

Approved Building Consent Documents

Please Note: A copy of the stamped approved documents must be available on site for all inspections.

Inspection booking timeframes

Call received	before 3pm inspection will be done	after 3pm inspection will be done
Monday	Wednesday	Thursday
Tuesday	Thursday	Friday
Wednesday	Friday	Monday
Thursday	Monday	Tuesday
Friday	Tuesday	Wednesday

Building inspections and enquiries phone: 03 347 2839

Please ensure all work for inspection is ready the day before. Incomplete work requiring re-inspection will incur an additional inspection fee.



ARTIST IMPRESSION

INDEX:

01 ARTIST IMPRESSION & INDEX

ENGINEERS DRAWINGS:

S01 LINTEL BEAM PLAN
S02 LINTEL BEAM ELEVATIONS/DETAILS

ARCHITECTURAL DRAWINGS:

02 SITE PLAN
03 FOUNDATION PLAN
04 FLOOR PLAN
05 ELEVATIONS & RISK ASSESMENTS

06 FRAMING LAYOUT
07 BRACING LAYOUT
08 BRACING FIXING DETAILS
09 BRACING DETAILS (GS1 & BL1)
10 TYPICAL PLYWOOD DETAILS
11 TYPICAL GIB DETAILS/WET AREA DETAILS
12 ROOF PLAN
13 PRELIMINARY LIGHTING/ELECTRICAL LAYOUT & TYP. DOWNLIGHT DETAIL
14 TYPICAL LINTEL HOLD DOWN FIXING DETAILS

15 CROSS SECTION A & B
16 CROSS SECTION C
17 TYP. FIXING DETAILS & DETAIL 01 - 03
18 DETAILS 04 - 09
19 DETAILS 10 - 15
20 DETAILS 16 - 21
21 DETAILS 22 - 26



* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
* THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
* THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
* THESE DRAWINGS ARE TO READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
* ON SITE AMENDMENTS, CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

PROJECT INFORMATION:
**Proposed Residence for DP Homes,
Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

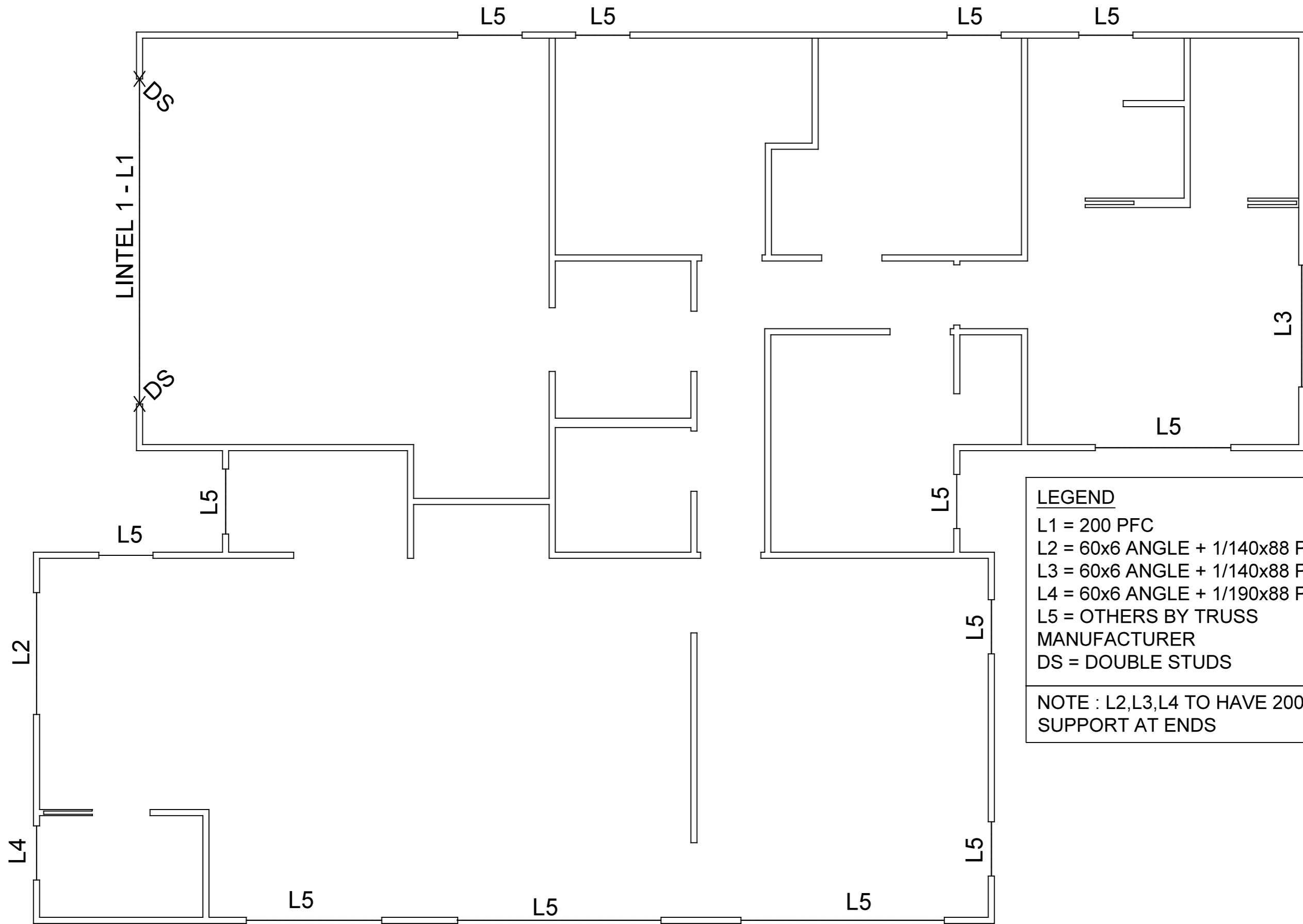
DRAWING TITLE:
ARTIST IMPRESSION & INDEX

REVISION:

CONSENT DRAWINGS: ISSUE 1
SCALE: N.T.S. DATE OF ISSUE: 07-Jun-21
DRAWN BY: Craig Fitchett JOB NUMBER: 2021-005

SHEET:
1
of 21

SDC - Approved Building Consent Document - BC211467 - Pg 3 of 30 - 9/09/2021 - camerj



LEGEND

- L1 = 200 PFC
- L2 = 60x6 ANGLE + 1/140x88 PROLAM
- L3 = 60x6 ANGLE + 1/140x88 PROLAM
- L4 = 60x6 ANGLE + 1/190x88 PROLAM
- L5 = OTHERS BY TRUSS MANUFACTURER
- DS = DOUBLE STUDS

NOTE : L2,L3,L4 TO HAVE 200mm SUPPORT AT ENDS

LINTEL BEAM PLAN

DS = DOUBLE STUDS

Postal Address: PO.Box 6160, Christchurch 8442, Phone: (03) 3431220

**MIKE WILTON
CONSULTING**

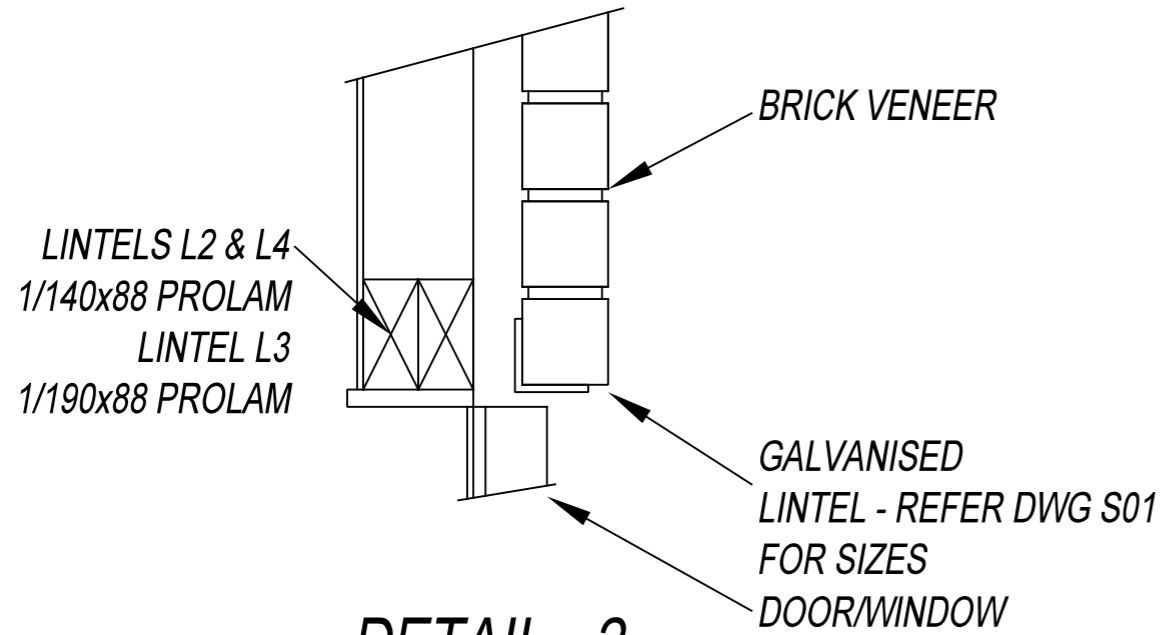
PROJECT TITLE
LOT70 VERDECO PARK
LINCOLN

DRAWING TITLE
LINTEL BEAM PLAN

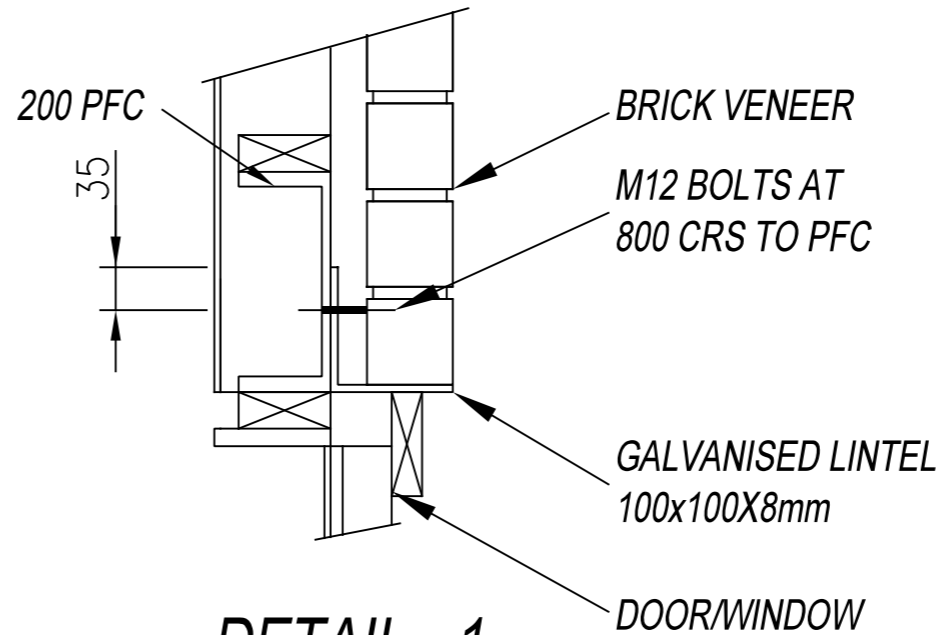
CLIENT
CLEARWATER DEVELOPMENTS

JOB NO.	21196	DATE	03/06/2021
SCALE @ A3	NTS	DRAWN	AC
REV NO.	1	SHEET NO.	S01

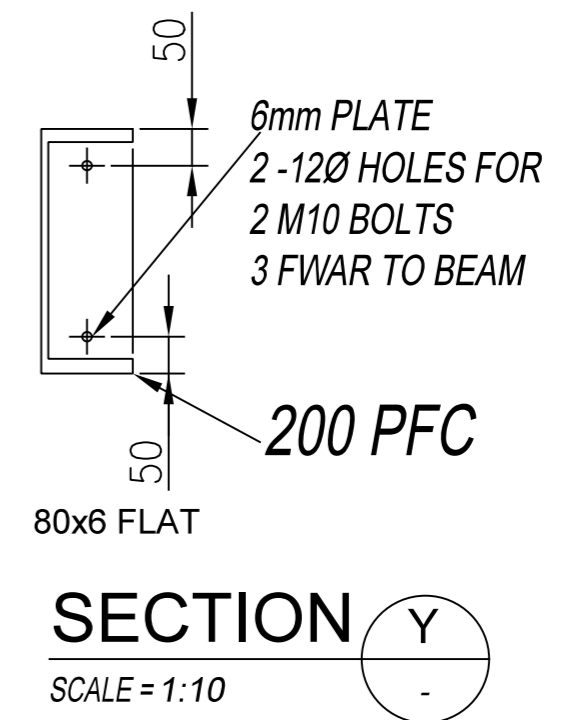
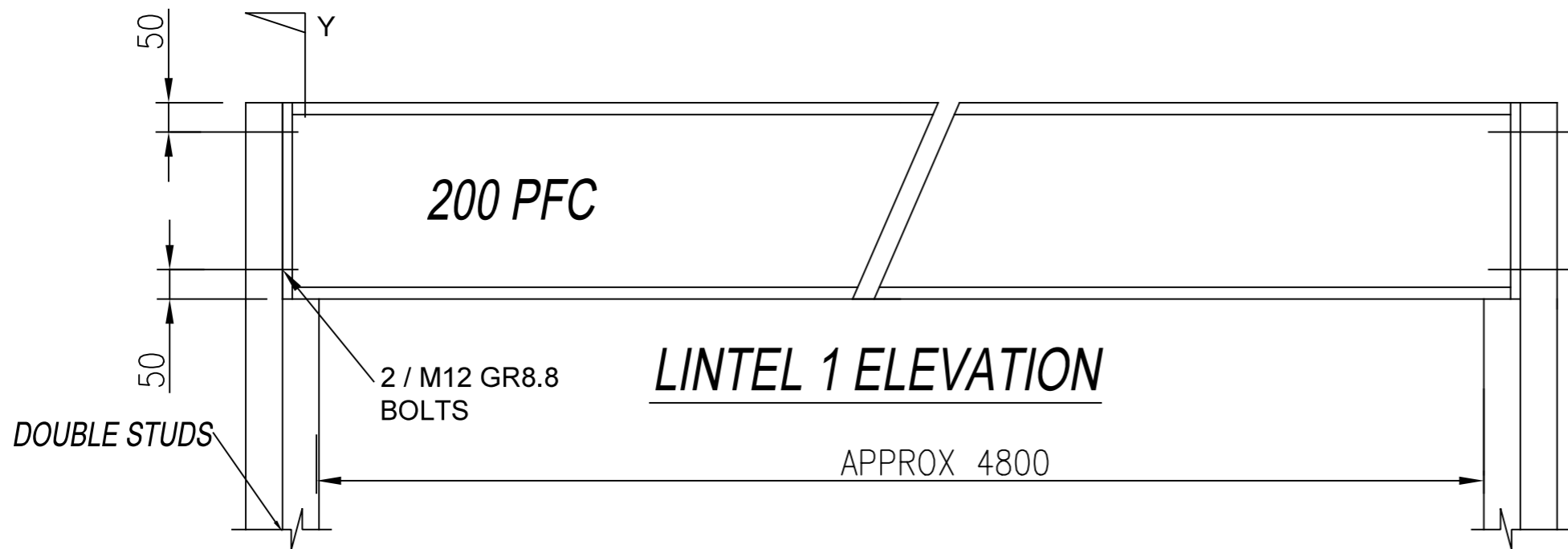
SDC - Approved Building Consent Document - BC211467 - Pg 4 of 30 - 9/09/2021 - camerj



DETAIL - 2
LINTELS - 2 TO 4
 LINTEL 2 TO 4 TO EXTEND 200mm PAST
 OPENING



DETAIL - 1
LINTEL - 1



SECTION Y
 SCALE = 1:10

KEY:

- Proposed Stormwater: 100mm dia., 1:120 gradient
- Proposed Sewer: 100mm dia., 1:60 gradient
- Terminal Vent (80mm min. dia) TV
- WC Fixture Vent (40mm min. dia) FV
- Down Pipe: DP
- Drainage Outlet: DO
- Gully Trap: GT
- Silt Trap: ST
- Silt Trap: SP
- Type 1 Surface Water Sump: SP
- Inspection Junction/Bend/Point: IJ/IB/IP
- Air Admittance Valve: AAV

All to comply with NZBC.

SCL PIPE SIZES:

- toilets: 100mm dia (1:60 gradient)
- sinks (bthrm): 40mm dia (1:40 gradient)
- sinks (kitchen): 50mm dia (1:40 gradient)
- w/c: 40mm dia (1:30 gradient)
- tub: 40mm dia (1:30 gradient)
- bat: 40mm dia (1:40 gradient)
- d/w: 40mm dia (1:40 gradient)
- shower: 40mm dia (1:40 gradient)
- whc: 32mm dia (1:20 gradient)
- ventilates: 32mm dia (1:20 gradient)

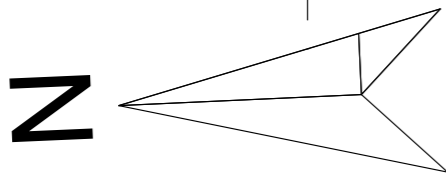
NOTES:

- 1. Drainage shown is diagrammatic, drainlayer & plumber to confirm on site local council.
- 2. All drains to comply with G13/AS1 and AS2
- 3. Air admittance valves are to be fitted to all fittings greater than 3.5m.
- 4. All pipe penetrations through concrete shall be wrapped in 'Deso Tape' or similar product to allow for pipe movement or any pipe work to go under any strip footing in the horizontal plane, shall be not less than 45°, and clear the underside of the footing by 25mm.
- 5. UPVC pipes shall be supported at centres not exceeding:
 - 32-50mm dia pipes - 1.0m vertically, 0.5m graded.
 - 65-100mm dia pipes - 1.2m vertically, 1.0m graded.
 - greater than 100mm dia pipes - 1.8m vertically, 1.2m graded.
- 6. Thermal movement shall be accommodated using pipe sleeves or a durable and flexible lagging material
- 7. Separation from all services 100mm min.
- 8. HWC overflow pipe to be copper (20mm dia).
- 9. AN INSPECTION POINT/JUNCTION IS TO BE LOCATED WITHIN 2.0m OF THE EXIT FROM THE BUILDING.

SDC Approved Building Consent Document - BC211467 - Pg 5 of 30 - 9/09/2021 - amended

Resource Consent # RC215479 has been granted on 30/07/21

30/07/2021 halln



1. Be of appropriate height and construction to prevent site hazards from harming traffic or passerby.
2. Be difficult to climb.
3. Have no openings other than those approved by the territorial authority for access and viewing.
4. have no gates or doors which project beyond the site when opened.

