H3 or H4 - onsite / tanks/ reticulated / bore water)?		HLn	30/04/2019 09:43 am	
6. Tank Construction: Is the type of tank construction identified and does it satisfy provisions of AS/NZS 1546.1?		HLn	30/04/2019 09:43 am	
7. System Dispersal: Is a comply description of the system provided? (Primary / secondary / tertiary, disposal system bed/ trench / pressure compensated drip irrigation or mound)		HLn	30/04/2019 09:43 am	
8. System Treatment: Does the system demonstrate compliance with AS/NZS 1547:2012 para 1.2.1.1? (OSET or EU or EPA)		HLn	30/04/2019 09:43 am	
8. Primary System - Tank Size: Does the tank size comply with NZS AS/NZS 1547: 2012 Appendix J Tables?		HLn	30/04/2019 09:43 am	
9. Secondary System - Method: Is the method of producing secondary quality effluent identified? (e.g. peat, sand, wetland, AWTS)		HLn	30/04/2019 09:43 am	
10. Tertiary System: Is the type of tertiary system nominated and complying?		HLn	30/04/2019 09:43 am	
11. Disinfection: Is the type of disinfection system nominated and complying?		HLn	30/04/2019 09:43 am	
12. Dispersal System: Does the dispersal system comply with the appropriate reference in Appendix L of AS/NZS 1547:2012? (Trenches and Beds - AS/NZS 1547:2012 Figures L 1-5, ETA/ ETS Figures L6 and L7, Irrigation systems M1-M3, Mounds N1)		HLn	30/04/2019 09:43 am	
13. Operational and Management Plan: Does the plan demonstrate compliance? (refer AS/NZS 1547:2012 Tables J 1-3)		HLn	30/04/2019 09:43 am	
14. Water Conservation: Do the water reduction fixtures comply with AS/NZS 1547:2012 Table H3, Note 3?		HLn	30/04/2019 09:43 am	
15. Soil and Site Evaluation: Does the evaluation demonstrate compliance with AS/NZS 1547:2012 Fig B1 and para D3.1.1 and is this supported with photographs?		HLn	30/04/2019 09:43 am	
16. Separation from Water Sources: Does the solution demonstrate compliance with AS/NZS 1547:2012 Tables R1 & R2?		HLn	30/04/2019 09:43 am	
17. Design Loading Rate / Design Irrigation Rate: Do these demonstrate compliance with AS/NZS 1547:2012 Tables L1, M1 and N1?		HLn	30/04/2019 09:43 am	
18. Slope / Levels: Do these demonstrate compliance with AS/NZS 1547: 2012 Tables M2?		HLn	30/04/2019 09:43 am	
19. Protection: Is protection of the effluent field compliant with AS/NZS 1547: 2012 section 5.5.3.7?		HLn	30/04/2019 09:43 am	
G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson - Prompt List:	N	RCx	01/05/2019 11:11 am	
1. Scope: Is the solution within the scope of G13/ VM4 and is the design flow volume nominated? Note: VM 4 provides for onsite disposal designs for the treatment of foul water for flow rates up to a maximum of 14,000 liters/ week from a population equivalent of up to 10 persons (A dwelling unit accommodating more than 10 persons is subject to Specific Engineer Design and is outside of VM 4).	Y	RCx	01/05/2019 11:11 am	Scope: The solution is within the scope of G13/ VM4 and the design flow volume is nominated.
2. Section 75: Is the on-site disposal system contained and constructed within a single allotment?	N/A	RCx	01/05/2019 11:11 am	This question does not apply to this project.

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
3. Plans: Are all components of the wastewater system located on the the site plan and floor plans and shown to scale and dimensioned? (ensure that the plans show the floor plans of all buildings serviced by the proposed waste water system and reserve fields).	N	RCx	01/05/2019 11:11 am	Plans: The plans provided with this consent clearly show a 4 bedroom dwelling and Sleep out, however the first paragraph in the report describes a 3 bedroom dwelling, 1 bedroom Unit and a Sleep out, please align the written report description with the plans.
4. Design Verification: Is the design accompanied by a Statement of Design from a suitably qualified person confirming compliance with AS/NZS 1547:2012? (PS1 from CPEng or IPENZ)	Y	RCx	01/05/2019 11:11 am	Design Verification: The design is accompanied by a Statement of Design from a suitably qualified person confirming compliance with AS/NZS 1547:2012? (PS1 from CPEng or IPENZ)
5. Design Flow Allowances: Have the correct design flow allowances been applied for the proposed water source (see AS/NZS 1547:2012 Table H3 or H4 - onsite / tanks/ reticulated / bore water)?	Y	RCx	01/05/2019 11:11 am	Design Flow Allowances: The correct design flow allowances have been applied for the proposed water source (see AS/NZS 1547:2012 Table H3 or H4 - onsite / tanks/ reticulated / bore water)
6. Tank Construction: Is the type of tank construction identified and does it satisfy provisions of AS/NZS 1546.1?	Y	RCx	01/05/2019 11:11 am	Tank Construction: The type of tank construction is identified and satisfies provisions of AS/NZS 1546.1 5m3 Alpha Precast
7. System Dispersal: Is a comply description of the system provided? (Primary / secondary / tertiary, disposal system bed/ trench / pressure compensated drip irrigation or mound)	N	RCx	01/05/2019 11:11 am	System Dispersal: Please show how the Cross Section drawing supplied details a coverage of 150mm for the inlet pipe to the AES system complies with Clause G13 Figure 7 drawing B which requires a minimum cover of 375mm.
8. System Treatment: Does the system demonstrate compliance with AS/NZS 1547:2012 para 1.2.1.1? (OSET or EU or EPA)	Y	RCx	01/05/2019 11:11 am	System Treatment: The system demonstrates compliance with AS/NZS 1547:2012 para 1.2.1.1 (OSET or EU or EPA) AES vertical sand filter with extension bed
8. Primary System - Tank Size: Does the tank size comply with NZS AS/NZS 1547: 2012 Appendix J Tables?	Y	RCx	01/05/2019 11:11 am	Primary System - Tank Size complies with NZS AS/NZS 1547: 2012 Appendix J Tables
9. Secondary System - Method: Is the method of producing secondary quality effluent identified? (e.g. peat, sand, wetland, AWTS)	Y	RCx	01/05/2019 11:11 am	Secondary System - The method of producing secondary quality effluent is identified (e.g. peat, sand, wetland, AWTS)
10. Tertiary System: Is the type of tertiary system nominated and complying?	N/A	RCx	01/05/2019 11:11 am	This question does not apply to this project.
11. Disinfection: Is the type of disinfection system nominated and complying?	N/A	RCx	01/05/2019 11:11 am	This question does not apply to this project.
12. Dispersal System: Does the dispersal system comply with the appropriate reference in Appendix L of AS/NZS 1547:2012? (Trenches and Beds - AS/NZS 1547:2012 Figures L 1-5, ETA/ ETS Figures L6 and L7, Irrigation systems M1-M3, Mounds N1)	Y	RCx	01/05/2019 11:11 am	Dispersal System: The dispersal system complies with the appropriate reference in Appendix L of AS/NZS 1547:2012. (Trenches and Beds - AS/NZS 1547:2012 Figures L 1-5, ETA/ ETS Figures L6 and L7, Irrigation systems M1-M3, Mounds N1)
13. Operational and Management Plan: Does the plan demonstrate compliance? (refer AS/NZS 1547:2012 Tables J 1-3)	Y	RCx	01/05/2019 11:11 am	Operational and Management Plan: The plan demonstrates compliance (refer AS/NZS 1547:2012 Tables J 1-3)
14. Water Conservation: Do the water reduction fixtures comply with AS/NZS 1547:2012 Table H3, Note 3?	Y	RCx	01/05/2019 11:11 am	Water Conservation: The water reduction fixtures comply with AS/NZS 1547:2012 Table H3, Note 3.
15. Soil and Site Evaluation: Does the evaluation demonstrate compliance with AS/NZS 1547:2012 Fig B1 and para D3.1.1 and is this supported with photographs?	Y	RCx	01/05/2019 11:11 am	Soil and Site Evaluation: The evaluation demonstrates compliance with AS/NZS 1547:2012 Fig B1 and para D3.1.1 and this is supported with photographs.
16. Separation from Water Sources: Does the solution demonstrate compliance with AS/NZS 1547:2012 Tables R1 & R2?	Y	RCx	01/05/2019 11:11 am	Separation from Water Sources: The solution demonstrates compliance with AS/NZS 1547:2012 Tables R1 & R2
17. Design Loading Rate / Design Irrigation Rate: Do these demonstrate compliance with AS/NZS 1547:2012 Tables L1, M1 and N1?	Y	RCx	01/05/2019 11:11 am	Design Loading Rate / Design Irrigation Rate: These demonstrate compliance with AS/NZS 1547:2012 Tables L1, M1 and N1
18. Slope / Levels: Do these demonstrate compliance with AS/NZS 1547:2012 Tables M2?	N/A	RCx	01/05/2019 11:11 am	This question does not apply to this project.
19. Protection: Is protection of the effluent field compliant with AS/NZS 1547:2012 section 5.5.3.7?	Y	RCx	01/05/2019 11:11 am	Protection of the effluent field is compliant with AS/NZS 1547:2012 section 5.5.3.7
G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson - Prompt List:	N	RCx	07/05/2019 08:03 am	
1. Scope: Is the solution within the scope of G13/ VM4 and is the design flow volume nominated? Note: VM 4 provides for onsite disposal designs for the treatment of foul water for flow rates up to a maximum of 14,000 liters/ week from a population equivalent of up to 10 persons (A dwelling unit accommodating more than 10 persons is subject to Specific Engineer Design and is outside of VM 4).	Y	RCx	07/05/2019 08:03 am	Scope: The solution is within the scope of G13/ VM4 and the design flow volume is nominated.
2. Section 75: Is the on-site disposal system contained and constructed within a single allotment?	N/A	RCx	07/05/2019 08:03 am	This question does not apply to this project.

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
3. Plans: Are all components of the wastewater system located on the the site plan and floor plans and shown to scale and dimensioned? (ensure that the plans show the floor plans of all buildings serviced by the proposed waste water system and reserve fields).	N	RCx	07/05/2019 08:03 am	Plans: The plans provided with this consent clearly show a 4 bedroom dwelling and Sleep out, however the first paragraph in the report describes a 3 bedroom dwelling, 1 bedroom Unit and a Sleep out, please align the written report description with the plans.
4. Design Verification: Is the design accompanied by a Statement of Design from a suitably qualified person confirming compliance with AS/NZS 1547:2012? (PS1 from CPEng or IPENZ)	Y	RCx	07/05/2019 08:03 am	Design Verification: The design is accompanied by a Statement of Design from a suitably qualified person confirming compliance with AS/NZS 1547:2012? (PS1 from CPEng or IPENZ)
5. Design Flow Allowances: Have the correct design flow allowances been applied for the proposed water source (see AS/NZS 1547:2012 Table H3 or H4 - onsite / tanks/ reticulated / bore water)?	Y	RCx	07/05/2019 08:03 am	Design Flow Allowances: The correct design flow allowances have been applied for the proposed water source (see AS/NZS 1547:2012 Table H3 or H4 - onsite / tanks/ reticulated / bore water)
6. Tank Construction: Is the type of tank construction identified and does it satisfy provisions of AS/NZS 1546.1?	Y	RCx	07/05/2019 08:03 am	Tank Construction: The type of tank construction is identified and satisfies provisions of AS/NZS 1546.1 5m3 Alpha Precast
7. System Dispersal: Is a comply description of the system provided? (Primary / secondary / tertiary, disposal system bed/ trench / pressure compensated drip irrigation or mound)	N	RCx	07/05/2019 08:03 am	System Dispersal: Please show how the Cross Section drawing supplied details a coverage of 150mm for the inlet pipe to the AES system complies with Clause G13 Figure 7 drawing B which requires a minimum cover of 375mm.
8. System Treatment: Does the system demonstrate compliance with AS/NZS 1547:2012 para 1.2.1.1? (OSET or EU or EPA)	Y	RCx	07/05/2019 08:03 am	System Treatment: The system demonstrates compliance with AS/NZS 1547:2012 para 1.2.1.1 (OSET or EU or EPA) AES vertical sand filter with extension bed
8. Primary System - Tank Size: Does the tank size comply with NZS AS/NZS 1547: 2012 Appendix J Tables?	Y	RCx	07/05/2019 08:03 am	Primary System - Tank Size complies with NZS AS/NZS 1547: 2012 Appendix J Tables
9. Secondary System - Method: Is the method of producing secondary quality effluent identified? (e.g. peat, sand, wetland, AWTS)	Y	RCx	07/05/2019 08:03 am	Secondary System - The method of producing secondary quality effluent is identified (e.g. peat, sand, wetland, AWTS)
10. Tertiary System: Is the type of tertiary system nominated and complying?	N/A	RCx	07/05/2019 08:03 am	This question does not apply to this project.
11. Disinfection: Is the type of disinfection system nominated and complying?	N/A	RCx	07/05/2019 08:03 am	This question does not apply to this project.
12. Dispersal System: Does the dispersal system comply with the appropriate reference in Appendix L of AS/NZS 1547:2012? (Trenches and Beds - AS/NZS 1547:2012 Figures L 1-5, ETA/ ETS Figures L6 and L7, Irrigation systems M1-M3, Mounds N1)	Y	RCx	07/05/2019 08:03 am	Dispersal System: The dispersal system complies with the appropriate reference in Appendix L of AS/NZS 1547:2012. (Trenches and Beds - AS/NZS 1547:2012 Figures L 1-5, ETA/ ETS Figures L6 and L7, Irrigation systems M1-M3, Mounds N1)
13. Operational and Management Plan: Does the plan demonstrate compliance? (refer AS/NZS 1547:2012 Tables J 1-3)	Y	RCx	07/05/2019 08:03 am	Operational and Management Plan: The plan demonstrates compliance (refer AS/NZS 1547:2012 Tables J 1-3)
14. Water Conservation: Do the water reduction fixtures comply with AS/NZS 1547:2012 Table H3, Note 3?	Y	RCx	07/05/2019 08:03 am	Water Conservation: The water reduction fixtures comply with AS/NZS 1547:2012 Table H3, Note 3.
15. Soil and Site Evaluation: Does the evaluation demonstrate compliance with AS/NZS 1547:2012 Fig B1 and para D3.1.1 and is this supported with photographs?	Y	RCx	07/05/2019 08:03 am	Soil and Site Evaluation: The evaluation demonstrates compliance with AS/NZS 1547:2012 Fig B1 and para D3.1.1 and this is supported with photographs.
16. Separation from Water Sources: Does the solution demonstrate compliance with AS/NZS 1547:2012 Tables R1 & R2?	Y	RCx	07/05/2019 08:03 am	Separation from Water Sources: The solution demonstrates compliance with AS/NZS 1547:2012 Tables R1 & R2
17. Design Loading Rate / Design Irrigation Rate: Do these demonstrate compliance with AS/NZS 1547:2012 Tables L1, M1 and N1?	Y	RCx	07/05/2019 08:03 am	Design Loading Rate / Design Irrigation Rate: These demonstrate compliance with AS/NZS 1547:2012 Tables L1, M1 and N1
18. Slope / Levels: Do these demonstrate compliance with AS/NZS 1547:2012 Tables M2?	N/A	RCx	07/05/2019 08:03 am	This question does not apply to this project.
19. Protection: Is protection of the effluent field compliant with AS/NZS 1547:2012 section 5.5.3.7?	Y	RCx	07/05/2019 08:03 am	Protection of the effluent field is compliant with AS/NZS 1547:2012 section 5.5.3.7
G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson - Prompt List:	N	RCx	14/05/2019 08:36 am	
1. Scope: Is the solution within the scope of G13/ VM4 and is the design flow volume nominated? Note: VM 4 provides for onsite disposal designs for the treatment of foul water for flow rates up to a maximum of 14,000 liters/ week from a population equivalent of up to 10 persons (A dwelling unit accommodating more than 10 persons is subject to Specific Engineer Design and is outside of VM 4).	Y	RCx	14/05/2019 08:36 am	Scope: The solution is within the scope of G13/ VM4 and the design flow volume is nominated.
2. Section 75: Is the on-site disposal system contained and constructed within a single allotment?	N/A	RCx	14/05/2019 08:36 am	This question does not apply to this project.

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
3. Plans: Are all components of the wastewater system located on the site plan and floor plans and shown to scale and dimensioned? (ensure that the plans show the floor plans of all buildings serviced by the proposed waste water system and reserve fields).	N	RCx	14/05/2019 08:36 am	Plans: The plans provided with this consent clearly show a 4 bedroom dwelling and Sleep out, however the first paragraph in the report describes a 3 bedroom dwelling, 1 bedroom Unit and a Sleep out, please align the written report description with the plans. The AES Calculator provided is for another property, please provide Calculator for this property.
4. Design Verification: Is the design accompanied by a Statement of Design from a suitably qualified person confirming compliance with AS/NZS 1547:2012? (PS1 from CPEng or IPENZ)	Y	RCx	14/05/2019 08:36 am	Design Verification: The design is accompanied by a Statement of Design from a suitably qualified person confirming compliance with AS/NZS 1547:2012? (PS1 from CPEng or IPENZ)
5. Design Flow Allowances: Have the correct design flow allowances been applied for the proposed water source (see AS/NZS 1547:2012 Table H3 or H4 - onsite / tanks/ reticulated / bore water)?	Y	RCx	14/05/2019 08:36 am	Design Flow Allowances: The correct design flow allowances have been applied for the proposed water source (see AS/NZS 1547:2012 Table H3 or H4 - onsite / tanks/ reticulated / bore water)
6. Tank Construction: Is the type of tank construction identified and does it satisfy provisions of AS/NZS 1546.1?	Y	RCx	14/05/2019 08:36 am	Tank Construction: The type of tank construction is identified and satisfies provisions of AS/NZS 1546.1 5m3 Alpha Precast
7. System Dispersal: Is a comply description of the system provided? (Primary / secondary / tertiary, disposal system bed/ trench / pressure compensated drip irrigation or mound)	N	RCx	14/05/2019 08:36 am	System Dispersal: Please show how the Cross Section drawing supplied details a coverage of 150mm for the inlet pipe to the AES system complies with Clause G13 Figure 7 drawing B which requires a minimum cover of 375mm.
8. System Treatment: Does the system demonstrate compliance with AS/NZS 1547:2012 para 1.2.1.1? (OSET or EU or EPA)	Y	RCx	14/05/2019 08:36 am	System Treatment: The system demonstrates compliance with AS/NZS 1547:2012 para 1.2.1.1 (OSET or EU or EPA) AES vertical sand filter with extension bed
8. Primary System - Tank Size: Does the tank size comply with NZS AS/NZS 1547: 2012 Appendix J Tables?	Y	RCx	14/05/2019 08:36 am	Primary System - Tank Size complies with NZS AS/NZS 1547: 2012 Appendix J Tables
9. Secondary System - Method: Is the method of producing secondary quality effluent identified? (e.g. peat, sand, wetland, AWTS)	Y	RCx	14/05/2019 08:36 am	Secondary System - The method of producing secondary quality effluent is identified (e.g. peat, sand, wetland, AWTS)
10. Tertiary System: Is the type of tertiary system nominated and complying?	N/A	RCx	14/05/2019 08:36 am	This question does not apply to this project.
11. Disinfection: Is the type of disinfection system nominated and complying?	N/A	RCx	14/05/2019 08:36 am	This question does not apply to this project.
12. Dispersal System: Does the dispersal system comply with the appropriate reference in Appendix L of AS/NZS 1547:2012? (Trenches and Beds - AS/NZS 1547:2012 Figures L 1-5, ETA/ ETS Figures L6 and L7, Irrigation systems M1-M3, Mounds N1)	Y	RCx	14/05/2019 08:36 am	Dispersal System: The dispersal system complies with the appropriate reference in Appendix L of AS/NZS 1547:2012. (Trenches and Beds - AS/NZS 1547:2012 Figures L 1-5, ETA/ ETS Figures L6 and L7, Irrigation systems M1-M3, Mounds N1)
13. Operational and Management Plan: Does the plan demonstrate compliance? (refer AS/NZS 1547:2012 Tables J 1-3)	Y	RCx	14/05/2019 08:36 am	Operational and Management Plan: The plan demonstrates compliance (refer AS/NZS 1547:2012 Tables J 1-3)
14. Water Conservation: Do the water reduction fixtures comply with AS/NZS 1547:2012 Table H3, Note 3?	Y	RCx	14/05/2019 08:36 am	Water Conservation: The water reduction fixtures comply with AS/NZS 1547:2012 Table H3, Note 3.
15. Soil and Site Evaluation: Does the evaluation demonstrate compliance with AS/NZS 1547:2012 Fig B1 and para D3.1.1 and is this supported with photographs?	Y	RCx	14/05/2019 08:36 am	Soil and Site Evaluation: The evaluation demonstrates compliance with AS/NZS 1547:2012 Fig B1 and para D3.1.1 and this is supported with photographs.
16. Separation from Water Sources: Does the solution demonstrate compliance with AS/NZS 1547:2012 Tables R1 & R2?	Y	RCx	14/05/2019 08:36 am	Separation from Water Sources: The solution demonstrates compliance with AS/NZS 1547:2012 Tables R1 & R2
17. Design Loading Rate / Design Irrigation Rate: Do these demonstrate compliance with AS/NZS 1547:2012 Tables L1, M1 and N1?	Y	RCx	14/05/2019 08:36 am	Design Loading Rate / Design Irrigation Rate: These demonstrate compliance with AS/NZS 1547:2012 Tables L1, M1 and N1
18. Slope / Levels: Do these demonstrate compliance with AS/NZS 1547:2012 Tables M2?	N/A	RCx	14/05/2019 08:36 am	This question does not apply to this project.
19. Protection: Is protection of the effluent field compliant with AS/NZS 1547:2012 section 5.5.3.7?	Y	RCx	14/05/2019 08:36 am	Protection of the effluent field is compliant with AS/NZS 1547:2012 section 5.5.3.7
G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson - Prompt List:	Y	RCx	14/05/2019 04:02 pm	
1. Scope: Is the solution within the scope of G13/ VM4 and is the design flow volume nominated? Note: VM 4 provides for onsite disposal designs for the treatment of foul water for flow rates up to a maximum of 14,000 liters/ week from a population equivalent of up to 10 persons (A dwelling unit accommodating more than 10 persons is subject to Specific Engineer Design and is outside of VM 4).	Y	RCx	14/05/2019 04:02 pm	Scope: The solution is within the scope of G13/ VM4 and the design flow volume is nominated.

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
2. Section 75: Is the on-site disposal system contained and constructed within a single allotment?	N/A	RCx	14/05/2019 04:02 pm	This question does not apply to this project.
3. Plans: Are all components of the wastewater system located on the site plan and floor plans and shown to scale and dimensioned? (ensure that the plans show the floor plans of all buildings serviced by the proposed waste water system and reserve fields).	Y	RCx	14/05/2019 04:02 pm	Plans: The plans provided with this consent clearly show a 4 bedroom dwelling and Sleep out, however the first paragraph in the report describes a 3 bedroom dwelling, 1 bedroom Unit and a Sleep out, please align the written report description with the plans. The AES Calculator provided is for another property, please provide Calculator for this property. Information provided in Version 4 of report
4. Design Verification: Is the design accompanied by a Statement of Design from a suitably qualified person confirming compliance with AS/NZS 1547:2012? (PS1 from CPENG or IPENZ)	Y	RCx	14/05/2019 04:02 pm	Design Verification: The design is accompanied by a Statement of Design from a suitably qualified person confirming compliance with AS/NZS 1547:2012? (PS1 from CPENG or IPENZ)
5. Design Flow Allowances: Have the correct design flow allowances been applied for the proposed water source (see AS/NZS 1547:2012 Table H3 or H4 - onsite / tanks/ reticulated / bore water)?	Y	RCx	14/05/2019 04:02 pm	Design Flow Allowances: The correct design flow allowances have been applied for the proposed water source (see AS/NZS 1547:2012 Table H3 or H4 - onsite / tanks/ reticulated / bore water)
6. Tank Construction: Is the type of tank construction identified and does it satisfy provisions of AS/NZS 1546.1?	Y	RCx	14/05/2019 04:02 pm	Tank Construction: The type of tank construction is identified and satisfies provisions of AS/NZS 1546.1 5m3 Alpha Precast
7. System Dispersal: Is a comply description of the system provided? (Primary / secondary / tertiary, disposal system bed/ trench / pressure compensated drip irrigation or mound)	Y	RCx	14/05/2019 04:02 pm	System Dispersal: Please show how the Cross Section drawing supplied details a coverage of 150mm for the inlet pipe to the AES system complies with Clause G13 Figure 7 drawing B which requires a minimum cover of 375mm. Note added to drawings to comply with G13 for coverage
8. System Treatment: Does the system demonstrate compliance with AS/NZS 1547:2012 para 1.2.1.1? (OSET or EU or EPA)	Y	RCx	14/05/2019 04:02 pm	System Treatment: The system demonstrates compliance with AS/NZS 1547:2012 para 1.2.1.1 (OSET or EU or EPA) AES vertical sand filter with extension bed
8. Primary System - Tank Size: Does the tank size comply with NZS AS/NZS 1547: 2012 Appendix J Tables?	Y	RCx	14/05/2019 04:02 pm	Primary System - Tank Size complies with NZS AS/NZS 1547: 2012 Appendix J Tables
9. Secondary System - Method: Is the method of producing secondary quality effluent identified? (e.g. peat, sand, wetland, AWTS)	Y	RCx	14/05/2019 04:02 pm	Secondary System - The method of producing secondary quality effluent is identified (e.g. peat, sand, wetland, AWTS)
10. Tertiary System: Is the type of tertiary system nominated and complying?	N/A	RCx	14/05/2019 04:02 pm	This question does not apply to this project.
11. Disinfection: Is the type of disinfection system nominated and complying?	N/A	RCx	14/05/2019 04:02 pm	This question does not apply to this project.
12. Dispersal System: Does the dispersal system comply with the appropriate reference in Appendix L of AS/NZS 1547:2012? (Trenches and Beds - AS/NZS 1547:2012 Figures L 1-5, ETA/ ETS Figures L6 and L7, Irrigation systems M1-M3, Mounds N1)	Y	RCx	14/05/2019 04:02 pm	Dispersal System: The dispersal system complies with the appropriate reference in Appendix L of AS/NZS 1547:2012. (Trenches and Beds - AS/NZS 1547:2012 Figures L 1-5, ETA/ ETS Figures L6 and L7, Irrigation systems M1-M3, Mounds N1)
13. Operational and Management Plan: Does the plan demonstrate compliance? (refer AS/NZS 1547:2012 Tables J 1-3)	Y	RCx	14/05/2019 04:02 pm	Operational and Management Plan: The plan demonstrates compliance (refer AS/NZS 1547:2012 Tables J 1-3)
14. Water Conservation: Do the water reduction fixtures comply with AS/NZS 1547:2012 Table H3, Note 3?	Y	RCx	14/05/2019 04:02 pm	Water Conservation: The water reduction fixtures comply with AS/NZS 1547:2012 Table H3, Note 3.
15. Soil and Site Evaluation: Does the evaluation demonstrate compliance with AS/NZS 1547:2012 Fig B1 and para D3.1.1 and is this supported with photographs?	Y	RCx	14/05/2019 04:02 pm	Soil and Site Evaluation: The evaluation demonstrates compliance with AS/NZS 1547:2012 Fig B1 and para D3.1.1 and this is supported with photographs.
16. Separation from Water Sources: Does the solution demonstrate compliance with AS/NZS 1547:2012 Tables R1 & R2?	Y	RCx	14/05/2019 04:02 pm	Separation from Water Sources: The solution demonstrates compliance with AS/NZS 1547:2012 Tables R1 & R2
17. Design Loading Rate / Design Irrigation Rate: Do these demonstrate compliance with AS/NZS 1547:2012 Tables L1, M1 and N1?	Y	RCx	14/05/2019 04:02 pm	Design Loading Rate / Design Irrigation Rate: These demonstrate compliance with AS/NZS 1547:2012 Tables L1, M1 and N1
18. Slope / Levels: Do these demonstrate compliance with AS/NZS 1547: 2012 Tables M2?	N/A	RCx	14/05/2019 04:02 pm	This question does not apply to this project.
19. Protection: Is protection of the effluent field compliant with AS/NZS 1547: 2012 section 5.5.3.7?	Y	RCx	14/05/2019 04:02 pm	Protection of the effluent field is compliant with AS/NZS 1547:2012 section 5.5.3.7

MAIN BUILDING - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
Supplementary Processing Notes:			RCx	14/05/2019 04:02 pm	refer to Version 4 for the consented Design
G15: Solid Waste			BGn	04/06/2019 05:10 pm	Code Clause Disabled: Not applicable for this project.
H: ENERGY EFFICIENCY					
H1: Energy Source: Is the energy for this building sourced from a network operator or a depletable energy resource? If yes, select the tick and proceed to Functional Requirement below. If NO then select N/A and apply N/A to Functional Requirement question below.	Y	BGn	05/06/2019 08:19 am	The energy for this building is sourced from a network operator as it is provided at the boundary as part of the sub-division	
H1: Energy Efficiency: Does the proposal comply with Functional Requirement H1.2 and demonstrate on reasonable grounds that the building will be constructed to achieve an adequate degree of energy efficiency when that energy is used for: (a) Modifying temperature, modifying humidity, providing ventilation, or doing all or any of these things; OR (b) Providing hot water to sanitary fixtures or sanitary appliances, or both; OR (c) Providing artificial lighting?					
H1: Energy Efficiency - Prompt List:	Y	BGn	05/06/2019 08:21 am		
1. H1.3.1 - Thermal Resistance: Does the proposal demonstrate that the building envelope enclosing spaces where the temperature or humidity (or both) are modified, are constructed to provide adequate thermal resistance; and limit uncontrollable airflow? LoA - does not apply to assembly service, industrial, outbuildings or ancillary buildings.	Y	BGn	05/06/2019 08:21 am	Heat loss calculations have been provided for the application within the specification using the calculation method. Satisfied with the data entry into the program and that it reflects the proposed construction R3.6 Pink Batt insulation for the ceiling R2.6 Pink Batt insulation for the walls R1.8 Expol	
2. H1.3.2 - BPI: Does the proposal demonstrate that the building is constructed to ensure that the building performance index (BPI) does not exceed 1.55? LoA - applies to Housing only.	Y	BGn	05/06/2019 08:21 am	Provisions of H1.3.2 are satisfied - Refer to the comment above for compliance	
3. H1.3.3 - Parameters: Does the proposal demonstrate that account is taken of physical conditions likely to affect energy performance, including: (a) The thermal mass of building elements; AND (b) The building orientation and shape; AND (c) The air tightness of the building envelope; AND (d) The heat gains from services, processes and occupants; AND (e) The local climate; AND (f) Heat gains from solar radiation?	Y	BGn	05/06/2019 08:21 am	Provisions of H1.3.3 are satisfied - Refer to the comment above for compliance	
4. H1.3.4 - Hot Water: Does the proposal demonstrate that systems for the heating, storage, or distribution of hot water to and from sanitary fixtures or sanitary appliances; having regard to the energy source used: (a) Limit the energy lost in the heating process; AND (b) Are constructed to limit heat losses from storage vessels and from distribution systems; AND (c) Are constructed to facilitate the efficient use of hot water? LoA - (b) does not apply to individual storage vessels with greater than 700 litre capacity, (c) only applies to housing.	Y	BGn	05/06/2019 08:21 am	Provisions of H1.3.4 are satisfied - compliance has been demonstrated and established via the specification	
5. H1.3.5 - Artificial Lighting: (G8) - Does the proposal demonstrate that artificial lighting fixtures will: (a) Be located and sized to limit energy use, consistent with the intended use of space; AND (b) Be fitted with a means to enable light intensities to be reduced, consistent with reduced activity in the space? LoA - only applies to commercial and communal non-residential with floor area greater than 300 m ² and does not apply to lighting provided solely to meet requirements of F6.	Y	BGn	05/06/2019 08:21 am	Provisions of H1.3.5 are satisfied - compliance has been demonstrated and established via the specification	
6. H1.3.6 - HVAC: Does the proposal demonstrate that HVAC systems will be located, constructed, and installed to: (a) Limit energy use, consistent with the intended use of space; AND (b) Enable them to be maintained to ensure their use of energy remains limited, consistent with the intended use of space? LoA - commercial buildings only.	N/A	BGn	05/06/2019 08:21 am	This question does not apply to this Project.	
Swimming Pools			BGn	05/06/2019 08:08 am	Code Clause Disabled: Not applicable for this project.
HEATING APPLIANCES			BGn	05/06/2019 08:08 am	Code Clause Disabled: Not applicable for this project.
Solid Fuel Burner					
Gas - Liquid Fuel Burning Appliances					
Radiators					
Solar Water Heater		BGn	05/06/2019 08:08 am	Code Clause Disabled: Not applicable for this project.	
DETACHED GARAGE		BGn	05/06/2019 08:08 am	Code Clause Disabled: Not applicable for this project.	
Retaining Walls		BGn	05/06/2019 08:08 am	Code Clause Disabled: Not applicable for this project.	

MAIN BUILDING - R2 - DETACHED DWELLING - Code Clause Management History			
Code Clause	Initials	Date	Reason/Notes
B1: Chimney	REe	29/05/2019 02:40 pm	Not applicable for this project.
B1: Masonry Construction	REe	29/05/2019 02:40 pm	Not applicable for this project.
B1: Specific Design Elements	REe	29/05/2019 02:40 pm	Not applicable for this project.
D2: Mech Installations for Access	BGn	04/06/2019 04:04 pm	Not applicable for this project.
F1: Hazardous Agents on Site	BGn	04/06/2019 05:08 pm	Not applicable for this project.
F4: Safety from Falling	BGn	04/06/2019 05:08 pm	Not applicable for this project.
F5: Construction and Demolition Hazards	BGn	04/06/2019 05:08 pm	TDC have a technical decision where by they do not consider compliance of F5 in relation to a RES building
F9: Restricting Access to Residential Pools	BGn	04/06/2019 05:08 pm	Not applicable for this project.
G5: Interior Environment	BGn	04/06/2019 05:10 pm	Not applicable for this project.
G15: Solid Waste	BGn	04/06/2019 05:10 pm	Not applicable for this project.
Swimming Pools	BGn	05/06/2019 08:08 am	Not applicable for this project.
HEATING APPLIANCES	BGn	05/06/2019 08:08 am	Not applicable for this project.
Solar Water Heater	BGn	05/06/2019 08:08 am	Not applicable for this project.
DETACHED GARAGE	BGn	05/06/2019 08:08 am	Not applicable for this project.
Retaining Walls	BGn	05/06/2019 08:08 am	Not applicable for this project.

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
BUILDING ACT				
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Has the correct building complexity and classified use been allocated to this project and is it within the scope of your assessed competence? Do not select X or N/A. If complexity is incorrect please rectify by selecting the correct checklist (under Manage Buildings). If processing of this project is to be undertaken under supervision then ensure that this is recorded here.	Y	BGn	05/06/2019 08:24 am	Complexity is correctly assigned. I have the appropriate level of competence
Section 28: Warning and Bans: In terms of section 28 of the Building Act, can the building consent authority exercise its powers to issue building consent and code compliance certificate for the building work relating to this building consent? DO NOT select N/A for this question.	N/A	BGn	05/06/2019 08:24 am	There are no known building methods or product used in this project that may result in breach of a ban issued in accordance with section 26 of the Building Act.
Section 36: Development Contribution: Has a Development Contribution Notice been attached to the PIM? Please select N/A if a Development Contribution Notice is not required to be issued.	N/A	BGn	05/06/2019 08:24 am	There is no development contribution required for this project.
Section 37: Resource Consent: Has a Resource Consent Certificate (Form 4) been attached to the PIM and have all conditions that affect issue of this building consent been satisfied? Please select N/A if Resource Consent is not required.	N/A	BGn	05/06/2019 08:24 am	The TA has not advised that a resource consent is required for this project.
Section 67 - 69: Waiver / Modifications: Is adequate reasoning for request for waiver / modification provided, and have associated legal obligations been satisfied? Please select N/A if Waiver or Modification is not required.	N/A	BGn	05/06/2019 08:24 am	There is no request for waiver or modification associated with this building consent application.
Section 71 - 74: Natural Hazards: Have provisions of Sections 71 - 74 been considered, and can building consent be granted? MBIE has advised that seismic events do not fit within the definition of natural hazards.				
Section 71 - 74: Natural Hazards - Prompt List:	N/A	BGn	05/06/2019 08:25 am	This question does not apply to this application.
1. Natural Hazards: Is the land on which building work is to occur free from natural hazards such as: Erosion (coastal, bank, sheet erosion), Falling debris (soil, rock, snow, ice), Subsidence, Inundation (flooding, overland flow, storm surge, tidal effects, ponding), Slippage? Please select N/A if the hazard has been already mitigated and/ or if the title has already been endorsed to reflect the presence of hazard/s.				
2. Degradation: Is it unlikely that building work will likely accelerate, worsen, or result in a natural hazard occurring?				
3. Mitigation: If existing natural hazard/s exist, then is adequate mitigation provided to protect land, building work, or other property from the hazard/s?				
4. Evidence: If existing natural hazard/s exist, then does the consent documentation adequately demonstrate provision is or will be made to restore any damage to the land or other property as a result of the building work?				
5. Conditions: Where building consent is to be issued under section 72, then have all the conditions required under section 73 been completed and all notifications been made; and does a copy of any PIM that has been issued and that relates to this project accompany such notification?				
Section 75 - 83: More than 1 Allotment: Is the building constructed on more than one allotment, and if so, have the provisions of sections 75 - 83 been satisfied? Please select N/A if building work is only on one allotment.	N/A	BGn	05/06/2019 08:25 am	The building is located on a single allotment therefore this question is not applicable.
Section 84 - 89: Restricted Building Work: Has the applicable restricted building work been properly identified, and have the names of owner-builders, and/or licensed building practitioners that are supervising or carrying out such work been notified to the BCA?				
Section 84 - 89: Restricted Building Work - Prompt List:	Y	BGn	05/06/2019 08:25 am	
1. Is the design certificate/s correctly completed and is the scope of each practitioners work clearly identified?	Y	BGn	05/06/2019 08:25 am	Refer to the comments within the main checklist for compliance
2. Do the applicable LBP's that are nominated or involved in the project hold current and correct classes of license?	Y	BGn	05/06/2019 08:25 am	Refer to comment above
3. If restricted work is intended to be carried out by the Owner/Builder, then has the statutory declaration as to Owner/Builder status been provided?	N/A	BGn	05/06/2019 08:25 am	Section 87A does not apply to this project.
4. If the building work relates to fire safety systems of small to medium apartments then does the designer have the appropriate design license class for this work?	N/A	BGn	05/06/2019 08:25 am	This question does not apply to this project.

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
Section 92: Application for a Code Compliance Certificate: Please just tick this question as it triggers a question in the final inspection to check if application for CCC has been received.		Y	BGn	05/06/2019 08:26 am	Done, because the prompt requires me to
Section 96: COA or Other Incomplete Building Consents: Are there any COA's or incomplete building consents associated with this project?		N/A	BGn	05/06/2019 08:26 am	Have checked NCS no issues identified
Section 112 (1): Alterations to Buildings: If the proposal involves alteration to an existing building, then does the solution demonstrate on reasonable grounds that after alteration the building will comply, as nearly as is reasonably practicable with provisions that relate to: Select N/A if the proposal is not an alteration to an existing building.					
Section 112 (1): Alterations to Buildings - Prompt List:		<u>N/A</u>	<u>BGn</u>	<u>05/06/2019 08:26 am</u>	This question does not apply to this application.
<i>(i) Means of escape from fire</i>					
<i>(ii) Access & facilities for people with disabilities: (if required by Section 118)?</i>					
<i>(iii) Continue to comply with the other provisions of the building code to at least the same extent as before the alteration?</i>					
Section 112 (2): Alterations to Buildings - TA Function: Have the provisions of section 112 (2) been satisfied? Select N/A if the Territorial Authority does not need to consider section 112 (2).		N/A	BGn	05/06/2019 08:26 am	This question does not apply to this project as TA input is not required
Section 112 (3): TA Function - Buildings subject to EPB Notice: Is the alteration to an existing building that is subject to an EPB Notice, and if so have provisions of section 133AT been satisfied? Select N/A if the building is not an alteration to an existing building that is subject to an EPB Notice.		N/A	BGn	05/06/2019 08:26 am	The building is not an alteration that is subject to an EPB Notice so this question does not apply to this project.
Section 113: Specified Intended Life: Is the specified intended life of the building less than fifty years? Please select N/A if the specified intended life is fifty years or more.		N/A	BGn	05/06/2019 08:26 am	The intended life of the building is fifty or more years.
Section 115: Change of Use: Does the proposal provide adequate evidence to enable the TERRITORIAL AUTHORITY to be satisfied, on reasonable grounds that: Please select N/A if there is no change of use occurring.					
Section 115: Change of Use - Prompt List:		<u>N/A</u>	<u>BGn</u>	<u>05/06/2019 08:26 am</u>	This question does not apply to this application.
<i>(a) Where the change involves the incorporation in the building of 1 or more household units where household units did not exist before; that the building, in its new use, will comply, as nearly as is reasonably practicable, with the building code in all respects?</i>					
<i>(b) In other cases; the building will comply, as nearly as is reasonably practicable, with every provision of the building code that relate to either or both of the following: A (i) Means of escape from fire, (ii) Protection of other property, (iii) Sanitary facilities, (iv) Structural performance, and (v) Fire rating performance. B (i) Access and facilities for people with disabilities (if required under BA Sec. 118) and (ii) Continues to comply with the other provisions of the building code to at least the same extent as before the change of use?</i>					
Section 116: Extension of Life: Does the proposal demonstrate compliance with provisions of Section 116? Please select N/A if the application does not apply to a building that currently has a specified intended life.		N/A	BGn	05/06/2019 08:26 am	This question does not apply to this application.

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
Section 116A: Subdivision: Is the proposal accompanied by a Certificate issued by The TERRITORIAL AUTHORITY under Section 224 (f) of the Resource Management Act 1991 giving effect to the proposed subdivision affecting the building or part of the building? Please select N/A if the application does not apply to a building that is currently undergoing subdivision.		N/A	BGn	05/06/2019 08:26 am	This question does not apply to this application.
Section 116B: Unsafe/ Insanitary or Inadequate means of escape from fire: Is the building safe and sanitary for its intended use and does it have adequate means of escape from fire? Please select N/A if this is an application for a new building.		N/A	BGn	05/06/2019 08:26 am	This question does not apply to this project.
Section 268 - 272: Product Certificates: If the proposal includes a product certificate issued by an accredited product certification body under BA sec. 261; then is the certificate current and the proposal within the scope of the product certificate? Please check MBIE register and record the product Authorization Number; or select N/A if there no certified building methods or products.		N/A	BGn	05/06/2019 08:26 am	This question does not apply to this application.
PRELIMINARY					
Compliance / Documentation: Has the means of compliance been properly completed on the building consent application form?		Y	BGn	05/06/2019 08:28 am	Refer to the main checklist for compliance
Preconstruction Meeting: Is a pre-construction meeting required? Please select N/A if a Pre-construction meeting is not required.		N/A	BGn	05/06/2019 08:28 am	A pre-construction meeting is not required.
Siting : Is sufficient information provided to ensure building work will be correctly sited? See Reference Notes to identify when a building location certificate (survey certificate) may be required and to identify which Advice Note to apply to each Council.		Y	BGn	05/06/2019 08:28 am	Refer to the main checklist for non compliance raised and the resolution
Services: Have the effects of building work on existing services been properly considered?		N/A	BGn	05/06/2019 08:29 am	This question does not apply to this application.
B1: Liquefaction Susceptibility: If the land on which the building work is to occur is deemed susceptible to liquefaction, then please confirm whether a geotechnical report been provided? Please add Advice Note AN 33 if the land is deemed susceptible to liquefaction.		N/A	BGn	05/06/2019 08:29 am	This question does not apply to this application.
B1 & E1: Slope Suitability / Overland Flow Paths: Have the effects of sloping ground in relation to building stability or effects of overland flow paths been properly considered?		N/A	BGn	05/06/2019 08:29 am	This question does not apply to this application.
B1: Demolition / Excavation / Construction / Sediment Control: Have the effects that construction activity may have on people or other properties been properly considered / mitigated i.e. demolition / excavation / sediment control etc.?		N/A	BGn	05/06/2019 08:29 am	This question does not apply to this application.
E1: Drainage Easement: Is an easement required for drains that affect other properties?		N/A	BGn	05/06/2019 08:29 am	This question does not apply to this application.
Finished Floor Levels: Is compliance with code provisions for finished floor levels in relation to finished ground levels demonstrated?		Y	BGn	05/06/2019 08:30 am	FFL is to match the main dwelling - cut site with same level RL - refer to main checklist for compliance
Specified Systems: If specified systems are proposed, then have these been correctly specified with with complying maintenance and inspection requirements and with each systems location identified on the plans?					
Specified Systems - Prompt List:		N/A	BGn	05/06/2019 08:30 am	This question does not apply to this application.
SS 1. Automatic systems for fire suppression					
SS 2. Automatic or manual emergency warning systems for fire or other dangers					
SS 3. Electromagnetic or automatic doors or windows					
SS 4. Emergency lighting systems					
SS 5. Escape route pressurisation systems					

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
SS 6. Riser mains for use by fire services				
SS 7. Automatic back-flow preventers connected to a potable water supply				
SS 8. Lifts, escalators, travelators, or other systems for moving people or goods within buildings				
SS 9. Mechanical ventilation or air conditioning systems				
SS 10. Building maintenance units providing access to exterior or interior walls of buildings				
SS 11. Laboratory fume cupboards				
SS 12. Audio loops or other assistive listening systems				
SS 13. Smoke control systems				
SS 14. Emergency power systems for, or signs relating to, a system or feature specified in any of SS to SS 13 above				
SS 15. Other fire safety systems or features (systems for communicating information intended to facilitate evacuation, final exits, fire separations, signs.				
SS 14/2 & SS 15/4. Signs				
SS 16. Cable Cars				
Miscellaneous - Other: Please select the cross if you wish to raise an RFI for an item that may not clearly fit into any other category.	N/A	BGn	05/06/2019 08:30 am	Not required
B1: STRUCTURE				
B1 - Structure				
B1: Foundation / Piles / Floors				
B1: Ground Bearing: Is evidence provided to confirm that ground bearing capacity is adequate to support imposed loads; and have construction monitoring / site verification requirements been applied (if required)? Apply Advice Notes as required - TCC apply AN 51	Y	BGn	05/06/2019 08:35 am	Evidence is provided to confirm that ground bearing capacity is adequate to support imposed loads; and have construction monitoring / site verification requirements been applied (if required)?
B1: Footings & Foundations (Concrete and Concrete Masonry): Does the design comply with the nominated design solution and satisfy the requirements for imposed loads? Note: Foundation walls that are retaining more than 600 mm of fill or soil shall be subject to specific design or provisions of NZS 4229.				
B1: Footings & Foundations (Concrete and Concrete Masonry) - Prompt List:	N/A	BGn	05/06/2019 08:35 am	This question does not apply to this application.
1. Foundation Footings: Are footing sizes and detailing compliant?				
2. Foundation Walls: Are foundation wall dimensions and detailing compliant?				
3. Sub-floor Ventilation: Is the size and location of sub-floor vents compliant?				
4. Reinforcing: Is reinforcing detailing compliant? (check grade, size, cover, lap, support)				
5. Concrete Strength: Is concrete strength & cover compliant? (check suitability for the exposure zone)				
6. SED / Construction Monitoring: Does the Specific Engineer Design information demonstrate compliance and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.				
E2: External Tanking (below ground): Does the design demonstrate compliance with the solution nominated and with Functional Requirement E2.2? Do not use this question to assess tanking of veneer rebates - assess these under E2.				
E2: External Tanking (below ground) - Prompt List:	N/A	BGn	05/06/2019 08:35 am	This question does not apply to this application.

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
1. Compatibility: Is the proposed tanking system compatible with the substrate it is in contact with?				
2. Sub-Ground Drainage: Does documentation demonstrate provision for sub-ground drainage with complying falls that flow to an approved outfall?				
3. Installation: Does documentation demonstrate how the tanking system is to be installed and confirm that it will be protected to prevent damage or rupture during and after installation, and that it will be well adhered to walls, weathertight and will be finished above ground level?				
4. Surface Drainage / Ground Levels: Have all other surface or ground drainage matters that may affect the external tanking been considered and does documentation reflect that finished ground levels will fall away from the tanking system and will finish below the top of the tanking system?				
B1: Pile: Does the pile design comply with the design solution nominated, and with B1 & B2?				
B1: Pile - Prompt List:		BGn	05/06/2019 08:38 am	
1. Layout/ Treatment / Type / Footing/ Height: Is compliance demonstrated?	Y	BGn	05/06/2019 08:38 am	All piles proposed are to be Anchor piles - construction methodology of the piles has been covered within the main checklist for compliance
2. Bracing: Is pile bracing demand satisfied?	Y	BGn	05/06/2019 08:38 am	Refer to the comment above
3. Load Paths: Are the piles correctly located to support imposed loads?	Y	BGn	05/06/2019 08:38 am	Load Paths: External only applicable and addressed within the design
4. Pile - Fixing: Are pile fixing assembly and durability details compliant and appropriate for the pile type?	Y	BGn	05/06/2019 08:38 am	Refer to the comment above
5. Sub-floor - Access / Ventilation: Is sub-floor access and ventilation compliant?				
6. Driven Piles / SED / Construction Monitoring: Does Specific Engineer Design information demonstrate compliance, and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.	N/A	BGn	05/06/2019 08:38 am	This question is not applicable to this project.
B1: Pile - Prompt List:	N	BGn	05/06/2019 08:39 am	
1. Layout/ Treatment / Type / Footing/ Height: Is compliance demonstrated?	Y	BGn	05/06/2019 08:39 am	All piles proposed are to be Anchor piles - construction methodology of the piles has been covered within the main checklist for compliance
2. Bracing: Is pile bracing demand satisfied?	Y	BGn	05/06/2019 08:39 am	Refer to the comment above
3. Load Paths: Are the piles correctly located to support imposed loads?	Y	BGn	05/06/2019 08:39 am	Load Paths: External only applicable and addressed within the design
4. Pile - Fixing: Are pile fixing assembly and durability details compliant and appropriate for the pile type?	Y	BGn	05/06/2019 08:39 am	Refer to the comment above
5. Sub-floor - Access / Ventilation: Is sub-floor access and ventilation compliant?	N	BGn	05/06/2019 08:39 am	Within the cross section it is indicated that the FFL from the GL is 600mm and that a 190mm joist is proposed meaning that compliance of NZS3604:2011 section 6.14.4 for assess has not been achieved, please revise
6. Driven Piles / SED / Construction Monitoring: Does Specific Engineer Design information demonstrate compliance, and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.	N/A	BGn	05/06/2019 08:39 am	This question is not applicable to this project.
B1: Pile - Prompt List:	Y	BGn	11/06/2019 01:58 pm	RFI Response
1. Layout/ Treatment / Type / Footing/ Height: Is compliance demonstrated?	Y	BGn	11/06/2019 01:58 pm	All piles proposed are to be Anchor piles - construction methodology of the piles has been covered within the main checklist for compliance
2. Bracing: Is pile bracing demand satisfied?	Y	BGn	11/06/2019 01:58 pm	Refer to the comment above

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
3. Load Paths: Are the piles correctly located to support imposed loads?		Y	BGn	11/06/2019 01:58 pm	Load Paths: External only applicable and addressed within the design
4. Pile - Fixing: Are pile fixing assembly and durability details compliant and appropriate for the pile type?		Y	BGn	11/06/2019 01:58 pm	Refer to the comment above
5. Sub-floor - Access / Ventilation: Is sub-floor access and ventilation compliant?		Y	BGn	11/06/2019 01:58 pm	Within the cross section it is indicated that the FFL from the GL is 600mm and that a 190mm joist is proposed meaning that compliance of NZS3604:2011 section 6.14.4 for assess has not been achieved, please revise Resolved - within the RFI response the designer has raised the FFL by 60mm to achieve the required crawl space
6. Driven Piles / SED / Construction Monitoring: Does Specific Engineer Design information demonstrate compliance, and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.		N/A	BGn	11/06/2019 01:58 pm	This question is not applicable to this project.
B1: Floor Slab: Does floor slab detailing demonstrate compliance with the nominated design solution and with NZBC B1 & B2? When assessing specific design (e.g. raft slab construction) ensure that V/M questions (1, 8) and relevant Producer Statement sections (select !) are completed.					
B1: Floor Slab - Prompt List:		<u>N/A</u>	<u>BGn</u>	<u>05/06/2019 08:35 am</u>	This question does not apply to this application.
1. Foundation: Is the slab foundation detailing compliant and is this located more than 3 m from any fill that exceeds 600 mm in depth? If not then obtain specific engineering design input.					
2. Hard-fill / Blinding / DPM / Insulation: Is detailing for these elements compliant?					
3. Reinforcing: Are reinforcing details compliant i.e. grade / size / spacing / lap / cover / placement, support / supplementary bars comply? Refer reference notes.					
4. Control Joints: Does the detailing of control joints demonstrate compliance?					
5. Point loads: Does support of point load and location of slab thickenings demonstrate compliance?					
6. Durability: Is detailing of concrete strength and concrete cover compliant with durability provisions?					
7. Services: Does the detailing for services below, through and within the slab demonstrate compliance?					
8. SED / Construction Monitoring: Does the design demonstrate compliance with B1 & B2, and confirm that the floor system is suitable for site ground bearing conditions, and have construction monitoring requirements been determined and entered into the system? Please review inspections and add further inspections as required to suit method of construction.					
B1: Suspended / Mid Floor Slab: Does mid-floor / suspended floor slab design and detailing demonstrate compliance with the nominated design solution and with NZBC B1 & B2?					
B1: Suspended / Mid Floor Slab - Prompt List:		<u>N/A</u>	<u>BGn</u>	<u>05/06/2019 08:35 am</u>	This question does not apply to this application.
1. Design: Does slab thickness, concrete strength and reinforcing detailing and concrete cover comply? See reference notes.					

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
2. Methodology: Does methodology indicate that slab will be properly supported prior to pouring and properly cured afterwards?				
3. Point Loads: Is point loads & thickenings detailing compliant?				
4. Shrinkage: Is shrinkage control & supplementary bar detailing compliant?				
5. Services: Is detailing for the installation of services below and through the slab compliant?				
6. SED / Construction Monitoring: Does the Specific Engineer Design information demonstrate compliance and have construction monitoring requirements been entered into the system? Please review inspections and add further inspections as required to suit method of construction.				
B1: Sub-floor and Deck Framing and Flooring				
B1: Bearers / Stringers: Do bearers and stringers comply with the design solution nominated, and with NZBC B1 & B2?	Y	BGn	05/06/2019 08:41 am	Bearer design demonstrates compliance - 2/140x45 H1.2 SG8 Bearers comply with NZS3604:2011 Table 6.4 for Span of 1.450 max
B1: Floor Joists: Does the floor joist design comply with the design solution nominated, and with NZBC B1 & B2?				
B1: Floor Joists - Prompt List:	<u>Y</u>	<u>BGn</u>	<u>05/06/2019 08:43 am</u>	
1. Floor Loads: Is floor load correctly identified?	Y	BGn	05/06/2019 08:43 am	Declared floor load is correct - 1.5kPa
2. Joist Layout: Are joist layout and details correct? - (species, grade, treatment, size, span, spacing, fixing and treatment)	Y	BGn	05/06/2019 08:43 am	Floor joist layout and detailing is correct 190x45mm H1.2 SG8 Floor Joists @ 400mm max crs Fix joists/bearers with Lumberlok 12kN Pile Kit. Comply as per NZS3604:2011 - Table 7.1 - max span of 3.55m applicable
3. Lateral Support: Is lateral support / blocking details correct?	Y	BGn	05/06/2019 08:43 am	Lateral support provisions are satisfied. Blocking or strutting between joists @ 1.8m max crs over subfloor lines of support. Solid block mid span.
4. Point Loads: Are point loads / load bearing walls correctly supported?	N/A	BGn	05/06/2019 08:43 am	This question does not apply to this project.
5. Cantilever Joists: Are cantilever joists and projections complying?	N/A	BGn	05/06/2019 08:43 am	This question does not apply to this project.
6. Build-ability: Has build-ability of sub-floor services & joist layout been considered?	Y	BGn	05/06/2019 08:43 am	Build-ability of sub-floor services and floor joist layout is satisfactory.
7. SED: Does Specific Engineer Design information demonstrate compliance?	N/A	BGn	05/06/2019 08:43 am	This question does not apply to this project.
B1: Sub-floor Wall Framing: Does the subfloor wall framing design demonstrate compliance with the solution nominated, and with NZBC B1 & B2?				
B1: Sub-floor Wall Framing - Prompt List:	<u>N/A</u>	<u>BGn</u>	<u>05/06/2019 08:43 am</u>	This question does not apply to this application.
1. Materials: Is treatment of materials / fixings compliant?				
2. Framing: Are framing details - (size, grade, spacing, fixings) compliant and correctly specified?				
3. Elements: Are building elements correctly supported & braced?				
B1: Sub-floor Bracing: Does the subfloor bracing design demonstrate compliance with the solution nominated, and with NZBC B1 & B2?				
B1: Sub-floor Bracing - Prompt List:	<u>Y</u>	<u>BGn</u>	<u>05/06/2019 08:45 am</u>	
1. Bracing: Is sub-floor bracing design within scope of design solution?	Y	BGn	05/06/2019 08:45 am	As indicated under the pile checklist the complete floor is to have anchor piles - bracing calculations provided - SORGED compliance established for compliance of B1 and B2
2. Earthquake: Is earthquake and wind demand satisfied?	Y	BGn	05/06/2019 08:45 am	Refer to the comment above
3. Brace Values: Are brace values and calculations compliant?	Y	BGn	05/06/2019 08:45 am	Refer to the comment above
4. Distribution: Does the distribution of bracing elements comply?	Y	BGn	05/06/2019 08:45 am	Refer to the comment above

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
5. Fixing: Are connections correctly detailed / specified?	Y	BGn	05/06/2019 08:45 am	Refer to the comment above	
6. Diaphragm: Does size, ratio, material and fixings comply?	N/A	BGn	05/06/2019 08:45 am	This question does not apply to this project.	
7. B2: Has durability of elements been satisfied - (check fixings & location in relation to wet areas)?	Y	BGn	05/06/2019 08:45 am	Refer to the comment above	
B1: Sub-floor Ground Clearance: Does sub-floor ground clearance comply with the design solution nominated and with NZBC B1 & B2 i.e. min. 450 mm clearance between ground and services and 600 mm between ground and particle board flooring?	Y	BGn	05/06/2019 08:45 am	Refer to the question raised within the pile section of the checklist and the resolution of for compliance	
B1: Sub-floor Cross-Flow Ventilation & Access: Does sub-floor ventilation and access comply with the design solution nominated?	Y	BGn	05/06/2019 08:46 am	Cross-flow ventilation achieved as the elevation indicates a open sub-floor	
B1: Flooring & Decking: Does the proposal for flooring and / or decking comply with the design solution nominated, and comply with NZBC B1 & B2?					
B1: Flooring & Decking - Prompt List:	Y	BGn	05/06/2019 08:47 am		
1. Framing: Is timber grade, span, size correctly specified?	Y	BGn	05/06/2019 08:47 am	Refer to floor joist checklist for compliance	
2. Flooring: Is the flooring / decking adequately supported?	Y	BGn	05/06/2019 08:47 am	Strandboard flooring - 20mm	
3. B2: Is the treatment of timber & fixings compliant?	Y	BGn	05/06/2019 08:47 am	Refer to floor joist checklist for compliance	
4. Maintenance: Is decking provided with adequate separation from the building to allow drainage and drying and to enable maintenance (painting) of the cladding behind or below?	N/A	BGn	05/06/2019 08:47 am	This question does not apply to this project.	
B1: Separation: Is adequate and complying separation provided between timber framing and concrete to prevent transference of moisture, and / or between framing and external walls to enable drainage and drying?	Y	BGn	05/06/2019 08:47 am	Greater than 150 from GL to bearer cut - no DPC separation required	
B1: Midfloor Framing					
B1: Mid-floor Bracing Diaphragm: Does the floor bracing diaphragm demonstrate compliance with the solution nominated, and with NZBC B1 & B2?	N/A	BGn	05/06/2019 08:51 am	This question does not apply to this project.	
B1: Mid-floor Stringers / Floor Joists: Does the mid-floor stringer and joist design comply with the design solution nominated, and NZBC B1 & B2?					
B1: Mid-floor Stringers / Floor Joists - Prompt List:	N	BGn	05/06/2019 09:07 am		
1. Floor Loads: Is floor load correctly identified?	Y	BGn	05/06/2019 09:07 am	The floor load is correct - identify rating 1.5kN.	
2. Stringers: Are stringer sizes compliant?	N/A	BGn	05/06/2019 09:07 am	This question does not apply to this project.	
3. Joist Layout: Is joist layout and details compliant? - (species, grade, treatment, size, span, spacing, fixing and treatment)	N	BGn	05/06/2019 09:07 am	Please refer to the following questions of compliance in relation to the mid floor framing 1: The GF plan does not indicate a lintel to the 2050x1400 opening meaning i have consider that the mid floor joists have a span of 3m for a 140x45 Sg8 joist, this is outside the scope of NZS3604:2011 table 7.1 - Please revise design for compliance 2: Cross section A-A indicates that a single joist is proposed to the 612mm load bearing wall, please revise so compliance of NZS3604:2011 section 7.1.3.1 can be established	
4. Support: Is lateral support / blocking details for joists compliant?	Y	BGn	05/06/2019 09:07 am	Double blocking has been indicated	
5. Point Loads: Is support of point loads / load bearing walls compliant?	N/A	BGn	05/06/2019 09:07 am	This question does not apply to this project.	
6. Trimmers: Are Trimmer joist detailing compliant?- (check species, grade, size and span)	N/A	BGn	05/06/2019 09:07 am	This question does not apply to this project.	
7. Cantilever Joists: Are cantilever joists and projections complying?	N/A	BGn	05/06/2019 09:07 am	This question does not apply to this project.	
8. Build-ability: Has build-ability of sub-floor services & joist layout been considered?	Y	BGn	05/06/2019 09:07 am	Build-ability of services and joist layout is satisfactory.	
9. SED: Does Specific Engineer Design information demonstrate compliance?	N/A	BGn	05/06/2019 09:07 am	This question does not apply to this project.	
B1: Mid-floor Stringers / Floor Joists - Prompt List:	Y	BGn	11/06/2019 02:06 pm	RFI Response	

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1. Floor Loads: Is floor load correctly identified?	Y	BGn	11/06/2019 02:06 pm	The floor load is correct - identify rating 1.5kN.
2. Stringers: Are stringer sizes compliant?	N/A	BGn	11/06/2019 02:06 pm	This question does not apply to this project.
3. Joist Layout: Is joist layout and details compliant? - (species, grade, treatment, size, span, spacing, fixing and treatment)	Y	BGn	11/06/2019 02:06 pm	<p>Please refer to the following questions of compliance in relation to the mid floor framing</p> <p>1: The GF plan does not indicate a lintel to the 2050x1400 opening meaning i have consider that the mid floor joists have a span of 3m for a 140x45 Sg8 joist, this is outside the scope of NZS3604:2011 table 7.1 - Please revise design for compliance</p> <p>Resolved - within the RFI response the designer has now confirmed a lintel to the GF opening - SORGed compliance established</p> <p>2: Cross section A-A indicates that a single joist is proposed to the 612mm load bearing wall, please revise so compliance of NZS3604:2011 section 7.1.3.1 can be established</p> <p>Resolved - within the RFI response the designer has revised sheet 14 to indicate a double joist</p>
4. Support: Is lateral support / blocking details for joists compliant?	Y	BGn	11/06/2019 02:06 pm	Double blocking has been indicated
5. Point Loads: Is support of point loads / load bearing walls compliant?	N/A	BGn	11/06/2019 02:06 pm	This question does not apply to this project.
6. Trimmers: Are Trimmer joist detailing compliant? - (check species, grade, size and span)	N/A	BGn	11/06/2019 02:06 pm	This question does not apply to this project.
7. Cantilever Joists: Are cantilever joists and projections complying?	N/A	BGn	11/06/2019 02:06 pm	This question does not apply to this project.
8. Build-ability: Has build-ability of sub-floor services & joist layout been considered?	Y	BGn	11/06/2019 02:06 pm	Build-ability of services and joist layout is satisfactory.
9. SED: Does Specific Engineer Design information demonstrate compliance?	N/A	BGn	11/06/2019 02:06 pm	This question does not apply to this project.
B1: Mid-floor Flooring / Decking: Does the proposal for flooring and / or decking comply with the design solution nominated, and NZBC B1 & B2?				
B1: Mid-floor Flooring / Decking - Prompt List:	N/A	BGn	05/06/2019 08:52 am	This question does not apply to this application.
1. B2: Is treatment of materials and fixings compliant?				
2. B1: Is support of elements compliant?				
3. Maintenance: Is decking provided with adequate separation from building to allow cladding maintenance?				
4. SED: Does Specific Engineer Design information demonstrate compliance?				
B1: Wall Framing				
B1: Wall Framing: Does wall framing design demonstrate compliance with the design solution nominated, and with NZBC B1 & B2? (check that LBP details are recorded)				
B1: Wall Framing - Prompt List:	N	BGn	05/06/2019 09:17 am	
1. Treatment: Is treatment of framing & fixings appropriate for environment?	Y	BGn	05/06/2019 09:17 am	Durability of fixings and materials complies. H1.2 specified for new framing - B2/AS1, Table 1A. External and Internal Wall Framing - D Fir H1.2 SG8.
2. Plates: Is top and bottom plate sizes, grade and treatment compliant and are these properly secured?	Y	BGn	05/06/2019 09:17 am	Top and bottom plate fixing has been indicated on sheet 14 and in accordance with MiTek design for the top plate and NZS3604:2011 for the bottom plates
3. Studs / Dwargs (Nogs): Is stud and nog sizes, spacing, treatment, grade and fixings compliant?	N	BGn	05/06/2019 09:17 am	Please indicate the stud sizing and centers as i cannot locate the relevant information within the cross section for the sleepout

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
4. Lintels / Trimmers: Are lintel and trimmer sizes, spacing, treatment, grade, fixing and support compliant?	Y	BGn	05/06/2019 09:17 am	Lintel sizes correct for the wind zone and loaded dimension, applicable MiTek fixing also indicated for the wind and loading - refer to sheet
5. Point Loads: Is point load support and distribution complying?	N/A	BGn	05/06/2019 09:17 am	This question does not apply to this project.
6. Blocking: Is blocking provided to support flashing systems?	Y	BGn	05/06/2019 09:17 am	Blocking for flashing support is detailed.
B1: Wall Framing - Prompt List:	<u>Y</u>	BGn	11/06/2019 01:59 pm	RFI Response
1. Treatment: Is treatment of framing & fixings appropriate for environment?	Y	BGn	11/06/2019 01:59 pm	Durability of fixings and materials complies. H1.2 specified for new framing - B2/AS1, Table 1A. External and Internal Wall Framing - D Fir H1.2 SG8.
2. Plates: Is top and bottom plate sizes, grade and treatment compliant and are these properly secured?	Y	BGn	11/06/2019 01:59 pm	Top and bottom plate fixing has been indicated on sheet 14 and in accordance with MiTek design for the top plate and NZS3604:2011 for the bottom plates
3. Studs / Dwargs (Nogs): Is stud and nog sizes, spacing, treatment, grade and fixings compliant?	Y	BGn	11/06/2019 01:59 pm	Please indicate the stud sizing and centers as i cannot locate the relevant information within the cross section for the sleepout Resolved - within the RFI response the designer has now added the applicable stud sizing information to sheet 14 - measured and compliance established
4. Lintels / Trimmers: Are lintel and trimmer sizes, spacing, treatment, grade, fixing and support compliant?	Y	BGn	11/06/2019 01:59 pm	Lintel sizes correct for the wind zone and loaded dimension, applicable MiTek fixing also indicated for the wind and loading - refer to sheet
5. Point Loads: Is point load support and distribution complying?	N/A	BGn	11/06/2019 01:59 pm	This question does not apply to this project.
6. Blocking: Is blocking provided to support flashing systems?	Y	BGn	11/06/2019 01:59 pm	Blocking for flashing support is detailed.
B1: Wall Bracing: Does the wall bracing design demonstrate compliance with the design solution nominated, and with NZBC B1 & B2?				
B1: Wall Bracing - Prompt List:	<u>Y</u>	BGn	05/06/2019 09:30 am	
1. Methodology: Has the bracing methodology for wings, blocks and discontinued floor levels been correctly applied (3604 - para 5.1.5)?	Y	BGn	05/06/2019 09:30 am	Winstones bracing system proposed and supported with a bracing plan and relevant bracing calculations using the GIB ezy brace system - applicable manufacturers installation specification provided to support application for construction and inspection - SORged compliance established for method, demand, distribution and construction
2. Brace Demand: Has brace demand for soil, earthquake, & wind been correctly evaluated?	Y	BGn	05/06/2019 09:30 am	Refer to the comment above
3. Brace Lines: Is brace line layout and top plate size compliant?	Y	BGn	05/06/2019 09:30 am	Refer to the comment above
4. Distribution: Is size and distribution of brace elements compliant?	Y	BGn	05/06/2019 09:30 am	Refer to the comment above
5. Construction: Are brace element construction details and fixings correctly specified?	Y	BGn	05/06/2019 09:30 am	Refer to the comment above
6. Allowances: Have correct allowance been applied for height variances and for changes of direction to bracing?	Y	BGn	05/06/2019 09:30 am	Refer to the comment above
7. Wet Areas: Are bracing elements clear of wet areas?	N/A	BGn	05/06/2019 09:30 am	This question does not apply to this project.
8. Connections: Do the plans indicate that all bracing elements are connected at top plate level either directly or via a framing member in the line of wall to external walls at right angles to it (NZS 3604 8.7.3.4)?	N/A	BGn	05/06/2019 09:30 am	This question does not apply to this project.
B1: Timber Post / Beam : Does post / beam design demonstrate compliance with the design solution nominated, and NZBC B1 & B2?				
B1: Timber Post / Beam - Prompt List:	<u>N/A</u>	BGn	05/06/2019 09:08 am	This question does not apply to this application.
1. Materials: Are materials & fixings appropriate for environment?				
2. Footing: Is post footing size compliant? - (adequate mass to resist uplift)				
3. Base Details: Is the post / footing base detail / connection compliant?				

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
4. Post: Is post size, grade, spacing compliant?				
5. Beam: Is the beam size, grade, span compliant?				
6. Connections: Is the post / beam detail / connection compliant?				
B1: Roof Structure				
B1: Roof Truss Certification, Layout & Bracing: Is complying roof truss design certification and layout provided that confirms compliance with NZBC B1 & B2?				
B1: Roof Truss Certification, Layout & Bracing - Prompt List:	N/A	BGn	05/06/2019 09:39 am	This question does not apply to this application.
1. Truss: Does truss fabrication information include: name of person or organization responsible for the specific design of the truss / truss design reference number / truss layout showing span, spacing and location of all trusses / site location / eaves overhang / roof pitch / dead loads [identifying type of roof and ceilings], live loads specifying wind & snow loads / point loads and support / fixing details / grade and species of framing members / bracing details?				
2. Valley: Is valley board grade and size compliant?				
3. Gable End: Does gable end bracing and support detailing demonstrate compliance? - [check strong-back size, span and brace location]				
B1: Roof Frame: Does the roof frame design comply with the design solution nominated, and with NZBC B1 & B2?				
B1: Roof Frame - Prompt List:	N	BGn	05/06/2019 09:45 am	
1. Imposed Loads: Is the roof structure adequate for imposed loads - [wind, snow, earthquake]?	Y	BGn	05/06/2019 09:45 am	Support for imposed loads complies. 1.0Kpa loading applicable for consideration
2. Roof members: Is the detailing of rafters, hips, valleys, ties, joists, ceiling runners, ridge, under purlins, struts and strutting beams compliant?	N	BGn	05/06/2019 09:45 am	240x45 H1.2 SG8 rafters at 900mm centers proposed spanning roughly 3.6m - compliance measured to table 10.1 of NZS3604:2011 and not achieved, please revise the design so compliance can be established
3. Fixing: Does roof frame fixing detailing comply?	Y	BGn	05/06/2019 09:45 am	2/100x2.95 nails plus 2/CT200 ties proposed for each rafter end - SORGED compliance established for required KN connection
4. Load Paths: Is load paths support compliant?	Y	BGn	05/06/2019 09:45 am	Load paths are compliant. loaded directly to the foundation
5. Bracing: Is roof bracing compliant - check cladding roof weight/ wind / earthquake?	N	BGn	05/06/2019 09:45 am	Please indicate the proposed bracing to the roof plane so compliance can be assessed and established
B1: Roof Frame - Prompt List:	N	BGn	11/06/2019 02:01 pm	RFI Response
1. Imposed Loads: Is the roof structure adequate for imposed loads - [wind, snow, earthquake]?	Y	BGn	11/06/2019 02:01 pm	Support for imposed loads complies. 1.0Kpa loading applicable for consideration
2. Roof members: Is the detailing of rafters, hips, valleys, ties, joists, ceiling runners, ridge, under purlins, struts and strutting beams compliant?	Y	BGn	11/06/2019 02:01 pm	240x45 H1.2 SG8 rafters at 900mm centers proposed spanning roughly 3.6m - compliance measured to table 10.1 of NZS3604:2011 and not achieved, please revise the design so compliance can be established Resolved - Rafter span now confirmed to be 3.420m and the centres now indicated to be 600mm meaning compliance of NZS3604:2011 now achieved
3. Fixing: Does roof frame fixing detailing comply?	Y	BGn	11/06/2019 02:01 pm	2/100x2.95 nails plus 2/CT200 ties proposed for each rafter end - SORGED compliance established for required KN connection
4. Load Paths: Is load paths support compliant?	Y	BGn	11/06/2019 02:01 pm	Load paths are compliant. loaded directly to the foundation
5. Bracing: Is roof bracing compliant - check cladding roof weight/ wind / earthquake?	N	BGn	11/06/2019 02:01 pm	Please indicate the proposed bracing to the roof plane so compliance can be assessed and established
B1: Roof Frame - Prompt List:	Y	BGn	11/06/2019 02:02 pm	RFI Response

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1. Imposed Loads: Is the roof structure adequate for imposed loads - [wind, snow, earthquake]?	Y	BGn	11/06/2019 02:02 pm	Support for imposed loads complies. 1.0Kpa loading applicable for consideration
2. Roof members: Is the detailing of rafters, hips, valleys, ties, joists, ceiling runners, ridge, under purlins, struts and strutting beams compliant?	Y	BGn	11/06/2019 02:02 pm	240x45 H1.2 SG8 rafters at 900mm centers proposed spanning roughly 3.6m - compliance measured to table 10.1 of NZS3604:2011 and not achieved, please revise the design so compliance can be established Resolved - Rafter span now confirmed to be 3.420m and the centres now indicated to be 600mm meaning compliance of NZS3604:2011 now achieved
3. Fixing: Does roof frame fixing detailing comply?	Y	BGn	11/06/2019 02:02 pm	2/100x2.95 nails plus 2/CT200 ties proposed for each rafter end - SORGed compliance established for required KN connection
4. Load Paths: Is load paths support compliant?	Y	BGn	11/06/2019 02:02 pm	Load paths are compliant. loaded directly to the foundation
5. Bracing: Is roof bracing compliant - check cladding roof weight/ wind / earthquake?	Y	BGn	11/06/2019 02:02 pm	Please indicate the proposed bracing to the roof plane so compliance can be assessed and established Resolved _ Within the RFI response the designer has now revised sheet 13 to indicate strap bracing to establish compliance
B1: Skillion Roofs - (incorporating B1, B2 & E2): Is the design in accordance with the design solution nominated, and with NZBC B1, B2 & E2.2?				
B1: Skillion Roofs - (incorporating B1, B2 & E2) - Prompt List:	Y	BGn	05/06/2019 10:29 am	
1. Framing: Is span, spacing, size and fixing of framing / substrate members in accordance with the design solution nominated?	Y	BGn	05/06/2019 10:29 am	Refer to the roof frame checklist for compliance
2. Pitch: Is roof pitch suitable for the proposed membrane / cladding system?	Y	BGn	05/06/2019 10:29 am	Roof pitch is compliant and suitable for the proposed membrane / cladding system.
3. Treatment: Do the treatments and levels of finish for framing / substrate / fixings satisfy provisions of B2 - [check compatibility of cladding / substrate / underlay / insulation / materials]?	Y	BGn	05/06/2019 10:29 am	Refer to the roof frame checklist for compliance
4. Cladding: Are roof cladding / membrane material specifications and detailing compliant - [check treatment, thickness, grade, colour, fixings, expansion]?	Y	BGn	05/06/2019 10:29 am	C/S 5 Rib profile - E2/AS1 applicable
5. Flashing: Is flashing / penetration detailing compliant - [check junctions & transitions, support, fixing, compatibility, construction sequencing, effects of snow considered]?	Y	BGn	05/06/2019 10:29 am	Barge and capping addressed within the main checklist
6. Drainage: Is roof drainage detailing compliant and does it demonstrate that it is adequate to effectively drain water from the roof?	Y	BGn	05/06/2019 10:29 am	STD CS fascia and gutter detailed - compliance considered within the main checklist
7. Separation: Is appropriate separation provided between insulation and roofing underlay?	Y	BGn	05/06/2019 10:29 am	240mm rafter with 45mm purline and 180mm insulate - required spearation provided for
8. Ventilation: Are ventilation provisions complying?	Y	BGn	05/06/2019 10:29 am	Air flow achieved under the purlins - SORGed compliance achieved
9. Penetrations: Is the roof space free from penetrations from spaces below?	N/A	BGn	05/06/2019 10:29 am	This question does not apply to this project.
10. Maintenance: Are maintenance requirements compliant and correctly specified?	Y	BGn	05/06/2019 10:29 am	Maintenance requirements comply.
B1: Parapet Construction, Cladding & Flashing (incorporating B2 & E2): Is the design in accordance with the design solution nominated, and with NZBC B1, B2 & E2.2?				
B1: Parapet Construction, Cladding & Flashing (incorporating B2 & E2) - Prompt List:	N/A	BGn	05/06/2019 09:45 am	This question does not apply to this application.
1. Framing: Is span, spacing, size and fixing of framing / substrate members in accordance with the design solution nominated?				

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
2. B2: Is durability detailing compliant and correctly specified - (check timber treatment, fixing and material coatings, materials suitable for environmental conditions, compatibility is properly considered - run-off run-on)?				
3. RAB: Do materials and cavity construction details demonstrate compliance?				
4. Flashing: Do details demonstrate compliance - (check cover dimension, material / fixing / coating / expansion / laps & seal at joins / capillary breaks / penetrations / junctions & transitions / support / fixing (avoid vertical fixings) / compatibility / construction sequencing)?				
5. Maintenance: Are requirements specified and compliant?				
B1: Sarking: Is roof sarking correctly specified and detailed in accordance with the design solution and with NZBC B1 & B2?	N/A	BGn	05/06/2019 09:45 am	This question does not apply to this project.
B1: Purlin / Tile Batten: Does purlin / batten design comply with the design solution nominated, and with NZBC B1 & B2? - [Check grade, size, span, spacing, fixing detail and treatment is appropriate for exposure and wind zones)	Y	BGn	05/06/2019 10:30 am	C/S corro iron proposed, 70x45 H1.2 SG8 purlins at 900mm centers [700mm centers from the ridge and gutter] and connected via 2/10g self drilling screw 80mm long [3. 55Kn] - SORGED compliance of B1 and B2 established
B1: Ceiling Batten: Does the ceiling batten type, size, grade, spacing, span, fixing and durability demonstrate compliance with NZBC B1 & B2?	Y	BGn	05/06/2019 10:32 am	13mm gib ceiling lining proposed within the plans and the specification, 70x35 timber ceiling battens at 600mm centers proposed - design is within the manufacturers installation specifications for the proposed products
B1: Interior Linings				
B1: Wall & Ceiling Lining Construction: Are wall and ceiling linings fit for purpose and are specifications adequate to ensure complying installation?	Y	BGn	05/06/2019 10:33 am	Construction detailing is compliant. 13mm gib ceilings proposed, 10mm STD gib to the walls - SORGED compliance established
B1: Ceiling Diaphragm: Does the ceiling diaphragm design demonstrate compliance with the design solution nominated, and with NZBC B1 & B2?				
B1: Ceiling Diaphragm - Prompt List:	N/A	BGn	05/06/2019 10:33 am	This question does not apply to this application.
1. Ceiling Diaphragm: Is the diaphragm(s) connected to wall bracing elements that satisfy minimum bracing unit requirements?				
2. Ratio: Does the ratio of the diaphragm comply?				
3. Materials: Is detailing / specification of materials and fixings compliant?				
4. Penetrations: Is detailing and location of penetrations / openings compliant?				
5. SED: Does Specific Engineer Design information demonstrate compliance?				
B1: Chimney		BGn	05/06/2019 08:31 am	Code Clause Disabled: Not applicable for this project.
B1: Masonry Construction		BGn	05/06/2019 08:31 am	Code Clause Disabled: Not applicable for this project.
B1: Specific Design Elements		BGn	05/06/2019 08:31 am	Code Clause Disabled: Not applicable for this project.
B2: DURABILITY				
B2: DURABILITY: Does the design demonstrate compliance with Functional Requirement - B2.2? Review inspections and add / delete / modify inspection questions as required.				
B2: DURABILITY - Prompt List:	Y	BGn	05/06/2019 10:37 am	
1. B2.3.1a): Will building elements (including floors, walls and fixings) that provide structural stability to the building, or elements that are difficult to access or replace, or where failure of those elements would go undetected during normal use or maintenance, with only normal maintenance continue to satisfy the performance requirements for this code for the lesser of the stated intended life of the building or for 50 years?	Y	BGn	05/06/2019 10:37 am	Compliance with B2.3.1a) is satisfied. H1.2 roof, wall, joist and bearer framing proposed -either enclosed or sheltered as defined by NZS3604:2011 H5 piles

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
2. B2.3.1b): Will building elements (including the building envelope, exposed plumbing in the sub-floor space, and in-built chimneys and flues) that are moderately difficult to access or replace, or where failure of those elements would go undetected during normal use of the building, but would be easily detected during normal maintenance, with only normal maintenance continue to satisfy the performance requirements for this code for the lesser of the stated intended life of the building or for 15 years?		Y	BGn	05/06/2019 10:37 am	Compliance with B2.3.1b) is satisfied - 15 year durability provisions are satisfied. CS cladding roof and wall - direct fix
3. B2.3.1c): Will building elements (including services, linings, renewable protective coatings, and fixtures) that are easy to access and replace, and where failure of those elements would be easily detected during normal use of the building, continue to satisfy the performance requirements for this code for the lesser of the stated intended life of the building or for 5 years?		Y	BGn	05/06/2019 10:37 am	Compliance with B2.3.1c) is satisfied - 5 year durability provisions are satisfied.
4. B2.3.2: Do individual building elements that are components of a building system and are difficult to access or replace have all the same durability OR are installed in a manner that permits replacement of elements of lesser durability without removing elements that have greater durability and are not specifically designed for removal and replacement?		N/A	BGn	05/06/2019 10:37 am	This question does not apply to this project.
B1 & B2: Wind / Earthquake / Corrosion Zone: Have the wind, earthquake and corrosion zones for this site been correctly determined and applied?		Y	BGn	05/06/2019 10:37 am	Compliance established - wind zone is EH - checked to the BRANZ mapping and indicates EH Corrosion Zone is C - applicable for the location checked to NZS3604:2011 Earthquake Zone 2 - applicable for the location - checked to NZS3604:2011
C: FIRE SAFETY					
C/AS1: SH					
C: SH - Fire Safety System [Para 2.2]: Has the designer specified a complying Type 1 smoke alarm system and correctly identified the location of the smoke detectors?		N	BGn	05/06/2019 10:38 am	Please specify that a Type 1 smoke alarm system will be installed in accordance with F7/AS1 and show the complying location of the detector on the floor plans so compliance can be established .
		RFI	BGn	05/06/2019 04:30 pm	Please specify that a Type 1 smoke alarm system will be installed in accordance with F7/AS1 and show the complying location of the detector on the floor plans so compliance can be established .
		Y	BGn	11/06/2019 02:07 pm	RFI Response: Within the RFI response the designer has quite rightly indicated the location of the proposed SD
C: SH - Means of Escape [Part 3]: Does the building design demonstrate compliance with SH means of escape provisions?		Y	BGn	05/06/2019 10:38 am	The DEOP for the dwelling is less than 25m
C: SH - Control of Internal Fire and Smoke Spread [Part 4]: Does the design demonstrate compliance with the Fire Code Acceptable Solution Part 4 provisions for control of Internal fire and smoke spread.					
C: SH - Control of Internal Fire and Smoke Spread [Part 4] - Prompt List:		N/A	BGn	05/06/2019 10:38 am	This question does not apply to this application.
1. Fire Separations [Para 4.1.1 & 2.3]: Are these correctly located with the correct LIFE or PROPERTY ratings applied?					
2. Surface Finish [Para 4.2]: If foam plastics or combustible insulating materials form part of a wall or ceiling fire / smoke separation system, then will the completed system achieve a Group Number of not more than 3.					
3. Durability: Have maintenance requirements for the fire separations been specified and are durability provisions satisfied [50 years]?					
C: SH - Control of External Fire Spread [Part 5]: Does the design demonstrate compliance with the Fire Code Acceptable Solution Part 5 provisions for control of External fire spread?					

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C: SH - Control of External Fire Spread [Part 5] - Prompt List:	<u>N/A</u>	<u>BGn</u>	<u>05/06/2019 10:40 am</u>	This question does not apply to this application.
1. Fire Resistant Ratings [Para 5.1]: Do external walls that are within 1m of a relevant boundary have an FRR of no less than 30/30/30?				
2. Roof Projections [Para 5.2]: Do eaves projections of external walls that require an FRR, have an FRR of 30/30/30; or if not, does the walls fire rating extend up to the underside of the roof?				
3. Eaves Rating [Para 5.2.2]: In cases where the eaves extends to within 650 mm of a relevant boundary; is the entire eaves construction and the wall from which it projects provided with an FRR of not less than 30/30/30?				
4. Protection from Lower Roof [Para 5.3]: Has fire spread from a roof that is close to and lower than an external wall of an adjacent building been mitigated by providing a 30/30/30 fire rating to the part of the roof that is within 5.0m horizontally of the wall?				
5. Exterior Surface Finishes [Para 5.4]: Do exterior surface finishes comply with the provisions of C/AS1 Para 5.4? Not required if surface finishes are less than 1 mm thick and applied directly to non-combustible substrate.				
6. Carports and Similar Construction [Para 5.5]: Have provisions of C/AS1 Para 5.4 been satisfied?				
7. Specifications / Detailing: Is complying construction detailing and specifications for fire rated construction provided - (check framing & fixing size spacing, durability, compatibility of wrap, correct insulation, suitable materials, finishes, execution)?				
8. Maintenance: Will the maintenance requirements provided ensure that the fire rated elements will achieve 50 years durability?				
C: SH - Firefighting [Part 6]: Does consent documentation confirm that the pavement is able to withstand laden weights of rescue vehicles, is traffic-able in all weather, is of appropriate width and height, and is provided with hard standing within 20 m of building entrance and inlets to sprinkler or hydrants?	N/A	BGn	05/06/2019 10:40 am	This question does not apply to this project.
C: SH - Down Lights [Para 7.4]: Have the correct types of down lights been specified and do these comply with Para 7.4 of C1/AS1?				
C: SH - Down Lights [Para 7.4] - Prompt List:	<u>N/A</u>	<u>BGn</u>	<u>05/06/2019 10:40 am</u>	This question does not apply to this application.
1. Type: Have complying types of down lights been specified?				
2. Clearance: Are insulation clearance distances specified?				
C: SH - Open Fire Chimney [Para 7.5]: Does the chimney design demonstrate compliance with Para 7.5 of C1/AS1? THIS PROMPT LIST DOES NOT ADDRESS COMPLIANCE WITH NZBC B1 OR B2 - GO TO STABILITY - B1 - CHIMNEY AFTER COMPLETING QUESTIONS LISTED IN THIS PROMPT LIST.				
C: SH - Open Fire Chimney [Para 7.5] - Prompt List:	<u>N/A</u>	<u>BGn</u>	<u>05/06/2019 10:40 am</u>	This question does not apply to this application.
1. Construction: Do chimney construction details comply with C/AS1 - Table 7.1 & Figure 7.1?				
2. Fire bricks: Are these correctly sized (i.e. not less than 50 mm thick)?				
3. Fireplace Joints: Are these non-combustible and sealed against leaks?				
4. Chimney brickwork: Is this correctly specified (i.e. min. 90mm thick single skin with 6.5mm grout)?				
5. Expansion: Has a complying expansion gap been provided to chimneys containing flues?				

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6. Flue Size: Is the cross-sectional area of flues correct?					
7. Flue linings: Are these correctly specified?					
8. Chimney clearance: Is the clearance above roof correctly specified?					
9. Number: Is a separate flue provided to each fireplace?					
10. Flue joints: Are flue joints of non-combustible materials sealed against air leakage?					
11. Hearth Construction: Is this correctly specified?					
12. Clearance: Is clearance between chimneys, hearths and combustible materials correctly specified?					
13. Ventilation: Is a min. of 50 mm ventilated space provided between the outer face of the chimney and any combustible material?					
D: ACCESS					
D1: Access Routes					
D1: Access Routes - Residential: Functional Requirement - Does the proposal comply with Functional Requirements D1.2.1 & D1.2.2? LoA - Requirement D1.2.1 shall not apply to Ancillary buildings or Outbuildings.					
D1: Access Routes - Residential - Prompt List:		N	BGn	05/06/2019 10:42 am	
1. D1.3.1: Does the proposal demonstrate that access routes enable people to: (a) Safely and easily approach the main entrance of buildings from the apron or construction edge of a building,(b) Enter buildings, (c) Move into spaces within buildings by such means as corridors, doors, stairs, ramps and lifts,(d) Manoeuvre and park cars, (e) Manoeuvre and park delivery vehicles required to use the loading space?		N	BGn	05/06/2019 10:42 am	Please clarify within the elevations if the provided step detail A on sheet 10 is also applicable to the sleepout and to establish compliance of D1.3.1
2. D1.3.3: Does the proposal demonstrate that access routes: (a) Have adequate activity space,(b) Are free from dangerous obstructions and from any projections likely to cause an obstruction, (c) Have a safe cross fall, and safe slope in the direction of travel, (d) Have adequate slip-resistant walking surfaces under all conditions of normal use, (e) Include stairs to allow access to upper floors irrespective of whether an escalator or lift has been provided, (f) Have stair treads, and ladder treads or rungs which: (i) provide adequate footing, and (ii) have uniform rise within each flight and for consecutive flights, (g) Have stair treads with a leading edge that can be easily seen, (h) Have stair treads which prevent children from falling through or becoming held fast between treads, where open risers are used, (i) Have smooth, reachable, and graspable handrails to provide support and to assist with movement along a stair or ladder, LoA - Clause (i) does not apply to isolated steps. (j) Have handrails of adequate strength and rigidity as required by Clause B1 "Structure", (k) Have landings of appropriate dimensions and at appropriate intervals along a stair or ramp to prevent undue fatigue, (l) Have landings of appropriate dimensions where a door opens from or onto a stair, ramp or ladder so that the door does not create a hazard, and (m) Have any automatically controlled doors constructed to avoid the risk of people becoming caught or being struck by moving parts?		N/A	BGn	05/06/2019 10:42 am	This question does not apply to this Project.
3. D1.3.5: Does the proposal demonstrate vehicle spaces and circulation routes have: (a) Dimensions appropriate to the intended use, (b) Appropriate cross-fall, and slope in the direction of travel, (c) Adequate queuing and circulation space, and, (d) Adequate sight distances?		N/A	BGn	05/06/2019 10:42 am	This question does not apply to this Project.
D1: Access Routes - Residential - Prompt List:		Y	BGn	11/06/2019 02:08 pm	RFI Response
1. D1.3.1: Does the proposal demonstrate that access routes enable people to: (a) Safely and easily approach the main entrance of buildings from the apron or construction edge of a building,(b) Enter buildings, (c) Move into spaces within buildings by such means as corridors, doors, stairs, ramps and lifts,(d) Manoeuvre and park cars, (e) Manoeuvre and park delivery vehicles required to use the loading space?		Y	BGn	11/06/2019 02:08 pm	Please clarify within the elevations if the provided step detail A on sheet 10 is also applicable to the sleepout and to establish compliance of D1.3.1 Resolved - Within the RFI response sheet 12 is revised to indicate stairs and has made reference to detail A

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
2. D1.3.3: Does the proposal demonstrate that access routes: (a) Have adequate activity space, (b) Are free from dangerous obstructions and from any projections likely to cause an obstruction, (c) Have a safe cross fall, and safe slope in the direction of travel, (d) Have adequate slip-resistant walking surfaces under all conditions of normal use, (e) Include stairs to allow access to upper floors irrespective of whether an escalator or lift has been provided, (f) Have stair treads, and ladder treads or rungs which: (i) provide adequate footing, and (ii) have uniform rise within each flight and for consecutive flights, (g) Have stair treads with a leading edge that can be easily seen, (h) Have stair treads which prevent children from falling through or becoming held fast between treads, where open risers are used, (i) Have smooth, reachable, and graspable handrails to provide support and to assist with movement along a stair or ladder, LoA - Clause (i) does not apply to isolated steps. (j) Have handrails of adequate strength and rigidity as required by Clause B1 "Structure", (k) Have landings of appropriate dimensions and at appropriate intervals along a stair or ramp to prevent undue fatigue, (l) Have landings of appropriate dimensions where a door opens from or onto a stair, ramp or ladder so that the door does not create a hazard, and (m) Have any automatically controlled doors constructed to avoid the risk of people becoming caught or being struck by moving parts?	N/A	BGn	11/06/2019 02:08 pm	This question does not apply to this Project.
3. D1.3.5: Does the proposal demonstrate vehicle spaces and circulation routes have: (a) Dimensions appropriate to the intended use, (b) Appropriate cross-fall, and slope in the direction of travel, (c) Adequate queuing and circulation space, and, (d) Adequate sight distances?	N/A	BGn	11/06/2019 02:08 pm	This question does not apply to this Project.
D2: Mech Installations for Access		BGn	05/06/2019 10:40 am	Code Clause Disabled: Not applicable for this project.
E: MOISTURE				
E1: Surface Water				
E1: Surface Water: Functional Requirement - Does the proposal comply with Functional Requirement E1.2 and demonstrate on reasonable grounds that buildings and site work will be constructed in a way that protects people and other property from the adverse effects of surface water? Review inspections and add / delete / modify inspection questions as required.				
E1: Surface Water - Prompt List:	Y	BGn	05/06/2019 10:44 am	
1. E1.3.1: Does the proposal demonstrate that except as otherwise required under the Resource Management Act 1991 for the protection of other property, surface water, resulting from an event having a 10% probability of occurring annually and which is collected or concentrated by buildings or sitework, will be disposed of in a way that avoids the likelihood of damage or nuisance to other property? See Reference Notes.	Y	BGn	05/06/2019 10:44 am	Compliance with E1.3.1 is demonstrated. - Refer to compliance comment within the main checklist
2. E1.3.2: Does the proposal demonstrate that surface water, resulting from an event having a 2% probability of occurring annually, will not enter buildings? LoA - only applies to Housing, Communal Residential and Communal Non-Residential buildings. See Reference Notes.	Y	BGn	05/06/2019 10:44 am	Compliance with E1.3.2 is demonstrated. Refer to the compliance comment within the main checklist
3. E1.3.3: Does the proposal demonstrate that drainage systems for the disposal of surface water are constructed to: (a) Convey surface water to an appropriate outfall using gravity flow where possible, (b) Avoid the likelihood of blockages, (c) Avoid the likelihood of leakage, penetration by roots, or the entry of ground water where pipes or lined channels are used, (d) Provide reasonable access for maintenance and clearing blockages, (e) Avoid the likelihood of damage to any outfall, in a manner acceptable to the network utility operator, and (f) Avoid the likelihood of damage from superimposed loads or normal ground movements? See Reference Notes.	Y	BGn	05/06/2019 10:44 am	Compliance with E1.3.3 (a - f) is demonstrated. 100mm SW drain at 1:100 to connected to the dwelling SW system - 1 x 80mm DP proposed which meets the requirements of table 5 of E1/AS1
E1/VM 1: Drainage: Does the proposal demonstrate compliance with Verification Method E1/VM 1?				

