

move.

council records

**122 pohutukawa place
waiwhakaiho**

Statement of Passing Over:

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- Natural Source
- Treatment Plant
- Pumpstation
- Storage Unit
- Hydrant
- Manhole
- Alert Valve
- Air Valve
- Non-Return Valve
- Standard Valve
- Manifold Valve
- Backflow
- Meter
- Restricted Flow
- Wellup
- Inlet
- Outlet
- Soakhole
- End Point
- Node
- Misc Point
- Trunk
- Rise
- Main
- Lateral
- Open Drain
- Stream
- Overland Flow Path
- Misc Polygon
- Proposed Bund and Ponding Areas
- Storm Water Mgmt Plan

Yellow = Privately Owned

Grey = Out of Service/Closed

Stormwater

Water Supply

Waste Water



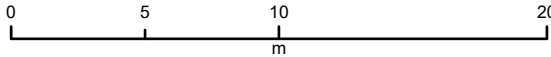
Te Kaunihera-ā-Rohe o Ngāmotu
**New Plymouth
District Council**

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HORIZONTAL DATUM
New Zealand Geodetic Datum 2000

MAP PROJECTION
New Zealand Transverse Mercator



MILES Print Map

Date: 20/11/2025



1:282

BUILDING CONSENT

118509P

PROPERTY ID

112870

118509P



Te Kaunihera-ā-Rohe o Ngāmotu
**NEW PLYMOUTH
DISTRICT COUNCIL**
newplymouthnz.com

RN 10069

New Plymouth District Council
Private Bag 2025
New Plymouth 4342
Phone 06 759 6060
BuildingAdministration@npdc.govt.nz

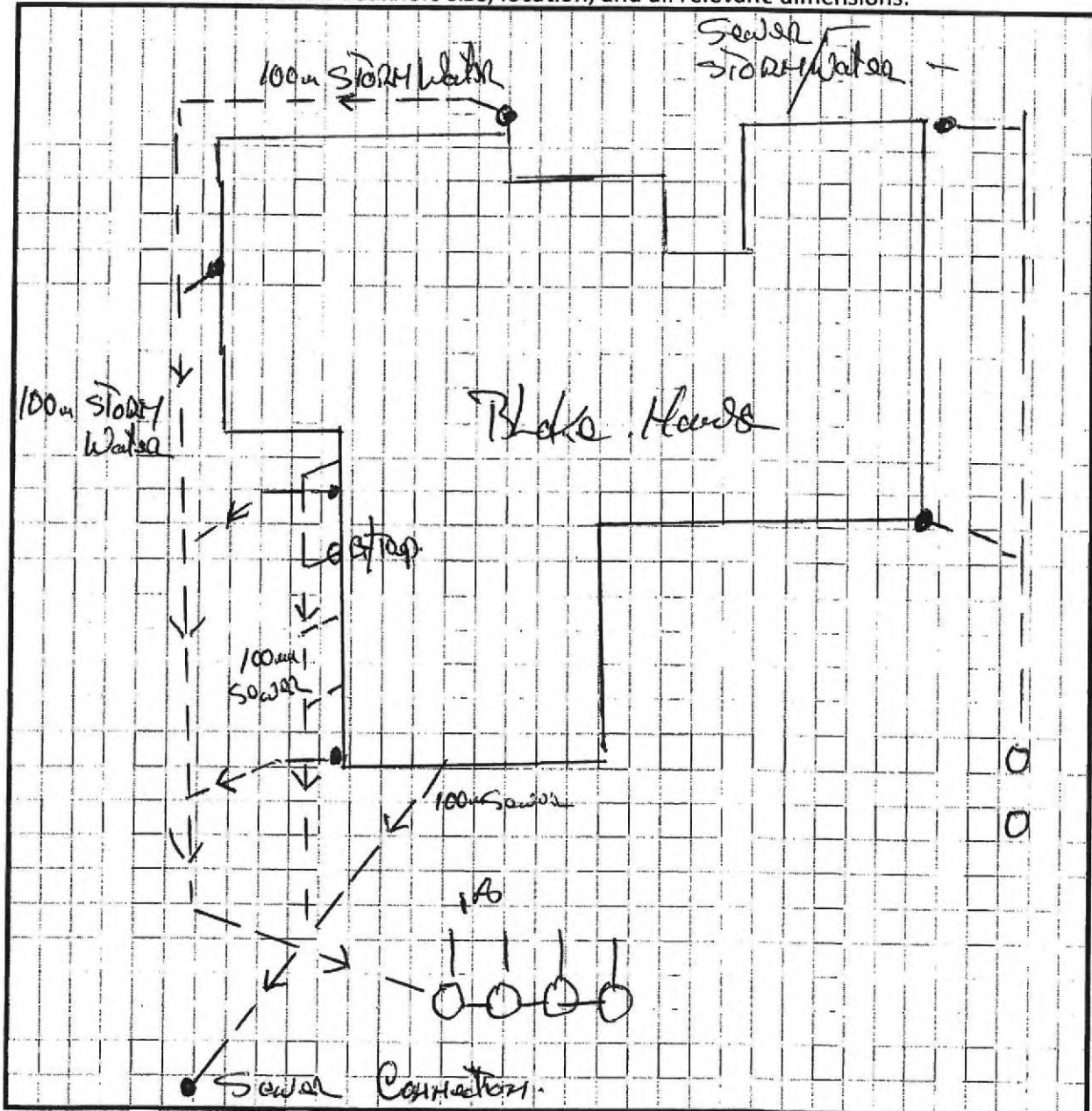
Blake Jar

AS-BUILT STORMWATER DRAINAGE PLAN TAR 148A

Building Consent: BC 15/18509 Address: Pohutukawa Place RD.

Person Responsible: Tony Walker Date: 10/11/15

Note: Show Soakhole size, location, and all relevant dimensions.



Specify system used:

- ☐ Conventional unlined Soakholes
- ☐ Lined Soakholes
- ☐ Reticulated System

Dia:

Liner type & size:

Depth:

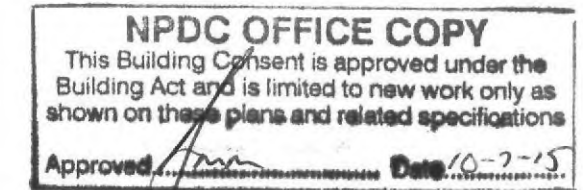
Depth:

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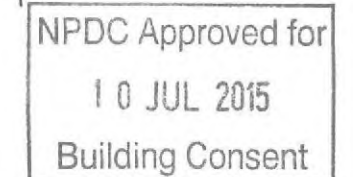
DM6567810, v1

SHEET INDEX

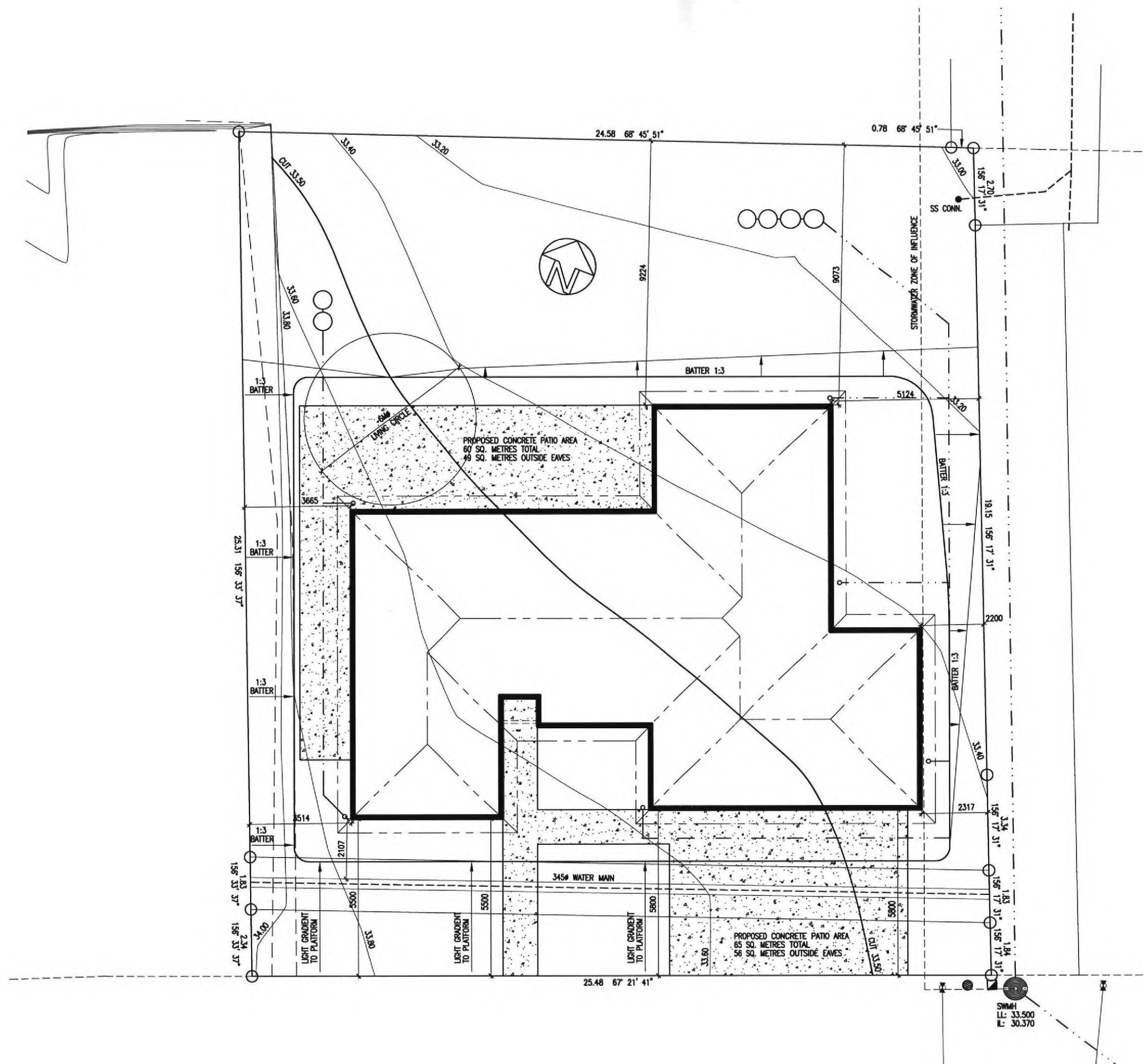
SHEET 1	- SITE PLAN
SHEET 2	- DRAINAGE PLAN
SHEET 3	- FLOOR PLAN
SHEET 4	- ELEVATIONS
SHEET 5	- ELEVATIONS
SHEET 6	- FOUNDATION
SHEET 7	- ROOF PLAN
SHEET 8	- KKBS ROOF PLAN
SHEET 9	- BRACING PLAN
SHEET 10	- TOP PLATES
SHEET 11	- ELECTRICAL
SHEET 12	- BLANK ELECTRICAL
SHEET 13	- SECTIONS
SHEET 14	- GENERAL DETAILS
SHEET 15	- ROOF DETAILS - INSULATION SCHEDULE
SHEET 16	- WINDOW DETAILS
SHEET 17	- BRACE DETAILS
SHEET 18	- GARAGE DOOR DETAILS
SHEET 19	- FLOOR COVERINGS
SHEET 20	- GENERAL DETAILS
SHEET 21	- WET AREA DETAILS



BC 15 / 118509



TAR148A
C & J BLAKE
LOT 14 DP 485464
POHUTUKAWA PLACE
BELL BLOCK



NPDC Approved for
10 JUL 2015
Building Consent

- ACCESS PATHS-PATIOS (D1/AS1)**
- WHERE THE SURFACE IS SUBJECT TO WETTING THE SURFACE SHALL HAVE CROSSFALL OF MIN 1:100. THE MAX CROSSFALL SHALL BE 1:50
 - PREFERRED SLOPE OF RAMPS/PATIOS SHALL BE BETWEEN 0-7° (123MM PER METRE) WITH A MAX OF 18° (325MM PER METRE)
 - COEFFICIENT OF SLIP SHALL BE 0.55-0.90 FOR WETTED SURFACES
IE BROOMED CONCRETE CLASS 5 OR 6 OR COATED AND SAND GRIT IMPREGNATED

PROPOSED RESIDENCE	
PLATFORM	33.500
FLOOR	33.805
FLOOR AREA	200.40 SQ M
FLOOR INCL ALL ROOF COVERED OUTDOOR AREAS	201.60 SQ M
SITE AREA	740.00 SQ M
% COVERAGE (FLOOR)	27.08%
% COVERAGE (COVERED)	27.34%

SOIL MOVEMENT	
CUT VOLUME:	38.40 M ³ APPROX
FILL VOLUME:	27.75 M ³ APPROX
EXCAVATION LEVEL MAY VARY ON SITE DUE TO TOPSOIL DEPTHS AND SITE CONDITIONS	
EXCESS VOLUME TO BE SPREAD OVER SECTION	
PILES MAY BE REQUIRED WHERE COMPACTING DOES NOT MEET ENGINEERING REQUIREMENTS	



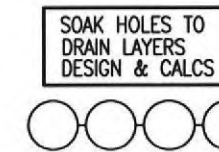
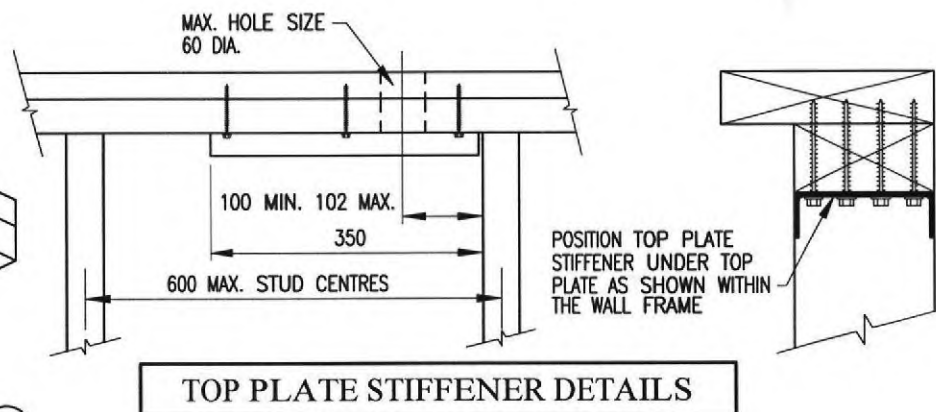
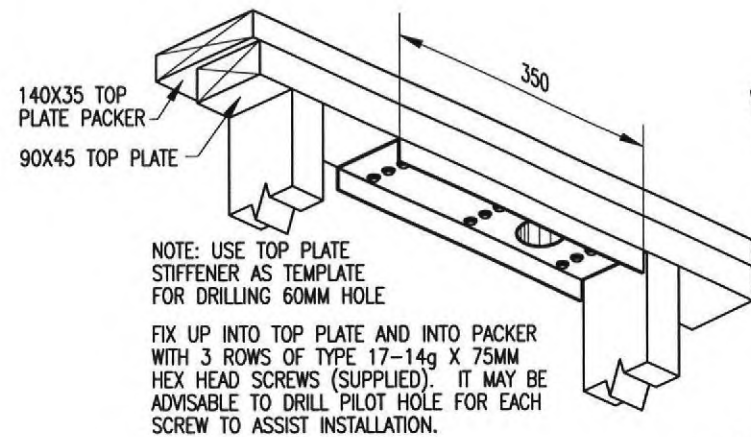
GALWAY ALTERED
NOTES

- 100MM PIPES FROM WATER CLOSETS ALL OTHER FOULWATER PIPEWORK TO BE 100MM UNLESS INDICATED OTHERWISE.
- 74MM DOWNPIPES THROUGHOUT. 110MM UPVC STORMWATER 1:120 GRADIENT TO AS/NZS 1260

LEGAL DESCRIPTION	
LOT NO	14
DP	XXX
AREA	740 SQ. METRES
STREET NO	XXX

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SALES LEAH	
DRAWN J.C.	DATE 25/05/2015
REVISED	
REVISED	
TAR148A	SITE PLAN
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE 1:100 ON A2	SHEET 1



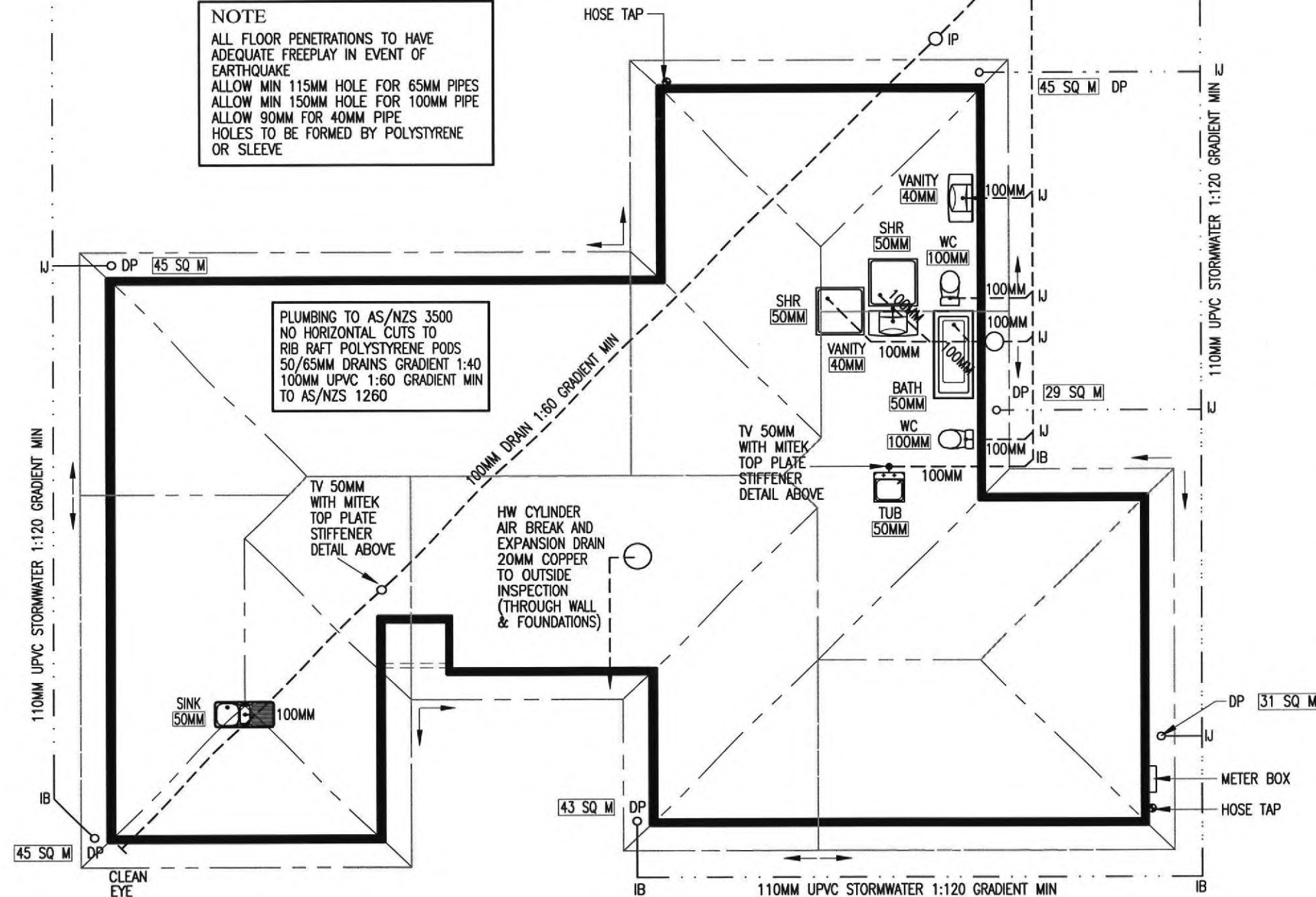
NPDC Approved for
10 JUL 2015
Building Consent

SOAK HOLES TO
DRAIN LAYERS
DESIGN & CALCS

NOTE
ALL FLOOR PENETRATIONS TO HAVE
ADEQUATE FREEPLAY IN EVENT OF
EARTHQUAKE
ALLOW MIN 115MM HOLE FOR 65MM PIPES
ALLOW MIN 150MM HOLE FOR 100MM PIPE
ALLOW 90MM FOR 40MM PIPE
HOLES TO BE FORMED BY POLYSTYRENE
OR SLEEVE

PLUMBING TO AS/NZS 3500
NO HORIZONTAL CUTS TO
RIB RAFT POLYSTYRENE PODS
50/65MM DRAINS GRADIENT 1:40
100MM UPVC 1:60 GRADIENT MIN
TO AS/NZS 1260

**DRAINAGE
LEGEND**
50MM WASTE SIZES
SHOWN
INFLOOR DRAINS
ARE 100 MM
AS NOTED
EXCEPT DIRECT
TO ORG



ROOF GUTTER CALCS
SPOUTING CROSS-SECTION 5550 SQ MM
RAINFALL INTENSITY 100MM / HOUR
AS PER FIGURE 15 E1/AS1
1 DOWNPIPE PER 45 SQ METRES OF ROOF
DOWNPIPE SIZE 74MM UP TO 85 SQ M
REFER TABLE 5 E1/AS1

GALWAY ALTERED	
NOTES	
1. 100MM PIPES FROM WATER CLOSETS ALL OTHER FOULWATER PIPEWORK TO BE 100MM UNLESS INDICATED OTHERWISE. 2. 74MM DOWNPIPES THROUGHOUT. 110MM UPVC STORMWATER 1:120 GRADIENT TO AS/NZS 1260	
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SALES LEAH	
DRAWN J.C.	DATE 25/05/2015
REVISED	
REVISED	
TAR148A DRAINAGE PLAN	
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE 1:100 ON A3	SHEET 2



GALWAY ALTERED

NOTES

- 45MM TRIMMER STUDS TO INTERNAL DOORS & 25MM JAMBS AND ARCHITRAVES.
- GRADE A & B SAFETY GLASS TO BE USED IN ACCORDANCE WITH NZSS 4223 & NZ BUILDING CODE.
- ALL ASPECTS OF THIS PROJECT MUST FULLY COMPLY WITH NZS 3604 & ALL RELEVANT RELATED APPROVED DOCUMENTS AND PROVISIONS OF THE NZ BUILDING CODE WHETHER OR NOT DETAILED IN THESE PLANS.
- GARAGE TO BE LINED AND PAINTED.
- SEALED LINER SHOWER TRAY UNITS GIB AQUALINE AROUND.
- TILES TO BE COMPATIBLE WITH FIXING TO 10MM AQUALINE SHEET ON WALLS.

ZONES

WIND ZONE	HIGH (A)
EXPOSURE ZONE	C
EARTHQUAKE ZONE	1
SNOW LOADING	NO

TIMBER GRADING

STUDS 90X45, H1.2 UNLESS SPECIFIED. ALL STRUCTURAL TIMBER TO BE MINIMUM STRESS GRADE 8 TIMBER. H1.2 TREATED TO INTERNAL WET AREAS. ALL LINTELS TO BE MINIMUM STRESS GRADE 8 TIMBER.

WINDOW CODES

AW12/20/1SL	— WINDOW TYPE AND SIZE
1216X2016 T	— TRIM SIZE FOR PRECUT
190X90 L	— LINTEL SIZE

AREAS

FLOOR AREA HOUSE	143.34 SQ. METRES
DOUBLE GARAGE	57.06 SQ. METRES
TOTAL AREA	200.40 SQ. METERS
PERIMETER FRAME	74.86 METRES
SOFFIT/GABLE LENGTH	77.74 METRES
ROOF AREA	238.73 SQ. METERS

LEGAL DESCRIPTION

LOT NO	14
DP	XXX
AREA	740 SQ. METRES
STREET NO	XXX

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SALES LEAH	
DRAWN J.C.	DATE 25/05/2015
REVISED	4/6/2015
ENGINEER	B.B. 49434

TAR148A FLOOR PLAN

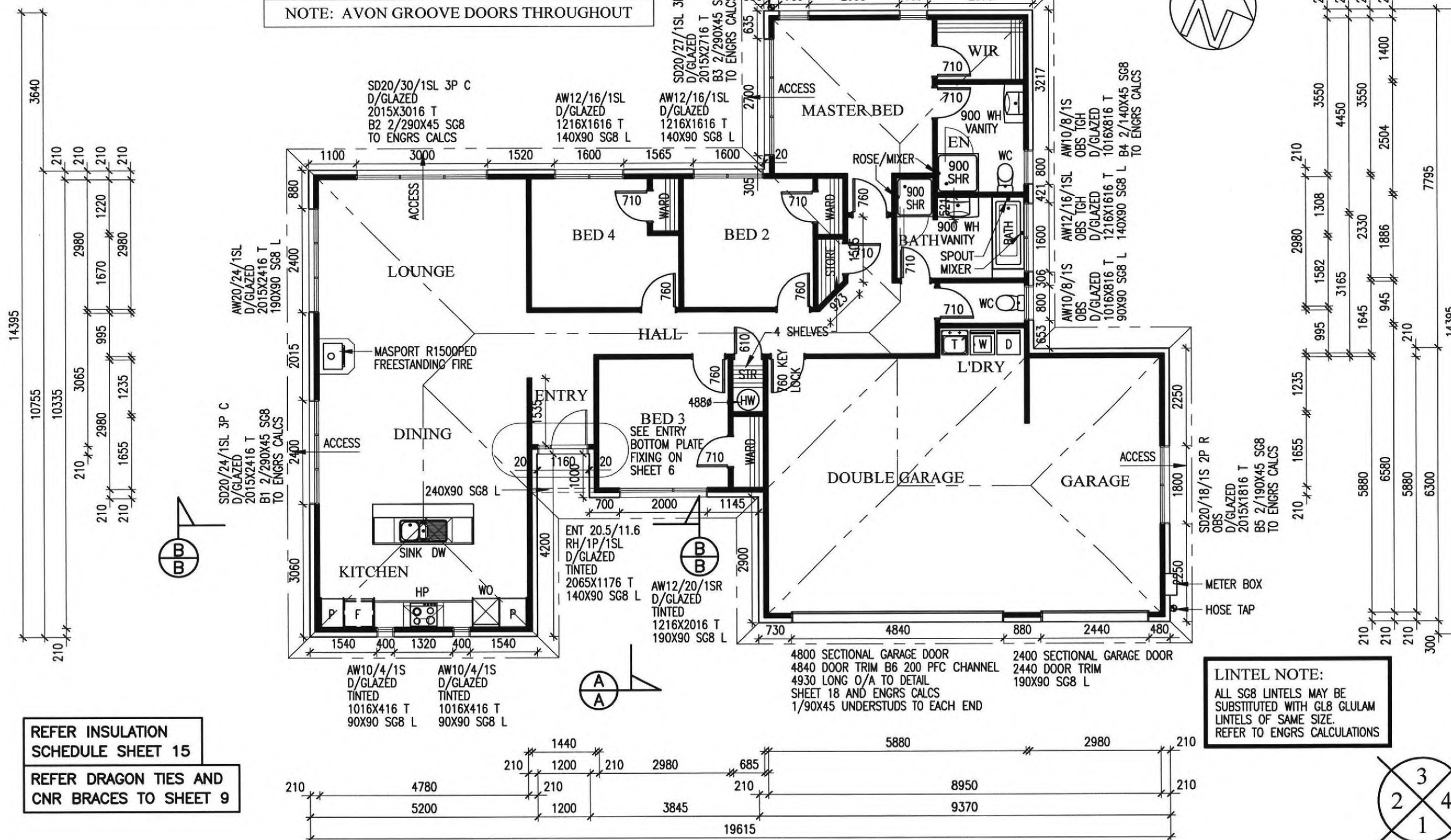
C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCK

SCALE 1:100 ON A3 SHEET 3

ENGINEERING INFO:
REFER ENGINEERING TO WILTON JOUBERT DESIGN & CALCS ATTACHED WITH PLANS
- LINTELS & BEAMS AS SPECIFIED ON THIS SHEET
- FOUNDATIONS AS SPECIFIED ON SHEET 6 AND TO BE READ IN CONJUNCTION WITH ENGRS DWGS

NOTE: AVON GROOVE DOORS THROUGHOUT

WALL NOTE:
2.42M HIGH WALLS THROUGHOUT
90X45MM H1.2 SG8 STUDS AT 600MM C-C WITH R2.2 BRADFORD GOLD WALL INSULATION TO EXTERNAL WALLS.
INTERNAL WALLS 90X45 H1.2 AT 600MM C-C



LINTEL NOTE:
ALL SG8 LINTELS MAY BE SUBSTITUTED WITH GL8 GLULAM LINTELS OF SAME SIZE.
REFER TO ENGRS CALCULATIONS

REFER INSULATION
SCHEDULE SHEET 15
REFER DRAGON TIES AND
CNR BRACES TO SHEET 9



ELEVATION KEY

Mark-up
WJL #: 49434

Lot 14,
Pohutukawa Place, Golf View Estate,
Bell Block,
Taranaki

NOTE

1. These mark-ups are to be read in conjunction with the architectural drawings and all other related documents. Refer to architectural drawings for dimensions.

2. Contact the architect/engineer if any discrepancies are found.

3. Check all structural beams, components and dimensions prior to fabrication and installation.

BE READ IN CONJUNCTION WITH ENGRS DWGS

NPDC Approved for
10 JUL 2015
Building Consent



GALWAY ALTERED

NOTES

- 45MM TRIMMER STUDS TO INTERNAL DOORS & 25MM JAMBS AND ARCHITRAVES.
- GRADE A & B SAFETY GLASS TO BE USED IN ACCORDANCE WITH NZSS 4223 & NZ BUILDING CODE.
- ALL ASPECTS OF THIS PROJECT MUST FULLY COMPLY WITH NZS 3604 & ALL RELEVANT RELATED APPROVED DOCUMENTS AND PROVISIONS OF THE NZ BUILDING CODE WHETHER OR NOT DETAILED IN THESE PLANS.
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- SEALED LINER SHOWER TRAY UNITS GIB AQUALINE AROUND.
- TILES TO BE COMPATIBLE WITH FIXING TO 10MM AQUALINE SHEET ON WALLS.

ZONES

WIND ZONE	HIGH (A)
EXPOSURE ZONE	C
EARTHQUAKE ZONE	1
SNOW LOADING	NO

TIMBER GRADING

STUDS 90X45, H1.2 UNLESS SPECIFIED. ALL STRUCTURAL TIMBER TO BE MINIMUM STRESS GRADE 8 TIMBER. H1.2 TREATED TO INTERNAL WET AREAS. ALL LINTELS TO BE MINIMUM STRESS GRADE 8 TIMBER.