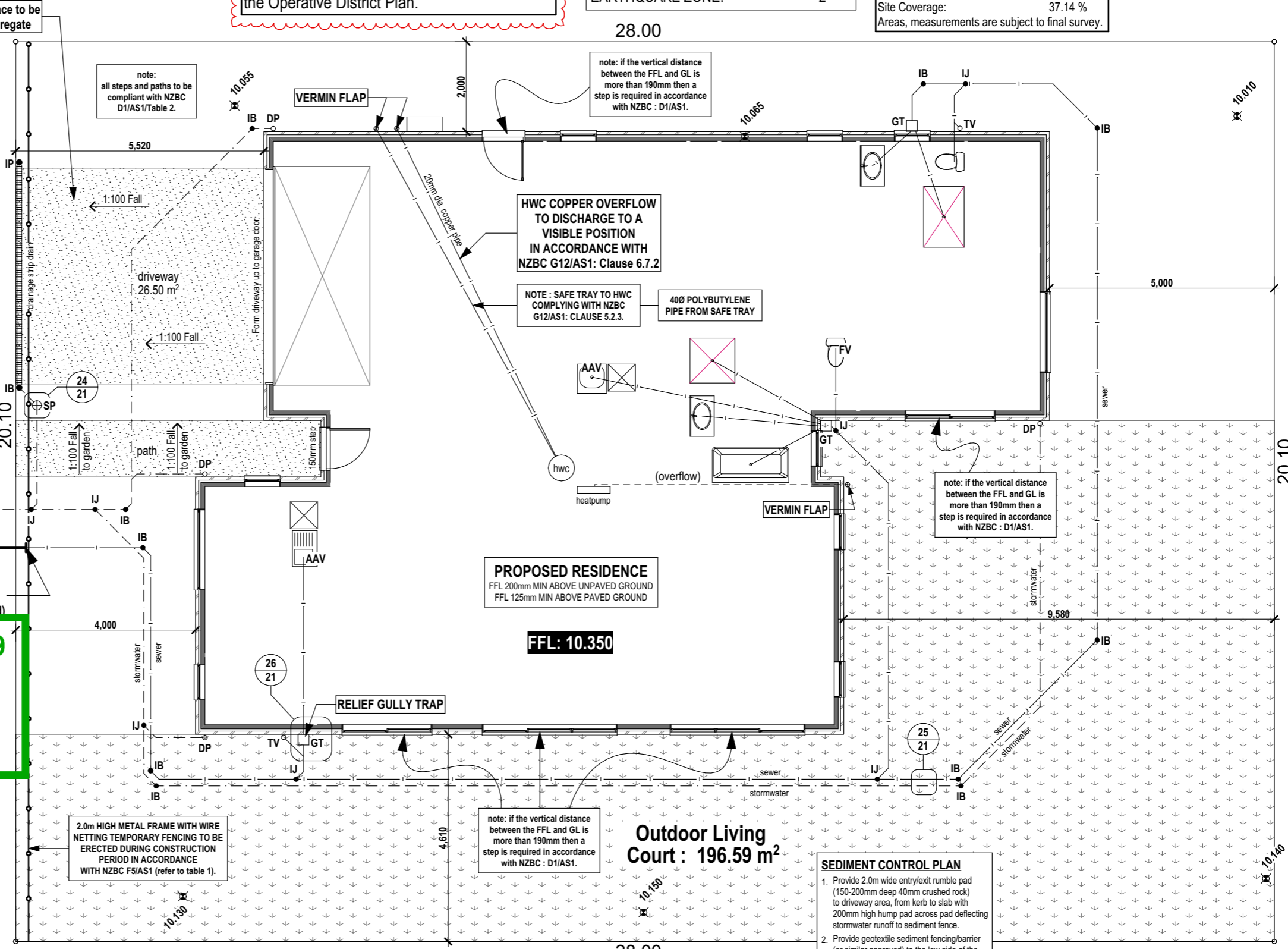
NOTE: Any proposed fence erected on site will comply with the requirements of Rule 4.13 of the Operative District Plan.

EXPOSURE ZONE: C
WIND ZONE: HIGH
EARTHQUAKE ZONE: 2

Lot 70, DP 558331
Site Area: 562 sq.m
Building Coverage: 208.72 sq.m
Site Coverage: 37.14 %
Areas, measurements are subject to final survey.

MONTE CRESCENT

Driveway surface to be exposed aggregate



note: all steps and paths to be compliant with NZBC D1/AS1/Table 2.

note: if the vertical distance between the FFL and GL is more than 190mm then a step is required in accordance with NZBC : D1/AS1.

HWC COPPER OVERFLOW TO DISCHARGE TO A VISIBLE POSITION IN ACCORDANCE WITH NZBC G12/AS1: Clause 6.7.2

NOTE : SAFE TRAY TO HWC COMPLYING WITH NZBC G12/AS1: CLAUSE 5.2.3.

note: if the vertical distance between the FFL and GL is more than 190mm then a step is required in accordance with NZBC : D1/AS1.

PROPOSED RESIDENCE
FFL 200mm MIN ABOVE UNPAVED GROUND
FFL 125mm MIN ABOVE PAVED GROUND

FFL: 10.350

2.0m HIGH METAL FRAME WITH WIRE NETTING TEMPORARY FENCING TO BE ERECTED DURING CONSTRUCTION PERIOD IN ACCORDANCE WITH NZBC F5/AS1 (refer to table 1).

note: if the vertical distance between the FFL and GL is more than 190mm then a step is required in accordance with NZBC : D1/AS1.

Outdoor Living Court : 196.59 m²

WATERTIGHTNESS
The water supply system shall be tested to ensure watertightness. An acceptable testing method is to:
a) Subject the hot and cold system to a pressure of 1500 kPa for a period of not less than 15 minutes, and
b) Inspect the system to ensure that there are no leaks.

- SEDIMENT CONTROL PLAN**
1. Provide 2.0m wide entry/exit rumble pad (150-200mm deep 40mm crushed rock) to driveway area, from kerb to slab with 200mm high hump pad across pad deflecting stormwater runoff to sediment fence.
 2. Provide geotextile sediment fencing/barrier (or similar approved) to the low side of the soil disturbance.
 3. Stockpile topsoil within the sediment controlled zone.
 4. Stabilise earth banks.
 5. Downpipes to be connected as soon as roof and drainage is available.
 6. All other work is to be completed in accordance with Environment Canterbury "Best Practice Guidelines."

Site Plan scale 1:100 @ A3



CRAIG FITCHETT DESIGN LIMITED
P. 03 343 0833,
M. 021 216 1438,
E. craig@craigfitchettdesign.co.nz
Licence number BP105386

PROJECT INFORMATION:
Proposed Residence for DP Homes, Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.

DRAWING TITLE:
SITE PLAN

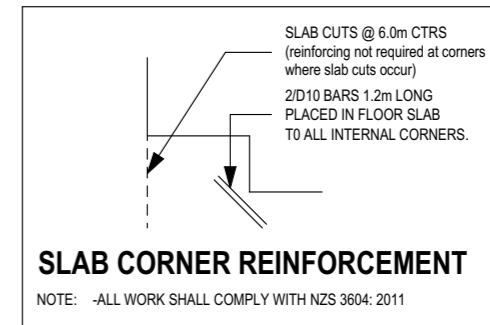
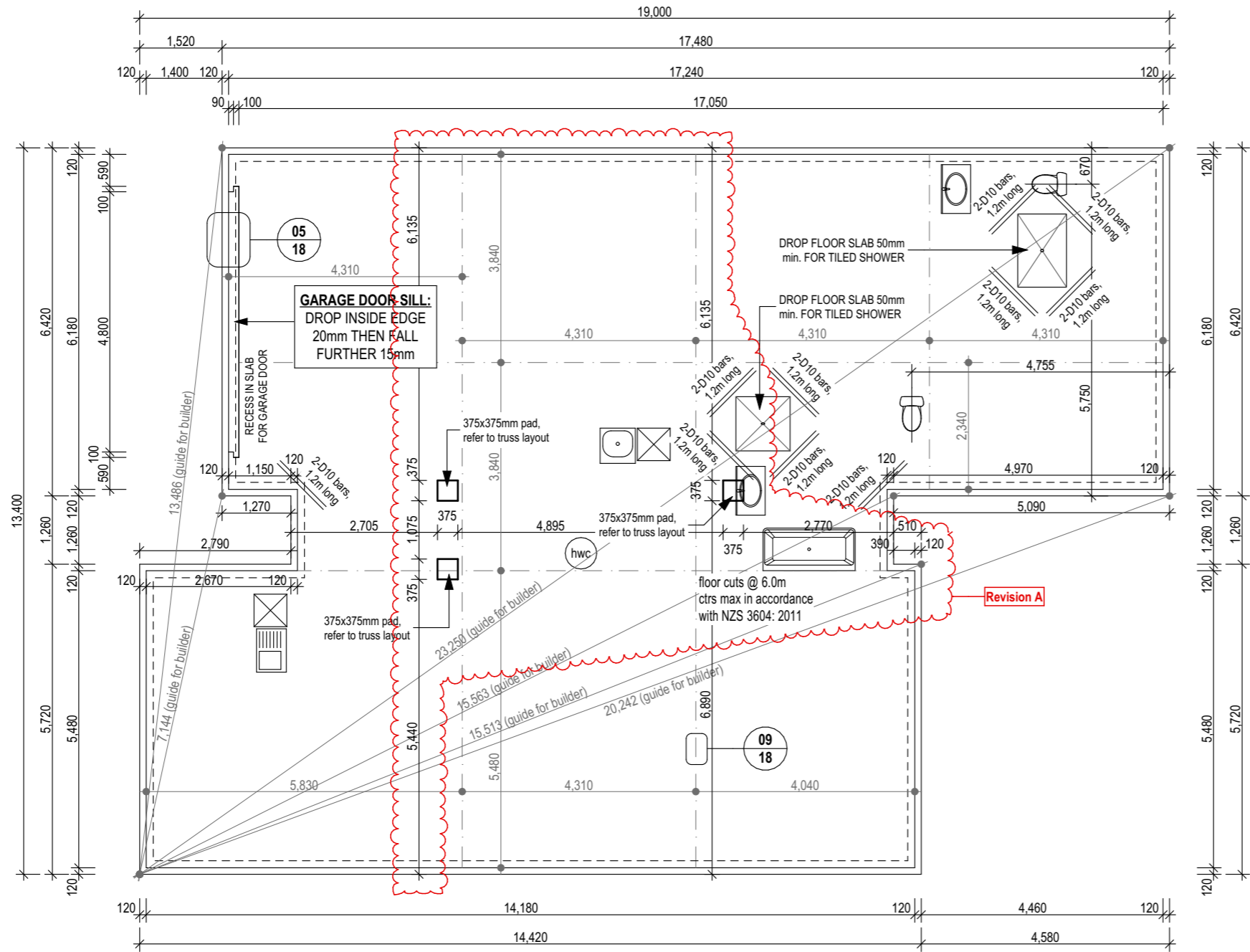
REVISION:

A	NOTE ADDED.
---	-------------

CONSENT DRAWINGS: ISSUE 1
SCALE: 1:100 @ A3
DATE OF ISSUE: 20-Jul-21
DRAWN BY: Craig Fitchett
JOB NUMBER: 2021-005

SHEET:
2
of 21

SDC - Approved Building Consent Document - BC211467 - Pg 6 of 30 - 9/09/2021 - camerj



Foundation Plan

scale 1:100



CRAIG FITCHETT DESIGN LIMITED
 P. 03 343 0833,
 M. 021 216 1438,
 E. craig@craigfitchettdesign.co.nz

Craig Fitchett
 licence number BP105386

PROJECT INFORMATION:
**Proposed Residence for DP Homes,
 Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
FOUNDATION PLAN

REVISION:

A	Concrete pads & dimensions added.
---	-----------------------------------

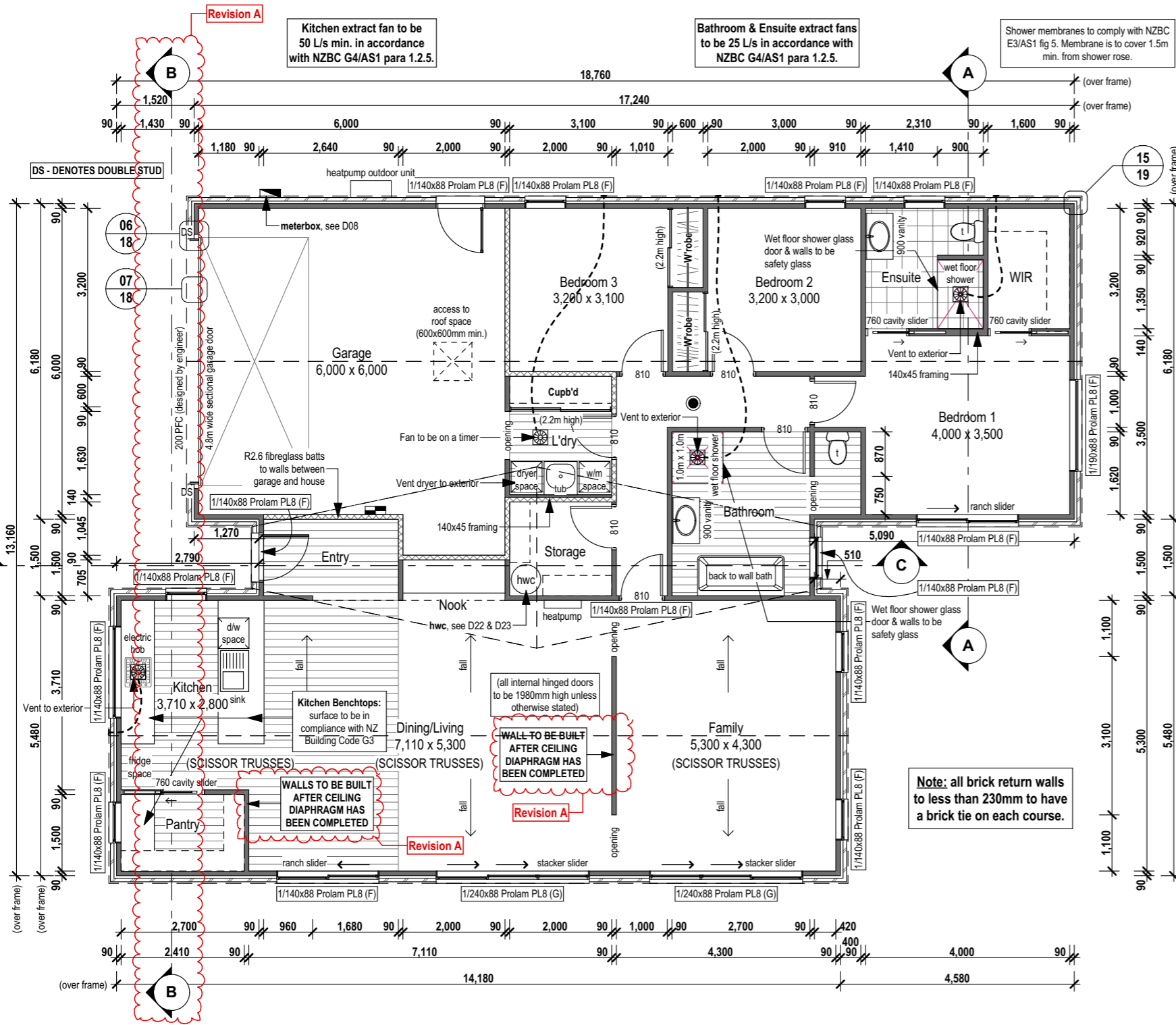
CONSENT DRAWINGS: ISSUE 1

SCALE: 1:100 @ A3	DATE OF ISSUE: 11-Aug-21
DRAWN BY: Craig Fitchett	JOB NUMBER: 2021-005

SHEET:
3
 of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNERS/MANUFACTURERS DRAWINGS.
 * ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

SDC - Approved Building Consent Document - BC211467 - Pg 7 of 30 - 9/09/2021 - camerj



Floor Plan scale 1: 100

ROOF & WALL CLADDING

Roof : 10° & 40° 'Dimond' Veedek Colorsteel Roofing
 Walls : 70 Series Brick Veneer on a 50mm Cavity

GENERAL FLOOR PLAN NOTES

SMOKE ALARMS:
 Smoke Alarms to be fitted within 3.0m of sleeping areas and on Escape routes, as indicated on the drawings.
 ALL SMOKE ALARMS TO HAVE HUSH & TEST FACILITIES
 ● Indicates Smoke Detector Position

MISCELLANEOUS:
 Dimensions shown are to the frame, GIB thickness not shown.
 Air Seals to have PEF rod & low expansion foam.
 All windows and doors centered in room unless shown otherwise

FOUNDATION:
 Standard foundations as per NZS3604:2011 subject to final soil report.

WALL FRAMING:
 Designed to high wind zone
 Stud Height: 2420 mm
 Exterior Walls: 90x45mm studs @ 600 mm ctrs max.
 Interior Loadbearing Walls: 90x45mm studs @ 600 mm ctrs max.
 Ensuite & L'dry Walls (where indicated): 145x45 SG8 H1.2 Studs @ 600mm crs
 Dwangs Ext: 90x45 @ 800 ctrs max.
 Non loadbearing wall framing: 90x45mm studs @ 600 mm ctrs max.
 Dwangs Int :90x45mm, 2 rows (@ 800mm ctrs max.)

LINTELS AND BEAMS:
 Sizes shown are to be confirmed by the precut manufacturer and shall comply with NZS 3604: 2011. Refer to the truss design layout.

BUILDING WRAP:
 Watergate Building Wrap, refer to manufacturers specifications.

INTERNAL DOORS:
 Hinged Doors Internal Height: 1980mm.
 Wardrobe Sliders Internal Height: 2200mm.

INSULATION:
 External Walls: Fibreglass R2.6 wall batts.
 Ceiling: Fibreglass R3.6 ceiling batts.

WALL AND CEILING LININGS
 Walls: Standard 10mm GIB (unless required for bracing)
 Standard 13mm GIB
 Ceiling: 13mm GIB Aqualine (bathrooms)
 10mm GIB Aqualine
 Bathroom: 10mm GIB Aqualine
 Corner Finish: Square

INTERIOR AND EXTERIOR JOINERY:
 Joinery: Double Glazed Vantage
 Standard Aluminium Joinery
 Interior: Shelf and rail to wardrobes

WATER HEATING
 Electric Hot water system.

KITCHEN COOKTOP
 Electric.

FLOOR COVERING KEY:
 all floor coverings shall comply with NZBC E3/AS1.

Tiles: Carpet: Family, Living, WIR, Bedrooms, Storage & Hallway.
Vinyl: Concrete: Garage.
Vinyl Planking: Concrete: Garage.

ANTI-SLIP: on all access routes (both external and internal), provide anti-slip surfaces complying with NZBC D1/AS1/Table 2 (except surfaces inside entry doors of housing may be considered as dry areas).

PIPE SUPPORT

Pipes shall be supported at centres not exceeding:

	Pipe Diameter	Max distance between supports
Copper Pipes:	32 - 50mm	3.0m (vertical pipe) 2.5m (graded pipe)
	greater than 50mm	3.5m (vertical pipe) 3.0m (graded pipe)
PVC-U Pipes:	32 - 50mm	1.0m (vertical pipe) 0.5m (graded pipe)
	65 - 100mm	1.2m (vertical pipe) 1.0m (graded pipe)
	greater than 100mm	1.8m (vertical pipe) 1.2m (graded pipe)

note: for PVC-U pipes carrying discharges of greater than 60°C, support for the pipe shall in accordance with Paragraph 6.3.2 of AS/NZS 2032.

HWC PIPE SIZES:

HWC pipe sizes and lengths shall comply with NZS 4305: 1996 clause 3.2.1 & table 5.