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
E1/VM 1: Drainage - Prompt List:	N/A	BGn	05/06/2019 10:42 am	This question does not apply to this application.
1. Run-off: Has the estimation of surface water run-off been correctly calculated?				
2. Sizing: Is the sizing of the surface water system in accordance with E1/VM1?				
3. Secondary Flow Paths: Does the design demonstrate that the effects of secondary flow paths have been correctly considered?				
4. Energy Loss: Does the design provide for energy loss through the drain structure?				
5. Flow Velocity: Does the design demonstrate that the drain shall satisfy minimum flow velocity as required by E1/VM1?				
6. Outflow Protection: Is compliance with outflow protection satisfied as required by E1/VM1?				
7. Drain Leak Test: Does the design identify the need for a drain leak test to occur?				
8. Soak Pit: Is evidence provided to demonstrate that the design for disposal to a soak pit satisfies the requirements of E1/VM1 Para 9.0?				
E2: External Moisture				
E2 - External Moisture: Does the proposal comply with Functional Requirement E2.2 and demonstrate on reasonable grounds that buildings and sitework are constructed to provide adequate resistance to penetration and accumulation of moisture from the outside? Review inspections and add / delete / modify inspection questions as required.				
E2 - External Moisture - Prompt List:	Y	BGn	05/06/2019 10:45 am	
1. E2.3.1: Does the proposal demonstrate that roofs shed precipitated moisture? In locations subject to snowfalls, roofs must also shed melted snow.	Y	BGn	05/06/2019 10:45 am	The same methodology has been proposed for the sleepout as is within the main dwelling - refer to the main checklist for non compliance and the required resolutions as well as compliance
2. E2.3.2: Does the proposal demonstrate that roofs and exterior walls prevent the penetration of water that could cause undue dampness, damage to building elements, or both?	Y	BGn	05/06/2019 10:45 am	The same methodology has been proposed for the sleepout as is within the main dwelling - refer to the main checklist for non compliance and the required resolutions as well as compliance
3. E2.3.3: Does the proposal demonstrate that walls, floors, and structural elements in contact with, or in close proximity to, the ground will not absorb or transmit moisture in quantities that could cause undue dampness, damage to building elements, or both?	Y	BGn	05/06/2019 10:45 am	The same methodology has been proposed for the sleepout as is within the main dwelling - refer to the main checklist for non compliance and the required resolutions as well as compliance
4. E2.3.4: Does the proposal demonstrate that building elements susceptible to damage will be protected from the adverse effects of moisture entering the space below suspended floors?	Y	BGn	05/06/2019 10:45 am	The same methodology has been proposed for the sleepout as is within the main dwelling - refer to the main checklist for non compliance and the required resolutions as well as compliance
5. E2.3.5: Does the proposal demonstrate that concealed spaces and cavities in buildings are constructed in a way that prevents external moisture being accumulated or transferred and causing condensation, fungal growth, or the degradation of building elements?	N/A	BGn	05/06/2019 10:45 am	This question does not apply to this Project.
6. E2.3.6: Does the proposal demonstrate that excess moisture present at the completion of construction is capable of being dissipated without permanent damage to building elements?	Y	BGn	05/06/2019 10:45 am	The same methodology has been proposed for the sleepout as is within the main dwelling - refer to the main checklist for non compliance and the required resolutions as well as compliance

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
7. E2.3.7: Does the proposal demonstrate that building elements will be constructed in a way that makes due allowance for the following: (a) The consequences of failure, (b) The effects of uncertainties resulting from construction or from the sequence in which different aspects of construction occur, (c) Variation in the properties of materials and in the characteristics of the site?		Y	BGn	05/06/2019 10:45 am	The same methodology has been proposed for the sleepout as is within the main dwelling - refer to the main checklist for non compliance and the required resolutions as well as compliance
8. Construction Monitoring / Warranties: Have Construction Monitoring or Warranty requirements been entered into the system?		N/A	BGn	05/06/2019 10:45 am	This question does not apply to this Project.
9. Miscellaneous: Please select the cross if you wish to raise an RFI for an item that may not clearly fit into any other category.		N/A	BGn	05/06/2019 10:45 am	This question does not apply to this Project.
E3: Internal Moisture					
E3: Internal Moisture: Does the proposal comply with Functional Requirement E3.2 and demonstrate on reasonable grounds that buildings are constructed to avoid the likelihood of (a) Fungal growth or the accumulation of contaminants on linings and other building elements; and (b) Free water overflow penetrating to an adjoining house hold unit; and (c) Damage to building elements being caused by the presence of moisture? Review inspections and add / delete / modify inspection questions as required.					
E3: Internal Moisture - Prompt List:		<u>Y</u>	BGn	05/06/2019 10:46 am	
1. E3.3.1: Does the design demonstrate that an adequate combination of thermal resistance, ventilation and space temperature is provided to all habitable spaces, bathrooms, laundry and other spaces where moisture is generated or may accumulate? LoA - does not apply to Communal Non-residential, Commercial, Industrial, Outbuildings or Ancillary buildings.		Y	BGn	05/06/2019 10:46 am	Passive ventilation has been provided to the applicable spaces in order for compliance to be established
2. E3.3.2: Is freewater from accidental overflow from sanitary fixtures or sanitary appliances disposed of in a way that avoids loss of amenity or damage to household units or other property?		N/A	BGn	05/06/2019 10:46 am	This question does not apply to this Project.
3. E3.3.3: Are floor surfaces of spaces containing sanitary fixtures or sanitary appliances impervious and easily cleaned?		N/A	BGn	05/06/2019 10:46 am	This question does not apply to this Project.
4. E3.3.4: Are wall surfaces adjacent to sanitary fixtures or sanitary appliances impervious and easily cleaned?		N/A	BGn	05/06/2019 10:46 am	This question does not apply to this Project.
5. E3.3.5: Are surfaces of building elements that are likely to be splashed or become contaminated in the course of the intended use of the building, impervious and easily cleaned?		N/A	BGn	05/06/2019 10:46 am	This question does not apply to this Project.
6. E3.3.6: Are surfaces of building elements that are likely to be splashed constructed in a way that prevents water splash from penetrating behind linings or into concealed spaces? Please give careful consideration to tile showers and membranes.		N/A	BGn	05/06/2019 10:46 am	This question does not apply to this Project.
7. Construction Monitoring / Warranties: Have Construction Monitoring or Warranty requirements been entered into the system?		N/A	BGn	05/06/2019 10:46 am	This question does not apply to this Project.
F: SAFETY OF USERS					
F1: Hazardous Agents on Site			BGn	05/06/2019 10:46 am	Code Clause Disabled: Not applicable for this project.
F2: Hazardous Building Materials					
F2: Hazardous Building Materials: Does the proposal demonstrate compliance with F2.2 and demonstrate on reasonable grounds that building materials which are potentially hazardous will be used in ways that avoid undue risk to people? Review inspections and add / delete / modify inspection questions as required.					
F2: Hazardous Building Materials - Prompt List:		<u>Y</u>	BGn	05/06/2019 10:47 am	

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
1. F2.3.1: (Harmful Concentrations) - Does the proposal identify that the quantities of gas, liquid, radiation or solid particles emitted by materials used in the construction of buildings, will not give rise to harmful concentrations at the surface of the material where the material is exposed, or in the atmosphere of any space?		N/A	BGn	05/06/2019 10:47 am	This question does not apply to this Project.
2. F2.3.2: (Manifestation) - Does the proposal demonstrate that transparent panels capable of being mistaken for an unimpeded path of travel are marked to make them visible? LoA - This provision does not apply to Housing.		N/A	BGn	05/06/2019 10:47 am	This question does not apply to this Project.
3. F2.3.3: (Impact) - Does the proposal demonstrate that glass or other brittle materials with which people are likely to come into contact will: (a) If broken on impact, break in a way that is unlikely to cause injury, or (b) Resist a reasonably foreseeable impact without breaking, or (c) Be protected from impact?		Y	BGn	05/06/2019 10:47 am	Window and door schedule indicated within the elevations which indicates applicable joinery units as SG meeting the requirements NZS4223:part3 2016. Note: measured the sill height on the plans and 800mm will be achieved meaning compliance of NZS4223 part3:2016 section 6 achieved
4. Structural Glass Barriers: Do structural glass barriers satisfy provisions of section 22 of NZS 4223.3 2016 and B1/AS1 7.3.3 and 7.3.4 as amended 1 June 2016.? See Reference Notes.		N/A	BGn	05/06/2019 10:47 am	This question does not apply to this Project.
5. Asbestos: Is the presence and location of asbestos identified; and if so, are safety procedures for working with the product provided? If there is no asbestos hazard then please turn off the requirement for a pre-construction meeting inspection and the requirement for an Asbestos Assessment Report (under Required Documents).		N/A	BGn	05/06/2019 10:47 am	This question does not apply to this Project.
F4: Safety from Falling					
F4: Safety from Falling: Does the proposal comply with Functional Requirement F4.2 and demonstrate that the building work is constructed to reduce the likelihood of accidental fall? Review inspections and add / delete / modify inspection questions as required.					
F4: Safety from Falling - Prompt List:		<u>Y</u>	<u>BGn</u>	<u>05/06/2019 10:49 am</u>	
1. F4.3.1: Does the proposal demonstrate that a barrier is provided where: (a) People could fall 1 metre or more from an opening in the external envelope, or floor of a building, or (b) From a sudden change of level within or associated with a building? LoA - does not apply where the barrier is incompatible with intended use, or to temporary barriers on construction sites where the fall is less than 3 m, or to buildings providing pedestrian access in remote locations where the route served presents similar natural hazards.		Y	BGn	05/06/2019 10:49 am	Provisions of F4.3.1 are satisfied. The proposed loft has a barrier provided where the fall is greater than 1m [note: area left opening for ladder access]
2. F4.3.2: Does the proposal demonstrate that roofs with permanent roof access have barriers?		N/A	BGn	05/06/2019 10:49 am	This question does not apply to this Project.
3. F4.3.4: Does the proposal demonstrate that barriers will: (a) Be continuous and extend for the full extent of the hazard, (b) Be of appropriate height, (c) Be constructed with adequate rigidity - (satisfies B1 & B2), (d) Be of adequate strength to withstand the foreseeable impact of people and, where appropriate, the static pressure of people pressing against them, (e) Be constructed to prevent people from falling through them - (ref. F4/AS1 1. 2), (g) Restrict the passage of children under 6 years of age when provided to guard a change of level in areas likely to be frequented by them, and (h) Be constructed so that they are not readily able to be used as seats?LoA - does not apply to housing.		Y	BGn	05/06/2019 10:49 am	Provisions of F4.3.4 are satisfied. Barrier construction has been detailed on sheet 14 - SORGed compliance of B1, B2 and F4 has been achieved
F5: Construction and Demolition Hazards			<u>BGn</u>	<u>05/06/2019 10:46 am</u>	Code Clause Disabled: Not applicable for this project.
F7: Warning System					

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT		Y/N	User	Date	Notes
F7: Warning System: Does the proposal comply with Functional Requirement F7.2 and demonstrate on reasonable grounds that the building is provided with appropriate means of warning people to escape to a safe place in an emergency? Read these Questions in Conjunction with C/ AS1 - C/AS7 - PARA 2.2. Note: The Inspection requirements for these systems are driven from the C-Fire Safety section of the processing checklist.					
F7: Warning System - Prompt List:		<u>Y</u>	BGn	12/06/2019 02:25 pm	
1. F7.3.1: Does the proposal demonstrate that the means of warning will alert people to the emergency in adequate time for them to reach a safe place?	Y	BGn	12/06/2019 02:25 pm	The designer has specified a complying Type 1 smoke alarm and identified the location of detector correctly so compliance of F7/AS1 section 3 can be established	
2. F7.3.2: Does the proposal demonstrate that appropriate means of detection and warning for fire will be provided within each household unit?	Y	BGn	12/06/2019 02:25 pm	Refer to the comment above for compliance	
3. F7.3.3: Does the proposal demonstrate that appropriate means of warning for fire and other emergencies are provided in buildings as necessary to satisfy the other performance requirements of this code?	Y	BGn	12/06/2019 02:25 pm	Refer to the comment above for compliance	
4. Installation: Is adequate information provided to enable onsite compliance of the system to be determined?	Y	BGn	12/06/2019 02:25 pm	BCA to inspect compliance as part of the final inspection process before the issue of CCC	
F9: Restricting Access to Residential Pools			BGn	05/06/2019 10:46 am	Code Clause Disabled: Not applicable for this project.
G: SERVICES			BGn	05/06/2019 08:23 am	Code Clause Disabled: Not applicable for this project.
G1: Personal Hygiene					
G2: Laundering					
G3: Food preparation and prevention of contamination					
G4: Ventilation					
G5: Interior Environment					
G7: Natural Light					
G8: Artificial Light					
G9: Electricity					
G10: Piped Services & G11: Gas As An Energy Source					
G12: Water Supplies					
G13: Sanitary Plumbing & Foul Water Drainage					
G15: Solid Waste					
H: ENERGY EFFICIENCY					
H1: Energy Source: Is the energy for this building sourced from a network operator or a depletable energy resource? If yes, select the tick and proceed to Functional Requirement below. If NO then select N/A and apply N/A to Functional Requirement question below.		Y	BGn	05/06/2019 10:50 am	Refer to the main checklist for compliance
H1: Energy Efficiency: Does the proposal comply with Functional Requirement H1.2 and demonstrate on reasonable grounds that the building will be constructed to achieve an adequate degree of energy efficiency when that energy is used for: (a) Modifying temperature, modifying humidity, providing ventilation, or doing all or any of these things; OR (b) Providing hot water to sanitary fixtures or sanitary appliances, or both; OR (c) Providing artificial lighting?					
H1: Energy Efficiency - Prompt List:		<u>Y</u>	BGn	05/06/2019 10:50 am	
1. H1.3.1 - Thermal Resistance: Does the proposal demonstrate that the building envelope enclosing spaces where the temperature or humidity (or both) are modified, are constructed to provide adequate thermal resistance; and limit uncontrollable airflow? LoA - does not apply to assembly service, industrial, outbuildings or ancillary buildings.	Y	BGn	05/06/2019 10:50 am	Heat loss calculations have been provided for the application within the specification using the calculation method. Satisfied with the data entry into the program and that it reflects the proposed construction R3.6 Pink Batt insulation for the ceiling R2.6 Pink Batt insulation for the walls R1.8 Expol	

SLEEPOUT - R2 - DETACHED DWELLING - Processing - AUDIT	Y/N	User	Date	Notes
2. H1.3.2 - BPI: Does the proposal demonstrate that the building is constructed to ensure that the building performance index (BPI) does not exceed 1.55? LoA - applies to Housing only.	Y	BGn	05/06/2019 10:50 am	Provisions of H1.3.2 are satisfied - Refer to the comment above
3. H1.3.3 - Parameters: Does the proposal demonstrate that account is taken of physical conditions likely to affect energy performance, including: (a) The thermal mass of building elements; AND (b) The building orientation and shape; AND (c) The air tightness of the building envelope; AND (d) The heat gains from services, processes and occupants; AND (e) The local climate; AND (f) Heat gains from solar radiation?	Y	BGn	05/06/2019 10:50 am	Provisions of H1.3.3 are satisfied - Refer to the comment above
4. H1.3.4 - Hot Water: Does the proposal demonstrate that systems for the heating, storage, or distribution of hot water to and from sanitary fixtures or sanitary appliances; having regard to the energy source used: (a) Limit the energy lost in the heating process; AND (b) Are constructed to limit heat losses from storage vessels and from distribution systems; AND (c) Are constructed to facilitate the efficient use of hot water? LoA - (b) does not apply to individual storage vessels with greater than 700 litre capacity, (c) only applies to housing.	N/A	BGn	05/06/2019 10:50 am	This question does not apply to this Project.
5. H1.3.5 - Artificial Lighting: (G8) - Does the proposal demonstrate that artificial lighting fixtures will: (a) Be located and sized to limit energy use, consistent with the intended use of space; AND (b) Be fitted with a means to enable light intensities to be reduced, consistent with reduced activity in the space? LoA - only applies to commercial and communal non-residential with floor area greater than 300 m² and does not apply to lighting provided solely to meet requirements of F6.	N/A	BGn	05/06/2019 10:50 am	This question does not apply to this Project.
6. H1.3.6 - HVAC: Does the proposal demonstrate that HVAC systems will be located, constructed, and installed to: (a) Limit energy use, consistent with the intended use of space; AND (b) Enable them to be maintained to ensure their use of energy remains limited, consistent with the intended use of space? LoA - commercial buildings only.	N/A	BGn	05/06/2019 10:50 am	This question does not apply to this Project.
Swimming Pools		BGn	05/06/2019 08:23 am	Code Clause Disabled: Not applicable for this project.
HEATING APPLIANCES		BGn	05/06/2019 08:23 am	Code Clause Disabled: Not applicable for this project.
Solid Fuel Burner				
Gas - Liquid Fuel Burning Appliances				
Radiators				
Solar Water Heater		BGn	05/06/2019 08:23 am	Code Clause Disabled: Not applicable for this project.
DETACHED GARAGE		BGn	05/06/2019 08:22 am	Code Clause Disabled: Not applicable for this project.
Retaining Walls		BGn	05/06/2019 08:22 am	Code Clause Disabled: Not applicable for this project.

SLEEPOUT - R2 - DETACHED DWELLING - Code Clause Management History			
Code Clause	Initials	Date	Reason/Notes
B1: Chimney	BGn	05/06/2019 08:31 am	Not applicable for this project.
B1: Masonry Construction	BGn	05/06/2019 08:31 am	Not applicable for this project.
B1: Specific Design Elements	BGn	05/06/2019 08:31 am	Not applicable for this project.
D2: Mech Installations for Access	BGn	05/06/2019 10:40 am	Not applicable for this project.
F1: Hazardous Agents on Site	BGn	05/06/2019 10:46 am	Not applicable for this project.
F5: Construction and Demolition Hazards	BGn	05/06/2019 10:46 am	Not applicable for this project.
F9: Restricting Access to Residential Pools	BGn	05/06/2019 10:46 am	Not applicable for this project.
G: SERVICES	BGn	05/06/2019 08:23 am	Not applicable for this project.
Swimming Pools	BGn	05/06/2019 08:23 am	Not applicable for this project.
HEATING APPLIANCES	BGn	05/06/2019 08:23 am	Not applicable for this project.
Solar Water Heater	BGn	05/06/2019 08:23 am	Not applicable for this project.
DETACHED GARAGE	BGn	05/06/2019 08:22 am	Not applicable for this project.
Retaining Walls	BGn	05/06/2019 08:22 am	Not applicable for this project.

Processing Time Clock Start Date: 29/04/2019 11:00 am

Decision To Grant: BC190480 by Brendon Guyton @ 14/06/2019 01:41 pm

Documentation demonstrates compliance with the Building Code and Building Act 2004. Requests for further information have been addressed and reasons for these have been recorded in each instance. Building Consent can be granted and issued on payment of the appropriate fees and levies.

Form 5

Building consent - BC190480

Section 51, Building Act 2004

The building

Street address of building: 31 Pineview Way, Motueka Valley
 Legal description of land where building is located: Lot 10 DP519728
 Building name:
 Location of building within site/block number: 31 Pineview Way, Motueka Valley
 Level/unit number:

The owner

Name of owner: Sam Mcleod & Toni Evans
 Contact person: Sam & Toni
 Mailing address: PO Box 316
 Motueka 7143
 Street address/registered office:
 Phone number: Landline: Mobile: 0211103643
 Daytime: No information provided
 After hours: No information provided
 Facsimile number: No information provided
 Email address: themotlot@gmail.com
 Website: No information provided
 First point of contact for communications with the building consent authority:
 Greg Benjamin; Mailing Address: 30 Citrus Lane
 Enner Glynn
 Nelson 7011; Mobile: 0211449153; Email: gregsdesign@outlook.com

Building work

The following building work is authorised by this building consent:

Construct new dwelling and detached sleepout

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 or 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

This building consent is subject to the following conditions:

Section 90 - Inspections by Building Consent Authorities: (1) Every building consent is subject to the condition that 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.

(2) The provisions (if any) that are endorsed on a building consent in relation to inspection during the carrying out of building work must be taken to include the provisions of this section.

(3) In this section, inspection means the taking of all reasonable steps to ensure that building work is being carried out in accordance with a building consent.

Compliance schedule

A compliance schedule is not required for this building.

Inspections

The following inspections are required:

Main Building

- | | |
|----------------------|----------------------|
| • Prepour | • Wastepipes |
| • Sub-floor Framing | • Framing / Pre-wrap |
| • Post Wrap / Cavity | • Preline |
| • Post Line | • Drainage |
| • Final | |

Sleepout

- | | |
|----------------------|----------------------|
| • Prepour | • Sub-floor Framing |
| • Framing / Pre-wrap | • Post Wrap / Cavity |
| • Preline | • Post Line |
| • Drainage | • Final |

Documents required

MAIN BUILDING

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G12: Pipework pressure test documentation
- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

SLEEPOUT

Prepour

- Form 6a - LBP record of building work - Foundations

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry

Drainage

- E1: Stormwater drain leakage test and as-built plans

Copies of all site reports/records must be provided to the BCA as work proceeds for their records, please upload these to the correct building consent via the AlphaOne portal.

Attachments

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

- Advice notes / Endorsements

Dawn Rosie

Position: Team Leader Building Consents

On behalf of: Tasman District Council

Issue Date: 25 June 2019

Advice notes / Endorsements

As-Built Truss Layout - An 'as built' truss layout, showing truss and top plate connectors, along with design verification data and lintel sizes outside the scope of NZS 3604 must be available on site at the Prewrap Inspection for the Building Consent Authority officer to collect to facilitate the inspection and retain for record purposes.

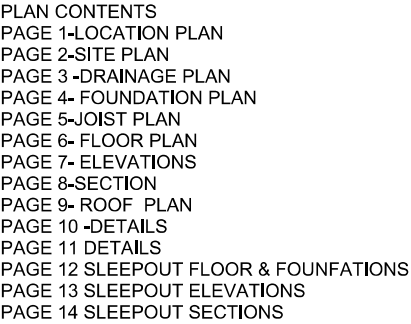
Electrical Energy Works Certificate - The Building Consent Authority places full reliance of the issue of energy work certificates to verify that the installation and completion of electrical services comply with the provisions of New Zealand Building Code Clauses G9. Code compliance certificate will not be issued unless the energy works certificates identifies compliance with this specific code clause and confirms compliance with this building consent.

Energy Works Certificate - The Building Consent Authority places full reliance on the issue of energy works certificates to verify compliance of the installation and completion of piped services, the gas supply system, and gas appliances with the provisions of New Zealand Building Code Clauses G10 and G11. Code compliance certificate will not be issued unless the energy works certificates identify compliance with these specific code clauses and confirm compliance with this building consent.

Pressure Test Certificate - Upon completion of the building work the plumber shall provide a pressure test certificate to the owner to submit with their documentation for code compliance certificate application.

Potable Water Supply - Confirmation of potability of the individual supply criteria of New Zealand Drinking Water Standards 1995, is required to be supplied as part of the documentation for code compliance certificate application.

Proof of potability of water supply must be demonstrated before the code compliance certificate is issued by provision of suitable bacteriological and chemical test results from an approved laboratory. Sampling results provided from a sampling routine of one chemical and one bacteriological test from pipe work as close to the well head as possible, followed by two further bacteriological tests at 30 day intervals from the same sampling point will be accepted as giving adequate assessment of water quality.



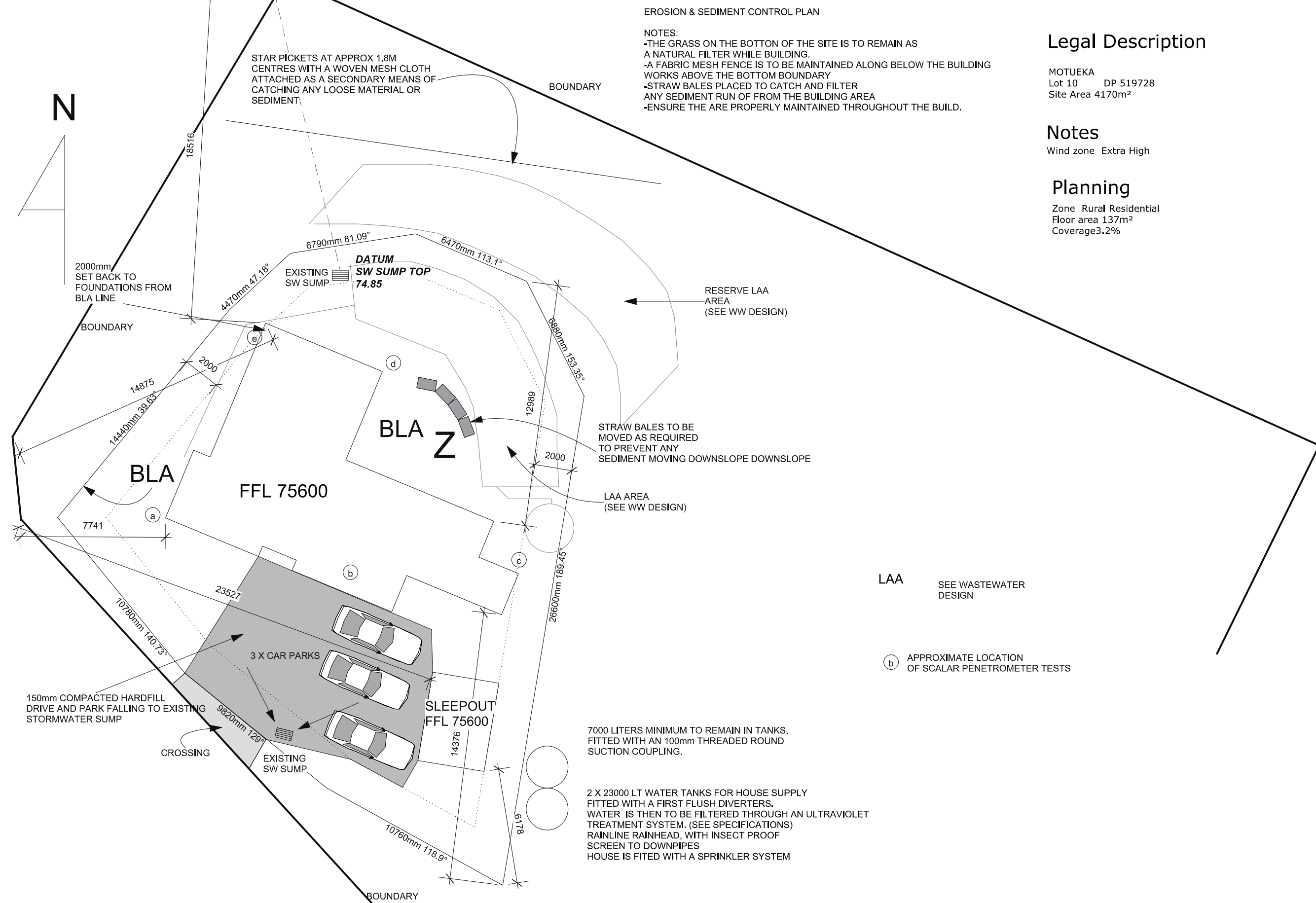
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FOUR BEDROOM DWELLING WITH SLEEPOUT	LOCATION PLAN	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:400 @A3 REVISION	1/14
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BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019



FOUR BEDROOM DWELLING
WITH SLEEPOUT

SITE PLAN

FOR S MCLOUD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

SCALE 1:200
@A3
REVISION

2/14

BC190480

TASMAN DISTRICT COUNCIL - APPROVED PLANS

17/28/2019

CLAUSE 'H' OF THE CONSENT NOTICE

Water Storage and Firefighting

(h) Each lot shall be provided with two rainwater storage tanks of 23,000 litres each. One of the tanks shall incorporate a rainwater detention facility.

Rainwater from the roof of the house and garage shall flow in a 100mm dia stormwater pipe from the house and garage to the Tank No 1.

The 100 mm overflow from Tank No 1 shall flow to the 100mm dia inlet of Tank No 2.

Tank No 2 is the Rainwater Storage and Detention Tank.

The details for the Tank No 2 are shown on the plan Drg No ESS1122/35 - Typical Details for Lower Rainwater Storage and Detention Tank. This Tank No 2 has a 25 mm internal diameter restricted outlet pipe for draining the detention volume. This pipe passes through the tank wall as a metal threaded connection at approximately 1000 mm from the base of the tank as shown.

There shall be a snorkel pipe for the detention volume fixed to the inside wall of the tank to allow for the specific detention volume for the specific roof area of the house.

The required Detention Volume shall be determined by the total roof area of the house and garage on the Lot. Detention volume for houses with roofs 100 sqm = 2800 litres, and for houses with roofs of 200 sqm = 5600 litres, and for houses with roofs of 300 sqm = 8400 litres.

(i) All water storage tanks shall as far as is practicable be buried within the ground, or alternatively screened, for the purposes of minimising their visual effects.

(ii) The owner shall install and maintain a home sprinkler system in accordance with NZS 4517:2010 Fire Sprinkler Systems for Houses.

DRAINAGE TO COMPLY WITH 'H' OF THE CONSENT NOTICE

Foul Water

Sanitary Fixture	Discharge Pipe	Minimum gradient
Basin/Vanity	40 DIA	1:40
Bathtub	40 DIA	1:40
Shower	40 DI	1:40
WC	100 DIA	1:40
Kitchen Sin	50 DI	1:40
Laundry Tub	50 DIA	1:40

Downpipe Calculation

1/ 80 dia per 75m² roof
Roof area 176m²
3/ 80mm dia downpipes required.

NOTE: STORMWATER DETENTION

SEE CONSENT NOTICE 'H' & 'K' (IN SPECIFICATIONS)

STORMWATER IS TO BE DIRECTED TO TANK 1 INITIALLY.

TANK 2 IS TO BE SET UP TO ALLOW FOR ADEQUATE STORMWATER DETENTION FOR THE ROOF AREA. OVERFLOW IS VIA A 25mm INTERNAL DIA PIPE TO RISTRICT FLOW, THEN THE OVERFLOW PIPE IS CONNECTED TO STORMWATER DOWNSTREAM. A SNORKEL WILL NEED TO BE FITTED TO ENSURE THE DESIGNED DETENTION. ROOF AREA 195M² = 5600 L DETENTION VOLUME IS REQUIRED.

WATER SUPPLY PIPE 25mm BLUELINE
HWC PIPE INSULATION 'ARMOURFLEX FR'
PIPE IN DWELLING BUTELINE 20mm HOT & COLD

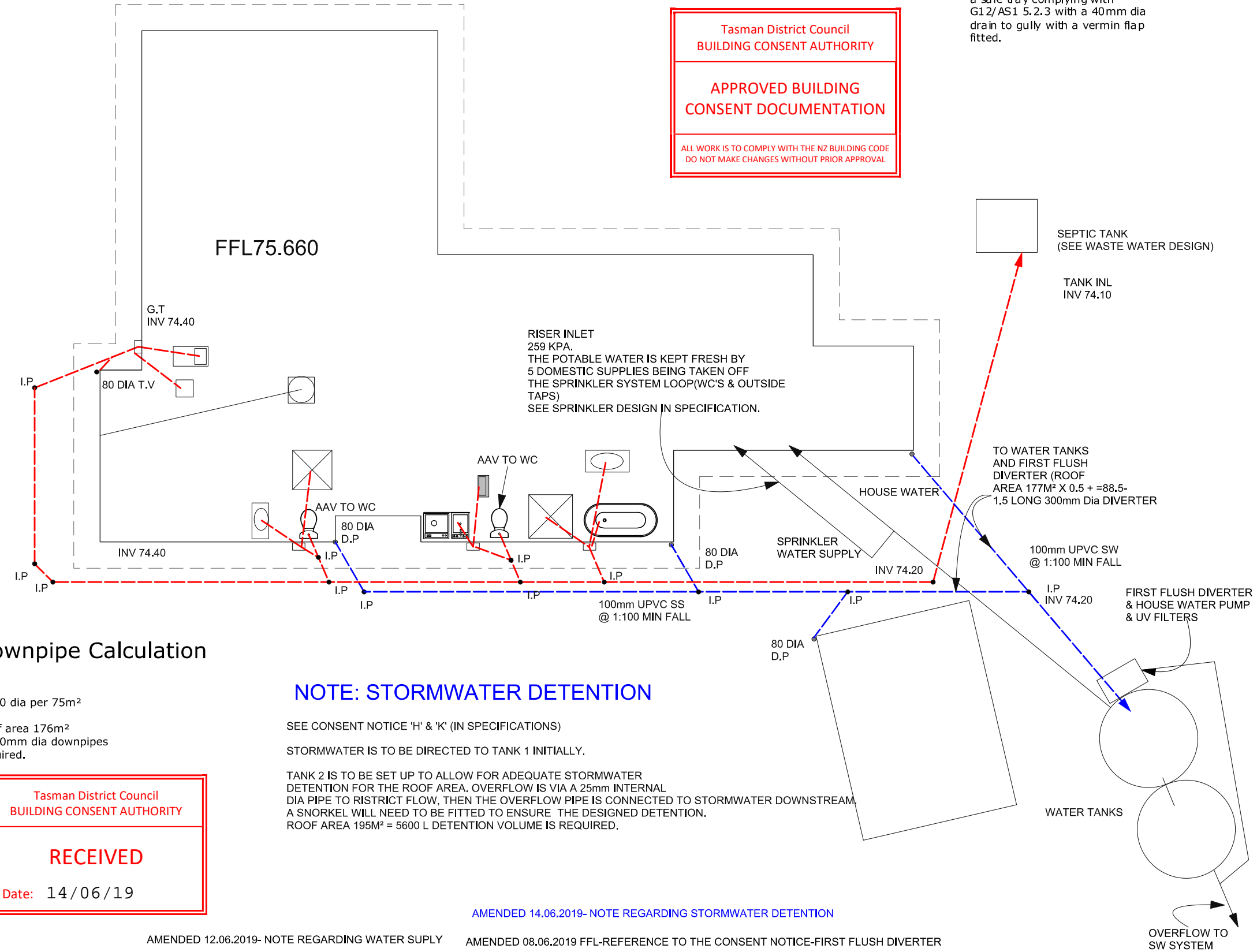
TO COMPLY WITH G13/AS1

Tasman District Council
BUILDING CONSENT AUTHORITY

RECEIVED

Date: 14/06/19

THE SPRINKLER SYSTEM HAS BEEN DESIGNED WITH UP TO 5 DOMESTIC SUPPLIES BEING TAKEN FROM THE LOOP, NEGATING THE NEED FOR A BACK FLOW PREVENTER. (SPRINKLER REPORT PAGE 5 OF 'DOMESTICSPRINKLER SYSTEM FOR S MCLOUD & T EVANS)



FOUR BEDROOM DWELLING
WITH SLEEPOUT

DRAINAGE PLAN

FOR S MCLEOD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

SCALE 1:100
@A3
REVISION 3

3/14

BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019

CLAUSE 'H' OF THE CONSENT NOTICE

Water Storage and Fire fighting

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The required Detention Volume shall be determined by the total roof area of the house and garage on the Lot. Detention volume for houses with roofs 100 sqm = 2800 litres, and for houses with roofs of 200 sqm = 5600 litres, and for houses with roofs of 300 sqm = 8400 litres.

(i) All water storage tanks shall as far as is practicable be buried within the ground, or alternatively screened, for the purposes of minimising their visual effects.

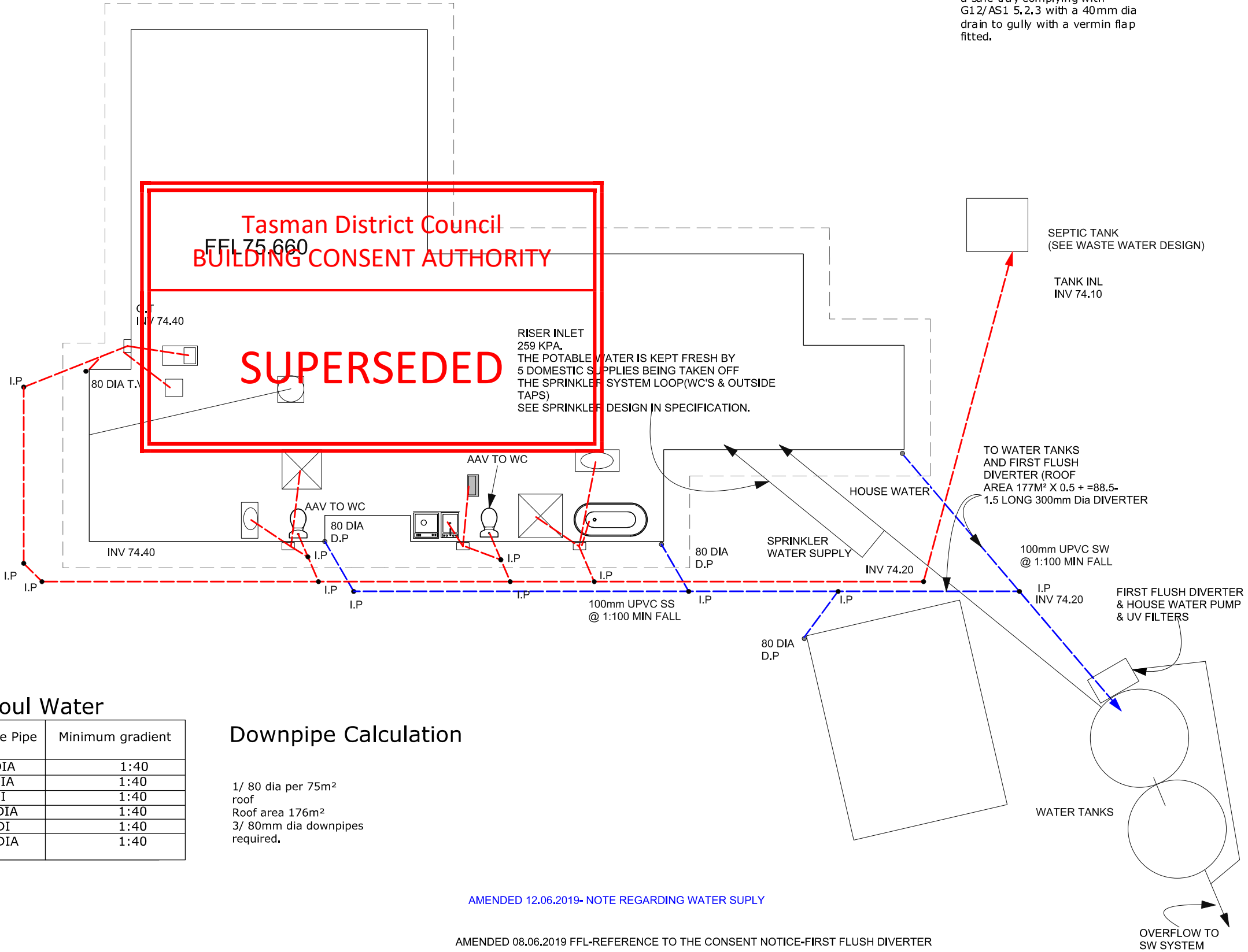
(j) The owner shall install and maintain a home sprinkler system in accordance with NZS 4517:2010 Fire Sprinkler Systems for Houses.

DRAINAGE TO COMPLY WITH 'H' OF THE CONSENT NOTICE

THE SPRINKLER SYSTEM HAS BEEN DESIGNED WITH UP TO 5 DOMESTIC SUPPLIES BEING TAKEN FROM THE LOOP, NEGATING THE NEED FOR A BACK FLOW PREVENTER. (SPRINKLER REPORT PAGE 5 OF 'DOMESTICSPRINKLER SYSTEM FOR S MCLOUD & T EVANS)

Hot Water Cylinder

Electric HWC complete with Tempering Valve.
No supply tank, mains pressure hwc with reducing valve & a safe tray complying with G12/AS1 5.2.3 with a 40mm dia drain to gully with a vermin flap fitted.



Foul Water

Sanitary Fixture	Discharge Pipe	Minimum gradient
Basin/Vanity	40 DIA	1:40
Bathtub	40 DIA	1:40
Shower	40 DI	1:40
WC	100 DIA	1:40
Kitchen Sin	50 DI	1:40
Laundry Tub	50 DIA	1:40

Downpipe Calculation

1/ 80 dia per 75m² roof
Roof area 176m²
3/ 80mm dia downpipes required.

WATER SUPPLY PIPE 25mm BLUELINE
HWC PIPE INSULATION 'ARMOURFLEX FR'
PIPE IN DWELLING BUTELINE 20mm HOT & COLD
TO COMPLY WITH G13/AS1

AMENDED 12.06.2019- NOTE REGARDING WATER SUPPLY

AMENDED 08.06.2019 FFL-REFERENCE TO THE CONSENT NOTICE-FIRST FLUSH DIVERTER

FOUR BEDROOM DWELLING
WITH SLEEPOUT

DRAINAGE PLAN

FOR S MCLEOD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

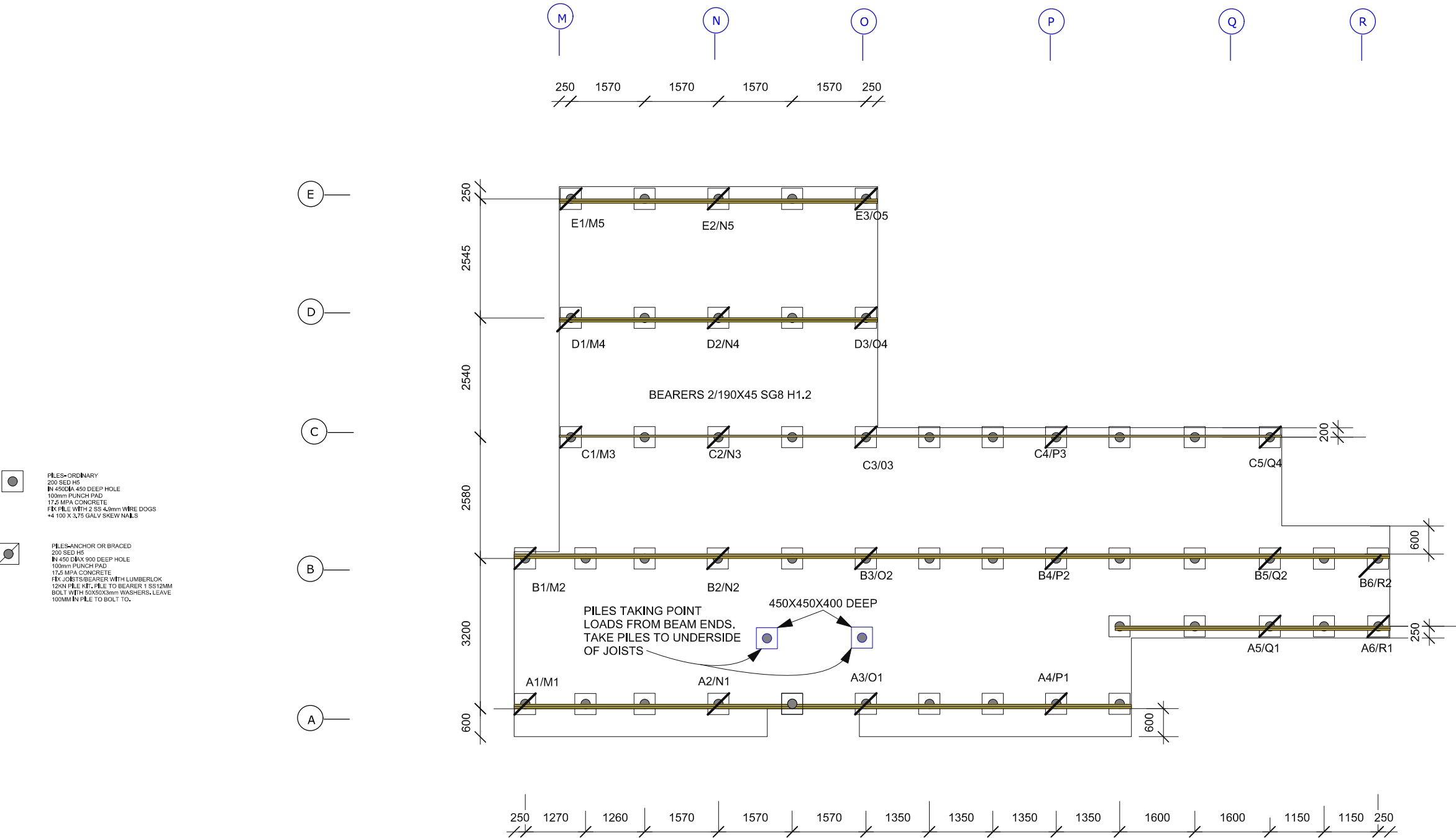
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@A3
REVISION 2

3/14

BC190480

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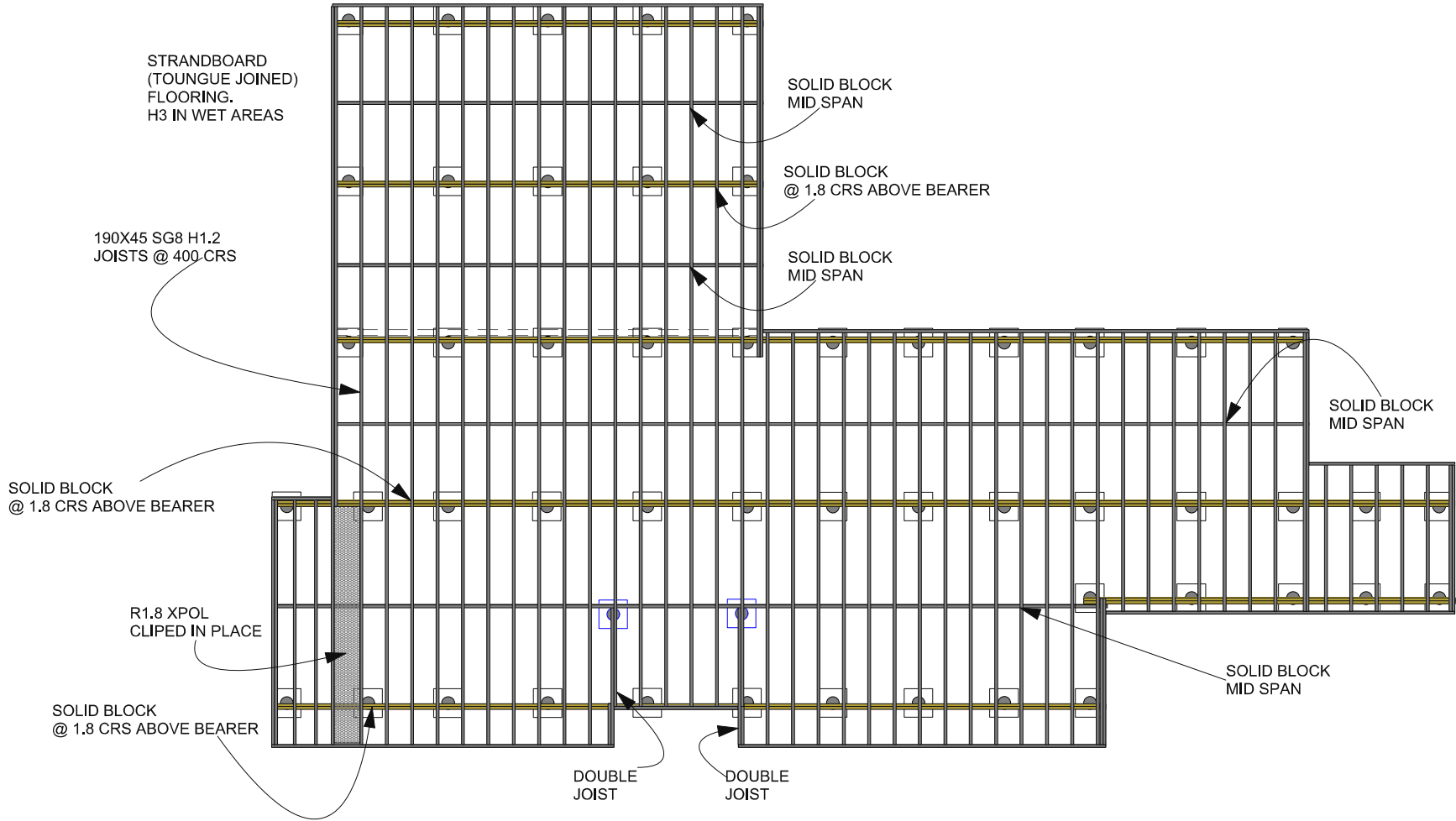
12-6-2019



FOUNDATION PLAN
1:100

AMENDED 08.06.2019 SUBFLOOR BRACING

FOUR BEDROOM DWELLING WITH SLEEPOUT	PILE PLAN	FOR S MCLEOD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:100 @A3 REVISION 1	4/14
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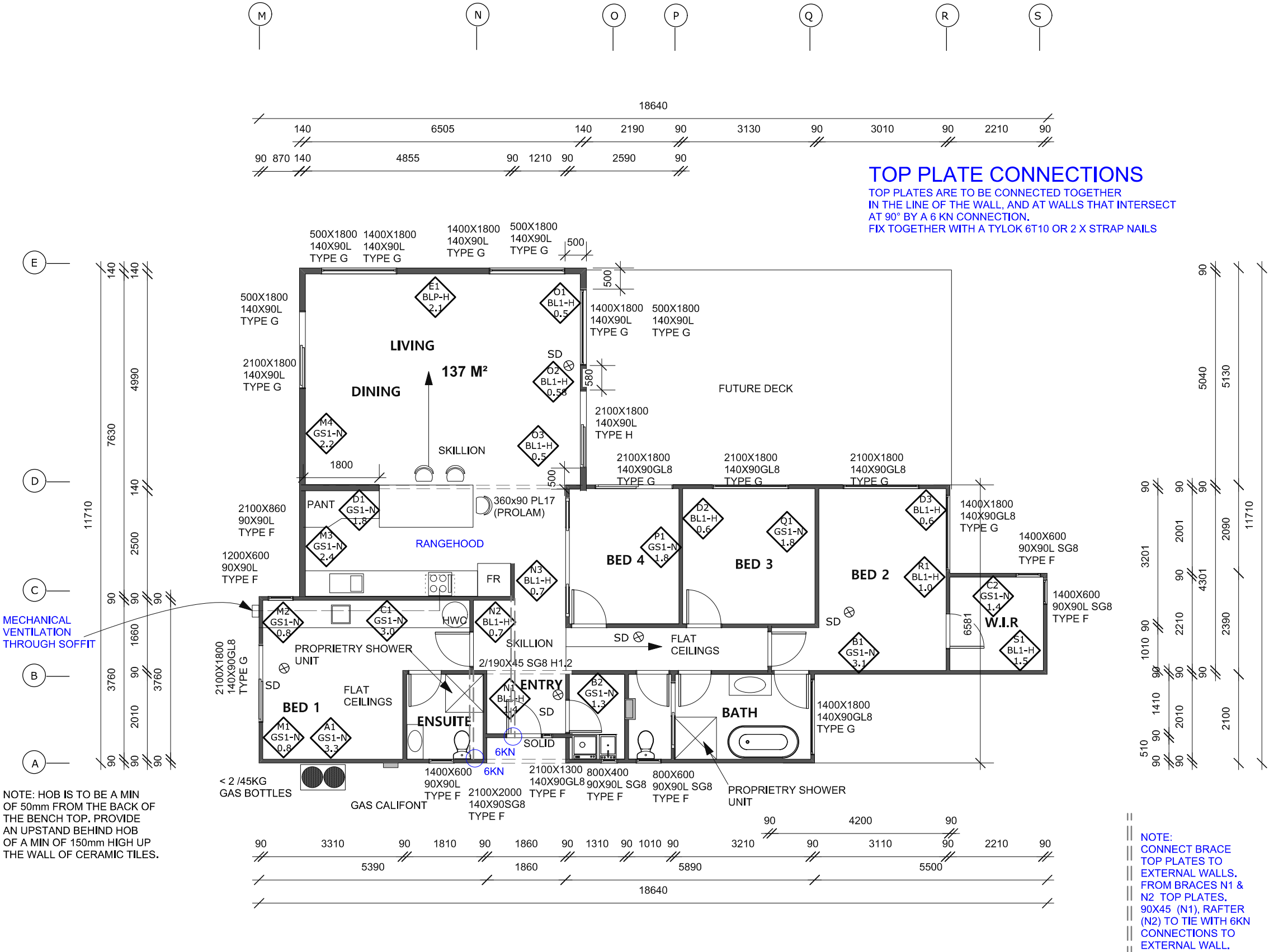
JOIST PLAN
1:100

FOUR BEDROOM DWELLING WITH SLEEPOUT	PILE PLAN	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:100 @A3 REVISION	5/14
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12-6-2019



Bracing Notes

A1 GS1A 1.8 Bracing number
Brace Type
Brace Lengyh

Hot Water Cylinder

Electric HWC complete with Tempering Valve, Pressure reducing and relief valves and Seismic restraints. Safe tray Sludge pipe to discharge to a safe place. Gas califont for self contained rooms water heating.

Wet Areas Wall Lining

Wet areas wall lining to be finished with Semi Gloss or Gloss paint as per acceptable solutions E3/AS1 3.1.2 Walls (f)

Legend

Type C = Lintel fixing type
140x90L = Lintel size
2100x2400 = Opening size (HxW)

WET AREAS FLOORS

(KITCHEN,BATHROOM,WC,LAUNDRY)
FLOORS SHALL BE COATED WITH 3 COATS OF POLYURETHANE E3/AS1 3.1.1 (F)

H1 COMPLIANCE

WALL INSULATION R2.6
FLOOR EXPOL R 1.8
CEILING R 3.6
WINDOWS DOUBLE GLAZED .26

GAS

GAS FOR SOME WATER HEATING AND COOKING TO BE INSTALLED BY A LICENCED FITTER AND ISSUED WITH A PRODUCER STATEMENT OF COMPLIANCE

SD ⊗ HUSH SENSITIVE SMOKE DETECTORS

CONFIRM ALL DIMENSIONS ON SITE
ANY DISCREPANCIES CONTACT DESIGNER IMMEDIATELY

DO NOT SCALE OFF PLAN

FOUR BEDROOM DWELLING
WITH SLEEPOUT

FLOOR PLAN

FOR S MCLEOD & T EVANS
31 PINEVIEW WAY
MOTUEKA

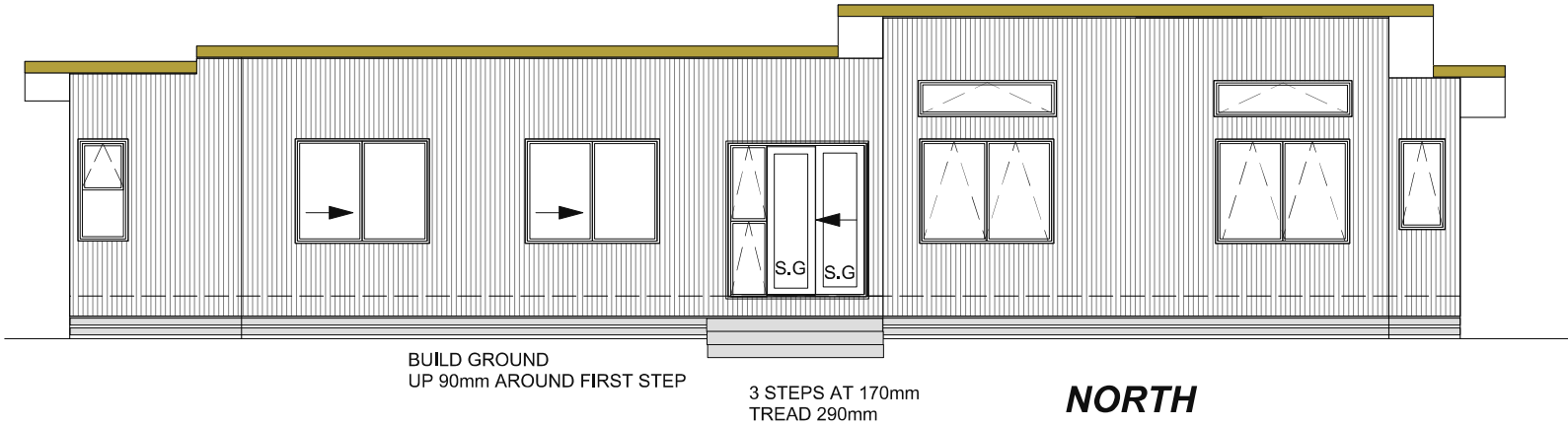
DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

SCALE 1:100
@A3
REVISION 1

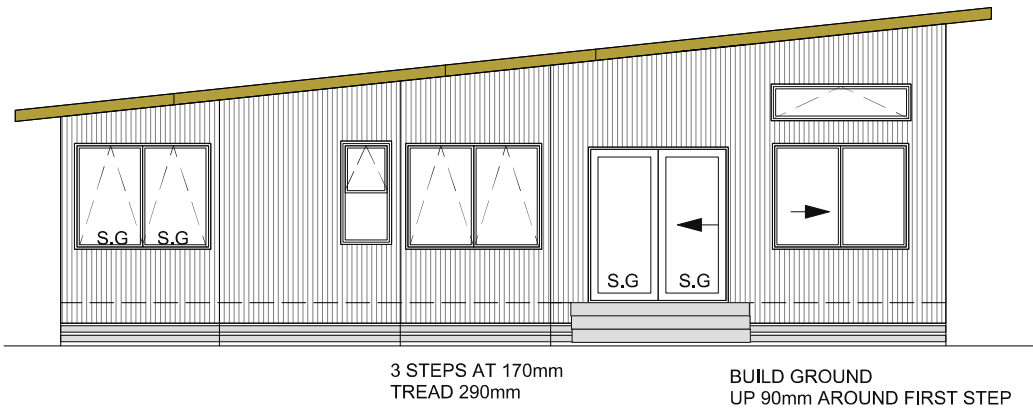
6/14

RISK FACTOR	LOW	MEDIUM	HIGH	X HIGH	SUB TOTALS			
					N	E	S	W
WIND ZONE	0	0	1	2	2	2	2	2
NO OF STORIES	0	1	2	4	0	0	0	0
ROOF/WALL	0	1	3	5	3	3	3	3
EAVES WIDTH	0	1	2	5	0	0	0	0
ENVELOPE COMPLEXITY	0	1	3	6	0	0	0	0
DECK DESIGN	0	2	4	6	0	0	0	0
TOTALS					5	5	5	5

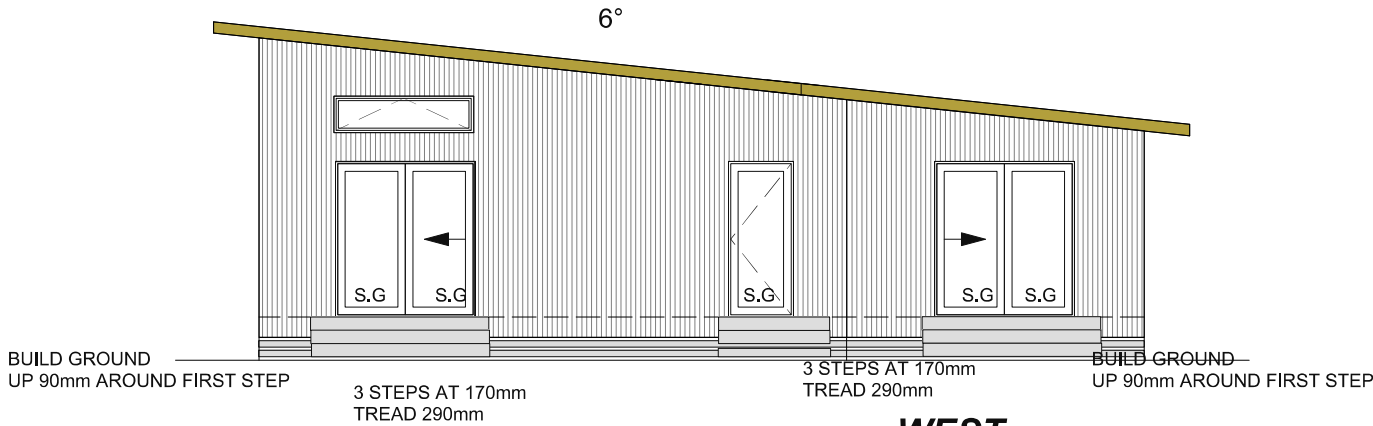
7-12 DIRECT FIXED VERTICAL PROFILED METAL ON
6mm PLY RAB



**NORTH
ELEVATION
1:100**



**EAST
ELEVATION
1:100**



**WEST
ELEVATION
1:100**

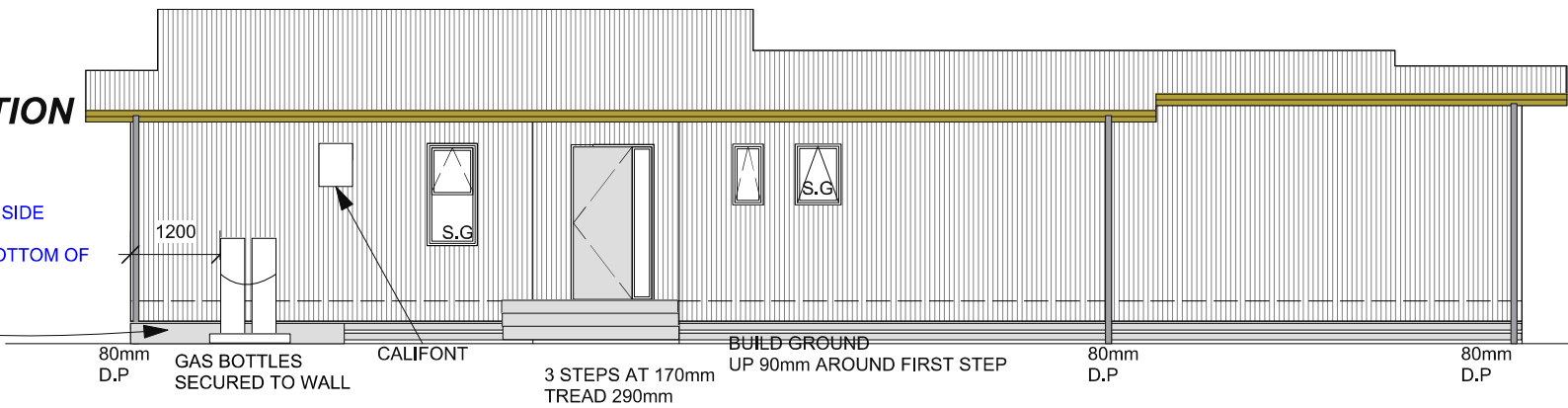
Windows

All windows within the insulated envelope to be Double Glazed
All Glazing to comply with NZS 4223.

O = Obscure
SG = Grade A Safety Glass
RS = Sashes fitted with Restrictor Stays

**SOUTH
ELEVATION
1:100**

CLAD SUBFLOOR AREA BEHIND THE GAS BOTTLE LOCATION -FROM CORNER TO1.2 METERS ON THE FAR SIDE WITH 6mm HARDIES FIXED TO H3.2 FRAMING. PEG VERTICALLY A H4 250 X45 TO FIX THE BOTTOM OF THE HARDIES TO 150mm ABOVE FGL



AMENDED 08.06.2019 SUBFLOOR BLOCKED BEHIND GAS BITTLES

FOUR BEDROOM DWELLING
WITH SLEEPOUT

ELEVATIONS

FOR S MCLEOD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

SCALE 1:100
@A3
REVISION 1

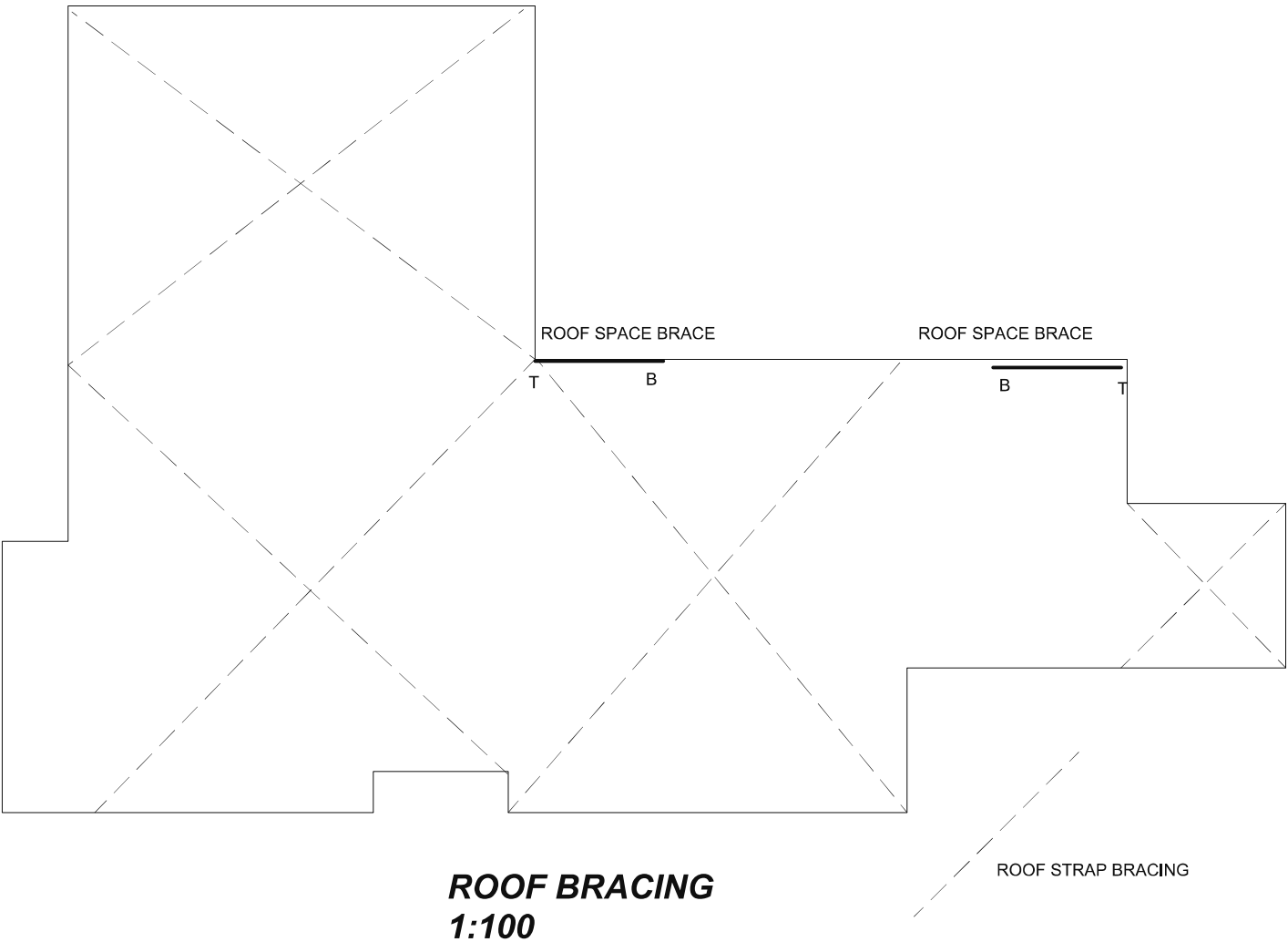
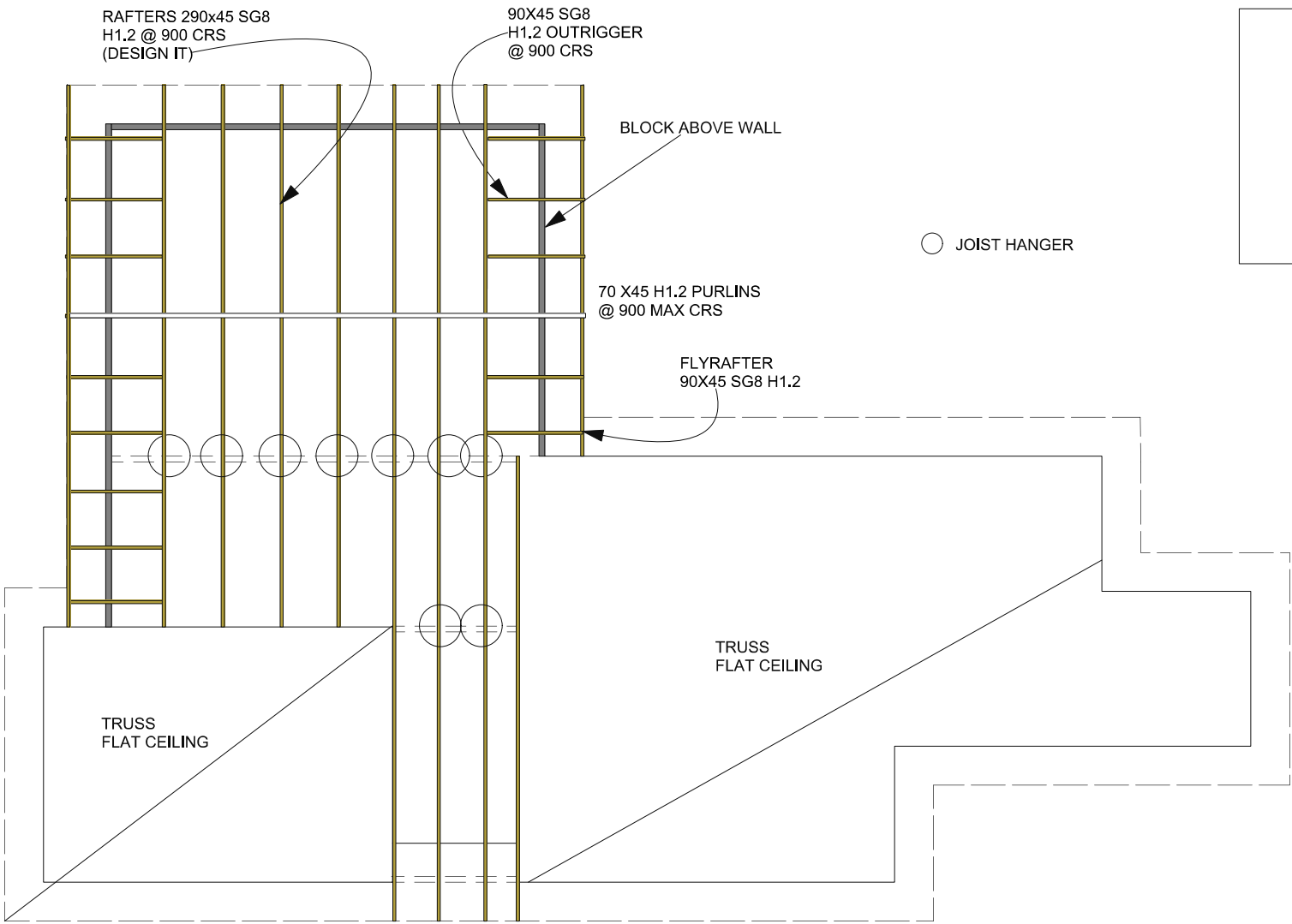
7/14



FOUR BEDROOM DWELLING WITH SLEEPOUT	SECTION	FOR S MCLEOD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:50 @A3 REVISION 1	8/14
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RAFTER PLAN
1:100

FIX RAFTERS & OUTRIGGERS TO TOP PLATES
WITH 2/CT200 + 2/100X2.95 SKEW NAILS



ROOF BRACING
1:100

AMENDED 08.06.2019 ROOF FRAMING MEMBER FIXING

FOUR BEDROOM DWELLING WITH SLEEPOUT	ROOF PLAN	FOR S MCLEOD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN DATE G BENJAMIN 0211449153 28/01/2019	SCALE AS SHOWN @A3 REVISION 1	9/14
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FOUR BEDROOM DWELLING WITH SLEEPOUT	DETAILS 1	FOR S MCLOUD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE AS SHOWN @A3 REVISION	10/14
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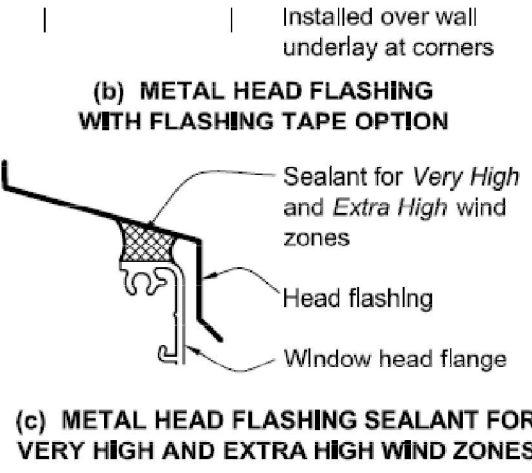
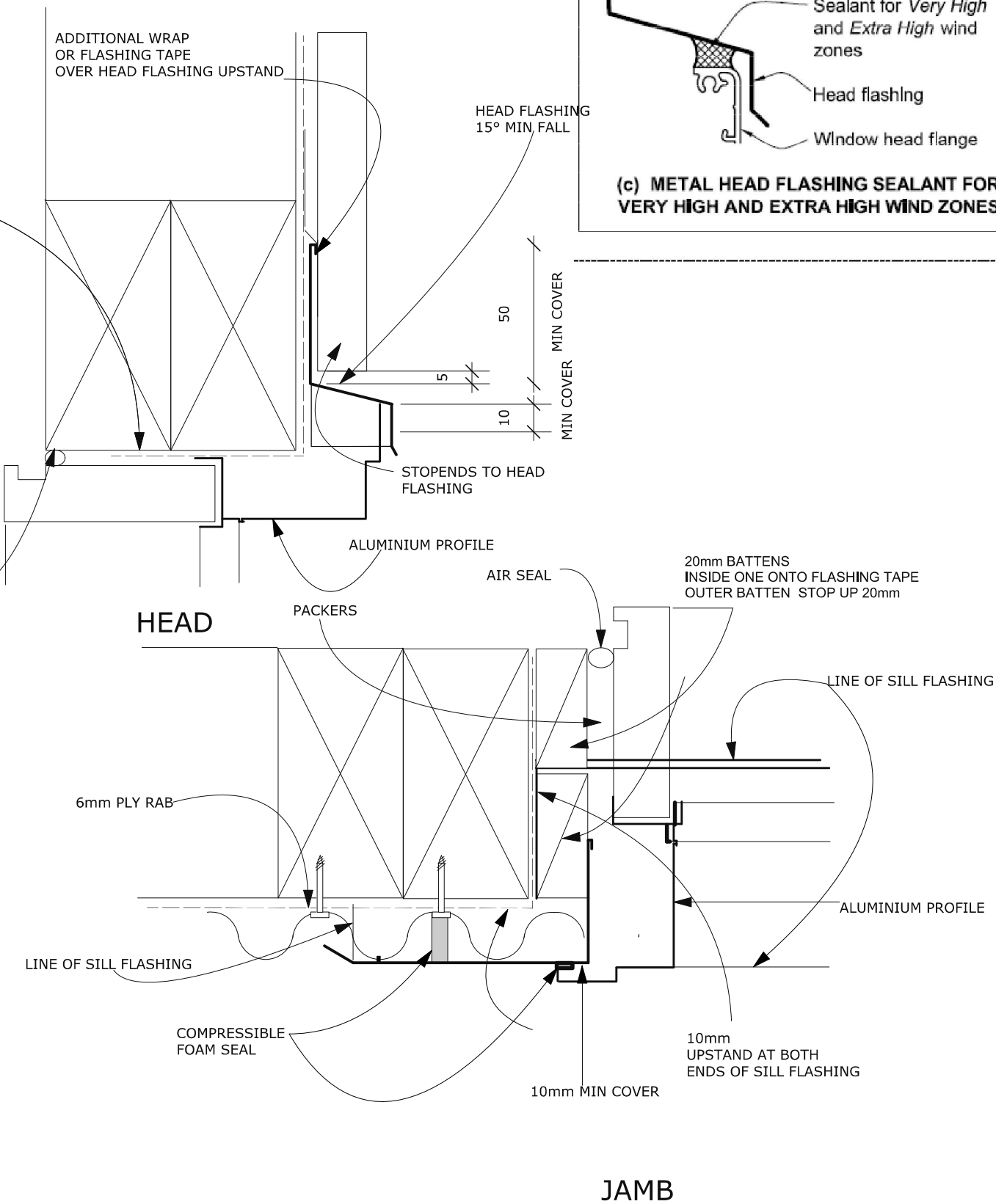
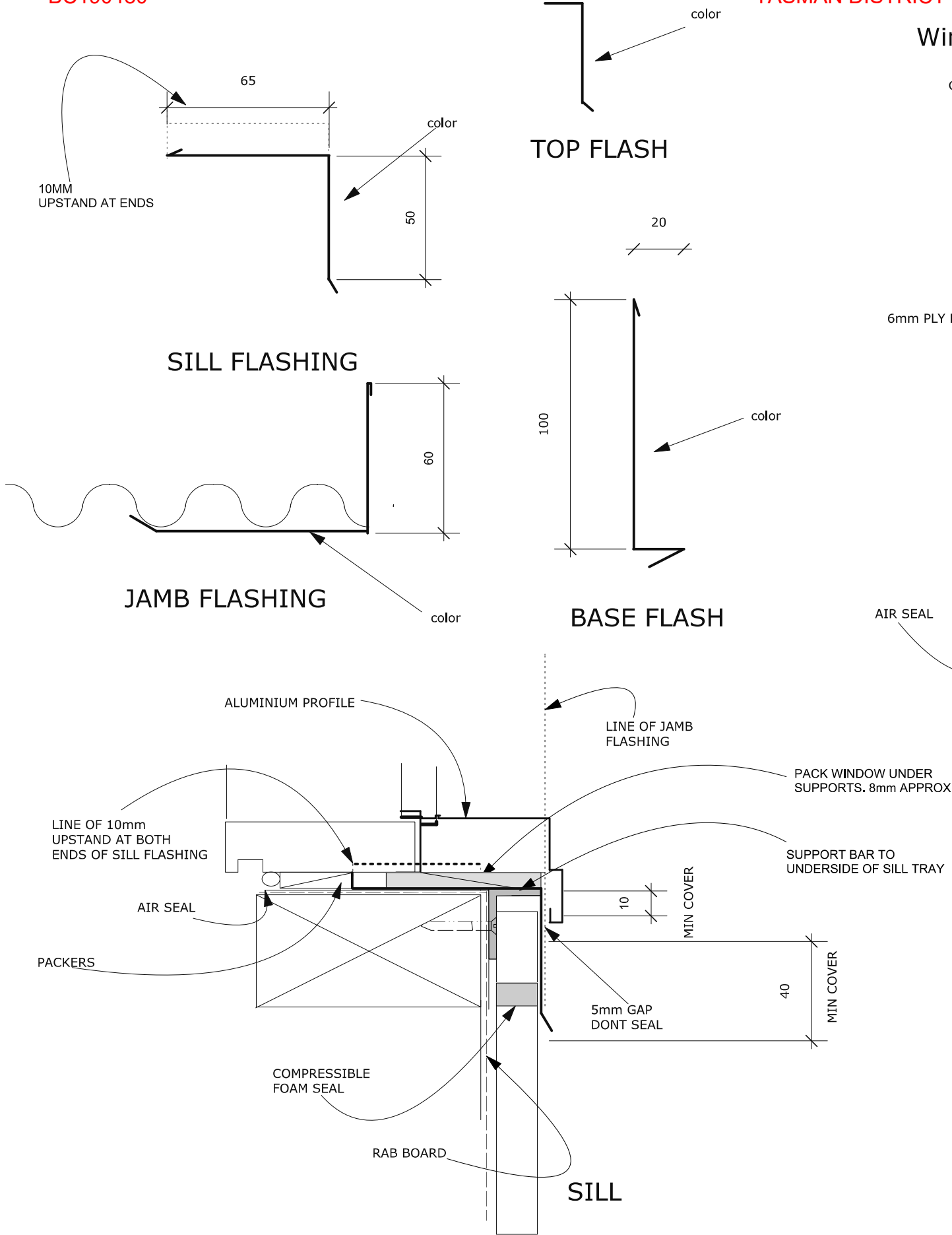
BC190480

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12-6-2019

Windows for Direct fixed Vertical Profiled Metal

General: (a) For wrapping of timber framed opening see Fig 72 E2/AS1
(b) Effective cover at sills shall be a Min of 8mm.



FOUR BEDROOM DWELLING
WITH SLEEPOUT

DETAILS 2

FOR S MCLOUD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

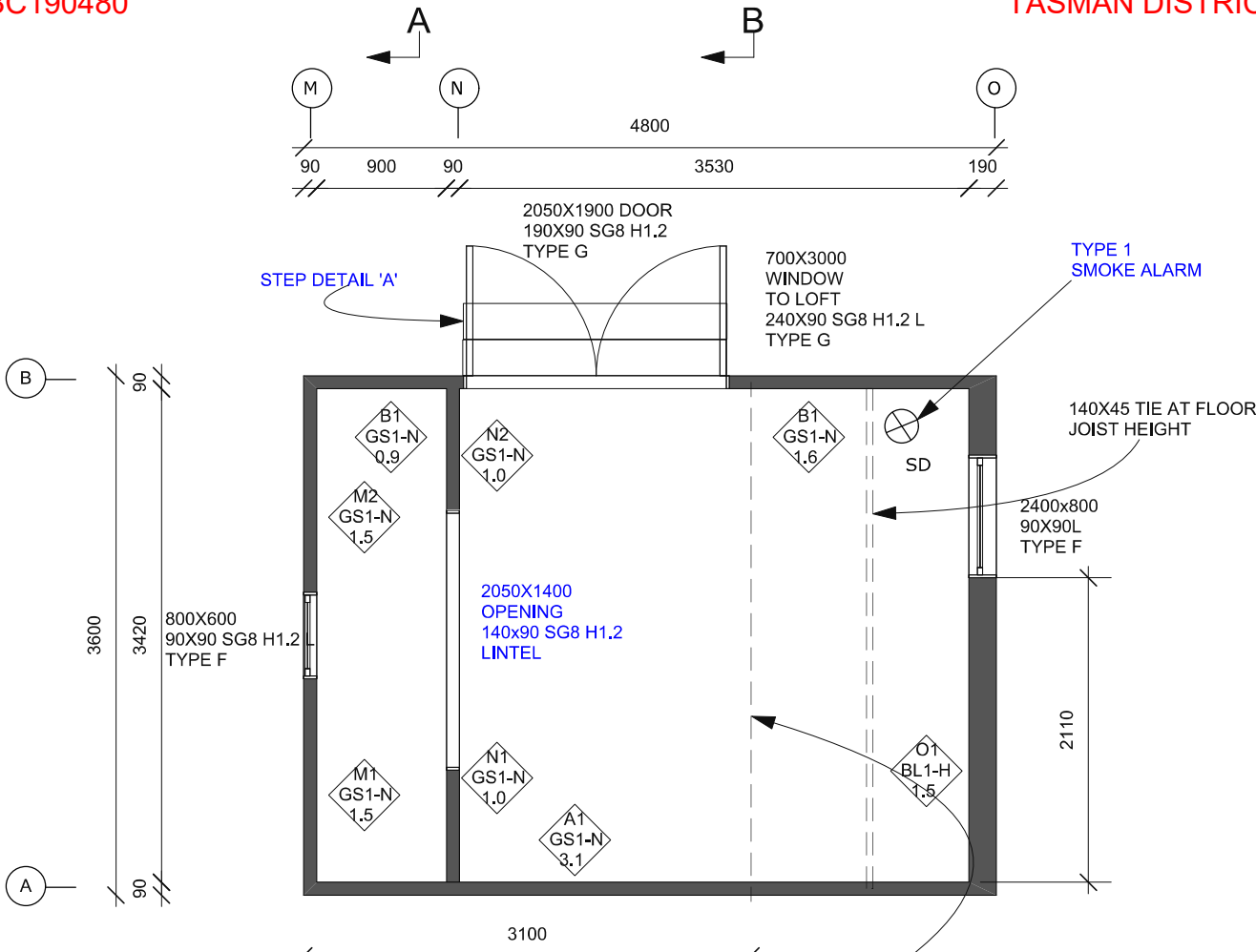
SCALE AS SHOWN
@A3
REVISION

11/14

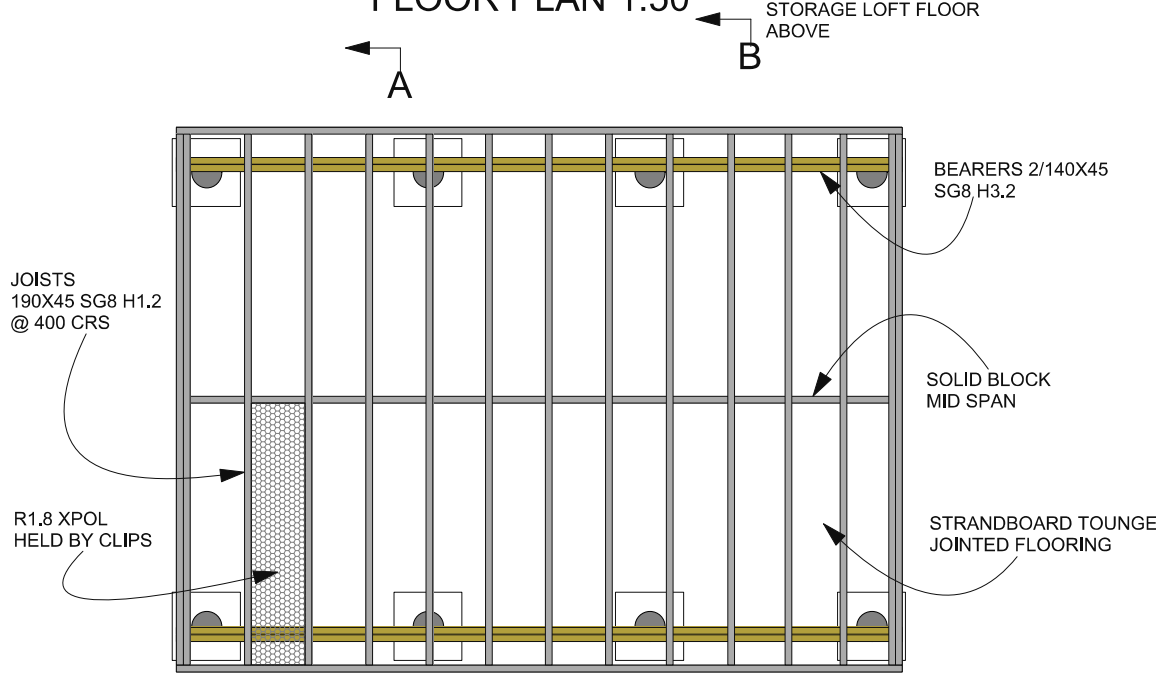
BC190480

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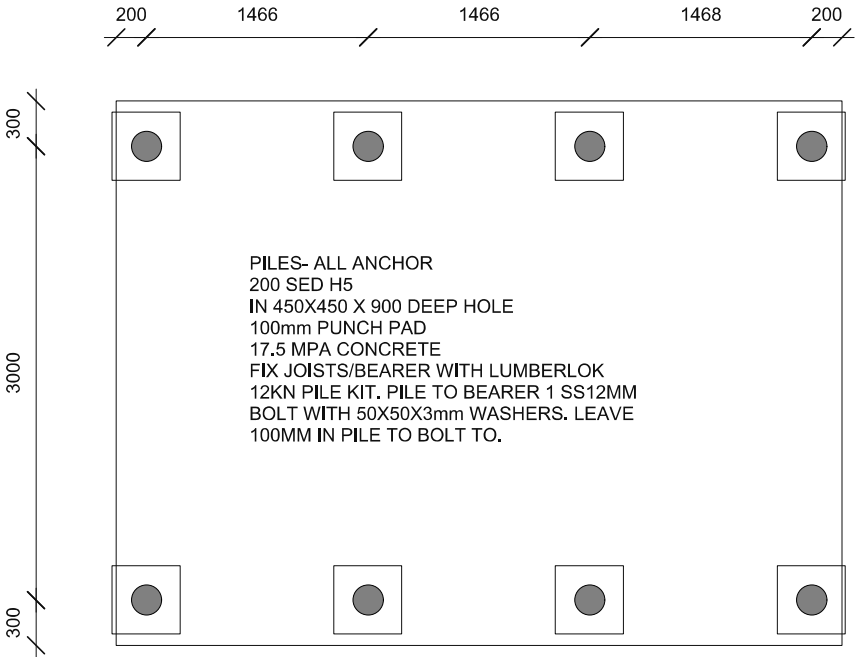
12-6-2019



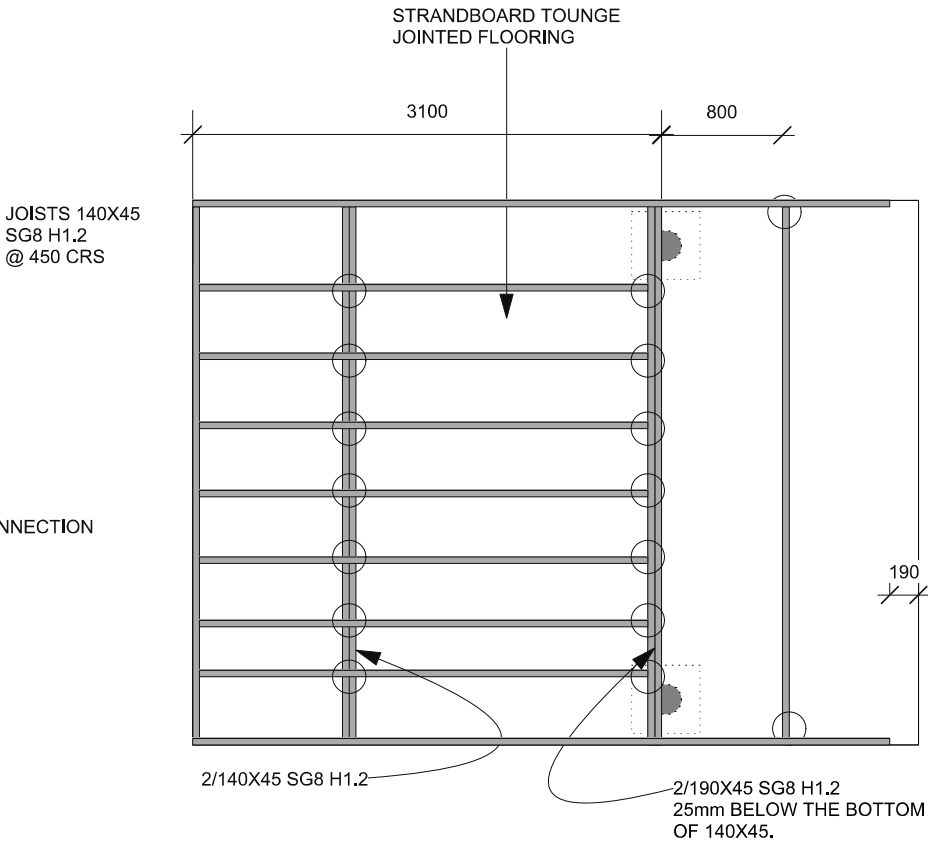
FLOOR PLAN 1:50



SUBFLOOR PLAN 1:50



PILE PLAN 1:50



MEZZANINE JOIST PLAN 1:50

AMENDED 08.06.2019- TYPE 1 SMOKE ALARM-STEP DETAIL REFERENCED

FOUR BEDROOM DWELLING WITH SLEEPOUT	FLOOR & FOUNDATION PLAN	FOR S MCLEOD & T EVANS 31 PINEVIEW WAY MOTUEKA	DRAWN G BENJAMIN 0211449153 DATE 28/01/2019	SCALE 1:50 @A3 REVISION 1	12/14
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BC190480

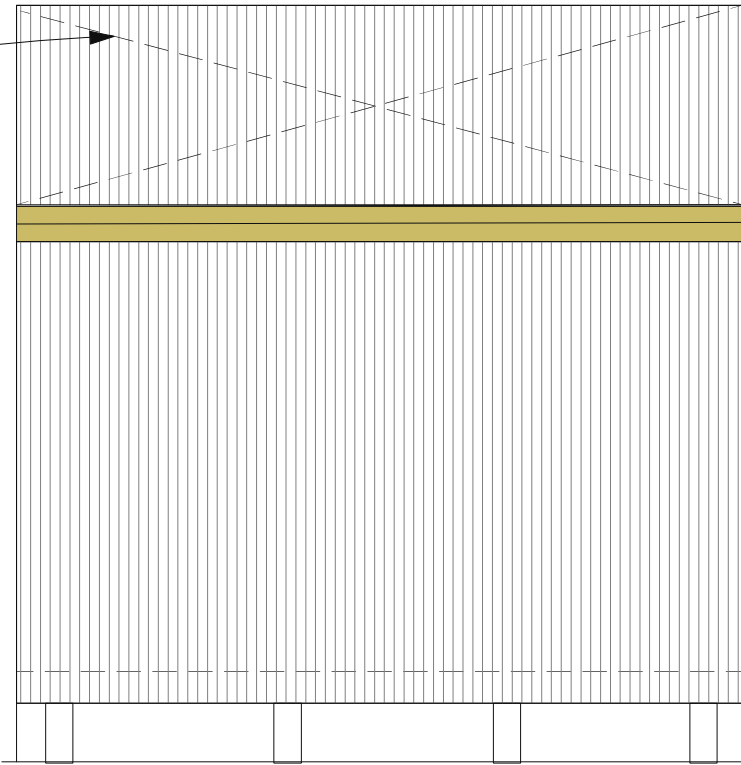
TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019

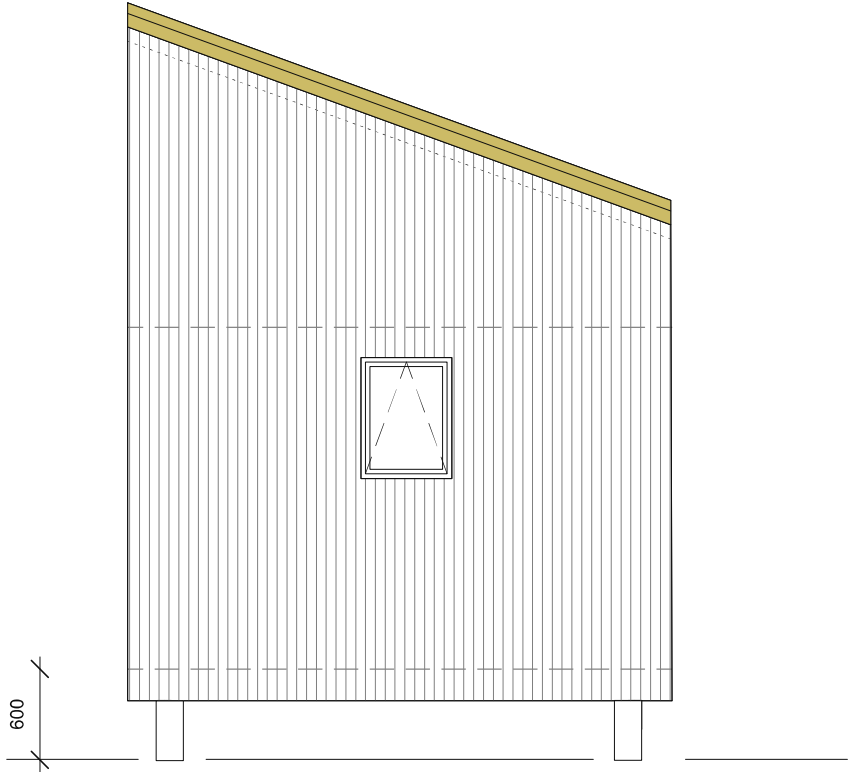
RISK FACTOR	LOW	MEDIUM	HIGH	X HIGH	SUB TOTALS			
					N	E	S	W
WIND ZONE	0	0	1	2	2	2	2	2
NO OF STORIES	0	1	2	4	0	0	0	0
ROOF/WALL	0	1	3	5	3	3	3	3
EAVES WIDTH	0	1	2	5	5	5	5	5
ENVELOPE COMPLEXITY	0	1	3	6	0	0	0	0
DECK DESIGN	0	2	4	6	0	0	0	0
TOTALS					10			

7-12 DIRECT FIXED VERTICAL PROFILED METAL ON
6mm PLY RAB

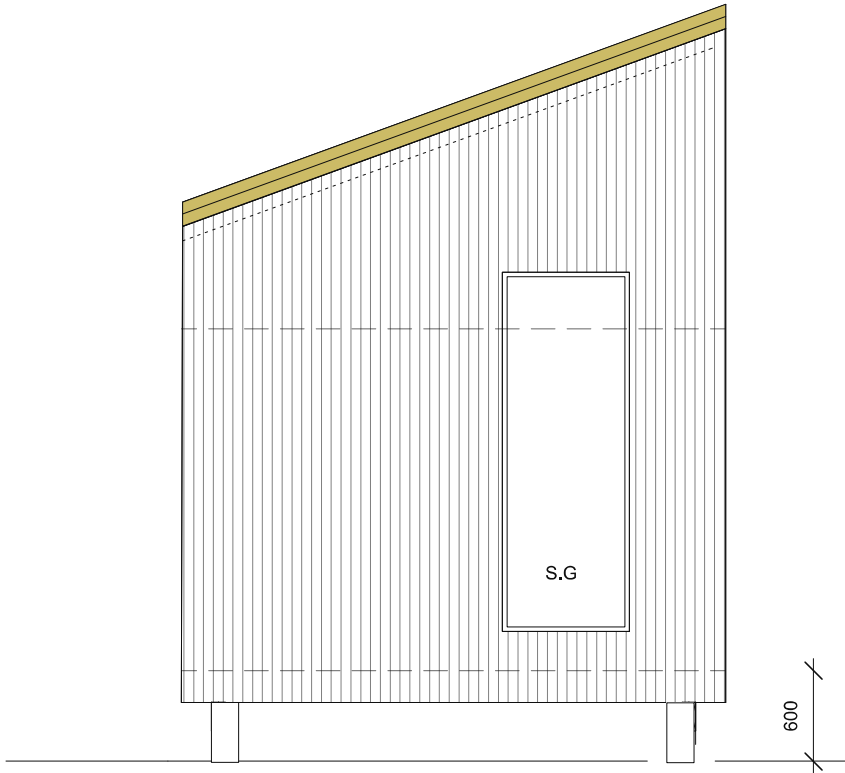
ROOF PLANE
STRAP BRACING



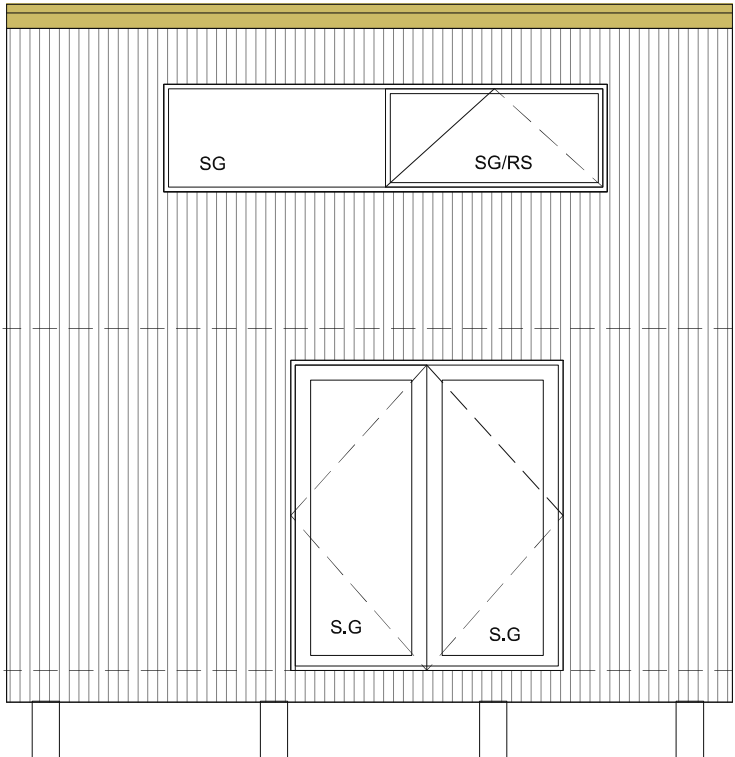
WEST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION

Windows

All windows within the
insulated envelope to
be Double Glazed
All Glazing to comply with
NZS 4223.

