

Sharalyn Fraser *Agency*

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CODE COMPLIANCE CERTIFICATE

Section 95 Building Act 2004



Consent No: 140363

The Building		
Street address of building:	12 Matuhi Street, Waikanae	Building name:
Current, Lawfully established, use:	Vacant Land	Location of building within site/block number:
Level/unit number:		Intended life of the building if 50 years or less:
Legal description of land where building is located:	LOT 5 DP 413488 C/T 466499	Year first constructed:
The Owner		
Name of owner:	O'Keeffe Warren Bernard & O'Keeffe Edite	Street address /registered office:
Contact person:		Phone numbers:
Mailing address:	C/-Richard Barrow A1 Homes 2 Hemi St Waikanae	Landline:
Email address:	edandwarren@gmail.com	Mobile: 021 1164846
Website:		Daytime:
		After hours:
		Facsimile number:
First point of contact for communications with the Kāpiti Coast District Council:		
Full Name: A1 Homes Lower North Mailing Address: PO Box 80, Waikanae Phones: 021 752857; 902 6002 Email: alan.wood@a1homes.co.nz		
Building Work		
Building Consent No:	140363	Issued by: Kāpiti Coast District Council
Project Description:	New 4 bedroom residential, single level dwelling with attached double garage.	

Code Compliance

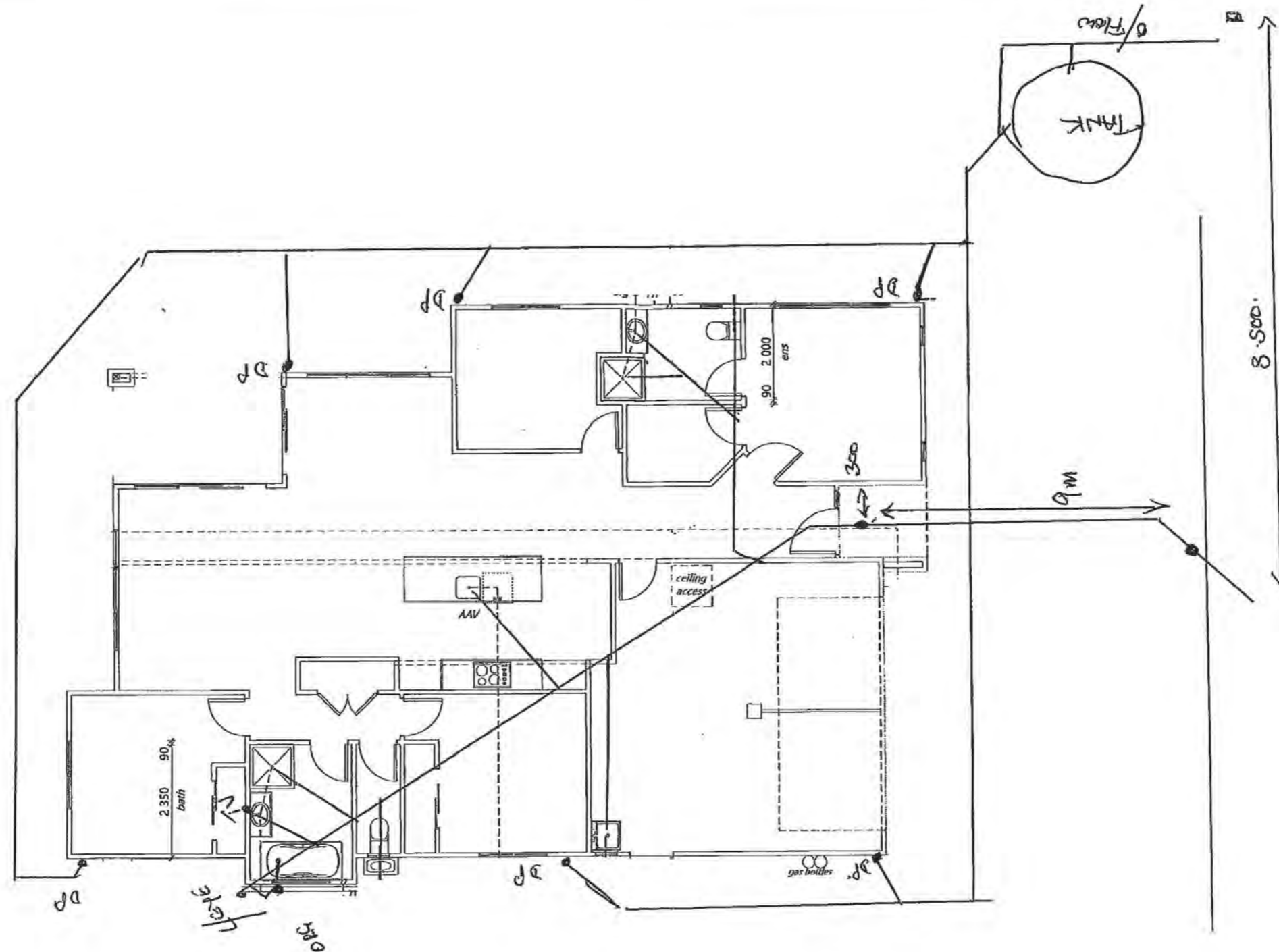
The building consent authority named below is satisfied, on reasonable grounds, that:

- (a) the building work complies with the building consent.

Russell Brook – Team Leader – Site Inspections

On behalf of **Kāpiti Coast District Council**

Date: 19 December 2014



The Certifying plumber/drain layer is to fill out drainage producer statement form and draw a neat as laid drawing and return to Council. Please show all services including under slab drainage.

<p>Client Details : Mr & Mrs O'Keeffe Address: 12 Matuhi Street Waikanae</p>
<p>Drainage Plan</p>

SCOPE OF INSPECTION SHEET

Date 11-12-14 BCA 140363 Inspection No. 11

Time 2:00 Documents on site YES / NO

Owner Name Al Homes Project Description New Dwg

Site Address 12 MATUHI ST WAIKANAHA Restricted Building Work YES / NO

Building Plumbing
 Circle appropriate Type & Inspection Other

Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name

Notes Exterior all completed Diagram (if necessary)
Painted & sealed. Roof &
flashings OK, Stormwater to
tank, Entrance & Garage complete
Non potable water signs fitted.
Interior all completed painted - sealed
Wet areas sealed, Safety Glass in bathrooms
Instant hot water 5/0, Laundry secure
Smoke detectors, Vent fans OK
Heat pump
Energy certificates Reviewed -

Photo's Taken - Nos. saved / scanned? Y / N

Site instruction issued

* PS 4 + Notes kept.

Confirmation of person on site
 Name LBP No.
 Result: Pass Fail

Your next inspection will be
(Guidance notes for inspection on the rear of this sheet)

Agreed, Richard Barrow Sign [Signature]
(Print Name)
 Officer Name Craig Watson Sign [Signature]

Information entered into data base Initial Date 1/1/15

SCOPE OF INSPECTION

Inspections are made in conjunction with, and with the cooperation of, the owner/owner's agent to ensure that the building work complies with the provisions of the Building Act and NZ Building Code. The inspection is general in nature and involves an audit of the following aspects:

Engineer – Civil/Structural/Fire/Geotechnical: An engineer has been engaged to carry out inspections on behalf of the owner. Please ensure those inspections are carried out. A Certificate of Expert Opinion is required to be supplied to Council.

Site: A surveyor's report, or visible boundary markers provided, so that the set out of the project can be clearly identified.

Foundation: When all formwork has been completed, footings have been excavated and reinforcement is in place.

Piles: When all holes are excavated prior to installation.

Pre-slab plumbing (concrete slab): When all plumbing and drainage pipes have been installed, prior to backfilling.

Pre-slab building (concrete slab): When DPM has been placed with all laps and penetrations sealed, reinforcing in place and in position with chairs as appropriate.

Sub-floor (timber suspended floor): When all sub-floor connections, joists and required blocking, and any suspended plumbing pipe work have been completed, but before any flooring or base boards have been fitted. Relocated dwellings require a sub-floor inspection prior to the base boards being fitted.

Drainage: When all drainage works is completed and is under test, before backfilling occurs. As laid drainage plan is required at time of inspection.

Pre-wrap: When all roof and wall framing is complete, including any exterior sheet bracing, but before building wrap has been installed.

Pre-clad: When building wrap and window and door flexible flashing tape has been installed, cavity battens (cavity systems), cavity closers and all flashing systems are in place, but before joinery has been installed.

Weathertightness: When exterior cladding has been installed, flashings in place, air seals fitted to openings, but before any coating system have been applied.

Pre-line (plumbing): When all internal plumbing is complete and plumbing pipe work is under test pressure.

Pre-line (building): When the exterior of the building is weather tight, all structural components (including bracing) have been completed and wall insulation is in place.

Wet area membranes, decks, roofs and shower area: Pre application of wet area membrane, when all outlets and flashings have been installed, ready for membrane installation.

Post application of wet area membrane.

Post-line: When all interior linings have been installed, but before skirting, Scotia or plastering stopping. Installation details of screws check of wall bracing element.

Block: When all masonry block work including block foundations for slab floors, is completed, reinforcing in place and washout openings in place.

Brick Veneer: When veneer is at half height and all flashings are in place.

Retaining wall: Pre application of waterproof membrane system.

Post application of waterproof membrane system.

Protection installed for membrane system and installation of perforated drainage system before back filling.

Final: Final inspections are carried out at the completion of the project and may include entire project, plumbing, drainage and storm water. The Code Compliance Certificate is issued if the building work complies with the approved building consent.

Free Standing Fireplace: Final inspection required only.

In Built Fireplace: Inspection required before installation **and** after installation.

PRIVACY STATEMENT

1. The information contained on the Building Inspection Report Sheet is held by the Kapiti Coast District Council, whose address is Private Bag 60601, Paraparaumu, 5254.
2. The information is available for public inspection as part of the Building Record of the property concerned. It can be viewed at 175 Rimu Road, Paraparaumu, 5032.
3. You have the right under the Privacy Act 1993 to obtain access to, and to request correction of any personal information held by Council concerning you.

Council has a Privacy Officer. If you have any concerns regarding privacy issues please telephone (04) 296 4700

FINAL INSPECTION SINGLE RESIDENTIAL

Date 11-12-14 BCA 140363 Inspection No. 11

Time 2.00 Documents on site YES / NO

Owner Name Al Homes Project Description New Dsg

Site Address 12 MATUHI ST WAIKANAŪ Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

Applicable to all inspections

Sighted previous inspection notes	<u>Y</u>	N	NA	Conforms with approved drawings	<u>Y</u>	N	NA	Confirm Additional information/amended plan	Y	N	<u>NA</u>
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FINAL - Exterior

Sub-floor ventilation	P	F	<u>NA</u>	Roof fixings	<u>P</u>	F	NA	Spouting + Down-pipes	<u>P</u>	F	NA
Deck Structure	P	F	<u>NA</u>	Flashings - Roof	<u>P</u>	F	NA	Penetrations - Flashings	<u>P</u>	F	NA
Barriers	P	F	<u>NA</u>	Gully Dishes	<u>P</u>	F	NA	Storm-water + site drainage	<u>P</u>	F	NA
Handrails	P	F	<u>NA</u>	Wastes to gully	<u>P</u>	F	NA	Fixings - Durability	<u>P</u>	F	NA
Steps/Stairs	P	F	<u>NA</u>	Terminal vents/AAV's	<u>P</u>	F	NA	Cladding painted/sealed	<u>P</u>	F	NA
Flashings - Windows/Doors	<u>P</u>	F	NA	Cladding Ground Clearance	<u>P</u>	F	NA		P	F	NA

FINAL - Interior

Service areas - floors/walls	<u>P</u>	F	NA	Food storage/preparation	<u>P</u>	F	NA	Hot water temp <u>51°</u>	<u>P</u>	F	NA
Stair design	P	F	<u>NA</u>	Ventilation	<u>P</u>	F	NA	Solid fuel heater	P	F	<u>NA</u>
Handrails	P	F	<u>NA</u>	Insulation + clearance	<u>P</u>	F	NA	Water supply tank	<u>P</u>	F	NA
Balustrades	P	F	<u>NA</u>	HWC flues	P	F	<u>NA</u>	Trap seals + AAV's	<u>P</u>	F	NA
Lightings	<u>P</u>	F	NA	HWC valves	P	F	<u>NA</u>	Cistern flushing	<u>P</u>	F	NA
Laundering	<u>P</u>	F	NA	HWC restraint	P	F	<u>NA</u>	WC pan connection	<u>P</u>	F	NA
Cooking facilities	<u>P</u>	F	NA	Tempering valve	P	F	<u>NA</u>	Septic tank	P	F	<u>NA</u>
Smoke detectors	<u>P</u>	F	NA	Glazing - Human Impact	<u>P</u>	F	NA	Window labels	<u>P</u>	F	NA

FINAL - Intertency/Commercial

Fire/Life systems sighted	P	F	NA	Guarantees/Warranties/Certificates/Expert Opinion	P	F	NA	Intertency STC	P	F	NA
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All Inspections

Road Crossing Complete	P	F	<u>NA</u>	Energy Certificates supplied	<u>P</u>	F	NA	Final Check Complete	<u>Y</u>	N
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Officer Name: Craig Watson Sign: CW Date: 11/12/14

SCOPE OF INSPECTION SHEET

Date 2/12/14 BCA 140363 Inspection No. 10
 Time 10:30 Documents on site YES / NO
 Owner Name M Hound Project Description NEW DWG
 Site Address 12 MATUHI ST Restricted Building Work YES / NO

Building Plumbing
 Circle appropriate Type & Inspection Other WGT ALISA
 Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name

Notes Diagram (if necessary)

AQUABLOCK. X 2 COATS.
ALL CORNERS SEALED

Photo's Taken - Nos. saved / scanned? Y / N

Site instruction issued

Confirmation of person on site Result: Pass Fail
 Name LBP No.

Your next inspection will be
(Guidance notes for inspection on the rear of this sheet)

Agreed, X Tide Telaki Sign [Signature]
(Print Name)
 Officer Name Alan Sign [Signature]

Information entered into data base Initial Date 1/1/14

WEATHERTIGHTNESS / PRELINE / POSTLINE

Date 2/12/14 BCA 140 30 2 Inspection No. 10

Time 10:30 Documents on site YES / NO

Owner Name AI Home Project Description New SW

Site Address 12 MATUHI ST Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

Applies to all inspections

Sighted previous inspection notes	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Conforms with approved drawings	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Confirm Additional information/amended plan	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA
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WEATHERTIGHTNESS

Cladding selection complies with BC?	P	F	NA	Roof material complies with BC?	P	F	NA	Sheets fixed to manufacturers	P	F	NA
Roof fixing complies	P	F	NA	Fixings appropriate for durability?	P	F	NA	Sheet layout	P	F	NA
Ridge/hip flashings in place	P	F	NA	Roof/wall junctions flashed	P	F	NA	Control joints where appropriate	P	F	NA
Penetrations correctly flashed	P	F	NA	Fixings appropriate for bracing elements	P	F	NA	Flashings in place	P	F	NA
Clearance provided for fascia & spouting	P	F	NA	Ground clearances achieved	P	F	NA	Clearance off deck surface	P	F	NA
Flashings/wraps in place, parapets/barriers	P	F	NA	Glazing – human impact	P	F	NA	Truss/Rafter fixings	P	F	NA

PRELINE

Max moisture Content	P	F	NA	Insulation R Value	P	F	NA	Bracing connections	P	F	NA
Ventilation to rooms	P	F	NA	Top plate connection	P	F	NA	Air seals	P	F	NA
Timber treatment	P	F	NA	Ceiling batten spacing	P	F	NA	Bottom plate fixings	P	F	NA
Lintel/beam size & fixing	P	F	NA	Stud spacing	P	F	NA		P	F	NA
Plumber Name				TPR line	P	F	NA	Waste pipe size & test	P	F	NA
Soil pipe size and test	P	F	NA	Inbuilt S/W pipes tested	P	F	NA	Floor wastes	P	F	NA
Pipes fixed/supported	P	F	NA	Vents terminated	P	F	NA	Shut off valves	P	F	NA
System: AS3500, G13, Other	P	F	NA	Pressure Test	P	F	NA	Fire wraps and collars	P	F	NA

POSTLINE

Sheet bracing	P	F	<input checked="" type="radio"/> NA	Wet area substrate system	<input checked="" type="radio"/> P	F	NA	Sheet fixings	P	F	<input checked="" type="radio"/> NA
Penetrations sleeved	P	F	NA		P	F	NA	Fire/Acoustic separation	P	F	NA

Officer Name: alan Sign:  Date: 2.12.14

SCOPE OF INSPECTION SHEET

Date 12/11/14 BCA 140363 Inspection No. 9
 Time 1.20 Documents on site YES / NO
 Owner Name O'Keefe Project Description New Sewer
 Site Address 12 MAUI ST Restricted Building Work YES / NO

Building Plumbing Circle appropriate Type & Inspection Other

Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name

Notes Sewer 100m PVC waste + soil Diagram (if necessary)
PIPE CONNECTED TO ALL FIXTURES +
LATERAL WITH GOOD FLOW
INSPECTION POINTS IN PLACE
QUALITY WORK BODY COMPLETED ON INSPECTION
UNDER TEST + HOLDY
- Stormwater 100m PVC in for
DOWN PIPES GOING TO TALK AND HOW
TO HOLD AT LOT STUB TO COMPLETE

Photo's Taken - Nos. saved / scanned? Y / N

Site instruction issued As built drawing to Sally

Confirmation of person on site Result: **Pass** **Fail**
 Name Business LBP No. 04479

Your next inspection will be
(Guidance notes for inspection on the rear of this sheet)

Agreed, Steve H. Sign [Signature]
(Print Name)
 Officer Name [Signature] Sign [Signature]

Information entered into data base Initial Date/...../.....

SITE / FOUNDATIONS / PILES / PRE SLAB / SUBFLOOR / DRAINAGE

Date 12/11/14 BCA 140363 Inspection No. 9

Time 1:20 Documents on site YES / NO

Owner Name D. King Project Description New Deck

Site Address 12 MAUI ST Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

SITE

Conforms with approved drawings	Y	N	NA	Checked driveway	Y	N	NA	Engineer supervision required	Y	N	NA
Scope of Resource consent granted?	Y	N	NA	Checked position off relevant boundaries and datum height	Y	N	NA		Y	N	NA
Expert Opinion (Producer statement) required	Y	N	NA	Name of Surveyor Company				Name of Engineer Company			

FOUNDATIONS

PILES

SUBFLOOR

Footing Depth	P	F	NA	Pile size	P	F	NA	Pile/Bearer/Joist Fixings	P	F	NA
Good bearing (NZS 3604)	P	F	NA	Pile layout is to plan	P	F	NA	Notching, Holes, etc	P	F	NA
Reinforcing	P	F	NA	Special piles - point load	P	F	NA	Solid Blocking	P	F	NA
Siting	P	F	NA	Timber Treatment	P	F	NA	Joists	P	F	NA
Sub-floor vents	P	F	NA	Hole depth	P	F	NA	Beams/Bearers	P	F	NA

PRE SLAB

Rebate for brick veneer	P	F	NA	Sand blinding	P	F	NA	Steel reinforcing	P	F	NA
Ground clearance	P	F	NA	Slab thickenings	P	F	NA	Bar chairs	P	F	NA
Concrete Cover	P	F	NA	Vapour barrier (DPC)	P	F	NA	DPC penetrations taped	P	F	NA
Driveway s/w control	P	F	NA	Bottom plate fixings	P	F	NA	Minimum Floor Level	P	F	NA
Secondary flow path	P	F	NA	TPR line	P	F	NA	Wastes and drains - size / fall	P	F	NA
Pipe material	P	F	NA	Plumbing layout	P	F	NA	Test - Water / Air	P	F	NA
Pipe protection	P	F	NA	Pipes supported	P	F	NA	Visual leak check	P	F	NA

DRAINAGE

Pipe diameter	<u>P</u>	F	NA	Connections/Angles	<u>P</u>	F	NA	Holding water	<u>P</u>	F	NA
Bedding material	<u>P</u>	F	NA	Branch length	<u>P</u>	F	NA	Terminal vent	<u>P</u>	F	NA
Gully trap(s)	<u>P</u>	F	NA	Direction/Fall	<u>P</u>	F	NA	LBP/Registration No:			

Officer Name: Sign:  Date: 12/11/14

SCOPE OF INSPECTION SHEET

Date 29-10-14 BCA 140 363 Inspection No. 8

Time 9 am Documents on site YES / NO

Owner Name O'Keefe Project Description New Deck

Site Address 12 Matuhi St Warkawa Restricted Building Work YES / NO

Building Plumbing
 Circle appropriate Type & Inspection Other

Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name

Notes All Bracing fixed as per consent. Diagram (if necessary)
10mm walls, 13mm Ceilings
Aqualine in bathrooms

OK to continue

Roof as now been fixed off correctly

Photo's Taken - Nos. saved / scanned? Y / N

Site instruction issued

Confirmation of person on site Result: Pass Fail

Name LBP No.

Your next inspection will be End
(Guidance notes for inspection on the rear of this sheet)

Agreed, John Dean Sign [Signature]

Officer Name Craig White Sign [Signature]

Information entered into data base Initial Date 1/1/14

WEATHERTIGHTNESS / PRELINE / POSTLINE

Date 29-10-14 BCA 140363 Inspection No. 8
 Time 9-00 Documents on site YES/ NO
 Owner Name O'Keefe Project Description New Dwg
 Site Address 12 Matuh. St Warkar Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

Applies to all inspections

Sighted previous inspection notes	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Conforms with approved drawings	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Confirm Additional information/amended plan	<input type="radio"/> Y	<input type="radio"/> N	<input checked="" type="radio"/> NA
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WEATHERTIGHTNESS

Cladding selection complies with BC?	P	F	NA	Roof material complies with BC?	P	F	NA	Sheets fixed to manufacturers	P	F	NA
Roof fixing complies	P	F	NA	Fixings appropriate for durability?	P	F	NA	Sheet layout	P	F	NA
Ridge/hip flashings in place	P	F	NA	Roof/wall junctions flashed	P	F	NA	Control joints where appropriate	P	F	NA
Penetrations correctly flashed	P	F	NA	Fixings appropriate for bracing elements	P	F	NA	Flashings in place	P	F	NA
Clearance provided for fascia & spouting	P	F	NA	Ground clearances achieved	P	F	NA	Clearance off deck surface	P	F	NA
Flashings/wraps in place, parapets/barriers	P	F	NA	Glazing - human impact	P	F	NA	Truss/Rafter fixings	P	F	NA

PRELINE

Max moisture Content	P	F	NA	Insulation R Value	P	F	NA	Bracing connections	P	F	NA
Ventilation to rooms	P	F	NA	Top plate connection	P	F	NA	Air seals	P	F	NA
Timber treatment	P	F	NA	Ceiling batten spacing	P	F	NA	Bottom plate fixings	P	F	NA
Lintel/beam size & fixing	P	F	NA	Stud spacing	P	F	NA		P	F	NA
Plumber Name				TPR line	P	F	NA	Waste pipe size & test	P	F	NA
Soil pipe size and test	P	F	NA	Inbuilt S/W pipes tested	P	F	NA	Floor wastes	P	F	NA
Pipes fixed/supported	P	F	NA	Vents terminated	P	F	NA	Shut off valves	P	F	NA
System: AS3500, G13, Other	P	F	NA	Pressure Test	P	F	NA	Fire wraps and collars	P	F	NA

POSTLINE

Sheet bracing	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Wet area substrate system	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Sheet fixings	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Penetrations sleeved	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA		<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Fire/Acoustic separation	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

Officer Name: [Signature] Sign: Date: 29, 10, 14

SCOPE OF INSPECTION SHEET

Date 15-10-14 BCA 140363 Inspection No. 7

Time 10-00 Documents on site YES / NO

Owner Name O'Keefe Project Description New Dwg

Site Address 12 MATUHI ST WAIKANA Restricted Building Work YES / NO

Building Plumbing

Circle appropriate Type & Inspection Other

Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name

Notes Exterior all weathertight Diagram (if necessary)
Bottom plate bracing all
complete
Rondo ceiling battens
R3-2 ceiling R2-2 wall insulation
Moisture 18% Windows Air sealed
OK to continue

Photo's Taken - Nos. saved / scanned? Y / N

Site instruction issued

* Roof requires more fixings (see pg 12)

Confirmation of person on site

Result: Pass Fail

Name LBP No.

Your next inspection will be Post line
(Guidance notes for inspection on the rear of this sheet)

Agreed John O'Keefe Sign [Signature]
(Print Name)

Officer Name Craig Watson Sign [Signature]

Information entered into data base Initial Date 1/1/14

WEATHERTIGHTNESS / PRELINE / POSTLINE

Date 15-10-14 BCA 140363 Inspection No. 7

Time 10:00 Documents on site YES / NO (YES)

Owner Name O'Keefe Project Description New Dwg

Site Address 12 MATUHI ST, WAIKANA Restricted Building Work YES / NO (YES)

All inspections are carried out with strict reference to the building consent granted.
P = Pass F = Fail NA = Non-Applicable
 Inspection decisions are based on the extent of work inspected at the time of inspection.
 Please refer to the related scope sheet for definition of the inspections extent.

Applies to all inspections

Sighted previous inspection notes	<u>(Y)</u>	N	NA	Conforms with approved drawings	<u>(Y)</u>	N	NA	Confirm Additional information/amended plan	Y	N	<u>(NA)</u>
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WEATHERTIGHTNESS

Cladding selection complies with BC?	<u>(P)</u>	F	NA	Roof material complies with BC?	<u>(P)</u>	F	NA	Sheets fixed to manufacturers	P	F	<u>(NA)</u>
Roof fixing complies	P	<u>(F)</u>	NA	Fixings appropriate for durability?	<u>(P)</u>	F	NA	Sheet layout	P	F	<u>(NA)</u>
Ridge/hip flashings in place	<u>(P)</u>	F	NA	Roof/wall junctions flashed	<u>(P)</u>	F	NA	Control joints where appropriate	P	F	<u>(NA)</u>
Penetrations correctly flashed	<u>(P)</u>	F	NA	Fixings appropriate for bracing elements	<u>(P)</u>	F	NA	Flashings in place	<u>(P)</u>	F	NA
Clearance provided for fascia & spouting	<u>(P)</u>	F	NA	Ground clearances achieved	<u>(P)</u>	F	NA	Clearance off deck surface	P	F	<u>(NA)</u>
Flashings/wraps in place, parapets/barriers	<u>(P)</u>	F	NA	Glazing - human impact	<u>(P)</u>	F	NA	Truss/Rafter fixings	<u>(P)</u>	F	NA

PRELINE

Max moisture Content <u>18</u> %	<u>(P)</u>	F	NA	Insulation R Value <u>2-3</u>	<u>(P)</u>	F	NA	Bracing connections	<u>(P)</u>	F	NA
Ventilation to rooms	<u>(P)</u>	F	NA	Top plate connection	<u>(P)</u>	F	NA	Air seals	<u>(P)</u>	F	NA
Timber treatment	<u>(P)</u>	F	NA	Ceiling batten spacing	<u>(P)</u>	F	NA	Bottom plate fixings	<u>(P)</u>	F	NA
Lintel/beam size & fixing	<u>(P)</u>	F	NA	Stud spacing	<u>(P)</u>	F	NA		P	F	NA
Plumber Name				TPR line	P	F	NA	Waste pipe size & test	P	F	NA
Soil pipe size and test	P	F	NA	Inbuilt S/W pipes tested	P	F	NA	Floor wastes	P	F	NA
Pipes fixed/supported	P	F	NA	Vents terminated	P	F	NA	Shut off valves	P	F	NA
System: AS3500, G13, Other	P	F	NA	Pressure Test	P	F	NA	Fire wraps and collars	P	F	NA

POSTLINE

Sheet bracing	P	F	NA	Wet area substrate system	P	F	NA	Sheet fixings	P	F	NA
Penetrations sleeved	P	F	NA		P	F	NA	Fire/Acoustic separation	P	F	NA

Officer Name: Craig Watson Sign: CW Date: 15, 10, 14

SCOPE OF INSPECTION SHEET

Date 19/9/14 BCA 140 363 Inspection No. 6
 Time 10.00 Documents on site YES / NO
 Owner Name _____ Project Description NEW DWG
 Site Address 12 MATUITI ST Restricted Building Work YES / NO

Building Plumbing Circle appropriate Type & Inspection Other _____
 Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name _____

Notes _____ Diagram (if necessary) _____

15mm x 20mm Duct Sewer RA
15mm Pipe to HOSE TAPS & WC
WATER TEST @ 1500 KPA
20mm COPPER GAS MAIN

Photo's Taken - Nos. _____ saved / scanned? Y / N

Site instruction issued _____

Confirmation of person on site Result: Pass Fail
 Name Steve H. LBP No. 04679

Your next inspection will be _____
 (Guidance notes for inspection on the rear of this sheet)
 Agreed, Steve H. Sign _____
 Officer Name Alan Sign _____

Information entered into data base Initial _____ Date 1/1/14

WEATHERTIGHTNESS / PRELINE / POSTLINE

Date 19/9/14 BCA 110 36 3 Inspection No. 6

Time 10.00 Documents on site YES / NO

Owner Name 12 MATUHI ST Project Description New Deck

Site Address 12 MATUHI ST Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

Applies to all inspections

Sighted previous inspection notes	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Conforms with approved drawings	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Confirm Additional information/amended plan	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA
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WEATHERTIGHTNESS

Cladding selection complies with BC?	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Roof material complies with BC?	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Sheets fixed to manufacturers	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Roof fixing complies	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Fixings appropriate for durability?	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Sheet layout	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Ridge/hip flashings in place	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Roof/wall junctions flashed	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Control joints where appropriate	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Penetrations correctly flashed	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Fixings appropriate for bracing elements	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Flashings in place	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Clearance provided for fascia & spouting	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Ground clearances achieved	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Clearance off deck surface	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Flashings/wraps in place, parapets/barriers	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Glazing - human impact	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Truss/Rafter fixings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

PRELINE

Max moisture Content	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Insulation R Value	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Bracing connections	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Ventilation to rooms	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Top plate connection	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Air seals	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Timber treatment	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Ceiling batten spacing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Bottom plate fixings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Lintel/beam size & fixing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Stud spacing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA		<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Plumber Name				TPR line	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA	Waste pipe size & test	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Soil pipe size and test	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Inbuilt S/W pipes tested	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA	Floor wastes	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA
Pipes fixed/supported	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Vents terminated	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Shut off valves	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA
System: AS3500, G13, Other	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Pressure Test	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Fire wraps and collars	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA

POSTLINE

Sheet bracing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Wet area substrate system	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Sheet fixings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Penetrations sleeved	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA		<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Fire/Acoustic separation	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

Officer Name: [Signature] Sign: [Signature] Date: 19/9/14

SCOPE OF INSPECTION SHEET

Date 19/9/14 BCA 140363 Inspection No. 5
 Time 10:00 Documents on site YES / NO
 Owner Name _____ Project Description NEW DWG
 Site Address 12 MATYHI ST Restricted Building Work YES / NO

Building Plumbing
 Circle appropriate Type & Inspection Other

Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name

Notes Diagram (if necessary)

Window Head Positions
FLASHING TAPE.
Corner Positions
Corner Crossover

Photo's Taken - Nos. saved / scanned? Y / N

Site instruction issued

Confirmation of person on site Result: Pass Fail

Name LBP No.

Your next inspection will be
 (Guidance notes for inspection on the rear of this sheet)

Agreed, John Reed Sign [Signature]
 (Print Name)
 Officer Name Silvan Sign [Signature]

Information entered into data base Initial Date 1/1/14

PRE WRAP / PRE CLAD

Date 19/9/14 BCA 140363 Inspection No. 5

Time 10:00 Documents on site YES / NO

Owner Name 12 MATIHI ST Project Description NEW DWG

Site Address 12 MATIHI ST Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

Applies to all inspections

Sighted previous inspection notes	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Conforms with approved drawings	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Confirm Additional information/amended plan	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA
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PRE WRAP

Cladding type identified	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Exterior sheet bracing & angle brace fixing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Bracing requirements	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Framing moisture meets cladding requirements%	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Bottom plate connections	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Purlin fixing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Stud spacing appropriate for cladding	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Building wrap type	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Decking substrate	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

PRE CLAD

Building wrap type	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Building wrap	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Head flashings	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Flexible sealing tape type	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Flexible sealing tape	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Sill flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Deck membrane type	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Deck membrane fixed in accordance with Spec	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Back flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Saddle flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Internal/external corner flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Jamb flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Capillary clearances	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Flashing of penetrations	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Ground/deck cladding clearance	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

CAVITY SYSTEM

Additional strapping to wrap	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Batten timber treatment	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Cavity closers	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Battens in place	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Battens structural fixing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Cavity spacers	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Cavity spacers size & slope	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Reinforcing fixed in place (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Proprietary self spacing mesh	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Mesh spacers (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Proprietary control joints (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Rigid backing type (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Fixings (galvanized or stainless) (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Waterproofing to slab-edge	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA		<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

Officer Name: Alan Sign: _____ Date: 19/9/14

SCOPE OF INSPECTION SHEET

Date 5-9-14 BCA 140363 Inspection No. 4

Time Documents on site YES / NO

Owner Name O'Keefe Project Description New dwg

Site Address 12 Matuki St Restricted Building Work YES / NO

Building Plumbing Circle appropriate Type & Inspection Other

Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name

Notes * tekton wrap Diagram (if necessary)
* thelma kraft tape
* waz bar
* H3.1 cavity battens
* cavity chases
* ali box and w flashings
* Stud replaced and int truss connections checked as previous inspection.
* headflashing not part of inspection

Photo's Taken - Nos. saved / scanned? Y / N

Site instruction issued * check axon back flashing
* check girders truss connections

Confirmation of person on site Result: Pass Fail
 Name LBP No.

Your next inspection will be headflashing
 (Guidance notes for inspection on the rear of this sheet)
 Agreed, John Rend Sign
 Officer Name Andrew Sign [Signature]

Information entered into data base Initial Date 6/1/14

PRE WRAP / PRE CLAD

Date 5-9-14 BCA 140363 Inspection No. 4

Time Documents on site YES / NO

Owner Name O'Keefe Project Description New DWG

Site Address 12 Matukahi St Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

Applies to all inspections

Sighted previous inspection notes	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Conforms with approved drawings	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Confirm Additional information/amended plan	<input type="radio"/> Y	<input checked="" type="radio"/> N	<input type="radio"/> NA
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PRE WRAP

Cladding type identified	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Exterior sheet bracing & angle brace fixing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Bracing requirements	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Framing moisture meets cladding requirements%	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Bottom plate connections	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Purlin fixing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Stud spacing appropriate for cladding	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Building wrap type	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Decking substrate	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

PRE CLAD

Building wrap type <u>tekton</u>				Building wrap	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Head flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Flexible sealing tape type <u>thermakraft</u>				Flexible sealing tape	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Sill flashings	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Deck membrane type <u>Na</u>				Deck membrane fixed in accordance with Spec	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA	Back flashings	<input type="radio"/> P	<input checked="" type="radio"/> F	<input type="radio"/> NA
Saddle flashings	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA	Internal/external corner flashings	<input checked="" type="radio"/> P	<input checked="" type="radio"/> F	<input type="radio"/> NA	Jamb flashings	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Capillary clearances	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Flashing of penetrations	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Ground/ deck cladding clearance	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

CAVITY SYSTEM

Additional strapping to wrap	<input checked="" type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA	Batten timber treatment	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Cavity closers	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Battens in place	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Battens structural fixing	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA	Cavity spacers	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Cavity spacers size & slope	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Reinforcing fixed in place (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA	Proprietary self spacing mesh	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA
Mesh spacers (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA	Proprietary control joints (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA	Rigid backing type (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA
Fixings (galvanized or stainless) (stucco)	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Waterproofing to slab-edge	<input type="radio"/> P	<input type="radio"/> F	<input checked="" type="radio"/> NA		<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

Officer Name: Andrea

Sign: [Signature]

Date: 5, 9, 14

SCOPE OF INSPECTION SHEET

Date 26/8/14 BCA 140363 Inspection No. 3
 Time 3:30 Documents on site YES / NO
 Owner Name O'KEEFE Project Description new Deck
 Site Address 12 MATUHI ST Restricted Building Work YES / NO

Building Plumbing Circle appropriate Type & Inspection Other
 Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a Name

Notes SIGHTED TRUSS PLAN AN Diagram (if necessary)
EXTERNAL FIXINGS IN PLACE AS PER
PLAN.
PILING IN AT 900mm CENTRES SCREENS
+ NAILS, ROOF STRAP BEGG & 5in
PLACE.
STUDS AT 600mm CENTRES.
WATER'S STRAPPED TOP + BOTTOM
TOP PLATE TO STUD CONNECTED GAN
NAIL PLATE.
BOTTOM PLATE'S EXTERNAL FIXES AT
900mm.

Photo's Taken - Nos. saved / scanned? Y / N
 Site instruction issued - TO REPLACE CUT STUD ON GUAGE SERVICE
WALL AS DISCUSSED NEEDS TWO NEW STUDS.

Confirmation of person on site Result: Pass Fail
 Name Bondel LBP No. 105910

Your next inspection will be Progress with internal truss fixings
 (Guidance notes for inspection on the rear of this sheet)
 Agreed, John Keard Sign [Signature]
 Officer Name [Signature] Sign [Signature]

Information entered into data base Initial Date 1/1/14

PRE WRAP / PRE CLAD

Date 26/8/14 BCA 140-73 Inspection No. 3

Time 3:30 Documents on site YES / NO

Owner Name P. K... .. Project Description new house

Site Address 16 M... .. ST Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

Applies to all inspections

Sighted previous inspection notes	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Conforms with approved drawings	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA	Confirm Additional information/amended plan	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> NA
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PRE WRAP

Cladding type identified	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Exterior sheet bracing & angle brace fixing	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Bracing requirements	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Framing moisture meets cladding requirements%	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Bottom plate connections	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Purlin fixing	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Stud spacing appropriate for cladding	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Building wrap type	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Decking substrate	<input checked="" type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

PRE CLAD

Building wrap type	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Building wrap	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Head flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Flexible sealing tape type	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Flexible sealing tape	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Sill flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Deck membrane type	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Deck membrane fixed in accordance with Spec	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Back flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Saddle flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Internal/external corner flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Jamb flashings	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Capillary clearances	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Flashing of penetrations	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Ground/deck cladding clearance	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

CAVITY SYSTEM

Additional strapping to wrap	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Batten timber treatment	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Cavity closers	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Battens in place	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Battens structural fixing	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Cavity spacers	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Cavity spacers size & slope	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Reinforcing fixed in place (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Proprietary self spacing mesh	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Mesh spacers (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Proprietary control joints (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Rigid backing type (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA
Fixings (galvanized or stainless) (stucco)	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA	Waterproofing to slab-edge	<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA		<input type="radio"/> P	<input type="radio"/> F	<input type="radio"/> NA

Officer Name: Sign:  Date: 26/8/14

SCOPE OF INSPECTION SHEET

Date 7-8-14 BCA 140363 Inspection No. 2
 Time 4:00 Documents on site YES / NO
 Owner Name D'Keeffe Project Description New Deck
 Site Address 12 MATUHI ST WAIKANA Restricted Building Work YES / NO

Building Plumbing
 Circle appropriate Type & Inspection Other

Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name JSP

Notes Site set out as plans Diagram (if necessary)
off boundary pegs + string lines
Poly Vapor Barriers on sand
HD12, 3 bars around perimeter
HD 12 thickings, all as per
engineers design
SG62 mesh with correct laps
Engineer has been on site
& left notes -

Photo's Taken - Nos. saved / scanned? Y / N

Site instruction issued

* PS4 + Notes Req'd for CCC

Confirmation of person on site Result: Pass Fail

Name LBP No.

Your next inspection will be Pre Wrap
(Guidance notes for inspection on the rear of this sheet)

Agreed John Sign
(Print Name)
 Officer Name Craig Watson Sign

Information entered into data base Initial Date 1/1/14

SITE / FOUNDATIONS / PILES / PRE SLAB / SUBFLOOR / DRAINAGE

Date 7-8-14 BCA 140363 Inspection No. 2
 Time 4:00 Documents on site YES / NO
 Owner Name D. Keefe Project Description New Deck
 Site Address 12 MAIHU ST WAIKANA Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

SITE

Conforms with approved drawings	<u>Y</u>	N	NA	Checked driveway	Y	N	NA	Engineer supervision required	<u>Y</u>	N	NA
Scope of Resource consent granted?	Y	N	NA	Checked position off relevant boundaries and datum height	Y	N	NA		Y	N	NA
Expert Opinion (Producer statement) required	Y	N	NA	Name of Surveyor				Name of Engineer <u>ISP</u>			
				Company				Company			

FOUNDATIONS

PILES

SUBFLOOR

Footing Depth	<u>P</u>	F	NA	Pile size	P	F	NA	Pile/Bearer/Joist Fixings	P	F	NA
Good bearing (NZS 3604)	<u>P</u>	F	NA	Pile layout is to plan	P	F	NA	Notching, Holes, etc	P	F	NA
Reinforcing	<u>P</u>	F	NA	Special piles - point load	P	F	NA	Solid Blocking	P	F	NA
Siting	<u>P</u>	F	NA	Timber Treatment	P	F	NA	Joists	P	F	NA
Sub-floor vents	P	F	<u>NA</u>	Hole depth	P	F	NA	Beams/Bearers	P	F	NA

PRE SLAB

Rebate for brick veneer	P	F	<u>NA</u>	Sand blinding	<u>P</u>	F	NA	Steel reinforcing	<u>P</u>	F	NA
Ground clearance	<u>P</u>	F	NA	Slab thickenings	<u>P</u>	F	NA	Bar chairs	<u>P</u>	F	NA
Concrete Cover	<u>P</u>	F	NA	Vapour barrier (DPC)	<u>P</u>	F	NA	DPC penetrations taped	<u>P</u>	F	NA
Driveway s/w control	P	F	<u>NA</u>	Bottom plate fixings	P	F	<u>NA</u>	Minimum Floor Level	<u>P</u>	F	NA
Secondary flow path	P	F	NA	TPR line	P	F	NA	Wastes and drains - size / fall	P	F	NA
Pipe material	P	F	NA	Plumbing layout	P	F	NA	Test - Water / Air	P	F	NA
Pipe protection	P	F	NA	Pipes supported	P	F	NA	Visual leak check	P	F	NA

DRAINAGE

Pipe diameter	P	F	NA	Connections/Angles	P	F	NA	Holding water	P	F	NA
Bedding material	P	F	NA	Branch length	P	F	NA	Terminal vent	P	F	NA
Gully trap(s)	P	F	NA	Direction/Fall	P	F	NA	LBP/Registration No:			

Officer Name: Craig Watson Sign: [Signature] Date: 8/8/14

SCOPE OF INSPECTION SHEET

Date 4/8/14 BCA 140363 Inspection No. 1
 Time 1:50 Documents on site YES/ NO
 Owner Name O'KEEFE Project Description New Bus
 Site Address 12 MATUHI ST Restricted Building Work YES/ NO

Building Plumbing Circle appropriate Type & Inspection Other

Site Found Piles PreSlab Subfloor Drainage PreWrap PreClad Weathertight PreLine PostLine Block Brick Ret.Wall Final

Engineer Supervision Yes No n/a - Name

Notes 100mm PVC MAIN THROUGH Diagram (if necessary)
SLAB IN FOR AIR FIXTURES.
GOOD RUN OUT OF SLAB.
TESTED + HOLDING.
USED 40mm FOR BATH TO GULLY.
PIPE PROTECTION AS PER RIBRAFT
DESIGN.
ALSO 100mm THROUGH AT FAR END
FOR CLEANING POINT.

Photo's Taken - Nos. saved / scanned? Y / N

Site instruction issued

Confirmation of person on site Result: Pass Fail

Name Purnima Prasad LBP No.
Henderson Plumbing +
BATHROOMS

Your next inspection will be SITE FOUNDS + SURV.
(Guidance notes for inspection on the rear of this sheet)

Agreed, Jason Carter Sign [Signature]
(Print Name)
 Officer Name [Signature] Sign [Signature]

Information entered into data base Initial Date 1/1/14

SITE / FOUNDATIONS / PILES / PRE SLAB / SUBFLOOR / DRAINAGE

Date 4/8/14 BCA 140 63 Inspection No.

Time 1:50 Documents on site YES / NO

Owner Name D. K... Project Description New Dug

Site Address 12 Main St Restricted Building Work YES / NO

All inspections are carried out with strict reference to the building consent granted.

P = Pass F = Fail NA = Non-Applicable

Inspection decisions are based on the extent of work inspected at the time of inspection.

Please refer to the related scope sheet for definition of the inspections extent.

SITE											
Conforms with approved drawings	Y	N	NA	Checked driveway	Y	N	NA	Engineer supervision required	Y	N	NA
Scope of Resource consent granted?	Y	N	NA	Checked position off relevant boundaries and datum height	Y	N	NA		Y	N	NA
Expert Opinion (Producer statement) required	Y	N	NA	Name of Surveyor Company				Name of Engineer Company			
FOUNDATIONS				PILES				SUBFLOOR			
Footing Depth	P	F	NA	Pile size	P	F	NA	Pile/Bearer/Joist Fixings	P	F	NA
Good bearing (NZS 3604)	P	F	NA	Pile layout is to plan	P	F	NA	Notching, Holes, etc	P	F	NA
Reinforcing	P	F	NA	Special piles - point load	P	F	NA	Solid Blocking	P	F	NA
Siting	P	F	NA	Timber Treatment	P	F	NA	Joists	P	F	NA
Sub-floor vents	P	F	NA	Hole depth	P	F	NA	Beams/Bearers	P	F	NA
PRE SLAB											
Rebate for brick veneer	P	F	NA	Sand blinding	P	F	NA	Steel reinforcing	P	F	NA
Ground clearance	P	F	NA	Slab thickenings	P	F	NA	Bar chairs	P	F	NA
Concrete Cover	P	F	NA	Vapour barrier (DPC)	P	F	NA	DPC penetrations taped	P	F	NA
Driveway s/w control	P	F	NA	Bottom plate fixings	P	F	NA	Minimum Floor Level	P	F	NA
Secondary flow path	P	F	NA	TPR line	P	F	NA	Wastes and drains - size / fall	<input checked="" type="radio"/>	F	NA
Pipe material	<input checked="" type="radio"/>	F	NA	Plumbing layout	<input checked="" type="radio"/>	F	NA	Test - Water /	<input checked="" type="radio"/>	F	NA
Pipe protection	<input checked="" type="radio"/>	F	NA	Pipes supported	<input checked="" type="radio"/>	F	NA	Visual leak check	<input checked="" type="radio"/>	F	NA
DRAINAGE											
Pipe diameter	P	F	NA	Connections/Angles	P	F	NA	Holding water	P	F	NA
Bedding material	P	F	NA	Branch length	P	F	NA	Terminal vent	P	F	NA
Gully trap(s)	P	F	NA	Direction/Fall	P	F	NA	LBP/Registration No:			

Officer Name: Sign:  Date: 4/8/14

Site Inspection Report - New Building Consent Applications

Date: 29/5/14	BC Application No: 140363
Lot 5	DP 413448
Site Address: 12 MATOHU ST.	
Building Project: New Dwelling	

Check NCS status is currently "To Site Inspection"

Item to be checked	Decision	Record any relevant information	Action required
Contours match application?	Yes/No		
Datum point identified?	Yes/No		
Boundaries identified?	Yes/No	NOT AN SURVEY PEGS FOUND.	
Check ground conditions?	Yes/No	LEVEL SITE ABOVE ROAD. SOLID AT APPROX 250m APPEARS SATISFACTORY	
Check f/path, kerb & channel, grass berm, note existence/damage.	Yes/No	GOOD CONDITION. STORMWATER KERB OUTLET.	
Vehicle entrance crossing installed (describe condition)	Yes/No		
Photos taken? (Save & link to NCS)	Yes/No		
Dogs or other hazards on property?	Yes/No		
Is there a requirement for further foundation investigation e.g Engineers design	Yes/No		Referred to Approvals T/L Yes/No

Record all decisions on compliance and reasons for those decisions. Circle Yes or No in each case.

Note: if there is a requirement for further information or some areas which do not appear to comply refer file to Team Leader Consent Approvals for action.

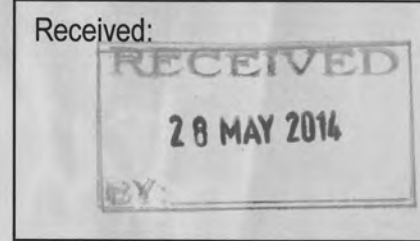
Inspecting Officer: Name: GARTH MCK	Signature: 	Date: 29/5/14
--	---	---------------

Unless further foundation information required, change NCS status to "To Plumbing & Drainage" and place file in P&D shelf area for Approvals. If further information is required, then Status change to "To Senior Building Inspector" and hand to Team Leader Consent Approvals for action.

APPLICATION WORKFLOW COVERSHEET (Blue Folder)

Department	For Referral	Comments	Approving Officer / Date
Site Inspection	✓	Refer to Form 241 for completion of Site Inspection & sign off this form when completed.	<i>Garrett Mc</i> 29/5/14
Resource Consents (refer PIM Sheet)	✓		
Plumbing and Drainage	✓		<i>[Signature]</i> 11/6/2014
Building	✓		AA. 19/06/14
Fire Design			
Compliance Schedule			
Environmental Health			
Other.....			
Attachments: <input type="checkbox"/> PIM <input type="checkbox"/> DIF <input type="checkbox"/> CS <input type="checkbox"/> Sec 37 Other: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		NOTES: <div style="border: 1px solid black; width: 100%; height: 100%; margin-top: 10px;"></div>	

Building Consent No.	140363
Building Project	New Dwelling
Location (Site Address)	12 matuhi st, waikanae
Building Category	Circle appropriate category 0 (1) 2 3



RBW

Note: A signature confirms that the application contains sufficient information to enable compliance with the building code to be assessed.

	Name and signature	Date
# Note: Checked, date stamped and initialled by TO/BCO. Select and circle appropriate category above & identify allocation to appropriate technical groups and if required to go to "site inspection" BC1	<i>[Signature]</i>	28/05/14
Payment taken and receipted (details entered inside this cover sheet) by CSO BC1		28.05.14
Data entered and invoiced by CSO BC1	Angie Stowe	28/5/14
Pages numbered by CSO BC1	Stowe	28/05/14
BC Application and documentation scanned, checked & status update by CSO BC1	Angie	28/5/14
BC Application signed over to BC BC1	Angie	28/5/14
Application reviewed by Technical Officers who sign off at back of this form BC2 & BC5	Simon Copp Atheniwell	11/6/2014 19 June 2014
Once Technical review complete, passed to CS for Plan Production and Invoicing BC3	Atheniwell	19 June 2014
CSO checks data entry input, including required inspections BC3		
BC, plans and other appropriate paperwork produced by CSO BC3	} <i>Yimjun</i>	20.06.14
BC, Approved plans and appropriate paperwork sent to applicant or agent with receipt by CSO BC3		
Inspection envelope prepared by CSO with endorsed plans and other appropriate paperwork and filed to cabinet. BC3		

CONSENT DATA INPUT REQUIREMENTS

✓ Required Inspections	✓ Required Inspections	✓ Required Inspections	✓ Required Inspections
✓ Foundation/Piles	✓ Drainage	✓ Pre-lining (Plumbing)	✓ Final (Dwelling)
Block	✓ Pre-Wrap	✓ Wet Areas – Membrane	Retaining Wall
✓ Pre-Slab (Plumbing)	✓ Pre-Clad	✓ Post Lining	Final (Commercial)
✓ Pre-Slab (Building)	✓ Weathertightness	Brick Veneer	Chimney (Inbuilt Fire)
Sub-Floor	✓ Pre-lining (Building)	Retaining Wall	

Office use ✓	Office use ✓
32 ✓ Lapse and cancellation after 12mths of consent	23A Second hand wood burner certified
2 ✓ Engineer design specific components	25 ✓ Contractor to leave site clean and clear
3 Foundations to solid bearing of 200mm	30 To comply with Food Hygiene Regulations 1974
4 NZS3604 as acceptable solution in terms of NZ Building Code	31 As in CCZ, all fixings need to be stainless steel
6 Not approved as Habitable Room	33 Approval only given for relocation purposes
9 ✓ Note and comply with all endorsements on approved plans	34 If cladding to have pre-finished colour coating, to be appropriate for coastal conditions
10 ✓ Names and Registration of plumber and drain-layer required	38 Window sashes on upper levels less than 760mm above floor to have stays fixed
11 ✓ Concealed soil and TV pipes and gas flues only allowed in ducts or minimum framed	39 Construction of playground to comply with NZS5828
12 ✓ Hot & Cold water pipes tested to 1500kPa	40 Fencing, gates, doors directly leading to swimming pool to comply with the Fencing of Swimming Pools Act 1987
13 Roof stormwater to be connected to existing	43 Textured systems should be applied by licensed, trained applicators – supply warranty
15 ✓ Owner/builder to ensure prop foundation height will allow satisfactory connection	44 Exterior cladding system to be completed and inspected prior to internal lining
21 Minimum FFL to comply with NZS3604	
23 Installation of solid fuel appliance (wood burner) comply and secured	

Act Ref ✓	Standard Consent Conditions	Comment
37	Resource Consent has not yet been obtained	
72 - 73	Land subject to natural hazard	
75-80	Construction on two or more allotments	

Non-Standard Addenda

Yes/No **NO** Compliance Schedule

Yes/No Office - please see additional consent data comments on next page

Attach Receipt	
✓	This project contains elements specifically designed by an engineer. The Owner/Builder is required to ensure the Engineer inspects the work and provides KCDC with written evidence of the inspections.
	The attached fire report constitutes an essential part of this Building Consent and must be read and fully implemented on site - refer to the fire report for full details that are not necessarily indicated on the architectural drawings. It is the responsibility of the owner and contractor to ensure the full fire precautions, systems and construction are incorporated in the building.
	Ground bearing must be reconfirmed on site following excavation but prior to placing of concrete and reinforcing. Soft ground may be encountered requiring engineer specific design.
	Other:

Attach receipt

Office Use Only: Fees	
Building Fee	\$ 2510.00
Sewer Connection	\$
Water Connection	\$
Vehicle Crossing Damage Deposit	\$
Code Compliance Administration	\$
Building Research levy	\$ 285.00
MBIE Building Levy	\$ 572.85
Compliance Schedule	\$
Digital Storage Fee	\$ 42.00
Certificate of Title Charge	\$ 30.00
Photocopying	\$
SUBTOTAL	\$
Less Fee Paid	\$
Total	\$ 3439.85
GST INCLUDED	\$

Application Fee	\$ 3439.85
Invoice No:	74011
Date:	28/5/14
Receipt No:	
Date:	
Fees Paid By:	
Building Consent Number:	140363
Date Issued:	28/5/14
AUTHORISATION FOR REFUND OF DEPOSITS	
Deposit Held	\$
Cost to Repair Damage Caused During Construction	\$
Total Balance to be Refunded	\$
Authority Number:	
Authorised:	
Date:	
Deposit Held	\$

A1 Homes Lower North
PO Box 80
Waikanae

20 June 2014

Dear Building Consent Applicant / Building Owner

Approval of Building Consent: 140363

Location: 12 Matuhi Street, Waikanae
Legal Description: LOT 5 DP 413488 C/T 466499
Description: New 4 bedroom residential, single level dwelling with attached double garage.

I am pleased to inform you that the above building consent application has been approved. The building consent documents have been issued and are enclosed.