10mm dia pipe:	maximum length 25.0m
15mm dia pipe:	maximum length 12.0m
20mm dia pipe:	maximum length 7.0m

notes:
 where the pipe supplying the sink unit is composed of sections of different diameters, the total volume of water in the pipe run shall not exceed 2 litres.
 HWC overflow pipe to be copper.

AREAS:

GARAGE & L'DRY:
 43.64 sq.m (over frame)

HOUSE:
 156.93 sq.m (over frame)

HOUSE TOTALS:
 200.57 sq.m (over frame)
 208.72 sq.m (over foundation)

THERMAL MOVEMENT

The plumbing system shall accommodate without failure the expected longitudinal movement in pipes resulting from temperature changes. All copper and PVC-U pipes shall incorporate expansion joints. The provisions described in Section 6.4 of AS/NZS 2032 shall be used for PVC-U pipes.
 At Supports, and at wall and floor penetrations not incorporating expansion joints, movement shall be accommodated using pipe sleeves or a durable and flexible material.



CRAIG FITCHETT DESIGN LIMITED
 P. 03 343 0833,
 M. 021 216 1438,
 E. craig@craigfitchettdesign.co.nz
 Craig Fitchett
 licence number BP105386

PROJECT INFORMATION:
**Proposed Residence for DP Homes,
 Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
FLOOR PLAN

REVISION:

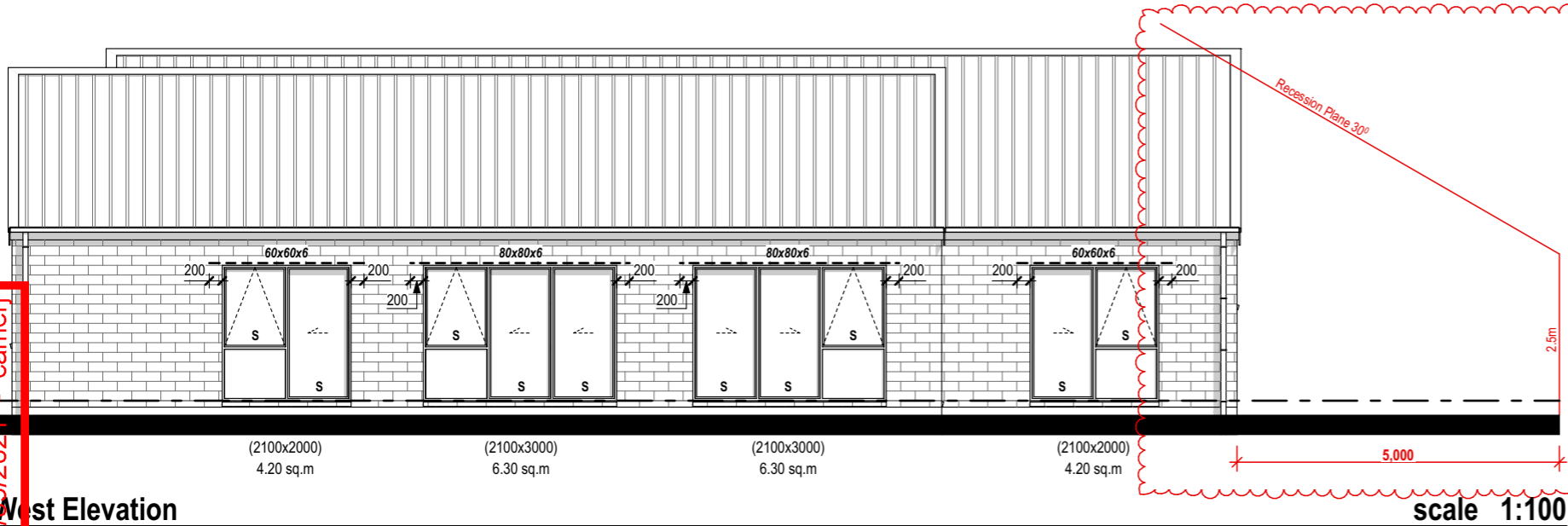
A	Section marker B & notes added.
---	---------------------------------

CONSENT DRAWINGS: ISSUE 1

SCALE: 1:100 @ A3	DATE OF ISSUE: 11-Aug-21
DRAWN BY: Craig Fitchett	JOB NUMBER: 2021-005

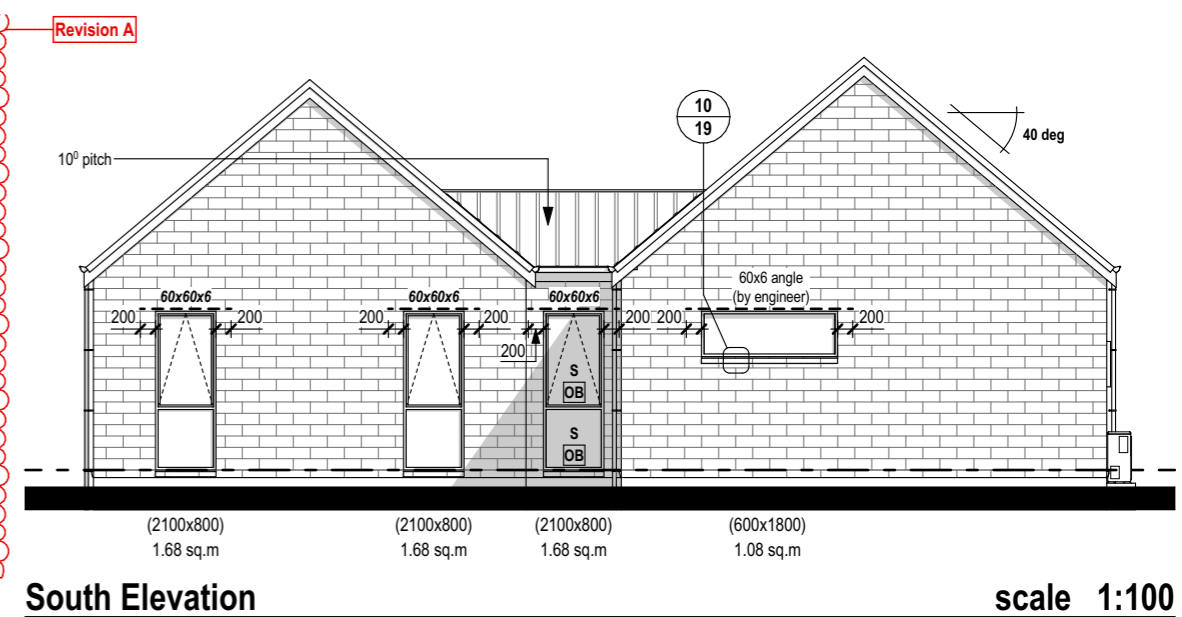
SHEET:
4
 of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNERS/MANUFACTURERS DRAWINGS.
 * ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.



West Elevation

scale 1:100



South Elevation

scale 1:100

BUILDING ENVELOPE RISK MATRIX WEST ELEVATION		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		4

BUILDING ENVELOPE RISK MATRIX EAST ELEVATION		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		4

NOTES:

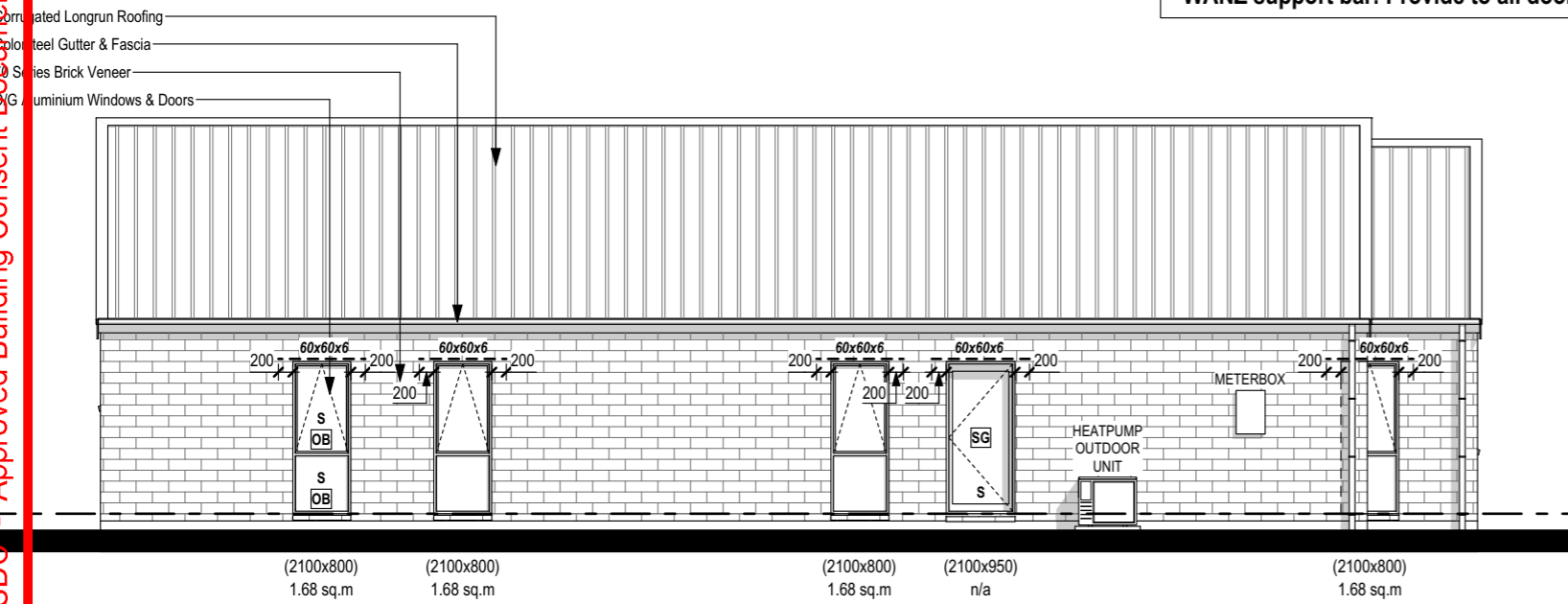
- S - denotes safety glazing to be in accordance with NZS 4223.3:2016
- All glazing to be in accordance with NZS 4223.3:2016
- All lintels are to comply with NZS 3604: 2011.
- All opening sizes are to be measured on site before windows & doors are to be manufactured.
- RS - denotes windows that are to have a 100mm (maximum opening) restrictor stay installed.

(h x w) Indicates size of window & door opening
 80x80x6 Indicates size of veneer lintel
 OB Indicates obscure glazing
 SG Indicates single glazing.

WANZ support bar: Provide to all doors & windows.

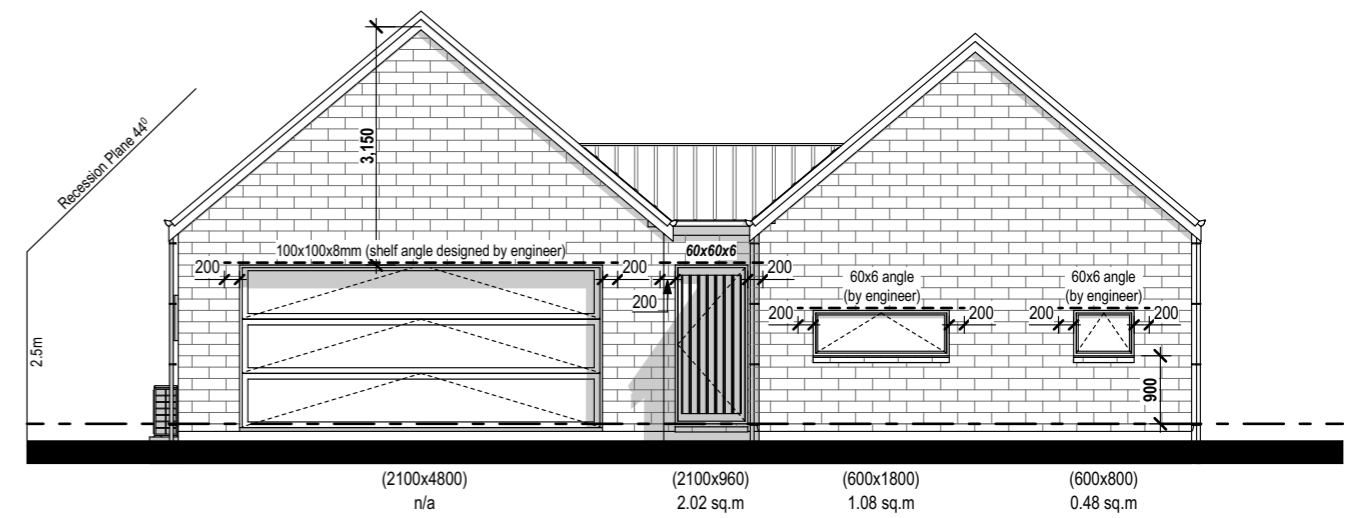
BUILDING ENVELOPE RISK MATRIX SOUTH ELEVATION		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		4

BUILDING ENVELOPE RISK MATRIX NORTH ELEVATION		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	High risk	2
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		4



East Elevation

scale 1:100



North Elevation

scale 1:100



PROJECT INFORMATION:
**Proposed Residence for DP Homes,
 Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
ELEVATIONS & RISK ASSESSMENTS

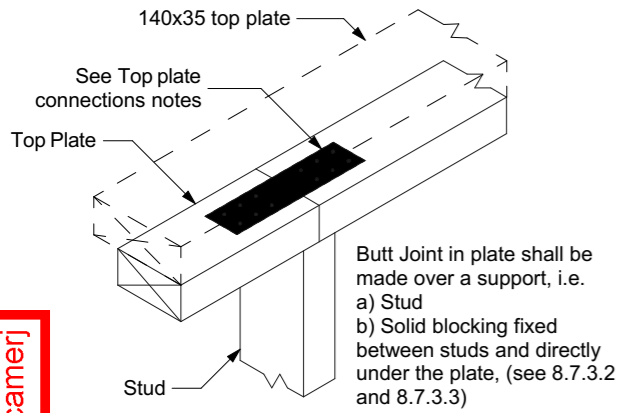
REVISION:
A RESSION PLANE ADDED.

CONSENT DRAWINGS: ISSUE 1
 SCALE: 1:100 @ A3
 DRAWN BY: Craig Fitchett

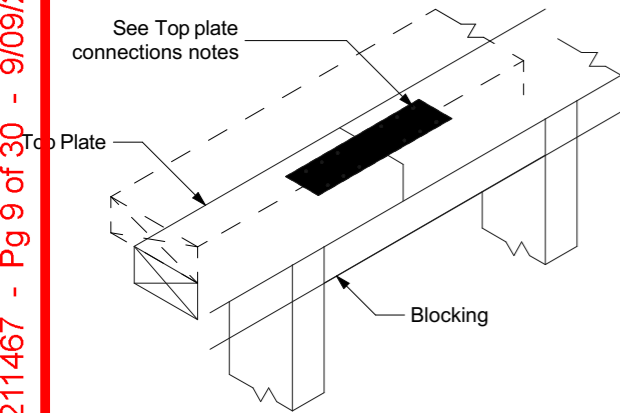
SHEET:
5
 of 21

SDC - Approved Building Consent Document - BC211467 - Pg 8 of 30 - 9/09/2021 - camerj

SDC - Approved Building Consent Document - BC211467 - Pg 9 of 30 - 9/09/2021 - camerj

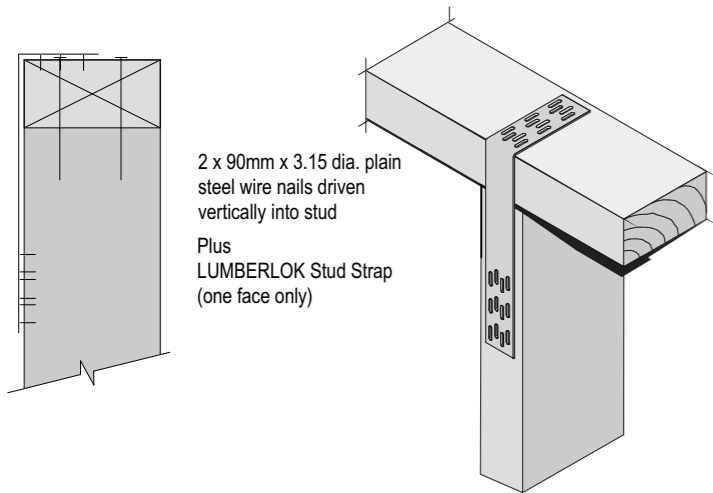


(A) Butt Joint Over Stud



(B) Butt Joint Over Blocking

**STUD TO TOP PLATE FIXING:
LOAD BEARING WALLS) @ 600crs**



2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud
Plus LUMBERLOK Stud Strap (one face only)

TOP PLATE JOINTING AS PER CLAUSE 8.7.3 NZS 3604:2011

Top Plate Connections

The top plate of a wall that contains one or more wall bracing elements shall be jointed according to the rating of the highest-rated individual wall bracing elements as follows:

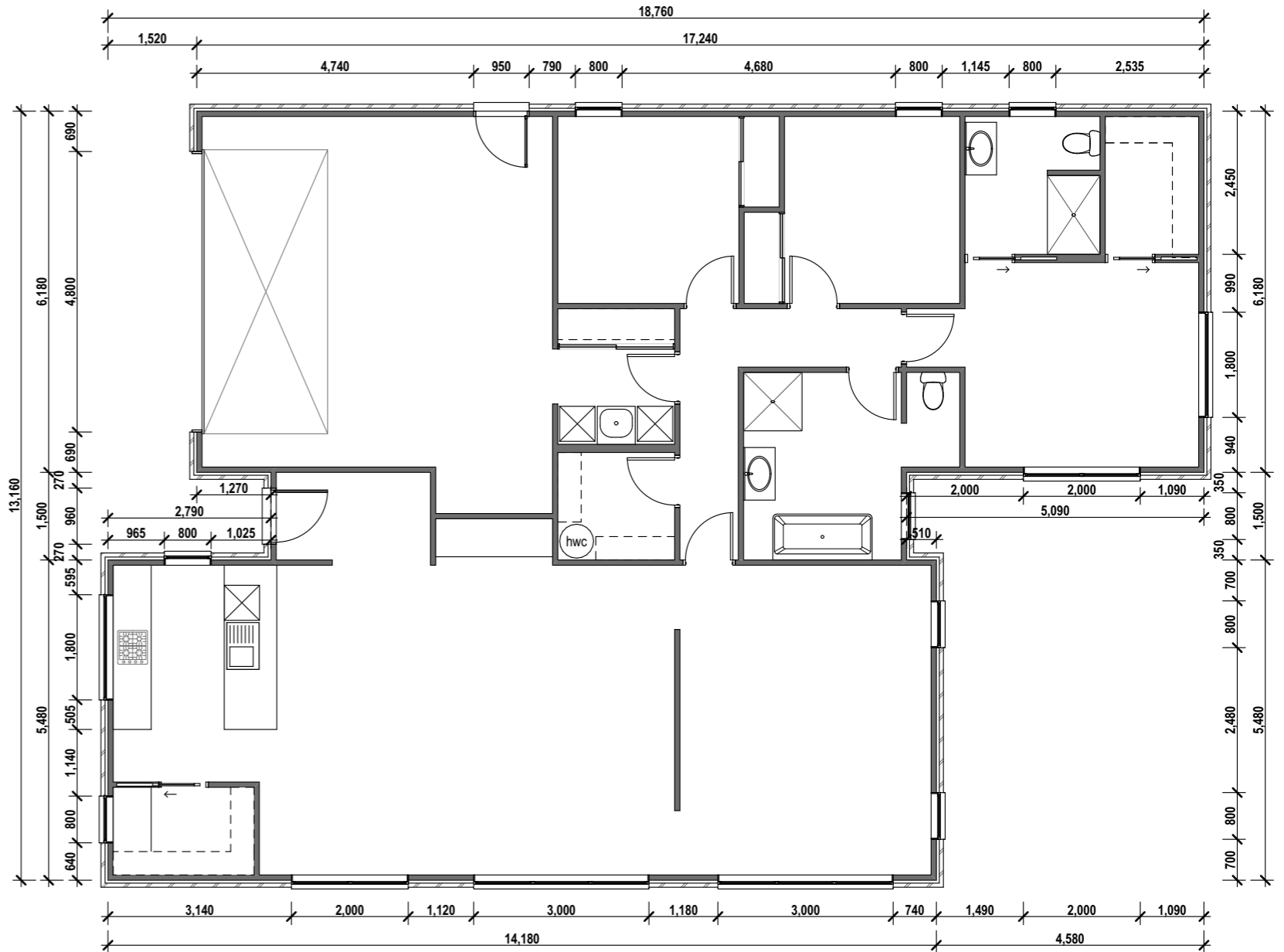
- (a) Rating not exceeding 100 bracing units: A 3kN connection as shown or by an alternative fixing of 3kN capacity in tension or compression along the plate;
- (b) Rating exceeding 100 bracing units: A 6kN connection as shown or by an alternative fixing of 6kN capacity tension or compression along the plate.