WINDOW CODES

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LEGAL DESCRIPTION

LOT NO	14
DP	XXX
AREA	740 SQ. METRES
STREET NO	XXX

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SALES LEAH

DRAWN J.C. DATE 25/05/2015

REVISED

REVISED

TAR148A FLOOR PLAN

C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCK

SCALE 1:100 ON A3 SHEET 3

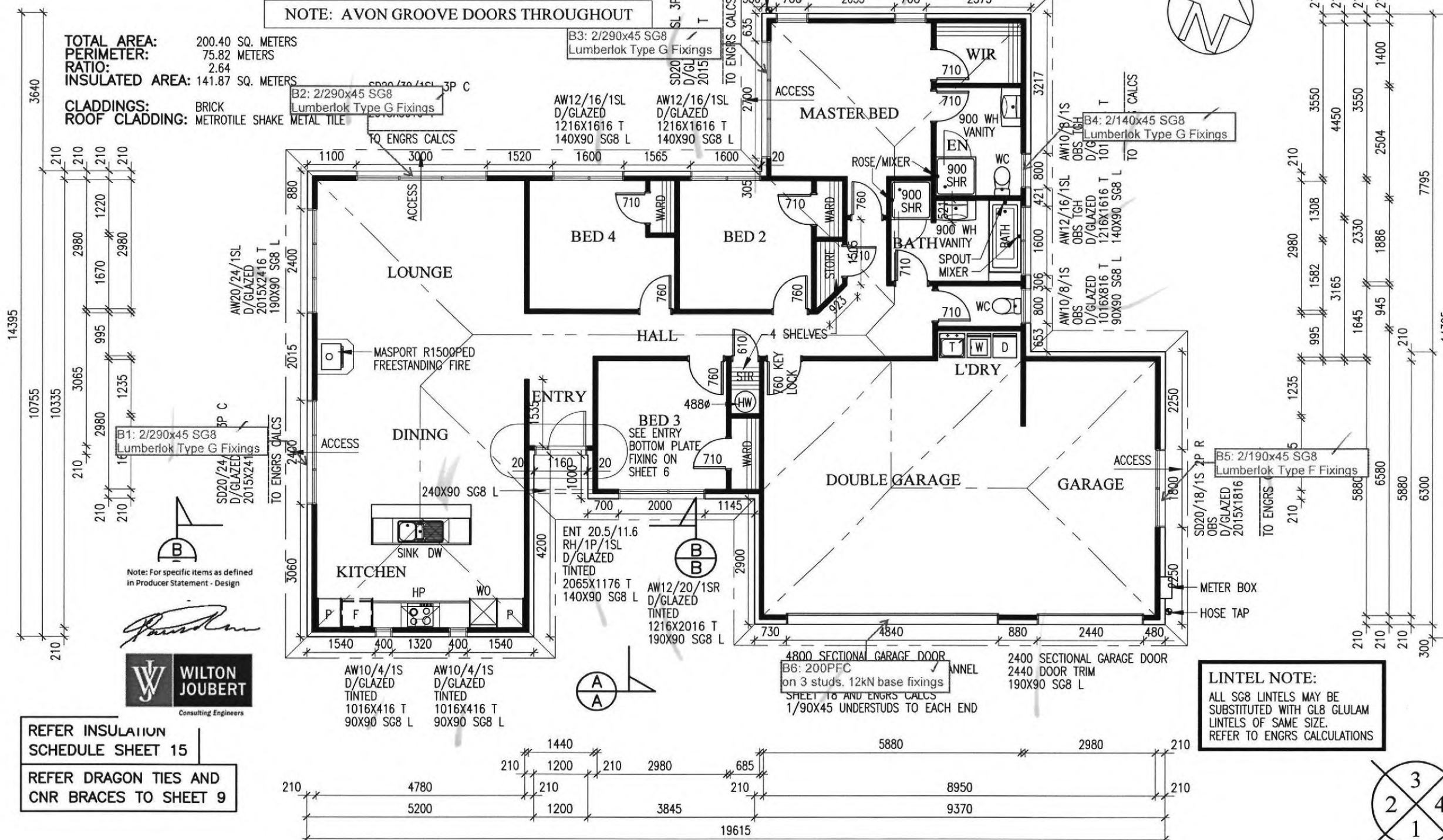
WALL NOTE:

2.42M HIGH WALLS THROUGHTOUT
90X45MM H1.2 SG8 STUDS AT 600MM C-C
WITH R2.2 BRADFORD GOLD WALL INSULATION
TO EXTERNAL WALLS.
INTERNAL WALLS 90X45 H1.2 AT 600MM C-C

NOTE: AVON GROOVE DOORS THROUGHOUT

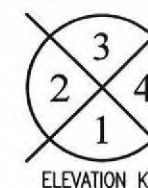
TOTAL AREA: 200.40 SQ. METERS
PERIMETER: 75.82 METERS
RATIO: 2.64
INSULATED AREA: 141.87 SQ. METERS

CLADDINGS: BRICK
ROOF CLADDING: METROTILE SHAKE METAL TILE



LINTEL NOTE:

ALL SG8 LINTELS MAY BE
SUBSTITUTED WITH GL8 GLULAM
LINTELS OF SAME SIZE.
REFER TO ENGRS CALCULATIONS

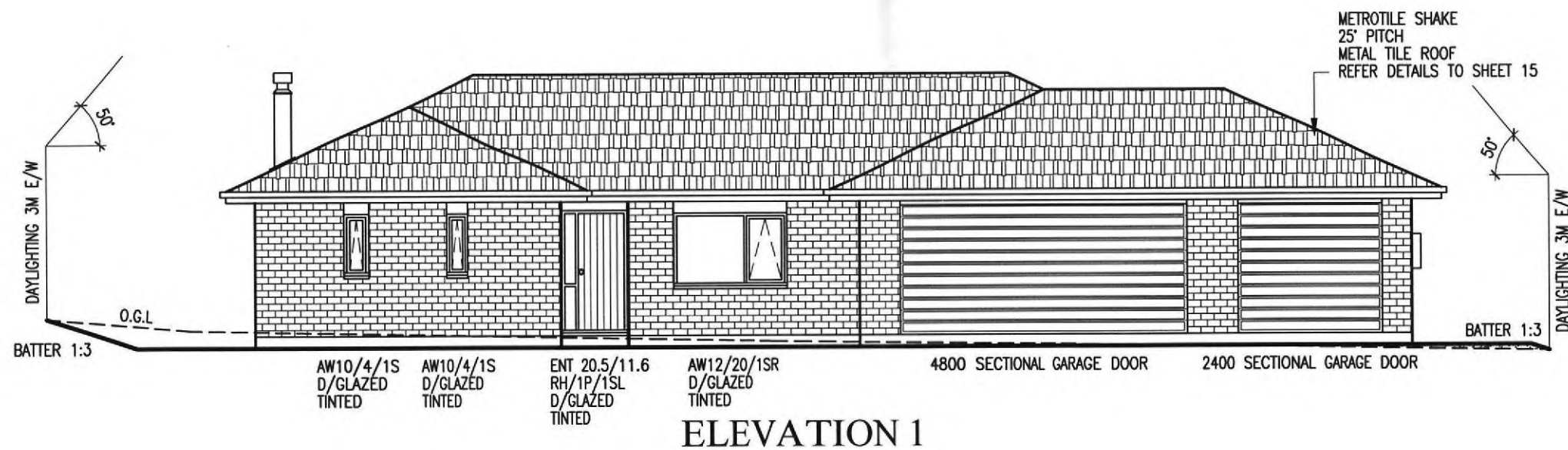


ELEVATION KEY

REFER INSULATION
SCHEDULE SHEET 15

REFER DRAGON TIES AND
CNR BRACES TO SHEET 9





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10 JUL 2015
Building Consent

RISK FACTOR	LOW	MEDIUM	HIGH	VERY HIGH	SUBTOTALS
WIND ZONE (PER NZS 3604)	0	0	1	2	1
NUMBER OF STOREYS	0	1	2	4	0
ROOF/WALL INTERSECTION DESIGN	0	1	3	5	1
EAVES WIDTH	0	1	2	5	1
ENVELOPE COMPLEXITY	0	1	3	6	1
DECK DESIGN	0	2	4	6	0
TOTAL RISK SCORE:					4



platinumhomes®
NEW ZEALAND

GALWAY ALTERED

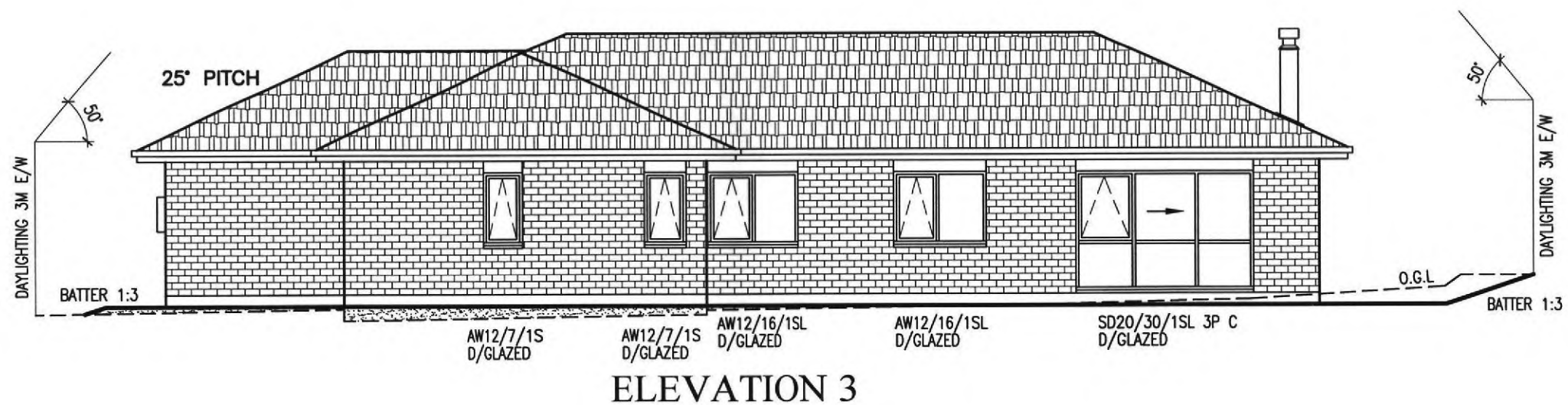
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SALES LEAH
DRAWN J.C. DATE 25/05/2015
REVISED
REVISED

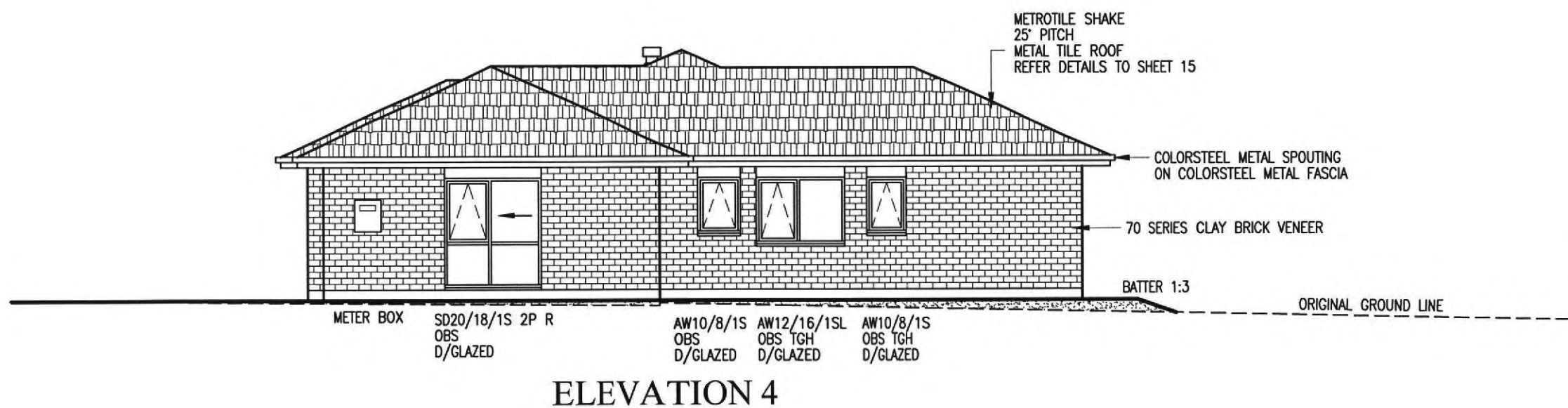
TAR148A ELEVATIONS

C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCK

SCALE 1:100 ON A3 SHEET 4



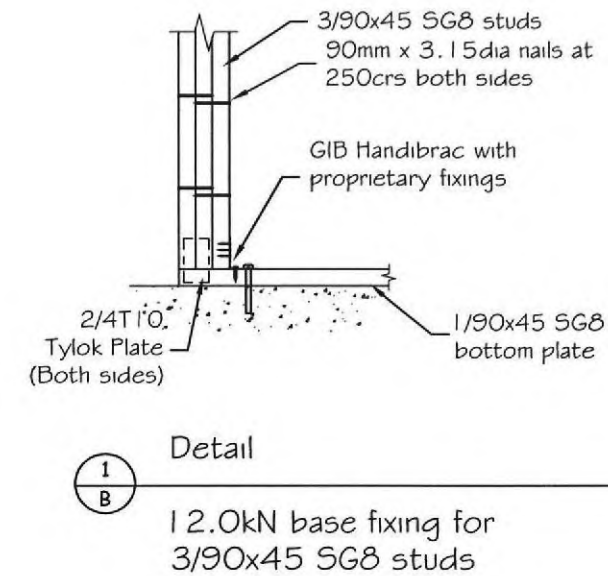
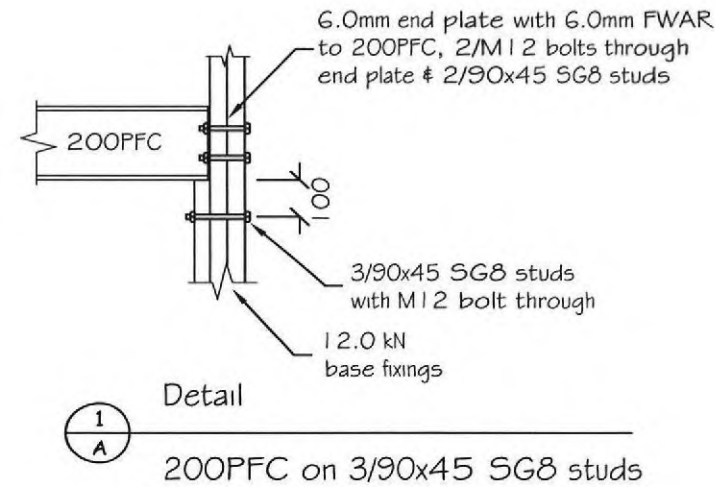
RISK FACTOR	LOW	MEDIUM	HIGH	VERY HIGH	SUBTOTALS
WIND ZONE (PER NZS 3604)	0	0	1	2	1
NUMBER OF STOREYS	0	1	2	4	0
ROOF/WALL INTERSECTION DESIGN	0	1	3	5	1
EAVES WIDTH	0	1	2	5	1
ENVELOPE COMPLEXITY	0	1	3	6	1
DECK DESIGN	0	2	4	6	0
TOTAL RISK SCORE:					4



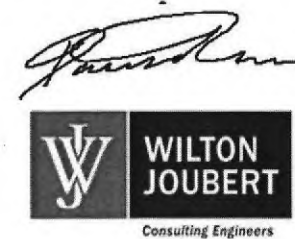
GALWAY ALTERED	
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SALES LEAH	
DRAWN J.C.	DATE 25/05/2015
REVISED	
REVISED	
TAR148A	ELEVATIONS
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE 1:100 ON A3	SHEET 5

NOTE:

1. Check all structural beams, components and dimensions prior to fabrication and installation.
2. Ensure truss and frame manufacturers understand what connections are shown. If a connection does not work practically, contact Wilton Joubert prior to manufacturer.



Note: For specific items as defined in Producer Statement - Design



NPDC Approved for
10 JUL 2015
Building Consent

- ## NOTES:
1. Do not scale from drawings. These drawings are to be read in conjunction with the architectural drawings and all other related documents. Refer to architectural drawings for dimensions.
 2. Contact the architect/engineer if any discrepancies are found.
 3. Unless otherwise noted, concrete shall be 20MPa minimum or 25MPa minimum within 'exposure zone D' (if in doubt, confirm with local BCA)
 4. 'FWAR' in these connection details refers to Fillet Weld All Round.
 5. Check all structural beams' components and dimensions prior to fabrication and installation.
 6. All steel beams should be packed with SG8 timber and bolted with M12 bolts at min. 600crs.

Revision	Description	Date

WILTON JOUBERT
Consulting Engineers

Northland: 09 945 4188
Auckland-Waikato: 09 527 0196
Canterbury: 021 824 063
Southern Lakes: 03 443 6209
www.wiltonjoubert.co.nz

Job Title:
Proposed Residence
Lot 14,
Pohutukawa Place
Bell Block, Taranaki

Sheet Title:
Connections

Prepared: BB	Drawn: BB
Checked: DL	Overhead: I I I
Scale: 1:20	Date: 05-06-2015
Job # 49434	Drawn: SD1

GENERAL

1. Do not scale from drawings. These drawings are to be read in conjunction with the architectural drawings and all other related documents. Refer to architectural drawings for dimensions, rebates & recesses.
2. Contact the architect/engineer if any discrepancies are found.
3. Under no circumstances shall polystyrene spacers be used. Use recommended spacers as per details provided.
4. DPM shall be in accordance with NZS3604 (polyethylene sheet, min. 0.25mm). Do not use multiple layers. All penetrations through the DPM shall be sealed.
5. A layer of sand blinding or granular fines (GAP7) shall be placed, screeded and compacted over the building platform. The maximum thickness of this layer shall be no more than 50mm.
6. All service trenches shall be properly backfilled and compacted.
7. Where underfloor heating is installed, floor topping shall be increased to 110mm.
8. Where concrete polishing and/or architectural cuts are made to the floor, the floor thickness shall be increased such that the final topping depth is no less than that specified on the plans after all polishing/cuts.
9. Polystyrene pods shall be 1100 x 1100 x 220mm.

CONCRETE

1. All concrete work and materials shall conform to NZS3109 and applicable building consent authority regulations.
2. No cuts shall be made to the floor other than those shown on the drawings.
3. Unless otherwise noted, concrete shall be:
20MPa minimum or 25MPa minimum within 'exposure zone D' (if in doubt, confirm with local BCA)

REINFORCEMENT

1. Unless otherwise specified, all reinforcement shall be Ductility Class E, in accordance with NZS 4671.
2. All bend diameters shall comply with NZS 3109. Re-bending of reinforcement is not permitted. 'Spot' welding of reinforcement is not permitted.
3. All mesh reinforcement shall be Ductility Class E as per NZS4671.
4. Unless otherwise specified by proprietary product specifications, mesh shall be lapped a minimum of 250mm or by a grid plus 50mm, whichever is greater.
5. Unless otherwise specified on plans, minimum covers are:
exposed to earth: 75mm
exposed to edge: 50mm
protected by damp proofing: 50mm
6. Unless otherwise specified, reinforcement laps are:

Reinforcement Grade	Nomination	min. lap (whichever is greater)	concrete strength (MPa)
300	'D'	40Ø or min. 600mm	all blockfill, 20 and 25
500	'HD'	70Ø	all blockfill
500	'HD'	56Ø	20
500	'HD'	50Ø	25

SITE CONDITIONS

1. Design is based on 'good ground' as per NZS3604:2011 (stable site, non expansive soils and min 100kPa allowable bearing capacity), to be confirmed.
2. Building platform, where filled above CGL/FGL, shall be extended min. 1.0m beyond the building footprint.
3. Confirm position & depth of all public pipes on the site, prior to any works. If different to the site plan then Wilton Joubert Ltd. shall be contacted.
4. Building foundation shall be outside of 45° influence line from the bottom of 375Ø water-main on the southern boundary.

INSPECTIONS

1. Check the BUILDING CONSENT CONDITIONS for any inspections that are required by the Building Consent Authority (BCA).
2. If BCA requires PS4 to be issued for inspections, a local engineer may be engaged to carry out such inspections and issue a PS4 accordingly.

Quantities of Spacers
(Quantities are approximate
and to be used as a guide only)

Item	Qty.
WJ100 Centre Spacer	201
WJ101 Clip-on Spacer	72

NOTES:

Do not scale from Drawings.
Refer Architectural Drawings for
overall dimensions. To be read in
conjunction with all other related
documents.

NPDC Approved for
10 JUL 2015
Building Consent

Revision	Description	Date

**WILTON
JOUBERT**

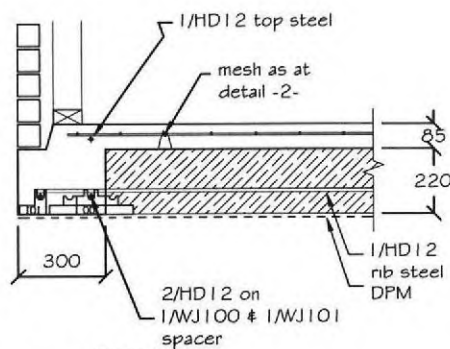
Consulting Engineers

Northland: 09 945 4188
Auckland-Waikato: 09 527 0196
Canterbury: 021 824 063
Southern Lakes: 03 443 6209
www.wiltonjoubert.co.nz

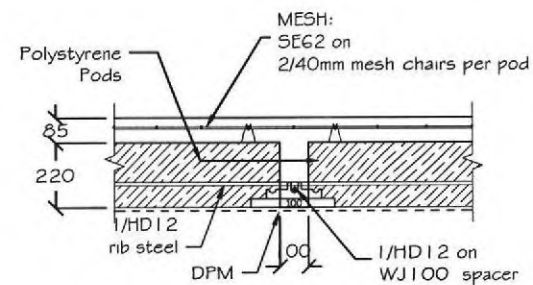
Job Title:
Proposed Residence
Lot 14
Pohutukawa Place
Bell Block

Sheet Title:
General Notes

Prepared BB	Drawn MH
Checked DL	Checked
Scale 1:100 & 1:25	Date 05-06-2015
Job # 49434	Sheet 50



Detail 1
Raftfloor Edge Beam - 300
Scale 1:25



Detail 2
Raftfloor Internal Rib - 100
Scale 1:25

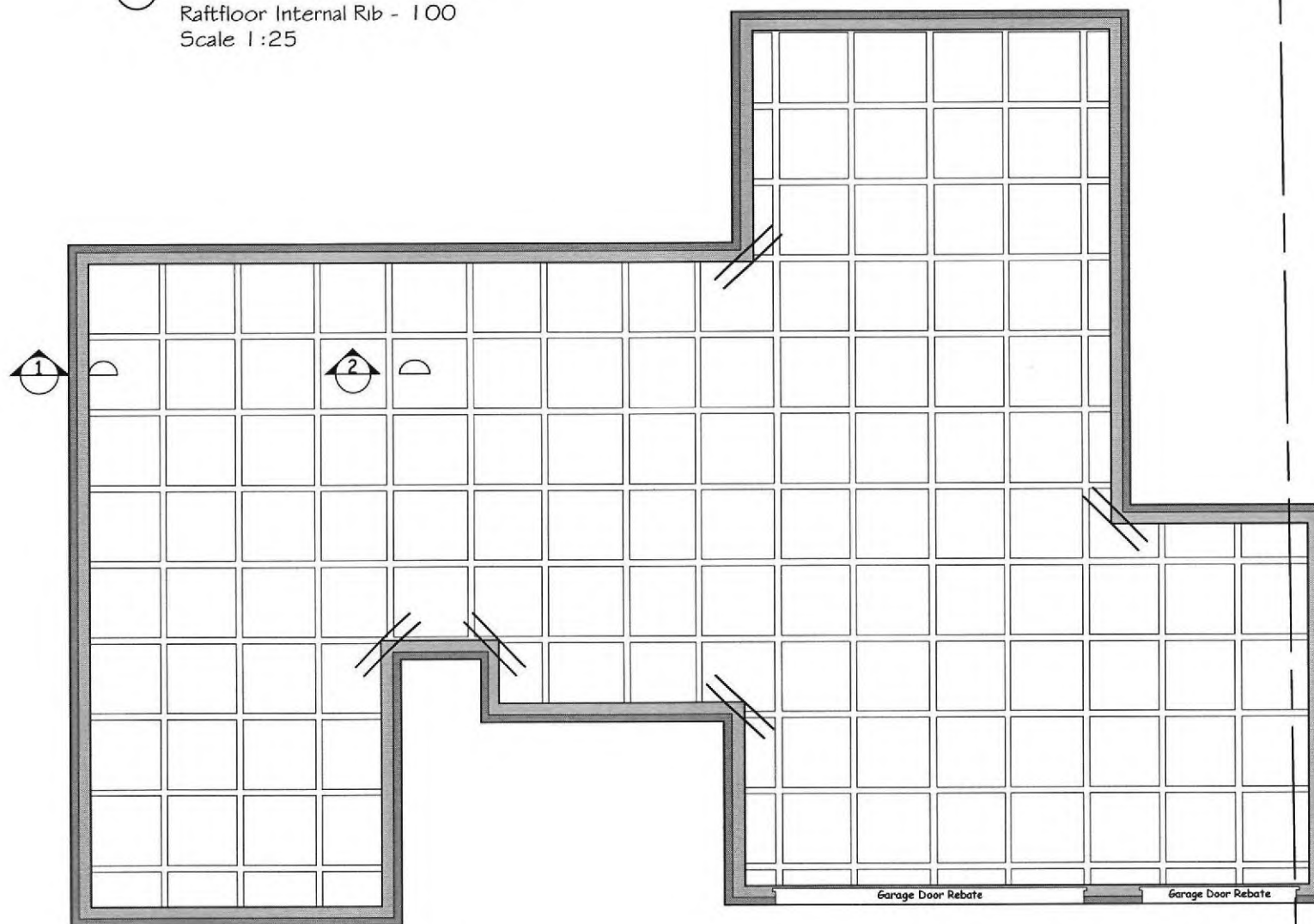
Note: For specific items as defined in Producer Statement - Design

Signature



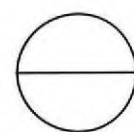
Legend:

Re Entrant corner steel
2/HD12 x 1200mm
at 200 crs



1.0m pipe clearance

Water main 375Ø confirm position & depth on site, prior to any works - raft floor foundation to be outside it's influence (max. pipe depth = 1.5m)



Ribraft Floor Plan

Scale 1:100

Quantities of Spacers
(Quantities are approximate
and to be used as a guide only)

Item	Qty.
WJ100 Centre Spacer	201
WJ101 Clip-on Spacer	72

NOTES:

Do not scale from Drawings.
Refer Architectural Drawings for
overall dimensions. To be read in
conjunction with all other related
documents.

NPDC Approved for
10 JUL 2015
Building Consent

Revision	Description	Date



Northland: 09 945 4188
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Canterbury: 021 824 063
Southern Lakes: 03 443 6209
www.wiltonjoubert.co.nz

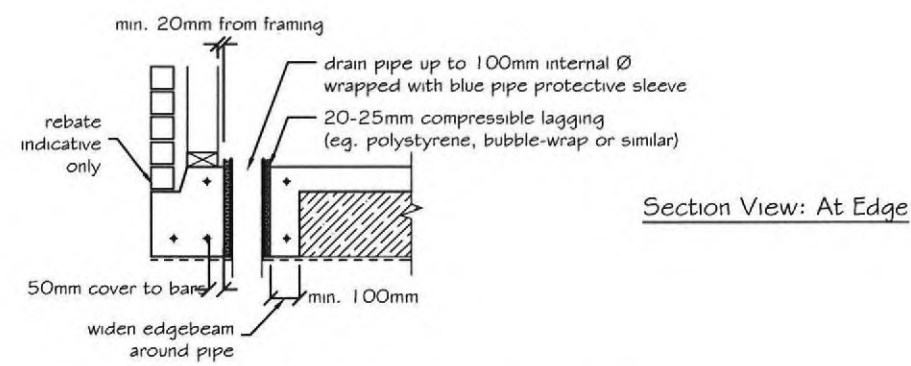
Job Title:

Proposed Residence
Lot 14
Pohutukawa Place
Bell Block

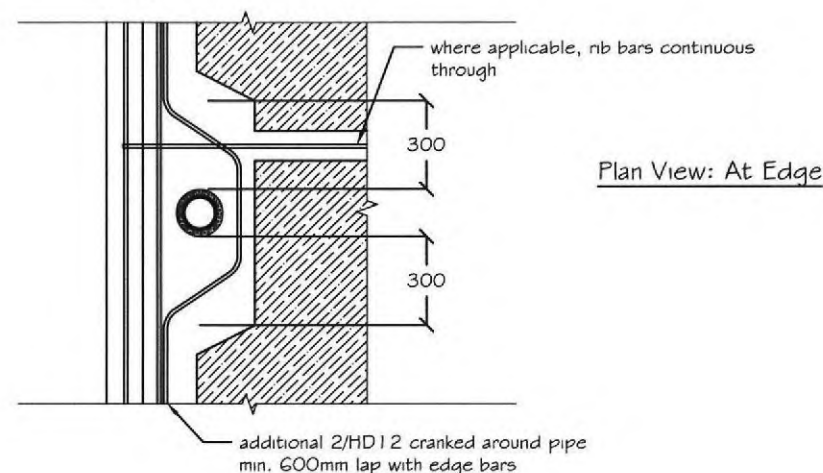
Sheet Title:

Ribraft Floor
Plan & Details

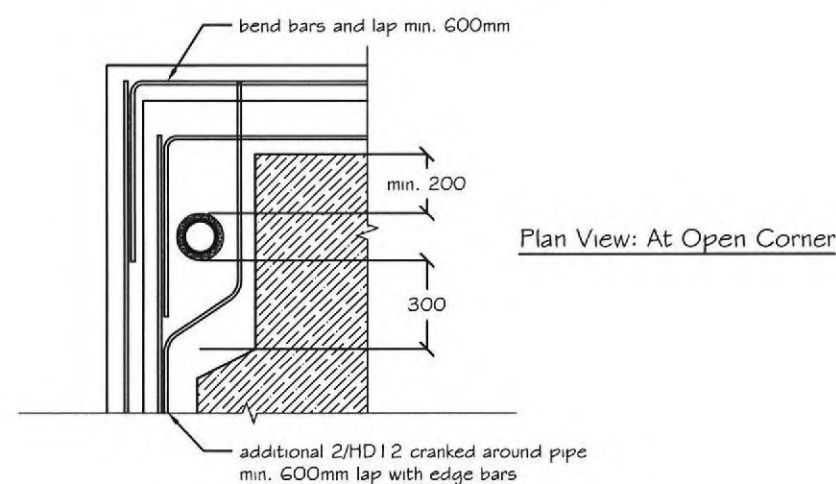
Prepared BB DL	Drawn MH
Checked DL	Checked MH
Scale 1:100 & 1:25	Date 05-06-2015
Job # 49434	Sheet S1



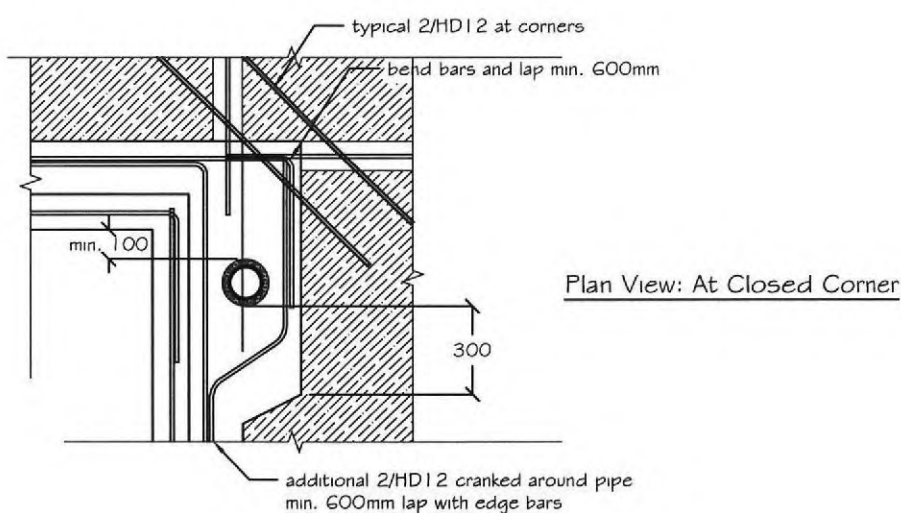
Section View: At Edge



Plan View: At Edge

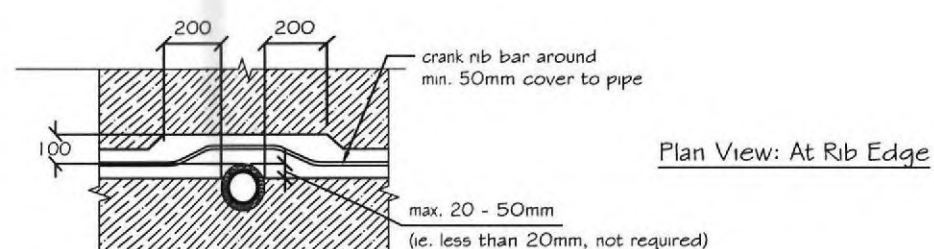


Plan View: At Open Corner

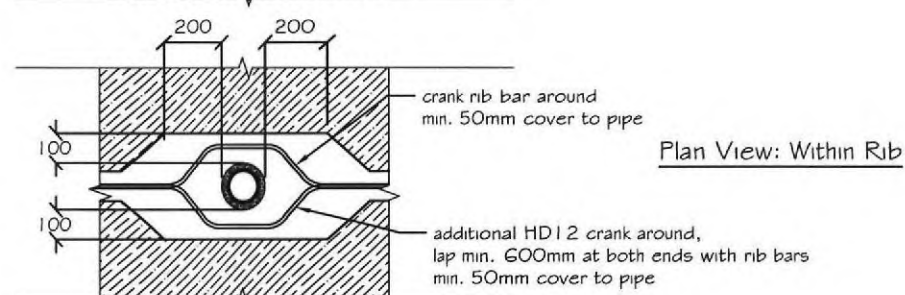


Plan View: At Closed Corner

Typical Detail Around Pipes
Raftfloor Edge Beam

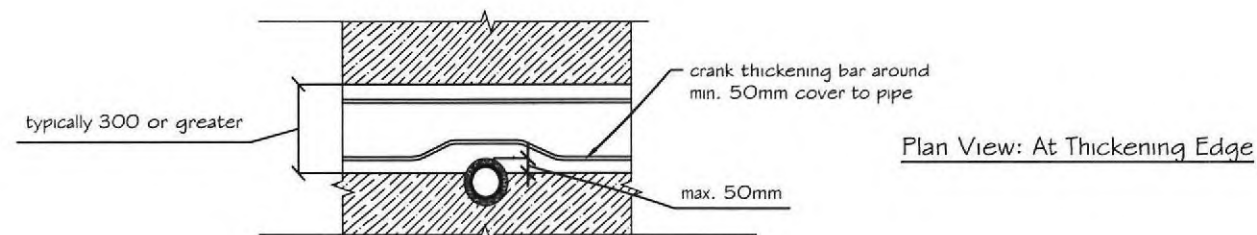


Plan View: At Rib Edge

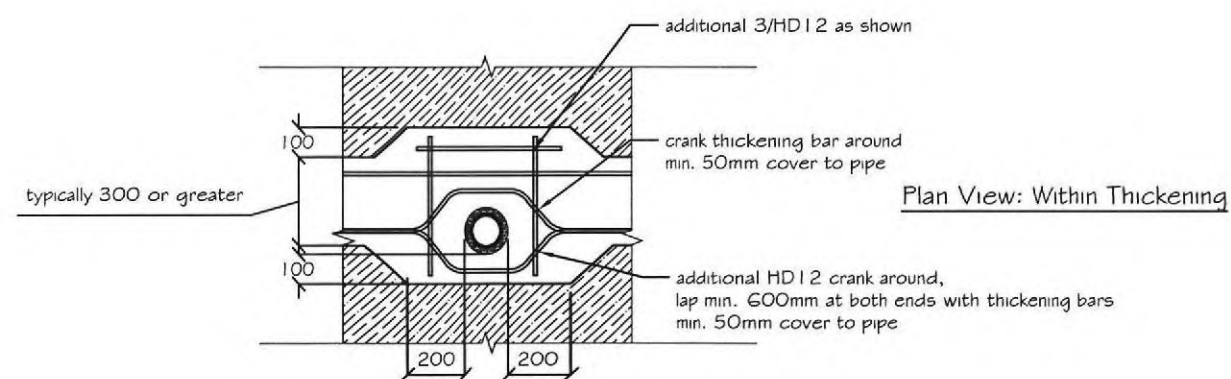


Plan View: Within Rib

Typical Detail Around Pipes
Raftfloor Internal Ribs



Plan View: At Thickening Edge



Plan View: Within Thickening

Typical Detail Around Pipes
Raftfloor Internal Thickenings

NOTES:

These details are applicable where plumbing/services are conveyed underground. Services are to be taken through polystyrene pods as much as possible. If this is unavoidable, it may be taken through ribs/thickenings, provided the details (or similar in principle) on this sheet are used.

All service trench backfill shall be properly compacted.

Member sizes and reinforcing shown are indicative only, details shown on raftslab plan & details shall take precedence over the details shown here.