Before starting any work please read ALL the building consent documents carefully and in full so that you as the owner understand the conditions under which the consent has been issued.

As the owner you are also responsible for the following:

- ensuring that building work starts within 12 months of the approval of the building consent and that work progresses at a reasonable pace.
- ensuring that all required inspections are completed and that a Code Compliance Certificate is obtained once the work has been completed – please be aware that before a Code Compliance Certificate is issued, the building work must comply with the Building Act 2004 and the Building Code as at the date of Consent.
- that no work with noisy equipment is to be carried out before 7.30 a.m. or after 6 p.m. Monday to Saturday. During the week there may be workers on site from 6.30 a.m. quietly preparing for work. Work with noisy equipment is not permitted on Sundays and public holidays.
- ensuring that no damage occurs to public property, for example footpaths or retaining structures. Should damage occur you will be required to pay for any repairs.
- ensuring that if you wish to make any changes to the approved building consent, then an amendment to the building consent will need to be lodged with us.

If you have any questions regarding your building consent or your responsibilities, please contact Kapiti Coast District Council on (04) 296 4700.

Building Consent
140363
Section 51, Building Act 2004

The building

Street address of building: 12 Matuhi Street, Waikanae
Legal description of land where building is located: LOT 5 DP 413488 C/T 466499
Valuation number: 1496020009
Building name:
Location of building within site/block number:
Level/unit number:

The owner

Name of owner: Mr Warren & Mrs Edite O`Keeffe
Contact person:
Mailing address: 39C Exchange Street, UPPER HUTT
Street address/registered office:
Email address: edandwarren@gmail.com
Website:
Phone numbers:
Landline: *Mobile:* 021 1164846
After hours: *Fax number:*
First point of contact for communications with the council/building consent authority:
Full Name: A1 Homes Lower North
Mailing Address: PO Box 80, Waikanae
Phones:: 021 752857: 902 6002
Email: alan.wood@a1homes.co.nz

Building work

The following building work is authorised by this building consent:
New 4 bedroom residential, single level dwelling with attached double garage.

Residential Dwelling

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.

Build conditions

Compliance schedule

A compliance schedule is not required for the building.

Attachments

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

- Building Consent Addendum
- List of required inspections
- Plans and specifications

Simon Corp
Signature

Building Control Officer
Position

On behalf of: KAPITI COAST DISTRICT COUNCIL

Date: 19/06/14

Addenda to Application

Application

A1 Homes Lower North PO Box 80 Waikanae	No.	140363
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Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages New 4 bedroom residential, single level dwelling with attached double garage.
Intended Life	Indefinite, but not less than 50 years
Intended Use	Residential Dwelling
Estimated Value	\$285,000
Location	12 Matuhi Street, Waikanae
Legal Description	LOT 5 DP 413488 C/T 466499
Valuation No.	1496020009

Designer: Nicola Davis - I Design Architecture Ltd 24 Part Street,
Tauranga : 027 5231310 / 07 578 7345

Contractor: ISP Consulting Engineers Ltd Kayel Building, Margaret Rd,
Raumati : 902 5750

General Requirements

- a) The Building Inspector is to be given 24 hours' notice before carrying out the following inspections:
1. Foundations
 2. Pre-slab
 3. Pre-slab
 4. Drainage
 5. Pre Wrap
 6. Pre Clad
 7. Weathertightness
 8. Preline
 9. Preline
 10. Wet Area - pre Application
 11. Wet Area - post application
 12. Postline
 13. Final Inspection
- b) To arrange for any of the above required inspections by Building Control Team, please contact the Call Centre on (04) 296 4700 between the hours of 8am and 5pm.

1. LAPSE AND CANCELLATION OF BUILDING CONSENT. A building consent shall lapse and be of no effect if the building work concerned has not been commenced within 12 calendar months after the date of issue. Or within such further period as the territorial authority allows.
2. The inspection of all specific design components of the building is the responsibility of the Design Engineer who is also required to supply a written report to Council.
3. Note and comply with endorsements on approved plans.
4. Names and registration numbers of plumber and drainlayer are required before work commences.
5. Concealed soil and TV pipes and gas flues are only permitted built into ducts or minimum 150mm framed walls or with the Phillips top plate connecting bracket.
6. Both hot and cold water pipes are to be tested to 1500 KPA pressure.
7. Owner/builder is to ensure that the proposed foundation height will allow a satisfactory drainage connection to the sewer main.
8. Contractor to leave site clear of all demolition materials and in a tidy state.
9. All work to be in accordance with RM050319 & Sec221 Consent Notice.

I have read the foregoing addenda to application, and the Owner/Builder/Authorised Person hereby agrees to comply with them.

**OWNER/BUILDER/
AUTHORISED PERSON**

Date: _____

The plumber is to contact Aldrin Abad with the attached water connection form (159) when the toby is to be changed/modified 042964731. The cost of this toby modification and any reinstatement work will be paid by the owner/agent when the invoice is sent out.

APPROVED BY
BUILDING
alisonh
OFFICER
19/06/2014

HIGH WIND ZONE

000001

www.A1homes.co.nz
Call 0800 A1homes
214663

Ensurs that the lid of the tank/float vaive is above the finished ground level.

RECEIVED
28 MAY 2014
BY: SH 1-27

Contents

- 01 Title Sheet
- 02 Site Plan
- 03 Drainage Plan
- 04 Bedding & Backfilling
- 05 Foundation Plan
- 06 Pipe Penetrations
- 07 Framing Plan
- 08 Floor Plan
- 09 North & East Elevations
- 10 South & West Elevations
- 11 Cross Section
- 12 Roof & Purlin Fixings
- 13 Purlin Fixings
- 14 Roof Plan
- 15 Trimming Studs
- 16 Bracing Plan
- 17 Electrical Plan
- 18 Foundation Details
- 19 Cladding Details
- 20 Cladding Details
- 21 Cladding Details
- 22 Roof Details
- 23 Roof Details
- 24 Roof Details
- 25 Joinery Details
- 26 Joinery Details
- 27 Wet Area Details

No Hose Taps or WC's to be on the town water supply permitted.

Water pipes running to w.c's and all hose taps are to be marked non potable for the entire length.

I recommend that the lid be secured of the water stoarge tank to prevent unauthorised access.

The water storage tank is to be topped up by a 600lt per day restricted supply from the second connection on the modified toby.No additional connections permitted.Two water mains required! one for house one for the tank.

Council's Manifold/meter box and base and lid are to be protected/reinstated if disturbed to original specification.The cost to reinstate any damage to Council's assets will be paid for by the contractor/property owner.

Ensure the tank used has water storage capacity of no less than 10,000lt.A producer statement from the tank manufacturer confirming this will need to be provided before a CCC can be issued.

Noisy Equipment

It is the responsibility of the owner to ensure that no work with noisy equipment shall be carried out before 7:30 a.m. or after 6 p.m. Monday to Saturday. During the week there may be workers on site from 6:30 a.m. quietly preparing for work. Work with noisy equipment is not permitted on Sundays or public Holidays.

BOUNDARY LINES

The Owner/Builder is responsible for clearly defining the site boundary lines and pegs.This may require a survey.
NOTE: established fences are not necessarily on the site boundary.

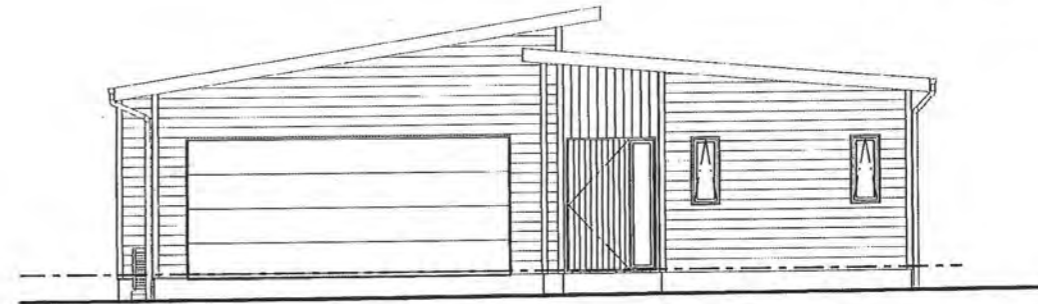
ENGINEERS DESIGN

This project contains elements specifically designed by an engineer. The owner/builder is required to ensure the engineer inspects the work and provides KCDC with written evidence of the inspection.

MAINTENANCE

It is the Owners responsibility to ensure ALL maintenance recommended by the Manufacturer's of the Roof, Exterior Cladding is carried out at the required intervals.

RBW



Proposed New Home For

Mr & Mrs O'Keeffe
12 Matuhi Street
Waikanae



You're just a few steps away from home

All documentation copyright to A1 Homes NZ



NZBC F5: Construction and Demolition Hazards
Acceptable Solution F5/AS1

1.0.1 The necessity for barriers will depend mainly on the site location. The need will be greater in areas with high levels of pedestrian traffic (i.e. in Central Business Districts), than in industrial or rural areas. Barriers are not necessary for domestic dwellings up to 2 storeys above ground level unless specific hazards exist.

At all work-sites hazard evaluation will take account of:

1. Pedestrian counts adjacent to the site.
2. Car parking adjacent to the site.
3. Location of neighbouring buildings.
4. Presence of neighbouring work-sites or recreation areas.
5. Proximity to schools or early childhood centres.
6. Proximity to housing.
7. The depth of a water hazard.
8. The period of time for which ponded water will be present.
9. The accessibility and 'visibility' of the site.

1.0.2 If a work-site is not completely enclosed, and unauthorised entry by children is likely, it is acceptable for specific hazards to be fenced only when workers are absent from the immediate vicinity.

1.1 Site fences and hoardings

1.1.1 Fences and hoardings shall extend at least 2.0 m in height from ground level on the side accessible to the public.

1.1.2 An acceptable fence may be constructed with galvanised chainlink netting having a maximum sized grid of 50 mm x 50 mm. Post spacing shall be a maximum of 2.5 m, and the gap between the bottom of the fence and ground no greater than 100 mm.

APPROVED BY
 PLANNING Stacey, All work to be in accordance with S221 and RM050319
 30/05/2014

000002



RECEIVED
 28 MAY 2014
 BY



Cautionary Notes:

BUILDING CONTRACTOR TO ASSESS SITE TO ENSURE DAYLIGHTING & BUILDING RESTRICTIONS ARE COMPLIED WITH. NO LIABILITY FOR ENCROACHMENT SHALL BE HELD BY DESIGNER IF SITE IS NOT SURVEYED BY A REGISTERED SURVEYOR PRIOR TO COMMENCEMENT OF FOUNDATIONS.

Construction Notes:

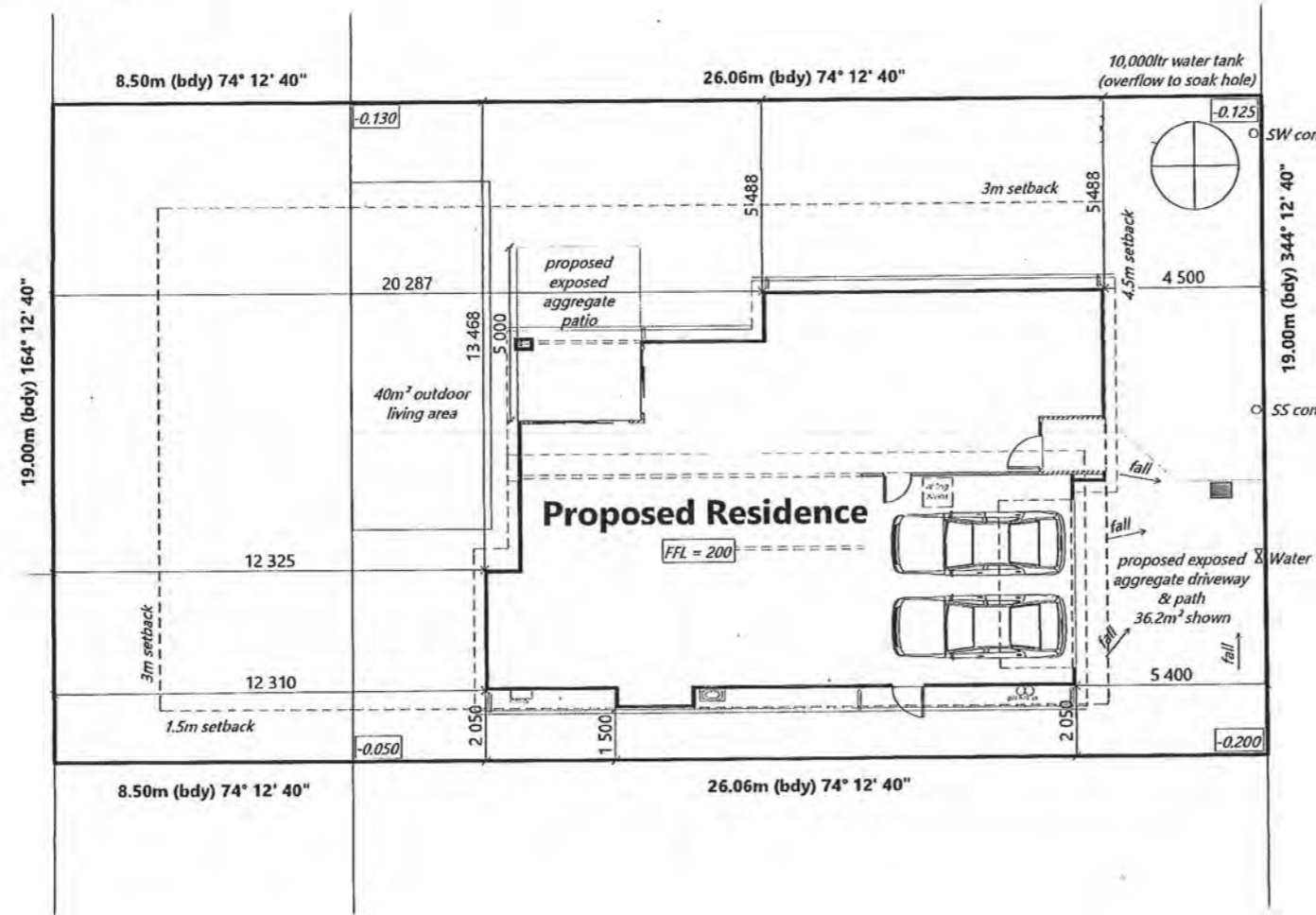
Before building is erected on site, all rubbish, noxious matter and organic matter shall be removed from the area to be covered by the building. Ensure final building platform & finished ground have an even fall away from building to ensure water not be allowed to accumulate in buildings subfloor. Any fill to be dry & approved by engineer & compacted down in accordance with NZS.3604.2011

Contractor to

- confirm ground has adequate bearing to comply with NZS 3604: 2011
- locate all service connections points on site prior to commencement of works. Check invert levels or pipes and manholes.
- confirm plumbing route and fixture positions on site prior to commencement of works.
- locate all electrical and water services on site.
- confirm on site all boundary bearings, lengths & peg locations on site prior to commencement of works, to ensure house position is correct.

Sediment Control:

- No building work will be started on this project until the construction of an approved stormwater outfall has been completed for this proposed Lot
- All erosion and sediment control structures are to be inspected and maintained daily
- Prevent any backfill or debris from ashing onto council or neighbouring properties
- All ground cover vegetation outside the immediate building area to be preserved during the building phase
- All erosion and sediment control measures are to be installed prior to commencement of earthworks
- Stockpiles of clay and materials are to be covered with impervious sheeting
- Roof water downpipes to be connected to the main stormwater system as soon as roof sheathing & spouting is installed



12 Matuhi Street

Datum - manhole lid = 0

Lot: 5
 DP: 413488
 Site Area: 656m²
 Floor Area: 171.13m²
 Site Coverage: 26.08% (max 40%)
 Maximum Building Ht: 8m
 Territorial Authority: Kapiti Coast District Council
 Planning Zone: Residential

Client Details: **UBAW318**
 Mr & Mrs O'Keeffe
 Address: 12 Matuhi Street
 Waikanae **BH170**

Site Plan
 Scale: 1:200
 Date: 20-May-14
 Sheet no: 2

Drawn: L.Janes Check: N.Davis
 Wnd: High Earthq: 3 Exposure: C Snow: N1-0.0kPa
 Call 0800 A1homes
 2 1 4 6 6 3
 www.A1homes.co.nz

All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. COPYRIGHT: All drawings remain the property of A1 Homes Ltd and are for use as described above and may not be used or re-produced in whole or part without written permission. Any site/construction works are not to commence until Building Consent becomes unconditional.

Finished Floor Level (FFL) shall be:
 a) For sites level with or above the road, no less than 150 mm above the road crown on at least one cross-section through the building and roadway
 b) For sites below the road, no less than 150 mm above the lowest point on the site boundary



A CERTIFYING PLUMBER/DRAINLAYER TO FILL OUT ATTACHED PRODUCER STATEMENT FORMS AND RETURN TO COUNCIL. ALSO PROVIDE NEAT ASBUILT DRAINAGE PLAN SHOWING SEWER STORMWATER AND WATER.

BC 1406363

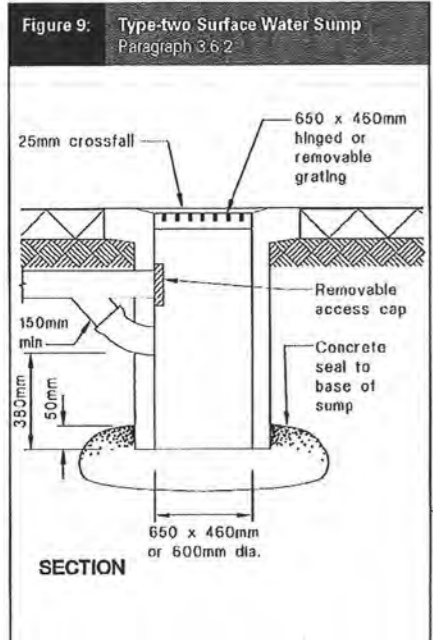
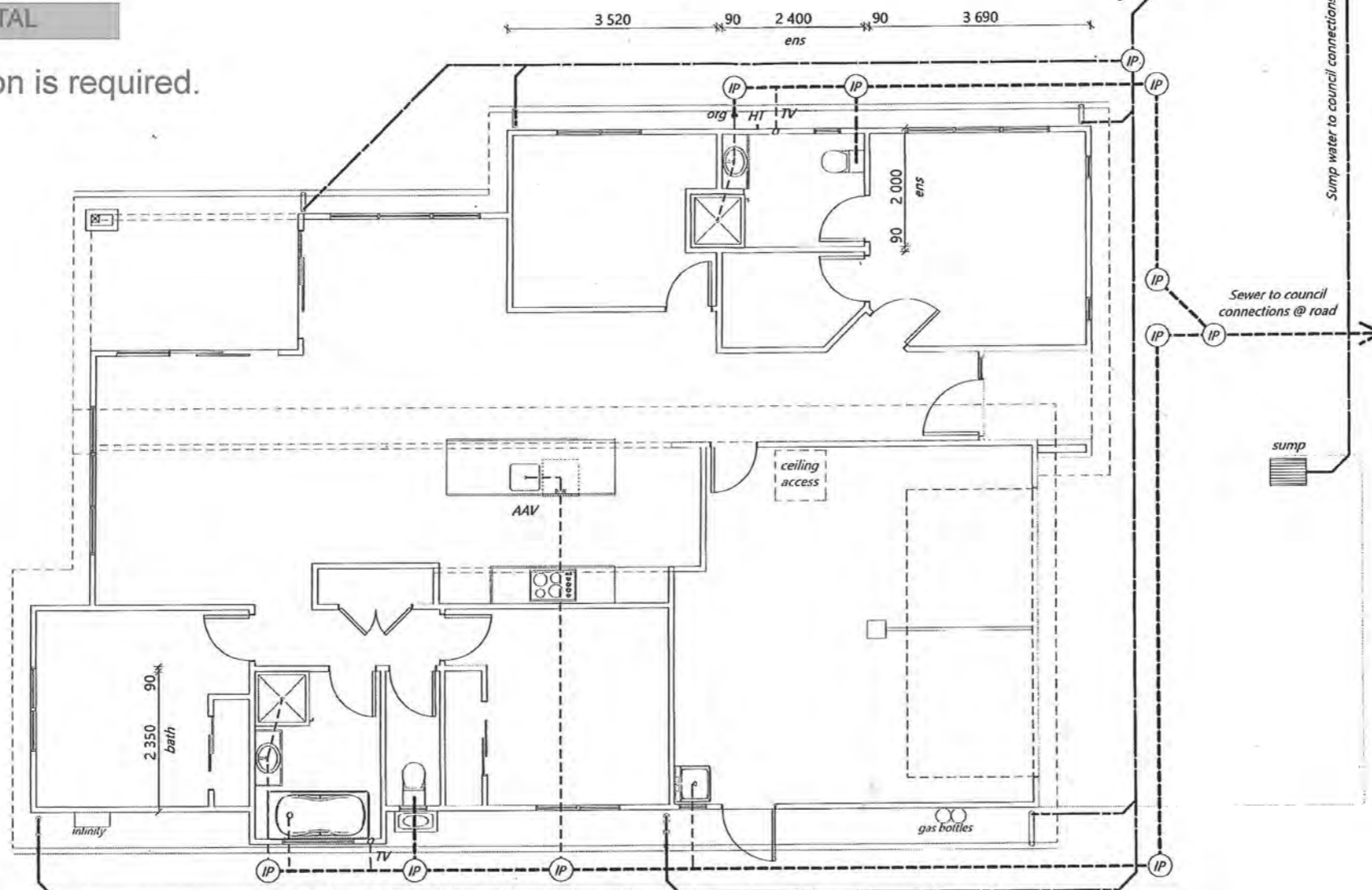
BUILDER TO ENSURE THAT PROPOSED FOUNDATION HEIGHT WILL ALLOW A SATISFACTORY DRAINAGE CONNECTION TO THE COUNCILS SEWER.

000003



BED DRAINS IN PEA METAL

A drainage inspection is required.



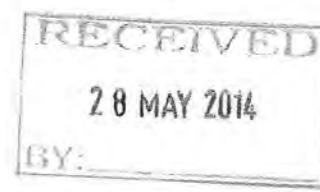
Plumbing Legend as per AS/NZS 3500

Symbol	Item	Symbol	Item
(IP)	Inspection point	---	DN100 PVC SS pipe, DN100 min water closets (ref specs) min 1:60 gradient
—	Downpipe	---	DN100 PVC SW pipe, min 1:120 gradient
HT	Hose Tap	---	min PVC fixture waste pipe sizes: DN40 basins, single head showers, baths, sinks, dishwasher & ldy tubs, DN50 multiple heads showers, DN65 unvented branch drains exceeding 2.5m long (max 5 fixture unit rating) DN65 to all wastes discharging directly into drain under slab min 1:40 gradient. 20mm HWC vent drain (copper)
Org	Overflow relief gully		
oTV	Terminal vent		
AAV	Air admittance valve		

Water supply pipe (from water tank or council mains) = DN20

Construction Notes:

Plumbing to AS/NZS:3500.2.2 (min 1:60 pipe gradient) by qualified tradesman.
Contractor to locate all service connections on site prior to earthworks confirm all boundary setbacks & restrictions comply with current regulations prior to commencement of foundations.
All waste pipes PVC. Sizes, fall, venting & discharge to be confirmed by NZ qualified plumber. Confirm positions of available services cabling etc on site prior to any excavation



Water supply:

Internal water pipes to Polybutylene. All pipework and pipes exposed to freezing to be lagged with closed cell foam

Fixture unit rating:

- Water Closet - 6 (x2)
 - Shower - 2 (x2)
 - Basin - 1 (x2)
 - Bath - 4
 - Dishwasher - 3
 - Kitchen sink - 3
 - Laundry tub - 5
- Total = 33 units

TABLE 3.5

SIZE AND RATING OF VENTS

Size of vent pipe DN	Fixture units discharging to drain	Vent rating
40	>1 ≤10	0.5
50	>10 ≤30	1
65	>30 ≤175	2
80	>175 ≤400	3
100	>400	6

Client Details: UBAW318
Mr & Mrs O'Keefe
Address: BH170
12 Matuhi Street
Waikanae

Drainage Plan

Scale: 1:100 Date: 20-May-14 Sheet no: 3
Rev:
Call 0800 A1homes 214663
www.A1homes.co.nz

Drawn: L.Janes Check: N.Davis
Wind: High Earthq: 3 Exposure: C Snow: N1-0.0kPa

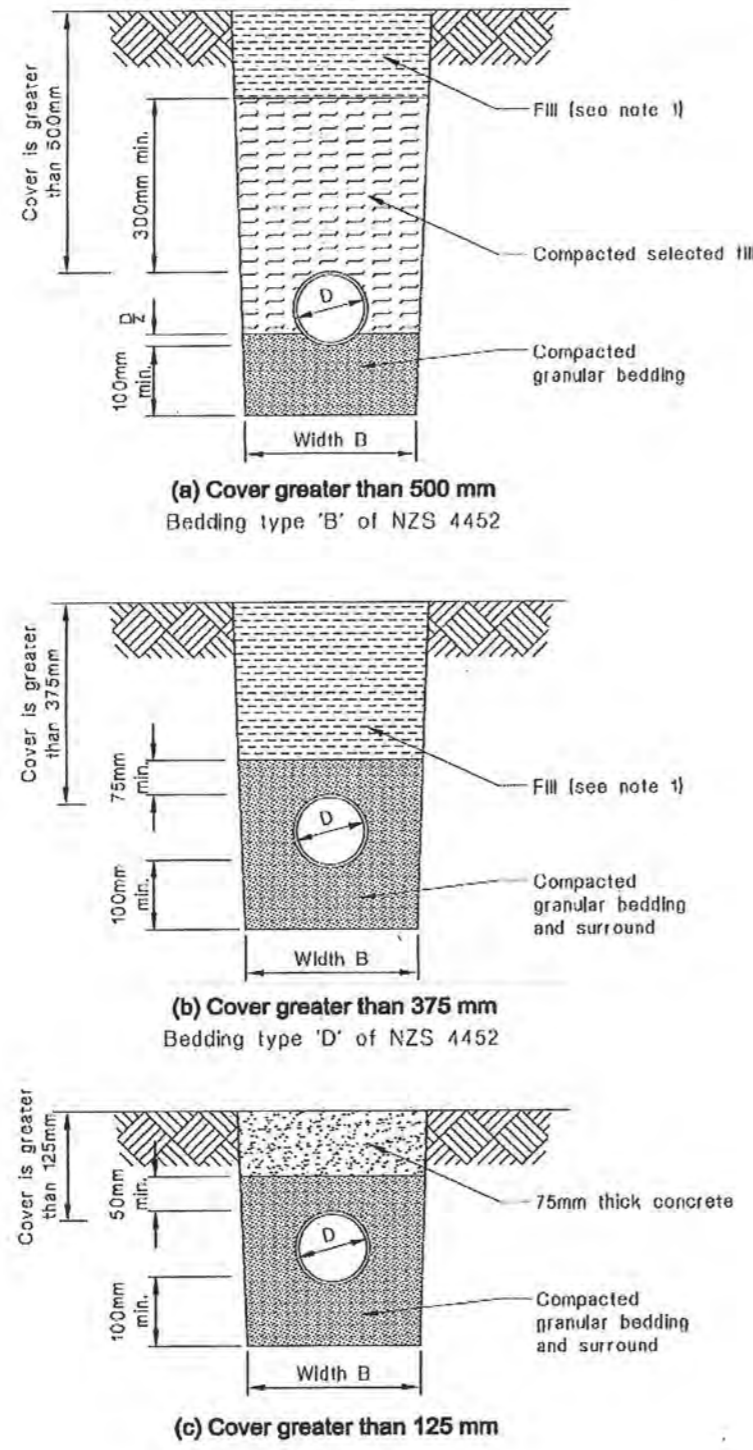
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Figure 13: Bedding and Backfilling
Paragraphs 3.9.2, 3.9.4 and 3.9.5

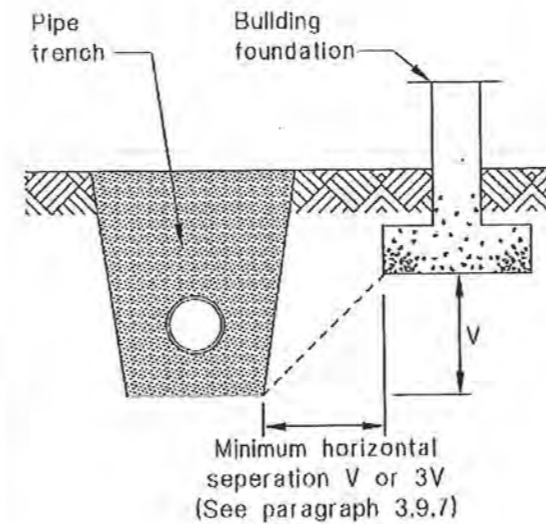


NOTE:
1. Fill shall be:
- Ordinary fill where drains are located below gardens and open country.
- Compacted selected fill where the drains are located below residential driveways and similar areas subjected to light traffic.

Proximity of trench to building:

3.9.7 Proximity of trench to building
For light timber frame and concrete masonry buildings founded on good ground and constructed in accordance with NZS 3604 or NZS 4229, pipe trenches which are open for no longer than 48 hours shall be located no closer than distance 'V' (see Figure 14) to the underside of any building foundation. Where the trench is to remain open for periods longer than 48 hours, the minimum horizontal separation shall increase to 3V in all ground except rock.

Figure 14: Relationship of Pipe Trench to Building Foundation
Paragraph 3.9.7



3.9 Bedding and backfilling
3.9.1 General
NZBC B1 requires all drains be constructed to withstand the combination and frequency of loads likely to be placed upon them without collapse, undue damage, undue deflection or undue vibration. In addition, adequate support needs to be provided to prevent gradients becoming less than those required as a result of:
a) Differential settlement, or
b) Deflection of an unsupported span.

3.9.2 Bedding and backfilling
Figure 13 gives acceptable solutions for the bedding and backfilling of the drainage pipes except where:
a) The trench is located within or above peat, or
b) Scouring of the trench is likely due to unstable soils, or
c) The horizontal separation between any building foundation and the underside of the pipe trench is less than that required by Paragraph 3.9.7, or
d) The cover H to the pipe is more than 2.5 m.

3.9.3 Trench slope
Where the slope of the trench is 1 in 8 or greater, anti-scour blocks shall be provided. These anti-scour blocks shall be:
a) Constructed from 150 mm thick concrete (17 MPa),
b) Keyed into the sides and floor of the trench by 150 mm,
c) Extended to 300 mm above the drain or to ground level where the drain cover is less than 300 mm, and
d) Spaced at:
i) 7.5m centres for trench slopes between 1 in 8 and 1 in 5, or
ii) 5.0m centres for trench slopes greater than 1 in 5.

3.9.4 Trench width
The width B of the trench shall be no less than the pipe diameter D plus 200 mm. Trench width at the top of the pipe shall be no more than 600 mm unless the pipe(s) in the trench are covered with concrete, as shown in Figure 13 (c).

3.9.5 Acceptable materials
Acceptable fill materials shown in Figure 13 are:
a) Bedding material of clean granular noncohesive material with a maximum particle size of 20 mm, or
b) Selected compacted fill of any fine-grained soil or granular material which is free from topsoil and rubbish and has a maximum particle size of 20 mm, or
c) Ordinary fill which may comprise any fill or excavated material.

3.9.6 Placing and compacting
a) Granular bedding and selected fill shall be placed in layers of no greater than 100 mm loose thickness and compacted.
b) Up to 300 mm above the pipe, compaction shall be by tamping by hand using a rod with a pad foot (having an area of 75 ± 25 mm by 75 ± 25 mm) over the entire surface of each layer to produce a compact layer without obvious voids.
c) More than 300 mm above the pipe, compaction shall be by at least four passes of a mechanical tamping foot compactor (whacker type) with a minimum weight of 75 kg.

Client Details:		UBAW318	
Mr & Mrs O'Keefe			
Address:			
12 Matuhi Street			
Waikanae		BH170	
Bedding & Backfilling		Scale: N.T.S	Sheet no: 4
Drawn: L.Janes	Check: N.Davis	Date: 20-May-14	
Wind: High	Earthq: 3	Rev:	
Exposure: C	Snow: NT-0.0kPa	Call 0800 A1homes	
		214663	
		www.A1homes.co.nz	
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Always cross reference the foundation plan with the floor plan prior to setting out.
In the case of ANY discrepancies, call designer for clarification (07) 578 7345

**Firth RibRaft Floor System laid in strict accordance with the latest FIRTH specification
Design not requiring specific engineering input for the Firth RibRaft Floor System.**

**Firth RibRaft Floor System: reinforced concrete waffle raft floor slab-on-ground.
85mm thick slab supported by grid of ribs, 100mm wide at 1200crs each way. Overall depth 305mm.
300mm wide Edge beams under load bearing walls**

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Cautionary Notes:

Always cross reference the foundation plan with the floor plan prior to setting out
The contractor shall accurately locate the position of all public drains on site prior to starting work, if any discrepancies are found in these drawings then the contractor must contact A1 Homes before proceeding with any further works.

Construction Notes:

Ensure granular hardfill is evenly compacted down in max. 150mm layers in accordance with NZS 3604:2011 to form a solid base with bearing capacity greater than 300kPa. Any areas of fill in excess of 600mm shall be certified by an engineer. Min. 5mm - 25mm max. sand blinding to cover hardfill to ensure the vapour barrier is protected from any granular protrusions. Conc. floor to comply with NZS.3109, surface tolerances, & NZS.3114, maximum deviations of 3mm

Shrinkage control joints

- 25mm deep saw cuts to form bays

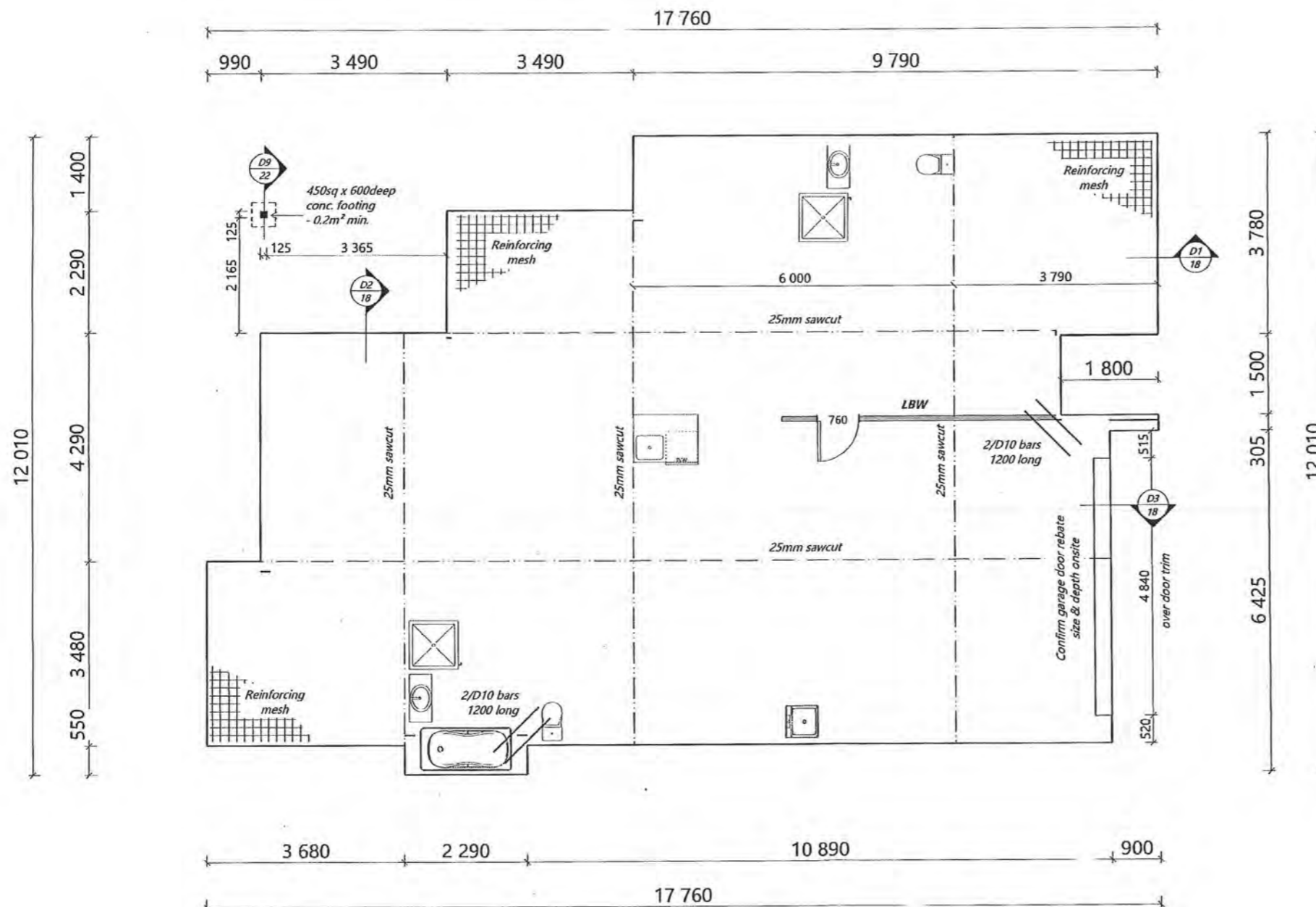
NZS3604:2011 -

Section 7: floors 7.5.8.6.4

The bay dimensions formed by either construction or shrinkage control joints shall be limited to a maximum length:width ratio of 2:1. Maximum bay dimensions in exposed concrete, vinyl or tiled areas to be 6m x 6m.

Steel reinforcing within concrete floors and walls of rooms that contain a bath or shower must be bonded to the earth system as per AS/NZS 3000:2007 Electrical Installations. See clause 5.6.2.5

Confirm layout & fittings of kitchen & bathrooms etc before foundation commences



Client Details : UBAW318
Mr & Mrs O'Keefe
Address: BH170
12 Matuhi Street
Waikanae

Foundation Plan		Scale: 1:100	Date: 20-May-14	Sheet no: 5
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes 214663		
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	www.A1homes.co.nz

All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. COPYRIGHT; All drawings remain the property of A1 Homes Ltd and are for use as described above and may not be used or re-produced in whole or part without written permission. Any site/construction works are not to commence until Building Consent becomes unconditional.



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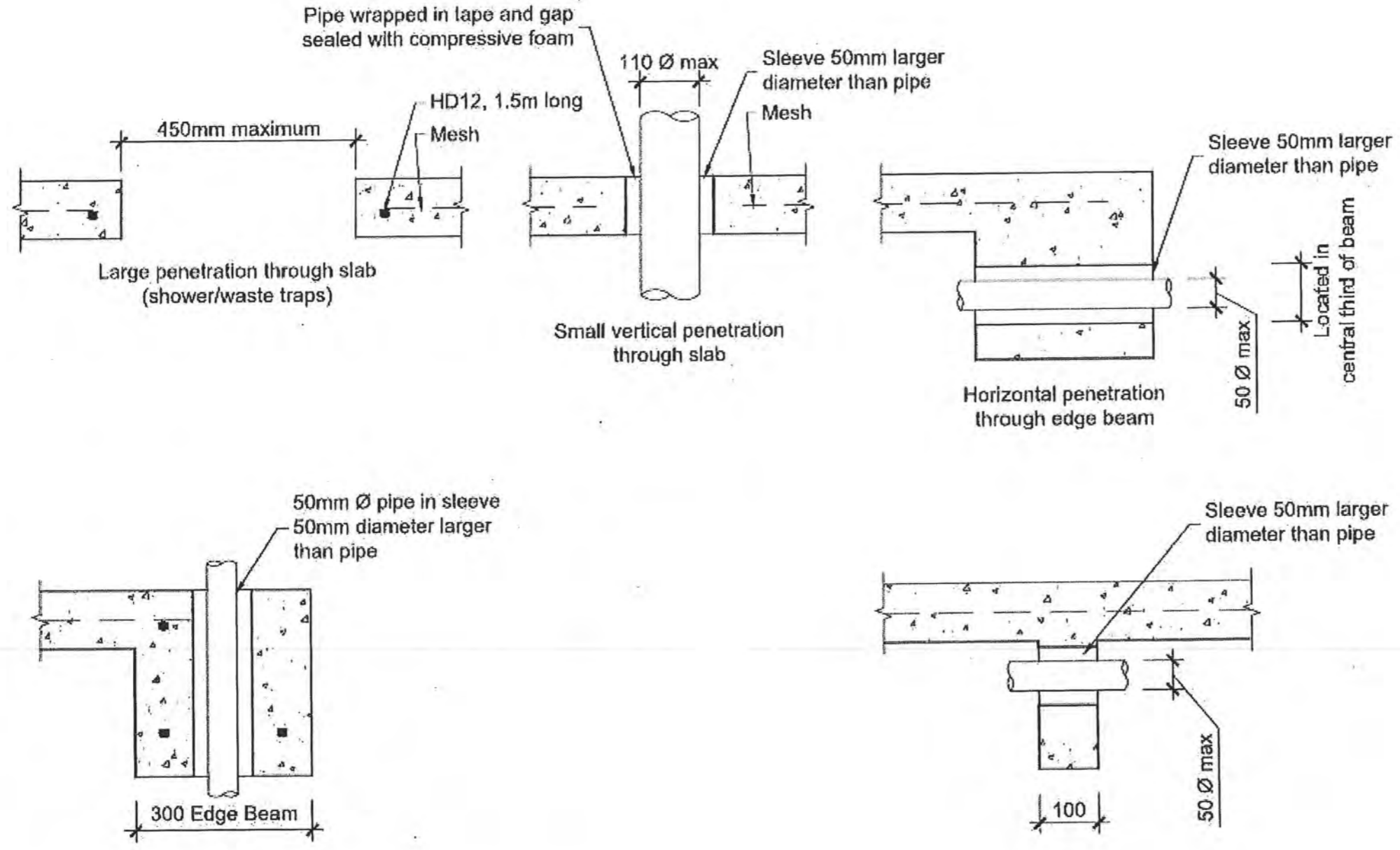


Figure 12 Example of detailing requirements for services

Client Details :				UBAW318	
Mr & Mrs O'Keeffe					
Address:					
12 Matuhi Street					
Waikanae				BH170	
Pipe Penetrations		Scale:	Date: 20-May-14	Sheet no :	
		N.T.S	Rev:	6	
Drawn:	L.Janes	Check:	N.Davis	Call 0800 A1homes	
Wind:	Earthq:	Exposure:	Snow:	2 1 4 6 6 3	
High	3	C	N1-0.0kPa	www.A1homes.co.nz	
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In the case of ANY discrepancies, call designer for clarification (07) 578 7345

000007

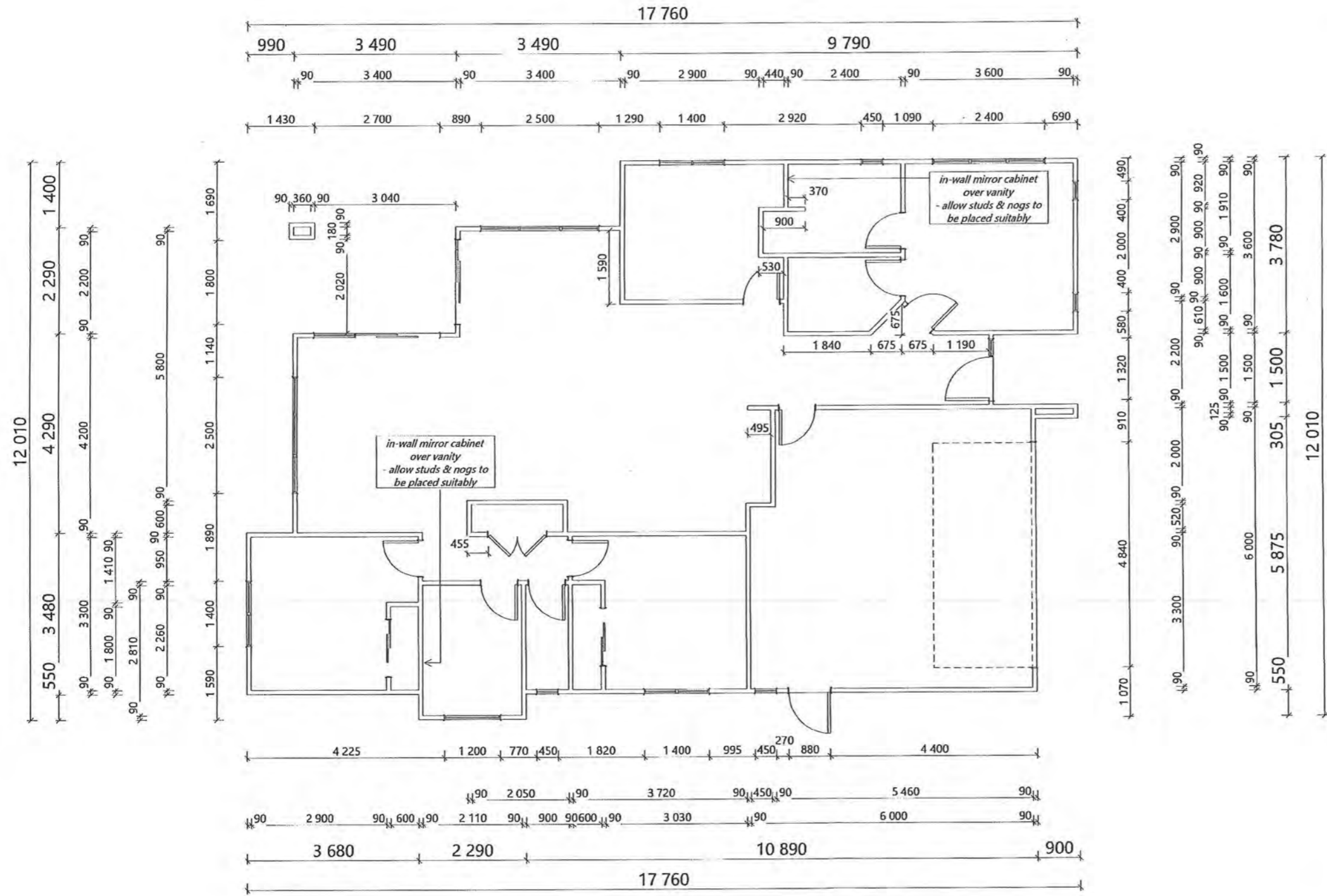


Cautionary Notes:

Always cross reference the foundation plan with the floor plan prior to setting out
Joinery sizes shown are box sizes & are preliminary only.
Site measure and confirm all joinery sizes, reporting to designer any changes, PRIOR to ordering joinery. No liability shall be held by designer for incorrect supply of joinery.

Refer to all written dimensions, DO NOT scale off drawings.

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BY: _____



Client Details :			UBAW318
Mr & Mrs O'Keeffe			
Address:			
12 Matuhi Street			
Waikanae			BH170
Framing Plan		Scale: 1:100	Date: 20-May-14 Rev: Sheet no: 7
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes 2 1 4 6 6 3	
Wind: High	Earthq: 3	Exposure: C	Snow: NT-0.0kPa
www.A1homes.co.nz			
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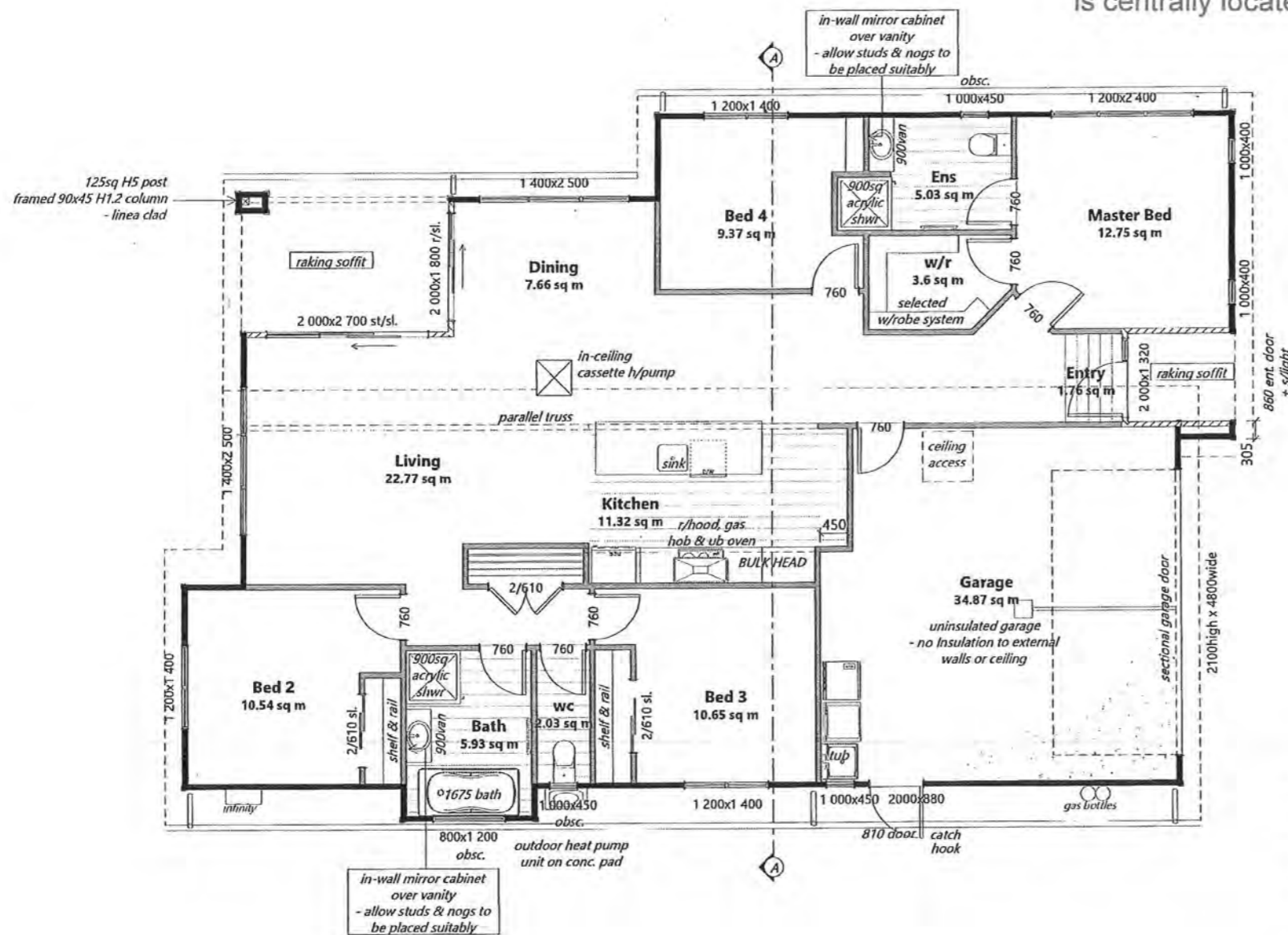
A certifying gas fitter is to provide a compliance certificate to council.

BC 1406363

All frost prone water pipes are to be lagged with a suitable type of insulation.

A preline plumbing inspection required.

APPROVED BY
PLUMBING AND DRAINAGE
Simon C
10/6/2014



G3/AS1
1.1.3 Food preparation surfaces shall be easily maintained in a hygienic condition. Stainless steel, decorative high pressure laminate, and tiles are examples of suitable materials for these surfaces.

1.6 Wall linings
Wall linings adjacent to appliances and facilities shall have surfaces that can be easily maintained in a hygienic condition. Stainless steel, decorative high pressure laminate, tiles, wallboards with painted or applied impervious coatings or films, are examples of suitable materials for these surfaces.

Ensure that the hot water heater is centrally located



Cautionary Notes:

Always cross reference the foundation plan with the framing plan prior to setting out

Joinery sizes shown are box sizes & are preliminary only. Site measure and confirm all joinery sizes, reporting to designer any changes, PRIOR to ordering joinery. No liability shall be held by designer for incorrect supply of joinery.

Refer to all written dimensions, DO NOT scale off drawings.

Construction Notes:

Gas hotwater & cooking with vented r/hood. Ensure gas appliance installation complies to NZS 5261: 2003. Polybutylene water supply pipes. Hot water supply pipes shall be thermally insulated to comply with H1/AS1 5.0

gas bottles: 2/1250high x 375Ø bottles to be mounted on conc. base & secured with seismic restraints (chains or fixed brackets) 1000mm from door, drain or air vent, 1500mm from any point of ignition, min 150mm below an opening window. (gas fitter to confirm)

gas water heater: 300mm from any opening door or window, 75mm from down pipes, 500mm fuse or electric box, 1000mm from gas bottles, 300mm from wall or corner, 1500mm from ground. (gas fitter to confirm)

Tapered edge joints in ceilings
To reduce the risk of cracks caused by substrate movement, back-blocking of tapered edge joints is required in the following situations.

- When steel battens have been used:
- Any area containing 6 or more tapered joints

Please confirm layout & fittings of kitchen & bathrooms etc before foundation commences

NZS 5261:2003 Gas Hob Installation
Cut out for hob: min. 60mm from back of bench top.
Overhead clearances: not less than 600mm from the highest part of hob to range hood
Side clearances: Where dimension from periphery of nearest burner to any vertical combustible surface is less than 200 mm, surface shall be protected to a min. height of 150 mm above hob for full dimension (width or depth) of cooking surface area. Horizontal surface shall be greater than 10 mm below surface of hob.
Protection of combustible surfaces: 5mm thick ceramic tiles or graphic glass is suitable to protect 10mm Gib board.