Top Plates in Line

Connection capacity	LUMBERLOK Connector
3 kN	LUMBERLOK PLATE-LOK OR Tylok 6T5 OR Strap Nail
6 kN	LUMBERLOK PLATE-LOK OR Tylok 6T10 OR 2 x Strap Nails

Top Plates at Right Angles

Connection capacity	LUMBERLOK Connector
6 kN	LUMBERLOK PLATE-LOK OR Tylok 6T10 OR 2 x Strap Nails
12 kN	2 x Sheet Brace Straps fixed with 6 x LUMBERLOK Product Nails 30mm x 3.15 dia. per end per strap (24 nails total)

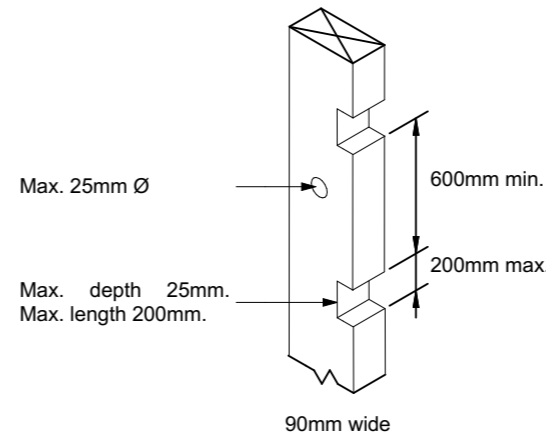


Framing Plan scale 1: 100

WALL STUD

Hole in the face and notches in the edge of a stud shall:

- (a) Be placed anywhere over the face of the stud except that:
In brick veneer cladding, at least 50mm clear of the outside face of the stud supporting the veneer, to prevent damage from the fixings to services.
- (b) Be not more in diameter or depth than:
90mm deep studs: 25mm. This may be increased to 35mm where not more than 3 consecutive studs are drilled or notched.
- (c) Notches in studs to be spaced vertically not less than 600mm apart, irrespective of the edge containing the notch.
- (d) 100mm min. offset between hole and notch.



TOP PLATES:

The sizes of holes or notches shall comply with dimensions as per NZS3604 Section 8.7.5. Where the size of a hole or notch exceeds these dimensions the plates shall be strengthened by one of the following methods:

- (a) A 70mm x 45mm member x 600mm long nailed to the exterior side of the plate with 4/75x3.15 nails on each side of the hole or notch.
- (b) A 70mm x 45mm eaves runner connected to all studs and no more than 250mm below the top plate.
- (c) A 70mm x 45mm blocking fitted between ceiling joists or trusses above cut top plates and the steel angle.

*100mm min. offset between hole and notch.



* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
* THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
* THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
* THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS, DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNERS' MANUFACTURER'S DRAWINGS.
ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

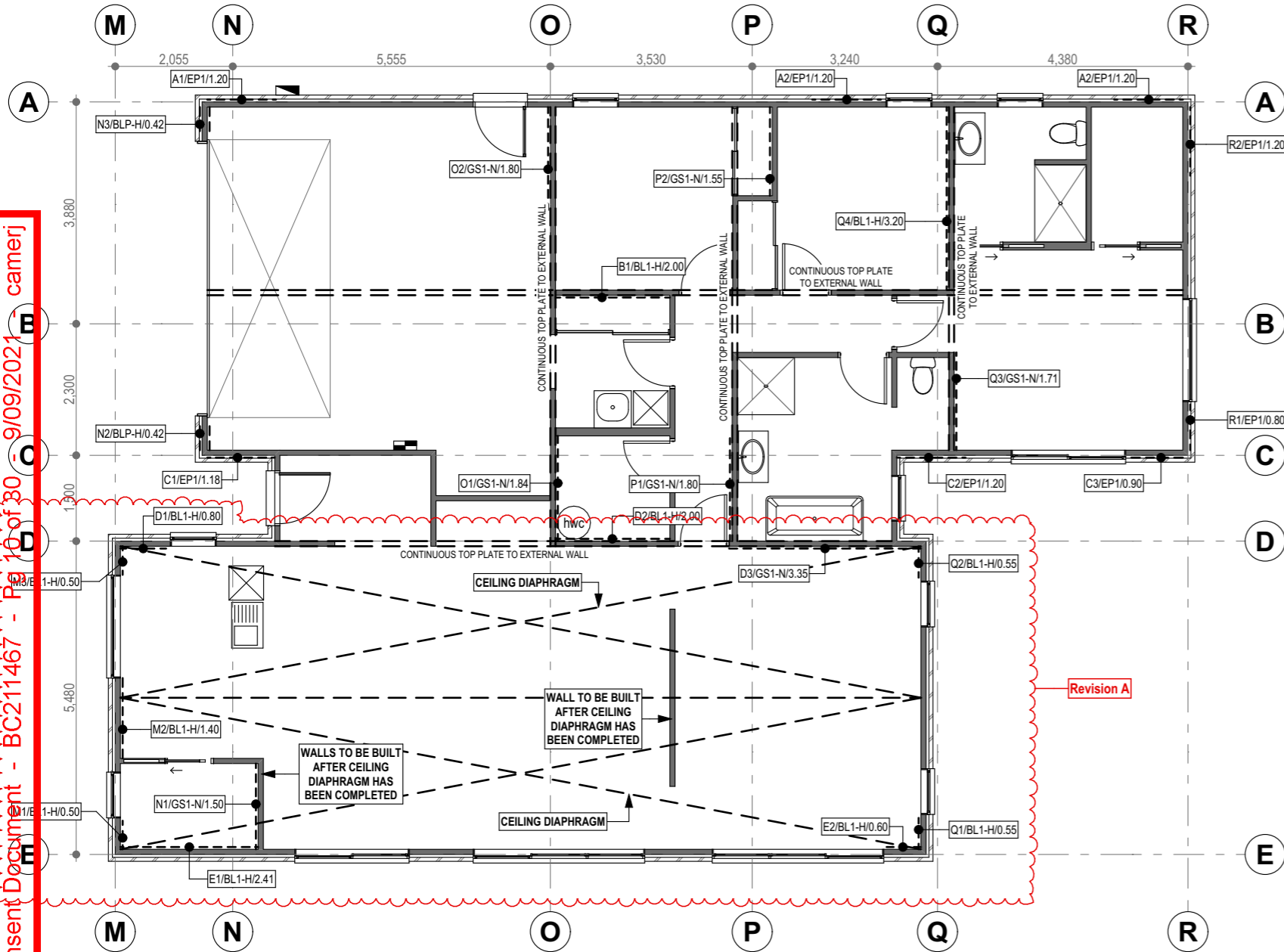
PROJECT INFORMATION:
**Proposed Residence for DP Homes,
Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
FRAMING LAYOUT

REVISION:

CONSENT DRAWINGS: ISSUE 1
SCALE: 1:100 @ A3
DATE OF ISSUE: 07-Jun-21
DRAWN BY: Craig Fitchett
JOB NUMBER: 2021-005

SHEET:
6
of 21



Bracing Layout scale 1:100

SDC - Approved Building Consent Document - BC211467 - Pg 10 of 30 - 9/09/2021 - camerj

Gib Notes
 Moisture Content of timber framing must be 18% or less at time of lining.
 Gib linings are a finishing product and are not to be walked on. Shoe marks are not acceptable under any circumstances.

Bracing Elements
 Note: All GIB elements are stated as minimums. Bracing elements MUST be MAXIMUM length on site. Refer to "Length of GIB EzyBrace Elements" in the supporting documents for fixing locations.

GS1-N
 10mm GIB Standard Plasterboard to one side fixed Vertical or Horizontal.

BL1-H
 10mm GIB Braceline to one side fixed Vertical or Horizontal. Panel Hold Down Fixings Required.

TOP PLATE JOINTING AS PER CLAUSE 8.7.3 NZS 3604:2011

Top Plate Connections
 The top plate of a wall that contains one or more wall bracing elements shall be jointed according to the rating of the highest-rated individual wall bracing elements as follows:

- (a) Rating not exceeding 100 bracing units: A 3kN connection as shown or by an alternative fixing of 3kN capacity in tension or compression along the plate;
- (b) Rating exceeding 100 bracing units: A 6kN connection as shown or by an alternative fixing of 6kN capacity tension or compression along the plate.

Top Plates in Line
Connection capacity LUMBERLOK Connector
 3 kN LUMBERLOK PLATE-LOK OR Tylok 6T5 OR Strap Nail
 6 kN LUMBERLOK PLATE-LOK OR Tylok 6T10 OR 2 x Strap Nails

Top Plates at Right Angles
Connection capacity LUMBERLOK Connector
 6 kN LUMBERLOK PLATE-LOK OR Tylok 6T10 OR 2 x Strap Nails
 12 kN 2 x Sheet Brace Straps fixed with 6 x LUMBERLOK Product Nails 30mm x 3.15 dia. per end per strap (24 nails total)

8.7.3.4
 Each wall that contains one or more wall bracing elements shall be connected at the top plate level, either directly, or through a framing member in the line of the wall, to external walls at right angles to it.
 Top plate fixings(s) of the capacity in tension or compression along the line of the wall bracing element are given as follows:

- a) For each wall containing wall bracing elements with a total bracing capacity of not more than 125 bracing units: to at least one such external wall by a fixing as shown in figure 8.16 of 6kN capacity;
- b) For each wall containing wall bracing elements with a total bracing capacity of not more than 250 bracing units: to at least 2 external walls by fixings as shown in figure 8.16 each of 6 kN capacity;
- c) For each wall containing wall bracing elements with a total bracing capacity of more than 250 bracing units: to at least 2 external walls by fixings as shown in figure 8.16 each having a rating of not less than 2.4 kN per 100 bracing units.

BOTTOM PLATE FIXINGS FOR GIB® BRACING ELEMENTS

Brace type	Concrete slabs		Timber floors
	External wall	Internal wall	External and Internal walls
GS1-N	As per NZS 3604:2011. No specific additional fastening required.	As per NZS 3604:2011. Alternatively use 75 x 3.8mm shot-fired fasteners with 16mm discs, 150mm and 300mm from each end of the bracing element and at 600mm thereafter.	Pairs of 100 x 3.75mm flat head hand driven nails or 3/90 x 3.15mm power driven nails at 600mm centres in accordance with NZS 3604:2011.
GS2-N GS2-NOM	Not applicable.		
GSP-H BL1-H BLP-H	Intermediate fastenings to comply with NZS 3604:2011 In addition: GIB HandiBrac® fixings or metal wrap-around strap fixings and bolt as illustrated on p.15 and 16.		Pairs of 100 x 3.75mm flat head hand driven nails or 3/90 x 3.15mm power driven nails at 600mm centres in accordance with NZS 3604:2011. In addition: GIB HandiBrac® fixings or metal wrap-around strap fixings and bolt as illustrated on p.15 and 16.
BLG-H	Not applicable		As for GSP-H, BL1-H, BLP-H on concrete slab as illustrated on p.15 and 16.

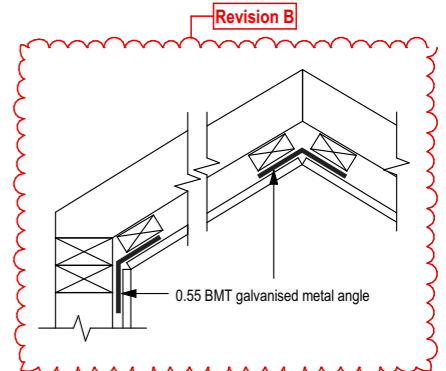


Table 12: Structural Plywood Brace with Plasterboard Other Side

Specification No.	Minimum Wall Length	Lining Requirements	BU's/m Wind	BU's/m Earthquake
EPG_0.4	0.4 m	Ecoply one side and 10 mm	100	115
EPG_1.2	1.2 m	GIB® Standard plasterboard other side	150	150

Table 10: Singled Sided Structural Plywood Brace

Specification No.	Minimum Wall Length	Lining Requirements	BU's/m Wind	BU's/m Earthquake
EPI_0.4	0.4 m	Ecoply one side	80	95
EPI_0.6	0.6 m	Ecoply one side	95	105
EPI_1.2	1.2 m	Ecoply one side	120	135

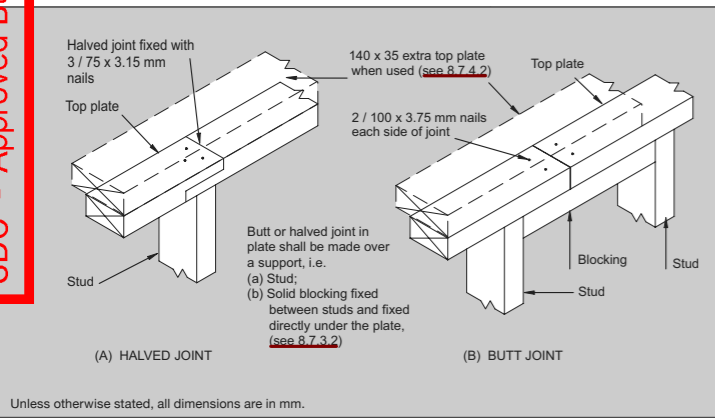
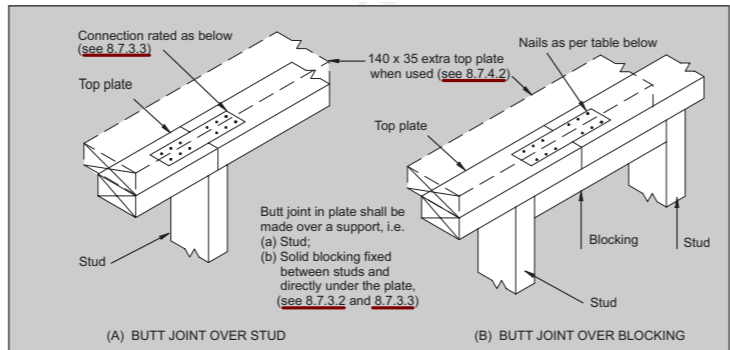


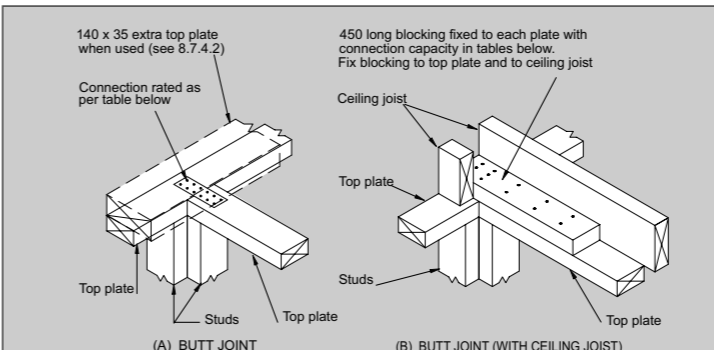
Figure 8.14 - Connecting top plates - Walls not containing bracing (see 8.7.3.2)



Capacities of metal plate joints ⁽²⁾		Capacities of nailed joints ⁽²⁾	
Up to 3 kN	3 / 30 x 3.15 mm nails per side	Up to 3 kN	3 / 100 x 3.75 mm nails per side
Up to 6 kN	6 / 30 x 3.15 mm nails per side	Up to 6 kN	6 / 100 x 3.75 mm nails per side

NOTE -
 (1) See section 4 for durability requirements.
 (2) Not required when extra top plate is used.

Figure 8.15 - Connecting top plates in line - Walls containing bracing (see 8.7.3.3)



Capacities of metal plate joints		Capacities of nailed joints	
Up to 3 kN	3 / 30 x 3.15 mm nails per side	Up to 3 kN	3 / 100 x 3.75 mm nails per side
Up to 6 kN	6 / 30 x 3.15 mm nails per side	Up to 6 kN	6 / 100 x 3.75 mm nails per side

NOTE - See section 4 for durability requirements.

Figure 8.16 - Connecting top plates to external walls at right angles - Walls containing bracing (see 8.7.3.4)



P. 03 343 0833,
 M. 021 216 1438,
 E. craig@craigfitchettdesign.co.nz
 Craig Fitchett
 licence number BP105386

REVISION:
 A | Ceiling diaphragm added, bracing elements added & notes added.
 B | Diaphragm connection detail added.

PROJECT INFORMATION:
Proposed Residence for DP Homes,
Lot 70, # 33 Monte Crescent, Verdeco
Park, Lincoln.

DRAWING TITLE:
BRACING LAYOUT

CONSENT DRAWINGS: ISSUE 1
SCALE: 1:100 @ A3
DRAWN BY: Craig Fitchett
DATE OF ISSUE: 08-Sep-21
JOB NUMBER: 2021-005
SHEET: 7 of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS, DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
 * ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

Bracing strap installation

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

positioned in such a way that the corner fastenings of the bracing element are not affected by it. Keeping the strap to the edge of the end stud as shown will allow the corner fastenings to be installed without having to penetrate the bracing strap.