NOTES:

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Revision	Description	Date



Consulting Engineers
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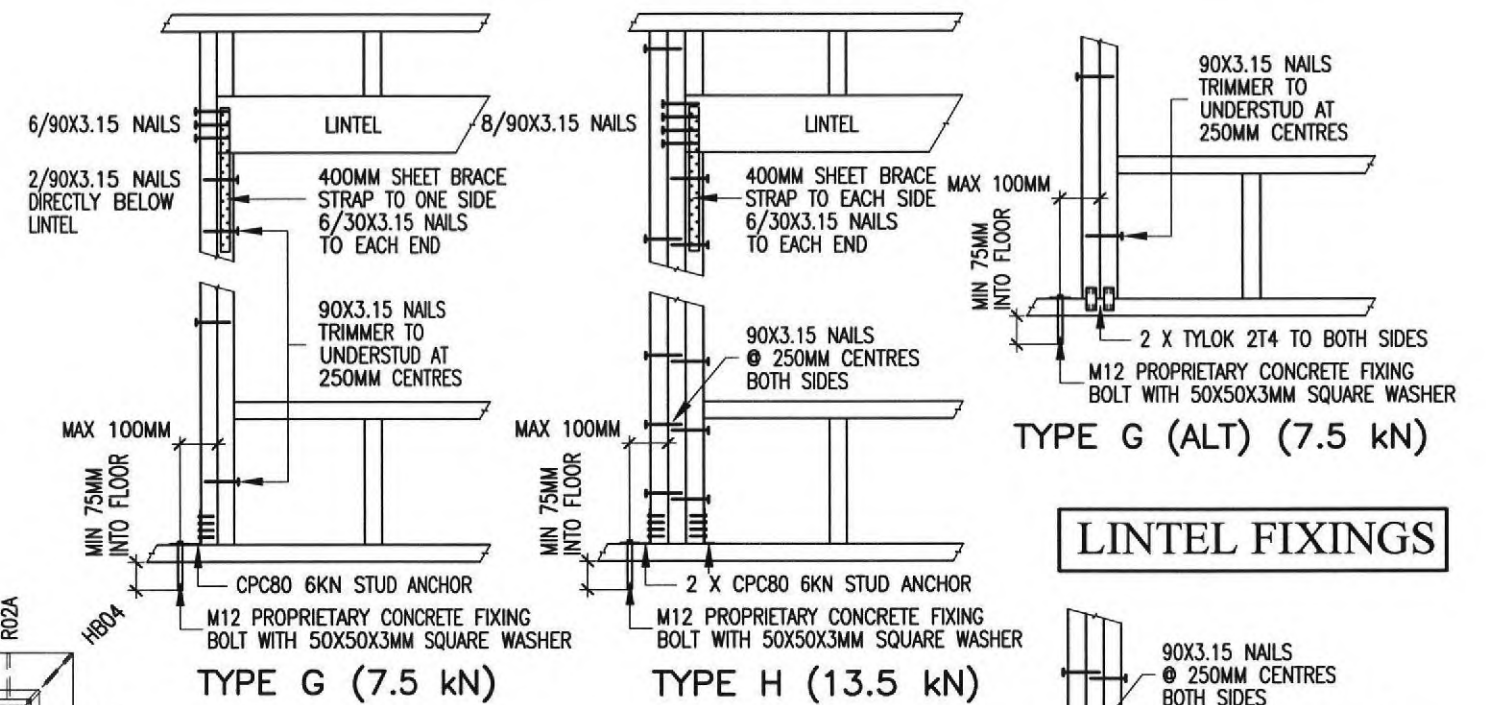
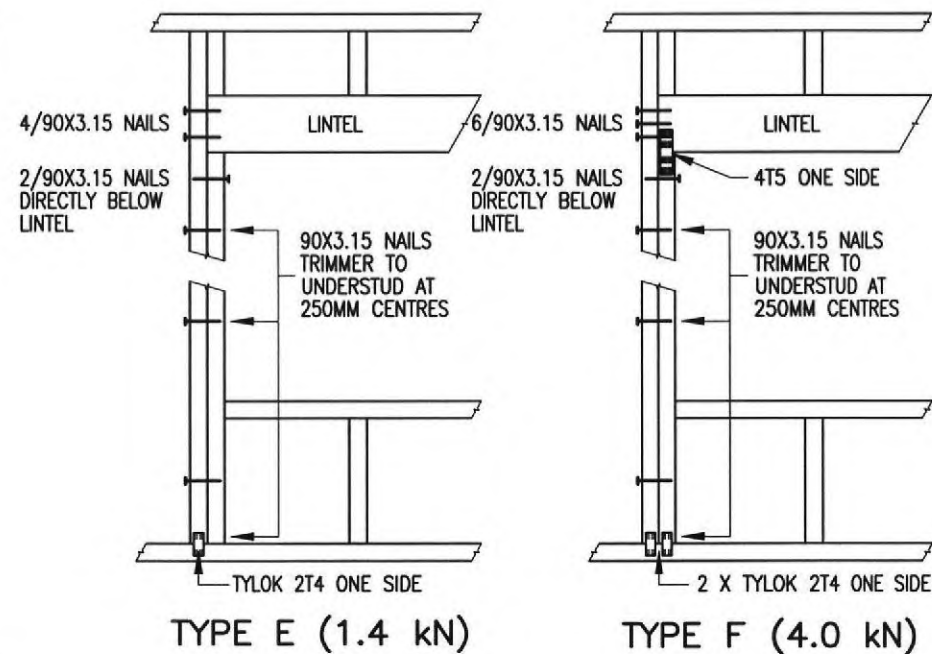
Job Title:

Generic Raft Slab

Sheet Title:

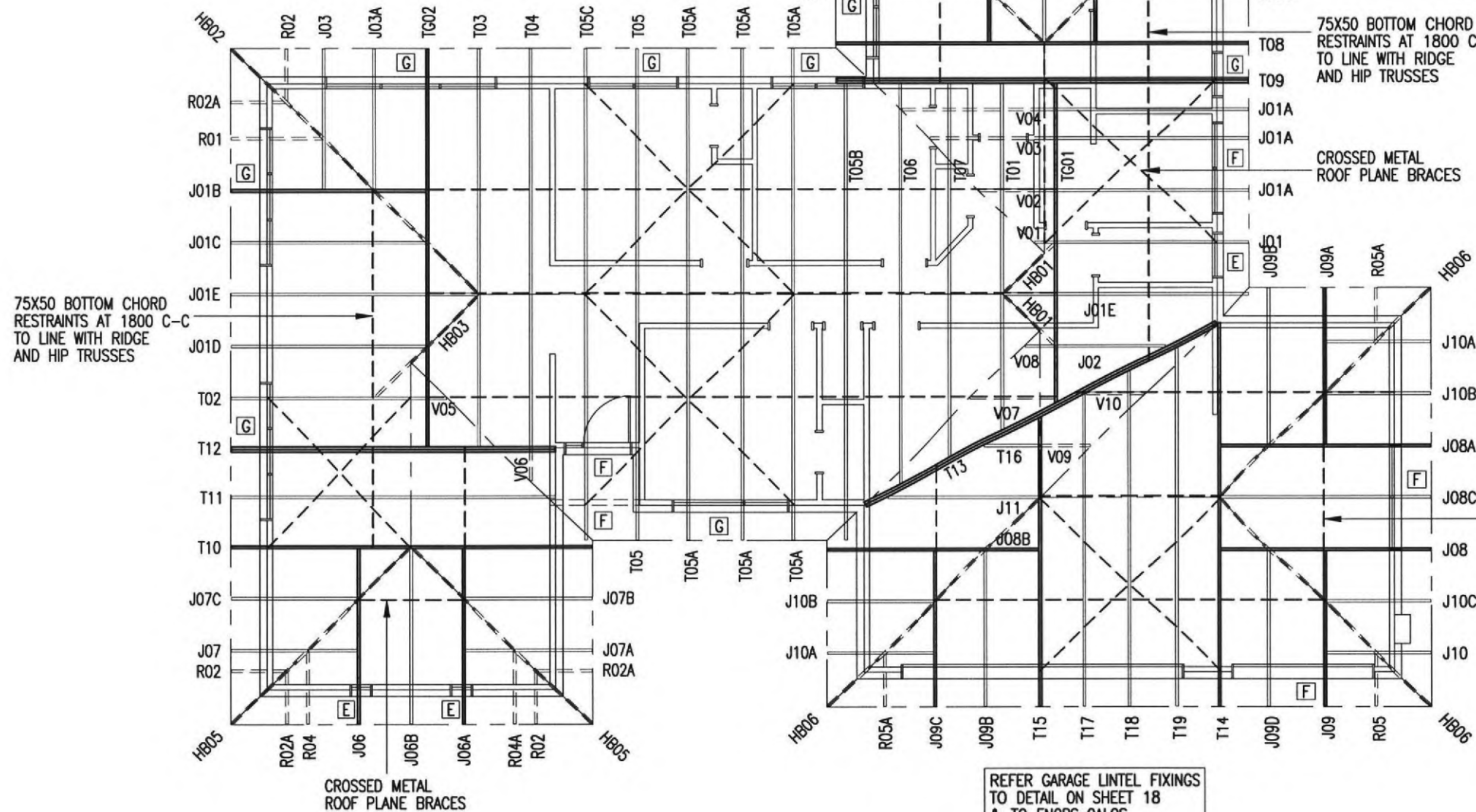
Typical Pipe Details

Drawn	DL	Drawn	DL
Checked	DL	Checked	DL
Scale	1:25	Date	2015
Job No.	DL	Draw No.	D1



LINTEL FIXINGS

TRUSS FIXINGS REFER TO PRECUT PLAN SHEET 8



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FIXINGS NOTE:

TYPE 304 S.S. FOR FIXINGS IN CONTACT WITH TIMBER TREATED WITH COPPER AZOLE OR ALKALINE COPPER QUATERNARY (ACQ) PRESERVATIVES, WHERE USED IN EXPOSED OR SHELTERED LOCATIONS. HOT-DIPPED GALV. FOR ALL OTHER LOCATIONS.

NOTE: USE FOR BRACING AND LINTEL FIXINGS ONLY. REFER TO KKBS SHEET 8 FOR TRUSS DESIGN

GALWAY ALTERED	
LINTEL FIXING TYPE E F G H TO LUMBER LOCK "LINTEL FIXING SCHEDULE" ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011	
WIND ZONE: HIGH (A)	
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SALES LEAH	
DRAWN J.C.	DATE 25/05/2015
REVISED	
TAR148A	ROOF PLAN
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE 1:100 ON A3	SHEET 7

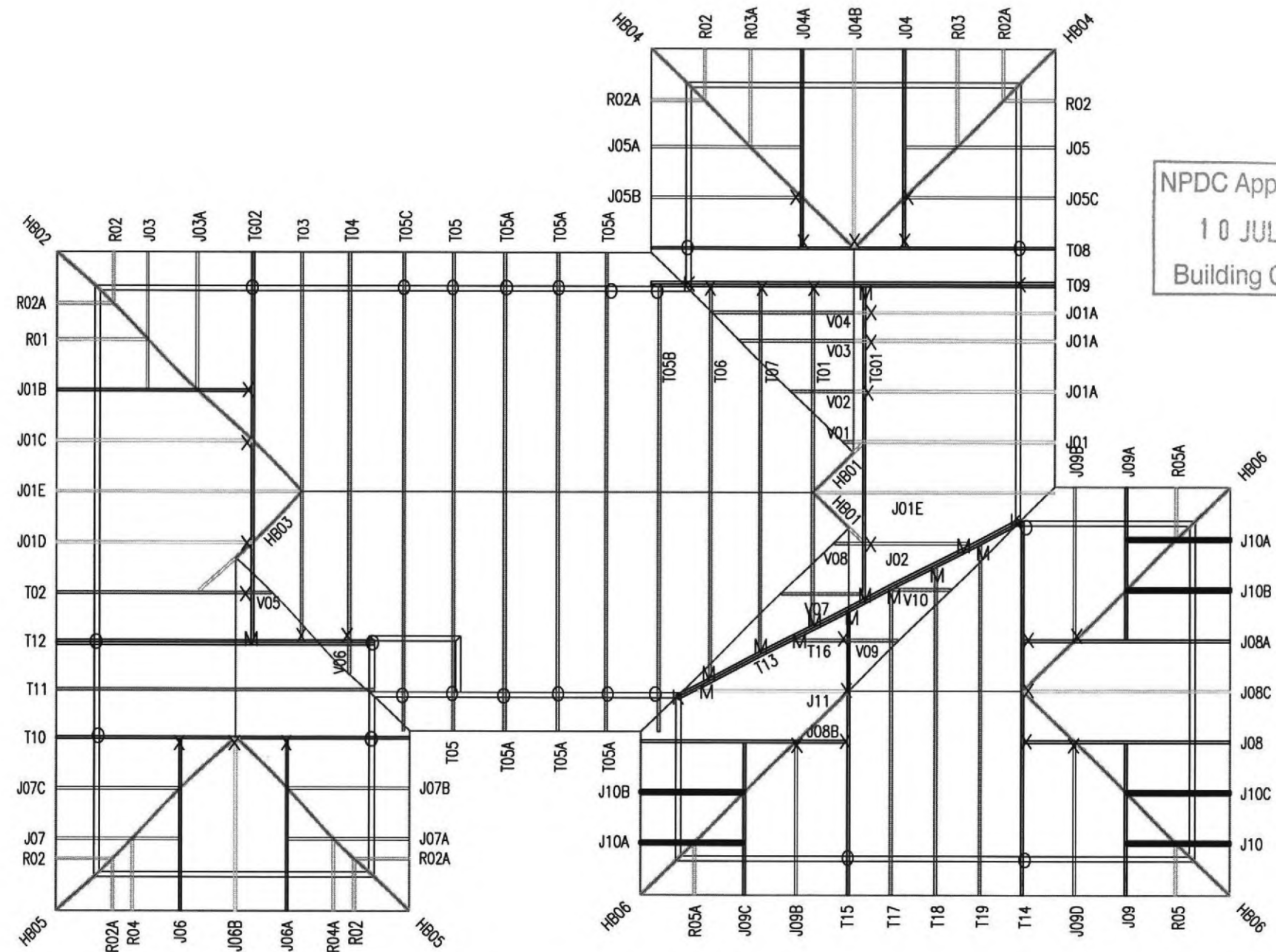
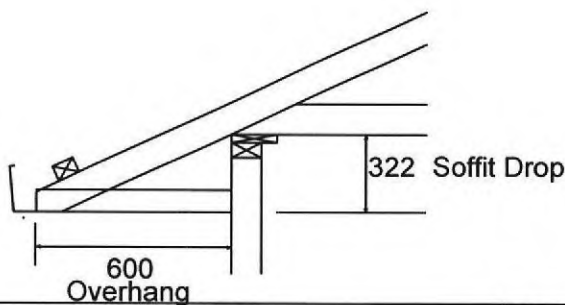
Truss Fixings

-  D - Pair of LUMBERLOK Wire Dogs
-  X - LUMBERLOK JH47x90 Joist Hanger
-  Z - LUMBERLOK JH47x120 Joist Hanger
-  P - LUMBERLOK JH47x190 Joist Hanger
-  E - LUMBERLOK JH95x165 Joist Hanger
-  O - Pair of LUMBERLOK CT200 Ceiling Ties
-  H - LUMBERLOK CT400 Cyclone Tie
-  B - LUMBERLOK CT600 Cyclone Tie
-  M - Pair of LUMBERLOK Multi Grips
-  NP - LUMBERLOK Nailon Plate
-  N - LUMBERLOK N21 Diagonal Cleat
-  W - Pair of LUMBERLOK CPC40 Cleats
-  K - LUMBERLOK TTP 16kN Truss to Top Plate set

SB = Soffit bearer
 HSB = Hip soffit bearer
 OR = Outrigger
 BOR = Bottom cord outrigger
 FR = Flyrafters
 VN = Verg nog
 CN = Ceiling nog

Katikati Building Supplies Ltd
 will not accept any charges for on
 site remedial work to frames & trusses
 unless such work has first been
 authorised by Katikati Building Supplies.

All trusses to be fixed to building top
 plates with (minimum 1-pair) of
 wiredogs plus 2/90x3.15 skew nails
 each end unless otherwise specified
 as per the truss fixings layout plan.



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NOTE ALLOW FOR CLIP FIX CEILING BATTENS

12 Earl Drive KATIKATI P.O. Box 243
 Ph 07-549-0689 Fax 07-549-0702

Site Address :
 C & J BLAKE
 POHUTUKAWA PLACE
 BELL BLOCK

Sheet Title :
 For Building Consent
 Truss Fixings & Roof Layout

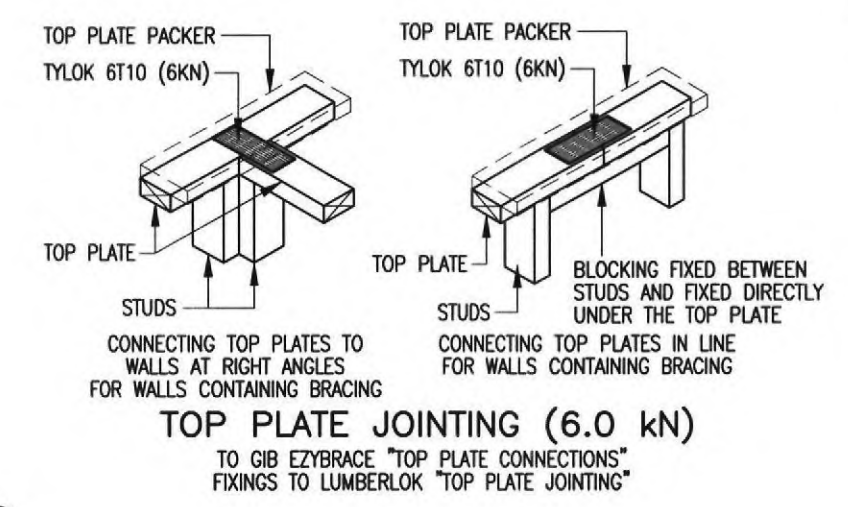
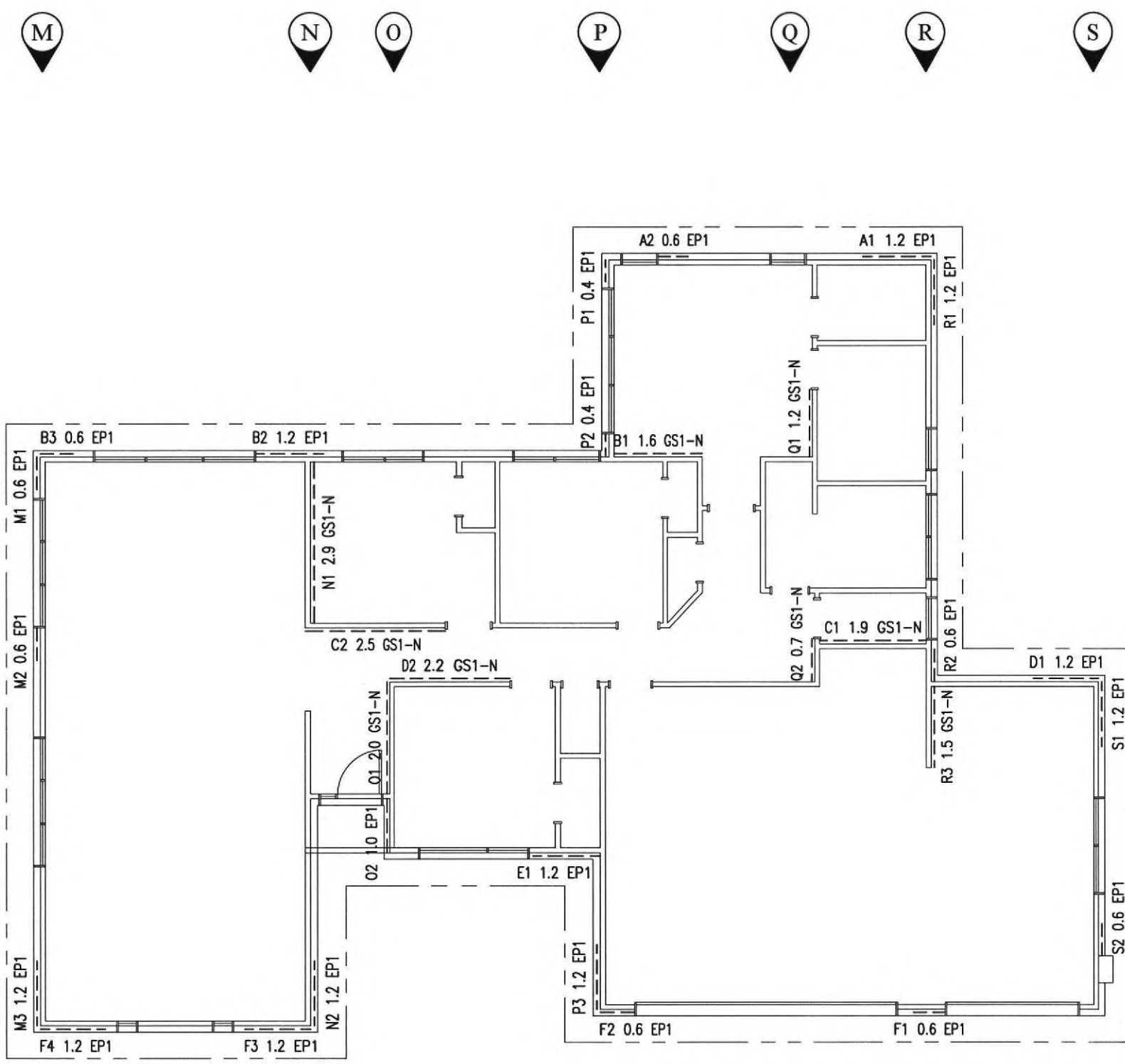
Date : 25 May, 2015 Drawn : DAVE
 Scale : 1:100 System : MiTek 20/20

Job Details:
 Roof Pitch : 25.00Deg
 Roof Material : Metal Tiles
 Ceiling Material : Rondo on clips
 Wind Zone : High
 Roof Snow Load : 0.000 kPa

Truss Centres : 900 mm
 Roof Live Load : 0.250 kPa
 Floor Live Load : kPa
 Wind Speed : 44.0 m/s

Job Title :
 TAR148A
 Sheet :
 8
 Revision Number :

PrimeCad v4.6.6 109

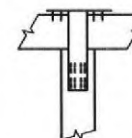


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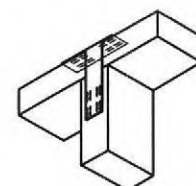
GALWAY ALTERED	
ROOF AREA HOUSE	238.73 SQ. METERS
FLOOR AREA HOUSE	200.40 SQ. METERS
BUILDING LENGTH	19.61 METRES
TOTAL WIDTH	14.39 METRES
WIND ZONE	HIGH (A)
EXPOSURE ZONE	C
EARTHQUAKE ZONE	1
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SALES LEAH	
DRAWN J.C.	DATE 25/05/2015
REVISED	
REVISED	
TAR148A	BRACING PLAN
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE 1:100 ON A3	SHEET 9

TOP PLATE FIXING

FIXING TYPE B (4.7 kN)

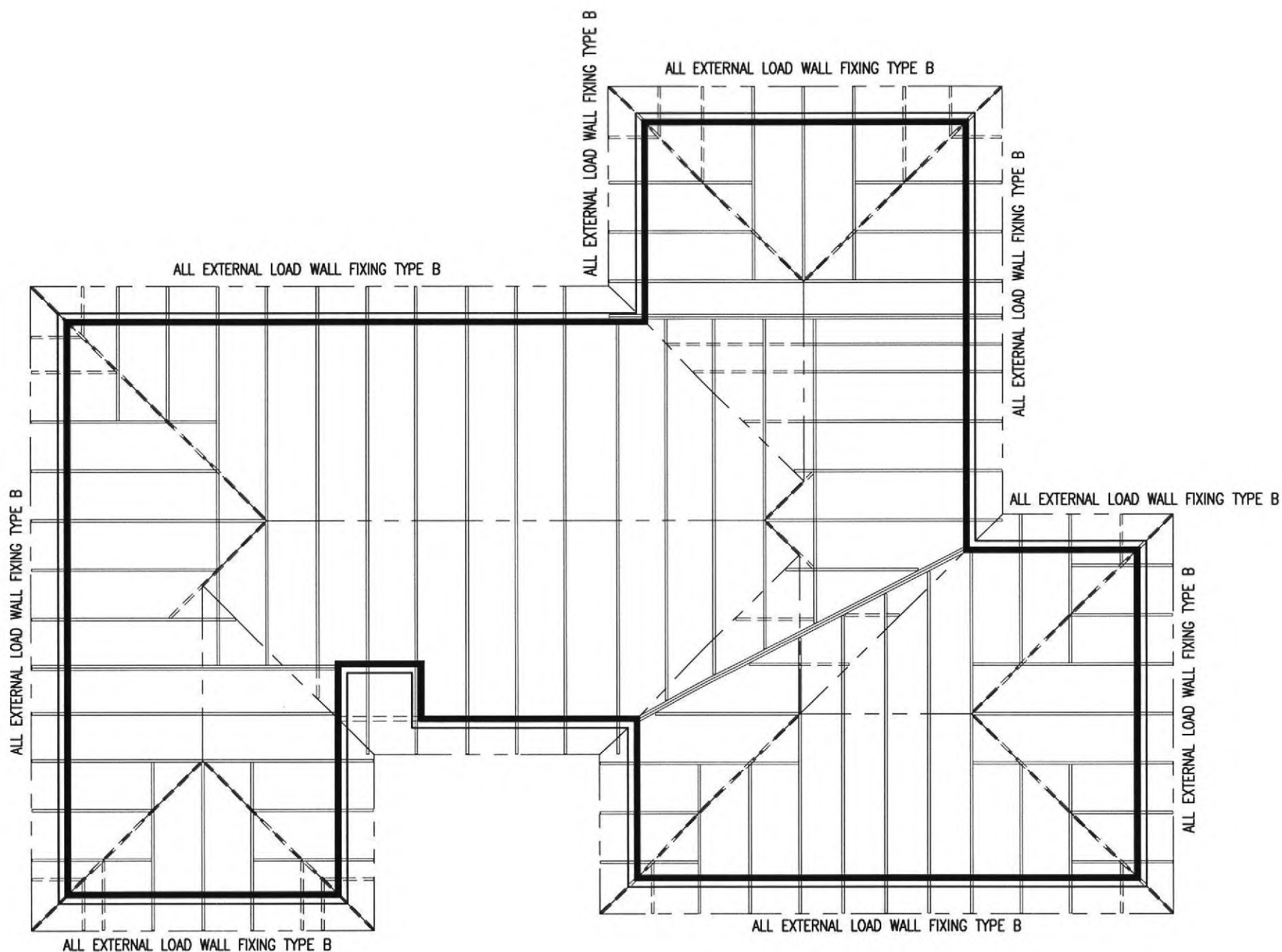


2/90X3.15
PLAIN STEEL
WIRE NAILS
DRIVEN
VERTICALLY
INTO STUD,
PLUS LUMBERLOK
STUD STRAP



LUMBERLOK
STUD STRAP

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GALWAY ALTERED	
TOP PLATE FIXINGS TYPE 'L' TO LUMBERLOK "STUD TO TOP PLATE FIXING SCHEDULE" ALTERNATIVE TO TABLE 8.18 NZS 3604:2011	
FIXING TYPE B XXXX	
WIND ZONE: HIGH (A)	
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SALES LEAH	
DRAWN J.C.	DATE 25/05/2015
REVISED	
REVISED	
TAR148A	TOP PLATES
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE 1:100 ON A3	SHEET 10

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10 JUL 2015
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ELECTRICIANS TO ENSURE
THAT ALL POWER POINTS AND
LIGHT SWITCHES ARE MIN.
90MM FROM EDGE OF ALL
BRACE WALLS. AS PER GIB
EZYBRACE SYSTEMS GUIDE.



GALWAY ALTERED

ELECTRICAL LEGEND

ALLOW TO CONFIRM POSITION OF FITTINGS
ON SITE IN CONSULTATION WITH CLIENT.
ALLOW FOR HOBS, OVEN AND HOT WATER
CYLINDER WIRING.
ALLOW FOR TEMPORARY BUILDERS SUPPLY.
ALLOW FOR CONNECTIONS AND INSPN. FEES.

○	RECESSED LIGHT (CA RATED)	26
◦	LIGHT SWITCH	24
2 WAY	2 WAY LIGHT CIRCUIT	2
3:1	3:1 LIGHT/HEAT FAN DUCTED TO OUTSIDE INCLUDING WATERPROOF SWITCHES	0
●	SENSOR DOUBLE LIGHT	0
ADP▷	AUTO DOOR POINT (2 REMOTES)	2
▽▽	DOUBLE POWER POINT	16
▽	SINGLE POWER POINT	5
▽▽	HEATED TOWEL RAILS	0
▽▽	BATHROOM WALL HEATER	2
SKY▷	SKY CONNECTION	1
T▷	TV POINT	1
PH▷	PHONE JACK	2
RH▷	RANGE HOOD DUCTING/P.P. DUCTED TO OUTSIDE SOFFIT GRATE	1
SM○	SMOKE ALARM HARD WIRED WITH HUSH FACILITY	2
MAINS	MAINS	20M
METER BOX	METER BOX	1
DVS SYSTEM	DVS SYSTEM	0
PREWIRE FOR ALARM.	3 SENSORS, 1 KEYPAD, INTERNAL AND EXTERNAL SIREN AND PANIC BUTTON	0
●	2 IN 1 FAN LIGHT DUCTED TO OUTSIDE SOFFIT GRATE	2
SPA▷	SPA CONNECTION	0

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SALES LEAH

DRAWN J.C. DATE 25/05/2015

REVISED

REVISED

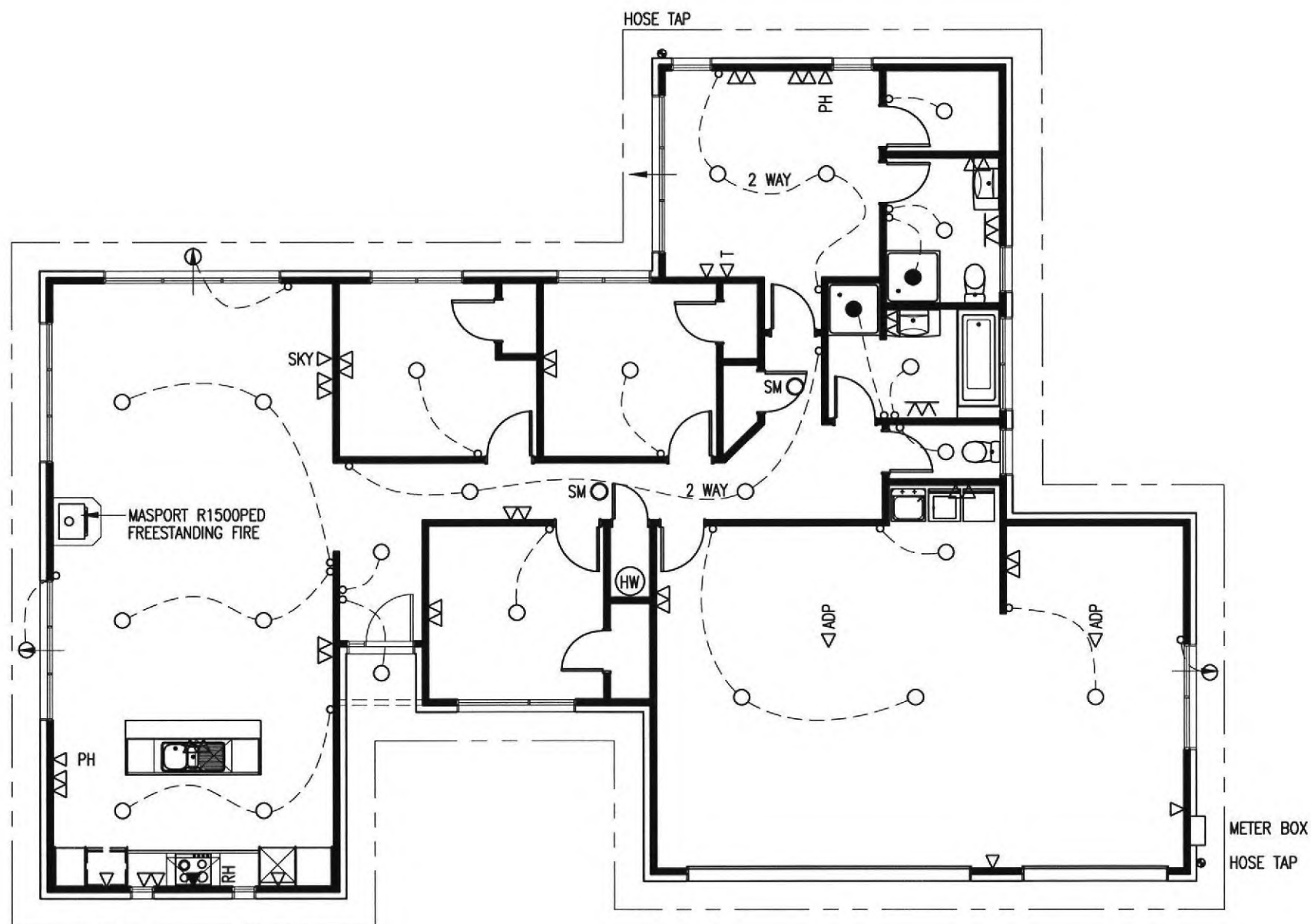
TAR148A ELECTRICAL

C & J BLAKE

POHUTUKAWA PLACE

BELL BLOCK

SCALE 1:100 ON A3 SHEET 11



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ELECTRICIANS TO ENSURE
THAT ALL POWER POINTS AND
LIGHT SWITCHES ARE MIN.
90MM FROM EDGE OF ALL
BRACE WALLS. AS PER GIB
EZYBRACE SYSTEMS GUIDE.