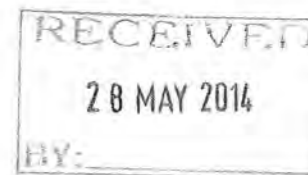
Floor Finishes:

- Carpet = 102m²
- Master Bed
- Bed 2
- Bed 3
- Bed 4
- Living
- Dining
- Hallways, cupd.s & wdrbs

- Wet Area = 24.07m²
- Bathroom
- Ensuite
- wc
- Kitchen
- Entry
- Concrete = 34.87m²
- Garage
- Laundry

Cladding Key:

- JH Linea Weatherboard
- JH Axon Panel



Floor Area:
= 171.13sqm o/frame

Client Details: UBAW318
Mr & Mrs O'Keeffe
Address: BH170
12 Matuhi Street
Waikanae

Floor Plan		Scale: 1:100	Date: 20-May-14	Sheet no: 8
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes 214663		
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	www.A1homes.co.nz

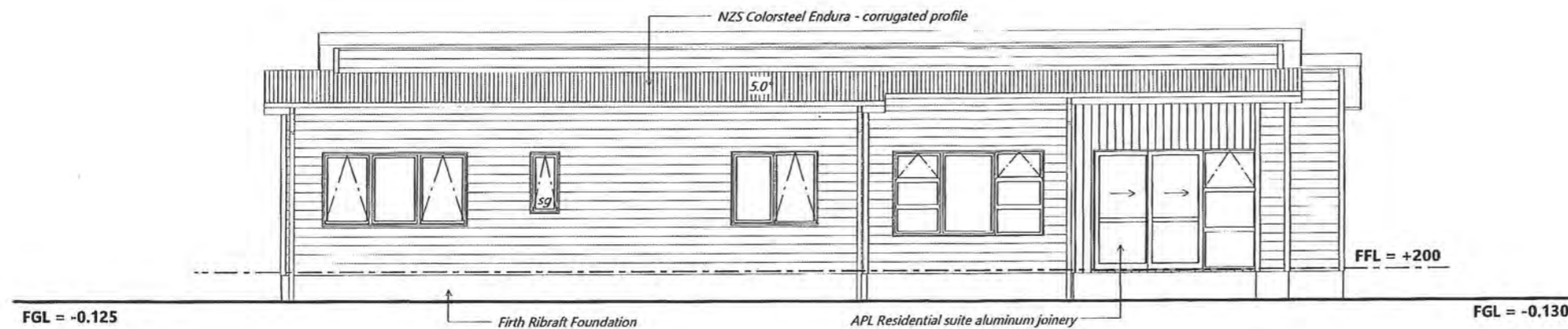
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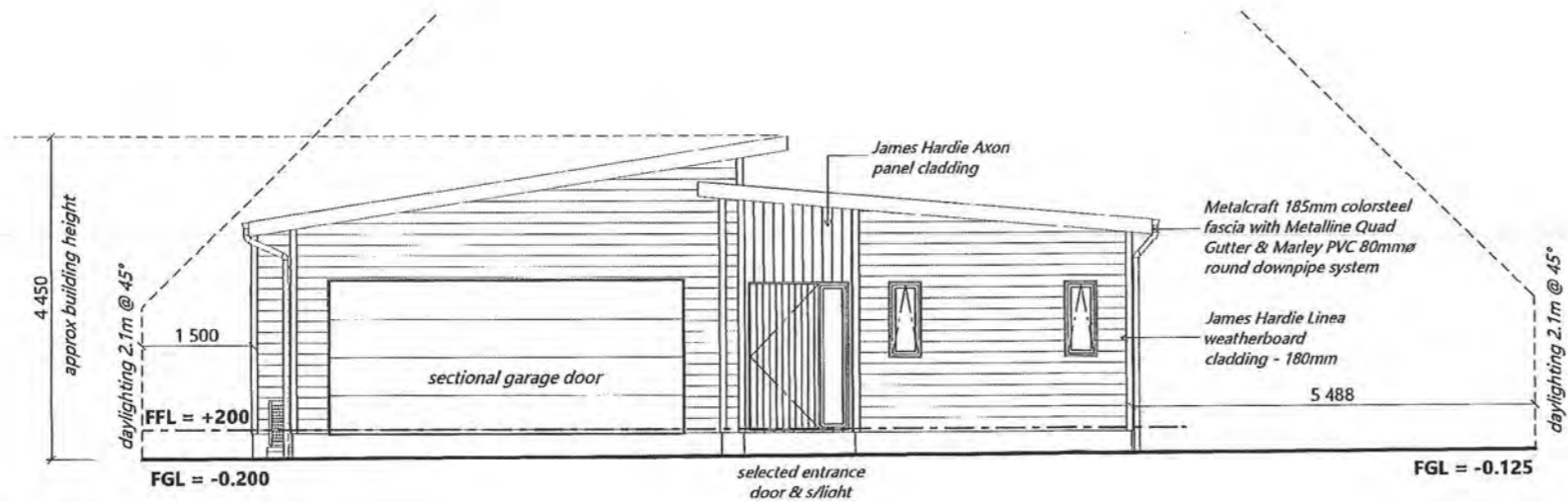
Cladding to be installed to manufacturers requirements in particular fixing and ground clearance.

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North



East

Cautionary Notes:

BUILDING CONTRACTOR TO ASSESS SITE TO ENSURE DAYLIGHTING & BUILDING RESTRICTIONS ARE COMPLIED WITH. NO LIABILITY FOR ENCROACHMENT SHALL BE HELD BY DESIGNER IF SITE IS NOT SURVEYED BY A REGISTERED SURVEYOR PRIOR TO COMMENCEMENT OF FOUNDATIONS.

Construction Notes:

Glazing in accordance with NZS 4223 & 2008 plus amendments. All glazing clear float except for obscure glass to bathrooms & wc. Double glazing to all window and door joinery excluding garage. sg = Safety glass.

Aluminium joinery head heights to be 2.0m (excludes entry box unit). Refer to floor plan for door & window sizes. Joinery schedule & sizes to be confirmed by pre-cut manufacturer & joinery fabricator PRIOR to manufacture by way of communication via e-mail, phone or other.

Minimum slip resistance to steps and landings in accordance with NZBC D1/AS1 Access. Concrete or H5 timber step to all access points (owners care) - min 150mm below FFL.

Safety restrictor stays:

Window restrictors are required to outward opening windows that may protrude into walk paths - Refer to Site plan for 'walk paths'

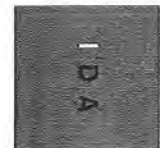
Building Envelope Risk Matrix

All Elevations		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	High risk	3
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score: 7		

Client Details : UBAW318
Mr & Mrs O'Keefe
Address: BH170
12 Matuhi Street
Waikanae

Elevations		Scale: 1:100	Date: 20-May-14	Sheet no: 9
Drawn: J.Janes	Check: N.Davis	Call 0800 A1homes 214663		
Wind: High	Earthq: 3	Exposure: C	www.A1homes.co.nz	

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GLAZING CONFORM NZS 4223
PARTS 1, 2, 3.

FIT SUITABLE FLASHINGS ETC
JOINERY

High Wind - 1100pa DWP
Very High Wind - 1550pa DWP

Roofing material to be installed
to manufacturers requirements.
In particular, fixing and minimum
pitch (reference also sect. 8 of
E2 NZ Building Code.)

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Cautionary Notes:

BUILDING CONTRACTOR TO ASSESS SITE TO ENSURE DAYLIGHTING
& BUILDING RESTRICTIONS ARE COMPLIED WITH.
NO LIABILITY FOR ENCROACHMENT SHALL BE HELD BY DESIGNER IF
SITE IS NOT SURVEYED BY A REGISTERED SURVEYOR PRIOR TO
COMMENCEMENT OF FOUNDATIONS.

Construction Notes:

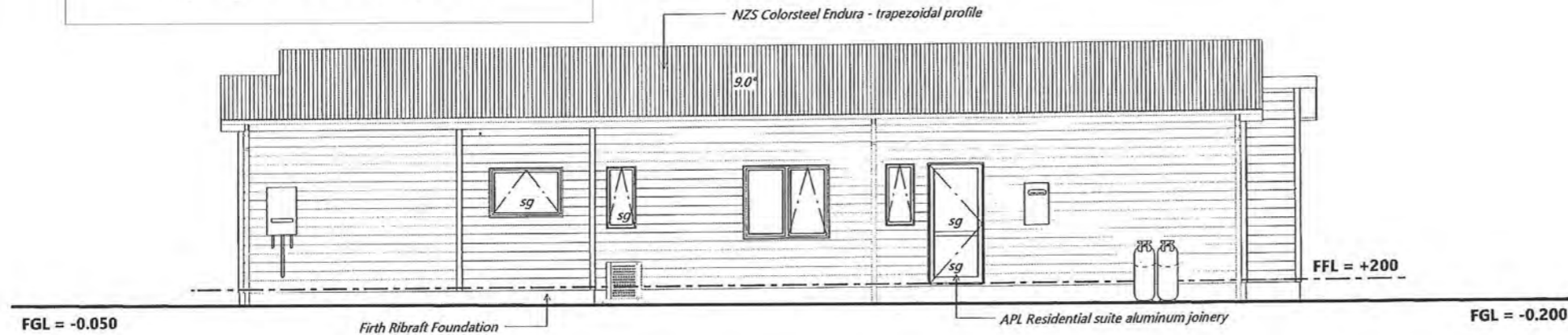
Glazing in accordance with NZS 4223 & 2008 plus amendments
All glazing clear float except for obscure glass to bathrooms & wc
Double glazing to all window and door joinery excluding garage
sg = Safety glass

Aluminium joinery head heights to be 2.0m (excludes entry box unit).
Refer to floor plan for door & window sizes. Joinery schedule & sizes
to be confirmed by pre-cut manufacturer & joinery fabricator PRIOR
to manufacture by way of communication via e-mail, phone or other.

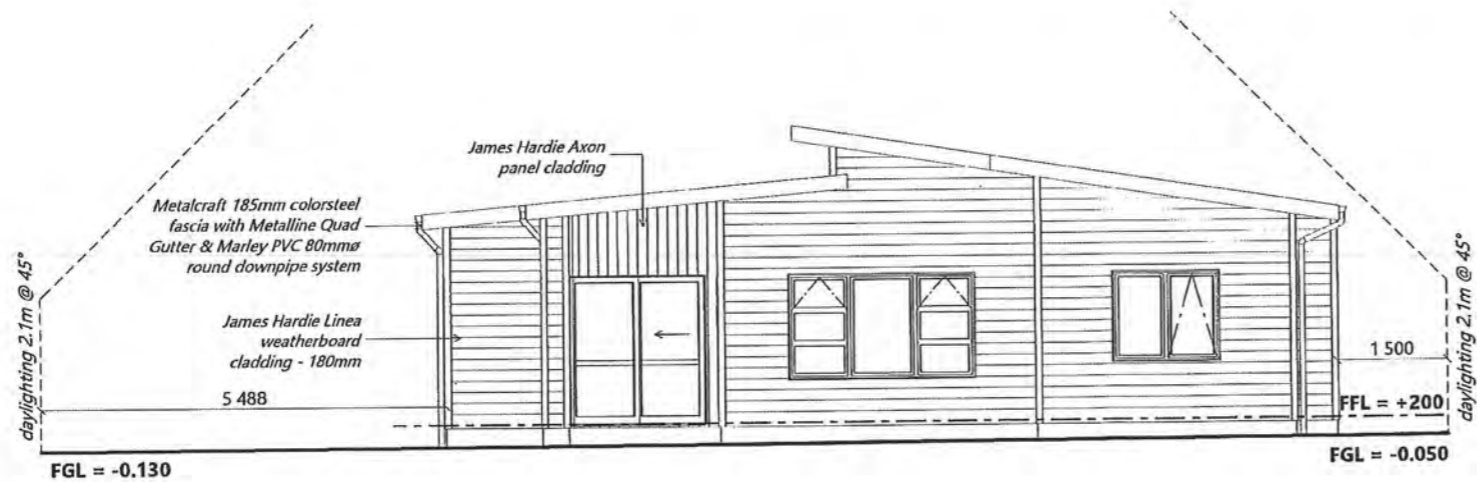
Minimum slip resistance to steps and landings in accordance with
NZBC D1/AS1 Access
Concrete or H5 timber step to all access points (owners care)
- min 150mm below FFL

Safety restrictor stays:

Window restrictors are required to outward opening
windows that may protrude into walk paths
- Refer to Site plan for 'walk paths'



South



West

Building Envelope Risk Matrix

All Elevations		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	High risk	3
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score: 7		

Client Details : UBAW318
Mr & Mrs O'Keeffe
Address:
12 Matuhi Street
Waikanae BH170

Elevations		Scale: 1:100	Date: 20-May-14	Sheet no: 10
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes 214663		
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	www.A1homes.co.nz

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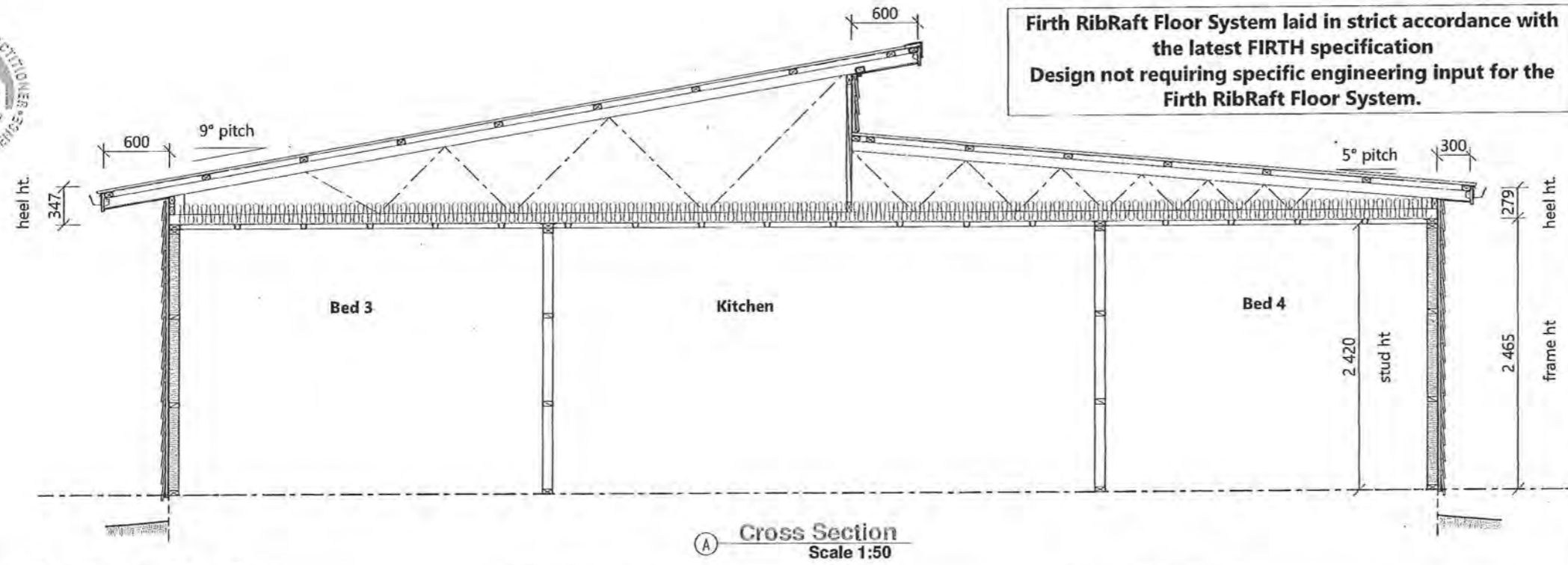
I | DESIGN | ARCHITECTURE



000011



**Firth RibRaft Floor System laid in strict accordance with the latest FIRTH specification
Design not requiring specific engineering input for the Firth RibRaft Floor System.**



A Cross Section Scale 1:50

Microclimatic Considerations:

In addition to exposure zones, evidence of local environmental effects (microclimates), and those produced by the erection of a structure or installation of equipment, shall be considered.

Significant acceleration of the corrosion of structural fasteners and fixings beyond what could be expected from the geographical location can occur in the following circumstances:

- (a) Industrial contamination & corrosion atmospheres;
- (b) Contamination from agricultural chemicals or fertilisers; and
- (c) Geothermal hot spots. Hot spots are defined as being within 50m of a bore, mud pool, steam vent, or other source.

Microclimatic conditions (a) to (c) require specific engineer design.

Foundations & Slabs

Firth RibRaft Floor System (Design not requiring specific engineering input for the Firth RibRaft Floor System): reinforced concrete waffle raft floor slab-on-ground.

85mm thick slab supported by grid of ribs, 100mm wide at 1200crs each way. Overall depth 305mm. 300mm wide Edge beams under load bearing walls laid in strict accordance with the latest FIRTH specification

Min. 5mm - 25mm max. sand blinding to cover hardfill to ensure the vapour barrier is protected from any granular protrusions
Malthoid under all bottom plates, overlapping timber by min. 6mm.

External Walls (SG8)

90x45 H1.2 frame + 90x45 top plate packers, studs @ 600crs max, nogs @ 800crs.

THERMAKRAFT Coverup building wrap taken up to top plate. Standard 10mm gib linings throughout, except wet areas. Fixed to comply with the latest Winstones Gib Manual - level 4 paint finish
9.1.8.5 Wall framing behind cavities

Where stud spacings are greater than 450 mm, and flexible wall underlays only are used, an intermediate means of restraining the flexible wall underlay and insulation from bulging into the drained cavity shall be installed.

- Polypropylene tape or galvanized wire at 300 mm centres fixed horizontally and drawn taut

Bottom plate fixing: Ramset Refer to table, Sheet 18

External Cladding

James Hardie 180 LINEA weatherboards on ex50x25 H3.1 cavity battens, installed, flashed and finished to the latest James Hardie specifications and in accordance with NZBC: E2/AS1 External Moisture. Merchant to include all flashings & fixings as required by cladding system.

James Hardie Axon Panel on ex50x25 H3.1 cavity battens, installed, flashed and finished to the latest James Hardie specifications and in accordance with NZBC: E2/AS1 External Moisture. Merchant to include all flashings & fixings as required by cladding system.

Internal Walls (SG8)

90x45 H1.2 frame + 90x45 top plate packers, studs @ 600crs max, nogs @ 800crs.

Standard 10mm gib linings throughout, except wet areas. Fixed to comply with the latest Winstones Gib Manual.

Bottom Plate Fixing: Ramset HD875 drive pin + washer (or equivalent) @ 600crs

Wet Areas

Floor finish: LAUNDRY, KITCHEN, ENTRY

Non-slip vinyl lining over sealed floor. Minimum slip resistance co-efficient for level surface between 0.25 - 0.50 acceptable in accordance with NZBC: D1/AS1 Access.

Option 1 - Cove vinyl up wall 100mm, fix skirting or vinyl smooth edge to wall junction

Option 2 - Waterproof seal vinyl to edge of painted skirting, contractor to comply with NZBC: E3/AS1 Internal Moisture.

Floor finish: BATHROOM, ENSUITE, WC

Non-slip tiles over waterproofed floor. Minimum slip resistance co-efficient for level surface between 0.25 - 0.50 acceptable in accordance with NZBC: D1/AS1 Access.

Tiler to waterproof floor & wall to comply with NZBC: E3/AS1 Internal Moisture. Approved waterproofer (nominated by tiler) applied to manufacturers instructions, non-slip ceramic tiles laid over with even grout lines. Use flexible MS sealant to internal corners, wall & floor - tiler to supply producer statement for waterproofing & tiling (Contractor/Owner to confirm finish)

Wall & Ceiling finish: BATHROOM, ENSUITE

GIB Aqualine: 10mm to walls and 13mm to ceilings 1/coat GIB Sealer with 2/ coats semi-gloss or gloss, acrylic enamel paint.

Ceilings

Rondo battens fixed to trusses as per manufacturers specifications @ 600crs. Ensure battens are straight prior to lining. 13mm Gib linings with 32mm x 6g GIB® Grabber™ Screws @ 600crs. Glue daubs to be minimum of 200mm from centre screw. Do not screw where you glue. 32mm x 6g GIB® Grabber™ Screws @ 200crs around the perimeter. Gib stopping to level 4 paint finish. 1/850sq ceiling access to roof space.

External Joinery

Aluminium joinery installed to comply with NZBC: E2/AS1.

Pre-primed jambs, architraves.

Approved window sealing tape to all openings.

Flashing tape over flashing fixings. Do not fix cladding through flashings.

Glazing to comply with NZS:4223. & 2008 amendments.

Insulation

R3.2C pink Batts insulation to all ceilings, except garage. (R2.2 batts to house exterior wall perimeters)

R2.2W pink Batts insulation to all exterior wall cavities excluding garage, however including walls between house & garage. Friction fitted.

Roof (SG8)

Pre-fabricated GANGNAIL 5/9° pitch H1.2 trusses @ 900crs - galv wire netting with Thermakraft 215 self supporting underlay laid vertically with min 150mm lap.

75x45 H1.2 purlins, spanning 900mm. Purlin spacings - End Span - 600mm, Intermediate Span - 900crs.

Purlin spacings - End Span - 600mm, Intermediate Span - 900crs.

Fixing - Type T - 1/10g self-drilling screw, 80mm long purlin/truss connection (2.4KN fixing)

Lumberlok strip brace & tensioners tightened firmly across roof planes.

Longrun colorsteel roofing as per elevations. Roofing fixed with compatible roofing nails or screws and sealing washers, by qualified persons with flashings as required to all junctions - flashings fixed with compatible roofing screws and sealing washers

Fixing pattern = T1 fixing pattern = fix every crest

Note: every sheet of roof cladding to span at least 3 supports)

8.4.8 Fixings: Trapezoidal

Fixings shall be as shown in Tables 11, 12, 14 and 15, and shall be a minimum 12-gauge screw, as shown in Figure 39, which complies with Class 4 of AS 3566: Part 2.

8.4.8.1 Fixing requirements

Fixings shall:

- a) Be fixed through crests,
- b) Penetrate purlins by a minimum of 40 mm for nail fixings and 30 mm for screw fixings,
- c) Include sealing washers of:
 - i) neoprene (having a carbon black content of 15% or less by weight),
 - ii) profiled washer and EPDM washer where required to allow for expansion of the profiled metal roof cladding.

Soffit

4.5mm Hardiflex soffit lining fixed to underside of truss top chord extensions. Refer to roof plan for eave widths, 25x19pp soffit mould. Colorsteel Fascia & spouting with Marley Downpipe system. Snow straps as required.

Exposure Notes:

Note: Exposure Zone C (exposure environments as defined by NZS 3604 : fig 4.2 & table 4.1)

Fixings & Fastenings (excludes nails and screws):

Nail Plates - In 'closed' & 'roof space' environments = continuously coated galv. steel

Wire Dogs & Bolts - In 'closed' & 'roof space' environments = hot-dip galv. steel

All other structural fixings - In 'closed' environments = mild steel (uncoated, non-galvanized)

All other structural fixings (except fabricated brackets (1))

- In sheltered environments = hot-dip galv. steel

- In exposed environments = type 304 stainless steel

Nails & screws used for framing & cladding:

Non-structural cladding (15 year durability) = galv. steel

Framing in 'closed' areas including roof spaces = mild steel (3)

Framing in 'exposed or sheltered' areas = galv. steel (3)

*1. - "fabricated brackets" shall be made from 5mm (minimum thickness) mild steel and shall be hot-dip galv.

*3. - steel fixings and fastenings in contacts with timber treated with copper-based timber preservatives (H3.2 or higher) shall be minimum of type 304 stainless steel (exposed and Sheltered environments), and hot-dip galv. steel (all other locations)

Minimum concrete strength after 28 days shall be:

17.5 MPa OR 20 MPa exposed to weather

Fixing Materials: (as per Acceptable Solution E2/AS1) - for definitions refer to E2/AS1

Hidden/Exposed

Aluminium, or Bronze, or type 304 stainless steel

Nails = galv. steel

Screws = galv. steel, Painted or unpainted to AS 3566: Part 2

Sheltered:

Aluminium, or Bronze, or type 304 stainless steel

Screws = galv. steel, Painted or unpainted to AS 3566: Part 2

* The use of stainless steel fixings is not recommended by steel manufacturers for use with coated steel in severe marine and industrial environments, as they are considered to cause deterioration



Client Details :				UBAW318	
Mr & Mrs O'Keefe					
Address:					
12 Matuhi Street					
Waikanae				BH170	
Cross Section			Scale:	Date: 20-May-14	Sheet no :
			1:50	Rev:	11
Drawn: L.Janes	Check: N.Davis				
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	Call 0800 A1homes 214663	
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Table 14: Steel trapezoidal profiled roofing – 0.4 mm BMT and profile height 27 mm minimum(1), and minimum 5-rib profiles
 Maximum spans and fixing patterns. Refer to Paragraph 8.4.6

Purlin spacings (metres)		Wind zones		
End span	Intermediate span	Low and Medium	High and Very High	Extra High
0.4	0.6	T2	T2	T1
0.6	0.9	T2	T1	T1
0.8	1.2	T2	T1	T1
1.2	1.8	SED	SED	SED

NOTE: T1 fixing pattern is – Fix every crest...

T2 fixing pattern is – Hit 1, miss 1...

SED Specific Engineering Design

(1) For profile heights and pan widths outside this range, refer to supplier's literature for fixing patterns and spans

Purlin size	Max. span (mm)	Maximum spacing and fixing in the following wind zones									
		Low		Medium		High		Very high		Extra high	
		Spacing (mm)	Fixing (type)	Spacing (mm)	Fixing (type)	Spacing (mm)	Fixing (type)	Spacing (mm)	Fixing (type)	Spacing (mm)	Fixing (type)
70 x 45	900	900	S	900	T	900	T	900	T	900	U
70 x 45	900	1200	T	1200	T	1200	T	1050	U	900	U
70 x 45	900	1800	T	1800	U	1400	U	1050	U	900	U
70 x 45	1200	1200	T	1150	T	800	T	600	T	500	T
70 x 45	1200	1300	T	1150	T	800	T	600	T	500	T
90 x 45	1200	1700	T	1450	U	1000	U	750	U	650	U

Fixing type	Description	Alternative fixing capacity (kN)
S	2 / 90 x 3.15 gun nails	0.8
T	1 / 10g self-drilling screw, 80 mm long	2.4
U	1 / 14g self-drilling type 17 screw, 100 mm long	5.5

NOTE – All fixing types are determined as required for the higher uplift loads at the periphery of the roof (based on local pressure factors in AS/NZS 1170.2).

Client Details :				UBAW318	
Mr & Mrs O'Keefe					
Address:					
12 Matuhi Street					
Waikanae				BH170	
Roof & Purlin Fixings		Scale: N.T.S	Date: 20-May-14	Sheet no: 12	
Drawn: L.Janes	Check: N.Davis				
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	Call 0800 A1homes 214663	
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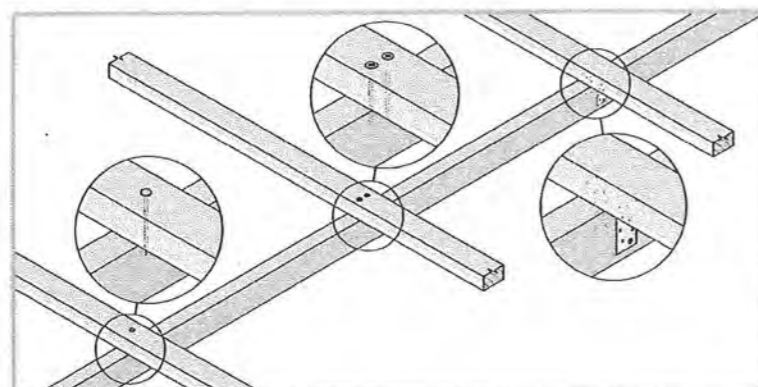
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LUMBERLOK
 PURLIN & BATTEN FIXING CHART
 ALTERNATIVE SOLUTION TO
 NZS 3604:2011 TABLES 10.10 & 10.12

07/2011

NOTE:

- All purlin and batten sizes are as per NZS 3604:2011.
- All fixings assume that the purlin and battens are installed on their flat over the top of the rafter or truss.
- The minimum fixing requirements apply to all purlin locations within the roof area.
- The LUMBERLOK BLUE SCREW where specified requires a minimum of 30mm penetration into rafter or truss i.e. it is suitable for rough sawn timber up to 50mm thick at 18% moisture content.



SELECTION CHART FIXING OPTIONS
 (minimum fixing requirements)

ROOF WEIGHT	MAX. PURLIN SPAN (mm)	MAX. PURLIN CRS. (mm)	WIND ZONE				
			L	M	H	VH	EH
HEAVY ROOF Tile Battens	900	370	A	A	A	A	A
LIGHT ROOF Tile Battens	900	370	A	A	B	C	C
	1200	370	A	B	C	C	C
LIGHT ROOF Purlins	900	900	C	C	C	C	D
	1200	900	C	C	C	D	D
	1200	1200	C	C	D	E	E

Wind Zone:
 As per NZS 3604:2011

L = Low Wind
 M = Medium Wind
 H = High Wind
 VH = Very High Wind
 EH = Extra High Wind

STANDARD FIXING OPTIONS

FIXING TYPE A
 0.55kN
 1 NAIL
 Note: Two nails maybe 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

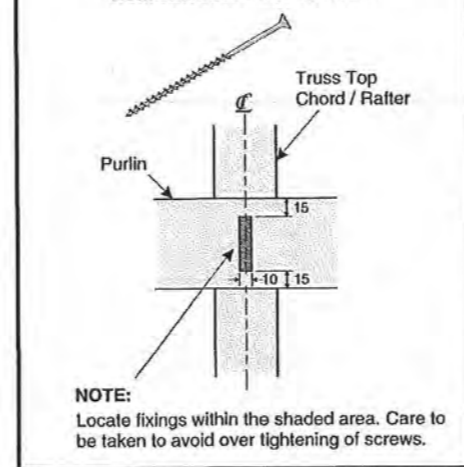
BLUE SCREW = 80mm x 10 gauge LUMBERLOK BLUE SCREW

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



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



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GANG-NAIL® LUMBERLOK® BOWMAC®

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Client Details : UBAW318
 Mr & Mrs O'Keeffe
 Address:
 12 Matuhi Street
 Waikanae
 BH170

Purlin Fixings		Scale: N.T.S.	Date: 20-May-14	Sheet no: 13
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes 214663		
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	www.A1homes.co.nz

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Supply copy of relevant warranties for roofing, Cladding and Guttering systems to Council

000014



Cautionary Notes:

This layout is preliminary. Read in conjunction with final PS1 & pre-cut design & documents. Truss manufacturer to inform designer of any further load bearing footing / slab thickenings (piles or bearer lines) that are required to support roof loads. If a discrepancy occurs contact I Design Architecture immediately on 07 543 3586

Construction Notes:

Ensure that all downpipes are positioned clear of Joinery units

Fixings:

- refer to Lumberlok manual

Stud to top plate:
Use Mitek type B fixing (excl. gable ends)
Gable end - Use Mitek type A fixing

Lintel Key:

190x90 - G ← Fixing
Size

Trimming Studs:

Refer to following page for trimming stud requirements
All Lintels GREATER than 1.8m span require an additional trimming stud

Rondo Clip System:

Bottom chord restraints required at 1.800crs

All lintels have been designed using DesignIT

Gutter Calculation

Spouting: Matalcraft Metalline Quad Gutter
Cross Sectional Area = 5550mm²

Catchment area of roof = 46m²

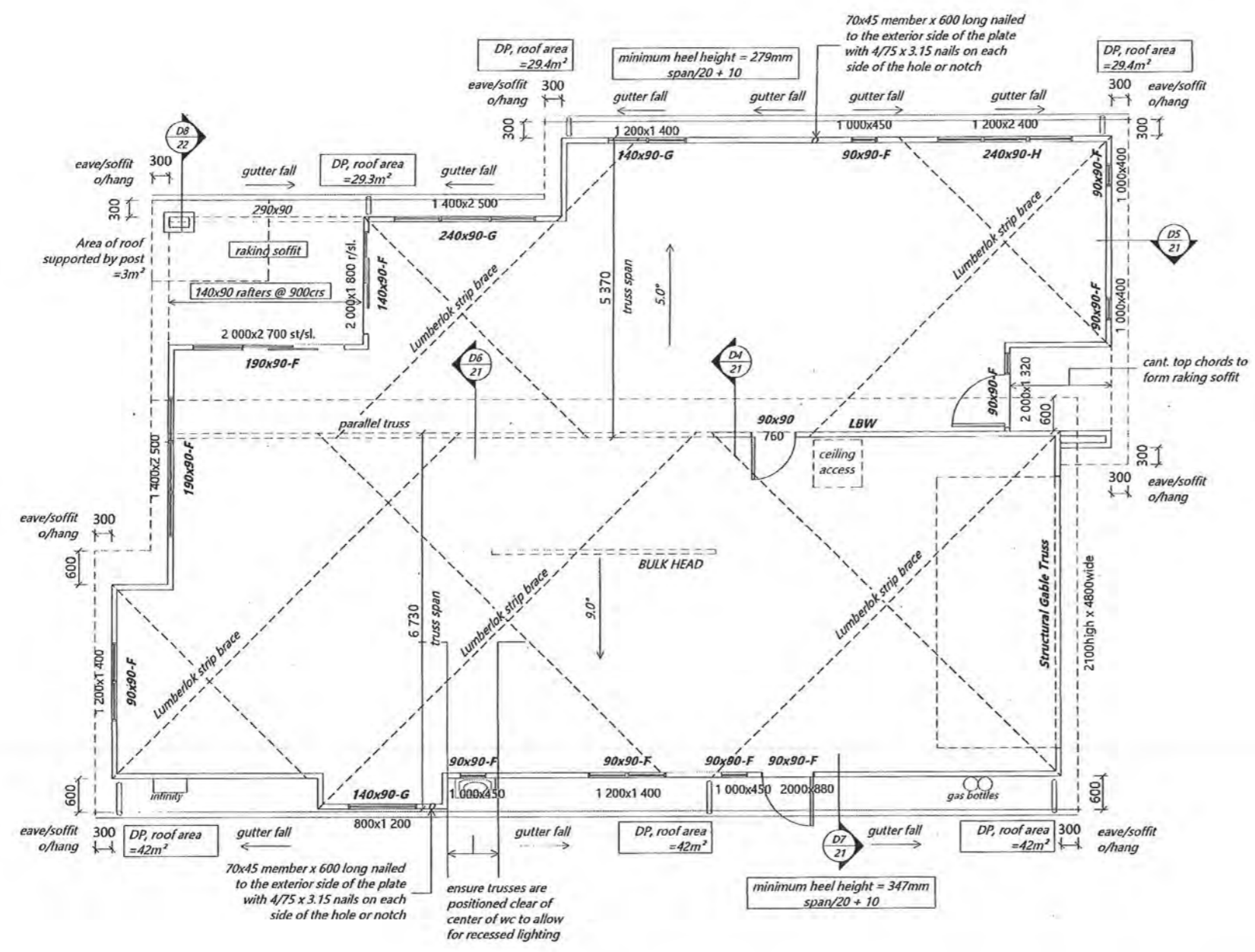
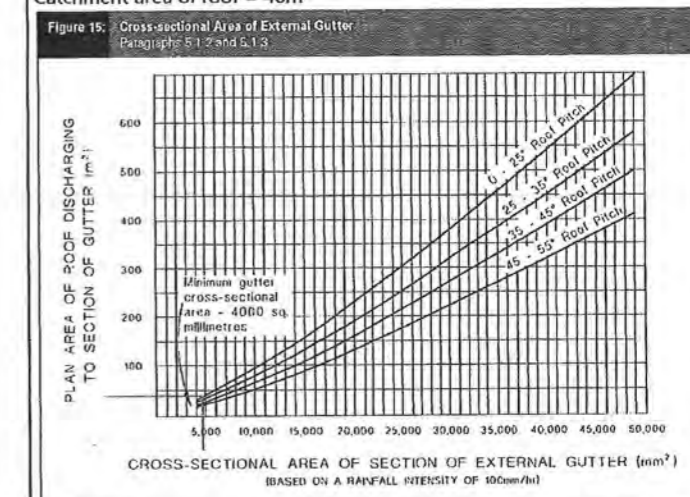


Table 5: Downpipe Sizes for Given Roof Pitch and Area
Paragraph 4.2.1

Downpipe size (mm) (minimum internal sizes)	Roof pitch			
	0-25°	25-35°	35-45°	45-55°
		Plan area of roof served by the downpipe (m²)		
63 mm diameter	60	50	40	35
74 mm diameter	85	70	60	50
100 mm diameter	155	130	110	90
150 mm diameter	350	290	250	200
65 x 50 rectangular	60	50	40	35
100 x 50 rectangular	100	80	70	60
75 x 75 rectangular	110	90	80	65
100 x 75 rectangular	150	120	105	90

Client Details:
UBAW318
Mr & Mrs O'Keefe
Address:
12 Matuhi Street
Waikanae
BH170

Roof Plan
Scale: 1:100
Date: 20-May-14
Sheet no: 14

Drawn: L.Janes Check: N.Davis
Wind: High Earthq: 3 Exposure: C Snow: NT-0.0kPa
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NZS 3604:2011 8.5.2 Trimming studs

A trimming stud shall be provided to each side of any opening as follows;

- must be the same width as the studs in the wall
- whether single or double, shall not contain holes, notches, checks, or cuts in the middle third of their length.
- Where a doubling stud which provides support for a lintel is shorter by 400 mm or more than the full stud height, its thickness shall not be included as contributing to the thickness of trimming studs from table 8.5

Table 8.5 – Trimming studs (see 8.5.2.1)

Maximum clear width of opening (span of lintel)	Stud thickness required for 600 mm spaced studs	Thickness of trimming studs*
(a) Single storey, top storey or non-loadbearing walls		
(m)	(mm)	(mm)
1.8	35	45
	45	45
	70	90
	90	115
3.0	35	45
	45	70
	90	135
3.6	35	70
	45	90
	70	140
	90	180
4.2	35	105
	45	135
	70	210
	90	270
(b) Any other location		
0.9	35	45
	45	70
	70	90
	90	135
1.8	35	70
	45	70
	70	115
	90	135
3.0	35	70
	45	90
	70	140
	90	180

* For brick veneer openings add extra stud for fixing veneer ties.

NOTE – To use this table:

- (1) Enter the row corresponding to the lintel span being considered.
- (2) From the second column, select the thickness of the studs required for the body of the wall, assuming that they are spaced at 600 mm.
- (3) Read the trimming stud thickness from the right side column.

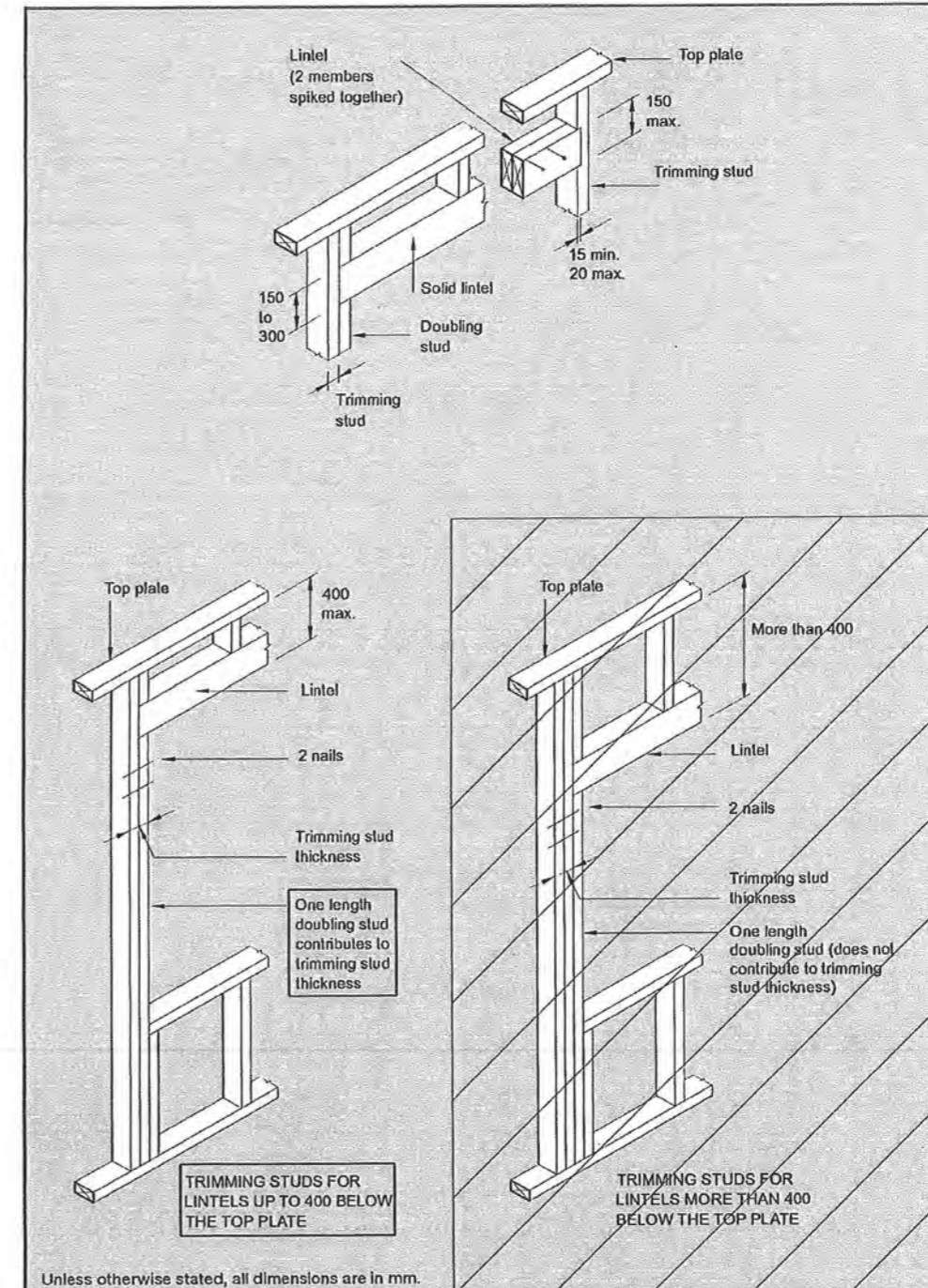


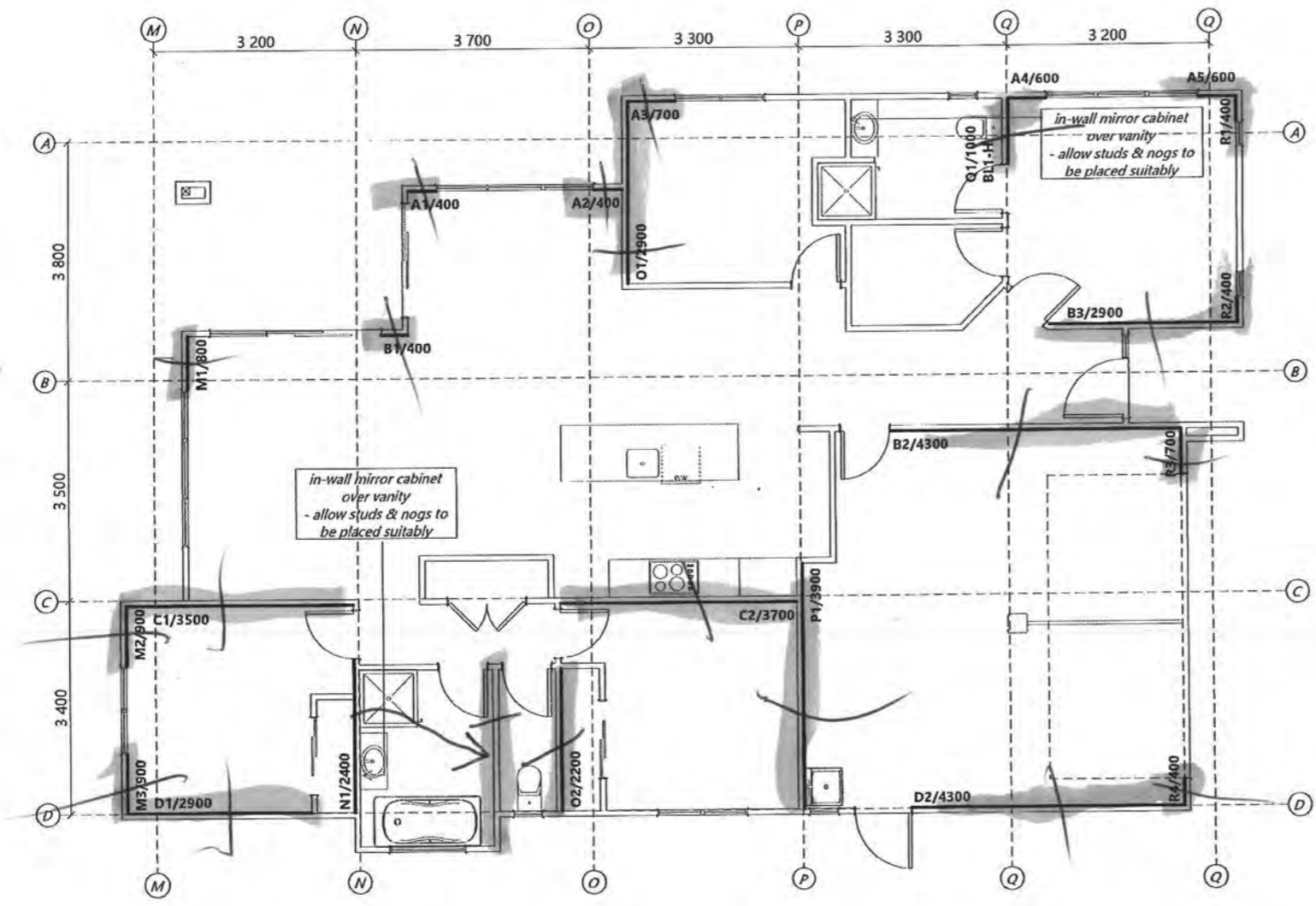
Figure 8.5 – Trimming studs and lintels (see 8.5.2.1)

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Waikanae			BH170
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Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes 214663	
Wind: High	Earthq: 3	Exposure: C	Snow: NT-0.0kPa
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All braces are GS1-N, unless otherwise stated



Cautionary Notes:

ALL GIB® BRACES FIXED IN ACCORDANCE WITH THE LATEST WINSTONES GIB BRACING MANUAL & GIB SITE GUIDE

Bracing Element Table

Brace Type	
GS1-N	10mm GIB std plasterboard on one side, min. length 0.4m
BL1-H	10mm GIB BRACELINE on one side, min. length 0.4m + GIB Handibrac hold down ea. end
All braces are GS1-N, unless otherwise stated	

Label No.
A1 / 1800
Brace Length

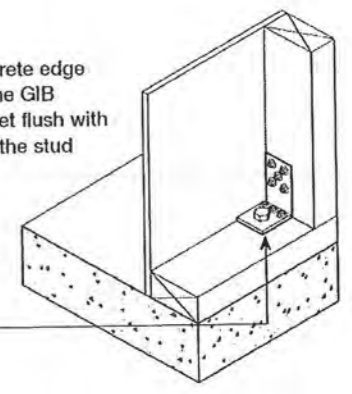
Openings in Bracing Elements

(as per GIB Ezybrace System)
Openings are allowed within the middle third of a wall bracing element's length and height. Neither opening dimension shall be more than one third of the element height. Wall linings are fixed to opening trimmers at 150mm centres. Small openings (e.g., power outlets) of 90 x 90mm or less may be placed no closer than 90mm to the edge of the braced element.

Concrete Floor - External Wall
The bottom plate at both ends of the bracing element is fixed using a fastener with a proprietary fixing with a minimum characteristic uplift strength of 15 kN. If included in pack see overleaf instruction to install BOWMAC screw bolt.

To maximise concrete edge distance, locate the GIB Handibrac® bracket flush with the inside face of the stud

GIB Handibrac® bracket



Client Details : UBAW318
Mr & Mrs O'Keeffe
Address: 12 Matuhi Street, Waikanae, BH170

Bracing Plan Scale: 1:100 Date: 20-May-14 Sheet no: 16

Drawn: L.Janes Check: N.Davis
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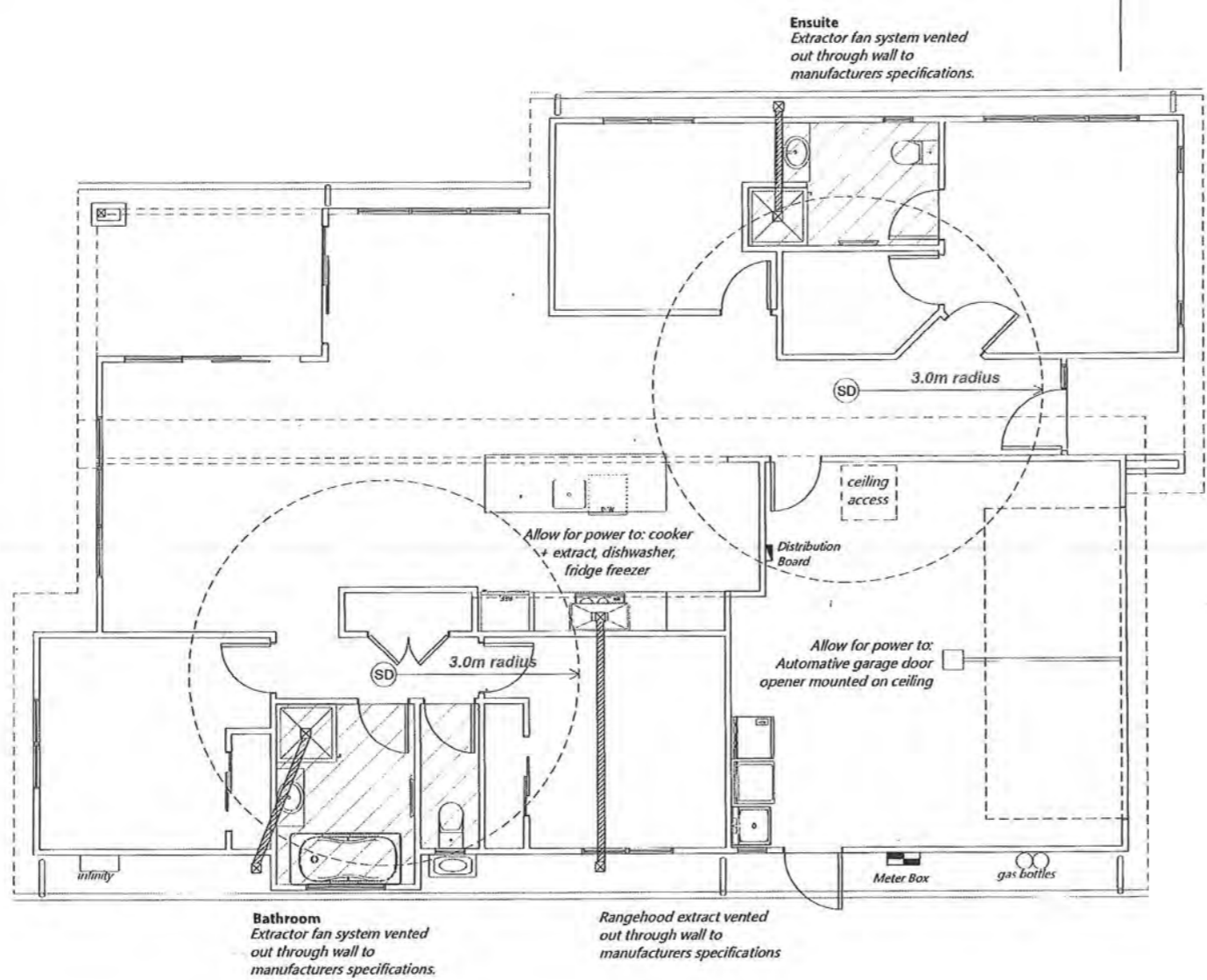
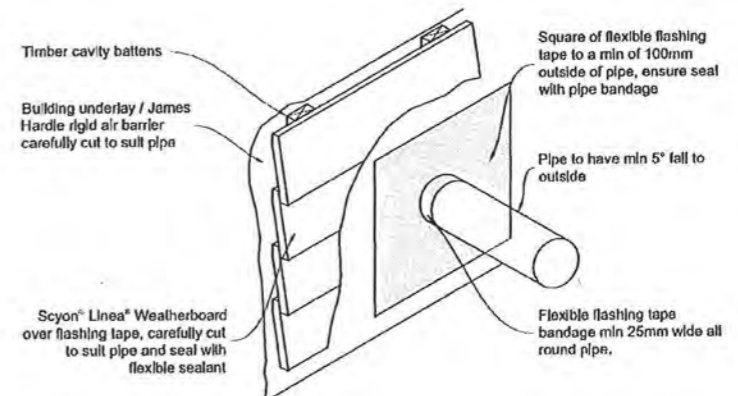


Section F7 of the New Zealand Building Code requires the installation of an approved smoke alarm system for detection and warning of fire.

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Figure 47: Timber cavity pipe penetration



Notes:

All electrical work & items to comply with; NZBC F7/AS1, AS/NZS 3000, AS/NZS 3008, AS 3786, AS/NZS 5000.2: 2006

SD - Approved smoke detectors required within 3.0m of any sleeping space
- first alert or similar. smoke alarms to have both a test & hush button

Position of Smoke detectors:
- Not less than 200mm from a wall
- Ideally in the centre of ceiling where possible (hallways)

Down lights to be CA 80 or CA 135 Rated (max 1 per 5m²).