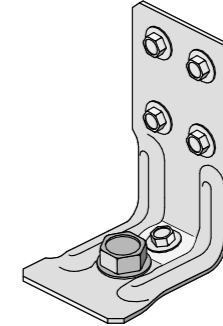
Concrete floor	Timber floor
<p>400 x 25 x 0.9mm galvanised strap to pass under the plate and up the other side of the stud. Six 30 x 2.5mm flat head galvanised nails to each side of the stud. Three 30 x 2.5mm flat head galvanised nails to each side of the plate. Hold down bolt with 50 x 50 x 3mm washer to be fitted within 80mm of the end of the element.</p>	
<p>Internal wall</p> <p>GEB004</p>	<p>GEB005</p>
<p>External wall</p> <p>GEB006</p>	<p>GEB007</p>
<p>Note: Where applicable drawings have been produced for CAD design. These are identified by a unique number in the bottom corner of each detail box that can be found at gib.co.nz/library.</p>	<p>2/300 x 25 x 0.9mm galvanised straps with six 30 x 2.5mm flat head galvanised nails to each stud and into the floor joist and three nails to the plate. Block to nog fixed with 3/100 x 3.75mm nails to stud.</p> <p>GEB008</p>
<p>Hold-down fastener requirements</p> <p>Concrete floor: A mechanical fastening with a minimum characteristic uplift capacity of 15kN fitted with a 50 x 50 x 3mm square washer within 80mm of the ends of the bracing element.</p> <p>Timber floor: 12 x 150mm galvanised coach screw fitted with a 50 x 50 x 3mm square washer within 80mm of the ends of the bracing element</p>	

GIB HandiBrac® installation

Developed in conjunction with MiTek™, the GIB HandiBrac® has been designed and tested by Winstone Wallboards for use in GIB EzyBrace® elements that require hold-downs. The GIB HandiBrac® is a substitute for bottom plate hold-down straps.

- Quick and easy to fit.
- May be fitted at any stage before lining.
- Framing face is clear to allow flush lining.
- Easily inspected.

The GIB HandiBrac® with BOWMAC® blue head screw bolt is suitable for timber and concrete floors constructed in accordance with NZS 3604:2011.



Concrete floor	Timber floor		
External walls	Internal walls	External walls	Internal walls
<p>GEB009</p>	<p>GEB010</p>	<p>GEB011</p>	<p>GEB012</p>
<p>Position GIB HandiBrac® as close as practicable to the internal edge of the bottom plate.</p>	<p>Position GIB HandiBrac® at the stud/plate junction and at mid-width of plate.</p>	<p>Position GIB HandiBrac® flush with the outside stud face, as close as practicable to the centre of the boundary joist.</p>	<p>Position GIB HandiBrac® in the centre of floor joist or full depth solid block.</p>
<p>Hold-down fastener requirements</p> <p>A mechanical fastening with a minimum characteristic uplift capacity of 15kN or use supplied BT10/140 screwbolt in GIB HandiBrac® pack.</p>			
		<p>12 x 150mm galvanised coach screw or use supplied BT10/140 screwbolt in GIB HandiBrac® pack.</p>	

SDC - Approved Building Consent Document - BC211467 - Pg 11 of 30 - 9/09/2021 - camerj

GIB EzyBrac® Systems specification GS1-N

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

WALL FRAMING

Wall framing to comply with:
 — NZBC B1 — Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
 — NZBC B2 — Durability B2/AS1 Clause 3.2 Timber (NZS 3602).
 Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

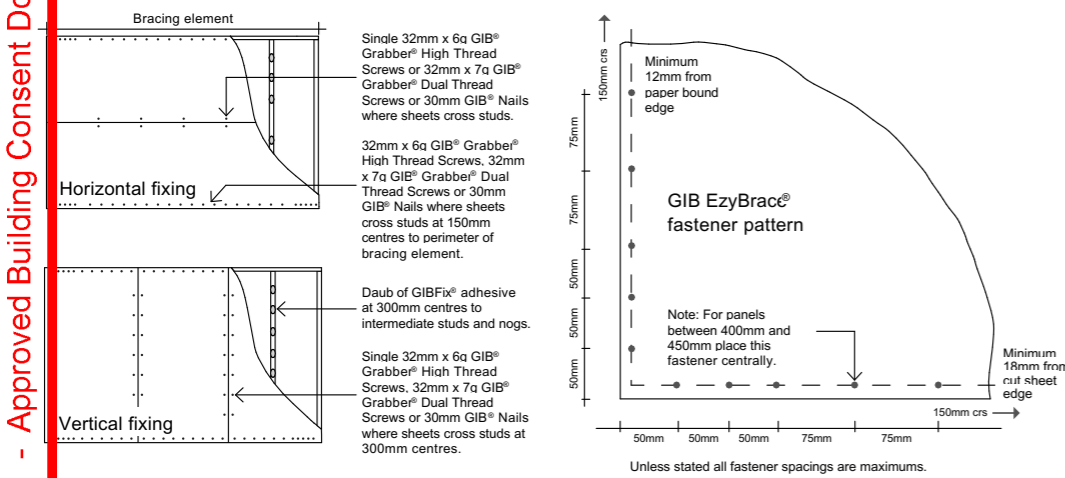
BOTTOM PLATE FIXING

Timber floor
 — Pair of hand driven 100 x 3.75mm nails at 600mm centres;
 — Three power driven 90 x 3.15mm nails at 600mm centres.
 Concrete floor
 Internal Wall Bracing Lines: In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75 x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and 600mm centres thereafter.

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

WALL LINING

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



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

GIB EzyBrac® Systems specification BL1-H

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

WALL FRAMING

Wall framing to comply with:
 — NZBC B1 — Structure B1/AS1 Clause 3 Timber (NZS 3604:2011).
 — NZBC B2 — Durability B2/AS1 Clause 3.2 Timber (NZS 3602).
 Framing dimensions and height as determined by NZS 3604:2011 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

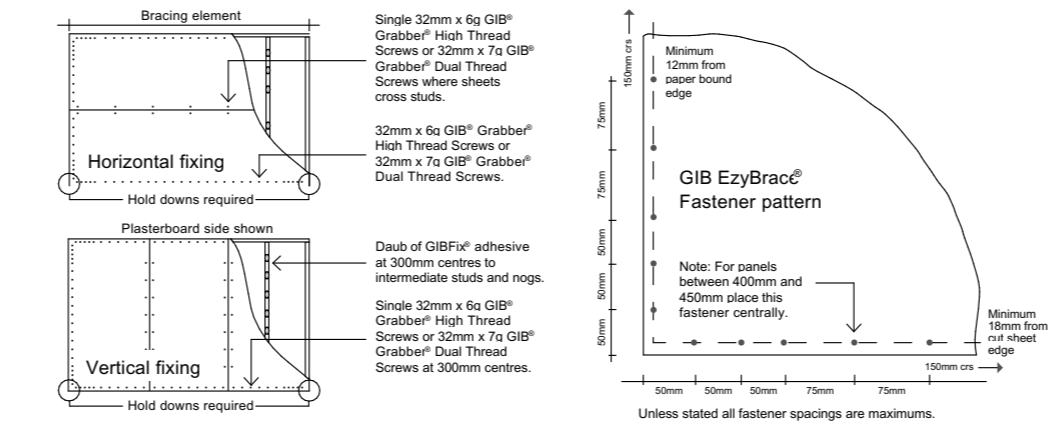
BOTTOM PLATE FIXING

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

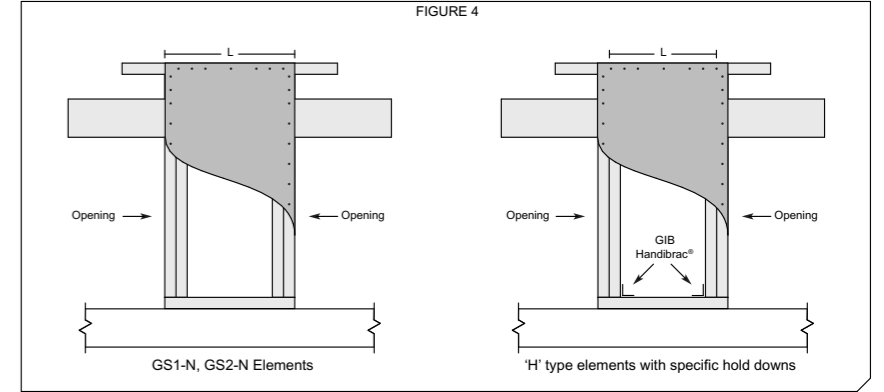
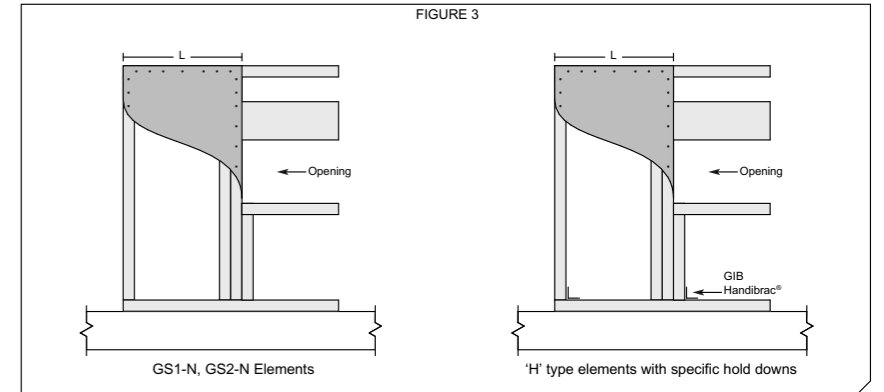
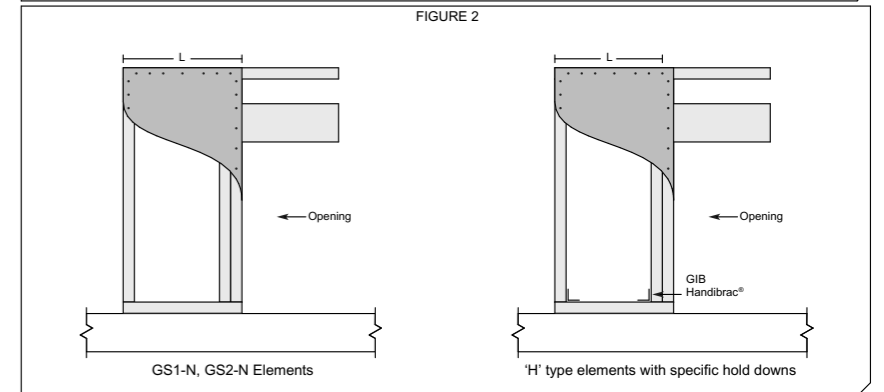
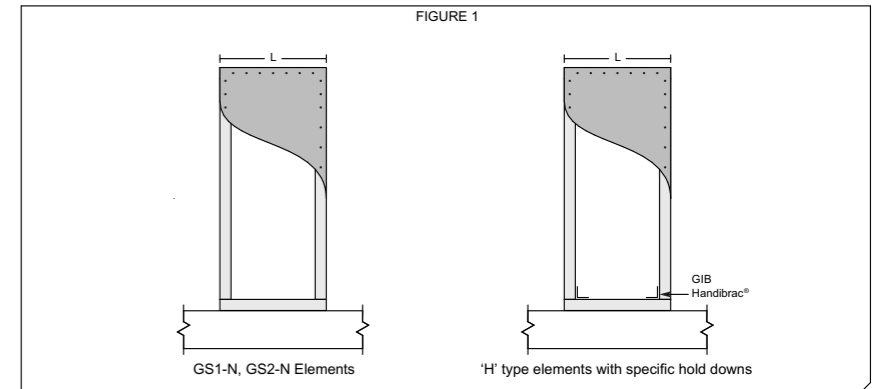
Use panel hold downs at each end of the bracing element. The GIB HandiBrac® is recommended. See details in GIB EzyBrac® Systems or GIB® Site Guide. Within the length of the bracing element bottom plates are to be fixed in accordance with the requirements of NZS 3604:2011.

WALL LINING

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



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



Length of GIB EzyBrac® Elements

GIB® Information Bulletin
 Length of GIB EzyBrac® Elements

©Copyright Winstone Wallboards Ltd



PROJECT INFORMATION:
**Proposed Residence for DP Homes,
 Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
BRACING DETAILS (GS1 & BL1)

REVISION:

CONSENT DRAWINGS: ISSUE 1
 SCALE: N.T.S. DATE OF ISSUE: 07-Jun-21
 DRAWN BY: Craig Fitchett JOB NUMBER: 2021-005

SHEET:
9
 of 21

SDC - Approved Building Consent Document - BCC 141487 - 12/06/2021 - 09/09/2021

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
 * ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

3.3 ECOPLY® BRACING SPECIFICATION - EPI

Table 10: Singled Sided Structural Plywood Brace

Specification No.	Minimum Wall Length	Lining Requirements	BU's/m Wind	BU's/m Earthquake
EPI_0.4	0.4 m	Ecoply one side	80	95
EPI_0.6	0.6 m	Ecoply one side	95	105
EPI_1.2	1.2 m	Ecoply one side	120	135

Framing

Wall framing must comply with:
 NZBC B1 - Structure: AS1 Clause 3 Timber (NZS 3604)
 NZBC B2 - Durability: AS1 Clause 3.2 Timber (NZS 3602)

Framing dimensions and height are as determined by the NZS 3604 stud and top plate tables for load bearing and non load bearing walls. Kiln dried verified structural grade timber must be used. Machine stress graded timber, such as Laserframe® of SGB stress grade minimum, is recommended.

Bottom plate fixing

Use GIB Handibrac® hold-down connections at each end of the bracing element. Refer to manufacturer installation instructions supplied with the connectors for correct installation instructions and bolt types to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are fixed in accordance with the requirements of NZS 3604.

Lining

One layer of 7 mm, 9 mm or 12 mm Ecoply plywood fixed directly to framing. If part sheets are used, ensure nailing at required centres is carried out around the perimeter of each sheet or part sheet. A 2-3 mm expansion gap should be left between sheets.

Fastening the Ecoply® panels

Fasten with 50 x 2.8 mm hot dipped galvanised or stainless steel flat head nails for direct fix. Place fasteners no less than 7 mm or 3 fastener diameters from sheet edges. Screws cannot be used. Power driven nails are suitable. Do not overdrive, nails must be full round head.

Fasteners for H3.2 CCA treated Ecoply® panels

Where fasteners are in contact with H3.2 CCA treated timber or plywood, fasteners shall be a minimum of hot dip galvanised.

In certain circumstances stainless steel fasteners may be required. Refer to Table 8 of the Ecoply Specification and Installation Guide for these circumstances and further fastener selection advice. Where stainless steel nails are required, annular grooved nails must be used.

Fastening centres

Fasteners are placed at 150 mm centres around the perimeter of each sheet and 300 mm centres to intermediate studs. Where more than one sheet forms the brace element each sheet must be nailed off independently.

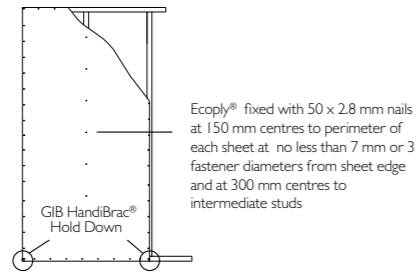


Table 11: Ecoply® Suitability For Bracing Applications Including Treatment Type and Fastener Material*

Application	Plywood Treatment	Fastener Material
Plywood bracing in interior spaces with no risk of exposure to weather or moisture penetration conducive to decay (all exposure zones as per section 4 of NZS 3604, including sea spray):	Ecoply Untreated	Hot dipped galvanised or better
Plywood bracing in enclosed spaces (protected from the weather) but with a risk of moisture penetration conducive to decay in exposure zones B & C, as per section 4 of NZS 3604:	Ecoply H3.1 LOSP/H3.2 CCA treated Ecoply Barrier (rigid air barrier)	Hot dipped galvanised or better
Plywood bracing in enclosed spaces (protected from the weather) but with a risk of moisture penetration conducive to decay in exposure zone D (sea spray), as per section 4 of NZS 3604:	Ecoply H3.1 LOSP/H3.2 CCA treated Ecoply Barrier (rigid air barrier)	Stainless steel
Rigid Air Barrier	Refer to Ecoply Barrier Specification & Installation Guide	
Bracing on framing exposed to ground atmosphere in exposure zones B & C, as per section 4 of NZS 3604	Ecoply H3.1 LOSP/H3.2 CCA treated	Hot dipped galvanised or better
Bracing on framing exposed to ground atmosphere in exposure zones D, as per section 4 of NZS 3604	Ecoply H3.1 LOSP/H3.2 CCA treated	Stainless steel
Bracing in wet process buildings in all exposure zones (including sea spray), as per section 4 of NZS 3604	Ecoply H3.1 LOSP/H3.2 CCA treated	Stainless steel

* Refer to Table 8, page 16 of Ecoply Specification & Installation Guide.

3.5 GIB HANDIBRAC® – RECOMMENDED INSTALLATION METHOD

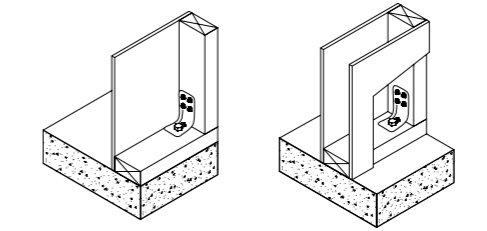
Developed in conjunction with MiTek®, the GIB Handibrac® has been tested for use as the hold-down in all EP bracing elements.

- The GIB Handibrac® registered design provides for quick and easy installation
- The GIB Handibrac® provides a flush surface for the wall linings because it is fitted inside the framing. There is no need to

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

Concrete Floor

External Walls Internal Walls



Position GIB Handibrac® as close as practicable to the internal edge of the bottom plate
 Position GIB Handibrac® at the stud/plate junction

Hold-down fastener requirements

A mechanical fastening with a minimum characteristic uplift capacity of 15kN or screw bolt supplied with the bracket

Reproduced with the permission of Winstone Wallboards Ltd

3.6 STRUCTURAL CEILING DIAPHRAGMS

Diaphragms are used to transfer lateral loads to braced walls and allow for greater spacing between bracing lines. Diaphragms do not have a BU rating themselves.

Plywood diaphragms are an acceptable solution as described in section 13 of NZS 3604 13.5.2 which allows for plywood not less than 6 mm thick and a minimum of three ply for:

- (a) Diaphragms not steeper than 25 degrees to the horizontal and not exceeding 12 metres long under light or heavy roofs and;
- (b) Diaphragms not steeper than 45 degrees to the horizontal and not exceeding 7.5 metres long under light or heavy roofs

Plywood ceiling diaphragms required to comply with NZS 3604 must be constructed as follows:

- (a) The length of diaphragm shall not exceed twice its width measured between supporting walls
- (b) The ceiling lining must consist of plywood over the entire area of the diaphragm
- (c) Complete sheets with a minimum size of 1800 x 900 must be used
- (d) Framing size and spacing must comply with NZS 3604
- (e) Fastener size should comply with Table 7 of this guide. E.g. 40 mm x 2.5 mm flat head nails for 7 mm and 9 mm Ecoply
- (f) Fastening is at 150 mm centres around the perimeter of each sheet and at 300 mm centres to intermediate framing
- (g) Fixings are no closer than 10 mm from sheet edges
- (h) Perimeter ceiling framing must be connected to wall framing by a perimeter 140 mm x 35 mm ribbon plate nailed to the top of the top plate or alternative such as a 0.55 mm thick steel angle or proprietary steel channel
- (i) Sheets must be laid in a staggered pattern
- (j) The basic shape of a ceiling diaphragm should be rectangular. Protrusions are permitted but cut-outs are not (see Figure 13.4 NZS 3604)

SDC - Approved Building Consent Document - BC211467 - Pg 13 of 30 - 9/09/2021 - camerj

Ecoply® Bracing Systems are designed to meet the requirements of the NZBC and have been tested and analysed using the P21 method referenced in NZS 3604:2011 listed as an acceptable solution B1/AS1 Structure. Testing was carried out using Ecoply manufactured by Carter

Holt Harvey and SGB timber framing, and GIB® products manufactured by Winstone Wallboards Ltd. Substituting materials may compromise performance of the system. GIB® and GIB Handibrac® are registered trade marks of Fletcher Building Holdings Ltd.