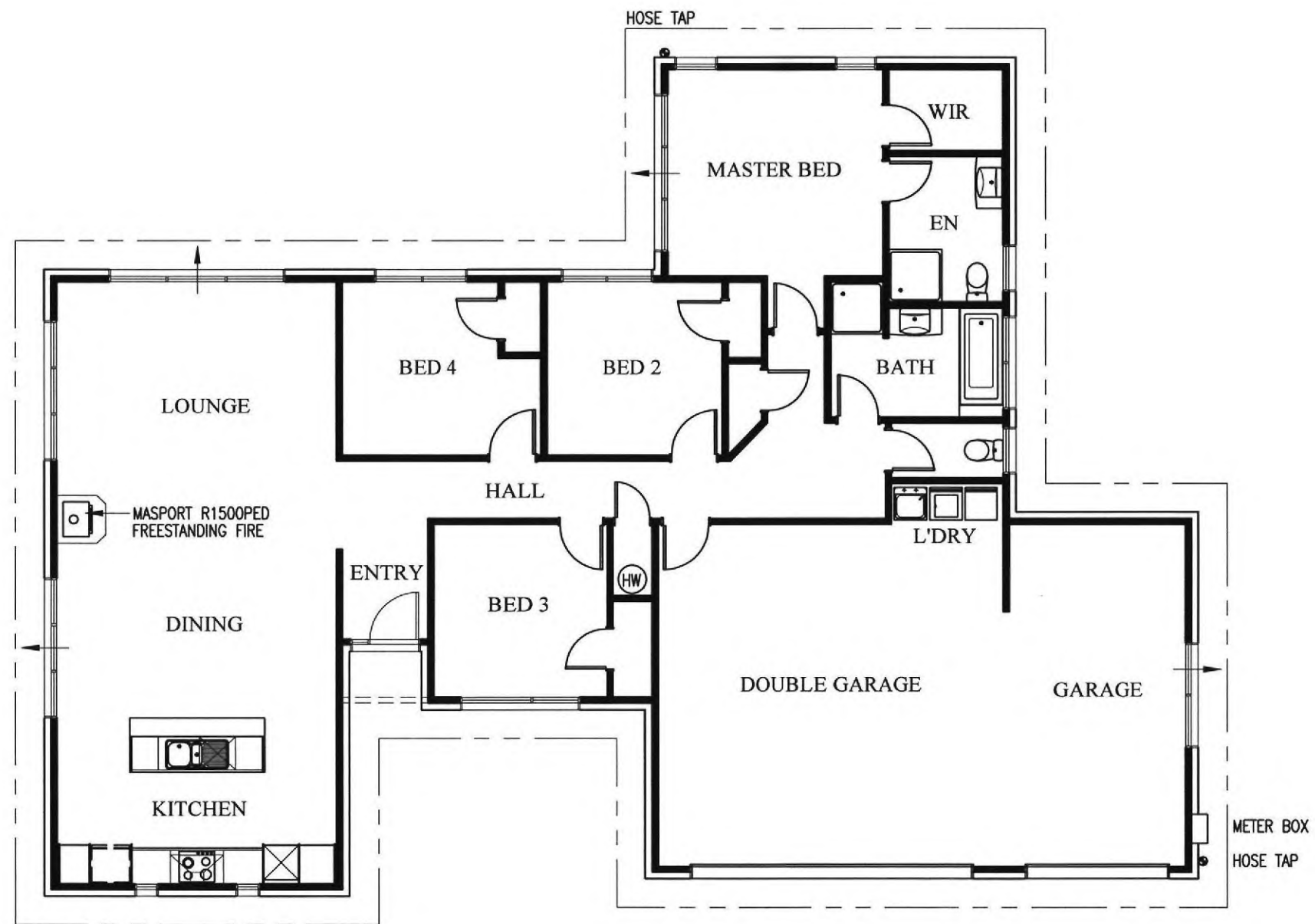


GALWAY ALTERED
ELECTRICAL LEGEND

- ALLOW TO CONFIRM POSITION OF FITTINGS
ON SITE IN CONSULTATION WITH CLIENT.
ALLOW FOR HOBS, OVEN AND HOT WATER
CYLINDER WIRING.
ALLOW FOR TEMPORARY BUILDERS SUPPLY.
ALLOW FOR CONNECTIONS AND INSPN. FEES.
- RECESSED LIGHT (CA RATED)
 - LIGHT SWITCH
 - 2 WAY 2 WAY LIGHT CIRCUIT
 - 3:1 LIGHT/HEAT FAN DUCTED
TO OUTSIDE INCLUDING
WATERPROOF SWITCHES
 - SENSOR DOUBLE LIGHT
 - ADP▷ AUTO DOOR POINT (2 REMOTES)
 - ▽▽ DOUBLE POWER POINT
 - ▽ SINGLE POWER POINT
 - ▽ HEATED TOWEL RAILS
 - ▽ BATHROOM WALL HEATER
 - SKY▷ SKY CONNECTION
 - T▷ TV POINT
 - PH▷ PHONE JACK
 - RH▷ RANGE HOOD DUCTING/P.P.
DUCTED TO OUTSIDE SOFFIT GRATE
 - SM○ SMOKE ALARM HARD WIRED
WITH HUSH FACILITY
 - MAINS
 - METER BOX
 - DVS SYSTEM
 - PREWIRE FOR ALARM. 3 SENSORS,
1 KEYPAD, INTERNAL AND EXTERNAL
SIREN AND PANIC BUTTON
 - 2 IN 1 FAN LIGHT
DUCTED TO OUTSIDE SOFFIT GRATE
 - SPA▷ SPA CONNECTION

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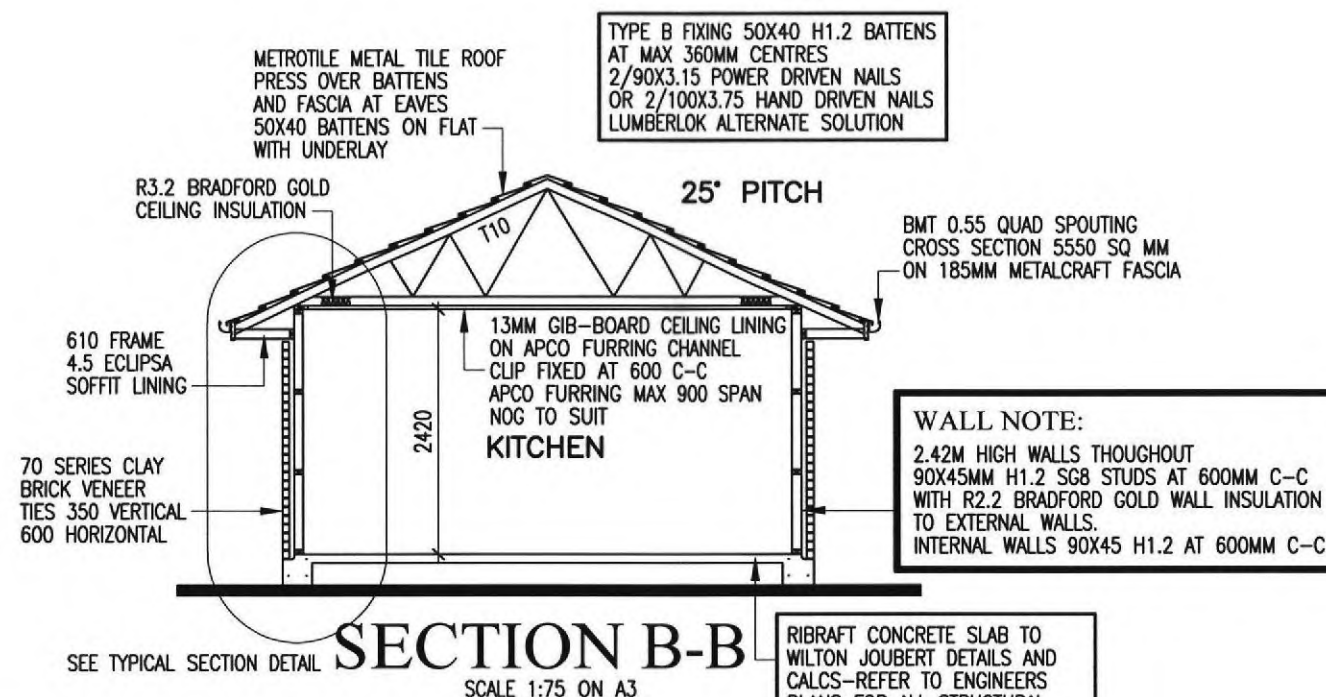
SALES LEAH	
DRAWN J.C.	DATE 25/05/2015
REVISED	
REVISED	
TAR148A	ELECTRICAL
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE 1:100 ON A3	SHEET 12



FIXINGS NOTE:

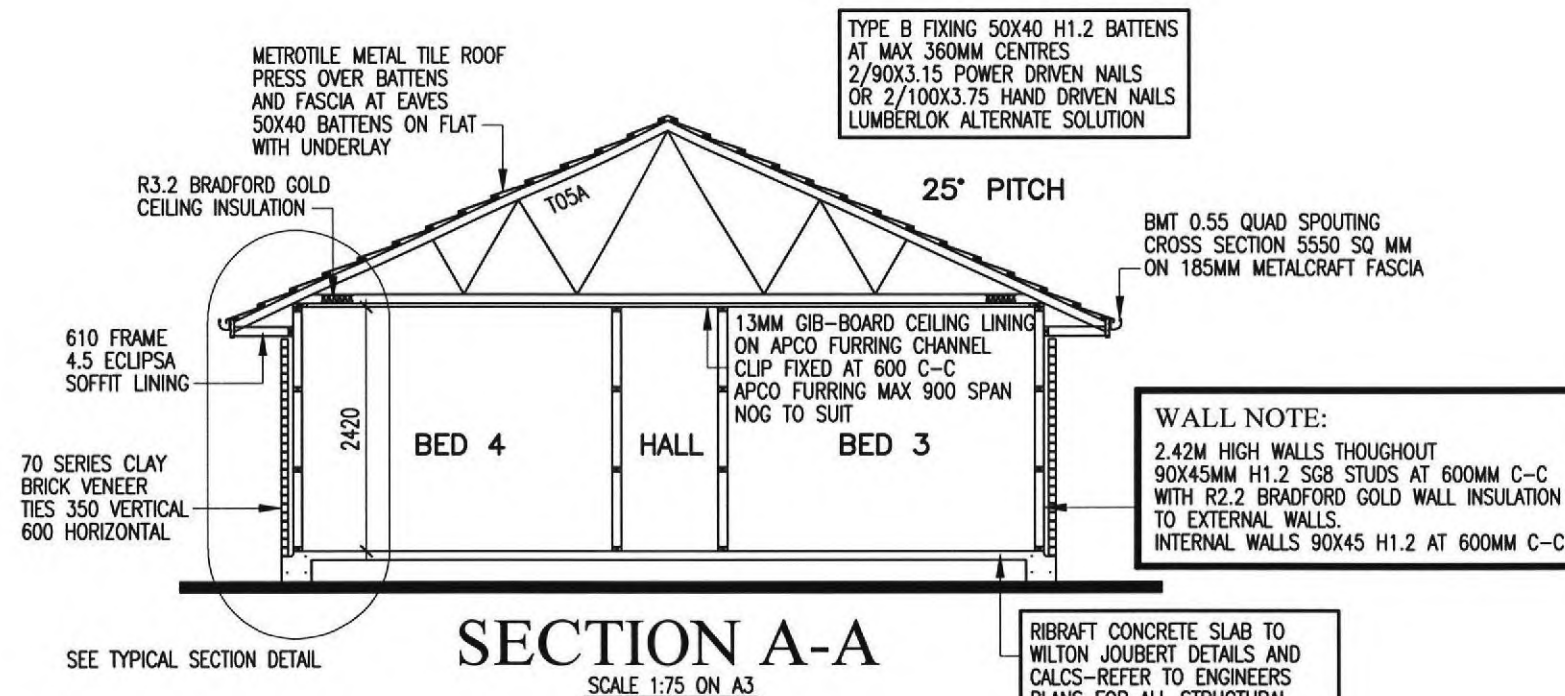
TYPE 304 S.S. FOR FIXINGS IN CONTACT WITH TIMBER TREATED WITH COPPER AZOLE OR ALKALINE COPPER QUATERNARY (ACQ) PRESERVATIVES, WHERE USED IN EXPOSED OR SHELTERED LOCATIONS. HOT-DIPPED GALV. FOR ALL OTHER LOCATIONS.

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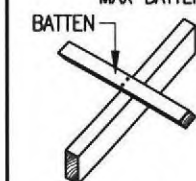
SEE TYPICAL SECTION DETAIL

RIBRAFT CONCRETE SLAB TO WILTON JOUBERT DETAILS AND CALCS-REFER TO ENGINEERS PLANS FOR ALL STRUCTURAL DETAILS, SAW CUTS, SHEAR KEYS AND SUPPLEMENTARY STEEL



SEE TYPICAL SECTION DETAIL

RIBRAFT CONCRETE SLAB TO WILTON JOUBERT DETAILS AND CALCS-REFER TO ENGINEERS PLANS FOR ALL STRUCTURAL DETAILS, SAW CUTS, SHEAR KEYS AND SUPPLEMENTARY STEEL

BATTEN FIXING	
NOTES	
FIXING DEFINITIONS	
NAIL:	90MM X 3.15MMØ POWER-DRIVEN OR 100MM X 3.75MMØ HAND-DRIVEN
SCREW:	80MM X 10 GAUGE LUMBERLOK BLUE
WIREDOG:	LEFT OR RIGHT LUMBERLOK WIREDOG
BATTEN FIXING FOR LIGHT WEIGHT ROOF HIGH WIND ZONE	
MAX BATTEN SPAN 900MM MAX BATTEN CENTRES 370MM	
	
FIXING TYPE B 0.8KN 2 NAILS	
FOR PURLIN / BATTEN SPLICE FIXING OPTIONS REFER TO LUMBERLOK "PURLIN & BATTEN FIXING CHART"	
BATTEN FIXINGS TYPE 'L' TO LUMBERLOK "PURLIN & BATTEN FIXING CHART" ALTERNATIVE TO TABLES 10.10 & 10.12 NZS 3604:2011	
	
GALWAY ALTERED	
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REVISED	
REVISED	
TAR148A	SECTIONS
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE SHOWN ON A3	SHEET 13

TYPE B FIXING 50X40 H1.2 BATTENS
AT MAX 360MM CENTRES
2/90X3.15 POWER DRIVEN NAILS
OR 2/100X3.75 HAND DRIVEN NAILS
LUMBERLOK ALTERNATE SOLUTION

TRUSS FIXINGS REFER TO
PRECUT PLAN SHEET 8

BMT 0.55 QUAD SPOUTING
CROSS SECTION 5550 SQ MM
ON 185MM METALCRAFT FASCIA

THERMAKRAFT 215
TYPE R2 SELF
SUPPORTING UNDERLAY/PLATE PACKER
PULLED TAUT OVER
FASCIA AND SECURED
PRIOR TO INSTALLATION
OF FIRST TILES

METROTILE METAL TILE ROOF
PRESS OVER BATTENS
AND FASCIA AT EAVES
50X40 BATTENS ON FLAT

150X40 TRUSS

90X45 SOFFIT PLATE

HARDIFLEX OVER WINDOW
P.C. ALUM ALUMINIUM
HEAD FLASHING

ALUMINIUM JOINERY
SILL 15° MIN SLOPE

CROMFORD 200MM SUPERCOURSE
D.P.C. SILL FLASHING
TURN OUT 15MM AT BOTTOM
TO FORM DRIP EDGE
EXTEND 200MM EACH SIDE
OF WINDOW

VENTS AT 800 C-C BRICK
BELOW FOR WINDOWS
EXCEEDING 2400 LONG

MASONS BARRICADE
BUILDING PAPER
12MM BINDER STRAPS AT
300MM TO HOLD IN BATTS

70 SERIES CLAY BRICK VENEER
WITH TIES AT 350 VERTICAL
600 HORIZONTAL

BRICK TIES TO WITHIN BOTTOM
2 COURSES OF BRICK

BOTTOM PLATE ON CROMFORD
90MM SUPERCOURSE D.P.C.

2 COATS FLINTKOTE
(OR SUPERCOURSE)

WEEP HOLES 75X10MM
AT 800 C-C MAX

MIN 150MM UNPROTECTED GL
MIN 100MM PERMANENT PAVING

FINISHED GROUND LEVEL

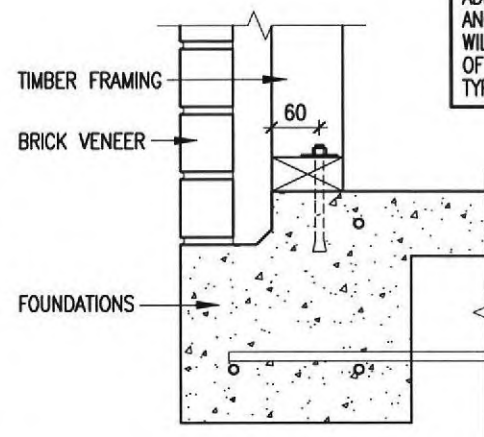
RIBRAFT CONCRETE SLAB TO
WILTON JOUBERT DETAILS AND
CALCS-REFER TO ENGINEERS
PLANS FOR ALL STRUCTURAL
AND SUPPLEMENTARY STEEL

TYPICAL SECTION DETAILS

SCALE 1:10

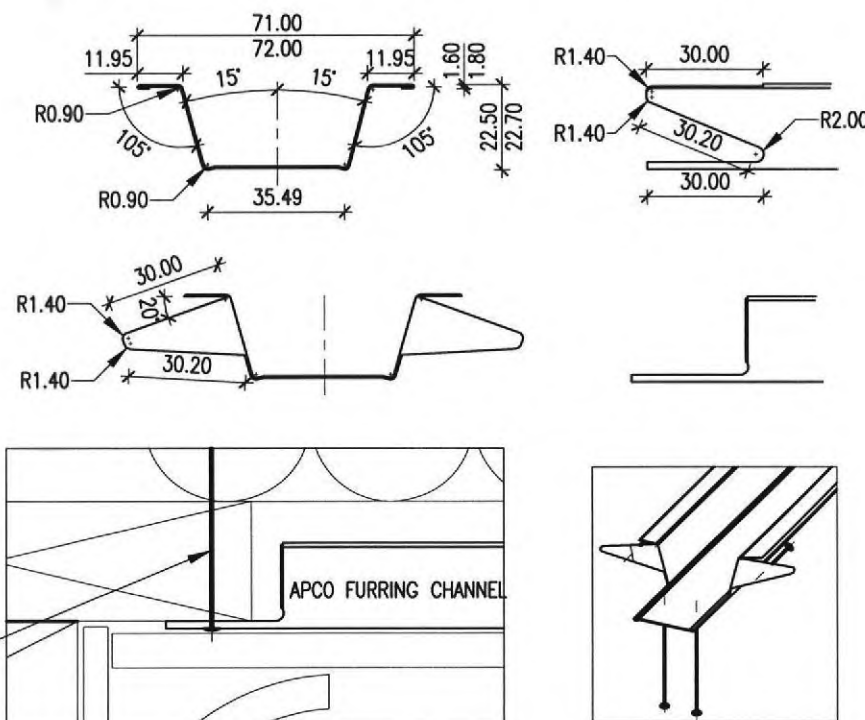
WALL NOTE:

2.42M HIGH WALLS THROUGHTOUT
90X45MM H1.2 SG8 STUDS AT 600MM C-C
WITH R2.2 BRADFORD GOLD WALL INSULATION
TO EXTERNAL WALLS.
INTERNAL WALLS 90X45 H1.2 AT 600MM C-C



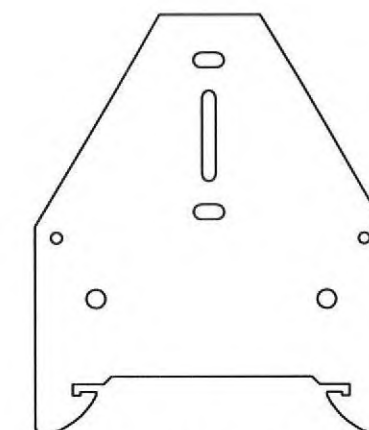
BOTTOM PLATE FIXING ANCHOR
DETAIL (BRICK VENEER)

SCALE 1:10 ON A3



APCO FURRING CHANNEL

SCALE 1:2 ON A3



APCO NAIL CLIP

SCALE 1:2 ON A3

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RAMSET 12120BPAG ANCHORS
900 C-C MAX AND MIN 150MM
FROM CORNERS 50 X 50 X 3MM
GALVANISED WASHERS
MIN 75MM BOLT EMBEDMENT

ADDITIONAL RAMSET AS12150GH
ANCHOR WITH GIB HANDIBRAC
WILL BE REQUIRED AT EACH END
OF INTERNAL GIB BRACE PANELS
GSP-H, BL1-H, BLG-H, BLP-H

ADDITIONAL RAMSET AS12150GH
ANCHOR WITH GIB HANDIBRAC
WILL BE REQUIRED AT EACH END
OF EXTERNAL PLY BRACE PANELS
TYPE EP1, EPG, GSP-H, BLP-H

A 75MM X 4MM DIAMETER NAIL MUST
BE APPLIED MAX 600 C-C
RAMSET HD875 DRIVE PIN
WITH 16MM DIAMETER WASHER
TO RAMSET TECHNICAL REPORT SR125
THROUGH THE BOTTOM PLATE
INTO THE CONCRETE, AT NO LESS
THAN 70MM FROM THE CONCRETE EDGE.
WHEN USING A SHEET WALL BRACING
ELEMENT, A FIXING ANCHOR MUST BE
POSITIONED WITHIN 100MM FOR GIB
FROM THE END OF THAT ELEMENT.
POSITIONED WITHIN 150MM FOR PLY
FROM THE END OF THAT ELEMENT.

INTERNAL FIXING



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DRAWN J.C. DATE 25/05/2015

REVISED

REVISED

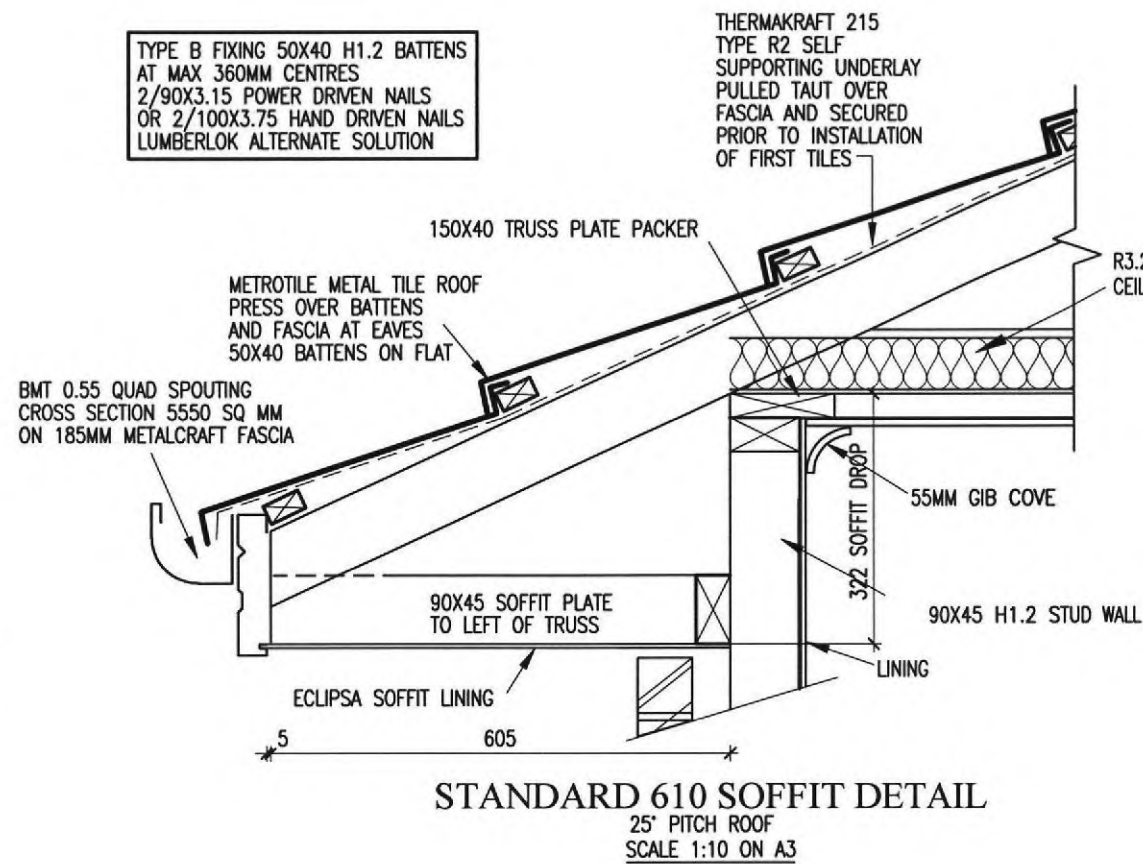
TAR148A DETAILS

C & J BLAKE

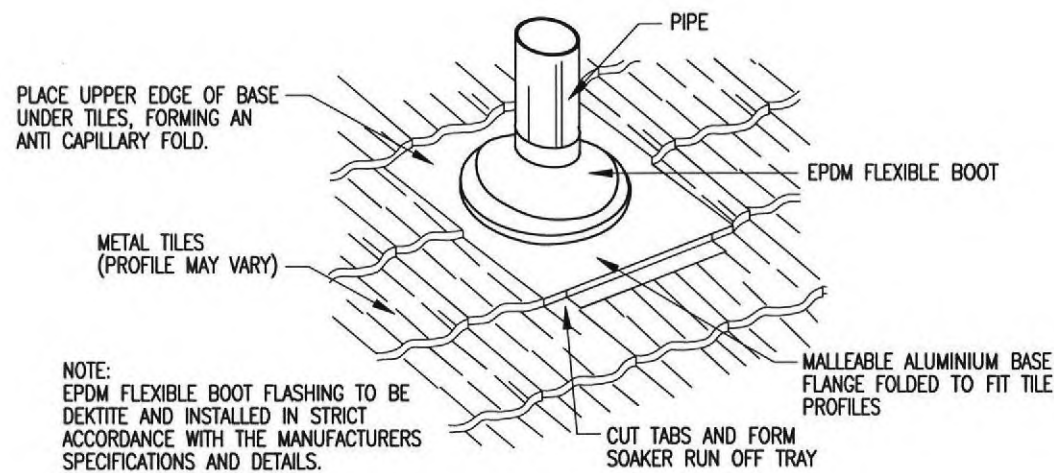
POHUTUKAWA PLACE

BELL BLOCK

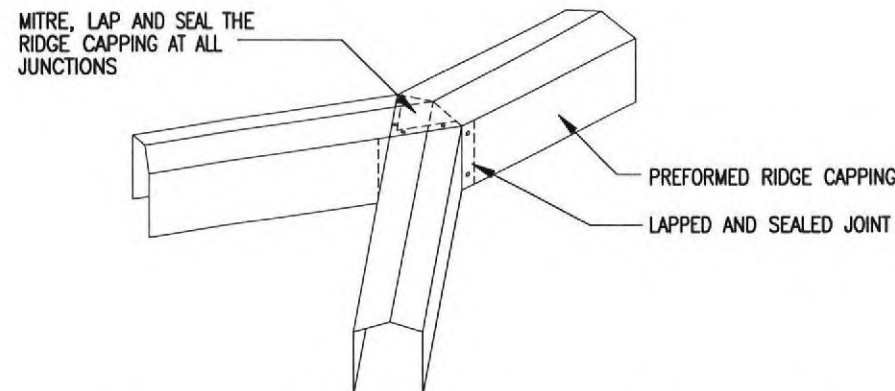
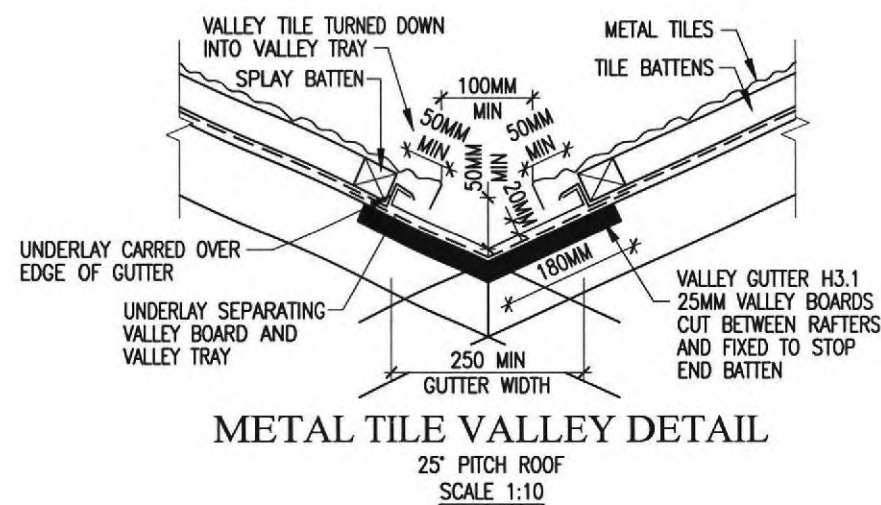
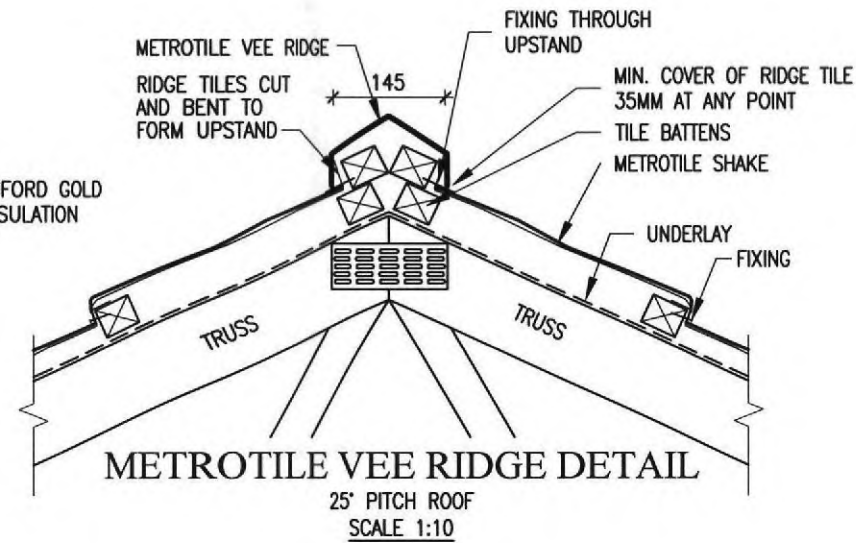
SCALE SHOWN ON A3 SHEET 14



TRUSS FIXINGS REFER TO PRECUT PLAN SHEET 8



PIPE PENETRATION FOR METAL TILE



RIDGE TO HIP FLASHING ALTERNATIVE

NOTE: FOR ALTERNATIVE RIDGE PROFILES, RIDGE TO HIP CAPPING MUST BE PERFORMED TO SUIT PROFILE

INSULATION SCHEDULE NON SOLID CONSTRUCTION REQUIRED MINIMUM R VALUES

LOCATION	CLIMATE ZONE 1	CLIMATE ZONE 2	CLIMATE ZONE 3
ROOF	R2.9	R2.9	R3.3
WALL	R1.9	R1.9	R2.0
FLOOR	R1.3	R1.3	R1.3
VERT GLAZING	0.26	0.26	R0.26
SKYLIGHTS	0.26	0.26	R0.31

ORIENTATION	WINDOW M ²	WALL M ²	% GLAZING
NORTH	11.52	39.71	29.01%
EAST	3.52	36.95	9.53%
SOUTH	5.58	39.71	14.05%
WEST	15.00	36.95	40.60%
TOTAL	35.62	153.31	23.23%
TOTAL E,S,W	24.10	113.60	21.21%

WALL	70MM MONIERBRICK, 90MM FRAMING, 50MM CAVITY, STUDS AT 600 C-C, 800MM NOG SPACING. REQUIRES R1.9 - USE R2.2 (R1.9) BRADFORD GOLD		
ROOF	13MM GIB-BOARD CEILING LINING ON METAL BATTENS, CLIP FIX AT 600 C-C, METROTILE SHAKE METAL TILE ROOF ON 90MM DEEP RAFTERS AT 900 SPACING. CA RATED DOWNLIGHTS INSTALLED TO NZECP 54. REQUIRES R2.9 - USE R3.2 (R3.1) BRADFORD GOLD		
FLOOR	FLOOR AREA	200.40 SQ M	
	FOUNDATION PERIMETER	75.82 M	
	AREA/PERIMETER RATIO	2.64	
	CONCRETE RIBRAFT FLOOR		
	INSULATED FLOOR AREA	141.87 SQ M	
	R1.5 R VALUE		
WINDOW	DOUBLE GLAZING. REQUIRES R0.26		

NOTE: CALCULATIONS FOR INSULATION SCHEDULE IS OF THE HOUSE AND EXCLUDES THE DOUBLE GARAGE. NOTE THAT THE INTERNAL WALL BETWEEN HOUSE AND DOUBLE GARAGE IS ALSO INSULATED. REQUIREMENTS MET WITH COMPONENTS SHOWN IN SCHEDULE METHOD.

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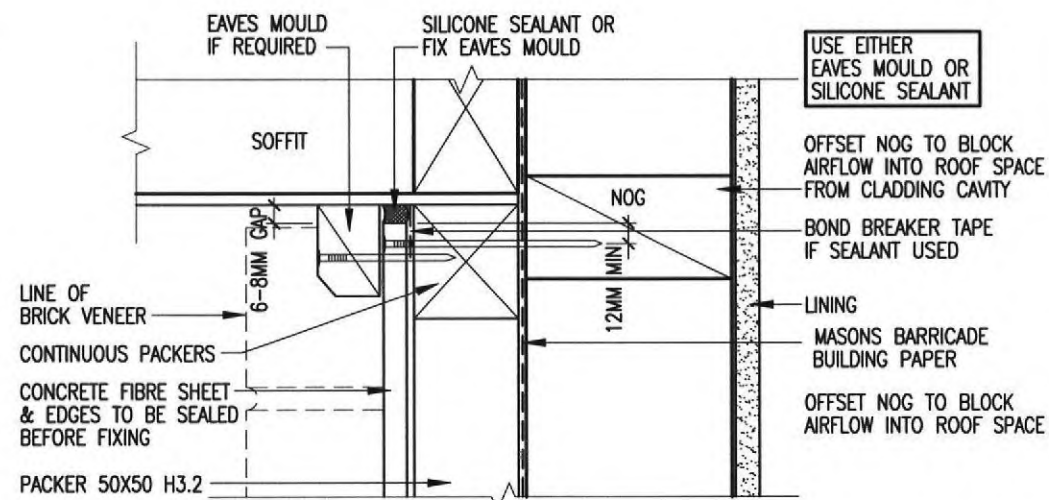
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REVISED	

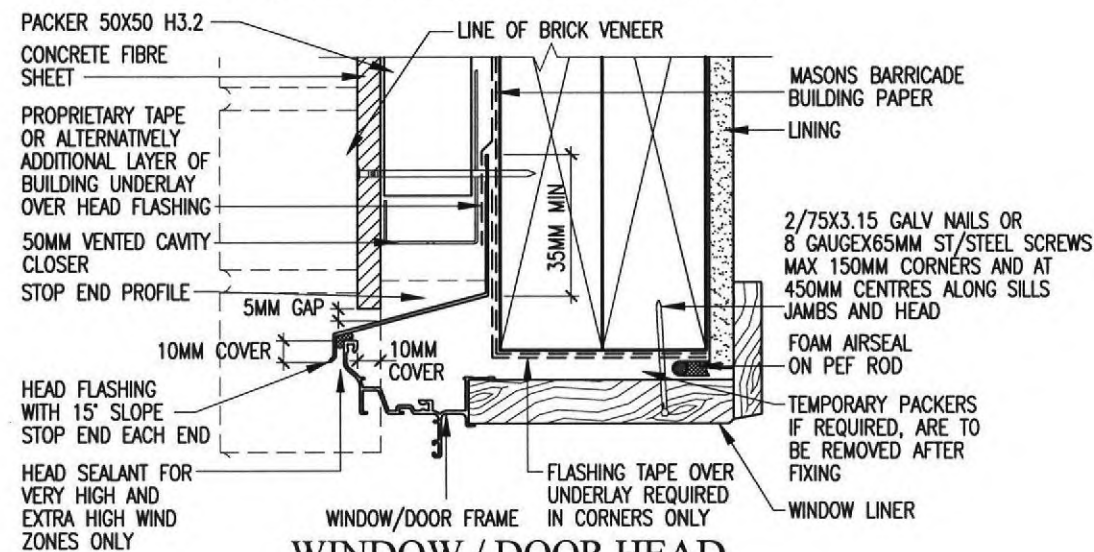
TAR148A ROOF DETAILS

C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCK

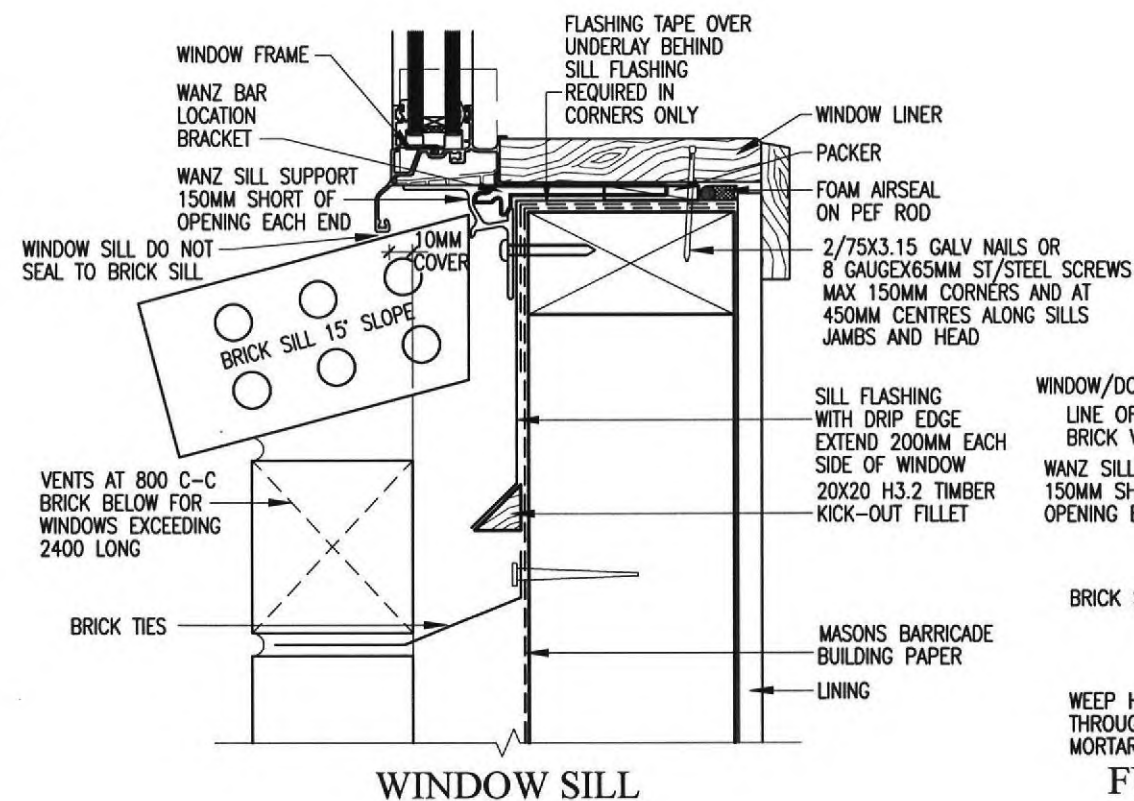
SCALE SHOWN ON A3	SHEET	15
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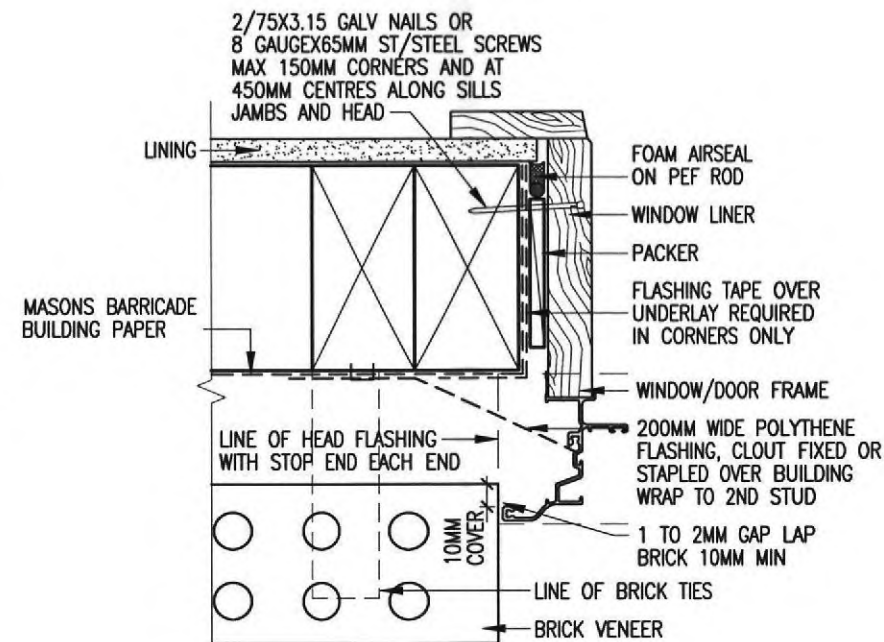
CONCRETE FIBRE SHEET SOFFIT