Ventilation system to vent ducts & r/hood to soffit outlet

Ventilation of Sanitary rooms

Percentage of ventilated opening to be minimum 5% of room floor area

Room	Floor area	Window opening	Percentage
Bath	5.9m ²	800x1200 = 0.96m ²	16.2%
wc	2.0m ²	1000x450 = 0.45m ²	22.5%
Ens	5.0m ²	1000x450 = 0.45m ²	9.0%

Client Details : UBAW318
Mr & Mrs O'Keeffe
Address: BH170
12 Matuhi Street
Waikanae

Electrical Plan
Scale: 1:100 Date: 20-May-14 Sheet no: 17
Rev:

Drawn: L.Janes Check: N.Davis
Wind: High Earthq: 3 Exposure: C Snow: N1-0.0kPa
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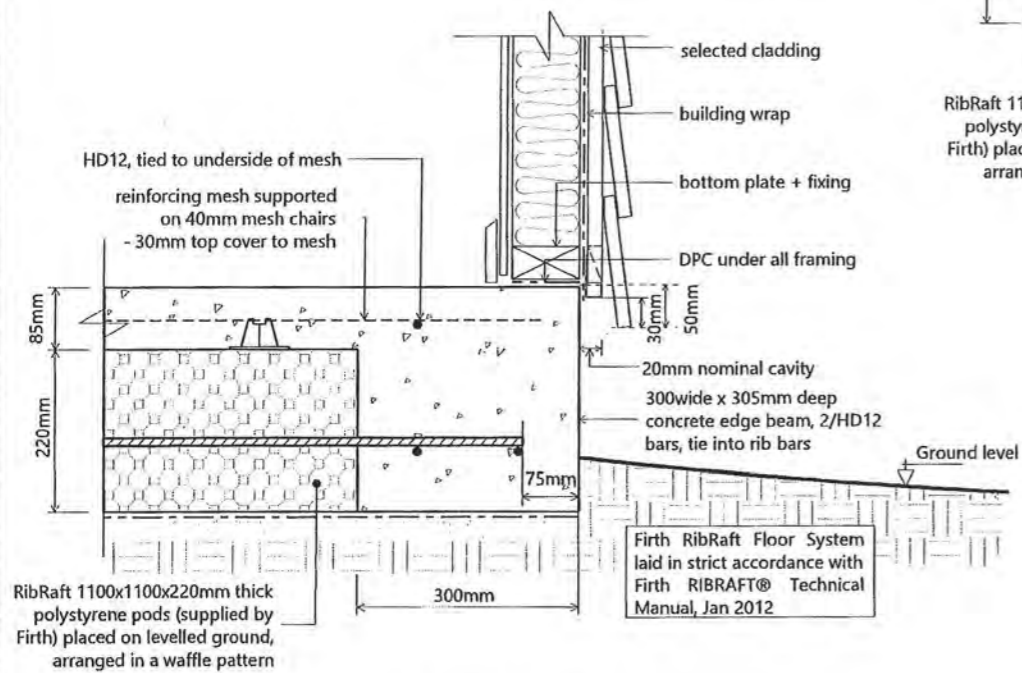
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Ramset™
BOTTOM PLATE FIXING SOLUTIONS 2013

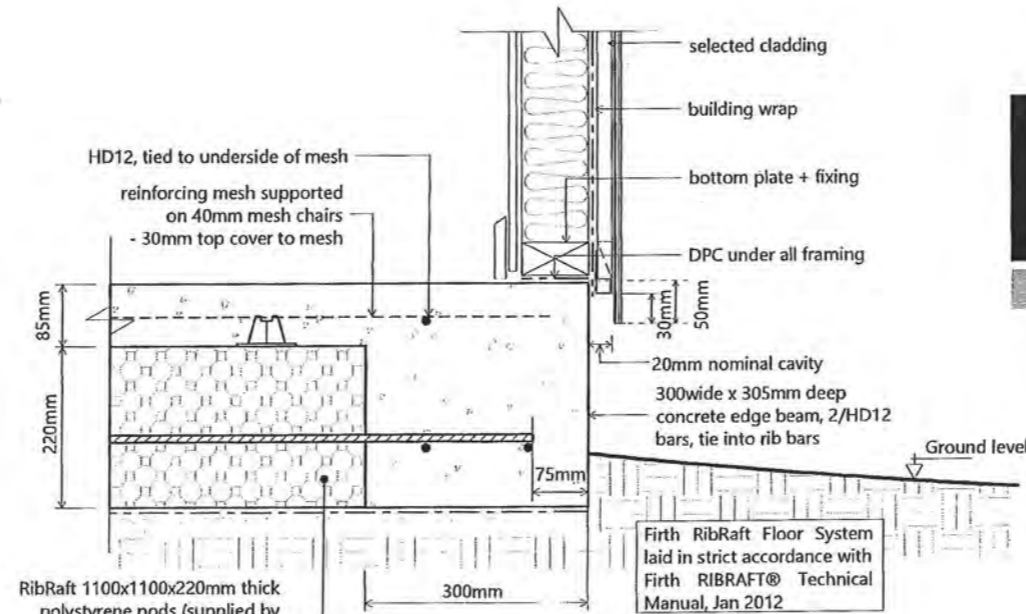
| Meets NZS 3604:2011 Requirements | 90 x 45 Bottom Plate |

Bottom Plate Durability

Bottom Plate Location	Fixing Requirements			Installation		
	Bottom Plate Fixing Requirement	Concrete Strength (min.)	Floor Edge Type	Max Spacing	Fastener	Min Edge Distance (FROM OUTLETS)
External Wall	NZS3604:2011	17.5 MPa	Concrete	900 mm	12120BPAG ¹ or T12140GH ¹	55 mm
	Proprietary Bracing Systems (18 kN)	17.5 MPa	Masonry Block	600 mm	AS12150GH + RPBA	
Internal Wall	NZS3604:2011	17.5 MPa	N/A	900 mm	12120BPAG ¹ or T12140GH ¹	N/A
	Proprietary Bracing Systems (15 kN)	17.5 MPa	N/A	600 mm	8x75 Drive Pin & Washer	N/A
				900 mm	12120BPAG ¹ or T12140GH ¹ + RPBA	N/A



D1 05 Foundation (Linea)



D2 05 Foundation (Axon)

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

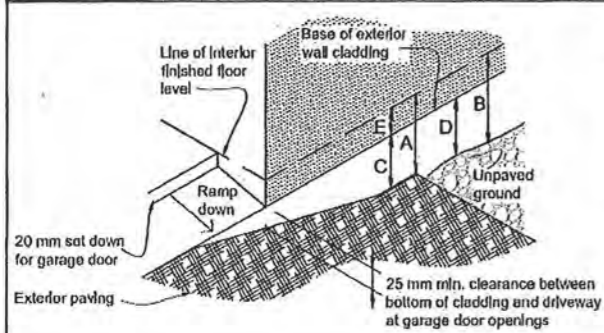
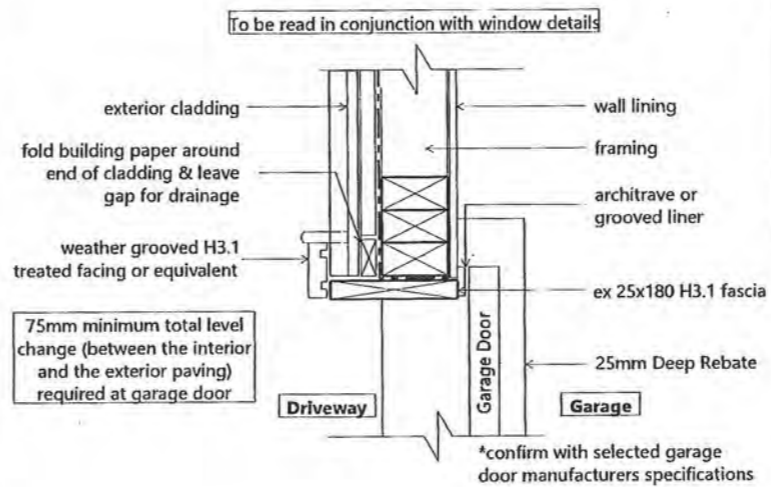


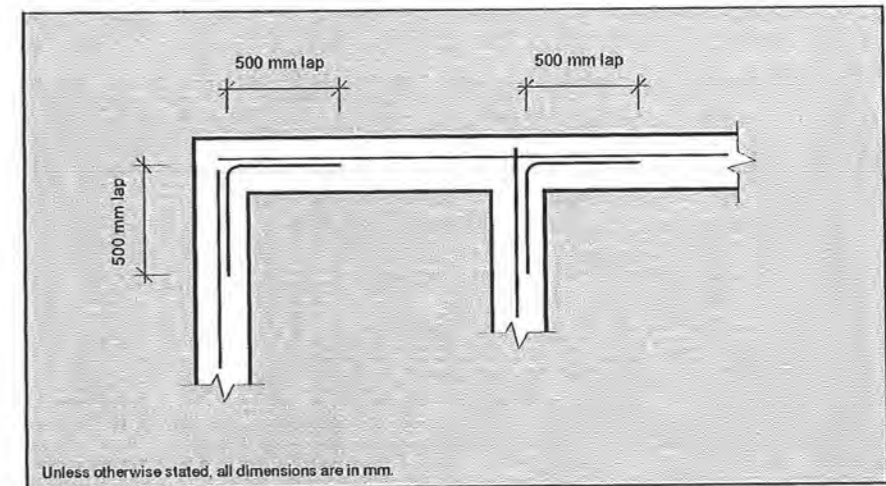
Table 18: Minimum clearances
Paragraphs 9.1.3, 9.1.3.1, 9.1.3.2, 9.1.3.3, 9.1.3.4, 9.1.3.5 and 9.2.7

Minimum clearances (mm)	Masonry veneer		Other claddings				
	A	B	A	B	C	D	E
Concrete slab	100	150	150	225	100	175	50
Timber floor Refer Note 1)					100	175	50

NOTE: 1) Refer to NZS 3604 for requirements.
2) Cladding to extend minimum 50 mm below bearer or lowest part of timber floor framing.



D3 05 Garage Door Rebate

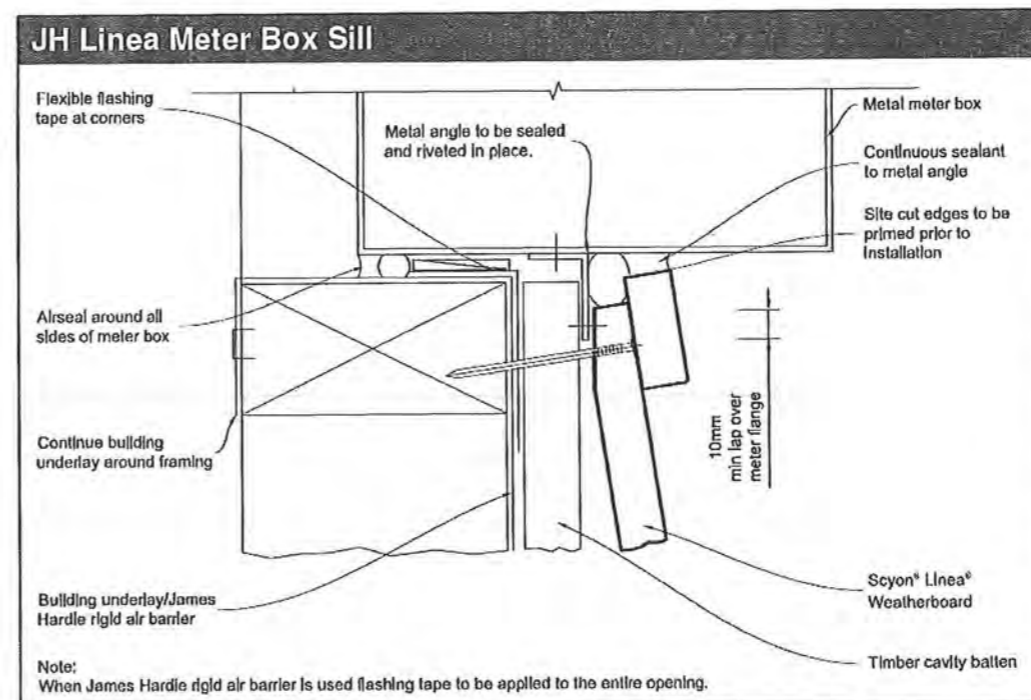
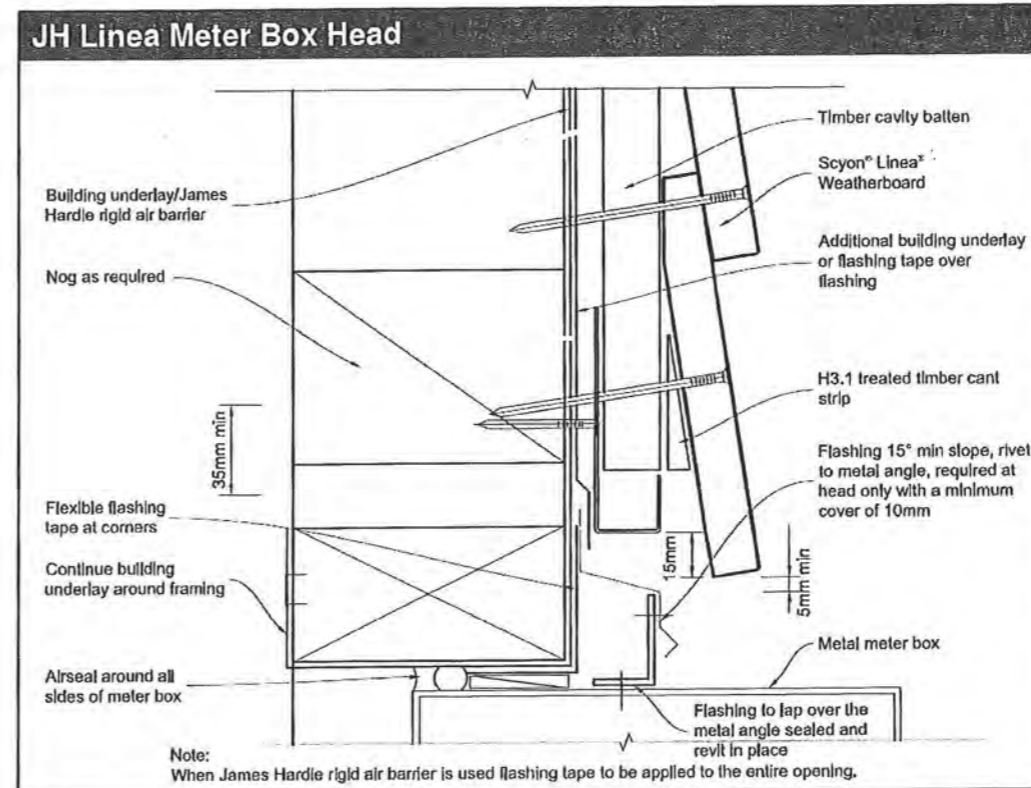
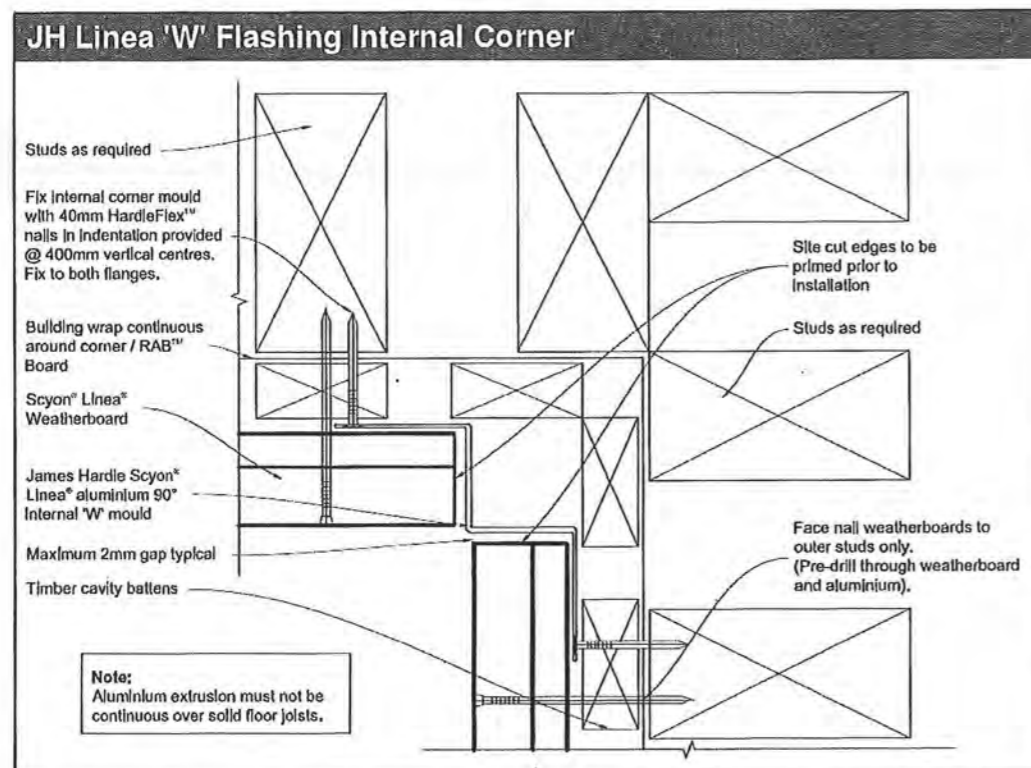
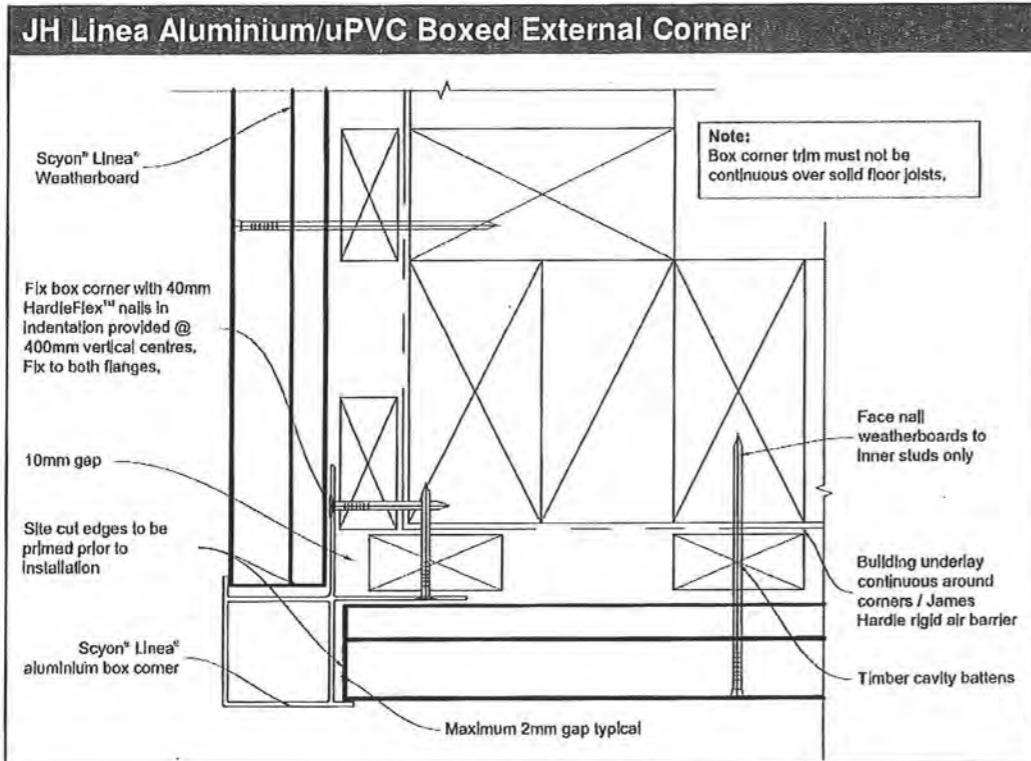


Client Details:
UBAW318
Mr & Mrs O'Keefe
Address:
12 Mātuhi Street
Waikanae
BH170

Foundation Details				Scale:	Date:	Sheet no.:
Drawn:	L.Janes	Check:	N.Davis	1:10	20-May-14	18
Wind:	High	Earthq:	3	Rev:		
Exposure:	C	Snow:	NT-0.0kPa	Call 0800 A1homes 214663 www.A1homes.co.nz		

All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. COPYRIGHT; All drawings remain the property of A1 Homes Ltd and are for use as described above and may not be used or re-produced in whole or part without written permission. Any site/construction works are not to commence until Building Consent becomes unconditional.

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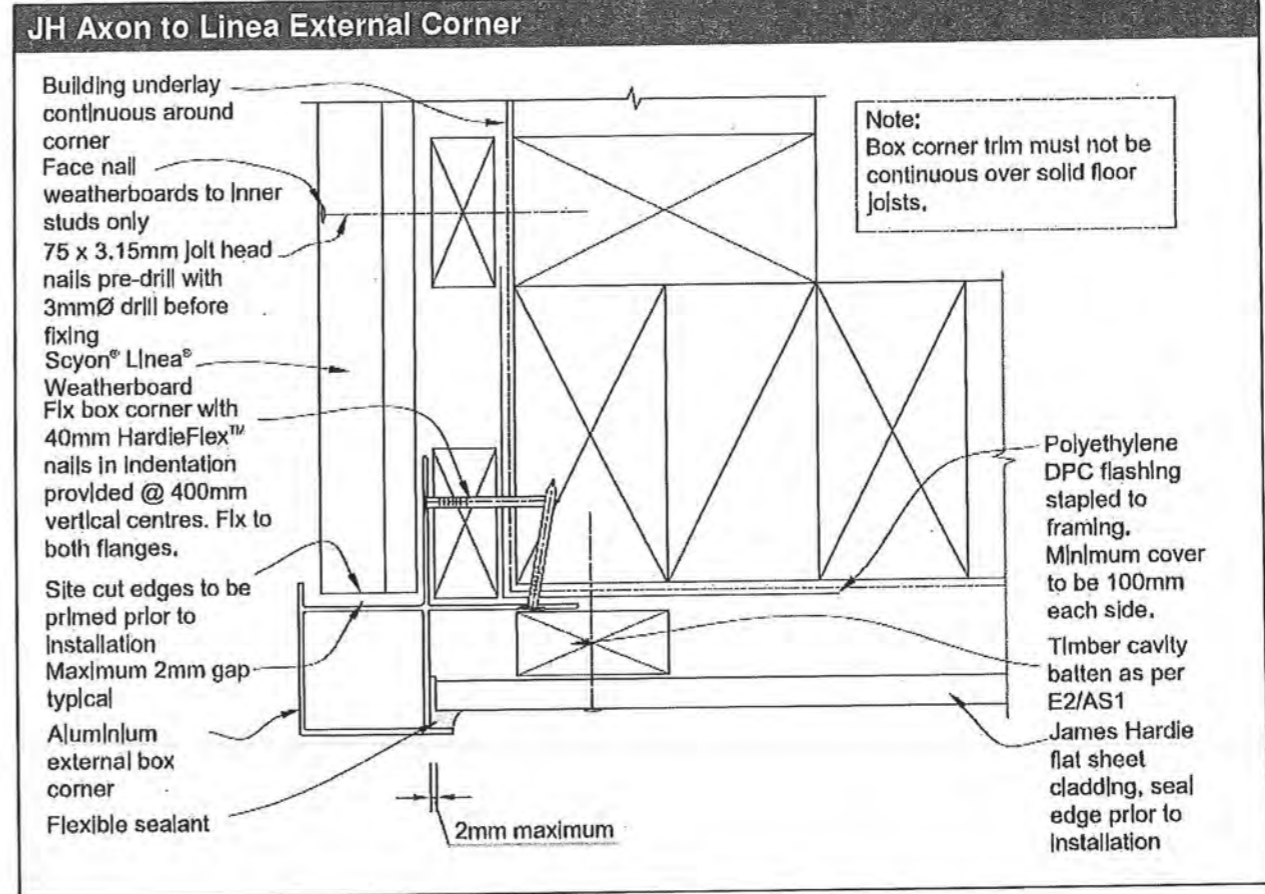
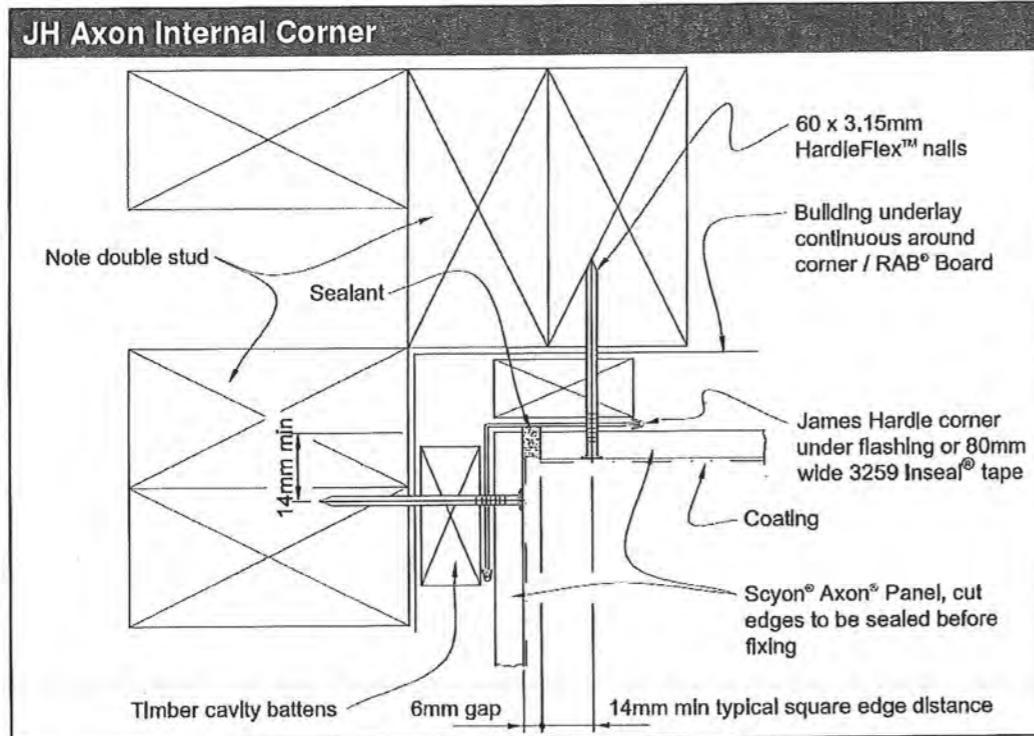
Client Details : UBAW318
Mr & Mrs O'Keefe
Address: BH170
12 Matuhi Street
Waikanae

Cladding Details		Scale: N.T.S	Date: 20-May-14	Sheet no: 19
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes 214663		
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	www.A1homes.co.nz

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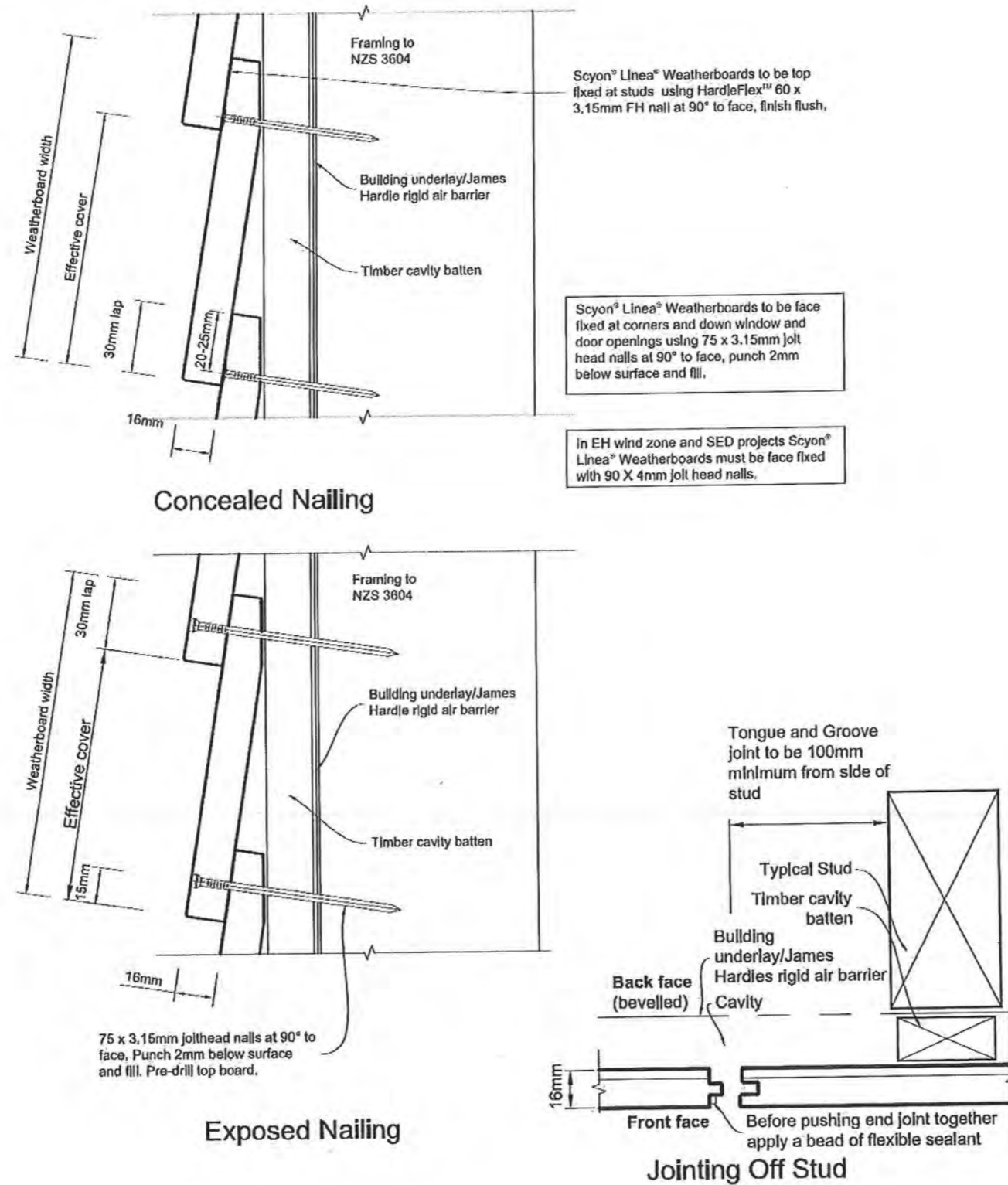


Client Details :			UBAW318
Mr & Mrs O'Keeffe			
Address:			
12 Matuhi Street			
Waikanae			BH170
Cladding Details		Scale:	Date: 20-May-14
		N.T.S	Rev:
			20
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes	
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa
		214663	
		www.A1homes.co.nz	

All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. COPYRIGHT; All drawings remain the property of A1 Homes Ltd and are for use as described above and may not be used or re-produced in whole or part without written permission. Any site/construction works are not to commence until Building Consent becomes unconditional.



Figure 29: Timber cavity weatherboard fixing



Jointing:

The ends of Scyon Linea Weatherboards are jointed off-stud by means of a tongue and groove joint. Tongue and groove joints may be located centrally between studs but no closer than 100mm from the edge of a stud. The joints must be staggered by 600mm minimum. Sealant must be provided in the tongue and groove joint.

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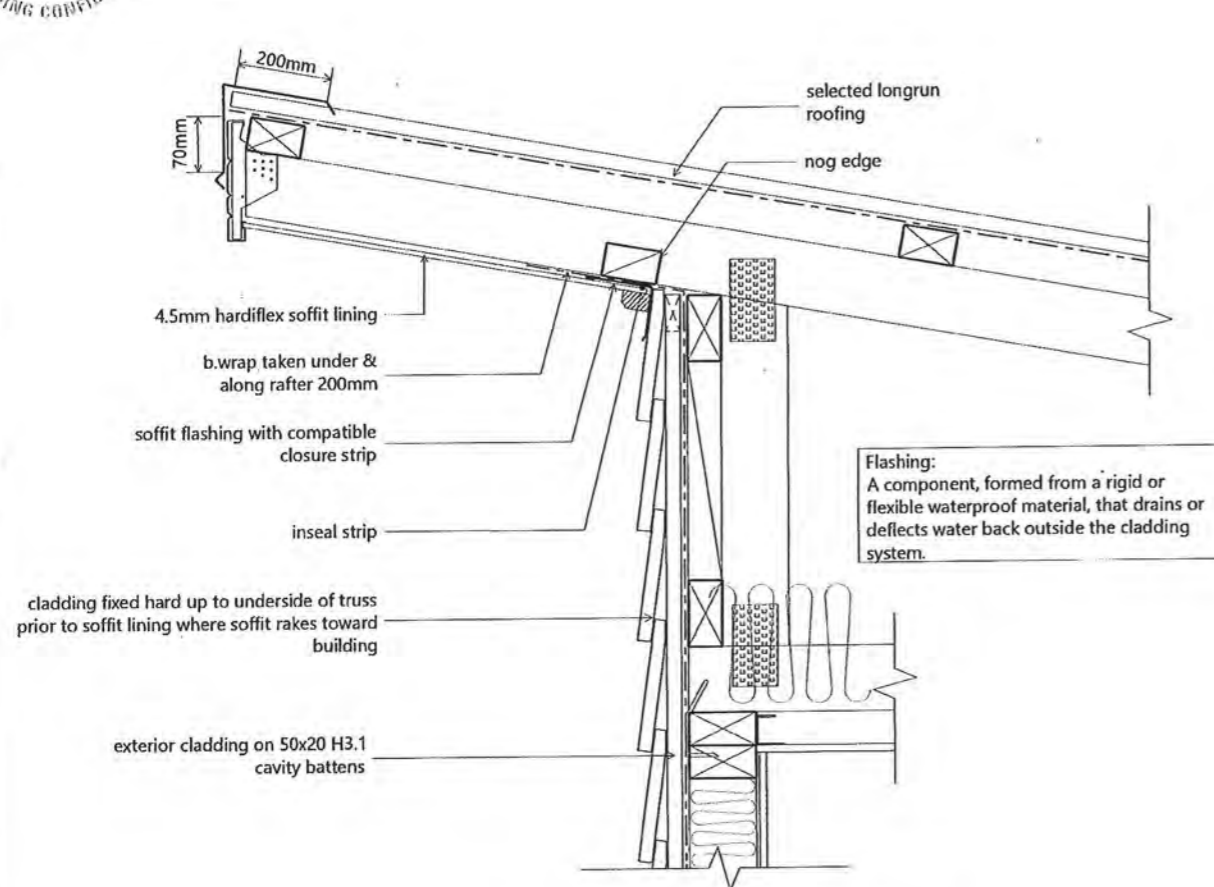
Client Details :			UBAW318
Mr & Mrs O'Keeffe			
Address:			
12 Mātuhi Street			BH170
Waikanae			

Cladding Details		Scale: N.T.S.	Date: 20-May-14	Sheet no: 21
Drawn: J.Janes	Check: N.Davis	Call 0800 A1homes 2 1 4 6 6 3 www.A1homes.co.nz		
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Exposure: C	Snow: N1-0.0kPa			

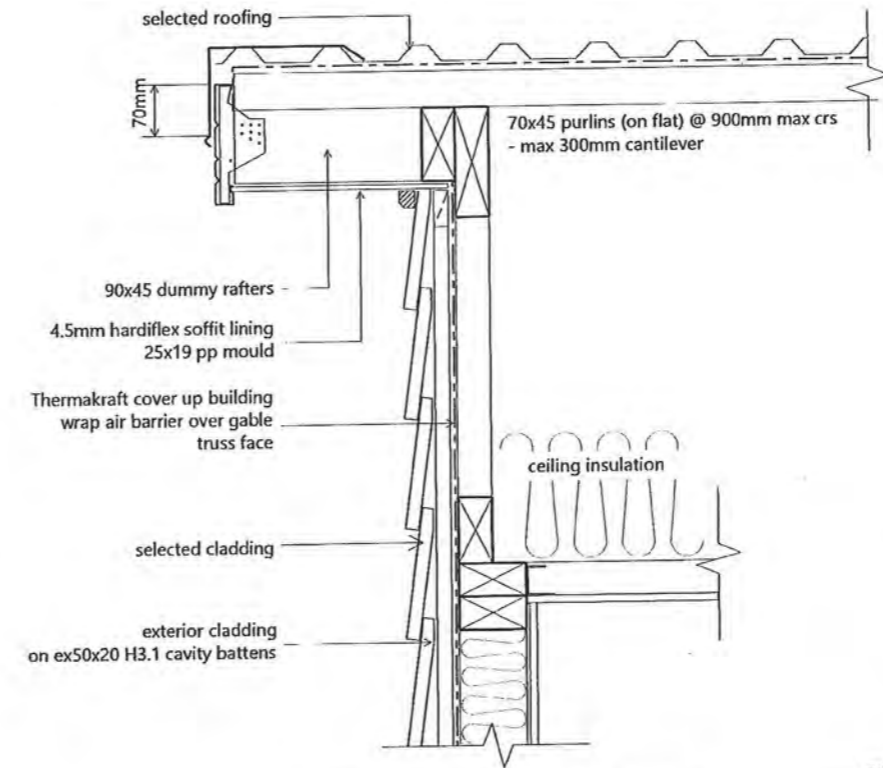
All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. COPYRIGHT; All drawings remain the property of A1 Homes Ltd and are for use as described above and may not be used or re-produced in whole or part without written permission. Any site/construction works are not to commence until Building Consent becomes unconditional.



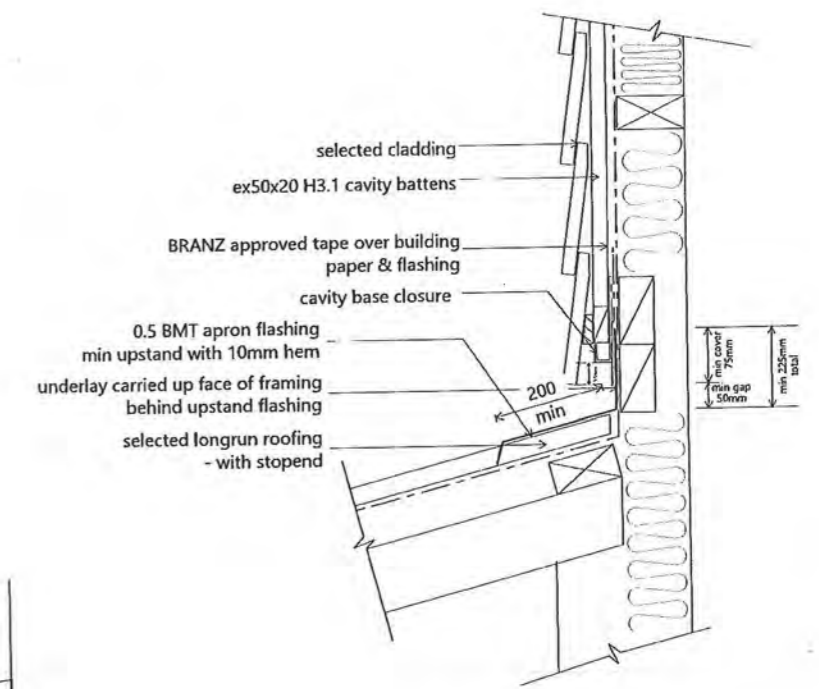
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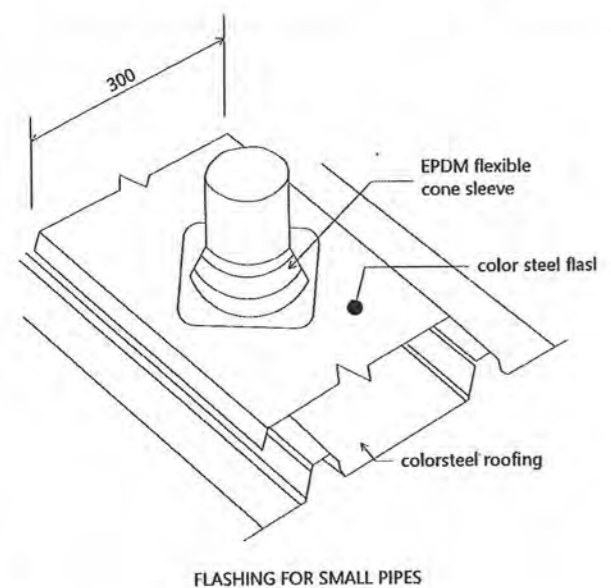
D4 Eave/Soffit (600mm)
 14



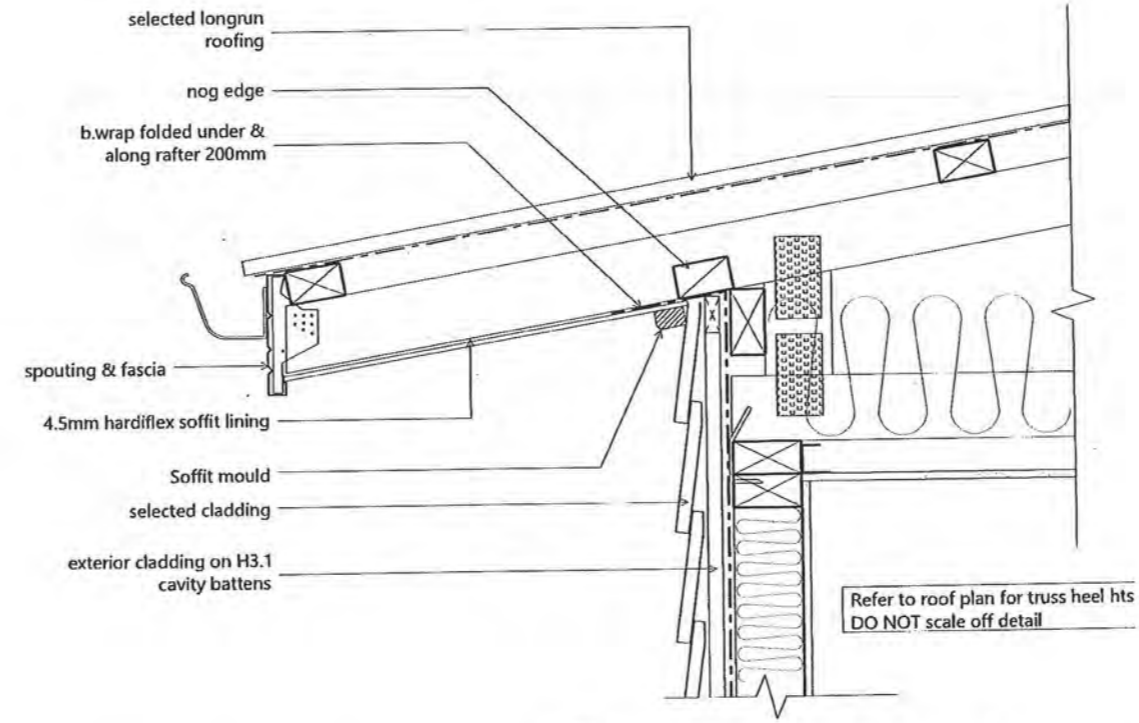
D5 Gable (300mm)
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D6 Roof to Wall
 14



FLASHING FOR SMALL PIPES

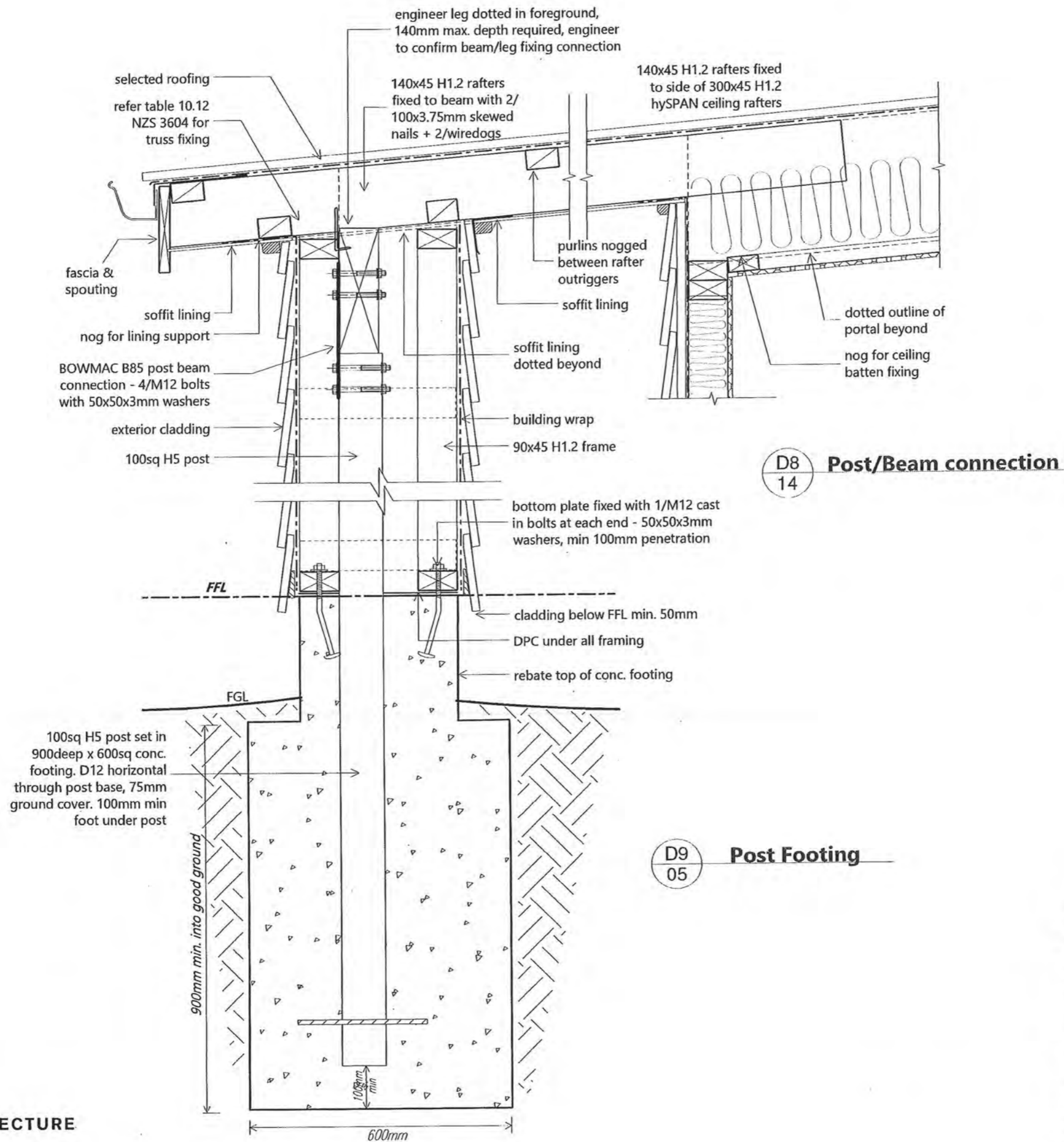


D7 Eave/Soffit (600mm)
 14

Client Details :			UBAW318		
Mr & Mrs O'Keefe					
Address:					
12 Matuhi Street			BH170		
Waikanae					
Roof Details			Scale:	Date: 20-May-14	Sheet no:
			1:10	Rev:	22
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes			
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	2 1 4 6 6 3	
			www.A1homes.co.nz		
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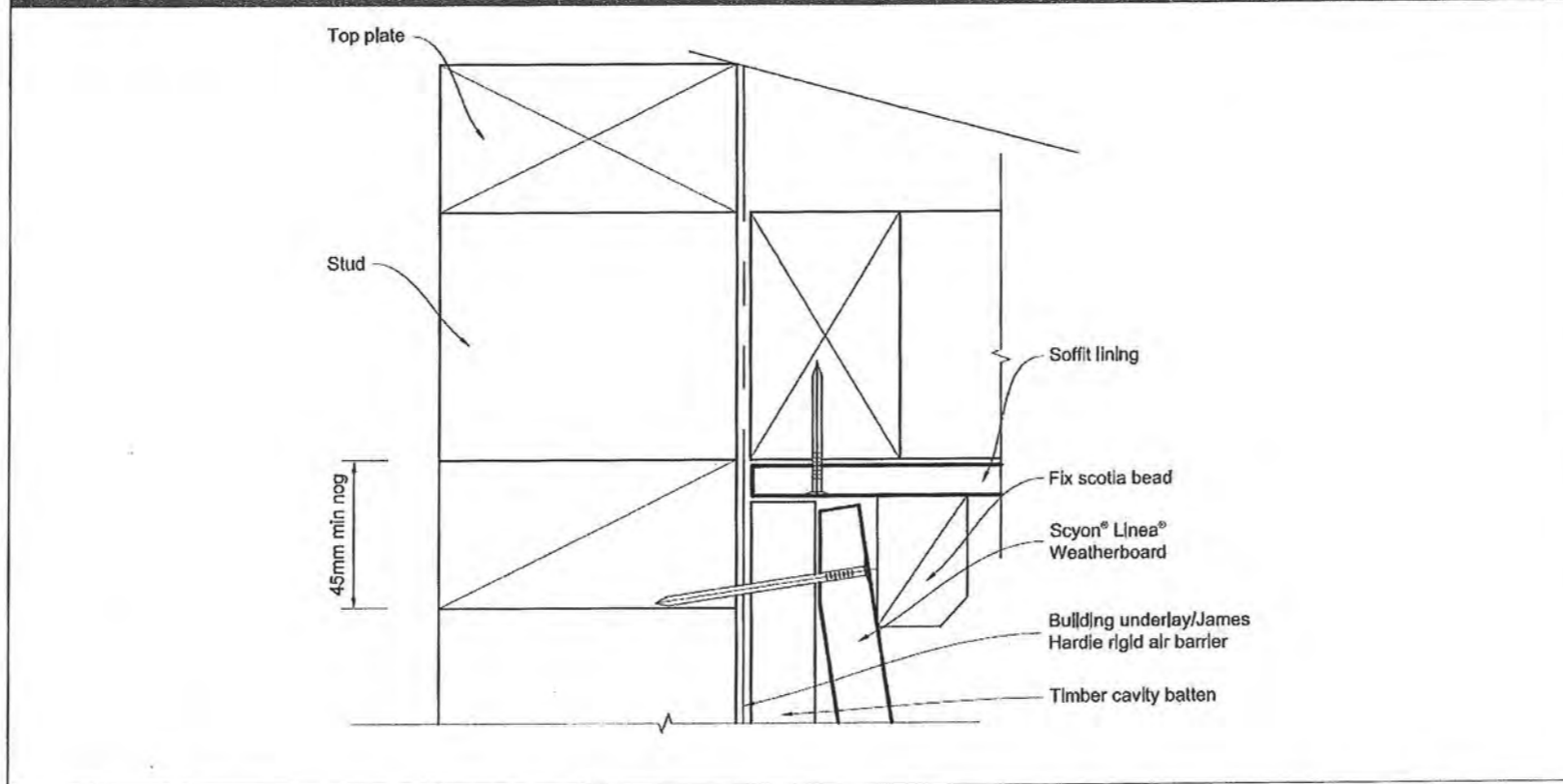
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Client Details :				UBAW318	
Mr & Mrs O'Keeffe					
Address:					
12 Matuhi Street					
Waikanae				BH170	
Roof Details		Scale:	Date: 20-May-14	Sheet no:	
		1:10	Rev:	23	
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes			
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	2 1 4 6 6 3	
				www.A1homes.co.nz	
All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. COPYRIGHT; All drawings remain the property of A1 Homes Ltd and are for use as described above and may not be used or re-produced in whole or part without written permission. Any site/construction works are not to commence until Building Consent becomes unconditional.					



Figure 28: Timber cavity soffit detail

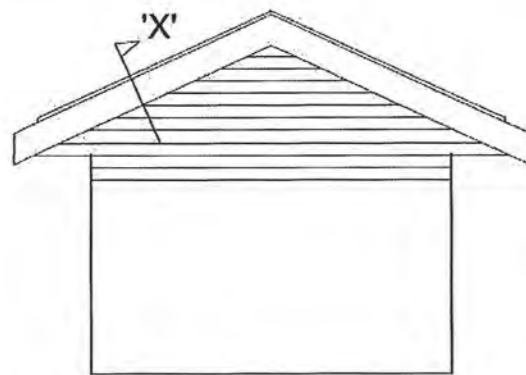


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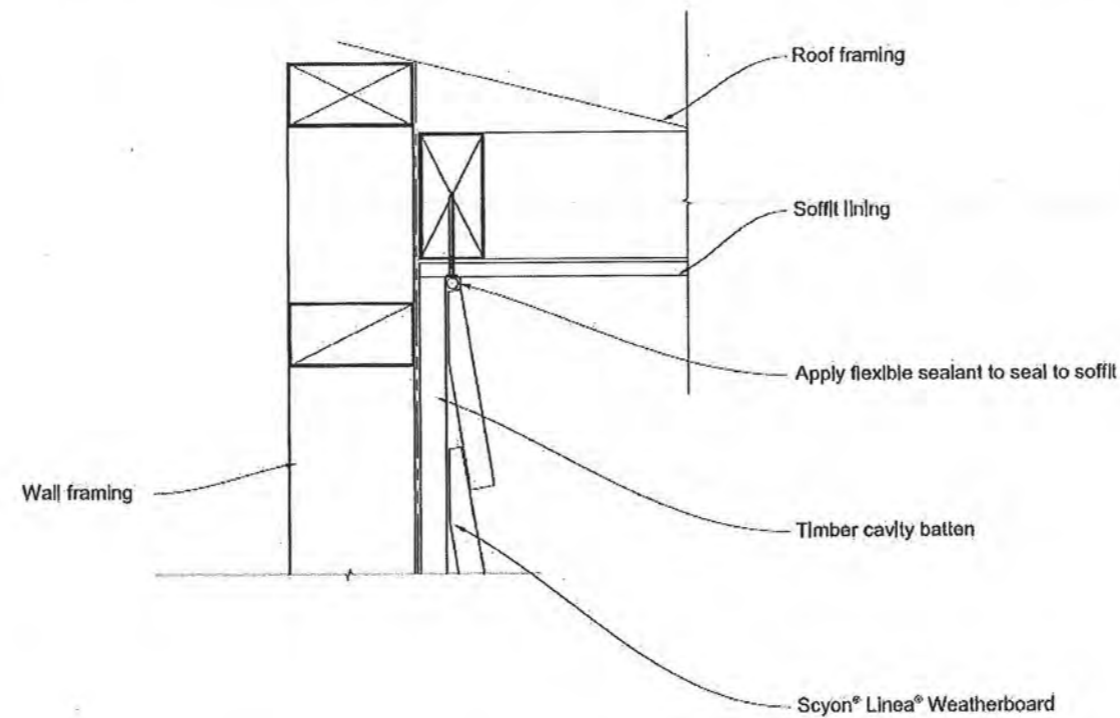
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BY:

Figure 58: Sloping soffit to weatherboard junction



The Scyon® Linea® Weatherboard must be neat cut and silicone sealed to angle of soffit
Alternatively a scotia can be scribed and sealed to Scyon® Linea® Weatherboard and the soffit lining



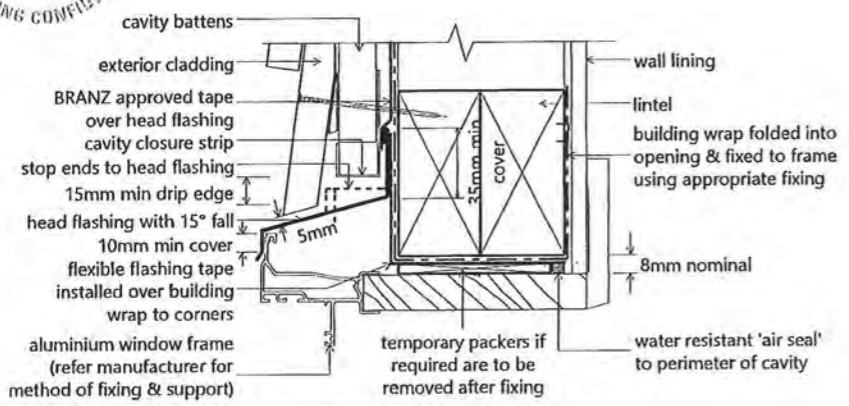
Client Details :				UBAW318
Mr & Mrs O'Keeffe				
Address:				
12 Matuhi Street				
Waikanae				BH170
Roof Details		Scale: N.T.S	Date: 20-May-14	Sheet no: 24
Drawn: L.Janes	Check: N.Davis			
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	
Call 0800 A1homes 214663				
www.A1homes.co.nz				

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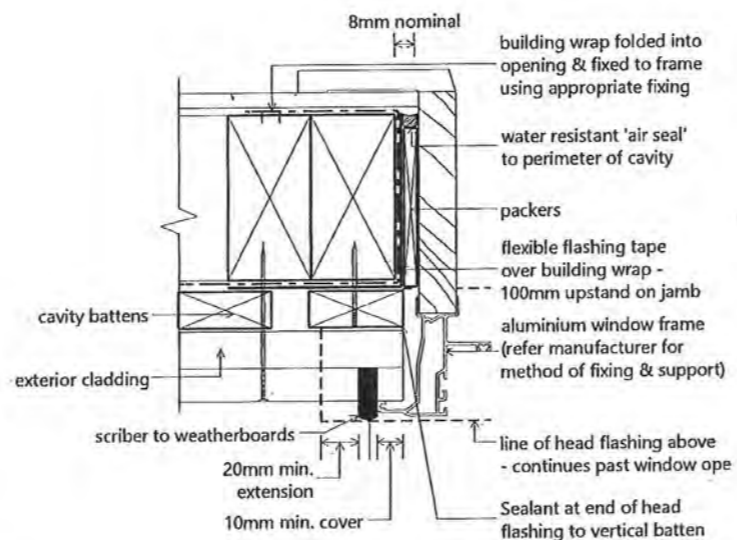


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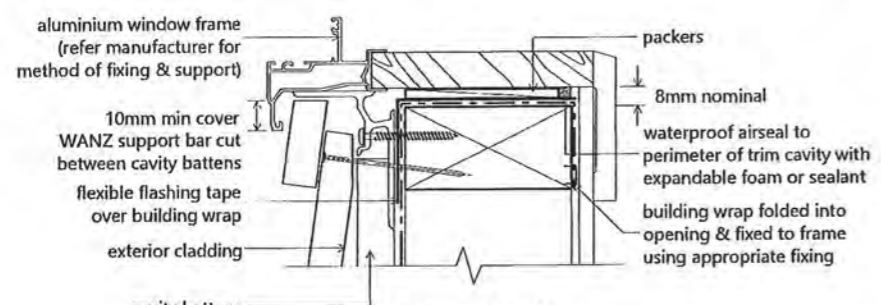
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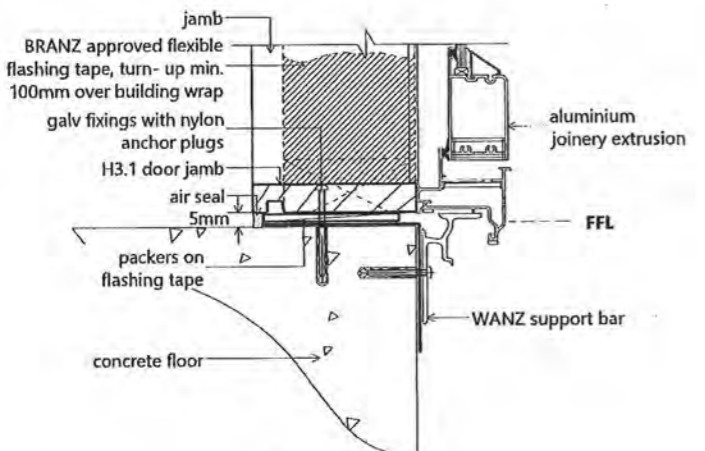
Window Head



Window Jamb



Window Sill



Door Sill

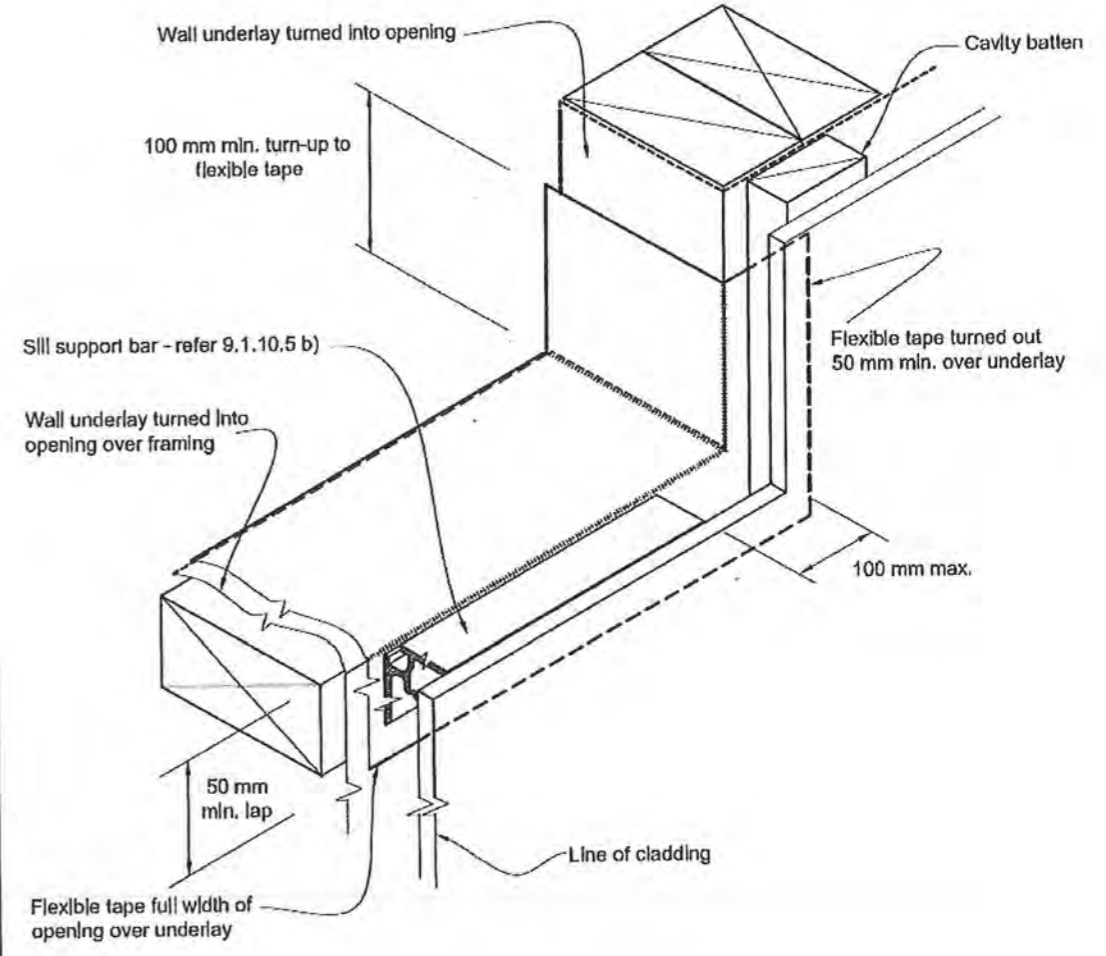
Flexible air seals:
The air seal shall be installed over a closed cell polyethylene foam (PEF) backing rod, or similar and made of self-expanding polyurethane foam

Backing rods are used for self-expanding polyurethane foam as there is a danger foam will expand to the outside of the wall and form a moisture bridge to the interior.