SEPTEMBER 2015

Ecoply® Bracing Systems are designed to meet the requirements of the NZBC and have been tested and analysed using the P21 method referenced in NZS 3604:2011 listed as an acceptable solution B1/AS1 Structure. Testing was carried out using Ecoply manufactured by Carter

Holt Harvey and SGB timber framing, and GIB® products manufactured by Winstone Wallboards Ltd. Substituting materials may compromise performance of the system. GIB® and GIB Handibrac® are registered trade marks of Fletcher Building Holdings Ltd.

SEPTEMBER 2015



CRAIG FITCHETT DESIGN LIMITED
 P. 03 343 0833,
 M. 021 216 1438,
 E. craig@craigfitchettdesign.co.nz
 Craig Fitchett
 licence number BP105386



PROJECT INFORMATION:
**Proposed Residence for DP Homes,
 Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
TYPICAL PLYWOOD DETAILS

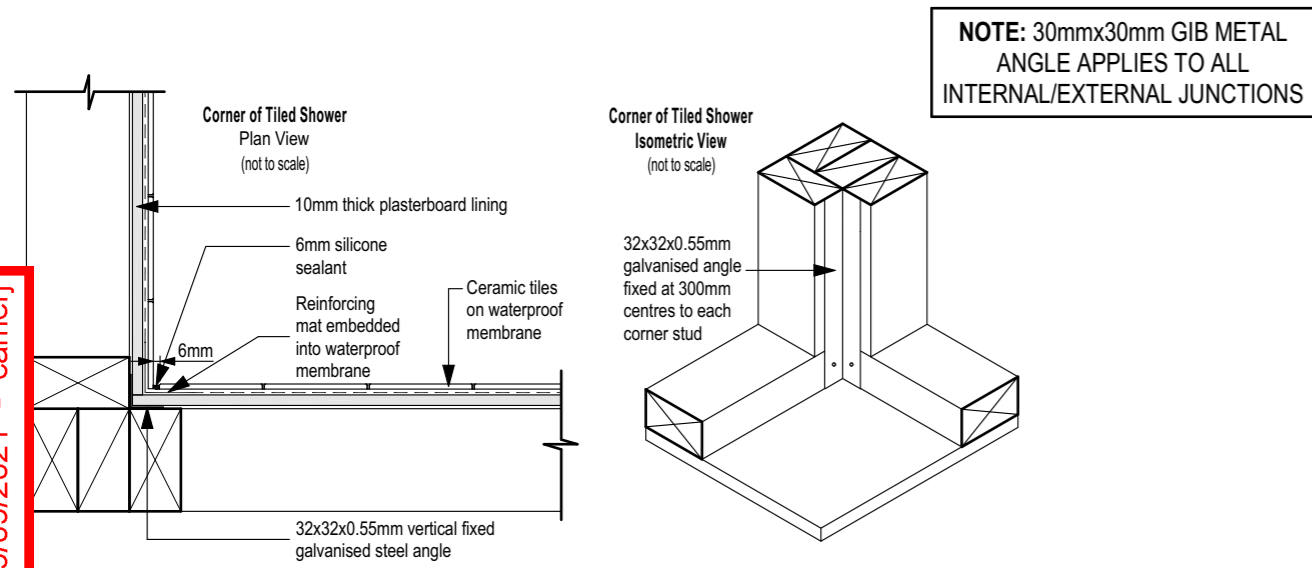
REVISION:

CONSENT DRAWINGS: ISSUE 1
 SCALE: N.T.S. DATE OF ISSUE: 07-Jun-21
 DRAWN BY: Craig Fitchett JOB NUMBER: 2021-005

SHEET:
10
 of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNERS' MANUFACTURER'S DRAWINGS.
 * ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

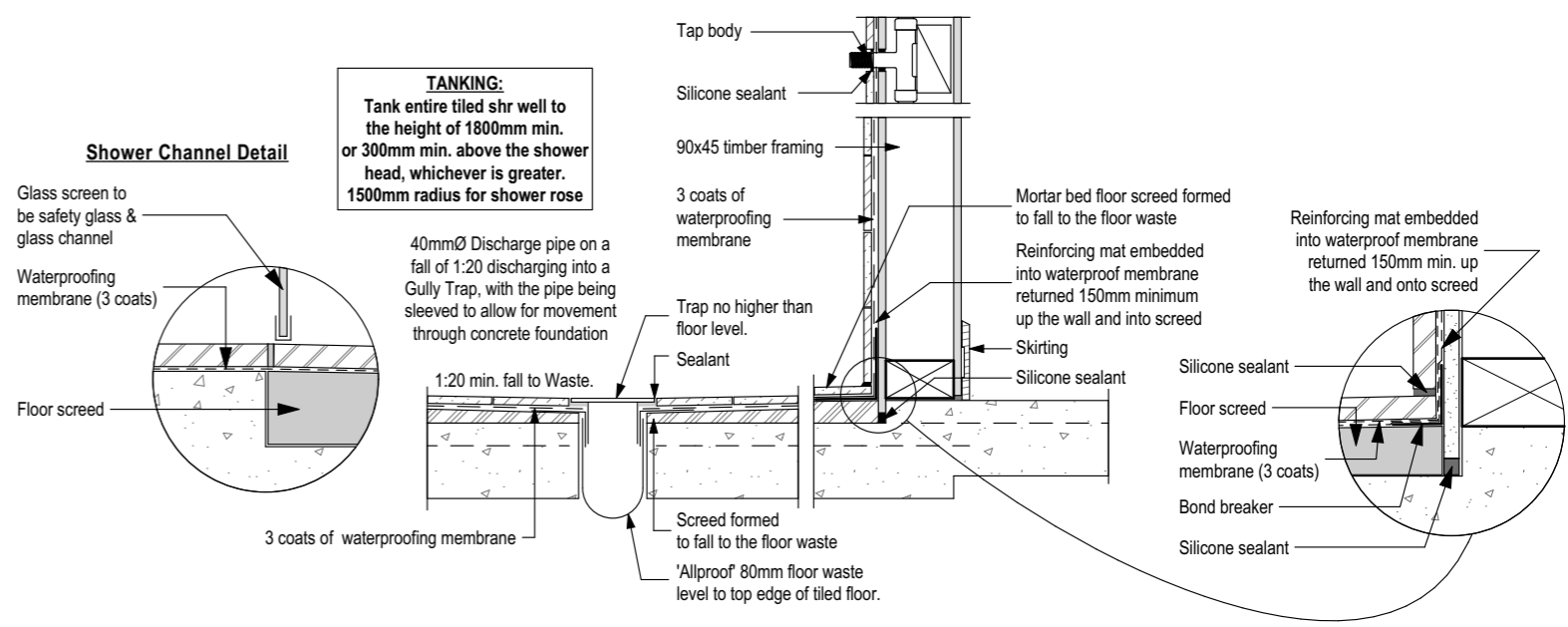
SDC - Approved Building Consent Document - BC211467 - Pg 14 of 30 - 9/09/2021 - camerj



NOTE: 30mmx30mm GIB METAL ANGLE APPLIES TO ALL INTERNAL/EXTERNAL JUNCTIONS

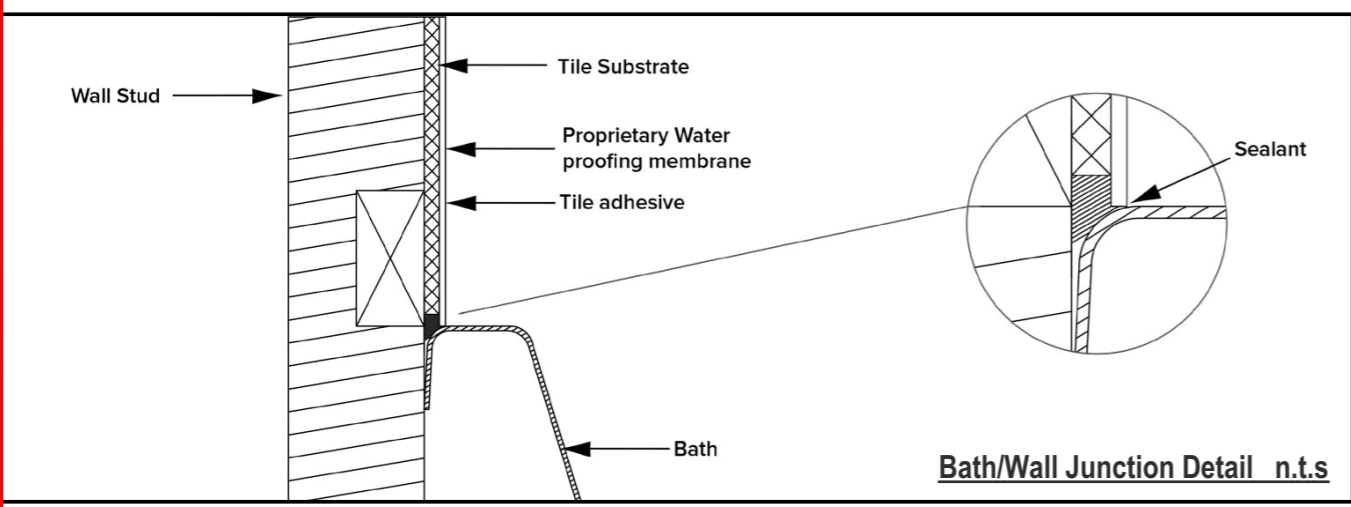
Typical Tiled Shr @ Cnr Details

n.t.s

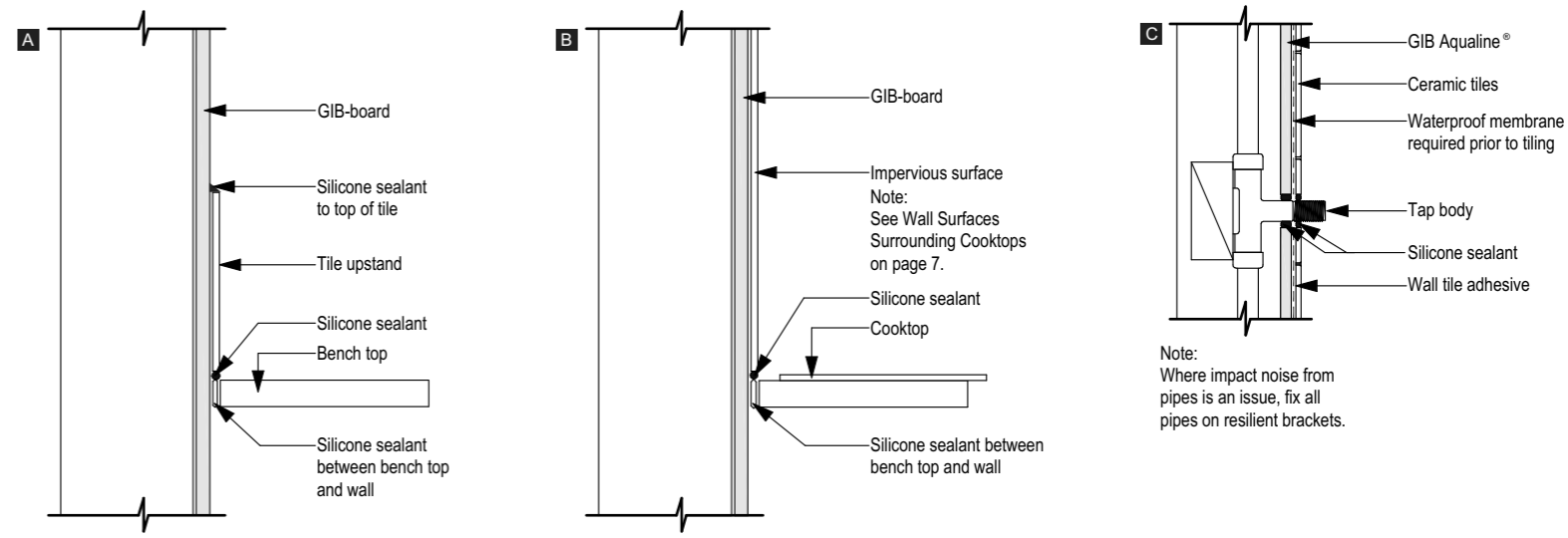


Typical Tiled Shr Detail

1:10

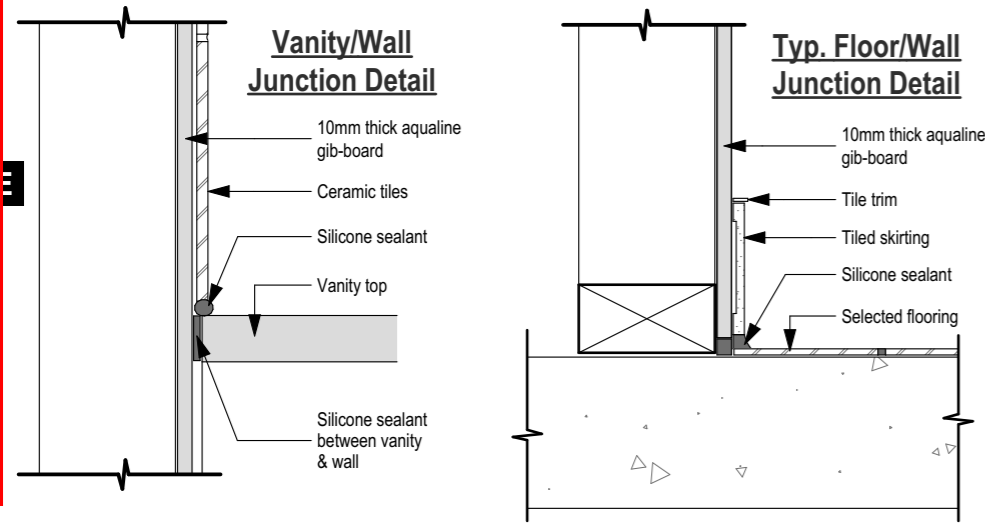


Bath/Wall Junction Detail n.t.s



Typ. Gib Details

n.t.s



Typ. Gib Wet Area Details

scale 1:5



PROJECT INFORMATION:
**Proposed Residence for DP Homes,
Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
TYPICAL GIB DETAILS/WET AREA DETAILS

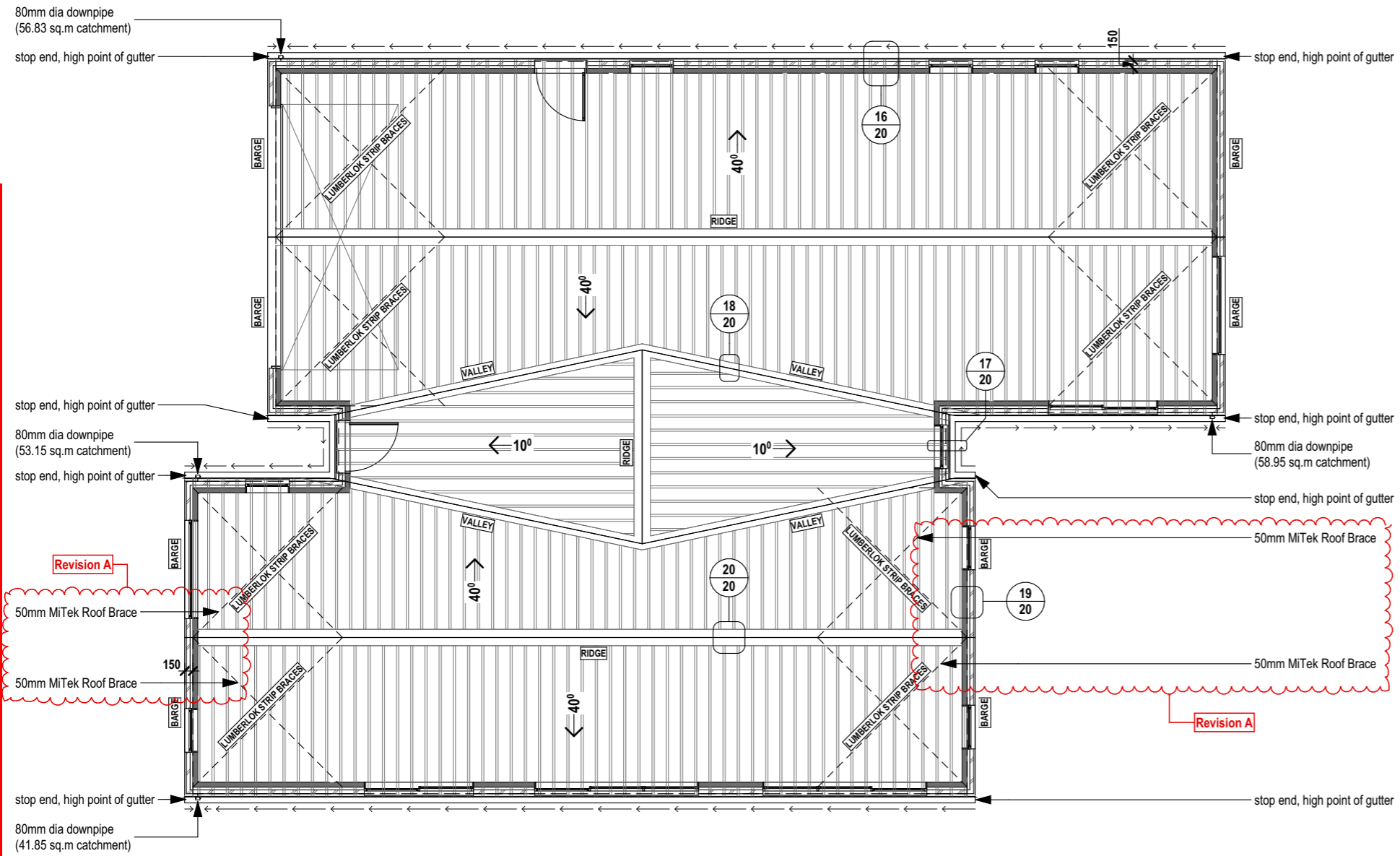
REVISION:

CONSENT DRAWINGS: ISSUE 1
SCALE: 1:5 @ A3
DRAWN BY: Craig Fitchett

SHEET:
11
of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
* THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
* THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
* THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
* ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

SDC - Approved Building Consent Document - BC211467 - Pg 15 of 30 - 9/09/2021 - camerj



Roof Plan scale 1:100

TRUSS MANUFACTURER

-Lintel Sizes: Truss manufacturers to size all lintels with special loads. (truss manufacturers lintel sizes take precedence over designers sizes (refer to truss manufacturers documentation)).
 Wall, lintel and truss fixings are also to be supplied.
 Truss manufacturer to confirm foundation thickenings and supply if necessary relevant documentation for point loads and thickenings.
 Roof trusses at 900mm ctrs with H1.2 treated pinus radiata timber members.
 All dimensions shown are to framing.
 Metal gutter to have minimum cross sectional area of 8700mm²
Note:
 Down pipes are to be as indicated 80mm dia (capacity of 85m² of the floor plan) (Roof Pitch 0-25°).