O = Obscure
SG = Grade A Safety Glass
RS = Sashes fitted with
Restrictor Stays

AMENDED 08.06.2019 ROOF BRACING

FOUR BEDROOM DWELLING
WITH SLEEPOUT

ELEVATIONS

FOR S MCLEOD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

SCALE 1:50
@A3
REVISION 1

13/14

BC190480

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EXTRA HIGH WIND ZONE

PURLIN FIXING: (D). 2 BLUE SCREWS (80X10 LUMBERLOK BLUE SCREW)
RAFTERS/TOP PLATES 2/CT200 + 2/100X2.95 SKEW NAILS
TOP PLATE/STUD FIXING LUMBERLOK 'TYPE B' ON WALLS WHERE
RAFTER ENDS ARE SUPPORTED = 2/90X3.15 NAILS TOP PLATE TO STUD
+ ONE CPC 80. or 2/90X3.15 NAILS + STUD STRAP(ONE FACE)
BOTTOM PLATE/JOIST OR BEARER 3/90X3.15 NAILS @ 600 CRS
SECOND TOP PLATE 3/90X3.15 NAILS @ 500 CRS

75X50 H1.2
PURLINS @
900 MAX CRS
(FIRST AND LAST PURLIN
SPANS TO BE < 700mm)

240X45 H1.2
SG8 RAFTERS
@ 600 crs

5 RIB ROOFING OVER BITUMUS
BREATHER ROOFING
UNDERLAY AND MESH

25mm
AIR GAP

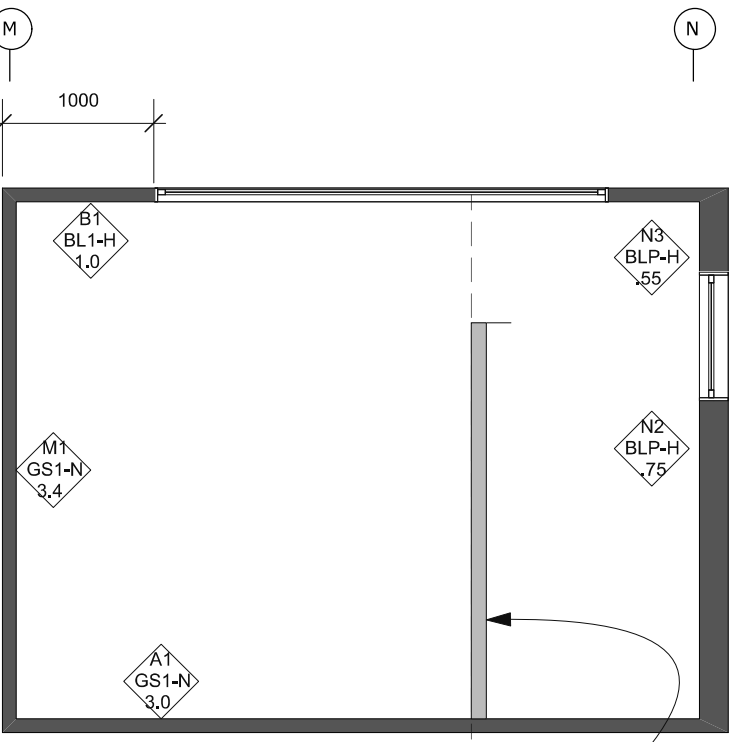
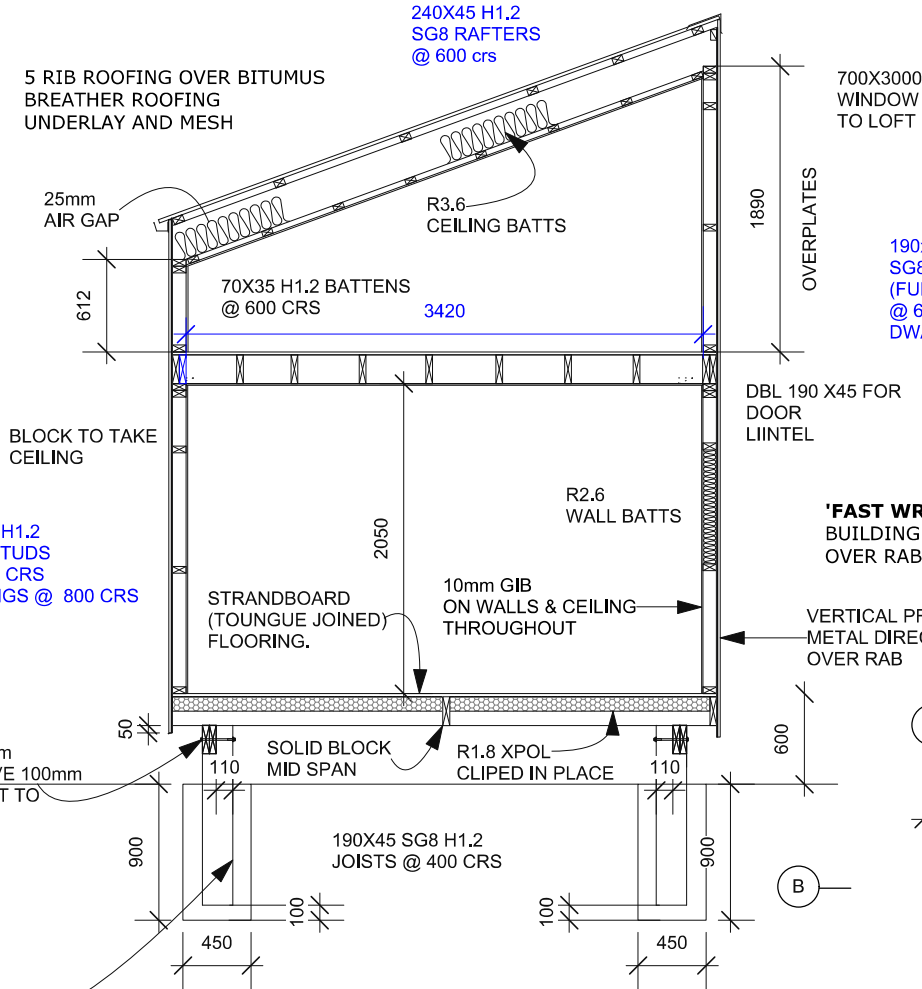
BLOCK TO TAKE
CEILING

90x45 H1.2
SG8 STUDS
@ 400 CRS
DWANGS @ 800 CRS

1 12MM SS
BOLT-50X50X3mm
WASHERS- LEAVE 100mm
IN POST TO BOLT TO

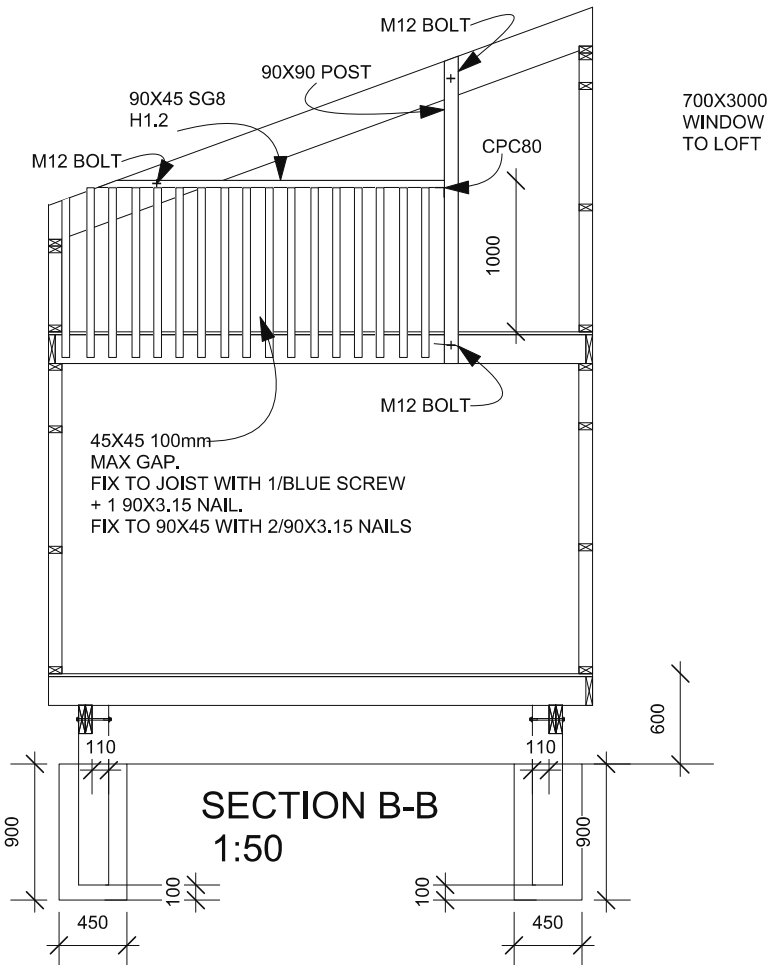
PILES-ANCHOR.
200 SED H5
IN 450X450 X 900 DEEP HOLE
100mm PUNCH PAD
17.5 MPA CONCRETE
FIX JOISTS/BEARER WITH LUMBERLOK
12KN PILE KIT. PILE TO BEARER 1 SS12MM
BOLT WITH 50X50X3mm WASHERS

SECTION A-A
1:50



STORAGE LOFT PLAN 1:50

BARRIER
(SEE B-B)



SECTION B-B
1:50

STORAGE LOFT
BARRIER

AMENDED 08.06.2019 STUD & RAFTER SPECIFICATION

FOUR BEDROOM DWELLING
WITH SLEEPOUT

SECTIONS

FOR S MCLEOD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

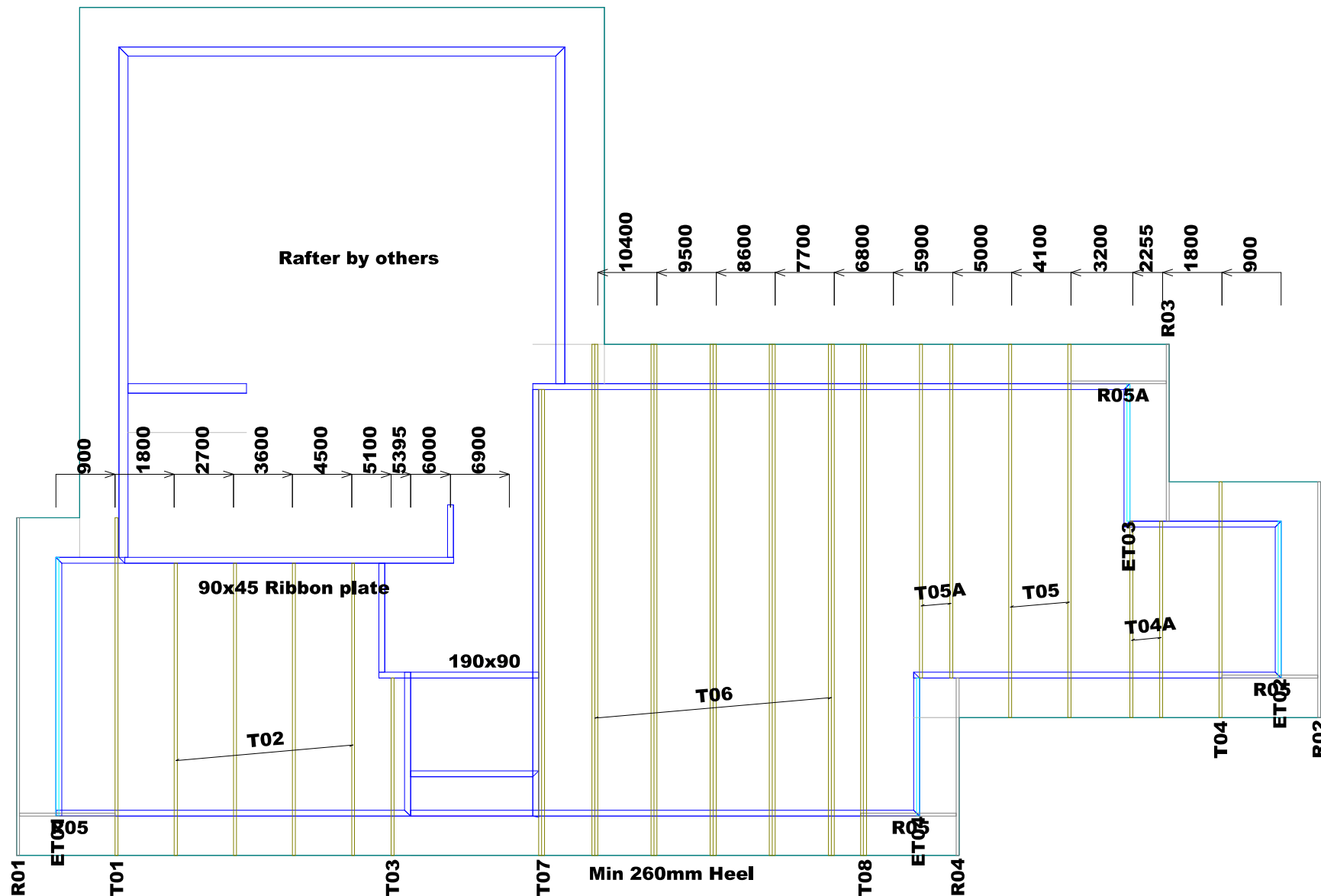
SCALE 1:50
@A3
REVISION 1'

14/14

BC190480

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12-6-2019



VOID IF ITM FRAME AND TRUSS ARE NOT FABRICATORS

FRAME & TRUSS



Site Address :
McCloud/Evans
31 Pineview Way
Motueka

Sheet Title :
**For Building Consent
Buildable Truss Layout**

Date : 15 Apr, 2019 Drawn : Marcel Stutz
Scale : 1:100 System : MiTek 20/20

Job Details:
Roof Pitch : 6,000 Deg
Roof Material : Galv Iron .5mm
Ceiling Material : Gib Board 12mm
Wind Zone : Extra High
Roof Snow Load : 0,400 kPa

Truss Centres : 900 mm
Roof Live Load : 0.250kPa
Floor Live Load : kPa
Wind Speed : 55,0 m/s



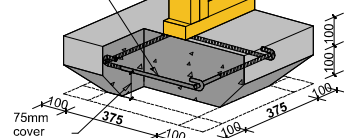
PrimeCad v4.7.301

Job Title :
9631
Sheet :
1
Revision Number :



SLAB THICKENING & STUD REQUIREMENTS

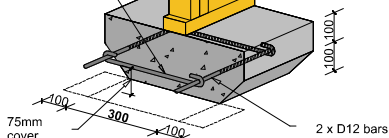
TYPE FP1 375mm² Pad

2 x D12 Bars
both ways

2

3

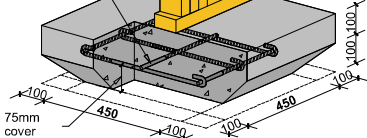
TYPE FS1 300mm Strip

R10 bars @
600 c/s

2

3

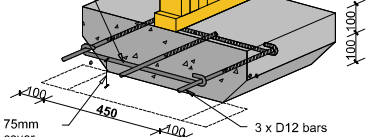
TYPE FP2 450mm² Pad

3 x D12 Bars
both ways

3

4

TYPE FS2 450mm Strip

R10 bars @
600 c/s

3

4

Notes:
 - The numbers found in the hatched areas are the numbers of studs required below each truss
 - Standard 100mm reinforcing concrete slab, as per NZS3604:2011

Refer to:
 MiTek Internal Load Bearing on Concrete Floor Slabs 10/2011
 MiTek Structural Fixings **On-Site Guide** for Building Code Compliance

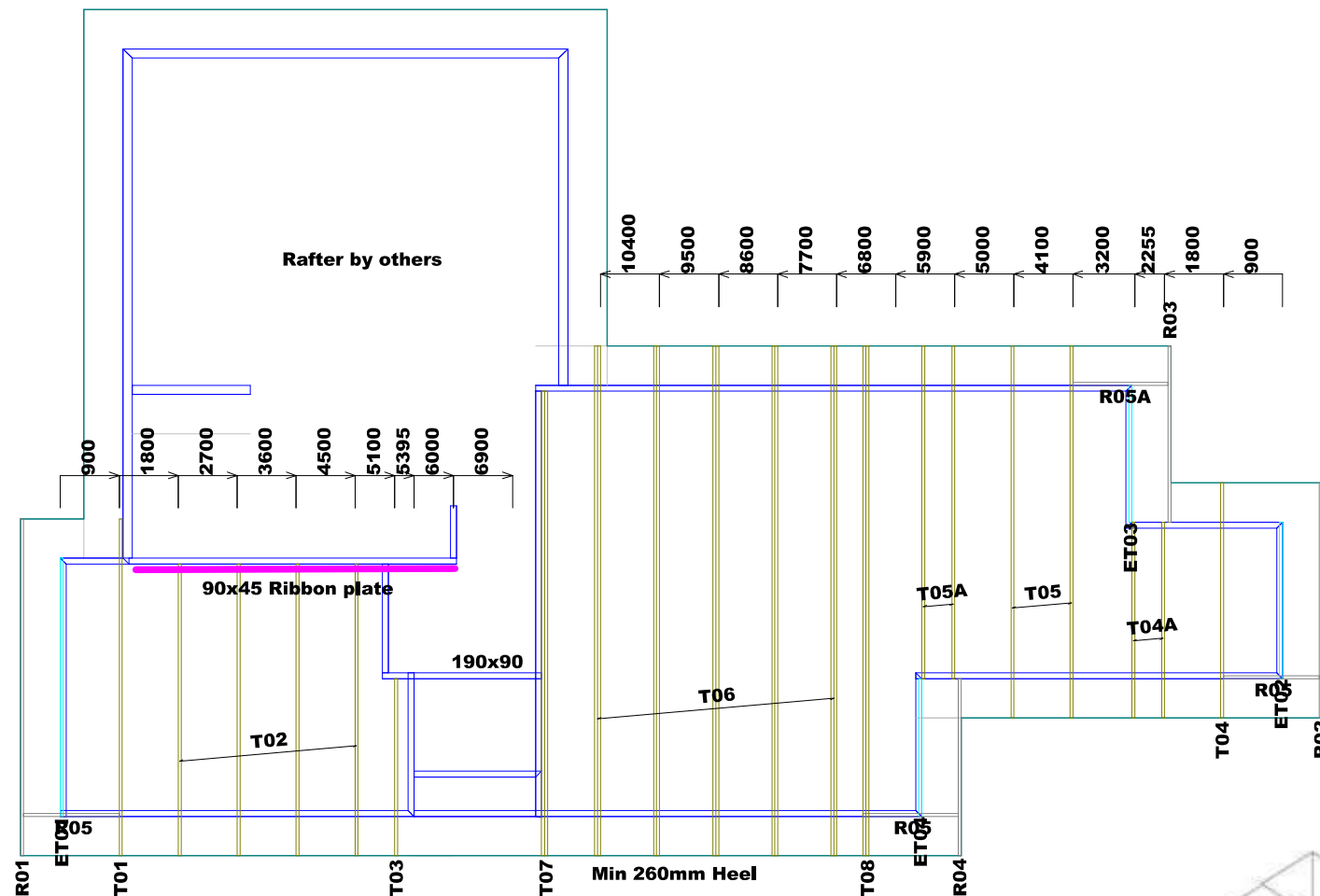
Concrete Slab
Thickening
Guide



TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019

Load bearing wall, Indicates loads from trusses only.
 Loads from trusses are less than -10Kn ULSL.
 Bearer line required to support wall



NO SLAB THICKENING REQUIRED

FRAME & TRUSS



Site Address :
 McCloud/Evans
 31 Pineview Way
 Motueka

Sheet Title :
 For Building Consent
 Slab Thickening

Date : 15 Apr.2019 Drawn : Marcel Stutz
 Scale : 1:100 System : MiTek 20/20

Job Details:
 Roof Pitch : 6.000 Deg
 Roof Material : Galv Iron .5mm
 Ceiling Material : Gib Board 12mm
 Wind Zone : Extra High
 Roof Snow Load : 0.400 kPa

Truss Centres : 900 mm
 Roof Live Load : 0.250kPa
 Floor Live Load : kPa
 Wind Speed : 55.0 m/s



PrimeCad v4.7.301

Job Title :

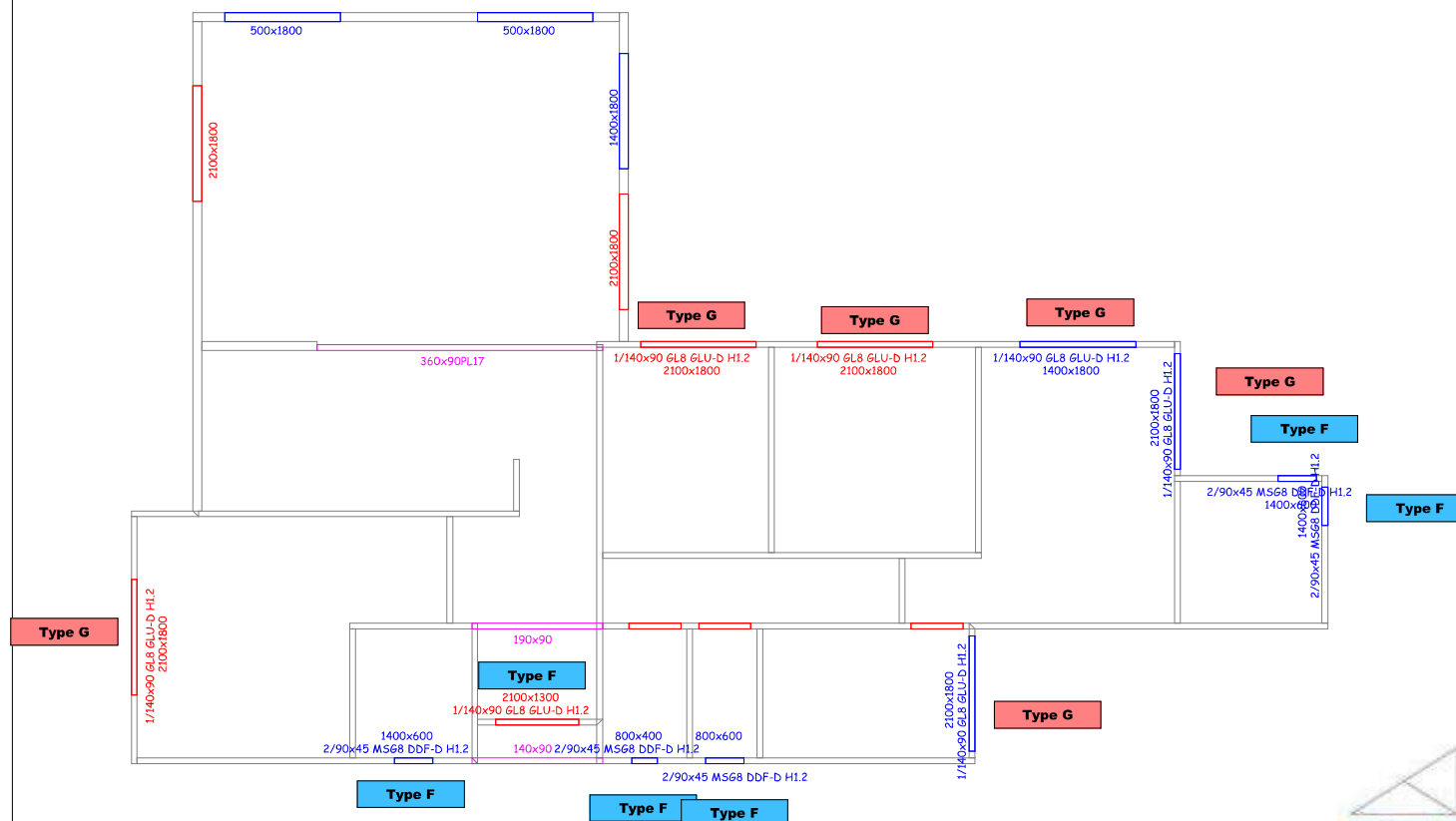
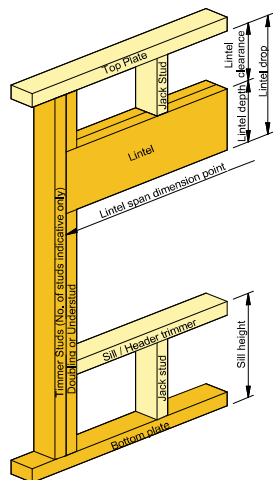
9631

Sheet :

2

Revision Number :

12-6-2019



Refer to:
LUMBERLOK Lintel Fixing Schedule 10/2011
MiTek Structural Fixings **On-Site Guide** for Building Code Compliance
(Alternative to Table 8.14 & Figure 8.12 NZS 3604:2011)



FTMA
NEW ZEALAND

FRAME & TRUSS



Site Address :
McCloud/Evans
31 Pineview Way
Motueka

Sheet Title :
**For Building Consent
Lintel Sizes**

Date : 15 Apr,2019	Drawn : Marcel Stutz
Scale : 1: 100	System : MiTek 20/20

Job Details:	
Roof Pitch	: 6.000 Deg
Roof Material	: Galv Iron .5mm
Ceiling Material	: Gib Board 12mm
Wind Zone	: Extra High
Roof Snow Load	: 0.400 kPa

Truss Centres : 900 mm
Roof Live Load : 0.250kPa
Floor Live Load : kPa
Wind Speed : 55.0 m/s



PrimeCad v4.7.301

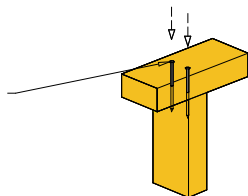
Job Title :	9631
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Sheet :	3
Revision Number :	

BC190480 **LUMBERLOK** **STUD TO TOP PLATE**

TYPE A **0.7 kN**

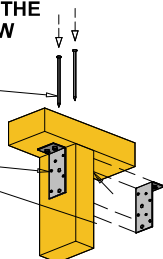
2 x 90mm x 3.15 Ø plain steel wire nails driven vertically into stud.



TYPE B **4.7 kN** **CHOOSE ANY OF THE 3 OPTIONS BELOW**

2 x 90mm x 3.15 Ø plain steel wire nails driven vertically into stud.

2 x LUMBERLOK CPC40

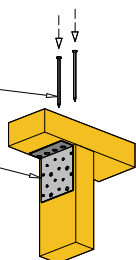


Recommended for internal wall options to avoid lining issues

OR

2 x 90mm x 3.15 Ø plain steel wire nails driven vertically into stud.

1 x LUMBERLOK 6 kN Stud Anchor (CPC80)

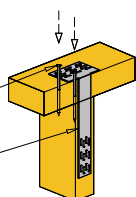


Recommended for internal wall options to avoid lining issues

OR

2 x 90mm x 3.15 Ø plain steel wire nails driven vertically into stud.

1 x LUMBERLOK Stud Strap



CPC80 Installation



Stud Strap Installation



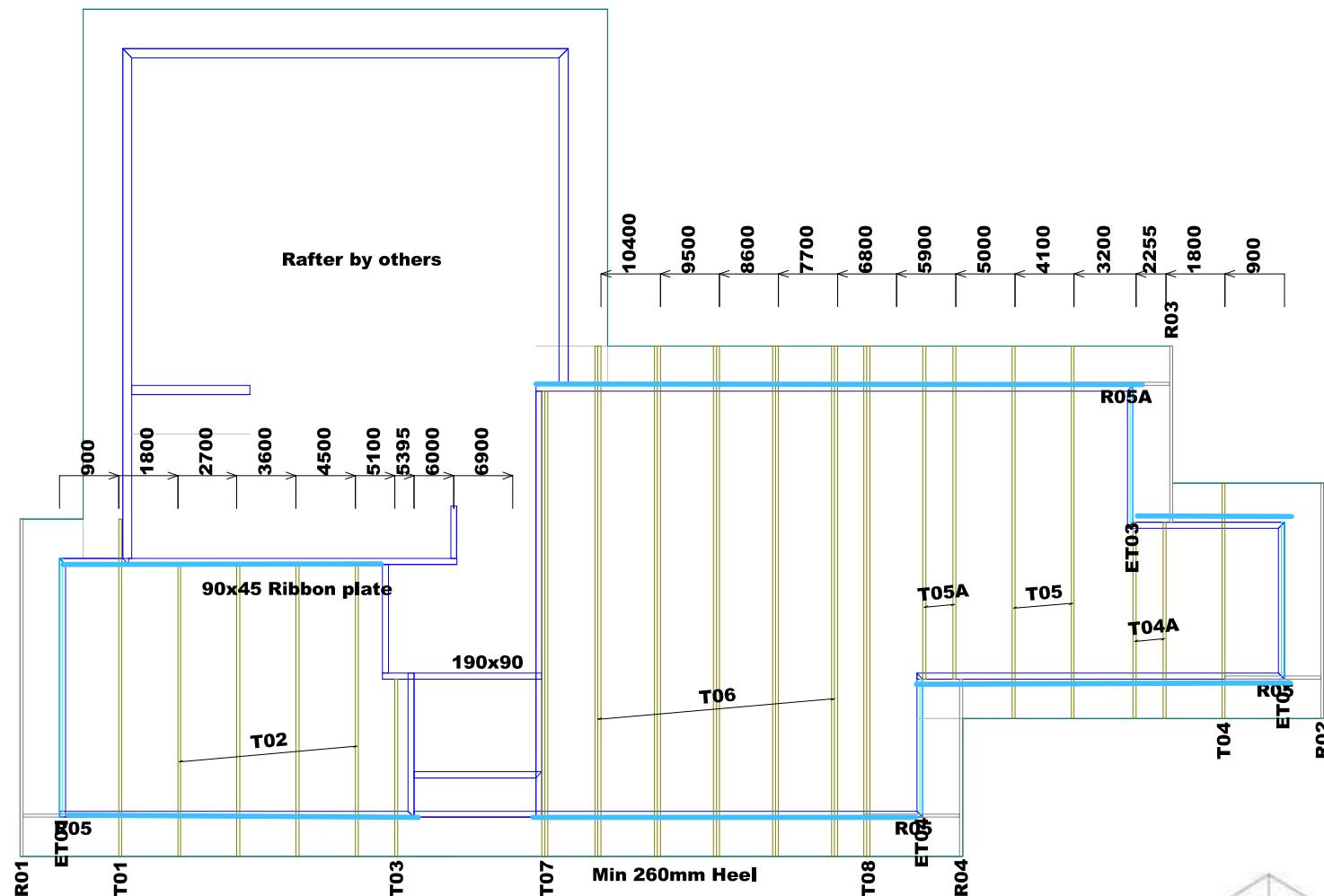
Plate to Top Plate Fixing Schedule



Refer to:
LUMBERLOK Stud to Top Plate Fixing Selection Chart 09/2011
MiTek Structural Fixings **On-Site Guide** for Building Code Compliance
(Alternative to NZS 3604:2011 Table 8.18)

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019



FRAME & TRUSS



Site Address :
McLoud/Evans
31 Pineview Way
Motueka

Sheet Title :
**For Building Consent
Stud To Top Plate Fixing**

Date : 15 Apr. 2019 Drawn : Marcel Stutz
Scale : 1: 100 System : MiTek 20/20

Job Details:
Roof Pitch : 6.000 Deg
Roof Material : Galv Iron .5mm
Ceiling Material : Gib Board 12mm
Wind Zone : Extra High
Roof Snow Load : 0.400 kPa

Truss Centres : 900 mm
Roof Live Load : 0.250kPa
Floor Live Load : kPa
Wind Speed : 55.0 m/s



PrimeCad v4.7.301

Job Title :
9631
Sheet :
4
Revision Number :

EC190480 LUMBERLOK TRUSS FIXINGS

D - Pair of Wire Dogs and 2 x 90mm 3.15mm skew nails
 X - LUMBERLOK JH47x90 Joist Hanger
 Z - LUMBERLOK JH47x120 Joist Hanger
 P - LUMBERLOK JH47x190 Joist Hanger
 E - LUMBERLOK JH95x165 Joist Hanger
 T - LUMBERLOK CT200 Ceiling Tie
 O - Pair of LUMBERLOK CT200 Ceiling Ties
 H - LUMBERLOK CT400 Cyclone Tie
 B - LUMBERLOK CT600 Cyclone Tie
 4 - LUMBERLOK Multi Grip
 M - Pair of LUMBERLOK Multi Grips
 NP - LUMBERLOK Nailon Plate
 N - LUMBERLOK N21 Diagonal Cleat
 V - LUMBERLOK CPC40 Cleat
 W - Pair of LUMBERLOK CPC40 Cleats
 K - LUMBERLOK TTP 16kN Truss to Top Plate set
 G - LUMBERLOK TTP 9kN Truss to Top Plate set

Joist Hanger
Installation



CT200 Truss to
Top Plate Fixing
Installation



16kN & 9kN Truss
to Top Plate Fixing
Installation



Notes:

All other areas must have the minimum 2 x 90mm 3.15mm skew nails and 2 x wire dogs for truss to top plate connections

Refer to:

LUMBERLOK Timber Connectors Characteristic Loadings Data Brochure 08/2014

All truss to top plate fixings not labelled require a minimum of a pair of LUMBERLOK Wire Dogs.
 All other areas must have a minimum of a pair of 90mm skew nails.

Fix all outriggers to gable trusses with a pair of LUMBERLOK Wire Dogs

Fix all stringers with a pair of LUMBERLOK Multi Grips at every stud.

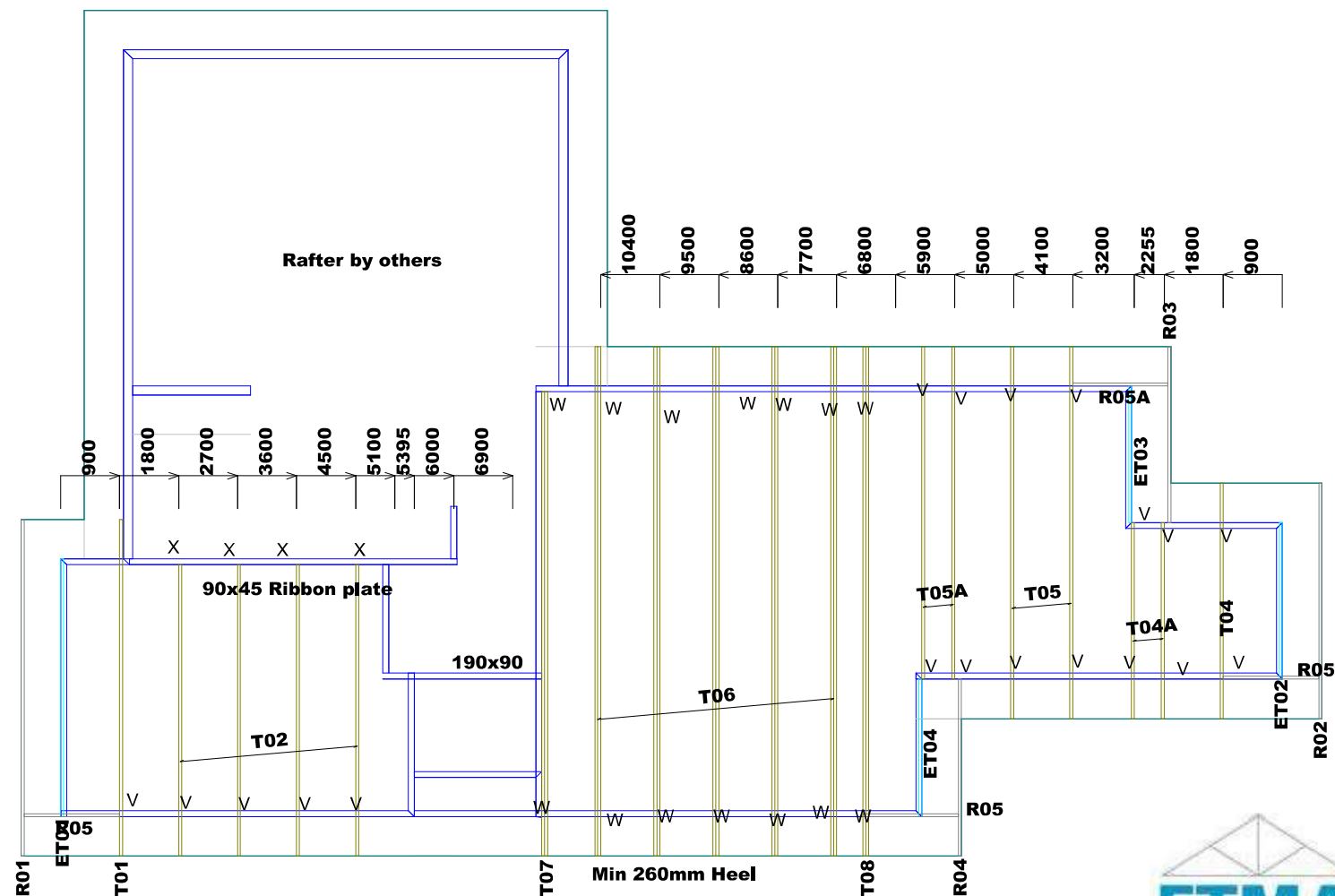
Fix planted overhang rafters to top chord of truss with a pair of 90mm nails at 300mm centres.

Refer to:

LUMBERLOK Timber Connectors Characteristic Loadings Data brochure 03/04

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019



PrimeCad v4.7.301



Site Address :
 McCloud/Evans
 31 Pineview Way
 Motueka

Sheet Title :
 For Building Consent
 Truss Fixings

Date : 15 Apr 2019 Drawn : Marcel Stutz
 Scale : 1:100 System : MiTek 20/20

Job Details:
 Roof Pitch : 6.000 Deg
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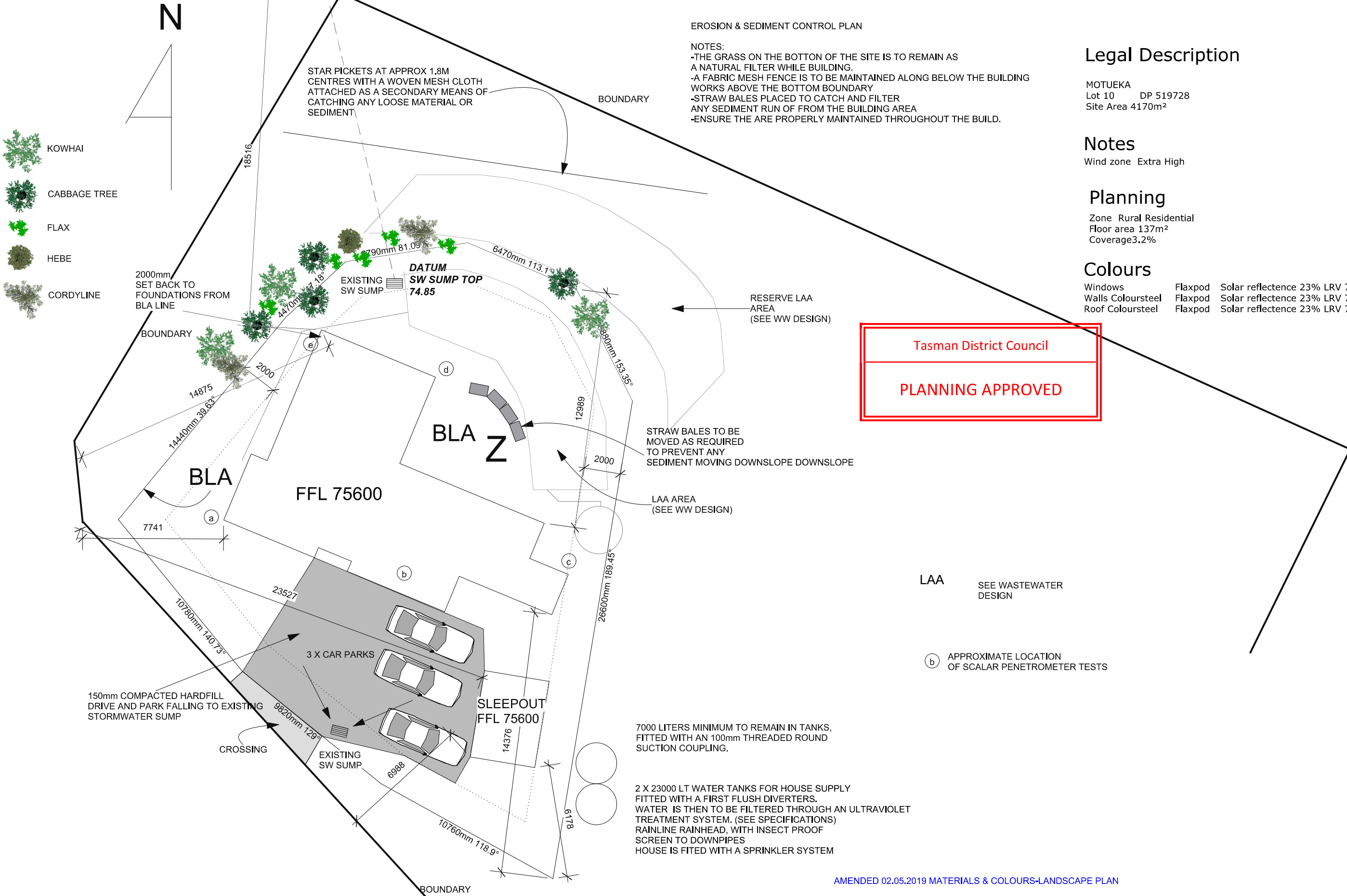


Job Title :
 9631
 Sheet :
 5
 Revision Number :

BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019



FOUR BEDROOM DWELLING
WITH SLEEPOUT

SITE PLAN

FOR S MCLEOD & T EVANS
31 PINEVIEW WAY
MOTUEKA

DRAWN G BENJAMIN
0211449153
DATE 28/01/2019

SCALE 1:200
@A3
FREVISION 1

2/14

SPECIFICATIONS



FOR	S Mcloud & T Evans
AT	31 Pineview Way Motueka
LOT	Lot 10
DP	519728
	02/04/2019

CONTENTS

General Specifications

H1 Calculations

Bracing Calculations

PS1's

Construction Details (Flashings etc)

Standards

The method of construction and the type, quality and sizes of materials used to complete the work shall not be less than laid down in the NZ Building Code, Approved Documents, Verification Methods, together with any other relevant standards referred to therein.

Nett Sums

The nett sums allowed in this Specification are “nett” including GST and the Contractor or Sub-Contractor must allow for all cartage and profit he requires to all such items.

Completion

Throughout the construction period the Contractor shall keep the site as tidy as possible and give due consideration to the occupants of neighbouring properties, particularly in the question of obstruction and noise.

On completion of the work the whole site shall be left clear and the building, paths and steps etc clean and ready for use.

Insurance

Throughout the construction period the Contractor shall hold himself and the Owner covered against all claims and losses that may arise in connection with the Contract.

Temporary Services

The Contractor shall arrange for all temporary services, pay all fees in connection therewith and remove same on completion of Contract.

Workmanship

The whole of the works shall be executed by competent tradesmen in accordance with best trade practice with materials of the grades and qualities as specified.

Progress Payments

The rates of payment shall be 90% of certified value of the work actually done and 90% of the certified value of materials on the site which are to be included in the permanent work.

Retention during the maintenance period shall be at the rate of 5%.

Tender

This Contract is a lump sum contract which is to be inclusive of Goods and Services Tax.

Time for Completion

The tenderer in his Tender shall state his date for the completion of the whole of the Contract. The Contractor must accept responsibility for his Sub-Contracts being completed on time.

Claims for extension of time due to abnormal weather conditions, site conditions, fire, strikes, earthquakes will be considered.

Drawings and Specifications

Any written dimensions on the Drawings shall be taken in preference to measurements by scaling.

Any contradictions on the Drawings shall be notified to the Designer as soon as discovered.

The subdivision of the Specification into sections and clauses is for convenience only and has no bearing on the interpretation of any clause. All clauses in all sections apply to the entire Contract and whereas reasonable care is taken to classify under each trade the onus is on each trade to make themselves conversant with all clauses which may affect their work.

Where work is indicated on Drawings but not in Specification or vice versa it shall be deemed to be included in Contract as if it were included in both.

Drainage

All existing drainage and connection points have been ascertained from existing records or on site inspection where this has been possible. The Drawings provide no guarantee that existing drains are located exactly where shown. It shall be the Contractor's responsibility in all cases to ensure that these drains are located on site by excavation before any building work is commenced.

EXCAVATION

Allow for all bulk excavation as indicated in Drawings.

All excavated material except top soil shall be removed from the site daily as part of the Contract unless otherwise advised.

Excavate for all foundations and driveway as required.

Should any soft patches be discovered, The Contractor may be required to carry out additional work, to be paid for as an extra to the Contract.

The Contractor shall place and consolidate backfilling round all foundations.

CONCRETE

Construct all concrete work as shown on the Drawings.

Concrete shall be pre-mixed or site mixed and provide 20MPa crushing strength at 28 days standard cured.

CARPENTRY AND JOINERY**General**

Particular reference shall be made to NZ Building Code, Approved Documents including B1, E1, E2, E3, and G1 and also to NZS 3604.

Timber

The following types and grades of timber shall be used:

Roof framing	Trusses D Fir H1.2	Purlins H1.2	Rafters D Fir H1.2
Wall framing	External D Fir H1.2 SG 8	Internal D Fir SG8 H1.2	

Provide and fix continuous two-ply bituminous fabric damp-course between all timber and concrete which would otherwise be in contact.

Gauging

All framing timbers in walls and partitions shall be gauged in width to produce regular plane surfaces to linings.

Priming

Before fixing, prime all joints, laps and abutting of exterior finishing timbers, all surfaces of external timber door and window frames.

Finish

All exposed timber shall be dressed to a smooth surface. Internal joinery and finishing timbers shall be brought to a smooth and even surface by sandpapering.

Claddings

Materials shall be applied with the highest standard of workmanship and made entirely weatherproof. All materials shall be fixed in strict accordance with the manufacturer's recommendations.

Exterior -Vertical profiled metal direct fixed.(on 6mm ply RAB)

Schedule of Finishes – Interior

Room	Wall Lining		Ceiling Lining	
	Material	Finish	Material	Finish
Kitchen	Gib	Paint	Gib	Paint
Dining	"	"	"	"
Living	"	"	"	"
Bedrooms	"	"	"	"
Hall	"	"	"	"
Laundry	"	"	"	"
WC	"	"	"	"
Bathroom	"	"	"	"

Finishings

Cornice 60 x 18 Single Bevel MDF

Skirtings 60 x 12 bevel (supplied by owner)

Windows

Note: All windows within the building envelope to be double glazed.

All windows shall be standard Aluminium construction complete with stays, catches and with condensation sill channel and drainage.

All reveals shall be of Treated Pine or Timber supplied by owner.

Glazing shall be in accordance with NZS 4223.

Windows to bathroom, WC etc shall be glazed in Grade A safety glazing in accordance with table 3.1 (308.1 (b). Obscure glass where shown.

Sliding / hinged doors and sidelights – 5 mm annealed glass.

All other windows	<1.5m ²	- 3mm annealed
	1.5m ² to 2.75m ²	- 4mm annealed
	2.75m ² to 4.4m ²	- 5mm annealed

Doors

Internal frames	MDF / Timber chosen by owner
External frames	Radiata Pine H1 clears or finger jointed
Exterior	selected timber panel (main entrance) in timber frame aluminium – 5mm annealed glass

Wardrobe

Interior flush doors Hollow core, MDF paint quality

All flush doors shall be hung on loose pin f.b. hinges.

Hardware

Allow the nett sum of \$2600.00 for supply of hardware.

Wardrobes

One ex 300 x 25 shelves and 20 diameter galvanised pipe hanging rail.

Linen Cupboard

Four full depth 18 mm MDF shelves.

Kitchen Cupboards

To later detail.

Ceiling Manhole

Provide 600 x 600 lift-out type to each roof space.

Insulation

Fibreglass batts

Ceiling R 3.6 min rating

Exterior Walls R2.6 rating

Floor xpol R1.8

Roofing

Trapezoidal coloursteel .

PLUMBING AND DRAINLAYING**General**

All work shall be done according to best trade practice and in accordance with NZ Building Code Approved Documents particularly E1, G1, G2, G12 and G13 shall be complied with.

Stormwater and Sewer

Connect as shown. Pipes shall be UPVC 110mm O.D. laid in accordance with manufacturers recommendations.

Plumbing

Spouting	Colorsteel
Downpipes	PVC (to be painted)

Wastes and Traps

Connect all fittings with appropriate size Dux polypropylene wastes and traps in accordance with Dux Code of Practice.

Water Supply

All water pipes shall be in Buteline.

Supply Tank: NA

Mains pressure system

Hot Water Cylinder:
260 Litre mains pressure

Gas califont**Bath**

To be selected.

All hot water pipes are to be lagged

Shower

Proprietary units

W C Pan

Opal 2000 (two of).

Shower Mixing Valves

Methven valves with rose fitted. Two

Taps

Single lever faucet to kitchen sink, Methven
Two hose taps

Vanity and Hand Basin

1x Tripple Cashmere, 2x Double Cashmere (759 & 900mm)
1x small recessed

ELECTRICAL**General**

All work shall be carried out in strict accordance with the NZ Electrical Wiring Regulations and local Authority Requirements.

Main

Bring power supply from Local Authority reticulation by underground route to main switch / meter board.

Main shall be 16mm² neutral screen cable. To be confirmed on site as being suitable by registered Electrician

All trenching and backfilling undertaken by Drainlayer.

Cabling in trenches must be inspected by Power Authority before backfilling.

Switch / Meter Board

Provide and install recessed metal cabinet with hinged front and complete with meters and 60 amp main switch.

Switchboard

Provide and install recessed metal switchboard cabinet with hinged front and complete with labelled circuit breakers – size of cabinet to allow for at least 2 spare MCBs.

Cables

All heat circuits to be run in 2.5 mm TPS twin and earth.

All light circuits to run in 1.0 mm TPS twin and earth.

Lights

Install all lighting shown on the drawings.

Switches shall be PDL 500 series.

Incandescent lighting shall be PDL batten holders fixed to ceiling with 100 watt lamps and 230 mm plastic conical shades.

Socket Outlets

Provide and install single or double PDL 500 series 10 amp at a height of XXX mm except to laundry, kitchen etc.

Electric oven

Allow the nett sum of \$2500 for supply only of Hob & Oven.

PAINTING AND PAPERHANGING

Paint to various surfaces where used shall be as follows:

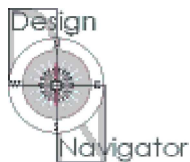
Refer to the Schedule of Finishes under "Carpentry". All colours shall be selected by the Owner. All paintwork shall be of three coat application unless otherwise stated.

Exterior

Exposed timbers	3 coats paint
-----------------	---------------

Interior

Ceilings and Walls	3 coats satin paint
Wet Area Walls	3 coats Gloss or Semi Gloss
Windows Reveals and doors/frames	3 coat



Design Navigator H1 Compliance Report

Project Summary

H1 Report created by:	
Project Name:	New Project
Client:	Evans & mcloud
Lot No:	10
Comment:	
Project Id:	121511
Report Date:	22/04/2019

Compliance Result

This report shows compliance of the design with Clause H1 Fourth edition Amendment 3 from January 2017 and the R-value targets of Clause E3 Second edition Amendment 6 from January 2017.

This building complies with H1 via the following methods:

- the Calculation Method in NZS4218:2009

H1 Compliance Details

NZS4218:2009 Calculation Method Compliance

The use of the Calculation Method is permitted .

In order to comply the Actual Heat Loss must be the same or smaller than the Reference Heat Loss AND all component R-values must be the same or larger than 50% of the R-values in the '50% Rule' table below. This design **complies** with the NZS4218:2009 Calculation Method.

HeatLoss:

Reference building	Proposed building
402	343

Minimum R-values ("50% rule"):

	Permitted Minimum	Proposed Minimum	
Floor:	0.65	2.03	✓
Non-solid Walls:	1	2.04	✓
Roof:	1.65	3.16	✓

The Reference building has the following areas and R-values.

			Non-solid	Solid Timber	Other Solid
			100.0	0.0%	0.0%
Floor:	Area: 137 m ²	R-values:	1.3	1.3	1.5
Walls excl. glazing:	Area: 118.9 m ²	R-values:	2	1.4	1.2
Glazing (up to 30%):	Area: 51 m ²	R-values:	0.26	0.26	0.26
Glazing (surplus of 30%):	Area: 0 m ²	R-values:	0.4	0.34	0.34
Roof:	Area: 137 m ²	R-values:	3.3	3.5	3.5
Heat Loss:			402	426	426

For mixed constructions the heat loss of the reference building is calculated as the sum of the heat losses for each type of wall construction multiplied by the fraction of the wall area of each type. This approach is based on clause 4.2.6 of NZS4218:2009. There are no skylights in the reference building. The reference building roof area is the sum of the proposed building roof and skylight areas.

Compliance with Clause E3

This building complies with the R-value targets in NZBC Clause E3 .

Component	Minimum R-value	Project R-value
Framed wall constructions with cavities	1.5	
Single skin masonry wall without a cavity	0.6	
Solid timber wall no less than 60 mm thick	0.6	
Roof or ceilings	1.5	

Design Details

Building Dimensions

Floor Area	<input type="text" value="137"/> m ²
Gross Wall Area	<input type="text" value="169.9"/> m ²
Net Wall Area	<input type="text" value="124.9"/> m ²
Wall (North) Area	<input type="text" value="35.5"/> m ²
Wall (East, South and West) Area	<input type="text" value="89.4"/> m ²
Gross Roof Area	<input type="text" value="137"/> m ²
Net Roof Area	<input type="text" value="137"/> m ²
Glazing Area	<input type="text" value="45"/> m ²
Window (North) Area	<input type="text" value="17.2"/> m ²
Window (East, South and West) Area	<input type="text" value="27.8"/> m ²
Skylight Area	<input type="text" value="0"/> m ²

Glazing Areas

Total Vertical Glazing Percentage	<input type="text" value="26.5"/> %
East, South and West Window Percentage	<input type="text" value="23.7"/> %
Total over 30%	<input type="text" value="no"/>
East, South and West over 30%	<input type="text" value="no"/>
Total over 50%	<input type="text" value="no"/>
max. Skylight Area for Schedule Method	<input type="text" value="2.05"/> m ²
Skylights over Schedule Method Limit	<input type="text" value="no"/>
Decorative Glazing	<input type="text" value="0"/> m ²
Decorative Glazing over 3m ²	<input type="text" value="no"/>

Information required for BPI calculation

Living Floor Area	<input type="text" value="137"/> m ² Note: This includes also internal floors.
Average Room Height	<input type="text" value="2.9"/> m

Thermal Mass Level

Suspended timber floor with timber framed walls
or a heavily carpeted slab floor with timber
framed walls.

Climate

Location	<input type="text" value="Riwaka, Motueka & Takaka"/>
Climate Zone	<input type="text" value="3"/>

Heat Loss Details

	ID	Orient.	Width	Height	Gross Area	Net Area	R-value*	Heat Loss	Shad. Coeff.**	Solid Wall***
<u>Floors</u>										
Floor 1					137.0	137.0	2.03	67.5		
<u>Walls</u>										
Wall 1		N	6.7	3.6	24.1	17.3	2.04	8.5		C
Window 1-1			1.8	0.5		0.9	0.26	3.5	0.00	
Window 1-2			1.8	0.5		0.9	0.26	3.5	0.00	
Window 1-3			1.8	1.4		2.5	0.26	9.7	0.00	
Window 1-4			1.8	1.4		2.5	0.26	9.7	0.00	
Wall 2		N	11.9	2.4	28.6	18.2	2.04	8.9		C
Window 2-1			1.8	2.1		3.8	0.26	14.5	0.00	
Window 2-2			1.8	1.4		2.5	0.26	9.7	0.00	
Window 2-3			1.8	1.4		2.5	0.26	9.7	0.00	
Window 2-4			0.6	1.2		0.7	0.26	2.8	0.00	
Window 2-5			0.6	1.4		0.8	0.26	3.2	0.00	
Wall 3		W	11.7	3.1	36.3	25.9	2.04	12.7		C
Window 3-1			1.8	2.1		3.8	0.26	14.5	0.00	
Window 3-2			1.8	0.5		0.9	0.26	3.5	0.00	
Window 3-3			0.9	2.1		1.9	0.26	7.3	0.00	
Window 3-4			1.8	2.1		3.8	0.26	14.5	0.00	
Wall 4		S	18.6	2.4	44.6	40.3	2.04	19.7		C
Window 4-1			0.6	1.4		0.8	0.26	3.2	0.00	
Window 4-2			1.3	2.1		2.7	0.26	10.5	0.00	
Window 4-3			0.4	0.8		0.3	0.26	1.2	0.00	
Window 4-4			0.6	0.8		0.5	0.26	1.8	0.00	
Wall 5		E	11.7	3.1	36.3	23.2	2.04	11.4		C
Window 5-1			1.8	1.4		2.5	0.26	9.7	0.00	
Window 5-2			0.6	1.4		0.8	0.26	3.2	0.00	
Window 5-3			1.8	1.4		2.5	0.26	9.7	0.00	
Window 5-4			1.8	2.1		3.8	0.26	14.5	0.00	
Window 5-5			1.8	1.4		2.5	0.26	9.7	0.00	
Window 5-6			1.8	0.5		0.9	0.26	3.5	0.00	
<u>Roofs</u>										
Roof 1					58.0	58.0	3.68	15.8		
Roof 2					79.0	79.0	3.16	25.0		
Total Heat Loss								342.6		

* Any concrete slab-on-ground floor regardless of its dimensions can be assumed to have an R-value of at least R-1.3 (H1/AS1 2.1.5).

** The Shading Coefficient is only required for BPI calculations.

*** C: Cavity Construction (any construction that is not solid), T: Solid Timber, S: Other Solid Construction (Note that the use of solid timber and other solid construction types is discretionary, i.e. solid timber walls and other solid walls can be treated as if they are non-solid (NZS4218:2009 section 4.1.3.).)

Floor Construction Details

Name:	Floortype 1	2.03 m ² °C/W
Type: Floor: Suspended Floor (no Lining)		
internal surface 0.09		
Flooring : 20mm Strandboard ▼ R-value: 0.17		
Timber Frame & Cavity : 190+ mm joists @ 400mm ▼ Floor Frame Area: 11.3% Cavity Area: 88.7%		
Framing : R-value: 1.56		Insulation : 1.8
Insulation value of the subfloor space		
Suspended floor area [m ²]:		
Perimeter length [m]:		
Perimeter height [m]:		
Perimeter type: Exposed floor (pole house) ▼		

Wall Construction Details


Name:	Walltype 1	2.04 m ² °C/W
Type: Wall: Timber Frame (direct fixed cladding)		
external surface 0.03		
Cladding : Metal weatherboard (corr. iron) ▼ R-value: 0.08		
Air Barrier : none ▼ R-value: 0.00		
Timber Frame & Cavity : 90mm, studs @ 400mm, dwangs @ 800mm ▼ Wall Frame Area: 17.9% Cavity Area: 82.1%		
Framing : R-value: 0.75		Insulation : 2.6
		still Airgap: none ▼ R-value: 0.00
Wall Lining : Gypsum plasterboard 10mm ▼ R-value: 0.04		
internal surface 0.09		

Roof Construction Details**Name:**

Rooftype 1

3.68
m²°C/W

Type: Roof: Timber framed skillion or flat Roof


external surface 0.03	
Roofing : Corrugate iron with building paper ▼ R-value: 0.01	
Timber Frame & Cavity : 290mm rafters or joists @ 900mm, battens covered with insulation ▼	
Roof Frame Area: 5.0%	Cavity Area: 95.0%
Framing : R-value: 2.40	still Airgap : none ▼ R-value: 0.00
Thermal Break : none ▼ R-value: 0.00	Insulation : 3.6
Roof Lining : Gypsum plasterboard 10mm ▼ R-value: 0.04	
internal surface 0.09	
Non-IC-rated recessed downlights	
Ceiling Area [m ²]: <input type="text"/> Number of downlights: <input type="text"/> Clearance from lamp holder side [m]: <input type="text"/> 	

Name:

Rooftype 2

3.16
m²°C/W

Type: Roof: Timber framed truss Roof, direct fixed or battened flat Ceiling

external surface 0.03	
Roofing : Corrugate iron with building paper ▼ R-value: 0.01	
Insulation : <input type="text"/>	
Timber Frame & Cavity : 90mm rafters or joists @ 600mm, battens covered with insulation ▼	
Roof Frame Area: 7.5%	Cavity Area: 92.5%
Roof space (still air) 0.11	Roof space (still air) 0.11
Framing : R-value: 0.75	Insulation : 3.6
Roof Lining : Gypsum plasterboard 13mm ▼ R-value: 0.06	
internal surface 0.09	
Non-IC-rated recessed downlights	
Ceiling Area [m ²]: <input type="text"/> Number of downlights: <input type="text"/> Clearance from lamp holder side [m]: <input type="text"/> 	



GIB EzyBrace® Bracing Software

Demand Calculation Sheet

Job Details

Name:	T Evans & S Mcloud
Street and Number:	31 Pineview Way
Lot and DP Number	
City/Town/District	Motueka
Designer	GB
Company	
Date	29.03.2019

Building Specification

Number of Storeys	1
Floor Loading	2 kPa
Foundation Type	Subfloor
Subfloor Cladding Weight	Light

Single

Cladding Weight	Light
Roof Weight	Light
Room in Roof Space	No
Roof Pitch (degrees)	6
Roof Height above Eaves (m)	1.5
Building Height to Apex (m)	4.5
Ground to Lower Floor (m)	0.6

Average Stud Height (m)	2.4
Building Length (m)	18.6
Building Width (m)	11.7
Building Plan Area (m²)	137

Building Location

Wind Zone = Extra 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	783	1053
Subfloor Level	1311	1679

Bracing Units required for Earthquake

	Along & Across
Single Level	1061
Subfloor Level	1380



GIB EzyBrace® Bracing Software

Single Level Along Resistance Sheet

Job Name: T Evans & S Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									783	1061
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	1218 155%	1099 104%
a	1	3.30		2.4	GS1-N	GIB®	228	198		
	External Length = 13.1								228 OK	198 OK
b	1	3.10		2.4	GS1-N	GIB®	214	186		
	2	1.30		2.4	GS1-N	GIB®	90	78		
	External Length = 5.5								304 OK	264 OK
c	1	3.00		2.4	GS1-N	GIB®	207	180		
	2	1.40		2.4	GS1-N	GIB®	97	84		
	External Length = 1								304 OK	264 OK
d	1	1.80		3.1	GS1-N	GIB®	96	84		
	2	0.60		2.4	BL1-H	GIB®	59	61		
	3	0.60		2.4	BL1-H	GIB®	59	61		
	External Length = 10.9								215 OK	205 OK
e	1	2.10		3.6	BLP-H	GIB®	168	168		
	External Length = 6.7								168 OK	168 OK



GIB EzyBrace® Bracing Software

Single Level Across Resistance Sheet

Job Name: T Evans & S Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									1053	1061
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	1246 118%	1124 106%
m	1	0.80		2.4	GS1-N	GIB®	49	47		
	2	0.80		2.4	GS1-N	GIB®	49	47		
	3	2.40		3.1	GS1-N	GIB®	128	111		
	4	2.20		3.4	GS1-N	GIB®	107	93		
	External Length = 11.7								333 OK	299 OK
n	1	1.40		2.4	BL1-H	GIB®	168	146		
	2	0.70		2.4	BL1-H	GIB®	73	71		
	3	0.70		3.2	GS1-N	GIB®	31	31		
									272 OK	247 OK
o	1	0.50		3.6	BL1-H	GIB®	31	34		
	2	0.58		3.4	BL1-H	GIB®	40	41		
	3	0.50		3.2	BL1-H	GIB®	35	38		
	External Length = 5.1								107 OK	112 OK
p	1	1.80		2.4	GS1-N	GIB®	124	108		
									124 OK	108 OK
q	1	1.80		2.4	GS1-N	GIB®	124	108		
	External Length = 2.1								124 OK	108 OK
r	1	1.00		2.4	BL1-H	GIB®	118	103		
	External Length = 2								118 OK	103 OK
s	1	1.40		2.4	BL1-H	GIB®	168	146		
	External Length = 2.2								168 OK	146 OK



GIB EzyBrace® Bracing Software

Subfloor Level Along Resistance Sheet

Job Name: T Evans & S Mcloud

									Wind	EQ
									Demand	
									1311	1380
									Achieved	
Line	Element	Length (m)	Angle (degrees)		Type	Supplier	Wind BUs	EQ BUs	3680 281%	2760 200%
A	1	6.00			Anchor Pile	NZS3604	960	720		
									960 OK	720 OK
B	1	6.00			Anchor Pile	NZS3604	960	720		
									960 OK	720 OK
C	1	5.00			Anchor Pile	NZS3604	800	600		
									800 OK	600 OK
D	1	3.00			Anchor Pile	NZS3604	480	360		
									480 OK	360 OK
E	1	3.00			Anchor Pile	NZS3604	480	360		
									480 OK	360 OK



GIB EzyBrace® Bracing Software

Subfloor Level Across Resistance Sheet

Job Name: T Evans & S Mcloud

									Wind	EQ
									Demand	
									1679	1380
									Achieved	
Line	Element	Length (m)	Angle (degrees)		Type	Supplier	Wind BUs	EQ BUs	3680 219%	2760 200%
M	1	5.00			Anchor Pile	NZS3604	800	600		
									800 OK	600 OK
N	1	5.00			Anchor Pile	NZS3604	800	600		
									800 OK	600 OK
O	1	5.00			Anchor Pile	NZS3604	800	600		
									800 OK	600 OK
P	1	3.00			Anchor Pile	NZS3604	480	360		
									480 OK	360 OK
Q	1	3.00			Anchor Pile	NZS3604	480	360		
									480 OK	360 OK
R	1	2.00			Anchor Pile	NZS3604	320	240		
									320 OK	240 OK

GIB EzyBrace® Bracing Software



Custom Wall Elements

Supplier	System	Min. Length m	Wind BUs/m	EQ BUs/m
CHH	EP1	.6	130	130

Custom Subfloor Elements

Supplier	System	Min. Length m	Wind BUs or BUs/m	EQ BUs or BUs/m

5.0 GIB® PERFORMANCE SYSTEMS INSTALLATION

The GIB® Performance Systems section covers installation of GIB EzyBrace® and GIB Aqualine® Wet Area Systems. For other systems including

GIB Noise Control® Systems, GIB® Fire Rated Systems and GIB® Tough Systems refer to the appropriate GIB® systems literature.

5.1 GIB® BRACING SYSTEMS

This section covers the installation of GIB EzyBrace® Systems to timber framing to NZS 3604:2011. Full design details can be found in the GIB EzyBrace® Systems literature.

Bracing of steel framed walls is by specific design. For details visit www.nashnz.org.nz

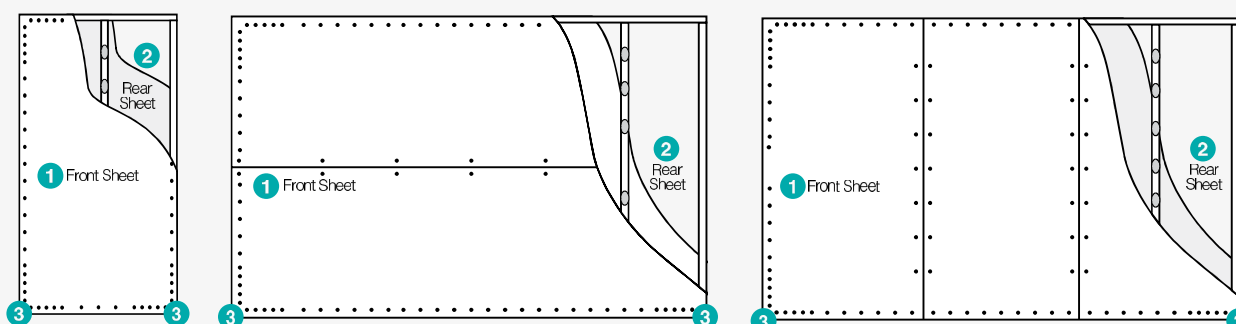
GIB® Bracing elements code system:

GS	GIB® Standard plasterboard or other similar thickness
BL	GIB Braceline®
P	7mm structural plywood manufactured to AS/NZS 2269:2012
1	Bracing element fixed to one side of the wall only
2	Bracing element fixed to both sides of the wall
N	Panel hold down not required
H	GIB HandiBrac® or metal strap and hold down bolt

5.1.1 INSTALLATION SUMMARY

Sheet Installation						
	Front Sheet ①		Rear Sheet ②		Panel Hold-Down Fixings ③	Fastener Spacing
	Lining	Fasteners	Lining	Fasteners		
GS1-N	Any 10mm or 13mm GIB® plasterboard	30mm x 2.8mm GIB® Nails, 32mm x 6g GIB® Grabber® high thread screws or 32mm x 7g GIB® Grabber dual thread screws	Not Required	Not Required	Not Required	GIB® Plasterboard Corner fastening pattern as illustrated on p. 63 Fasteners at 150mm to bracing element perimeter and: at 300mm centres to intermediate sheet joints for vertical fixing, or at stud/sheet junction for horizontally fixed elements, and GIBFix® adhesive daubs at 300mm are to intermediate framing Structural Plywood 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
GS2-N			Any 10mm or 13mm GIB® plasterboard	30mm x 2.8mm GIB® Nails, 32mm x 6g GIB® Grabber® high thread screws		
GSP-H			Minimum 7mm structural plywood manufactured to AS/NZS 2269	50mm x 2.8mm flat head galvanised or stainless steel nails	Yes	
BL1-H			10mm or 13mm GIB Braceline®	Minimum 32mm x 6g GIB® Grabber® high thread screws	Not required	
BLG-H	10mm or 13mm GIB Braceline®	Minimum 32mm x 6g GIB® Grabber® high thread screws	Any 10mm or 13mm GIB® plasterboard	30mm x 2.8mm GIB® Nails, 32mm x 6g GIB® Grabber® high thread screws		
BLP-H			Minimum 7mm structural plywood manufactured to AS/NZS 2269	50mm x 2.8mm flat head galvanised or stainless steel nails		

Installation Summary

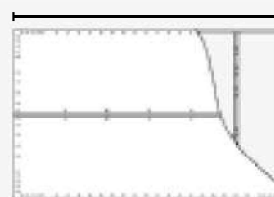


5.1.2 SYSTEM SPECIFICATIONS

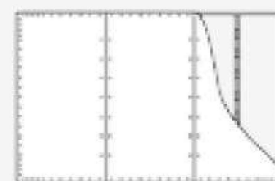
GS1-N

1. Any 10 or 13mm GIB® plasterboard to one side of the wall only
2. Corner fastening pattern applies (see p. 63)
3. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws or 30 x 2.8mm GIB® Nails at 150mm to perimeter
4. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
5. Panel hold downs not required
6. Joints and fastener heads must be stopped
7. GIB® tape must be used in joints
8. Sheets may be fixed horizontally or vertically

Bracing Element



Horizontal Fixing

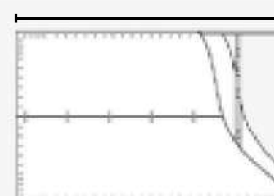


Vertical Fixing

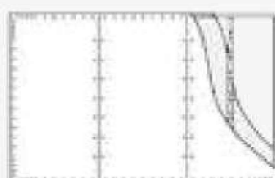
GS2-N

1. Any 10 or 13mm GIB® plasterboard to both sides of the wall. Both sides fixed as bracing elements
2. Corner fastening pattern applies (see p. 63)
3. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws or 30 x 2.8mm GIB® Nails at 150mm to perimeter
4. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
5. Panel hold downs not required
6. Joints and fastener heads must be stopped
7. GIB® tape must be used in joints
8. Sheets may be fixed horizontally or vertically

Bracing Element



Horizontal Fixing



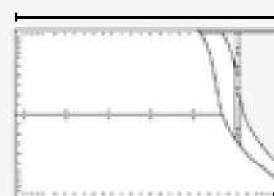
Vertical Fixing

GSP-H

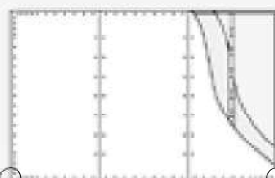
1. Any 10 or 13mm GIB® plasterboard to one side of the wall
2. 7mm structural plywood to the other side
3. Corner fastening pattern applies (see p. 63)
4. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws or 30 x 2.8mm GIB® Nails at 150mm to perimeter (plasterboard side) 50 x 2.8mm FH nails at 150mm to perimeter. Corner fastening pattern not applicable to ply side
5. Panel hold downs required
6. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
7. Joints and fastener heads must be stopped
8. GIB® tape must be used in joints
9. Sheets may be fixed horizontally or vertically

Bracing Element

Plasterboard side shown



Horizontal Fixing



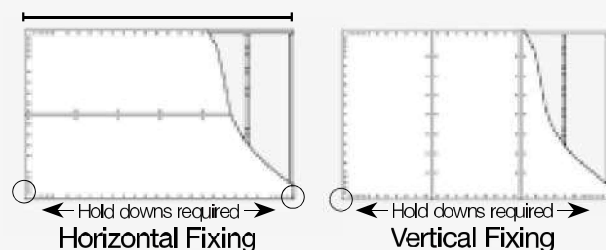
Vertical Fixing

5.1.2 SYSTEM SPECIFICATIONS

BL1-H

1. 10 or 13mm GIB Braceline® to one side of the wall only
2. Corner fastening pattern applies (see p. 63)
3. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws at 150mm to perimeter
4. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
5. Panel hold downs required
6. Joints and fastener heads must be stopped
7. GIB® tape must be used in joints
8. Sheets may be fixed horizontally or vertically

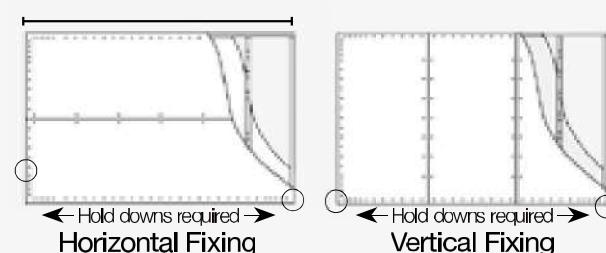
Bracing Element – Plasterboard side shown



BLG-H

1. 10 or 13mm GIB Braceline® to one side of the wall. Any 10 or 13mm GIB® plasterboard to the other side. Both sides fixed as bracing elements
2. Corner fastening pattern applies (see p. 63)
3. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws at 150mm to perimeter
4. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
5. Panel hold downs required
6. Joints and fastener heads must be stopped
7. GIB® tape must be used in joints
8. Sheets may be fixed horizontally or vertically

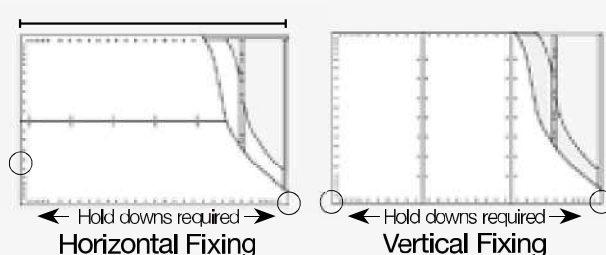
Bracing Element – Plasterboard side shown



BLP-H

1. 10 or 13mm GIB Braceline® to one side of the wall only
2. 7mm structural plywood to the other side
3. Corner fastening pattern applies (see p. 63)
4. 32 x 6g GIB® Grabber® screws, GIB® Grabber® Dual Thread screws at 150mm to perimeter (plasterboard side). 50 x 2.8mm FH nails at 150mm to plywood perimeter. Corner fastening pattern not applicable (plywood side)
5. Panel hold downs required
6. Centre of the sheet may be fixed with adhesive or fastenings at 300mm
7. Joints and fastener heads must be stopped
8. GIB® tape must be used in joints
9. Sheets may be fixed horizontally or vertically

Bracing Element – Plasterboard side shown



For sheet substitution options refer to p. 16.

5.1.3 BOTTOM PLATE FIXING

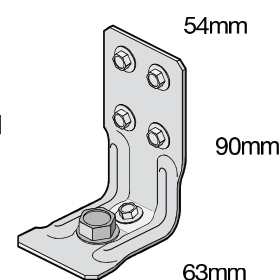
Bottom Plate Fixings for GIB® Bracing Elements			
Brace Type	Concrete Slabs		Timber Floors
	External Walls	Internal Walls	External and Internal Walls
GS1-N	As per NZS 3604:2011 No specific additional fastening required	As per NZS 3604:2011. Alternatively use 75 x 3.8mm shot-fired fasteners with 16mm discs, 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 pp. 62–63		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-H, BL1-H, BLP-H on concrete slab as illustrated on p. 62 & 63	In addition: GIB HandiBrac® fixings or metal wrap-around strap fixings and bolt as illustrated below

5.1.4 PANEL HOLD-DOWN DETAILS

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 into 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 Floors		Timber Floors	
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 boundary joist	Position GIB HandiBrac® in the centre of floor joist or full depth solid block

Hold-Down Fastener Requirements

A mechanical fastening with a minimum characteristic uplift capacity of 15kN or use supplied BT 10/140 screw bolt in GIB HandiBrac® pack.

12 x 150mm galvanised coach screw or use supplied BT 10/140 screw bolt in GIB HandiBrac® pack.

Bracing Strap Installation

Care needs to be taken with the installation of the bracing strap. It should be checked in to be flush with the face of the stud providing a flat substrate for the plasterboard. 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.

Concrete Floors

Timber Floors

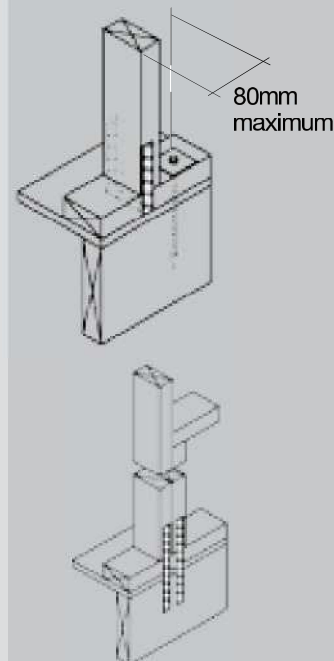
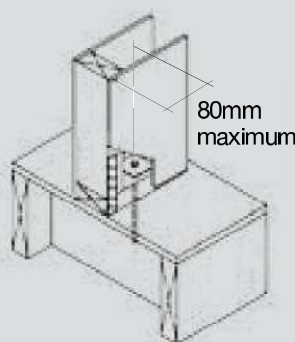
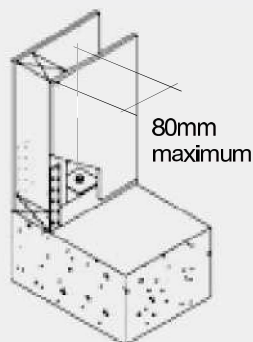
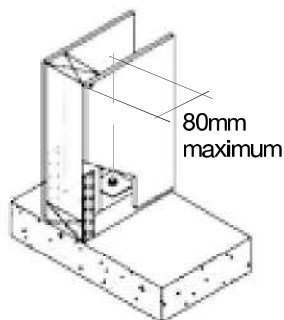
400 x 25 x 0.9mm galvanised strap to pass under the plate and up the other side of the stud. Six 30 x 2.5 flat head galvanised nails to each side of the stud. Three 30 x 2.5 flat head galvanised nails to each side of the plate. Hold down bolt with 50 x 50 x 3mm washer to be fitted within 80mm of the edge of the element.

Internal Walls

External Walls

Internal Walls

External Walls



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.

Hold-Down Fastener Requirements

Concrete Floors

Timber Floors

A mechanical fastening with a minimum characteristic uplift capacity of 15kN fitted with a 50 x 50 x 3mm square washer within 80mm of the ends of the bracing element.

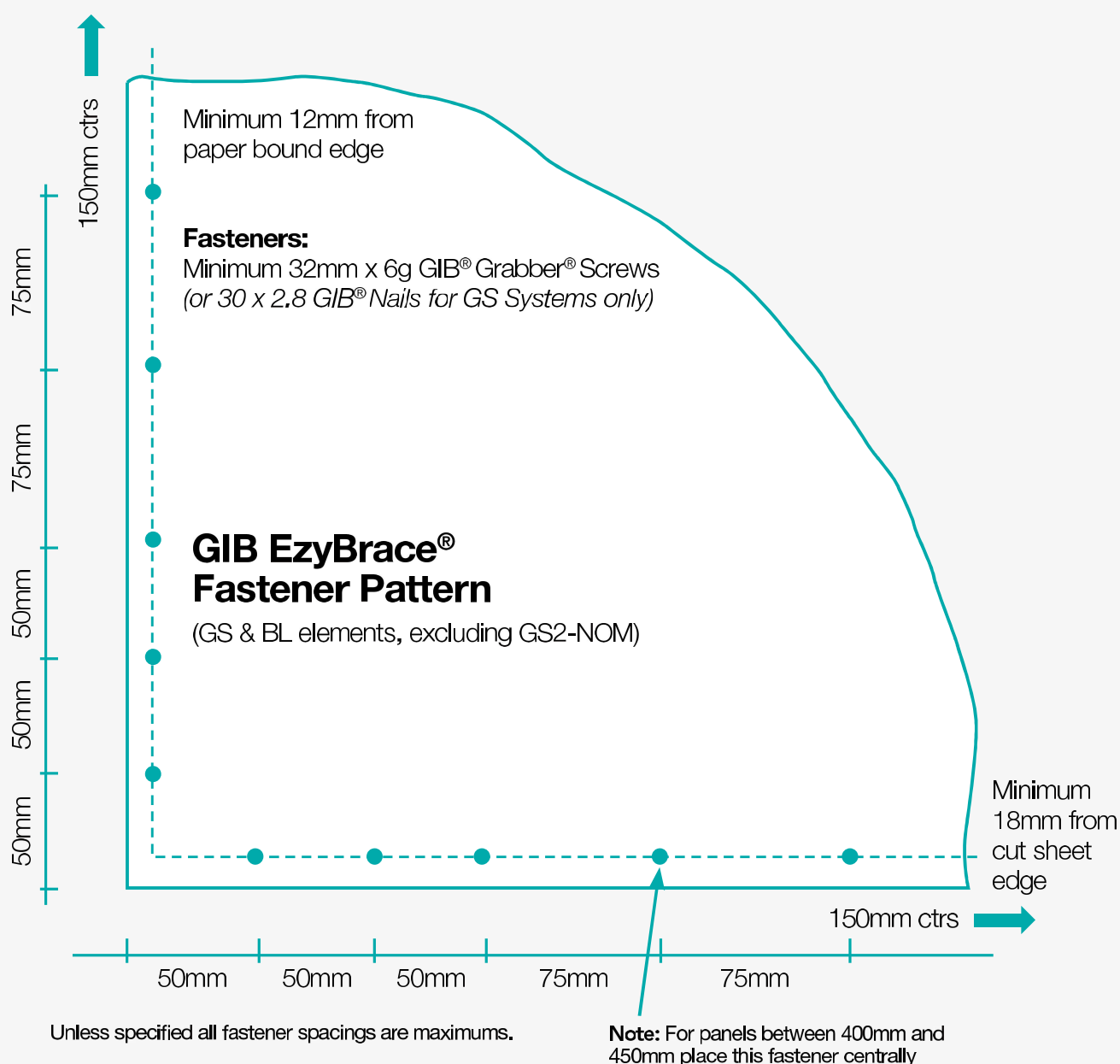
12 x 150mm galvanised coach screw fitted with a 50 x 50 x 3mm square washer within 80mm of the ends of the bracing element

5.1.5 GIB EzyBRACE® CORNER FASTENER PATTERN

Corner Fastener Pattern for ALL 4 CORNERS OF GIB® Bracing Elements (excluding GS2-Nom)

- ▶ All four corners of a GIB® plasterboard bracing element must be fastened at 50mm, 100mm, 150mm, 225mm and 300mm from the edge of the sheet
- ▶ Bracing element perimeter is then fastened at 150mm centres
- ▶ Fasteners must be no closer than 12mm from the paper enclosed edge and no closer than 18mm from sheet ends or cut edges of sheets

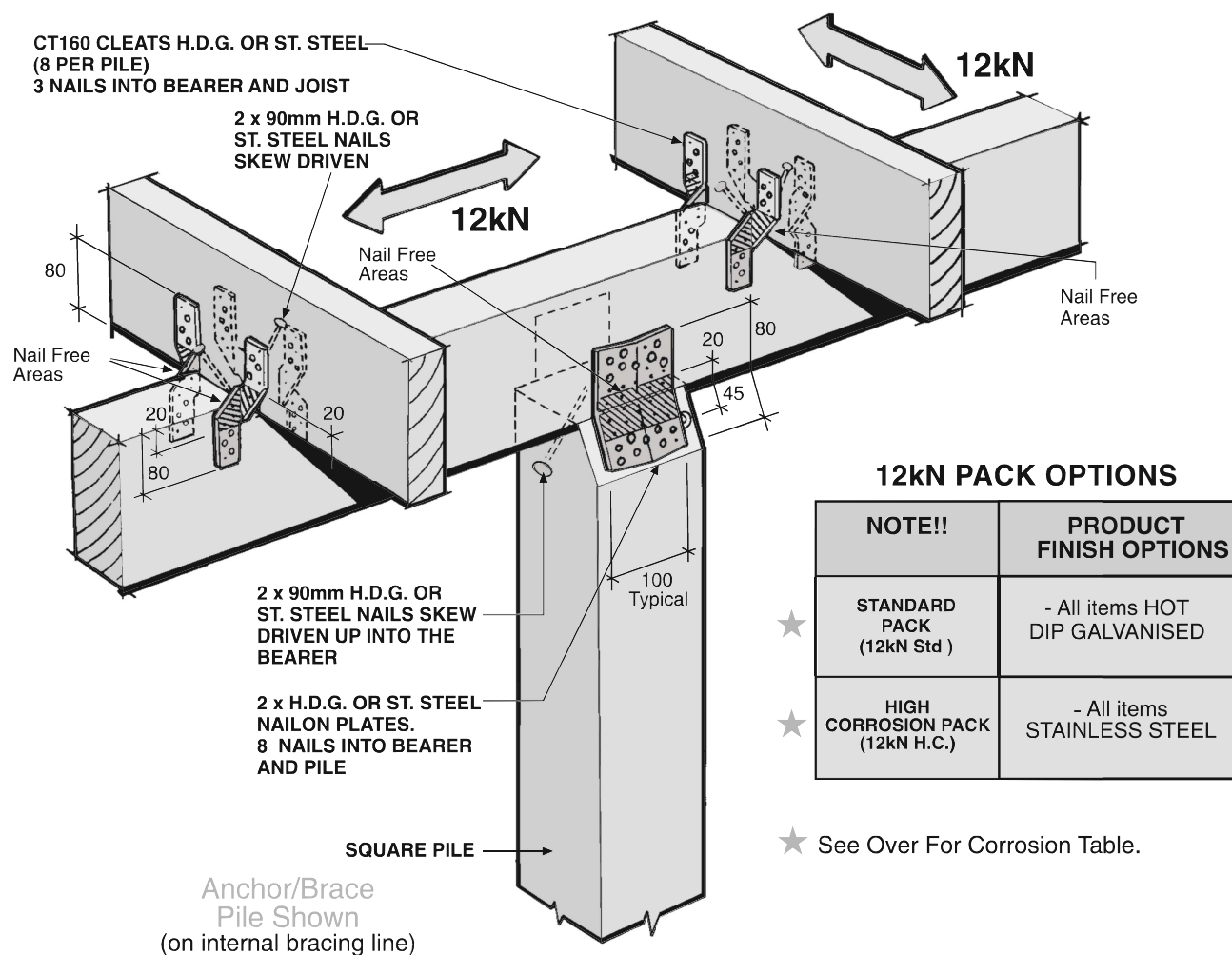
GIB EzyBrace® Corner Fastener Pattern



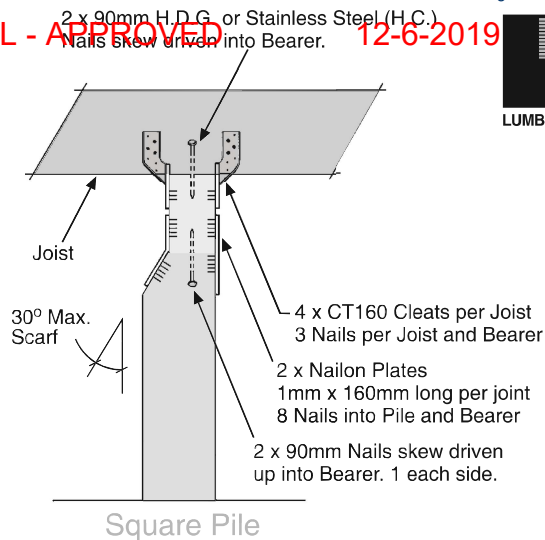
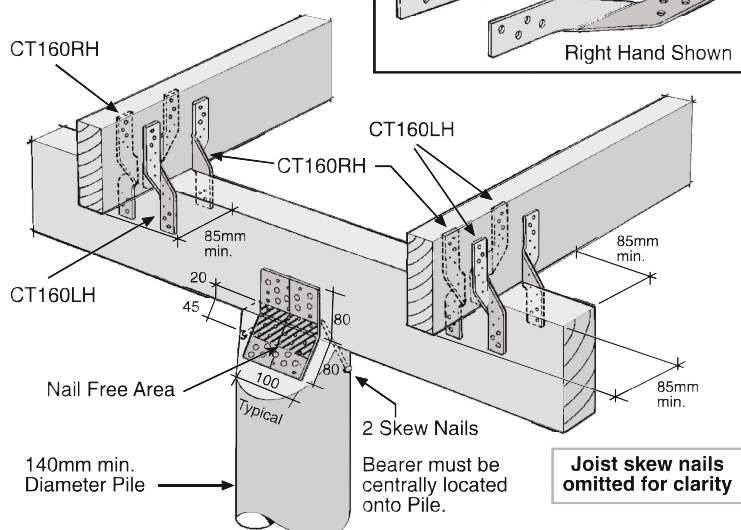


12kN PILE FIXING FOR BRACED PILES OR ANCHOR PILES

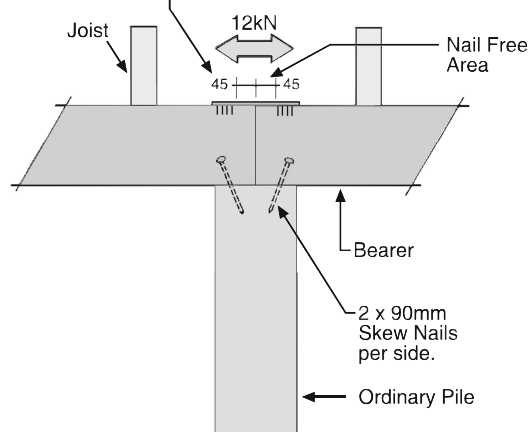
- ★ The 12kN Pile Fixing must be installed in accordance with this brochure
- ★ Auckland University Tested. Test Ref. 4613
- ★ All subfloor construction must be in accordance with NZS 3604:2011
- ★ NZS 3604 requires lines of lateral support to floor joists within 300mm of bearer or bracing lines, refer to Clause 7.1.2



**Available from leading Builders Supply Merchants
throughout New Zealand**



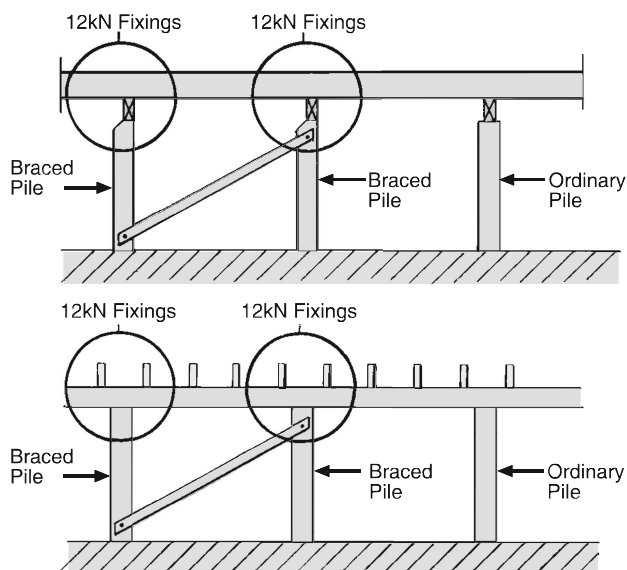
Nailon Plate 1mm x 160mm long (ex 12kN Pack)
8 Nails per end. No Nails within 18mm of timber edge.



12kN Bearer Splice

Clause 6.12.7.2
NZS 3604:2011

CORROSION HAZARD USE TABLE	
Standard Pack (12kN Std) - Zones B & C - All Fixings ABOVE 600mm from Ground level	All items Hot Dip Galvanised.
High Corrosion Pack (12kN HC) - Zone D - All Fixings BELOW 600mm from Ground level	All items Stainless Steel (304).



Sample Subfloor Elevations

12kN Fixing - Pile to Bearer
- Joists to Bearer

12kN Joint Fixing Schedule

- PILE TO BEARER
- Nailon Plate (2 per joint) 1mm x 100mm (Typical) x 160mm long
 - 8 Nails per Plate into Pile
 - 8 Nails per Plate into Bearer
 - 2 Skew Nails 90mm (1 per face)
- JOIST TO BEARER
- CT160 Cleats (4 per Joist) 160mm long
 - 3 Nails per Cleat into Joist
 - 3 Nails per Cleat into Bearer
 - 2 Skew Nails 90mm (1 per side)
- NAILS
- 80 x 45mm x 3.55 dia. Spiral Nails
 - 6 x 90mm x 4 dia. St. Steel Nails (H.C. Pack only)

12kN Pile Set Contents

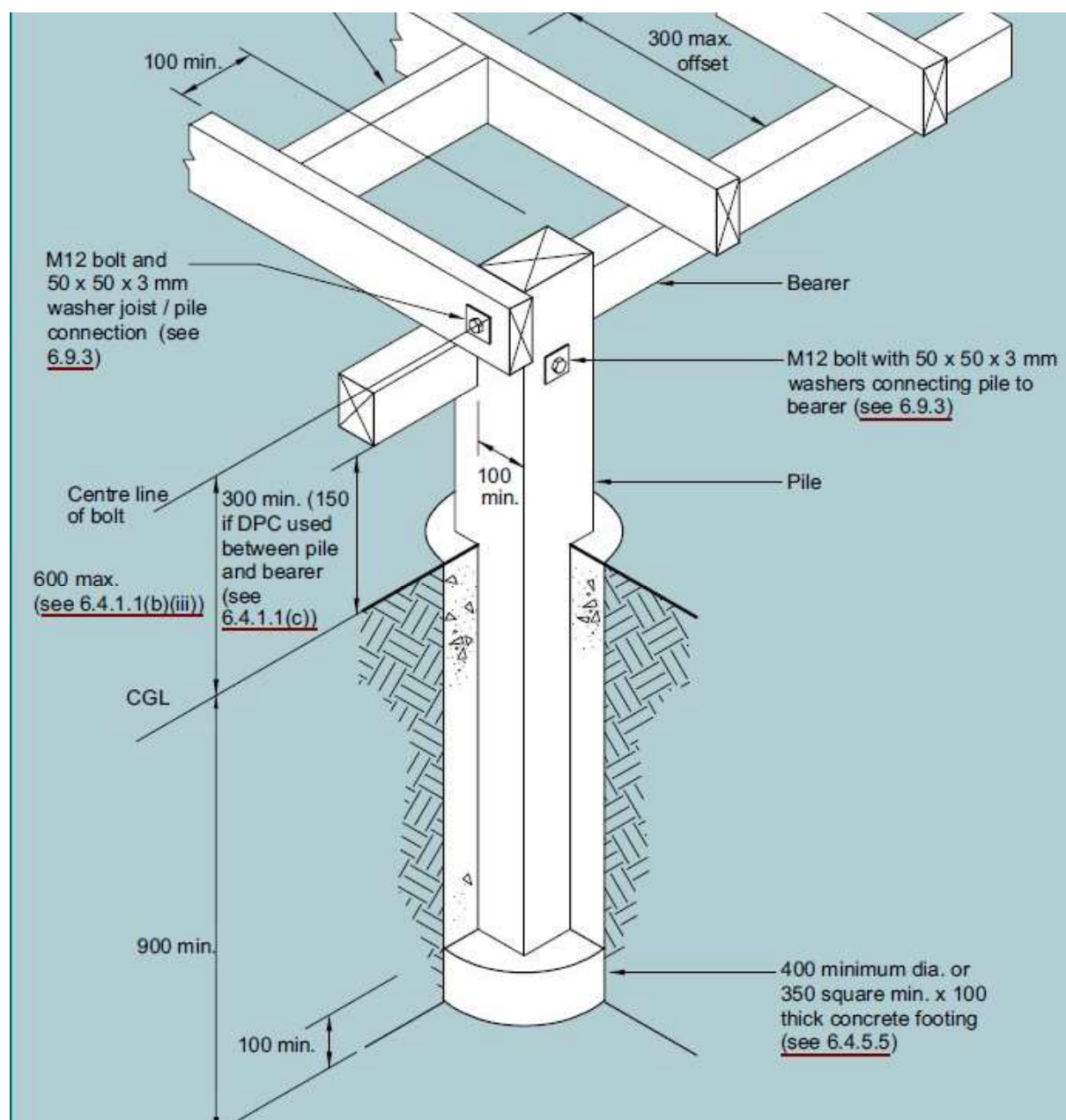
Each set represents 1 x 12kN Pile Fixing

(packed 4 sets per carton)

- 2 x Nailon Plates 160mm long
- 8 x CT160 Cleats
- 80 x 45mm x 3.55 dia. Spiral Nails
- 90mm x 4 dia. St. Steel Angular Groove
- 6 - H.C. Pack

Refer front page
for Product
Finish Options

90mm H.D.G. Nails
not included.