9.1.10.8 Attachments for windows and doors
Install windows and doors using pairs of minimum 75 x 3.15 galvanised jolt head nails or 8 gauge x 65 mm stainless steel screws, through reveals into surrounding framing at:
a) Maximum 450 mm centres along sills, jambs and heads, and
b) Maximum 150 mm from reveal ends.
Install packers between reveals and framing at all fixing points, except between head reveals and lintels.

Figure 72B: General window and door opening with drainage cavity
Paragraphs 9.1.5, 9.1.9.3, 9.1.10.2, Figures 73C, 76, 85, 88, 91, 99, 116 and 128

NOTE:
(1) Detailed cladding omitted for clarity, refer to specific claddings.
(2) Head to be treated similarly with continuous wall underlay and flexible tape at corners.
(3) Refer individual cladding details for jamb flashings.



Flashing tape must be proven compatibility with selected building underlay and other building materials with which it comes into contact as per table 21 of 'E2/AS1'

Client Details : UBAW318
Mr & Mrs O'Keefe
Address: 12 Matuhi Street, Waikanae, BH170

Joinery Details				Scale: 1:5	Date: 20-May-14	Sheet no: 25
Drawn: L.Janes	Check: N.Davis			Call 0800 A1homes 214663		
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	www.A1homes.co.nz		

All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. COPYRIGHT; All drawings remain the property of A1 Homes Ltd and are for use as described above and may not be used or re-produced in whole or part without written permission. Any site/construction works are not to commence until Building Consent becomes unconditional.

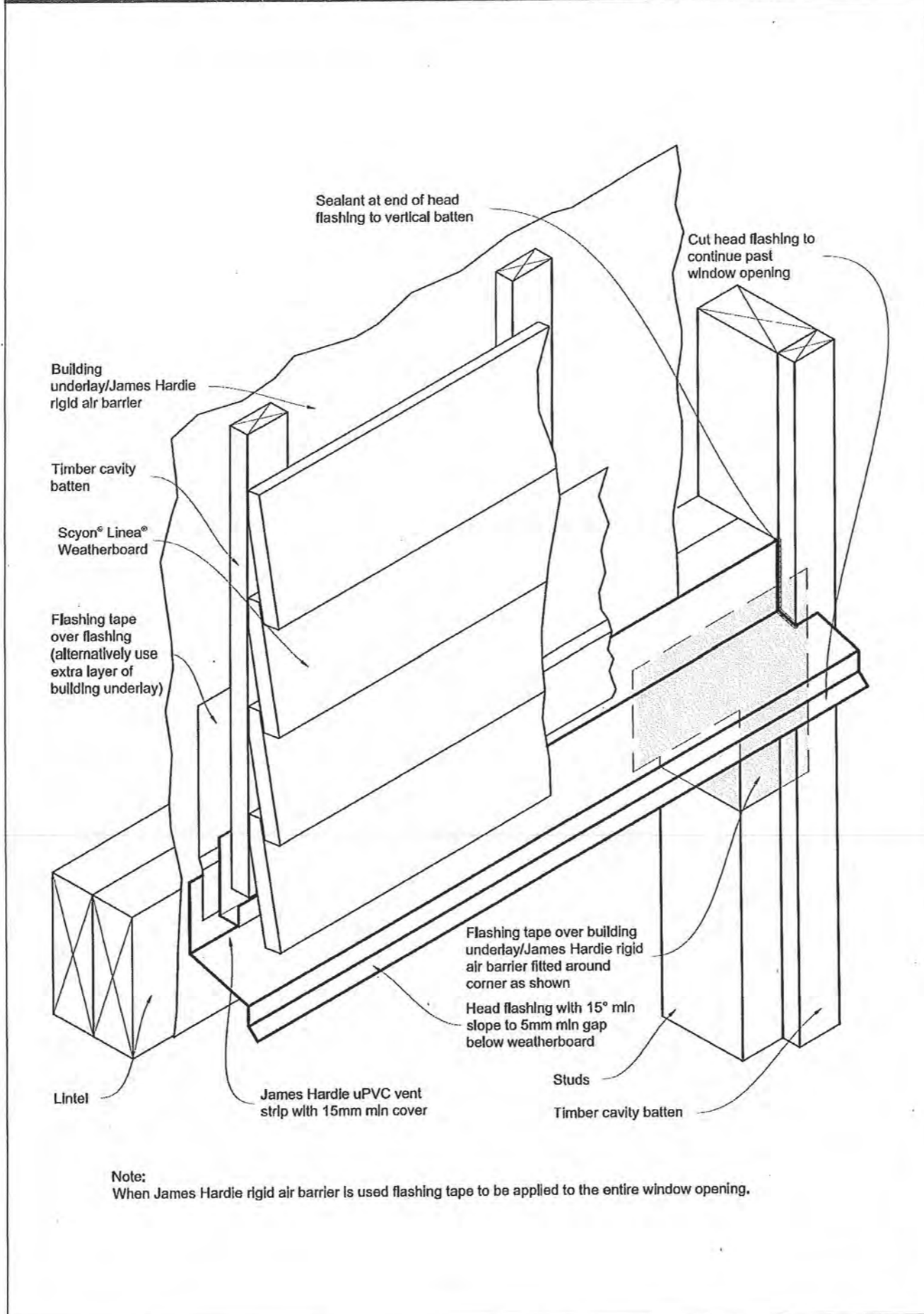


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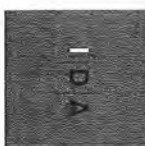
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www.A1homes.co.nz

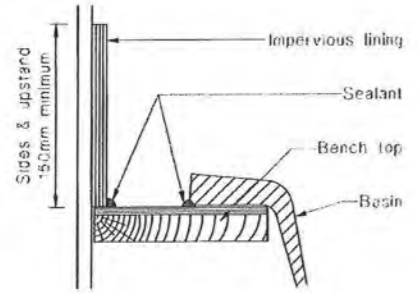
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Figure 44: Timber cavity head flashing termination

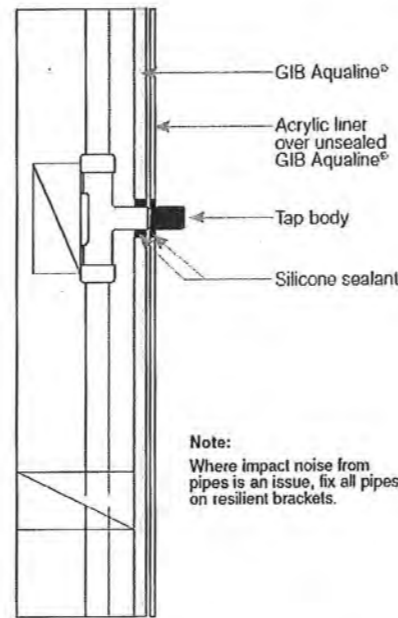


Client Details :				UBAW318	
Mr & Mrs O'Keeffe					
Address:					
12 Matuhi Street					
Waikanae				BH170	
Joinery Details		Scale:	Date: 20-May-14	Sheet no:	
		N.T.S	Rev:	26	
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes 2 1 4 6 6 3 www.A1homes.co.nz			
Wind: High	Earthq: 3				
All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. COPYRIGHT; All drawings remain the property of A1 Homes Ltd and are for use as described above and may not be used or re-produced in whole or part without written permission. Any site/construction works are not to commence until Building Consent becomes unconditional.					

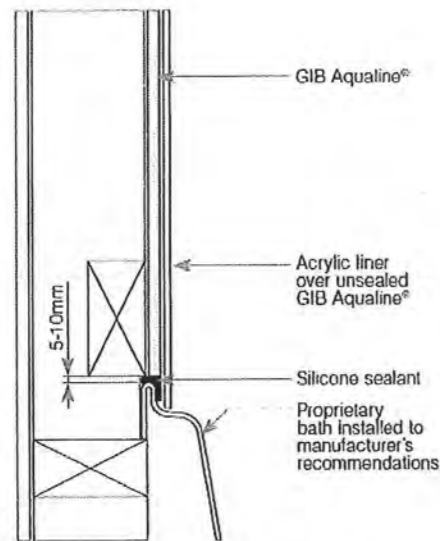




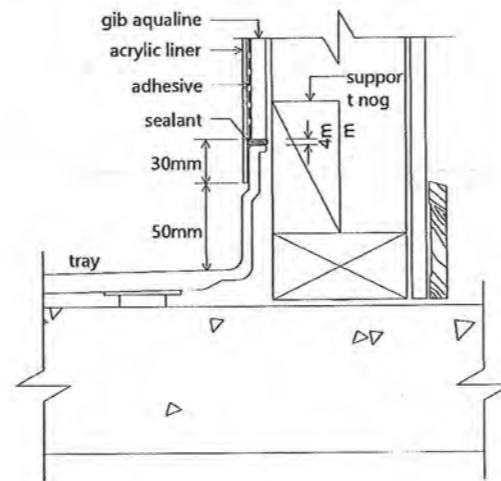
Tub, Sink and Basin Junction



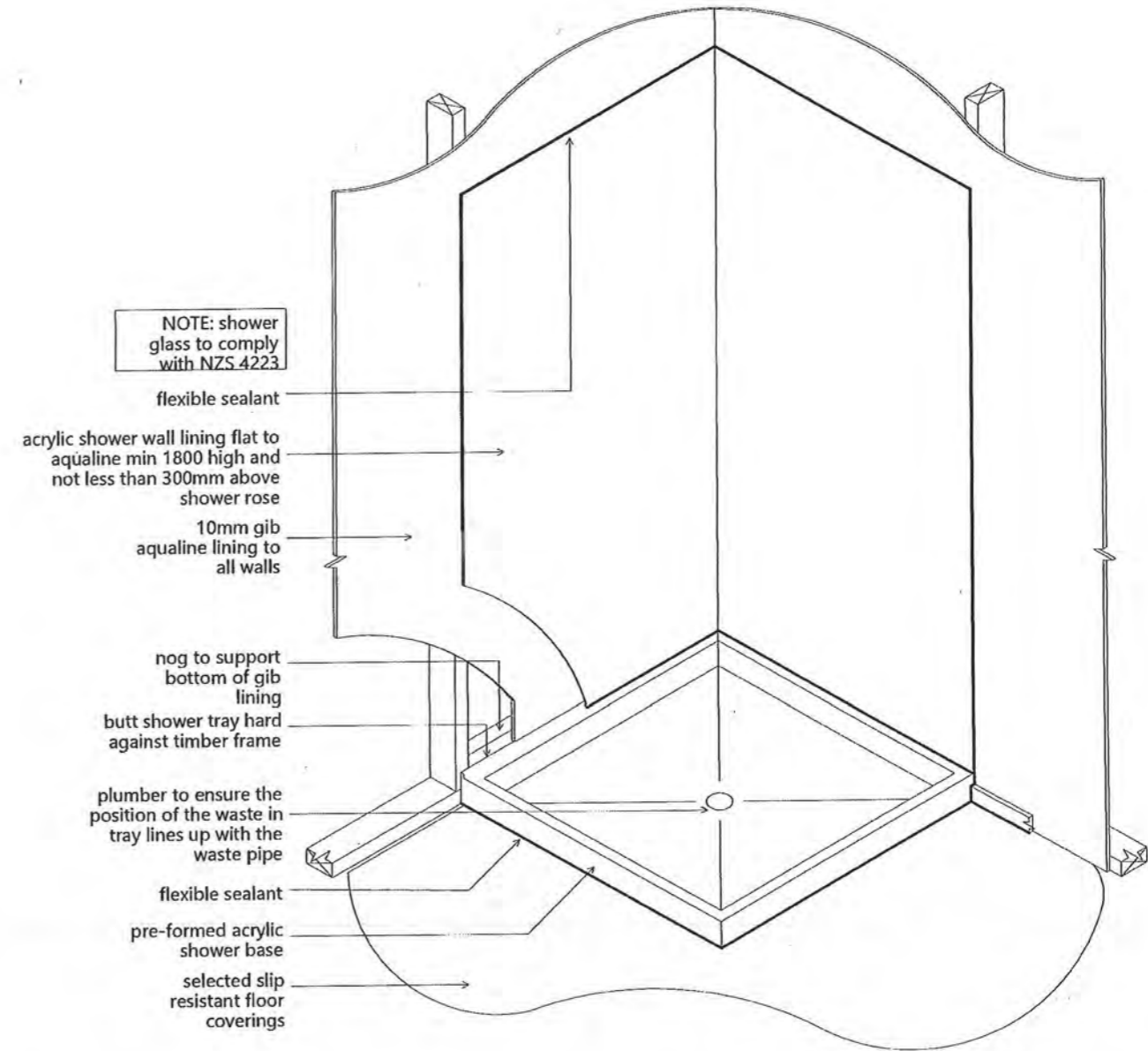
Typical Pipe Penetration



Bath to Wall Junction

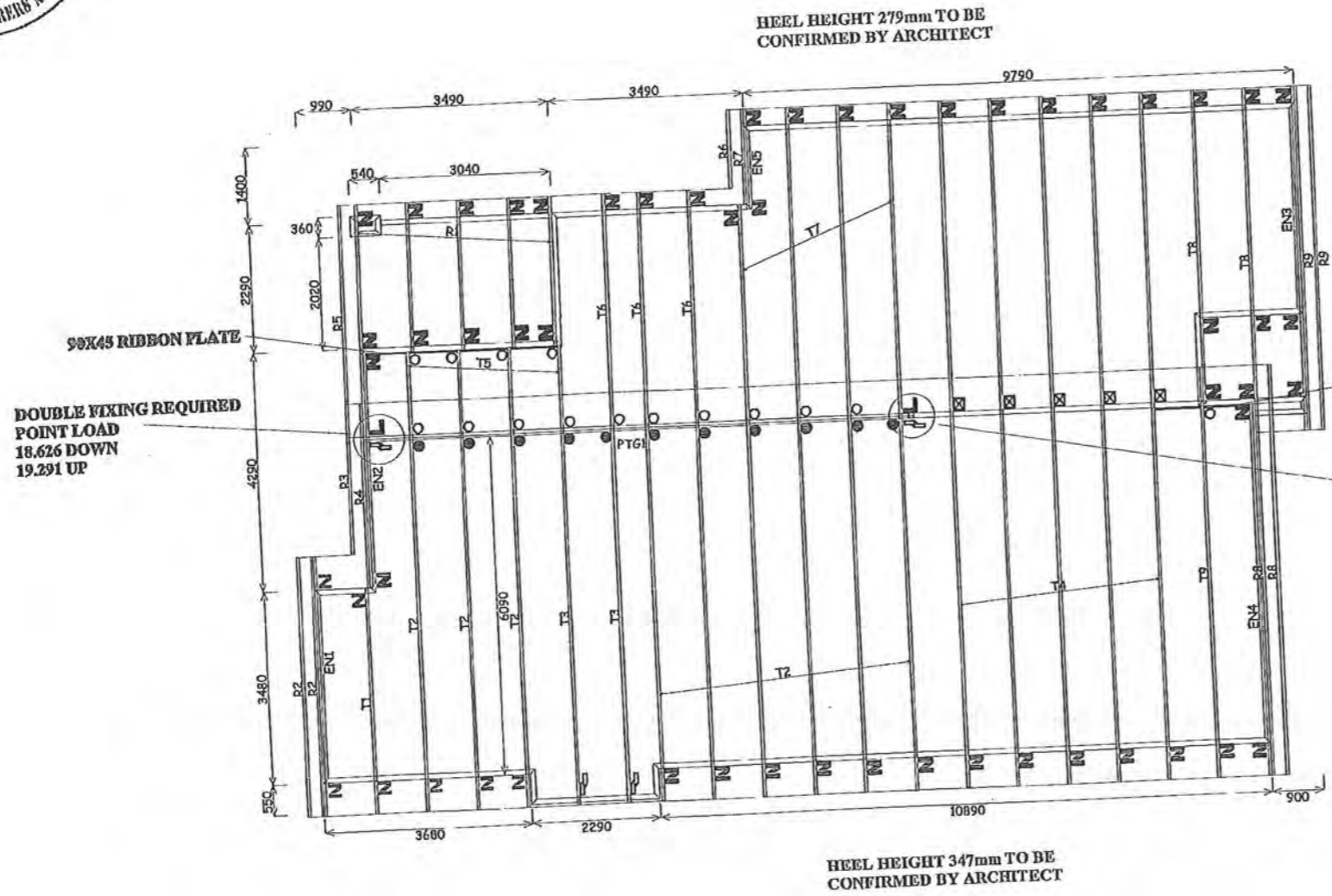


Shower Tray 1:5



Acrylic Shower Tray + Wall Linings 1:20

Client Details :				UBAW318	
Mr & Mrs O'Keefe					
Address:					
12 Matuhi Street					
Waikanae				BH170	
Wet Area Details			Scale: as shown	Date: 20-May-14	Sheet no: 27
Drawn: L.Janes	Check: N.Davis	Call 0800 A1homes 214663			
Wind: High	Earthq: 3	Exposure: C	Snow: N1-0.0kPa	www.A1homes.co.nz	
All dimensions & underground service locations to be checked prior to commencement of all works. DO NOT scale off drawings. Cross reference all drawings, confirm site levels, floor heights & restrictions prior to earthworks. If any discrepancies occur, ask the designer or contractor immediately before commencing works or ordering. COPYRIGHT; All drawings remain the property of A1 Homes Ltd and are for use as described above and may not be used or re-produced in whole or part without written permission. Any site/construction works are not to commence until Building Consent becomes unconditional.					



Design wind speed category:	HIGH
Pressure Coeff: C _{pe} = varies; C _{pi} = -0.8, 0.2	
Timber size and grades:	90x45 MEGS & MSG10 (III.2)
Roof Weight & Type:	Light
Roof Pitch:	9 & 4 Degrees
Roof Dead Load:	0.210 kPa
Roof Restraints:	900mm centres
Roof Live Load:	Q _{ro} = 0.250 kPa; Q _e = 1.100 kN
Ceiling Material:	Rondo on clips
Ceiling Dead Load:	0.210 kPa
Ceiling Restraints:	600mm centres
Ceiling Live Load:	Q _c = 1.400kN
Earthquake Zone:	A
Snow Zone:	I

IF RONDO BATTENS ON CLIPS ARE USED THEN THE BOTTOM CHORDS OF THE TRUSSES MUST BE RESTRAINED @ 1800mm CTRS MAX

ALL HEEL HEIGHTS MUST BE CONFIRMED BEFORE MANUFACTURE

No. of	Fixing description
1	"Z" nails (1 pair)
1	JH37 x 90
1	JH37 x 110
1	JH47 x 90
1	JH47 x 120
1	JH47 x 150
1	JH70 x 100
1	JH95 x 105
1	CFC 89 (Timber Elm screws)
1	200x100x1mm Nail on plate.
1	320x100x1mm Nail on plate.
14 pairs	Multi-Grip (pair)
1	CT200 (pair)
1	CFC 46

Truss to Top Plate Fixings.

J	CFC 89	Fill all holes with Product nails 30x3.15mm
□	CT200 (pair)	Fill all holes with Product nails 30x3.15mm
○	CT400 (eye-bone ties)	8 x Product nails 30x3.15mm / 4 x Type 17, 35mm screws
Z	"Z" nails (pair)	
▲	Multi-Grip (pair)	Fill all holes with Product nails 30x3.15mm

Truss to Truss Fixings.
(In all other situations use 2 / 100mm skew nails)

□	JH70 x 180	Fill all holes with Product nails 30x3.15mm
○	JH95 x 165	Fill all holes with Product nails 30x3.15mm
J	CFC 89	8 x Product nails 30x3.15mm / 4 x Type 17, 35mm screws
▲	200x100x1mm Nail on plate.	(Fill all holes to within 10mm of the timber edge)
▲	320x100x1mm Nail on plate.	(Fill all holes to within 10mm of the timber edge)

TRUSS LAYOUT FOR : A1 HOMES (O'KEEFFE)
12 Matuhi Street, Waikanae

JOB #2900381

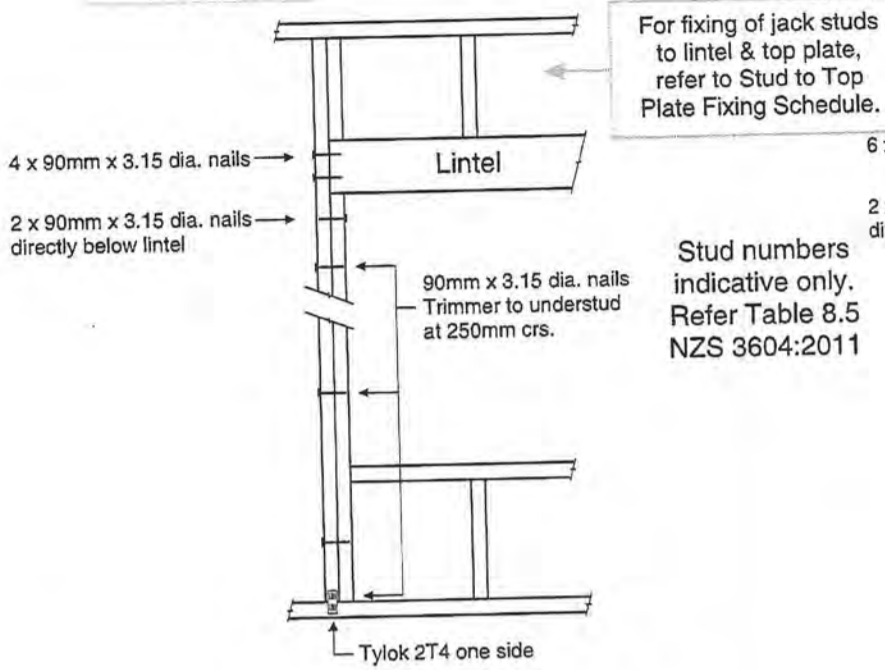
WELLINGTON FRAME & TRUSS

Drawn by: Dwayne Jackson
PHONE (04) 298 8567 - FAX (04) 298 5488
E-MAIL: djackson@placemakers.co.nz

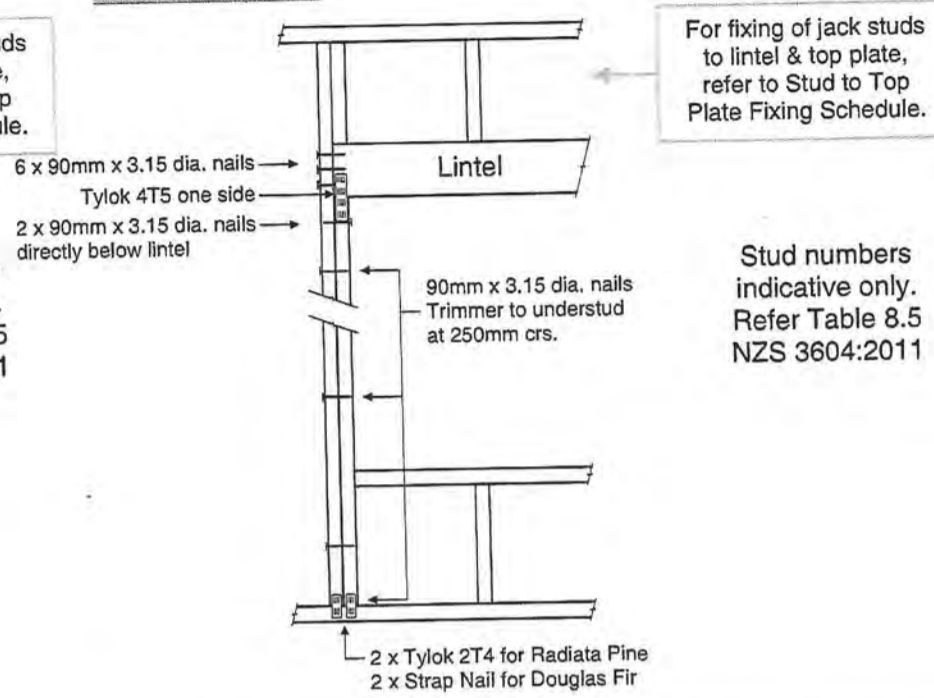
Version	Issue Date

LINTEL FIXING OPTIONS

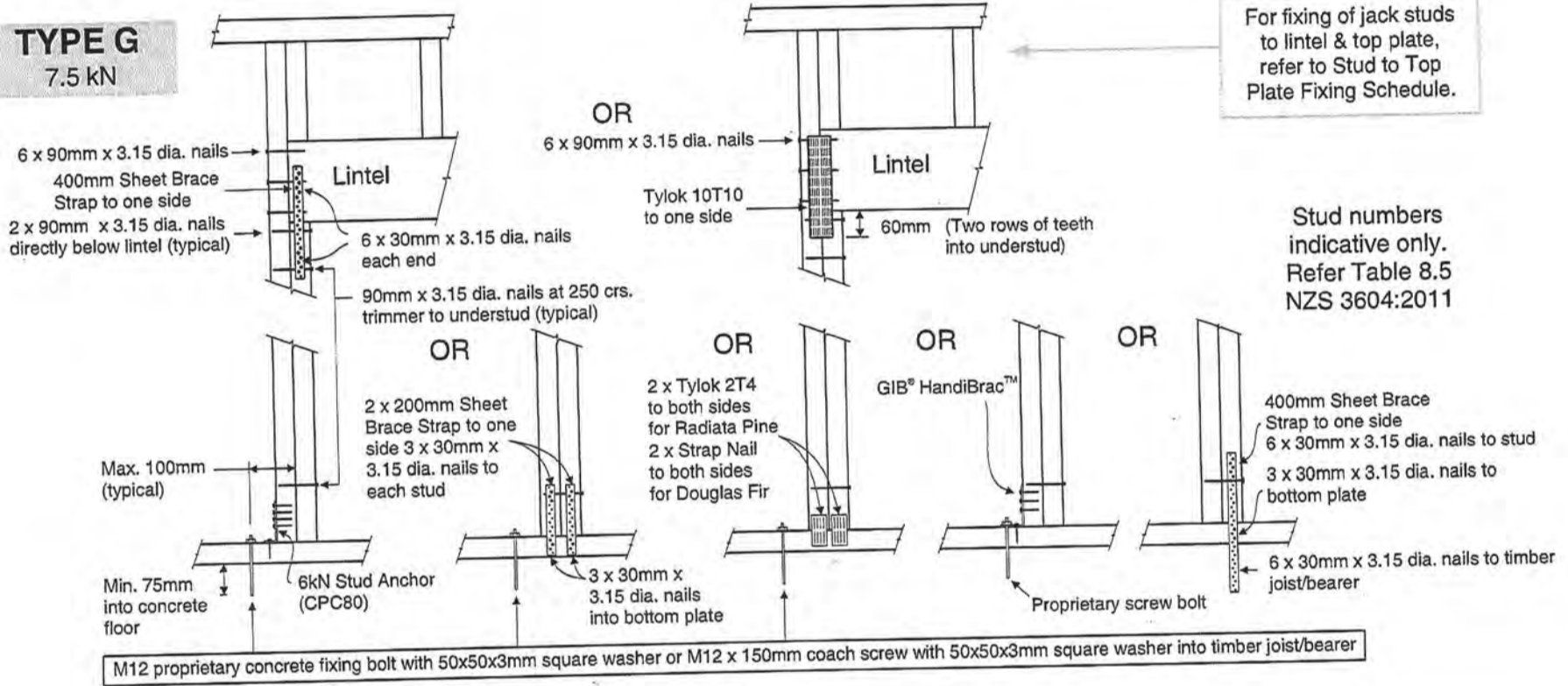
TYPE E 1.4 kN



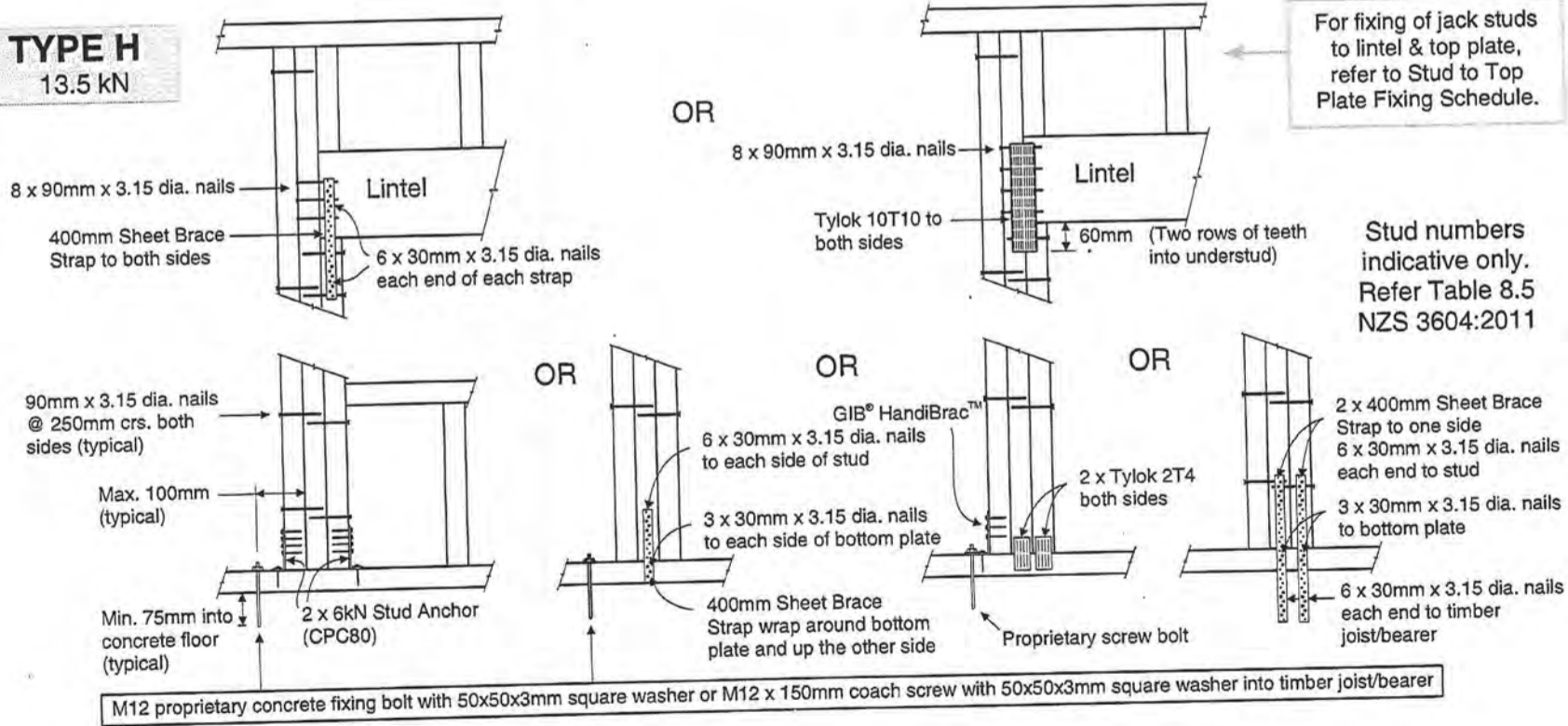
TYPE F 4.0 kN



TYPE G 7.5 kN



TYPE H 13.5 kN



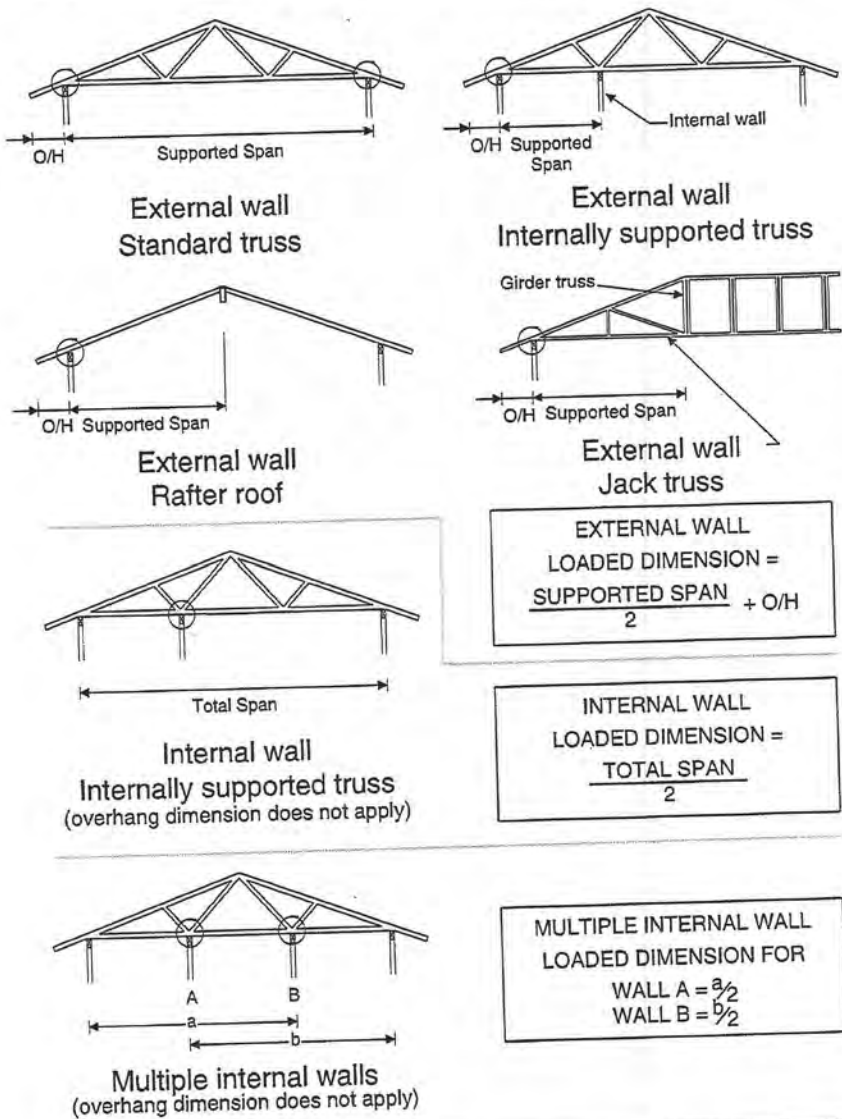
LUMBERLOK®

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.)

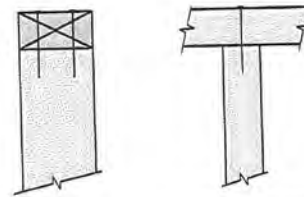
Wind Zones L, M, H, VH, EH, as per NZS 3604:2011

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

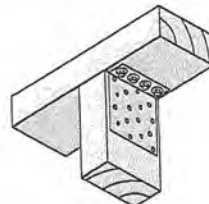
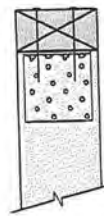
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



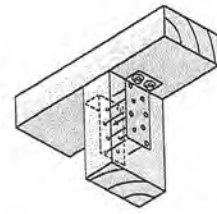
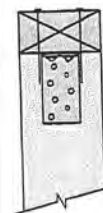
FIXING TYPE B 4.7 kN

CHOOSE ANY OF THE 3 OPTIONS BELOW

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



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

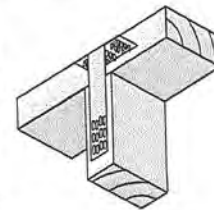


Plus LUMBERLOK 6kN Stud Anchor (CPC80)

Plus 2 x LUMBERLOK CPC40

Recommended for internal wall options to avoid lining issues

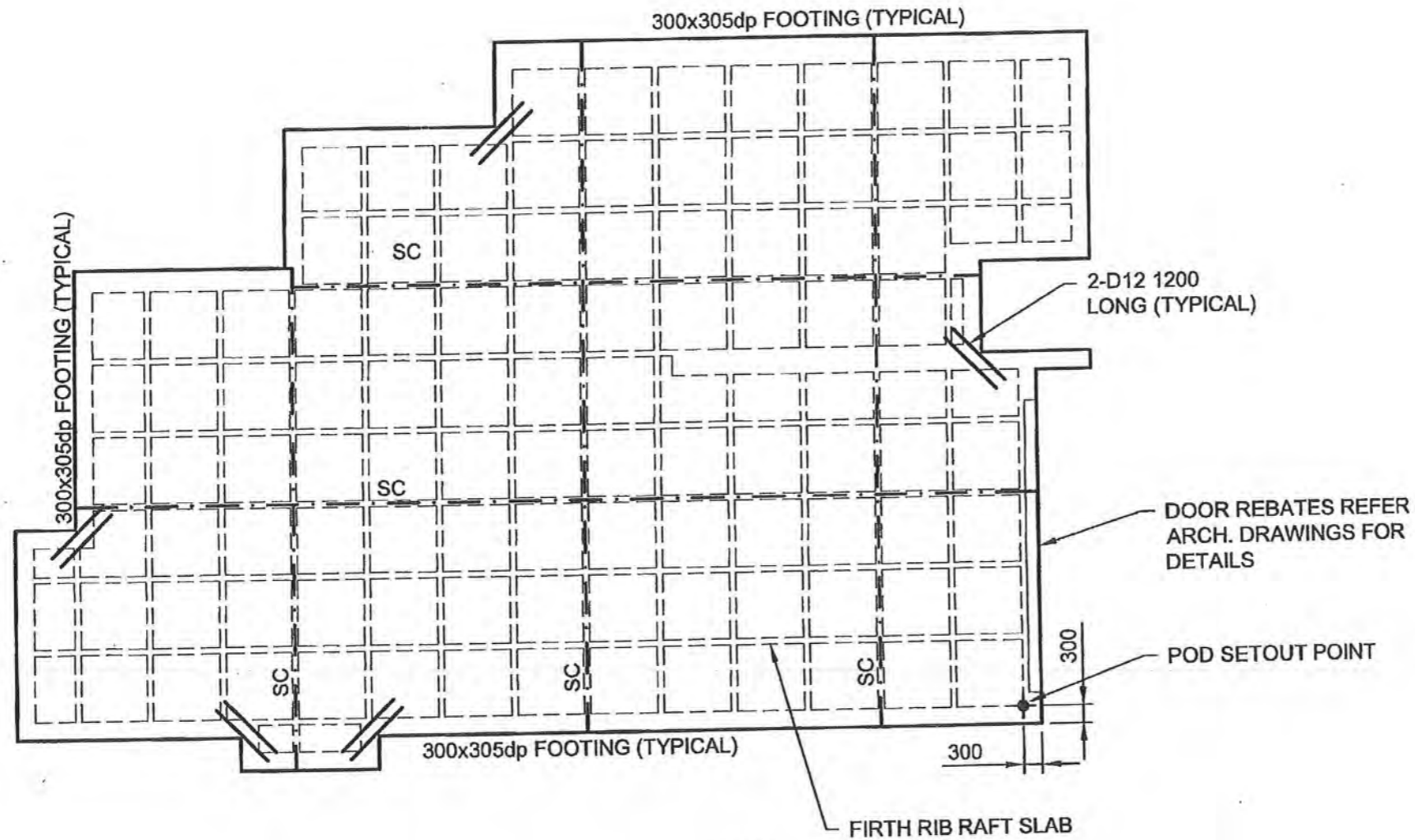
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.



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.



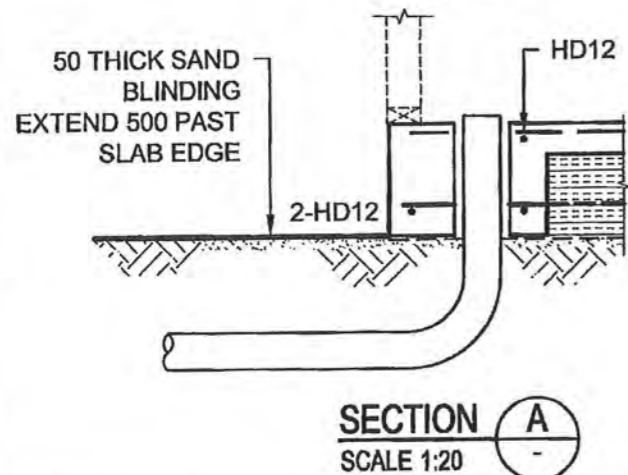
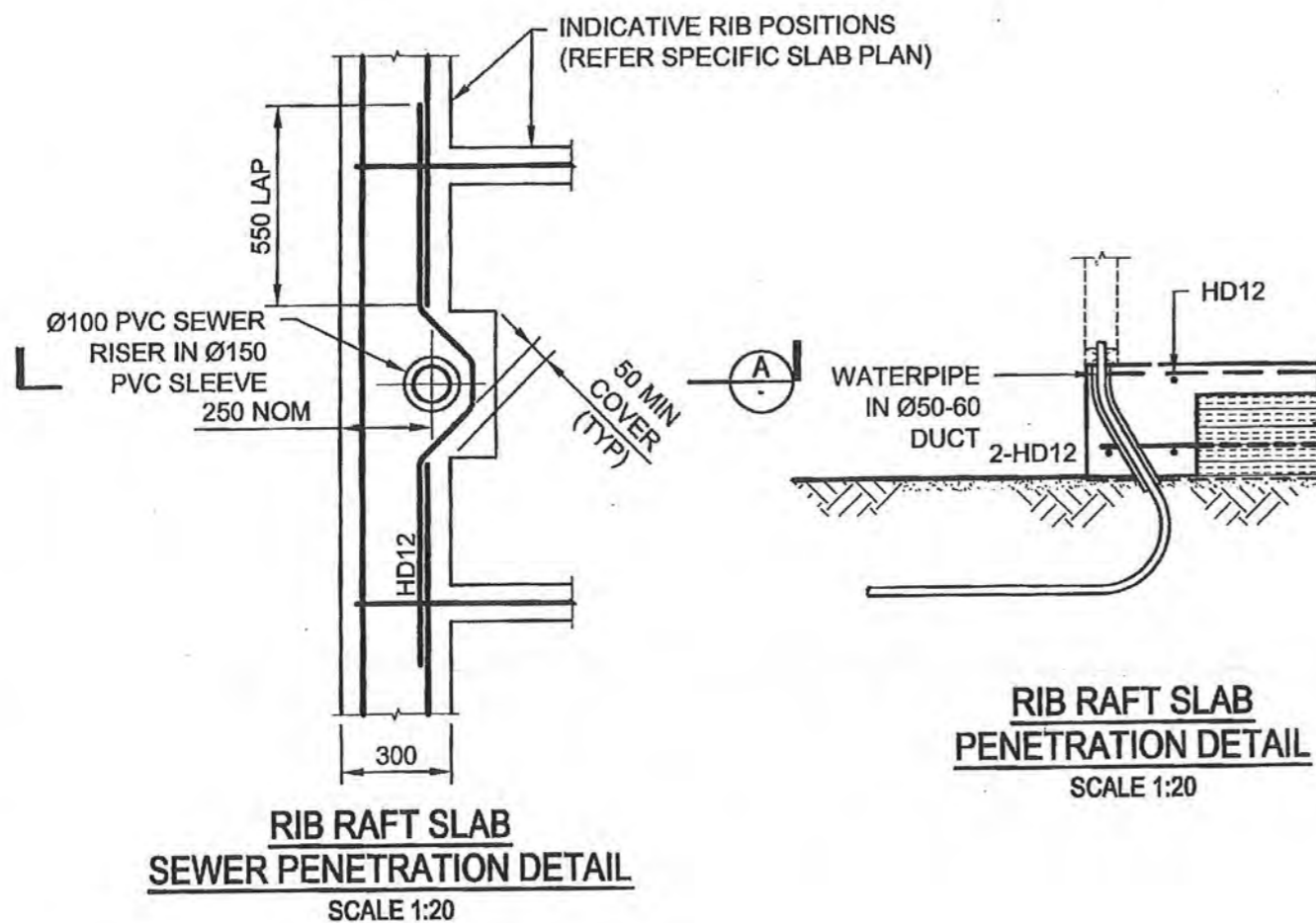
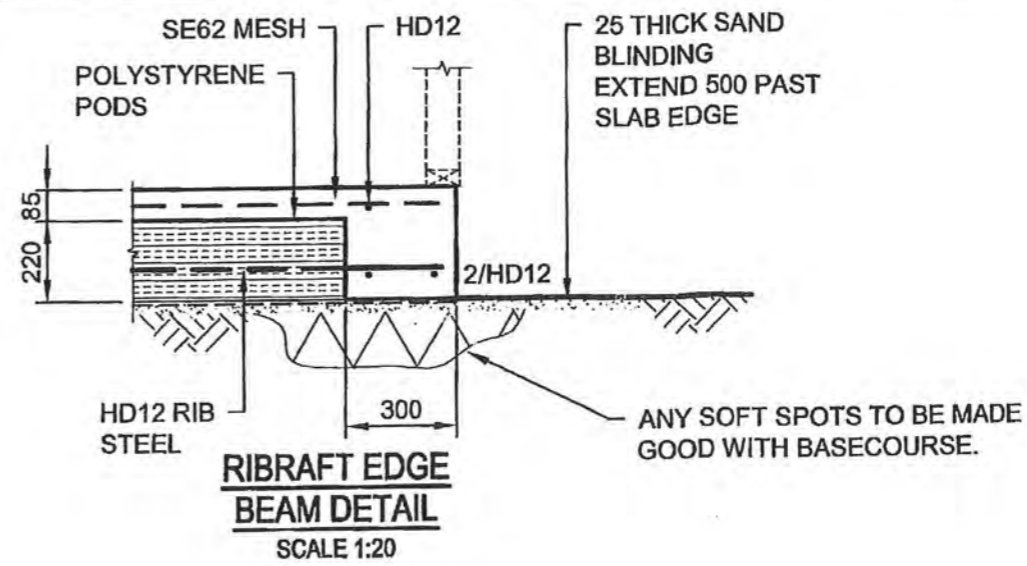
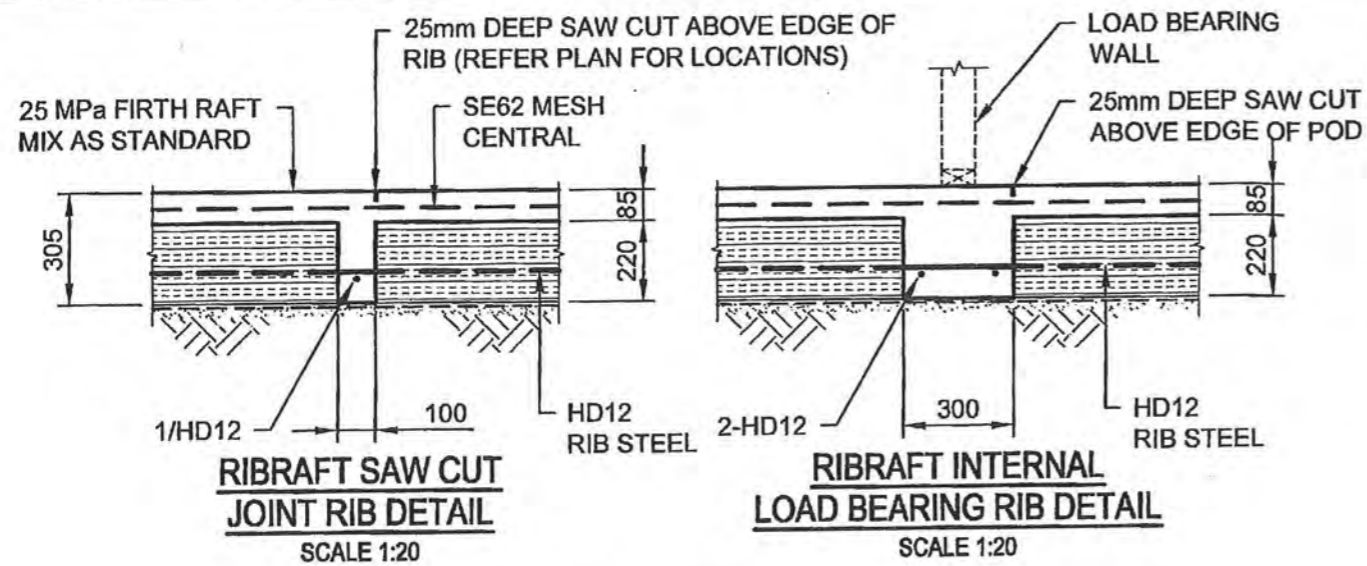
RIBRAFT FOUNDATION PLAN
SCALE 1:100

S.C. = SAWCUT.

NOTES:

1. REFER ARCHITECT'S DRAWINGS FOR DIMENSIONS, UNLESS NOTED OTHERWISE AND FOR DETAILS OF ALL SERVICES TO BE CAST IN SLAB. DO NOT SCALE OFF THIS DRAWING.
2. ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF NZS3109:1997
3. CONCRETE SHALL BE:
 - SLABS & FOOTINGS FIRTHS RIBRAFT MIX (25MPa)
4. MAXIMUM SLUMP TO BE 100mm UNLESS NOTED OTHERWISE
5. HD12 BARS LAP LENGTH IS 600mm
6. CONCRETE FINISHES SHALL BE:
 - SLABS U3
 - EXPOSED FOOTINGS F4
10. CONCRETE COVER
 - 25mm MIN. INTERIOR
 - 40mm MIN. EXTERIOR
 - 75mm MIN. IN CONTACT WITH GROUND.
11. ALL REINFORCEMENT SHALL COMPLY WITH AS/NZS4671:2001 (HD BARS SHALL NOT BE REBENT)
12. REFER RIB RAFT SPECIFICATIONS FOR SAWCUTS AND SHRINKAGE CONTROL JOINTS
13. BASECOURSE AS REQUIRED TO BRING SITE LEVEL. ANY SOFT SPOTS ARE TO BE EXCAVATED AND REPLACED WITH BASECOURSE.
14. ENGINEER TO INSPECT PRIOR TO POURING CONCRETE. ENGINEER REQUIRES 24 HOURS NOTICE BEFORE ANY VISIT

CLIENT		URBAN BUILDING SERVICES LTD.	
PROJECT		12 MATUHI STREET WAIKANA	
 Lower Hutt Office Tel: (04) 566-8004 Fax: (04) 566-8037 Kapiti Office Tel: (04) 902 5750	DATE:	APRIL 2014	
	DRAWN:	BV	
	APPROVED:	HF	
JOB No:	25894	SHEET No:	S1
		REV:	0



CLIENT URBAN BUILDING SERVICES LTD.		
PROJECT 12 MATUHI STREET WAIKANAЕ		
 ISP CONSULTING ENGINEERS LTD.	Lower Hutt Office Tel: (04) 566-8004 Fax: (04) 566-8037	DATE: APRIL 2014
	Kapiti Office Tel: (04) 902 5750	DRAWN: BV
JOB No: 25894	SHEET No: S2	APPROVED: HF
	REV: 0	

RECEIVED
28 MAY 2014
BY: [Signature]

000032



Bottom Plate Fixing

JUNE 2011

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

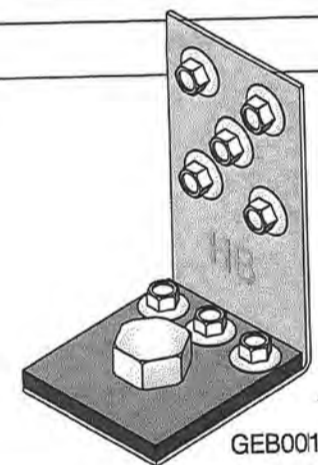


Panel Hold-down Details

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 in the framing as recommended with conventional straps
- The GIB HandiBrac® is suitable for both new and retrofit construction
- The design also allows for installation and inspection at any stage prior to fitting internal linings



Concrete Floor		Timber Floor	
External walls	Internal walls	External walls	Internal walls
 GEB002	 GEB003	 GEB004	 GEB005
Position GIB HandiBrac® as close as practicable to the internal edge of the bottom plate	Position GIB HandiBrac® at the stud / plate junction	Position GIB HandiBrac® in the centre of the perimeter joist or bearer	Position GIB HandiBrac® in the centre of floor joist or full depth solid block
Hold-down fastener requirements		12x150mm galvanised coach screw	
A mechanical fastening with a minimum characteristic uplift capacity of 15kN.			