TRUSS MANUFACTURER

-Lintel Sizes: Truss manufacturers to size all lintels with special loads. (truss manufacturers lintel sizes take precedence over designers sizes (refer to truss manufacturers documentation)).
 Wall, lintel and truss fixings are also to be supplied.
 Truss manufacturer to confirm foundation thickenings and supply if necessary relevant documentation for point loads and thickenings.
 Roof trusses at 900mm ctrs with H1.2 treated pinus radiata timber members.
 All dimensions shown are to framing.
 Metal gutter to have minimum cross sectional area of 8700mm²
Note:
 Down pipes are to be as indicated 80mm dia (capacity of 70m² of the floor plan) (Roof Pitch 25-35°).

: 'Dimond' veedek roofing fixed over self supporting building paper on 70x45 H1.2 pinus radiata timber purlins laid in accordance with manufacturers specifications, on manufacturer designed trusses @ 10° & 30° pitch.
 : 150mm eaves off outside edge of framing.
 : Refer to manufacturers documentation for roof bracing details, and any specific lintel requirements regarding girder trusses.

Table 14: Steel trapezoidal profiled roofing – 0.4 mm BMT and profile height 27 mm minimum(1), and minimum 5-rib profiles
 Maximum spans and fixing patterns. Refer to Paragraph 8.4.6

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

NOTE: T1 fixing pattern is – Fix every crest...
 T2 fixing pattern is – Hit 1, miss 1...
 SED Specific Engineering Design
 (1) For profile heights and pan widths outside this range, refer to supplier's literature for fixing patterns and spans



PROJECT INFORMATION:
**Proposed Residence for DP Homes,
 Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
ROOF PLAN

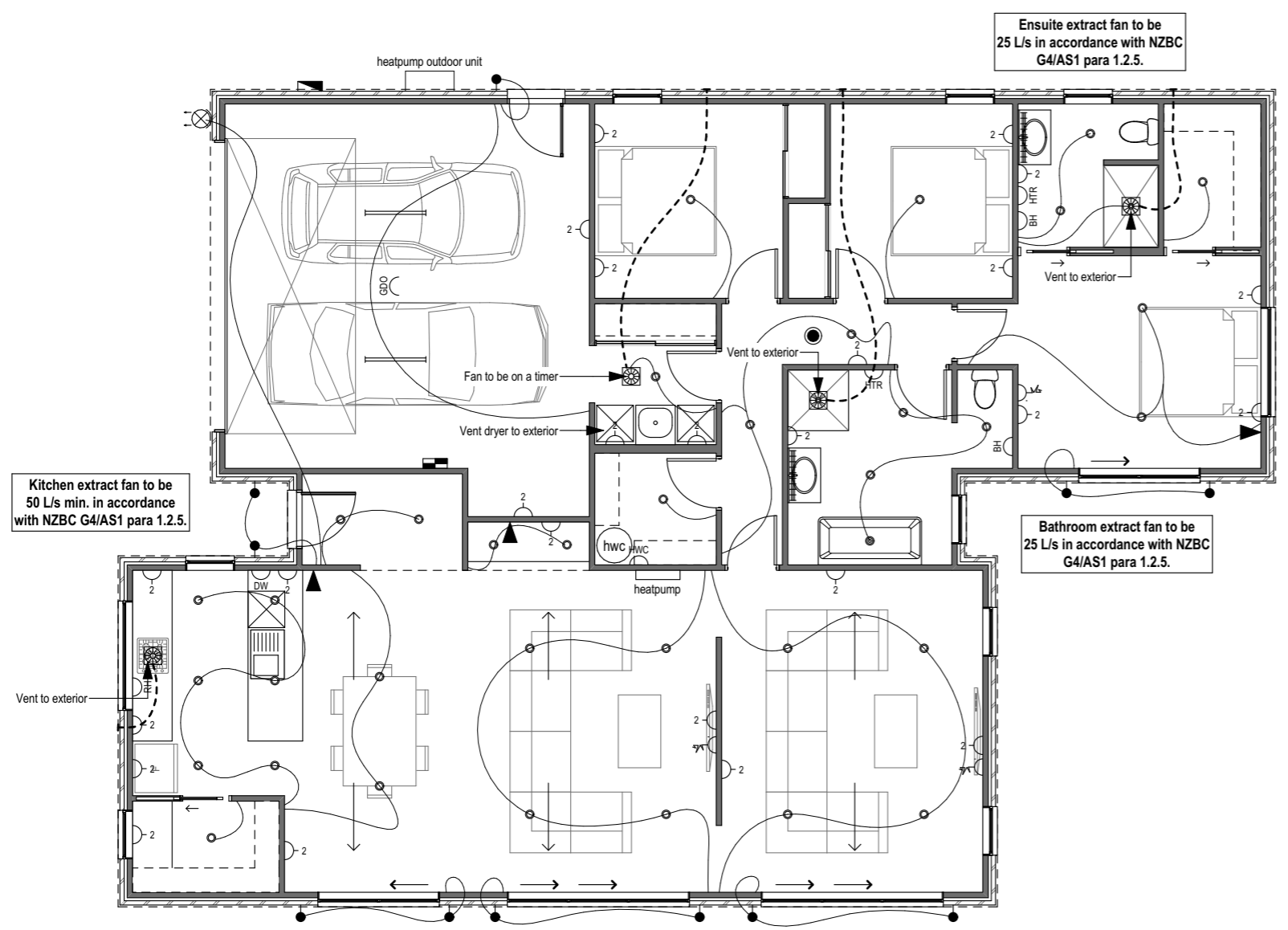
REVISION:
 A Notations added.

CONSENT DRAWINGS: ISSUE 1
 SCALE: 1:100 @ A3
 DRAWN BY: Craig Fitchett

SHEET:
12
 of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
 * ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

SDC - Approved Building Consent Document - BC211467 - Pg 16 of 30 - 9/09/2021 - camerj



Preliminary Lighting/Electrical Layout

scale 1:100

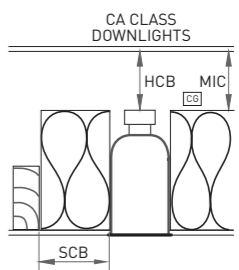
Electrical Key

⊕	Double power point	DW	Dish washer connection
⊗	Halogen light fitting	BH	Bathroom heater
○	Downlight fitting	HWC	Hot water cylinder
⊗	Batten light fitting	HTR	Heated towel rail
⊗	Outside light fitting	GDO	Garage door opener
⊗	Outside light & sensor	EF	Extract fan
⊗	Meter board	TV	TV point
⊗	Switch board	▲	Phone/Data connection
⊗	Range/hob connection	—	Tube light fitting
⊗	Oven Outlet	●	Exterior up-down light
⊗	Smoke detector	⊗	Mirror Light Fitting
		*	Prewire Alarm

NOTE* ~ ANY RECESSED LIGHTING UNITS ARE TO BE PROTECTED INSTALLATION THERMOSAFE FITTINGS, CA TYPE, TO NZECP 54 CLASSIFICATION. ALL SMOKE ALARMS TO HAVE HUSH & TEST FACILITIES

Risk of Fire Instructions must include minimum clearances to building elements and insulation type

SCB	Side clearance to building elements
HCB	Height clearance to building elements
SCI	Side clearance to building insulation (non-IC only)
MIC	Minimum clearance above building insulation for ventilation
Insulation type	Class Markings and manufacturer's specifications dictate what type of insulation is safe for each model of downlight



Information provided by Gartner Superlux Ltd

When selecting a recessed downlight ensure it is labelled with one of the following:



Current technology limits the durability and availability of these classes of downlights

Typ. Downlight Detail n.t.s



CRAIG FITCHETT DESIGN LIMITED
 P. 03 343 0833, M. 021 216 1438, E. craig@craigfitchettdesign.co.nz
 Craig Fitchett licence number BP105386

PROJECT INFORMATION:
Proposed Residence for DP Homes, Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.

DRAWING TITLE:
PRELIMINARY LIGHTING/ELECTRICAL LAYOUT & TYP. DOWNLIGHT DETAIL

REVISION:

CONSENT DRAWINGS: ISSUE 1
 SCALE: 1:100 @ A3
 DRAWN BY: Craig Fitchett

SHEET: **13** of 21
 DATE OF ISSUE: 07-Jun-21
 JOB NUMBER: 2021-005

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNERS/MANUFACTURER'S DRAWINGS.
 * ON SITE AMENDMENTS, CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.



10/2011

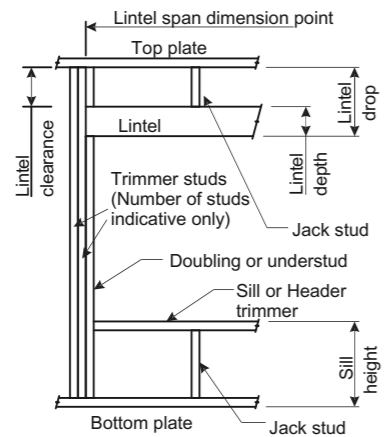


LINTEL FIXING SCHEDULE ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011

NOTE:

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

DEFINITIONS



Lintel Supporting Girder Trusses:

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

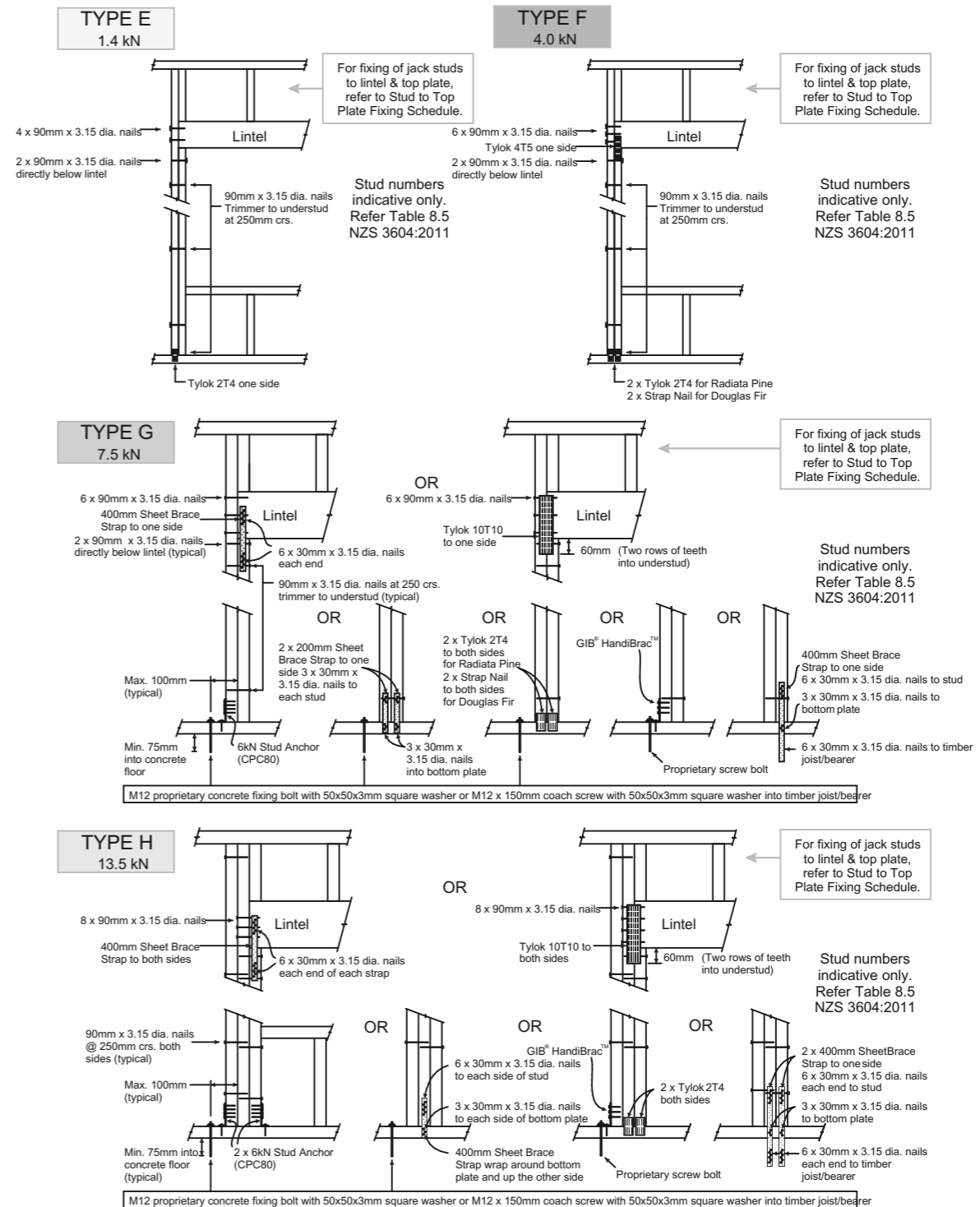
Notes:

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

SELECTION CHART FOR LINTEL FIXING

Lintel Span	Loaded Dimension (See Fig. 1.3 NZS 3604:2011)	Light Roof Wind Zone				Heavy Roof Wind Zone			
		L	M	H	VH	L	M	H	VH
0.7	2.0	E	E	E	E	F	E	E	E
	3.0	E	E	F	F	E	E	E	F
	4.0	E	F	F	F	E	E	E	F
	5.0	E	F	F	F	G	E	F	F
	6.0	E	F	F	G	G	E	F	F
0.9	2.0	E	E	F	F	E	E	E	F
	3.0	E	F	F	F	E	E	E	F
	4.0	E	F	F	F	E	F	F	F
	5.0	E	F	F	F	G	E	F	F
	6.0	E	F	F	G	G	E	F	F
1.0	2.0	E	E	F	F	E	E	E	F
	3.0	E	F	F	F	E	E	E	F
	4.0	E	F	F	F	E	F	F	F
	5.0	E	F	F	F	G	E	F	F
	6.0	E	F	F	G	G	E	F	F
1.2	2.0	E	F	F	F	E	E	F	F
	3.0	E	F	F	F	E	F	F	F
	4.0	E	F	F	F	E	F	F	F
	5.0	E	F	F	F	G	E	F	F
	6.0	E	F	F	G	G	E	F	F
1.5	2.0	E	F	F	F	E	E	F	F
	3.0	E	F	F	F	E	E	F	F
	4.0	E	F	F	F	E	F	F	F
	5.0	E	F	F	F	G	E	F	F
	6.0	E	F	F	G	G	E	F	F
2.0	2.0	E	F	F	F	E	E	F	F
	3.0	E	F	F	F	E	F	F	F
	4.0	F	F	G	G	H	E	F	G
	5.0	F	F	G	G	H	E	F	G
	6.0	F	F	G	G	H	E	F	G
2.4	2.0	E	F	F	F	E	E	F	F
	3.0	F	F	G	G	H	E	F	G
	4.0	F	F	G	G	H	E	F	G
	5.0	F	F	G	G	H	E	F	G
	6.0	F	F	G	G	H	E	F	G
3.0	2.0	F	F	G	G	H	E	F	G
	3.0	F	F	G	G	H	E	F	G
	4.0	F	F	G	G	H	E	F	G
	5.0	F	F	G	G	H	E	F	G
	6.0	F	F	G	G	H	E	F	G
3.6	2.0	F	F	G	G	H	E	F	G
	3.0	F	F	G	G	H	E	F	G
	4.0	F	F	G	G	H	E	F	G
	5.0	F	F	G	G	H	E	F	G
	6.0	F	F	G	G	H	E	F	G
4.2	2.0	F	F	G	G	H	E	F	G
	3.0	F	F	G	G	H	E	F	G
	4.0	F	F	G	G	H	E	F	G
	5.0	F	F	G	G	H	E	F	G
	6.0	F	F	G	G	H	E	F	G
4.5	2.0	F	F	G	G	H	E	F	G
	3.0	F	F	G	G	H	E	F	G
	3.4	F	F	G	G	H	E	F	G
	4.0	F	F	G	G	H	E	F	G
	5.0	F	F	G	G	H	E	F	G
4.8	2.0	F	F	G	G	H	E	F	G
	3.0	F	F	G	G	H	E	F	G
	3.2	F	F	G	G	H	E	F	G
	4.0	F	F	G	G	H	E	F	G
	5.0	F	F	G	G	H	E	F	G

LINTEL FIXING OPTIONS



© Copyright 2011 MiTek Holdings, Inc. All rights reserved.



MiTek New Zealand Limited

AUCKLAND
PO Box 58-014, Botany 2163
Phone: 09-274 7109
Fax: 09-274 7100
www.mitek.nz.co.nz

CHRISTCHURCH
PO Box 8387, Riccarton 8440
Phone: 03-348 8691
Fax: 03-348 0314

© Copyright 2011 MiTek Holdings, Inc. All rights reserved.