WINDOW / DOOR HEAD



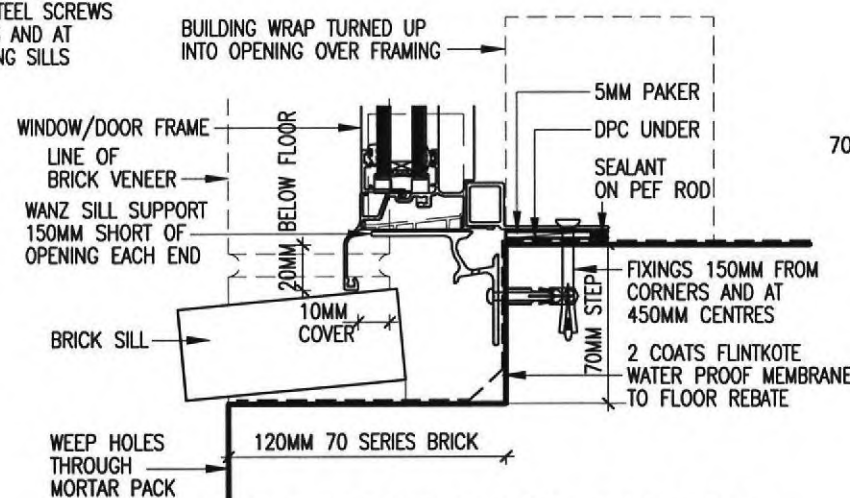
WINDOW SILL



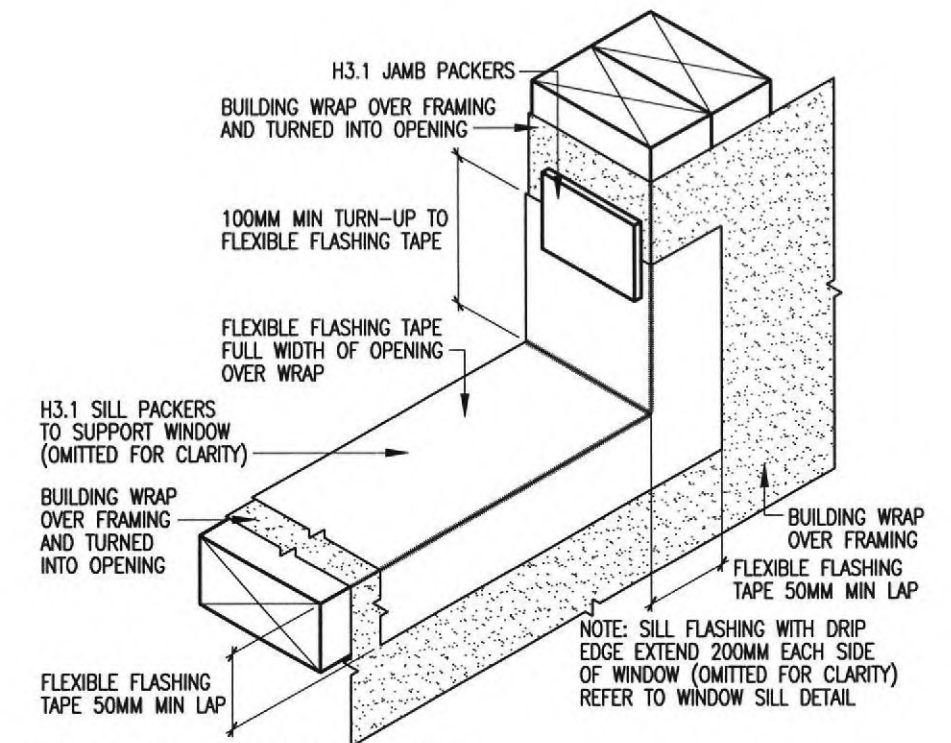
WINDOW / DOOR JAMB

- NOTE:
- (1) WINDOW PROFILE TO BE SELECTED TO ACHIEVE COVER SHOWN IN DETAILS
 - (2) ARCHITRAVES ARE SHOWN FOR CONSISTENCY ONLY, DETAIL MAY BE USED WITH REBATED LINER
 - (3) MAKE ALLOWANCE BETWEEN PACKER AT SILLS FOR SUPPORT BRACKETS FOR LARGE WINDOWS. SUCH BRACKETS REQUIRE SPECIFIC DESIGN, AND SHALL BE SUPPLIED BY THE WINDOW MANUFACTURER
 - (4) WINDOW JAMBS TO BE H3.1 TAN

NOTE JAMB FLASHINGS TO OVERLAP SILL FLASHING



FULL HEIGHT WINDOW / DOOR SILL



WINDOW OPENING SILL

BRICK VENEER CLADDING

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DRAWN J.C. DATE 25/05/2015

REVISED

REVISED

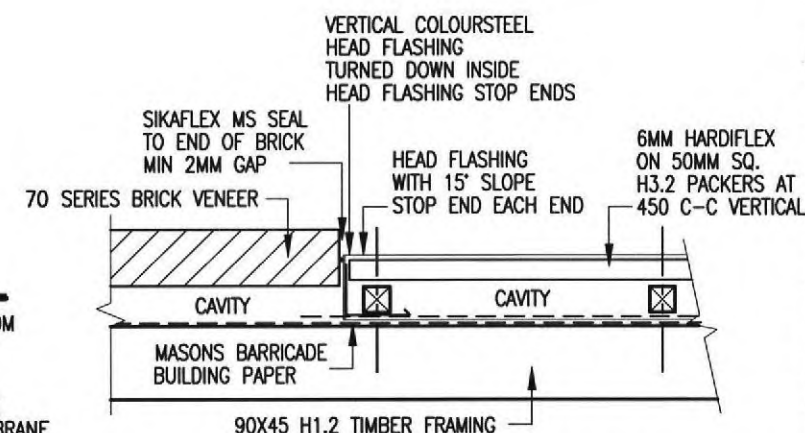
TAR148A WINDOW DETAILS

C & J BLAKE

POHUTUKAWA PLACE

BELL BLOCK

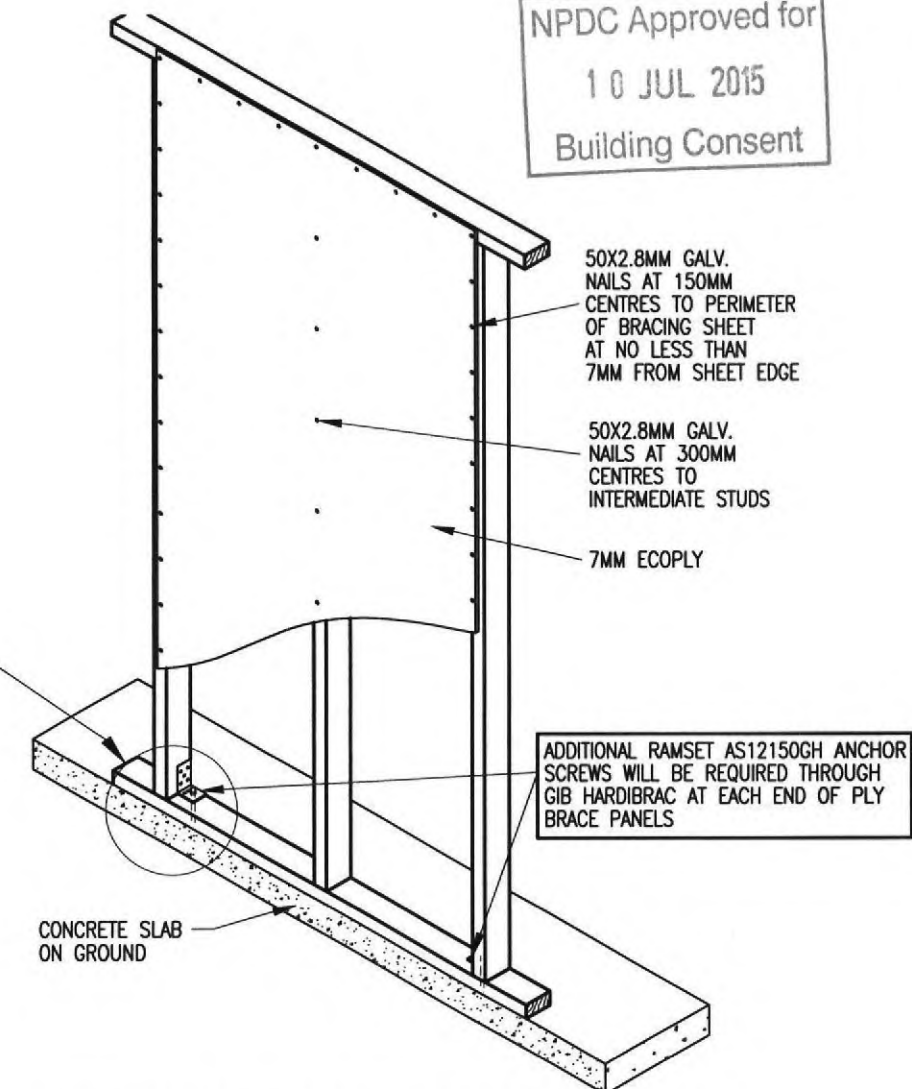
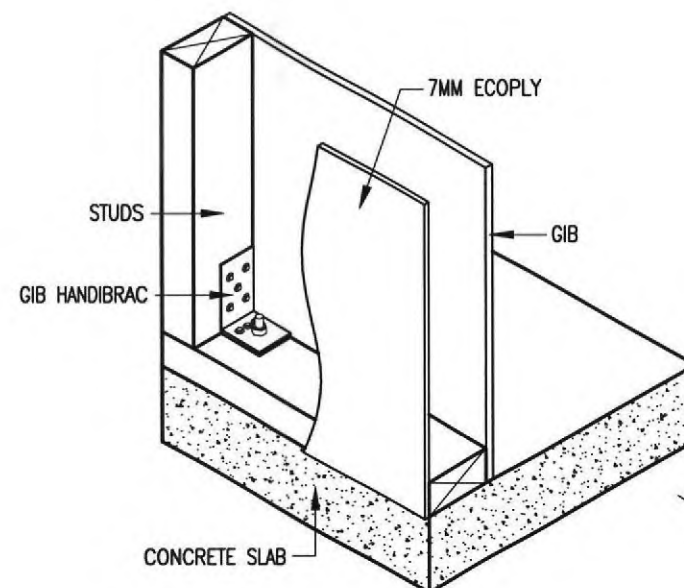
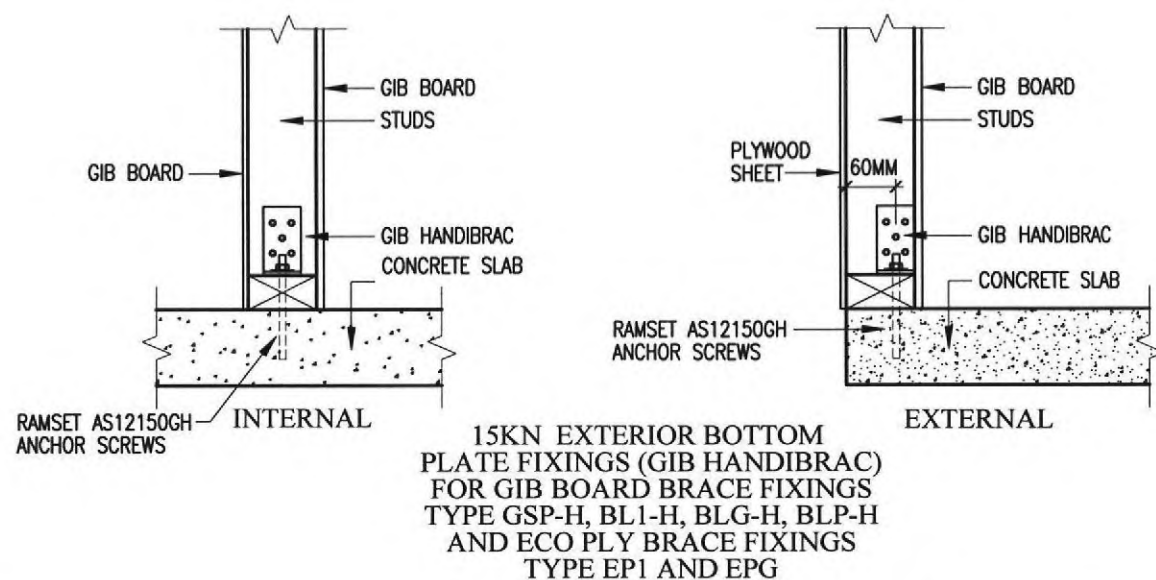
SCALE SHOWN ON A3 SHEET 16



HARDIFLEX/BRICK VENEER WINDOW HEADS TO UNDER FLAT SOFFITS

PLAN VIEW

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FASTENING THE GIB BD BRACING ELEMENT REQUIRING HOLD DOWNS TO CONC SLABS
TYPE GSP-H, BL1-H, BLG-H, BLP-H

EXTERNAL WALLS

FASTENING OF THE BOTTOM PLATE OF A GIB WALL BRACING ELEMENT TO CONCRETE FLOORS MUST BE IN ACCORDANCE WITH NZS3604 FOR EXTERNAL WALL, WITH AN ADDITIONAL 12MM (15KN) RAMSET AS12150GH ANCHOR SCREW AND GIB HANDIBRAC (RECOMMENDED METHOD) TO EACH END OF BRACE PANEL.

INTERNAL WALLS

THE BOTTOM PLATE OF GIB BRACING MAY BE FIXED USING 75x3.8mm SHOT FIRED FASTENERS FITTED WITH 16mm DISCS, SPACED AT 150mm AND 300mm FROM THE END STUDS AND THEREAFTER AT 600mm CENTRES.
AN ADDITIONAL 12MM (15KN) RAMSET AS12150GH ANCHOR SCREW AND GIB HANDIBRAC (RECOMMENDED METHOD) TO EACH END OF BRACE PANEL.

OPENINGS IN GIBALTER BOARD

1. OPENINGS 90x90 MAX (POWER/LIGHT SWITCHES) MAY BE NO CLOSER THAN 90mm TO EDGE OF BRACE SHEETS. BLOCKING MAY BE REQUIRED TO ACHIEVE 90mm
2. WALL OPENINGS ALLOWED IN MIDDLE THIRD OF ELEMENT OPENINGS NAILED TO TRIMMERS AT 150 C-C MAX REFER GIB EZYBRACE SYSTEMS BOOK PAGE 17

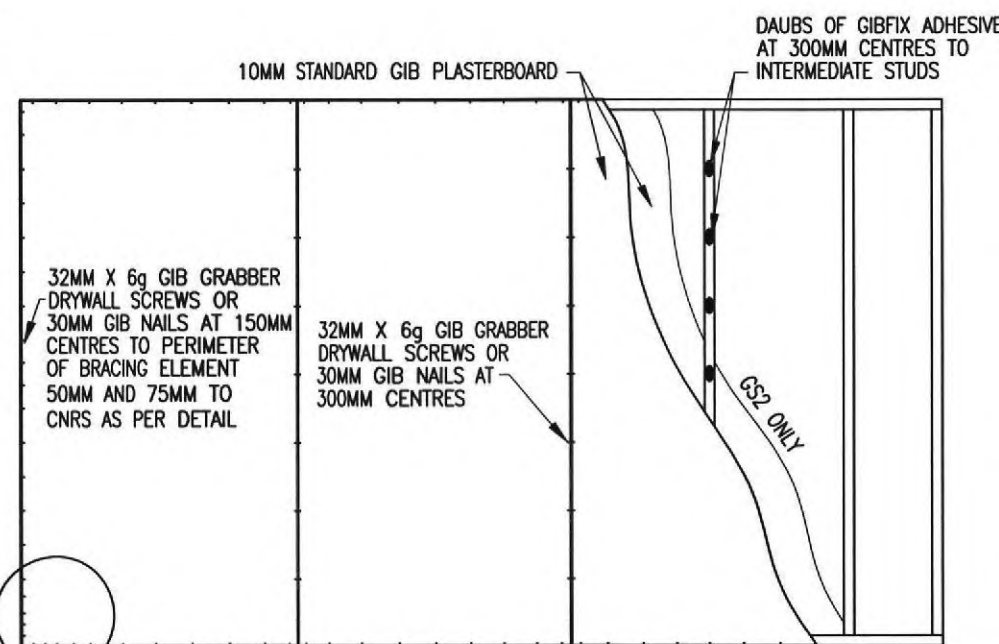
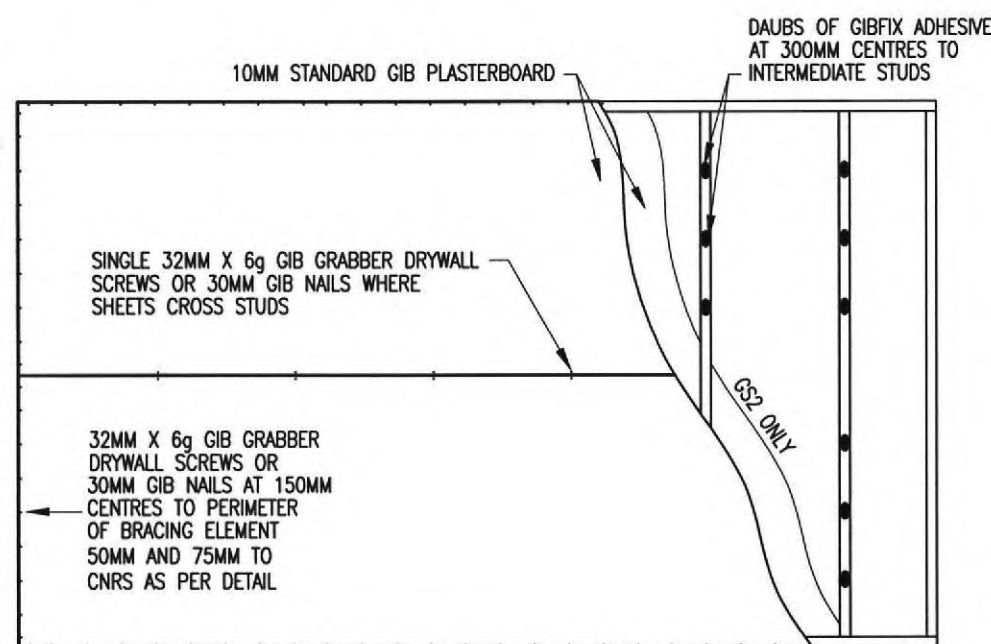
OPENINGS IN ECOPLY BRACING

1. OPENINGS 90x90 MAX (POWER/LIGHT SWITCHES) MAY BE NO CLOSER THAN 90mm TO EDGE OF BRACE SHEETS. BLOCKING MAY BE REQUIRED TO ACHIEVE 90mm
2. WASTE PIPE OPENINGS NOT EXCEEDING 150mm DIA CANNOT BE PLACED WITHIN 150mm OF SHEET EDGE REFER ECOPLY BRACING SYSTEMS SHEET 16

FASTENING THE GIBALTER BOARD BRACING ELEMENT GS1-N, GS2-N TO CONC SLABS

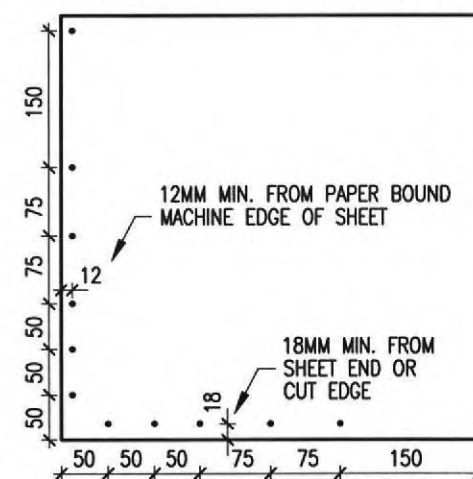
INTERNAL BRACING LINES, THE BOTTOM PLATE OF GIB BRACING ELEMENTS MAY BE FIXED USING 75x3.8mm SHOT FIRED FASTENERS FITTED WITH 16mm DISCS, SPACED AT 150mm AND 300mm FROM THE END STUDS AND THEREAFTER AT 600mm CENTRES.

EP1 AND EPG EXTERIOR PLY FIXING
PLY BRACE PANELS TO BE H3.2 TAN



SEE CORNER DETAIL

FASTENERS ARE PLACED AT 150MM CENTRES AROUND THE BRACING ELEMENT PERIMETER STARTING AT 50, 75 AND 150MM FROM THE BRACING ELEMENT CORNER. FASTENERS ARE PLACED NO CLOSER THAN 12MM TO A PAPER BOUND MACHINE EDGE OF THE SHEET AND NO CLOSER THAN 18MM TO A SHEET END OR CUT EDGE.



CORNER FASTENING DETAILS
FOR STANDARD GIB BRACING ELEMENT

HORIZONTAL FIXING GIB GS1-N AND GIB GS2-N BRACE FIXING **VERTICAL FIXING**
GIB GS1-N (LINED ONE SIDE)
GIB GS2-N (LINED BOTH SIDES)

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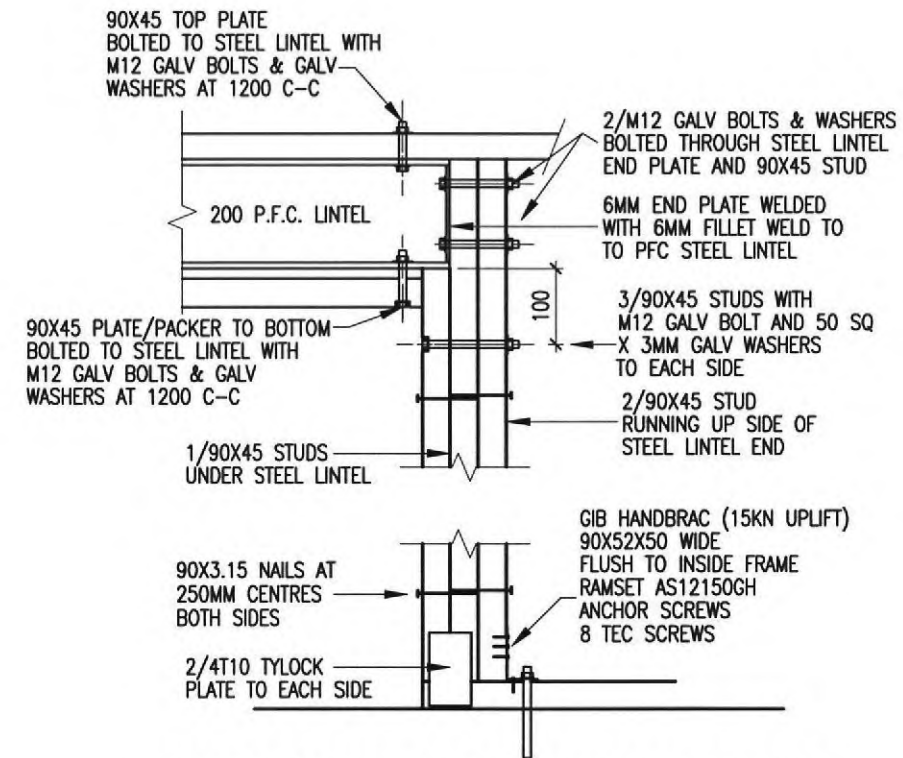
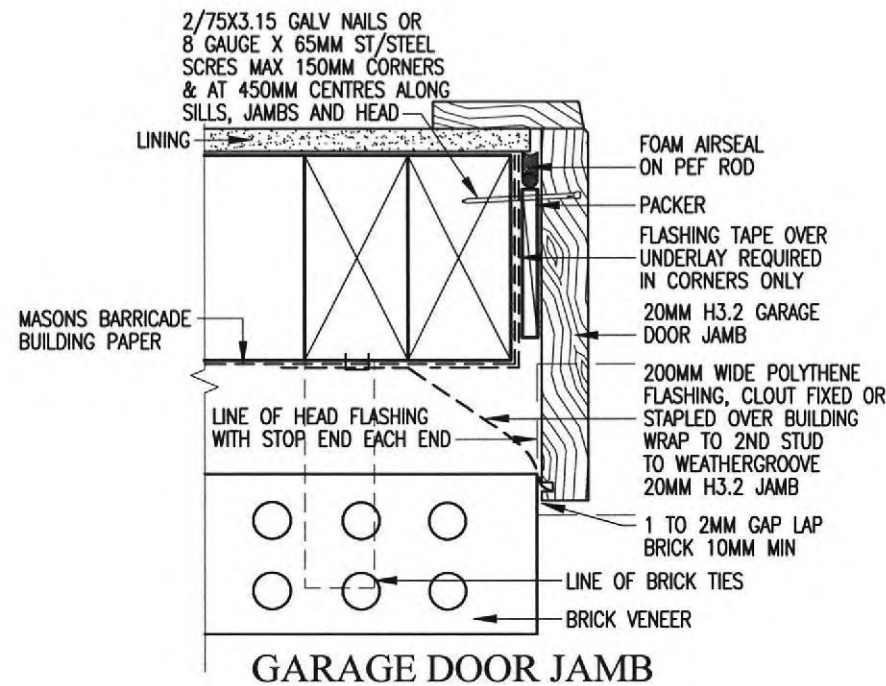
REVISED

REVISED

TAR148A BRACE DETAILS

C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCK

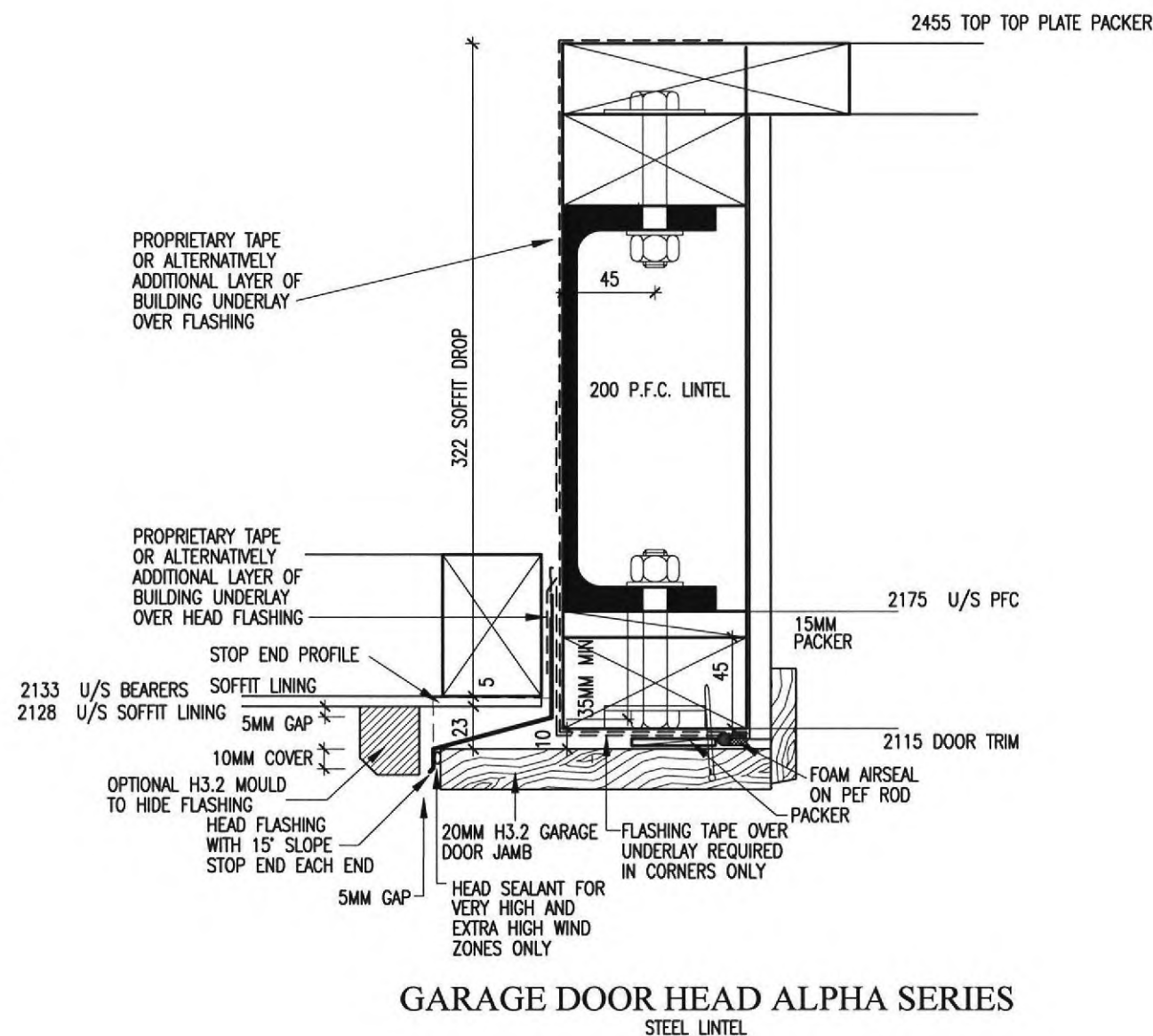
SCALE SHOWN ON A3 SHEET 17



GARAGE 200 PFC CHANNEL DETAIL

SCALE 1:12.5 ON A3

STEEL TO BE PRIMED ALTEX DEVOE CATHA-COAT TO ACHIEVE A D.F.T. OF 75 MICRONS
APPLY 1 COAT ALTEX DEVOE DEEVSHIELD 236 TO ACHIEVE A D.F.T. OF 150 MICRONS



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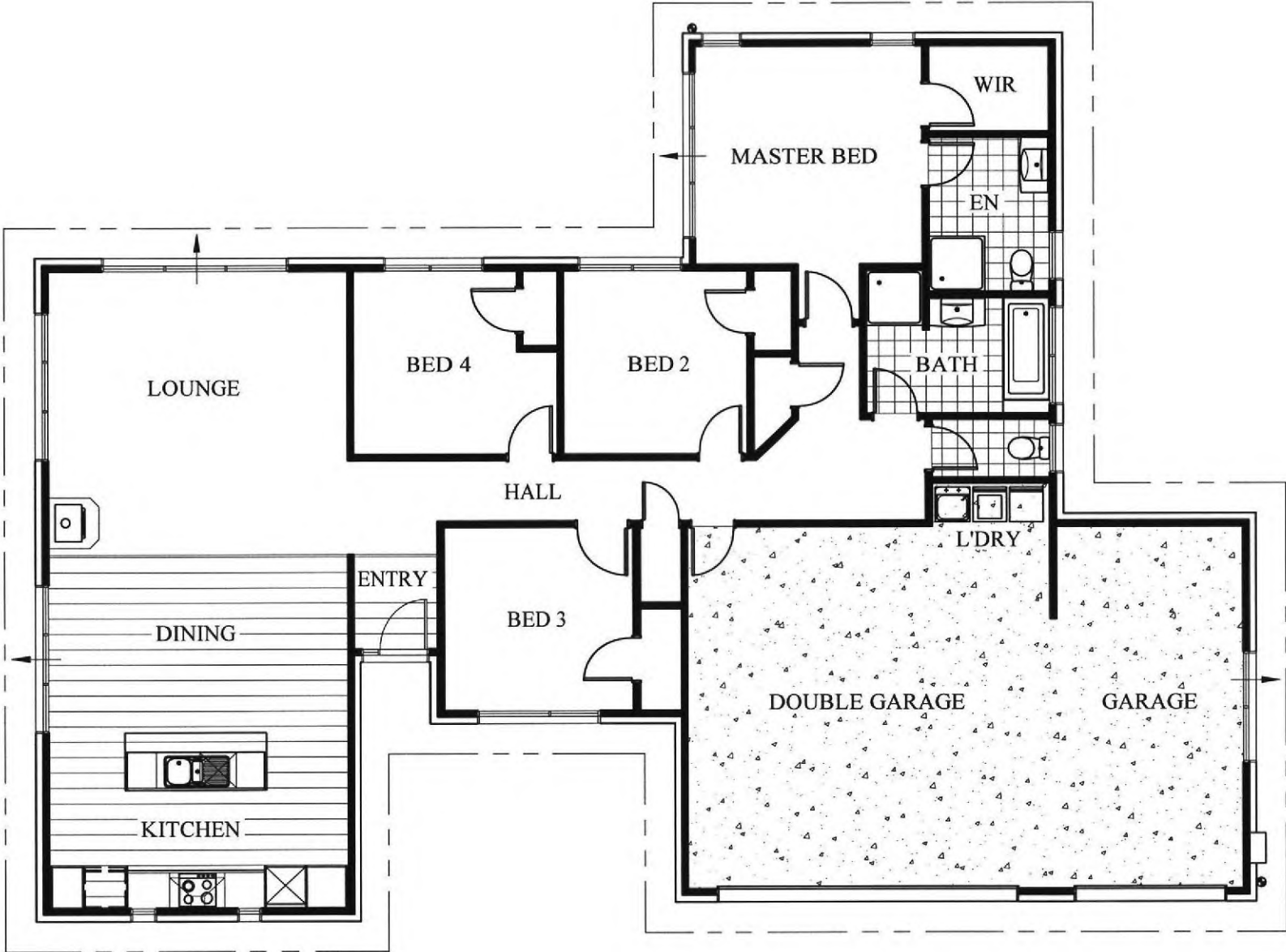
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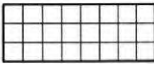
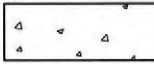
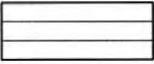
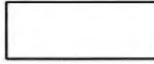
SALES LEAH	
DRAWN J.C.	DATE 25/05/2015
REVISED	4/6/2015
REVISED	