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



Bracing strap Installation	
<p>Care needs to be taken with the installation of the bracing strap. It should be checked in to be flush with the face of the stud providing a flat substrate for the plasterboard. It should be positioned in such a way that the important corner fastenings of the bracing element are not affected by it. Keeping the strap to the edge of the end stud as shown will allow the important corner fastenings to be installed without having to penetrate the bracing strap.</p>	
Concrete Floor	Timber Floor
<p>400 x 25 x 0.9mm galvanised strap to pass under the plate and up the other side of the stud. Six 30x2.5mm flat head galvanised nails to each side of the stud. Three 30x2.5mm flat head galvanised nails to each side of the plate. Hold down bolt to be fitted within 100mm of the end of the element.</p>	
Internal wall	
<p style="text-align: right;">100mm maximum</p> <p style="text-align: right;">GEB006</p>	<p style="text-align: right;">100mm maximum</p> <p style="text-align: right;">GEB007</p>
External wall	
<p style="text-align: right;">100mm maximum</p> <p style="text-align: right;">GEB008</p>	<p style="text-align: right;">100mm maximum</p> <p style="text-align: right;">GEB009</p>
<p>NB: where applicable drawings have been produced for CAD design. These are identified by a unique number in the bottom corner of each detail box that can be found at the web address gib.co.nz/cad</p>	
<p style="text-align: right;">GEB010</p>	
Hold-down fastener requirements	
Concrete floor	Timber floor
<p>A mechanical fastening with a minimum characteristic uplift capacity of 15kN fitted with a 50x50x3mm square washer within 100mm of the ends of the bracing element.</p>	<p>12x150mm galvanised coach screw fitted with a 50x50x3mm square washer within 100mm of the ends of the bracing element</p>

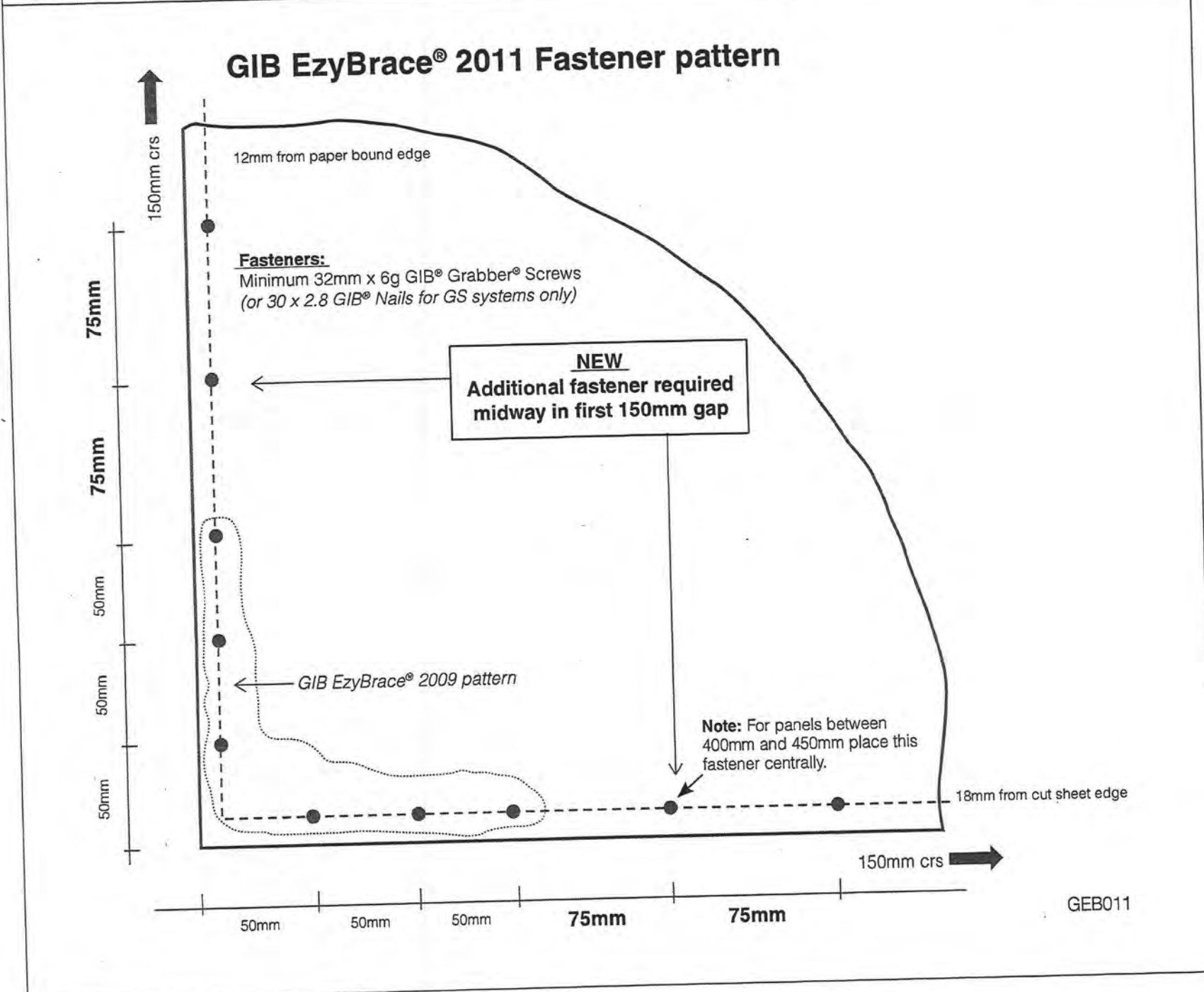
Construction

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



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

As GIB Braceline® screws are no longer required for BL bracing elements, two additional fasteners must be installed in **all four corners** of GIB EzyBrace® GS and BL elements, as shown. Fasteners must be placed no closer than 12mm from the paper bound sheet edge and no closer than 18mm from sheet ends or cut edges.



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

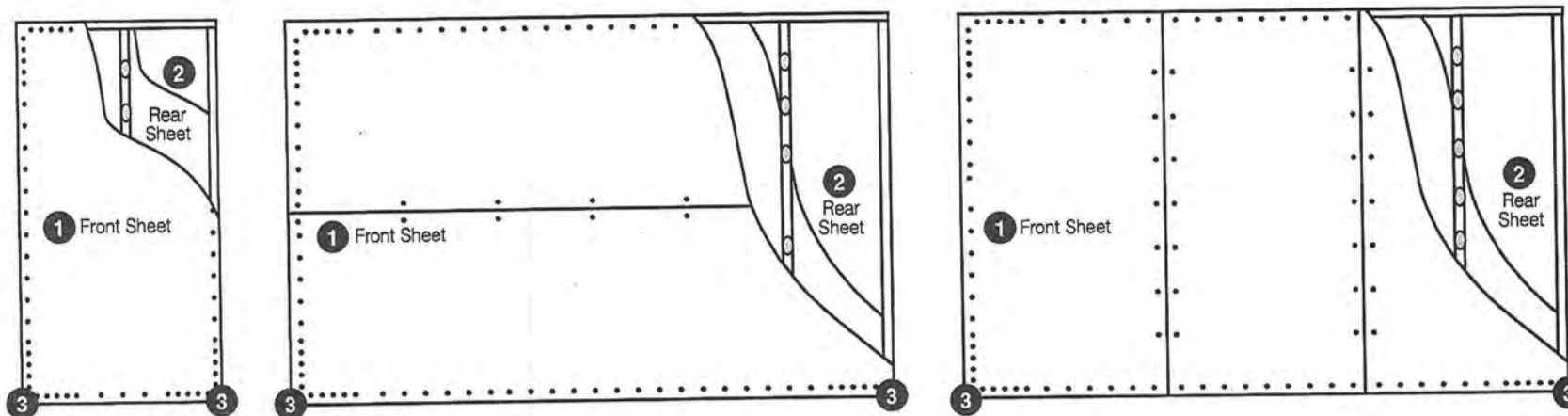
PERMITTED GIB® PLASTERBOARD SUBSTITUTIONS IN GIB EZYBRACE® SYSTEMS

GIB Ezybrace® Systems have been designed and tested using only the products specified. Occasionally additional properties may be required to be provided by a different GIB® Plasterboard product. The following table provides acceptable substitution options.

Specified	Permitted alternative GIB® Plasterboard products					GIB Fyreline®			
	GIB® Standard	GIB Ultraline®	GIB Braceline/Noiseline®	GIB Aqualine®	GIB Toughline®	10mm	13mm	16mm	19mm
						OK	NOTE 2	NOTE 2	NOTE 2
GIB® Standard		OK	OK	OK	OK	OK	NOTE 2	NOTE 2	NOTE 2
GIB Braceline®	X	X		NOTE 1	OK	X	NOTES 1 and 2	NOTES 1 and 2	NOTES 1 and 2

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

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



System	Lining one side ①		Lining opposite side ②		Panel Hold-Down Fixings ③	Fastener spacing
	Lining	Fasteners	Lining	Fasteners		
GS1-N	Any 10mm or 13mm GIB® Plasterboard	30mm GIB® nails, or minimum 32mm x 6g GIB® Grabber® high thread screws	Not required	Not required	Not required	<p><i>GIB® Plasterboard</i></p> <p>Corner fastening pattern as illustrated above</p> <p>Fasteners at 150mm to bracing element perimeter, and:</p> <ul style="list-style-type: none"> • 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 crs to intermediate framing <p><i>Plywood</i></p> <p>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.</p>
GS2-N			Any 10mm or 13mm GIB® Plasterboard	30mm GIB® nails, or minimum 32mm x 6g GIB® Grabber® high thread screws		
GSP-H			Minimum 7mm Ecoply manufactured to AS/NZS 2269	50mm x 2.8mm Flat head galvanised or stainless steel nails	Yes, see Pages 19 and 20	
BL1-H	10mm or 13mm GIB Braceline®	minimum 32mm x 6g GIB® Grabber® high thread screws	Not required	Not required		
BLG-H			Any 10mm or 13mm GIB® Plasterboard	30mm GIB® nails, or minimum 32mm x 6g GIB® Grabber® high thread screws		
BLP-H			Minimum 7mm Ecoply manufactured to AS/NZS 2269	50mm x 2.8mm flat head galvanised or stainless steel nails		



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

WALL FRAMING

Wall framing to comply with;

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

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

BOTTOM PLATE FIXING

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

Concrete floor

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

EXTERNAL WALL BRACING LINES
In accordance with the requirements of NZS 3604 for external plate fixing.

WALL LINING

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

PERMITTED SUBSTITUTION

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

FASTENING THE LINING

Fasteners

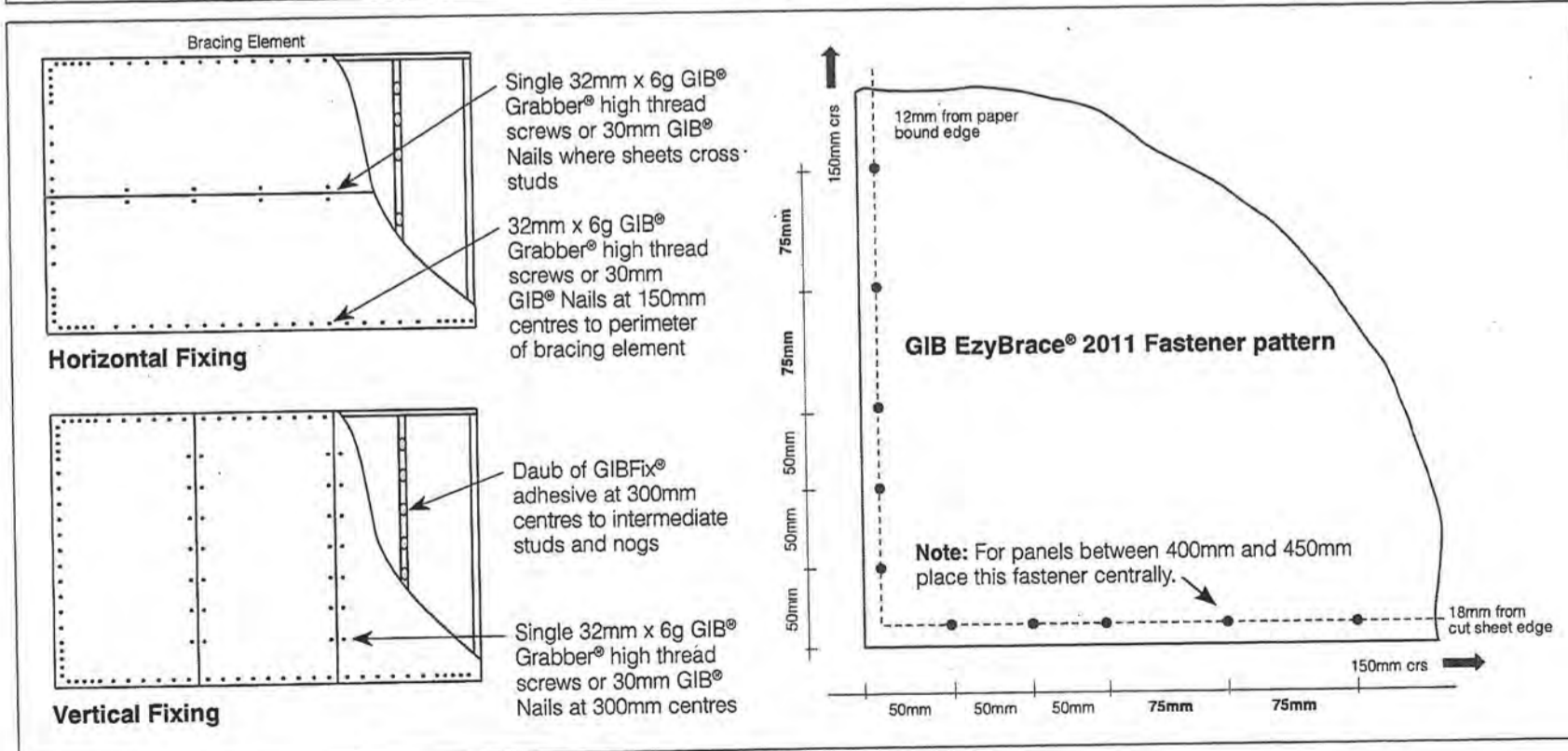
32mm x 6g GIB® Grabber® high thread screws; or 30mm GIB® Nails.

Fastener centres

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

JOINTING

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



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



Specification Code	Minimum Length (m)	Lining requirement
GS2-N	0.4	Any 10mm or 13mm GIB® Standard Plasterboard fixed to each side of the wall framing.

WALL FRAMING

Wall framing to comply with;

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

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

BOTTOM PLATE FIXING

Timber Floor

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

Concrete floor

INTERNAL WALL BRACING LINES

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

WALL LINING

One layer 10mm or 13mm GIB® Plasterboard to each side of the wall.
Sheets can be fixed vertically or horizontally.
Sheet joints shall be touch fitted.
Use full length sheets where possible.

PERMITTED SUBSTITUTION

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

FASTENING THE LINING

Fasteners

32mm x 6g GIB® Grabber® high thread screws; or 30mm GIB® Nails.

Fastener centres

50,100,150, 225, 300mm from each corner and 150mm thereafter around the perimeter of the bracing element.

For vertically fixed sheets place fasteners at 300mm centres to intermediate sheet joints.

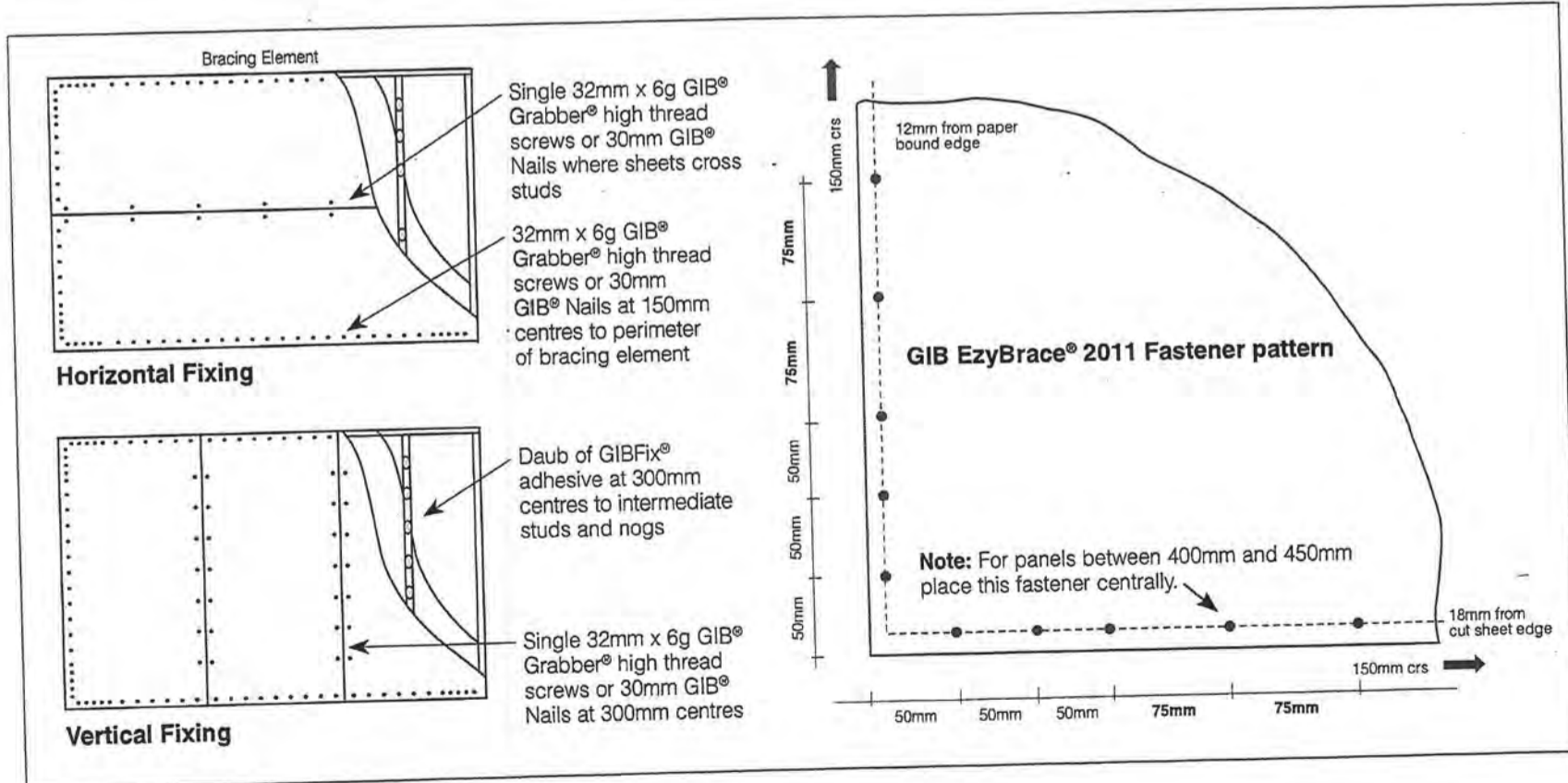
For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud.

Use daubs of GIB Fix® adhesive at 300mm centres to intermediate studs.

Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING

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



Construction

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



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

WALL FRAMING

Wall framing to comply with;

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

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

BOTTOM PLATE FIXING

Timber Floor

Use panel hold downs at each end of the bracing element. The GIB HandiBrac® is recommended. See details in GIB Ezybrace® Systems 2011 or GIB® Site Guide. Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or
Three power driven 90 x 3.15 nails at 600mm centres.

Concrete floor

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

WALL LINING

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

PERMITTED SUBSTITUTION

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

FASTENING THE LINING

Fasteners

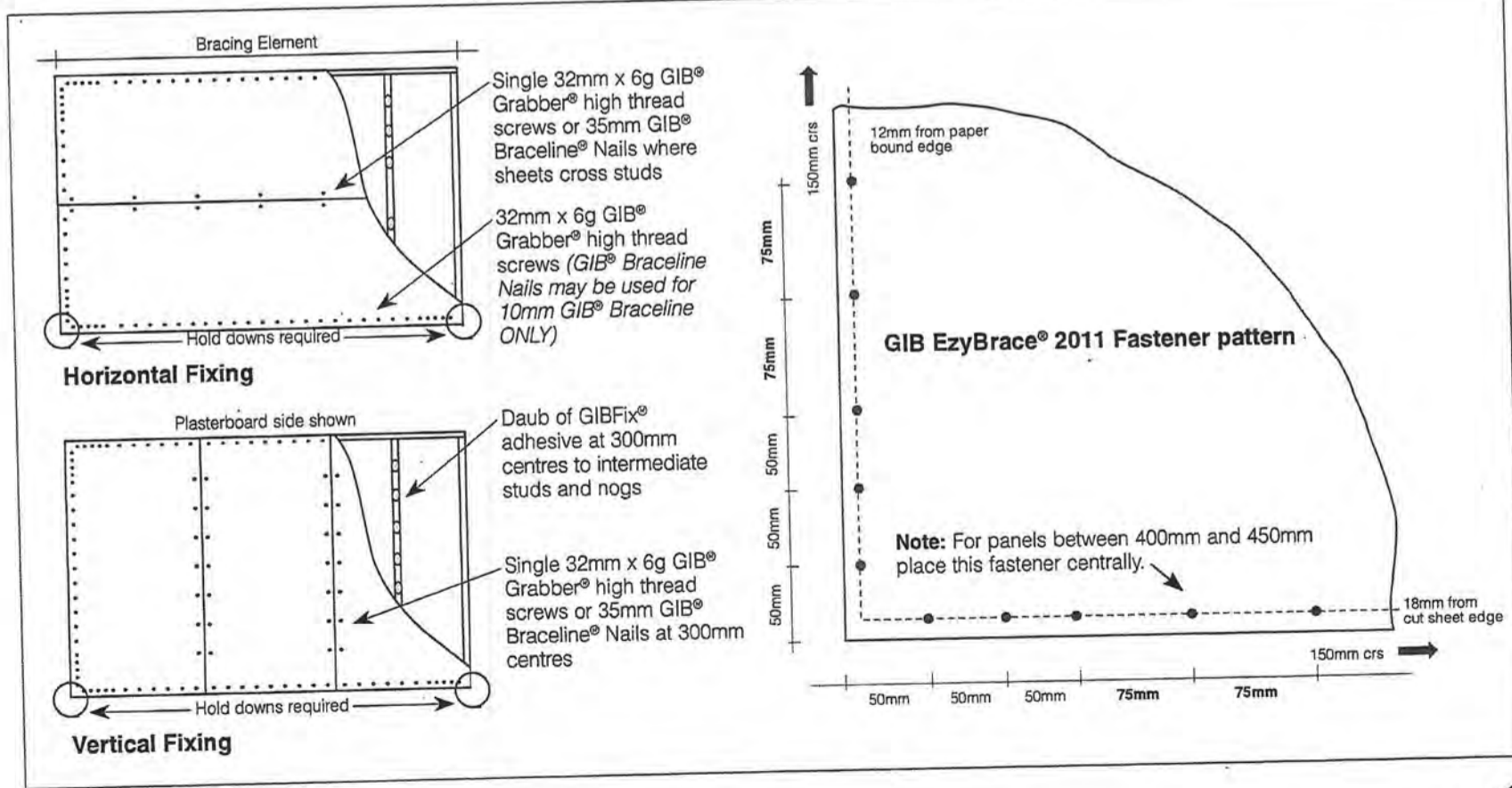
32mm x 6g GIB® Grabber® high thread screws. (GIB Braceline® Nails may be used with 10mm GIB Braceline® only.)

Fastener centres

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

JOINTING

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



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





Legend

- Parcel
- Contours 5m
- All Contours
- Subdivision Fill from March 2014
- RBLs
- GWFloodExtents
- KDCDFloodExtents

SCALE 1: 286 @A4

Date Printed: 18-June-2014



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Legend

- Deposited Plans
- Parcel
- Rivers Streams Drains
- WS Point**
 - Node
 - Flowmeter
 - Hydrant
 - Manifold
 - Manifold - Restrictor
 - Manifold - PC75
 - Meter-Manifold
 - Pump
 - Reservoir
 - Toby
 - Valve-Air
 - Valve-Check/NRV
 - Valve-Gate
 - Valve
 - Well Head
 - Zone Meter
- WS Pipe**
 - Bulk Main
 - Main
 - Rider Main
 - Drain
 - Unknown
 - Private
 - Abandoned
- WS Lateral**
 - Lateral
 - Private Lateral
- SW Point**
 - Misc
 - Manhole
 - Pump Station
 - Soakpit
 - Sump
 - Valve

SCALE 1: 385 @A4



Date Printed: 11-June-2014



J25894



Building Code Clause(s).....

PRODUCER STATEMENT – PS4 – CONSTRUCTION REVIEW

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: ISP Consulting Engineers Ltd
TO: Urban Building Services Ltd
(Owner/Developer)
TO BE SUPPLIED TO: Kapiti Coast District Council
(Building Consent Authority)
IN RESPECT OF: New Residence
(Description of Building Work)
AT: 12 Matuhi Street, Waikanae
Lot: 5 DP: 413488
(Address)

Validity authenticated
 18 DEC 2014
 Signature: 

ISP Consulting Engineers Ltd has been engaged by **Urban Building Service Ltd**

to provide CM1 CM2 CM3 CM4 CM5 observation services
(Engineering Categories)

in respect of clause(s) B1, VM1 of the Building Code for the building work described in documents relating to Building Consent No # **140363**. We have sighted these Building Consents and the conditions of attached to them.

Authorised instructions / Site Inspection Report **Numbered 1 & Builders Statement** (copy attached) has been issued during the course of the works.

On the basis of this these review(s) and information supplied by the contractor during the course of the works,

I believe on reasonable grounds that All **Part only as specified of building work outside the scope of NZS3604:2011-**

- Ribraft Slab Foundation

Of the building works have been completed in accordance with the relevant requirements of the Building Consents and Building Consent Amendments identified above, with respect to Clause(s) B1, VM1 of the Building Regulations.

I, Stuart Preston am CPEng Registered No. 138744

I am a Member of IPENZ and hold the following qualifications: BE (Civil), MIPENZ, CPEng

The Construction Review Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000*.

The Construction Review Firm is a member of ACENZ

SIGNED BY Stuart Preston **ON BEHALF OF** ISP Consulting Engineers Ltd.

Date: 8th August 2014

Signature:



Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Construction Review Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$200,000*.

This form to accompany **Forms 6 or 8 of the Building (Form) Regulations 2004** for the issue of a Code Compliance Certificate.

GUIDANCE ON USE OF PRODUCER STATEMENTS

Producer statements were first introduced with the Building Act 1992. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional Engineers New Zealand, Association of Consulting Engineers New Zealand in consultation with the Building Officials Institute of New Zealand. The original suite of producer statements has been revised as at the date of this form as a result of enactment of the Building Act (2004) by these organisations to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with reasonable grounds for the issue of a Building Consent or a Code Compliance Certificate, without having to duplicate design or construction checking undertaken by others.

PS1 Design

Intended for the use by a suitably qualified independent design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

PS2 Design Review

Intended for use by a suitably qualified independent design professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

PS3 Construction

Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:20031 ; or Schedules E1/E2 of NZIA's SCC 2007 2

PS 4 Construction Review

Intended for use by a suitably qualified independent design professional who undertakes construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.
This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACENZ, IPENZ and NZIA to interpret the Producer Statement.

Competence of Design Professional

This statement is made by a Design Firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its designers.

A competent design professional will have a professional qualification and proven current competence through registration on a national competence-based register, either as a Chartered Professional Engineer (CPEng) or a Registered Architect.

Membership of a professional body, such as the Institution of Professional Engineers New Zealand (IPENZ) or the New Zealand Institute of Architects (NZIA) provides additional assurance of the designer's standing within the profession. If the design firm is a member of the Association of Consulting Engineers New Zealand (ACENZ), this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent design professional".

Professional Indemnity Insurance

As part of membership requirements, ACENZ requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI insurance minimum stated on the front of this form reflects standard, small projects. If the parties deem this inappropriate for large projects the minimum may be up to \$500,000.

Professional Services during Construction Phase

There are several levels of service which a Design Firm may provide during the construction phase of a project (CM1-5)3 (OL1-OL4)2. The Building Consent Authority is encouraged to require that the service to be provided by the Design Firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4

Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design Firm's engagement.

Attached Particulars

Attached particulars referred to in this producer statement refer to supplementary information appended to the producer statement.

Refer Also:

1 Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2003

2 NZIA Standard Conditions of Contract SCC 2007 (1st edition)

3 Guideline on the Briefing & Engagement for Consulting Engineering Services (ACENZ/IPENZ 2004)

www.acenz.org.nz

www.ipenz.org.nz

www.nzia.co.nz

SITE INSPECTION REPORT



ISP CONSULTING ENGINEERS LTD

Civil & Structural
Seismic Risk Analysis
Building Compliance

Lower Hutt Office
Tel: 04 566 8004
Fax: 04 566 8037
Level 1,
Hutt City Dental Centre
14 Laings Road
P.O. Box 30 535
Lower Hutt 5040

Kapiti Office
Tel: 04 902 5750
Level 1, Kayel Building
Margaret Road, Raumati
Paraparaumu 5032

Email: email@isp.co.nz
Web: www.isp.co.nz

Date: 11/07/14	Report No: 01	Job No: 25894
Inspected By: Geert van de Vorstenbosch		Sheet 01 of 01
Contractors Representative: John Kenny	Area Inspected: Ribraft Slab (Pre-pour)	
Project: 12 Matuhi St, Waikanae	BC Number: 140363	

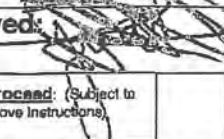
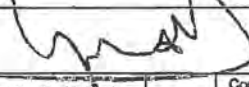
Observations:

- Slab has been set out as per the drawings
- Reinforcement in footings & ribs is as per the drawings
- Mesh is being re-laid ^{added} to ensure 250mm overlaps.
- Projection footing has 3 H102 bars but no down steel.
- Top bars in footings are not tied/continuous around corners.
- 2 PVC pipes do not have sleeves or tape around them.
- Internal corner shrinkage bars yet to be laid & tied.

Instructions Given:

- Install one extra H102 bar into top of projection footing (lay 600 into slab)
- Install mesh "strips" around the four bars of this footing
- Complete layout & tying of mesh.
- Wrap the 2 PVC pipes with Duroseal prior to pouring concrete.
- ~~Install~~ Lay & tie the internal corner shrinkage bars.

File Copy

Approved: (Signed: )	Not Approved - Hold Point: (Signed: )			
Work <u>may</u> proceed: (Subject to completing above instructions)	Work may <u>not</u> proceed. Further design/instruction and re-inspection required:	Re-inspection required following completion of above instructions:	Contractor to <u>supply photographs</u> for approval following completion of above instructions. Work not to proceed until approval given.	<input checked="" type="checkbox"/>

Note: Approvals given in this report are subject to the satisfactory completion of Territorial Authority statutory inspections.

JP BUILDING AND CONTRACTING

BUILDING CONTRACTORS
P.O BOX 365

PH 0275 446 448

WAIKANAЕ

email jobuilding.jp@gmail.com

18 December 2014

A1 Homes

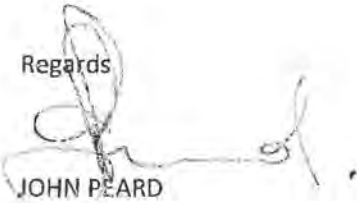
Waikanae

Attention Richard Barrow

Re 12 Matuhi Street Waikanae

As discussed all of the instructions noted on the ISP inspection report were carried out as directed,
There were photos taken on my Samsung phone which however were lost when repairs were done
to the phone.

Regards


JOHN PEARD



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

RECEIVED

28 MAY 2014
SJT

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

www.mitek.nz.co.nz

MiTek 20/20 Engineering 4.6.6.148

Printed: 08:33:40 22 Apr 2014

PRODUCER STATEMENT for MiTek 20/20[®] TRUSS DESIGN - Version 4.6

ISSUED BY: MiTek New Zealand Limited

TO: PLACEMAKERS - W.F.T.

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 **2900381** 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

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, 22 April 2014

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

Job: 2900381

Client: Placemakers Kalwharawhara
Phone:

Site: A1 Homes (O'Keefe)
12 Matalui Street
Waikanae

Description: proposed new dwelling
Building Consent No.:
MITek 2020 Engineering 4.6.6.148

MITek New Zealand Limited

Phone:

Printed: 08:33:40 22 Apr 2014

MITEK FABRICATOR DESIGN STATEMENT

This statement is issued by MITek accredited fabricator PLACEMAKERS - W.F.T., 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:	MSGx45 H1.2	Pitch:	9.000 deg	Nominal Overhang:	600 mm
Roof		Celling		Wind	
Material:	Galv Iron .5mm	Material:	Rondo on clips	Area:	High (44.0 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:	1800 mm centres		
Live Load:	Q _{ur} = 0.250 kPa	Live Load:	Q _c = 1.400 kN		
	Q _c = 1.100 kN				

The timber for these MITek[®] trusses shall be treated to the requirements of NZS 3602:2003 and shall be graded to the requirements of NZS 3603:1993. Unless otherwise noted, this design assumes that the steel fixings and timber connectors proposed are located in a "closed environment", as defined by NZS3604:2011 Section 4.

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)
EN3	1	3780	4.000	900	EN5	1	1490	4.000	900	*R2	2	4680	9.000	900
PTG1	1D	9780	0.000	900 LB	R1	5	2680	4.000	900	*R3	1	2700	9.000	900
T2	9	6180	9.000	900	T1	1	3480	9.000	900	*R4	1	3300	9.000	900
T3	2	6730	9.000	900	T5	4	1500	4.000	900	*R5	1	4180	4.000	900
T4	5	11460	9.000	900	T6	3	3880	4.000	900	*R6	1	1400	4.000	900
EN1	1	3480	9.000	900	T7	4	3880	4.000	900	*R7	1	1700	4.000	900
EN2	1	4200	9.000	900	T8	2	3780	4.000	900	*R8	2	7380	9.000	900
EN4	1	6090	9.000	900	T9	1	6090	9.000	900	*R9	2	6185	4.000	900

Total quantity : 53

The computer design input has been carried out by:

Signed: 

Name of Detailer: Shane Jackson

On behalf of: PLACEMAKERS - W.F.T.

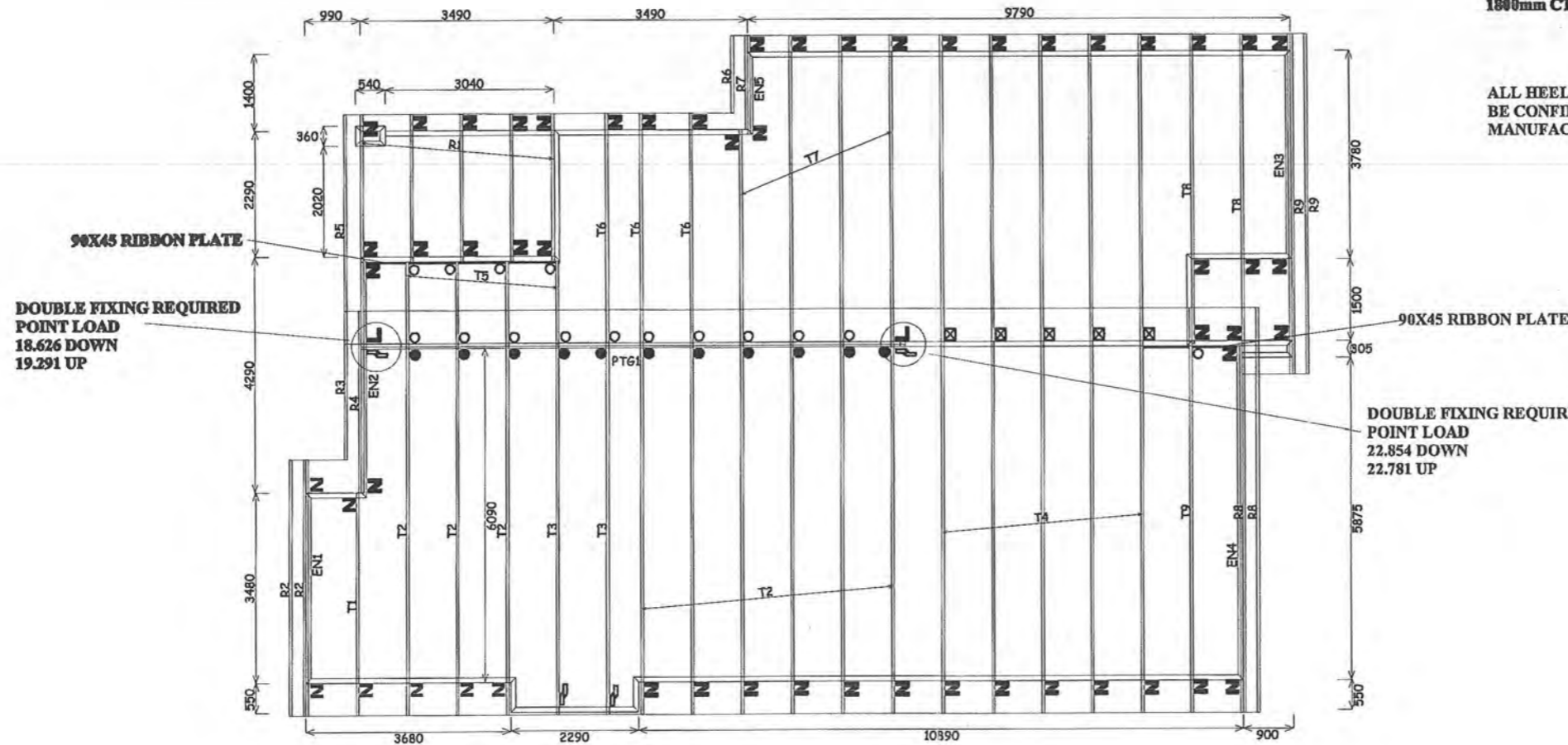
Date: ...Tuesday, 22 April 2014....

Qualifications and Title: Detailer





HEEL HEIGHT 279mm TO BE CONFIRMED BY ARCHITECT



HEEL HEIGHT 347mm TO BE CONFIRMED BY ARCHITECT

Design wind speed category:	HIGH
Pressure Coeff: Cpe = varies; Cpl = -30.0, 020	
Timber size and grades:	90x45 MSG8 & MSG10 (HL2)
Roof Weight & Type:	Light
Roof Pitch:	9 & 4 Degrees
Roof Dead Load:	0.210 kPa
Roof Restraints:	900mm centres
Roof Live Load:	Q _{ro} = 0.250 kPa; Q _c = 1.100 kN
Ceiling Material:	Rondo on clips
Ceiling Dead Load:	0.210 kPa
Ceiling Restraints:	600mm centres
Ceiling Live Load:	Q _c = 1.400kN
Earthquake Zone:	A / Snow Zone: 1

IF RONDO BATTENS ON CLIPS ARE USED THEN THE BOTTOM CHORDS OF THE TRUSSES MUST BE RESTRAINED @ 1800mm CTRS MAX

ALL HEEL HEIGHTS MUST BE CONFIRMED BEFORE MANUFACTURE

No. of	Fixing description
1	Z "Z" nails (1 pair)
1	JH37 x 90
1	X JH37 x 120
1	O JH47 x 90
1	● JH47 x 120
1	▲ JH47 x 150
1	JH70 x 180
1	○ JH95 x 165
1	CPC 88 (75mm rim screws)
1	200x100x1mm Nail on plate.
1	320x100x1mm Nail on plate.
1	Multi-Grip (pair)
14 pairs	CT200 (pair)
1	⊠ CPC 88

Truss to Top Plate Fixings.

J	CPC 88	Fill all holes with Product nails 30x3.15mm
⊠	CT200 (pair)	Fill all holes with Product nails 30x3.15mm
⊠	CT400 (cyclone ties)	8 x Product nails 30x3.15mm / 4 x Type 17, 35mm screws
Z	"Z" nails (pair)	
⊠	Multi-Grip (pair)	Fill all holes with Product nails 30x3.15mm

Truss to Truss Fixings. (In all other situations use 2 / 100mm skew nails)

⊠	JH70 x 180	Fill all holes with Product nails 30x3.15mm
○	JH95 x 165	Fill all holes with Product nails 30x3.15mm
J	CPC 88	8 x Product nails 30x3.15mm / 4 x Type 17, 35mm screws
▲	200x100x1mm Nail on plate.	(Fill all holes to within 10mm of the timber edge)
⊠	320x100x1mm Nail on plate.	(Fill all holes to within 10mm of the timber edge)

TRUSS LAYOUT FOR : A1 HOMES (O'KEEFFE)
12 Matuhi Street, Waikanae

JOB #2900381

WELLINGTON FRAME & TRUSS

Drawn by: Dwayne Jackson
PHONE (04) 298 8567 - FAX (04) 298 5488
E-MAIL djackson@placemakers.co.nz

Version	Issue Date

PRODUCER STATEMENT PIPED SERVICES AND PLUMBING STACKS



Construction Review

Send or deliver this form to: Kapiti Coast District Council,
175 Rimu Road, Paraparaumu 5032
Private Bag 60601, Paraparaumu 5254
For enquiries, phone 04 296 4700 (Toll Free: 0800 486 486)

Signature:

18 DEC 2014

Handwritten signature

TO BE COMPLETED BY THE INSTALLER	
Issued by:	<i>Stephen Henderson</i>
Registration number:	<i>04479</i>
In respect of Piped Services installed in accordance with G12/AS1 as shown on the approved plans or as per the attached amended plan and Sanitary Plumbing Stacks installed in accordance with G13/AS1 or AS/NZS 3500.2.2	
Installed at:	<i>12 Mahuki St</i>
Building Consent No:	<i>140 363</i>
As a certified plumber, currently holding an annual practicing license, 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. Both hot and cold systems have been pressure tested for a period of 15 minutes at a pressure of 1500 kPa.	
Name	<i>Steve H.</i>
Signature	<i>Steve Henderson</i>
Address	
Date	<i>NOV 2014</i>
Phone	<i>06364 5252</i>
Fax	
Mobile	
Email	

Kapiti Coast District Council Office Use Only

Producer Statement author authenticated and current registration verified. Verification and Registration checked through public register on www.pgdb.co.nz

Date

Name

Signature:

PRODUCER STATEMENT STORMWATER DRAINS



Construction Review

Send or deliver this form to: Kapiti Coast District Council,
 175 Rimu Road, Paraparaumu 5032
 Private Bag 60601, Paraparaumu 5254
 For enquiries, phone 04 296 4700 (Toll Free: 0800 486 486)

Signature: CW 18 DEC 2014

TO BE COMPLETED BY THE INSTALLER	
Issued by:	Jason Gates
Registration number:	19318
In respect of: Stormwater Drains installed in accordance with E1 AS1 as shown on the approved plans or as per the attached amended plan	
Installed at:	12 Makahi ST
Building Consent No:	140363 140363
As a certified drainlayer, currently holding an annual practicing license, 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.	
Name	Jason G. Signature <u>[Signature]</u>
Address	Date NOV 2014
Phone	063645252. Fax
Mobile	Email

Note: Fully dimensioned as built drain plan to be supplied. (scale 1:100)

Kapiti Coast District Council Office Use Only	
Producer Statement author authenticated and current registration verified. Verification and Registration checked through public register on www.pgdb.co.nz	
Date	<input type="text"/>
Name	<input type="text"/>
Signature:	<u>[Signature]</u>


**PRODUCER STATEMENT
PRIVATE SEWER DRAINS**




Validity authenticated


Construction Review

Send or deliver this form to: Kapiti Coast District Council,
175 Rimu Road, Paraparaumu 5032
Private Bag 60601, Paraparaumu 5254
For enquiries, phone 04 296 4700 (Toll Free: 0800 486 486)

Signature:  18 DEC 2014

TO BE COMPLETED BY THE INSTALLER	
Issued by:	Jason Gales
Registration number:	19318
In respect of: Private Sewer Drains installed in accordance with G13 AS2 or AS/NZS 3500.2.2 as shown on the approved plans or as per the attached amended plan	
Installed at:	12 Makhi St
Building Consent No:	140363
As a certified drainlayer, currently holding an annual practicing license, 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.	
Name	Jason G. Signature 
Address	Date
Phone 06 364 5252	Fax
Mobile	Email

Note: Fully dimensioned as built drain plan to be supplied. (scale 1:100)
Drains may be laid and backfilled without inspection provided that the drain is left under test with a min of 1.0 m head and the inspection at the lateral left exposed.

COUNCIL USE ONLY	
Producer Statement author authenticated and current registration verified Verification & Registration checked: https://www2.pgdb.co.nz/PGDB/PublicRegister	
Date	<input type="text"/>
Name	<input type="text"/>
Signature:	

GASFITTING CERTIFICATE OF COMPLIANCE – GAS SAFETY CERTIFICATE



Client Name:

Reference / Job #: ICP (if known):

Address of work:

Suburb: Town / City:

Description of gasfitting work: (If different gasfitting work was done by different people, state who did what gasfitting.)

2 x 45 kg LPG bottles and auto change over regulator.
 1 Rinnai VT26 continuous flow gas water heater.
 1 x Bosch cook top/hob. s/s.

Gas supply pressure kPa Risk classification (tick one) Low-Risk General High-risk

Gas type (tick one) Natural gas LPG Biogas Other (specify)

The work has been done in accordance with a certified design: Yes No

Copy of certified design attached (or provide reference)

The work relies on manufacturer's instructions: Yes No

Copy of manufacturer's instructions attached (or provide reference)

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 required for compliance?

Yes (specify) No

Parts of the gas installation that are safe to connect to a 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:

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: Registration number:

Certifier Signature: Date:

I confirm that the work described in this Gas Safety Certificate, and the installation or part installation, is connected to a gas supply and is safe to use.

Name of person authorised to certify the connection:

Registration number: Date of completion or connection (if different from date of issuing GSC):

Certifier Signature: Date:

This certificate confirms that the gasfitting work complies with the building code for the purposes of Section 19(1)(e) of the Building Act 2004.

Independent Electrical Inspectors Ltd

□ Andrew Stellingwerf -I2866 ph:027 280 4588 □ Andrew Carroll-I258075 ph:027 280 4599

COMBINED COC / ROI / ESC

Customer Name: E + W Okeete Reference: 15243929
 Location of Installation: 12 Matuhi St
Waikanae

Certificate of compliance: for revenue metering installed on this site in accordance with E.I.P.C code.

Vircom EMS testhouse Indeserve testhouse Other _____

Record of Inspection: Description of work inspected: New mains, main earth
main sub box

Certificate of compliance supplied yes
 Reference: 66062 Issued by: Meadem Reg Number: E260606 Dated: 28/11/14
 Reference: _____ Issued by: _____ Reg Number: _____ Dated: _____

HAZARD IDENTIFICATIONS AND CONTROLS.

ELECTRA CONTROL ROOM PH: 06 367 9755 IN EMERGENCY PHONE: 111 NETWORK ACCESS PH: 0800 800 109
 MINIMUM P.P.E. REQUIRED: HARD HAT, FLAMEPROOF OVERALLS, WORK BOOTS, GLOVES, SAFETY GLASSES.

FIRE EXTINGUISHER, FIRST AID KIT, AND WATER BOTTLE LOCATED REAR OF VEHICLE.

Client:	<u>Stones</u>	Electra acknowledgement #	<u>1603375</u>	
Job Type:	<u>NC + Tie in</u>	Time on:	<u>1300</u>	
		Time off:	<u>1344</u>	
Asset #:	<u>32360 C</u>	Pole <input type="checkbox"/> Pillar <input checked="" type="checkbox"/> Other <input type="checkbox"/>		
HAZARD	POTENTIAL HARM	ACTIONS PROPOSED	COMMENTS	WORK CARRIED OUT
Electricity	Shock, burns	<u>min</u>	<u>Check gloves</u>	Inspect & Liven
Heights	Gravity			1 PH tie in
Falls, trips & slips	Injury			3 PH tie in
Outdoor/Weather	Cold/Heat/Rain			Disco/Reco
Traffic	Hit by			Fuse
Public Access	Danger to public			

Signature: [Signature] 18 DEC 2014

CONSIDER ALSO: SITE SECURITY, OTHER SERVICES, ENVIRONMENTAL ISSUES, HEAVY LIFTING, ELEVATED WORKING, ETC

TESTING AND COMMISSIONING

TESTING & INSPECTIONS CARRIED OUT IN ACCORDANCE WITH THE ELECTRICITY SAFETY REGULATIONS AS/NZS 3000 / AS/NZS 3019

Voltage:	R: <u>230</u> v	W: v	B: v	Comments:
Earth Loop impedance:	R: <u>0.4</u> Ω	R Ω	B: Ω	
PSSC:	R: <u>1.061</u> ka	W: ka	B: ka	
Insulation Resistance:	MΩ	Earth Lead Resistance: <u>0.1</u> Ω	Bonding: <u>ma</u>	Ω
Polarity <input checked="" type="checkbox"/>	Visual Check <input checked="" type="checkbox"/>	R.C.D Test	ms	ma

NOTES

This work complies with the NZ building code, is connected to a power supply and has not adversely affected any other part of this installation. I certify that the installation or part thereof, to which this certificate applies, complies with the current electrical regulations and is safe to use.

SIGNATURE: [Signature] DATE: 28/11/14



Electrical Contractors Limited



Job Number: 64062

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under Part 1 or Part 2 of AS/NZS 3000 are safe to be connected to the specified system of electrical supply.

Location Details: 12 Matuhi St Waikanae.

Contact Details: (Name and address) A1 Homes Waikanae.

Name of Electrical worker: MATTHEW MEALLEN Registration/Practising licence number: E260636.

Organisation/company: Stones Electrical Contractors Ltd

Phone and email: 027 5353332

Name of person(s) supervised: _____

CoC

Type of work: Additions Alterations New work

The prescribed electrical work is: Low risk General High risk (Specify): _____

Reference Standards: Part 1 of AS/NZS 3000 Part 2 of AS/NZS 3000

Additional Standards: _____

Description of Work: (including date/s of work and type of supply system)

New House Installation 1x OVEN 1x A/C 1x Pump
37 x POWER Points 30 x LIGHTS
Mains DONE BY OTHERS

I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct in that the installation, or part of the installation:

Select those that apply:

- Has been installed in accordance with the specified certified design¹
- Has an earthing system that is correctly rated (where applicable)
- Contains fittings that are safe to connect to a power supply
- Relies on a supplier Declaration of Conformity¹
- Relies on a manufacturer's instructions¹
- Has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010
- Is safe to connect

Electronic/Other reference: MM00134

Certifier's signature: [Signature]

Test Results	
Polarity (Independent earth):	<u>0.14 Ω</u>
Insulation resistance:	<u>> 299 MΩ</u>
Earth Continuity:	<u>0.14 Ω</u>
Bonding:	<u>0.14 Ω</u>
Fault Loop Impedance	<u>1.61 kA</u>
Other (specify):	

Date: 28/11/14

¹ Attach or reference. If it is impractical to attach a copy of a particular manufacturer's instructions, or of any certified design or supplier declaration of conformity, provide a reference to where the documents can be found, in a readily accessible format, by electronic means.

ESC

I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

This part to be completed by person connecting.

Name: Matthew Meallen

Registration Number: E260636

Signed: [Signature]

Date: 28/11/14

If person connecting is under supervision. This part to be completed by supervisor.

Name: _____

Registration Number: _____

Signed: _____

Date: _____

INSPECTION COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS
This certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(e) of the Building Act 2004.
Retained by person inspecting the work



WARRANTY

ELE10 PLUS

The Warranty

1. Larsens warrants that all tanks of its own manufacture sold by Larsens will at the date of purchase by the Customer and for a period of 8 years* thereafter be free from defects in materials and workmanship and will conform to Larsens applicable specifications or, if appropriate to specifications accepted by Larsens, therefore.

Larsens Obligation

2. Larsens obligation under this warranty is limited to, at Larsens option, either:
 - 2.1 Repairing; or,
 - 2.2 Refunding the purchase price of; or
 - 2.3 Replacing the products of part thereof (on an exchange basis)

for which Larsens is responsible under this warranty and for which written notice of the defect is forwarded to and received by Larsens or a Larsens agent at the Customer's expense within thirty (30) days after the date upon which the Customer becomes aware of the defect. Under no circumstances will Larsens accept any notification or return of the product after more than the years stated above * from purchase date.

3. Larsens obligation for all portions of products not manufactured by Larsens shall consist only of passing on to the Customer any warranty indemnification payment actually received by Larsens from the original manufacturer so far as Larsens is permitted to do so.

Exclusions from Warranty

4. Customer is defined as the initial end user only. This warranty extends to the Customer only and not to subsequent customers or users of the Customer's products or purchases from the Customer or assignees, or lessees.
5. In no event shall Larsens be liable for any incidental or consequential damage caused to the Customer or any third party.
6. Pumps installed with the system are subject to the manufacturer's warranty and their terms and conditions.

How To Get Warranty Service

Should your product need servicing under warranty you should contact the sales outlet from which it was purchased. If you are not located near the outlet, please contact:

Larsens Concrete & Drainage
437 Heads Road, Wanganui
Phone: 06 344 5911 Fax: 06 344 8189
Email: sales@larsensconcrete.co.nz

IMPORTANT

To qualify for warranty service you will also need to provide evidence of purchase date from a copy of your purchase invoice. Include reference to the serial numbers on the product.

Please keep this record of warranty with your invoice to make the unlikely event of a claim easier to manage.



RESIDENTIAL WARRANTY & MAINTENANCE REQUIREMENTS

COLORSTEEL® Endura™

PROPERTY OWNER: O'Keefe

SITE ADDRESS: 12 Matuhi St. Waikanae

DATE OF SUPPLY TO SITE: Sept 2014
INSTALLATION DATE: Supply Only

SITE ENVIRONMENT
Moderate ISO3
Severe _____

PHONE NO:

You have chosen high quality COLORSTEEL® Endura™ pre-painted steel products, which are designed to give you protection well into the future. The terms and conditions of this warranty are detailed below. To ensure you gain maximum value from your investment over time, the maintenance program under Maintenance specified below **MUST BE STRICTLY ADHERED TO:**
This warrants the following material:

Lift No: T34209

	Roofing	Cladding	Fascia/Gutter
Will not perforate through corrosion:	30 Years	XX Years	XX Years
Will not flake, peel or excessively fade:	18 Years	XX Years	XX 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.

Please note this warranty is subject to the following terms and conditions:

- > That the COLORSTEEL® Endura™ pre-painted steel is processed, installed and maintained in accordance with the New Zealand Steel published literature, roofing manufacturers literature and accepted good trade practices.
- > The product must be manufactured from prime COLORSTEEL® Endura™ pre painted steel.
- > Garage Doors are not included in the warranty.
- > Damage or corrosion resulting from the following circumstances is not covered by the warranty:
 - a) Mechanical, chemical or other damage sustained during handling, storage, processing or installation.
 - b) Mechanical, chemical or other damage after installation.
 - c) Installations in very severe environments or special conditions as defined in the New Zealand Steel literature
 - d) Ponding in gutters due to build up of debris or due to inadequate fall.
 - e) Storm, tempest or other causes beyond the control of the roofing manufacturer.