GIB EzyBrace® Bracing Software

Demand Calculation Sheet

Job Details

Name:	Evans & Mcloud
Street and Number:	31 Pineview Way
Lot and DP Number	
City/Town/District	Motueka
Designer	GJB
Company	
Date	18.04.2019

Building Specification

Number of Storeys	2	
Floor Loading	2 kPa	
Foundation Type	Subfloor	
Subfloor Cladding Weight	Light	
	Upper	Lower
Cladding Weight	Light	Light
Roof Weight	Light	Light
Room in Roof Space	No	No
Roof Pitch (degrees)	20	25
Roof Height above Eaves (m)	1.5	1.5
Building Height to Apex (m)	5	
Ground to Lower Floor (m)	0.6	
Lower to Upper Floor (m)		2.3
Average Stud Height (m)	1.2	2
Building Length (m)	3	4.8
Building Width (m)	3.6	3.6
Building Plan Area (m²)	11	17

Building Location

Wind Zone = Extra High

Earthquake Zone 2

Soil Type: D & E (Deep to Very Soft)
Annual Prob. of Exceedance: 1 in 1000 (x 1.3)

Bracing Units required for Wind

	Along	Across
Upper Level	130	77
Lower Level	309	325
Subfloor Level	488	564

Bracing Units required for Earthquake

	Along & Across
Upper Level	107
Lower Level	288
Subfloor Level	326



GIB EzyBrace® Bracing Software

Upper Level Along Resistance Sheet

Job Name: Evans & Mcloud

Timber Floor Limit of 120 BUs/m Applied

Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	Wind	EQ
									Demand	
									130	107
									Achieved	
									325 250%	283 264%
a	1	3.00		.6	GS1-N	GIB®	207	180		
	External Length = 4.8								207 OK	180 OK
b	1	1.00		1.9	BL1-H	GIB®	118	103		
	External Length = 4.8								118 OK	103 OK



GIB EzyBrace® Bracing Software

Upper Level Across Resistance Sheet

Job Name: Evans & Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									77	107
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	336 436%	305 285%
m	1	3.40		1.2	GS1-N	GIB®	235	204		
	External Length = 3.6								235 OK	204 OK
n	1	0.55		4.0	BLP-H	GIB®	40	40		
	2	0.75		3.5	BLP-H	GIB®	62	62		
External Length = 3.6									101 OK	101 OK



GIB EzyBrace® Bracing Software

Lower Level Along Resistance Sheet

Job Name: Evans & Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									309	288
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	381 123%	335 116%
A	1	3.10		2.1	GS1-N	GIB®	214	186		
	External Length = 4.8								214 OK	186 OK
B	1	0.90		2.1	GS1-N	GIB®	57	53		
	2	1.60		2.1	GS1-N	GIB®	110	96		
External Length = 4.8									167 OK	149 OK



GIB EzyBrace® Bracing Software

Lower Level Across Resistance Sheet

Job Name: Evans & Mcloud

Timber Floor Limit of 120 BUs/m Applied

									Wind	EQ
									Demand	
									325	288
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	457 141%	403 140%
M	1	1.50		2.1	GS1-N	GIB®	104	90		
	2	1.50		2.1	GS1-N	GIB®	104	90		
	External Length = 3.6								207 OK	180 OK
N	1	1.00		2.1	GS1-N	GIB®	65	60		
	2	1.00		2.1	GS1-N	GIB®	65	60		
									130 OK	119 OK
O	1	1.50		3.6	BL1-H	GIB®	120	104		
	External Length = 3.6								120 OK	104 OK



GIB EzyBrace® Bracing Software

Subfloor Level Along Resistance Sheet

Job Name: Evans & Mcloud

									Wind	EQ
									Demand	
									488	326
									Achieved	
Line	Element	Length (m)	Angle (degrees)		Type	Supplier	Wind BUs	EQ BUs	1280 262%	960 294%
A	1	4.00			Anchor Pile	NZS3604	640	480		
	External Length = 4.8								640 OK	480 OK
B	1	4.00			Anchor Pile	NZS3604	640	480		
	External Length = 4.8								640 OK	480 OK



GIB EzyBrace® Bracing Software

Subfloor Level Across Resistance Sheet

Job Name: Evans & Mcloud

									Wind	EQ
									Demand	
									564	326
									Achieved	
Line	Element	Length (m)	Angle (degrees)		Type	Supplier	Wind BUs	EQ BUs	1280 227%	960 294%
M	1	4.00			Anchor Pile	NZS3604	640	480		
	External Length = 3.6								640 OK	480 OK
N	1	4.00			Anchor Pile	NZS3604	640	480		
	External Length = 3.6								640 OK	480 OK

GIB EzyBrace® Bracing Software

Custom Wall Elements

Supplier	System	Min. Length m	Wind BUs/m	EQ BUs/m
CHH	EP1	.6	130	130

Custom Subfloor Elements

Supplier	System	Min. Length m	Wind BUs or BUs/m	EQ BUs or BUs/m

BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019



D - Pair of Wire Dogs and 2 x 90mm 3.15mm skew nails

X - LUMBERLOK JH47x90 Joist Hanger

Z - LUMBERLOK JH47x120 Joist Hanger

P - LUMBERLOK JH47x190 Joist Hanger

E - LUMBERLOK JH95x165 Joist Hanger

T - LUMBERLOK CT200 Ceiling Tie

O - Pair of LUMBERLOK CT200 Ceiling Ties

H - LUMBERLOK CT400 Cyclone Tie

B - LUMBERLOK CT600 Cyclone Tie

4 - LUMBERLOK Multi Grip

M - Pair of LUMBERLOK Multi Grips

NP - LUMBERLOK Nailon Plate

N - LUMBERLOK N21 Diagonal Cleat

V - LUMBERLOK CPC40 Cleat

W - Pair of LUMBERLOK CPC40 Cleats

K - LUMBERLOK TTP 16kN Truss to Top Plate set

G - LUMBERLOK TTP 9kN Truss to Top Plate set

Joist Hanger

Installation



CT200 Truss to

Top Plate Fixing

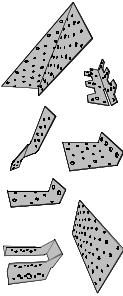
Installation



16kN & 9kN Truss

to Top Plate Fixing

Installation



Notes:

All other areas must have the minimum 2 x 90mm 3.15mm skew nails and

2 x wire dogs for truss to top plate connections

Refer to:

LUMBERLOK Timber Connectors Characteristic Loadings Data Brochure

08/2014

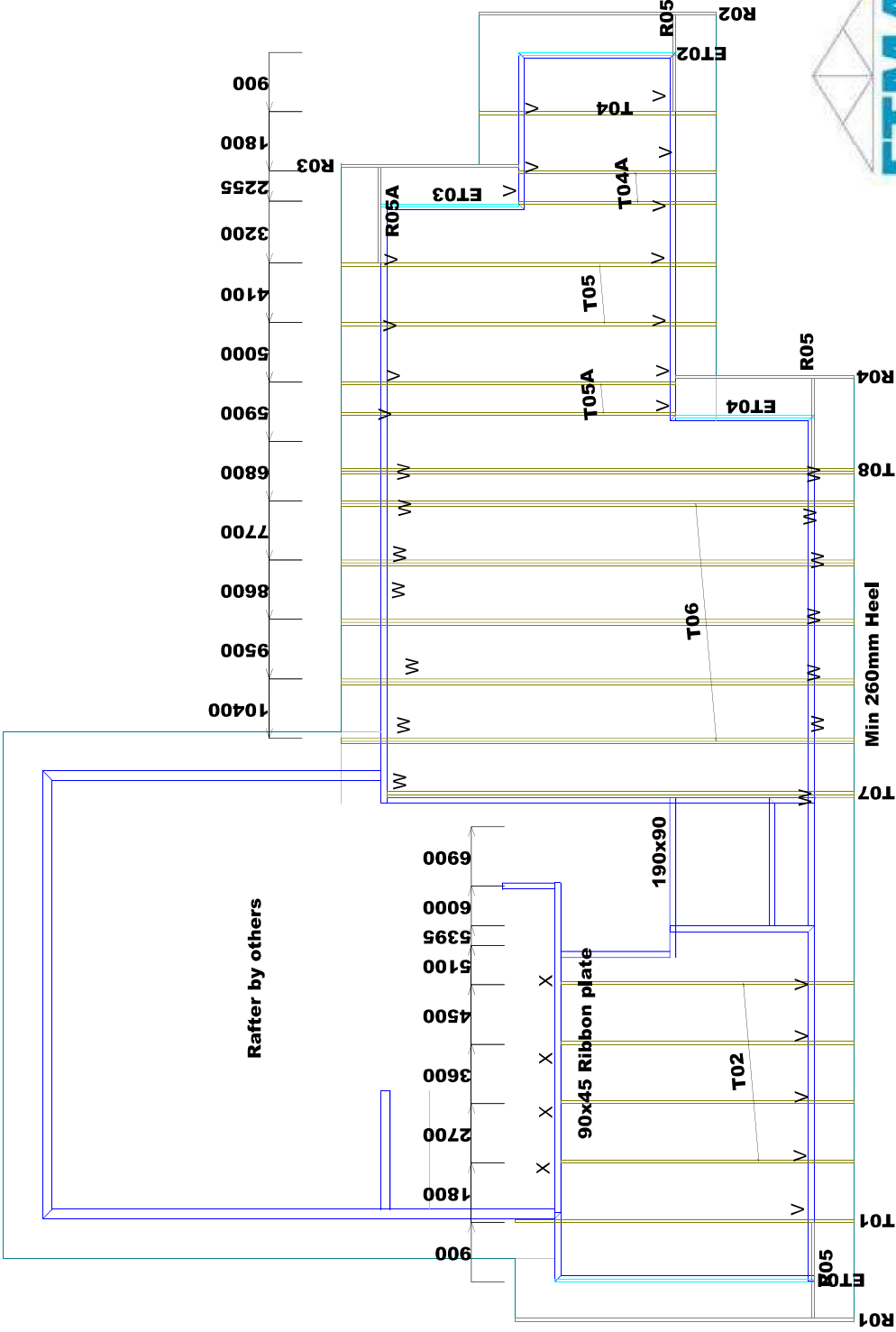
All truss to top plate fixings not labelled require a minimum of a pair of LUMBERLOK Wire Dogs.
All other areas must have a minimum of a pair of 90mm skew nails.

Fix all outriggers to gable trusses with a pair of LUMBERLOK Wire Dogs

Fix all stringers with a pair of LUMBERLOK Multi Grips at every stud.

Fix planted overhang rafters to top chord of truss with a pair of 90mm nails at 300mm centres.

Refer to:
LUMBERLOK Timber Connectors Characteristic Loadings Data brochure 03/04



Job Title :
Job No :
Sheet :
Revision Number :
Mitek

Truss Centres : 900 mm
Roof Live Load : 0.250kPa
Floor Live Load : kPa
Wind Speed : 55.0 m/s

Job Details:
Roof Pitch : 6.000 Deg
Roof Material : Galv Iron .5mm
Ceiling Material : Gib Board 12mm
Wind Zone : Extra High
Roof Snow Load : 0.400 kPa

Site Address :
McLoud/Evans
31 Pineview Way
Motueka
Scale : 1:100
System : Mitek 2020





BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019

MiTek New Zealand Limited

Correspondence from : **AUCKLAND**
 40 Neales Road, East Tamaki 2013
 PO Box 58-014, Botany 2163
Phone: 09 274 7109
Fax: 09 274 7100

CHRISTCHURCH
 14 Pilkington Way, Wigram 8042
 PO Box 8387, Riccarton 8440
Phone: 03 348 8691
Fax: 03 348 0314

www.mitek.nz.co.nz

Printed: 08:55:14 16 Apr 2019

MiTek 20/20 Engineering 4.7.301.0

PRODUCER STATEMENT for MiTek 20/20® TRUSS DESIGN - Version 4.7

ISSUED BY: **MiTek New Zealand Limited**

TO: **Building ConneXion Ltd t/a ITM Building Centres**

IN RESPECT OF: **MiTek® Truss Designs**

This producer statement covers the MiTek 20/20® truss design and the structural performance of the GANG-NAIL® connector plate for the job reference **9631** and may be used by a Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

The MiTek 20/20® truss design program has been developed by MiTek New Zealand Limited for the design of MiTek® timber roof, floor and attic trusses in New Zealand. The truss designs computed by MiTek 20/20® are prepared using sound and widely accepted engineering principles, and in accordance with compliance documents of the New Zealand Building Code and Verification Method B1/VM1; and internationally accepted standard ANSI/TPI 1 - 2002 as an alternative solution, to satisfy the requirements of Clause B1 of the New Zealand Building Code.

On behalf of MiTek New Zealand Limited, and subject to:

- i) All proprietary products meeting their performance specification requirements
- ii) The provision of adequate roof bracing and overall building stability
- iii) Correct selection and placement of GANG-NAIL connector plates
- iv) Correct input of Truss Design Data as shown in the Fabricator Design Statement for this job
- v) The design being undertaken by the accredited fabricator under the terms of the software licence
- vi) Timber is graded to the requirements of NZS 3603:1993
- vii) Minimum timber treatment for these MiTek® trusses shall be in accordance with B2/AS1 Table 1A and the relevant sections of NZS 3602:2003

I believe on reasonable grounds that the trusses, if constructed in accordance with the MiTek 20/20® truss design and shop drawings, will comply with the relevant provisions of the New Zealand Building Code.

MiTek New Zealand Limited holds a current policy of Professional Indemnity Insurance no less than \$500,000.

On behalf of MiTek New Zealand Limited,

Date: Tuesday, 16 April 2019

In Ling Ng, BE (Hons), CPEng, IntPE, MIPENZ (ID: 146585)
TECHNICAL SERVICES MANAGER, MiTek New Zealand Limited

BC190480

TASMAN DISTRICT COUNCIL - APPROVED

Building ConneXion Ltd t/a ITM Building Centres

12-6-2019

Job: 9631

Client: Greg Benjamin
Phone:Site: McLoud/Evans
31 Pineview Way
MotuekaDescription:
Building Consent No.:
MiTek 20/20 Engineering 4.7.301.0

Phone:

Printed: 08:55:14 16 Apr 2019

MiTek New Zealand Limited

MITEK FABRICATOR DESIGN STATEMENT

This statement is issued by MiTek accredited fabricator **Building ConneXion Ltd t/a ITM Building Centres**, being licensed to use the MiTek 20/20® software, to the client listed above and may be used by the Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

MiTek 20/20® TRUSS DESIGN DATA

The MiTek 20/20® computer design for this job is based on the following design parameters entered into the program. The Fabricator shall ensure that these job details are current and relevant to the project for the design of the MiTek® trusses.

Job Details		Importance Level :	2	Design Working Life :	50 years
Roof Truss		Pitch:	6,000 deg	Nominal Overhang:	600 mm
Timber Group:	DDF1.2	Ceiling		Wind	
Roof		Material:	Gib Board 12mm	Area:	Extra High (55.0 m/s)
Material:	Galv Iron .5mm	Dead Load:	0.200 kPa	Pressure Coeff:	Cpe = varies; Cpi = -0.30, 0.20
Dead Load:	0.210 kPa	Restraints:	600 mm centres	Snow	
Restraints:	900 mm centres	Live Load:	Qc = 1,400 kN	Location:	Nelson (N3) at 220 m
Live Load:	Qur = 0,250 kPa Qc = 1,100 kN			Open Ground Load:	0,300 kPa
				Basic Roof Load:	0,400 kPa

The minimum timber treatment for these MiTek® trusses shall be in accordance with B2/AS1 Table 1A and the relevant sections of NZS 3602:2003. The timber for these MiTek® trusses shall be graded to the requirements of NZS 3603:1993. Proprietary fixings and timber connectors shall be selected in accordance with NZS3604:2011 Section 4 - Durability.

MiTek® Truss List

Legend: * = detail only, ? = input only, ~~FX~~ = failed design, Ø = non certified, Unmarked trusses = designed successfully, LB = lateral bracing required
GB = gable brace required

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
ET01	1	3940	6,000	900	*R05	3	1455	0,000	900	T05A	2	4480	6,000	900
ET02	1	2390	6,000	900	*R05A	1	1455	0,000	900	T06	5D	6580	6,000	900
ET03	1	2090	6,000	900	T01	1	3940	6,000	900	T07	1D	6490	6,000	900
ET04	1	2100	6,000	900	T02	4	3850	6,000	900	T08	1D	6580	6,000	900
*R01	1	5140	6,000	900	T03	1	2100	6,000	900					
*R02	1	3590	6,000	900	T04	1	2390	6,000	900					
*R03	1	2690	6,000	900	T04A	2	2390	6,000	900					
*R04	1	2700	6,000	900	T05	2	4480	6,000	900					

Total quantity : 32**The computer design input has been carried out by:**Signed: *Marcel Stutz*

Date: Tuesday, 16 April 2019

Name of Detailer: Marcel Stutz

Qualifications and Title: Detailer

On behalf of: Building ConneXion Ltd t/a ITM Building Cent



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 February 2019

For further information or advice contact:

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

Specifier details:

Specifier:	G Benjamin
Business name:	G Design
Email:	gregsdesign@outlook.com

Project & site details:

Project:	4 Bedroom
Site address:	31 Pineview Way Motueka
For (owner/s):	Evans & McCloud
Design wind zone	Extra high
Snow loading	Design snow zone: N0

MEMBER DESIGN DETAILS

Member 1

- | | |
|---------------------------------------|-------------------------------------|
| 1) Member code and description | R1 - Common rafters |
| 2) Date prepared | 28 March 2019 |
| 3) Serviceability criteria | AS 1720.1: 2010 and AS 1720.3: 2016 |

4) Design inputs

Span	5.1 m - single span
Rafter spacing	900 mm
Roof mass	35 kg/m ²
Lateral restraint condition	Bottom edge restrained by ceiling/ceiling battens at 600 crs max.

5) Member specification

Size, stress grade/product	Use 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 + $\Psi_L Q^*$	17.0 mm	9.1 mm (long term)	1.9
Live load - $\Psi_S Q$	20.4 mm	2.7 mm	7.5
Live load - $\Psi_S Q$	20.4 mm	3.6 mm	5.7
Wind load - W_s	34.0 mm	12.6 mm	2.7

*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	-1.4
1.2G + 1.5Q	0.80	-3.0
1.2G + W_u + $\Psi_c Q$	1.00	-3.9
0.9G + W_u	1.00	3.4

8) Installation requirements

- Minimum bearing - end supports, 30 mm.

Notes for interpretation of serviceability data

- '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.
- 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!

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

- '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 'k₁' 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
-

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 February 2019

For further information or advice contact:

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

Specifier details:

Specifier:	G Benjamin
Business name:	G Design
Email:	gregsdesign@outlook.com

Project & site details:

Project:	23 Washington Road
Site address:	NELSON
For (owner/s):	S & O WATSON
Design wind zone	High
Snow loading	Design snow zone: N0

MEMBER DESIGN DETAILS

Member 1

- | | |
|---------------------------------------|---|
| 1) Member code and description | L1 - Lintels in lower storey load bearing walls |
| 2) Date prepared | 25 March 2019 |
| 3) Serviceability criteria | AS 1720.1: 2010 and AS 1720.3: 2016 |

4) Design inputs

Span	2.2 m
Floor load width 'FLW'	4.5 m
Floor dead load	40 kg/m ²
Floor live load	1.5 kPa/1.8 kN
Wall type and height	Light wall: 2.7 m
Nominal wall thickness	90 mm
Roof load width 'RLW'	3.0 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

6) Serviceability

Load case	Limit ³ on average deflection ²	Estimated average deflection ²	Rigidity ratio ⁴
Long term load - $G + \Psi_L Q^*$	7.3 mm	3.8 mm (long term)	1.9
Live load - $\Psi_S Q$	6.1 mm	2.1 mm	3.0

*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	-9.3
1.2G + 1.5Q	0.80	-19.4
1.2G + W_u + $\Psi_c Q$	1.00	-10.4
0.9G + W_u	1.00	-2.0

8) Installation requirements

- Provide at least 40 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 'k₁' 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
-

27 March 2019



SN-R10116687

PROLAM SUMMARY

Customer/Project: Mcloud
Physical Address: 31 Pineview Way Motueka
Designer: Greg Benjamin
15 Sunnybank Rise, Nelson 7010
E: gregsdesign@outlook.com P: 0211449153

Lounge beam

Prolam Lintels Supporting Roof and Ceiling

Building Type	House	Roof Weight	Light with Ceiling
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	Extra High (55.0 m/s)
Roof Pitch	6 °	Snow Region	No Snow
Eaves	600 mm		
Roof Span	9.50 m		
Lintel Span	4.50 m		

Use Prolam PL17H1-400100 360 x 90mm PL17

Capacity Ratio	2.5
Long Term Deflection	< 1.0 mm
Max. Bearing Reaction	11.2 kN
Load Combination	1.2G + 1.5Q
Minimum Bearing Length	35 mm
Uplift Fixing Requirements	27.5 kN Characteristic Load

PRODUCER STATEMENT



Tasman Consulting Engineers Limited has been engaged by Prowood to provide design services for the development of the Prolam Online calculator.

The design has been carried out using sound and widely accepted engineering principles to the requirements of AS/NZS1170:2002, NZS3603:1993 and NZS3604:2011 using the timber properties for GL8, GL12 and GL17 glulam and LVL15.

I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

David King

David King

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050

27 March 2019

283 Waiwhero Rd P O Box 413 Motueka New Zealand Phone 03 526 7436 Fax 03 526 7437

Email: info@prowoodnz.com • www.prolamnz.com



TIMBER PROPERTIES IN USED SPAN TABLE CALCULATIONS

DRY USE

Characteristic Stresses and Elastic Moduli for Prolam (Glulam Grades)

Characteristic Stresses (MPa)						Elastic Moduli (MPa)	
	PL Grade	Bending	Tension parallel to grain	Shear in Beam	Compression parallel to grain	Short modulus of elasticity parallel to the end grain	Short duration modulus of rigidity for beams
Prolam	PL 17	42	21	3.7	35	16700	1100
Prolam	PL 12	25	12.5	3.7	29	11500	770
Prolam	PL 8	19	10	3.7	24	8000	530
Prospan	LVL 15	59	35	4.2	39	15000	775

For compression perpendicular to the grain, use 8.9 MPa dry and 5.3 MPa wet as per NZS 3603 for Radiata Pine for all PL grades.

WET USE - (H3.2 treated)

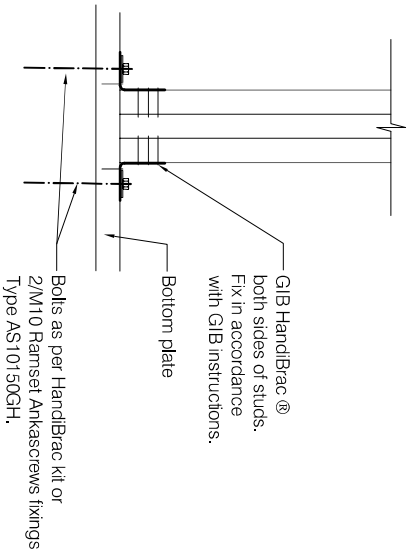
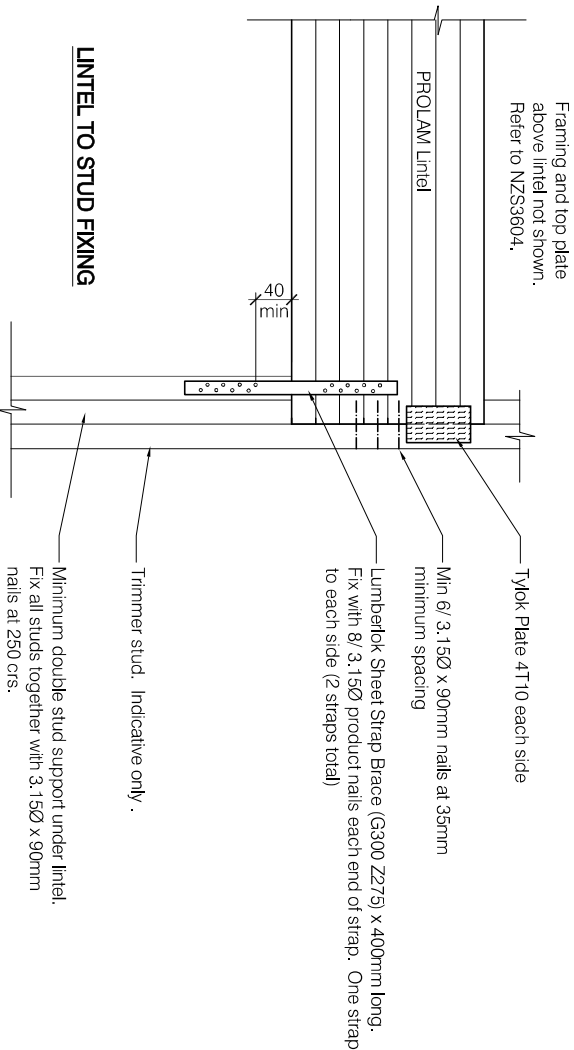
Characteristic Stresses and Elastic Moduli for Glulam Grades

Characteristic Stresses (MPa)					Elastic Moduli (MPa)	
PL Grade	Bending	Tension parallel to grain	Shear in Beam	Compression parallel to grain	Short modulus of elasticity parallel to the end grain	Short duration modulus of rigidity for beams
PL 17	33.6	16.8	2.5	28.0	13400	880
PL 12	20.0	10.0	2.5	23.2	9200	610
PL 8	15.2	8.0	2.5	19.2	6400	420

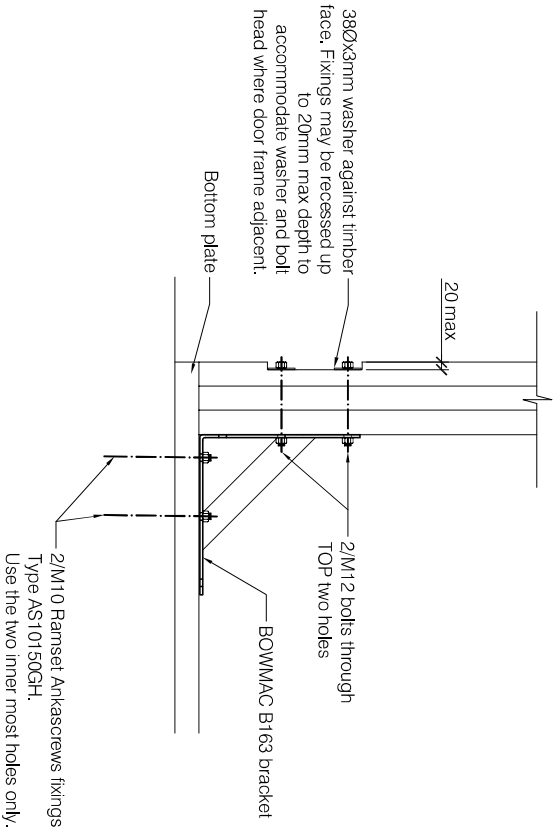
12-6-2019

TASMAN DISTRICT COUNCIL - APPROVED

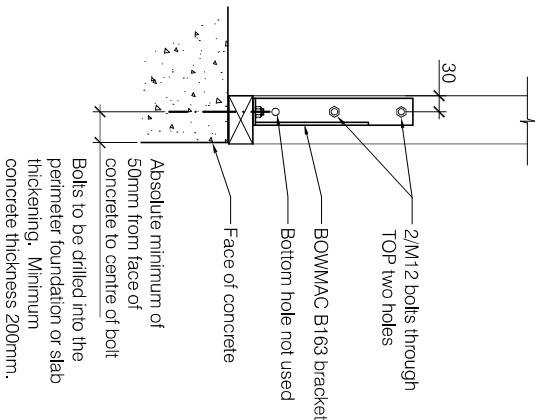
BC190480



ALTERNATIVE BASE FIXING FOR FRAMING BOTH SIDES OF STUDS



BASE FIXING FOR FRAMING TO ONE SIDE (eg at door frame)



TASMAN DISTRICT COUNCIL
CONSULTING ENGINEERS
195A Queen St
PO Box 3631
Richmond NELSON
Ph: (03) 544-6404
www.tce.co.nz

PROLAM LINTELS - UPLIFT FIXING DETAILS
Reduced Ultimate Capacity 18kN for wind loads.
(Characteristic Capacity 22.5kN).

Scale 1:10
Date Aug 2015
Drawn DJK
Sheet S1 of 2
File 14265



LUMBERLOK

LINTEL FIXING SCHEDULE

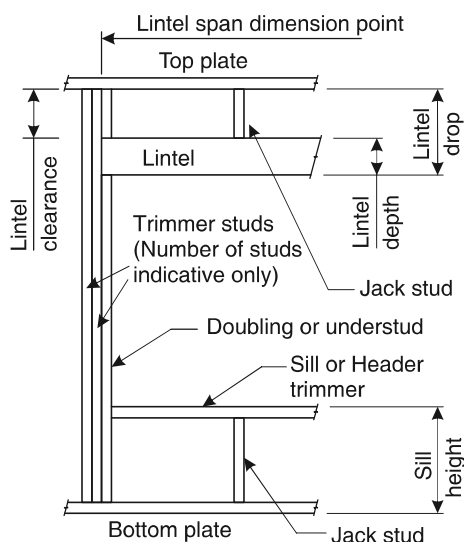
ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12

NZS 3604:2011

NOTE:

- ★ All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20 kPa.
- ★ 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	
8.6 m ²	G	G	H		G	G	H	
11.6 m ²	G	H	H		G	G	H	
12.1 m ²	G	H	H		G	H	H	
15.3 m ²	H	H	-		G	H	H	
19.1 m ²	H	-	-		G	H	-	
20.9 m ²	H	-	-		H	H	-	
21.8 m ²	H	-	-		H	-	-	
34.3 m 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

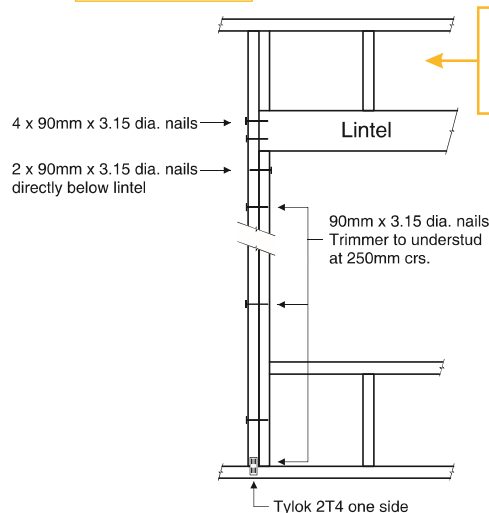
SELECTION CHART FOR LINTEL FIXING

Lintel Span	Loaded Dimension (See Fig. 1.3 NZS 3604:2011)	Light Roof					Heavy Roof				
		Wind Zone					Wind Zone				
		L	M	H	VH	EH	L	M	H	VH	EH
0.7	2.0	E	E	E	E	F	E	E	E	E	E
	3.0	E	E	E	F	F	E	E	E	E	F
	4.0	E	E	F	F	F	E	E	E	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
0.9	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	E	F	F	F	E	E	F	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
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	F	G	H	H
2.4	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	G	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	F	G	H	H
	6.0	F	G	H	H	-	E	F	G	H	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	F	G	H	H
	5.0	F	G	H	H	-	E	F	G	H	H
	6.0	F	G	H	-	-	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	F	G	G	H
	4.0	F	G	H	H	-	E	F	G	H	H
	5.0	F	G	H	-	-	E	F	G	H	-
	6.0	G	H	H	-	-	E	F	H	-	-
4.2	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	H	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.5	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.4	F	G	H	H	-	E	F	G	H	-
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
4.8	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.2	F	G	H	H	-	F	F	G	H	-
	4.0	F	G	H	-	-	E	F	H	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-

INTEL FIXING OPTIONS

TYPE E

1.4 kN

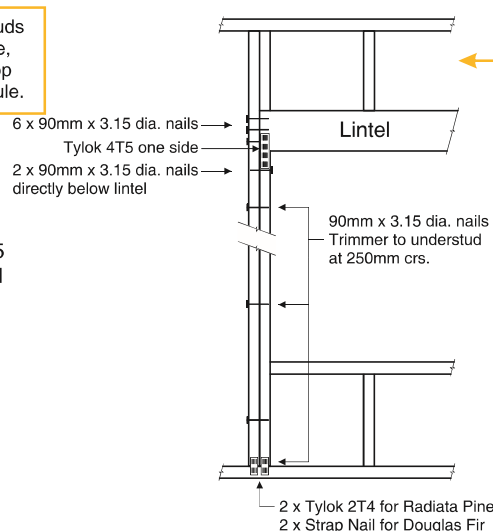


For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

TYPE F

4.0 kN

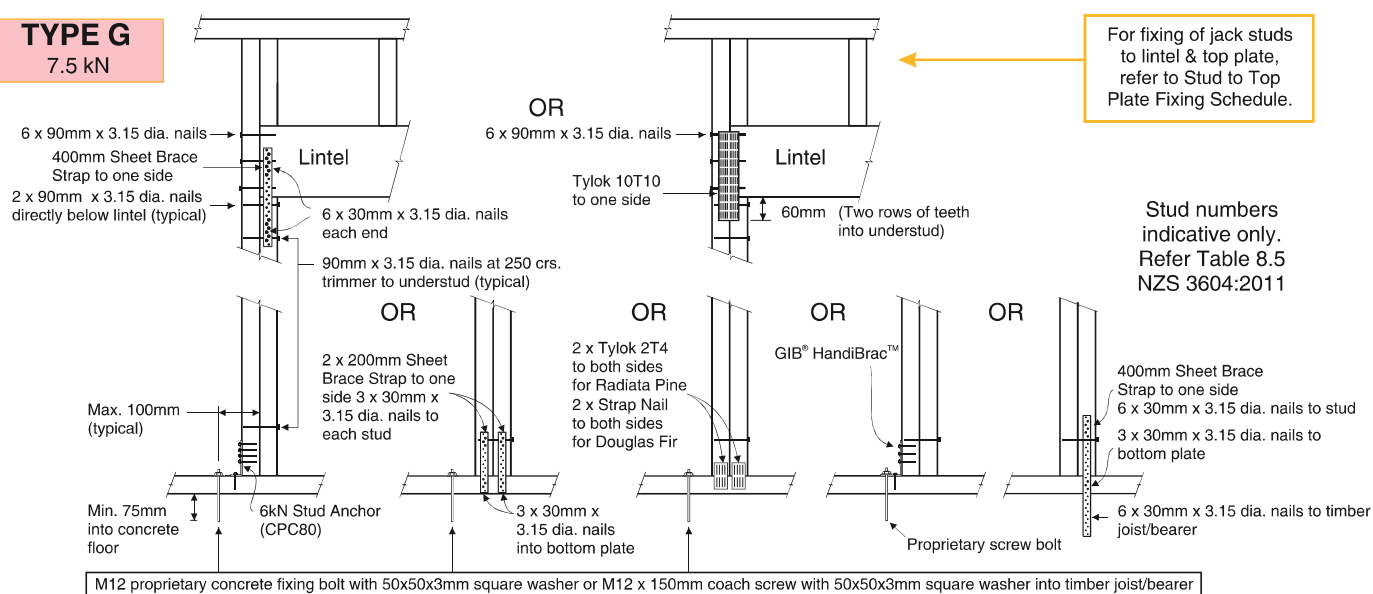


For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

TYPE G

7.5 kN

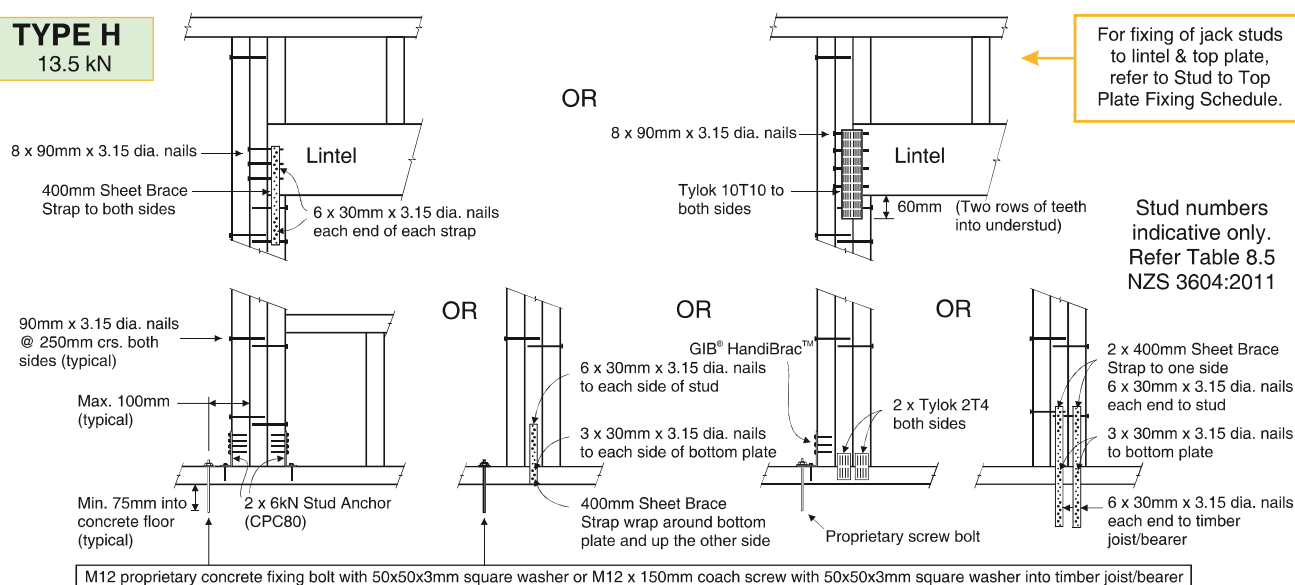


For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

TYPE H

13.5 kN



For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011



PROLAM® products are manufactured to the requirements of AS/NZS 1328.1:1998 Glue Laminated Structural Timber, and AS/NZS 1491:1996 Finger Jointed Structural Timber under an approved quality system based on the ISO 9000 series of standards. As such if the product is used in accordance with **PROLAM®** product literature, it will meet the durability clauses of the New Zealand Building Code B2.

Subfloor Applications:

- ☒ **PROLAM®** may be used where approved practices for clearance and ventilation are used.

External Use:

- ☒ **PROLAM®** is recommended for weather exposed applications if sealed and maintained in accordance with **PROLAM®** literature.

Preservative Treatment:

- ☒ **PROLAM®** Beams are CCA H3.2 treated as defined by NZS 3640:2003, for weather exposed applications, such as verandah beams, deck bearers, and subfloor applications.
- ☒ **PROLAM®** Posts are CCA H5 treated as defined by NZS 3640:2003 for in-ground and weather exposed applications, such as deck piles, verandah posts and similar applications.

Storage of **PROLAM®**:

- ☒ To ensure **PROLAM®** remains straight and true at the time of installation, follow the below recommendations:
 1. Store under cover so that it remains dry until installation.
 2. Stack clear of the ground for good ventilation.
 3. Stack on bearers to keep flat and straight.

Branded **PROLAM®**:

- ☒ **PROLAM®** is branded for your protection. Look-alike materials may not perform to the standard of **PROLAM®**. For your protection do not accept unauthorized substitution

Rinnai

Installation guide

Rinnai INFINITY A-Series continuous flow water heaters

REU-A2626WG-ZK



REU-A2426WG-ZK



REU-A2024WG-ZK



REU-A1620WG-ZK



The Rinnai INFINITY A-Series models are not suitable for commercial or solar applications

Important

This appliance must be installed in accordance with:

- Manufacturer's installation instructions
- Current AS/NZS 3000, AS/NZS 3500, AS/NZS 5601.1 and G12/AS1

For use with Natural Gas or Universal LPG as indicated on the appliance.

Not suitable as a spa or swimming pool heater.

Not suitable for commercial or solar applications.

Appliance must be installed, commissioned and serviced by an authorised person, being in New Zealand a licensed gasfitter, in accordance with these instructions and all applicable local rules and regulations.

Warning

Improper installation, adjustment, alteration, service and maintenance can cause property damage, personal injury or loss of life.

For more information about buying, using, and servicing of Rinnai appliances call: 0800 RINNAI (0800 746 624).

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[facebook.com/rinnainz](https://www.facebook.com/rinnainz)

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Before installation

- **Check for damage:** Unpack the appliance and check for damage. DO NOT install any damaged items.
- **Check components and gas type:** Check all components have been supplied and that you have the correct gas type.
- **Read these instructions:** Get an overview of the steps required before starting the installation. Failure to follow these instructions could cause a malfunction of the appliance. This could result in serious injury and property damage.
- **Applicable models:** These instructions apply only to the Rinnai A-Series continuous flow water heater models listed on the cover page of this guide.

Appliance location

This appliance is designed for outdoor installations only. It MUST BE located above ground in open air with natural ventilation, without stagnant areas, where gas leakage and products of combustion can be rapidly dispersed by wind and natural convection.

The appliance MUST BE mounted on a vertical structure with the water and gas connections on the underside pointing downwards.

Location of the flue terminal MUST BE in accordance with Section 6 and Figure 6.2 of the AS/NZS 5601.

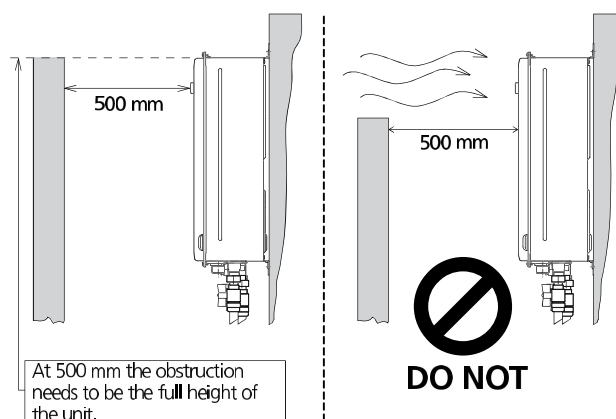
The appliance MUST BE placed **as close as practicable to the most frequently used hot water outlet** or outlets to reduce the delay time for hot water delivery¹. For installations where the distance between the water heater and the outlets is considerable, a flow and return system can be used to minimise the waiting time for hot water delivery. Alternatively multiple appliances can be strategically placed to serve outlets with minimal delay time.

An AC 230 V, 10 A earthed power point must be provided adjacent² to the appliance. This power point must be weatherproof. It must be clear of the gas and water connections to the appliance and also the flue exhaust and water pressure relief valve. The power cord of the appliance is 1.5 m long.

All appliances MUST BE installed to ensure access can be gained without hazard or undue difficulty for maintenance and servicing. Sufficient clearances shall allow access and removal of all serviceable components. Appliances should not be mounted more than 2.5 m above the ground or floor level unless the customer can arrange permanent and safe access, or can provide another means of safe access.

Horizontal obstructions

AS/NZS 5601 states a minimum horizontal clearance of 500 mm between a building structure and obstruction facing the terminal. At 500 mm the obstruction needs to be the full height of the unit (as shown), and not a partial obstruction. A partial obstruction of less than 1 m could result in wind pushing the flue gases back into the flue terminal.



¹ Rinnai recommend a maximum pipe run of 10 m.

² Power point can be within the pipe cover if a pipe cover is installed—must comply with AS/NZS Wiring rules

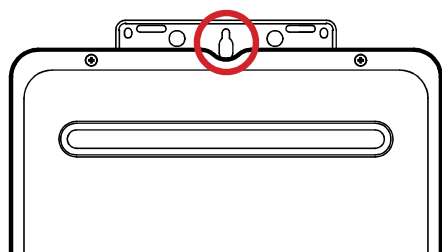
General installation information

Securing the Rinnai INFINITY

The wall or structure on which the units are mounted **MUST BE** capable of supporting the weight of the appliance and associated pipe work. Refer p. 7 for the specific model weight.

Ensure that suitable fixing screws or bolts are used to secure the unit to the wall, in accordance with AS/NZS 5601 section 6. Wooden plugs shall not be used.

The top bracket has a keyhole slot so that the appliance can be positioned by hanging it on one screw, once in position the appliance can then be secured with appropriate fittings.



The appliance can be mounted directly against the wall or structure. There is no need to use non-combustible sheeting between the appliance back panel and the wall or structure for the purposes of meeting the temperature hazard requirements of AS/NZS 5601.

Pipe sizing

If the gas pipe sizing is insufficient the appliance won't perform properly. Gas pipe sizing must consider the gas input into this appliance as well as other gas appliances in the premises. The gas meter and regulator must be specified for this gas rate.

An approved sizing chart such as the one in AS/NZS 5601 should be used. Refer p. 7 for model specific gas consumption details.

Water pipe sizing and layout should be performed in accordance with AS/NZS 3500. All hot water pipe work should be insulated to optimise performance and energy efficiency.

Water supply

The appliance is intended to be permanently connected to the water mains.

Refer p. 7 for model specific operational water pressure limitations. Approved pressure limiting valves may be required if the maximum rated water supply pressures are exceeded. To achieve the rated flow, the minimum water supply pressures must be met.

The A-Series water heaters will operate at lower pressures than the specifications, but will not achieve the rated flow. Contact Rinnai for gravity fed or low pressure installations.

Water chemistry and impurity limits are detailed in the operation guide within the warranty section. Most metropolitan water supplies fall within the requirements.

If you are unsure about your local water quality, contact your water authority. If sludge or foreign matter is present in the water supply, a suitable filter or strainer should be incorporated in the water supply to the Rinnai INFINITY.

Water delivery temperature

Requirements of AS/NZS 3500 MUST BE considered regarding the temperature limitations of hot water supplied to areas used primarily for personal hygiene. The temperature of these areas may be limited to 55 °C or less.

If the appliance is to deliver water primarily for the purposes of personal hygiene in an early childhood centre, school, nursing home or similar facility as defined in AS/NZS 3500.4, a Temperature Limiting Device (TLD), such as a tempering valve may be required, even if the appliance is set to 55 °C or less. For these types of applications contact Rinnai.

Requirements for Rinnai INFINITY units installed without controllers

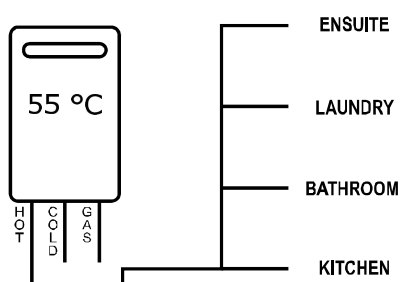


Diagram 1 - 55 °C Appliance

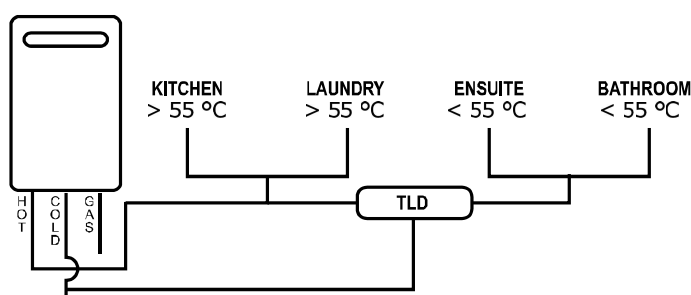
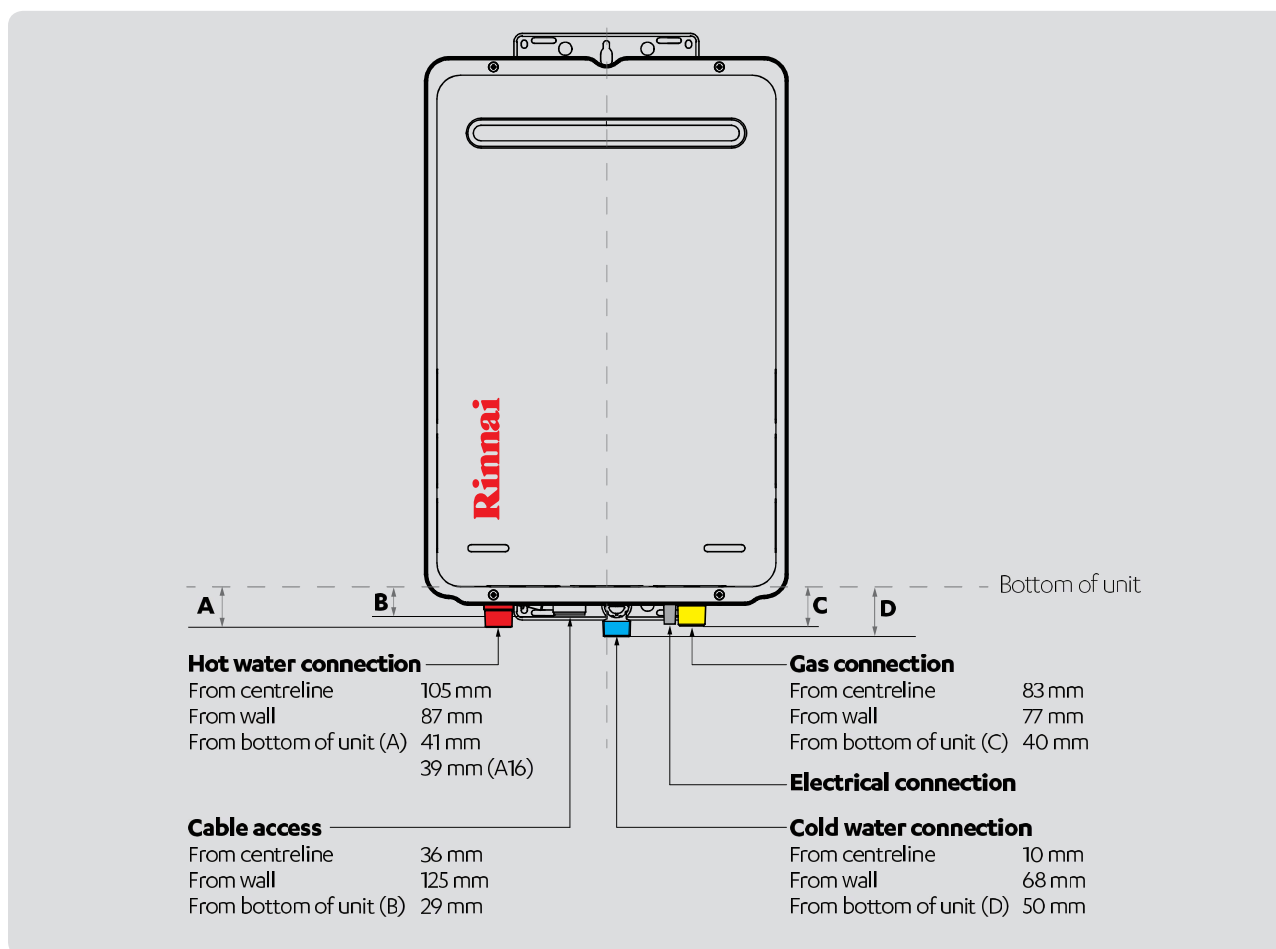


Diagram 2 - Not a 55 °C Appliance
(TLD = Temperature Limiting Device)

When the Rinnai INFINITY is set to deliver water at a temperature higher than 55 °C, it will be necessary to fit a Temperature Limiting Device for delivery to areas used for the purposes of personal hygiene.

Connections and fittings



Model	Gas consumption MJ/h	Water Supply kPa		Weight kg	Fittings		
		Min.	Max.		Hot	Cold	Gas
A16 external REU-A1620WG-ZK	16.3-124	120	1000	13	R $\frac{1}{2}$ (15 mm)	R $\frac{1}{2}$ (15 mm)	R $\frac{3}{4}$ (20 mm)
A20 external REU-A2024WG-ZK	19.9-156	160	1000	14	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)
A24 external REU-A2426WG-ZK	16.3-184	200	1000	15	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)
A26 external REU-A2626WG-ZK	16.3-199	200	1000	15	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)	R $\frac{3}{4}$ (20 mm)

Service connection points

An approved full flow isolation valve and disconnection union **MUST BE** fitted to the cold water inlet. A non-return valve is not required unless required by local regulations.

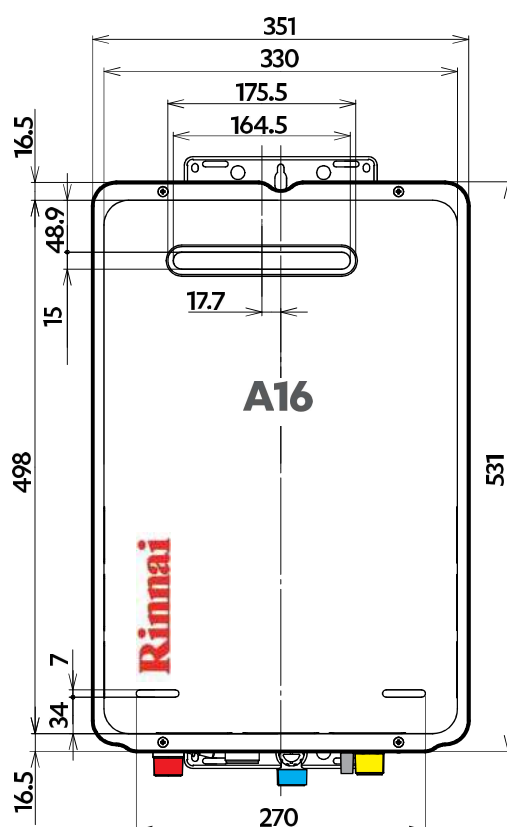
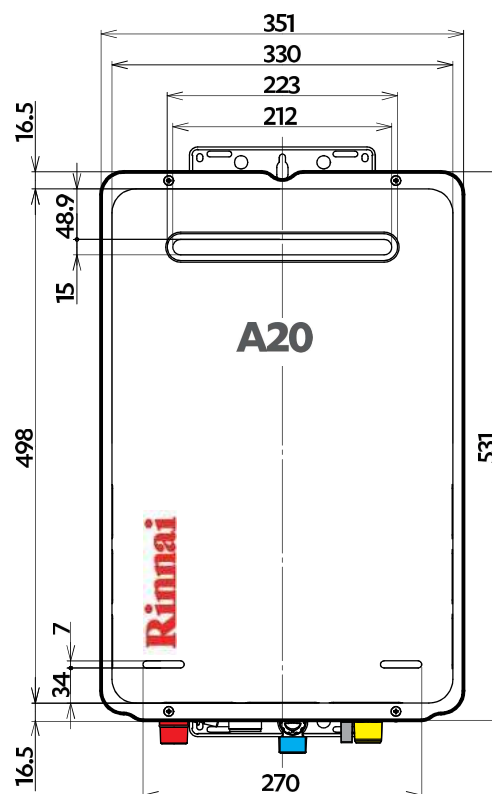
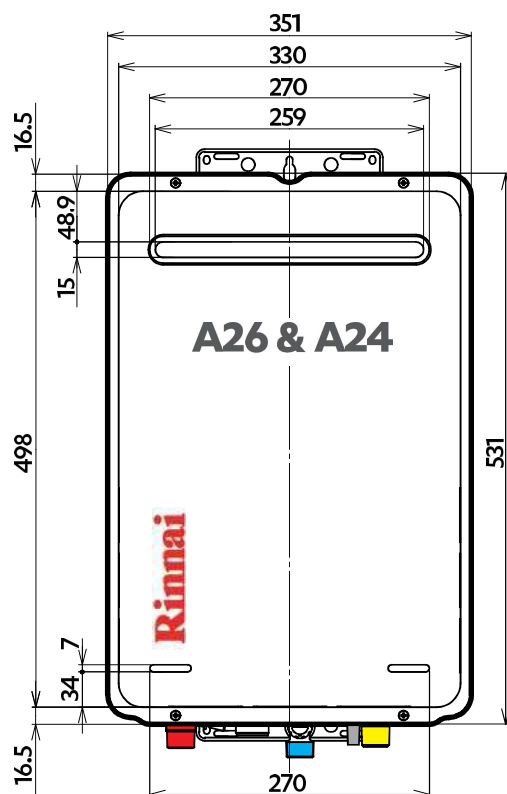
Isolation valves **MUST NOT** be fitted directly to the appliance.

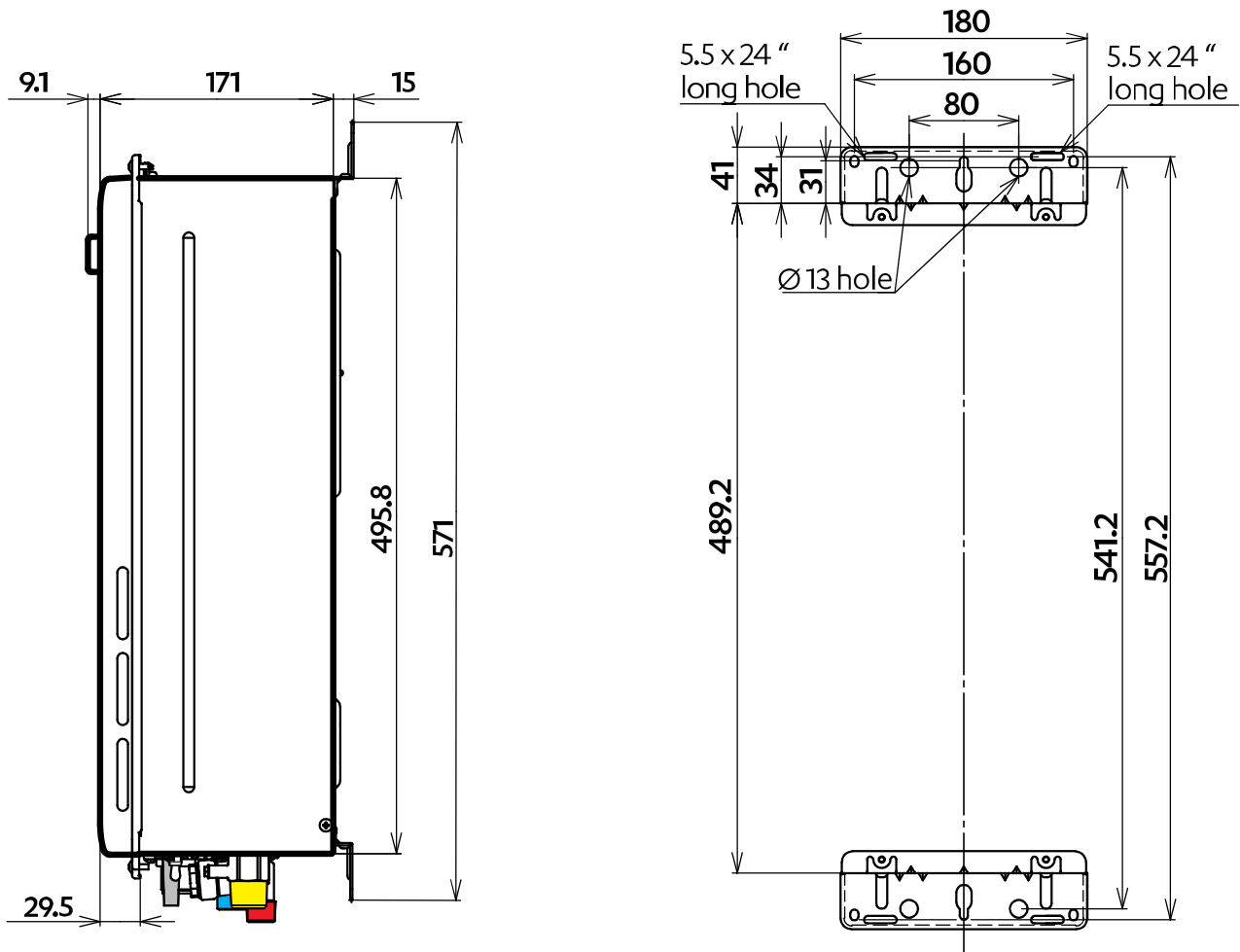
It may be necessary to fit a temperature limiting device for delivery to areas used primarily for the purposes of personal hygiene, refer previous page for 'Water delivery temperature' information.

Purge gas and cold water supply lines to remove air and swarf before final connection. Swarf in the gas or water supplies may cause damage, a common problem, which is not covered by warranty.

Dimensions (mm)

The basic dimensions, (height, width, and depth) are the same. The difference between the models are the dimensions and position of the flue outlet.





Commissioning

AS/NZS 5601.1, clauses 2.6.8 and 6.11.2, states that every part of a gas installation shall be commissioned prior to initial use. It is the installer's responsibility to ensure all current AS/NZS 5601 requirements are met. The URL's provided are links to short videos on how key steps are performed.



The appliance operation must be tested after installation. Ensure the building occupants do not have access to the hot water outlets during this procedure.

Please note

The Rinnai INFINITY A-Series comes with a factory preset outlet temperature of 55 °C. The high and low gas operating pressures are also factory preset. Under normal circumstances the operating pressures do not require adjustment during installation. Make adjustments ONLY if the unit is not operating correctly and all other possible causes for incorrect operation have been eliminated.

Inlet supply pressure to the appliance **MUST BE** checked and set within the operating parameters of the appliance in all instances.

If the appliance can not be adjusted to perform correctly call 0800 RINNAI (0800 746 624) for assistance.

Steps to commissioning a Rinnai INFINITY A-Series model

- 1 Flush water pipes, and gas line**
 Before final connection of the water heater flush the gas, hot and cold water supply lines. Swarf in the gas or water supplies may cause damage, a common problem, which is not covered by warranty.

- 2 Connect gas line**

- 3 Purge the gas line of air**

- 4 Final connection test**

- 5 Check supply pressure**
 Operate ALL other gas appliances at their maximum gas rate. With all gas appliances on maximum the supply pressure must read between 1.13-3.0 kPa on Natural Gas. On LPG the pressure must be 2.75-3.0 kPa.

If the pressure is lower, the gas supply is inadequate and the appliance will not operate to specification. It is the installer's responsibility to check the gas meter, service regulator and pipe work for correct operation and sizing, and rectify as required.

6 **PCB and/or dip switch settings checked.**

Refer p.12-14.

PCB settings checked if the factory default temperature has been changed.

Dip switch settings checked if a flue diverter is fitted.

 Short video: <http://rinnai.co.nz/007>

7 **Operate and test for gas leaks**

Replace the appliance front cover otherwise the unit won't operate correctly, and operate and test for gas leaks using an electronic leak detector.

8 **Operational test—water flow and temperature at the hot water outlets**

Confirm the hot water delivery temperatures using a thermometer.

If water controllers are fitted, it is necessary to test their operation through the complete range of functions, refer separate instructions provided with the water controllers.

9 **Check cold water inlet filter**

Inspect and clean the water inlet filter. This may need to be repeated to ensure the filter remains clear, especially on new installations.

 Short video: <http://rinnai.co.nz/006>

If you feel the customer is capable of doing this check it would be beneficial to show them how to inspect and clean the filter as well.

10 **Customer handover**

After testing is completed, explain to the customer the functions and operation of the water heater and water controllers (if fitted).

Also talk to them about the gas, power, and water connections, how frost protection works, the procedure for draining the water heater, where to find the data plate, maintenance and servicing. If the customer is not there try and contact them by phone to relay the important points.

Ensure the installer details section is completed in the operation guide, the commissioning checklist has been completed and signed, and that guide and checklist are left with the customer.

PCB interface and dip switch settings

The PCB interface and dip switch settings must only be changed by a licensed gasfitter. They have been provided as there may be a requirement to change the temperature of the water delivered from the water heater or change the dip switch settings if fitting a flue diverter.



Care must be taken when changing the temperature or dip switch settings as they can be easily switched or bumped into the wrong position. Fully check the operation of the water heater before leaving including the temperature of the water delivered.

The cover of the water heater will need to be removed to carry out this operation. As this will expose live mains voltage wiring **please disconnect the power supply before removing the front cover.**

We wish to draw your attention to the requirements of the New Zealand Building Code and compliance document G12. This requires that water delivered to sanitary fixtures be no more than 55 °C. Increasing the water heater set temperature will require that you protect all sanitary fixtures to which the appliance is plumbed with suitable tempering valves or something similar.

Rinnai will accept no liability for issues arising out of the use of this information.

If you have any doubts about the performance of the water heater, please contact Rinnai by phoning 0800 RINNAI (0800 746 624).

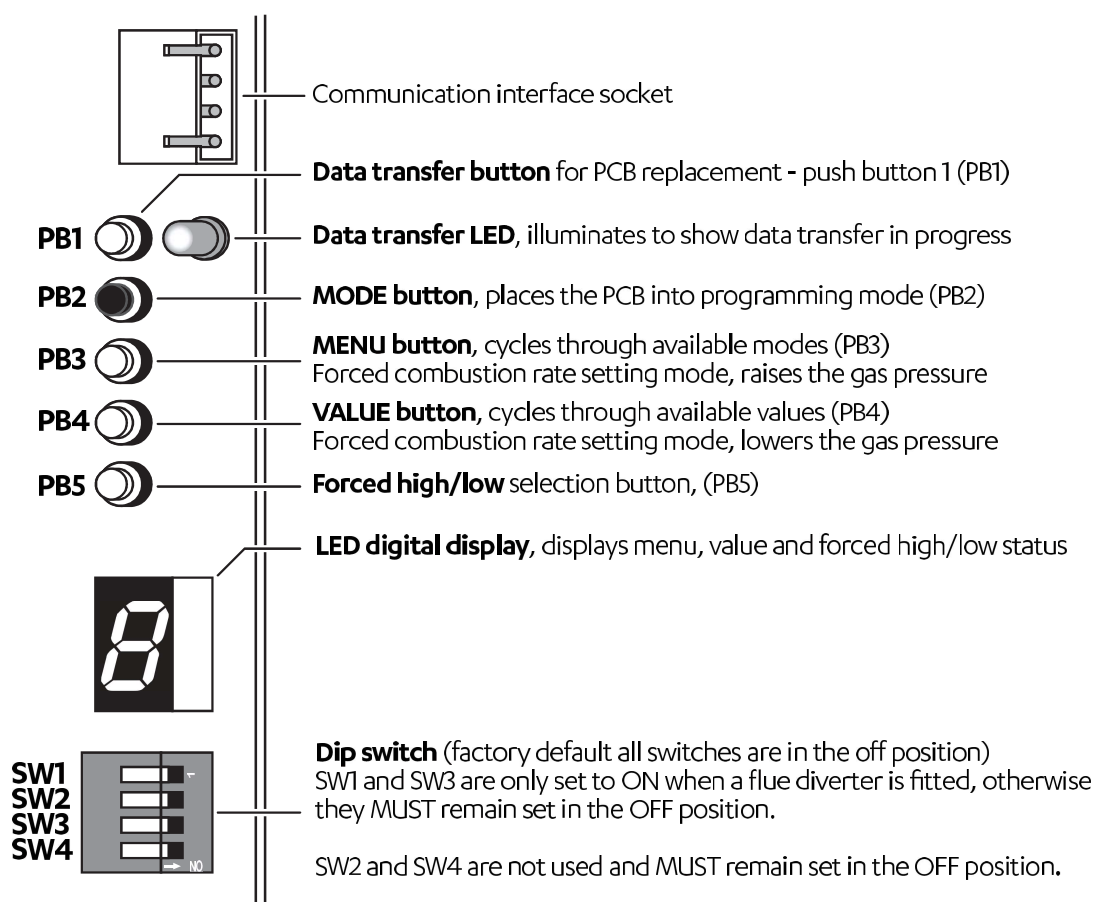
The following information details settings for the Rinnai INFINITY A-Series models only. They are not applicable for other models.

Basic operation of the PCB interface

- To place the PCB into programming mode press PB2 until the LED digital display shows **1**, noting that the current set value will be displayed shortly afterwards.
- To alter a value press PB4, each press of the button will select the next available value.
- To change to another menu, press PB3, each press of the button will select the next available menu.
- To exit the programming mode and save the selected settings press PB2 until the LED display goes blank.

Note:

- If no buttons are pressed the PCB will automatically exit programming mode after 10 mins.
- Exiting programming mode sets the value last viewed as the current value.



Menu	Menu description	Value							
		A	b	C	d	E	F	H	J
1	Gas type	ULPG	NG	N/A	N/A	N/A	N/A	N/A	N/A
2*	Model	2626	2426	2024	1620	N/A	N/A	N/A	N/A
3	Fixed / Max. temp	55 °C ¹	65 °C	60 °C	50 °C	42 °C	40 °C	N/A	N/A
4	OFF water flow rate	+ 3 °C ²	+ 6 °C	N/A	N/A	N/A	N/A	N/A	N/A
5	50 °C delivery adjustment temp.	Min Step 0	Increase Step 1	Increase Step 2	Increase Step 3	Increase Step 4	Increase Step 5	Increase Step 6	Increase Max

The temperature of outgoing hot water is constantly monitored by a built-in sensor. If the temperature of the outgoing hot water rises to more than 3 °C (6 °C #) above the selected temperature shown on the digital monitor or the preset limit when water controllers are fitted, the burner will automatically go out.

* Values in menu 2 cannot be adjusted.

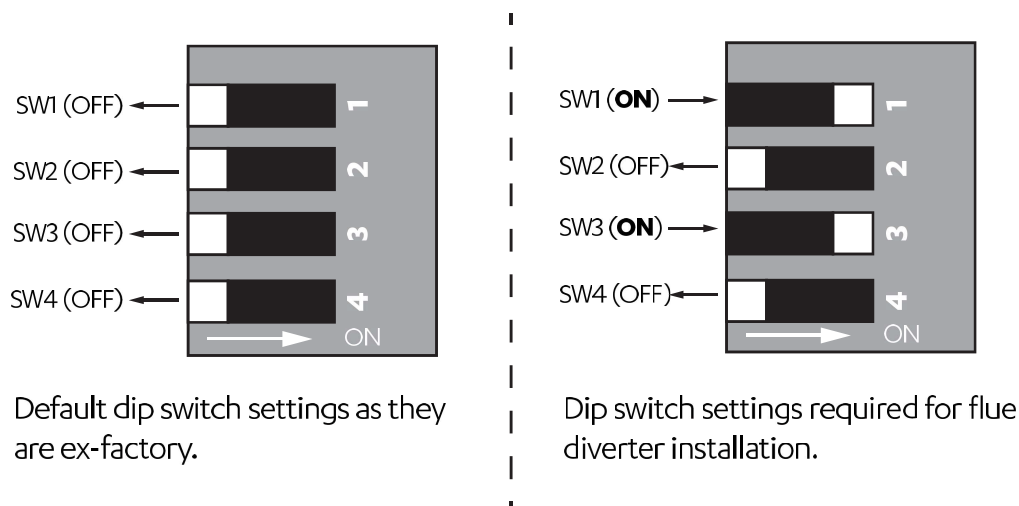
1 Factory default

2 OFF water flow rate (+3 °C, factory default)

Flue diverter dip switch changes

When delivered ex-factory, by default SW1, SW2, SW3, and SW4 of the DipSW are set to the OFF position.

If a flue diverter is installed onto the water heater, SW1 and SW3 of the DipSW must be set to the ON position.



The dip switch change for flue diverters is required to increase the combustion fan speed, which helps overcome the friction losses from have a flue diverter installed on the water heater.

Appendix 1:

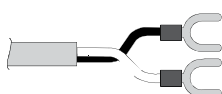
Water controller communication cables

Wired water controllers operate at an extra low voltage (12 V DC) which is supplied from the water heater, a 10 m long communication cable is supplied for connection to the water heater. Only Rinnai supplied communication cables may be used.

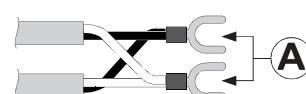
The water heater end of the cables is fitted with spade terminals. Only two pairs of cables (four spade connectors in total) may be terminated. When attaching three or four cables it is necessary to join the cable terminators as shown below.

For each pair cut off the existing spade connectors and re-terminate each pair into a new spade connector (A). Spade connectors are available from your local electrical component retailer

Single cables can be used when terminating up to two communication cables.



Paired cables are to be used when terminating three or four communication cables.

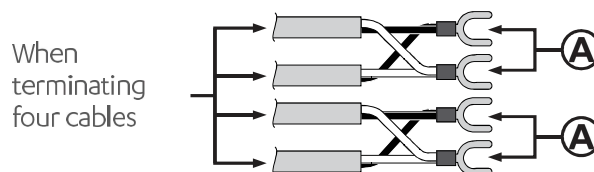
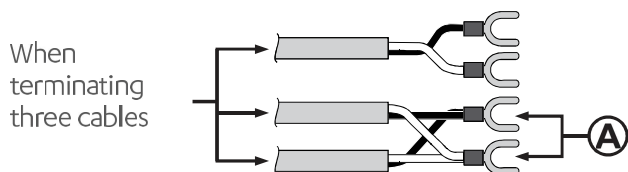


Connecting one or two communication cables

Follow steps one through five below to terminate the cables to the water heater.

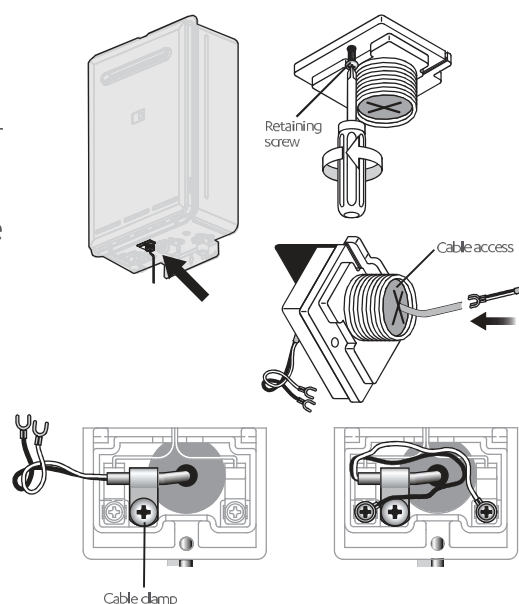
Connecting three or four communication cables

To connect three or four cables, separate all the cables to be fitted into pairs.



Follow steps one through five below to terminate the joined cable pairs to the water heater.

1. Isolate the power supply by switching the power point off and removing the power plug of the water heater from the electric power socket.
2. Removing the retaining screw of the cable connector at the base of the unit.
3. Swing the cable connector door open and thread the cable through the weather seal of the cable access hole, allowing sufficient cable length so that the sheath of the cable can be secured with the cable clamp supplied with the transceiver.
4. Loosen the screw terminals and connect the cable spade connectors to these terminals and re-tighten. Polarity is not important, either wire colour can be connected to either terminal.
5. Return the cable connector to the original position, taking care not to damage the cable wires in the process, and replace the retaining screw.



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of magic



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<http://www.youtube.com/rinnainz>

U340-1336(01)



INFINITY A-series

continuous flow gas hot water heaters

PTS

01:18

A Product Technical Statement (PTS) is a way to show how a product or system is fit for purpose for use in New Zealand and to demonstrate compliance with the New Zealand Building Code (Building Code Amendment Act 2013).

Product description

Designed and made in Japan, the Rinnai INFINITY A-series are continuous flow gas hot water heaters with inbuilt frost protection. They have electronic ignition and require electricity to operate. The temperature dip switch setting is factory preset at 55 °C.

The INFINITY A-series comes in a range of sizes, model selection is dependent on the number of outlets in the house. Click on any of the thumbnail images to view the product information.

Scope of use

Suitable for mains and medium pressure residential applications. They are designed to be externally mounted on an outside wall and located as close as practicable to the most frequently used hot water outlet(s), to reduce the delay for hot water delivery.

They are not suitable as a spa or swimming pool heater. They are also not suitable for commercial installations.

Hard or acidic water will need to be treated to use this product.

Available for connection to natural gas or LPG, this must be specified at the time of purchase.

Flue terminations must comply with the flue terminal locations shown in AS/NZS 5601.1.

Design guidelines

Specification and installation must be in accordance with Rinnai installation requirements and with the Building Code.

Rinnai specify that installation must be in compliance with AS/NZS 5601.1:2013, AS/NZS 3000:2007, and AS/NZS 3500.

Quality assurance

- ISO 9001 Certified System
- ISO 14001 Certified System



A16



A20



A24



A26



ISO 9001



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INFINITY A-series

continuous flow gas hot water heaters

PTS

01:18

Compliance with the NZ Building Code

If specified, installed and maintained in accordance with all Rinnai requirements the INFINITY A-series will comply with the below provisions of the NZ Building Code. AS/NZS 5601.1 is an acceptable solution within the NZBC for gas installations as per NZBC G11/AS1 9.0.1.

Code clause	Evidence of compliance
B1.3.1 B1.3.2 B1.3.3 (a, b, c, h, , m)	The INFINITY A-series units are certified to AS/NZS 4552, a series of standards for safety, performance and energy efficiency in gas fired water heaters for hot water supply and/or central heating.
B.2.3.1 (c)	In service history.
C2.2 and C2.3	Certification of continuous flow gas water heaters to AS/NZS 4552.
E2.3.2	Achieved by following E2/AS1
G4.3.3 (f, i)	Achieved as long as the building complies with G4/AS1
G9.3.1 (a, b, c, d, f), G9.3.3	G9/AS1 as required by Rinnai installation guidance
G10.3.1 (a, b, c, d), G10.3.2, G10.3.3, G10.3.4, G10.3.5, G10.3.6	G10/AS1 (NZS 5442 natural gas) and (NZS 5435 LPG)
G11.3.1, G11.3.2, G11.3.3, G11.3.4	G11/AS1 (AS/NZS 5601.1) as required by Rinnai installation guidance
H1.3.4	Certification of continuous flow gas water heaters to AS/NZS 4552.2 (Minimum energy performance standards for gas water heaters).

Additional evidence to support the above statements

Energy Safety Supplier Declaration of Compliance:

- INFINITY A16: Declaration number - [1825920179](#)
- INFINITY A20: Declaration number - [1825820179](#)
- INFINITY A24: Declaration number - [1825720179](#)
- INFINITY A26: Declaration number - [1825620179](#)

Seismic restraint

Rinnai has prepared a seismic restraint calculation using NZS 4219. This can be accessed from the A-series product page (technical tab) on the Rinnai website.

Special conditions - installation requirements

Full appliance information can be found at www.rinnai.co.nz.

Limitations: To be installed in accordance with all Rinnai installation requirements and by a licensed gasfitter/plumber, and electrician. Upon completion of the installation, a final inspection and test to demonstrate that the gas appliance has been installed in accordance with Rinnai's instructions and in accordance with Gas (safety and measurement) Regulations 2013 is required by the installer. The gasfitter is to issue a certificate of compliance.

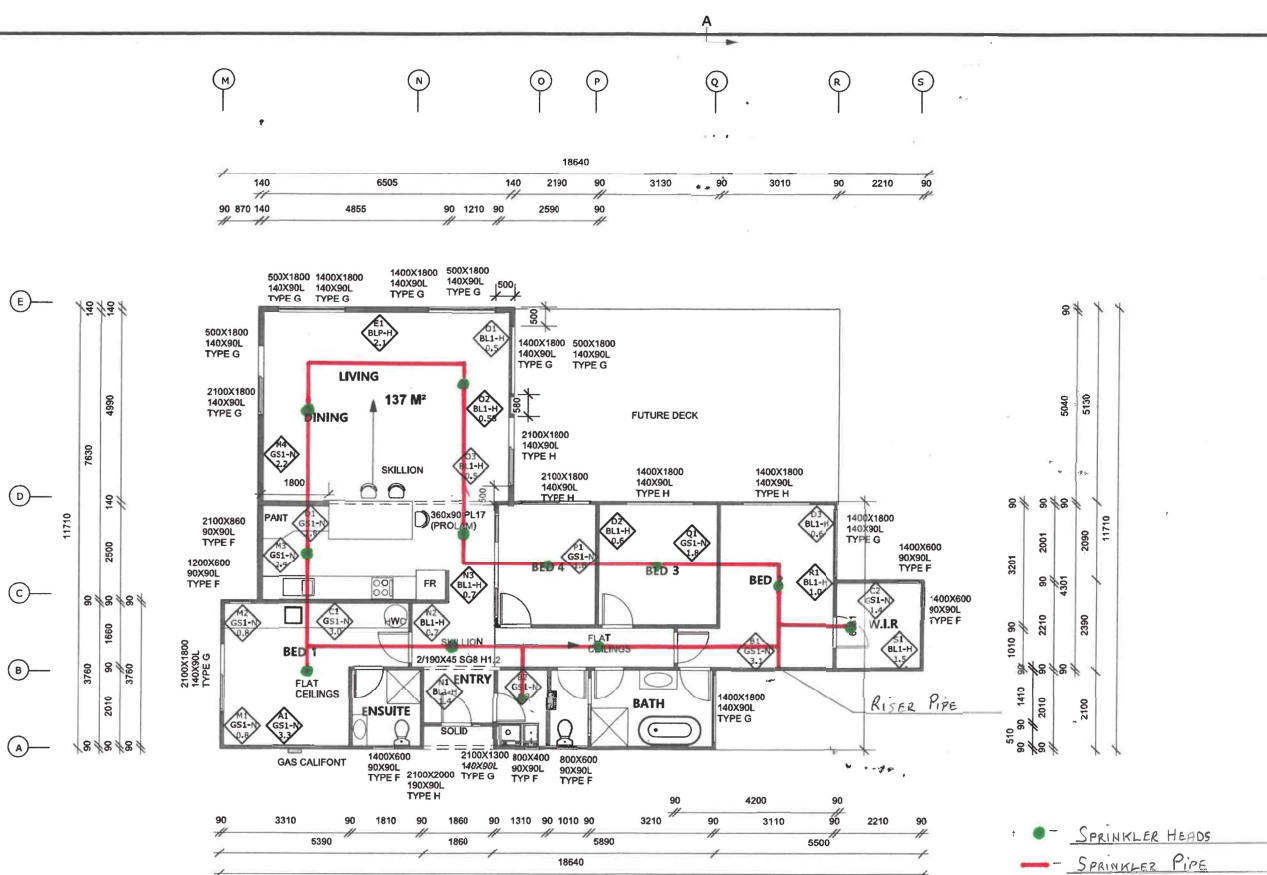
Special conditions - maintenance requirements

For reliable operation Rinnai INFINITY units should be serviced every two years. Installation, servicing and repair shall be carried out only by authorised personnel.



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FOUR BEDROOM DWFL DWELLING

FLOOR PLAN

FOR S MCLOUD & T EVANS
31 DINEVIEW WAYDRAWN G BENJAMIN
0211449153SCALE 1:100
@A3

6/11

BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019

Sprinklers for **HOUSES: CALCULATION SHEET**

Project Title: S Mcloud & T Evans New Dwelling	Date: 07/04/2019
Address: 31 Pineview Way, Motueka	
STEP ONE:	MHD Sprinkler: WIR Flow: 49.2 l/m Pressure: 48 kPa
STEP TWO:	Equivalent pipe lengths PEX Barrier pipe 28 mm OD using Speedfit Fittings

Loop Coefficient:	0.14
--------------------------	-------------

Section		Pipe	T-Branch	T-Flow	Elbow	Bend	Valve	Total
One MHD	Fittings	PEX 28	1		1			
	EPL	2	1.5		0.9			
	=	2	1.5		0.9			4.4
Two LOOP	Fittings	PEX 28	3	16	4			
	EPL	39.8	1.5	0.5	0.9			
	=	39.8	4.5	8	3.6			55.9x0.14=7.83
Three RISER	Fittings	PEX 28			2			
	EPL	3.6			0.9			
	=	3.6			1.8			5.4
Four	Fittings							
	EPL							
	=							
Five	Fittings							
	EPL							
	=							
	Fittings							
	EPL							
	=							

STEPS THREE AND FOUR

	Flow l/min	Pressure loss kPa/m	EPL m	Pressure loss kPa	Pressure loss at MHD sprinkler
Section One	49.2	2.06	4.4	9.07	9.07
Section Two	110	8.73	7.83	68.36	77.43
Section Three	110	8.73	5.4	47.14	124.57
Section Four					
Section Five					

STEP FIVE: Total pressure loss

Total pressure loss due to flows	125 kPa
Water meter loss	- kPa
Static pressure loss	30 kPa
Total pressure losses	155 kPa

STEP SIX: Checking available pressure

Pressure	Minimum Pressure Required at Riser inlet	259 kPa
Less total pressure losses		155 kPa
Available pressure at MHD sprinkler		104 kPa
Required pressure at MHD sprinkler		48 kPa

Domestic Sprinkler System for S Mccloud & T Evans

This domestic sprinkler system design has been designed to meet the requirements of NZS 4517:2010.

NOTE: A Horizontal Ceiling is regarded as a ceiling that does not exceed a slope of 9°.

Sprinkler Heads

Sprinkler Heads:	Victaulic V2742 K4.9 Concealed Residential Pendent
Sprinkler Head coverage:	4.9 m x 4.9 m
Sprinkler Head minimum flow:	49.2 l/min
Sprinkler Head minimum pressure:	48 KPa

The use of any other sprinkler head will affect the design calculations and the design would need to be recalculated.

Sprinkler Head Spacing:

The position of the sprinkler heads are marked on the attached plan. Installer to ensure that no sprinkler head is to be installed outside the following parameters.

Minimum spacing between heads	2.43 m
Maximum spacing between heads	4.9 m
Maximum distance to wall	2.43 m
Minimum distance from solid fuel heater and flue	1.5 m

The sprinkler head guide is enclosed for guidance with the installation of the heads.

The model to be used is highlighted and can be obtained from the local Plumbing Merchants.

The design requires 12 sprinkler heads in the dwelling and it is recommended that an additional 2 heads are kept as spares.

Most Hydraulically Disadvantaged Sprinkler

The MHD head is located in the MIR, with 2 m branch pipe from the loop (As marked on plan).

A minimum of 259 KPa supply pressure at the **riser inlet** is required to ensure the pressure required at the MHD sprinkler is sufficient.

Any changes to the sprinkler design as shown on the plans may affect the efficiency of the MHD sprinkler and will require the sprinkler design to be recalculated.

The sprinkler system has been designed with up to **5 domestic supplies** being taken from the loop these domestic supplies are to be used to flush the toilets and service the outside taps to help keep the water in the sprinkler system fresh and negate the need for a Back Flow Preventer.

Any additional supplies taken from the system will affect the efficiency of the system and will require the sprinkler design to be recalculated.

Sprinkler Pipe

The pipe used for the sprinkler system, which includes: the loop, riser and branch pipes is PEX Barrier Pipe 28 mm OD pipe and Speedfit Fittings. **(no crimp joiners to be used)**. The calculation sheet for that pipe is attached.

The parameters of the pipe are as follows:

PEX Barrier Pipe 28 mm OD

Supply, riser and loop piping:	28mm OD
Sprinkler branch pipes:	28mm OD
Supply pressure Riser Inlet:	259 KPa minimum (refer calculation sheet)

Water Pump

The pumpset used to deliver water for the domestic sprinkler system supply must be able to deliver a minimum flow of 110 L/min (almost 2 L/sec) at the minimum pressure required at the riser inlet.

There are several makes of 240v pumps that will meet these criteria.

Smoke Alarms

The installation of a domestic sprinkler system does not negate the need for smoke alarms to meet the Building Code. I would strongly recommend that smoke alarms should be installed in each Bedroom, Living Area and Hallway be 240v hard wired **photoelectric** smoke alarms. Your electrician can advise on installation.

The 240v hard wired smoke alarms gives the advantage of each smoke alarm being interconnected so that when one alarm activates they all sound which alerts all members of the building at the same time.

Before installation of the sprinkler heads a pressure test should be carried out to check for leaks and a **flow/pressure test** is also to be carried out at the MHD sprinkler head to ensure the sprinkler system parameters are met.

Domestic Sprinkler System Maintenance

Introduction

Routine checks should be provided to ensure that the system will perform as required. These may be carried out by the home owner. If the routine checks indicate conditions that may impact on the reliability of the system, specialist advice should be sought.

If any alterations to the building or changes to the water supply have occurred or are proposed specialist advice should be sought to ensure the sprinkler system will function as designed.

Monthly Checks

- 1) Check the sprinkler system water supply pressure gauge to ensure that the water supply pressure has not deteriorated below the minimum required water supply pressure.
- 2) Where the sprinkler system water pressure is reliant on a pump, check that the pump starts correctly.
- 3) Where pumps are used, clean the filters and check the pressure vessel, and
- 4) Ensure any isolation valves that affect the water supplies to the sprinkler system are fully open.
- 5) Ensure there is in excess of 7000 litres of water left in the supply tank.

Annual Checks

- 1) Inspect the sprinkler system to ensure that the sprinkler heads have not been damaged, covers have not been painted over or have any items hanging from the head or otherwise obstructing the head.

Should you have any questions about the design please contact me on 021654324.

Rob Dalton
Branz Registered Sprinkler Designer
Registration Number 15
daltonh.design@gmail.com

Owner's Manual for an Automatic Home Multi-Purpose Fire Sprinkler System

S Mcloud & T Evans

As the owner of a fire sprinkler system, your home is protected 24 hours a day all year round for the life of your dwelling, from the threat of fire and the consequences of such an undesired event.

Each sprinkler head of your "Life Safety System" acts as a firefighter ready to apply water immediately and automatically onto a fire.

You have purchased a cost effective, low maintenance, high quality, durable, life safety system. The purpose of this manual is to provide you with useful information on your sprinkler system to enhance your safety within the home.

As the owner you are responsible for maintaining the fire protection system in proper operating condition.

1.0 Your Home Fire Sprinkler System Is Designed To:

- Activate at 57°C - 68°C within 75 seconds of this operating temperature being reached.
- Only discharge water from the sprinkler head that is activated by the fire.
- Discharge water at a rate of 49.2 litres per minute when activated.
- Prevent fire within the home becoming a threat to life.
- Allow you and other occupants of your home to escape from the fire.
- Use the same water for fire suppression that comes into the home for normal living use.
- Automatically extinguish or control a fire within a sprinkler protected compartment.

2.0 This Home Fire Sprinkler System Is Not Designed To:

- Provide early warning to the occupants by means of a water flow alarm. For this reason, smoke alarms are considered an integral part of the total life safety system within the home.
- Automatically notify the Fire Service.

- To be shut off or shut down separately from the normal domestic water supply.
- Automatically shut the sprinkler water flow off after activation.
- Fully control or extinguish a fire:
 - which originates in an unsprinklered area before spreading to a sprinklered compartment.
 - where combustible material is not the amount or type of materials normally found in a home.
 - where unauthorised changes have been made to the plumbing system after installation.

3.0 Sprinkler System Components

3.1 Water Supply

- The domestic water supply is used for both domestic use and for fire suppression via the sprinkler system if and when required.
- The amount of water required to allow the sprinkler heads to function correctly as recommended by the manufacturer has been obtained by calculations derived from water supply pressure/flow available, pipe diameter required and pipe-work layout to reduce friction losses.
- The system has also been operationally tested and has been certified as meeting all design specification requirements by the plumber at completion of the installation.
- If the main water supply is shut-off, the sprinkler system will not function.

3.2 Water Main Shut-Off Valve

- The main water shut-off valve outside of your house is the only valve that will shut off water to your sprinkler system. There are no other valves on the sprinkler system.

3.3 Sprinkler System Pipe-work

- The sprinkler system pipe-work are pipes that use the normal domestic water to supply the sprinkler heads. These pipes are the same types of pipes that supply water to the toilets, bathroom, laundry and kitchen areas but have a larger outside diameter.
- All pipe-work is normally full with water at all times.

3.4 “Residential” Sprinkler Head

- The fire sprinkler heads fitted in your home are “Quick Response” sprinklers and are small, high-sensitivity devices which are activated by heat that either melts a specialised solder link or shatters a small liquid filled bulb.
- “Quick response” means that the sprinkler head is fitted with a “Fast Response” element and must operate within 75 seconds under test conditions when the pre-set temperature is breached.

- Residential sprinkler heads have a high discharge trajectory to ensure coverage of walls and ceilings that may be constructed of or covered with combustible materials, as opposed to a conventional “umbrella” pattern given by sprinkler heads used for commercial applications.

- The sprinklers fitted into your home are:

Type	Residential Sprinkler
Temperature Rating	Cover Plate 57°C, Sprinkler head - 68°C
Manufacturer	Victaulic
Model	V2742
Model Specific Design Features	Dome Cover Plate Concealed Residential Sprinkler
Locations Where Fitted In Home	Covering all areas except Bathrooms, toilets, wardrobes and roof space.

3.5 Sprinkler System Cabinet

It is recommended that the home owner installs a cabinet which is used to contain essential information and spare parts for your sprinkler system.

- Spare sprinkler heads and covers so that the sprinkler heads can be replaced without delay after activation. The sprinkler heads are not reusable.
- Sprinkler wrench for use by an approved installer so that sprinkler heads can be changed without damaging the pipe-work or sprinkler head being installed. A half-inch socket drive is also normally required.
- As-built drawing that shows the layout of the internal pipe-work in case additional servicing or maintenance is required for the domestic plumbing.
- System completion records which document system information, when system installed/by whom, and when system tested by whom.
- Maintenance record that shows all maintenance that has been carried out on the sprinkler system to date.
- Manufacturers Technical Data Sheet for type of sprinkler heads fitted into the home.

3.6 Hard Wired Smoke Alarms

- Although not in any way connected to the sprinkler system, these smoke alarms form an integral and necessary part of the whole life safety system.
- It is recommended that smoke alarm coverage may extend to cover all bedrooms, lounge, living and dining areas and hallways.

- It is recommended that you familiarise yourself with the location of all smoke alarms.
- Care should be taken with any modification to a smoke alarm position or replacement of a smoke alarm due to the 240 Volt supply. It is recommended that a Registered Electrician carry out any electrical wiring work required.

4.0 Areas Not Covered By The Sprinkler System

The following areas have been assessed as not requiring sprinkler coverage:

- Wardrobes and Roof/Ceiling Void.
- Decision on whether or not to install sprinklers in these areas is made on the risk assessment that considers the likelihood of a fire in this type of space, based on past fire statistics, actual intended use of the space in question and floor area of the actual space itself.
- This does not mean that sprinklers cannot be fitted if required which will further increase degree of fire protection.

5.0 Modifications to Plumbing System After Installation

- Any system extension, modification or alteration to the domestic plumbing should be checked and carried out by an approved installer.

6.0 Domestic Sprinkler System Maintenance

Introduction

Routine checks should be provided to ensure that the system will perform as required. These may be carried out by the home owner. If the routine checks indicate conditions that may impact on the reliability of the system, specialist advice should be sought.

If any alterations to the building or changes to the water supply have occurred or are proposed specialist advice should be sought to ensure the sprinkler system will function as designed.

Monthly Checks

- 1) Check the sprinkler system water supply pressure gauge to ensure that the water supply pressure has not deteriorated below the minimum required water supply pressure.
- 2) Where the sprinkler system water pressure is reliant on a pump, check that the pump starts correctly.
- 3) Where pumps are used, clean the filters and check the pressure vessel, and
- 4) Ensure any isolation valves that affect the water supplies to the sprinkler system are fully open.

- 5) Ensure there is in excess of 7000 litres of water left in the supply tank.

Annual Checks

- 1) Inspect the sprinkler system to ensure that the sprinkler heads have not been damaged, covers have not been painted over or have any items hanging from the head or otherwise obstructing the head.

7.0 In The Event Of A Fire

- Ensure that all occupants are alerted, have exited the house and remain outside.
- Phone 111 and ask for the Fire Service. Give your address, nearest cross street and any other information required.
- The water supply should not be turned off until it is confirmed that the fire is completely out. Ideally this task should be left to the Fire Service.
- Sprinklers that have operated in fire cannot be re-assembled and must be replaced.
- Sprinklers that have been subjected to fire conditions but were not activated should also be replaced. Check with the approved installer for minimum replacement requirements.

8.0 Sprinkler Head Operation Under Fire Conditions

- During fire conditions, the temperature around a sprinkler head will approach the operating temperature as hot gases rise to the ceiling. At this time with concealed type sprinkler models, a *Cover Plate* will detach and fall away.
- Continued heating (75 seconds maximum) of an exposed sprinkler at the operating temperature will cause the *Fusible Link* to disengage or the *Quartzoid Bulb* to shatter, releasing the *Water Sealing Assembly*. On some low profile (flush or semi-recessed) models the *Deflector* may also drop into position at this time.
- Water will immediately flow through the sprinkler orifice and strikes the *Deflector*, forming a *Uniform Droplet Spray Pattern* over a specific area of coverage as determined by the water supply pressure and type of *Deflector* fitted.
- The *Uniform Droplet Spray Pattern* will cover an average area of approximately 4.9 metres by 4.9 metres. Because the water spray will immediately cool the hot gases from the fire, other adjacent sprinkler heads may not be activated. The water spray will reach the burning material, cooling it below its combustion temperature to extinguish or control the fire.

9.0 Sprinkler Facts and Figures

- A combined home sprinkler system does not require additional control valves or back-flow devices.

- This type of home sprinkler system does not require annual external servicing of components.
- Actual physical servicing of the sprinkler heads is required only after activation following a fire or when a sprinkler head has been mechanically damaged.
- Sprinklers are the most effective life fire safety device ever invented.
- Sprinklers reduce property damage because they control fires so quickly.
- Sprinklers will protect your family for the life of your home.
- Sprinklers can extinguish a fire in less time than it takes the Fire Service to arrive.
- Modern residential sprinklers are much smaller and have an inconspicuous lower profile than commercial sprinkler heads. They can be partially or fully recessed.
- Residential sprinklers come in common colours and may be custom painted by the manufacturer. They must not be painted after installation.
- Sprinklers rarely leak. Your system has been pressure tested by the installer.
- Sprinklers remain closed until needed and do not wear out.
- Only the sprinkler head that is affected by the fire will activate.
- Sprinkler heads are activated by heat only.
- Smoke without heat will not cause a sprinkler to activate.
- Sprinkler operation will cause less damage than the fire itself.
- A sprinkler will control a fire in its early stages and will use considerably less water than the Fire Service would use.
- Sprinklers have been in use since the late 1800's to protect lives and property - they are a proven technology.
- The odds of accidental sprinkler operation discharge due to a manufacturing defect are 1 in 16 million.
- 90% of fires are contained by the operation of one sprinkler.
- Almost 90% of fatal fires originate in bedrooms, lounge/dining rooms and kitchens.

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE

This Model V27 residential sprinkler is designed to meet the requirements of NFPA 13, 13D and 13R for residential use in a variety of room sizes, depending upon available operating pressure and room configuration. Model V2742 is UL Listed for use under smooth flat horizontal ceilings. The design incorporates state-of-the-art, heat responsive, frangible glass bulb design (quick response) for prompt, precise operation.

The die cast frame is more streamlined and attractive than traditional sand cast frames. It is cast with a hex-shaped wrench boss to allow easy tightening from many angles, reducing assembly effort. This sprinkler is available in various finishes to meet many design requirements.

The V27 sprinkler is now available with the aesthetically pleasing dome cover plate, which also is available in various finishes to meet many design requirements.



SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS



DOMES COVER PLATE
(V2742)

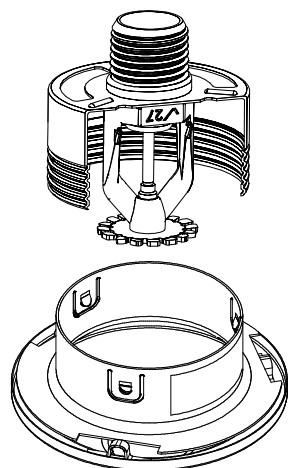
SPRINKLER OPERATION:

The operating mechanism is a frangible glass bulb which contains a heat responsive liquid. During a fire, the ambient temperature rises causing the liquid in the bulb to expand. When the ambient temperature reaches the rated temperature of the sprinkler, the bulb shatters. As a result, the waterway is cleared of all sealing parts and water is discharged towards the deflector. The deflector is designed to distribute the water in a pattern that is most effective in controlling the fire.

COVERAGE:

Residential spray coverage up to 20 feet x 20 feet/6.1 m x 6.1 m room sizes per NFPA.

TECHNICAL SPECIFICATIONS:



Exaggerated for Clarity

Model: V2742

Style: Concealed Residential Pendent

Nominal Orifice Size: 7/16"/12 mm

K-Factor: V2742 – 4.9 Imp./7.1 S.I.^ for room sizes up to 20'/6.1 m

Nominal Thread Size: 1/2" NPT/15 mm

Max. Working Pressure: 175 psi/1200 kPa

Factory Hydrostatic Test: 100% @ 500 psi/3450 kPa

Min. Operating Pressure: 7 psi/48 kPa

Temperature Rating: See chart on page 3

MATERIAL SPECIFICATIONS

Pendent Deflector: Bronze per UNS C51000

Bulb: Glass with glycerin solution.

Bulb Nominal Diameter:

- Quick Response: 3.0mm

Load Screw: Bronze per UNS C65100

Pip Cap: Bronze per UNS C65100

Seal: Teflon* tape

Frame: Die cast brass 65-30

Cup: Cold rolled steel, zinc-chrome plated.

Cover/Escutcheon: Brass per UNS C26000

ACCESSORIES

Installation Wrench: Concealed: V39/V27-2

Sprinkler Finishes:

- Chrome plated
- Brass Plated
- White Painted
- Flat Black†
- Custom Painted†

For cabinets and other accessories refer to separate sheet.

^ For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.

*Teflon is a registered trademark of Dupont Co.

† These finishes require longer lead times. Contact Victaulic for details.

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

Date _____

www.victaulic.com

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REV_D

victaulic

40.52_1

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**APPROVALS/LISTINGS**

Model	Orifice Size	Nominal K-Factor	Response	Deflector Type	Approved Temperature Ratings °F/°C ‡
	Inches mm	Imperial S.I. ^			cULus
V2742	7/16 12	4.9 7.1	Quick	Concealed Pendent	155 68

‡ Listings and approval as of printing.

^ For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.

RATINGS

All glass bulbs are rated for temperatures from –67°F/–55°C to those shown in table below.

Sprinkler	Sprinkler – V2742				Cover – V27		
	Victaulic Part Identification	Temperature – °F/°C		Glass Bulb Color	Victaulic Part Identification	Cover Temperature – °F/°C	
		Nominal Temperature Rating	Maximum Ambient Temperature Allowed			Nominal Temperature Rating	Maximum Ambient Temperature Allowed
Ordinary	C	155 68	100 38	Red	A	135 57	100 38

WARNING**WARNING**

- Proper temperature rated cover must be used with the correct sprinkler rating per the Temperature Chart Ratings.
- The plastic shipping cap must be removed for the sprinkler to operate properly.
- If shipping cap is replaced over an installed sprinkler for purposes of painting or plastering, then the fire protection system shall be considered out of service, the Authority Having Jurisdiction notified, and a firewatch is suggested.

Failure to do so may result in failure of sprinkler to operate causing serious personal injury or property damage.

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**ORDERING INFORMATION**

Please specify the following when ordering:

Sprinkler Model Number	
Style	
Temperature Rating	
K-Factor	
Thread Size	
Quantity	
Cover Finish	
Wrench Model Number	

WARNING**WARNING**

- Always read and understand installation, care, and maintenance instructions, supplied with each box of sprinklers, before proceeding with installation of any sprinklers.
- Always wear safety glasses and foot protection.
- Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.
- Installation rules, especially those governing obstruction, must be strictly followed.
- Painting, plating, or any re-coating of sprinklers (other than that supplied by Victaulic) is not allowed.

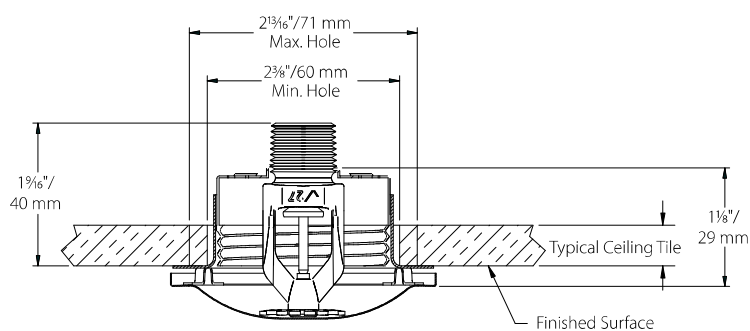
Failure to follow these instructions could result in serious personal injury and/or property damage.

The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to the current National Fire Protection Association pamphlet that describes care and maintenance of sprinkler systems. In addition, the authority having jurisdiction may have additional maintenance, testing, and inspection requirements that must be followed.