TAR148 GARAGE DOOR DETAILS

C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE SHOWN ON A3	SHEET 17

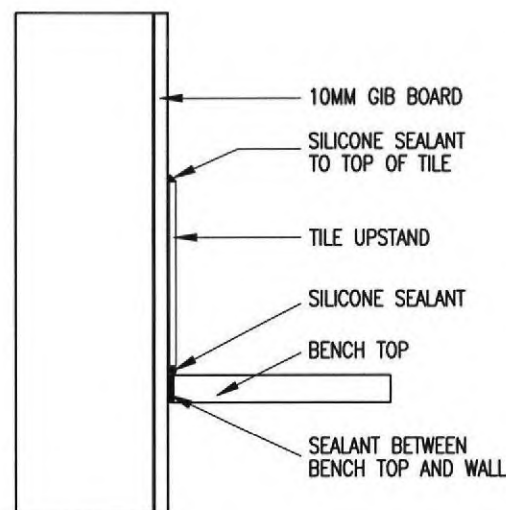
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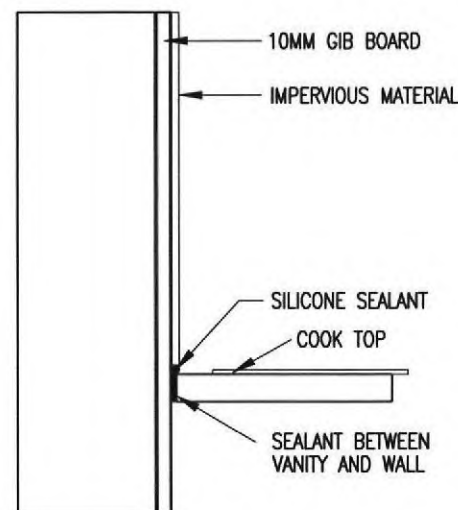
TILES  CONCRETE  KARNDEN  CARPET 



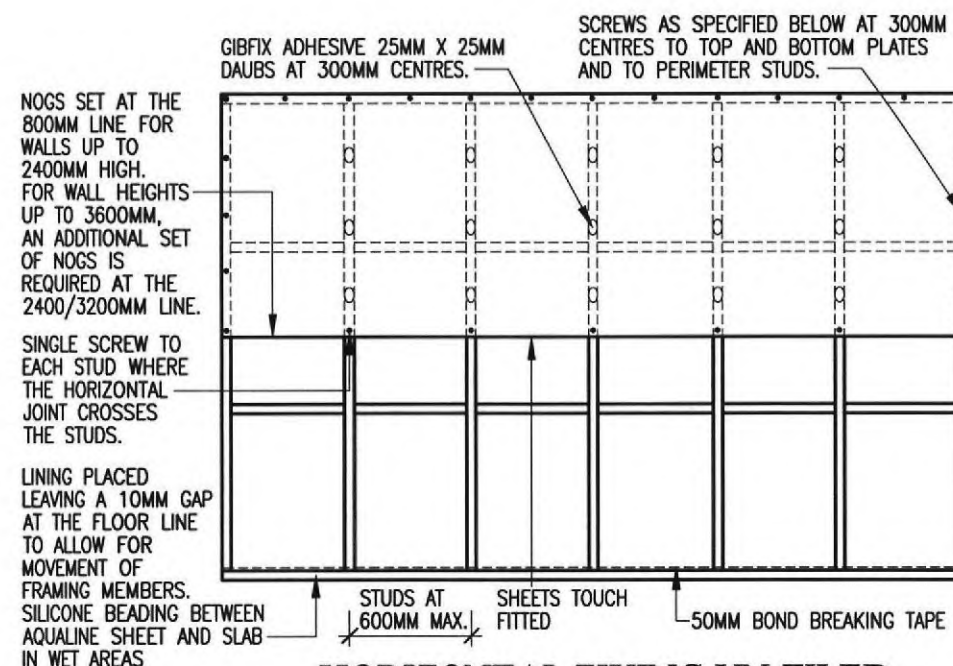
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TAR148A FLOOR COVERINGS	
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE SHOWN ON A3	SHEET 19



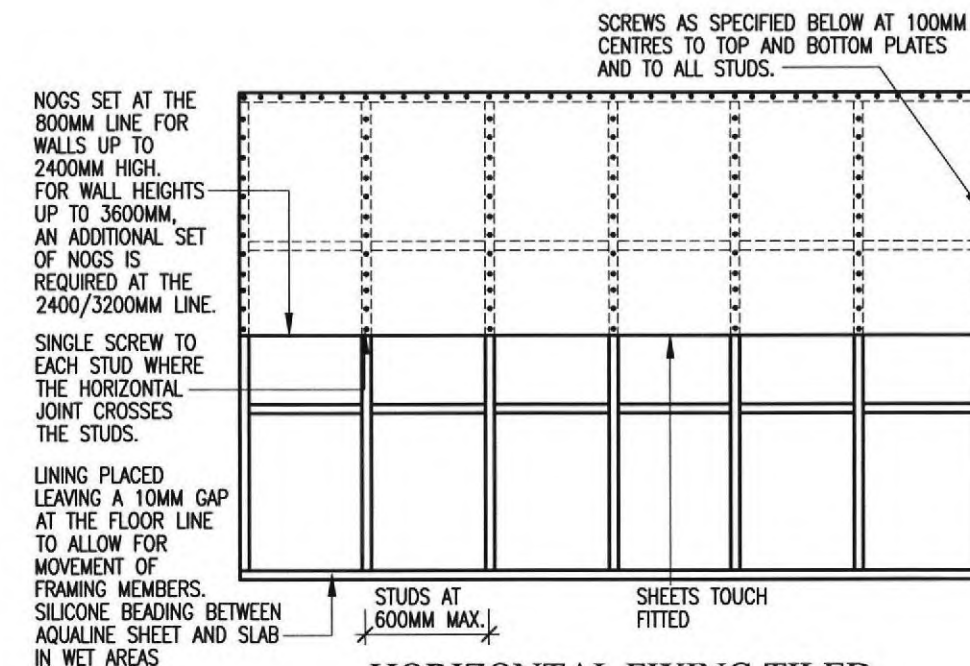
KITCHEN BENCH TOP
TO WALL DETAIL



KITCHEN COOK TOP
TO WALL DETAIL



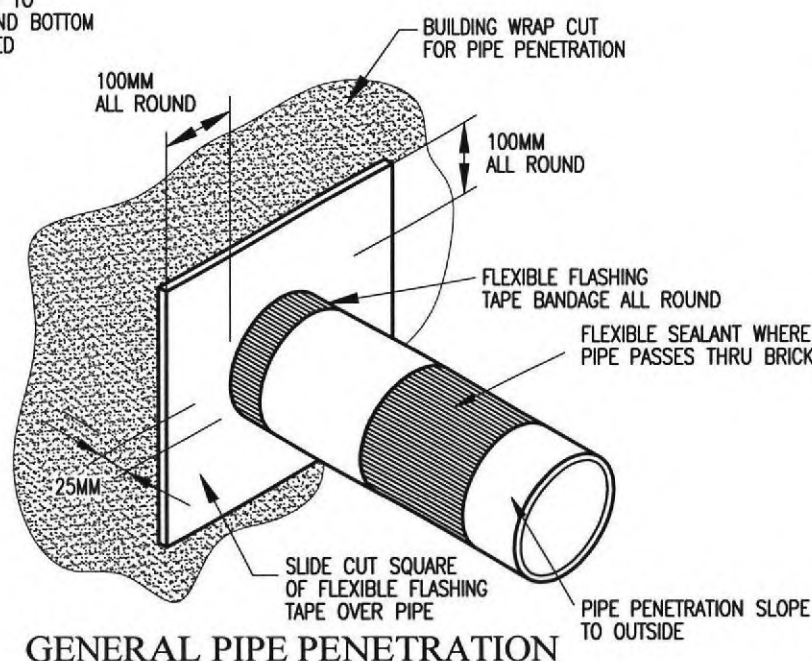
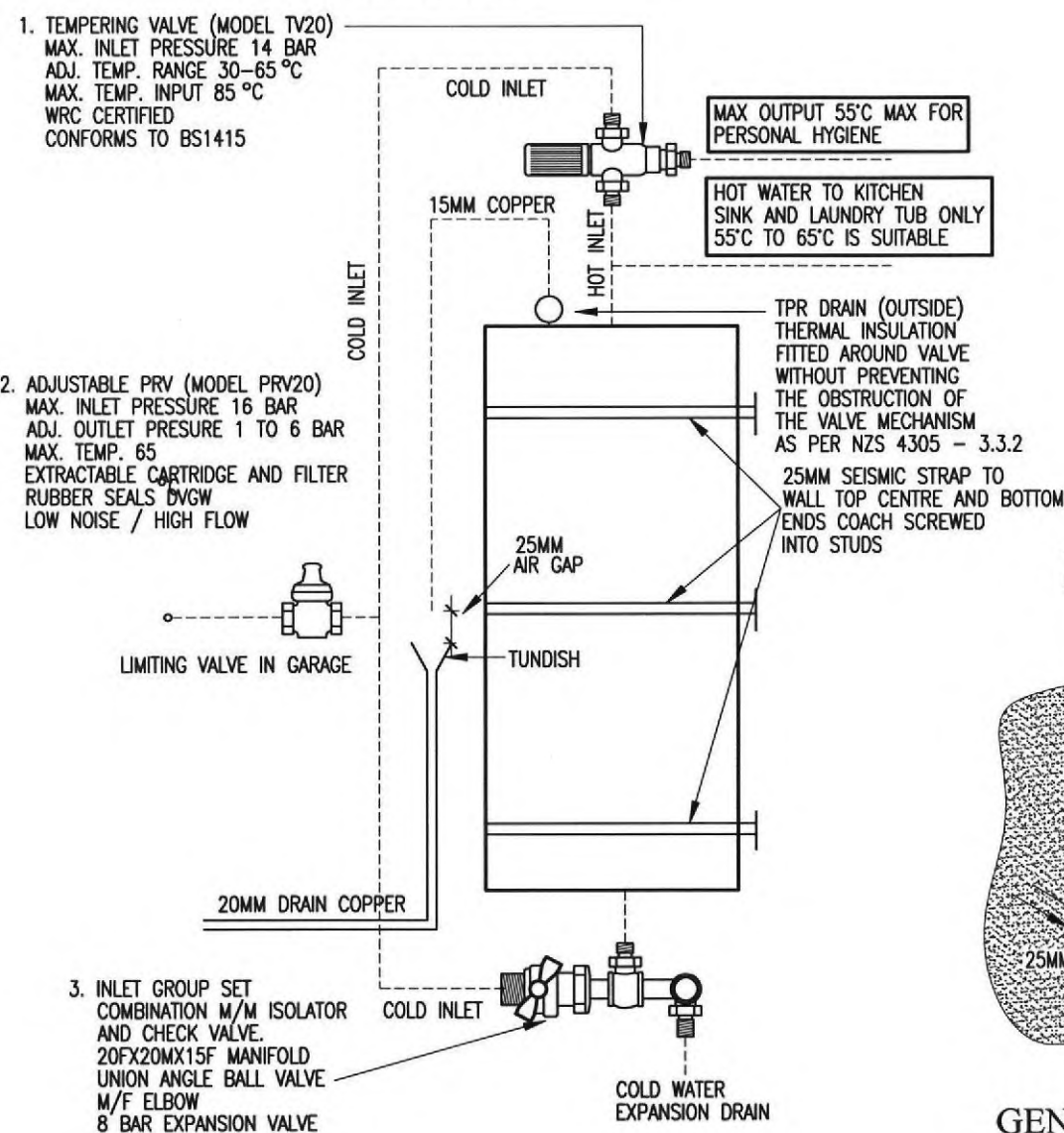
HORIZONTAL FIXING UN-TILED
TO GIB AQUALINE WET AREAS FRAMING AND LINING INSTALLATION



HORIZONTAL FIXING TILED
TO GIB AQUALINE WET AREAS FRAMING AND LINING INSTALLATION

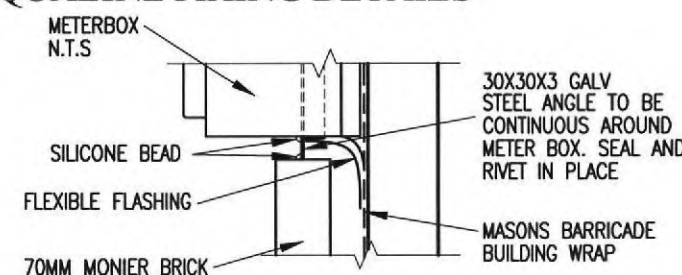
HOTWATER CYLINDER PIPE LAYOUT

G12 WATER SUPPLIES

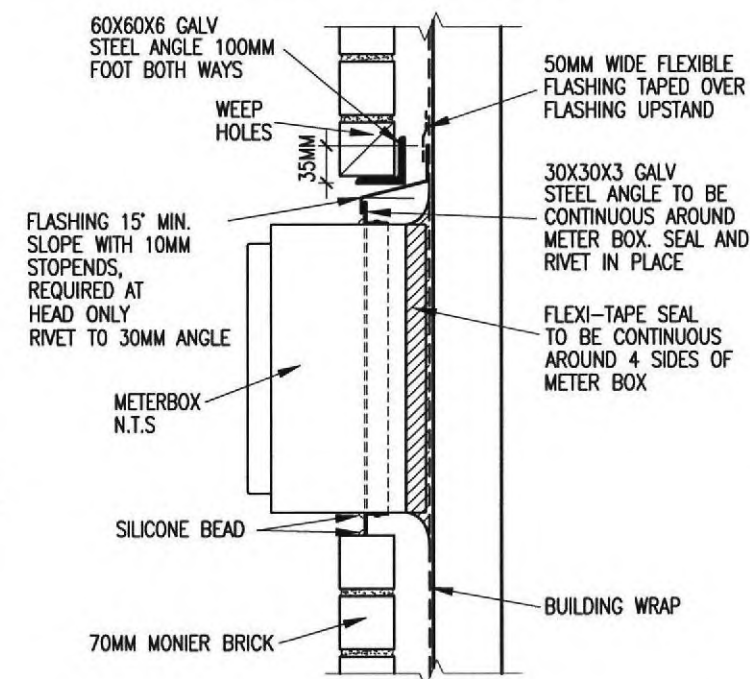


GENERAL PIPE PENETRATION

GIB AQUALINE FIXING DETAILS



DETAIL OF METER BOX JAMB



DETAILS OF DCB-15 METER BOX
FLASHING IN BRICK VENEER

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NOTE:
BUILDERS TO FIX FLASHING TO THE METERBOX
WITH ADHESIVE AT THE APPROPRIATE PLACE
TO SUIT THE CLADDING.



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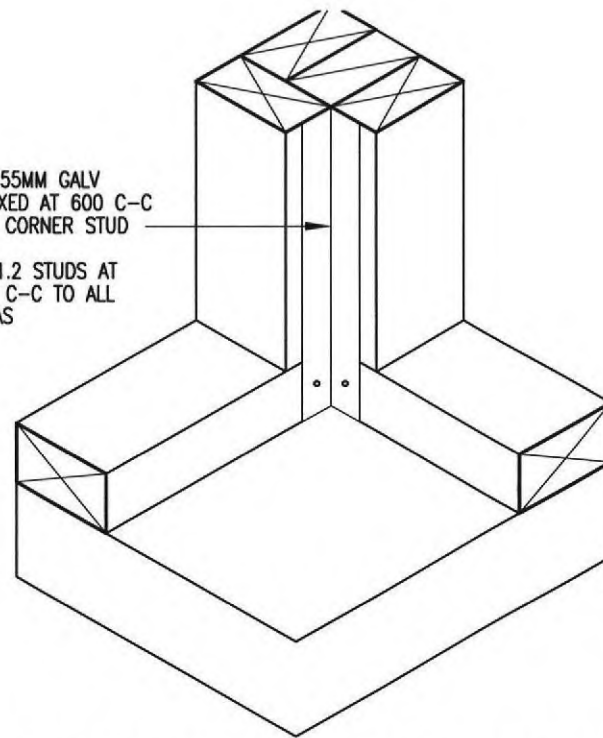
TAR148A DETAILS

C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCK

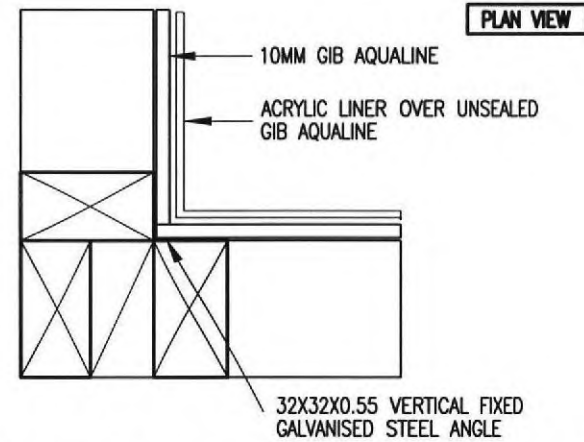
SCALE SHOWN ON A3 SHEET 20

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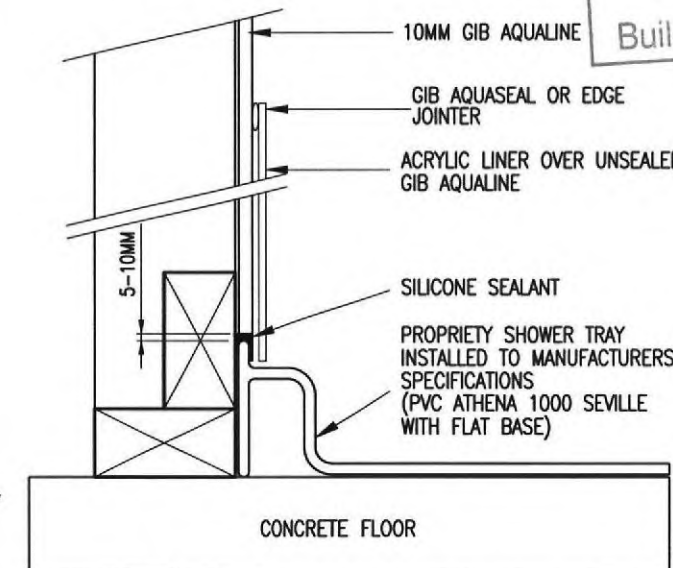
32X32X0.55MM GALV
ANGLE FIXED AT 600 C-C
TO EACH CORNER STUD
NOTE:
90X45 H1.2 STUDS AT
600 MAX C-C TO ALL
WET AREAS



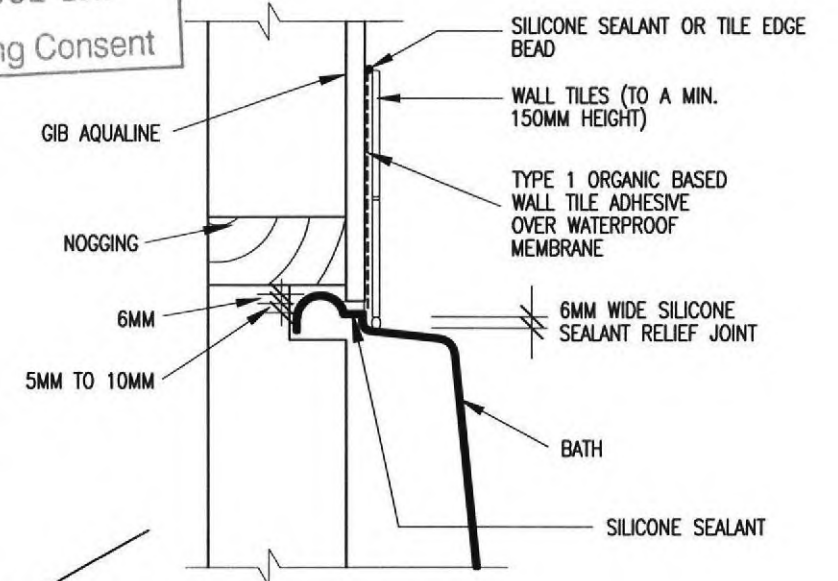
SHOWER CORNER ANGLE DETAIL



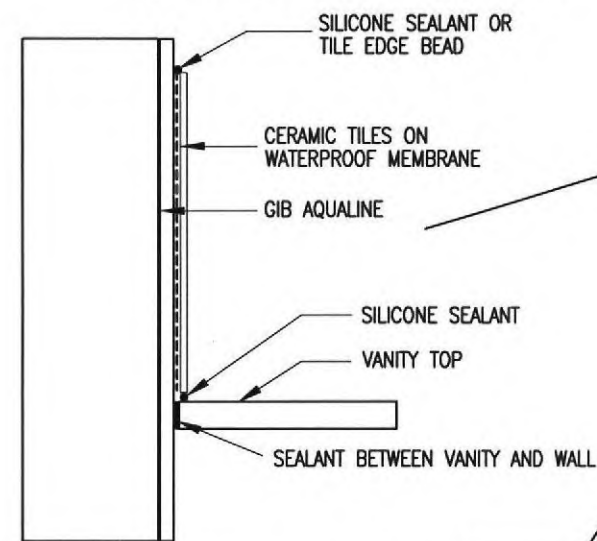
SHOWER INTERNAL CORNER DETAIL
SCALE 1:5 A3



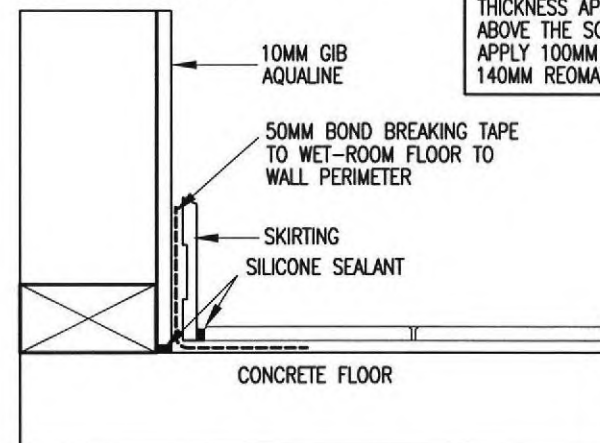
BASE /TOP DETAIL
SCALE 1:5 A3



BATH/WALL DETAIL
SCALE 1:5 A3

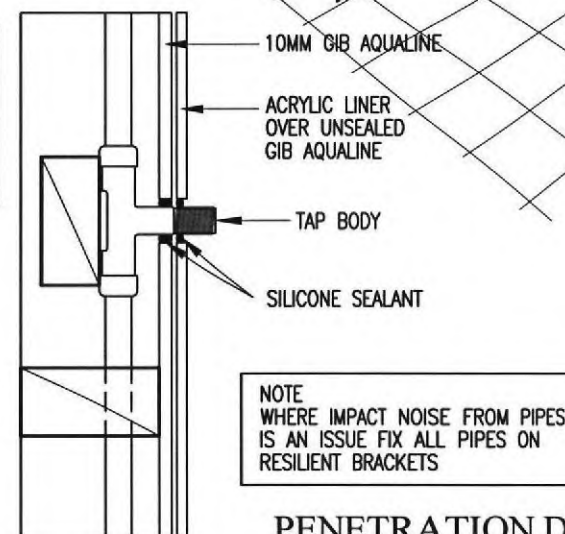


VANITY TOP/WALL DETAIL
SCALE 1:5 A3



TILED FLOOR TO AQUALINE WALL DETAIL
SCALE 1:5 A3

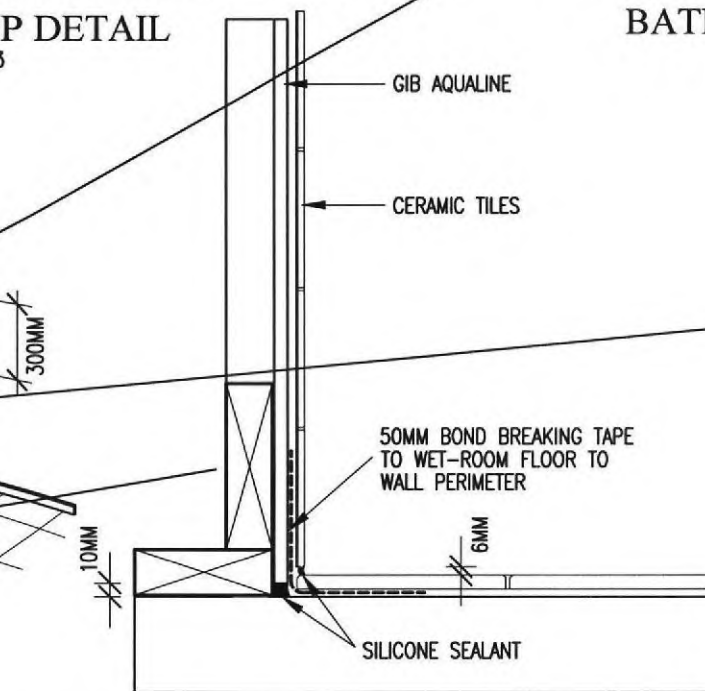
2 COATS OF THE REQUIRED
BRANZ APPRAISED WATERPROOF
MEMBRANE TO 1.5MM DRY FILM
THICKNESS APPLIED BELOW OR
ABOVE THE SCREED
APPLY 100MM UP WALL
140MM REOMAT REINF MESH



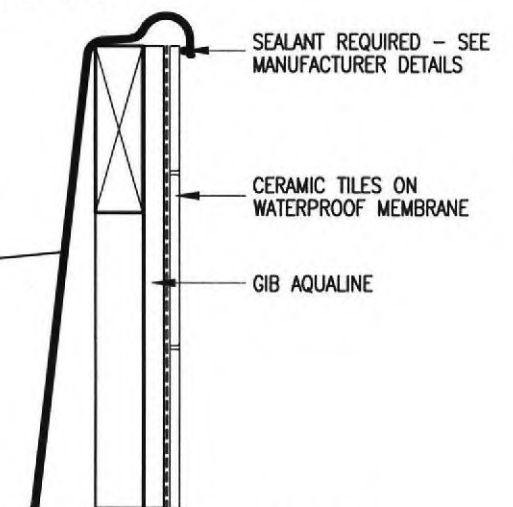
PENETRATION DETAIL

NOTE
WHERE IMPACT NOISE FROM PIPES
IS AN ISSUE FIX ALL PIPES ON
RESILIENT BRACKETS

BATH/SHOWER WALL JUNCTION DETAIL
SCALE 1:5 A3



TILED FLOOR TO TILED WALL DETAIL
SCALE 1:5 A3



BATH EDGE DETAIL

NOTES:
1. 90X45 H1.2 STUDS AT
600 MAX C-C TO ALL
WET AREAS
2. ALL WALL FINISHES TO COMPLY
WITH NZBC 1991 E3 SURFACE
FINISHES



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DRAWN J.C.	DATE 25/05/2015
REVISED	
REVISED	
TARI48A WET AREA DETAILS	
C & J BLAKE	
POHUTUKAWA PLACE	
BELL BLOCK	
SCALE SHOWN ON A3	SHEET 21

Katikati Building Supplies Ltd

Fabricator Design Statement: Page 1

Job: TAR148A

Client: Platinum Homes NZ Ltd
Phone:

Site: C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCK

Description:
Building Consent No.:
MITek 20/20 Engineering 44.6.2017

Phone:

Printed: 16/02/2017 12:30:20

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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

Roof Truss

Timber Group: MSG8x45-H1.
Roof:
Material: Metal Tiles
Dead Load: 0.210 kPa
Restraints: 400 mm centres
Live Load: Q_{ur} = 0.250 kPa
Q_c = 1.100 kN

Importance Level: 2

Pitch: 25.000 deg
Ceiling:
Material: Rondo on clips
Dead Load: 0.200 kPa
Restraints: 1800 mm centres
Live Load: Q_c = 1.400 kN

Design Working Life: 50 years

Nominal Overhang: 600 mm
Wind:
Area: High (44.0 m/s)
Pressure Coeff: C_{pe} = varies; C_{pl} = -0.30, 0.20

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, Tex = 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)
T05	1	7315	25.000	899	J05B	1	2027	25.000	900	T17	1	4818	25.000	768
T05A	3	7315	25.000	899	J05C	1	2027	25.000	900	T18	1	5218	25.000	768
T05B	1	7315	25.000	899	J06	1	2457	25.000	900	T19	1	5618	25.000	768
T05C	1	7315	25.000	899	J08A	1	2457	25.000	900	V02	1	1070	25.000	900
T06	1	6937	25.000	899	J08B	1	2457	25.000	900	V03	1	1970	25.000	900
T07	1	6489	25.000	899	J07	1	1557	25.000	900	V04	1	2470	25.000	900
T08	1	5900	25.000	900	J07A	1	1557	25.000	900	V06	1	595	25.000	900
T09	1D	5900	25.000	900	J07B	1	1557	25.000	900	V07	1	1400	25.000	900
T10	1	4980	25.000	900	J07C	1	1557	25.000	900	V09	1	878	25.000	900
T12	1D	4980	25.000	859	J08	1	3007	25.000	900	V10	1	965	25.000	900
T13	1D	6787	22.464	900	J08A	1	3007	25.000	900	*HB01	2	1209	18.249	900
T14	1	6080	25.000	900	J08B	1	3007	25.000	900	*HB02	1	5989	18.249	900
T15	1	4417	25.000	900	J08C	1	3007	25.000	900	*HB03	1	2482	18.249	900
TG01	1	5530	25.000	900	J09	1	2107	25.000	900	*HB04	2	4989	18.249	900
TG02	1	8294	25.000	900	J08A	1	2107	25.000	900	*HB05	2	4324	18.249	900
J01	1	2735	25.000	900	J09B	2	2107	25.000	900	*HB06	3	5102	18.249	900
J01A	3	2735	25.000	900	J09C	1	2107	25.000	900	*R01	1	1548	25.000	900
J01B	1	2735	25.000	900	J09D	1	2107	25.000	900	*R02	5	913	25.000	900
J01C	1	2735	25.000	900	J10	1	1207	25.000	900	*R02A	5	913	25.000	900
J01D	1	2735	25.000	900	J10A	2	1207	25.000	900	*R03	1	1740	25.000	900
J01E	2	2735	25.000	900	J10B	2	1207	25.000	900	*R03A	1	1740	25.000	900
J02	1	1823	25.000	900	J10C	1	1207	25.000	900	*R04	1	1270	25.000	900
J03	1	1835	25.000	900	J11	1	2617	25.000	900	*R04A	1	1270	25.000	900
J03A	1	1835	25.000	900	T01	1	6000	25.000	900	*R05	1	920	25.000	900
J04	1	2927	25.000	900	T02	1	2735	25.000	900	*R05A	2	920	25.000	900
J04A	1	2927	25.000	900	T03	1	8294	25.000	900	*V05	1	345	25.000	900
J04B	1	2927	25.000	900	T04	1	8294	25.000	899	*V06	1	250	25.000	900
J05	1	2027	25.000	900	T11	1	4960	25.000	859					
J05A	1	2027	25.000	900	T16	1	890	25.000	900					

Total quantity : 107

The computer design input has been carried out by:

Signed: 

Name of Detailer:

On behalf of:

Katikati Building Supplies Ltd

Date: ...Friday, 12 June 2015....

Qualifications and Title:.....Designer.....(MITek N.Z. Ltd C.O.C.-10307)....