If COLORSTEEL® Endura™ pre-painted steel has failed to perform as warranted, the roofing manufacturer will at its sole option repair or replace (including labour) the affected material. A new warranty shall be issued to cover the balance of the original offer for both the paint coating and perforation protection. The roofing manufacturer shall not be liable for any consequential loss or damage except as may be required under any mandatory statutory provisions. This warranty does not in any way affect the rights of the consumer under the Consumer Guarantees Act.

MAINTENANCE

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 recommended
Wall Cladding	Rain washing plus manual washing every year	Rain washing plus manual washing every 6 months	Not recommended
Unwashed and high risk areas	Manual washing every 6 months	Manual washing every 3 months	Not recommended

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.

Note:

1. Recommendations provided in this table are contained in the standard provisions of the New Zealand Building Code, Section B2 Durability.
2. High Risk areas include around flues and extractor vents, under television aerials and trees and sites prone to mould, lichen, bird droppings or debris.

This roof was installed by: Supply Only***** Signature of Installer

And carries a workmanship warranty for: XXXXXXXX Years
A copy of the current COLORSTEEL® Endura™ colour chart has been provided

Signature of property owner or agent:

DATE:

PLEASE RETURN A SIGNED COPY OF THE WARRANTY TO THE ROOFING MANUFACTURER
This Warranty is issued by (the roofing manufacturer):

Signed: V Redshaw

Position: Sales

Date: Oct 2014

COLORSTEEL® is a registered trademark of New Zealand Steel Limited
Endura™ is a trademark of New Zealand Steel.





Care and Maintenance:

• Just as washing your car is important for removing dirt and grime your powder coating needs to be given a regular wash to keep it in great shape. The effects of ultra violet light, atmospheric pollution, general dirt and grime and airborne salt deposits can all accumulate over time and for this reason it is a condition of this warranty that accumulated deposits must be removed at regular intervals. As a general rule cleaning must take place every six months. In areas where pollutants are more prevalent such as beach front houses and industrial or geothermal areas then a cleaning program must be carried out on a more frequent basis i.e. every three months.

- Step (1)** Remove loose deposits with a wet sponge rather than risk micro scratching the surface by dry dusting.
- Step (2)** Using a soft brush and mild detergent in warm water clean the powder coating to remove any dust, salt, or other deposits. Pay particular attention to areas that would not normally be exposed to rain water.
- Step (3)** Always rinse after cleaning with fresh water to remove any remaining detergent.

Warning: In some cases strong solvents contained in household cleaners and those recommended for thinning various types of paints and for cleaning up mastics and sealants are harmful to the powder coated surface. These must not be used for cleaning purposes. If paint splashes or sealants or mastics need to be removed then the following are some products that can be used safely: Methylated Spirits, Ethyl Alcohol, Isopropanol.

Warranty conditions and exclusions:

• The warranties shall not apply if the failure of the Dulux™ Duralloy™ coating is caused by a failure resulting from external influences including, but not limited to - mechanical abrasion, falling objects, damage occurring during transportation fabrication, storage, explosion, fire, riots, acts of war, or exposure to radiation, harmful gases, sprays or fumes, water chemicals, foreign substances, salt atmospheres, and any other occurrence beyond Dulux's control.

• For a claim to be made under this Performance Warranty the claimant shall establish to Dulux's satisfaction that 5% or more to the total coated area to which the product has been applied failed to meet the performance criteria as specified in this warranty as a result of an error or defect in the formulation or manufacture of the Product.

Liability:

• Dulux's liability shall be limited to the actual cost of repairing i.e. replacing or recoating insitu the defectively coated metal or replacing the Product which shall constitute Dulux's sole liability and the claimants sole remedy (whether by law or in equity or otherwise and including for negligence). In no event shall be liable for any further direct, incidental, special, or consequential damages.

• The cost of the repair or replacement shall be determined by Dulux™ using contractors, materials and practices selected by Dulux™. Dulux™ will determine at its reasonable discretion the most appropriate materials and practices for remedying the failure.

• Subject only to any overriding law (statutory or otherwise) to the contrary, shall not be liable for any representation or statement made by or on behalf of whether made prior to or after the giving of this Performance Warranty. Dulux's liability is solely derived from the terms of this Warranty Card.

Important: Please keep this card in a safe place as in the unlikely event of a claim the reference number on this Warranty card must be referred directly to your joinery supplier.

To register your Warranty and confirm that you have read and understood the terms and conditions please return this card to your joinery supplier.

Performance Warranty for Residential and Light Commercial Joinery

Owners Name: AI Homes - UBAW 318 - O'Keefe

Address: 12 Matuhi St
Waikanae

Date of fabrication: 17 Sept 14

Joinery Supplier: Wellington Windows & Doors Ltd
5 Mohuia Crescent, Porirua 5022
PO Box 56037, Tawa 5249
Tel: (04) 2375780 Fax: (04) 2374457

Ref No.: 25837

Duralloy is a registered trade mark of DGL International Limited.



Performance Warranty for Residential and Light Commercial Joinery

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Tel: (04) 2375780 Fax: (04) 2374457

Ref No.: 25837

To register your Warranty and confirm that you have read and understood the terms and conditions please return this card to your joinery supplier.

Fabricators COPY

To validate this Performance Warranty

Please complete this portion (your name as the actual owner may not yet be on our records) and return to:

Owner **A1 Homes - UBAW318 - O'Keefe**
Site address **12 Matuhi Street, Waikanae**
Manufacturer **Wellington Windows & Doors Ltd**
Date installation completed **17 September 2014**
Warranty No. **25837**

Our windows comply with the building code

We hereby certify that all products supplied by our company meet or exceed the requirements of the New Zealand Building Code Means of Compliance, NZS 4211:2008 Performance of Windows and NZS 4223, Glazing in Buildings Parts 1,2 and 3.

This means that our windows have been designed and tested to perform under the most diverse New Zealand weather conditions, and:

- have been successfully tested for strength under a range of wind pressures appropriate for the various wind zones in New Zealand.
- meet the requirements for deflection under simulated loads.
- meet stringent requirements for waterproofing and air leakage.
- have glass of the correct thickness and toughness to cope with expected wind loads and accidental human impact.

In accordance with our TERMS AND CONDITIONS OF SALE a guarantee for all FIRST products is provided under normal conditions of use against failure of materials and workmanship for 5 years from date of practical completion.

DURABILITY. FIRST WINDOWS & DOORS products can be expected to have a trouble-free serviceable life of not less than 15 years as required by section B2 of the New Zealand Building Code. This pertains specifically to the structural elements of the joinery.

In the course of normal use decorative elements and non-structural fittings such as window fasteners, door rollers, weatherpile and the like may need to be replaced as they wear out. This process does not contravene the B2 Durability requirements of the New Zealand Building Code or the warranty given by the manufacturer.

The decorative coating on the joinery is covered by a separate warranty.

A window and door hardware warranty covers manufacturing defects, functionality and surface finish for 5 years, assuming that the care and maintenance guidelines are followed. Plated (soft) finishes are excluded from this warranty as deterioration is possible under some environmental conditions.

Please Note: This warranty is subject to correct installation as outlined in the Building Code Acceptable Solution Clause E2/AS1 External Moisture.

Purchaser **A1 Homes - UBAW318 - O'Keefe**
Address
Site address **12 Matuhi Street, Waikanae**
Manufacturer **Wellington Windows & Doors Ltd**
Address **PO Box 56087, Tawa 5249**
Date installation completed **17 September 2014**
Signature
Warranty No. **25837**

FIRST
WINDOWS & DOORS

Producer Statement/ Warranty

This Producer Statement covers product supplied as per our quotation and is based on window schedules, floor plans and elevations as supplied.

Quot. No. **25837**
Date **17 September 2014**
Revision Date

Supplied Only
Supplied & Installed
Un glazed Glazed

Please read reverse for guidance on care and maintenance of your FIRST Windows & Doors

000049



Form 2A

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

Please fill in the form as fully and correctly as possible.

If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING

Street address: 12 Matuhi Street

Suburb:

Town/City: Waikanae

Postcode:

THE OWNER

Name(s): Mr & Mrs O'Keeffe

Mailing address:

Suburb:

PO Box/Private Bag:

Town/City:

Postcode:

Phone number:

Email address:

BASIS FOR PROVIDING THIS MEMORANDUM

I am providing this memorandum in my role as the: Please tick the option that applies (✓)	
<input type="checkbox"/>	sole designer of all of the RBW design outlined in this memorandum – I carried out all of the RBW design myself – no other person will be providing any additional memoranda for the project
<input checked="" type="checkbox"/>	lead designer who carried out some of the RBW design myself but also supervised other designers – this memorandum covers their RBW design work as well as mine, and no other person will be providing any additional memoranda for the project
<input type="checkbox"/>	lead designer for all but specific elements of RBW – this memorandum only covers the RBW design work that I carried out or supervised and the other designers will provide their own memoranda relating to their specific RBW design
<input type="checkbox"/>	specialist designer who carried out specific elements of RBW design work as outlined in this memorandum – other designers will be providing a memorandum covering the remaining RBW design work

IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK (RBW)

I Nicola Davis carried out / supervised the following design work that is restricted building work

PRIMARY STRUCTURE: B1

Design work that is restricted building work	Description	Carried out/ supervised	Reference to plans and specifications
Tick (✓) if included Cross (X) if excluded	[If appropriate, provide details of the restricted building work]	[Specify whether you carried out this design work or supervised someone else carrying	[If appropriate, specify references]

out this design work]				
Primary structure				
All RBW Design work relating to B1	(√)	-	() Carried out () Supervised	-
Foundations and subfloor framing	(√)	<i>Firth RibRaft</i>	() Carried out (√) Supervised	Sht 05
Walls	(√)	<i>Timber Frame</i>	() Carried out (√) Supervised	Sht 11
Roof	(√)	<i>Timber Trusses</i>	() Carried out (√) Supervised	Sht 14 + Prenail Truss Design
Columns and beams	(√)	<i>Timber</i>	() Carried out (√) Supervised	Sht 14
Bracing	(√)	<i>GIB Ezybrace system</i>	() Carried out (√) Supervised	Sht 16 + Bracing calculations
Other	(X)		() Carried out () Supervised	

EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2

All RBW design work relating to E2	(√)	-	() Carried out (√) Supervised	-
Damp proofing	(√)	<i>0.25 polythene on sand blinding</i>	() Carried out (√) Supervised	Sht 05, 11
Roof cladding or roof cladding system	(√)	<i>Longrun trapezoidal</i>	() Carried out (√) Supervised	Sht 09,10,14
Ventilation system (for example, subfloor or cavity)	(√)	<i>vented cavity</i>	() Carried out (√) Supervised	Sht 11
Wall cladding or wall cladding system	(√)	<i>JH Linea w/board, JH Axon Panel</i>	() Carried out (√) Supervised	Sht 09-11
Waterproofing	(X)		() Carried out () Supervised	
Other	(X)		() Carried out () Supervised	

FIRE SAFETY SYSTEMS: C1 – C6

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

other

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.

WAIVERS AND MODIFICATIONS

Waivers or modifications of the building code are 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: Nicola Davis	LBP or Registration number: BP125092
The practitioner is a: (✓) Design LBP () Registered architect () Chartered professional engineer	
Design Entity or Company (optional): I Design Architecture NZ Ltd	
Mailing address (if different from below):	
Street address / Registered office: 24 Park Street	
Suburb:	Town/City: Tauranga
PO Box/Private Bag:	Postcode: 3110
Phone number: 07 578 7345	Mobile: 027 523 1310
After Hours:	Fax:
Email address: nicola@idesignarchitecture.co.nz	Website:

DECLARATION

I Nicola Davis *[name of practitioner]*, LBP,

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

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

Signature: 

Date: 02 05 2014

HAZARD ASSESSMENT

Must be completed where the presence of a natural hazard has been identified in the PIM or Property/Project Information. To be filled in by both Building Control and Resource Consents

Building Consent: BC140363

Address: 12 Matuni Street , Waikanae

Minor Works Addition The lesser of 25% of original floor plan or 30M2 Total floor area increase: N/A

Major Works

Does a natural hazard exist on this property? - see Section 71(3) Building Act 2004

Ponding / Coastal Erosion / Other (state)
Ponding occurs to the rear of the section as form part of the surface/ storm water drainage easement with KDC - Resource Consent 050319

Section 71(1) Assessment - Is the building work itself subject to that hazard or likely to accelerate, worsen, or result in a natural hazard on that land?

How close is the hazard area to the proposed building work?
Proposed building work sited away from the ponding area. Approx distance of 10meters

Will work accelerate, worsen, or result in a natural hazard on any other property?

The proposed work will not accelerate or worsen, or result in a natural hazard on any other property as the proposed building is approx 8 meters away

Should Council refuse consent under Section 71(1)?

Not Applicable

Section 71(2) assessment. Is protection of the land, other property or building work being done?

No

Should Council refuse consent under Section 71(2)?

No, The proposed work will not accelerate or worsen, or result in a natural hazard on any other property as the proposed building is approx 8 meters away

Section 72 assessment – Can requirements of Section 71 be met?

Will work accelerate, worsen, or result in a natural hazard on this or any other property – Section 72(a)? No the proposed work is shown to be above the ponding

Is this land subject to a natural hazard – Section 72(b)? Yes the section is subjected to ponding as Identified on the GIS map attached but is covered by the Resource Consent 050319

Is it reasonable to grant a waiver or modification – Section 72(c)? no

Conclusions

Can the requirements of Section 72 be satisfied? Yes Section 72 is not to be put on title.

Should Council refuse to issue the consent under Section 72? No

Should Council refuse to issue the consent under Section 71(1)? No

Letter sent Yes / No by:

Invoice created:

Section 72 sent to be registered:

Assessed by: (Name) Alison Helliwell	June 2014	Co-reviewed by: (Name) <i>[Signature]</i>	18 June 14
Signature: <i>Alison Helliwell</i>	18 th June 2014	Signature: <i>[Signature]</i>	



Design Navigator H1 Compliance Report

Project Summary

H1 Report created by: I Design Architecture NZ Ltd
 Project Name: **RECEIVED** UBAW318 O'Keefe
 Client: **28 MAY 2014** O'Keefe
 Lot No: **BY:** 5 DP: 41348
 Comment:
 Project Id: 61263
 Report Date: 30/04/2014

Compliance Result

This building complies with H1 via the following methods :

- the Calculation Method in NZS4218:2004 (Sept 2008 R-values)

H1 Compliance Details

NZS4218:2004 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 60% of the R-values in the '60% Rule' table below. This design complies with the NZS4218:2004 Calculation Method.

HeatLoss:

Reference building	Proposed building
369	317

Minimum R-values ("60% rule"):

	Permitted Minimum	Proposed Minimum	
Floor:	0.8	1.29	✓
Non-solid Walls:	1.1	2.06	✓
Glazing in Non-solid Walls:	0.15	0.26	✓
Roof:	1.7	2.65	✓
Skylights:	0.15		✓

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

		Non-solid	Solid Timber	Other Solid
		100.0%	0.0%	0.0%
Floor:	Area: 134.4 m ² R-values:	1.3	1.3	1.5
Walls excl. glazing:	Area: 100.9 m ² R-values:	1.9	1.2	1
Glazing (up to 30%):	Area: 43.2 m ² R-values:	0.26	0.26	0.26
Glazing (surplus of 30%):	Area: 0 m ² R-values:	0.31	0.31	0.31
Roof:	Area: 134.4 m ² R-values:	2.9	3.5	3.5
Skylights:	Area: 0 m ² R-values:	0.31	0.31	0.31
Heat Loss:		369	392	395

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 because NZS4218:2004 has no clear guidance on mixed constructions. Note that all other requirements (window area (30%) and skylight area (1.2m²) threshold for Schedule Method, maximum R-value tradeoff (40%), etc.) are still using NZS4218:2004 including the 2007 H1 amendments because this is the Acceptable Solution for Clause H1.

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 DetailsBuilding Dimensions

Floor Area	<u>134.4</u>
Gross Wall Area	<u>144.1</u>
Net Wall Area	<u>116.7</u>
Wall (North) Area	<u>29.1</u>
Wall (East, South and West) Area	<u>87.6</u>
Gross Roof Area	<u>134.4</u>
Net Roof Area	<u>134.4</u>
Glazing Area	<u>27.5</u>
Window (North) Area	<u>13.9</u>
Window (East, South and West) Area	<u>13.6</u>
Skylight Area	<u>0</u>

Glazing Area Percentages

Total Glazing Percentage	<u>19%</u>
East, South and West Window Percentage	<u>13.4%</u>
Total over 30%	<u>no</u>
East, South and West over 30%	<u>no</u>
Total over 50%	<u>no</u>

Information required for BPI calculation

Living Floor Area	<u>134.4</u>	Note: This includes also internal floors.
Average Room Height	<u>2.4</u>	
Thermal Mass Level	<u>Medium weight</u>	<u>Slab floor with some carpeting or direct glued timber, timber framed walls.</u>

Climate

Location	<u>Paraparaumu</u>
Climate Zone	<u>2</u>

Heat Loss Details

	ID	Orient.	Width	Height	Gross Area	Net Area	R-value*	Heat Loss	Shad. Coeff.**	Solid Wall***
<u>Floors</u>										
	Floor 1				134.4	134.4	1.29	104.2		
<u>Walls</u>										
	Wall 1	N	14.3	2.4	34.5	26.0	2.06	12.6		C
	Window 1-1		2.5	1.4		3.5	0.26	13.5	0.00	
	Window 1-2		1.4	1.2		1.7	0.26	6.5	0.00	
	Window 1-3		0.5	1.0		0.5	0.26	1.7	0.00	
	Window 1-4		2.4	1.2		2.9	0.26	11.1	0.00	
	Wall 2	axon	N	3.5	2.4	8.4	3.0	2.06	1.5	C
	Window 2-1		2.7	2.0		5.4	0.26	20.8	0.00	
	Wall 3	E	4.3	2.4	10.5	9.7	2.06	4.7		C
	Window 3-1		0.4	1.0		0.4	0.26	1.5	0.00	
	Window 3-2		0.4	1.0		0.4	0.26	1.5	0.00	
	Wall 4	axon	E	1.5	2.4	3.6	2.8	2.06	1.3	C
	Window 4-1		0.4	2.0		0.9	0.26	3.4	0.00	
	Wall 5	garage	E	6.2	2.4	15.0	15.0	2.12	7.1	C
	Wall 6		S	10.8	2.4	26.1	23.0	2.06	11.2	C
	Window 6-1		1.4	1.2		1.7	0.26	6.5	0.00	
	Window 6-2		0.5	1.0		0.5	0.26	1.7	0.00	
	Window 6-3		1.2	0.8		1.0	0.26	3.7	0.00	
	Wall 7	axon	S	1.8	2.4	4.4	4.4	2.06	2.1	C
	Wall 8	garage	S	5.2	2.4	12.6	12.6	2.12	5.9	C
	Wall 9		W	9.7	2.4	23.5	18.3	2.06	8.9	C
	Window 9-1		1.4	1.2		1.7	0.26	6.5	0.00	
	Window 9-2		2.5	1.4		3.5	0.26	13.5	0.00	
	Wall 10	axon	W	2.3	2.4	5.5	1.9	2.06	0.9	C
	Window 10-1		1.8	2.0		3.6	0.26	13.8	0.00	
<u>Roofs</u>										
	Roof 1				134.4	134.4	2.65	50.7		
<u>Total Heat Loss</u>								316.8		

* 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/MM1 and H1/AS1, Replacement Table 1, Note (4)).

** 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 (NZS4218:2004 section 3.1.4.).)

Floor Construction Details

1: Slab floor

internal surface 0.09	
Flooring	none (Example: polished surface of a concrete floor) ▼
R-value: 0	
Insulation value of the slabfloor	
Slab floor area [m ²]:	134.4
Perimeter length [m]:	59.54
External wall thickness [mm]:	90 ⓘ
Soil conductivity [W/m C]:	1.2 ⓘ
Underslab insulation:	none ▼ Insulation: <input type="text"/> ⓘ
Piles Footings:	Number: <input type="text"/> Penetration Diameter: <input type="text"/> mm
Slab edge insulation:	none ▼ Insulation: <input type="text"/> ⓘ
R-value: 1.2	

Construction R-value: **1.29** m²K/W.

Wall Construction Details

1: Timber frame with vented cavity

external surface 0.03	
Cladding	Linea weatherboard R-value: 0.04
Air Barrier	Building paper R-value: 0.01
Timber Frame & Cavity	90mm, studs @ 600mm, dwangs @ 800mm
Frame Area: 15.1%	Cavity Area: 84.9%
15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08	15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08
Timber Frame R-value: 0.75	Insulation 2.2
	still Airgap 12mm airgap (non-reflective) R-value: 0.15
Wall Lining	Gypsum plasterboard 10mm R-value: 0.04
internal surface 0.09	

Construction R-value: 2.06 m²K/W.

2: Timber frame (direct fixed cladding) with internal strapping

external surface 0.03	
Cladding	Gypsum plasterboard 10mm into still air (garage, etc.) R-value: 0.1
Air Barrier	none R-value: 0
Timber Frame & Cavity	90mm, studs @ 600mm, dwangs @ 800mm
Frame Area: 15.1%	Cavity Area: 84.9%
Timber Frame R-value: 0.75	Insulation 2.2
	still Airgap none R-value: 0
internal strapping and air gap 0.16	
Wall Lining	Gypsum plasterboard 10mm R-value: 0.04
internal surface 0.09	

Construction R-value: 2.12 m²K/W.

3: Timber frame with vented cavity

external surface 0.03	
Cladding	Fibre cement board 1470 9mm R-value: 0.04
Air Barrier	Building paper R-value: 0.01
Timber Frame & Cavity	90mm, studs @ 600mm, dwangs @ 800mm
Frame Area: 15.1%	Cavity Area: 84.9%
15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08	15-90mm vented cavity (all R-values on ext. side of cavity will be halved), R: 0.08
Timber Frame R-value: 0.75	Insulation 2.2
	still Airgap 12mm airgap (non-reflective) R-value: 0.15
Wall Lining	Gypsum plasterboard 10mm R-value: 0.04
internal surface 0.09	

Construction R-value: 2.06 m²K/W.

Roof Construction Details

1: Timber framed 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 45mm timber battens @ 900mm with insulation inbetween, any type of purlins underneath		
Frame Area: 5%	Cavity Area: 95%	
Roof space (still air) 0.11	Roof space (still air) 0.11	
Trusses and dwangs R-value: 0.37	Insulation 3.2	
Ceiling Lining Gypsum plasterboard 13mm		
R-value: 0.06		
internal surface 0.09		
Recessed downlights		
Ceiling area [m ²]: 134.4	Number of downlights: 20	Clearance from lamp holder side [m]: 0.05

Construction R-value: 2.65 m²K/W.



This tool was created by Design Navigator Ltd.

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GIB EzyBrace® 2011 Software



Demand Calculation Sheet

single storey

V06/11

Job Details

Name O'Keeffe
 Street and Number 12 Matuhi Street
 Lot and DP Number 5, DP:41348
 City/Town/District Waikanae
 Designer Lisa Janes
 Company Name I Design Architecture
 Date 30/04/2014



Select Lining Option

10 or 13 mm GIB® Plasterboard

Building Specification

Number of storeys	single		
Floor Loading	2kPa		
Foundation Type	slab		
		Single Floor	Complete Single Floor Column only
Cladding Weight	light		
Roof Weight	light		
Room in Roof Space	no		
Roof Pitch (degrees)	9 ✓		
Roof height above eaves (m)	1.2 ✓		
Building height to apex (m)	4.5 ✓		
Ground to lower floor level (m)	0.3 ✓		
Stud Height (m)	2.4 ✓		
Building Length (m)	17.8 ✓		
Building Width (m)	12.0 ✓		
Building Plan Area (m2)	171 ✓		

Building Location

Wind Zone	High	Earthquake Zone	Soil Type
Select by Building Consent Authority Map		3	D&E (deep to very soft)
or Preference	High	Annual exceedance probability	
Wind Region	Preference selected	1/500 (NZS3604:2011 default)	
Lee Zone	Preference selected		
Ground Roughness	Preference selected		
Site Exposure	Preference selected		
Topographic Class	Preference selected		

Bracing Units required for Wind

Demand W (BU)		Walls single
along	slab	563
across	slab	709

Bracing Units required for Earthquake

Demand along / across E (BU)	
Walls	single
slab	906

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28 MAY 2014

[Signature]

To validate this Performance Warranty

Please complete this portion (your name as the actual owner may not yet be on our records) and return to:

Sample Only

Owner _____

Site address _____

Manufacturer _____

Date installation completed _____

Warranty No. _____



Producer Statement/Warranty

This Producer Statement covers product supplied as per our quotation and is based on window schedules, floor plans and all windows as supplied.

Quote No. _____

Date _____

Revision Date _____

Supplied Only

Supplied & installed

Un glazed glazed

Please read reverse for guidance on care and maintenance of your FIRST Windows & Doors.

Our windows comply with the building code

We hereby certify that all products supplied by our company meet or exceed the requirements of the New Zealand Building Code Means of Compliance, NZS 4211:2008 Performance of Windows and NZS 4223, Glazing in Buildings Parts 1,2 and 3. This means that our windows have been designed and tested to perform under the most diverse New Zealand weather conditions, and:

- have been successfully tested for strength under a range of wind pressures appropriate for the various wind zones in New Zealand.
- meet the requirements for deflection under simulated loads.
- meet stringent requirements for waterproofing and air leakage.
- have glass of the correct thickness and toughness to cope with expected wind loads and accidental human impact.

In accordance with our TERMS AND CONDITIONS OF SALE a guarantee for all FIRST products is provided under normal conditions of use against failure of materials and workmanship for 5 years from date of practical completion.

DURABILITY. FIRST WINDOWS & DOORS products can be expected to have a trouble-free serviceable life of not less than 15 years as required by section B2 of the New Zealand Building Code. This pertains specifically to the structural elements of the joinery.

In the course of normal use decorative elements and non-structural fittings such as window fasteners, door rollers, weatherpile and the like may need to be replaced as they wear out. This process does not contravene the B2 Durability requirements of the New Zealand Building Code or the warranty given by the manufacturer.

The decorative coating on the joinery is covered by a separate warranty.

A window and door hardware warranty covers manufacturing defects, functionality and surface finish for 5 years, assuming that the care and maintenance guidelines are followed. Plated (soft) finishes are excluded from this warranty as deterioration is possible under some environmental conditions.

Please Note: This warranty is subject to correct installation as outlined in the Building Code Acceptable Solution Clause E2/AS1 External Moisture.

Purchaser _____

Address _____

Site address _____

Manufacturer _____

Address _____

Date installation completed _____

Signature _____

Warranty No. _____



BRANZ Appraised
Appraisal No.729 [2011]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
No. 729 (2011)**

WATERGATE-PLUS FLEXIBLE HOUSE WRAP

**Thermakraft Industries Australia
Pty Ltd**
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VICTORIA 3134
AUSTRALIA

Tel: +61 3 9870 5880

Fax: +61 3 9870 5990

Web: www.thermakraft.com.au



BRANZ
BRANZ Limited
Private Bag 50 908
Porirua City
New Zealand
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www.branz.co.nz



Product

1.1 Watergate-Plus is a fire retardant, synthetic wall sarking for use under masonry veneer and other direct fixed and cavity-based wall cladding on timber and steel framed buildings. The product is manufactured from coated, non-woven polyolefin and is coloured white.



Scope

2.1 Watergate-Plus has been appraised for use as a wall sarking on buildings within the following scope:

- Class 1 and Class 10 buildings; and,
- Class 2 to Class 9 buildings subject to specific weathertightness design; and,
- constructed with timber framing in accordance with the BCA 2010, or steel framing in accordance with the BCA 2010; and,
- with absorbent and non-absorbent wall claddings directly fixed to framing; and,
- with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; and,
- with masonry veneer in accordance with the BCA 2010; and,
- situated in non-cyclonic wind zones up to, and including N3.

2.2 Building designers are responsible for the building design and for the incorporation of Watergate-Plus into their design in accordance with the declared properties and the instructions of Thermakraft Industries Australia Pty Ltd.

Building Regulations

Building Code of Australia (BCA 2010)

3.1 In the opinion of BRANZ, Watergate-Plus, if used, designed, installed and maintained in accordance with the statements and conditions of this Appraisal, will contribute to meeting the following provisions of the BCA 2010:

BCA 2010 Volume 1 - Class 2 to Class 9 Buildings

Part F1 - Damp and Weatherproofing: Performance Requirement FP1.4. Watergate-Plus will contribute to meeting this requirement. See Paragraphs 13.1 and 13.2.

BCA 2010 Volume 2 - Class 1 and Class 10 Buildings

Part 2.2 Damp and Weatherproofing: Performance Requirement P2.2.2. Watergate-Plus will contribute to meeting these requirements. See Paragraphs 13.1 and 13.2.

3.2 This is an Appraisal of an **Alternative Solution** in terms of Building Code of Australia compliance.

Technical Specification

4.1 Watergate-Plus is a white, 112 g/m² non-woven, microporous polyolefin fabric sarking.

4.2 The product is supplied in rolls 1.370 m wide x 30m long (41 m²) and 2.740 m wide x 30m long (82 m²). The product is printed with the Watergate-Plus logo repeated along the length of the roll and is labelled with the marketing or construction company's name. The rolls are wrapped in clear polythene film.

Accessories

4.3 Accessories used with Watergate-Plus which are supplied by the installer are:

- Fixings - staples, clouts, screws or proprietary sarking fixings, or other temporary fixings to attach the wall sarking to the framing.
- Wall sarking support - polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to support the wall underlay (refer to Paragraph 7.5).

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 Watergate-Plus. 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

Timber and Steel Framing

7.1 Studs must be provided at maximum 600 mm centres. Nogging must be fitted flush between the studs at maximum 1200 mm centres.

General

7.2 Watergate-Plus is intended to be 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.

7.3 The sarking also provides a degree of temporary weather protection during early construction. However, the sarking 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.

7.4 Refer to Table 1 for details of the material properties of Watergate-Plus and the relevant AS/NZS 4200.1 classifications.

Table 1: Watergate-Plus Material Properties

AS/NZS 4200.1 Properties	Property Performance Requirement	Actual Property Performance	AS/NZS 4200.1 Classification
Resistance to dry delamination		Pass	Not Applicable
Resistance to wet delamination		Pass	Not Applicable
Shrinkage	≤ 0.5%	Pass	Not Applicable
Folding Endurance (machine direction)	≥ 2.00	Pass	Not Applicable
Folding Endurance (cross direction)	≥ 1.70	Pass	Not Applicable
Absorbency	≥ 100 g/m ²	Pass	High
Vapour Barrier	≤ 7 MN s/g	Pass	Low
Water Barrier	≥ 100 mm	Pass	High
Emmittance			Non-reflective
Edge Tear and Tensile Strength		Edge tear: Machine direction (average) = 110 N Cross direction (average) = 91 N Tensile strength: Machine direction (average) = 2.09 kN/m Cross direction (average) = 1.78 kN/m	Extra Heavy Extra Heavy Unclassified Unclassified
Flammability	≤ 5	Pass	Low

7.5 Watergate-Plus is deemed to be a satisfactory sarking material for the waterproofing of walls in accordance with BCA 2010 Volume One, Paragraph F1.6.

7.6 In masonry veneer installations and wall cladding installations over a cavity, where the studs or cavity battens are installed at greater than 450 mm centres, the sarking must be supported to prevent the sarking bulging into the cavity space when bulk insulation is installed in the wall frame cavity.

Structure

8.1 Watergate-Plus is suitable for use on buildings situated in non-cyclonic wind zones up to, and including N3.

Durability

Serviceable Life

9.1 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, Watergate-Plus is expected to have a serviceable life equal to that of the cladding.

Flammability

10.1 Watergate-Plus has an AS 1530 Part 2 Flammability Index of less than 5 and therefore has a flammability index classification of low in accordance with AS/NZS 4200.1.

Heating Appliances, Fireplaces, Chimneys and Flues

11.1 Watergate-Plus must be separated from fireplaces, heating appliances, flues and chimneys in accordance with the requirements of the BCA 2010 for the protection of combustible materials.

Fire Resistance

BCA 2010 Bush Fire Zones

12.1 Where regulations require special attention in bushfire prone areas, it may be necessary for Watergate-Plus sarking to comply with AS 3959. The building designer is responsible for determining the compliance requirements.

Damp and Weatherproofing

13.1 Wall claddings installed over Watergate-Plus must meet the performance requirements of the BCA 2010, e.g. Deemed to Satisfy wall claddings covered by the BCA 2010, or wall claddings covered by a valid BRANZ Appraisal.

13.2 Watergate-Plus, when installed in accordance with the Technical Literature and this Appraisal will assist in the total cladding systems compliance with the Damp and Weatherproofing performance clauses of the BCA 2010.

Installation Information

Installation Skill Level Requirements

13.1 Installation must always be carried out in accordance with the Watergate-Plus Technical Literature and this Appraisal, by competent tradespersons with an understanding of wall sarking installation.

Sarking Installation

14.1 Watergate-Plus 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 sarking fixings. The sarking must be pulled taut over the framing before fixing.

14.2 Watergate-Plus 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 sarking should be run over openings and these left covered until windows and doors are ready to be installed. Openings are formed in the sarking by cutting on a 45 degree diagonal from each corner of the penetration. The flaps of the cut sarking must be folded inside the opening and stapled to the penetration framing. Excess sarking may be cut off flush with the internal face of the wall frame.

14.4 Where the sarking needs to be supported, polypropylene strap or galvanised wire must be installed over the sarking at 300 mm centres. Alternatively, 75 mm galvanised wire mesh can be installed over the entire sarking surface.

14.5 Watergate-Plus can be added as a second layer over window and door joinery head flashings.

14.6 When used behind masonry veneer cladding, the brick ties must be fixed to the face of the stud only.

14.7 When fixing the product in windy conditions, care must be taken due to the large sail area created by wide roll widths.

14.8 Any damaged areas of Watergate-Plus, 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

14.9 The Technical Literature must be referred to during the inspection of Watergate-Plus 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 Watergate-Plus in accordance with AS/NZS 4200.1: Resistance to dry delamination, resistance to wet delamination, shrinkage, folding endurance, tensile strength, edge-tear resistance, resistance to water vapour transmission, resistance to water penetration, and surface water absorbency. A range of these tests were completed before and after Watergate-Plus was exposed to ultra-violet light.

15.2 The Flammability Index of Watergate-Plus has been evaluated in accordance with AS/NZS 1530.2.

Other Investigations

16.1 A durability opinion has been given by BRANZ technical experts.

16.2 The practicability of installation of Watergate-Plus has been assessed by BRANZ and found to be satisfactory.

16.3 The Technical Literature, including installation instructions, has been examined by BRANZ and found to be satisfactory.

Quality

17.1 The manufacture of Watergate-Plus 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 Thermakraft Industries Australia Pty Ltd.

17.3 Building designers are responsible for the design of the building, and for the incorporation of the wall sarking into their design in accordance with the instructions of Thermakraft Industries Australia Pty Ltd.

17.4 Quality of installation is the responsibility of the installer in accordance with the instructions of Thermakraft Industries Australia Pty Ltd.

Sources of Information

- AS 1530.2 - 1993 Test for flammability of materials.
- AS 3959 - 2009 Construction of buildings in bushfire-prone areas.
- AS/NZS 4200.1: 1994 Pliable building membranes and sarkings - materials.
- Building Code of Australia, Australian Building Codes Board, 2010.



BRANZ

In the opinion of BRANZ, Watergate-Plus Flexible House 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 Thermakraft Industries Australia Pty Ltd, 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. Thermakraft Industries Australia Pty Ltd:
 - 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 Thermakraft Industries Australia Pty Ltd.
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 Thermakraft Industries Australia Pty Ltd or any third party.

For BRANZ

P Burghout
Chief Executive

Date of issue: 21 March 2011

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BY:

**Product**

1.1 Linea™ Weatherboard Cavity Cladding is a cavity-based bevelbacked fibre cement weatherboard wall cladding. It is designed to be used as part of an external cladding system for residential and light commercial type buildings where domestic construction techniques are used.

1.2 Linea™ Weatherboard Cavity Cladding consists of Linea™ Weatherboard, which is a bevelbacked fibre cement weatherboard, fixed over timber battens to form the cavity. The cladding is finished with a latex paint system.

1.3 The cladding incorporates a primary and secondary means of weather resistance (first and second line of defence) against water penetration by separating the cladding from the external wall framing with a nominal 20 mm cavity. The cavity allows for any occasional ingress of water that may get past the external skin to drain to the exterior of the building, and any remaining moisture to dry by evaporation.



BRANZ Appraised
Appraisal No.447 [2010]

BRANZ Appraisals

Technical Assessments of products
for building and construction

BRANZ
APPRAISAL
No. 447 (2010)

This Appraisal replaces BRANZ
Appraisal No. 447 (2005) issued 4
February 2005.

LINEA™
WEATHERBOARD
CAVITY CLADDING

James Hardie New Zealand Ltd
PO Box 12 070
Penrose
Auckland

Tel: 0800 808 868

Fax: 0800 808 988

Web: www.jameshardie.co.nz



BRANZ
BRANZ Limited
Private Bag 50 908
Porirua City
New Zealand
Tel: +64 4 237 1170
Fax: +64 4 237 1171
www.branz.co.nz

WFTAO

**Scope**

2.1 Linea™ Weatherboard Cavity Cladding has been appraised as an external wall cladding for buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
- constructed with timber framing complying with the NZBC; and,
- with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
- situated in NZS 3604 Building Wind Zones up to, and including 'Very High'.

2.2 Linea™ Weatherboard must only be installed horizontally on vertical surfaces.

2.3 Linea™ Weatherboard Cavity Cladding is appraised for use with aluminium window and door joinery that is installed with vertical jambs and horizontal heads and sills. *(The Appraisal of Linea™ Weatherboard Cavity Cladding relies on the joinery meeting the requirements of NZS 4211 for the relevant Building Wind Zone.)*

(Note: Linea™ Weatherboard Cavity Cladding can be used to provide structural bracing and fire resistance rated construction, but these aspects have not been assessed by this Appraisal and are outside its scope.)

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Linea™ Weatherboard Cavity Cladding if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4. Linea™ Weatherboard Cavity Cladding meets the requirements for loads arising from self-weight, earthquake, wind, impact and creep (i.e. B1.3.3 (a), (f), (h), (j) and (q)). See Paragraphs 9.1 - 9.3.

Clause B2 DURABILITY: Performance B2.3.1(b), 15 years and B2.3.2. Linea™ Weatherboard Cavity Cladding meets these requirements. See Paragraphs 10.1 and 10.2.

Clause C3 SPREAD OF FIRE: Performance C3.3.5. Linea™ Weatherboard Cavity Cladding meets this requirement. See Paragraph 12.1.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. Linea™ Weatherboard Cavity Cladding meets this requirement. See Paragraphs 14.1 - 14.5.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Linea™ Weatherboard Cavity Cladding 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.

Technical Specification

4.1 Linea™ Weatherboards are bevelback weatherboards with a tongue and groove at each end for jointing. The weatherboards are pre-primed with an acrylic primer on the front face and both edges. Linea™ weatherboards are 16 mm thick and are available 135 mm, 150 mm and 180 mm wide. All boards are supplied 4200 mm long.

4.2 Linea™ Weatherboards are manufactured from a reduced density cellulose fibre cement formulation. The boards are formed, cut to length and then cured by high-pressure autoclaving. After autoclaving, a bevel is cut on the back face of the weatherboards, the front edge at the bottom of the board is chamfered and the ends are tongue and grooved for jointing. Linea™ Weatherboards are manufactured to meet the requirements of AS/NZS 2908.2.

Accessories

4.3 Accessories used with Linea™ Weatherboard Cavity Cladding which are supplied by James Hardie New Zealand Ltd are:

- Linea™ Trim - a 16 mm thick fibre cement trim manufactured from a reduced density cellulose fibre cement formulation. Linea™ Trim is pre-primed with an acrylic primer on the front face and both edges, and is available in sizes of 84 mm and 100 mm wide by 2600 mm long.
- External and internal corner mouldings - chromate treated aluminium external box corner, 90° internal corner 'W' mould and 135° internal corner 'W' mould. The mouldings are available in 2700 mm lengths.
- Corner soakers - 90° soakers are available for 135 mm, 150 mm and 180 mm Linea™ Weatherboards. The soakers are available in chromate treated aluminium, copper and stainless steel.
- Cavity vent strip - uPVC, available in 2700 mm lengths.

4.4 Accessories used with Linea™ Weatherboard Cavity Cladding which are supplied by the building contractor are:

- Building underlay - paper or underlay complying with NZBC Acceptable Solution E2/AS1, Table 23, or breather-type membranes covered by a valid BRANZ Appraisal for use as wall underlays.
- Flexible sill, head and jamb flashing tape - flexible flashing tapes complying with NZBC Acceptable Solution E2/AS1, Paragraph 4.3.11, or flexible flashing tapes covered by a valid BRANZ Appraisal for use around window and door joinery openings.
- Cavity battens - nominal 50 mm wide by 25 mm thick (minimum finished size of 45 mm wide by 18 mm thick) timber treated to Hazard Class H3.1.
- Building underlay support - polypropylene strap, 75 mm galvanised mesh, galvanised wire, or additional vertical battens for securing the building underlay in place and preventing bulging of the bulk insulation into the drainage cavity. (Note: mesh and wire galvanising must comply with AS/NZS 4534.)
- Joinery head flashings - folded from aluminium or galvanised steel to suit the window or door trim opening. Refer to NZS 3604, Section 4 and NZBC Acceptable Solution E2/AS1, Table 20 for durability requirements.
- Planted sill and scribes - timber treated to Hazard Class H3.1, pre-primed before installation.
- Window and door trim cavity air seal - air seals complying with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.6, or self-expanding, moisture cure polyurethane foam air seals covered by a valid BRANZ Appraisal suitable for use around window, door and other wall penetration openings.
- Flexible sealant - sealant complying with NZBC Acceptable Solution E2/AS1, or sealant covered by a valid BRANZ Appraisal for use as a weather sealing sealant for exterior use.
- Cavity batten fixings - 40 x 2.8 mm flat head hot-dip galvanised nails.
- Linea™ Weatherboard fixings - 60 x 3.15 mm flat head hot-dip galvanised Hardiflex nails or stainless steel ring shank Hardiflex nails (for concealed nailing), and 75 x 3.15 mm jolt head hot-dip galvanised nails or stainless steel ring shank nails (for face nailing).
- Linea™ Trim fixings - 60 x 3.15 mm or 75 x 3.15 mm hot-dip galvanised jolt head nails and stainless steel ring shank jolt head nails.

(Note: Stainless steel fixings must be Grade 316 and hot-dip galvanising must comply with AS/NZS 4680).

Paint System Specification

4.5 Paint systems are not supplied by James Hardie New Zealand Ltd and have not been assessed, therefore they are outside the scope of this Appraisal.

4.6 All exposed faces, including top edges at sills and all bottom edges of Linea™ Weatherboard, Linea™ Trim and accessories must be finished with a latex exterior paint system complying with any of Parts 7, 8, 9, or 10 of AS 3730.

Handling and Storage

5.1 Handling and storage of all materials supplied by James Hardie New Zealand Ltd or the building contractor, whether on site or off site, is under the control of the building contractor. Linea™ Weatherboards must be stacked flat, off the ground and supported on a level platform. They must be kept dry at all times either by storing under cover or providing waterproof covers to the stack. Care must be taken to avoid damage to edges, ends and surfaces. Weatherboards must always be carried on edge.

5.2 Accessories must be stored so they are kept clean, dry and undamaged. All accessories must be used within the maximum storage period recommended by the manufacturer.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Linea™ Weatherboard Cavity Cladding. 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

Framing

Timber Treatment

7.1 Timber wall framing behind Linea™ Weatherboard Cavity Cladding must be treated as required by NZS 3602.

Timber Framing

7.2 Studs must be provided at maximum 600 mm centres. Nogs must be fitted flush between the studs at maximum 800 mm centres (for studs at 600 mm centres) or maximum 1200 mm centres (for studs at 400 mm centres).

7.3 Timber framing must comply with NZS 3604 or be to a specific design using NZS 3603 and AS/NZS 1170. Where specific design is required, the framing must be of at least equivalent stiffness to the framing provisions of NZS 3604.

7.4 Timber framing must have a maximum moisture content of 24% at the time of the cladding application. (*If weatherboards are fixed to framing with a moisture content of greater than 24% problems may occur at a later date due to excessive timber shrinkage.*)

7.5 Timber wall framing must have a maximum moisture content of 18% before the weatherboards are painted.

General

8.1 Punchings in the cavity vent strip provide a minimum ventilation opening area of 1000 mm² per lineal metre of wall.

8.2 At ground level the bottom edge of Linea™ Weatherboards must be kept clear of paved surfaces, such as footpaths, by a minimum of 100 mm and unpaved surfaces by 175 mm in accordance with NZBC Acceptable Solution E2/AS1, Table 18. The ground clearances to finished floor levels as set out in NZS 3604 must be adhered to.

8.3 At balcony, deck or low pitch roof/wall junctions, the bottom edge of Linea™ Weatherboards must be kept clear of any adjacent surface, or above the top surface of any adjacent roof flashing by a minimum of 50 mm.

8.4 All buildings must have barriers to airflow in the form of interior linings with all joints stopped, or alternatively, unlined gables and walls must incorporate a rigid sheathing or an air barrier which meets the requirements of NZBC Acceptable Solution E2/AS1, Table 23. Where rigid sheathings are used, the fixing length must be increased by a minimum of the thickness of the sheathing.

8.5 Where cladding penetrations are wider than the cavity batten spacing, allowance must be made for airflow between adjacent cavities by leaving a minimum gap of 10 mm between the bottom of the vertical cavity batten and the flashing to the opening.

8.6 Where Linea™ Weatherboard Cavity Cladding abuts other cladding systems, designers must detail the junction to meet their own requirements and the performance requirements of the NZBC. Details not included within the Technical Literature have not been assessed and are outside the scope of this Appraisal.

Structure

Mass

9.1 The mass of the 135 mm wide Linea™ Weatherboard when installed on the wall is 24.9 kg/m² at equilibrium moisture content (EMC). The mass of the 150 mm wide board is 25.7 kg/m² at EMC and the mass of the 180 mm wide board is 23.9 kg/m² at EMC. Linea™ Weatherboard Cavity Cladding is therefore considered a light wall cladding in terms of NZS 3604.

Impact Resistance

9.2 Linea™ Weatherboard Cavity Cladding will resist impacts likely to be encountered in normal residential use. The likelihood of impact damage to the cladding when used in light commercial situations should be considered at the design stage, and appropriate protection such as the installation of bollards and barriers provided for vulnerable areas.

Wind Zones

9.3 Linea™ Weatherboard Cavity Cladding is suitable for use on buildings situated in all Building Wind Zones of NZS 3604, up to, and including Very High.

Durability

Serviceable Life

10.1 Linea™ Weatherboard Cavity Cladding installations are expected to have a serviceable life of at least 50 years provided the paint coating system is maintained in accordance with this Appraisal to ensure the Linea™ Weatherboards and fixings remain dry in service. Linea™ Weatherboards must be painted within 3 months of fixing.

10.2 Areas of geothermal activity and coastal locations can be very corrosive to fasteners, especially coastal locations within distances of up to 500 metres of the sea including harbours, or 100 metres from tidal estuaries and sheltered inlets in some instances. These coastal locations are defined in NZS 3604 as Sea Spray Zone and Zone 1. To achieve a 50 year serviceable life in Sea Spray Zones and areas of geothermal activity, Linea™ Weatherboard must be fixed with stainless steel fasteners. To achieve a 50 year serviceable life in Zone 1, Linea™ Weatherboard must be fixed with stainless steel or protected hot-dip galvanised steel fasteners. Fasteners outside the Sea Spray Zone, Zone 1 and areas of geothermal activity may be hot-dip galvanised steel.

Maintenance

11.1 Regular maintenance is essential for Linea™ Weatherboard Cavity Cladding installations to continue to meet the NZBC durability performance provision and to maximise their serviceable life.

11.2 Annual inspections must be made to ensure that all aspects of the cladding system, including the paint coating system, flashings and any sealed joints remain in a weatherproof condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress must be repaired immediately. Sealant and paint coatings must be repaired in accordance with the sealant or paint coating manufacturer's instructions.

11.3 Regular cleaning (at least annually) of the paint coating surface is recommended to remove grime, dirt and organic growth and to maximise the life and appearance of the coating. Paint systems must be recoated at approximately 7-15 yearly intervals in accordance with the paint manufacturer's instructions.

11.4 Minimum ground clearances as set out in this Appraisal must be maintained at all times during the life of the cladding.

(Failure to adhere to the minimum ground clearances given in this Appraisal and the Technical Literature will adversely affect the long term durability of Linea™ Weatherboard Cavity Cladding.)

Control of External Fire Spread

12.1 Linea™ Weatherboard Cavity Cladding has a performance level A in accordance with NZBC C/AS1 Table 7.5. The system is suitable for use as an external wall cladding system on buildings in all Purpose Groups, at any distance to the boundary. Linea™ Weatherboard is also suitable for use where a non-combustible material is specified. When Linea™ Weatherboard is finished with a paint coating of not more than 1.0 mm in thickness, it is suitable for use as an external wall cladding in all building Purpose Groups in accordance with NZBC Acceptable Solution C/AS1 Part 7, Paragraph 7.11.2(a).

Outbreak of Fire

13.1 When Linea™ Weatherboard Cavity Cladding is finished with a paint coating of not more than 1.0 mm in thickness, clearance separations from chimneys and flues are not required. However, when used in conjunction with, or attached to heat sensitive materials, the heat sensitive material must be separated from chimneys and flues in accordance with the requirements of NZBC Acceptable Solution C/AS1 Part 9 for the protection of combustible materials.

External Moisture

14.1 Linea™ Weatherboard Cavity Cladding, when installed in accordance with this Appraisal and the Technical Literature will prevent the penetration of moisture that could cause undue dampness or damage to building elements.

14.2 The cavity must be sealed off from the roof and sub-floor space to meet code compliance with Clause E2.3.5.

14.3 Linea™ Weatherboard Cavity Cladding allows excess moisture present at the completion of construction to be dissipated without permanent damage to building elements to meet code compliance with Clause E2.3.6.

14.4 The details given in the Technical Literature for weather sealing are based on the design principle of having a first and second line of defence against moisture entry for all joints, penetrations and junctions. The ingress of moisture must be excluded by detailing joinery and wall interfaces as shown in the Technical Literature. Weathertightness details that are developed by the designer are outside the scope of this Appraisal and are the responsibility of the designer for compliance with the NZBC.

14.5 The use of Linea™ Weatherboard Cavity Cladding where there is a designed cavity drainage path for moisture that penetrates the cladding, does not reduce the requirement for junctions, penetrations, etc to remain weather resistant.

Internal Moisture

15.1 Buildings must be constructed with an adequate combination of thermal resistance and ventilation, and space temperature must be provided to all habitable spaces, bathrooms, laundries and other spaces where moisture may be generated or may accumulate.

Water Vapour

15.2 Linea™ Weatherboard Cavity Cladding is not a barrier to the passage of water vapour, and when installed in accordance with the Technical Literature and this Appraisal will not create or increase the risk of moisture damage resulting from condensation.

Installation Information

Installation Skill Level Requirements

16.1 Installation of Linea™ Weatherboard and accessories supplied by James Hardie New Zealand Ltd and the building contractor must be completed by tradespersons with an understanding of cavity construction and bevelback weatherboard installation, in accordance with instructions given within the Linea™ Weatherboard Cavity Cladding Technical Literature and this Appraisal.

System Installation

Building Underlay and Flexible Sill and Jamb Tape Installation

17.1 The selected building underlay and flexible sill and jamb tape system must be installed by the building contractor in accordance with the underlay and tape manufacturer's instructions prior to the installation of the Linea™ Weatherboards. Particular attention must be paid to the installation of the building underlay and sill and jamb flashing tapes around window and door openings to ensure a continuous seal is achieved and all exposed timber in the opening is protected.

Cavity Battens

17.2 Cavity battens must be installed over the building underlay to the wall framing at maximum 600 mm centres where the studs are at 600 mm centres or at 400 mm centres when studs are at 400 mm centres. The battens must be fixed in place with 40 x 2.8 mm hot-dip galvanised flat-head nails at maximum 800 mm centres.

17.3 Where studs are at greater than 400 mm centres, a building underlay support must be installed over the building underlay between the cavity battens at maximum 300 mm centres.

Linea™ Weatherboard Installation

17.4 Linea™ Weatherboards may be cut on site by power saw. Holes and cut-outs may be formed by drilling a number of holes around the perimeter of the opening required and tapping out the centre with a hammer, or by using a hole saw.

17.5 Weatherboards must be dry prior to installation. Before the weatherboards are installed, cut ends exposed to the exterior such as at aluminium box corners or internal corners must be sealed with an acrylic sealer to reduce the absorbency of the fibre cement.

17.6 Linea™ Weatherboards must be installed starting at the bottom of the wall. A cant strip (H3.1 treated timber or fibre cement) must be fixed behind the bottom course of weatherboards to ensure the weatherboards are set at the correct angle. The cant strip must be continuous around the perimeter of the building. The bottom course of weatherboards must overhang the bottom plate by a minimum of 50 mm.

17.7 Before the weatherboards are installed, the corner detail must be prepared to suit the selected option, e.g. external box corner, corner soaker. The necessary flashings, including window flashings, must be installed before commencing weatherboard fixing.

17.8 The first course of weatherboards must be full length, i.e. 4200 mm and commence from an external corner. Jointing of Linea™ Weatherboards is made off the stud using the pre-cut tongue and groove joint. Tongue and groove joints may be located centrally between the studs, but must be no closer than 100 mm to the edge of a stud. A bead of sealant must be applied to the front side of the tongue before the corresponding board is inserted. Subsequent courses of weatherboards must be installed so that the tongue and groove joints are staggered by 600 mm minimum from joints in the previous course.

17.9 Linea™ Weatherboards must have a minimum lap of 30 mm, and should be set out so as near to a full board as possible will finish under and over windows and doors and at the top of the wall. A storey rod can be used to accurately position weatherboard courses.

17.10 Linea™ Weatherboards must be fixed to each stud using concealed fixings behind the lap of the boards or face nailing, except that face nailing must be provided at all corners and vertical edges of openings.

17.11 Concealed fixing must be carried out using 60 x 2.8 mm hot-dip galvanised or stainless steel Hardieflex nails depending on the location - see Paragraph 10.2. Nails must be fixed 25 mm from the top edge of the board and must be driven flush with the board surface.

17.12 Face nailing must be carried out using 75 x 3.15 mm hot-dip galvanised or stainless steel jolt-head nails depending on the location - see Paragraph 10.2. Nails must be fixed 15 mm up from the bottom of the board and punched a maximum of 2 mm below the surface of the board. When stainless steel nails are used, the top board at each lap must be pre-drilled.

17.13 Linea™ Weatherboards can be hand or gun nailed. Nails must not be closer than 25 mm to the end of the board when hand nailing, or closer than 50 mm when gun nailing. *(Note: Gun nailing must only be used for concealed nailing.)*

Aluminium Joinery Installation

17.14 Aluminium joinery and associated head and sill flashings must be installed by the building contractor in accordance with the Technical Literature. A 7.5 mm nominal gap must be left between the joinery reveal and the wall framing so a PEF rod and air seal can be installed after the joinery has been secured in place.