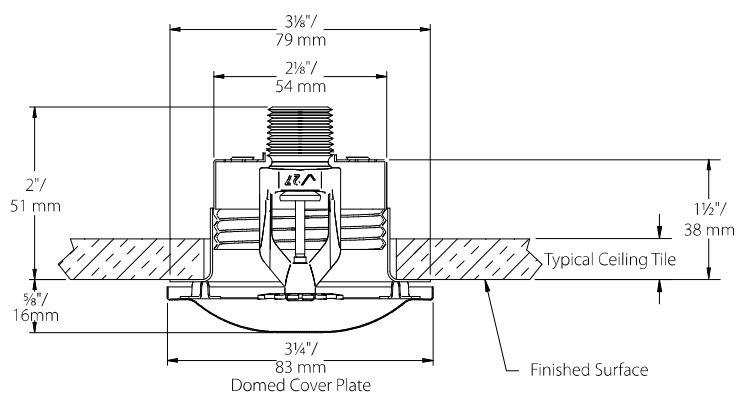
If you need additional copies of this publication, or if you have any questions about the safe installation of this product, contact Victaulic World Headquarters: P.O. Box 31, Easton, Pennsylvania 18044-0031 USA, Telephone: 001-610-559-3300.

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**DIMENSIONS****Model V2742 (drawing not to scale)**

MAXIMUM EXTENSION



MAXIMUM RECESS

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**ROOM SIZE**

Victaulic V2742, 4.9 K-Factor Concealed Pendent Sprinkler
For Ceiling types refer to NFPA 13, 13R or 13D 2013 Editions

Max. Coverage Area ^(a)	Ordinary Temp Rating 155°F/68°C		Intermediate Temp Rating 175°F/79°C		Deflector to Ceiling	Installation Type	Minimum Spacing
Ft. x Ft. m x m	Flow ^(b) GPM L/min	Pressure ^(b) PSI bar	Flow ^(b) GPM L/min	Pressure ^(b) PSI bar			Ft. m
12 X 12 3.7 X 3.7	13 49.2	7.0 0.48	N/A	N/A	N/A	Concealed Sprinkler using Model V27 Coverplate Assembly	8.0 2.4
14 X 14 4.3 X 4.3	13 49.2	7.0 0.48	N/A	N/A			
16 X 16 4.9 X 4.9	13 49.2	7.0 0.48	N/A	N/A			
18 X 18 5.5 X 5.5	17 64.3	12 0.83	N/A	N/A			
20 X 20 6.1 X 6.1	20 75.7	16.7 1.15	N/A	N/A			

Notes:

^ For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.

(a) For coverage area dimensions less than or between those indicated, use the minimum required flow for the next highest coverage area for which hydraulic design criteria are stated.

(b) For NFPA 13 residential applications, the greater of 0.1gpm/ft² over the design area of the flow in accordance with the criteria in the table must be used.**AVAILABLE WRENCHES**

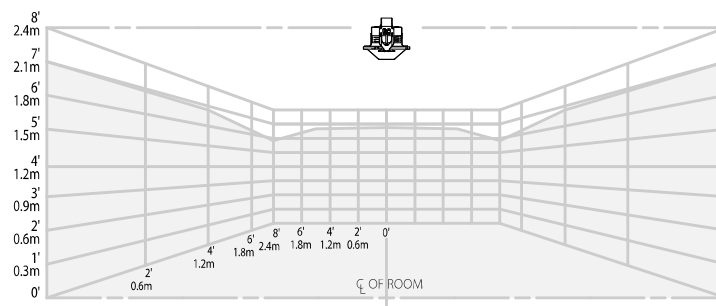
Sprinkler Type	Concealed
V2742 Concealed Pendent	V39/V27-2

V27, K4.9

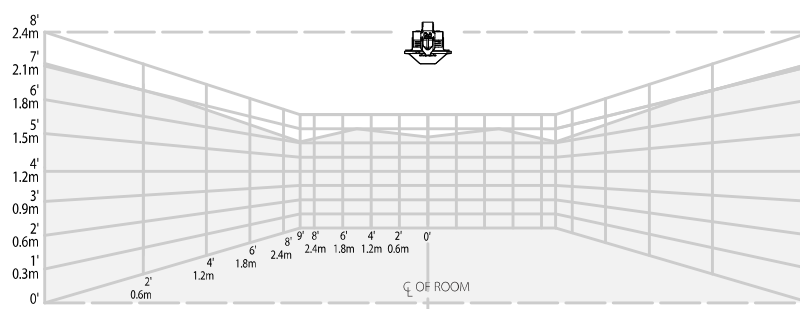
Residential Concealed Pendent

V2742 QUICK RESPONSE**NOMINAL WETTING PATTERNS****Model V2742****K4.9 residential concealed pendent**

13 GPM/49.2 LPM – 16' x 16'/4.9 x 4.9m coverage area

**Model V2742****K4.9 residential concealed pendent**

17 GPM/64.3 LPM – 18' x 18'/5.5 x 5.5m coverage area



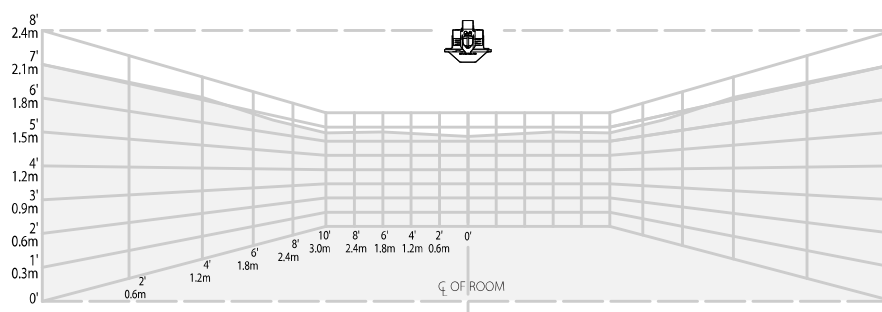
See notes on next page.

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE**NOMINAL WETTING PATTERNS****Model V2742****K4.9 residential concealed pendent**

20 GPM/75.7 LPM – 20' x 20'/6.1 x 6.1 m coverage area

**NOTES:**

- 1 Data shown is approximate and can vary due to differences in installation.
- 2 These graphs illustrate approximate wall-wetting patterns for these specific Victaulic FireLock Automatic Sprinklers. They are provided as information for guidance and should not be used as minimum sprinkler spacing rules for installation. Sprinkler location shall be in accordance with the obstruction rules for residential sprinklers in NFPA 13 (2002 or later edition). Failure to follow these guidelines could adversely affect the performance of the sprinkler and will void all Listings, Approvals and Warranties.
- 3 All patterns are symmetric to waterway.

V27, K4.9

Residential Concealed Pendent

V2742 QUICK RESPONSE

WARRANTY

Refer to the Warranty section of the current Price List or contact Victaulic for details.

NOTE

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

For complete contact information, visit www.victaulic.com

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Onsite Wastewater Management Service Design Proposal

Report for

**Toni Evans and Sam McLeod
31 Pineview Way, Motueka Valley**

12 April 2019



**Prepared by
Kiwi Pioneer Co Ltd**

Document control sheet

Client		Toni Evans and Sam McLeod		Job #	190411D610
Project Title		Onsite wastewater management service design proposal			
Document Title		Wastewater Design Proposal			
Document Ref.		D610			
This Document Comprises		Total No. of Pages	List of Figures	List of Tables	No. of Appendices
		20	4	3	5
Ref.	Status	Author(s)	Review	Office of Origin	Issue Date
WDP	Draft	Andy Williams	Mike Copeland	Motueka	12 April 2019
WDP v.1	Client issue	Andy Williams	Environment Technology	Motueka	12 April 2019
WDP v.2	Client issue	Mike Copeland	Greg Benjamin	Motueka	15 April 2019
WDP v.3	Client issue	Mike Copeland		Motueka	19 April 2019



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1. Introduction

Kiwi Pioneer Co Ltd has been engaged by Toni Evans and Sam McLeod to provide a design proposal for the onsite wastewater management service (OWMS) of a proposed three-bedroom dwelling a one bedroom unit and one bedroom sleepout at 31 Pineview Way, Motueka Valley.

Site visits were undertaken by Kiwi Pioneer Co Ltd on 4 August 2018 and 8 March 2019. This report outlines the site and soil constraints, proposes an OWMS and assesses consent requirements. This proposal has been carried out in accordance with AS/NZS 1547:2012: *On-site domestic wastewater management* and the Tasman Resource Management Plan (TRMP) 2011.

Property owner	Toni Evans and Sam McLeod
Contact details:	PO Box 316 Motueka 7143 Ph. 021 110 3643 themotlot@gmail.com
Legal description:	Lot 10 DP 519728
Land area	0.35ha
Location	NZTM: E-1596149 - N-5445320
District Council:	Tasman

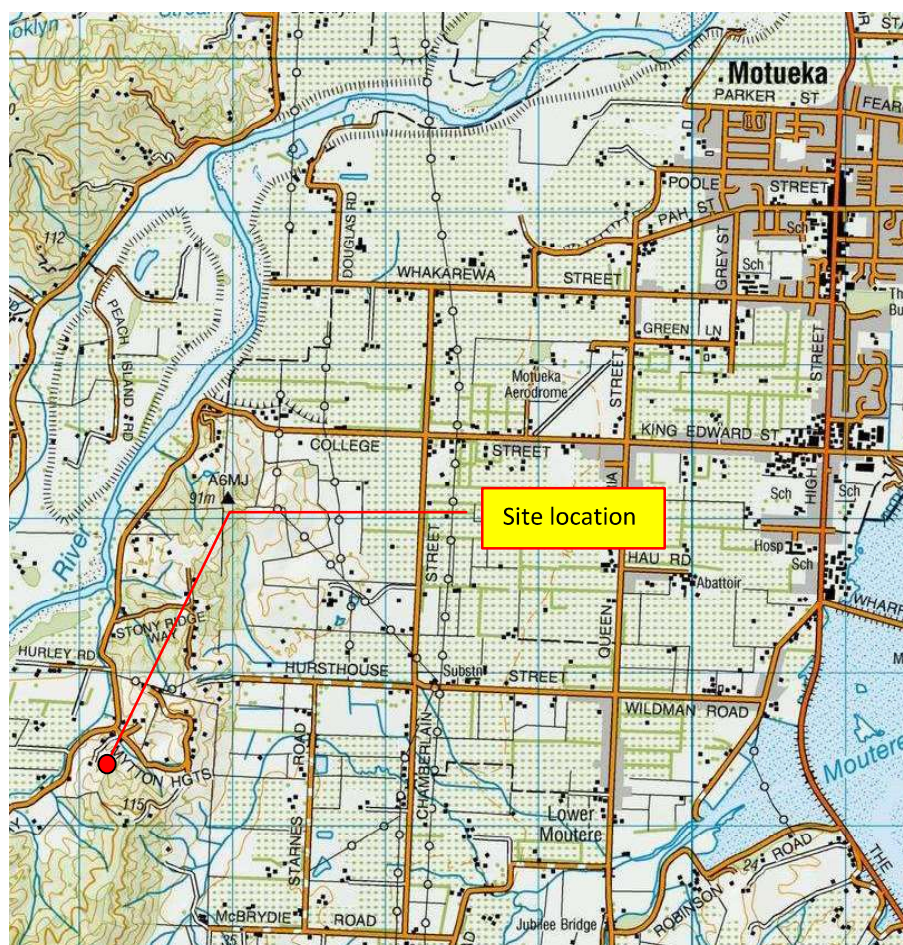


FIGURE 1: LOCATION OF SITE

TABLE 1: SPECIFICATION SUMMARY FOR PROPOSED OWMS

Area of property	0.35ha
No. of bedrooms	5 (3 Dwelling + 1 unit + 1 sleepout)
Design occupancy	9 population equivalents (pe) – 5 dwelling + 2 unit + 2 sleepout
Water supply	Roof supply
Soil type	Category 3 – Fine sandy loam (ASNZS1547:2012 Table E1)
Topography	Hillside slope
Proposed OWMS and design flow for dwelling and two units	
Proposed OWMS	Septic tank to AES sand bed
Septic tank capacity	5000L – Alpha Precasts ST5000 (ASNZS1547:2012 Table J1)
Daily wastewater flow rate	1305L – allowance is 145L/person/day - roof supply with standard water reduction fixtures installed. (ASNZS 1547:2012 Table H3)
Design loading rate (DLR)	20mm/day
AES sand bed area required	65m ²
Set backs	
Separation to nearest boundary	9m to western boundary
Separation to nearest surface water	300m north east to man-made pond on Mytton Heights
Separation to ground water	>2m
Separation to nearest well	n/a
Discharge consentability	
Discharge meets all conditions of TRMP Rule 36.1.2.4: permitted activity	

2. Site assessment

2.1 Soil investigation

Site visits were carried out by Kiwi Pioneer Co Ltd on 4 August 2018 and 8 March 2019. Six test pits (TP) were dug by hand with a shovel and soil auger to depths of up to 1000mm, however, only 3 were located where the proposed land application area (LAA) will be. For soil type TP5 was chosen as indicative of the soil at the site. For soil investigation results refer to Appendix A.

2.2 Key findings

The soil profile is well structured clay loam topsoil over compacted granite sand. For wastewater design purposes the soil is **Category 3, Fine sandy loam**, with no structure. This soil type has a design loading rate (DLR) of 30mm/day for secondary treated effluent (ASNZS 1547:2012 Table L1). However, due to the soil being compacted or less weathered, and thus less permeable, Kiwi Pioneer will use the lower DLR of 20mm at this site.

2.3 Topography

The site is set among rolling foot-hills. The proposed LAA is situated on an excavated building platform.

2.4 Water supply

The property is served by roof water supply.

2.5 Surface water, groundwater and wells

The nearest surface water is a pond 300m northeast, at its closest point, of the proposed land application area (LAA). Groundwater was not encountered during the soil investigation and is estimated to be >2m below ground level (BGL) at the LAA location. There are no wells within the vicinity with all local dwellings using roof water for supply.

3. Wastewater design flow allowances

In accordance with ASNZS 1547:2012, Table H3 the wastewater flow allowance for a dwelling on roof water supply with standard water reduction fixtures is 145 litres per person per day. The water reduction fixtures will comply with NZ's Water Efficiency Labelling Scheme (WELS):

- 4 star or better toilets
- 3 star or better shower head
- 5 star kitchen and bathroom tap ware
- 4.5 star dishwasher and washing machine

TABLE 2: WASTEWATER DESIGN FLOW ALLOWANCE: DWELLING + UNIT + SLEEPOUT

No. of bedrooms	5	
Maximum occupancy	9	Persons/day (ASNZS 1547:2012 Table J1)
Daily per capita flow	x 145	Litres/person/day, roof supply (ASNZS 1547: 2012, Table H3)
Daily flow allowance	= 1305	Litres/day

4. Proposed onsite wastewater management service

4.1 Influencing factors

– Soil type

The soil at the site is a Category 3, Fine sandy loam (weathered granite sand) with no structure. This soil type is suitable for receiving secondary treated effluent at a design loading rate of 20mm/day (AS/NZS 1547:2012, Table L1). An AES sand bed, with its secondary treatment processes, is a suitable wastewater disposal system for this soil type.

– Client's preference

The client's preference is to have a passive system. The proposed OWMS utilises an AES sand bed and will not require power and thus meets this requirement.

4.2 Proposed onsite wastewater management system

In consideration of the above factors the following OWMS is proposed:

Septic tank to AES sand bed; refer to Table 3 and Figures 2 - 4.

For OWMS component and installation specifications refer to Appendix B.

TABLE 3: PROPOSED ONSITE WASTEWATER MANAGEMENT SERVICE

Primary treatment system	Septic tank – Alpha Precasts ST5000 or similar	
LAA	Maximum daily flow rate	1305L/day
	Design loading rate (DLR)	÷ 20mm/day
	LAA area required (min.)	= 65m ²

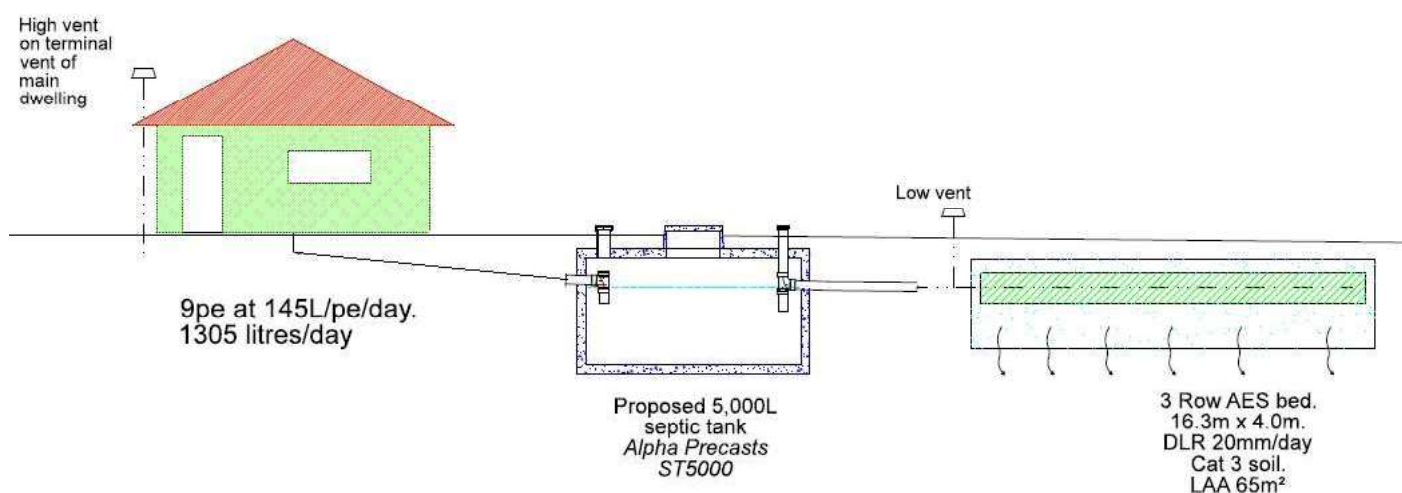


FIGURE 2: OWMS SCHEMATIC

4.3 Maintenance

The proposed wastewater service is a passive system and has been designed to operate with low maintenance requirements. For wastewater system management refer to Appendix C.

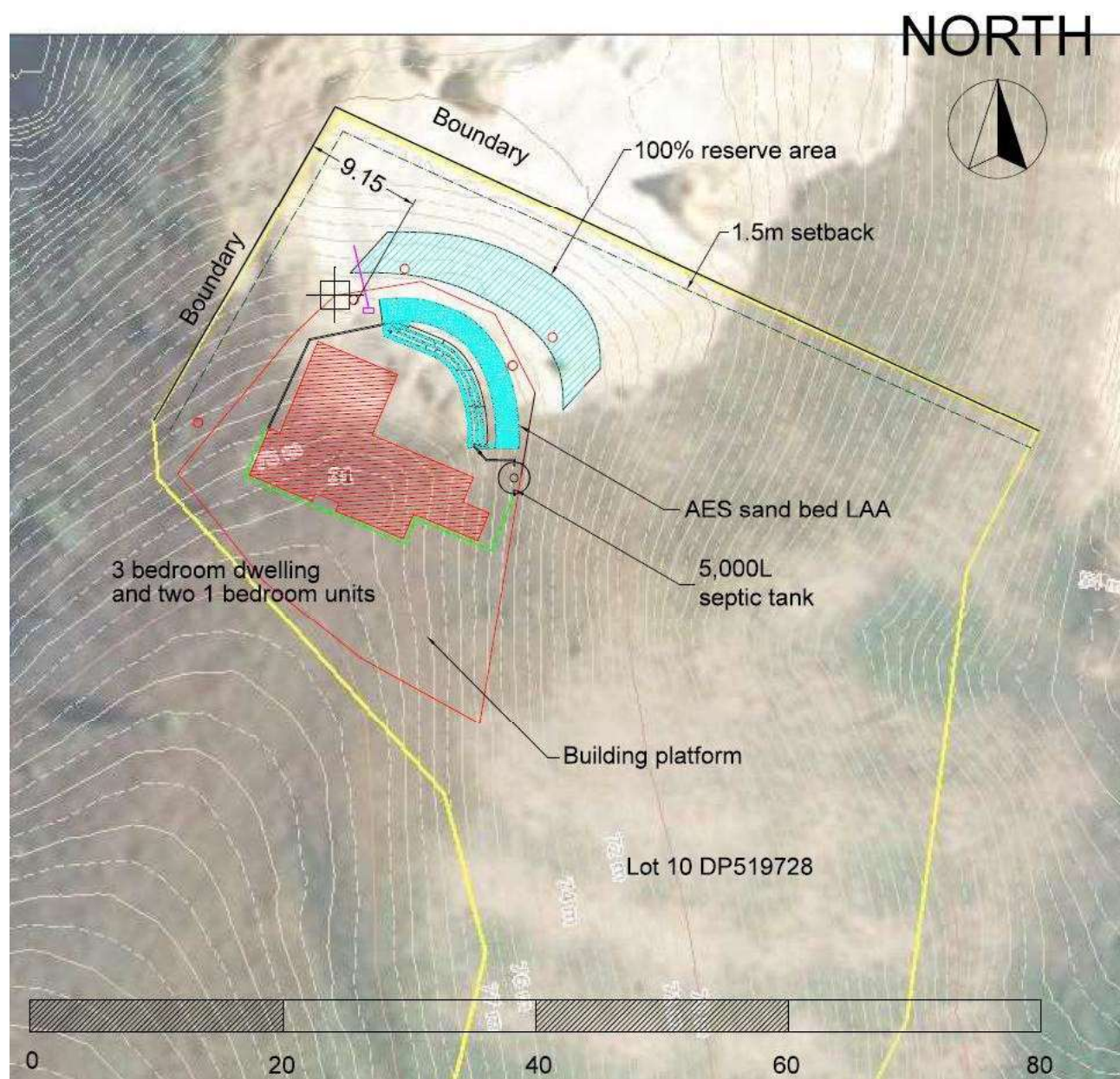


FIGURE 3: OWMS LOCATION WITHIN THE SITE

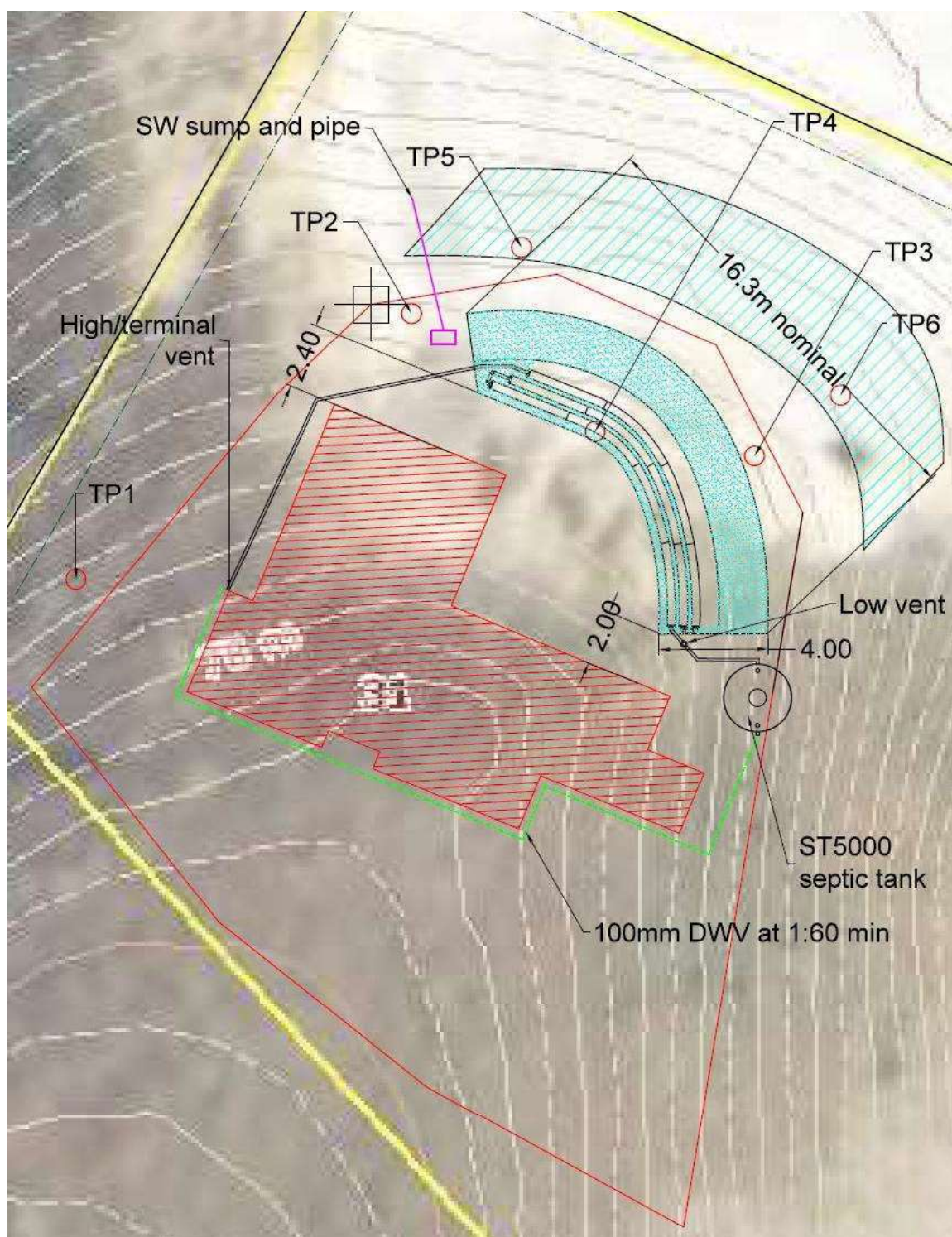


FIGURE 4: OWMS SITE MAP

5. Consent requirements

5.1 Tasman District Council Rules

The consentability of the proposed wastewater service has been assessed in terms of the TRMP Rule 36.1.2.4: *Discharge of Domestic Wastewater*.

It is Kiwi Pioneer Co's assessment that the proposed OWMS meets all conditions of Rule 36.1.2.4 and is therefore a **permitted activity**; refer to Appendix D.

5.2 Building Act 2004 and regulations

Kiwi Pioneer Co Ltd is satisfied that all Building Code requirements can be met; refer Appendix E.

6. Proposed OWMS Summary

The proposed OWMS meets all requirements of TRMP Rule 36.1.2.4 and achieves the required separation distances so there will be no adverse environmental effects on any groundwater, surface water, or neighbouring drain, or any threat to public, private or local ecosystem health.

7. Statement of Design

ISSUED BY: Kiwi Pioneer Co Ltd
TO: Toni Evans and Sam McLeod
TO BE SUPPLIED TO: Tasman District Council
IN RESPECT OF: On-site Wastewater Management Service for a proposed 3-bdrm dwelling attached 1 bedroom unit and 1 bedroom sleepout.
AT:
 NZ Grid Reference: NZTM2000 E-1596149 - N-5445320
 Legal Description: Lot 10 DP 519728
 District Council: Tasman
 Address: 31 Pineview Way,

Kiwi Pioneer Co Ltd has been engaged by Toni Evans and Sam McLeod to provide the technical design details for an on-site wastewater management service. The design has been carried out in accordance with AS/NZS 1547:2012: *On-site domestic wastewater management*.

Other resources used for this design are:

- ARC Environment 2004. *On-site wastewater disposal from households and institutions*. Auckland Regional Council. Technical Report 58.

For details of site assessment and design, refer to **Kiwi Pioneer Co Ltd Report 12 April 2019**.

This is an independent design, covered by a current policy of Professional Indemnity Insurance.

I BELIEVE ON REASONABLE GROUNDS that this design has been carried out accordance with best practice in wastewater design principles and procedures.

NOTE: This statement does not approve the installed system. Under certain conditions Kiwi Pioneer Co Ltd is available to certify the installed system. These conditions include:

- The technology supplier(s) takes full responsibility for the stated quality and performance of technologies and other hardware supplied;
- The installer(s) take full responsibility for installing the system as specified by Kiwi Pioneer Co Ltd report 12 April 2019 unless departure from the stated specification(s) are subsequently agreed between the installer and Kiwi Pioneer Co Ltd;
- Kiwi Pioneer Co Ltd is informed prior to installation, and is engaged, under separate contract, to supervise installation of all specified system components.
- Other conditions that may be specified by Kiwi Pioneer Co Ltd under the contract to supervise installation.

Disclaimer

The Client is to make full disclosure of relevant information on existing and/or proposed activities on the site that will influence estimation of likely daily wastewater quantity (potential number of bedrooms and other wastewater producing activities) and quality (in particular any chemicals in the water supply and/or wastewater stream potentially toxic to biological wastewater processes). This design is based on the site assessment carried out by Kiwi Pioneer Co Ltd. Subsequent changes to the site that might affect the topography and soil profiles are to be notified by the client. Failure, by the Client, to provide this information will invalidate this design producer statement.

Approval is to be sought from Kiwi Pioneer Co Ltd, should variations to the specification and layout in this report/drawing be considered necessary by the installer prior to or at the time of installation. Failure to do so will invalidate the Design Producer Statement and Kiwi Pioneer Co Ltd will no longer take responsibility for the design.



Date: 12 April 2019



Mike Copeland
Director: Kiwi Pioneer Co Ltd

Appendix A: Soil investigation results

Test pit 5



Total hole depth		1000mm
Sample taken at		700mm
Depth (mm)	Colour	Description
0 - 300		Top Soil. Well structured. 0% aggregates >2mm Colour – Brown
300 – 1000+		Weathered granite sand. No structure. 0% aggregates >2mm. Colour –Off white



Soil analysis

	Soil test
Pit or auger	TP 5
Sample depth	700
Colour	White
Structure	Nil
Bolus strength (coherence)	weak
Grittiness	High
Stickiness	Low
Sponginess	Low
Plasticity	Low
Stain	Low
Ribbon length (mm)	15
Soil type	Fine sandy loam
Soil category	3
Comments	Compacted

Test pit 6

Total hole depth		700mm
Depth (mm)	Colour	Description
0 – 200		Top soil. Well structured. 0% aggregates >2mm. Colour – Brown
200 - 700+		Granite sand. Less weathered than TP5. Auger can still penetrate. Colour – Off white

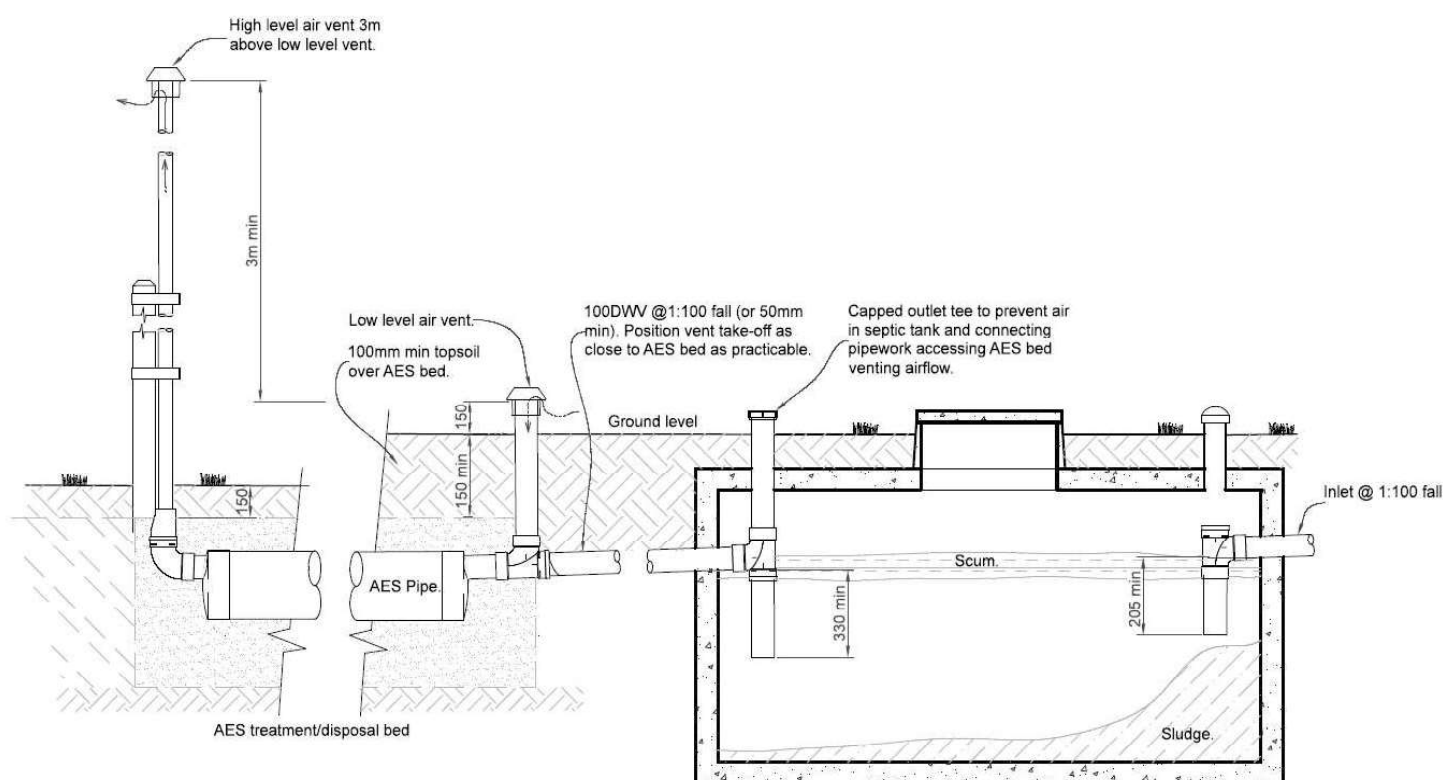


Appendix B: OWMS Components and Installation Specifications

1. Septic tank specifications

New tank	
Septic tank capacity	Alpha Precasts ST5000 or similar
Distance from buildings	Min. 3m
Inlet pipe diameter	100mm DWV pipe
Pipe gradient	1:100
Outlet filter	Not required
Outlet pipe diameter	100mm DWV
Installation Note: It is the installers responsibility to ensure the tank is anchored in the ground	

2. Septic tank and AES sand bed venting



Installation notes:

- The high vent is to be located at the back of the dwelling.
- Cap outlet tee to prevent airflow between septic tank and low vent. Failing this air entering the low vent may travel through the septic tank to the terminal vent, thereby precluding ventilation of the AES bed itself.

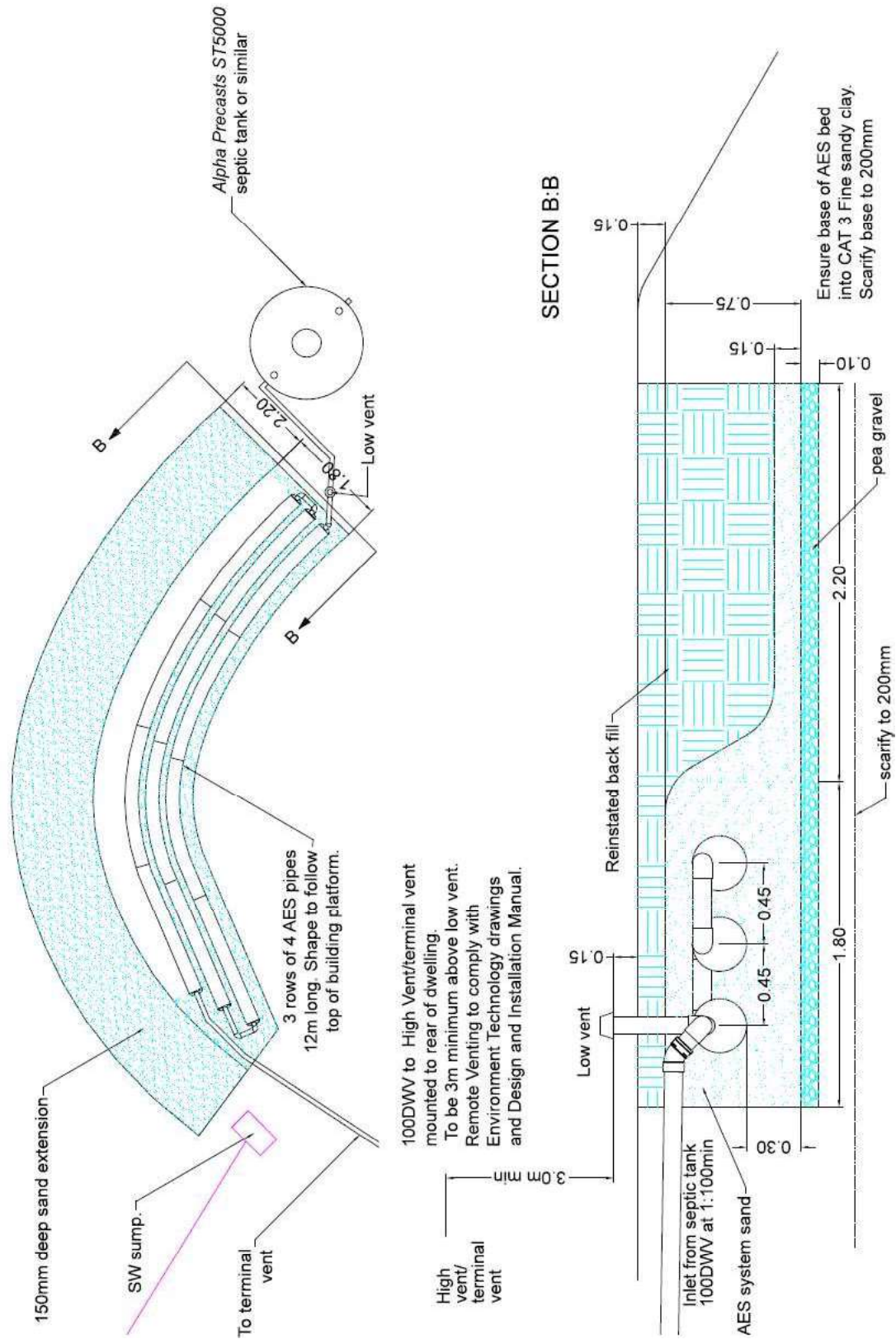
3. AES sand bed specifications

Delivery pipe from Septic tank	100mm DWV
Min. fall of delivery pipe	1:100
Design loading rate (DLR):	20mm/day (ASNZS1547:2012 Table L1)
Distance from property boundary	>1.5m
Low vents	100mm DWV 150mm above ground level
High vent	80-100mm DWV a minimum 3m above lower vent, located at back of the dwelling as terminal vent.
AES sand bed	
No. of AES pipe rows	3
No. of AES pipes per row	4
AES sand bed length	16.25m
AES sand bed width	4m (1.8m + 2.2m sand extension)
Total AES sand bed area	65m ²

4. Material quantities for AES sand beds with 1.3 bulking factor

Volume of system sand	34.4m ³
Volume of pea gravel	8.5m ³
Volume of top soil	reuse what is dug out
Number of AES pipes	12
Number of AES couplers	9
Number of AES off set adaptors	6
Oxygen demand vents	1

5. AES sand bed plan view and cross section



6. Installation Certificate

On-site Wastewater Completion of Works (PS3)

(To be completed by the installer)

Date:

Issues by:

To be supplied to: Tasman District Council

Site details

Address: 31 Pineview Way,
Legal Description: Lot 10 DP 519728
Client: Toni Evans and Sam McLeod

Description of OWMS:

- Installation of 5,000L septic tank;
- Installation of an AES sand bed: 4m x 16.25m = 65m²

Council consent number/date:.....

Installed in accordance with: Kiwi Pioneer Co Ltd Report, 12 April 2019 and conditions specified in council consent.

Date of site installation inspection:

By:

Report variations (if any):

Declaration

I believe on reasonable grounds that all of the wastewater works have been completed in accordance with Kiwi Pioneer Co Ltd report, 12 April 2019.

Installer's name

Signed:

Appendix C: Operation and Management of On-site Wastewater Service

Property location: 31 Pineview Way,
Property owner: Toni Evans and Sam McLeod
Prepared by: Kiwi Pioneer Co Ltd, Motueka

Date: 12 April 2019

A failed or failing wastewater system is not only a health risk to occupants and members of the public using the site, but also neighbours. Failure can cause nuisance odours, ponding and can be costly to fix!

Taking care about what is flushed or drained into the treatment system

Care must be taken by occupants of the dwelling to ensure large quantities of toxic substances do not enter the drainage system.

Minimize discharging the following substances:

- Bleaches, whiteners, nappy soakers, stain removers, disinfectants.
- Antibiotics.
- Sanitary pads, tampons, disposable nappies, condoms and excessive quantities of paper.
- Excessive fats, cooking oils and greases.
- Antiseptics liquids.

Do not discharge the following into the wastewater system;

- Alkaline detergents such as caustic soda;
- Acids, pesticides, herbicides, chemicals;
- Paints, varnishes and paint thinners;
- Drugs and pharmaceuticals;
- Motor oil;
- Sanitary napkins and other hygiene products
- Toys, clothing, plastic bags.....

To support the living ecology in the treatment tank and in the land application area:

- Use biodegradable soaps;
- Use a low-phosphorus detergent;
- Use a low-sodium detergent;
- Use detergents in the recommended quantities.

Apply common sense – there are living organism in the system breaking down normal body waste products and heavy doses of toxic substances will kill these essential organisms and cause the system to fail.

Avoid excessive water volumes entering the treatment system. This system comprises a Septic tank and AES sand bed, which have been designed for no more than 1305L per day of wastewater. Volumes in excess of this for periods of longer than four days are to be avoided.

Regular Maintenance

Septic tank servicing

Septic tanks and on-site waste water treatment systems need regular maintenance to work properly. Public health risks and the impact on the local ecological systems will be minimised if the system is well-maintained.

Some key points to note:

- Protect the tank from vehicle access and damage.
- Ensure access covers of the septic tank are easily exposed.
- Check the sludge level and surface scum thickness in the septic tank annually.
- Pump out tanks when the sludge (build-up of material on bottom of tank) and the scum takes up 1/2 or more of volume of tank's first chamber (check yearly).

AES sand bed

The sand bed needs to be demarcated to discourage access by unauthorised people and vehicles. Ensure air vents do not become overgrown or damaged so as to prevent inflow of air to the AES pipe work.

Planting

Deep rooting trees or shrubs should not be planted with 5m of the sand bed

Record keeping

File this report, as-built reports and consent documents. Maintain operational and monitoring records and required by Regional Council Consent. Maintain a written record of problems, servicing and maintenance of the wastewater system.

Change of ownership



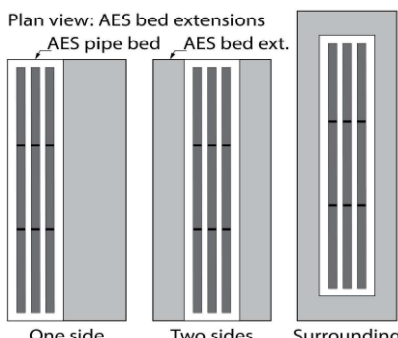

The consent notice for the wastewater treatment system, its specifications and site plan must be kept in a handy and safe place. These are to be given to a new owner, if and when, a property changes ownership.

Appendix D: TRMP 2011 Rule 36.1.2.4 – permitted activity conditions

The discharge of domestic wastewater into land from an on-site wastewater treatment disposal field is a permitted activity that may be undertaken without a resource consent, if it complies with the following conditions:		Complies ✓ or ✗
a.	Any discharge first commencing after 19 September 1998 is not in any Special Domestic Wastewater Disposal Area.	
b.	Any discharge first commencing after 20 December 2003 is not within the Wastewater Management Area.	✓
c.	The volume of effluent discharged is not more than a weekly averaged flow of 2,000 litres per day.	✓
d.	There is no discharge or run-off of effluent into surface water.	✓
e.	The disposal field is located not less than: (i) 20 metres away from any surface water body, or the coastal marine area; (ii) 20 metres from any bore for domestic water supply; (iii) 1.5 metres from any adjoining property.	✓ ✓ ✓
f.	The design and operation of the system must result in the depth of unsaturated soil between the effluent disposal field and the average winter level of groundwater or of the basement rock being no less than 500 millimetres or sufficient to ensure that the discharge does not result in any bacterial contamination of groundwater beyond the property boundary.	✓
g.	There is no discharge of effluent from the disposal field to the ground surface.	✓
h.	The septic tank must be regularly desludged so that the liquid volume (excluding sludge and scum) is maintained at not less than one-third of the tank volume.	✓
i.	The discharge does not create an offensive or objectionable odour discernible beyond the property boundary.	✓
j.	An access point to allow sampling of the effluent being discharged to the disposal field must be provided with any on-site wastewater disposal system installed after 19 September 1998.	✓
k.	The quality of the effluent being discharged into the disposal field does not exceed the following standards: — BOD-5: 150 milligrams per litre — Total suspended solids: 150 milligrams per litre	✓

Appendix E: Building Act 2004 requirements

Code/clause	Requirements	Assessment
B1 Structural	The proposed structures are to be of such a standard to ensure public safety and protection of property.	The wastewater treatment system is a significant structural component and is required to conform to B1
B2 Durability	To ensure the durability of the “building”. The code implies durability of materials.	Kiwi Pioneer Co is confident that all component materials will, within reason, meets the durability requirements of B2.
G13 Foul water	This code applies to above-ground non-pressure (gravity flow) sanitary plumbing for buildings having 3 levels or less and includes all pipe work for foul water within, or on the building, including any basements.	All conditions and requirements under G13 can be met.
E1 Surface water	(a) Safeguard people from injury or illness, and other property from damage, caused by surface water, and (b) Protect the outfalls of drainage systems	All stormwater is to be diverted away from the LAA.

 BC190480		PS2 AES Design Calculator - Residential* Schedule of Materials		 12-6-2019	
Environment Technology (ET) Ph: 03 970 7979 Email: info@et.nz www.et.nz ET Nelson warehouse: 105 Pascoe St, Annesbrook, Ph: 03 547 3030		For use by consenting authorities - a signed calculator is a PS-2; proof of design review by ET. For use by wastewater system designers for sizing of AES wastewater treatment systems receiving residential strength wastewater. Supplied to ET with design/ drawings and then signed by ET			
When ordering AES materials - installers please supply to ET a Design Calculator signed by ET and council consented plans.					
Site Address	31 Pineview Way, Motueka Valley				
Client Name	Toni Evans and Sam McLeod				
Designed By	Kiwi Pioneer Co Ltd	Designer Phone #	021 654931	Designer AES Cert. #	QLD00522
Installer		Installer Phone #		Installer AES Cert. #	
Council Area	Tasman District Council	Drainlayer Licence #		Date	11.04.2019
Receiving soil category, surface water, water tables & all other site constraints to be addressed by designer.					
System designer's site and soil data. Enter data in light blue fields.				NOTES	
Number of bedrooms	5	>> Enter "NA" if this design is for a campground, office, cafe etc without bedrooms.			
Number of people	9				
Daily wastewater design flow allowance per person (l/p/d)	145				
Loading rate for AES pipes (L/m AES pipe/d)	38.0	>> Standard rate is 38 L/m AES pipe/d, averaged over a week. This is the NZ certified loading rate.			
Do you want to use cut AES pipes - eg. 3.5 AES pipes per row? Y or N	n				
AES bed - No. of rows to suit site - max. AES pipe row length 30m/ 10x3m lgth	3	>> Longer AES beds increase contact area with surrounding soil.			
Soil Category (per AS/NZS 1547) from site & soil evaluation	3				
Design Loading Rate (DLR) based on soil category (mm/day)	20	>> Soil conditioning may be necessary. Ref AS/NZS 1547/ TP58/ GD06 & Notes below.			
Sand depth beneath AES pipes - standard 300mm tested 3.5 FC Log reduction	300	>> Standard 300mm achieves 3.5Log reduction for FC**; increase sand depth to reduce FC further. Total expected FC Log reduction through AES system in this design: 3.5Log.			
Is there a pump between the septic tank and the AES bed? Y or N	n	>> Ensure there is 50mm min. fall between septic tank and AES pipes, and pipework laid at 1:100 min.			
Is this property sloping? Y or N	y	>> Ensure surface water is diverted away from AES bed.			
Is this design vented to the building terminal vent (TV)? Y or N	y	>> Fit inspection on TV to allow fitting of carbon filter if required.			
Diameter of high vent (mm)	100	>> 65mm, 80mm or 100mm.			
Is sampling of the treated effluent required? Y or N	n				
Distribution Box required Y or N	n	Number of ports required, including inlet port, and port for air vent if so designed.			
NOTES: Increasing the pipe loading rate reduces the buffer capacity/ total volume of the pipes. The total volume of the AES pipes is 20,352L, which still allows room peak flows to be discharged over a relatively short time.					
- Scarification of receiving surface is required in clay soil structures in Cat 4,5,6. In addition refer to AS/NZS 1547.2012, TP58 and GD06 (draft) Always excavate and scarify parallel to the site slope and the rows of AES pipe.					
- All sloping sites require special consideration regarding design of AES bed, sand extensions, surface water and construction methods as per AS/NZS 1547. - Drainlayers ensure good construction techniques ref. AS/NZS 1547 are especially important in these soil types. Ref AS/NZS1547 & AES installation Instructions.					
Plan view: AES bed extensions 		AES Bed Design Calculator Outcomes			
		Daily design flow (Q)	1305.00 L/d		
		Min. length of AES pipe rows	11.45 m		
		No. of 3m AES pipes per row	4.00 lths		
		Total volume of AES pipes	2544.00 L		
		For 'Surrounding' extension or to increase bed length/ decrease width enter "Y" - otherwise leave blank:		y	If "Y" enter custom width (m) of AES bed - otherwise leave blank:
		Length (m)	Width (m)	Minimum AES footprint required 65.3m2	
The dimensions of this AES bed with surrounding extension or increased bed length/ decreased width are:		16.3	x	4	= 65.3 m2 total
AES Bed Schedule of Materials				ET Signature box - ET Use Only	
AES 3m length pipes required		12	lths	 Signed by: Environment Technology Date & Time: 15 Apr, 2019 04:48:08 p.m. Producer Statement PS-2 Design Review - approved by ET. (Does not cover site and soil assessment by designer.)	
AES couplings required		9	ea		
AES offset adaptors		6	ea		
100mm vent cap with mesh		1	ea		
Vent cowl for high vent		1	ea - 100mm diam.		
80mm TV inspection with fittings					
Sample port not required					
Distribution box not required					
Total AES System Sand required (guide only)		22.9	m3		
To be used as a guide only; this AES Design Calculator is a design aid to assist calculating of the AES components and configuration. Site and Soil conditions as specified in NZS1547:2012 are calculated and designed by a Qualified Designer . Environment Technology has no responsibility for the soil evaluation, loading calculations or the DLR entered by the designer for this calculator.				Reviewed by: SVUHP 190415 Date: 15/04/2019 15:09 Data entry by:	
*Residential Effluent is classed as having less than 300mg/L BOD5 and 350mg/L TSS prior to entry into the septic tank, and does not contain wastewater from industrial processes. AES pipes can be cut to length on site. AES pipes are supplied in 3 metre lengths only.				Open PDF in Adobe Acrobat; hover over signature Follow link below to download Signature Verification macro www.securedsigning.com/products/signature-verification-service Click on signature in PDF to view signature validation	
** AES-38 single pass system achieved 3.5 log reduction for FC in OSET-NTP Trial 12, 2016-17 benchmarking period. ***Microbial removal rates through medium sand - Pang (2009). Microbial Removal Rates in Subsurface Media Estimated From Published Studies of Field Experiments and Large Intact Soil Cores					
To have a design reviewed and signed off by ET - Designers please email your AES Design Calculator and drawings to design@et.nz To order AES components - installers please email your signed AES Design Calculator and council consented plans to info@et.nz					

4. Proposed onsite wastewater management service

4.1 Influencing factors

– Soil type

The soil at the site is a Category 3, Fine sandy loam (weathered granite sand) with no structure. This soil type is suitable for receiving secondary treated effluent at a design loading rate of 20mm/day (AS/NZS 1547:2012, Table L1). An AES sand bed, with its secondary treatment processes, is a suitable wastewater disposal system for this soil type.

– Client's preference

The client's preference is to have a passive system. The proposed OWMS utilises an AES sand bed and will not require power and thus meets this requirement.

4.2 Proposed onsite wastewater management system

In consideration of the above factors the following OWMS is proposed:

Septic tank to AES sand bed; refer to Table 3 and Figures 2 - 4.

For OWMS component and installation specifications refer to Appendix B.

TABLE 3: PROPOSED ONSITE WASTEWATER MANAGEMENT SERVICE

Primary treatment system	Septic tank – Alpha Precasts ST5000 or similar	
LAA	Maximum daily flow rate	1305L/day
	Design loading rate (DLR)	÷ 20mm/day
	LAA area required (min.)	= 65m ²

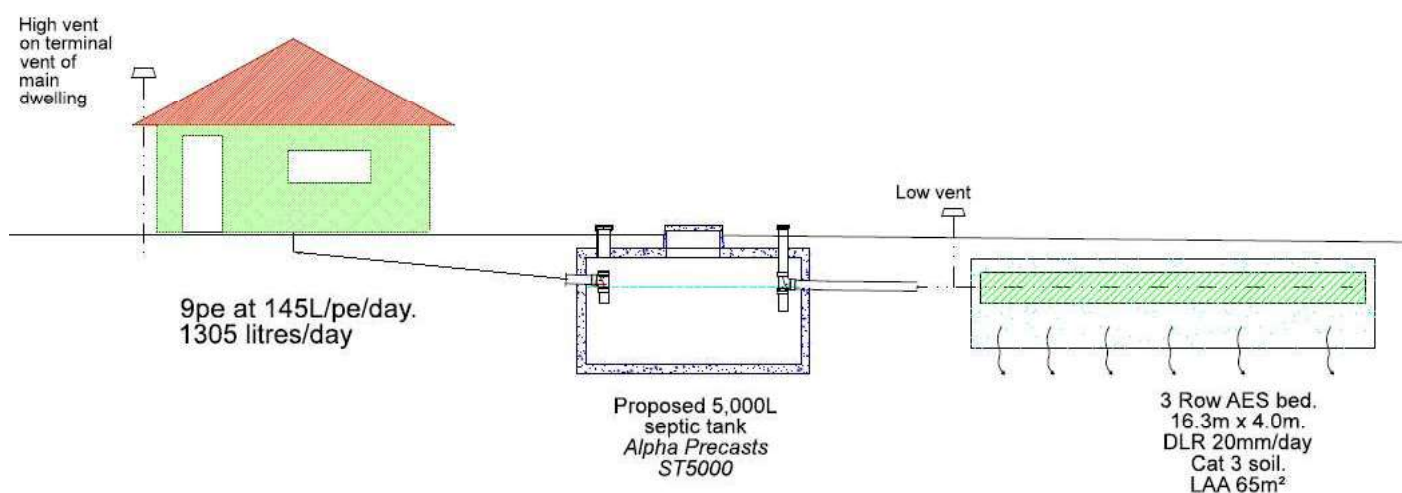


FIGURE 2: OWMS SCHEMATIC

4.3 Maintenance

The proposed wastewater service is a passive system and has been designed to operate with low maintenance requirements. For wastewater system management refer to Appendix C.

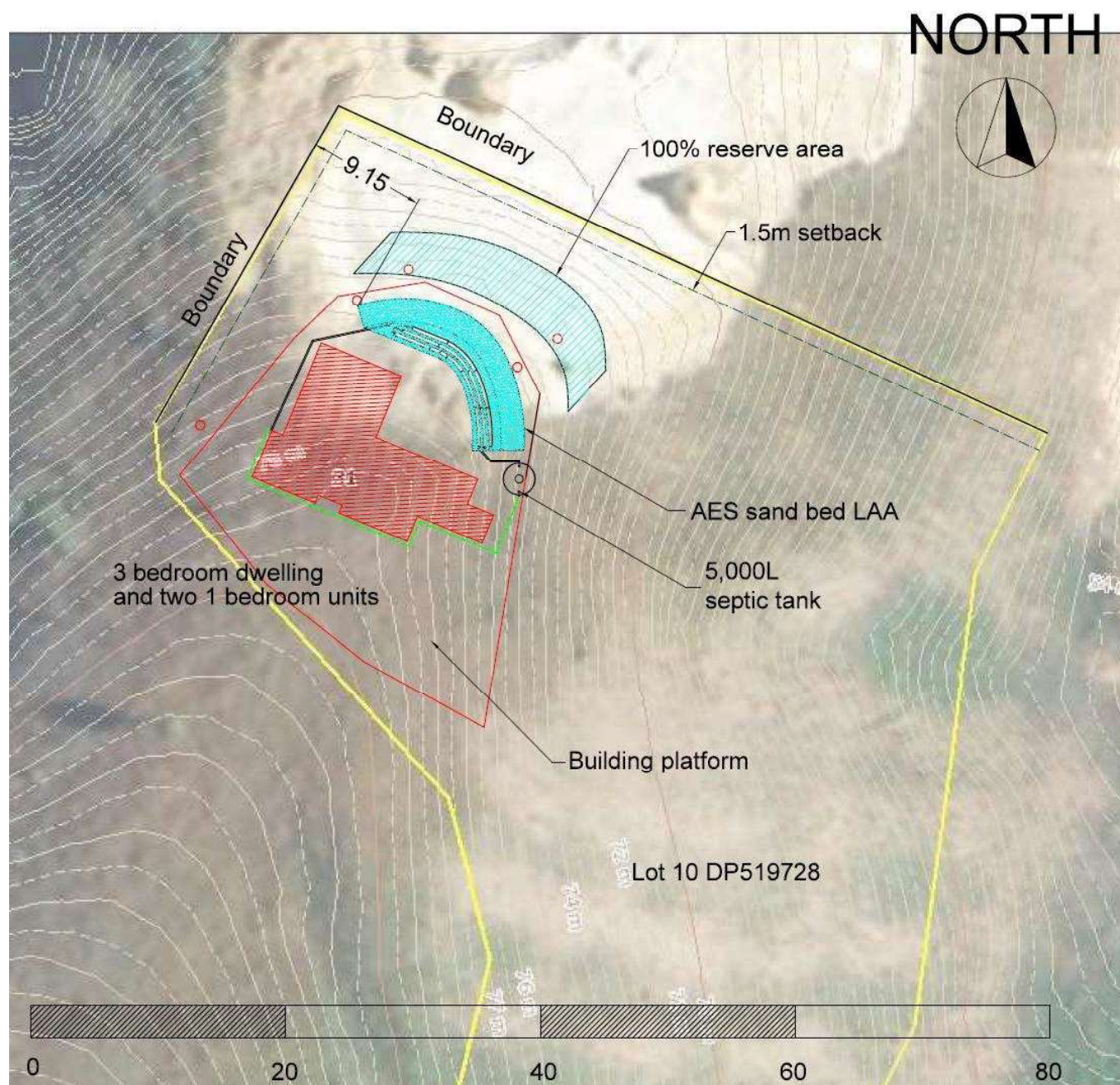


FIGURE 3: OWMS LOCATION WITHIN THE SITE

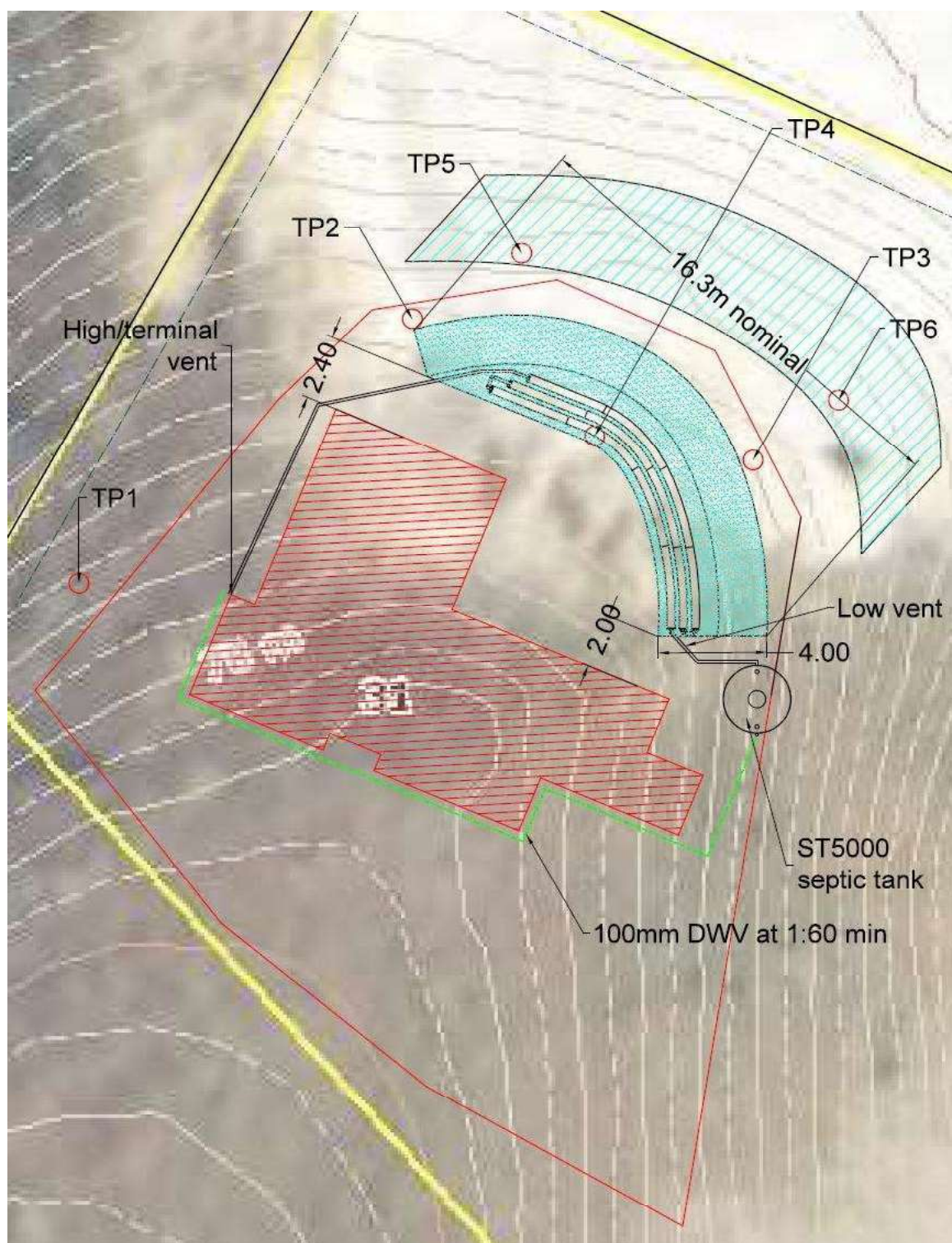


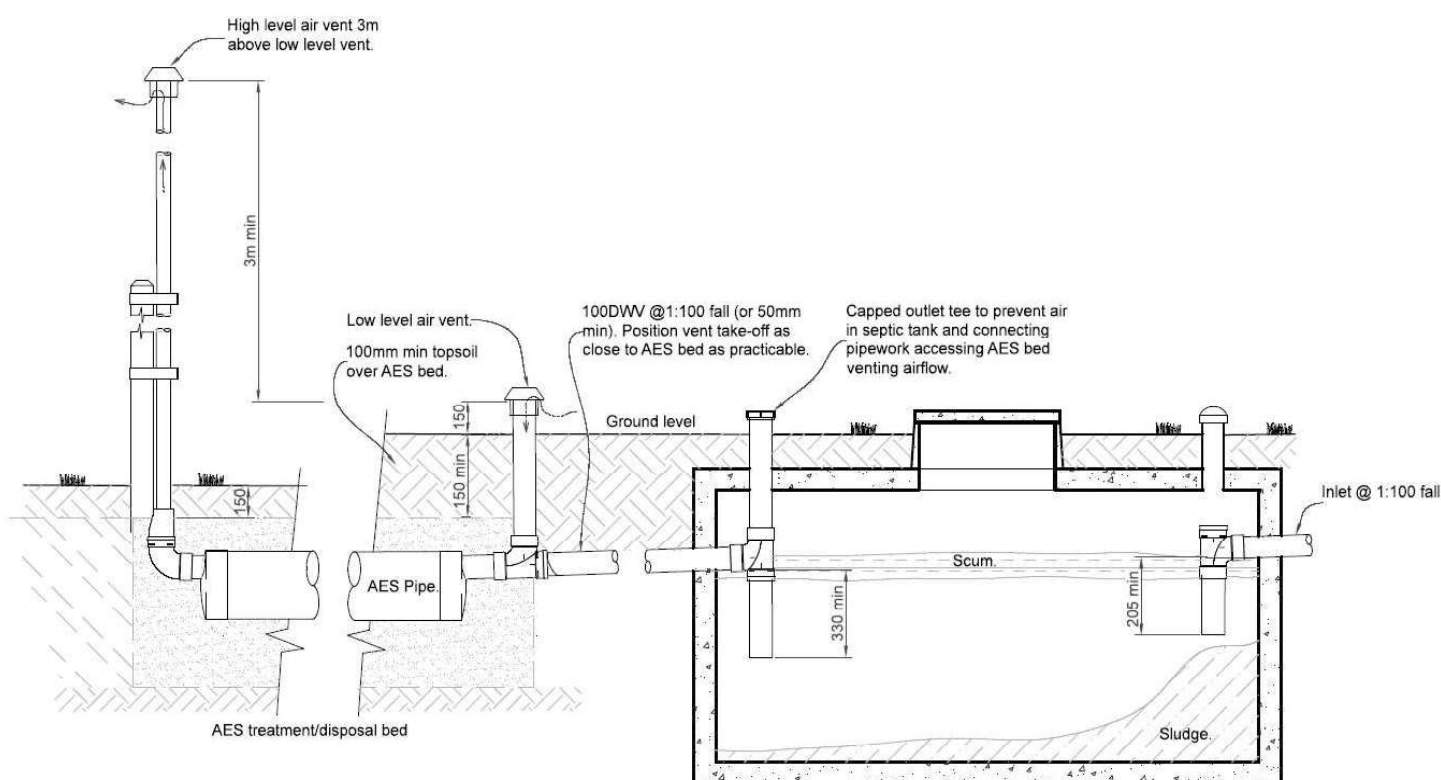
FIGURE 4: OWMS SITE MAP

Appendix B: OWMS Components and Installation Specifications

1. Septic tank specifications

New tank	
Septic tank capacity	Alpha Precasts ST5000 or similar
Distance from buildings	Min. 3m
Inlet pipe diameter	100mm DWV pipe
Pipe gradient	1:100
Outlet filter	Not required
Outlet pipe diameter	100mm DWV
Installation Note: It is the installers responsibility to ensure the tank is anchored in the ground	

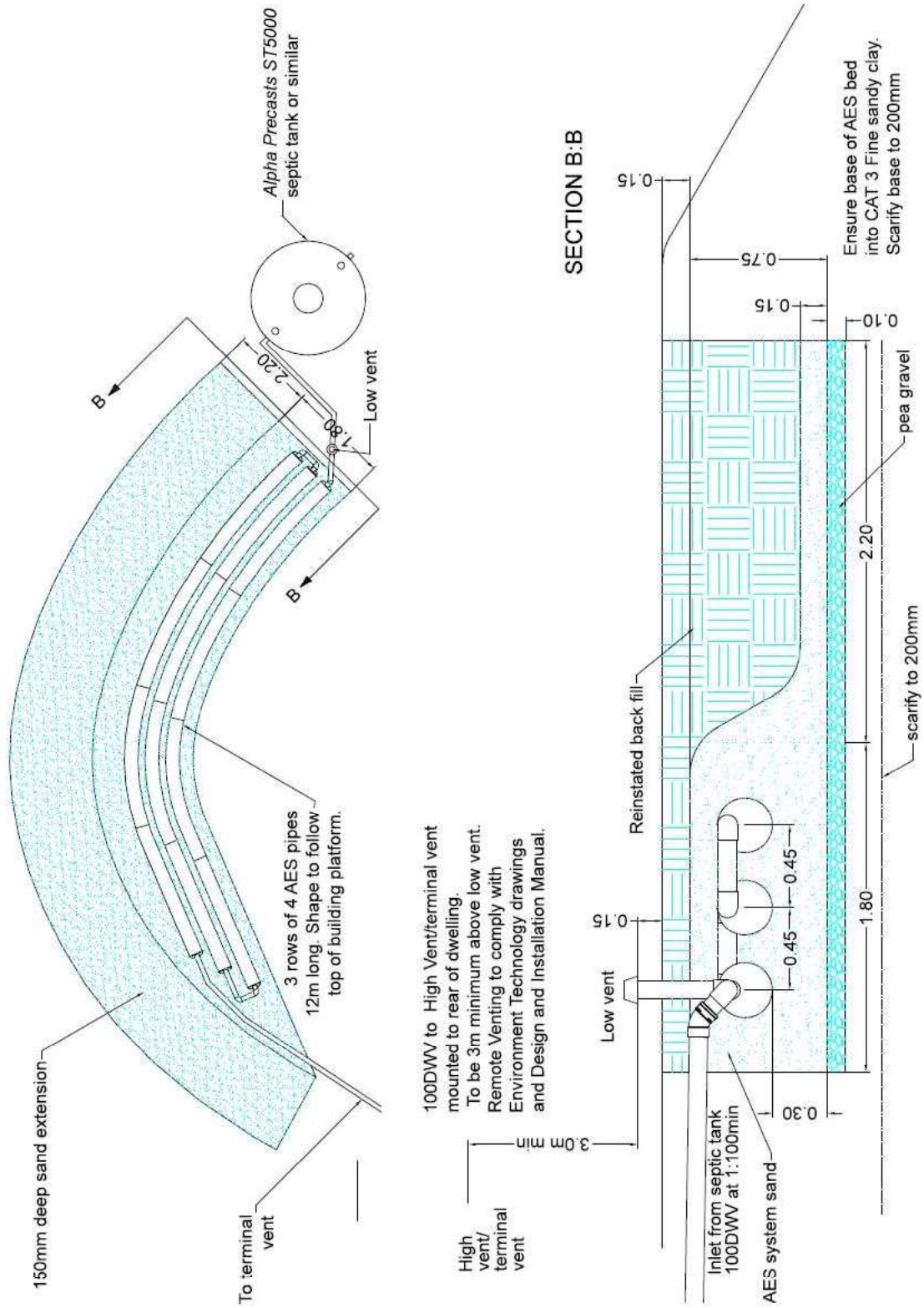
2. Septic tank and AES sand bed venting

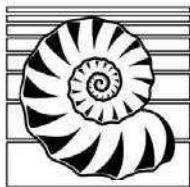


Installation notes:

- The high vent is to be located at the back of the dwelling.
- Cap outlet tee to prevent airflow between septic tank and low vent. Failing this air entering the low vent may travel through the septic tank to the terminal vent, thereby precluding ventilation of the AES bed itself.

5. AES sand bed plan view and cross section





GEO-LOGIC
L I M I T E D

7028.11

17 July 2018

The Engineering Manager
Tasman District Council
Private Bag 4
Richmond

Geotechnical Building Site Certification, Lot 10, ROW C; Hunu Hills Ltd, MOTUEKA

ISSUED BY: Geo-Logic Ltd
TO: Hunu Hills Ltd
SUPPLIED TO: Tasman District Council
IN RESPECT OF: Lot 10, ROW C
AT: Mytton Heights Road, MOTUEKA

We have carried out an investigation in accordance with sound engineering and geotechnical principles and practice on the above property and in accordance with Schedule 2A of NZS 4404:2004.

This certificate is submitted in conjunction with Geo-Logic Ltd ***Certification Site Plan*** dated 15 July 2018 defining an area suitable for the erection of a residential dwelling. Our work was undertaken to address Engineering Certification stipulated as a condition of Resource Consent for the Subdivision (RM130940):

Certification from a geotechnical engineer that the building platform is suitable for the erection of residential buildings..... The certificate shall define on each lot within the building location area that it is suitable for the erection of residential buildings and shall be in accordance with NZS4404:2004 Schedule 2A.

We visited the site on 16 February 2018 as a part of site certification. Our work has been completed in association with the project engineer Richard Walker of Engineering Sustainable Solutions Ltd (ESS) who prepared the engineering completion report (ESS, 2018). The lot boundaries surrounding the Project Area were supplied by BRV as referenced in the attached ***Certification Site Plan*** sheet 01.

Geo-Logic Ltd was not involved in the design or construction observation of the earthworks undertaken as a part of this site development which were carried out under the direction of the Project Engineer, Richard Walker of ESS as documented in his engineering completion report. For completeness that report should be read in conjunction with this site certification report.

ENGINEERING GEOLOGY & GEOTECHNICAL SERVICES

Tel 64-3-546 7425 Fax 64-3-546 7208 Email geoquest@geo-logic.co.nz

Web www.geo-logic.co.nz Postal PO Box 880, 17A Examiner Street, Nelson 7015, New Zealand

The engineering completion report notes *“The earthworks for the Lot 10 platform were constructed by Dr Dig Ltd between November 2017 and June 2018. All areas of the earthworks were stripped of topsoil and unsuitable material prior to the excavation for the building platform. All the earthworks for the Lot 10 platform required cut only.”* The Project Engineer *“...monitored the construction of the earthworks and drainage works for the construction of the Lot 10 platform and driveway with several site inspections during the course of the works between November 2017 and June 2018.”*

For the current geotechnical site certification, we undertook Scala penetrometer testing on the finished platform. The results of the Scala testing are attached. Scala test SP-10.1 and SP-10.2 both encountered effective refusal at or very near the finished ground surface suggesting competent ground exists at a shallow depth on the platform which is entirely in cut ground. The test results attached reflect ground conditions at the locations of the test on the test date. Ground conditions may vary at other locations not tested.

We have viewed the site on a number of occasions during development, while in the area for other work. Our services were provided as per an IPENZ Agreement dated 28 March 2017.

Certified Building Area Designation

A certified building area has been designated for Lot 10 as shown on the attached ***Certification Site Plan***, sheet 01. The approximate dimensions of the Certified Building Area are as indicated and the certified Building Area designated on the attached Certification Site Plan, sheet 01 has incorporated the Building Location for Lot 10 from the plan included in the Engineering Completion Works report (ESS, 2018).

The certified building area on Lot 10 is situated on a strong spur and granite bedrock is well exposed on the site and immediately upslope and along the access road (refer ***Photoplate 1.2***). The weathered granite bedrock consisting of white SILTY SAND exists at shallow depths on the platform which has been developed by cut. No ‘very soft’ soil was encountered. The site therefore meets the criteria set out in NZS1170.5 Earthquake Actions NZ, clause 3.1.3 *Site Subsoil Class*, for a subsoil *class C, shallow soil*, as depth to bedrock at all locations on the site is very likely to be less than 20m.

Appropriate plantings are recommended on the slopes to the northeast and west of the platform and review and maintenance of these slopes is recommended following intense or prolonged rainfall events until such time as vegetation is well established on the sloping ground. The site generally, and including the certified building area, exhibits a very high degree of stability.

In general buildings are to be set out a minimum of 2 metres from the edge of the platform *“Specific engineering investigation and design should be required for the foundations for any building less than 2 metres from the as built edge of the Lot 10 platform”* (ESS, 2018) as shown on the ***Certification Site Plan***. The Engineering Completion report specifies *“There should be a minimum of 5 metres between the west side of the watertanks and any building.”* Specific investigation and design areas are double hatched areas, as per the legend.

GROUNDWATER No seepages were observed on this site at the time of our most recent site visits is located on a strong spur. Seepages were noted in the vicinity of the western slopes prior to site development earthworks (Geo-Logic 2010, 2012). As groundwater levels may vary seasonally provision for collection and controlled discharge of groundwater must be incorporated in any/all retaining wall design.

FILL Lot 10 is entirely in cut. There is no fill except, as noted in the Engineering Completion Works report, “...a very small area of fill adjacent to the two water tanks at the south east corner of the building platform.”

ACCESS The building area is readily accessed from ROW C adjacent and to the west.

Please refer to the engineering completion report for further details of site development generally.

Certification

I am a geo-professional as defined in section 1.2.2 of NZS 4404 and was retained by the developer as the project geo-professional. It is our professional opinion, not to be construed as a guarantee, that there is an area (defined in Geo-Logic Ltd **Certification Site Plan** - Sheet 01) suitable for the erection of a residential building provided that:

1. Building shall be within the Certified Building Area designated on Geo-Logic’s **Certification Site Plan** – Sheet 01 dated 15 July 2018.
2. Foundations for any building on the platform shall extend through topsoil and subsoil and any areas of fill to bear in competent natural ground.
3. In general buildings are to be set out a minimum of 2 metres from the edge of the platform as shown on the **Certification Site Plan**. Otherwise specific investigation and design is required.
4. Provision shall be made for on-site stormwater mitigation in accordance with the report by Engineering Sustainable Solutions (ESS) Ltd, titled: “Proposed Subdivision South of Mytton Heights Road for Atamai Village Stage Three at Motueka Valley” dated December 2013.
5. Provision for collection and controlled discharge of groundwater must be incorporated in any/all retaining wall design.
6. Granite soils on the site are sensitive to erosion. Collection of water from roofs, paved areas, retaining walls and water storage system overflows shall be discharged in a controlled manner to avoid erosion. Adequate subsoil drainage is to be provided for collection and controlled discharge of groundwater in any/all retaining wall design.
7. Penetrometer tests should be carried out by a suitably qualified person to confirm suitable firm bearing as part of the application for building consent.
8. The site is located on the centre of a strong spur and exhibits a very high degree of stability. Weathered granite bedrock is present at shallow depth, and no ‘very soft’ soil was encountered. The site meets the criteria set out in NZS1170.5 Earthquake Actions NZ, clause 3.1.3 *Site Subsoil Class*, for a subsoil class C, *shallow soil*, as depth to bedrock at all locations on the site is very likely to be less than 20m.
9. The positioning and design of any effluent disposal to land is to be designed and constructed by a qualified engineer experienced in effluent disposal systems.
10. If unusual ground conditions are encountered the services of a Chartered Professional Engineer experienced in geotechnical engineering or an experienced Engineering Geologist shall be sought.

11. Planting of suitable vegetation on exposed slopes is recommended to minimise any erosion potential, stabilise the soil and control subsoil moisture. Review and maintenance of this slope is recommended following intense or prolonged rainfall events until such time as vegetation is well established on the sloping ground.
12. These conditions and recommendations relate to the general stability of the site and do not remove the need for inspection and design of foundations that would normally ensue in natural ground.

Limitations

This certificate is furnished to Tasman District Council. It is acknowledged that the Council is entitled to provide information contained in this certificate pursuant to Section 31 of the Building Act 1992 and Section 44A of the Local Government Official Information and Meetings Act 1987.

This certificate relates to geotechnical, slope stability and engineering considerations of the site only. Stormwater runoff, set backs from boundaries, provision of services, and building codes have not been considered in the issue of this certificate. It is recommended that the applicant seek further professional input on these other matters.

No liability is accepted by Geo-Logic Ltd or by any principal, or director, or any servant or agent of this firm, in respect of its use by any other person. Any other person who relies upon any matter contained in this report without consultation with and agreement by Geo-Logic Ltd as to its applicability to that persons intentions, does so entirely at their own risk. This disclaimer shall apply notwithstanding that the report be made available to any person in connection with any application for permission or approval, or pursuant to any requirement of law.

This certificate must be reviewed for applicability in the event that any substantial modifications are made to the site or adjacent properties such that site conditions are changed substantially from current site conditions. Other time limitations may be imposed by regulatory authorities.

References

ENGINEERING SUSTAINABLE SOLUTIONS LTD, 2018: Hunu Hills Subdivision RM 130940 – Stage 3H, Completion of Works for Building Platform for Lot 10 at Right Of Way C. Engineering report prepared for the Tasman District Council on behalf of Hunu Hills Ltd dated 28 June 2018 (ref ESS 1512).

GEO-LOGIC LTD, 2010: Geotechnical Investigation, Proposed 30 Lot Subdivision, Atamai Village – Stage 2, Motueka Valley Highway, Motueka. Consultant's report prepared for Atamai Village Council dated September 2010 (reference 7028.01)

GEO-LOGIC LTD, 2012: Geotechnical Review, Revised Atamai Village STAGE 2 Scheme Plan, Atamai Village, Mytton Heights Road, Motueka Valley, Motueka. Letter prepared for the Tasman District Council on behalf of Atamai Development dated 23 August 2012 (reference 7028.01)

If you have any queries or require clarification please contact me by phone or email.

Yours faithfully
GEO-LOGIC LIMITED



Paul Denton
Engineering Geologist

Attachments:

Certification Site Plan - sheet 01
Photoplate 01, Overviews of Lot 10
Scala Penetrometer test results (2 sheets)

CC: Hunu Hills Ltd
58C Mytton Heights Road
RD 1MOTUEKA 7196
Attention: Jeff Santa Barbara
jsantab5@gmail.com

Richard Walker
Pigeon Saddle
Wainui Bay
TAKAKA RD1
richard.essltd@gmail.com

Scalar Penetrometer

31 Pineview way

Motueka

22.04.2019

Conducted by

Greg Benjamin

09/04/2019

For Sam MCloud & Toni Evans

Geo-logic in their report dated 17.07.2018 asks in condition 7, for penetrometer tests to be done at building consent stage.

Ground bearing: NZS3604:2011 3.3.2

Conditions were dry when tested. The building location area is a flat cut area.

Five areas were tested, marked 'a-e' on the site plan, these areas encompass the area that will be built on. (apart from the sleepout)

All 5 penetrometer tests indicated 'good ground' as described in NZS3604:11 and having an ultimate bearing capacity of greater than 300kPa at pile depths.

Greater than 5 blows per 100mm was encountered at a depth of 250mm below the cut surface in all locations.

Refusal (or effectively refusal) was found in all locations at a maximum depth of 700mm.

These findings are consistent with the Geo-logic report which states 'refusal at or near the surface' on the two scalar penetrometer test they recorded.

Greg Benjamin

22.04.2019

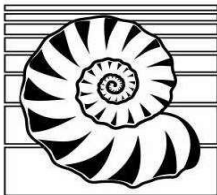


SHEET 01	REV
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BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019



GEO-LOGIC
L I M I T E D

Hunu Hills Ltd
Geotechnical Site Certification
Lot 10 – ROW C
Motueka Valley Highway
7028.11



1.1 Lot 10 building platform as of 16 Feb 2018. View looking north.

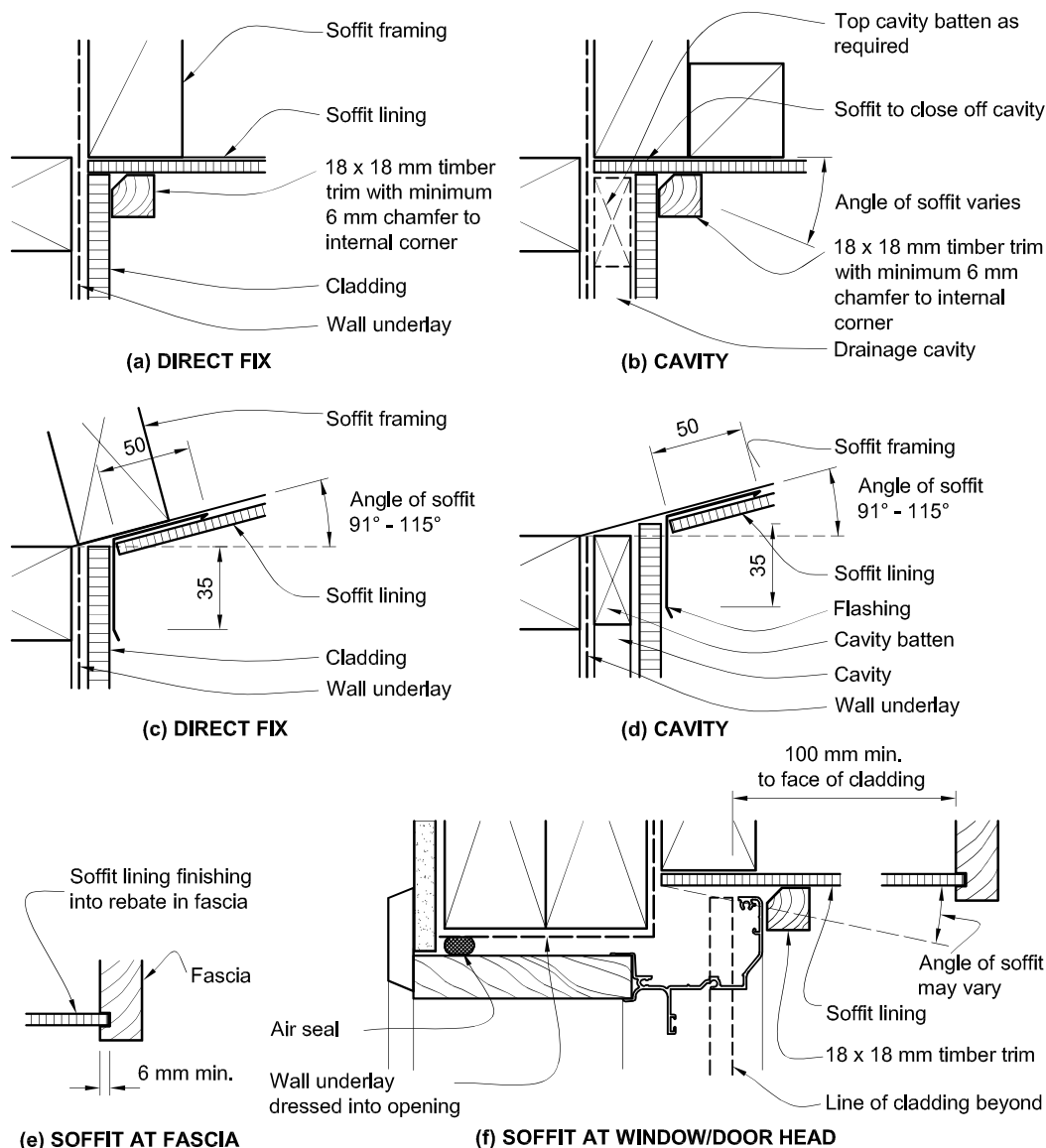


1.2 Excavation near of Lot 10 building platform as of 16 Feb 2018. View looking east.

Photoplate 01 *Overviews of Lot 10*

SCALA PENETROMETER TESTS



Amend 5
Aug 2011**Figure 8A: Soffit/wall junction**
Paragraphs 5.3, 8.1.3.1, 8.4.6, 9.7.5, 9.8.6Errata 2
Dec 2011Amend 2
Jul 2005Amend 5
Aug 2011

- b) For profiled metal, incorporates *stopends* at the upper end of the *roof cladding* as per Paragraph 8.4.13,
- c) Provides a minimum clearance from the *wall cladding* to the roofing in accordance with Table 7, and
- d) Extends over the roofing by a minimum cover in accordance with Paragraph 4.6.1.1 and Table 7, depending on the:
- wind zone* and,
 - pitch of the roof*.

COMMENT:

40 mm is the maximum upturn achievable with pressed metal tiles, meaning that a *flashing* is required.

Details for specific *wall cladding systems* are given in Paragraph 9.0.

Where the roof finishes within the length of an adjacent *wall*, a *kick-out* or *stopend* as detailed in Figure 8B shall be provided to direct water out from the *wall cladding* onto the *roof cladding* and gutter.

Amend 2
Jul 2005Amend 5
Aug 2011Amend 2
Jul 2005

BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019



BRANZ Appraised
Appraisal No. 615 [2017]

**FAST WRAP BUILDING
WRAP**



Appraisal No. 615 [2017]

This Appraisal replaces BRANZ
Appraisal No. 615 [2008].

BRANZ Appraisals

Technical Assessments of
products for building and
construction.



**Judea Holdings Ltd,
T/A Paul Industries**

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Tauranga 3140

Free phone: 0800 330 320

Tel: 07 578 8209

Fax: 07 928 5244

Web: www.paulindustries.co.nz



BRANZ

1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand
Tel: 04 237 1170
branz.co.nz



Product

- 1.1 Fast Wrap is a synthetic building underlay for use as a flexible wall underlay under wall claddings on timber and steel framed buildings. The product is manufactured from an ultra-violet (UV) light resistant non-woven, spun-bonded polypropylene and is coloured beige.

Scope

Flexible Wall Underlay

- 2.1 Fast Wrap has been appraised for use as a flexible wall underlay for timber and steel framed buildings within the following scope:
- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
 - with direct fixed absorbent and non-absorbent wall claddings; or,
 - with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; or,
 - with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1 for timber framed buildings or to a specific design for steel framed buildings; and,
 - situated in NZS 3604 Wind Zones up to and including Very High.

Use over Rigid Wall Underlay

- 2.2 Fast Wrap has been appraised for use as a flexible wall underlay over rigid wall underlays on timber and steel framed buildings within the following scope:
- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
 - with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; and,
 - with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1 for timber framed buildings or to a specific design for steel framed buildings; and,
 - situated in NZS 3604 Wind Zones up to and including Extra High.

Specific Design

- 2.3 Fast Wrap has also been appraised for use on buildings subject to specific weathertightness design. Building designers are responsible for the building design and for the incorporation of Fast Wrap into their design in accordance with the declared properties and the instructions of Paul Industries.



Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Fast Wrap, if used, designed, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet, or contribute to meeting the following provisions of the NZBC:

Clause B2 DURABILITY: Performance B2.3.1 [a], not less than 50 years, B2.3.1 [b], 15 years and B2.3.2. Fast Wrap meets these requirements. See Paragraphs 9.1 and 9.2.

Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE: Performance C3.4 [c]. Fast Wrap meets this requirement. See Paragraph 10.1.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the cladding system, Fast Wrap will contribute to meeting this requirement. See Paragraphs 12.1 and 12.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Fast Wrap meets this requirement and will not present a health hazard to people.

Technical Specification

- 4.1 Fast Wrap is a beige, UV stabilised, non-woven spun-bonded polypropylene.
- 4.2 The product is supplied in rolls 1.370 m wide x 36.5 and 73 m long and 2.740 m wide x 18.5 and 36.5 m long. The product is printed with the Fast Wrap logo repeated along the length of the roll. The rolls are wrapped in clear polythene film.

Accessories

- 4.3 Accessories used with Fast Wrap which are supplied by the installer are:
- **Fixings** - staples, clouts, screws or proprietary underlay fixings, or other temporary fixings to attach the wall underlay to the framing.
 - **Wall underlay support** - 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to support the wall underlay in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5.

Handling and Storage

- 5.1 Handling and storage of the product, whether on or off site, is under the control of the installer. The rolls must be protected from damage and weather. They must be stored on end, under cover, in clean, dry conditions and must not be crushed.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Fast Wrap. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

- 7.1 Fast Wrap is intended for use as an alternative to conventional building papers which are fixed over timber or steel framed walls in order to limit the entry of wind into building cavities, and to act as a secondary barrier to wind-driven rain. Refer to Table 1 for material properties.
- 7.2 The material also provides a degree of temporary weather protection during early construction. However, the product will not make the building weathertight and some wetting of the underlying structure is always possible before the building is closed in. Hence, the building must be closed-in and made weatherproof before moisture sensitive materials such as wall or ceiling linings and insulation materials are installed.

BC190480



BRANZ Appraised
Appraisal No. 615 [2017]

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BRANZ Appraisal

FAST WRAP BUILDING WRAP

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- 7.3 Fast Wrap must not be exposed to the weather or ultra violet light for a total of more than 42 days before being covered by the wall cladding.
- 7.4 Fast Wrap is suitable for use as an air barrier where walls are not lined, such as attic spaces at gable ends, in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.4 (c).
- 7.5 In cavity installations where the cavity battens are installed at greater than 450 mm centres, the wall underlay must be supported between the battens to prevent the underlay bulging into the cavity space when bulk insulation is installed in the wall frame cavity in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.5. Wall underlay support options include polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens.

Table 1: NZBC E2/AS1, Table 23 [NZS 2295] Requirements

NZBC E2/AS1, Table 23 [NZS 2295] Wall Underlay Properties	Property Performance Requirement	Actual Property Performance
Absorbency	$\geq 100 \text{ g/m}^2$	Pass
Vapour Resistance	$\leq 7 \text{ MN s/g}$	Pass
Water Resistance	$\geq 20 \text{ mm}$	Pass
pH of Extract	≥ 5.5 and ≤ 8	Pass
Shrinkage	$\leq 0.5\%$	Pass
Mechanical	Edge tear and tensile strength	Edge tear [Average]: Machine direction = 164 N Cross direction = 97 N Tensile strength [Average]: Machine direction = 3.4 kN/m Cross direction = 1.95 kN/m
Air Barrier	Air resistance: $\geq 0.1 \text{ MN s/m}^3$	Average 0.120 MN s/m^3 Fast Wrap is suitable for use as an air barrier.

Claddings

- 7.6 Fast Wrap is suitable for use under wall claddings as a wall underlay as called up in NZBC Acceptable Solution E2/AS1, Table 23 on timber framed buildings, including non-absorbent wall claddings such as vinyl and metal-based weatherboards in direct fixed situations. Fast Wrap is suitable for use under cavity based wall claddings as an absorbent synthetic wall underlay as called up in NZS 2295, Table 2.4 on steel framed buildings.

Stucco Plaster

- 7.7 Fast Wrap is suitable for use as a non-rigid backing material for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.5.1. The underlay must be supported with a 50 or 75 mm galvanised mesh or wire at 150 mm centres run across the cavity battens to limit deflection to a maximum of 5 mm.
- 7.8 Fast Wrap may also be used as a slip layer over rigid backings for stucco plaster in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.3.3.1 (b).



Structure

- 8.1 Fast Wrap is suitable for use in all Wind Zones of NZS 3604 up to, and including, Very High when used as a stand-alone flexible wall underlay, and all Wind Zones of NZS 3604 up to, and including, Extra High when used as an overlay for rigid wall underlays.

Durability

- 9.1 Fast Wrap meets code compliance with NZBC Clause B2.3.1 (a), not less than 50 years for wall underlays used where the cladding durability requirement or expected serviceable life is not less than 50 years, e.g. behind masonry veneer, and code compliance with NZBC Clause B2.3.1 (b), 15 years for wall underlays used where the cladding durability requirement is 15 years.

Serviceable Life

- 9.2 Provided it is not exposed to the weather or ultra-violet light for a total of more than 42 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, Fast Wrap is expected to have a serviceable life equal to that of the cladding.

Control of Internal Fire and Smoke Spread

- 10.1 Fast Wrap has an AS 1530 Part 2 flammability index of not greater than 5 and therefore meets the requirements of NZBC Acceptable Solutions C/AS2 to C/AS6, Paragraph 4.17.8 b), for the surface finish requirements of suspended flexible fabric used as an underlay to exterior cladding that is exposed to view in occupied spaces. It may therefore be used with no restrictions in all buildings.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to Fast Wrap from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

- 12.1 Fast Wrap must only be used behind claddings that meet the requirements of the NZBC, such as those covered by NZBC Acceptable Solution E2/AS1, or claddings covered by a valid BRANZ Appraisal.
- 12.2 Fast Wrap, when installed in accordance with the Technical Literature and this Appraisal, will assist in the total cladding system's compliance with NZBC Clause E2.

Installation Information

Installation Skill Level Requirements

- 13.1 Installation must always be carried out in accordance with the Fast Wrap Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.

Underlay Installation

- 14.1 Fast Wrap must be fixed to all framing members at maximum 300 mm centres with large-head clouts 20 mm long, 6-8 mm staples, self drilling screws or proprietary underlay fixings. The membrane must be pulled taut over the framing before fixing.
- 14.2 Fast Wrap must be run horizontally and must extend from the upper-side of the top plate to the under-side of the bearers or wall plates supporting ground floor joists, or below bottom plates on concrete slabs. Horizontal laps must be no less than 150 mm wide, with the direction of the lap ensuring that water is shed to the outer face of the membrane. End laps must be made over framing and be no less than 150 mm wide.



- 14.3 The wall underlay should be run over openings and these left covered until windows and doors are ready to be installed. Openings are formed in the membrane by cutting on a 45 degree diagonal from each corner of the penetration. The flaps of the cut membrane must be folded inside the opening and stapled to the penetration framing. Excess underlay may be cut off flush with the internal face of the wall frame.
- 14.4 Fast Wrap can be added as a second layer over head flashings in accordance with the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.10.3.
- 14.5 When fixing the product in windy conditions, care must be taken due to the large sail area created by wide roll widths.
- 14.6 Any damaged areas of Fast Wrap, such as tears, holes or gaps around service penetrations, must be repaired. Damaged areas can be repaired by covering with new material lapping the damaged area by at least 150 mm and taping, or by taping small tears.

Inspections

- 14.7 The Technical Literature must be referred to during the inspection of Fast Wrap installations.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

- 15.1 The following tests have been carried out on Fast Wrap in accordance with NZBC Acceptable Solution E2/AS1, Table 23: tensile strength, edge-tear resistance and resistance to water vapour transmission in accordance with AS/NZS 4200.1, shrinkage in accordance with AS/NZS 4201.3, resistance to water penetration in accordance with AS/NZS 4201.4, surface water absorbency in accordance with AS/NZS 4201.6, pH of extract in accordance with AS/NZS 1301.421s and air resistance to BS 6538.3. A range of these tests were completed before and after Fast Wrap was exposed to ultra-violet light.
- 15.2 The flammability index of Fast Wrap has been tested in accordance with AS/NZS 1530.2.

Other Investigations

- 16.1 A durability opinion was given by BRANZ technical experts.
- 16.2 An evaluation of the expected performance of Fast Wrap in direct contact with metal wall cladding has been completed by BRANZ.
- 16.3 Site inspections were carried out by BRANZ to assess methods used for the installation of Fast Wrap.
- 16.4 The marketer's Technical Literature, including installation instructions, has been examined by BRANZ and found to be satisfactory.

Quality

- 17.1 The manufacture of Fast Wrap has not been examined by BRANZ, but details of the methods adopted for quality control and the quality of the materials used, have been obtained and found to be satisfactory.
- 17.2 The quality of supply to the market is the responsibility of Paul Industries.
- 17.3 Building designers are responsible for the design of the building, and for the incorporation of the wall underlay into their design in accordance with the instructions of Paul Industries.
- 17.4 Quality of installation is the responsibility of the installer in accordance with the instructions of Paul Industries.

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FAST WRAP BUILDING WRAP

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Sources of Information

- AS 1530.2: 1993 Test for flammability of materials.
- AS/NZS 1301.421s: 1998 Determination of the pH value of aqueous extracts of paper, board and pulp - Cold extraction method.
- AS/NZS 4200.1: 1994 Pliable building membranes and underlays - Materials.
- AS/NZS 4201.3: 1994 Pliable building membranes and underlays - Methods of test - Shrinkage.
- AS/NZS 4201.4: 1994 Pliable building membranes and underlays - Methods of test - Resistance to water penetration.
- AS/NZS 4201.6: 1994 Pliable building membranes and underlays - Methods of test - Surface water absorbency.
- BS 6538.3: 1987 Method for determination of air permeance using the Garley apparatus.
- NZS 2295: 2006 Pliable, permeable building underlays.
- NZS 3604: 2011 Timber-framed buildings.
- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture Clause E2, Ministry of Business, Innovation and Employment, Third Edition July 2005 (Amendment 7, 01 January 2017).
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

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TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019

BRANZ Appraisal

FAST WRAP BUILDING WRAP

Appraisal No. 615 [2017]

24 August 2017



BRANZ Appraised
Appraisal No. 615 [2017]



BRANZ

In the opinion of BRANZ, **Fast Wrap Building Wrap** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Judea Holdings Ltd, T/A Paul Industries**, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the Technical Literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. **Judea Holdings Ltd, T/A Paul Industries:**
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions.
 - d) Warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by **Judea Holdings Ltd, T/A Paul Industries**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Judea Holdings Ltd, T/A Paul Industries** or any third party.

For BRANZ

Chelydra Percy

Chief Executive

Date of Issue:

24 August 2017



BRANZ Appraised
Appraisal No.853 [2014]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
No. 853 (2014)**

**FASTWRAP
ULTRA-BOND SILL
TAPE**

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Product

1.1 Fastwrap ULTRA-BOND Sill Tape is a flexible flashing tape system for use around framed joinery openings as a secondary weather resistant barrier.

1.2 The system is installed into and around the framed joinery opening over the wall underlay and exposed frame to cover both the face and edge of the opening framing. Fastwrap ULTRA-BOND Sill Tape is also used at joinery heads to seal flashing upstands to the wall underlay.