Job: TAR148A

Client: Platinum Homes NZ Ltd
Phone:

Site: C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCK

Description:
Building Consent No.:
MITek 2020 Engineering 4.8.8.207

MITek New Zealand Limited

Phone:

Printed: 18:29 42 12 Jun 2019

TRUSS FIXING SELECTION REPORT - Characteristic
Loads

Findings are selected from the LUMBERLOK Brochure 08/2014 (Timber Connectors Characteristic Loadings Data)

MITek® Truss List

Legend: * = detail only, ? = input only, Txx = failed design, Ø = non certified, Unmarked trusses = designed successfully

Truss	Qty	Span (mm)	Joint	Down (kN)	Uplift (kN)	Bearing	Fixing	
							Qty	Selected
T05	1	7315	B	4.143	3.559	Cross	1	CT400
			H	3.254	2.805	Cross	1	Pair of Wire Dog Staples
			O	1.410	1.056	Cross	1	Pair of Wire Dog Staples
T05A	3	7315	B	4.344	3.710	Cross	3	CT400
			H	4.344	3.710	Cross	3	CT400
T05B	1	7315	A	3.978	3.651	Cross	1	CT400
T05C	1	7315	G	4.358	3.714	Cross	1	CT400
			B	4.143	3.559	Cross	1	CT400
			H	3.254	2.805	Cross	1	Pair of Wire Dog Staples
T06	1	6937	O	1.410	1.056	Cross	1	Pair of Wire Dog Staples
			A	3.786	3.463	Butt	1	JH 47x90
			M	3.786	3.469	Butt	1	JH 47x90
T07	1	6469	A	3.530	3.218	Butt	1	JH 47x90
			M	3.530	3.246	Butt	1	JH 47x90
T08	1	5900	B	5.806	5.710	Cross	1	CT400
			F	5.806	5.710	Cross	1	CT400
T09	1D	5900	B	8.845	8.039	Cross	1	CT400
			F	13.609	12.298	Cross	1	16kN Truss to Top Plate
T10	1	4960	B	4.549	4.400	Cross	1	CT400
			F	4.549	4.400	Cross	1	CT400
T12	1D	4960	B	6.722	6.323	Cross	1	CT400
			F	10.873	10.515	Cross	1	CT200 pair
T13	1D	6787	A	16.240	15.406	Cross	1	16kN Truss to Top Plate
			G	14.654	13.693	Cross	1	16kN Truss to Top Plate
T14	1	6060	B	6.075	5.999	Cross	1	CT400
			F	5.670	5.912	Cross	1	CT400
T15	1	4417	F	4.608	5.208	Butt	1	Pair of MultiGrips
			D	4.116	3.852	Cross	1	CT400
TG01	1	5530	G	5.495	5.700	Butt	1	Pair of MultiGrips
			E	6.575	6.519	Butt	1	Pair of MultiGrips
TG02	1	6294	B	6.299	6.278	Cross	1	CT400
			O	6.574	7.041	Butt	1	Pair of MultiGrips
J01	1	2735	B	2.605	1.068	Cross	1	Pair of Wire Dog Staples
			D	1.619	1.743	Cross	1	Pair of Wire Dog Staples
J01A	3	2735	B	2.605	1.068	Cross	3	Pair of Wire Dog Staples
			G	1.619	1.743	Butt	3	JH 47x90
J01B	1	2735	B	2.841	1.866	Cross	1	Pair of Wire Dog Staples
			F	1.655	1.755	Butt	1	JH 47x90
J01C	1	2735	B	2.607	1.084	Cross	1	Pair of Wire Dog Staples
			F	1.672	1.154	Butt	1	JH 47x90
J01D	1	2735	D	0.366	0.553	Butt	1	Pair of 3.15d Nails
			B	2.607	1.084	Cross	1	Pair of Wire Dog Staples
J01E	2	2735	F	1.672	1.154	Butt	1	JH 47x90
			D	0.366	0.553	Butt	1	Pair of 3.15d Nails
J02	1	1823	B	2.580	0.807	Cross	2	Pair of Wire Dog Staples
			E	0.269	0.394	Butt	2	Pair of 3.15d Nails
J03	1	1835	D	2.083	2.438	Cross	2	Pair of Wire Dog Staples
			E	1.504	0.411	Butt	1	JH 47x90
J03A	1	1835	G	1.056	0.803	Butt	1	Pair of 3.15d Nails
			C	0.594	0.675	Cross	1	Pair of Wire Dog Staples
J04	1	2927	B	2.432	0.866	Cross	1	Pair of Wire Dog Staples
			E	0.969	0.602	Butt	1	Pair of 3.15d Nails
J04A	1	2927	B	2.429	0.743	Cross	1	Pair of Wire Dog Staples
			D	0.539	0.053	Butt	1	Pair of 3.15d Nails
J04B	1	2927	C	0.589	1.063	Butt	1	Pair of 3.15d Nails
			B	2.923	2.006	Cross	1	Pair of Wire Dog Staples
J05	1	2027	F	1.912	2.041	Butt	1	JH 47x90
			B	2.923	2.006	Cross	1	Pair of Wire Dog Staples
J05A	1	2027	F	1.912	2.041	Butt	1	JH 47x90
			B	2.652	1.155	Cross	1	Pair of Wire Dog Staples
J05B	1	2027	F	1.716	1.233	Butt	1	JH 47x90
			D	0.390	0.595	Butt	1	Pair of 3.15d Nails
J05C	1	2027	B	2.463	0.936	Cross	1	Pair of Wire Dog Staples
			E	1.109	0.723	Butt	1	Pair of 3.15d Nails
J06	1	2457	B	2.463	0.936	Cross	1	Pair of Wire Dog Staples
			E	1.109	0.723	Butt	1	Pair of 3.15d Nails
J06A	1	2457	B	2.460	0.825	Cross	1	Pair of Wire Dog Staples
			F	1.386	0.770	Butt	1	JH 47x90
J06B	1	2457	D	0.313	0.458	Butt	1	Pair of 3.15d Nails
			B	2.460	0.825	Cross	1	Pair of Wire Dog Staples
J06C	1	2457	F	1.386	0.770	Butt	1	JH 47x90
			D	0.313	0.458	Butt	1	Pair of 3.15d Nails
J06D	1	2457	B	2.713	1.635	Cross	1	Pair of Wire Dog Staples
			F	1.483	1.354	Butt	1	JH 47x90
J06E	1	2457	B	2.713	1.635	Cross	1	Pair of Wire Dog Staples
			F	1.483	1.354	Butt	1	JH 47x90

Katikati Building Supplies Ltd

Fbng Report : Page 2

Job: TAR148A

Client: Platinum Homes NZ Ltd
Phone:Site: C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCKDescription:
Building Consent No.:
MITek 2020 Engineering 4.6.6.287

Phone:

MITek New Zealand Limited

Printed: 18:29 42 12 Jun 2015

Truss	Qty	Span (mm)	Joint	Down (kN)	Uplift (kN)	Bearing	Fixing	
							Qty	Selected
J06B	1	2457	B	2.547	0.982	Cross	1	Pair of Wire Dog Staples
			F	1.609	1.040	Butt	1	JH 47x90
			D	0.331	0.492	Butt	1	Pair of 3.15d Nails
J07	1	1557	B	2.398	0.764	Cross	1	Pair of Wire Dog Staples
J07A	1	1557	B	2.398	0.764	Cross	1	Pair of Wire Dog Staples
			E	0.730	0.425	Butt	1	Pair of 3.15d Nails
J07B	1	1557	B	2.398	0.643	Cross	1	Pair of Wire Dog Staples
			D	0.456	0.045	Butt	1	Pair of 3.15d Nails
			C	0.474	0.894	Butt	1	Pair of 3.15d Nails
J07C	1	1557	B	2.398	0.643	Cross	1	Pair of Wire Dog Staples
			D	0.456	0.045	Butt	1	Pair of 3.15d Nails
			C	0.474	0.894	Butt	1	Pair of 3.15d Nails
J08	1	3007	B	2.973	2.135	Cross	1	Pair of Wire Dog Staples
			H	2.043	2.214	Butt	1	JH 47x90
J08A	1	3007	B	2.973	2.135	Cross	1	Pair of Wire Dog Staples
			H	2.043	2.214	Butt	1	JH 47x90
J08B	1	3007	B	2.973	2.135	Cross	1	Pair of Wire Dog Staples
			H	2.043	2.214	Butt	1	JH 47x90
J08C	1	3007	B	2.670	1.185	Cross	1	Pair of Wire Dog Staples
			F	1.734	1.266	Butt	1	JH 47x90
			D	0.400	0.613	Butt	1	Pair of 3.15d Nails
J09	1	2107	B	2.526	1.289	Cross	1	Pair of Wire Dog Staples
			F	1.224	0.895	Butt	1	Pair of 3.15d Nails
J09A	1	2107	B	2.526	1.289	Cross	1	Pair of Wire Dog Staples
			F	1.224	0.895	Butt	1	Pair of 3.15d Nails
J09B	2	2107	B	2.474	0.855	Cross	2	Pair of Wire Dog Staples
			F	1.455	0.835	Butt	2	JH 47x90
			D	0.305	0.444	Butt	2	Pair of 3.15d Nails
J09C	1	2107	B	2.526	1.289	Cross	1	Pair of Wire Dog Staples
			F	1.224	0.895	Butt	1	Pair of 3.15d Nails
J09D	1	2107	B	2.474	0.855	Cross	1	Pair of Wire Dog Staples
			F	1.455	0.835	Butt	1	JH 47x90
			D	0.305	0.444	Butt	1	Pair of 3.15d Nails
			B	2.386	0.620	Cross	1	Pair of Wire Dog Staples
J10	1	1207	D	0.547	0.205	Butt	1	Pair of 3.15d Nails
			B	2.386	0.620	Cross	2	Pair of Wire Dog Staples
J10A	2	1207	D	0.547	0.205	Butt	2	Pair of 3.15d Nails
			B	2.391	0.518	Cross	2	Pair of Wire Dog Staples
J10B	2	1207	D	0.352	0.035	Butt	2	Pair of 3.15d Nails
			C	0.386	0.679	Butt	2	Pair of 3.15d Nails
			B	2.391	0.518	Cross	1	Pair of Wire Dog Staples
J10C	1	1207	D	0.352	0.035	Butt	1	Pair of 3.15d Nails
			C	0.386	0.679	Butt	1	Pair of 3.15d Nails
			D	1.549	0.872	Butt	1	JH 47x90
J11	1	2617	F	1.482	1.069	Butt	1	JH 47x90
			C	0.417	0.677	Butt	1	Pair of 3.15d Nails
			G	3.278	3.038	Butt	1	JH 47x90
T01	1	6000	F	3.278	2.964	Butt	1	JH 47x90
			B	2.606	1.203	Cross	1	Pair of Wire Dog Staples
T02	1	2735	I	1.671	1.591	Butt	1	JH 47x90
			B	3.808	3.187	Cross	1	Pair of Wire Dog Staples
T03	1	6294	N	3.422	3.165	Butt	1	JH 47x90
			B	3.804	3.184	Cross	1	Pair of Wire Dog Staples
T04	1	6294	N	3.419	3.161	Butt	1	JH 47x90
			B	3.101	2.427	Cross	1	Pair of Wire Dog Staples
T11	1	4960	F	2.567	2.363	Cross	1	Pair of Wire Dog Staples
			C	1.621	1.095	Butt	1	JH 47x90
T16	1	890	D	1.802	1.281	Butt	1	JH 47x90
			G	2.227	2.083	Butt	1	JH 47x90
T17	1	4818	E	2.901	2.076	Cross	1	Pair of Wire Dog Staples
			G	2.415	2.235	Butt	1	JH 47x90
T18	1	5218	E	2.993	2.266	Cross	1	Pair of Wire Dog Staples
			H	2.603	2.396	Butt	1	JH 47x90
T19	1	5618	F	3.086	2.446	Cross	1	Pair of Wire Dog Staples
V02	1	1070	A			Wide		No fixing selected
V03	1	1970	A			Wide		No fixing selected
V04	1	2470	A			Wide		No fixing selected
V06	1	595	A			Wide		No fixing selected
V07	1	1400	A			Wide		No fixing selected
V09	1	878	A			Wide		No fixing selected
V10	1	965	A			Wide		No fixing selected
*HB01	2	1209	A			Wide		No fixing selected
*HB02	1	5989	A			Wide		No fixing selected
*HB03	1	2482	A			Wide		No fixing selected
*HB04	2	4989	A			Wide		No fixing selected
*HB05	2	4324	A			Wide		No fixing selected
*HB06	3	5102	A			Wide		No fixing selected
*R01	1	1548	D	1.549	0.872	Butt	1	JH 47x90
			F	1.482	1.069	Butt	1	JH 47x90
			C	0.417	0.677	Butt	1	Pair of 3.15d Nails
*R02	5	913	D	1.549	0.872	Butt	5	JH 47x90
			F	1.482	1.069	Butt	5	JH 47x90
			C	0.417	0.677	Butt	5	Pair of 3.15d Nails
*R02A	5	913	D	1.549	0.872	Butt	5	JH 47x90
			F	1.482	1.069	Butt	5	JH 47x90
			C	0.417	0.677	Butt	5	Pair of 3.15d Nails

Refer NZS3604:2011 Tables 10.1 & 10.14
Refer NZS3604:2011 Tables 10.1 & 10.14
Refer NZS3604:2011 Tables 10.1 & 10.14
Refer NZS3604:2011 Tables 10.1 & 10.14
Refer NZS3604:2011 Tables 10.1 & 10.14
Refer NZS3604:2011 Tables 10.1 & 10.14
Refer NZS3604:2011 Tables 10.1 & 10.14Refer NZS3604:2011 Tables 10.1 & 10.14
Refer NZS3604:2011 Tables 10.1 & 10.14

Katikati Building Supplies Ltd

Fbding Report : Page 3

Job: TAR148A

Client: Platinum Homes NZ Ltd
Phone:

Site: C & J BLAKE
POHUTUKAWA PLACE
BELL BLOCK

Description:
Building Consent No.:
MITek 2020 Engineering 4.8.8.287

MITek New Zealand Limited

Phone: Printed: 16:28 42 12 Jun 2015

Truss	Qty	Span (mm)	Joint	Down (kN)	Uplift (kN)	Bearing	Fixing	
							Qty	Selected
*R03	1	1740	D	1.549	0.872	Butt	1	JH 47x90
			F	1.482	1.069	Butt	1	JH 47x90
			C	0.417	0.677	Butt	1	Pair of 3.15d Nails
*R03A	1	1740	D	1.549	0.872	Butt	1	JH 47x90
			F	1.482	1.069	Butt	1	JH 47x90
			C	0.417	0.677	Butt	1	Pair of 3.15d Nails
*R04	1	1270	D	1.549	0.872	Butt	1	JH 47x90
			F	1.482	1.069	Butt	1	JH 47x90
			C	0.417	0.677	Butt	1	Pair of 3.15d Nails
*R04A	1	1270	D	1.549	0.872	Butt	1	JH 47x90
			F	1.482	1.069	Butt	1	JH 47x90
			C	0.417	0.677	Butt	1	Pair of 3.15d Nails
*R05	1	920	D	1.549	0.872	Butt	1	JH 47x90
			F	1.482	1.069	Butt	1	JH 47x90
			C	0.417	0.677	Butt	1	Pair of 3.15d Nails
*R05A	2	920	D	1.549	0.872	Butt	2	JH 47x90
			F	1.482	1.069	Butt	2	JH 47x90
			C	0.417	0.677	Butt	2	Pair of 3.15d Nails
*V05	1	345	A			Wide		No fixing selected
*V08	1	250	A			Wide		No fixing selected

Refer NZS3604:2011 Tables 10.1 & 10.14

Refer NZS3604:2011 Tables 10.1 & 10.14

Refer NZS3604:2011 Tables 10.1 & 10.14

Refer NZS3604:2011 Tables 10.1 & 10.14

Refer NZS3604:2011 Tables 10.1 & 10.14

Refer NZS3604:2011 Tables 10.1 & 10.14

Refer NZS3604:2011 Tables 10.1 & 10.14

Refer NZS3604:2011 Tables 10.1 & 10.14

Fixing List

Qty	Selected Fixing	Cost
20	CT400	23.40
57	Pair of Wire Dog Staples	26.79
74	JH 47x90	102.12
3	16kN Truss to Top Plate	16.80
1	CT200 pair	1.17
4	Pair of MultiGrips	4.20
55	Pair of 3.15d Nails	2.20
20	No fixing selected	
Total		176.68

Note:

- 1) Fixings have been selected based on loading only. Please check that selected fixings are practical for each situation and that appropriate nailing can be applied on site.
- 2) Fixings are selected from the LUMBERLOK Brochure 08/2014 (Timber Connectors Characteristic Loadings Data) with down and uplift characteristic loads of at least the values shown for each joint.

GIB EzyBrace® 2011 Software



Demand Calculation Sheet

single storey

V11/14a

Job Details

Name TAR148A BLAKE
Street and Number LOT 14 POHUTUKAWA PLACE
Lot and DP Number LOT 14 DP XXXXXX
City/Town/District BELL BLOCK
Designer KEN INGLIS
Company Name PLATINUM DESIGN LTD
Date 23/05/2015



Select Lining Option 10 or 13 mm GIB® Plasterboard

Building Specification

Number of storeys single
Floor Loading 2 kPa
Foundation Type slab

Single Floor

Cladding Weight heavy
Roof Weight light
Room in Roof Space no
Roof Pitch (degrees) 25
Roof height above eaves (m) 2.1
Building height to apex (m) 4.6
Ground to lower floor level (m) 0.3

Stud Height (m) 2.4
Building Length (m) 19.6
Building Width (m) 14.4
Building Plan Area (m2) 200

Building Location

Wind Zone High
Select by Building Consent Authority Map
or Preference High

Earthquake Zone 1
Soil Type D&E (deep to very soft)
Annual exceedance probability
1/500 (NZS3604:2011 default)

Bracing Units required for Wind

Demand W (BU)		Walls single
along	slab	691
across	slab	868

Bracing Units required for Earthquake

Demand along / across E (BU)	
Walls	
single	
slab	812

Document Set ID: 7197938
Version: 1, Version Date: 05/08/2016

Document Set ID: 7197938
Version: 1, Version Date: 05/08/2016

Masport[®] Heating	MODEL	R1500P / R1500L R1500WS R1500R(Rural) R1600
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INSTALLATION SPECIFICATION SHEET

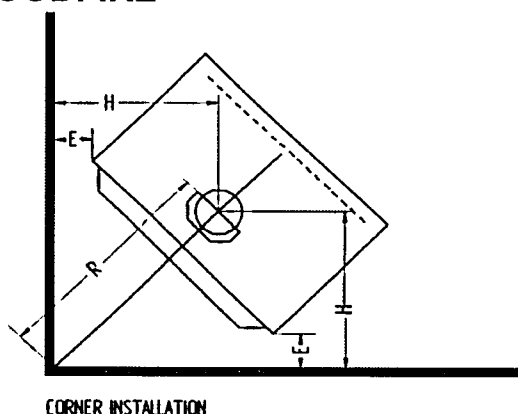
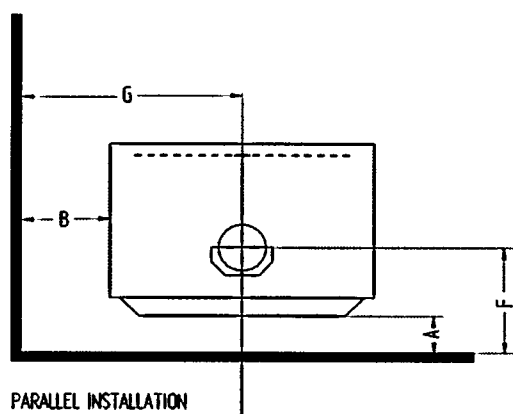
These instructions must be used in conjunction with the 'General Installation Instructions' for Masport wood fires.

CLEARANCE REQUIREMENTS

This fire has been tested and complies to the Australian/New Zealand Standard AS/NZS 2918:2001 and all installations must be in accordance with the minimum clearances to combustibles indicated in these instructions.

The minimum clearances to combustables may be reduced if the combustable walls are shielded with an approved non-combustable material. Details of suitable materials and appropriate clearance reduction factors are present in Section 3 of AS/NZS 2918:2001.

POSITIONING YOUR FREE-STANDING WOODFIRE



NEW ZEALAND

MINIMUM DISTANCES TO HEAT SENSITIVE WALLS (mm)

MODEL	FLUE HEAT SHIELD	A	B	E	F	G	H	R§
R1500P / R1500L R1500R / R1600	MASPORT/LOGAIRE DOUBLE SKIN S/S POLISHED	110	290	55	285	590	382	541
R1500WS		110	290	100	285	590	427	604

AUSTRALIA

MINIMUM DISTANCES TO HEAT SENSITIVE WALLS (mm)

MODEL	FLUE HEAT SHIELD	A	B	E	F	G	H	R§
R1500 R1600	FLOMET UNIVERSAL FLUE SYSTEM	150	245	115	377	545	442	624
	FLOMET FLUE + MASPORT DOUBLE SKIN SHIELD	30	285	80	257	585	407	575
	AIR-GROUP SPECIAL INSULATED FLUE KIT*	40	310	140	267	610	467	660

§ Valid only when the room walls are at 90° to each other.

‡ Note: Clearances are for fire hazard only. For durability of finishes or surfaces you should contact the relevant manufacturer for their specification. Masport accepts no responsibility for the deterioration of surfaces or finishes.

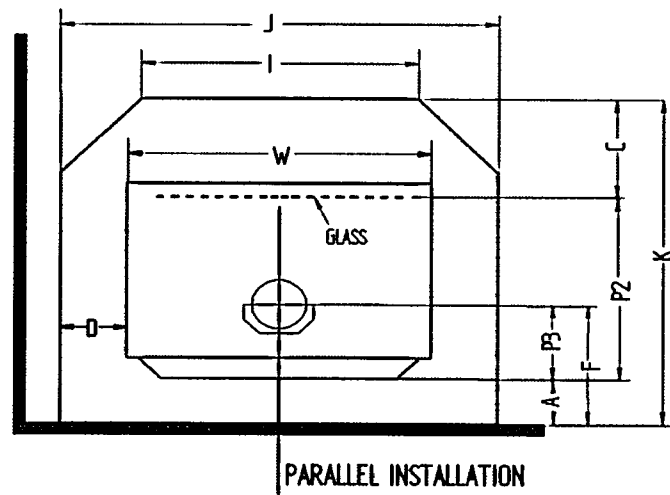
* Air-Group Special Insulated Flue Kit is same as AHD Special Insulated Flue Kit

PRT. NO.	593791
DATE:	19.03.2014

FLOOR PROTECTOR (Hearth) REQUIREMENTS

PARALLEL INSTALLATION

MINIMUM FLOOR PROTECTOR DIMENSIONS IN mm



DIMENSIONS IN THE TABLE ARE VALID ONLY WHEN THE FIRE IS EXACTLEY AT ITS MINIMUM ALLOWABLE WALL CLEARANCE.

NEW ZEALAND

MODEL	Flue Shield	Floor Protector height	A#	C#	D	F	I	J	K#	P2	P3	W	Floor Protector Type Ø
R1500P / R1500L R1500R/R1600	LDS	ANY	110	300	111	285	522	822	835	425	175	600	AFP
R1500WS	LDS	ANY	110	300	111	285	522	822	835	425	175	600	AFP

LDS = MASPORT / LOGAIRE DOUBLE SKIN S/S POLISHED 1200mm HIGH

AFP = ASH FLOOR PROTECTOR

AUSTRALIA -ALL WITH FLUE HEATSHIELD

MODEL	Flue Shield	Floor Protector height	A#	C#	D	F	I	J	K#	P2	P3	W	Floor Protector Type Ø
R1500 R1600	FUF	ANY	150	300	111	377	522	822	925	475	227	600	AFP
	FUL	ANY	30	300	111	257	522	822	805	475	227	600	AFP
	AGA	ANY	40	300	111	267	522	822	815	475	227	600	AFP

FUF = FLOWMET UNIVERSAL FLUE SYSTEM

FUL = FLOWMET UNIVERSAL FLUE WITH MASPORT/LOGAIRE DOUBLE FLUE SHIELD

AGA = AIR GROUP / AHD SPECIAL INSULATED FLUE KIT WITH 900mm S/S REFLECTOR SHIELD

AFP = ASH FLOOR PROTECTOR

Ø for minimum constructional requirements see general installation instructions.

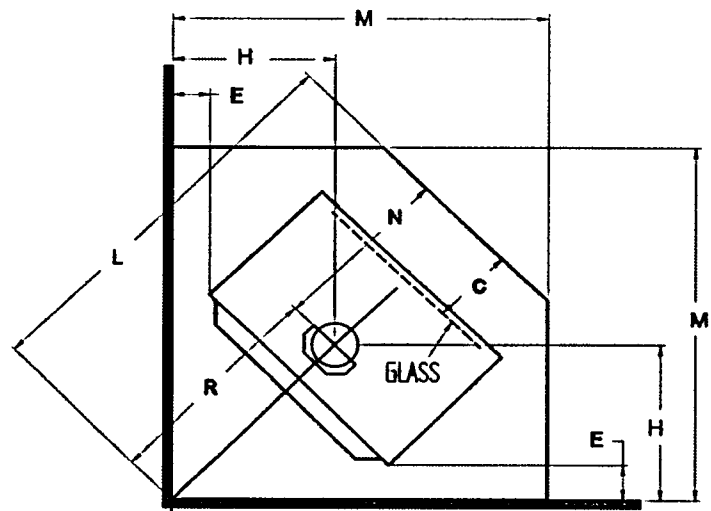
Valid only when the fire is exactly at its minimum allowable wall clearance.

NOTE: Where a fan is being fitted, you may prefer to increase the 'A' dimension to 100 mm to provide easier access for servicing. If so, the amount you add to 'A' to bring it to 100 mm must also be added to the 'C' and 'S' dimensions.

FLOOR PROTECTORS (Hearth) REQUIREMENTS

CORNER INSTALLATION

MINIMUM FLOOR PROTECTOR DIMENSIONS IN mm



DIMENSIONS IN THE TABLE ARE VALID ONLY WHEN THE FIRE IS EXACTLEY AT ITS MINIMUM ALLOWABLE WALL CLEARANCE.

NEW ZEALAND

MODEL	Flue Shield	Floor Protector Distance above Floor	C	E	H#	L#	M#	N	R#	FLOOR PROTECTOR TYPE
R1500P / R1500L R1500R/R1600	LDS	ANY	300	55	382	1091	956	550	541	ASH
R1500WS	LDS	ANY	300	100	427	1154	1001	550	604	ASH

LDS = MASPORT / LOGAIRE DOUBLE SKIN S/S POLISHED 1200mm HIGH

AUSTRALIA

MODEL	Flue Shield	Floor Protector Distance above Floor	C	E	H#	L#	M#	N	R#	FLOOR PROTECTOR TYPE
R1500 R1600										
	FUF	ANY	300	115	442	1172	1013	548	624	ASH
	FUL	ANY	300	80	407	1123	978	548	575	ASH
	AGA	ANY	300	140	467	1208	1038	548	660	ASH

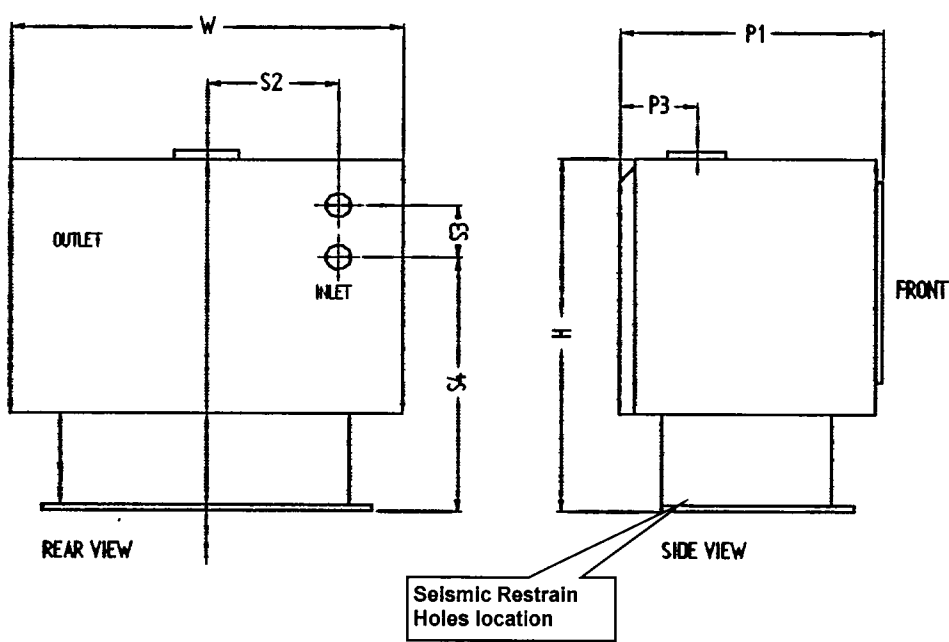
FUF = FLOWMET UNIVERSAL FLUE SYSTEM

FUL = FLOWMET UNIVERSAL FLUE WITH MASPORT/LOGAIRE DOUBLE FLUE SHIELD

AGA = AIR GROUP/AHD SPECIAL INSULATED FLUE KIT WITH 900mm S/S REFLECTOR SHIELD

AFP = ASH FLOOR PROTECTOR

FREE STANDING FIRE DIMENSIONS

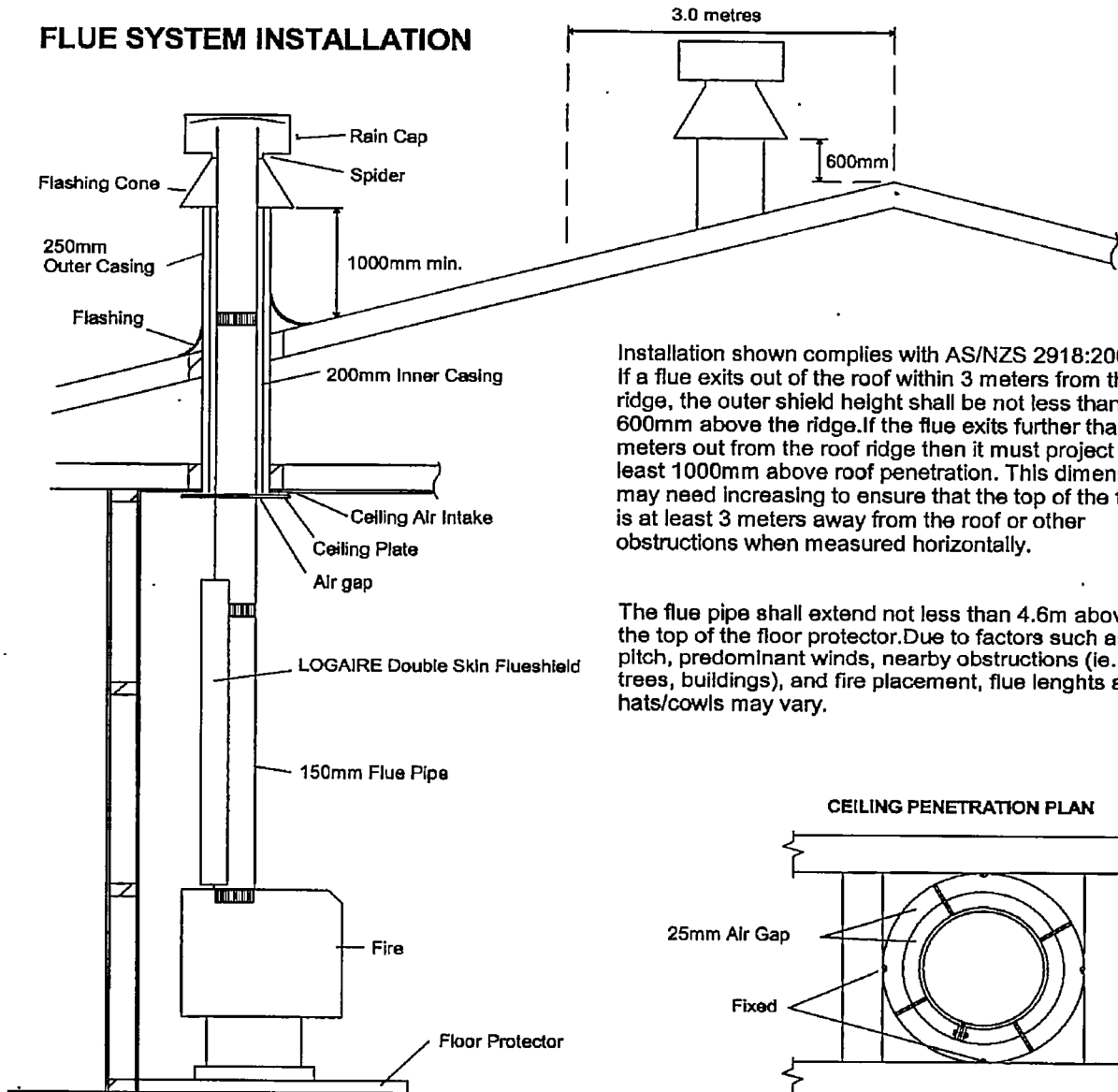


MODEL	P1	P3	H	W	S1	S2	S3	S4
R1500P/R1500P NZ	439	175	658	600	-	184	164	354
R1500WS NZ	439	175	743	600	-	184	164	439
R1500R NZ	439	175	658	600	-	184	164	354
R1600 NZ	439	175	658	600	-	184	164	354
R1500 AU	491	227	658	600	-	184	164	354
R1600 AU	491	227	658	600	-	184	164	354

Seismic Restrain - In New Zealand and some part of Australia, it is required that the wood fire and floor protector are secured to prevent shifting in the event of an earthquake. This is best done by fastening the wood fire right through the protector to the floor, using two screws not less than 12 guage or the equivalent size of coach bolts or toggle fasteners.

**THIS FLUE INSTALLATION DIAGRAM BELOW IS VALID FOR NZ INSTALLATIONS ONLY.
FOR INSTALLATIONS IN AU PLEASE REFER TO SPECIFIC FLUE INSTALLATION SPECIFICATIONS
SUPPLIED BY FLUE MANUFACTURER.**

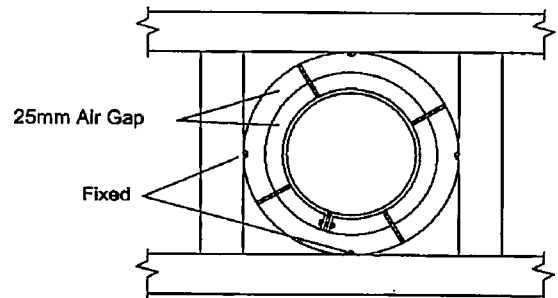
FLUE SYSTEM INSTALLATION



Installation shown complies with AS/NZS 2918:2001. If a flue exits out of the roof within 3 meters from the ridge, the outer shield height shall be not less than 600mm above the ridge. If the flue exits further than 3 meters out from the roof ridge then it must project at least 1000mm above roof penetration. This dimension may need increasing to ensure that the top of the flue is at least 3 meters away from the roof or other obstructions when measured horizontally.

The flue pipe shall extend not less than 4.6m above the top of the floor protector. Due to factors such as roof pitch, predominant winds, nearby obstructions (ie. trees, buildings), and fire placement, flue lengths and hats/cowls may vary.

CEILING PENETRATION PLAN



Above plan is valid only for flue manufactured by Glen Dimplex New Zealand Ltd or Sheetmetal Fabricated Products Ltd, Auckland, New Zealand. For other products, use specific flue installation specifications supplied by the manufacturer.