17.15 After installing the window and door joinery, Linea™ Trim, planted sills and scribes may be installed in accordance with the Technical Literature to provide additional weatherproofing for the joinery/weatherboard junction.

Inspections

17.16 The Technical Literature must be referred to during the inspection of Linea™ Weatherboard Cavity Cladding installations.

Finishing

17.17 The paint coating manufacturer's instructions must be followed at all times for application of the paint finish. Linea™ Weatherboards and trim must be clean and dry before commencing painting.

Health and Safety

18.1 Cutting of Linea™ Weatherboard must be carried out in well ventilated areas, and a dust mask and eye protection must be worn.

18.2 When power tools are used for cutting, grinding or forming holes, health and safety measures as set out in the Technical Literature must be observed because of the amount of dust generated.

18.3 Safe use and handling procedures for Linea™ Weatherboard and the components that make up the cladding system are provided in the relevant manufacturer's Technical Literature.

Basis of Appraisal

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

Tests

19.1 The following testing has been completed by BRANZ:

- BRANZ expert opinion on NZBC E2 code compliance for Linea™ Weatherboard Cavity Cladding was based on testing and evaluation of all details within the scope and as stated within this Appraisal. Linea™ Weatherboard Cavity Cladding was tested to E2/VM1. The testing assessed the performance of the foundation detail, window head, jamb and sill details, meterbox head, jamb and sill details, balustrade to wall junction, parapet cap and internal and external corners. In addition to the weathertightness test, the details contained within the Technical Literature have been reviewed, and an opinion has been given by BRANZ technical experts that the system will meet the performance levels of NZBC Acceptable Solution E2/AS1 for drained cavity claddings.
- Uniform wind face load tests to simulate wind pressures on 12 mm thick Linea™ Weatherboards were carried out by BRANZ, and the results were used in assessing 16 mm thick Linea™ Weatherboard used in Linea™ Weatherboard Cavity Cladding.
- Cone Calorimeter testing to determine the peak rate of heat release and total heat release of Linea™ Weatherboard was completed by BRANZ. The testing was carried out in accordance with AS/NZS 3837.

19.2 Linea™ Weatherboards have been tested by a James Hardie NATA accredited laboratory in accordance with AS/NZS 2908.2. The testing covered: soak-dry, bending strength, warm water soaking, heat/rain, freeze/thaw and apparent density. The test methods and results have been reviewed by BRANZ and found to be satisfactory.

19.3 Testing has been carried out by James Hardie New Zealand Ltd to determine the modulus of rupture and inter-laminar bond strength of carbonated and non-carbonated Linea™ Weatherboard. The test methods and results have been reviewed by BRANZ and found to be satisfactory.

Other Investigations

20.1 Weathertightness, structural, fire and durability opinions have been provided by BRANZ technical experts.

20.2 Site visits have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.

20.3 The manufacturer's Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

21.1 The manufacture of Linea™ Weatherboard has been examined by BRANZ, and details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.

21.2 The quality of materials, components and accessories supplied by James Hardie New Zealand Ltd is the responsibility of James Hardie New Zealand Ltd. The quality control system of James Hardie New Zealand Ltd has been assessed and registered as meeting the requirements of ISO 9001: 2008 by TelarcSAI Limited, Registration Number 409.

21.3 Quality on site is the responsibility of the installer.

21.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of the building underlay, cavity battens, Linea™ Weatherboard and accessories in accordance with the instructions of James Hardie New Zealand Ltd.

21.5 Building owners are responsible for the maintenance of Linea™ Weatherboard Cavity Cladding in accordance with the instructions of James Hardie New Zealand Ltd.

Sources of Information

- AS 3730 Guide to the properties of paints for buildings.
- AS/NZS 1170: 2002 Structural design actions.
- AS/NZS 2908.2: 2000 Cellulose-cement products - Flat sheet.
- AS/NZS 3837: 1998 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter.
- AS/NZS 4534: 1998 Zinc and zinc/aluminium-alloy coatings on steel wire.
- AS/NZS 4680: 2006 Hot-dip galvanized (zinc) coatings on fabricated ferrous articles.
- NZS 3602: 2003 Timber and wood-based products for use in building.
- NZS 3603: 1993 Timber Structures Standard
- NZS 3604: 1999 Timber framed buildings.
- NZS 4211: 2008 Specification for performance of windows.
- Compliance Document for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005.
- New Zealand Building Code Handbook, Department of Building and Housing, Third Edition May 2007.
- The Building Regulations 1992, up to, and including August 2008 amendment.



In the opinion of BRANZ, Linea™ Weatherboard Cavity Cladding 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 James Hardie New Zealand Ltd, 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. James Hardie New Zealand Ltd:
 - 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 James Hardie New Zealand Ltd.
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 James Hardie New Zealand Ltd or any third party.

For BRANZ

P Burghout
Chief Executive

Date of issue: 14 September 2010

Product Warranty

February 2013

James Hardie New Zealand ("James Hardie") warrants for a period of 15 years from the date of purchase that the James Hardie Weatherboards (the "Product"), will be free from defects due to defective factory workmanship or materials and, subject to compliance with the conditions below, will be resistant to cracking, rotting, fire and damage from termite attacks to the extent set out in James Hardie's relevant published literature current at the time of installation. James Hardie warrants for a period of 15 years from the date of purchase that the accessories supplied by James Hardie will be free from defects due to defective factory workmanship or materials.

Nothing in this document shall exclude or modify any legal rights a customer may have under the Consumer Guarantees Act or otherwise which cannot be excluded or modified at law.

CONDITIONS OF WARRANTY:

The warranty is strictly subject to the following conditions:

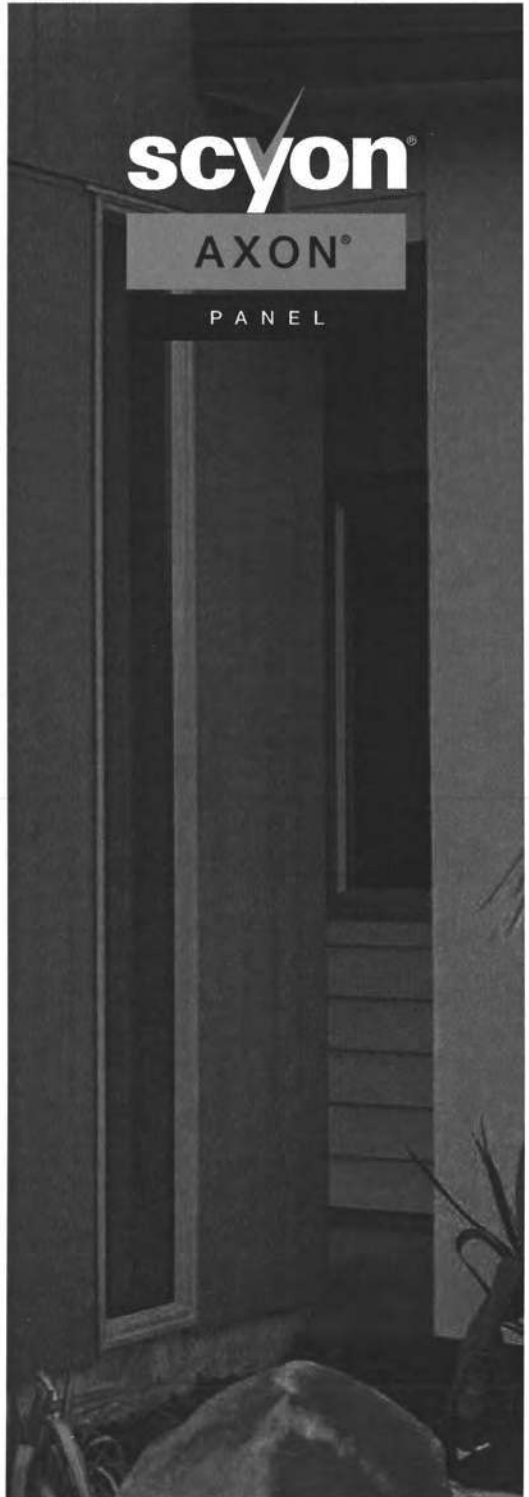
- a) James Hardie will not be liable for breach of warranty unless the claimant provides proof of purchase and makes a written claim either within 30 days after the defect would have become reasonably apparent or, if the defect was reasonably apparent prior to installation, then the claim must be made prior to installation.
- b) This warranty is not transferable.
- c) The Product must be installed and maintained strictly in accordance with the relevant James Hardie literature current at the time of installation and must be installed in conjunction with the components or products specified in the literature. Further, all other products, including coating and jointing systems, applied to or used in conjunction with the Product must be applied or installed and maintained strictly in accordance with the relevant manufacturer's instructions and good trade practice.
- d) The project must be designed and constructed in strict compliance with all relevant provisions of the current New Zealand Building Code ("NZBC"), regulations and standards.
- e) The claimant's sole remedy for breach of warranty is (at James Hardie's option) that James Hardie will either supply replacement product, rectify the affected product or pay for the cost of the replacement or rectification of the affected product.
- f) James Hardie will not be liable for any losses or damages (whether direct or indirect) including property damage or personal injury, consequential loss, economic loss or loss of profits, arising in contract or negligence or howsoever arising. Without limiting the foregoing James Hardie will not be liable for any claims, damages or defects arising from or in any way attributable to poor workmanship, poor design or detailing, settlement or structural movement and/or movement of materials to which the Product is attached, incorrect design of the structure, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, efflorescence or performance of paint/coatings applied to the Product, normal wear and tear, growth of mould, mildew, fungi, bacteria, or any organism on any Product surface or Product (whether on the exposed or unexposed surfaces).
- g) All warranties, conditions, liabilities and obligations other than those specified in this warranty are excluded to the fullest extent allowed by law.
- h) If meeting a claim under this warranty involves re-coating of Products, there may be slight colour differences between the original and replacement Products due to the effects of weathering and variations in materials over time.

Disclaimer: The recommendations in James Hardie's literature are based on good building practice, but are not an exhaustive statement of all relevant information and are subject to conditions (c), (d), (f) and (g) above. James Hardie has tested the performance of James Hardie Weatherboards when installed in accordance with the James Hardie Weatherboards technical specification, in accordance with the standards and verification methods required by the NZBC and those test results demonstrate the product complies with the performance criteria established by the NZBC. However, as the successful performance of the relevant system depends on numerous factors outside the control of James Hardie (e.g. quality of workmanship and design) James Hardie shall not be liable for the recommendations made in its literature and the performance of the relevant system, including its suitability for any purpose or ability to satisfy the relevant provisions of the NZBC, regulations and standards, as it is the responsibility of the building designer to ensure that the details and recommendations provided in the relevant James Hardie installation manual are suitable for the intended project and that specific design is conducted where appropriate.

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AXON®
PANEL

Timber Cavity Batten Technical Specification

Available online only.

JULY 2013 | NEW ZEALAND

 **James Hardie**
a smarter way™

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WE VALUE YOUR FEEDBACK

To continue with the development of our products and systems, we value your input. Please send any suggestions, including your name, contact details, and relevant sketches to:

Ask James Hardie™
 Fax 0800 808 988
literaturefeedback@jameshardie.co.nz

THIS TECHNICAL SPECIFICATION IS FOR
 SCYON® AXON® PANEL FIXED TO
 A TIMBER CAVITY BATTEN.

1 Application and scope

1.1 APPLICATION

Scyon® Axon® Panel is manufactured in New Zealand by James Hardie using advanced proprietary Scyon technology which is a composition of treated cellulose fibre, portland cement, finely ground sand and water. Scyon Axon Panel has vertical grooves along the length of panel. It is classified as light weight wall cladding suitable for residential and light commercial buildings using timber framed buildings.

- Scyon Axon Panel is ideal for achieving feature walls in areas such as gable ends and entrance ways.
- Scyon Axon Panel is primed on the face to take a suitable paint finish in any colour.
- Scyon Axon Panel 133 Smooth - the grooves on the face panel are nominal 10mm wide x 2.25mm deep and spaced at 133mm c/c.
- Scyon Axon Panel 133 Grained - the grooves on the face panel are nominal 10mm wide x 2.25mm deep and spaced at 133mm c/c. Between the grooves is a look of traditional wood-grain texture.
- Scyon Axon Panel 400 Smooth - the grooves on the face panel are nominal 10mm wide x 2.25mm deep and spaced at 400mm c/c.

If you are a specifier

Or other responsible party for a project ensure that the information in this document is appropriate for the application you are planning and that you undertake specific design and detailing for areas which fall outside the scope of these specifications.

If you are an installer

Ensure that you follow the design, moisture management and associated details and material selection provided by the designer. All details provided in this document must be read in conjunction with this specification.

Make sure your information is up to date

When specifying or installing James Hardie products, ensure you have the current manual. If you're not sure you do, or you need more information, visit www.jameshardie.co.nz or Ask James Hardie on 0800 808 868.

1.2 SCOPE

The scope of this specification covers the use of Scyon Axon Panel fixed to timber cavity battens and is limited to buildings which fall within the scope limitations of 'Acceptable Solution E2/AS1 paragraph 1.1' of the New Zealand Building Code (NZBC).

This document is intended for use by architects, designers and specifiers who may be involved with the specification of Scyon Axon Panel.

This manual covers the use of Scyon Axon Panel for cavity construction, used in external walls of timber framed buildings. Refer to E2/AS1 for further information regarding the selection of construction methods to be used for fixing Scyon Axon Panel claddings.

Note: Refer to Scyon Axon Panel CLD Structural Cavity Batten technical specification for direct or when fixing to CLD Structural Cavity Battens.

1.3 DETAILS

Various Scyon Axon Panel fixed to timber cavity batten figures are provided at the rear of this document. All dimensions shown are in millimetres unless noted otherwise. This specification and details in CAD file are also available for download at www.jameshardie.co.nz.

1.4 SPECIFIC DESIGN

For use of Scyon Axon Panel outside the published scope, the architect, designer or engineer must undertake specific design. For advice on designs outside the scope of this specification, Ask James Hardie on 0800 808 868.

2 Design

2.1 COMPLIANCE

Scyon Axon Panel complies with E2 of NZBC as an alternate solution.

Scyon Axon Panel cladding has been tested as per E2/VM1 of NZBC and it passes the test performance requirements. Scyon Axon Panel also complies with 'Structure - B1' and 'Durability - B2' requirements of NZBC.

2.2 RESPONSIBILITY

The specifier or other party responsible for the project must run through a risk matrix analysis to determine which construction method is to be used. The designer must also ensure that the figures published in this specification are appropriate for the intended application and that additional detailing is performed for specific design or any areas that fall outside the scope of this specification. The designers should ensure that the intent of their design meets the requirements of NZBC.

All New Zealand Standards referenced in this manual are current edition and must be complied with.

James Hardie conducts stringent quality checks to ensure that any product manufactured falls within our quality spectrum. It is the responsibility of the builder to ensure that the product meets aesthetic requirements before installation. James Hardie will not be responsible for rectifying obvious aesthetic surface variations following installation.

2.3 SITE AND FOUNDATION

The site on which the building is situated must comply with NZBC Acceptable Solution E1/AS1 'Surface Water'.

Foundations design must comply with the requirements of NZS 3604 'Timber Framed Buildings' or be as per specific engineering design.

The grade of adjacent finished ground must slope away from the building to avoid any possibility of water accumulation in accordance with NZBC requirements.

2.4 CLEARANCES

The bottom edge of claddings must comply with section 9.1.3 of E2/AS1. Also the floor must maintain a minimum clearance to paved or unpaved ground as required by NZS 3604.

Scyon Axon Panel must overhang the bottom plate on a concrete slab by a minimum of 50mm as required by NZS 3604.

Scyon Axon Panel must have a minimum clearance of 100mm paved ground, and 175mm from unpaved ground. On the roofs and decks, the minimum clearance must be 50mm.

Do not install external cladding such that it may remain in contact with water or ground. Refer Figures 3, 17, 29, 31 and 37.

2.5 MOISTURE MANAGEMENT

It is the responsibility of the specifier to identify moisture related risks associated with any particular building design.

Wall construction design must effectively manage moisture, considering both the interior and exterior environments of the building, particularly in buildings that have a higher risk of wind driven rain penetration or that are artificially heated or cooled.

Walls shall include those provisions as required by NZBC Acceptable Solution E2/AS1 'External Moisture'. In addition all wall openings, penetrations, junctions, connections, window sills, heads and jambs must incorporate appropriate flashings for waterproofing. The other materials, components and installation methods used to manage moisture in external walls, must comply with the requirements of relevant standards and NZBC.

2.6 STRUCTURE

2.6.1 Timber Framing

Timber framed buildings must be designed in accordance with NZS 3604 (Timber Framed Buildings). When the framing is provided as per the specific engineering design, the framing stiffness must be equivalent to or more than the stiffness requirements of NZS 3604.

2.6.2 Wind Loading

Scyon Axon Panel is suitable for use in all New Zealand wind zones up to and including EH as defined in NZS 3604.

A specific design is required for all situations where the buildings falls in a specific engineering design (SED) wind zone.

2.7 BRACING

Scyon Axon Panel can be used to achieve structural bracing when fixed with stainless steel HardieFlex nails. Refer to the James Hardie Bracing Design Manual for further information.

2.8 FIRE RATED WALLS

Scyon Axon Panel when fixed to timber cavity battens to external walls can achieve fire ratings up to 60/60/60 to comply with C/AS1 of NZBC when the walls are constructed in accordance with the current James Hardie 'Fire and Acoustic' Design Manual.

Scyon Axon Panel is classified as a 'non-combustible' material suitable for use on walls close to a boundary.

2.9 ENERGY EFFICIENCY

External walls constructed using Scyon Axon Panel, and bulk insulation, where the area of glazing is 30% or less of the total wall area and constructed as per this technical specification complies with the requirements for walls in NZBC Acceptable Solution.

H1/AS1 (NZBC Clause H1 Energy Efficiency), Replacement Table 1. To meet the minimum thermal insulation requirements for the construction, the bulk insulation as specified in Table 1 must be used. This insulation may be substituted with insulation material having higher R-values. The thermal insulation of a wall is affected when the depth of the timber framing is increased or decreased or stud spacing is decreased. The calculation used in Table 1 is based on a timber framing size 90 x 45mm and an internal lining material such as James Hardie Villaboard® Lining or a 10mm plasterboard.

Table 1

Insulation capability		
Climate Zone	Construction R-Value Requirement	Minimum R-Value of Insulation Required
1 and 2	1.9 m ² °C/W	#R2.0
3	2.0 m ² °C/W	#R2.2

Total construction R-Value depends on the insulation material used and the framing ratio. The insulation material R-Values specified in this table are for studs spaced at 600mm c/c and nogs spaced at 800mm c/c.

To achieve higher construction R-Values the wall insulation material must be replaced with an insulation material having higher R-Values to suit the requirements.

For further guidance on insulation requirement refer to current edition of 'House Insulation Guide' published by BRANZ.

3 Framing

3.1 GENERAL

Scyon Axon Panels can be installed to timber-framed or steel-framed structures. Fixing to any other framing material is subject to a specific engineering design.

- Stud spacing must not exceed 600mm c/c.
- Nog/dwang spacing must not exceed 800mm c/c when studs are at 600mm c/c.

3.2 TIMBER FRAMING

3.2.1 Dimensions

A minimum 70mm wide stud is required at panel edges for cavity construction using HardieFlex nails.

3.2.2 Structural Grade

Minimum timber grade requirement is No. 1 framing grade or MSG6 as per NZS 3604. The grading of timber must comply with AS/NZS 1748 and NZS 3631 requirements.

3.2.3 Durability

The external framing must be treated to a minimum H1.2 treatment. Refer to NZBC Acceptable Solution B2/AS1 'Durability' for further information about the durability requirements.

For timber treatment and allowable moisture content information refer to NZS 3602 (Timber and Wood-Based Products for use in Buildings) and NZS 3640 (Chemical Preservation of Round Sawn Timber) for minimum timber treatment selection and treatment requirements.

Also refer to framing manufacturer's literature for further guidance on timber selection. Framing must be protected from moisture at site in accordance with the recommendation of framing manufacturers.

Note: Refer to NZS 3602 for the allowable moisture contents in timber.

3.2.4 Frame Construction

The framing must fully support all panel edges. The framing must be rigid and not rely on the cladding panel for stability.

All timber framing sizes and set-out must comply with NZS 3604 and as specified in this specification.

Note: It is recommended that the CLD Structural Cavity Battens be installed prior to plumbing, electrical and other services within the frame. This will prevent these services from being damaged by fasteners used to install the battens.

3.3 STEEL FRAMING

3.3.1 Dimensions and Gauge

A 38mm minimum stud width is required. Framing members must be 0.55mm minimum to 1.6mm maximum BMT (Base Metal Thickness).

3.3.2 Durability

The steel framing must have the appropriate level of coating to prevent corrosion and to comply with the durability requirements of NZBC.

3.3.3 Frame Construction

Steel framing must comply either with NZS 3404 or with the specific engineering design for the project. Stud and batten spacing must not be more than what has been specified in this specification. Refer to framing manufacturer's specifications and also to NASH 3405 (a standard developed by NASH-National Association of Steel Framed Housing Inc.) for further guidance on steel frame.

3.4.CAVITY CONSTRUCTION METHOD

For cavity construction method the following framing is required:

- when studs are spaced at 600mm centres maximum, the nogs/dwangs must be provided at 800mm centres maximum.

- a minimum 70mm wide stud is required at vertical panel joint when fixing with HardieFlex 60 x 3.15mm nails.
- when studs are spaced at 400mm centres then the nogs/dwangs may be provided at 1200mm centres.
- an extra stud is required in internal corners. Refer to Figure 7

3.5 SPECIAL FRAMING REQUIREMENTS

The following are special framing requirements for both timber and steel framing:

- Double studs are required at internal corners, refer to Figure 12.

3.6 TOLERANCES

In order to achieve an acceptable wall finish, it is imperative that framing is straight and true.

Framing tolerances must comply with the requirements of NZS 3604. All framing shall be made flush.

4 Preparation

4.1 BUILDING UNDERLAY OR HOMERAB PRECLAD LINING

Building underlay must be provided as per the requirements of NZBC Acceptable Solution E2/AS1 'External Moisture' Table 23. The building underlay must be fixed in accordance with E2/AS1 and the underlay manufacturer's recommendations. Walls which are not lined on the inside face e.g. garage walls or gable ends must include a rigid sheathing or an air barrier behind the cladding which complies with the requirements of NZBC Acceptable Solution E2/AS1 Table 23. HomeRAB PreClad Lining is suitable for use in these applications. It must be installed in accordance with James Hardie Rigid Air Barriers installation manual.

4.2 RIGID AIR BARRIER

For specific engineering design (SED) projects where the design wind pressures are between 1.5kPa (uls) and 2.5kPa (uls), RAB Board (6mm) must be used. Refer to James Hardie Rigid Air Barriers installation manual for information regarding its installation.

When using RAB Board the length of nail must be increased by 5mm minimum.

4.3 VENT STRIP

The James Hardie uPVC cavity vent strip must be installed at the bottom of all walls constructed using the drained and ventilated cavity construction method. It is important that the openings in the vent strip are kept clear and unobstructed to allow free drainage and ventilation of cavities. James Hardie uPVC vent strip has an opening area of 1000mm²/m length.

4.4 CAVITY BATTENS

Buildings with a risk score of 7-20 calculated in accordance with Table 3 of Acceptable Solution E2/AS1 of NZBC, require Scyon Axon Panel to be installed on a cavity. The battens provide airspace between the frame and the panel and are considered a "packer" only in this specification.

The timber cavity battens must be minimum H3.1 treated in accordance with NZS 3640 (Chemical preservation of rough and sawn timber) to comply with the durability requirements of B2/AS1.

Cavity battens must comply with E2/AS1 and:

- be minimum 18mm thick
- be as wide as the width of studs
- be provided at 300mm c/c where studs are fixed at 600mm c/c.
- be fixed by the cladding fixings to the main framing over the building underlay. Therefore until claddings are fixed the battens only need to be fixed to framing by 40 x 2.8mm nails at 800mm c/c.

4.5 INTERMEDIATE SUPPORT

Where studs are at 600mm centres an intermediate means of restraining the building underlay and insulation from bulging into the cavity shall be installed. An acceptable method to achieve this is using one of the following options:

- intermediate cavity batten between the studs
- 75mm galvanized mesh
- polypropylene tape at 300mm centres fixed horizontally and drawn taut

No intermediate supports are required:

- when studs are spaced at 400mm centres
- when rigid air barriers instead of building underlays are used.

4.6 FLASHINGS

All wall openings, penetrations, intersections, connections, window sills, heads and jambs must be flashed prior to panel installation. Please refer to moisture management requirements in Clause 2.5.

The building underlays must be appropriately incorporated with penetration and junction flashings. Materials must be lapped in such a way that water tracks down to the exterior on the face of building underlay. James Hardie will assume no responsibility for water infiltration within the wall due to poor flashings or building underlays.

The selected flashing materials must comply with the durability requirements of NZBC. For information refer to Table 20 of E2/AS1.

5 Panel Fixing

5.1 GENERAL

Scyon Axon Panel must be kept dry and under cover whilst in storage or prior to/during the installation. Every endeavour must be made to keep framing dry once panel fixing commences. All site cut panel edges must be sealed prior to installation.

The shiplap jointing of panels is only suitable for vertical fixing of panels. Do not fix in the groove of Scyon Axon Panel.

This specifications covers the fixing of Scyon Axon Panel to

timber cavity battens fixed over timber frame. When fixing to steel frame, Ask James Hardie 0800 808 868.

5.2 FASTENER DURABILITY

Fasteners must meet the minimum durability requirements of the NZBC. NZS 3604 specifies the requirements for fixing material to be used in relation to exposure conditions and are summarised in Table 2.

Table 2

Exposure conditions and nail selection prescribed by NZS 3604		
NAIL MATERIAL		
Zone D	Zone C outside sea spray zone and Zone B and geothermal hot spots	Bracing - all zones
Grade 316 Stainless	Hot-dipped galvanised or 316 Stainless	Grade 316 Stainless

*(Zone C areas where local knowledge dictates that increased durability is required, appropriate selection shall be made). Microclimate conditions as detailed in NZS 3604, Paragraph 4.2.4 require SED.

Also refer to the NZBC Acceptable Solution E2/AS1' Table 20 and 21 for information regarding the selection of suitable fixing materials and their compatibility with other materials.

5.3 FASTENER – SIZE AND LAYOUT

Scyon Axon Panel must be fixed to framing using the fixings as specified in Table 3 below and follow the edge distance required for nails as shown in the details. Fixings must be finished flush with the panel surface. Refer to Figure 5.

When using rigid air barrier like HomeRAB PreClad Lining or RAB Board, the cladding fixing nails must be increased in length equal to the thickness of the rigid air barrier.

Table 3

Panel fixing	
cavity construction	
60 x 3.15mm HardieFlex nails.	Fix @ 200mm centres to all framing. Stud width 70mm min required at vertical joint.

For other fixing options Ask James Hardie on 0800 808 868.

Note: Special fixing arrangements are required for bracing and fire-resistance rated wall systems. For more information Ask James Hardie on 0800 808 868.

- When fixing the panels using nail guns, refer to the nail gun manufacturer for information about nails and the type of nail gun to be used.

Note: Do not use 'D' head nails.

5.4 PANEL LAYOUT

All panel edges must be supported by the framing. The shiplap joint must be formed vertically. The framing centres must be checked before the panel installation. Refer to Figure 3.

6 Jointing

6.1 GENERAL

Scyon Axon Panels are fixed to form a shiplap joint at vertical edges. The panels have factory made edges to suit this jointing.

6.2 VERTICAL JOINT

Scyon Axon Panels are shiplap jointed keeping a gap of 1-2mm between the panels. A 50mm wide Inseal sealing tape is used under the joint. A flexible sealant must be applied to the full length of the joint before the panels are jointed. The edge distance for a HardieFlex nail must be 18mm min. Refer to Figure 5.

6.3 HORIZONTAL JOINT

At floor joist levels a horizontal joint must be provided to accommodate the movement resulting from timber joist shrinkage and settlement. A James Hardie aluminium horizontal 'h' mould is used to form a horizontal joint. Use the aluminium 'h' mould jointer to cover over the butt joint of flashings. A purpose made metal 'Z' flashing or a James Hardie uPVC flashing could also be used to flash the horizontal joint. Refer to Figure 12.

6.4 EXTERNAL CORNER

An aluminium box corner flashing is used to form the external box corner. The site cut sheet edges are sealed before butting them into the box corner.

Do not run the box corner flashing continuously over the floor joist. On a two storey construction the aluminium box corner is finished under the aluminium 'h' mould. A uPVC corner under flashing must be used under the box corner when in this situation. Refer to Figures 8 and 27.

6.5 INTERNAL CORNER

The internal corner is formed using the uPVC corner under flashing or an 80mm wide Inseal sealing strip behind the panel edges. The joint is filled with the flexible sealant. Refer to Figure 7.

6.6 FLASHING MATERIAL DURABILITY

Please refer to Table 20 of E2/AS1 of the NZBC regarding the durability requirements of various flashing materials.

7 Finishing

7.1 PREPARATION

Painting of Scyon Axon Panel is required to meet the durability requirements of the NZBC and James Hardie product warranties.

Scyon Axon Panel must be dry and free from dirt before painting.

When using uPVC flashings, dark colours should be avoided as it will affect the durability of uPVC flashing. The LRV of paint must be above 40% when using uPVC flashings.

Dark paints can be used when using the aluminium flashings.

7.2 SEALANTS

All sealants used must comply with the relevant requirements of NZBC. Application and use of sealants must comply with manufacturer's instructions. Check with sealant manufacturer prior to coating over sealants. Some sealant manufacturers do not recommend coating over their product.

7.3 COATING

Scyon Axon Panels are supplied pre-primed. Panels must be painted within 90 days of installation. Use only quality exterior paints complying with AS 3730. Manufacturer's specification for the selected paint must be followed. Note that certain special paints require an undercoat before applying the finish coat. Refer to the paint manufacturer for preparation required before commencing the coating work. Scyon Axon Panel can be painted with dark colour paints. When using uPVC flashings, the LRV of colour should be 40% or higher.

8 Storage and handling

Scyon Axon Panel must be laid flat on a smooth level surface. Edges and corners must be protected from chipping.

To ensure optimum performance, store panels under cover and keep dry prior to fixing. If the panels become wet, allow them to dry thoroughly before fixing.

Do not carry panels on the flat, carry in the vertical position to avoid excessive bending.

9 Maintenance

The extent and nature of maintenance will depend on the geographical location and exposure of the building. As a guide, it is recommended that basic normal maintenance tasks shall include but not be limited to:

- Washing down exterior surfaces every 6-12 months*
- Re-applying of exterior protective finishes if necessary*
- Maintaining the exterior envelope and connections including joints, penetrations, flashings and sealants that may provide a means of moisture entry beyond the exterior cladding
- Cleaning out gutters, blocked pipes and overflows as required
- Pruning back vegetation that is close to or touching the building.
- The clearance between the bottom edge of Scyon Axon Panel and the finished ground must always be maintained.

**Do not use a water blaster to wash down the cladding.*

***Refer to your paint manufacturer for washing down and recoating requirements related to paint performance.*

10 Product information

10.1 MANUFACTURING AND CLASSIFICATION

Scyon Axon Panel is a cellulose fibre reinforced cement building product. The basic composition is portland cement, ground sand, cellulose fibre and water. The panels are easily identified by the name 'Scyon Axon Panel' printed at regular intervals on the back face of panel.

Scyon Axon Panel is manufactured to AS/NZS 2908.2 'Cellulose-Cement Products Part 2: Flat Sheets' (ISO 8336 'Fibre Cement Flat Panels') standards in New Zealand. James Hardie New Zealand is an ISO 9001 'Telarc' certified manufacturer.

Scyon Axon Panel is classified Type A, Category 2 in accordance with AS/NZS 2908.2 "Cellulose-Cement Products".

For Safety Data Sheets (SDS) visit www.jameshardie.co.nz or Ask James Hardie on 0800 808 868.

10.2 PRODUCT MASS

Scyon Axon Panel is manufactured in 9.0 mm thickness and has a mass of 12.1kg/m² at EMC.

Scyon Axon Panel cladding is defined as a Light Weight Wall Cladding (not exceeding 30kg/m²) as per NZS 3604.

10.3 DURABILITY

Scyon Axon Panel installed as per this technical specification will meet the durability requirements for claddings as required under clause 'B2-Durability' of NZBC.

Scyon Axon Panel has demonstrated resistance to permanent

moisture induced deterioration (rotting) and has passed the following tests in accordance with AS/NZS 2908.2:

- Water Permeability (Clause 8.2.2)
- Warm Water (Clause 8.2.4)
- Heat Rain (Clause 6.5)
- Soak Dry (Clause 8.2.5)

10.4 RESISTANCE TO FIRE

Scyon Axon Panel is classified as 'Non-Combustible Material' which is suitable for use as external wall cladding and complies with the provisions of Clause C3 of 'Protection From Fire' compliance document of NZBC.

10.5 ALPINE REGIONS

In regions subject to freeze/thaw conditions, Scyon Axon Panel must not be in direct contact with snow or ice build up for extended periods, e.g. external walls in alpine regions subject to snow drifts over winter.

11 Safe working practices

WARNING — DO NOT BREATHE DUST AND CUT ONLY IN WELL VENTILATED AREA

James Hardie products contain respirable crystalline silica which is considered by relevant government authorities to be a cause of cancer from some occupational sources. Breathing excessive amounts of respirable silica dust can also cause a disabling and potentially fatal lung disease called silicosis, and has been linked with other diseases. Some studies suggest smoking may increase these risks. During installation or handling: (1) work in outdoor areas with ample ventilation; (2) minimise dust when cutting by using either 'Score and Snap' knife, fibre cement shears or, where not feasible, use a HardieBlade™ Saw Blade and dust-reducing circular saw attached to a HEPA vacuum; (3) warn others in the immediate area to avoid breathing dust; (4) wear a properly-fitted, approved dust mask or respirator (e.g. P1 or P2) in accordance with applicable government regulations and manufacturer's instructions to further limit respirable silica exposures. During clean-up, use HEPA vacuums or wet cleanup methods - never dry sweep. For further information, refer to our installation instructions and Safety Data Sheets available at www.jameshardie.co.nz

FAILURE TO ADHERE TO OUR WARNINGS, SAFETY DATA SHEETS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

James Hardie recommended safe working practices

CUTTING OUTDOORS

1. Position cutting station so that wind will blow dust away from user or others in working area.
2. Use a dust reducing circular saw equipped with HardieBlade™ Saw Blade and HEPA vacuum extraction.

Drilling/other machining

When drilling or machining you should always wear a P1 or P2 dust mask and warn others in the immediate area.

IMPORTANT NOTES

1. NEVER use a power saw indoors
2. NEVER use a circular saw blade that does not carry the HardieBlade™ logo
3. NEVER dry sweep — Use wet suppression or HEPA Vacuum
4. NEVER use grinders
5. ALWAYS follow tool manufacturer's safety recommendations

P1 or P2 respirators can be used in conjunction with above cutting practices to further reduce dust exposures. Additional exposure information is available at www.jameshardie.co.nz to help you determine the most appropriate cutting method for your job requirements. If concern still exists about exposure levels or you do not comply with the above practices, you should always consult a qualified industrial hygienist or contact James Hardie for further information.

Working Instructions

Refer to recommended Safe Working Practices before starting any cutting or machining of product.



HardieBlade™ Saw Blade

The HardieBlade™ Saw Blade used with a dust-reducing saw connected to a HEPA vacuum is ideal for fast, clean cutting of James Hardie fibre cement products. A dust-reducing saw uses a dust deflector or a dust collector connected to a vacuum system. When sawing, clamp a straight-edge to the sheet as a guide and run the saw base plate along the straight edge when making the cut.

Hole-Forming

For smooth clean cut circular holes:

Mark the centre of the hole on the sheet. Pre-drill a 'pilot' hole.

Using the pilot hole as a guide, cut the hole to the appropriate diameter with a hole saw fitted to a heavy duty electric drill.



For irregular holes:

Small rectangular or circular holes can be cut by drilling a series of small holes around the perimeter of the hole then tapping out the waste piece from the sheet face.

Tap carefully to avoid damage to sheets, ensuring that the sheet edges are properly supported.

Storage And Handling




All James Hardie building products should be stored to avoid damage, with edges and corners of the sheets protected from chipping.

James Hardie building products must be installed in a dry state and be protected from rain during transport and storage. The product must be laid flat under cover on a smooth level surface clear of the ground to avoid exposure to water or moisture, etc.








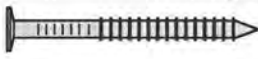

Quality

James Hardie conducts stringent quality checks to ensure that any product manufactured falls within our quality spectrum. It is the responsibility of the builder to ensure that the product meets aesthetic requirements before installation. James Hardie will not be responsible for rectifying obvious aesthetic surface variations following installation.

12 Accessories

Scyon Axon Panel information					
Product	Description	Thickness	Size		Product Code
			Length	Width	
	Scyon Axon Panel 133 Smooth Is a shiplap jointed panel to hide the panel joints. The panel is face primed. The panel has grooves at 133mm centres. The panel must be installed vertically. Nom. Panel Mass: 12.1kg/m ²	9	2450	1200	403780
			2750	1200	403781
			3000	1200	403782
	Scyon Axon Panel 133 Grained Is a shiplap jointed panel to hide the panel joints. The panel is face primed. The panel has grooves at 133mm centres. The panel must be installed vertically. Nom. Panel Mass: 12.1kg/m ²	9	2450	1200	404510
			2750	1200	404511
			3000	1200	404512
	Scyon Axon Panel 400 Smooth Is a shiplap jointed panel to hide the panel joints. The panel is face primed. The panel has grooves at 400mm centres. The panel must be installed vertically. Nom. Panel Mass: 12.1kg/m ²	9	2450	1200	404414
			2750	1200	404415
			3000	1200	404416






Note: The actual width of the panel is 1203mm. All dimensions and masses provided are approximate only and subject to manufacturing tolerances.

Accessories/tools supplied by James Hardie		
Accessories	Description and Material Code	Quantity/Size (approx)
	Aluminium External Box Corner A box corner mould to form the external joints. 9mm etch prime. CODE: 304509 CODE: 304510 CODE: 305150	2450mm long 2750mm long 3000mm long
	Aluminium Horizontal 'h' Mould A horizontal flashing to flash the horizontal joints. 9mm etch prime. CODE: 304508	3000mm long
	Aluminium 'h' Mould Jointer A jointer to cover the butt joint of 'h' mould. CODE: 304512	100mm long
	uPVC Corner Under Flashing A 50 x 50mm corner under flashing for internal and external joints CODE: 303745	3000mm long
	uPVC Vent Strip Used to provide protection from vermin entering cavity space. CODE: 302490	3000mm long
	INSEAL® 3259 Tape Black 50mm tape to be used under the vertical shiplap joint. CODE: 300767 Black 80mm tape to be used at corners. CODE: 300769	50m roll
Tools		
	HardieBlade™ Saw Blade Diamond tip 184mm diameter fibre cement circular saw blade. Spacers not included. CODE: 300660	Each
	HardieFlex™ Stainless Steel 316 Nails For fixing panels through cavity battens. 60 x 3.15mm CODE: 302782	Jar
	HardieFlex™ Hot Dip Galv. Nails For fixing panels through cavity battens. 60 x 3.15mm CODE: 302784	Jar

Note: upvc 'h' mould and jointer accessories are also available from James Hardie.

Accessories/tools not supplied by James Hardie

James Hardie recommends the following products for use in conjunction with Scyon Axon Panel. James Hardie does not supply these products and does not provide a warranty for their use. Please contact component manufacturer for information on their warranties and further information on their products.

Accessories	Description
	<p>Building underlay To comply with Table 23 of E2/AS1.</p>
	<p>Flexible tape A flexible self-adhesive tape used in preparation of a window. Refer to the Window installation section in this manual for more information. e.g. Tyvek®, Protecto or Thermakraft or similar.</p>
	<p>Joint sealant Paintable flexible sealants are recommended for filling the joints. Refer to Section 7,2 for information.</p>
	<p>Head flashing Required over window heads to be supplied by window installer. Material must comply with Table 20 and 21 of E2/AS1.</p>
	<p>Timber cavity batten H3.1 minimum treated</p>

13 Details

The following generic details have been provided in this document for cavity construction methods.

Table 4

Panel fixing		
Description	Cavity Construction	
	Figure No.	Page No.
Typical Framing Setout	Figure 1	13
Batten Fixing	Figure 2	14
Typical Panel Fixing Setout	Figure 3	15
Foundation Detail	Figure 4	16
Shiplap Joint	Figure 5	16
Soffit Detail	Figure 6	17
Internal Corner Detail	Figure 7	17
External Corner Detail	Figure 8	18
Window Head	Figure 9	18
Section at Sill	Figure 10	19
Window Jamb	Figure 11	19
Horizontal Joint Detail	Figure 12	20
Parapet Flashing	Figure 13	21
Enclosed Deck Balustrade to Wall Junction	Figure 14	21
Enclosed Balustrade to Wall	Figure 15	22
Enclosed Deck	Figure 16	23
Deck Junction	Figure 17	23
Cavity One Piece Apron Flashing Joint	Figure 18	24
Pipe Penetration	Figure 19	25
Meter Box at Head	Figure 20	25
Meter Box at Sill	Figure 21	26
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Cavity Interstorey Drainage	Figure 23	27
Roof to Wall Junction Detail	Figure 24	28
Alternative Head Flashing Termination Against Batten	Figure 25	29
Aluminium 'h' Mould Jointer	Figure 26	30
Corner at 'h' Mould Joint Detail	Figure 27	31

Figure 1: Cavity fixed typical framing setout

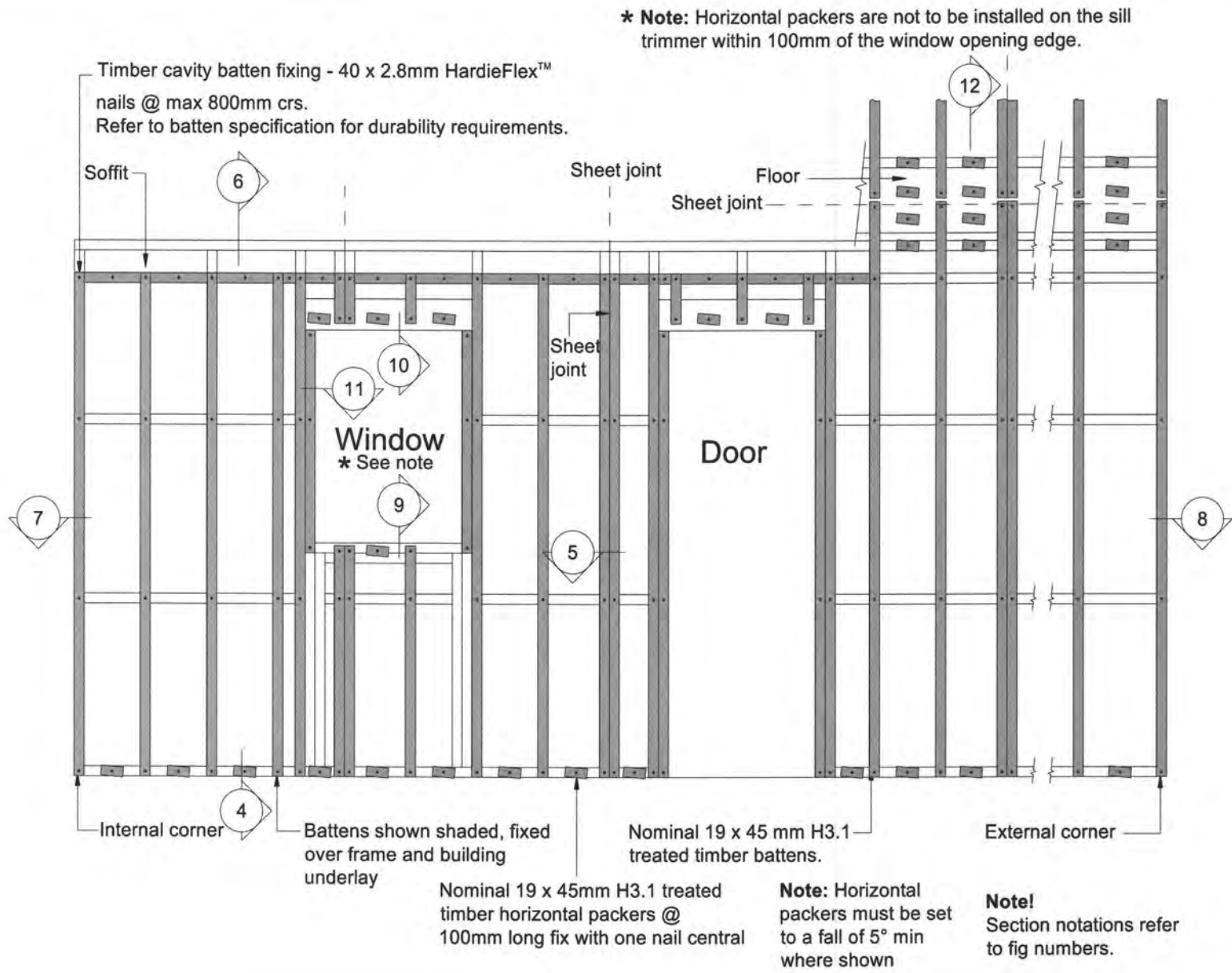
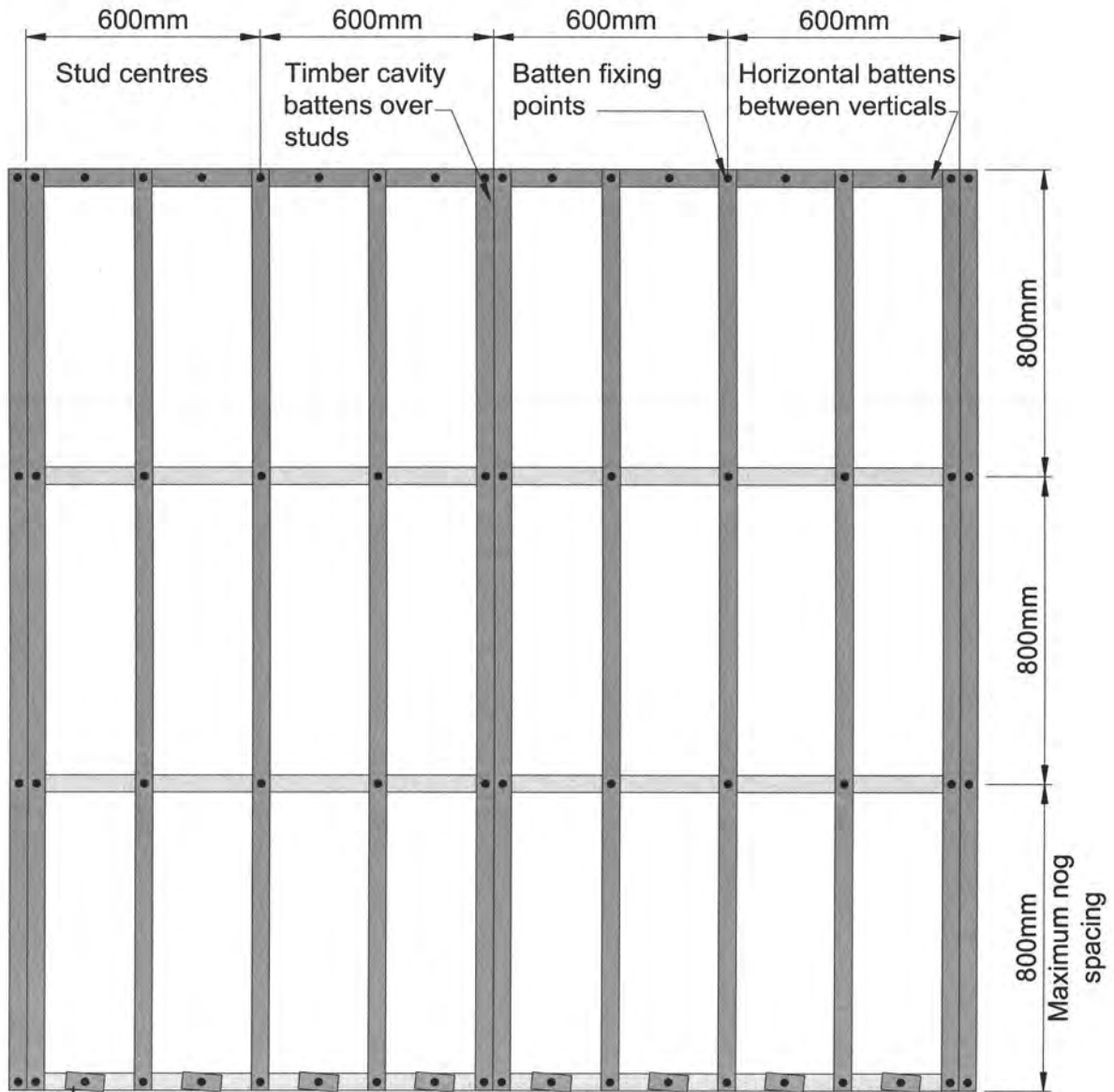


Figure 2: Cavity batten fixing



100mm long horizontal packers bottom of sheet.

Intermediate timber batten or nylon strapping stapled to nogs

Note: No horizontal cavity packers required at nogs

Note: Horizontal packers must be set to a fall of 5° min where shown

Check Figure 5 for framing and batten requirements for vertical joint

Figure 3: Cavity fixed typical panel fixing setout

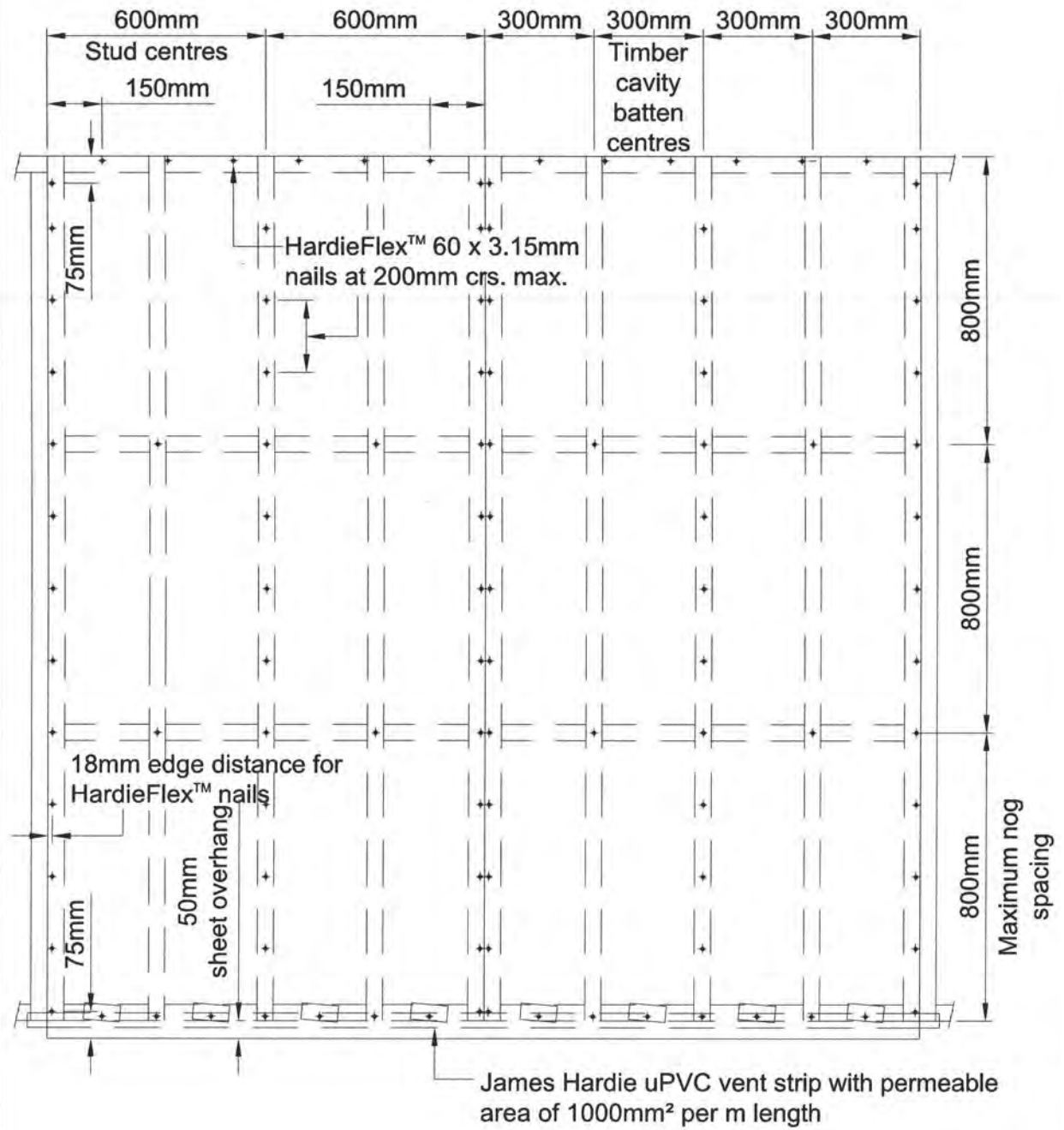


Figure 4: Cavity fixed foundation detail

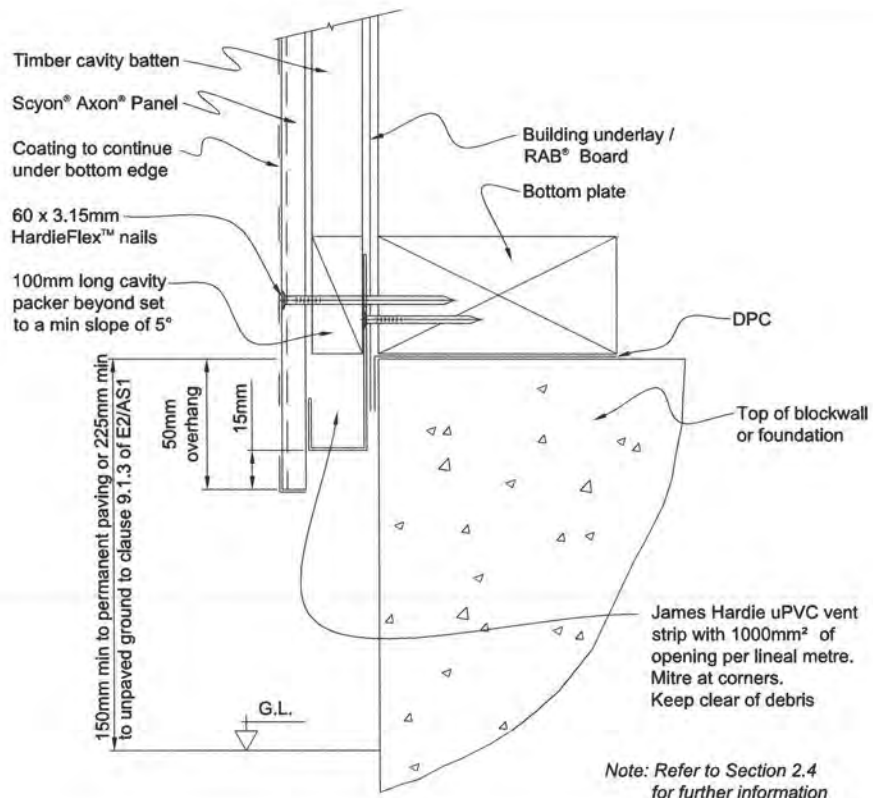


Figure 5: Cavity shiplap joint