Scope

2.1 Fastwrap ULTRA-BOND Sill Tape has been appraised as a flexible flashing system for use around window and door joinery openings for buildings within the following scope:

- constructed with timber framing in accordance with the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; or,
- constructed with steel framing subject to specific engineering design with building height and floor plan area scope limitations in accordance with NZBC Acceptable Solution E2/AS1; and,
- with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
- with wall cladding systems complying with NZBC Acceptable Solution E2/AS1 or a valid BRANZ Appraisal that specifies a flexible flashing system; and,
- with flexible wall underlays compatible with the flashing tape and complying with the NZBC; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High (refer to Paragraph 7.3).

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Fastwrap ULTRA-BOND Sill Tape, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:

Clause B2 DURABILITY: Performance B2.3.1(b), 15 years and B2.3.2. Fastwrap ULTRA-BOND Sill Tape meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. Fastwrap ULTRA-BOND Sill Tape contributes to meeting this requirement. See Paragraphs 7.1 - 7.4 and 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Fastwrap ULTRA-BOND Sill Tape meets this requirement and will not present a health hazard to people.

3.2 This is an Appraisal of an **Alternative Solution** in terms of New Zealand Building Code compliance. See Paragraph 7.1.

Technical Specification

4.1 System components and accessories supplied by Paul Industries are:

- Fastwrap ULTRA-BOND Sill Tape is a white spun bonded polyethylene film faced, butyl rubber self-adhesive tape with a release backing paper. The tape is supplied in rolls 200, 150, 75 and 50 mm wide x 25 m long. The rolls are wrapped in clear polythene film.

4.2 Accessories used with the system which are supplied by the building contractor are:

- Flexible wall underlay – building paper complying with NZBC Acceptable Solution E2/AS1 Table 23, or breather-type membranes covered by a valid BRANZ Appraisal for use as wall underlays.

Handling and Storage

5.1 Handling and storage of all materials supplied by Paul Industries, whether on or off site, is under the control of the installer. Fastwrap ULTRA-BOND Sill Tape must be protected from damage and weather. Rolls must be stored under cover, in clean, dry conditions away from direct exposure to sunlight.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Fastwrap ULTRA-BOND Sill Tape. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

7.1 Fastwrap ULTRA-BOND Sill Tape has been assessed against the requirements of AC148: 2001 which is an alternative solution to the version of AC148 referenced by NZBC Acceptable Solution E2/AS1 Paragraph 9.1.5(b). The installation method for Fastwrap ULTRA-BOND Sill Tape is an alternative solution to the installation method shown within NZBC Acceptable Solution E2/AS1, Figures 72A and 72B.

7.2 Fastwrap ULTRA-BOND Sill Tape must not be exposed to the weather or ultra-violet light for a total of more than 30 days before being covered by the cladding system.

7.3 The use of flexible flashing systems around window and door joinery openings is critical to assist the overall weathertightness performance of window and door joinery installations.

7.4 Fastwrap ULTRA-BOND Sill Tape is suitable for use over flexible wall underlays compatible with the flashing tape in NZS 3604 Wind Zones up to and including Extra High. In the Extra High Wind Zone, the flexible underlay must be installed over a rigid underlay complying with NZBC Acceptable Solution E2/AS1, Table 23.

7.5 Fastwrap ULTRA-BOND Sill Tape is designed to prevent air leakage and water penetration around window and door openings at framing junctions (e.g. at the sill trimmer and opening stud junction), and to keep any water that gets past the cladding, or through the joinery, from direct contact with the framing timber.

7.6 Fastwrap ULTRA-BOND Sill Tape is not designed to overcome poor detailing and workmanship of the window or door joinery installation. The system must not be considered in isolation, but be considered as part of the wall cladding system. Fastwrap ULTRA-BOND Sill Tape is designed to be used in conjunction with air seals and joinery flashing systems, not as a substitute.

7.7 When Fastwrap ULTRA-BOND Sill Tape is used in conjunction with LOSP (light organic solvent preservative) treated timber, the solvent from the timber treatment must be allowed to evaporate (generally at least one week) prior to the installation of the system.

Durability

8.1 Assessment of durability to meet the NZBC is based on difficulty of access and replacement, and the ability to detect failure of Fastwrap ULTRA-BOND Sill Tape both during normal use and maintenance of the building.

Serviceable Life

8.2 Provided it is not exposed to the weather or ultra-violet light for a total of more than 30 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, Fastwrap ULTRA-BOND Sill Tape is expected to have a serviceable life equal to that of the cladding.

Maintenance

9.1 No maintenance is required for Fastwrap ULTRA-BOND Sill Tape. Regular checks, at least annually, must be made of the junctions between the joinery and wall cladding to ensure that they are maintained weathertight and that the primary means of weather resistance for the junction e.g. flashing, sealant, etc continues to perform its function, to ensure that water will not penetrate the cladding.

Prevention of Fire Occurring

10.1 Separation or protection must be provided to the Fastwrap ULTRA-BOND Sill Tape from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

11.1 Where a cladding manufacturer specifies the use of generic flashing tapes around window and door joinery openings at framing junctions as part of their system, or they specify the use of flexible flashing tapes that comply with NZBC E2/AS1, Paragraph 9.1.5(b), Fastwrap ULTRA-BOND Sill Tape may be used.

Installation Information

Installation Skill Level Requirements

12.1 Installation of Fastwrap ULTRA-BOND Sill Tape must be completed by tradespersons with an understanding of flexible flashing tape systems, in accordance with instructions given within Fastwrap ULTRA-BOND Sill Tape Technical Literature and this Appraisal.

General

13.1 The selected wall underlay must be installed in accordance with the manufacturer's instructions, and must completely cover the joinery opening. The underlay is then cut on a 45° angle away from each corner of the opening so the flaps can be folded into the opening and secured to the interior face of the timber framing.

13.2 Before the Fastwrap ULTRA-BOND Sill Tape is applied, the substrate surfaces must be clean, dry and free from any surface contaminants such as dust and grease that may cause loss of adhesion.

13.3 A length of Fastwrap ULTRA-BOND Sill Tape must be cut to the length of the sill plus 400 mm. The tape is installed flush with the interior face of the opening and is applied along the entire length of the sill and 200 mm up each jamb. The overhanging tape is cut at the corner of the opening to allow the tape to be folded onto the face of the building underlay. A spatula or similar must be used to ensure that adequate adhesion of the tape is achieved and that the tape is installed tight into the sill/jamb junction.

13.4 A 400 mm length of Fastwrap ULTRA-BOND Sill Tape must be installed 200 mm down the jamb and 200 mm along the lintel at each of the top corners of the window or door joinery opening.

13.5 A 50 mm wide x 120 mm long sealing tape 'butterfly' must be installed at 45° across the corner of the head/jamb and sill/jamb junctions overlapping the corner by 3 mm to create a seal at the corner junction.

13.6 Fastwrap ULTRA-BOND Sill Tape must not be stretched. To avoid wastage, the tape can be lapped 100 mm minimum onto itself without reducing the performance of the Fastwrap ULTRA-BOND Sill Tape System.

13.7 If the Fastwrap ULTRA-BOND Sill Tape is exposed to the weather or UV light for more than 30 days, then it must be replaced.

Installation Temperature

13.8 Fastwrap ULTRA-BOND Sill Tape must not be installed at temperatures less than 5°C. *(Note: Paul Industries approve the installation of Fastwrap ULTRA-BOND Sill Tape within the temperature range of -17°C to +45°C. This has not been addressed by the BRANZ and is therefore outside the scope of the Appraisal.)*

Inspections

13.9 The Technical Literature must be referred to during the inspection of Fastwrap ULTRA-BOND Sill Tape installations.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

14.1 Testing of Fastwrap ULTRA-BOND Sill Tape has been completed by BRANZ to the requirements of ICC Evaluation Service Acceptance Criteria for Flashing Materials AC148:2001. The adhesion of Fastwrap ULTRA-BOND Sill Tape to black bituminous Kraft building paper complying with the requirements of NZBC Acceptable Solution E2/AS1, Table 23 and selected other synthetic wall underlays has been tested and found to be satisfactory.

Other Investigations

15.1 An assessment was made of the durability of Fastwrap ULTRA-BOND Sill Tape by BRANZ technical experts.

15.2 Site inspections were carried out by BRANZ to examine the practicability of installation.

15.3 The Technical Literature has been reviewed by BRANZ and found to be satisfactory.

Quality

16.1 The manufacture of Fastwrap ULTRA-BOND Sill Tape has not been examined by BRANZ, but details of the quality and composition of the materials used were obtained and found to be satisfactory. BRANZ undertakes an ongoing review of product quality on an inwards goods basis.

16.2 The quality of supply to the market is the responsibility of Paul Industries.

16.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and wall underlays in accordance with the instructions of the designer.

16.4 The quality of installation, handling and storage on site is the responsibility of the installer in accordance with the instructions of Paul Industries.

Sources of Information

- ICC Evaluation Service, Inc, AC148 Acceptable Criteria for Flexible Flashing Materials, July 2001.
- NZS 3604: 2011 Timber-framed buildings.
- Compliance Document for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005 (Amendment 6, 14 February 2014).
- The Building Regulations 1992.
- MBIE Record of Amendments, Compliance Documents and Handbooks.



BRANZ

In the opinion of BRANZ, **Fastwrap ULTRA-BOND Sill Tape** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Paul Industries**, and is valid until further notice, subject to the Conditions of Appraisal.

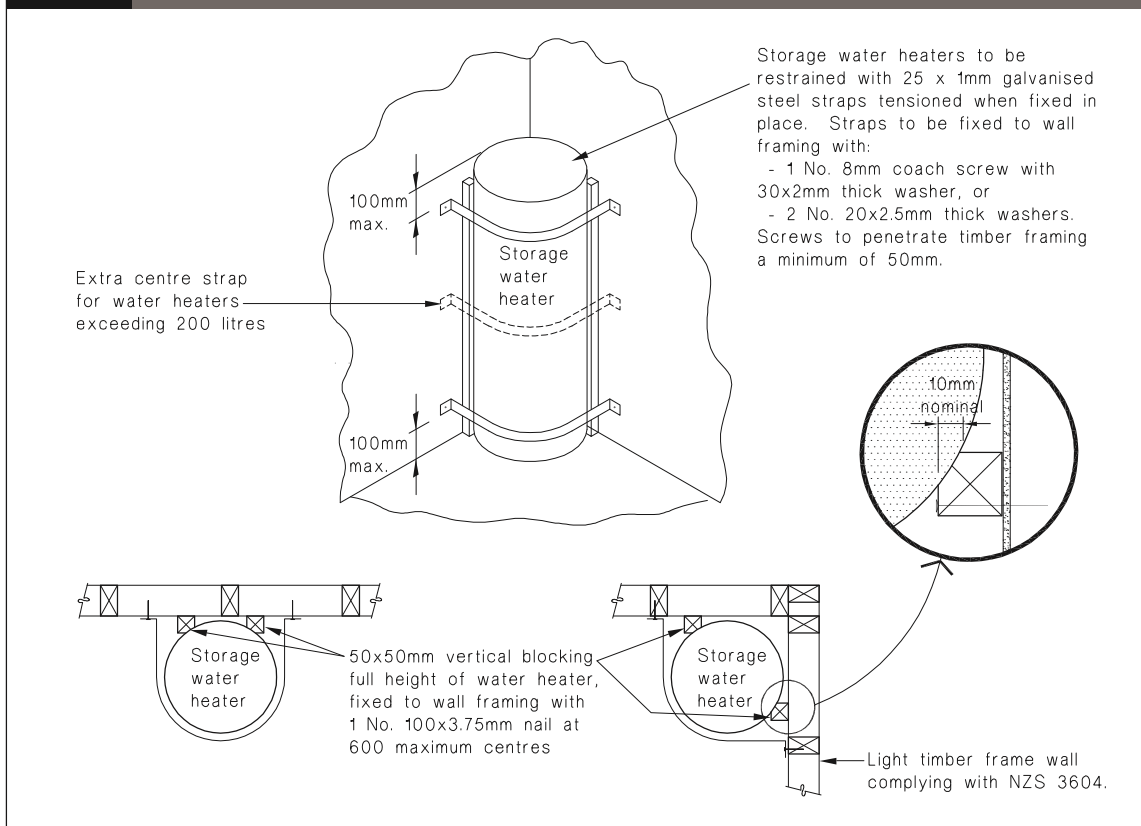
Conditions of Appraisal

1. This Appraisal:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the technical literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. **Paul Industries**:
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions;
 - d) Warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by **Paul Industries**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Paul Industries** or any third party.

For BRANZ

C Percy
Chief Executive

Date of issue: 13 May 2014

Amend 5
Feb 2004**Figure 14: Seismic Restraint of Storage Water Heaters 90 – 360 litres**
Paragraph 6.11.4**6.11.4 Structural Support**

NZBC B1.3.2 requires *building elements* (including *storage water heaters*) to be adequately supported including support against earthquake forces. The method illustrated in Figure 14 is acceptable for *water heaters* up to 360 litre capacity. Where fittings and pipework are attached to the *water heater* through the supporting platform or floor a 50 mm minimum clearance shall be provided between the fitting and the support structure.

6.11.5 Another acceptable solution for securing *storage water heaters* against seismic forces is given in Section 203 of NZS 4603.

6.12 Hot water pipe sizes

6.12.1 The *diameter* of hot water supply pipes from *storage water heaters* and to *sanitary fixtures* shall be no less than those required by Table 4.

6.13 Wet-back water heaters

6.13.1 Wet-back *water heaters* shall be:

- Connected only to *open vented storage water heaters*, or a water storage vessel (see Figure 15), and
- Made of copper.

6.13.2 Copper pipework shall be used between the wet-back and the *water tank*.

Third Edition
Dec 2007Amend 5
Feb 2004Amend 5
Feb 2004



LINTEL FIXING SCHEDULE

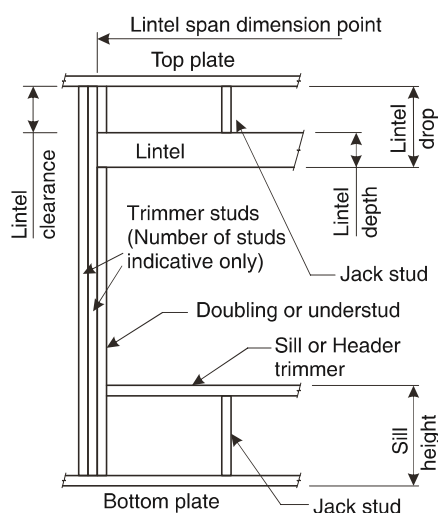
ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12

NZS 3604:2011

NOTE:

- ★ All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20 kPa.
- ★ 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
8.6 m ²	G	G	H	G	G	H
11.6 m ²	G	H	H	G	G	H
12.1 m ²	G	H	H	G	H	H
15.3 m ²	H	H	-	G	H	H
19.1 m ²	H	-	-	G	H	-
20.9 m ²	H	-	-	H	H	-
21.8 m ²	H	-	-	H	-	-
34.3 m 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

SELECTION CHART FOR LINTEL FIXING

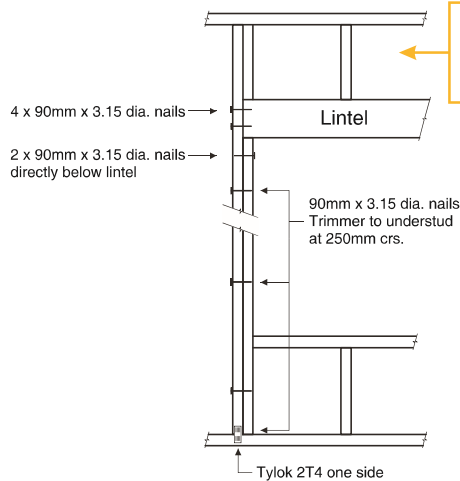
Lintel Span	Loaded Dimension (See Fig. 1.3 NZS 3604:2011)	Light Roof					Heavy Roof				
		Wind Zone					Wind Zone				
		L	M	H	VH	EH	L	M	H	VH	EH
0.7	2.0	E	E	E	E	F	E	E	E	E	E
	3.0	E	E	E	F	F	E	E	E	E	F
	4.0	E	E	F	F	F	E	E	E	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
0.9	2.0	E	E	E	F	F	E	E	E	E	F
	3.0	E	E	F	F	F	E	E	E	F	F
	4.0	E	E	F	F	F	E	E	F	F	F
	5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
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	F	G	H	H
2.4	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	G	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	F	G	H	H
	6.0	F	G	H	H	-	E	F	G	H	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	F	G	H	H
	5.0	F	G	H	H	-	E	F	G	H	H
	6.0	F	G	H	-	-	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	F	G	G	H
	4.0	F	G	H	H	-	E	F	G	H	H
	5.0	F	G	H	-	-	E	F	G	H	-
	6.0	G	H	H	-	-	E	F	H	-	-
4.2	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	G	H	H	-	E	F	G	H	H
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	H	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-
4.5	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.4	F	G	H	H	-	E	F	G	H	-
	4.0	F	G	H	-	-	E	F	G	H	-
	5.0	G	H	-	-	-	E	F	H	-	-
4.8	2.0	F	F	G	H	H	E	E	F	G	H
	3.0	F	G	H	H	-	E	F	G	H	H
	3.2	F	G	H	H	-	F	F	G	H	-
	4.0	F	G	H	-	-	E	F	H	-	-
	5.0	G	H	-	-	-	E	F	H	-	-
	6.0	G	H	-	-	-	E	F	H	-	-



LINTEL FIXING OPTIONS

TYPE E

1.4 kN

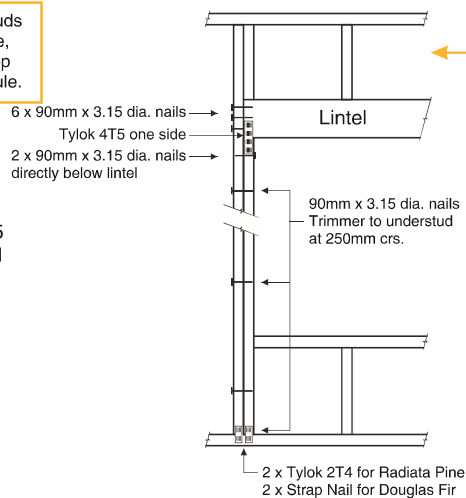


For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

TYPE F

4.0 kN

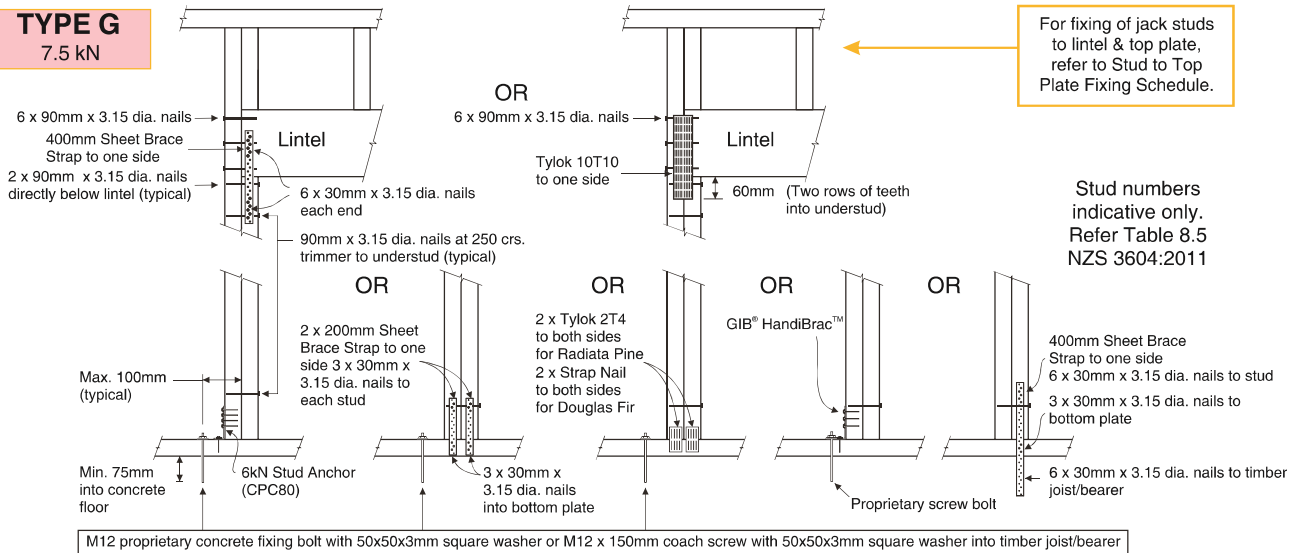


For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

TYPE G

7.5 kN

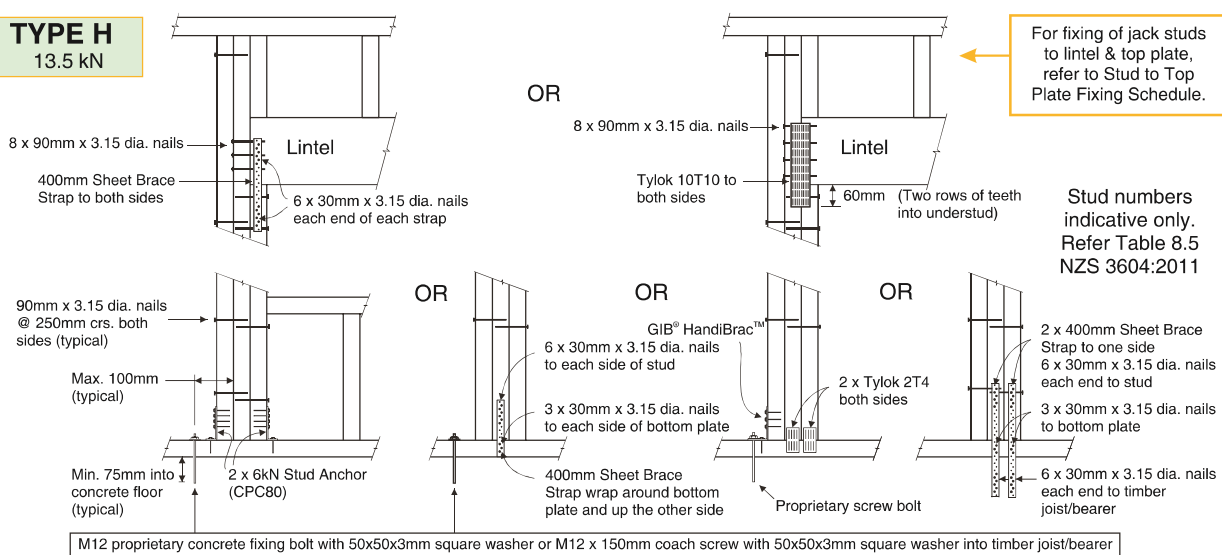


For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

TYPE H

13.5 kN



For fixing of jack studs to lintel & top plate, refer to Stud to Top Plate Fixing Schedule.

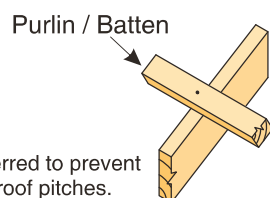
Stud numbers indicative only. Refer Table 8.5 NZS 3604:2011

STANDARD FIXING OPTIONS

FIXING TYPE A 0.55kN

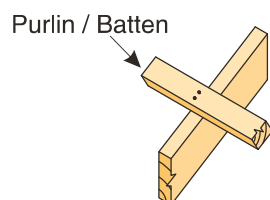
1 NAIL

Note: Two nails may be preferred to prevent batten rolling over with high roof pitches.



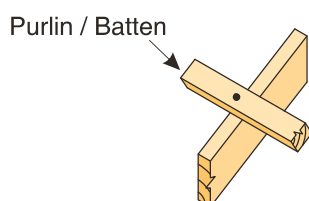
FIXING TYPE B 0.8kN

2 NAILS



FIXING TYPE C 2.4kN

1 BLUE SCREW

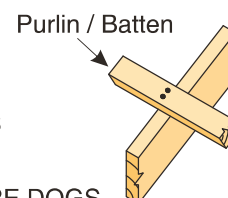


FIXING TYPE D 3.45kN

2 BLUE SCREWS

OR

2 SKEW NAILS plus 2 WIRE DOGS
(for purlin on edge)

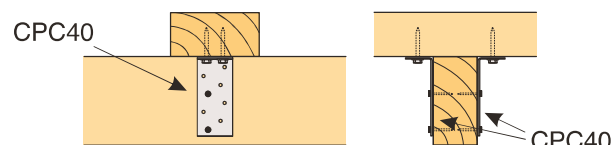


FIXING TYPE E 5.5kN

2 NAILS plus 1 CT200

OR

1 PAIR of CPC40



FIXING DEFINITIONS

NAIL = Either 90mm x 3.15 dia. power-driven nail or 100mm x 3.75 dia. hand-driven nail

BLUE SCREW = 80mm x 10 gauge LUMBERLOK BLUE SCREW

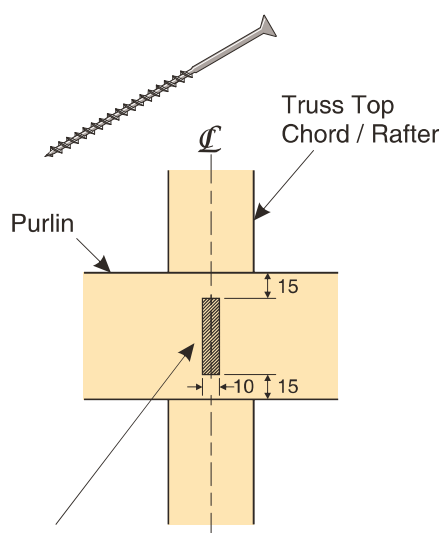
WIRE DOG = LUMBERLOK WIRE DOG either LH or RH

CT200 = LUMBERLOK Ceiling Tie CT200 bend over purlin, 4 x LUMBERLOK Product Nails 30mm x 3.15 dia. each end

CPC40 = LUMBERLOK CPC40 with 2 x Type 17-14g x 35mm Hex Head Screws per flange

FIXING TOLERANCES

LUMBERLOK BLUE SCREW

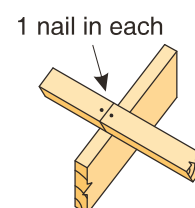


NOTE:

Locate fixings within the shaded area. Care to be taken to avoid over tightening of screws.

PURLIN / BATTEN SPLICE FIXING OPTIONS

FIXING TYPE A & B OVER PURLIN SPLICE



NOTE:

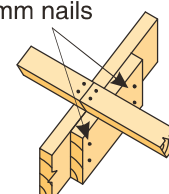
Skew nail when fixing to 35mm rafter or truss

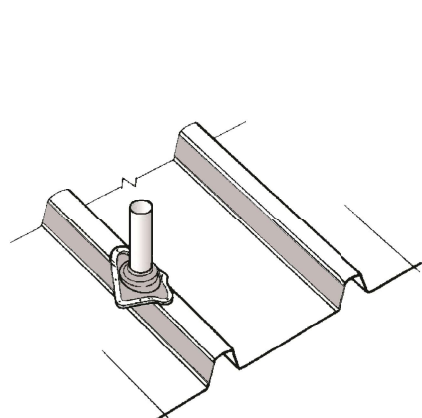
FIXING TYPE C, D or E OVER PURLIN SPLICE

90 x 35mm block fixed to chord or rafter with 4 x 75mm nails

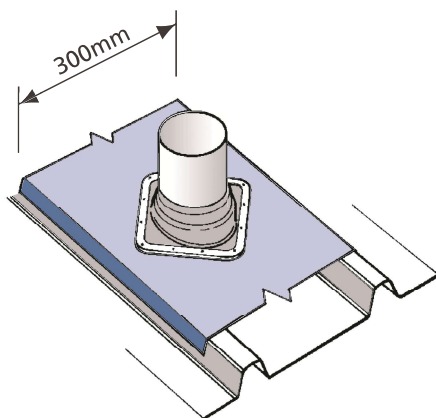
• TYPE C
1 SCREW
to each purlin

• TYPE D & E
1 NAIL plus 1 SCREW to each purlin



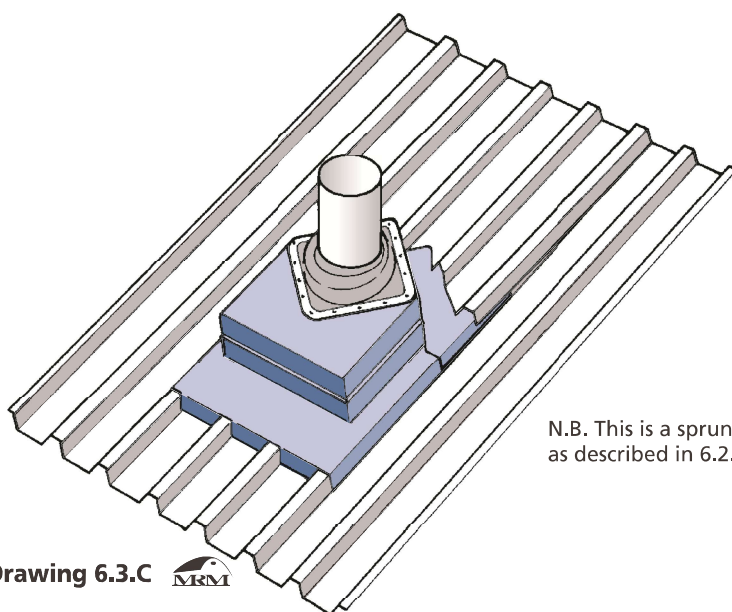


Drawing 6.3.A 



Drawing 6.3.B 

The flashings above can extend 8m maximum from the ridge.



Drawing 6.3.C 

N.B. This is a sprung roof flashing as described in 6.2.8.C.

Drawing 6.3.C shows a large proprietary 250mm diameter EPDM flashing, which would obstruct drainage from the catchment above. It has been designed with a self cleansing 45° diverter flashing, while still providing the flexibility offered by this proprietary type of flashing.

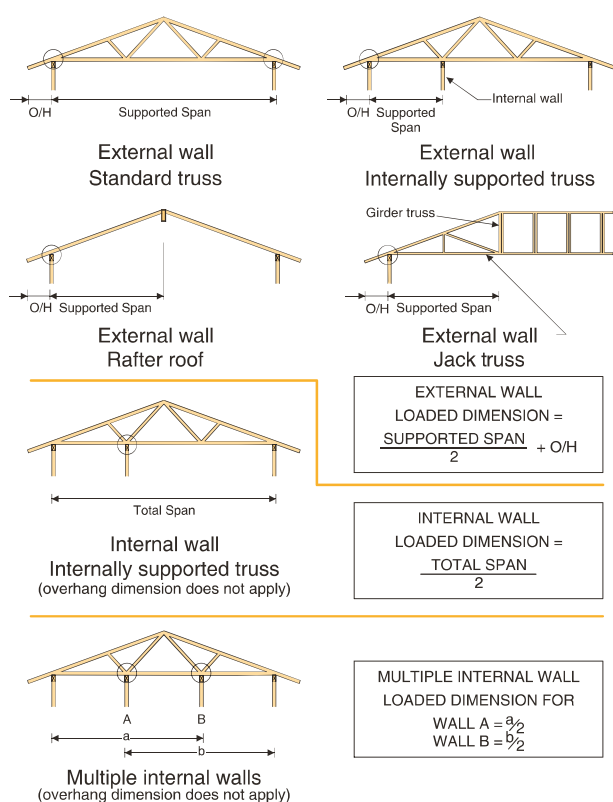


STUD TO TOP PLATE FIXING SCHEDULE ALTERNATIVE TO TABLE 8.18 NZS 3604:2011

NOTE:

- ★ All fixings are designed to resist vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20 kPa.
- ★ Refer to Table 8.19 NZS 3604:2011 for nailing schedule to resist lateral loads.
- ★ These fixings assume the correct choice of rafter/truss to top plate connections have been made.
- ★ Gable end wall top plate/stud connections where the adjacent rafter/truss is located within 1200mm of gable end wall with a maximum verge overhang of 750mm, requires fixing type A as shown below.
- ★ All fixings assume top plate thickness of 45mm maximum.
- ★ Wall framing arrangements under girder trusses are not covered in this schedule.
- ★ All timber selections are as per NZS 3604:2011.

LOADED DIMENSION DEFINITION



FIXING SELECTION CHART

(Suitable for walls supporting roof members at 600, 900 or 1200mm crs.)

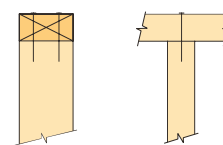
Wind Zones L, M, H, VH, EH, as per NZS 3604:2011

Loaded Dimension (m) Stud Centres			Light Roof Wind Zone					Heavy Roof Wind Zone				
300mm	400mm	600mm	L	M	H	VH	EH	L	M	H	VH	EH
3.0	2.3	1.5	A	A	B	B	B	A	A	B	B	B
4.0	3.0	2.0	A	A	B	B	B	A	A	B	B	B
5.0	3.8	2.5	A	B	B	B	B	A	A	B	B	B
6.0	4.5	3.0	A	B	B	B	B	A	A	B	B	B
7.0	5.3	3.5	A	B	B	B	B	A	A	B	B	B
8.0	6.0	4.0	A	B	B	B	B	A	A	B	B	B
9.0	6.8	4.5	B	B	B	B	B	A	A	B	B	B
10.0	7.5	5.0	B	B	B	B	B	A	A	B	B	B
11.0	8.3	5.5	B	B	B	B	B	A	A	B	B	B
12.0	9.0	6.0	B	B	B	B	B	A	A	B	B	B

FIXING OPTIONS

FIXING TYPE A 0.7 kN

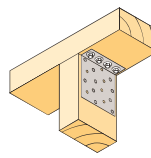
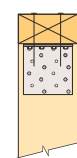
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



FIXING TYPE B 4.7 kN

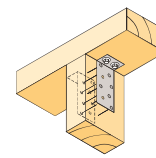
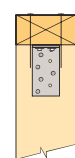
CHOOSE ANY OF THE 3 OPTIONS BELOW

2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
LUMBERLOK
6kN Stud Anchor
(CPC80)

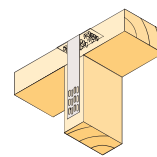
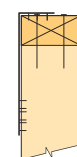
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
2 x LUMBERLOK
CPC40

Recommended for internal wall options to avoid lining issues

2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



Plus
LUMBERLOK
Stud Strap
(one face only)

Note:

To calculate the number of B type fixings required, divide the wall length by the stud centres, add 1 to this figure and locate this number of fixings as evenly as possible along the wall length. This figure includes the start and end studs in each wall length.

[Home](#) [Product Details](#) [Specifications](#) [Where to Purchase](#) [Support](#)[Your Inventions](#)

Product Details

The **UNITRAY** concept was born out of the desire to improve the speed and ease of installation of safe trays. installations are compliant with the AS3500 plumbing first time, every time. The **UNITRAY** reduces time, cost and unit.

UNITRAY SYSTEM Benefits:.

- Easily & rapidly assembled - representing significant labour cost savings over current methods.
- Design complies with and exceeds AS 3500 National Plumbing Code requirements.
- No soldering, brazing or gluing involved in tray assembly - threaded, HDPE fusion welded and welded.
- Tray design engineered and certified to support and exceed maximum load requirements.
- Manufactured from non-electrically conductive material for safe installation.
- Manufactured from Ultra Violet (UV) light stabilized materials suitable for long term external use.
- Circular space saving design fits into smaller positions where square type trays may not.
- Multiple size trays available to suit HWU's from 25 litre to 315 litre capacities.



ALL IN ONE SOLUTION

The Unitray is an all in one Hot Water Unit (HWU) installation solution. It includes the tray base, an integrated "Pizza base", a 50mm drainage outlet integrated into the tray, a "tee" piece and a tundish. All the parts come wasted trips getting forgotten parts. Easier quoting with less variables to consider.



In comparison, the current method requires the use of a copper or metal type tray, the latter of which is not a the effects of corrosion, further an drain outlet is required to be welded or sealed into the tray using time cor acetylene or silicone) note plumbers using plug and waste outlets are in contravention of the AS 3500 due to maintaining water within the tray due to the elevated lip on the waste outlet.

NO SPECIAL TOOLS REQUIRED

All that is required to assemble this product is a roll of Teflon tape, applied to three threads. No oxy-acetylen the product representing further time saving.

SAVES YOU TIME

The efficient use of time and materials is an ongoing challenge facing our competitive industry. The Unitray is assembled and ready to support a HWU within two minutes or less. To get to a similar stage in a traditional

BUILT TO LAST

The **UNITRAY** is made from top quality UV resistant polymer. When installed as intended it is built to outlast steel, glass lined cylinder hot water unit it supports. The **UNITRAY** has been engineer certified.

ACCESORIES

UNITRAY offer an optional elevating support post kit. These engineer certified posts are compliant for use if waste point is located directly below the hot water unit. They fit into multiple slots under the tray for ultimate



Current elevating options including stainless steel frames, concrete plinths or timber frames are costly and t unsanitary. Compare the ease of purchasing an over the counter **UNITRAY** elevating post kit from your supp stainless steel custom frame, or sourcing timber, nails, hand saw etc for a timber elevating platform. The ch

COMPLIANT EVERY TIME

The **UNITRAY** conforms with and exceeds all current AS 3500 standards (National Plumbing Code) relating

FLEXIBLE

BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019



Indoor Safetray Installation

Indoor Safetray Installation

Inc

All in one compliant safetray solution. Save time, save money, get it right first time.

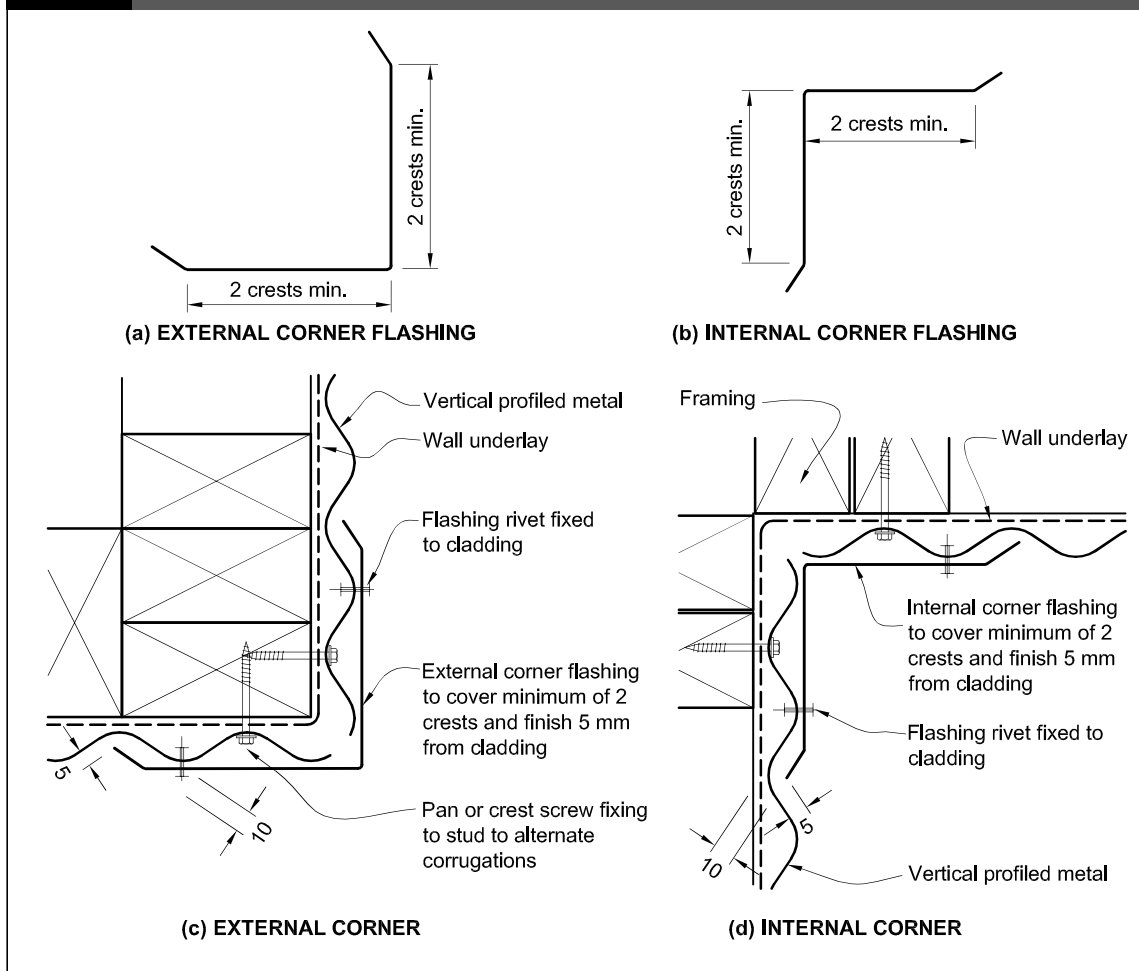
All in one compliant safetray solution. Save time, save money, get it right first time.

All i time

Supplied with 50mm BSP female outlet coupling that can be trimmed to suit Fernco or fusion welded couplings as shown.

Supplied with 50mm BSP female outlet coupling that can be trimmed to suit Fernco or fusion welded couplings as shown.

Sup that welc

Figure 94: Corners for vertical profiled metal
Paragraph 9.6.8.4Amend 5
Aug 2011**9.6.8.5 Vertical profile: penetrations**

Pipe penetrations shall be as per Figure 53.

The heads of larger penetrations shall be flashed in similar fashion to Figure 69, with head *flashings* adjusted to suit the profile and other *flashings* as per window and door details in relevant paragraphs.

Amend 5
Aug 2011**9.6.8.6 Vertical profile: windows and doors**

Windows and doors in vertical profiled metal *claddings* shall be flashed as shown in Figure 95 and Figure 100.

Amend 5
Aug 2011

Rain Harvesting Systems

Safer solutions for rainwater collection



Rain Harvesting Systems

safe solutions for the collection,

1 Marley Spouting & Downpipe Systems

The harvesting of safe, quality potable rainwater starts with the spouting and downpipes. Marley products comply with AS/NZS 4020: 2005 so are certified safe for the collection of drinking water. Available in a variety of profiles and colours, Marley spouting and downpipe systems carry a 15 year guarantee. Made of uPVC they will not rust, so give off no metal contaminants to end up in your water storage tank.

2 Outlet Strainer

The Marley Outlet Strainer stops large debris such as sticks and tennis balls entering the downpipe system from the spouting.

3 Leaf Diverter

The Marley Curve™ significantly curbs the amount of solid matter that can flow into a tank. This reduces sediment build up which affects water quality and increases the strain on in-line filters and pumps. Curve has a unique screen design that minimises water wastage by drawing water through while keeping leaves and other debris out. Other options also available.

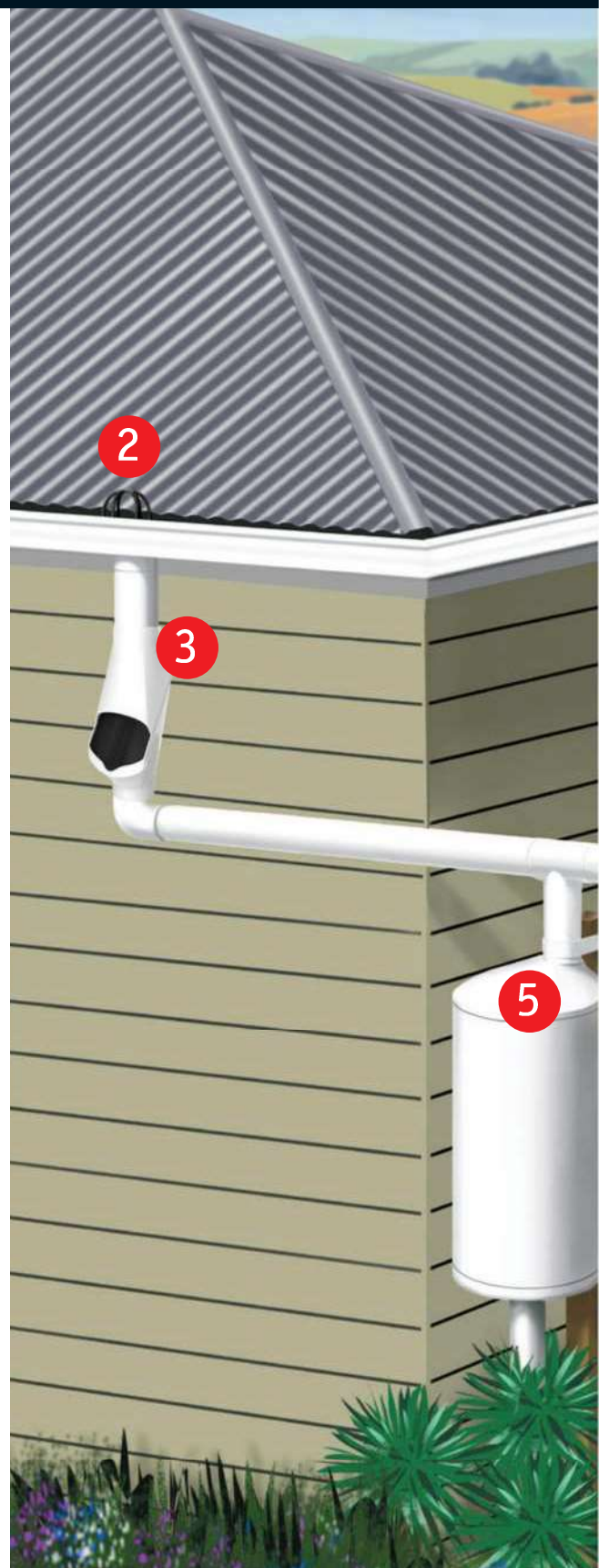
4 Downpipe Diverters

The Marley Twist® captures free rainwater for a multitude of uses. It features an easy on-off "twist" control and direct connects to a tank via a standard hose fitting. It features its own leaf filter and is ideal for diverting rainwater to an additional small tank as and when required.

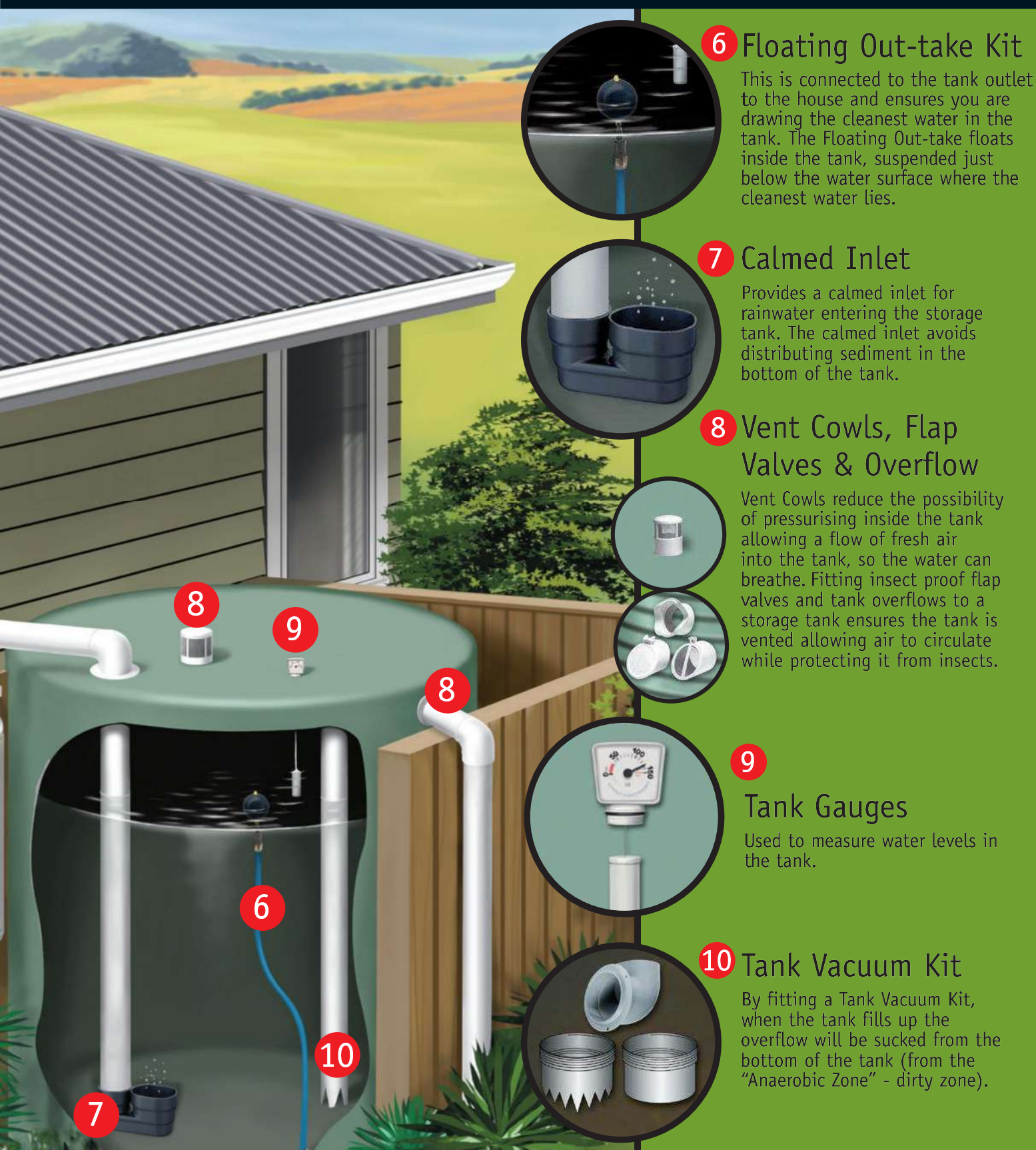
The Marley Downpipe Diverter is ideal for stopping debris entering the tank while spouting is being cleaned.

5 First Flush Diverter

Long term build-up of foreign matter on the roof is often washed into the tank in the first heavy rain. The First Flush Diverter is critical for reducing pollution of tank water by diverting this first flush of contaminated water away from the tank. Available in 90mm or 300mm kits.



storage and distribution of rain water.



Marley Rain Harvesting Products; safer solutions for the collection, storage and distribution of rain water.

HOW SAFE IS THE WATER YOU ARE COLLECTING?

When collecting rainwater as a partial or total source for a water supply it is essential the design of the system meets the need for potable (safe drinking) water.

Water collected from a roof and stored and distributed from a water tank, can contain a nasty range of pollutants that can contaminate your water, for example bacteria from bird droppings, insects, rotting debris, airborne dusts (containing heavy metals).

The Marley Rain Harvesting System comprises of a number of unique and cost effective components that are designed to work with the Marley uPVC range of spouting and downpipes to help make tank water as clean as possible. However, it is advisable to have your tank water analysed to check its potability.

7 STEPS TO RAIN HARVESTING POTABLE WATER;

1. Ensure the roof surface is suitable for collecting potable water
2. Ensure Marley spouting is installed according to Building Code, allowing for adequate fall and installing suitable expansion outlets or gutter outlets to make certain water does not pond in the gutter
3. Install leaf and debris diverters to direct leaf litter and larger debris items out of the flow of the water
4. Fit an appropriate sized first flush diverter, to divert the first most contaminated rain water from entering the tank
5. Attach tank overflows and vent flaps to tanks to ensure the tank is vented properly allowing air to circulate
6. Attach insect screens to rainheads and tanks to prevent insects and vermin entering the tank
7. To assist in cleaning the tank, install a tank vacuum kit to suck water from the bottom of the tank (anaerobic zone – dirty 'zone') when the tank is full to overflowing.

RAIN HARVESTING SYSTEM COMPONENTS

Debris and Rainwater Diverters*

	CURVE™ Leaf Diverter Available in six colours Code: CURVE, CURVE.GYF, CURVE. IRO, CURVE.BLK, CURVE.COP, CURVE.TTN		PRODUCT OF THE YEAR 2018 TWIST® Rainwater Diverter^ Available in six colours Code: TWIST, TWIST.GYF, TWIST.IRO, TWIST.BLK, TWIST.COP, TWIST.TTN		Downpipe Diverter Code: RWDD		Outlet Strainer Code: RWST
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^Marley Twist® won Product of the Year 2018 at the New Zealand Plumbing Awards.

*Also see back page

First Flush Diverters

	300mm First Flush Diverter Kit (Kit only add 300 diam pipe to suit volume required) Code: RH8121-1		90mm First Flush Diverter Kit Code: RH8119-5
--	--	---	---

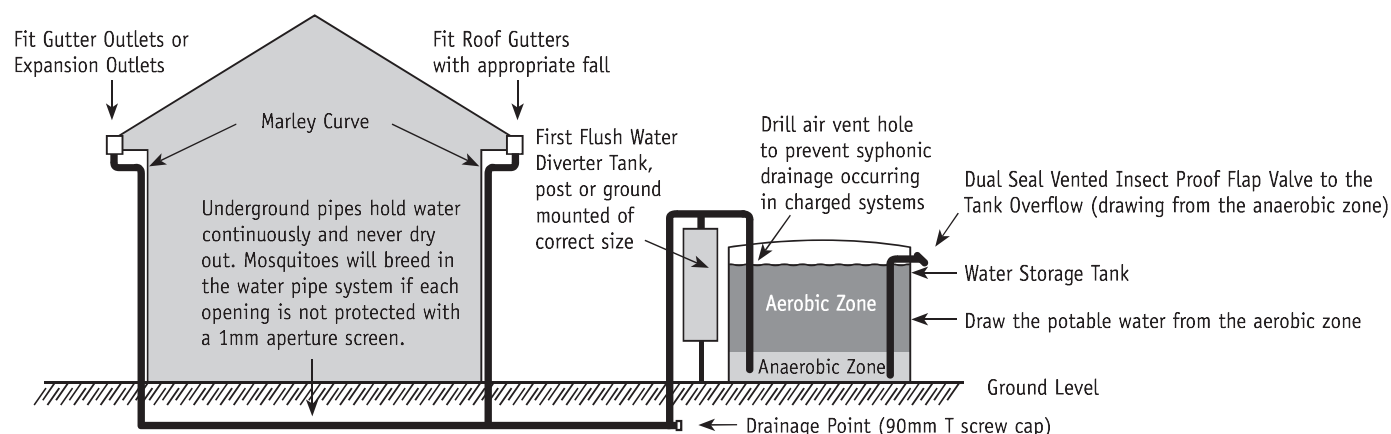
Tank Improvement Products

	90mm diameter Insect Proof, Vented Flap Valve PVC/ Stainless Steel Code: RH8119-3		Plain Tank Overflow Outlet 90mm X 90 degree bend M&F Code: RH8124-2		Floating Out-take Collar Code: RHFO.C		Tank Gauge (Mechanical or Wireless) Code: RHMG, RHRA
	90mm 304 Stainless Steel M&F Insect Proof Screen (Fits RH8123, RH8124-1, RH 8124-2) Code: RH8116		50mm diameter Vent Cowl PVC & S/Steel Insect Proof Screen Code: RH8119-9		Floating Out-take Length of hose is 2 metres and 25mm diameter to fit a 25mm hose tail. Code: RHFO		
	Flanged Tank Overflow Outlet 90mm X 90 degree bend M&F Code: RH8124-1		90mm Tank Vacuum Kit - Poly/F-Glass/Flat wall Tank Code: RHFWTV90 Concrete Tanks Code: RHCONTV90		Calmed Inlet Code: RHCI		

Choosing the most suitable components for a rain harvesting system will be based upon whether the tank is set up as a wet or dry system.

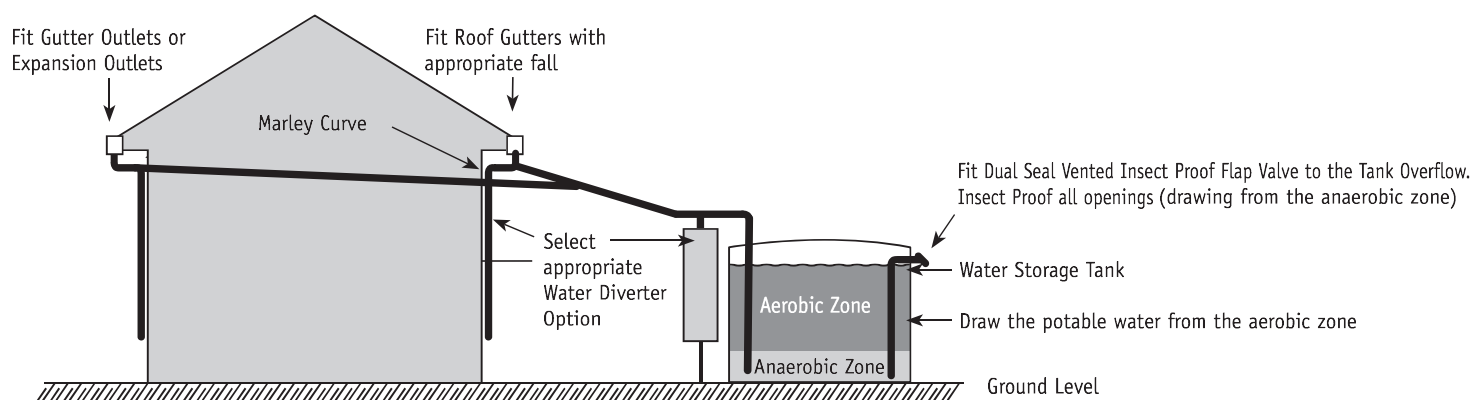
A TYPICAL "WET" SYSTEM (syphonic system)

A "Wet" System is a system where the pipes are fitted in such a way that when the rain stops the pipes to the tank do not drain out. They hold water. With this type of system, the pipes must be fitted with screens at each end to ensure that insects cannot enter and breed in the system. A "wet" system needs to be fitted with a First Flush Water Diverter at the tank, with a capacity equal to that of the pipes plus whatever amount is to be diverted from the roof. To lessen the amount of water to be diverted at the tank, a Downpipe First Flush Water Diverter can be fitted on the building to take the required first flush from the roof.



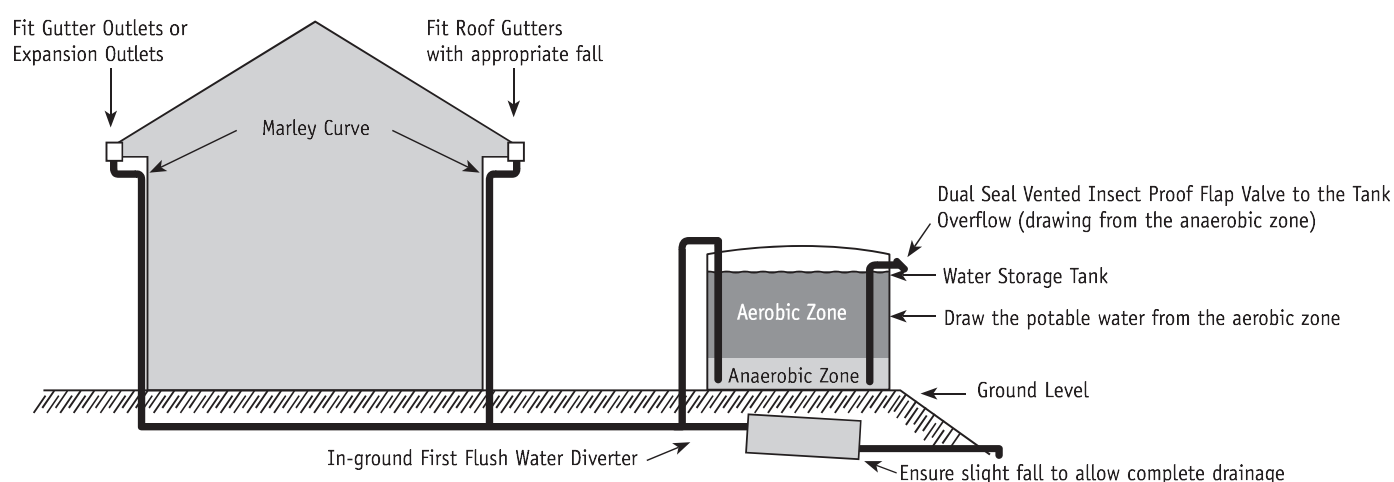
A TYPICAL "DRY" SYSTEM

A "Dry" System is a system where the pipes drain out and dry out after rain. A system where pipes do not hold water after the rain stops. Large buildings normally make it near impossible to have "dry" systems. For slightly sloping sites an In-Ground First Flush Water Diverter will turn a "wet" system into a "dry" system.



A TYPICAL "WET" SYSTEM CONVERTED TO A "DRY" SYSTEM

For slightly sloping sites an In-Ground First Flush Water Diverter will turn a "wet" system into a "dry" system.



Regular maintenance is extremely important. Clean rainhead and filter screens. Check to ensure that all insect proofing is in place and is effective. Check that the roof is free from overhanging branches and that there are no snags in the roof gutter.

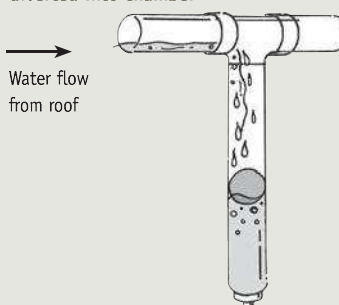
FIRST FLUSH DIVERTERS

Water diversion is a key component to water quality. The main function of the first flush diverter is to prevent the first flow of water from the roof from entering the water storage tank.

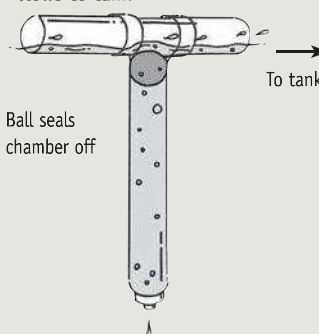
When it begins to rain, the first flow of contaminated water is diverted into the diverter chamber. Once the chamber is full, the fresh water automatically flows into the storage tank.

The type of first flush diverter to be fitted should be chosen by assessing the quantity of water to be diverted.

First flush of contaminated water is diverted into chamber



Once chamber is full fresh water flows to tank



300MM FIRST FLUSH DIVERTER



Can be installed to a new or existing downpipe system, designed to fit 90 or 100mm pipe and can be wall-mounted or fitted underground.

Add the appropriate length of 300mm diameter pipe to suit the quantity of water you wish to divert (see table below).

Calculation Method: 300mm First Flush Diverter KIT only

$\text{m}^2 \text{ Roof Area} \times \text{Pollution Factor} + (\text{Length of wet pipe (m)} \times \text{pipe cross-section factor}) = \text{litres to be diverted}$

CATEGORY	DESCRIPTION	POLLUTION FACTOR	PIPE SIZE	PIPE CROSS SECTION FACTOR
Minimal Pollution	Open field	0.5	65mm Round Downpipe	3.30
Average Pollution	Some trees & shrubs in neighbourhood but not directly adjacent to collection area	1	80mm Round Downpipe	4.40
			90mm Stormwater pipe	5.75
Substantial Pollution	Trees and foliage on and around property. Leaves, debris, bird droppings, various insect matter	2	100mm Stormwater pipe	8.60

300MM FIRST FLUSH DIVERTER



PRODUCT CODE	DESCRIPTION	VOLUME IN LITRES	MAX SERVICABLE ROOF AREA (Minimal pollution in dry system)
FFD.300.1.5	300mm x 1.5 metre (white)	112 Litres	224m ²
FFD.300.2	300mm x 2 metre (white)	147 Litres	294m ²

Step 1 - Determine the length of the Diverter Chamber (see table above). Make sure the Screw Cap is at least 150mm from the ground to allow for cleaning.

Step 2 - Bevel both ends of the 300mm pipe with an angle grinder so that the pipe fits easily onto the end caps.

For Post/Wall mounting glue (Marley Gold) the caps on each of the chamber making sure the cap outlets are both at 12 o'clock.

For an underground unit (horizontal) glue one cap at 12 o'clock and the other at 6 o'clock.

Step 3 - Attach the wall/post bracket in position.

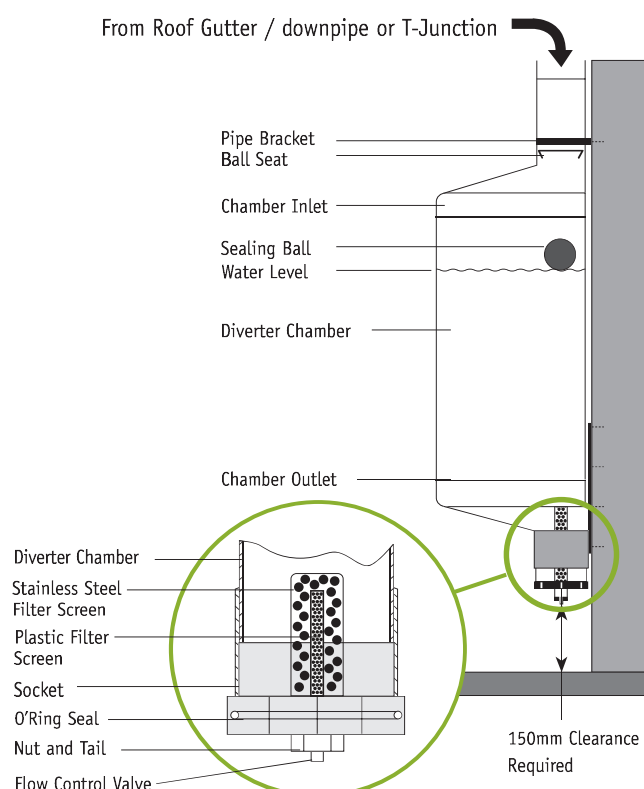
Place the diverter chamber into the bracket and secure the chamber to the wall at the top with a 100mm pipe bracket.

Step 4 - Connecting to the Chamber Inlet

If connecting to 90mm pipe; insert the ball seat with the small end (seat) down into the top of the chamber inlet and insert the infeed pipe directly hard down on the diverter seat. Use a t-junction to divert the pipe into the chamber inlet.

If connecting to a 100mm pipe: Insert the ball seat with the small end (seat) down into the top of the chamber inlet and insert and glue the 20mm (long) 90mm spacer (provided) and push the

From Roof Gutter / downpipe or T-Junction



spacer hard down on top of the seat to hold it in place. Attach the 100mm infeed pipe. Use a t-junction to divert the pipe into the chamber inlet.

Step 5 - Connecting to the Chamber Outlet

Glue the 100mm long 90mm diameter pipe provided into the plain end of the 90mm threaded coupling and glue into the chamber outlet.

Insert the Stainless Steel filter into the socket with the open end of the filter facing downwards, insert the 20mm (long) 90mm pipe (spacer) into the socket to hold the filter in place.

Fit the Screw cap to the socket making sure that the "O" Ring is in place in the cap. Insert the plastic screen into the cap, select the appropriate Flow Control Valve (rubber seal with holes) with the smallest hole giving slowest flow. Place Flow Control Valve in the Nut and Tail and screw the Nut and Tail into the cap.

To install the unit underground, ensure that before Chamber Inlets and Outlets are glued to the Chamber, the Chamber Inlet is at 12 O'clock and the Chamber Outlet at 6 O'clock to ensure water can drain out effectively.

Hint: Make sure diverter water flows away from house or tank. Use diverted water for gardens.

Maintenance

To ensure continuing function, unscrew the screw cap on a regular basis to allow debris to fall out. Hose or wash the filter screen if needed and check and clean the flow control valve.

90MM FIRST FLUSH DIVERTER

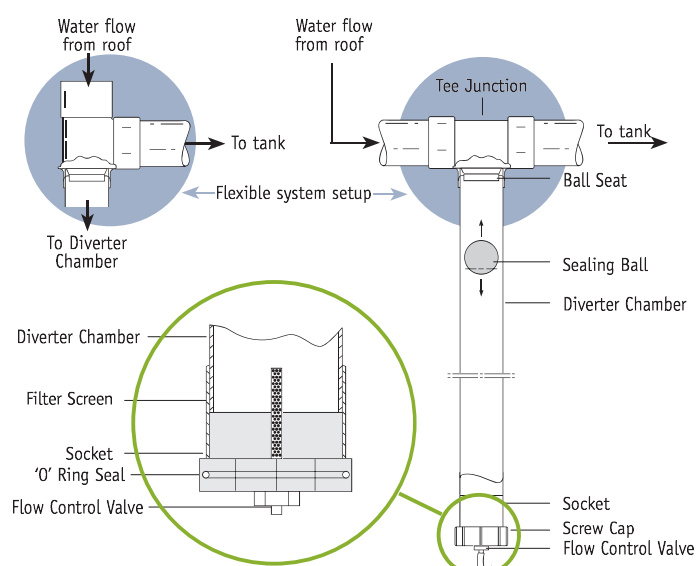


A simple First Flush Diverter requiring minimal maintenance.

Can be installed to a new or existing downpipe system and is designed to be installed in-line with each downpipe connecting to the tank.

LENGTH OF CHAMBER	VOLUME IN LITRES	MAX SERVICABLE ROOF AREA (Minimal pollution in dry system)
1 Metre	5.7 Litres	11.4m ²
2 Metres	11.4 Litres	22.8m ²
3 Metres	17.1 Litres	34.2m ²

NB. The 90mm First Flush diverter requires a section of Marley Stormline 90mm pipe sold separately in 1m, 3m and 6m lengths.



Installation Instructions



Step 1 - Determine the length of the Diverter Chamber (cut 90mm pipe as long as possible) making sure the Screw Cap is at least 150mm from the ground to allow for removal and cleaning.

Step 2 - Place the Ball Seat into the Tee Junction and then fit the Diverter Chamber up against the Ball Seat and hold until the glue sets. Then fit the socket to the bottom end of the Diverter Chamber.

Step 3 - Fix the assembled chamber to the wall in the desired position using the steel Pipe Brackets.

Step 4 - For wall mounting, connect a M & F Elbow to the Diverter Chamber and connect the downpipe. Bracket if necessary. Fit an elbow to the Tee Junction inlet and connect to the bottom of the selected Leaf Diverter.

Step 5 - Place the Sealing Ball into the Diverter Chamber and attach the Screw Cap.

Step 6 - Select the appropriate Flow Control Valve and insert into the Nut and Tail. Insert plastic Filter Screen into Screw Cap and attach the Nut and Tail.

Maintenance

To ensure continuing function, unscrew the screw cap on a regular basis to allow debris to fall out. Hose or wash the filter screen if needed and check and clean the flow control valve.

TANK VACUUM KIT

Fine sediment, which can contain harmful bacteria and heavy metals, eventually builds up in the bottom of the tank and some can find its way out the outtake pipe and into the home and can be ingested. This can be removed by using a tank vacuum kit.

How the Tank Vacuum System Works

Water flows into the tank through your existing pipework. The 90mm diameter Tank Vacuum Kit becomes charged with water and a suction action starts as the excess water exits the tank. This exiting water sucks the sediment/waste from the bottom of the tank (from the "Anaerobic Zone" - dirty zone) up the syphon pipe and out the tank. Position the tank vacuum kit directly over the outtake. Cut the vacuum pipe so that the serrated pick up rests on the bottom of the tank. The anti syphon feature prevents all the water in the tank from syphoning.

DEBRIS AND WATER DIVERSION

Leaf and Debris Diverters



MARLEY CURVE™

Suitable for new or existing downpipes, the Marley Curve has been designed in New Zealand to meet all rainfall conditions. Curve fits anywhere on the downpipe and does not need to be fixed to cladding or spouting. Containing no metal parts, Curve will not rust. It also features a quick release upper body for easy removal of its innovative screen for cleaning.

Dimensions: 330mm high; 126mm wide; 133mm deep. Fits Marley RP80® 80mm downpipe system. Adaptors available for other sizes.

Available in:

STRATUS®
DESIGN SERIES



LEAF BEATER

Mount mid or top of downpipe. PVC body with Clean Shield™ stainless steel screen. Features VH Pivot™ outlet that swivels to suit vertical or horizontal downpipes. Fits Marley RP80® 80mm round downpipe or Marley 90mm Stormline pipe. Adaptor available to fit Marley RP65® 65mm round downpipe.

Dimensions: 280mm high, 211mm wide, 183mm deep.



LEAF EATER

Mount mid or top of downpipe. PVC body with 6mm aperture screen for large debris and 1mm aperture mosquito proof stainless steel mesh screen.

Fits Marley RP80® 80mm round downpipe or Marley 90mm Stormline pipe. Adaptor available to fit Marley RP65® 65mm round downpipe.

Dimensions: 289mm high, 275mm wide, 188mm deep.



LEAF CATCHER

Spouting or wall mounted. PVC body with dual 6mm aperture screen for large debris and 1mm aperture mosquito proof stainless steel mesh screen. Fits Marley Magnum® 100mm round downpipe or Marley 90mm

Stormline pipe. Adaptors available to fit Marley RP80® 80mm round downpipe.

Dimensions - 210mm high, 290mm wide, 190mm deep.



OUTLET STRAINER

The Marley Outlet Strainer is made from UV resistant black polypropylene and is able to be used with 65mm, 80mm or 100mm outlets. Cost effective, simple to install and ideal for preventing large debris such as sticks and tennis balls from entering your downpipe system.

Rainwater Diverters



MARLEY TWIST®

The Marley Twist lets you capture extra rainwater as you need it via a convenient on-off 'twist' control. It quick connects to a secondary tank via a standard hose fitting. This additional water supply can be used for watering the garden, topping up pools, general cleaning or emergency supply.

Dimensions: 230mm high, 97mm wide including hose spigot. Fits Marley RP80® 80mm downpipe system. Adaptors available for other sizes.

To Use: Direct connect to a collection tank. Simply "twist" the upper body to the 'on' position when a fill is required, then twist to 'off' when finished.

Available in:

STRATUS®
DESIGN SERIES



DOWNPIPE DIVERTER

The Marley Downpipe Diverter is ideal when cleaning roofing and spouting. It removes the majority of debris flushed down the downpipe without the need to disconnect the downpipe. Note: Do not use the Downpipe Diverter in a 'wet' system.

Dimensions - 335mm high. Fits Marley RP80® 80mm downpipe system.

To Use: Lower the diverter arm and ensure it is clipped in a downwards sloping position.

For further installation information please refer to the technical section of the applicable product page at www.marley.co.nz

SUSTAINABLE MANUFACTURING

Marley is committed to creating environmentally sustainable processes and products and was the first plastics manufacturer in New Zealand to achieve ISO14001 registration. We are also Best Environmental Practice certified for our entire range of manufactured uPVC systems. This means we get our raw materials from sustainable and responsible sources, continuously work on our manufacturing processes to reduce our environmental footprint and accept our products back at the end of their useful life for recycling.



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For more information: **0800 MARLEY (0800 627539)**

www.marley.co.nz

an *OAliaxis* company

Rainwater Solutions



UV Water Systems Ltd 09 827 1409
Product Catalogue June 2018



UV System – Untreated Water



B3

Capacity

100 L/m; 80w Lamp
1.0" connections

Inlet Water

Typical / moderate debris
Taste issues
Chemical contamination

Use where

Multi bathroom
Larger family

General overview

- For outdoor installation
- For larger dwellings having more than 2 occupants
- System designed for typical untreated water sources chlorine, sprays, debris, or have taste/odor issues
- Untreated Water Cartridges (recommended)
5 m Pleated, 1 m Melt Blown, 5 m Carbon
- Annual servicing is inexpensive with lamps and cartridges available online from us.

Bolt to the wall, connect the inlet /outlet and plug in simplicity

Major features include:

- **Chamber** Cup end double welded internally polished chamber with 1 " inlet outlet, and sensor port for the option of adding a light sensor if required.
- **Connections** SS 1.0" Unions: tube connections that seal with rubber gaskets.
No more pesky leaking plumbing joins.
- **Assembly** All components front bolted into SS inserts mounted into 15mm durable PVC sheet.
Components easily removed without having to get behind the PVC sheet.
Piping & components joined with SS Hex Unions for DIY dismantling & reassembly.
- **Fully moisture protected power supply** Gel filled ballast prevents all moisture reaching the electronic circuitry; housed in IP 55 container.

Dosage

- Exceeds 30 mJ/cm² @ 95%UVT

Options:

- UV Sensor
to close an AutoShut Valve upon 'low light' condition
- AutoShut
1" Actuated Ball Valve to close on lamp failure; Normally Open; Closes on lamp fault.

UV Water Systems Ltd 09 827 1409

Product Catalogue June 2018



Cover

Dimensions	1035 x 535 x 235
Material	ACM (allu composite)
Fixing	Riveted & Glued

Specifications

- **Power Supply:** 800 mA 80 watt UV lamp; Digital '365 day countdown' ballast; Surge Protector & RCBO; IP55 Box;
- **Filtration:** Three 10" Jumbo Filters; Cartridges: 5M pleated paper/ 1m Melt blown / 5M carbon
- **Piping:** SS pipe fittings and UV chamber; 1.0" BSP connections (F);
- **Mounting:** 15mm PVC sheet;
- **Supplied with:** Weatherproof ACM (alloy composite material) security cover.
- **AutoShut Option:** Actuated 1.0" Ball Valve, controlled by ballast auxiliary; Normally Open; Closes on lamp fault.
- **Light Sensor Option.** Monitors UV output.
- **Shipping Carton:** 1.1 x 0.6 x 0.3 (0.2 m3); 33kg
- **Dimensions:** 1040x530; Allow 900mm on left side to remove lamp when servicing;

Typical Installation

- Do not mount close to the ground – chest height is recommended
- Mount out of direct midday sun
- Screw (14g 35mm SS Truss Screws) through the PVC Mounting Board (8 pre drilled holes) into the wall
- If using posts, firstly fit two '75 x 50' wooden horizontal rails, then screw to the rails
- If fitting to a concrete block wall, firstly bolt two '75 x 50' wooden rails using M8 concrete bolts
- Run inlet and outlet pipes horizontally then up to the ball valves (for ease of disconnect)
- Position system with 1 meter clearance to the left (for removal of the lamp& quartz sleeve)

Maintenance

- 6monthly for replacing cartridges. If cartridges prematurely block then pre-filtration may be required.
- 12 monthly for replacing UV lamp, removal/cleaning of the quartz sleeve; replace seals.
- End of Lamp life signaled by digital display countdown from 365 to 7; then alarm

Water Quality

Water passed through the unit must fall within the following parameters:

- Iron: < 0.3 ppm (0.3mg/L)
- Hardness* :< 7 gpg (120 mg/L)
- Turbidity: < 1NTU
- Manganese: < 0.05 ppm (0.05 mg/L)
- Tannins: < 0.1 ppm (0.3 mg/L)
- UV Transmittance: > 75% (call factory for recommendations on applications where UVT < 75%)

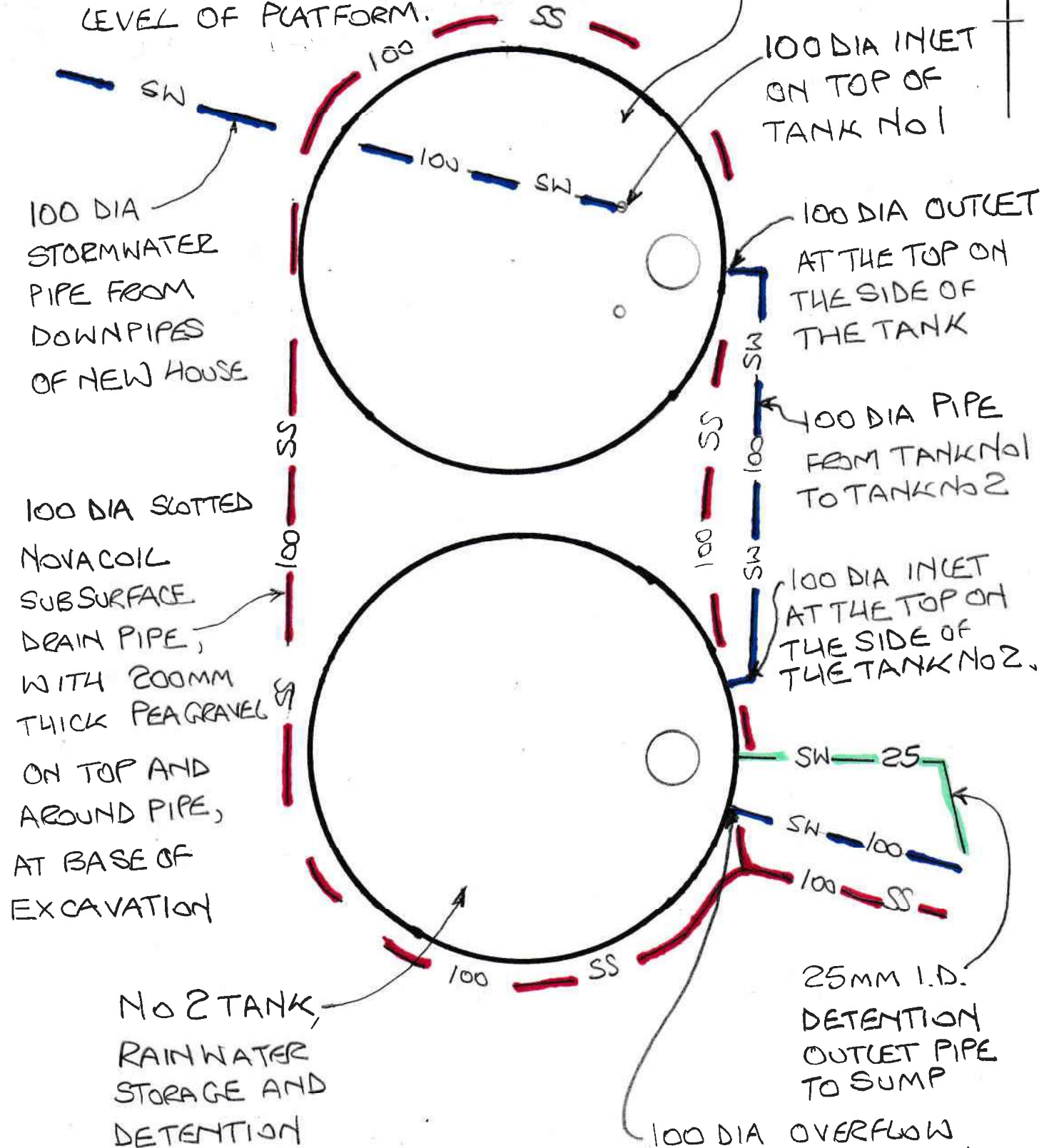
BC190480

TASMAN DISTRICT COUNCIL - APPROVED

12-6-2019

NO 1 TANK - RAINWATER STORAGE

TOP OF TANK TO BE ONE METRE BELOW
LEVEL OF PLATFORM.



NOTE: TOP OF TANK NO 1 TO BE
50MM HIGHER THAN TANK NO 2

SCALE 1 : 50 AT A4

DRG NO ESS1512/52
MAY 2018

PLAN OF INLETS AND OUTLETS FOR WATERTANKS FOR LOTS C10 & C13



SCALE 1:750

02 September 2019

Sam Mcleod & Toni Evans
PO Box 316
Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 1

Building Name: Main Building

Inspection Results:

DRAINAGE - 02 Sep 2019 @ 15:28 by Grant Fidler

Inspection Outcome: **INCOMPLETE** - Some aspects of the building work pertaining to this inspection have yet to be checked and confirmed as complying with the building consent.

Inspection Summary: Pass-Inspection for onsite waste water tanks & effluent field only, as per approved BC & relevant building codes, ok to backfill.

Your next inspection will be: **Prepour**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

<http://www.tasman.govt.nz>

189 Queen Street, Richmond 7020

Tel.: 03 543 8400 Email: bc.admin@tasman.govt.nz

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	-
Wastepipes	-
Sub-floor Framing	-
Framing / Pre-wrap	-
Post Wrap / Cavity	-
Preline	-
Post Line	-
Drainage	IN-PROGRESS - 02 Sep 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Grant Fidler

Building Technical Officer

On behalf of **Tasman District Council**

08 October 2019

Sam Mcleod & Toni Evans
 PO Box 316
 Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 2

Building Name: Main Building

Inspection Results:

PREPOUR - 08 Oct 2019 @ 09:56 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

DRAINAGE - 08 Oct 2019 @ 09:56 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: Profiles , boundary pegs in place Siting as per plan distances to boundaries as per plan . FFL75600 set off SW sump at front of section. 450 dia post holes in to hard ground , 900 deep anchors ,ordinary 450mm, point loads 450sq x 450 . certified site / building platform . H5 200SED poles on site . FINE TO POUR .

Your next inspection will be: **Sub-floor Framing**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations

- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	PASS - 08 Oct 2019
Wastepipes	-
Sub-floor Framing	-
Framing / Pre-wrap	-
Post Wrap / Cavity	-
Preline	-
Post Line	-
Drainage	PASS - 08 Oct 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Building Inspector

On behalf of **Tasman District Council**

15 October 2019

Sam Mcleod & Toni Evans

PO Box 316

Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 3

Building Name: Main Building

Inspection Results:

SUB-FLOOR FRAMING - 15 Oct 2019 @ 10:40 by Craig Jaquiere

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: New Dwelling and Sleepout inspection. All sub-floor connections installed to bearers and Joists. All connections Stainless Steel. Sub-floor insulation installed. Pass approved to continue.

Your next inspection will be: **Framing / Pre-wrap**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

<http://www.tasman.govt.nz>

189 Queen Street, Richmond 7020

Tel.: 03 543 8400 Email: building.support@tasman.govt.nz

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name

Prepour

Wastepipes

Sub-floor Framing

Framing / Pre-wrap

Post Wrap / Cavity

Preline

Post Line

Drainage

Final

Summary

PASS - 08 Oct 2019

-

PASS - 15 Oct 2019

-

-

-

-

PASS - 08 Oct 2019

-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Craig Jaquierey

Building Technical Officer (Inspections)

On behalf of **Tasman District Council**

04 November 2019

Sam Mcleod & Toni Evans
 PO Box 316
 Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 4

Building Name: Main Building

Inspection Results:

FRAMING / PRE-WRAP - 04 Nov 2019 @ 10:11 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: Dwelling and sleep out all correctly fixed for extra high wind zone as per Mitek frame and truss plan and NZS3604. PURLINS, 2 BLUE SCREWS , Diagonal strap bracing in place, top plates all stud lok, lintels with stud lok or 6kn straps / handi bracs , Rafters with cpc40/multi grips / strapped . Beam type H fixings . Fine for wrap and roof .

Your next inspection will be: **Post Wrap / Cavity**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry

- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name

Summary

Prepour	PASS - 08 Oct 2019
Wastepipes	-
Sub-floor Framing	PASS - 15 Oct 2019
Framing / Pre-wrap	PASS - 04 Nov 2019
Post Wrap / Cavity	-
Preline	-
Post Line	-
Drainage	PASS - 08 Oct 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Richmond Grant
Building Inspector
On behalf of **Tasman District Council**

25 November 2019

Sam Mcleod & Toni Evans
PO Box 316
Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 5

Building Name: Main Building

Inspection Results:

POST WRAP / CAVITY - 25 Nov 2019 @ 13:29 by Craig Harley

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: cavity inspection. LBP Jessie Robough.

7mm h3.2 structural grade ply. overlaid by fastwrap building wrap . Protecto flashing tape dressed into openings. penetrations taped to wrap.

Cladding to be direct fixed profiled metal. Windows /doors not installed at time of inspection.

Have agreed with builder and cladding installer -Conrad from Freeman Roofing. That they are to provide photos of flashings that are covered and email to

190480@tasman.abcs.co.nz

Builder has shown photos of ply nailed of to bracing pattern at lounge area between windows for BLP. And other locations around building in general.

OK to continue cladding

These notes apply to sleepout as inspected at same time. result pass

Your next inspection will be: **Preline**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	PASS - 08 Oct 2019
Wastepipes	-
Sub-floor Framing	PASS - 15 Oct 2019
Framing / Pre-wrap	PASS - 04 Nov 2019
Post Wrap / Cavity	PASS - 25 Nov 2019
Preline	-
Post Line	-
Drainage	PASS - 08 Oct 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Craig Harley
Building Technical Officer (Inspections)
On behalf of **Tasman District Council**

16 December 2019

Sam Mcleod & Toni Evans

PO Box 316

Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 6

Building Name: Main Building

Inspection Results:

WASTEPIPES - 16 Dec 2019 @ 12:14 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

PRELINE - 16 Dec 2019 @ 12:14 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: Dwelling and sleep out .TIMBER CEILING BATTENS AT 600mm centres . R3.6 and R2.6 batts , and noise bats neatly fitted. Airseals in place , Handi bracs or straps for BL braces , rest of bottom plates all gun nailed correctly . Average moisture 14% . Think Water have lagged and supported polybutylene pipes to G12 specs and wastes to G13. Sprinkler system installed . Fine to line . Pressure test for water supply, and separate test for sprinkler system to NZS 4517 required.

Your next inspection will be: **Post Line**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations

- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	PASS - 08 Oct 2019
Wastepipes	PASS - 16 Dec 2019
Sub-floor Framing	PASS - 15 Oct 2019
Framing / Pre-wrap	PASS - 04 Nov 2019
Post Wrap / Cavity	PASS - 25 Nov 2019
Preline	PASS - 16 Dec 2019
Post Line	-
Drainage	PASS - 08 Oct 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Richmond Grant
Building Inspector
On behalf of **Tasman District Council**

20 December 2019

Sam Mcleod & Toni Evans
PO Box 316
Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 7

Building Name: Main Building

Inspection Results:

POST LINE - 20 Dec 2019 @ 12:35 by Craig Jaquierey

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

DRAINAGE - 20 Dec 2019 @ 12:35 by Craig Jaquierey

Inspection Outcome: **FAIL** - The following aspects of this inspection have resulted in a Fail result -- see the item(s) below:

E1: Surface Water:

1. Please provide a set of as-built drawings accurately depicting the drainage layout and forward these to the Building Consent Authority to enable issue of the code compliance certificate to be finalised.

These may be viewed at time of next inspection.

Inspection Summary: Dwelling and sleepout Sewer and storm water laid at 1:100 fall. Sewer connection to Sceptic tank. Storm water connecting to In ground water tanks. 2 Toilets.

Approved to back fill. Fail paper work only As-built to come.

Dwelling bracing. bracing panels installed as per the Stamped plan and Fixed as per the 2018 Gib site bracing specifications. Pass. Approved to continue

Your next inspection will be: **Final**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name

Prepour

Wastepipes

Sub-floor Framing

Framing / Pre-wrap

Post Wrap / Cavity

Preline

Post Line

Drainage

Final

Summary

PASS - 08 Oct 2019

PASS - 16 Dec 2019

PASS - 15 Oct 2019

PASS - 04 Nov 2019

PASS - 25 Nov 2019

PASS - 16 Dec 2019

PASS - 20 Dec 2019

FAIL - 20 Dec 2019

View at next inspection

-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Craig Jaquiere
Building Technical Officer (Inspections)
On behalf of **Tasman District Council**

23 March 2020

Sam Mcleod & Toni Evans

PO Box 316

Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 8

Building Name: Main Building

Inspection Results:

DRAINAGE - 23 Mar 2020 @ 11:53 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

FINAL - 23 Mar 2020 @ 11:53 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: New dwelling and sleep out built as per consented plans , All painting and decorating water temperature 52C . 6 +1 smoke detectors correctly fitted . EXTERIOR roof and cladding secure and weather proof , storm water system complete to 2 tanks . First flush diverter in place . Fine to issue CCC .

Your next inspection will be: **No further inspection required**

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	PASS - 08 Oct 2019
Wastepipes	PASS - 16 Dec 2019
Sub-floor Framing	PASS - 15 Oct 2019
Framing / Pre-wrap	PASS - 04 Nov 2019
Post Wrap / Cavity	PASS - 25 Nov 2019
Preline	PASS - 16 Dec 2019
Post Line	PASS - 20 Dec 2019
Drainage	PASS - 23 Mar 2020
Final	PASS - 23 Mar 2020

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Richmond Grant
Building Inspector
On behalf of **Tasman District Council**

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT		Pass	User	Date	Notes
Prepour					
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	RGt	08/10/2019 09:36 am	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is . . .	
	Pass	RGt	08/10/2019 09:36 am	Complexity is correctly assigned.	
Siting : Is the siting and building orientation confirmed to be in accordance with building consent? Request a Survey Certificate / Building Location Certificate if siting cannot be adequately verified.	Pass	RGt	08/10/2019 09:36 am	Building siting complies.	
Services: Has proper attention been given to ensuring building work will not adversely affect existing services?	Pass	RGt	08/10/2019 09:36 am	Existing services are adequately protected.	
B1 & B2: Wind / Earthquake / Corrosion Zone: Do on-site conditions correlate to the wind and corrosion zone classifications that have been applied to the design?	Pass	RGt	08/10/2019 09:36 am	On-site conditions correlate to the wind and exposure zone classifications.	
B1: Demolition / Excavation / Construction / Sediment Control: Have the effects that construction activity may have on people or other properties been properly considered / mitigated i.e. demolition / excavation / sediment control etc? Discuss with builder and record accordingly.	N/A	RGt	08/10/2019 09:37 am	NA	
B1: Ground Bearing: Is evidence provided confirming that ground bearing capacity is adequate to support imposed loads; and (where required) has construction monitoring / site verification documentation and requirements been satisfied?	Pass	RGt	08/10/2019 09:37 am	Evidence of good ground bearing capacity has been provided.	
B1 & E1: Slope Suitability / Overland Flow Paths: Is ground contour in accordance with consent documents and is the building located clear of overland flow paths?	Pass	RGt	08/10/2019 09:37 am	Ground contour is in accordance with consent documents.	
Finished Floor Levels: From observation; do finished floor levels in relation to finished ground, and horizontal separation distances in relation to adjacent ground comply with the building consent?	Pass	RGt	08/10/2019 09:37 am	Finished floor levels in relation to finished ground, and horizontal separation distances in relation to adjacent ground satisfy the requirements of building consent.	
B1: Pile: Is pile siting, layout and construction in accordance with building consent?	Pass	RGt	08/10/2019 09:37 am		
B1: Pile - Prompt List:					
1. Siting: Is siting in accordance with building consent (check datum, locate boundary pegs?	PASS	RGt	08/10/2019 09:37 am	Building siting complies.	
2. Ground Bearing: Are piles founded on good ground?	PASS	RGt	08/10/2019 09:37 am	Ground bearing is adequate to support imposed loads.	
3. Footings: Are footings clear of services, clean, and is size complying?	N/A	RGt	08/10/2019 09:37 am	This question does not apply to this Project.	
4. Pile Type / Layout / Bracing / Size / Treatment: Does the pile type, layout, size /treatment and location of bracing elements comply?	PASS	RGt	08/10/2019 09:37 am	Pile type, layout / size / treatment and location of bracing elements complies.	
5. Height: Does pile height in relation to finished floor level and finished ground level comply?	PASS	RGt	08/10/2019 09:37 am	Pile height in relation to finished floor level complies.	
6. Driven Piles / SED / Construction Monitoring / LBP: Is the driven pile layout compliant and is construction monitoring records / required documentation provided and has the LBP details been entered into the site contacts list? Refer reference notes.	N/A	RGt	08/10/2019 09:37 am	This question does not apply to this Project.	
Wastepipes					
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision	Pass	RGt	16/12/2019 11:37 am	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is . . .	

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT		Pass	User	Date	Notes
please ensure that this is recorded here.		Pass	RGt	16/12/2019 11:37 am	Complexity is correctly assigned. I have the appropriate level of competence ...
G12: Water Supply: Is the hot water cylinder relief drain pipework appropriately sized & protected (durability), with continuous fall and sleeved through the concrete and is the pipework pressure test documentation provided?		Pass	RGt	16/12/2019 11:38 am	The hot water cylinder relief drain pipework is appropriately sized & protected, with continuous fall and sleeved through the concrete.
G13: Foul Water: Is the foul water system installed in accordance with building consent?		<u>Pass</u>	<u>RGt</u>	<u>16/12/2019 11:38 am</u>	
G13: Foul Water - Prompt List:					
1. Plumber / Drainlayer: Name, company, license number, contact details provided?		PASS	RGt	16/12/2019 11:38 am	Think Water Plumber name: Company name: License number: Contact details:
2. Fixture Layout / Drains / Wastes / Vents: Is fixture layout, pipework gradient, materials, size, length and support compliant?		PASS	RGt	16/12/2019 11:38 am	Fixture Layout / Drains / Wastes / Vents comply.
3. Separation: Are pipes that pass through concrete floors or walls sleeved appropriately?		N/A	RGt	16/12/2019 11:38 am	This question does not apply to this consent.
4. Bedding: Is pipework properly supported on complying bedding material?		N/A	RGt	16/12/2019 11:38 am	This question does not apply to this consent.
5. Pipework Tests: Have tests and documentation verifying system integrity been obtained?		PASS	RGt	16/12/2019 11:38 am	Tests and documentation verifying system integrity has been obtained.
Sub-floor Framing					
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.		Pass	CJ	15/10/2019 10:19 am	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
		Pass	CJ	15/10/2019 10:20 am	Complexity is correctly assigned. I have the appropriate level of competence.
B1: Pile: Are pile fixings / connections installed in accordance with building consent?		<u>Pass</u>	<u>CJ</u>	<u>15/10/2019 10:23 am</u>	
B1: Pile - Prompt List:					
1. Pile Location: Is pile location compliant (check piles correctly located in relation to bearer spans, point loads and load transfer paths)?		PASS	CJ	15/10/2019 10:22 am	The piles correctly located in relation to bearer spans, point loads and load transfer paths Z nails and anchor pile kits with M12 ss bolts connections on anchor piles with DPM
2. Pile Fixings: Are pile fixing assemblies compliant and correctly installed?		PASS	CJ	15/10/2019 10:23 am	Connections comply Z nails installed for ordinary anchor pile kits with M12 SS bolts connections on anchor piles with DPM
3. Durability: Is durability of pile fixings compliant (check proximity to ground, corrosion zone, exposure - sheltered / exposed)?		PASS	CJ	15/10/2019 10:23 am	Durability of pile fixings is complying. Stainless Steel
4. Spoil: Has sub-floor spoil been removed / leveled? (Ensure builder is aware of sub-floor ventilation and access requirements - these may be checked at time of final inspection).		PASS	CJ	15/10/2019 10:23 am	Sub-floor spoil has been removed and builder has been advised of sub-floor ventilation requirements.
B1: Bearers / Stringers: Is Bearer / Stringer construction in accordance with building consent?		<u>Pass</u>	<u>CJ</u>	<u>15/10/2019 10:26 am</u>	
B1: Bearers / Stringers - Prompt List:					
1. Span/ spacing/ size: Is compliance demonstrated?		PASS	CJ	15/10/2019 10:25 am	Span/ spacing/ size: Compliance is demonstrated. 200x90 H3.2 SG8 as per the stamped plan
2. Support: Is bearer support in accordance with consent?		PASS	CJ	15/10/2019 10:26 am	Support: Bearer support is in accordance with consent

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
3. Joins: Is bearer / stringer construction complying (joins formed over supports and correctly plated / secured)?	PASS	CJ	15/10/2019 10:26 am	Joins: Bearer / stringer construction is complying (joins formed over supports and correctly plated / secured)
4. Treatment: Is timber and fixing treatment complying and are ground separation requirements satisfied?	PASS	CJ	15/10/2019 10:26 am	Treatment of timber and fixings complies. H3.2 and Stainless Steel fixings
B1: Floor Joists: Does floor joist construction comply with building consent?	<u>Pass</u>	<u>CJ</u>	<u>15/10/2019 10:27 am</u>	
B1: Floor Joists - Prompt List:				
1. Joist: Is joist construction compliant? (check - layout, species, grade, treatment, size, span, spacing, fixing and treatment)?	PASS	CJ	15/10/2019 10:27 am	Joist construction complies. 200x45 H1.2 SG8 at 400mm centers
2. Blocking: Is lateral support / blocking compliant?	PASS	CJ	15/10/2019 10:27 am	Lateral support / blocking is complying.
3. Point Loads: Are point loads / load bearing walls correctly supported?	PASS	CJ	15/10/2019 10:27 am	Point loads / load bearing walls are correctly supported.
4. Cantilever Joists: Are cantilever joists and projections complying?	N/A	CJ	15/10/2019 10:27 am	This question does not apply to this consent.
5. Holes: Are holes and notches in floor joists complying?	PASS	CJ	15/10/2019 10:27 am	Holes and notches in floor joists are complying. No holes in joists at time of inspection
B1: Sub-floor Ground Clearance: Does sub-floor ground clearance comply with building consent i.e. min. 450mm between ground and services and 600mm between ground and particle board flooring?	Pass	CJ	15/10/2019 10:28 am	Sub-floor ground clearance complies with building consent.
B1: Sub-floor Bracing: Does sub-floor bracing construction comply with building consent?	<u>Pass</u>	<u>CJ</u>	<u>15/10/2019 10:28 am</u>	
B1: Sub-floor Bracing - Prompt List:				
1. Brace Elements: Are brace elements correctly located and constructed with complying connections and treatment?	PASS	CJ	15/10/2019 10:28 am	Bracing elements are correctly located and constructed with complying connections and treatment. Anchor piles
2. Diaphragm: Does the floor bracing diaphragm construction comply?	N/A	CJ	15/10/2019 10:28 am	This question does not apply to this project.
B1: Sub-floor Cross-Flow Ventilation & Access: Is sub-floor ventilation and access compliant?	Pass	CJ	15/10/2019 10:28 am	Sub-floor ventilation and access is compliant.
H1: Energy Efficiency: Is sub-floor insulation correctly installed with correct R-value in accordance with the building consent?	Pass	CJ	15/10/2019 10:28 am	Sub-floor insulation is correctly installed with correct R-value in accordance with the building consent.
	Pass	CJ	15/10/2019 10:29 am	Sub-floor insulation is correctly installed with correct R-value in accordance with the building consent. Gray Expol sub floor insulation installed
Framing / Pre-wrap				
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	RGt	04/11/2019 09:30 am	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
	Pass	RGt	04/11/2019 09:31 am	Complexity is correctly assigned.
B1: Flooring & Decking: Does flooring and decking construction comply with building consent?	<u>Pass</u>	<u>RGt</u>	<u>04/11/2019 09:32 am</u>	
B1: Flooring & Decking - Prompt List:				
1. Materials: Do materials, size/ span/ grade/ fixing comply?	PASS	RGt	04/11/2019 09:32 am	Materials, size, span, grade are correct.
2. Elements: Are elements correctly supported and fixed?	N/A	RGt	04/11/2019 09:32 am	This question does not apply to this consent.
3. Durability: Is the treatment of fixings and materials compliant?	PASS	RGt	04/11/2019 09:32 am	Fixings and material treatment are compliant.
4. Maintenance: Does external decking have adequate separation from the building to allow drainage and to enable wall cladding behind / below to be maintained?	N/A	RGt	04/11/2019 09:32 am	This question does not apply to this consent.