FLUE SYSTEM INSTALLATION 150mm



**WILTON
JOUBERT**

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CANTERBURY
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Structural Design Calculations for:

**Lot 14, Pohutukawa Place,
Golf View Estate,
Bell Block,
Taranaki**

Job #: 49434

May 2015

Date : 2/06/2015
Designer : BB
Checker : DL
Job Number : 49261

Raftfloor Design



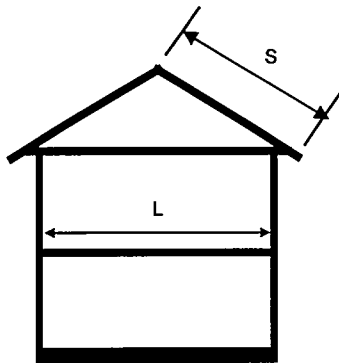
**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : EDGE BEAM Entry- Worst Case

Loadings

Upper Wall must be Timber



Tributary Roof and Floor Lengths

WALLS

Lower:

Timber

(North/South Taupo)

170 kg/m²

1.67 kPa

Height

Load/m

2.55 m

4.25 kN/m

Upper:

Timber

(North/South Taupo)

kg/m²

kPa

Height

Load/m

m

kN/m

Other (Specify Wall Weight)

Weight

Height

Load

kg/m²

kPa

m

kN/m

SUSPENDED MID-FLOOR

Unit/Floor

Topping

Live Loading

Super Imposed Dead

Tributary Span

Dead Load/m

Live Load/m

Tributary Length L/2

Timber

N/A

kPa

kPa

kPa

m

kN/m

kN/m

ROOF

Light

Tributary Length = S

0.46 kPa

Live Loading

0.25 kPa

Tributary Span

Dead Load/m

Live Load/m

4.89 m

2.25 kN/m

1.22 kN/m

Loadings Summary

Walls	4.25	kN/m	Dead
Mid Floors		kN/m	Dead
		kN/m	Live
Slab*	3.42	kN/m	Dead+SDL
	0.90	kN/m	Live
Roof	2.25	kN/m	Dead
	1.22	kN/m	Live^
Extra Dead		kN/m	Dead
Extra Live		kN/m	Live

* Includes Edge Beam Weight, SDL = 0.5 kPa LL = 1.5 kPa

^ Roof LL not added if midfloor exists else LL = 0.25 kPa

WWW.WILTONJOUBERT.CO.NZ | STRUCTURAL, GEOTECH, STORMWATER, WASTEWATER

Date : 2/06/2015
Designer : BB
Checker : DL
Job Number : 49281

Raftfloor Design



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : EDGE BEAM Entry- Worst Case

Working Loads

Ultimate Loads (1.2G + 1.5Q)

Total Ultimate Load on Edge

Dead	9.92	kN/m
Live	2.12	kN/m
Dead	11.91	kN/m
Live	3.18	kN/m
w =		15.09 kN/m

Edge Beam Details

Wall Construction Type

Brick Veneer min beam width 300mm

Beam Width = 300 mm
Pod Depth = 220 mm
Top slab Depth = 85 mm
Self Weight = 2.20 kN/m
Construction Type = Standard Raft

Standard Raft Construction

Dependable bearing capacity: 150 kPa

Bearing Check = OK!
Working Pressure = 36 kPa

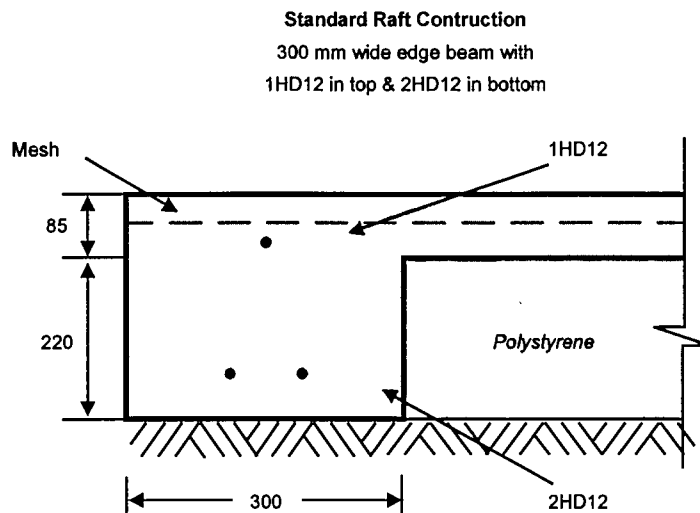
Steel Requirements - As Per Std Drg's

Top Steel: 1HD12
Btm Steel: 2HD12

Prescribed Edge Beam Design

Location (ie: which wall):

EDGE BEAM



Date : 3/08/2015
Designer : BB
Checker : DL
Job Number : 49261

Raftfloor Design



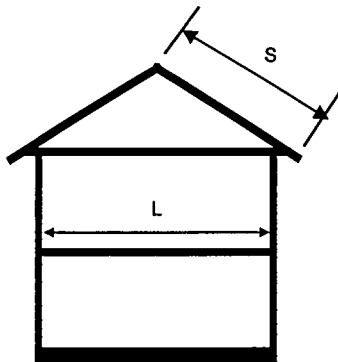
**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : EDGE BEAM (2 Entry- Worst Case)

Loadings

Upper Wall must be Timber



Tributary Roof and Floor Lengths

WALLS

Lower:

Timber

(North/South Taupo)

170 kg/m²

1.67 kPa

Height = 2.55 m

Load/m = 4.25 kN/m

Upper:

Timber

(North/South Taupo)

kg/m²

kPa

Height = m

Load/m = kN/m

Other (Specify Wall Weight)

Weight = kg/m²

kPa

Height = m

Load = kN/m

SUSPENDED MID-FLOOR

Unit/Floor = Timber

Topping = N/A

kPa

Live Loading = kPa

Super Imposed Dead = kPa

Tributary Span = m

Dead Load/m = kN/m

Live Load/m = kN/m

ROOF

Light

Tributary Length = S

0.46 kPa

Live Loading = 0.25 kPa

Tributary Span = 2.50 m

Dead Load/m = 1.15 kN/m

Live Load/m = 0.63 kN/m

Loadings Summary

Walls	4.25	kN/m	Dead
Mid Floors		kN/m	Dead
		kN/m	Live
Slab*	3.42	kN/m	Dead+SDL
	0.90	kN/m	Live
Roof	1.15	kN/m	Dead
	0.63	kN/m	Live^
Extra Dead		kN/m	Dead
Extra Live		kN/m	Live

* Includes Edge Beam Weight, SDL = 0.5 kPa LL = 1.5 kPa

^ Roof LL not added if midfloor exists else LL = 0.25 kPa

Date : 3/06/2015
Designer : BB
Checker : DL
Job Number : 49261

Raftfloor Design



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : EDGE BEAM (2 Entry- Worst Case)

Working Loads

	Dead	8.82	kN/m
	Live	1.53	kN/m
Ultimate Loads (1.2G + 1.5Q)	Dead	10.59	kN/m
	Live	2.29	kN/m
Total Ultimate Load on Edge	w =	12.87	kN/m

Edge Beam Details

Wall Construction Type

Brick Veneer min beam width 300mm

Beam Width = 300 mm
Pod Depth = 220 mm
Top slab Depth = 85 mm
Self Weight = 2.20 kN/m
Construction Type = Standard Raft

Standard Raft Construction

Dependable bearing capacity: 150 kPa

Bearing Check = OK!

Working Pressure = 31 kPa

Steel Requirements - As Per Std Drg's

Top Steel: 1HD12

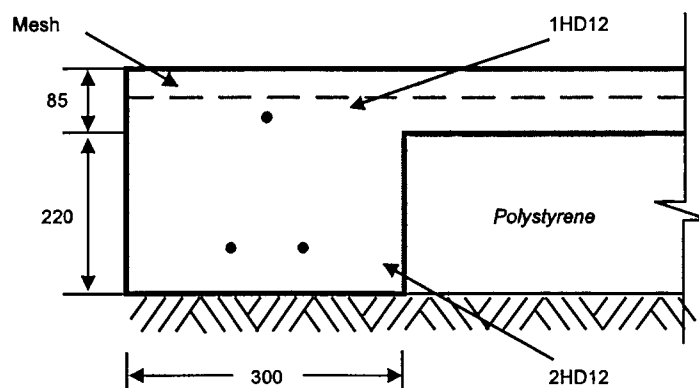
Btm Steel: 2HD12

Prescribed Edge Beam Design

Location (ie: which wall):

EDGE BEAM (2)

Standard Raft Construction
300 mm wide edge beam with
1HD12 in top & 2HD12 in bottom



Date : 3/06/2015
Designer : BB
Checker : DL
Job Number : 49261

Raftfloor Design



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : CANTILEVER (2)

Bending strength

Cantilevered length: 0.5 m

Load on edge beam:

P = 10.055862 kN/m

rib spacing = 1300 mm

Multiply for rib spacing = 13.0726206 kN

M* = 7.3202103 kNm

Topping depth: 85 mm

Rib spacings: 1200 mm

Rib width: 100 mm

Pod depth: 220 mm

Rib spacing to be - 1200 for ribraft, 1300 for generic

Cracking moment

$$M_{cr} = \frac{f_r I_g}{Y_t}$$

I_g = 5.71E+08 mm⁴

y_t = 69.55645161 mm

f_c = 20 MPa

f_r = 3.58 MPa

øM_{cr} = 25.0 kNm

Therefore øM_{cr} > M* OK

Reinforcement strength

$$\phi M_u = \phi A_s f_y (d - a/2)$$

a = A_s f_y

0.85 f_c b

A_s f_y = 73

a = 42.94117647

d_{mesh} = 270 mm

øM_u = 15.4 kNm

OK

Mesh = SE62

Area per m = 146 mm²

mesh yield = 500 MPa

reinforcing diameter = 0 mm

spacing = 1300 mm

reinforcing yield = 500 MPa

mesh = 73 kN/m

bars = 0 kN/m

dbars = 275 mm

Serviceability Strength Check

SLS load = 8.036135 kN/m

= 10.4469755 kN per rib spacing

M_{sls} = 5.69098775 kNm

M_{cr} greater than SLS moment, therefore OK

Point Load Redundancy

Load redundancy before exceeding cantilever strength

Half wall half roof = 22.7383897 kN

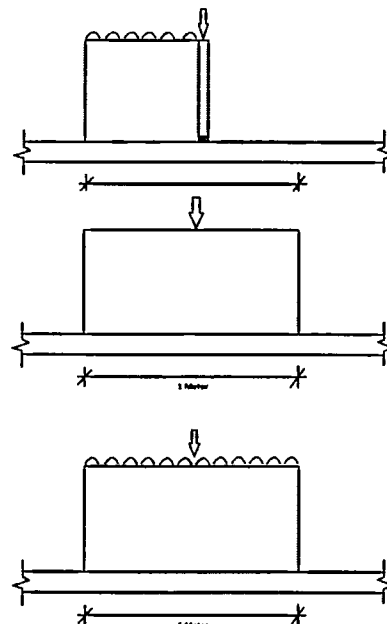
OK

Full wall no roof = 19.2148294 kN

OK

Full wall full roof = 16.2020794 kN

OK



Date : 2/06/2015
Designer : BB
Checker : DL
Job Number : 13/11/2034

Raftfloor Design



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : SLIDING RESISTANCE

Calculation of Shear Pile Requirements

Use AS1170 design philosophy of preventing damaging movement up to an SLS event, and thereafter accepting increasing levels of damage as the event increases.

Assumed Class C soil:

City/town: Taranki

$C(t) = Ch(t) Z R N(T,D)$

$Ch(t)$ 2.36

Z 0.23

R_s (25 yr RP) 0.25

R_u 500yr 1

$N(T,D)$ 1 SLS

$C(t)$ SLS 0.14

$C(t)$ ULS 0.54

Assume $T_1 = 0.4$

$ku = 1 + (u-1)T_1/0.7$

$ku = 1$

$Cd(T_1) = C(t) Sp/ku$

For base sliding $Sp = 1.0$

SLS $Cd(T_1) = 0.14$

Note for Class D soil SLS $Cd(t_1) = 0.17$

ULS $Cd(T_1) = 0.47$

ULS $Cd(t_1) = 0.60$

Testing by Dr McManus University of Canterbury (Geotechnical Society Symposium, 2003) found the friction co-efficient of slab on polythene on sand had peak friction co-efficients of 0.42 for an unloaded slab and 0.53 for a loaded slab. Residual friction coefficient were 0.38 and 0.49 respectively.

These values are some what lower than that published by other sources, normally 0.7 peak and 0.5 residual.

Even using the lower values there will be no relative movement between the slab and the ground at SLS level event on either Class C or D. At ULS level event there may be relative movement between the slab and the ground, this may break services to the house, but will also serve to reduce the forces transferred to the structure of the house. This is acceptable within the intent of NZS 1170.5 2004.

Therefore, based on the above, shear key piles are unnecessary.

Date : 3/06/2015
Designer : BB
Checker : DL
Job Number : 49434

Beam Analysis



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : Beam (1)

Beam Loadings - Primary Beam :

roof span:	0.70 m	Beam Span:	2.50 m
roof weight:	0.48 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	0.16 kN/m
wall B mass:	kg/m ²		

Beam Loadings - Secondary Beam (PL A) :

roof span:	4.08 m	Beam Span:	4.90 m
roof weight:	0.48 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	kN/m
wall B mass:	kg/m ²		

Point Load B (PL B) :

G:	0.64 kN
Q:	0.35 kN
Wu:	-1.62 kN
Su:	kN

Point Load C (PL C) :

G:	1.10 kN
Q:	0.61 kN
Wu:	-2.80 kN
Su:	kN

Loadings Summary

UDL G :	0.48 kN/m	Point Load, G :	4.60 kN
Q :	0.18 kN/m	Q :	2.50 kN
Wu :	-0.81 kN/m	Wu :	-11.60 kN
Su :	0.00 kN/m	Su :	0.00 kN
Load Combo :	1.2 G		0 Wu
	1.5 Q		0 Su
UDL:	0.84 kN/m		
Sec Beam Point Load:	9.27 kN	at	1.20 m from support 1
Additional Point Load (PL b):	1.29 kN	at	2.10 m from support 1
Additional Point Load (PL c):	2.24 kN	at	0.40 m from support 1

	ULS	Wind Uplift	Snow (& mid-floor Q)	Snow (& roof only)
Load Cases	1.2G + 1.5Q	0.9G + Wu	1.2G + 0.4Q + Su	1.2 G + 0.0Q + Su
Support 1	7.95 kN	-6.04 kN	5.66 kN	4.82 kN
Support 2	6.94 kN	-5.22 kN	4.95 kN	4.22 kN

Beam end support condition:

simply supported ▼

Try: 2/290x45 SG8

Beam Type: timber ▼

for timber & flitched beams
b = 90 mm
d = 290 mm
I = 1.83E+08 mm⁴
for other beams
I = mm⁴
E = 6700 MPa

M* = 7.15 kNm
V* = 7.95 kN
support 1 reaction: 7.95 kN
support 2 reaction: 6.94 kN

k2 = 2.00
max. long term deflection: 3.95 mm
max. short term deflection: 2.23 mm
allowable defn (functionality), L/400 = 6.25 mm
OK

Beam Design

φ = 0.8
k1 = 0.8
lay/b = 10
k8 = 1
φ M = 11.3 kNm OK
φ V = 42.3 kN OK

shear stress = 3.8 MPa
bending stress = 14 MPa
Z = 1.26E+06 mm³

Date : 3/08/2015
Designer : BB
Checker : DL
Job Number : 49434

Beam Analysis



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : Beam (2)

Beam Loadings - Primary Beam :

roof span:	0.70 m	Beam Span:	3.00 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	0.00 kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	0.16 kN/m
wall B mass:	kg/m ²		

Beam Loadings - Secondary Beam (PL A) :

roof span:	2.10 m	Beam Span:	6.30 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	kN/m
wall B mass:	kg/m ²		

Point Load B (PL B) :

G:	0.43 kN
Q:	0.23 kN
Wu:	-1.10 kN
Su:	kN

Point Load C (PL C) :

G:	1.45 kN
Q:	0.80 kN
Wu:	-3.65 kN
Su:	kN

Loadings Summary

UDL G :	0.48 kN/m	Point Load, G :	3.04 kN
Q :	0.18 kN/m	Q :	1.65 kN
Wu :	-0.81 kN/m	Wu :	-7.67 kN
Su :	0.00 kN/m	Su :	0.00 kN
Load Combo :	1.2 G		0 Wu
	1.5 Q		0 Su
UDL:	0.84 kN/m		
Sec Beam Point Load:	6.13 kN	at	1.80 m from support 1
Additional Point Load (PL b):	0.86 kN	at	0.90 m from support 1
Additional Point Load (PL c):	2.94 kN	at	2.65 m from support 1

	ULS	Wind Uplift	Snow (& mid-floor Q)	Snow (& roof only)
Load Cases	1.2G + 1.5Q	0.9G + Wu	1.2G + 0.4Q + Su	1.2 G + 0.0Q + Su
Support 1	4.65 kN	-3.32 kN	3.36 kN	2.89 kN
Support 2	7.79 kN	-5.82 kN	5.55 kN	4.74 kN

Beam end support condition:

simply supported ▼

Try: 2/290x45 SG8

Beam Type: timber ▼

for timber & b = 90 mm
flitched beams d = 290 mm
I = 1.83E+08 mm⁴
for other beams I = mm⁴
E = 6700 MPa

M* = 6.24 kNm
V* = 7.79 kN
support 1 reaction: 4.65 kN
support 2 reaction: 7.79 kN

k2 = 2.00
max. long term deflection: 5.09 mm
max. short term deflection: 2.87 mm
allowable defn (functionality), L/400 = 7.50 mm
OK

Beam Design

φ = 0.8
k1 = 0.8
lay/b = 10
k8 = 1
φ M = 11.3 kNm OK
φ V = 42.3 kN OK

shear stress = 3.8 MPa
bending stress = 14 MPa
Z = 1.26E+06 mm³

Date : 3/08/2015
Designer : BB
Checker : DL
Job Number : 49434

Beam Analysis



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : Beam (3)

Beam Loadings - Primary Beam :

roof span:	1.84 m	Beam Span:	2.70 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	0.00 kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	0.16 kN/m
wall B mass:	kg/m ²		

Beam Loadings - Secondary Beam (PL A) :

roof span:	2.07 m	Beam Span:	5.90 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	0.00 kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	kN/m
wall B mass:	kg/m ²		

Point Load B (PL B) :

G:	kN
Q:	kN
Wu:	kN
Su:	kN

Point Load C (PL C) :

G:	kN
Q:	kN
Wu:	kN
Su:	kN

Loadings Summary

UDL G :	1.00 kN/m	Point Load, G :	2.81 kN
Q :	0.46 kN/m	Q :	1.53 kN
Wu :	-2.13 kN/m	Wu :	-7.08 kN
Su :	0.00 kN/m	Su :	0.00 kN
Load Combo :	1.2 G		0 Wu
	1.5 Q		0 Su
UDL:	1.89 kN/m		
Sec Beam Point Load:	5.66 kN	at	0.30 m from support 1
Additional Point Load (PL b):	0.00 kN	at	m from support 1
Additional Point Load (PL c):	0.00 kN	at	m from support 1

	ULS	Wind Uplift	Snow (& mid-floor Q)	Snow (& roof only)
Load Cases	1.2G + 1.5Q	0.9G + Wu	1.2G + 0.4Q + Su	1.2 G + 0.0Q + Su
Support 1	7.59 kN	-5.71 kN	5.41 kN	4.62 kN
Support 2	3.19 kN	-2.17 kN	2.32 kN	2.00 kN

Beam end support condition:

simply supported ▼

Try: 2/290x45 SG8

Beam Type: timber ▼

for timber & flitched beams
b = 90 mm
d = 290 mm
I = 1.83E+08 mm⁴
for other beams
I = mm⁴
E = 6700 MPa

M* = 2.68 kNm
V* = 7.59 kN
support 1 reaction: 7.59 kN
support 2 reaction: 3.19 kN

k2 = 2.00
max. long term deflection: 2.09 mm
max. short term deflection: 1.17 mm
allowable defn (functionality), L/400 = 6.75 mm
OK

Beam Design

shear stress = 3.8 MPa
bending stress = 14 MPa
Z = 1.26E+06 mm³

φ = 0.8
k1 = 0.8
lay/b = 10
k8 = 1

φ M = 11.3 kNm OK
φ V = 42.3 kN OK

Date : 3/06/2015
Designer : BB
Checker : DL
Job Number : 49434

Beam Analysis



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : Beam (4)

Beam Loadings - Primary Beam :

roof span:	0.70 m	Beam Span:	0.90 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	kPa		
wall A height:	m	floor B span:	m
wall A mass:	kg/m ²	floor B weight:	kPa
wall B height:	m	floor B live load:	kPa
wall B mass:	kg/m ²	self weight:	0.08 kN/m

Beam Loadings - Secondary Beam (PL A) :

roof span:	3.74 m	Beam Span:	6.00 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	kPa		
wall A height:	m	floor B span:	m
wall A mass:	kg/m ²	floor B weight:	kPa
wall B height:	m	floor B live load:	kPa
wall B mass:	kg/m ²	self weight:	kN/m

Point Load B (PL B) :

G:	kN
Q:	kN
Wu:	kN
Su:	kN

Point Load C (PL C) :

G:	kN
Q:	kN
Wu:	kN
Su:	kN

Loadings Summary

UDL G :	0.40 kN/m	Point Load, G :	5.16 kN
Q :	0.18 kN/m	Q :	2.80 kN
Wu :	-0.81 kN/m	Wu :	-13.01 kN
Su :	0.00 kN/m	Su :	0.00 kN
Load Combo :	1.2 G		1.5 Q
			0 Wu
			0 Su
UDL:	0.74 kN/m		
Sec Beam Point Load:	10.39 kN	at	0.40 m from support 1
Additional Point Load (PL b):	0.00 kN	at	m from support 1
Additional Point Load (PL c):	0.00 kN	at	m from support 1

	ULS	Wind Uplift	Snow (& mid-floor Q)	Snow (& roof only)
Load Cases	1.2G + 1.5Q	0.9G + Wu	1.2G + 0.4Q + Su	1.2 G + 0.0Q + Su
Support 1	6.11 kN	-4.85 kN	4.31 kN	3.65 kN
Support 2	4.95 kN	-3.92 kN	3.50 kN	2.97 kN

Beam end support condition:

simply supported ▼

Try: 2/140x45 SG8

Beam Type:

timber ▼

for timber & b = 90 mm
fitched beams d = 140 mm
I = 2.06E+07 mm⁴
for other beams I = mm⁴
E = 6700 MPa

M* = 2.38 kNm
V* = 6.11 kN
support 1 reaction: 6.11 kN
support 2 reaction: 4.95 kN

k2 = 2.00
max. long term deflection: 1.42 mm
max. short term deflection: 0.80 mm
allowable defn (functionality), L/400 = 2.25 mm
OK

Beam Design

shear stress = 3.8 MPa
bending stress = 14 MPa
Z = 2.94E+05 mm³

φ = 0.8
k1 = 0.8
lay/b = 10
k8 = 1

φ M = 2.6 kNm OK
φ V = 20.4 kN OK

Date : 3/06/2015
Designer : BB
Checker : DL
Job Number : 49434

Beam Analysis



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : Beam (5)

Beam Loadings - Primary Beam :

roof span:	2.42 m	Beam Span:	1.80 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	0.06 kN/m
wall B mass:	kg/m ²		

Beam Loadings - Secondary Beam (PL A) :

roof span:	1.73 m	Beam Span:	3.00 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	kN/m
wall B mass:	kg/m ²		

Point Load B (PL B) :

G:	1.20 kN
Q:	0.65 kN
Wu:	-3.00 kN
Su:	kN

Point Load C (PL C) :

G:	kN
Q:	kN
Wu:	kN
Su:	kN

Loadings Summary

UDL G :	1.19 kN/m	Point Load, G :	1.19 kN
Q :	0.60 kN/m	Q :	0.65 kN
Wu :	-2.80 kN/m	Wu :	-3.00 kN
Su :	0.00 kN/m	Su :	0.00 kN
Load Combo :	1.2 G		0 Wu
	1.5 Q		0 Su
UDL:	2.33 kN/m		
Sec Beam Point Load:	2.40 kN	at	0.10 m from support 1
Additional Point Load (PL b):	2.42 kN	at	1.70 m from support 1
Additional Point Load (PL c):	0.00 kN	at	m from support 1

	ULS	Wind Uplift	Snow (& mid-floor Q)	Snow (& roof only)
Load Cases	1.2G + 1.5Q	0.9G + Wu	1.2G + 0.4Q + Su	1.2 G + 0.0Q + Su
Support 1	4.50 kN	-3.49 kN	3.19 kN	2.71 kN
Support 2	4.51 kN	-3.48 kN	3.20 kN	2.72 kN

Beam end support condition:

simply supported ▼

Try: 2/140x45 SG8

Beam Type: timber ▼

for timber & b = 90 mm
fitted beams d = 140 mm
I = 2.06E+07 mm⁴
for other beams I = mm⁴
E = 6700 MPa

M* = 1.18 kNm
V* = 4.51 kN
support 1 reaction: 4.50 kN
support 2 reaction: 4.51 kN

k2 = 2.00
max. long term deflection: 3.68 mm
max. short term deflection: 2.08 mm
allowable defn (functionality), L/400 = 4.50 mm
OK

Beam Design

φ = 0.8
k1 = 0.8
lay/b = 10
k8 = 1
φ M = 2.6 kNm OK
φ V = 20.4 kN OK

shear stress = 3.8 MPa
bending stress = 14 MPa
Z = 2.94E+05 mm³

Date : 3/06/2015
Designer : BB
Checker : DL
Job Number : 49434

Beam Analysis



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : Beam (6)

Beam Loadings - Primary Beam :

roof span:	0.70 m	Beam Span:	4.95 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	0.23 kN/m
wall B mass:	kg/m ²		

Beam Loadings - Secondary Beam (PL A) :

roof span:	1.55 m	Beam Span:	5.20 m
roof weight:	0.46 kPa	floor A span:	m
roof live load (Q):	0.25 kPa	floor A weight:	kPa
roof uplift wind load (Wu):	-1.16 kPa	floor A live load:	kPa
roof snow load (Su):	kPa	floor B span:	m
wall A height:	m	floor B weight:	kPa
wall A mass:	kg/m ²	floor B live load:	kPa
wall B height:	m	self weight:	kN/m
wall B mass:	kg/m ²		

Point Load B (PL B) :

G:	0.85 kN
Q:	0.45 kN
Wu:	-2.10 kN
Su:	kN

Point Load C (PL C) :

G:	2.10 kN
Q:	1.15 kN
Wu:	-5.30 kN
Su:	kN

Loadings Summary

UDL G :	0.55 kN/m	Point Load, G :	1.86 kN
Q :	0.18 kN/m	Q :	1.01 kN
Wu :	-0.81 kN/m	Wu :	-4.68 kN
Su :	0.00 kN/m	Su :	0.00 kN
Load Combo :	1.2 G		0 Wu
			0 Su
UDL:	0.92 kN/m		
Sec Beam Point Load:	3.74 kN	at	3.60 m from support 1
Additional Point Load (PL b):	1.70 kN	at	1.50 m from support 1
Additional Point Load (PL c):	4.25 kN	at	2.50 m from support 1

	ULS	Wind Uplift	Snow (& mid-floor Q)	Snow (& roof only)
Load Cases	1.2G + 1.5Q	0.9G + Wu	1.2G + 0.4Q + Su	1.2 G + 0.0Q + Su
Support 1	6.59 kN	-4.22 kN	4.84 kN	4.21 kN
Support 2	7.67 kN	-5.10 kN	5.60 kN	4.84 kN

Beam end support condition:

simply supported ▼

Try:

200PFC

Beam Type:

steel ▼

for timber & b = mm
fitted beams d = mm
l = mm⁴
for other beams l = 1.91E+07 mm⁴
E = 2.00E+05 MPa

M*	11.89 kNm
V*	7.67 kN
support 1 reaction:	6.59 kN
support 2 reaction:	7.67 kN
	2.00
max. long term deflection:	5.07 mm
max. short term deflection:	5.68 mm
allowable defn (functionality), L/400 =	12.38 mm
	OK

Date : 3/08/2015
 Designer : BB
 Checker : DL
 Job Number : 49434

Steel Beam Check



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
 Description : Beam (6)

Section type: PFC	Member Length: 4950 mm		
Section: 200PFC	Grade: 300PLUS [®]	Hot rolled	End restraint: PP
d= 200 mm	b= 75 mm	t _f = 12.0 mm	t _w = 6.0 mm
Area= 2920 mm ²	f _y = 300 MPa	f _w = 320 MPa	f _u = 440 MPa
I _{xx} = 19.10E+06 mm ⁴	Z _x = 191.0E+03 mm ³	S _x = 221.0E+03 mm ³	r _x = 80.9 mm
I _{yy} = 1.650E+06 mm ⁴	Z _y = 033E+03 mm ³	S _y = 058.9E+03 mm ³	r _y = 23.8 mm
J= 101.0E+03 mm ⁴	I _w = 011E+09 mm ⁶	Z _{xx} = 221.0E+03 mm ³	k= 1
Z _{xy} = 048.7E+03 mm ³	E= 205E+03 MPa	G= 080.0E+03 MPa	
			Load height: Top Flange

Check of Section Category Requirements

Minimum section category =4

Maximum Yield Stress Requirement Satisfied (Tbl 12.4)

No transverse loading therefore Clause 12.8.3.3 is complied with

**** MAJOR axis bending ****

Flange: $\lambda_f = 6.30$, Allowable = 25 [OK]

Web: $\lambda_w = 33.19$, Allowable = 161 [OK]

Member Effective length Calcs

Torsional End Restraint Conds (TERC) are given as PP

=> Line3 of Tbl 5.6.3(1) => kt = 1.1

=> Line1 of Tbl 5.6.3(2) => kl = 1.4

=> Line2 of Tbl 5.6.3(3) => kr = 1.0

Eff. Len Le = L * kt * kl * kr = 4.95 * 1.1 * 1.4 * 1.0 = 7.4844 m

Major Axis Bending

Design action M_x = 11.89 kNm

Section Bending Capacity M_{xx} = f_y Z_{xx} = 66.30 kNm

1.7M_s [Eq 5.6.1.1(2)]

$$\alpha_m = \frac{1.7}{[(M_2^2 + (M_3^2 + (M_4^2)^{0.5})^{0.5}]^{0.5}}$$

$$= 1.7 * 11.894818 / [(7.44946594)^2 + (11.829909)^2 + (8.7809984)^2]^{0.5} = 1.2249$$

Reference Buckling Moment Calculation : M_o

$$M_o = [(\pi^2 * E * I_y / L_e^2) * (G * J + (\pi^2 * E * I_w / L_e^2))]^{0.5} \quad [\text{Eq 5.6.1.1(4)}]$$

$$= [(3.142^2 * 2.05E+05 * 1.650E+06 / 7484^2) * (080.0E+03 * 101E+03 + (3.142^2 * 205E+03 * 011E+09 / 7484^2))]^{0.5}$$

M_o := 22.48 kNm

$$\alpha_s = 0.8 \left[\left(\frac{M_{xx}}{M_{ox}} \right)^2 + 3 \right]^{0.5} - \left(\frac{M_{xx}}{M_{ox}} \right) = 0.28$$

$\alpha_m, \alpha_s < 1.0$, => Segment NOT Fully Restrained

$$M_{ux} = 1.2249 * 0.28 * 66.30 = 22.93$$

Major axis capacity Ratio = M_x/M_{ux}

$$= 0.5764 \quad [\text{OK}]$$

WWW.WILTONJOUBERT.CO.NZ STRUCTURAL GEOTECH STORMWATER WASTEWATER

Date : 3/08/2015
Designer : BB
Checker : DL
Job Number : 49434

Steel Beam Check



**WILTON
JOUBERT**

Consulting Engineers

Site Address : Lot 14, Pohutukawa Place, Golf View Estate
Description : Beam (6)

Section type: PFC Member Length: 4950 mm

Shear Calculations (Unstiffened Web)

Design Action $V_x = 7.668$ kN

$V_w = 0.6 * F_{yw} * d * t_w = 0.6 * 320 * 200 * 6.0$

Nominal Shear Yield capacity $V_w = 230.4$ kN

$\alpha_v = [82 / \{ (d_p / t_w) * (f_y / 250)^{0.5} \}]^2 = 5.3506 \geq 1 \Rightarrow$ full web shear capacity

$V_u = V_w = 230.4$ kN

Moment-Shear Interaction Check : Moment ratio (0.576) $\leq$ 0.75 Moment-Shear OK

Seismic Member Checks

Minimum Seismic Category not 1, 2, or 3, hence checks not required

===== SUMMARY =====
U.L.S. Capacity Check PASSED, Load Cap. Ratio = 0.58 ---- OK *****
=====



Te Kaunihera-ā-Rohe o Ngāmotu

NEW PLYMOUTH DISTRICT COUNCIL

newplymouthnz.com

Code Compliance Certificate

Form 7, Section 95, Building Act 2004

The Building

Street Address of building: 122 Pohutukawa Place BELL BLOCK, NEW PLYMOUTH 4312

Legal Description of land where building is located: Lot 14 DP 485464

Current, lawfully established use: Residential dwelling with attached garaging

Year first constructed: 2015

The Owner

Name of owner: Cameron Leslie BLAKE

Jacqueline Ann BLAKE

Contact Person: PLATINUM HOMES NZ

LIMITED

Owner Mailing Address: C/- PO Box 148

NEW PLYMOUTH 4340

Phone number: (Bus.) 06-7574667

(Pvt.) 0277366420

Email address:

nicole.leigh@platinumhomes.co.nz

Building Work

Building Consent number:

BC15/118509

Description of work:

**Four bedroom dwelling with
attached triple garage**

Issued by:

New Plymouth District Council

Code Compliance

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

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

This is a final code compliance certificate issued in respect of all of the building work under the above building consent.

CODE COMPLIANCE CERTIFICATE

Building Lead

On behalf of: New Plymouth District Council

Date Issued: 31 December 2015



Te Kaunihera-ā-Rohe o Ngāmotu
**NEW PLYMOUTH
DISTRICT COUNCIL**
newplymouthnz.com

RN 10069

New Plymouth District Council
Private Bag 2025
New Plymouth 4342
Phone 06 759 6060
BuildingAdministration@npdc.govt.nz

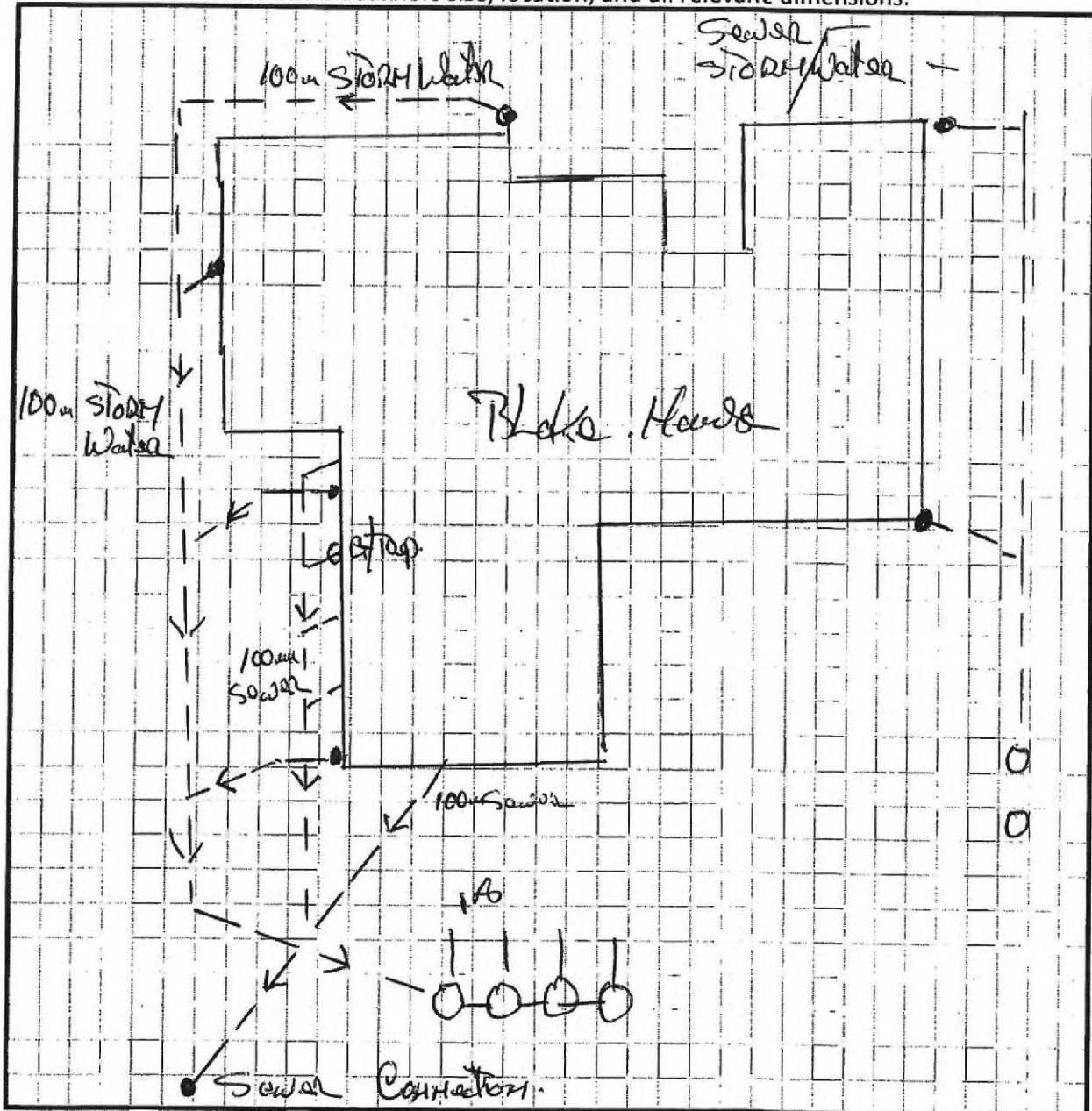
Blake Jar

AS-BUILT STORMWATER DRAINAGE PLAN TAR 148A

Building Consent: BC 15/18509 Address: Pohutukawa Place RD.

Person Responsible: Tony Walker Date: 10/11/15

Note: Show Soakhole size, location, and all relevant dimensions.



Specify system used:

- ☐ Conventional unlined Soakholes
- ☐ Lined Soakholes
- ☐ Reticulated System

Dia:

Liner type & size:

Depth:

Depth:

Receipt by NPDC of this record does not imply endorsement of its accuracy.

DM6567810, v1

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