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
B1: Wall Framing: Is wall framing layout, treatment, fixings, set-out and construction in accordance with building consent? (check that LBP details are recorded)	<u>Pass</u>	<u>RGt</u>	<u>04/11/2019 09:55 am</u>	
B1: Wall Framing - Prompt List:				
1. Plates / Studs: Is grade, size & fixing compliant?	PASS	RGt	04/11/2019 09:54 am	Grade, size & fixings are compliant
2. Trimmers: Is grade, size & number of trimmer studs compliant?	PASS	RGt	04/11/2019 09:54 am	Grade, size & number of trimmer studs is compliant
3. Lintels: Is grade, size, fixing of lintels & sills compliant?	PASS	RGt	04/11/2019 09:54 am	Grade, size & fixing of lintels and sills is compliant
4. Flashing Support: Is blocking support to flashings provided?	PASS	RGt	04/11/2019 09:54 am	Flashing support complies
5. Point Loads: Is support and distribution of point loads complying?	PASS	RGt	04/11/2019 09:55 am	Support and distribution of point loads complies.
B1: Wall Bracing: Is exterior wall bracing compliant?	<u>N/a</u>	<u>RGt</u>	<u>04/11/2019 09:51 am</u>	
B1: Wall Bracing - Prompt List:				
1. Brace Layout: Is brace layout / element location/ element size and top plate size compliant?	N/A	RGt	04/11/2019 09:51 am	This question does not apply to this consent.
2. Penetrations: Are penetrations in brace elements correctly located?	N/A	RGt	04/11/2019 09:51 am	This question does not apply to this consent.
3. Fixings: Are fixings and hold down connections compliant? (ensure that LBP details are recorded)	N/A	RGt	04/11/2019 09:51 am	This question does not apply to this consent.
B1: Roof Truss Certification, Layout & Bracing: Is roof truss construction, layout, bracing and connections in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>04/11/2019 09:31 am</u>	
B1: Roof Truss Certification, Layout & Bracing - Prompt List:				
1. Truss: Is truss pitch / treatment / grade / span / spacing / layout compliant?	PASS	RGt	04/11/2019 09:31 am	Truss pitch / treatment / grade / span / spacing / layout complies.
2. Fixing: Is fixing, treatment and installation compliant?	PASS	RGt	04/11/2019 09:31 am	Truss fixing treatment and installation complies.
3. Point Loads: Is truss and point loads support compliant?	PASS	RGt	04/11/2019 09:31 am	Trusses and point load support is compliant.
4. Bracing: Is truss bracing compliant? - [check bottom chord restraint size and location, gable end bracing, dragon ties, roof space / roof plane braces etc.]	PASS	RGt	04/11/2019 09:31 am	Truss bracing detailing complies.
5. Valley Board: Is grade / size / treatment compliant?	N/A	RGt	04/11/2019 09:31 am	This question does not apply to this project.
6. Required Documents / LBP: Has a copy of the roof truss certification been obtained and is this from a suitably qualified truss system designer? (ensure that LBP details are recorded)	N/A	RGt	04/11/2019 09:31 am	This question does not apply to this project.
B1: Roof Frame: Is roof frame construction in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>04/11/2019 09:42 am</u>	
B1: Roof Frame - Prompt List:				
1. Rafter: Does construction comply?	PASS	RGt	04/11/2019 09:42 am	Rafter construction complies.
2. Valley: Is valley board grade, size, treatment compliant?	N/A	RGt	04/11/2019 09:31 am	This question does not apply to this consent.
3. Ties: Is collar ties & cleat size and installation compliant?	N/A	RGt	04/11/2019 09:31 am	This question does not apply to this consent.
4. Ceiling Runner: Is construction compliant- [span, spacing, free from roof loads]?	N/A	RGt	04/11/2019 09:31 am	This question does not apply to this consent.
5. Joist: Is joist layout and construction compliant?	N/A	RGt	04/11/2019 09:31 am	This question does not apply to this consent.
6. Ridge: Is ridge board construction compliant?	PASS	RGt	04/11/2019 09:42 am	Ridge board grade, size, span, spacing & treatment complies.
7. Underpurlin: Is underpurlin installation compliant?	N/A	RGt	04/11/2019 09:31 am	This question does not apply to this consent.
8. Strutting Beam: Is strutting beam construction compliant?	N/A	RGt	04/11/2019 09:31 am	This question does not apply to this consent.
9. Eave: Is construction compliant?	N/A	RGt	04/11/2019 09:31 am	This question does not apply to this consent.
10. Bracing: Is this compliant?	PASS	RGt	04/11/2019 09:42 am	Roof bracing complies.
B1: Purlin / Tile Batten: Is purlin / batten construction compliant? - [check treatment, grade, size, span, spacing, fixings]	Pass	RGt	04/11/2019 09:42 am	Installation complies.
B1: Separation: Is separation provided between timber framing and concrete to prevent transference of moisture (DPC) and to enable drainage?	N/A	RGt	04/11/2019 09:32 am	Timber floors
Post Wrap / Cavity				

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	CHy	25/11/2019 01:00 pm	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
E2 - External Moisture: Wall Cladding: Is wall cladding construction in Wall Cladding:ing construction in accordance with building consent? " See Reference Notes.E2 - External Moisture - Prompt List: re - Prompt List:		CHy	25/11/2019 01:08 pm	
1. Materials / Installation: Are materials and installation of these in accordance with the building consent [check size, span, spacing, fixing, thickness, grade, treatment, profile, workmanship, ground clearance]?	PASS	CHy	25/11/2019 01:08 pm	Materials / Installation: Wall cladding material, installation and workmanship is compliant.
2. Wall Wrap: Is the wall wrap installation as per consent [secure/ supported/ penetrations properly sealed (windows, doors, meter box etc.)?]				
3. Flashing: Are flashing tapes and flashings to openings in the exterior envelope installed as per consent?				
4. Air Barriers: Is the installation of air barriers complying?				
5. Cavity Battens: Is batten treatment, fixing and installation complying?				
7. Cavity Closure: Is the cavity closure / vermin strip installation complying?				
8. Support Bars: Is the installation of window and door support systems complying?				
9. Construction Monitoring / Warranties / LBP: Has the contractor been advised of Construction Monitoring / Warranty requirements? [record LBP details].				
E2 - External Moisture: Wall Cladding: Is wall cladding construction in Wall Cladding:ing construction in accordance with building consent? " See Reference Notes.E2 - External Moisture - Prompt List: re - Prompt List:	Pass	CHy	25/11/2019 01:24 pm	
1. Materials / Installation: Are materials and installation of these in accordance with the building consent [check size, span, spacing, fixing, thickness, grade, treatment, profile, workmanship, ground clearance]?				
2. Wall Wrap: Is the wall wrap installation as per consent [secure/ supported/ penetrations properly sealed (windows, doors, meter box etc.)?]	PASS	CHy	25/11/2019 01:24 pm	Wall Wrap: Installation is secure, supported and penetrations are correctly sealed in accordance with the building consent.
3. Flashing: Are flashing tapes and flashings to openings in the exterior envelope installed as per consent?	PASS	CHy	25/11/2019 01:24 pm	Flashing: Installation of flashings is in accordance with building consent.
4. Air Barriers: Is the installation of air barriers complying?	PASS	CHy	25/11/2019 01:24 pm	Air Barriers: The installation of air barriers is compliant.
5. Cavity Battens: Is batten treatment, fixing and installation complying?	N/A	CHy	25/11/2019 01:24 pm	Installation of cavity battens is not a consideration for this project.
7. Cavity Closure: Is the cavity closure / vermin strip installation complying?	PASS	CHy	25/11/2019 01:24 pm	Cavity Closure: The installation of the cavity closure and vermin strip is compliant.
8. Support Bars: Is the installation of window and door support systems complying?	N/A	CHy	25/11/2019 01:24 pm	Installation of window and door support systems is not a consideration for this project.
9. Construction Monitoring / Warranties / LBP: Has the contractor been advised of Construction Monitoring / Warranty requirements? [record LBP details].	PASS	CHy	25/11/2019 01:24 pm	Construction Monitoring / Warranties: The contractor been advised of Construction Monitoring / Warranty requirements.
E2 - External Moisture: Roof Cladding: Is roof cladding installation in Roof Cladding:ing installation in accordance with building consent? " /> See Reference Notes.- External Moisture - Prompt List: - Prompt List:	Pass	CHy	25/11/2019 01:24 pm	

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	Use	Date	Notes
1. Roof Construction: Is roof construction compliant? [check materials, size, treatment, grade, support].	PASS	CHy	25/11/2019 01:24 pm	Roof Construction: Construction is compliant.
2. Underlay / Cladding: Is installation of the underlay and roof cladding compliant? [check underlay is as specified, well supported and undamaged; check roof cladding is as specified and properly secured].	PASS	CHy	25/11/2019 01:24 pm	Underlay / Cladding: Materials and installation are compliant.
3. Fixing: Are fixings compliant? [check size, type, perimeter fixings].	PASS	CHy	25/11/2019 01:24 pm	Fixing: Fixing of the cladding is compliant.
4. Flashing: Are flashings compliant? [check size, cover, fixing, compatibility, sealing of penetrations].	PASS	CHy	25/11/2019 01:24 pm	Flashing: Roof flashing is compliant.
5. Water Management: Is provision for overflow complying and is support and falls for gutters and location of outlets complying?	PASS	CHy	25/11/2019 01:24 pm	Water Management: The provision for overflow and support and falls for gutters and location of outlets is complying.
6. Construction Monitoring / Warranties / LBP: Has the contractor been advised of Construction Monitoring / Warranty requirements? [record LBP details].	PASS	CHy	25/11/2019 01:24 pm	Construction Monitoring / Warranties: The contractor has been advised of requirements.
Preline				
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	RGt	15/12/2019 06:46 pm	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
	Pass	RGt	15/12/2019 06:46 pm	Complexity is correctly assigned. I have the appropriate level of competence
B1: Wall & Ceiling Lining Construction: Is pre-line construction compliant? B1: Wall & Ceiling Lining Construction - Prompt List:	Pass	RGt	16/12/2019 11:35 am	
1. Layout: Are room layouts in accordance with building consent [give attention to room sizes and accessibility set-ups in service areas - toilets, laundry, kitchens].	PASS	RGt	16/12/2019 11:35 am	Room set-outs comply.
2. Services: Is the installation of services [water, gas, electricity] in relation to position of fixtures in accordance with building consent?	PASS	RGt	16/12/2019 11:35 am	The installation of services in relation to fixtures complies.
3. Blocking: Is all necessary framing, blocking and support for fixtures, handrails, flashing support, appliances, linings and finishes etc. installed?	PASS	RGt	16/12/2019 11:35 am	Framing and blocking installed.
4. Metal Angles: Have metal angles been installed to corners of wet areas?	N/A	RGt	16/12/2019 11:35 am	This question does not apply to this Project.
5. Air Seals: Have air-seals been installed around openings in the external envelope?	PASS	RGt	16/12/2019 11:35 am	Air Seals are compliant.
6. Insulation: Is insulation as specified & correctly installed - [complying R-value, no gaps to perimeter]?	PASS	RGt	16/12/2019 11:35 am	Insulation is compliant.
7. Noise Control / Fire Ratings: Is the construction of noise control / fire ratings in accordance with building consent - [correct framing configuration, materials as specified and correctly located]?	PASS	RGt	16/12/2019 11:35 am	Noise Control and Fire Rating construction is compliant.
8. Ceiling Battens: Is ceiling space access location / ceiling batten size / layout, and moisture content compliant?	PASS	RGt	16/12/2019 11:35 am	Ceiling batten size, layout and moisture content is compliant.
9. Moisture Content: Is moisture content within safe range to allow lining to proceed?	PASS	RGt	16/12/2019 11:35 am	Moisture content readings indicate that framing is within safe range to allow enclosing of framing to proceed
B1: Wall Bracing: Does wall bracing conform to the consent documents? B1: Wall Bracing - Prompt List:	Pass	RGt	16/12/2019 11:36 am	
1. Brace Layout: Is brace layout / element location/ element size / fixings and top plate size compliant?	PASS	RGt	16/12/2019 11:35 am	Brace element distribution, layout and plate size and fixing is correct.
2. Penetrations: Are penetrations in brace elements correctly located?	PASS	RGt	16/12/2019 11:36 am	Penetrations in brace elements are correctly located.
3. Elements: Are bracing elements clear of wet areas, correctly located and secured? (ensure that LBP details are recorded)	PASS	RGt	16/12/2019 11:36 am	Bracing elements are clear of wet areas and are correctly located and secured.

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
G4: Ventilation - Residential: Does the preline installation of the ventilation system comply with the building consent?	<u>Pass</u>	<u>RGt</u>	<u>16/12/2019 11:36 am</u>	
G4: Ventilation - Residential - Prompt List:				
1. Materials: Are materials as specified?	PASS	RGt	16/12/2019 11:36 am	Materials are as specified.
2. System Components: Are system components correctly located and installed?	N/A	RGt	16/12/2019 11:36 am	This question does not apply to this project.
G4: Windows: Is window installation in accordance with building consent? (check air seals, support, flashing, location, sash size and location, safety glass)	Pass	RGt	16/12/2019 11:36 am	Window installation is in accordance with building consent - aspects considered include air seals, support, flashing, location, sash size and location, safety glass
G12: Water Supply: Are water supplies services installation for G12 compliant?	<u>Pass</u>	<u>RGt</u>	<u>16/12/2019 11:36 am</u>	
G12: Water Supply - Prompt List:				
1. LBP: Have the LBP (plumber) details been obtained (name, company, license number, contact details)?	PASS	RGt	16/12/2019 11:36 am	Think water LBP Details provided
2. Water Supplies: Is installation & construction of the hot and cold water supply system compliant (check materials / jointing / size / pipe run & support / insulation / valving / sealing of penetrations/ back-flow protection)	PASS	RGt	16/12/2019 11:36 am	Installation & construction of the hot and cold water supply system is compliant.
3. Water Pipe Pressure Tests: Has pressure tests and documentation verifying system integrity been obtained?	PASS	RGt	16/12/2019 11:36 am	Pipework tests provided.
4. Wetback: Does the wet back system pipework installation conform to the building consent?	N/A	RGt	16/12/2019 11:36 am	This question does not apply to this project.
G13: Foul Water: Is internal foul water system pipework grade, size location, and internal venting compliant?	<u>Pass</u>	<u>RGt</u>	<u>16/12/2019 11:37 am</u>	
G13: Foul Water - Prompt List:				
1. LBP: Have the LBP (plumber/ drain layer) details been obtained (name, company, license number, contact details)?	PASS	RGt	16/12/2019 11:37 am	LBP Details provided
2. Drains, Wastes, Vents: Is installation of the sanitary plumbing compliant - (check materials, jointing, gradient, size, length and support)?	PASS	RGt	16/12/2019 11:37 am	Installation of the sanitary plumbing is compliant.
H1: Energy Efficiency: Is wall and ceiling insulation compliant with the building consent?	<u>Pass</u>	<u>RGt</u>	<u>16/12/2019 11:37 am</u>	
H1: Energy Efficiency - Prompt List:				
1. Glazing: Is correct glazing installed?	PASS	RGt	16/12/2019 11:37 am	Glazing is correct.
2. R- Value: Is correct insulation with correct R-value installed?	PASS	RGt	16/12/2019 11:37 am	R-Values comply
3. Insulation: Is insulation correctly fitted?	PASS	RGt	16/12/2019 11:37 am	Insulation correctly fitted.
4. Thermal Bridge: Are thermal bridging requirements satisfied?	PASS	RGt	16/12/2019 11:37 am	Thermal bridging provisions satisfied.
Post Line				
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	CJ	20/12/2019 12:20 pm	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
	Pass	CJ	20/12/2019 12:21 pm	Complexity is correctly assigned. I have the appropriate level of competence.
B1: Wall & Ceiling Lining Construction: Are materials, fixings and stopping compliant?	Pass	CJ	20/12/2019 12:21 pm	Materials, fixings and stopping is compliant.
	Pass	CJ	20/12/2019 12:21 pm	Materials, fixings compliant.
B1: Wall Bracing: Is the fixing of the bracing elements compliant i.e. check that penetration sizes / locations, and fixings / fixing patterns comply? (ensure that LBP details are recorded)	Pass	CJ	20/12/2019 12:21 pm	The fixing of the bracing elements is compliant.

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT		Pass	User	Date	Notes
Drainage					
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	GFd	02/09/2019 02:50 pm	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..	
	Pass	GFd	02/09/2019 02:51 pm	Complexity is correctly assigned. I have the appropriate level of competence	
E1: Surface Water: Does the location and construction of sumps and drains comply with building consent? E1: Surface Water - Prompt List:	N/a	GFd	02/09/2019 02:51 pm		
1. Separation: Is sufficient separation provided between drains and foundations?	N/A	GFd	02/09/2019 02:51 pm	This question does not apply to this consent.	
2. Materials: Are pipe materials, pipe size, length and gradient compliant?	N/A	GFd	02/09/2019 02:51 pm	This question does not apply to this consent.	
3. Inspection: Are inspection point locations compliant?	N/A	GFd	02/09/2019 02:51 pm	This question does not apply to this consent.	
4. Sub-floor: Is sub-floor pipework support compliant?	N/A	GFd	02/09/2019 02:51 pm	This question does not apply to this consent.	
5. Bedding: Is drain bedding material and drain cover compliant?	N/A	GFd	02/09/2019 02:51 pm	This question does not apply to this consent.	
6. Drain Leakage Test: Has the system passed a drain leakage test and has evidence of this test been recorded?	N/A	GFd	02/09/2019 02:51 pm	This question does not apply to this consent.	
7. Construction: Is the down pipe/ sump / cesspit / soakpit / swale location and construction compliant?	N/A	GFd	02/09/2019 02:51 pm	This question does not apply to this consent.	
8. As-built: Have as-built drawings and required documents been provided along with drain-layer details - (name, company, license number, contact details)?	N/A	GFd	02/09/2019 02:51 pm	This question does not apply to this consent.	
E1: Surface Water: Does the location and construction of sumps and drains comply with building consent? E1: Surface Water - Prompt List:	Fail	CJ	20/12/2019 12:18 pm		
1. Separation: Is sufficient separation provided between drains and foundations?	PASS	CJ	20/12/2019 12:16 pm	Sufficient separation is provided between drains and foundations.	
2. Materials: Are pipe materials, pipe size, length and gradient compliant?	PASS	CJ	20/12/2019 12:17 pm	Pipe materials, pipe size, length and gradient is compliant. Marley PVC-U 100mm pipe and connections laid at 1:100 fall	
3. Inspection: Are inspection point locations compliant?	PASS	CJ	20/12/2019 12:17 pm	5 Inspection point locations are compliant.	
4. Sub-floor: Is sub-floor pipework support compliant?					
5. Bedding: Is drain bedding material and drain cover compliant?	PASS	CJ	20/12/2019 12:18 pm	Drain bedding material and drain cover is compliant. Pea metal laid at time of inspection	
6. Drain Leakage Test: Has the system passed a drain leakage test and has evidence of this test been recorded?	PASS	CJ	20/12/2019 12:18 pm	Drain test passed.	
7. Construction: Is the down pipe/ sump / cesspit / soakpit / swale location and construction compliant?	PASS	CJ	20/12/2019 12:18 pm	4 Down pipes and swale location and construction is compliant.	
8. As-built: Have as-built drawings and required documents been provided along with drain-layer details - (name, company, license number, contact details)?	FAIL	CJ	20/12/2019 12:18 pm	Please provide a set of as-built drawings accurately depicting the drainage layout and forward these to the Building Consent Authority to enable issue of the code compliance certificate to be finalised.	
E1: Surface Water: Does the location and construction of sumps and drains comply with building consent? E1: Surface Water - Prompt List:	Pass	RGt	20/03/2020 03:47 pm		
1. Separation: Is sufficient separation provided between drains and foundations?					

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
2. Materials: Are pipe materials, pipe size, length and gradient compliant?				
3. Inspection: Are inspection point locations compliant?				
4. Sub-floor: Is sub-floor pipework support compliant?				
5. Bedding: Is drain bedding material and drain cover compliant?				
6. Drain Leakage Test: Has the system passed a drain leakage test and has evidence of this test been recorded?				
7. Construction: Is the down pipe/ sump / cesspit / soakpit / swale location and construction compliant?				
8. As-built: Have as-built drawings and required documents been provided along with drain-layer details - (name, company, license number, contact details)?	PASS	RGt	20/03/2020 03:47 pm	Supplied .Please provide a set of as-built drawings accurately depicting the drainage layout and forward these to the Building Consent Authority to enable issue of the code compliance certificate to be finalised.
G13: Foul Water: Is construction of the foul water drainage system in accordance with the building consent?		<u>GFd</u>	<u>02/09/2019 02:55 pm</u>	
G13: Foul Water - Prompt List:				
1. Drain Separation: Is there sufficient separation between drains and foundations?				
2. Material / Grade: Are pipe materials, size and drain grade complying?				
3. Inspection: Do inspection point locations comply?				
4. Vents: Is external vent location and size compliant?				
5. Bedding: Does bedding material comply?				
6. Drain Cover: Does drain cover comply?				
7. Gully Trap / ORG: Are the ORG / gully traps correctly located, a minimum of 150 mm below the lowest sanitary fixture and able to be charged?				
8. Waste Pipe Entry: Are waste pipes located at least 20 mm above the gully water seal & 20 mm below grate of the gully?				
9. Drain Tests: Has the drain test passed?				
10. On-site Disposal: Does the on-site disposal system installation comply with the building consent and has certification verifying this been provided along with the as-built of the septic tank system?	PASS	GFd	02/09/2019 02:53 pm	The 5000L concrete tank & 64m2 AES bed on-site disposal system installation complies with the building consent. The certification to be provided verifying this along with the as-built of the septic tank system prior to CCC..
11. Septic Tank and Discharge Field: Is the location and installation of the septic tank and effluent discharge field in accordance with approved consent documents?	PASS	GFd	02/09/2019 02:54 pm	The location and installation of the septic tank and 16.3m x 4m AES effluent discharge field are in accordance with approved consent documents.
12. Installation Record: Has an installation record been provided by a suitably qualified and competent person (typically a registered drain layer) to confirm the septic tank and effluent disposal system has been installed as per the approved design plan and specification?	N/A	GFd	02/09/2019 02:55 pm	The following required documents to be provided prior to CCC-As-built drainage plan along with drainlayer name & rego Number:
13. Notification: Has the Council's Assets Department been notified that a new service connection has been provided? Please select N/A if there is no requirement to advise the Council Assets Department.	N/A	GFd	02/09/2019 02:55 pm	This question does not apply to this consent.
14. Required Documents: Have Drainage As-built drawings, Drainlayer Details (name, company, license number, contact details) been provided?	N/A	GFd	02/09/2019 02:55 pm	The following required documents to be provided prior to CCC-As-built drainage plan:
G13: Foul Water: Is construction of the foul water drainage system in accordance with the building consent?	<u>N/a</u>	<u>RGt</u>	<u>08/10/2019 09:35 am</u>	
G13: Foul Water - Prompt List:				
1. Drain Separation: Is there sufficient separation between drains and foundations?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
2. Material / Grade: Are pipe materials, size and drain grade complying?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
3. Inspection: Do inspection point locations comply?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
4. Vents: Is external vent location and size compliant?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
5. Bedding: Does bedding material comply?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
6. Drain Cover: Does drain cover comply?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
7. Gully Trap / ORG: Are the ORG / gully traps correctly located, a minimum of 150 mm below the lowest sanitary fixture and able to be charged?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
8. Waste Pipe Entry: Are waste pipes located at least 20 mm above the gully water seal & 20 mm below grate of the gully?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
9. Drain Tests: Has the drain test passed?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
10. On-site Disposal: Does the on-site disposal system installation comply with the building consent and has certification verifying this been provided along with the as-built of the septic tank system?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
11. Septic Tank and Discharge Field: Is the location and installation of the septic tank and effluent discharge field in accordance with approved consent documents?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
12. Installation Record: Has an installation record been provided by a suitably qualified and competent person (typically a registered drain layer) to confirm the septic tank and effluent disposal system has been installed as per the approved design plan and specification?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
13. Notification: Has the Council's Assets Department been notified that a new service connection has been provided? Please select N/A if there is no requirement to advise the Council Assets Department.	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
14. Required Documents: Have Drainage As-built drawings, Drainlayer Details (name, company, license number, contact details) been provided?	N/A	RGt	08/10/2019 09:35 am	This question does not apply to this consent.
G13: Foul Water: Is construction of the foul water drainage system in accordance with the building consent?	Pass	CJ	20/12/2019 12:20 pm	
G13: Foul Water - Prompt List:				
1. Drain Separation: Is there sufficient separation between drains and foundations?	PASS	CJ	20/12/2019 12:18 pm	Sufficient separation is provided between drains and foundations.
2. Material / Grade: Are pipe materials, size and drain grade complying?	PASS	CJ	20/12/2019 12:19 pm	Pipe materials, sizes and drain grade is compliant. Marley PVC-U 100mm pipe and connections laid at 1:100 fall
3. Inspection: Do inspection point locations comply?	PASS	CJ	20/12/2019 12:19 pm	Inspection point locations comply. 5 IP
4. Vents: Is external vent location and size compliant?	PASS	CJ	20/12/2019 12:19 pm	The foul water system vent size and location is compliant. 1 TV
5. Bedding: Does bedding material comply?	PASS	CJ	20/12/2019 12:19 pm	Foul water drain bedding material complies. Pea meatal laid at time of inspection
6. Drain Cover: Does drain cover comply?	PASS	CJ	20/12/2019 12:19 pm	Foul water drain cover complies.
7. Gully Trap / ORG: Are the ORG / gully traps correctly located, a minimum of 150 mm below the lowest sanitary fixture and able to be charged?	PASS	CJ	20/12/2019 12:19 pm	The gully traps are correctly located, a minimum of 150 mm below the lowest sanitary fixture and able to be charged.
8. Waste Pipe Entry: Are waste pipes located at least 20 mm above the gully water seal & 20 mm below grate of the gully?	PASS	CJ	20/12/2019 12:19 pm	Foul water waste pipes are located at least 20 mm above the gully water seal & 20 mm below grate of the gully.
9. Drain Tests: Has the drain test passed?	PASS	CJ	20/12/2019 12:19 pm	Drain test has passed.
10. On-site Disposal: Does the on-site disposal system installation comply with the building consent and has certification verifying this been provided along with the as-built of the septic tank system?				
11. Septic Tank and Discharge Field: Is the location and installation of the septic tank and effluent discharge field in accordance with approved consent documents?				
12. Installation Record: Has an installation record been provided by a suitably qualified and competent person (typically a registered drain layer) to confirm the septic tank and effluent disposal system has been installed as per the approved design plan and specification?				

MAIN BUILDING - R2 - DETACHED DWELLING - Inspections - AUDIT		Pass	User	Date	Notes
13. Notification: Has the Council's Assets Department been notified that a new service connection has been provided? Please select N/A if there is no requirement to advise the Council Assets Department.					
14. Required Documents: Have Drainage As-built drawings, Drainlayer Details (name, company, license number, contact details) been provided?		QUALIFIED	CJ	20/12/2019 12:20 pm	AS built to come as per the consent for final and CCC
G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson: Is construction of the onsite wastewater treatment system in accordance with the building consent? G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson - Prompt List:		Pass	GFd	02/09/2019 03:25 pm	
1. On-site Disposal: Does the on-site disposal system installation comply with the building consent and has certification verifying this been provided along with the as-built of the septic tank system?		PASS	GFd	02/09/2019 03:24 pm	The AES on-site disposal system installation complies with the building consent and certification verifying this to be provided along with the as-built of the onsite wastewater treatment system prior to CCC.
2. Septic Tank and Discharge Field: Is the location and installation of the septic tank and effluent discharge field in accordance with approved consent documents?		PASS	GFd	02/09/2019 03:24 pm	Septic Tank and Discharge Field: The location and installation of the septic tank and effluent discharge field is in accordance with approved consent documents.
3. Installation Record: Has an installation record been provided by a suitably qualified and competent person (typically a registered drain layer) to confirm the septic tank and effluent disposal system has been installed as per the approved design plan and specification?		N/A	GFd	02/09/2019 03:24 pm	The on-site disposal system installation complies with the building consent and certification verifying will be provided along with the as-built of the onsite wastewater treatment system prior to CCC inspection.
4. Required Documents: Have the as-built drawings for the onsite wastewater treatment system and the drainlayer details (name, company, license number, contact details) been provided?		PASS	GFd	02/09/2019 03:25 pm	Required Documents: the as-built drawings for the the onsite wastewater treatment system and the drainlayer details (name, company, license number, contact details) to be provided prior to CCC inspection.
Final					
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.		Pass	RGt	20/03/2020 03:48 pm	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
		Pass	RGt	20/03/2020 03:48 pm	Complexity is correctly assigned. I have the appropriate level of competence
Section 28: Warning and Bans: In terms of s28 (Warnings and Bans) - can CCC be issued?		N/A	RGt	20/03/2020 03:48 pm	NA
Section 84 - 89: Restricted Building Work: Has each licensed building practitioner that has carried out or supervised restricted building work under this building consent provided the TA with record of work on the prescribed form?		Fail	RGt	20/03/2020 03:48 pm	Please obtain a record of work on the prescribed form from each licensed building practitioner that has carried out or supervised restricted work under this building consent and forward this to Building Consent Authority.
		Pass	RGt	23/03/2020 11:28 am	Complete
Section 92: Application for a Code Compliance Certificate: Has the application for Code Compliance Certificate been provided?		Pass	RGt	20/03/2020 03:48 pm	A CCC application has been provided/applied for.
Finished Floor Levels: Do finished floor levels, finished ground levels, and proximity of adjacent ground to external walls comply with the building consent?		Pass	RGt	20/03/2020 03:48 pm	FFL, FGL and proximity of adjacent ground complies with consent.
B1 & E1: Slope Suitability / Overland Flow Paths: Is the finished ground level graded to ensure surface water is managed within the site and does not cause nuisance to other properties or to the finished structure?		Pass	RGt	20/03/2020 03:48 pm	Finished ground level is graded to ensure surface water is managed within the site and does not cause nuisance to other properties or to the finished structure.
B1: Pile: Sub-floor Ventilation & Access: Is compliance satisfied?		Pass	RGt	23/03/2020 11:22 am	Sub-floor ventilation and access is compliant.

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B2: DURABILITY: Has compliance with B2 provisions been satisfied?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:22 am</u>	
B2: DURABILITY - Prompt List:				
1. Incompatibility: Is the structure free of obvious incompatibility issues?	PASS	RGt	23/03/2020 11:22 am	No obvious incompatibility issues have been observed.
2. Access for Maintenance: Is access for maintenance purposes available to all concealed and enclosed spaces?	N/A	RGt	23/03/2020 11:22 am	This question does not apply to this project.
3. Finishes: Are all finishes completed in accordance with the building consent?	PASS	RGt	23/03/2020 11:22 am	All finishes are completed in accordance with building consent.
C: SH - Fire Safety System [Para 2.2]: Has a complying Type 1 smoke alarm been installed and are detectors located in accordance with building consent documentation?	Pass	RGt	23/03/2020 11:28 am	A complying Type 1 smoke alarm has been installed and detectors are located in accordance with consent documentation.
C: SH - Means of Escape [Part 3]: Does the means of escape from this building comply with the building consent?	Pass	RGt	20/03/2020 03:48 pm	Means of escape from this building complies with the building consent.
D1: Access Routes - Residential: Do the finished access routes comply with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:22 am</u>	
D1: Access Routes - Residential - Prompt List:				
1. Safe Access: Is safe access available to the building entrance?	PASS	RGt	23/03/2020 11:22 am	Safe access is available to the building entrance.
2. Slope & Cross Falls: Are safe slopes and cross falls provided in the direction of travel?	PASS	RGt	23/03/2020 11:22 am	Slopes and cross-falls comply.
3. Obstructions: Are routes free from dangerous obstructions and projections?	PASS	RGt	23/03/2020 11:22 am	Access routes are free from dangerous obstructions.
4. Slip Resistance: Do surfaces have adequate slip resistance?	PASS	RGt	23/03/2020 11:22 am	Surfaces have adequate slip resistance.
5. Treads: Do stairs have complying treads & rise?	PASS	RGt	23/03/2020 11:22 am	Stairs and stair treads comply.
6. Handrails/ Ramps / Landings: Do handrails, ramps and landings comply?	PASS	RGt	23/03/2020 11:22 am	Handrails, ramps and landings comply.
E1: Surface Water: Is finished construction of the rain and stormwater system and cesspits compliant?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:23 am</u>	
E1: Surface Water - Prompt List:				
1. Materials: Are materials compatible with the stormwater system?	PASS	RGt	23/03/2020 11:23 am	Materials are compliant.
2. Gutters: Is gutter size, fall, support and provision for expansion / snow compliant?	PASS	RGt	23/03/2020 11:23 am	Gutter size, fall, support and provision for expansion is compliant.
3. Outlets: Is outlet size and provision for overflow relief compliant?	PASS	RGt	23/03/2020 11:23 am	Outlet size and provision for overflow relief is compliant.
4. Downpipes: Is downpipe size, support and location compliant?	PASS	RGt	23/03/2020 11:23 am	Downpipe size, support and location is compliant
5. Falls: Are falls to drains and cesspits compliant?	PASS	RGt	23/03/2020 11:23 am	Falls to drains and cesspits are compliant.
E2 - External Moisture: Wall Cladding: Is the exterior weathertight and is or weathertight and is finished construction of the wall cladding systems in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:23 am</u>	
E2 - External Moisture - Prompt List:				
1. Flashing: Are openings in the wall cladding correctly flashed with all penetrations properly sealed?	PASS	RGt	23/03/2020 11:23 am	Flashing: Wall cladding flashings and penetrations are compliant.
2. B2-Durability: Are all materials compatible, compliant and fit for the environmental conditions?	PASS	RGt	23/03/2020 11:23 am	Compliance with B2 - Durability is satisfied.
3. Coatings: Are finished coatings installed as per building consent and free of cracks / defects?	PASS	RGt	23/03/2020 11:23 am	Finished coating is compliant.
4. Finished Ground Levels: Are finished ground levels and cladding separation requirements compliant?	PASS	RGt	23/03/2020 11:23 am	Finished ground levels and cladding separation is compliant.
5. Documentation: Has all applicator and installer documentation / warranties / declarations and LBP Record of Work certificates been obtained?	PASS	RGt	23/03/2020 11:23 am	All applicator and installer documentation / warranties / declarations and LBP Record of Work certificates have been obtained.

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E2 - External Moisture: Plaster System(s): Is the exterior weathertight and is finished construction of the plaster system(s) in accordance with building consent?	N/A	RGt	23/03/2020 11:23 am	NA
E2 - External Moisture: Roof Cladding: Is the exterior weathertight and is or weathertight and is finished construction of the roof cladding system(s) in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:23 am</u>	
E2 - External Moisture - Prompt List:				
1. Flashing: Are flashings correctly installed and penetrations sealed as detailed - [(check junctions & transitions, support, fixing, compatibility, construction sequencing, effects of snow melt considered)?	PASS	RGt	23/03/2020 11:23 am	Flashings are correctly installed and penetrations sealed as detailed
2. Ventilation: Have roof space ventilation requirements been addressed?	PASS	RGt	23/03/2020 11:23 am	Roof space ventilation is compliant.
3. Drainage: Is roof drainage adequate to effectively drain water from the roof?	PASS	RGt	23/03/2020 11:23 am	Roof drainage is compliant.
4. Penetrations: Is the roof space free from penetrations from spaces below? Refer coaching.	PASS	RGt	23/03/2020 11:23 am	Penetrations are weathertight.
5. B2-Durability: Does the visible in-service performance indicate that roof performance satisfies Clause B1, B2 & E2?	PASS	RGt	23/03/2020 11:23 am	Durability provisions are satisfied.
6. Documentation: Has the applicator verification documentation / warranties / installer declarations / LBP ROW certificates been obtained?	PASS	RGt	23/03/2020 11:23 am	Warranties are provided,
E3: Internal Moisture: Does finished construction of interior service areas demonstrate compliance with the building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:24 am</u>	
E3: Internal Moisture - Prompt List:				
1. Containment: Is containment satisfied - (floor coverings & finishes installed as specified to mitigate potential for accidental overflow affecting household units or adjacent property)?	PASS	RGt	23/03/2020 11:23 am	Containment is satisfied - floor coverings & finishes are installed as specified to mitigate potential for accidental overflow affecting household units or adjacent property.
2. Overflow: Is overflow provisions satisfied - (floor waste drain mitigates potential for accidental overflow affecting the household unit or adjacent property)?	PASS	RGt	23/03/2020 11:23 am	Overflow provisions are satisfied.
3. Thermal Break: Is a thermal break provided where steel framing is used?	N/A	RGt	23/03/2020 11:23 am	This question does not apply to this consent.
4. Condensation: Are condensation channels and drainage outlets provided to windows?	PASS	RGt	23/03/2020 11:24 am	Condensation channels and drainage outlets are provided to windows.
5. Ventilation: Is adequate ventilation provided?	PASS	RGt	23/03/2020 11:24 am	Adequate ventilation is provided.
6. Splash Protection: Are walls provided with adequate protection from water splash?	PASS	RGt	23/03/2020 11:24 am	Walls are provided with adequate protection from water splash.
7. Compliance: Is workmanship, construction and surface finishes as specified?	PASS	RGt	23/03/2020 11:24 am	Workmanship & construction is as specified.
8. Wet / Service Areas: Are surfaces impervious & easily cleaned, joints properly sealed, water tested, and correctly finished?	PASS	RGt	23/03/2020 11:24 am	Wet Areas / Service Areas - surfaces are impervious & easily cleaned, joints properly sealed, water tested, and correctly finished
9. Fittings: Are fittings and fixtures installed as per consent and is sealing of these compliant - check the bath / basins / sinks / tub / sanitary appliances?	PASS	RGt	23/03/2020 11:24 am	Fittings and fixtures are compliant.
10. Warranties / Required Documents: Have all warranties / installer declarations and Required Documents for this system been obtained?	PASS	RGt	23/03/2020 11:24 am	All warranties are provided.
F2: Hazardous Building Materials: Are building materials that are potentially hazardous installed in accordance with building consent?	<u>N/a</u>	<u>RGt</u>	<u>20/03/2020 03:49 pm</u>	
F2: Hazardous Building Materials - Prompt List:				
1. Compliance Label / Required Documents: Is evidence provided verifying that glazing satisfies F2 (compliance labeling or statement from supplier)?	N/A	RGt	20/03/2020 03:49 pm	This question does not apply to this consent.
2. Safety Glass: Is safety glass installed, located and provided with complying manifestation in accordance with building consent?	N/A	RGt	20/03/2020 03:49 pm	This question does not apply to this consent.

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3. Hazardous Material: Has the location of harmful materials (such as asbestos) been recorded and is installation in accordance with the building consent?	N/A	RGt	20/03/2020 03:49 pm	This question does not apply to this consent.
G1: Personal Hygiene - Residential: Is completed construction of personal hygiene facilities in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:24 am</u>	
G1: Personal Hygiene - Residential - Prompt List:				
1. Layout / Fixtures: Is the interior layout complying and are fixtures correctly located, correctly installed, secure and operational?	PASS	RGt	23/03/2020 11:24 am	G1 Layout and fixture location and installation is compliant.
2. Services: Are services to fixtures installed in accordance with building consent?	PASS	RGt	23/03/2020 11:24 am	G1 - Services: Installation is compliant.
3. Surface Finishes: Are surface finishes as detailed - (splash resistant, slip resistant, properly sealed at junctions)?	PASS	RGt	23/03/2020 11:24 am	G1 - Surface Finishes: Installation and finish is compliant.
G2: Laundering - Residential: Does the completed construction of the laundering facilities comply with the building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:24 am</u>	
G2: Laundering - Residential - Prompt List:				
1. Layout / Fixtures: Is the interior layout complying and are fixtures secure, correctly located, correctly installed and operational?	PASS	RGt	23/03/2020 11:24 am	G2 - Laundry: Layout and Fixtures are correctly located, correctly installed, secure and operational.
2. Services: Are services to fixtures installed in accordance with building consent?	PASS	RGt	23/03/2020 11:24 am	G2 - Laundry: Installation of services is compliant.
3. Surface Finishes: Are surface finishes as detailed - splash resistant, slip resistant, properly sealed at junctions?	PASS	RGt	23/03/2020 11:24 am	G2 - Laundry: Surface finishes are compliant.
G3: Food Preparation & Prevention of Contamination - Residential: Is finished construction of the food preparation facilities in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:25 am</u>	
G3: Food Preparation & Prevention of Contamination - Residential - Prompt List:				
1. Layout / Installation: Is the layout complying and is joinery, sinks, refrigerator, cooker, hobs etc. correctly located, secure, operational, and provided with correct clearances, and in accordance with building consent?	PASS	RGt	23/03/2020 11:25 am	G3 - Food Preparation: Layout complies and installation of joinery, sinks, refrigerator, cooker, hot plates etc is compliant.
2. Services: Are services to fixtures installed in accordance with building consent?	PASS	RGt	23/03/2020 11:25 am	G3 - Food Preparation: Installation of services is compliant.
3. Surface Finishes: Are surface finishes as detailed - splash resistant, slip resistant, properly sealed at junctions?	PASS	RGt	23/03/2020 11:25 am	G3 - Food Preparation: Surface finishes are compliant.
G4: Ventilation - Residential: Does ventilation and installation of ventilation systems comply with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:25 am</u>	
G4: Ventilation - Residential - Prompt List:				
1. Unit Installation: Are ventilation units sized, operational and installed in accordance with the building consent?	PASS	RGt	23/03/2020 11:25 am	Ventilation units are sized, operational and installed in accordance with the building consent.
2. Duct Installation: Are all ducts correctly installed and do they discharge to the exterior?	PASS	RGt	23/03/2020 11:25 am	Ducts are correctly installed and discharge to the exterior.
3. E2 - Penetrations: Are duct penetrations sealed and satisfy provisions of B2 and E2?	PASS	RGt	23/03/2020 11:25 am	Duct penetrations are sealed and satisfy provisions of B2 and E2.
4. G4 - Commissioning Documents: Has Mechanical Ventilation Systems Commissioning & Quality Assurance Documentation been provided from a Suitably Qualified Professional?	N/A	RGt	23/03/2020 11:25 am	This question does not apply to this building consent.
G4: Windows: Is window construction and installation in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:29 am</u>	
G4: Windows - Prompt List:				

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1. Certification: Is verification provided confirming compliance of the window / door units?	PASS	RGt	23/03/2020 11:29 am	Verification is provided confirming compliance of the window / door units.
2. E2: Is installation of exterior joinery compliant with flashings installed in accordance with building consent?	PASS	RGt	23/03/2020 11:29 am	Compliance with E2 is satisfied. Flashing are installed in accordance with building consent
3. F4: Is safety glass located in accordance with building consent?	PASS	RGt	23/03/2020 11:29 am	Compliance with F4 is satisfied. Safety glass is located in accordance with building consent.
4. G4: Are opening sashes correctly sized and located in accordance with building consent ensuring that adequate ventilation is available to each room?	PASS	RGt	23/03/2020 11:29 am	Sashes are correctly sized and located in accordance with building consent.
G7: Natural Light: Are windows and openings that have been provided to provide natural light located and sized in accordance with building consent?	Pass	RGt	20/03/2020 03:49 pm	Windows and openings that have been provided to provide natural light are located and sized in accordance with building consent.
G8: Artificial Light: Is the type & placement of light switches and light fittings that provide artificial lighting in accordance with building consent?	Pass	RGt	23/03/2020 11:25 am	The type & placement of light switches and light fittings that provide artificial lighting are in accordance with building consent.
G9: Electricity: Energy Works Certificate provided identifying all electrical work including specified systems provided?	Pass	RGt	20/03/2020 03:49 pm	A correctly completed Energy Works Certificate is provided.
G10 & G11: Piped Services & Gas as an Energy Source (R1 - R3 APPLICATIONS): Is compliance demonstrated?	<u>Pass</u>	<u>RGt</u>	<u>20/03/2020 03:49 pm</u>	
G10 & G11: Piped Services & Gas as an Energy Source (R1 - R3 APPLICATIONS) - Prompt List:				
1. Location: Is the gas supply correctly located (externally and above ground), accessible and clear of windows and opening vents or potential ignition sources?	PASS	RGt	20/03/2020 03:49 pm	The gas supply is correctly located (externally and above ground), accessible and clear of windows and opening vents or potential ignition sources.
2. Size: Is the size of the cylinders as per consent, properly secured and restrained with adequate ventilation?	PASS	RGt	20/03/2020 03:49 pm	The size of the cylinders as per consent, properly secured and restrained with adequate ventilation.
3. Building Envelope Weathertightness: Are all penetrations through the building envelope weathertight and durable?	PASS	RGt	20/03/2020 03:49 pm	All penetrations through the building envelope are weathertight and durable.
4. Energy Works / Location Certificate: Is an energy works certificate provided from a registered gas fitter to verify that the completed gas supply system installation and connection of all associated appliances is in accordance with the building code and building consent?	PASS	RGt	20/03/2020 03:49 pm	An energy works certificate is provided from a registered gas fitter to verify that the completed gas supply system installation and connection of all associated appliances is in accordance with the building code and building consent.
G12: Water Supply: Is the hot water and cold water system installed in accordance with the building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:25 am</u>	
G12: Water Supply - Prompt List:				
1. Water Supply Protection: Is protection of the water supply satisfied - (lids to header tanks)?	PASS	RGt	23/03/2020 11:25 am	The water supply is adequately protected.
2. Seismic Restraint: Is the system seismically restrained and correctly supported?	PASS	RGt	23/03/2020 11:25 am	The system is seismically restrained and correctly supported.
3. Overflow: Is provision for overflow in accordance with building consent?	PASS	RGt	23/03/2020 11:25 am	Provision for overflow complies with building consent.
4. Non-Potable Identification: Is all non-potable water supply clearly identified?	N/A	RGt	23/03/2020 11:25 am	This question does not apply to this consent.
5. Earthing: Does equipotential bonding (earthing) comply with requirements of building consent?	PASS	RGt	23/03/2020 11:25 am	Earthing complies with building consent.
6. Valve Train: Is the valve train and venting in accordance with the building consent?	PASS	RGt	23/03/2020 11:25 am	The valve train and venting complies with building consent.
7. Temperature Control: Are temperatures correctly set to avoid growth of legionella bacteria & avoid scalding?	PASS	RGt	23/03/2020 11:25 am	Temperature control provisions comply with building consent.
8. Relief Drain: Is the relief drain terminated in a safe and complying manner?	PASS	RGt	23/03/2020 11:25 am	Relief drain is correctly installed.
9. Insulation: Is insulation of the system in accordance with building consent?	PASS	RGt	23/03/2020 11:25 am	System insulation complies.

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10. Wet Back: Does completed installation of the wet back system demonstrate compliance with the building consent?	N/A	RGt	23/03/2020 11:25 am	This question does not apply to this consent.
11. E2 - Penetrations: Are all penetrations through the external envelope weather tight and durable?	PASS	RGt	23/03/2020 11:25 am	Penetrations through the external envelope are correctly sealed.
12. Potable Water Supply Validation: Has proof of potability of water supply been provided from an approved laboratory? Answer N/A if water supply is from a NUO reticulated supply.	N/A	RGt	23/03/2020 11:25 am	This question does not apply to this consent.
G13: Foul Water: Is the foul water system installed in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:26 am</u>	
G13: Foul Water - Prompt List:				
1. Vents: Are vents correctly located, sized, secured, and are envelope penetrations weather tight?	PASS	RGt	23/03/2020 11:26 am	Vents are correctly located, sized and envelope penetrations are weather tight.
2. Traps & Wastes: Are traps and wastes sealed, watertight and compliant?	PASS	RGt	23/03/2020 11:26 am	Traps and wastes are sealed, watertight and compliant.
3. Fire Separations: Are pipe penetrations in and through fire separations compliant?	N/A	RGt	23/03/2020 11:26 am	This question does not apply to this consent.
4. Water Seals: Do seals to fixtures retain minimum water level when tested (pans, sinks)?	PASS	RGt	23/03/2020 11:26 am	Seals to fixtures retained minimum water level when tested.
5. Gully Trap Grate: Will gully trap grates allow overflow to freely occur in the event of overflow?	PASS	RGt	23/03/2020 11:26 am	Gully trap grates will allow overflow to freely occur in the event of overflow.
6. Gully Trap Height: Are gully traps located a minimum of 25 mm above paving or 100 mm above finished ground if unpaved?	PASS	RGt	23/03/2020 11:26 am	Gully height is correct.
7. Gully Water Seal: Is the water seal not more than 600 mm from top of gully?	PASS	RGt	23/03/2020 11:26 am	The gully trap water seal is not more than 600mm from the top of the gully.
8. Gully Trap Clearance: Is 600 mm clearance provided above the gully and is it easily accessed for cleaning?	PASS	RGt	23/03/2020 11:26 am	600 mm clearance is provided above the gully to enable ease of cleaning.
9. Gully Trap Support: Is the gully properly supported?	PASS	RGt	23/03/2020 11:26 am	Gully is well supported.
10. ORG / Gully: Is the ORG / top of the gully a minimum of 150mm below the lowest sanitary fixture?	PASS	RGt	23/03/2020 11:26 am	The ORG /gully is a minimum of 150mm below the lowest sanitary fixture.
11. Sealing: Are all pipe penetrations through the foundations and into the gully sealed?	N/A	RGt	23/03/2020 11:26 am	This question does not apply to this consent.
12. Required Documents: Is all Required Documentation provided?	PASS	RGt	23/03/2020 11:26 am	All documentation has been provided.
H1: Energy Efficiency: Is the finished installation of insulation and glazing in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:26 am</u>	
H1: Energy Efficiency - Prompt List:				
1. Luminaires / Roof space Insulation: Is insulation around luminaires correctly installed with appropriate clearances maintained, and roof space insulation correctly installed?	PASS	RGt	23/03/2020 11:26 am	Insulation around luminaires is correctly installed with appropriate clearances and roof space insulation is correctly installed.
2. Flues: Is correct protection and clearance provided around flues in the roof space?	PASS	RGt	23/03/2020 11:26 am	Protection and clearance around flues in the roof space is compliant.
3. Sub-floor Protection: Is appropriate protection provided to sub floor insulation where this is exposed to elements?	PASS	RGt	23/03/2020 11:26 am	Sub-floor insulation that is exposed to elements has appropriate protection.
4. Pipework: Is pipe work that requires insulation correctly insulated and within the thermal envelope?	PASS	RGt	23/03/2020 11:26 am	Pipework insulation is compliant.
5. Glazing: Is the finished installation of glazing insulation compliant?	PASS	RGt	23/03/2020 11:26 am	Finished installation of glazing insulation is compliant.
Compliance / Documentation: Is compliance with building consent demonstrated and have all building consent and RMA conditions been	Pass	RGt	23/03/2020 11:27 am	Compliance with building consent is demonstrated and all building consent and RMA conditions have been satisfied, all required documents been provided and have been reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that they reflect construction in its finished state. I am reg. 10 & 18 qualified and confirm that all required documents reflect the as-built state of construction.

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satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that they reflect construction in its finished state.		Pass	RGt	23/03/2020 11:45 am	Compliance with building consent is demonstrated and all building consent and RMA conditions have been satisfied, all required documents been provided and have been reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that they reflect construction in its finished state. I am reg. 10 & 18 qualified and confirm that all required documents reflect the as-built state of construction.

SLEEPOUT - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
Prepour				
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	N/A	RGt	16/12/2019 11:34 am	NA
Siting : Is the siting and building orientation confirmed to be in accordance with building consent? Request a Survey Certificate / Building Location Certificate if siting cannot be adequately verified.	Pass	RGt	16/12/2019 11:34 am	Building siting complies.
B1 & B2: Wind / Earthquake / Corrosion Zone: Do on-site conditions correlate to the wind and corrosion zone classifications that have been applied to the design?	Pass	RGt	16/12/2019 11:34 am	On-site conditions correlate to the wind and exposure zone classifications.
B1: Ground Bearing: Is evidence provided confirming that ground bearing capacity is adequate to support imposed loads; and (where required) has construction monitoring / site verification documentation and requirements been satisfied?	Pass	RGt	16/12/2019 11:34 am	Evidence of good ground bearing capacity has been provided.
Finished Floor Levels: From observation; do finished floor levels in relation to finished ground, and horizontal separation distances in relation to adjacent ground comply with the building consent?	Pass	RGt	16/12/2019 11:34 am	Finished floor levels in relation to finished ground, and horizontal separation distances in relation to adjacent ground satisfy the requirements of building consent.
B1: Pile: Is pile siting, layout and construction in accordance with building consent? B1: Pile - Prompt List:	Pass	RGt	16/12/2019 11:34 am	
1. Siting: Is siting in accordance with building consent (check datum, locate boundary pegs?	PASS	RGt	16/12/2019 11:34 am	Building siting complies.
2. Ground Bearing: Are piles founded on good ground?	PASS	RGt	16/12/2019 11:34 am	Ground bearing is adequate to support imposed loads.
3. Footings: Are footings clear of services, clean, and is size complying?	N/A	RGt	16/12/2019 11:34 am	This question does not apply to this Project.
4. Pile Type / Layout / Bracing / Size / Treatment: Does the pile type, layout, size /treatment and location of bracing elements comply?	PASS	RGt	16/12/2019 11:34 am	Pile type, layout / size / treatment and location of bracing elements complies.
5. Height: Does pile height in relation to finished floor level and finished ground level comply?	PASS	RGt	16/12/2019 11:34 am	Pile height in relation to finished floor level complies.
6. Driven Piles / SED / Construction Monitoring / LBP: Is the driven pile layout compliant and is construction monitoring records / required documentation provided and has the LBP details been entered into the site contacts list? Refer reference notes.	N/A	RGt	16/12/2019 11:34 am	This question does not apply to this Project.
Sub-floor Framing				
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	CJ	15/10/2019 10:29 am	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
	Pass	CJ	15/10/2019 10:29 am	Complexity is correctly assigned. I have the appropriate level of competence.
B1: Pile: Are pile fixings / connections installed in accordance with building consent? B1: Pile - Prompt List:	Pass	CJ	15/10/2019 10:31 am	
1. Pile Location: Is pile location compliant (check piles correctly located in relation to bearer spans, point loads and load transfer paths)?	PASS	CJ	15/10/2019 10:30 am	The piles correctly located in relation to bearer spans, point loads and load transfer paths. All Anchor piles. Anchor pile kits with M12 SS bolts connections on anchor piles with DPM
2. Pile Fixings: Are pile fixing assemblies compliant and correctly installed?	PASS	CJ	15/10/2019 10:31 am	Connections comply Stainless Steel Anchor pile connection installed
3. Durability: Is durability of pile fixings compliant (check proximity to ground, corrosion zone, exposure - sheltered / exposed)?	PASS	CJ	15/10/2019 10:31 am	Durability of pile fixings is complying. Stainless Steel
4. Spoil: Has sub-floor spoil been removed / leveled? (Ensure builder is aware of sub-floor ventilation and access requirements - these may be checked at time of final inspection).	PASS	CJ	15/10/2019 10:31 am	Sub-floor spoil has been removed and builder has been advised of sub-floor ventilation requirements.

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B1: Bearers / Stringers: Is Bearer / Stringer construction in accordance with building consent?	<u>Pass</u>	<u>CJ</u>	<u>15/10/2019 10:32 am</u>	
B1: Bearers / Stringers - Prompt List:				
1. Span/ spacing/ size: Is compliance demonstrated?	PASS	CJ	15/10/2019 10:32 am	Span/ spacing/ size: Compliance is demonstrated. 140x90 H3.2 SG8
2. Support: Is bearer support in accordance with consent?	PASS	CJ	15/10/2019 10:32 am	Support: Bearer support is in accordance with consent
3. Joins: Is bearer / stringer construction complying (joins formed over supports and correctly plated / secured)?	PASS	CJ	15/10/2019 10:32 am	Joins: Bearer / stringer construction is complying (joins formed over supports and correctly plated / secured
4. Treatment: Is timber and fixing treatment complying and are ground separation requirements satisfied?	PASS	CJ	15/10/2019 10:32 am	Treatment of timber and fixings complies. Stainless Steel
B1: Floor Joists: Does floor joist construction comply with building consent?	<u>Pass</u>	<u>CJ</u>	<u>15/10/2019 10:33 am</u>	
B1: Floor Joists - Prompt List:				
1. Joist: Is joist construction compliant? (check - layout, species, grade, treatment, size, span, spacing, fixing and treatment)?	PASS	CJ	15/10/2019 10:33 am	Joist construction complies. 140x45 H1.2 SG8 at 400mm centers
2. Blocking: Is lateral support / blocking compliant?	PASS	CJ	15/10/2019 10:33 am	Lateral support / blocking is complying.
3. Point Loads: Are point loads / load bearing walls correctly supported?	PASS	CJ	15/10/2019 10:33 am	Point loads / load bearing walls are correctly supported.
4. Cantilever Joists: Are cantilever joists and projections complying?	N/A	CJ	15/10/2019 10:33 am	This question does not apply to this consent.
5. Holes: Are holes and notches in floor joists complying?	PASS	CJ	15/10/2019 10:33 am	Holes and notches in floor joists are complying. No holes on Joist at time of inspection
B1: Sub-floor Ground Clearance: Does sub-floor ground clearance comply with building consent i.e. min. 450mm between ground and services and 600mm between ground and particle board flooring?	Pass	CJ	15/10/2019 10:33 am	Sub-floor ground clearance complies with building consent.
B1: Sub-floor Bracing: Does sub-floor bracing construction comply with building consent?	<u>Pass</u>	<u>CJ</u>	<u>15/10/2019 10:34 am</u>	
B1: Sub-floor Bracing - Prompt List:				
1. Brace Elements: Are brace elements correctly located and constructed with complying connections and treatment?	PASS	CJ	15/10/2019 10:34 am	Bracing elements are correctly located and constructed with complying connections and treatment. Anchor piles
2. Diaphragm: Does the floor bracing diaphragm construction comply?	N/A	CJ	15/10/2019 10:34 am	This question does not apply to this project.
B1: Sub-floor Cross-Flow Ventilation & Access: Is sub-floor ventilation and access compliant?	Pass	CJ	15/10/2019 10:34 am	Sub-floor ventilation and access is compliant.
H1: Energy Efficiency: Is sub-floor insulation correctly installed with correct R-value in accordance with the building consent?	Pass	CJ	15/10/2019 10:34 am	Sub-floor insulation is correctly installed with correct R-value in accordance with the building consent.
	Pass	CJ	15/10/2019 10:34 am	Sub-floor insulation is correctly installed with correct R-value in accordance with the building consent. Gray Expol sub floor insulation
Framing / Pre-wrap				
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	RGt	04/11/2019 10:04 am	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
	Pass	RGt	04/11/2019 10:04 am	Complexity is correctly assigned.
B1: Flooring & Decking: Does flooring and decking construction comply with building consent?	<u>N/a</u>	<u>RGt</u>	<u>04/11/2019 10:04 am</u>	
B1: Flooring & Decking - Prompt List:				
1. Materials: Do materials, size/ span/ grade/ fixing comply?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
2. Elements: Are elements correctly supported and fixed?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
3. Durability: Is the treatment of fixings and materials compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.

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4. Maintenance: Does external decking have adequate separation from the building to allow drainage and to enable wall cladding behind / below to be maintained?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
B1: Wall Framing: Is wall framing layout, treatment, fixings, set-out and construction in accordance with building consent? (check that LBP details are recorded)	N/a	RGt	04/11/2019 10:04 am	
B1: Wall Framing - Prompt List:				
1. Plates / Studs: Is grade, size & fixing compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
2. Trimmers: Is grade, size & number of trimmer studs compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
3. Lintels: Is grade, size, fixing of lintels & sills compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
4. Flashing Support: Is blocking support to flashings provided?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
5. Point Loads: Is support and distribution of point loads complying?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
B1: Wall Bracing: Is exterior wall bracing compliant?	N/a	RGt	04/11/2019 10:04 am	
B1: Wall Bracing - Prompt List:				
1. Brace Layout: Is brace layout / element location/ element size and top plate size compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
2. Penetrations: Are penetrations in brace elements correctly located?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
3. Fixings: Are fixings and hold down connections compliant? (ensure that LBP details are recorded)	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
B1: Roof Frame: Is roof frame construction in accordance with building consent?	N/a	RGt	04/11/2019 10:04 am	
B1: Roof Frame - Prompt List:				
1. Rafter: Does construction comply?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
2. Valley: Is valley board grade, size, treatment compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
3. Ties: Is collar ties & cleat size and installation compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
4. Ceiling Runner: Is construction compliant- [span, spacing, free from roof loads]?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
5. Joist: Is joist layout and construction compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
6. Ridge: Is ridge board construction compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
7. Underpurlin: Is underpurlin installation compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
8. Strutting Beam: Is strutting beam construction compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
9. Eave: Is construction compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
10. Bracing: Is this compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this consent.
B1: Purlin / Tile Batten: Is purlin / batten construction compliant? - [check treatment, grade, size, span, spacing, fixings]	N/A	RGt	04/11/2019 10:04 am	See dwelling
B1: Mid-floor Stringers / Floor Joists: Is mid-floor stringer / joist construction compliant?	N/a	RGt	04/11/2019 10:04 am	
B1: Mid-floor Stringers / Floor Joists - Prompt List:				
1. Joist Layout: Is joist layout compliant? - (check species, grade, treatment, size, span, spacing, fixing and treatment)?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this project.
2. Stringer: Is stringer, trimmer and trimmer joist construction compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this project.
3. Support: Is lateral support / blocking compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this project.
4. Point Loads: Is support of point loads / load bearing walls compliant?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this project.
5. Cantilever Joists: Are cantilever joists and projections complying?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this project.
6. Holes: Are all holes and notches in floor joists complying?	N/A	RGt	04/11/2019 10:04 am	This question does not apply to this project.
B1: Separation: Is separation provided between timber framing and concrete to prevent transference of moisture (DPC) and to enable drainage?	N/A	RGt	04/11/2019 10:05 am	Timber
	Pass	RGt	04/11/2019 10:05 am	Separation is provided.
Post Wrap / Cavity				

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BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.		Pass	CHy	25/11/2019 01:22 pm	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
E2 - External Moisture: Wall Cladding: Is wall cladding construction in Wall Cladding:ing construction in accordance with building consent? " See Reference Notes.E2 - External Moisture - Prompt List: re - Prompt List:		<u>Pass</u>	<u>CHy</u>	<u>25/11/2019 01:22 pm</u>	
1. Materials / Installation: Are materials and installation of these in accordance with the building consent [check size, span, spacing, fixing, thickness, grade, treatment, profile, workmanship, ground clearance]?		PASS	CHy	25/11/2019 01:22 pm	Materials / Installation: Wall cladding material, installation and workmanship is compliant.
2. Wall Wrap: Is the wall wrap installation as per consent [secure/ supported/ penetrations properly sealed (windows, doors, meter box etc.)?]		PASS	CHy	25/11/2019 01:22 pm	Wall Wrap: Installation is secure, supported and penetrations are correctly sealed in accordance with the building consent.
3. Flashing: Are flashing tapes and flashings to openings in the exterior envelope installed as per consent?		PASS	CHy	25/11/2019 01:22 pm	Flashing: Installation of flashings is in accordance with building consent.
4. Air Barriers: Is the installation of air barriers complying?		PASS	CHy	25/11/2019 01:22 pm	Air Barriers: The installation of air barriers is compliant.
5. Cavity Battens: Is batten treatment, fixing and installation complying?		N/A	CHy	25/11/2019 01:22 pm	Installation of cavity battens is not a consideration for this project.
7. Cavity Closure: Is the cavity closure / vermin strip installation complying?		PASS	CHy	25/11/2019 01:22 pm	Cavity Closure: The installation of the cavity closure and vermin strip is compliant.
8. Support Bars: Is the installation of window and door support systems complying?		N/A	CHy	25/11/2019 01:22 pm	Installation of window and door support systems is not a consideration for this project.
9. Construction Monitoring / Warranties / LBP: Has the contractor been advised of Construction Monitoring / Warranty requirements? [record LBP details].		PASS	CHy	25/11/2019 01:22 pm	Construction Monitoring / Warranties: The contractor been advised of Construction Monitoring / Warranty requirements.
E2 - External Moisture: Roof Cladding: Is roof cladding installation in Roof Cladding:ing installation in accordance with building consent? " /> See Reference Notes.- External Moisture - Prompt List: - Prompt List:		<u>Pass</u>	<u>CHy</u>	<u>25/11/2019 01:22 pm</u>	
1. Roof Construction: Is roof construction compliant? [check materials, size, treatment, grade, support].		PASS	CHy	25/11/2019 01:22 pm	Roof Construction: Construction is compliant.
2. Underlay / Cladding: Is installation of the underlay and roof cladding compliant? [check underlay is as specified, well supported and undamaged; check roof cladding is as specified and properly secured].		PASS	CHy	25/11/2019 01:22 pm	Underlay / Cladding: Materials and installation are compliant.
3. Fixing: Are fixings compliant? [check size, type, perimeter fixings].		PASS	CHy	25/11/2019 01:22 pm	Fixing: Fixing of the cladding is compliant.
4. Flashing: Are flashings compliant? [check size, cover, fixing, compatibility, sealing of penetrations].		PASS	CHy	25/11/2019 01:22 pm	Flashing: Roof flashing is compliant.
5. Water Management: Is provision for overflow complying and is support and falls for gutters and location of outlets complying?		PASS	CHy	25/11/2019 01:22 pm	Water Management: The provision for overflow and support and falls for gutters and location of outlets is complying.
6. Construction Monitoring / Warranties / LBP: Has the contractor been advised of Construction Monitoring / Warranty requirements? [record LBP details].		PASS	CHy	25/11/2019 01:22 pm	Construction Monitoring / Warranties: The contractor has been advised of requirements.
Preline					
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision		Pass	RGt	16/12/2019 11:31 am	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..

SLEEPOUT - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
please ensure that this is recorded here.	Pass	RGt	16/12/2019 11:32 am	Complexity is correctly assigned. I have the appropriate level of competence
B1: Wall & Ceiling Lining Construction: Is pre-line construction compliant? B1: Wall & Ceiling Lining Construction - Prompt List:	<u>Pass</u>	<u>RGt</u>	<u>16/12/2019 11:33 am</u>	
1. Layout: Are room layouts in accordance with building consent [give attention to room sizes and accessibility set-ups in service areas - toilets, laundry, kitchens].	PASS	RGt	16/12/2019 11:32 am	Room set-outs comply.
2. Services: Is the installation of services [water, gas, electricity] in relation to position of fixtures in accordance with building consent?	PASS	RGt	16/12/2019 11:32 am	The installation of services in relation to fixtures complies.
3. Blocking: Is all necessary framing, blocking and support for fixtures, handrails, flashing support, appliances, linings and finishes etc. installed?	PASS	RGt	16/12/2019 11:32 am	Framing and blocking installed.
4. Metal Angles: Have metal angles been installed to corners of wet areas?	N/A	RGt	16/12/2019 11:33 am	This question does not apply to this Project.
5. Air Seals: Have air-seals been installed around openings in the external envelope?	PASS	RGt	16/12/2019 11:33 am	Air Seals are compliant.
6. Insulation: Is insulation as specified & correctly installed - [complying R-value, no gaps to perimeter]?	PASS	RGt	16/12/2019 11:33 am	Insulation is compliant.
7. Noise Control / Fire Ratings: Is the construction of noise control / fire ratings in accordance with building consent - [correct framing configuration, materials as specified and correctly located]?	PASS	RGt	16/12/2019 11:33 am	Noise Control and Fire Rating construction is compliant.
8. Ceiling Battens: Is ceiling space access location / ceiling batten size / layout, and moisture content compliant?	PASS	RGt	16/12/2019 11:33 am	Ceiling batten size, layout and moisture content is compliant.
9. Moisture Content: Is moisture content within safe range to allow lining to proceed?	PASS	RGt	16/12/2019 11:33 am	Moisture content readings indicate that framing is within safe range to allow enclosing of framing to proceed
B1: Wall Bracing: Does wall bracing conform to the consent documents? B1: Wall Bracing - Prompt List:	<u>Pass</u>	<u>RGt</u>	<u>16/12/2019 11:33 am</u>	
1. Brace Layout: Is brace layout / element location/ element size / fixings and top plate size compliant?	PASS	RGt	16/12/2019 11:33 am	Brace element distribution, layout and plate size and fixing is correct.
2. Penetrations: Are penetrations in brace elements correctly located?	PASS	RGt	16/12/2019 11:33 am	Penetrations in brace elements are correctly located.
3. Elements: Are bracing elements clear of wet areas, correctly located and secured? (ensure that LBP details are recorded)	PASS	RGt	16/12/2019 11:33 am	Bracing elements are clear of wet areas and are correctly located and secured.
H1: Energy Efficiency: Is wall and ceiling insulation compliant with the building consent? H1: Energy Efficiency - Prompt List:	<u>Pass</u>	<u>RGt</u>	<u>16/12/2019 11:33 am</u>	
1. Glazing: Is correct glazing installed?	PASS	RGt	16/12/2019 11:33 am	Glazing is correct.
2. R- Value: Is correct insulation with correct R-value installed?	PASS	RGt	16/12/2019 11:33 am	R-Values comply
3. Insulation: Is insulation correctly fitted?	PASS	RGt	16/12/2019 11:33 am	Insulation correctly fitted.
4. Thermal Bridge: Are thermal bridging requirements satisfied?	PASS	RGt	16/12/2019 11:33 am	Thermal bridging provisions satisfied.
Post Line				
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	CJ	20/12/2019 12:24 pm	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..
	Pass	CJ	20/12/2019 12:33 pm	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..

SLEEPOUT - R2 - DETACHED DWELLING - Inspections - AUDIT		Pass	User	Date	Notes
B1: Wall & Ceiling Lining Construction: Are materials, fixings and stopping compliant?	Pass	CJ	20/12/2019 12:24 pm	Materials, fixings and stopping is compliant.	
	Pass	CJ	20/12/2019 12:25 pm	Materials, fixings compliant.	
B1: Wall Bracing: Is the fixing of the bracing elements compliant i.e. check that penetration sizes / locations, and fixings / fixing patterns comply? (ensure that LBP details are recorded)	Pass	CJ	20/12/2019 12:25 pm	The fixing of the bracing elements is compliant.	
	Fail	CJ	20/12/2019 12:25 pm	The fixing of the bracing elements is not compliant. Please rectify the following and advise when ready for re-inspection.	
	Fail	CJ	20/12/2019 12:27 pm	The fixing of the bracing elements is not complete M1 , M2, B1 and N2 bracing panels have not been installed As formal amendment for Ensuite has been applied for. Reinspection is required once a	
	Fail	CJ	20/12/2019 12:29 pm	Bracing elements is not complete M1 , M2, B1 and N2 bracing panels have not been installed As formal amendment for Ensuite has been applied for. Reinspection is required once approved. Note the rest of the bracing has been installed	
	Pass	RGt	23/03/2020 11:18 am	now complete Bracing elements is not complete M1 , M2, B1 and N2 bracing panels have not been installed As formal amendment for Ensuite has been applied for. Reinspection is required once approved. Note the rest of the bracing has been installed	
Drainage					
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	N/A	RGt	23/03/2020 11:18 am	NA	
E1: Surface Water: Does the location and construction of sumps and drains comply with building consent?	<u>N/a</u>	<u>RGt</u>	<u>23/03/2020 11:18 am</u>		
E1: Surface Water - Prompt List:					
1. Separation: Is sufficient separation provided between drains and foundations?	N/A	RGt	23/03/2020 11:18 am	This question does not apply to this consent.	
2. Materials: Are pipe materials, pipe size, length and gradient compliant?	N/A	RGt	23/03/2020 11:18 am	This question does not apply to this consent.	
3. Inspection: Are inspection point locations compliant?	N/A	RGt	23/03/2020 11:18 am	This question does not apply to this consent.	
4. Sub-floor: Is sub-floor pipework support compliant?	N/A	RGt	23/03/2020 11:18 am	This question does not apply to this consent.	
5. Bedding: Is drain bedding material and drain cover compliant?	N/A	RGt	23/03/2020 11:18 am	This question does not apply to this consent.	
6. Drain Leakage Test: Has the system passed a drain leakage test and has evidence of this test been recorded?	N/A	RGt	23/03/2020 11:18 am	This question does not apply to this consent.	
7. Construction: Is the down pipe/ sump / cesspit / soakpit / swale location and construction compliant?	N/A	RGt	23/03/2020 11:18 am	This question does not apply to this consent.	
8. As-built: Have as-built drawings and required documents been provided along with drain-layer details - (name, company, license number, contact details)?	N/A	RGt	23/03/2020 11:18 am	This question does not apply to this consent.	
Final					
BC Complexity / Competence (Reg 10 & 18 of BCA Regs 2006): Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.	Pass	RGt	23/03/2020 11:18 am	Complexity is correctly assigned. I have the appropriate level of competence OR I am undertaking this under supervision - my supervisor is ..	
Section 84 - 89: Restricted Building Work: Has each licensed building practitioner that has carried out or supervised restricted building work under this building consent provided the TA with record of work on the prescribed form?	Pass	RGt	23/03/2020 11:18 am	Record of Work has been provided.	

SLEEPOUT - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
Section 92: Application for a Code Compliance Certificate: Has the application for Code Compliance Certificate been provided?	Pass	RGt	23/03/2020 11:18 am	A CCC application has been provided/applied for.
Finished Floor Levels: Do finished floor levels, finished ground levels, and proximity of adjacent ground to external walls comply with the building consent?	Pass	RGt	23/03/2020 11:18 am	FFL, FGL and proximity of adjacent ground complies with consent.
B1: Pile: Sub-floor Ventilation & Access: Is compliance satisfied?	Pass	RGt	23/03/2020 11:18 am	Sub-floor ventilation and access is compliant.
B2: DURABILITY: Has compliance with B2 provisions been satisfied?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:18 am</u>	
B2: DURABILITY - Prompt List:				
1. Incompatibility: Is the structure free of obvious incompatibility issues?	PASS	RGt	23/03/2020 11:18 am	No obvious incompatibility issues have been observed.
2. Access for Maintenance: Is access for maintenance purposes available to all concealed and enclosed spaces?	N/A	RGt	23/03/2020 11:18 am	This question does not apply to this project.
3. Finishes: Are all finishes completed in accordance with the building consent?	PASS	RGt	23/03/2020 11:18 am	All finishes are completed in accordance with building consent.
C: SH - Fire Safety System [Para 2.2]: Has a complying Type 1 smoke alarm been installed and are detectors located in accordance with building consent documentation?	Fail	RGt	23/03/2020 11:18 am	Consent documents require the installation of a complying Type 1 smoke detection system with detectors installed as shown on the consent documentation. Please comply with this requirement and advise the BCA when the smoke alarm system is correctly installed and ready for re-inspection.
	Pass	RGt	23/03/2020 11:18 am	A complying Type 1 smoke alarm has been installed and detectors are located in accordance with consent documentation.
	Pass	RGt	23/03/2020 11:19 am	1 A complying Type 1 smoke alarm has been installed and detectors are located in accordance with consent documentation.
C: SH - Means of Escape [Part 3]: Does the means of escape from this building comply with the building consent?	Pass	RGt	23/03/2020 11:19 am	Means of escape from this building complies with the building consent.
D1: Access Routes - Residential: Do the finished access routes comply with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:19 am</u>	
D1: Access Routes - Residential - Prompt List:				
1. Safe Access: Is safe access available to the building entrance?	PASS	RGt	23/03/2020 11:19 am	Safe access is available to the building entrance.
2. Slope & Cross Falls: Are safe slopes and cross falls provided in the direction of travel?	PASS	RGt	23/03/2020 11:19 am	Slopes and cross-falls comply.
3. Obstructions: Are routes free from dangerous obstructions and projections?	PASS	RGt	23/03/2020 11:19 am	Access routes are free from dangerous obstructions.
4. Slip Resistance: Do surfaces have adequate slip resistance?	PASS	RGt	23/03/2020 11:19 am	Surfaces have adequate slip resistance.
5. Treads: Do stairs have complying treads & rise?	PASS	RGt	23/03/2020 11:19 am	Stairs and stair treads comply.
6. Handrails/ Ramps / Landings: Do handrails, ramps and landings comply?	N/A	RGt	23/03/2020 11:19 am	This question does not apply to this consent.
E1: Surface Water: Is finished construction of the rain and stormwater system and cesspits compliant?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:19 am</u>	
E1: Surface Water - Prompt List:				
1. Materials: Are materials compatible with the stormwater system?	PASS	RGt	23/03/2020 11:19 am	Materials are compliant.
2. Gutters: Is gutter size, fall, support and provision for expansion / snow compliant?	PASS	RGt	23/03/2020 11:19 am	Gutter size, fall, support and provision for expansion is compliant.
3. Outlets: Is outlet size and provision for overflow relief compliant?	PASS	RGt	23/03/2020 11:19 am	Outlet size and provision for overflow relief is compliant.
4. Downpipes: Is downpipe size, support and location compliant?	PASS	RGt	23/03/2020 11:19 am	Downpipe size, support and location is compliant
5. Falls: Are falls to drains and cesspits compliant?	PASS	RGt	23/03/2020 11:19 am	Falls to drains and cesspits are compliant.

SLEEPOUT - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
E2 - External Moisture: Wall Cladding: Is the exterior weathertight and is or weathertight and is finished construction of the wall cladding systems in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:19 am</u>	
E2 - External Moisture - Prompt List:				
1. Flashing: Are openings in the wall cladding correctly flashed with all penetrations properly sealed?	PASS	RGt	23/03/2020 11:19 am	Flashing: Wall cladding flashings and penetrations are compliant.
2. B2-Durability: Are all materials compatible, compliant and fit for the environmental conditions?	PASS	RGt	23/03/2020 11:19 am	Compliance with B2 - Durability is satisfied.
3. Coatings: Are finished coatings installed as per building consent and free of cracks / defects?	PASS	RGt	23/03/2020 11:19 am	Finished coating is compliant.
4. Finished Ground Levels: Are finished ground levels and cladding separation requirements compliant?	PASS	RGt	23/03/2020 11:19 am	Finished ground levels and cladding separation is compliant.
5. Documentation: Has all applicator and installer documentation / warranties / declarations and LBP Record of Work certificates been obtained?	PASS	RGt	23/03/2020 11:19 am	All applicator and installer documentation / warranties / declarations and LBP Record of Work certificates have been obtained.
E2 - External Moisture: Plaster System(s): Is the exterior weathertight and is finished construction of the plaster system(s) in accordance with building consent?	N/A	RGt	23/03/2020 11:19 am	NA
E2 - External Moisture: Roof Cladding: Is the exterior weathertight and is or weathertight and is finished construction of the roof cladding system(s) in accordance with building consent?	<u>Pass</u>	<u>RGt</u>	<u>23/03/2020 11:20 am</u>	
E2 - External Moisture - Prompt List:				
1. Flashing: Are flashings correctly installed and penetrations sealed as detailed - [(check junctions & transitions, support, fixing, compatibility, construction sequencing, effects of snow melt considered)]?	PASS	RGt	23/03/2020 11:20 am	Flashings are correctly installed and penetrations sealed as detailed
2. Ventilation: Have roof space ventilation requirements been addressed?	PASS	RGt	23/03/2020 11:20 am	Roof space ventilation is compliant.
3. Drainage: Is roof drainage adequate to effectively drain water from the roof?	PASS	RGt	23/03/2020 11:20 am	Roof drainage is compliant.
4. Penetrations: Is the roof space free from penetrations from spaces below? Refer coaching.	PASS	RGt	23/03/2020 11:20 am	Penetrations are weathertight.
5. B2-Durability: Does the visible in-service performance indicate that roof performance satisfies Clause B1, B2 & E2?	PASS	RGt	23/03/2020 11:20 am	Durability provisions are satisfied.
6. Documentation: Has the applicator verification documentation / warranties / installer declarations / LBP ROW certificates been obtained?	PASS	RGt	23/03/2020 11:20 am	Warranties are provided,
E3: Internal Moisture: Does finished construction of interior service areas demonstrate compliance with the building consent?	<u>N/a</u>	<u>RGt</u>	<u>23/03/2020 11:20 am</u>	
E3: Internal Moisture - Prompt List:				
1. Containment: Is containment satisfied - (floor coverings & finishes installed as specified to mitigate potential for accidental overflow affecting household units or adjacent property)?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
2. Overflow: Is overflow provisions satisfied - (floor waste drain mitigates potential for accidental overflow affecting the household unit or adjacent property)?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
3. Thermal Break: Is a thermal break provided where steel framing is used?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
4. Condensation: Are condensation channels and drainage outlets provided to windows?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
5. Ventilation: Is adequate ventilation provided?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
6. Splash Protection: Are walls provided with adequate protection from water splash?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.

SLEEPOUT - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
7. Compliance: Is workmanship, construction and surface finishes as specified?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
8. Wet / Service Areas: Are surfaces impervious & easily cleaned, joints properly sealed, water tested, and correctly finished?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
9. Fittings: Are fittings and fixtures installed as per consent and is sealing of these compliant - check the bath / basins / sinks / tub / sanitary appliances?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
10. Warranties / Required Documents: Have all warranties / installer declarations and Required Documents for this system been obtained?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
F2: Hazardous Building Materials: Are building materials that are potentially hazardous installed in accordance with building consent?	N/a	RGt	23/03/2020 11:20 am	
F2: Hazardous Building Materials - Prompt List:				
1. Compliance Label / Required Documents: Is evidence provided verifying that glazing satisfies F2 (compliance labeling or statement from supplier)?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
2. Safety Glass: Is safety glass installed, located and provided with complying manifestation in accordance with building consent?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
3. Hazardous Material: Has the location of harmful materials (such as asbestos) been recorded and is installation in accordance with the building consent?	N/A	RGt	23/03/2020 11:20 am	This question does not apply to this consent.
F4: Safety from Falling: Is the construction of barriers in accordance with the building consent?	Pass	RGt	23/03/2020 11:21 am	
F4: Safety from Falling - Prompt List:				
1. Location: Are barriers correctly located?	PASS	RGt	23/03/2020 11:20 am	Barriers are correctly located.
2. B2 - Materials: Are materials in accordance with building consent - (treatment, fixings)?	PASS	RGt	23/03/2020 11:20 am	Materials, treatment and fixings are correct.
3. Continuous: Are barriers continuous & extend for full length of the hazard.	PASS	RGt	23/03/2020 11:20 am	Barriers are continuous and extend full length of hazard.
4. Climbable: Are barriers correct height and non-climbable?	PASS	RGt	23/03/2020 11:20 am	Barriers are non-climbable and correct height?
5. Rigid: Do barriers have adequate rigidity?	PASS	RGt	23/03/2020 11:20 am	Barriers have adequate rigidity.
6. Safe: Are barriers not readily usable as seats?	PASS	RGt	23/03/2020 11:20 am	Barriers are not readily usable as seats.
7. Restrictors: Are complying restriction devices provided to all window and door openings that require protection?	N/A	RGt	23/03/2020 11:21 am	This question does not apply to this project.
8. Construction Monitoring / Required Documents: Are Construction Monitoring records and Required Documents provided?	N/A	RGt	23/03/2020 11:21 am	This question does not apply to this project.
H1: Energy Efficiency: Is the finished installation of insulation and glazing in accordance with building consent?	Pass	RGt	23/03/2020 11:21 am	
H1: Energy Efficiency - Prompt List:				
1. Luminaires / Roof space Insulation: Is insulation around luminaires correctly installed with appropriate clearances maintained, and roof space insulation correctly installed?	PASS	RGt	23/03/2020 11:21 am	Insulation around luminaires is correctly installed with appropriate clearances and roof space insulation is correctly installed.
2. Flues: Is correct protection and clearance provided around flues in the roof space?	N/A	RGt	23/03/2020 11:21 am	This question does not apply to this consent.
3. Sub-floor Protection: Is appropriate protection provided to sub floor insulation where this is exposed to elements?	PASS	RGt	23/03/2020 11:21 am	Sub-floor insulation that is exposed to elements has appropriate protection.
4. Pipework: Is pipe work that requires insulation correctly insulated and within the thermal envelope?	N/A	RGt	23/03/2020 11:21 am	This question does not apply to this consent.
5. Glazing: Is the finished installation of glazing insulation compliant?	PASS	RGt	23/03/2020 11:21 am	Finished installation of glazing insulation is compliant.

SLEEPOUT - R2 - DETACHED DWELLING - Inspections - AUDIT	Pass	User	Date	Notes
Compliance / Documentation: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that they reflect construction in its finished state.	Pass	RGt	23/03/2020 11:22 am	Compliance with building consent is demonstrated and all building consent and RMA conditions have been satisfied, all required documents been provided and have been reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that they reflect construction in its finished state. I am reg. 10 & 18 qualified and confirm that all required documents reflect the as-built state of construction.

Decision To Issue CCC: Richmond Grant at 23/03/2020 03:24 pm

02 September 2019

Sam Mcleod & Toni Evans
PO Box 316
Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 1

Building Name: Main Building

Inspection Results:

DRAINAGE - 02 Sep 2019 @ 15:28 by Grant Fidler

Inspection Outcome: **INCOMPLETE** - Some aspects of the building work pertaining to this inspection have yet to be checked and confirmed as complying with the building consent.

Inspection Summary: Pass-Inspection for onsite waste water tanks & effluent field only, as per approved BC & relevant building codes, ok to backfill.

Your next inspection will be: **Prepour**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

<http://www.tasman.govt.nz>

189 Queen Street, Richmond 7020

Tel.: 03 543 8400 Email: bc.admin@tasman.govt.nz

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	-
Wastepipes	-
Sub-floor Framing	-
Framing / Pre-wrap	-
Post Wrap / Cavity	-
Preline	-
Post Line	-
Drainage	IN-PROGRESS - 02 Sep 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Grant Fidler

Building Technical Officer

On behalf of **Tasman District Council**

08 October 2019

Sam Mcleod & Toni Evans

PO Box 316

Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 2

Building Name: Main Building

Inspection Results:

PREPOUR - 08 Oct 2019 @ 09:56 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

DRAINAGE - 08 Oct 2019 @ 09:56 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: Profiles , boundary pegs in place Siting as per plan distances to boundaries as per plan . FFL75600 set off SW sump at front of section. 450 dia post holes in to hard ground , 900 deep anchors ,ordinary 450mm, point loads 450sq x 450 . certified site / building platform . H5 200SED poles on site . FINE TO POUR .

Your next inspection will be: **Sub-floor Framing**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations

- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	PASS - 08 Oct 2019
Wastepipes	-
Sub-floor Framing	-
Framing / Pre-wrap	-
Post Wrap / Cavity	-
Preline	-
Post Line	-
Drainage	PASS - 08 Oct 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Building Inspector

On behalf of **Tasman District Council**

15 October 2019

Sam Mcleod & Toni Evans

PO Box 316

Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 3

Building Name: Main Building

Inspection Results:

SUB-FLOOR FRAMING - 15 Oct 2019 @ 10:40 by Craig Jaquiere

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: New Dwelling and Sleepout inspection. All sub-floor connections installed to bearers and Joists. All connections Stainless Steel. Sub-floor insulation installed. Pass approved to continue.

Your next inspection will be: **Framing / Pre-wrap**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

<http://www.tasman.govt.nz>

189 Queen Street, Richmond 7020

Tel.: 03 543 8400 Email: building.support@tasman.govt.nz

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	PASS - 08 Oct 2019
Wastepipes	-
Sub-floor Framing	PASS - 15 Oct 2019
Framing / Pre-wrap	-
Post Wrap / Cavity	-
Preline	-
Post Line	-
Drainage	PASS - 08 Oct 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Craig Jaquierey
Building Technical Officer (Inspections)
On behalf of **Tasman District Council**

04 November 2019

Sam Mcleod & Toni Evans
 PO Box 316
 Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 4

Building Name: Main Building

Inspection Results:

FRAMING / PRE-WRAP - 04 Nov 2019 @ 10:11 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: Dwelling and sleep out all correctly fixed for extra high wind zone as per Mitek frame and truss plan and NZS3604. PURLINS, 2 BLUE SCREWS , Diagonal strap bracing in place, top plates all stud lok, lintels with stud lok or 6kn straps / handi bracs , Rafters with cpc40/multi grips / strapped . Beam type H fixings . Fine for wrap and roof .

Your next inspection will be: **Post Wrap / Cavity**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry

- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name

Summary

Prepour	PASS - 08 Oct 2019
Wastepipes	-
Sub-floor Framing	PASS - 15 Oct 2019
Framing / Pre-wrap	PASS - 04 Nov 2019
Post Wrap / Cavity	-
Preline	-
Post Line	-
Drainage	PASS - 08 Oct 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Richmond Grant
Building Inspector
On behalf of **Tasman District Council**

25 November 2019

Sam Mcleod & Toni Evans

PO Box 316

Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 5

Building Name: Main Building

Inspection Results:

POST WRAP / CAVITY - 25 Nov 2019 @ 13:29 by Craig Harley

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: cavity inspection. LBP Jessie Robough.

7mm h3.2 structural grade ply. overlaid by fastwrap building wrap . Protecto flashing tape dressed into openings. penetrations taped to wrap.

Cladding to be direct fixed profiled metal. Windows /doors not installed at time of inspection.

Have agreed with builder and cladding installer -Conrad from Freeman Roofing. That they are to provide photos of flashings that are covered and email to

190480@tasman.abcs.co.nz

Builder has shown photos of ply nailed of to bracing pattern at lounge area between windows for BLP. And other locations around building in general.

OK to continue cladding

These notes apply to sleepout as inspected at same time. result pass

Your next inspection will be: **Preline**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	PASS - 08 Oct 2019
Wastepipes	-
Sub-floor Framing	PASS - 15 Oct 2019
Framing / Pre-wrap	PASS - 04 Nov 2019
Post Wrap / Cavity	PASS - 25 Nov 2019
Preline	-
Post Line	-
Drainage	PASS - 08 Oct 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Craig Harley
Building Technical Officer (Inspections)
On behalf of **Tasman District Council**

16 December 2019

Sam Mcleod & Toni Evans

PO Box 316

Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 6

Building Name: Main Building

Inspection Results:

WASTEPIPES - 16 Dec 2019 @ 12:14 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

PRELINE - 16 Dec 2019 @ 12:14 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: Dwelling and sleep out .TIMBER CEILING BATTENS AT 600mm centres . R3.6 and R2.6 batts , and noise bats neatly fitted. Airseals in place , Handi bracs or straps for BL braces , rest of bottom plates all gun nailed correctly . Average moisture 14% . Think Water have lagged and supported polybutylene pipes to G12 specs and wastes to G13. Sprinkler system installed . Fine to line . Pressure test for water supply, and separate test for sprinkler system to NZS 4517 required.

Your next inspection will be: **Post Line**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations

- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	PASS - 08 Oct 2019
Wastepipes	PASS - 16 Dec 2019
Sub-floor Framing	PASS - 15 Oct 2019
Framing / Pre-wrap	PASS - 04 Nov 2019
Post Wrap / Cavity	PASS - 25 Nov 2019
Preline	PASS - 16 Dec 2019
Post Line	-
Drainage	PASS - 08 Oct 2019
Final	-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Richmond Grant
Building Inspector
On behalf of **Tasman District Council**

20 December 2019

Sam Mcleod & Toni Evans
 PO Box 316
 Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 7

Building Name: Main Building

Inspection Results:

POST LINE - 20 Dec 2019 @ 12:35 by Craig Jaquierey

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

DRAINAGE - 20 Dec 2019 @ 12:35 by Craig Jaquierey

Inspection Outcome: **FAIL** - The following aspects of this inspection have resulted in a Fail result -- see the item(s) below:

E1: Surface Water:

1. Please provide a set of as-built drawings accurately depicting the drainage layout and forward these to the Building Consent Authority to enable issue of the code compliance certificate to be finalised.

These may be viewed at time of next inspection.

Inspection Summary: Dwelling and sleepout Sewer and storm water laid at 1:100 fall. Sewer connection to Sceptic tank. Storm water connecting to In ground water tanks. 2 Toilets.

Approved to back fill. Fail paper work only As-built to come.

Dwelling bracing. bracing panels installed as per the Stamped plan and Fixed as per the 2018 Gib site bracing specifications. Pass. Approved to continue

Your next inspection will be: **Final**

Please allow 2 working days notice when booking all Building Inspections.

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name

Prepour

Wastepipes

Sub-floor Framing

Framing / Pre-wrap

Post Wrap / Cavity

Preline

Post Line

Drainage

Final

Summary

PASS - 08 Oct 2019

PASS - 16 Dec 2019

PASS - 15 Oct 2019

PASS - 04 Nov 2019

PASS - 25 Nov 2019

PASS - 16 Dec 2019

PASS - 20 Dec 2019

FAIL - 20 Dec 2019

View at next inspection

-

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Craig Jaquiere

Building Technical Officer (Inspections)

On behalf of **Tasman District Council**

23 March 2020

Sam Mcleod & Toni Evans

PO Box 316

Motueka 7143

Dear Sam Mcleod & Toni Evans

Site Inspection Report

Reference: BC190480

Location: 31 Pineview Way, Motueka Valley, Lot 10 DP519728

Project: Construct new dwelling and detached sleepout

IR Number: 8

Building Name: Main Building

Inspection Results:

DRAINAGE - 23 Mar 2020 @ 11:53 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

FINAL - 23 Mar 2020 @ 11:53 by Richmond Grant

Inspection Outcome: **PASS** - The BCA is satisfied, on reasonable grounds, that the aspects of building work pertaining to this inspection demonstrate compliance with the building consent.

Inspection Summary: New dwelling and sleep out built as per consented plans , All painting and decorating water temperature 52C . 6 +1 smoke detectors correctly fitted . EXTERIOR roof and cladding secure and weather proof , storm water system complete to 2 tanks . First flush diverter in place . Fine to issue CCC .

Your next inspection will be: **No further inspection required**

Outstanding Required Documents for this Building

Prepour

- Form 6a - LBP record of building work - Foundations
- B1: Piles - Construction monitoring records (PS3 / PS4)

Wastepipes

- G12: Pipework pressure test documentation
- G12: Water potability certification - Non NUO supply

Framing / Pre-wrap

- Form 6a - LBP record of building work - Carpentry
- B1: Truss certification

Preline

- G13: Pressure test verification (PS3), plumber details

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test
- G13 VM4 - Onsite wastewater treatment system as-built and installer details

Final

- G9: Energy works certificate
- G10 & G11: Energy works certificate

History

Inspection Name	Summary
Prepour	PASS - 08 Oct 2019
Wastepipes	PASS - 16 Dec 2019
Sub-floor Framing	PASS - 15 Oct 2019
Framing / Pre-wrap	PASS - 04 Nov 2019
Post Wrap / Cavity	PASS - 25 Nov 2019
Preline	PASS - 16 Dec 2019
Post Line	PASS - 20 Dec 2019
Drainage	PASS - 23 Mar 2020
Final	PASS - 23 Mar 2020

Please plan your project ahead of time and allow a minimum of 2 working days' notice when booking all inspections.

Yours sincerely

Richmond Grant
Building Inspector
On behalf of **Tasman District Council**

Building: Main Building
Inspection: Post Wrap / Cavity
Question: Wall Cladding: Is wall cladding construction in accordance with building consent? See Reference Notes.
Inspector: Craig Harley
Timestamp: 2019-11-25 13:10:58
Comment: Post Wrap / Cavity - Default #1 25/11/19



Building: Main Building
Inspection: Post Wrap / Cavity
Question: Wall Cladding: Is wall cladding construction in accordance with building consent? See Reference Notes.
Inspector: Craig Harley
Timestamp: 2019-11-25 13:10:58
Comment: Post Wrap / Cavity - Default #2 25/11/19



Building: Main Building
Inspection: Post Wrap / Cavity
Question: Wall Cladding: Is wall cladding construction in accordance with building consent? See Reference Notes.
Inspector: Craig Harley
Timestamp: 2019-11-25 13:10:58
Comment: 147e074a-e049-44fa-a364-6edb01c5e1e2.jpg



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...
Inspector: Richmond Grant
Timestamp: 2020-03-23 11:55:11
Comment: A Final - Default #1 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...
Inspector: Richmond Grant
Timestamp: 2020-03-23 11:55:11
Comment: Gas Final - Default #2 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...
Inspector: Richmond Grant
Timestamp: 2020-03-23 11:55:11
Comment: B Final - Default #3 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...

Inspector: Richmond Grant

Timestamp: 2020-03-23 11:55:11

Comment: C Final - Default #4 23/03/20

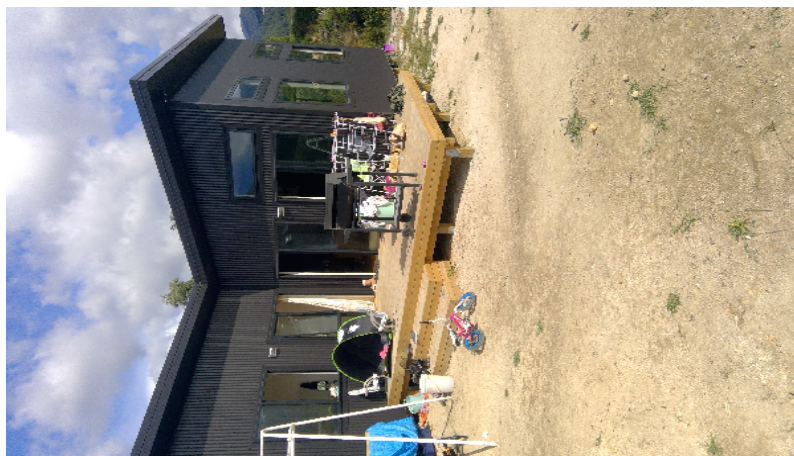


Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...

Inspector: Richmond Grant

Timestamp: 2020-03-23 11:55:11

Comment: D Final - Default #5 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...

Inspector: Richmond Grant

Timestamp: 2020-03-23 11:55:11

Comment: E Final - Default #6 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...
Inspector: Richmond Grant
Timestamp: 2020-03-23 11:55:11
Comment: F Final - Default #7 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...
Inspector: Richmond Grant
Timestamp: 2020-03-23 11:55:11
Comment: G Final - Default #8 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...
Inspector: Richmond Grant
Timestamp: 2020-03-23 11:55:11
Comment: Gas 2Final - Default #9 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...

Inspector: Richmond Grant

Timestamp: 2020-03-23 11:55:11

Comment: 1 Final - Default #10 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...

Inspector: Richmond Grant

Timestamp: 2020-03-23 11:55:11

Comment: 2. Final - Default #11 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...

Inspector: Richmond Grant

Timestamp: 2020-03-23 11:55:11

Comment: 3 Final - Default #12 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...
Inspector: Richmond Grant
Timestamp: 2020-03-23 11:55:11
Comment: Water tanks Final - Default #13 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...
Inspector: Richmond Grant
Timestamp: 2020-03-23 11:55:11
Comment: Septic Final - Default #14 23/03/20



Building: Main Building
Inspection: Final
Question: Is compliance with building consent demonstrated and have all building consent and RMA conditions been satisfied, and have all required documents been provided and reviewed by a suitably qualified and competent person (as required by reg. 10 and 18) to confirm that t...
Inspector: Richmond Grant
Timestamp: 2020-03-23 11:55:11
Comment: Septic 2Final - Default #15 23/03/20



Inspection Photos Record on Project 190480

Building: Sleepout

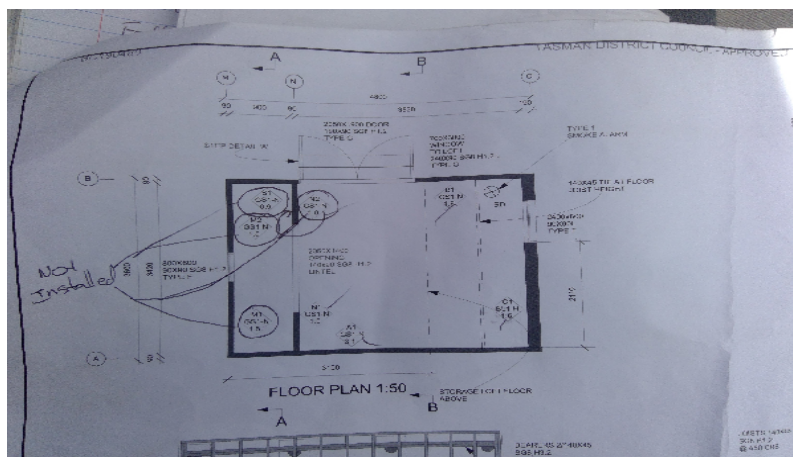
Inspection: Post Line

Question: Is inspection of this project within the scope of your assessed competence? Do not select X or N/A. If you are inspecting this project under supervision please ensure that this is recorded here.

Inspector: Craig Jaquierey

Timestamp: 2019-12-20 12:36:01

Comment: Post Line - Default #1 20/12/19



Memorandum from licensed building practitioner: Record of building work

Section 88, Building Act 2004



THE BUILDING

Street address: 31 Pineview Way	
Suburb: Motueka Valley	
Town/City: Motueka	Postcode: 7143

THE PROJECT

Building consent number: 190480

THE OWNER(S)

Name(s): Sam McLeod & Toni Evans	
Mailing address: 31 Pineview Way	
Suburb:	PO Box/Private Bag:
Town/City: Motueka	Postcode: 7143
Phone number: 0211103643	Email address: themotlot@gmail.com

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

PRIMARY STRUCTURE

Work that is restricted building work	Description of restricted building work	Carried out or supervised
Tick <input checked="" type="checkbox"/>	If necessary, describe the restricted building work	Tick <input checked="" type="checkbox"/> whether you carried out the work or supervised someone else.
Foundations and subfloor framing <input type="radio"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised
Walls <input type="radio"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised

PRIMARY STRUCTURE CONT'D

Roof	<input type="radio"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised
Columns and beams	<input type="radio"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised
Bracing	<input type="radio"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised
Other	<input type="radio"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

EXTERNAL MOISTURE MANAGEMENT SYSTEMS

Damp proofing	<input type="radio"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised
Roof cladding or roof cladding system	<input checked="" type="radio"/>	Roofing by freemen roofing	<input type="radio"/> Carried out <input checked="" type="radio"/> Supervised
Ventilation system (for example, subfloor or cavity)	<input type="radio"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS CONT'D

Wall cladding or wall cladding system <input checked="" type="checkbox"/>	Wall cladding by freemans	<input type="radio"/> Carried out <input checked="" type="radio"/> Supervised
Waterproofing <input type="checkbox"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised
Other <input type="checkbox"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised

ISSUED BY

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

Name: <u>Jess Roborgh</u>	LBP number: <u>BP 123 351</u>
Class(es) licensed in: <u>Carpentry</u>	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below):	
Street address/Registered office:	
Suburb: <u>Riwaka</u>	Town/City: <u>Mohreka</u>
PO Box/Private Bag:	Postcode: <u>7198</u>
Phone number:	Mobile: <u>021 101 5882</u>
After hours: <u>021 101 5882</u>	Fax:
Email address: <u>jessroborgh@gmail.com</u>	Website:

DECLARATION

I Jess Roborgh carried out or supervised the restricted building work recorded on this form.

Signature: [Signature] Date: 23.03.2020

NZS 4517:2010

APPENDIX H – SPRINKLER SYSTEM DECLARATION (DESIGN AND CONSTRUCTION)

(Normative)

DOMESTIC SPRINKLER SYSTEM DECLARATION (DESIGN AND CONSTRUCTION)

The sprinkler system installed in accordance with Re BC 190480As Per leap (Design number)on the 16/03/2020 (Date)at: 31 PINEVIEW Way, MYTTON HEIGHTS
MOTUEKA
(Full street address)

complies with the requirements of NZS 4517:2010 in all respects.

The required flow at the reference point is 52,1 L/min at a pressure c. 48 kPa,
which includes an allowance of 12 L/min for simultaneous domestic flow.Signed [Signature] Name M. INCH
(Print)Company or organisation THINK WATERQualification/position PLUMBERDate 16/03/2020

(Copyright of this form has been waived by Standards New Zealand.)

Main Building

Form 6a - LBP record of building work - Carpentry (Framing / Pre-wrap)

PASS

Historical Notes

[PASS @ 23 Mar 2020 12:56:03] Richmond Grant:

Correct

B1: Piles - Construction monitoring records (Prepour)

N/A

Historical Notes

[N/A @ 23 Mar 2020 12:57:49] Richmond Grant:

NA

[23 Mar 2020 12:57:38] Richmond Grant:

User cleared the answers for this required document.

[N/A @ 23 Mar 2020 12:56:18] Richmond Grant:

Correct

Form 6a - LBP record of building work - Foundations (Prepour)

PASS

Historical Notes

[PASS @ 23 Mar 2020 12:55:59] Richmond Grant:

Correct

B1: Truss certification (Framing / Pre-wrap)

N/A

Historical Notes

[N/A @ 23 Mar 2020 12:56:27] Richmond Grant:

Correct

E1: Stormwater drain leakage test and as-built plans (Drainage)

N/A

Historical Notes

[N/A @ 23 Mar 2020 12:56:33] Richmond Grant:

Correct

G9: Energy works certificate (Final)

PASS

Historical Notes

[PASS @ 23 Mar 2020 12:56:39] Richmond Grant:

Correct

G10 & G11: Energy works certificate (Final)

PASS**Historical Notes**

[PASS @ 23 Mar 2020 12:56:43] Richmond Grant:

Correct

G12: Pipework pressure test documentation (Wastepipes)

PASS**Historical Notes**

[PASS @ 23 Mar 2020 12:56:50] Richmond Grant:

Correct

G12: Pipework pressure test documentation (Preline)

PASS**Historical Notes**

[PASS @ 23 Mar 2020 12:56:56] Richmond Grant:

Correct

G12: Water potability certification - Non NUO supply (Wastepipes)

N/A**Historical Notes**

[N/A @ 23 Mar 2020 12:57:04] Richmond Grant:

NA

G13: As-builts, drainlayer details, pipework test (Drainage)

PASS**Historical Notes**

[PASS @ 23 Mar 2020 12:57:21] Richmond Grant:

Correct

G13 VM4 - Onsite wastewater treatment system as-built and installer details (Drainage)

PASS**Historical Notes**

[PASS @ 23 Mar 2020 12:57:28] Richmond Grant:

Correct

Miscellaneous documents

Accepted Documents:

- 190480-ROW-Roofing.pdf (1.76MB)

Accepted Date: 23 Mar 2020 12:55:42 - Monday

Accepted By: Richmond Grant

Historical Notes

[23 Mar 2020 12:55:42] Richmond Grant:

Accepted Document: 190480-ROW-Roofing.pdf (renamed to 190480_Miscellaneousdocuments_20200323.pdf)Reasons / Notes: Automatically accepted as was uploaded by Council.

Minor variations

- {no file(s) uploaded}

G13: Pressure test verification (PS3), plumber details (Preline)

PASS

Historical Notes

[PASS @ 23 Mar 2020 12:57:15] Richmond Grant:

Correct

Sleepout

Form 6a - LBP record of building work - Carpentry (Framing / Pre-wrap)

PASS

Historical Notes

[PASS @ 23 Mar 2020 15:24:34] Richmond Grant:

Correct

Form 6a - LBP record of building work - Foundations (Prepour)

PASS

Historical Notes

[PASS @ 23 Mar 2020 15:24:29] Richmond Grant:

Correct

E1: Stormwater drain leakage test and as-built plans (Drainage)

PASS

Historical Notes

[PASS @ 23 Mar 2020 15:24:39] Richmond Grant:

Correct

Miscellaneous documents

Accepted Documents:

- Sprinkler-Pressure-Test.pdf (216.26kB)

Accepted Date: 23 Mar 2020 15:28:09 - Monday

Accepted By: Richmond Grant

Historical Notes

[23 Mar 2020 15:28:09] Richmond Grant:

Accepted Document: Sprinkler-Pressure-Test.pdf (renamed to 190480_Miscellaneousdocuments_20200323_000.pdf)Reasons / Notes: Automatically accepted as was uploaded by Council.

Minor variations

- {no file(s) uploaded}

APPLICATION FOR CODE COMPLIANCE CERTIFICATE (Form 6)

Section 92. Building Act 2004.



1. What is the Building Consent? *Complete this field*

Building consent number:	
Issued by: (name of building consent authority)	

2. Who owns the building? *Complete all fields, using N/A if a field is not applicable*

Owner name:	Mr Samuel J. McLeod & Mrs Toni R. Evans			Title: e.g. Mr, Mrs, Ms, Dr
Contact person:	Toni			
Owner mailing address:	31 Pineview Way, Motueka RD1 796			
Street address / registered office:				
Owner email address:	themotlot@gmail.com			
Owner contact numbers:	Ph:	Cell: 021 1103643		
Indicate which of the following Proof of Ownership documents is attached to your application. Your documents must be less than 3 months old.				
<input checked="" type="checkbox"/> Copy of Certificate of Title	<input type="checkbox"/> Copy of Lease Agreement	<input type="checkbox"/> Agreement for Sale & Purchase	<input type="checkbox"/> Other document showing full name of legal owner	
Are you using an Agent?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If Yes, please also complete the following	
Who is the first point of contact for further correspondence?		<input type="checkbox"/> Agent	<input type="checkbox"/> Owner	
Agent name:				
Agent email:				
Agent contact numbers:	Ph:	Cell:		
Agent mailing address:				
Relationship to owner:				

3. When was the building work completed? *Complete this field*

All building work to be carried out under the building consent specified on this form was completed on:	dd/mm/yyyy
---	------------

4. Who completed the building work? *Complete all fields on each line. You will need to complete one line for each building practitioner. Use a separate sheet if necessary.*

The licensed building practitioner(s) who carried out/supervised the restricted building work is/are:			
Name:	Licensing class:	LBP or registration number:	Work carried out / supervised:
Jess Robbough Builder	Carpentry	123351	Build
MR Electrical	general electrical	254326	Electric
Think Water	plumbing	07138	Plumbing
Kurt Bolton	drainlaying	24828	Drains
Freeman Roofing		?	Clothing (ex)

Name:	Licensing class:	LBP or registration number:	Work carried out / supervised:
Matt Whealton Tony Bartholomew	Plastering Gas fitting	20563	Plastering (internal) Gas fitting

Tradespeople who carried out building work other than restricted building work are as follows:

Name:	Address:	Contact number:	Registration number:


The following specified systems are contained on the compliance schedule for the building and, in the opinion of the personnel who installed them, are capable of performing to the performance standards set out in the building consent:

5. Declaration

☒ I understand that this application may *only* be made with the owner's approval. *Please tick to indicate your agreement.*

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004. The code compliance certificate should be sent to:

☒ Owner ☐ Agent ☒ Owner address as per Section 2 ☐ Agent address as per Section 2

Name:	Toni Evans
Signature:	
Date:	3. March 2020

You can add a digital signature to this document, either using Adobe or your existing digital signature.

Once you have filled out the form, including signatures, please save the application to your computer. You can then submit the application with supporting documentation to your local Council.

If you are unsure about what information to include in your application, a guidance document is available ([click here](#)).

6. Have you attached all required documents?

You are required to provide all the necessary documents to support your application. This includes (but is not limited to) the following sections:

- *Memorandum of Licensed Building Practitioners – Record of Work (for each type of building work completed)*
- *Certificates relating to energy work*
- *Evidence that specified systems are capable of performing to the performance standards set out in the building consent (if changed from the building consent)*
- *Other documents from personnel who carried out the work.*

Refer to your building consent approval letter for a full list of documents required to support your Code Compliance Certificate application.

Gas Certificate of Compliance



Client Name:

TONI EVANS

Location of installation: (enter registration number for relocatable installations)

Number & Street

31 PINE VIEW WAY. RD 1

Suburb

Town / City

MOWEKA

Postcode

7167

Description of gasfitting work: (If different gasfitting work was done by different people, state who did what gasfitting.)

TO INSTALL GAS TO CALIFONT AND INSTALL GAS BOTTLE STATION.

Gas supply pressure

2.75

kPa

Risk classification

Low - risk:

☐

General:

☒

High-risk:

☐

Gas type

☐

Natural gas

☒

LPG

☐

Biogas

Other (specify)

The work has been done in accordance with a certified design:

Yes: ☐No: ☒If yes - Identify the certified design including name, date and version. Also attach a copy to this certificate.
(or provide reference to a readily accessible electronic version)

The work relies on manufacturer's instructions:

Yes: ☐No: ☒If yes - identify the instructions including name, date and version. Also attach a copy to this certificate.
(or provide reference to a readily accessible electronic version)

The work has been done in accordance with means of compliance: (specify)

☒ Yes- AS/NZS 5601.1 sections 3 to 6☐ Yes- AS/NZS 5601.2 sections 3 to 9☐ No

Were any other standards or gas code of practice required for compliance?

☐

Yes

(specify)

☒

No

Parts of the gas installation to which this certificate relates that are safe to connect to the gas supply:

☒

All

☐

Parts

(specify)

Date(s) on which the work was done:

(if different from date of certifying gasfitting)

Name and registration number of anyone who carried out work under supervision:

By signing this document I confirm that I am satisfied that the work described in this certificate of compliance has been done lawfully and safely, and that the information on this certificate is correct.

Certifier name:

TONY BARTHOLOMEW

Registration number:

20563

Certifier Signature:

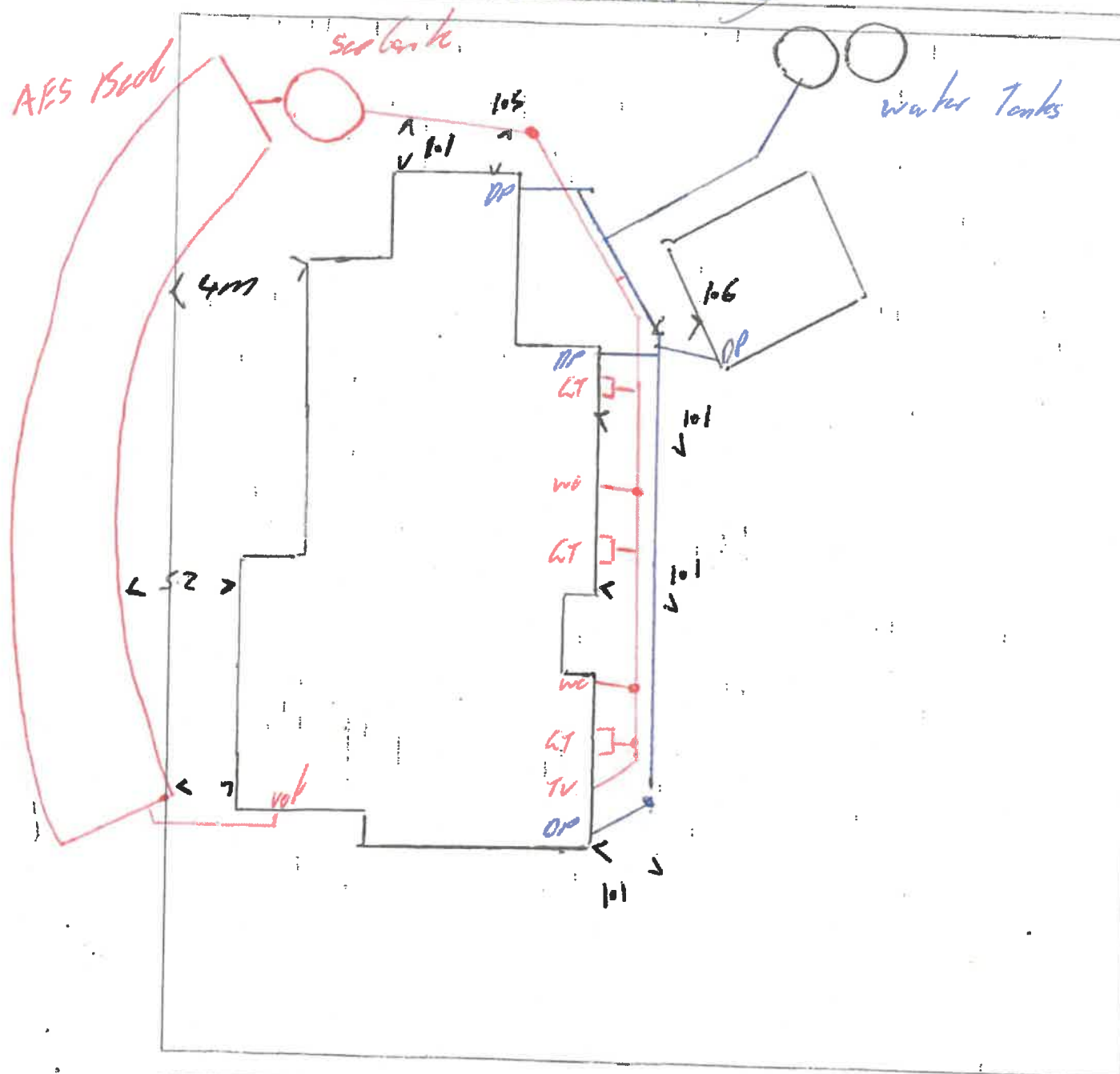
Date:

10/3/20

DRAINAGE PLAN



BUILDING CONSENT NO	140480	DATE	19/2/20
PROPERTY ADDRESS	31 Pine View Way		
DRAINLAYING COMPANY	Bolters Contracting		



Signed by Registered Drainlayer

Registration Number

24828

Tasman District Council

Email info@tasman.govt.nz
Website www.tasman.govt.nz

24 hour assistance

RICHMOND

189 Queen Street
Private Bag 1
Richmond 7050
New Zealand

Phone: 03 543 8497
Fax: 03 543 9521

MURCHISON

92 Fairfax Street
Murchison 7007
New Zealand

Phone: 03 573 1011
Fax: 03 573 1012

MOTUEKA

7 Hickson Place
PO Box 173
Motueka 7143
New Zealand

Phone: 03 508 2022
Fax: 03 528 9751

TAKAKA

76 Commercial Street
PO Box 74
Takaka 7142
New Zealand

Phone: 03 525 0020
Fax: 03 525 9972



Pressure Test Certificate Piped Services at Pre-line

FORM NUMBER: BC44

DATE REVISED: 19 July 2010

Issued by: (print name) JOHN G FISCHER Registration Number: 07138

To: Tasman District Council

In respect to the following:

Piped services installed in accordance with G12/AS1 or NZS/AUS3500.1 and 3 (delete one) as shown on the approved plans or as per the attached amendment plan.

Installed at: (property address) 31 PINEVIEW WAY, MOTUEKA

Building consent number: BC190480

Pipe brand used: RUTELINE

Type of test: WATER PRESSURE TEST

Duration: 15min

As a craftsman plumber, currently holding an annual practising licence, I certify that I, or personnel under my control, have carried out the installation of the above system and I believe on reasonable grounds that the installation complies with the New Zealand Building Code.

Signature of Client/Builder

Signature of Plumber

For Council Use Only

Register checked: ☐

Date: _____

Inspector name: _____

Signature: _____

Tasman District Council Email: info@tasman.govt.nz Website: www.tasman.govt.nz
 Richmond 100 Queen Street Private Bag 4 Richmond, New Zealand
 Murchison 92 Tairāwhiti Street Murchison 4802, New Zealand
 Motueka 1 Hikurangi Place PO Box 174, Motueka 7143, New Zealand
 Golden Bay 25 Commerce Centre 202 Box 74, Takaka 7142, New Zealand

24 hour assistance

Phone 03 543 6400 Fax 03 543 9521
 Phone 03 523 1013 Fax 03 523 1017
 Phone 03 528 2012 Fax 03 528 9757
 Phone 03 525 0600 Fax 03 525 0977



Compliance and Electrical Safety Certificate



Unique ID: J4350

This form has been designed to be used by licensed electrical workers to certify low voltage installations or part installations that comply with Part 2 of AS/NZS 3000 and are safe to be connected to a 230V RMS and multiple earth neutral (MEN) system of electrical supply.

Location of installation

Address: 31 Pinetree Way Motueka 7120

Customer Information

Name: T Evans & S McLeod

Postal Address: P O Box 514 Motueka 7120

Phone & email: 021 1183643

Electrical Worker Information

Name: Guy Johnston

Registration/Practising Licence No: E 254326

Organisation: MR Electrical

Telephone: 021 507 135 (MR Electrical)

Email: office@mr-electrical.co.nz

Name of person (s) being supervised: Tim Hart

Work Details

The work is (circle): additions | alterations | new work

The prescribed electrical work is: * High risk * General * Low risk * The homeowner has undertaken part of the electrical installation work.
(Please tick (✓) as appropriate)

Indicate the number of each item:

Installed or altered:

Other work?

Tick (✓) if work includes:

Number of lighting outlets: 40 New house 54 off * MainsNumber of socket outlets: 37 including sub boards * MEN switch board closest to point to point of supplyNumber of ranges: ----- in Sheeps * Main Earthing SystemNumber of water heaters: 1

Certification of Work

I certify that the completed prescribed electrical work to which this certificate applies, has been done lawfully and safely and the information in the certificate is correct in that the installation, or part of the installation:

- ✓ has been installed in accordance with a certified design
- ✓ has an earthing system that is correctly rated
- ✓ has suppliers Declaration of Conformity
- ✓ has an manufacturer's instructions
- ✓ has been satisfactorily tested in accordance with Electricity (Safety) Regulations 2010

Test Results			
Polarity, independent earthing	✓		
Insulation resistance	✓		
Earth continuity	✓		
Loop	✓		

✓ Is safe to connect. Electronic reference: _____ Electricians Signature: _____ Date: _____

28 February 2020

Electrical Safety Certificate

I certify that the installation, or part of the installation, to which the Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Name: Guy Johnston

Signature: _____

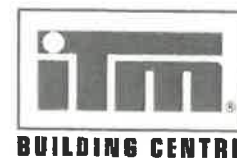
Registration/Practising Licence Number:

E 254326

Date: 28 February 2020

Memorandum from licensed building practitioner: Record of building work

Section 88, Building Act 2004



THE BUILDING

Street address: 31 Pineview Way

Suburb: Motueka Valley

Town/City: Motueka

Postcode: 7143

THE PROJECT

Building consent number: 190 480

THE OWNER(S)

Name(s): Sam McLeod & Toni Evans

Mailing address: 31 Pineview Way

Suburb:

PO Box/Private Bag:

Town/City: Motueka

Postcode: 7143

Phone number: 0211103643

Email address: themotlot@gmail.com

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

PRIMARY STRUCTURE

Work that is restricted building work	Description of restricted building work	Carried out or supervised
Tick <input checked="" type="checkbox"/>	If necessary, describe the restricted building work	Tick <input checked="" type="checkbox"/> whether you carried out the work or supervised someone else.
Foundations and subfloor framing <input checked="" type="radio"/>	Timber floor on piles converted into ground	<input checked="" type="radio"/> Carried out <input type="radio"/> Supervised
Walls <input checked="" type="radio"/>	Pre-cut Frames	<input checked="" type="radio"/> Carried out <input type="radio"/> Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS CONT'D

Wall cladding or wall cladding system <input checked="" type="checkbox"/>	<i>Coloursol vertical Direct fixed breather roofing</i>	<input type="radio"/> Carried out <input type="radio"/> Supervised
Waterproofing <input type="checkbox"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised
Other <input type="checkbox"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised

ISSUED BY

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

Name: <i>Jess Roborgh</i>	LBP number: <i>123 351</i>
Class(es) licensed in: <i>Carpentry</i>	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below):	
Street address/Registered office: <i>737 Main Road Riwaka</i>	
Suburb:	Town/City: <i>Motueka</i>
PO Box/Private Bag:	Postcode:
Phone number: <i>021 101 5882</i>	Mobile: <i>021 101 5882</i>
After hours:	Fax:
Email address: <i>jessroborgh@gmail.com</i>	Website:

DECLARATION

I *Jess Roborgh* carried out or supervised the restricted building work recorded on this form.

Signature: *J Roborgh*

Date: *18.02.2020*

PRIMARY STRUCTURE CONT'D

Roof	<input checked="" type="radio"/>	Trusses and rafters	<input checked="" type="radio"/> Carried out <input type="radio"/> Supervised
Columns and beams	<input type="radio"/>	Laminated Beam x 1	<input checked="" type="radio"/> Carried out <input type="radio"/> Supervised
Bracing	<input checked="" type="radio"/>	Ply and Gibs bracing	<input checked="" type="radio"/> Carried out <input type="radio"/> Supervised
Other	<input type="radio"/>		<input type="radio"/> Carried out <input type="radio"/> Supervised

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

EXTERNAL MOISTURE MANAGEMENT SYSTEMS

Damp proofing	<input checked="" type="checkbox"/>	Low steel roof by Freeman Roofing	<input checked="" type="radio"/> Carried out <input checked="" type="radio"/> Supervised
Roof cladding or roof cladding system	<input checked="" type="checkbox"/>	Colour steel roof by Freeman Roofing	<input type="radio"/> Carried out <input type="radio"/> Supervised
Ventilation system (for example, subfloor or cavity)	<input type="radio"/>	Colour steel vertical Duct fixed over plywood	<input checked="" type="radio"/> Carried out <input type="radio"/> Supervised

ENDURA™



Residential Warranty and Maintenance Requirements

SUPPLY DATE: NOVEMBER 2019

PROPERTY OWNER	Placemakers Motueka - McLeod House
SITE ADDRESS	31 Pineview Way, Motueka, New Zealand
SITE ENVIRONMENT	Moderate
BUILDING TYPE	Residential
ROLLFORMER	Freeman Roofing

WARRANTY THAT PRODUCT:	ROOFING	WALL CLADDING	GUTTERS/DOWNPipes	FASCIA	FLASHINGS
Paint will not flake, peel or excessively fade	18 Years	15 Years	-	-	-
Will not perforate through corrosion	30 Years	15 Years	-	-	-

The product manufactured from **COLORSTEEL® Endura®** is subject to normal wear and tear, which may include uniform fading, chalking and dirt collection. Minor white corrosion, which may appear at unwashed tension bends or cut edges, is a natural weathering phenomenon of **COLORSTEEL® Endura®** and does not constitute a failure of the coating system. Testing to determine coating performance will be in accordance with the methods described in Australian Standard AS1580.

This warranty is issued by New Zealand Steel Limited and is subject to the following terms and conditions:

(Note: all New Zealand Steel literature referred to in this warranty is that which is current at the time of installation and is available from the rollformer or www.colorsteel.co.nz)

1. The maintenance programme specified on the reverse **BEING STRICTLY ADHERED TO and documented.**
2. The warranty periods stated above start from the date the material is supplied to site.
3. The installed pitch of the roof is equal to or greater than 3°, or the minimum recommended for the profile, whichever is greater.
4. The product is only used in the environments and applications as recommended in the *Environmental Categories and Product Maintenance Recommendations* brochure (or on-line *Guidelines for Use*).
5. The product is designed, formed, stored, handled and installed in accordance with recommendations given in *Specifiers and Builders Guide* (on-line *Guidelines for Use*), *Information Bulletins* and *NZ Metal Roof and Wall Cladding Code of Practice*.
6. This warranty covers the **COLORSTEEL® Endura®** material only and no accessories supplied which include, without limitation, fasteners, soft edge and building wrap.
7. All warranties, conditions, liabilities and obligations other than those specified in this warranty are excluded to the fullest extent allowed in law. In particular, where the product is supplied for the purpose of business, the guarantees contained in the Consumer Guarantees Act 1993 do not apply.
8. Failure of the material or the coating partially or wholly due to one or more of the following causes is not covered by this warranty:
 - Physical damage during or after installation, including scratching, contact with other metal items, incorrect installation of external objects such as air-conditioning units, PV/Solar energy systems, and failure to remove swarf.
 - Contact with soil, ash, fertilizer, moisture retaining substances, or sunscreen.

- Contact with or runoff from lead or copper and other dissimilar metals, chemical agents, green or wet timber or treated timber.
- Water entrapment or ponding for any reason.
- Mechanical damage, chemical attack, corrosion or other damage sustained during transport, handling, storage, installation or subsequent to installation.
- Attack from chemical or other agents, fumes, solids or liquids other than direct rain or run-off falling onto the product under warranty.
- Application of post paint treatments or systems.
- Failure to install, use and maintain the product in accordance with NZ Steel's guidelines and applicable industry standards.
- Underside corrosion as a result of high humidity, condensation or pollution generated within a building.
- Failure to replace corroded fasteners, or use of incorrect fasteners.
- Corrosion arising from lapped areas of end-lapped sheets.
- The product having been inappropriately stored prior to installation.
- Causes beyond the control of New Zealand Steel or the roofing manufacturer, including earthquakes, fires, cyclones, tornadoes, storms, hurricanes, lightning, hail, volcanic activity and other similar extreme "Acts of God".
- Actions by other persons.

If **COLORSTEEL® Endura®** pre-painted steel has failed to perform as warranted, then a claim, in writing, specifying in what respect the **COLORSTEEL® Endura®** has failed to perform, must be made within the applicable warranty period, to New Zealand Steel who will at its sole option repair or replace (including labour) the affected material or provide a refund equal to the cash value based on New Zealand Steel's estimate of the cost of the then current New Zealand Steel equivalent product. All claims must be accompanied by this original warranty document. A new warranty will be issued to cover the balance of the original warranty offer for both the paint coating and perforation protection where repair or replacement is made, this period is not extended in case of replacement. Neither the roofing manufacturer named below nor New Zealand Steel will be liable for any consequential loss or damage except as may be required under any mandatory statutory provisions. Nothing in this warranty is intended to exclude or limit any rights consumers may have under the Consumer Guarantees Act 1993.

New Zealand Steel and/or the roofing manufacturer reserve the right to inspect a building prior to issuing of the warranty and/or to inspect and conduct tests as necessary at any time after a claim is made under this warranty and accordingly have access to the property.



For more information call 0800 697 833, visit www.colorsteel.co.nz, mail us at Private Bag 92121, Auckland 1142, or email us at info@colorsteel.co.nz



PRODUCT USAGES

Roofing with a 5 Rib profile and a pitch of 6 degrees

- Paint will not flake, peel or excessively fade for 18 years
- Will not perforate through corrosion for 30 years

Coil References: P655247: Flax Pod, 0.4mm

Wall Cladding with a Corrugate profile

- Paint will not flake, peel or excessively fade for 15 years
- Will not perforate through corrosion for 15 years

Coil References: P655219: Flax Pod, 0.4mm - P660586: Flax Pod, 0.4mm

SIGNATURES

Installed by Freeman Roofing.

This Warranty is issued by (the manufacturer): Freeman Roofing

Signed: _____ Position: Coil Purchaser Date: Jan '20

MAINTENANCE PROGRAMME

All roofing and cladding products are subject to the cumulative effects of weather, dust and other deposits. Normal rain-washing will remove accumulated atmospheric contaminants from roofs. Gutters must be regularly inspected to remove debris, which may cause ponding.

ENVIRONMENT	MODERATE ISO CATEGORY 3	SEVERE ISO CATEGORY 4	VERY SEVERE ISO CATEGORY 5
Roof	Rain washing	Rain washing	Not warranted
Wall Cladding	Manual washing every year	Not warranted	Not warranted
Gutters, fascias and unwashed or high risk areas	Manual washing every 6 months	Manual washing every 3 months	Not warranted

Environment zones are described in detail in the *Environmental Categories and Product Maintenance Recommendations* brochure. If your building is within 1000 metres of the sea or in an area with a corrosive environment you should check these Categories.

Regular washing of **COLORSTEEL® Endura®** products increases the durability by reducing attack from airborne salts and pollutants. **COLORSTEEL® Endura®** surfaces should be manually washed with water and a sponge or a soft nylon-bristled brush. For large areas it may be appropriate to use water blasting at pressures up to 20 MPa. Regular inspection for, and removal of lichen should be carried out as per Information Bulletin - *Removal of Lichen*.

Note: high risk areas include areas around flues, chimneys and extractor vents, under television aerials and trees and sites prone to mould, lichen, bird droppings or debris. External objects such as walkways and platforms, air conditioning units, solar hot water and solar photovoltaic systems, all have the potential to create areas on the roof that are sheltered from the rain (unwashed areas) and, as such, additional maintenance of the roof area affected is required as highlighted in the above table.

COLORSTEEL® and **COLORSTEEL® Endura®** are registered trademarks of New Zealand Steel Limited.



For more information call 0800 697 833, visit www.colorsteel.co.nz,
mail us at Private Bag 92121, Auckland 1142, or email us at info@colorsteel.co.nz



Form 7

Code compliance certificate

Section 95, Building Act 2004

The building

Street address of building: 31 Pineview Way, Motueka Valley
 Legal description of land where building is located: Lot 10 DP519728
 Building name: N/A
 Location of building within site/block number: 31 Pineview Way, Motueka Valley
 Level/unit number: N/A
 Current, lawfully established, use: 2.0 Housing:
 2.0.2 Detached Dwelling
 Year first constructed: 2020

The owner

Name of owner: Sam Mcleod & Toni Evans
 Contact person: Sam & Toni
 Mailing address: PO Box 316, Motueka
 Street address/registered office: N/A
 Phone number: Landline: N/A Mobile: 0211103643
 Daytime: Landline: N/A Mobile: 0211103643
 After hours: Landline: N/A Mobile: 0211103643
 Facsimile number: No information provided
 Email address: themotlot@gmail.com
 Website: No information provided
 First point of contact for communications with the council/building consent authority:
 Greg Benjamin; Mailing Address: 30 Citrus Lane
 Enner Glynn
 Nelson 7011; Mobile: 0211449153; Email: gregsdsgn@outlook.com

Building work

Building consent number: BC190480
 Description: Construct new dwelling and detached sleepout
 Issued by: Tasman District Council

Code compliance

The building consent authority named below is satisfied, on reasonable grounds, that -
 the building work complies with the building consent.

Richmond Grant

Position: Building Inspector

On behalf of: Tasman District Council

Date: 23 March 2020

Project ID: 190480
Date Received: 2019-04-29 08:30:09
Sender: gregsdesign@outlook.com
Checked By: Julie Panes
Accepted By: Sally Blain
Subject:

Information Received Via Email: Re: 190480.1 Request For Further Information - Vetting - 31 Pineview Way, Motueka Valley

Message:

Good morning Sally,

I have attached the Plans, with smoke detectors shown on page 6 & 12 and the specifications with a contents page.

Thanks

Greg

From: Tasman District Council <190480@tasman.abcs.co.nz>

Sent: Friday, 26 April 2019 3:59 PM

To: gregsdesign@outlook.com; themotlot@gmail.com

Subject: 190480.1 Request For Further Information - Vetting - 31 Pineview Way, Motueka Valley

Dear Sir/Madam,

Thank you for your building consent application. We have reviewed it for completeness and we need some more information before we can formally accept your application. We have detailed the information we need in the attached letter.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- 1 A covering note outlining the response to each item
- 2 Files that are in PDF format and to scale
- 3 Only provide information specifically relating to this project

Regards

Sally Blain

Administration Officer - Building Assurance

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

ATTACHMENTS:

- 31 Pineview Way-Plans.pdf

- 31 Pineview Way-Specifications.pdf



Email #6492: BC190480

Project ID: 190480
Date Received: 2019-05-02 07:50:03
Sender: gregsdesign@outlook.com
Checked By: Julie Panes
Accepted By: Julie Panes
Subject:

Information Received Via Email: Re: 190480.1 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Message:

Hi Julie

Consent notice attached.

Thanks

Greg

From: Tasman District Council <190480@tasman.abcs.co.nz>

Sent: Wednesday, 1 May 2019 10:12 AM

To: gregsdesign@outlook.com; themotlot@gmail.com

Subject: 190480.1 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Dear Greg,

Reference Number: BC190480

Project Location: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Your PIM / Building Consent application has been processed, the attached letter details information which is required to be provided to demonstrate that the proposed work will comply with the NZ Building Code / Resource Management / District Scheme provisions.

So that your information gets to us as promptly as possible, please:

- ensure you reply directly to this email;
- only provide information specifically relating to this project;
- all attachments must be saved in PDF format;

By doing this you will keep your project moving as the information will be delivered directly to the processor - thank you for helping us to help you!

Julie Panes

Consents Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

ATTACHMENTS:

- Consent notice.pdf

Project ID: 190480
Date Received: 2019-05-03 08:25:02
Sender: gregsdesign@outlook.com
Checked By: Julie Hope
Accepted By: Julie Panes
Subject:

Information Received Via Email: Re: 190480.2 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Message:

Hi Julie,

Please find an amended site plan attached.

Thanks

Greg Benjamin

From: Tasman District Council <190480@tasman.abcs.co.nz>

Sent: Thursday, 2 May 2019 2:44 PM

To: gregsdesign@outlook.com; themotlot@gmail.com

Subject: 190480.2 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Dear Greg,

Reference Number: BC190480

Project Location: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Your PIM / Building Consent application has been processed, the attached letter details information which is required to be provided to demonstrate that the proposed work will comply with the NZ Building Code / Resource Management / District Scheme provisions.

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Julie Panes

Consents Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

ATTACHMENTS:

- B-SITE-2r1.pdf



Email #6580: BC190480

Project ID: 190480
Date Received: 2019-05-03 13:50:04
Sender: gregsdesign@outlook.com
Checked By: Julie Hope
Accepted By: Julie Panes
Subject:
 Information Received Via Email: Re: BC190480: 31 Pineview Way, Motueka Valley

Message:

Good afternoon Julie,

I have attached an amended sheet 2, with a the addition of a note regarding the water tanks being buried and highlighting the external colours and materials.

Thanks

Greg Benjamin

From: Tasman District Council <190480@tasman.abcs.co.nz>
 Sent: Friday, 3 May 2019 11:50 AM
 To: gregsdesign@outlook.com
 Subject: BC190480: 31 Pineview Way, Motueka Valley

Hi Greg

Thank you for the Landscape plan. Still waiting for external colours and tanks to be shown as buried or screened.

Regards

Julie

Julie Panes
 Consents Officer
 Tasman District Council
 189 Queen Street, Richmond 7020
 P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

=====

Hi Julie,

Please find an amended site plan attached.

Thanks

Greg Benjamin

From: Tasman District Council

Sent: Thursday, 2 May 2019 2:44 PM

To: gregsddesign@outlook.com; themotlot@gmail.com

Subject: 190480.2 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Dear Greg,

Reference Number: BC190480

Project Location: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Your PIM / Building Consent application has been processed, the attached letter details information which is required to be provided to demonstrate that the proposed work will comply with the NZ Building Code / Resource Management / District Scheme provisions.

So that your information gets to us as promptly as possible, please:

- ensure you reply directly to this email;
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By doing this you will keep your project moving as the information will be delivered directly to the processor - thank you for helping us to help you!

Julie Panes

Consents Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

DISCLAIMER

This message is for the designated recipient(s) only, and may contain confidential and/or privileged information. If you have received it in error, please delete it and advise the sender immediately. You should not copy or use it for any other purpose, nor disclose its contents to any other person.

Designated Recipient(s): gregsddesign@outlook.com

Sent From: AlphaOne Building Consent System

Sent Date: 3 May 2019 11:50:44 am - Friday

ATTACHMENTS:

- B-SITE-2r1a.pdf



Email #6590: BC190480

Project ID: 190480
Date Received: 2019-05-03 16:00:05
Sender: kiwipioneer@gmail.com
Checked By: Julie Hope
Accepted By: Robert Cox
Subject:

Information Received Via Email: Signed AES calcualtor - 1985 Motueka Vly Hwy

Message:

To Whom it May Concern

Please find the signed PS2 for the proposed wastewater design at the above address.

All the best

Mike Copeland

Kiwi Pioneer Co Ltd

Ecological Wastewater Design

98 Thorp St., Motueka

Ph. 021 654 931

www.kiwipioneer.co.nz

ATTACHMENTS:

- J1036 Signed Calc and Design Motueka Valley Highway Armstrong SVU 190503.pdf

Project ID: 190480
Date Received: 2019-05-10 19:45:03
Sender: kiwipioneer@gmail.com
Checked By: Dawn Rosie
Accepted By: Robert Cox
Subject: Information Received Via Email: RFI for BC190480
Message:

To Whom it May Concern

Please see answers to RFI for BC190480 below in red.

G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson

Plans: The plans provided with this consent clearly show a 4 bedroom dwelling and Sleep out, however, the first paragraph in the report describes a 3 bedroom dwelling, 1 bedroom Unit and a Sleepout, please align the written report description with the plans. Please see the amended design attached (v.4) now for a proposed four bedroom dwelling and 1 bedroom sleepout.

System Dispersal: Please show how the Cross Section drawing supplied details coverage of 150mm for the inlet pipe to the AES system complies with Clause G13 Figure 7 drawing B which requires a minimum cover of 375mm. Please see amended installation note for drainage pipes requesting all pipework comply with G13 Foul water: Appendix B 5. Pg16.

All the best

Mike Copeland

Kiwi Pioneer Co Ltd

Ecological Wastewater Design

98 Thorp St., Motueka

Ph. 021 654 931

www.kiwipioneer.co.nz

ATTACHMENTS:

- 190510_Wastewater Design Proposal_Evans_v.4.pdf



Email #6912: BC190480

Project ID: 190480
Date Received: 2019-05-10 19:50:01
Sender: gregsdesign@outlook.com
Checked By: Brendon Guyton
Accepted By: Robert Cox
Subject:

Information Received Via Email: Re: RFI for BC190480

Message:

Thanks Mike

Greg

Get Outlook for Android<<https://aka.ms/ghei36>>

From: Mike Copeland <kiwipioneer@gmail.com>
 Sent: Friday, May 10, 2019 7:43:31 PM
 To: 190480@tasman.abcs.co.nz
 Cc: Greg Benjamin; Toni Evans
 Subject: RFI for BC190480

To Whom it May Concern

Please see answers to RFI for BC190480 below in red.

G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson

Plans: The plans provided with this consent clearly show a 4 bedroom dwelling and Sleep out, however, the first paragraph in the report describes a 3 bedroom dwelling, 1 bedroom Unit and a Sleepout, please align the written report description with the plans. Please see the amended design attached (v.4) now for a proposed four bedroom dwelling and 1 bedroom sleepout.

System Dispersal: Please show how the Cross Section drawing supplied details coverage of 150mm for the inlet pipe to the AES system complies with Clause G13 Figure 7 drawing B which requires a minimum cover of 375mm. Please see amended installation note for drainage pipes requesting all pipework comply with G13 Foul water: Appendix B 5. Pg16.

All the best

Mike Copeland

Kiwi Pioneer Co Ltd

Ecological Wastewater Design

98 Thorp St., Motueka

Ph. 021 654 931

www.kiwipioneer.co.nz<<http://www.kiwipioneer.co.nz>>

[<https://docs.google.com/uc?export=download&id=2f8vZJ0510iRWpsaURWWmZFbnM&rev=2f8vZJ0510iUEtESzBiK1FnZUFvZTINckg2SIJXeDViakVzPQ>]

Project ID: 190480
Date Received: 2019-05-29 17:35:09
Sender: gregsdesign@outlook.com
Checked By: Dawn Rosie
Accepted By: Robyn Edwards
Subject:

Information Received Via Email: Re: BC190480.2 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Hi Robyn,

I have attached the bracing calculations and DesignIT calcs.

Please let me know if this is readable or I may need a normal email address to send them to. I believe they were not corrupt in the copy sent in the specifications.

Thanks

Greg Benjamin

From: Tasman District Council <190480@tasman.abcs.co.nz>

Sent: Wednesday, 29 May 2019 3:41 PM

To: gregsdesign@outlook.com

Subject: BC190480.2 Request For Further Information - 31 Pineview Way, Motueka Valley

Dear Greg,

I am currently working on this consent but require the attached information to continue processing.

Please note: I am assessing other areas and will get you a further RFI if required asap.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes
(e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Regards,

Robyn

Robyn Edwards

Building Technical Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

ATTACHMENTS:

- C-Bracing Details.pdf

- E-Design IT.pdf



Email #7756: BC190480

Project ID: 190480
Date Received: 2019-05-29 19:05:02
Sender: gregsdesign@outlook.com
Checked By: Dawn Rosie
Accepted By: Robyn Edwards
Subject:

Information Received Via Email: Re: BC190480.2 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Hi Robyn,

I have attached a response to your RFI.
 Please call to discuss if needed.

Thanks
 Greg

From: Tasman District Council <190480@tasman.abcs.co.nz>
 Sent: Wednesday, 29 May 2019 3:41 PM
 To: gregsdesign@outlook.com
 Subject: BC190480.2 Request For Further Information - 31 Pineview Way, Motueka Valley

Dear Greg,

I am currently working on this consent but require the attached information to continue processing.
 Please note: I am assessing other areas and will get you a further RFI if required asap.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes
 (e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Regards,
 Robyn

Robyn Edwards

Building Technical Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

ATTACHMENTS:

- Reply to building RFI.pdf

Project ID: 190480
Date Received: 2019-06-10 17:45:03
Sender: gregsdesign@outlook.com
Checked By: Brendon Guyton
Accepted By: Brendon Guyton
Subject:

Information Received Via Email: Re: BC190480.3 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Hi Brendon,

Please find attached amended files in response to your request for further information.

Thanks

Greg Benjamin

From: Tasman District Council <190480@tasman.abcs.co.nz>

Sent: Wednesday, 5 June 2019 4:30 PM

To: gregsdesign@outlook.com; themotlot@gmail.com

Subject: BC190480.3 Request For Further Information - 31 Pineview Way, Motueka Valley

Dear Sir/Madam,

Thank you for your building consent application. We have reviewed it and we need some more information to make sure the proposed work meets the requirements of the Building Act 2004. We have detailed the information we need in the attached letter.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes
(e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Regards,

Brendon Guyton

Building Technical Officer - Contractor

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

ATTACHMENTS:

- 31 Pineview-Amended Plans.pdf

- 31 Pineview-Amended specification.pdf

- Reply to building RFI 2.pdf

Project ID: 190480
Date Received: 2019-06-12 08:20:05
Sender: gregsdesign@outlook.com
Checked By: Brendon Guyton
Accepted By: Brendon Guyton
Subject:

Information Received Via Email: Re: BC190480.4 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Good morning,

Please find attached a response to a request for further information.

Thanks

Greg Benjamin

From: Tasman District Council <190480@tasman.abcs.co.nz>

Sent: Tuesday, 11 June 2019 2:23 PM

To: gregsdesign@outlook.com; themotlot@gmail.com

Subject: BC190480.4 Request For Further Information - 31 Pineview Way, Motueka Valley

Dear Sir/Madam,

Thank you for your building consent application. We have reviewed it and we need some more information to make sure the proposed work meets the requirements of the Building Act 2004. We have detailed the information we need in the attached letter.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes
(e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Regards,

Brendon Guyton

Building Technical Officer - Contractor

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

ATTACHMENTS:

- C-DRAINAGE PLAN-3-R2.pdf

- F-Prolam Beam.pdf

- Reply to RFI Building 2.pdf

Project ID: 190480
Date Received: 2019-06-14 07:55:01
Sender: gregsdesign@outlook.com
Checked By: Jenna Wolter
Accepted By: Jenna Wolter
Subject:
 Information Received Via Email: Re: BC190480: 31 Pineview Way, Motueka Valley

Message:

Hi Jenna,

I have amended sheet 3 to alert contractors of the requirements of the consent notice. I have briefly described what is required and calculated the detention storage required.

The tank construction details have also been included in the consent documentation. The tanks were set up during subdivision works but will need the snorkel to be set up for the house specific roof area and associated required detention.

Kind regards
 Greg Benjamin

From: Tasman District Council <190480@tasman.abcs.co.nz>
 Sent: Thursday, 13 June 2019 4:16 PM
 To: gregsdesign@outlook.com
 Cc: themotlot@gmail.com
 Subject: BC190480: 31 Pineview Way, Motueka Valley

Hi Greg,

Consent Notice (h) and (k) attached to the title of this property require that stormwater detention is provided within the two water tanks on site. Can you please confirm whether the required 25mm orifice is provided in the second tank - at a level that provides the appropriate detention volume as specified in Consent Notice (h)? Could you then specific this on the drainage plan, along with details of the tank overflow outlet point.

Kind regards,

Jenna Wolter
 Consent Planner - Natural Resources
 Tasman District Council
 189 Queen Street, Richmond 7020
 P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

DISCLAIMER

This message is for the designated recipient(s) only, and may contain confidential and/or privileged information. If you have received it in error, please delete it and advise the sender immediately. You should not copy or use it for any other purpose, nor disclose its contents to any other person.

Designated Recipient(s): gregsdesign@outlook.com, themotlot@gmail.com

Sent From: AlphaOne Building Consent System

Sent Date: 13 June 2019 16:16:08 pm - Thursday

ATTACHMENTS:

- C-DRAINAGE PLAN-3-R3.pdf

Project ID: 190480
Date Received: 2019-06-21 12:55:07
Sender: themotlot@gmail.com
Checked By: Courtenay Lynn
Accepted By: Sally Blain
Subject:

Information Received Via Email: Building consent issue please

Message:

Hi there - we received invoice for our consent on Monday and I paid
Wednesday morning in two payments - one online banking and one debit card.
Was just wondering if I could please have the consent and consented plans
etc. emailed today as I would like to meet with our builder in the weekend
- Thankyou so much if you can. Toni Evans and Sam McLeod 0211103643

--

Toni Evans & Sam McLeod
Dreamteam Ltd.
0211103643

--

Toni Evans & Sam McLeod
Dreamteam Ltd.
0211103643

Project ID: 190480
Date Received: 2019-06-25 08:40:07
Sender: themotlot@gmail.com
Checked By: Debbie Yarrall
Accepted By: Debbie Yarrall
Subject:

Information Received Via Email: Re: BC190480: 31 Pineview Way, Motueka Valley

Message:

Hi there - that's my terrible arithmetic skills how embarrassing. I popped the extra in so hopefully all good now? Toni

On Fri, 21 Jun 2019 at 4:15 PM Tasman District Council <190480@tasman.abcs.co.nz> wrote:

> Good afternoon
 >
 > Unfortunately, you have underpaid by \$1000. The invoice total was for
 > \$4452.80 and I can only see a payment for \$1280.00 and one for \$2172.80,
 > leaving \$1000 owing.
 >
 > Once you have made this payment we can issue the building consent. You can
 > still meet with your builder and use the plans you submitted to discuss
 > your project and can forward the approved plans to your builder once they
 > are issued.
 >
 > Kind regards
 > Sally
 >
 >
 >
 > Sally Blain
 > Building Support Officer - Building Assurance
 > Tasman District Council
 > 189 Queen Street
 > <<https://www.google.com/maps/search/189+Queen+Street?entryail&source=g>>,
 > Richmond 7020
 > P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>
 >
 >
 >

>

> =====>

> Hi there - we received invoice for our consent on Monday and I paid

> Wednesday morning in two payments - one online banking and one debit card.

> Was just wondering if I could please have the consent and consented plans

> etc. emailed today as I would like to meet with our builder in the weekend

> - Thankyou so much if you can. Toni Evans and Sam McLeod 0211103643

> --

> Toni Evans & Sam McLeod

> Dreamteam Ltd.

> 0211103643

> --

> Toni Evans & Sam McLeod

> Dreamteam Ltd.

> 0211103643

>

> -----

>

> -----

> *DISCLAIMER*

> This message is for the designated recipient(s) only, and may contain

> confidential and/or privileged information. If you have received it in

> error, please delete it and advise the sender immediately. You should not

> copy or use it for any other purpose, nor disclose its contents to any

> other person.

>

> Designated Recipient(s): themotlot@gmail.com

> Sent From: AlphaOne Building Consent System

> Sent Date: 21 June 2019 16:05:06 pm - Friday

--

Toni Evans & Sam McLeod

Dreamteam Ltd.

0211103643



Email #17415: BC190480

Project ID: 190480
Date Received: 2019-12-16 15:00:13
Sender: admin.tasmanbay@thinkwater.co.nz
Checked By: Debbie Yarrall
Accepted By: Debbie Yarrall
Subject:

Information Received Via Email: pressure test - 31 Pineview Way

Message:

Hi

Please find attached the pressure test for 31 Pineview Way, Motueka

Regards

Sheryl Riordan
 Office Administrator

Think Water Tasman Bay
 401 High Street, Motueka 7120
 P 03 528 8888 | C 0275644233
 E admin.tasmanbay@thinkwater.co.nz<mailto: admin.tasmanbay@thinkwater.co.nz> | W
 www.thinkwatertasmanbay.co.nz<http://www.thinkwatertasmanbay.co.nz/>

[Description: Description: TW - Email Signature 05]

[cid:image004.jpg@01D5B421.1CFEAAB0]<https://issuu.com/thinkwater/docs/2019_summer_catalogue_nz_digital>

REJECTED ATTACHMENT(S):

Note: The listed file(s) below were rejected because they were not in PDF format.

- image001.jpg
- image004.jpg

ATTACHMENTS:

- BC 190480 - 31 PINEVIEW WAY.pdf



Email #21395: BC190480

Project ID: 190480
Date Received: 2020-03-17 10:50:07
Sender: julie.hope@tasman.govt.nz
Checked By: Courtenay Lynn
Accepted By: Casey Port
Subject:
 Information Received Via Email: CCC Application & Certificates

Message:

Hi

Please find attached CCC application and certificates. The customer said she had already booked a final inspection for Monday 23rd March but would like it sooner if possible. Could you please check this appointment is correct.

Many Thanks

Julie

Julie Hope

Customer Services Officer

DDI 03 528 2022 | Julie.Hope@tasman.govt.nz<mailto:Julie.Hope@tasman.govt.nz>

PO Box 123, Motueka 7143, NZ

[Logo]<<https://www.tasman.govt.nz>>

[Facebook]<<https://www.facebook.com/tasmandistrictcouncil>> [Twitter] <<http://www.twitter.com/tasmandc>>

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REJECTED ATTACHMENT(S):

Note: The listed file(s) below were rejected because they were not in PDF format.

- imageb9010e.JPG
- imageb0525b.PNG
- image5d900c.PNG

ATTACHMENTS:

- SMFD-Motueka20031711040.pdf



Email #21711: BC190480

Project ID: 190480
Date Received: 2020-03-23 14:30:02
Sender: admin.tasmanbay@thinkwater.co.nz
Checked By: Courtenay Lynn
Accepted By: Courtenay Lynn
Subject: Information Received Via Email: Sprinkler system
Message:

HI

NZS 4517:2010 for sprinklers as discussed

Regards

Mike Inch

Think Water Tasman Bay

ATTACHMENTS:

- CCE_000110.pdf

**Email #27422: BC190480**

Project ID: 190480
Date Sent: 2019-04-26 15:59:17
Recipient: gregsdesign@outlook.com, themotlot@gmail.com
Sender: Sally Blain
Subject:
190480.1 Request For Further Information - Vetting - 31 Pineview Way, Motueka Valley

Message:

Dear Sir/Madam,

Thank you for your building consent application. We have reviewed it for completeness and we need some more information before we can formally accept your application. We have detailed the information we need in the attached letter.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- 1 A covering note outlining the response to each item
- 2 Files that are in PDF format and to scale
- 3 Only provide information specifically relating to this project

Regards

Sally Blain

Administration Officer - Building Assurance

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #27453: BC190480

Project ID: 190480
Date Sent: 2019-04-29 08:30:11
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System
Subject:

RE: Re: 190480.1 Request For Further Information - Vetting - 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- 31 Pineview Way-Plans.pdf (2.93MB)
- 31 Pineview Way-Specifications.pdf (19.89MB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #27542: BC190480

Project ID: 190480
Date Sent: 2019-04-29 12:55:20
Recipient: sally.blain@tasman.govt.nz
Sender: Sally Blain
Subject: BC190480: A new email has been allocated to you
Message:

Hello Sally Blain,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System

**Email #27555: BC190480**

Project ID: 190480
Date Sent: 2019-04-29 14:00:07
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System
Subject: Building Consent Application Accepted
Message:

Dear Sir/Madam,

Your application for Building Consent only with reference code BC190480 has passed vetting and has been accepted by Tasman District Council for processing.

If you entered an electronic application you can track its progress on the customer portal
<https://consents-topofthesouth.abcs.co.nz/>.

Please pay your deposit using the consent number listed above as your reference. For payment methods please see our website <https://www.tasman.govt.nz/do-it-online/payment/>

For all applications, the deposit is \$550.00, with the following exceptions:

For applications for PIM onlys, the deposit is \$300.00

For applications for woodburners only, the deposit is \$350.00

For applications for a Certificate of Acceptance, the deposit is \$800.00

For applications for amendments to current Building Consents, the deposit is \$250.00

If your total fee at the end of the process is less than the deposit you have paid, a refund will be processed.

The deposit should be paid directly to the following bank account:

Name: Tasman District Council

Bank: ASB Bank, Richmond

Account: 12-3193-0002048-03 (or -003 if your bank requires a three digit suffix)

Reference: Please use your consent number listed above \"BC_ _ _ _ _\".

Without this reference we will not be able to identify which application you are paying for. Alternatively, you can make the payment at any Tasman District Council Office.

Regards,

Tasman District Council

**Email #27719: BC190480**

Project ID: 190480
Date Sent: 2019-04-30 09:44:15
Recipient: robyn.edwards@tasman.govt.nz
Sender: Helen Lawton
Subject: BC190480: A new job for you
Message:

Hello Robyn Edwards,

BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480>

— AlphaOne System

**Email #27764: BC190480**

Project ID: 190480
Date Sent: 2019-04-30 12:05:03
Recipient: enviroww.cx@gmail.com
Sender: Robert Cox
Subject: Specialist Input Requested - 30 Apr 2019
Message:

Hello Robert Cox!

Specialist input has been requested on the following:

BC Number: BC190480

Building: Main Building

Question(s):

G13 / VM4 Foul Water: Onsite Wastewater Disposal - Tasman Nelson: Does the proposal demonstrate compliance with G13.2 and G13/VM 4 Foul Water: Onsite Disposal? Note: VM 4 provides for onsite disposal designs for the treatment of foul water for flow rates up to a maximum of 14,000 liters/ week from a population equivalent of up to 10 persons (A dwelling unit accommodating more than 10 persons is subject to Specific Engineer Design and is outside of VM 4). {REFERENCE_NOTES}

Notes: (no comments)

Click the link to log in to your Dashboard: <http://tasman.abcs.co.nz/dashboard/>

Generated by:

AlphaOne Building Consent System

www.abcs.co.nz | www.alphaonebuildingconsent.com

Date & Time: 30 April 2019, 12:05 pm - Tuesday | Signature Hash: c7a3cfc89139bd19cbc852e6bd504553155c553

**Email #27891: BC190480**

Project ID: 190480
Date Sent: 2019-05-01 10:12:39
Recipient: gregsdesign@outlook.com, themotlot@gmail.com
Sender: Julie Panes
Subject: 190480.1 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Message:

Dear Greg,

Reference Number: BC190480

Project Location: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Your PIM / Building Consent application has been processed, the attached letter details information which is required to be provided to demonstrate that the proposed work will comply with the NZ Building Code / Resource Management / District Scheme provisions.

So that your information gets to us as promptly as possible, please:

- ensure you reply directly to this email;
- only provide information specifically relating to this project;
- all attachments must be saved in PDF format;

By doing this you will keep your project moving as the information will be delivered directly to the processor - thank you for helping us to help you!

Julie Panes

Consents Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #27893: BC190480

Project ID: 190480
Date Sent: 2019-05-01 10:14:30
Recipient: jenna.wolter@tasman.govt.nz
Sender: Julie Panes
Subject: BC190480: A new job for you
Message:

Hello Jenna Wolter,

BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480>

— AlphaOne System

Project ID: 190480
Date Sent: 2019-05-01 11:16:03
Recipient: themotlot@gmail.com, gregsdesign@outlook.com
Sender: Robert Cox

Subject:

190480.1 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Dear Greg,

The RFI attached is solely for the Wastewater Engineer to address, the Building processor may have further questions shortly.

Robert

Thank you for your building consent application. We have reviewed it and we need some more information to make sure the proposed work meets the requirements of the Building Act 2004. We have detailed the information we need in the attached letter.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes
(e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Regards,

Robert Cox

Building Technical Officer - Contractor

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #28089: BC190480

Project ID: 190480
Date Sent: 2019-05-02 07:50:04
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System

Subject:

RE: Re: 190480.1 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- Consent notice.pdf (2.80MB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #28116: BC190480

Project ID: 190480
Date Sent: 2019-05-02 09:12:47
Recipient: pim@tasman.govt.nz
Sender: Sally Blain
Subject: BC190480: A new email has been allocated to you
Message:

Hello Julie Panes,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System



Email #28144: BC190480

Project ID: 190480
Date Sent: 2019-05-02 10:36:06
Recipient: gregsdesign@outlook.com
Sender: Sally Blain

Subject:

BC190480: 31 Pineview Way, Motueka Valley - Correction

Message:

Good morning Greg

Just a confirmation that we have updated Sam's surname and postal address.

Kind regards

Sally

Sally Blain

Administration Officer - Building Assurance

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

**Email #28223: BC190480**

Project ID: 190480
Date Sent: 2019-05-02 14:44:47
Recipient: gregsdesign@outlook.com, themotlot@gmail.com
Sender: Julie Panes
Subject:
190480.2 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Message:

Dear Greg,

Reference Number: BC190480

Project Location: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Your PIM / Building Consent application has been processed, the attached letter details information which is required to be provided to demonstrate that the proposed work will comply with the NZ Building Code / Resource Management / District Scheme provisions.

So that your information gets to us as promptly as possible, please:

- ensure you reply directly to this email;
- only provide information specifically relating to this project;
- all attachments must be saved in PDF format;

By doing this you will keep your project moving as the information will be delivered directly to the processor - thank you for helping us to help you!

Julie Panes

Consents Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #28312: BC190480

Project ID: 190480
Date Sent: 2019-05-03 08:25:08
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System

Subject:

RE: Re: 190480.2 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- B-SITE-2r1.pdf (466.35kB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #28369: BC190480

Project ID: 190480
Date Sent: 2019-05-03 11:30:07
Recipient: pim@tasman.govt.nz
Sender: Sally Blain
Subject: BC190480: A new email has been allocated to you
Message:

Hello Julie Panes,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System



Email #28388: BC190480

Project ID: 190480
Date Sent: 2019-05-03 11:50:46
Recipient: gregsdesign@outlook.com
Sender: Julie Panes
Subject: BC190480: 31 Pineview Way, Motueka Valley
Message:
Hi Greg

Thank you for the Landscape plan. Still waiting for external colours and tanks to be shown as buried or screened.

Regards

Julie

Julie Panes
Consents Officer
Tasman District Council
189 Queen Street, Richmond 7020
P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

=====

Hi Julie,

Please find an amended site plan attached.

Thanks
Greg Benjamin

From: Tasman District Council
Sent: Thursday, 2 May 2019 2:44 PM
To: gregsdesign@outlook.com; themotlot@gmail.com
Subject: 190480.2 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Dear Greg,

Reference Number: BC190480

Project Location: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Your PIM / Building Consent application has been processed, the attached letter details information which is required to be provided to demonstrate that the proposed work will comply with the NZ Building Code / Resource Management / District Scheme provisions.

So that your information gets to us as promptly as possible, please:

- ensure you reply directly to this email;
- only provide information specifically relating to this project;
- all attachments must be saved in PDF format;

By doing this you will keep your project moving as the information will be delivered directly to the processor - thank you for helping us to help you!

Julie Panes

Consents Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #28435: BC190480

Project ID: 190480
Date Sent: 2019-05-03 13:50:05
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System
Subject: RE: Re: BC190480: 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- B-SITE-2r1a.pdf (472.32kB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #28485: BC190480

Project ID: 190480
Date Sent: 2019-05-03 16:00:06
Recipient: kiwipioneer@gmail.com
Sender: AlphaOne System
Subject: RE: Signed AES calculatior - 1985 Motueka Vly Hwy

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- J1036 Signed Calc and Design Motueka Valley Highway Armstrong SVU 190503.pdf (1.04MB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #28572: BC190480

Project ID: 190480
Date Sent: 2019-05-06 11:39:10
Recipient: pim@tasman.govt.nz
Sender: Sarah Abrey
Subject: BC190480: A new email has been allocated to you
Message:

Hello Julie Panes,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System



Email #28580: BC190480

Project ID: 190480
Date Sent: 2019-05-06 11:53:41
Recipient: pim@tasman.govt.nz
Sender: Sarah Abrey
Subject: BC190480: A new email has been allocated to you
Message:

Hello Julie Panes,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System

**Email #28581: BC190480**

Project ID: 190480
Date Sent: 2019-05-06 11:53:42
Recipient: robyn.edwards@tasman.govt.nz
Sender: Sarah Abrey
Subject: BC190480: A new email has been allocated to you
Message:

Hello Robyn Edwards,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System



Email #28611: BC190480

Project ID: 190480
Date Sent: 2019-05-06 13:09:12
Recipient: gregsdesign@outlook.com
Sender: Julie Panes
Subject:
 BC190480: 31 Pineview Way, Motueka Valley. Colour approval
Message:
 Hi Greg

Thank you for the additional information.

Colours approved and accepted

Walls and Roof Resene Flaxpod LRV 7%

Regards

Julie

Julie Panes
 Consents Officer
 Tasman District Council
 189 Queen Street, Richmond 7020
 P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

=====

Good afternoon Julie,

I have attached an amended sheet 2, with a the addition of a note regarding the water tanks being buried and highlighting the external colours and materials.

Thanks
 Greg Benjamin

From: Tasman District Council
 Sent: Friday, 3 May 2019 11:50 AM
 To: gregsdesign@outlook.com

Subject: BC190480: 31 Pineview Way, Motueka Valley

Hi Greg

Thank you for the Landscape plan. Still waiting for external colours and tanks to be shown as buried or screened.

Regards

Julie

Julie Panes

Consents Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

=====

Hi Julie,

Please find an amended site plan attached.

Thanks

Greg Benjamin

From: Tasman District Council

Sent: Thursday, 2 May 2019 2:44 PM

To: gregsdesign@outlook.com; themotlot@gmail.com

Subject: 190480.2 Request For Further Information - RMA - 31 Pineview Way, Motueka Valley

Dear Greg,

Reference Number: BC190480

Project Location: 31 Pineview Way, Motueka Valley

Project Description: Construct new dwelling and detached sleepout

Your PIM / Building Consent application has been processed, the attached letter details information which is required to be provided to demonstrate that the proposed work will comply with the NZ Building Code / Resource Management / District Scheme provisions.

So that your information gets to us as promptly as possible, please:

- ensure you reply directly to this email;
- only provide information specifically relating to this project;
- all attachments must be saved in PDF format;

By doing this you will keep your project moving as the information will be delivered directly to the processor - thank you for helping us to help you!

Julie Panes

Consents Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

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Designated Recipient(s): gregsdesign@outlook.com

Sent From: AlphaOne Building Consent System

Sent Date: 3 May 2019 11:50:44 am - Friday



Email #29653: BC190480

Project ID: 190480
Date Sent: 2019-05-10 19:45:04
Recipient: kiwipioneer@gmail.com
Sender: AlphaOne System
Subject: RE: RFI for BC190480
Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- 190510_Wastewater Design Proposal_Evans_v.4.pdf (2.88MB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #29654: BC190480

Project ID: 190480
Date Sent: 2019-05-10 19:50:03
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System
Subject: RE: Re: RFI for BC190480

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #29698: BC190480

Project ID: 190480
Date Sent: 2019-05-13 09:38:00
Recipient: enviroww.cx@gmail.com
Sender: Sarah Abrey
Subject: BC190480: A new email has been allocated to you
Message:

Hello Robert Cox,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System



Email #29699: BC190480

Project ID: 190480
Date Sent: 2019-05-13 09:38:01
Recipient: robyn.edwards@tasman.govt.nz
Sender: Sarah Abrey
Subject: BC190480: A new email has been allocated to you
Message:

Hello Robyn Edwards,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System



Email #29701: BC190480

Project ID: 190480
Date Sent: 2019-05-13 09:38:27
Recipient: enviroww.cx@gmail.com
Sender: Sarah Abrey
Subject: BC190480: A new email has been allocated to you
Message:

Hello Robert Cox,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System

**Email #32507: BC190480**

Project ID: 190480
Date Sent: 2019-05-29 15:41:55
Recipient: gregsdesign@outlook.com
Sender: Robyn Edwards

Subject:

BC190480.2 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Dear Greg,

I am currently working on this consent but require the attached information to continue processing.

Please note: I am assessing other areas and will get you a further RFI if required asap.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes
(e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Regards,

Robyn

Robyn Edwards

Building Technical Officer

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #32544: BC190480

Project ID: 190480
Date Sent: 2019-05-29 17:35:10
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System
Subject:

RE: Re: BC190480.2 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- C-Bracing Details.pdf (1.43MB)
- E-Design IT.pdf (436.54kB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #32551: BC190480

Project ID: 190480
Date Sent: 2019-05-29 19:05:03
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System
Subject:

RE: Re: BC190480.2 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- Reply to building RFI.pdf (580.23kB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #32567: BC190480

Project ID: 190480
Date Sent: 2019-05-30 08:25:33
Recipient: gregsdesign@outlook.com
Sender: Robyn Edwards
Subject: BC190480: 31 Pineview Way, Motueka Valley

Message:

Hi Greg,

Thank you for your response.

This property is within the Separation Point Granite area. All foundations need to be specifically engineered designed, even if it is a shed.

Your design could be acceptable but needs to be signed off by a suitably qualified person (as stated in the RFI), Producer Statements and Inspection Schedules for both buildings need to be submitted.

I will send out further RFI's for the rest of the design (if any) by the end of the week.

Kindest regards,
 Robyn

Robyn Edwards
 Building Technical Officer
 Tasman District Council
 189 Queen Street, Richmond 7020
 P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

=====

Hi Robyn,

I have attached a response to your RFI.
 Please call to discuss if needed.

Thanks
 Greg

From: Tasman District Council
Sent: Wednesday, 29 May 2019 3:41 PM
To: gregsdesign@outlook.com
Subject: BC190480.2 Request For Further Information - 31 Pineview Way, Motueka Valley

Dear Greg,

I am currently working on this consent but require the attached information to continue processing.
Please note: I am assessing other areas and will get you a further RFI if required asap.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes
(e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Regards,
Robyn

Robyn Edwards
Building Technical Officer
Tasman District Council
189 Queen Street, Richmond 7020
P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #32812: BC190480

Project ID: 190480
Date Sent: 2019-05-31 09:17:23
Recipient: focus.consultancynz@gmail.com
Sender: Helen Lawton
Subject: BC190480: A new job for you
Message:

Hello Focus Consultancy Group,

BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480>

— AlphaOne System



Email #32908: BC190480

Project ID: 190480
Date Sent: 2019-05-31 13:08:15
Recipient: focus.consultancynz@gmail.com
Sender: AlphaOne System
Subject: BC190480: A new job for you
Message:

Hello Brendon Guyton,

BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480>

— AlphaOne System

**Email #33407: BC190480**

Project ID: 190480
Date Sent: 2019-06-05 16:30:23
Recipient: gregsdesign@outlook.com, themotlot@gmail.com
Sender: Brendon Guyton
Subject:

BC190480.3 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Dear Sir/Madam,

Thank you for your building consent application. We have reviewed it and we need some more information to make sure the proposed work meets the requirements of the Building Act 2004. We have detailed the information we need in the attached letter.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes
(e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Regards,

Brendon Guyton
Building Technical Officer - Contractor
Tasman District Council
189 Queen Street, Richmond 7020
P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #33980: BC190480

Project ID: 190480
Date Sent: 2019-06-10 17:45:04
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System
Subject:

RE: Re: BC190480.3 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- 31 Pineview-Amended Plans.pdf (2.00MB)
- 31 Pineview-Amended specification.pdf (5.66MB)
- Reply to building RFI 2.pdf (243.62kB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>

**Email #34156: BC190480**

Project ID: 190480
Date Sent: 2019-06-11 14:23:19
Recipient: gregsdesign@outlook.com, themotlot@gmail.com
Sender: Brendon Guyton
Subject:

BC190480.4 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Dear Sir/Madam,

Thank you for your building consent application. We have reviewed it and we need some more information to make sure the proposed work meets the requirements of the Building Act 2004. We have detailed the information we need in the attached letter.

Please respond through the AlphaOne portal by replying to this email, which will link your response to your application ensuring it receives prompt attention.

Ensure all items are addressed in a single response, and that this includes:

- A covering note outlining the response to each item
- Revised documents that clearly identify changes
(e.g. referenced by revision clouds and document versions)
- Files that are in PDF format and to scale
- Only provide information specifically relating to this project

Regards,

Brendon Guyton
Building Technical Officer - Contractor
Tasman District Council
189 Queen Street, Richmond 7020
P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #34231: BC190480

Project ID: 190480
Date Sent: 2019-06-12 08:20:06
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System
Subject:

RE: Re: BC190480.4 Request For Further Information - 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- C-DRAINAGE PLAN-3-R2.pdf (437.19kB)
- F-Prolam Beam.pdf (952.41kB)
- Reply to RFI Building 2.pdf (223.60kB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #34306: BC190480

Project ID: 190480
Date Sent: 2019-06-12 09:58:24
Recipient: focus.consultancynz@gmail.com
Sender: Sally Blain
Subject: BC190480: A new email has been allocated to you
Message:

Hello Focus Consultancy Group,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System



Email #34429: BC190480

Project ID: 190480
Date Sent: 2019-06-12 15:13:12
Recipient: Helen.lawton@tasman.govt.nz
Sender: Brendon Guyton
Subject: BC190480: 31 Pineview Way, Motueka Valley

Message:

Hi

As discussed, I can,t complete this job as it will not allow me to enter the RFI reply dates, i have indicated these in the file note for your record.

Could you please get A1 to sort this and then issue the BC - EVERYTHING else has been does ready for this application to granted and issued

Brendon Guyton

Building Technical Officer - Contractor

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #34639: BC190480

Project ID: 190480
Date Sent: 2019-06-13 16:16:11
Recipient: gregsdesign@outlook.com
Sender: Jenna Wolter
Subject: BC190480: 31 Pineview Way, Motueka Valley

Message:

Hi Greg,

Consent Notice (h) and (k) attached to the title of this property require that stormwater detention is provided within the two water tanks on site. Can you please confirm whether the required 25mm orifice is provided in the second tank - at a level that provides the appropriate detention volume as specified in Consent Notice (h)? Could you then specific this on the drainage plan, along with details of the tank overflow outlet point.

Kind regards,

Jenna Wolter

Consent Planner - Natural Resources

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #34652: BC190480

Project ID: 190480
Date Sent: 2019-06-14 07:55:02
Recipient: gregsdesign@outlook.com
Sender: AlphaOne System
Subject: RE: Re: BC190480: 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- C-DRAINAGE PLAN-3-R3.pdf (460.56kB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>

**Email #34698: BC190480**

Project ID: 190480
Date Sent: 2019-06-14 09:09:11
Recipient: Helen.lawton@tasman.govt.nz
Sender: Jenna Wolter
Subject: BC190480: 31 Pineview Way, Motueka Valley
Message:

Hi Helen,

Happy to sign this one off now. Could you please make sure this amended drainage plan is merged into the approved plan set.

Thanks,

Jenna

Jenna Wolter
Consent Planner - Natural Resources
Tasman District Council
189 Queen Street, Richmond 7020
P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

Hi Jenna,

I have amended sheet 3 to alert contractors of the requirements of the consent notice. I have briefly described what is required and calculated the detention storage required.

The tank construction details have also been included in the consent documentation. The tanks were set up during subdivision works but will need the snorkel to be set up for the house specific roof area and associated required detention.

Kind regards
Greg Benjamin

From: Tasman District Council
Sent: Thursday, 13 June 2019 4:16 PM
To: gregsdesign@outlook.com
Cc: themotlot@gmail.com
Subject: BC190480: 31 Pineview Way, Motueka Valley

Hi Greg,

Consent Notice (h) and (k) attached to the title of this property require that stormwater detention is provided within the two water tanks on site. Can you please confirm whether the required 25mm orifice is provided in the second tank - at a level that provides the appropriate detention volume as specified in Consent Notice (h)? Could you then specific this on the drainage plan, along with details of the tank overflow outlet point.

Kind regards,

Jenna Wolter

Consent Planner - Natural Resources

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

DISCLAIMER

This message is for the designated recipient(s) only, and may contain confidential and/or privileged information. If you have received it in error, please delete it and advise the sender immediately. You should not copy or use it for any other purpose, nor disclose its contents to any other person.

Designated Recipient(s): gregsdesign@outlook.com, themotlot@gmail.com

Sent From: AlphaOne Building Consent System

Sent Date: 13 June 2019 16:16:08 pm - Thursday

**Email #35022: BC190480**

Project ID: 190480
Date Sent: 2019-06-17 14:31:38
Recipient: themotlot@gmail.com
Sender: Sally Blain
Subject: BC190480: 31 Pineview Way, Motueka Valley

Message:

Good afternoon

You recently applied for a building consent, which has now been "Recommended to Grant". An invoice for the balance of fees outstanding is enclosed. Once payment is received and cleared, your building consent documentation can be generated.

Please note that building fees are due the 20th of the month following the invoice date. Council is not required to grant a building consent until it receives any fees and charges fixed by it in relation to the consent (Section 49.2(a) New Zealand Building Act 2004).

If you have any further queries regarding this matter, please contact your local Council Service Centre, or call the number below and ask to speak to the Duty Building Administration Officer.

Kind regards

Sally

Sally Blain

Building Support Officer - Building Assurance

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #35846: BC190480

Project ID: 190480
Date Sent: 2019-06-21 12:55:08
Recipient: themotlot@gmail.com
Sender: AlphaOne System
Subject: RE: Building consent issue please

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #35914: BC190480

Project ID: 190480
Date Sent: 2019-06-21 16:05:07
Recipient: themotlot@gmail.com
Sender: Sally Blain
Subject: BC190480: 31 Pineview Way, Motueka Valley

Message:

Good afternoon

Unfortunately, you have underpaid by \$1000. The invoice total was for \$4452.80 and I can only see a payment for \$1280.00 and one for \$2172.80, leaving \$1000 owing.

Once you have made this payment we can issue the building consent. You can still meet with your builder and use the plans you submitted to discuss your project and can forward the approved plans to your builder once they are issued.

Kind regards

Sally

Sally Blain

Building Support Officer - Building Assurance

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>

=====

Hi there - we received invoice for our consent on Monday and I paid Wednesday morning in two payments - one online banking and one debit card. Was just wondering if I could please have the consent and consented plans etc. emailed today as I would like to meet with our builder in the weekend - Thankyou so much if you can. Toni Evans and Sam McLeod 0211103643

--

Toni Evans & Sam McLeod

Dreamteam Ltd.

0211103643

--

Toni Evans & Sam McLeod
Dreamteam Ltd.
0211103643



Email #36176: BC190480

Project ID: 190480
Date Sent: 2019-06-25 08:40:08
Recipient: themotlot@gmail.com
Sender: AlphaOne System
Subject: RE: Re: BC190480: 31 Pineview Way, Motueka Valley

Message:

Hello

Thank you for your message regarding your Building Consent application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #36286: BC190480

Project ID: 190480
Date Sent: 2019-06-25 14:05:50
Recipient: themotlot@gmail.com, gregsdsgn@outlook.com
Sender: Debbie Woodley
Subject:

BC190480.1 Form 5: Building Consent - 31 Pineview Way, Motueka Valley

Message:

Dear Sir/Madam,

Please find attached the copy of your granted Form 5: Building Consent.

Your building consent documents are available to download from our customer portal. To access these:

- 1) click link, or enter the following link into your internet web browser: <https://consents-topofthesouth.abcs.co.nz/>
- 2) click on the BC section of your consent applications progress bar
- 3) on the blue menu bar, click on Documents, then View Documents Issued
- 4) click on BC190480.pdf, select Save File
- 5) select where you would like to save this documentation to, and then click on save

Your files will be downloaded and available for you to save locally and use.

Regards,

Debbie Woodley
Building Support Officer - Building Assurance
Tasman District Council
189 Queen Street, Richmond 7020
P: 03 543 8400 | E: bc.admin@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #47350: BC190480

Project ID: 190480
Date Sent: 2019-09-02 15:30:23
Recipient: themotlot@gmail.com, gregsdesign@outlook.com
Sender: Grant Fidler
Subject: BC190480 Inspection Report

Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact Tasman District Council on 03 543 8400.

Regards,



Email #53369: BC190480

Project ID: 190480
Date Sent: 2019-10-08 10:00:37
Recipient: jessroborgh@gmail.com
Sender: Richmond Grant
Subject: BC190480 Inspection Report

Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact Tasman District Council on 03 543 8400.

Regards,



Email #54640: BC190480

Project ID: 190480

Date Sent: 2019-10-15 10:45:09

Recipient:

jessroborgh@gmail.com, themotlot@gmail.com, gregsdsgn@outlook.com

Sender: Craig Jaquiere

Subject: BC190480 Inspection Report

Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact Tasman District Council on 03 543 8400.

Regards,



Email #57447: BC190480

Project ID: 190480
Date Sent: 2019-11-04 10:15:07
Recipient: jessroborgh@gmail.com
Sender: Richmond Grant
Subject: BC190480 Inspection Report

Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact Tasman District Council on 03 543 8400.

Regards,



Email #61307: BC190480

Project ID: 190480
Date Sent: 2019-11-25 13:30:14
Recipient: jessroborgh@gmail.com, gregsdesign@outlook.com
Sender: Craig Harley
Subject: BC190480 Inspection Report

Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact Tasman District Council on 03 543 8400.

Regards,



Email #65037: BC190480

Project ID: 190480
Date Sent: 2019-12-16 12:15:08
Recipient: jessroborgh@gmail.com
Sender: Richmond Grant
Subject: BC190480 Inspection Report

Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact Tasman District Council on 03 543 8400.

Regards,



Email #65105: BC190480

Project ID: 190480
Date Sent: 2019-12-16 15:00:14
Recipient: admin.tasmanbay@thinkwater.co.nz
Sender: AlphaOne System
Subject: RE: pressure test - 31 Pineview Way
Message:

Hello

Thank you for your message regarding your application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- BC 190480 - 31 PINEVIEW WAY.pdf (297.45kB)

REJECTED ATTACHMENTS:

- image001.jpg (3.04kB)
- image004.jpg (14.24kB)

The rejected attachment(s) may be from your signature. If not, please contact the AlphaOne Support Team on (06) 280 2734.

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #66004: BC190480

Project ID: 190480

Date Sent: 2019-12-20 12:40:11

Recipient:

jessroborgh@gmail.com, themotlot@gmail.com, gregsdsgn@outlook.com

Sender: Craig Jaquiere

Subject: BC190480 Inspection Report

Message:

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

If you have any queries regarding the content of the site notice please contact Tasman District Council on 03 543 8400.

Regards,



Email #77118: BC190480

Project ID: 190480
Date Sent: 2020-03-17 10:50:09
Recipient: julie.hope@tasman.govt.nz
Sender: AlphaOne System
Subject: RE: CCC Application & Certificates

Message:

Hello

Thank you for your message regarding your application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:

- SMFD-Motuek20031711040.pdf (955.63kB)

REJECTED ATTACHMENTS:

- imageb9010e.JPG (8.26kB)
- imageb0525b.PNG (1.35kB)
- image5d900c.PNG (1.48kB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #77143: BC190480

Project ID: 190480
Date Sent: 2020-03-17 11:48:13
Recipient: Reception.Takaka@tasman.govt.nz
Sender: Marise Bainbridge
Subject: BC190480: A new email has been allocated to you
Message:

Hello Takaka Reception,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System



Email #77162: BC190480

Project ID: 190480
Date Sent: 2020-03-17 12:15:34
Recipient: themotlot@gmail.com
Sender: Casey Port
Subject: BC190480: 31 Pineview Way, Motueka Valley
Message:

Hi Sam & Toni,

Thank you for supplying your Code of Compliance Application.

Your final inspection for Code of compliance has been booked for 23/03/20, a building inspector will be in contact no later than morning of the inspection to confirm an approximate time to meet at the property.

This is the earliest final inspection time we have available.

Casey Port
Customer Service Officer - Takaka
Tasman District Council
189 Queen Street, Richmond 7020
P: 03 543 8400 | E: building.support@tasman.govt.nz | W: <http://www.tasman.govt.nz>

=====

Hi

Please find attached CCC application and certificates. The customer said she had already booked a final inspection for Monday 23rd March but would like it sooner if possible. Could you please check this appointment is correct.

Many Thanks
Julie

Julie Hope
Customer Services Officer
DDI 03 528 2022 | Julie.Hope@tasman.govt.nz

PO Box 123, Motueka 7143, NZ

[Logo]

[Facebook] [Twitter]

This e-mail message and any attached files may contain confidential information, and may be subject to legal professional privilege. If you are not the intended recipient, please delete.

REJECTED ATTACHMENT(S):

Note: The listed file(s) below were rejected because they were not in PDF format.

- imageb9010e.JPG
- imageb0525b.PNG
- image5d900c.PNG

**Email #78107: BC190480****Project ID:** 190480**Date Sent:** 2020-03-23 12:00:21**Recipient:**

jessroborgh@gmail.com, themotlot@gmail.com, gregsdsgn@outlook.com

Sender: Richmond Grant**Subject:** BC190480 Inspection Report**Message:**

Our inspection team have carried out a site inspection on the above project today, please find attached the inspectors site notice for your information.

We send a copy of all correspondence to the Owner of the property for their records. If you are using an Agent or First Point of Contact it is expected that they will manage the building consenting process, and respond to any requests.

The AlphaOne system has the ability to mark the inspection record as a Pass or Fail, this is to ensure an accurate record is maintained of outstanding work or documents that is required to be completed or provided. The Inspector will discuss the inspection outcome and expectations with the onsite contact during the inspection.

If you have any queries regarding the content of the site notice please contact Tasman District Council on 03 543 8400.

Regards,



Email #78145: BC190480

Project ID: 190480
Date Sent: 2020-03-23 14:30:03
Recipient: admin.tasmanbay@thinkwater.co.nz
Sender: AlphaOne System
Subject: RE: Sprinkler system
Message:

Hello

Thank you for your message regarding your application with Tasman District Council. This is an automated response to confirm your message has been received by the assigned officer for review.

Below is a list of the accepted and rejected attachments. We accept email attachments in PDF, JPG and PNG format.

ACCEPTED ATTACHMENTS:
- CCE_000110.pdf (216.26kB)

For further information or enquiries please email 190480@tasman.abcs.co.nz.

Kind regards

Tasman District Council
189 Queen Street
Richmond 7020
<http://www.tasman.govt.nz>



Email #78154: BC190480

Project ID: 190480
Date Sent: 2020-03-23 15:25:56
Recipient: themotlot@gmail.com, jessroborgh@gmail.com
Sender: Richmond Grant

Subject:

BC190480.1 Form 7: Code Compliance Certificate - 31 Pineview Way, Motueka Valley

Message:

Dear Sir/Madam,

Please find attached a copy of your code compliance certificate for BC190480.

If you have any questions please contact Tasman District Council on 03 543 8400.

Regards

Richmond Grant

Building Inspector

Tasman District Council

189 Queen Street, Richmond 7020

P: 03 543 8400 | E: building.support@tasman.govt.nz | W: <http://www.tasman.govt.nz>



Email #78333: BC190480

Project ID: 190480
Date Sent: 2020-03-24 14:44:18
Recipient: richmond.grant@tasman.govt.nz
Sender: Debbie Yarrall
Subject: BC190480: A new email has been allocated to you
Message:

Hello Richmond Grant,

A new email for BC190480 has been allocated to you. Please check and take appropriate action.

<https://tasman.abcs.co.nz/jobs/190480/communication/?optilbox>

— AlphaOne System

Blog ID: 147924
Author: Sally Blain
Created: 2019-04-26 15:59:39
Notes: Specialist WW input will be required for this project.

Blog ID: 148254
Author: Julie Panes
Created: 2019-05-01 10:13:27
Notes: RFI sent requesting consent Notice 11014338.2 RMA check can not start without this.

Blog ID: 148268
Author: Robert Cox
Created: 2019-05-01 11:17:11
Notes: RFI for Wastewater sent.

Blog ID: 148515
Author: Julie Panes
Created: 2019-05-03 11:45:43
Notes: RFI compliance with CN11014338.2 Condition d) Landscape plan required.
g) External colours required LRV values for Roof 25% or less and walls 50% LRV or less.
h)(i) All water tanks as far as practicable be buried within the ground or screened.

Blog ID: 148521
Author: Julie Panes
Created: 2019-05-03 11:51:22
Notes: Landscape plan received still waiting for external colours and tanks buried or screened.

Blog ID: 148664
Author: Julie Panes
Created: 2019-05-06 13:09:59
Notes: Tanks mostly buried and colours received. Resene Flaxpod walls and roof LRV 7%

Blog ID: 149677
Author: Robert Cox
Created: 2019-05-14 16:04:15
Notes: Version 4 of Engineers report for Wastewater is for the consent file. Ready to go

Blog ID: 151362
Author: Natural Hazards
Created: 2019-05-30 12:08:26
Notes: Assets Input: No natural hazard issues provided the works are undertaken in accordance with the GEO-Logic Ltd site certification report (dated 17 July 2018), specifically the recommendations in Certification recommendations (page 3).

Blog ID: 151477
Author: Helen Lawton
Created: 2019-05-31 09:14:49
Notes: The statutory time clock is currently reading incorrectly and this job has breached. Put on hold by Robert Cox on day 2 while an wastewater RFI was requested when it should not have been due to incomplete processing of the full job. Processor advised of this by team leader. RFI reply received by WW processor, who did not correctly restart the clock - this was missed by the processor. Current stat days incorrect and job has breached. To be reallocated to Focus, who will advise the client of the delay with undertaking to have RFI request to them asap. Statutory clock to be adjusted to match actual processing timelines.

Blog ID: 151479
Author: Helen Lawton
Created: 2019-05-31 09:16:56
Notes: Reallocated to Focus - job has already breached. To be fully reprocessed as advised by Brendan who will also make contact with the agent to advise of timelines.

Blog ID: 151524
Author: Brendon Guyton
Created: 2019-05-31 11:20:43
Notes: Contacted agent and notified him of the current status with the application and that Focus Consultancy will be reprocessing the application from today's date

Blog ID: 151824
Author: Brendon Guyton
Created: 2019-06-05 11:01:12
Notes: While processing the application the RFI start clock in the system came up on the screen to be completed for the WW processing and resolution - the RFI was received on the 10-5-19 and approved on the 14-5-19 by R Cox, the system would only let me back date the clock to 27-5-19 for some reason so the dys indicated to process this application is NOT a true reflect of time taken

Blog ID: 151919
Author: Brendon Guyton
Created: 2019-06-05 16:30:45
Notes: Processing completed, RFI [1] sent

Blog ID: 152379
Author: Brendon Guyton
Created: 2019-06-11 14:23:55
Notes: Process RFI [1] reply, up date documents, write and send RFI [2]

Blog ID: 152588
Author: Brendon Guyton
Created: 2019-06-12 14:37:47
Notes: Process RFI [2] reply, update documents, stamp documents [which now takes longer due to having to flatten them] complete action TAB, make recommendation to grant

Had to go over to TDC and sort out RFI clock as not allowing me to complete

Additional time from RFI[2] to completion [1.5hrs]

Blog ID: 152604
Author: Brendon Guyton
Created: 2019-06-12 15:09:39
Notes: Email and discussion with Helen in relation to inputting of RFI times

RFI [1] reply 10th of June
RFI [2] reply 12th of June

Blog ID: 152620
Author: Helen Lawton
Created: 2019-06-12 16:05:04
Notes: Requested Alpha support re-calculate the stat clock to show correct days. Job has breached on 27 days at granting.

Blog ID: 152621
Author: Marthijn Batlajeri
Created: 2019-06-12 16:05:11
Notes: Updated the RFI letters and dates with Helen on the phone. Now the Processing days are on day 27 as confirmed by Helen.

Blog ID: 152785
Author: Jenna Wolter
Created: 2019-06-14 09:17:11
Notes: agent has submitted amended drainage plan showing appropriate stormwater detention to be provided. have asked Helen to ensure this is merged into approved plan set. no further issues. RMA check is now complete.

Blog ID: 152846
Author: Brendon Guyton
Created: 2019-06-14 13:41:11
Notes: The statutory time frame for BC has been exceeded for the following reason: TDC did not allocate the job to Focus Consultancy Ltd until the application was already over 20 days

Blog ID: 152847
Author: Brendon Guyton
Created: 2019-06-14 13:41:11
Notes: Brendon Guyton added 'BC Issue Awaiting Invoice' block for the following reason: Invoice Due

Blog ID: 152848
Author: Brendon Guyton
Created: 2019-06-14 13:41:11
Notes: Brendon Guyton added 'CCC Issue Other' block for the following reason: CCC Not Ready

Blog ID: 152849
Author: Brendon Guyton
Created: 2019-06-14 13:41:11
Notes: Brendon Guyton added 'Inspections BC Not Granted/Issued' block for the following reason: BC

decision to grant has occurred but the BC has not yet been granted/issued. This block will automatically be removed when the BC is granted/issued.

Blog ID: 152917

Author: Helen Lawton

Created: 2019-06-17 08:33:40

Notes: 3rd version of drainage plan approved by planning and added to plan set. Job has already been RTG but documents not yet issued.

Blog ID: 152989

Author: Sally Blain

Created: 2019-06-17 14:30:13

Notes: Sally Blain removed 'BC Issue Awaiting Invoice' block for the following reason: Invoice 75134

Blog ID: 152990

Author: Sally Blain

Created: 2019-06-17 14:30:30

Notes: Sally Blain added 'BC Issue Awaiting Payment' block for the following reason: Awaiting payment

Blog ID: 153812

Author: Debbie Woodley

Created: 2019-06-25 14:05:07

Notes: Debbie Woodley removed 'BC Issue Awaiting Payment' block for the following reason: Paid

Blog ID: 153813

Author: Debbie Woodley

Created: 2019-06-25 14:05:15

Notes: Debbie Woodley removed 'Inspections BC Not Granted/Issued' block for the following reason:
BC is now granted and issued

Blog ID: 176872

Author: Jenna North

Created: 2020-03-13 09:44:22

Notes: northj cancelled inspection booking 'Final ' for the following reason: Rebooked for the 2303

Blog ID: 182017

Author: Casey Port

Created: 2020-03-17 11:56:25

Notes: I have uploaded the Application for CCC - Paper (17 March 2020)

Blog ID: 182018

Author: Casey Port

Created: 2020-03-17 11:56:25

Notes: Casey Port made a decision to start the CCC clock for the following reason: CCC application submitted

Blog ID: 184046

Author: Richmond Grant

Created: 2020-03-23 13:00:17

Notes: Richmond Grant removed 'CCC Issue Other' block for the following reason: NA

Blog ID: 184063

Author: Richmond Grant

Created: 2020-03-23 15:24:52

Notes: Richmond Grant added 'CCC Issue Awaiting Invoice' block for the following reason: Invoice Due

Blog ID: 184064

Author: Richmond Grant

Created: 2020-03-23 15:25:06

Notes: Richmond Grant removed 'CCC Issue Awaiting Invoice' block for the following reason: NA

Blog ID: 184075

Author: System

Created: 2020-03-24 02:32:24

Notes: API added 'Project at End Other' block for the following reason: System set this project as read-only as the project is at end.

Blog ID: 184602

Author: Courtenay Lynn

Created: 2020-03-30 11:36:42

Notes: Courtenay Lynn removed 'Project at End Other' block for the following reason: Incoming email.

Blog ID: 184664

Author: System

Created: 2020-03-31 02:31:55

Notes: API added 'Project at End Other' block for the following reason: System set this project as read-only as the project is at end.

Blog ID: 193288

Author: System
Created: 2020-04-25 03:21:22
Notes: Covid-19 Site Inspection Check

- If you are feeling unwell - do not attend site.
- Sanitise Hands
- Put on PPE
- Clean Equipment that is to be taken on site
- Upon Request Provide Site Manager with your Covid-19 Plan
- Sign the Site Register - All people entering the site must do this (tip - photograph site register)
- Complete Site Induction
- Follow Site Protocols maintaining Physical Distancing at all times
- While on site consider the Durability of Exposed Materials
- On completion Sign Out and Sanitise Hands
- Clean Equipment on completion of inspection
- To assist tracking Maintain a Record of Daily Contacts.

<https://www.building.govt.nz/covid-19/get-prepared-for-working-at-alert-level-3>

Blog ID: 321628
Author: System
Created: 2022-09-21 10:35:41
Notes: API removed 'Project at End Other' block for the following reason: Unarchived to recompile project documents (2022-09-21 10:35:41).

Blog ID: 321889
Author: System
Created: 2022-09-22 02:47:04
Notes: API added 'Project at End Other' block for the following reason: System set this project as read-only as the project is at end.

Blog ID: 326533
Author: System

Created: 2022-10-04 12:34:45

Notes: API removed 'Project at End Other' block for the following reason: Unarchived to recompile project documents (2022-10-04 12:34:45).