SDC - Approved Building Consent Document - BC211467 - Pg 17 of 30 - 9/09/2021 - camerj



PROJECT INFORMATION:
**Proposed Residence for DP Homes,
Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

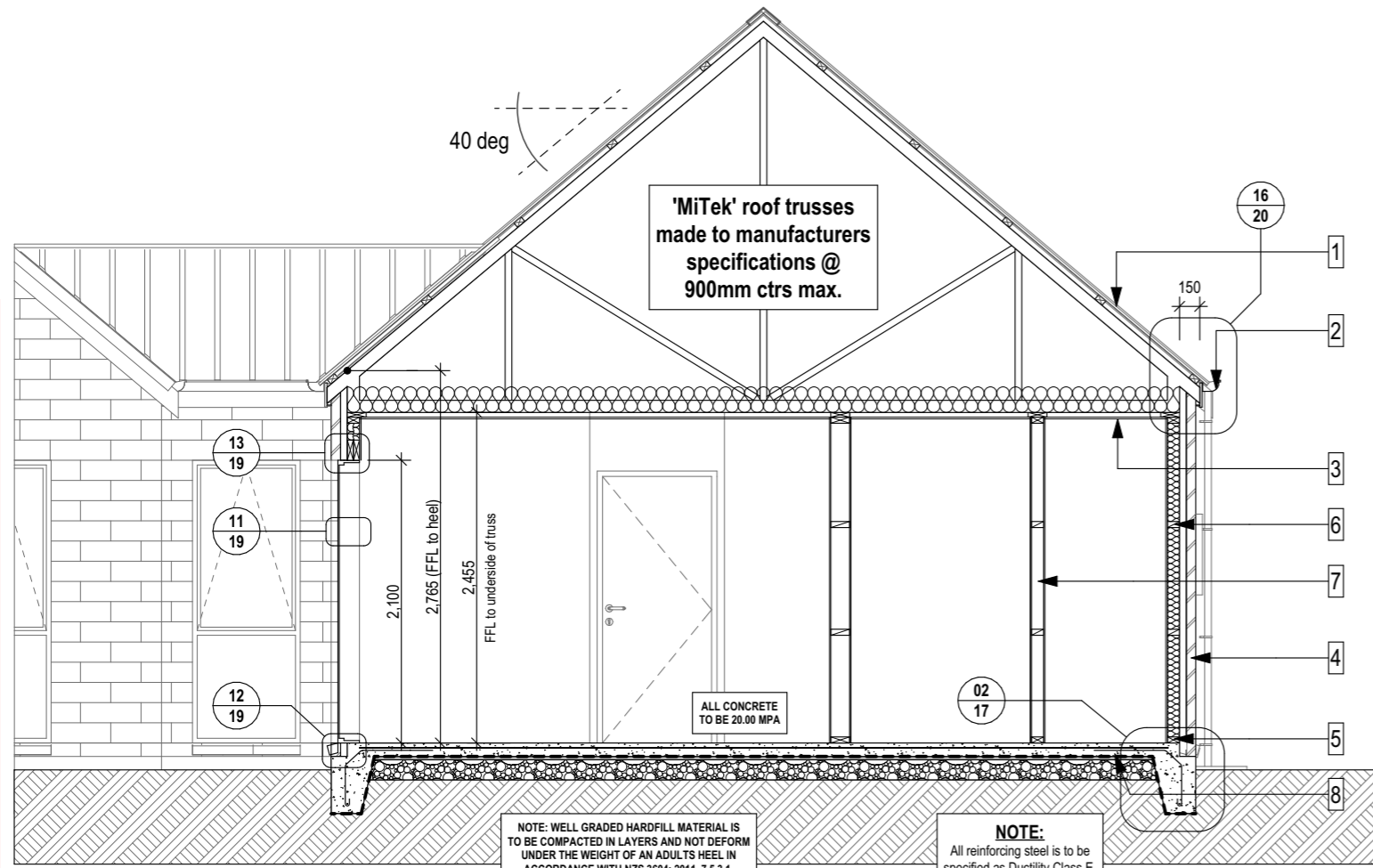
DRAWING TITLE:
**TYPICAL LINTEL HOLD DOWN FIXING
DETAILS**

REVISION:

CONSENT DRAWINGS: ISSUE 1
SCALE: N.T.S. DATE OF ISSUE: 07-Jun-21
DRAWN BY: Craig Fitchett JOB NUMBER: 2021-005

SHEET:
14
of 21

SDC - Approved Building Consent Document - BC211467 - Pg 18 of 30 - 9/09/2021 - camerj



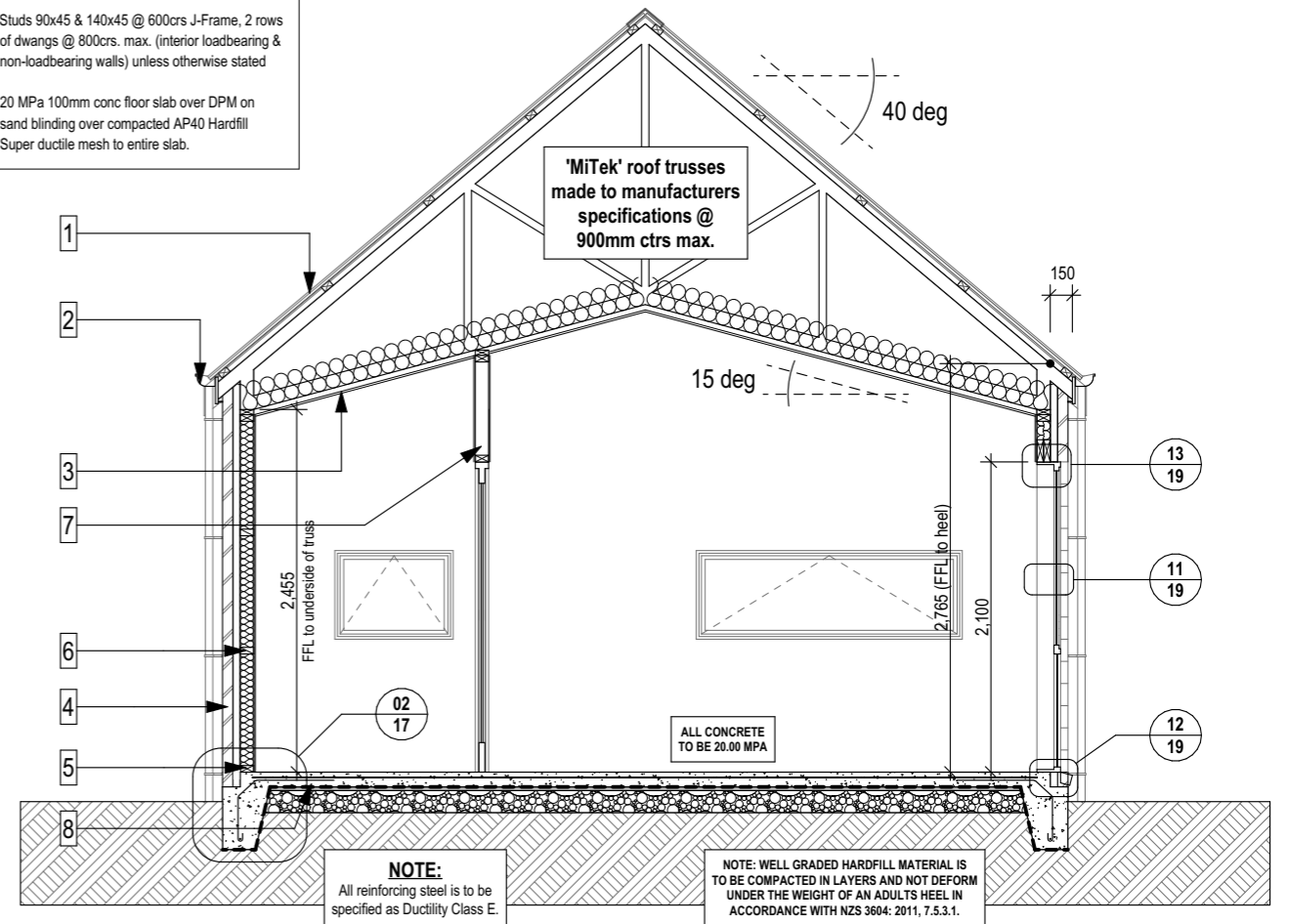
Cross Section A scale 1:50

90x45 J-Frame structural LVL gauged framing to comply with AS/NZS 4787.

LEGEND

General Notes:

- 1) Veedek Colorsteel roofing by Dimond on self supporting ThermoKraft 215 roof underlay on 70x45mm SG8 H1.2 Purlins @ 900crs fixings 1/10g self-drilling screw, 80mm long
- 2) Metalcraft fascia & quad gutter system with 4.5mm Hardies soffit lining on 70x35mm H1.2 eaves bearers on edge fixed to ribbon board.
- 3) 13mm Standard GIB ceiling lining to underside of 70x35 H1.2 treated pinus radiata ceiling battens @ 600 crs with R3.6 insulation batts between MiTek trusses @ 900mm ctrs max.
- 4) 70 Series Brick Veneer on a 50mm cavity, Watergate Plus building wrap on stud framing with R2.6 insulation batts between framing & 10mm Std. GIB wall lining (Aqualine to wet areas).
- 5) Bottom Plate fixings: Lumberlok bottom plate fixing anchors as per manufacturers spec's @ 900mm crs on all external walls and within 150mm of each end of the plate. 75mmx4mm dia shot fired fasteners @ 600mm crs and within 150mm of each end of the bottom plate to interior load bearing walls. DPC between bottom plate & floor slab (Refer to Mi Tek spec's attached for specific bottom plate fixing details required for bracing lintels)
- 6) Studs 90x45 @ 600crs J-Frame, 2 rows of dwangs @ 800crs max. (exterior walls) unless otherwise stated
- 7) Studs 90x45 & 140x45 @ 600crs J-Frame, 2 rows of dwangs @ 800crs. max. (interior loadbearing & non-loadbearing walls) unless otherwise stated
- 8) 20 MPa 100mm conc floor slab over DPM on sand blinding over compacted AP40 Hardfill Super ductile mesh to entire slab.



Cross Section B scale 1:50



PROJECT INFORMATION:
Proposed Residence for DP Homes,
Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.

DRAWING TITLE:
CROSS SECTION A & B

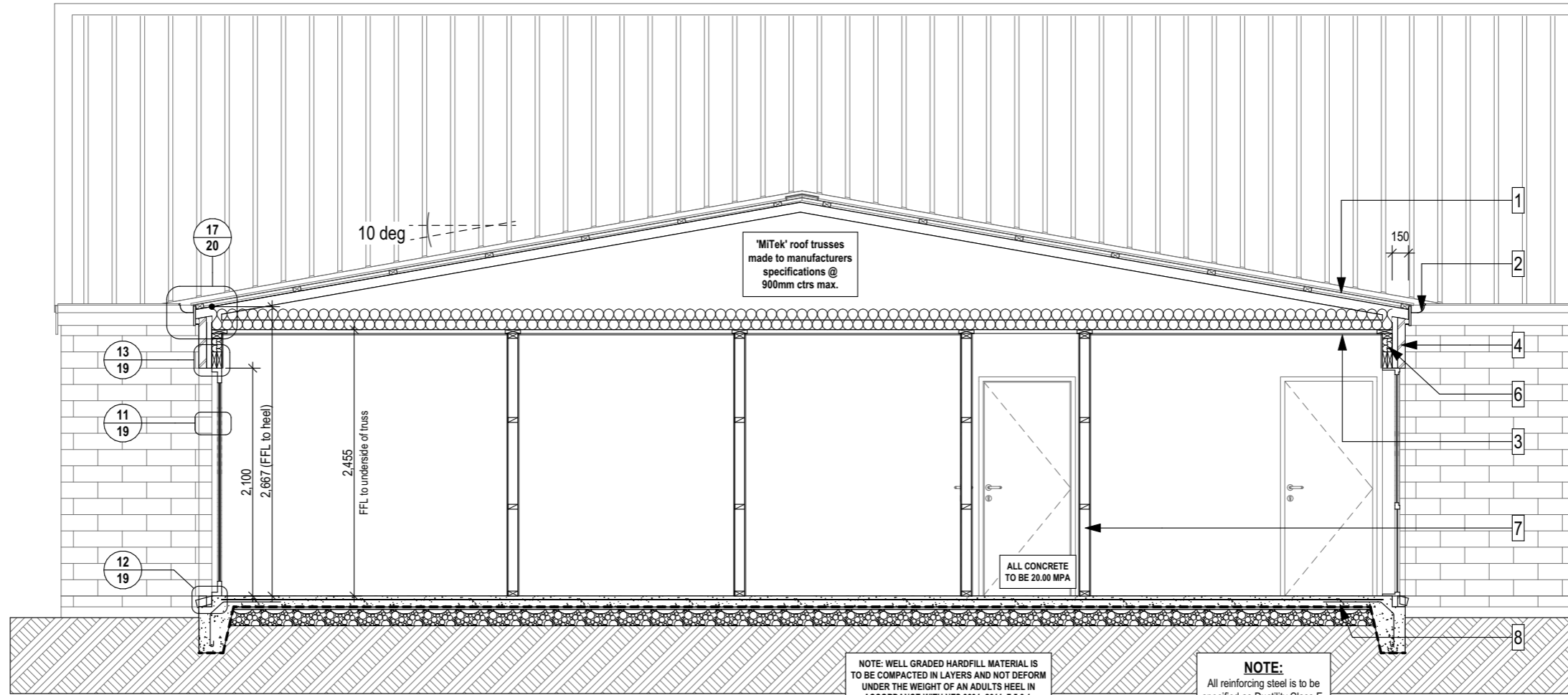
REVISION:

CONSENT DRAWINGS: ISSUE 1
SCALE: 1:50 @ A3
DRAWN BY: Craig Fitchett
DATE OF ISSUE: 07-Jun-21
JOB NUMBER: 2021-005

SHEET:
15
of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
 * ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

SDC - Approved Building Consent Document - BC211467 - Pg 19 of 30 - 9/09/2021 - camerj



- LEGEND**
- General Notes:**
- 1) Veedek Colorsteel roofing by Dimond on self supporting ThermoKraft 215 roof underlay on 70x45mm SG8 H1.2 Purlins @ 900crs fixings 1/10g self-drilling screw, 80mm long
 - 2) Metalcraft fascia & quad gutter system with 4.5mm Hardies soffit lining on 70x35mm H1.2 eaves bearers on edge fixed to ribbon board.
 - 3) 13mm Standard GIB ceiling lining to underside of 70x35 H1.2 treated pinus radiata ceiling battens @ 600 crs with R3.6 insulation batts between MiTek trusses @ 900mm ctrs max.
 - 4) 70 Series Brick Veneer on a 50mm cavity, Watergate Plus building wrap on stud framing with R2.6 insulation batts between framing & 10mm Std. GIB wall lining (Aqualine to wet areas).
 - 5) Bottom Plate fixings: Lumberlok bottom plate fixing anchors as per manufacturers spec's @ 900mm crs on all external walls and within 150mm of each end of the plate. 75mmx4mm dia shot fired fasteners @ 600mm crs and within 150mm of each end of the bottom plate to interior load bearing walls. DPC between bottom plate & floor slab (Refer to Mi Tek spec's attached for specific bottom plate fixing details required for bracing lintels)
 - 6) Studs 90x45 @ 600crs J-Frame, 2 rows of dwangs @ 800crs max. (exterior walls) unless otherwise stated
 - 7) Studs 90x45 & 140x45 @ 600crs J-Frame, 2 rows of dwangs @ 800crs. max. (interior loadbearing & non-loadbearing walls) unless otherwise stated
 - 8) 20 MPa 100mm conc floor slab over DPM on sand blinding over compacted AP40 Hardfill Super ductile mesh to entire slab.

Cross Section

C

scale 1:50



CRAIG FITCHETT DESIGN LIMITED

P. 03 343 0833,
M. 021 216 1438,
E. craig@craigfitchettdesign.co.nz

Craig Fitchett
licence number BP105386

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
* THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
* THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
* THESE DRAWINGS ARE TO READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
* ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

PROJECT INFORMATION:

**Proposed Residence for DP Homes,
Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:

CROSS SECTION C

REVISION:

CONSENT DRAWINGS: ISSUE 1

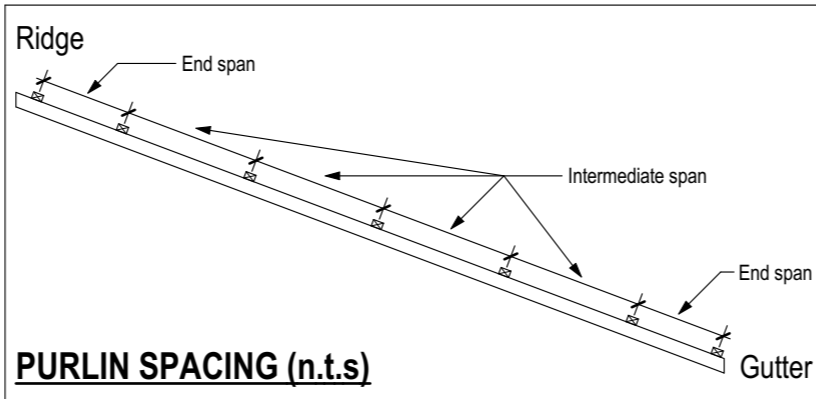
SCALE: 1:50 @ A3
DRAWN BY: Craig Fitchett

DATE OF ISSUE: 07-Jun-21
JOB NUMBER: 2021-005

SHEET:

16
of **21**

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



CANTILEVER PURLIN OPTION

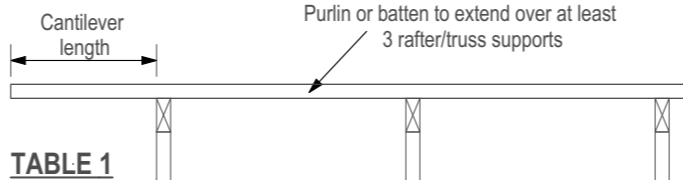
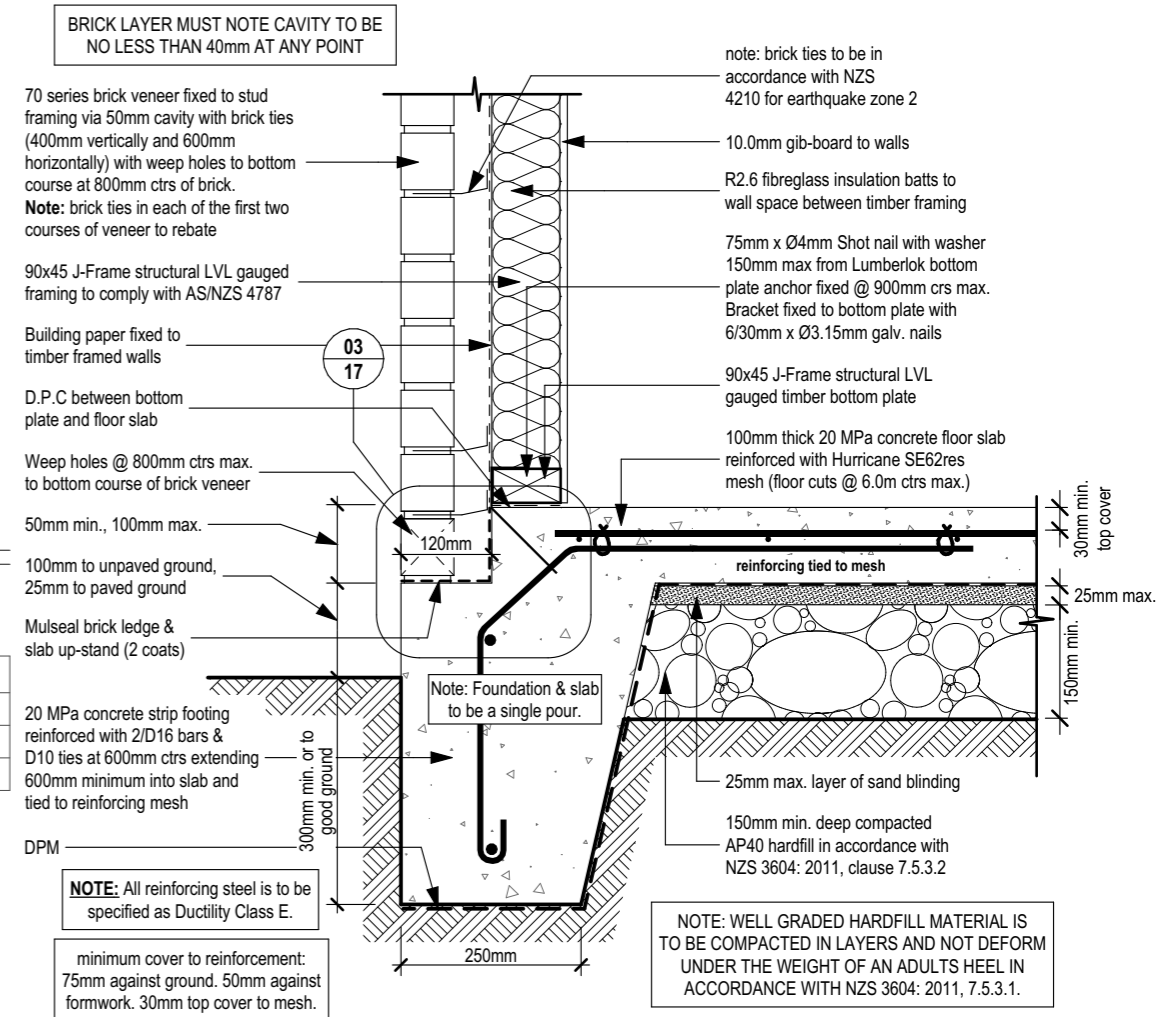


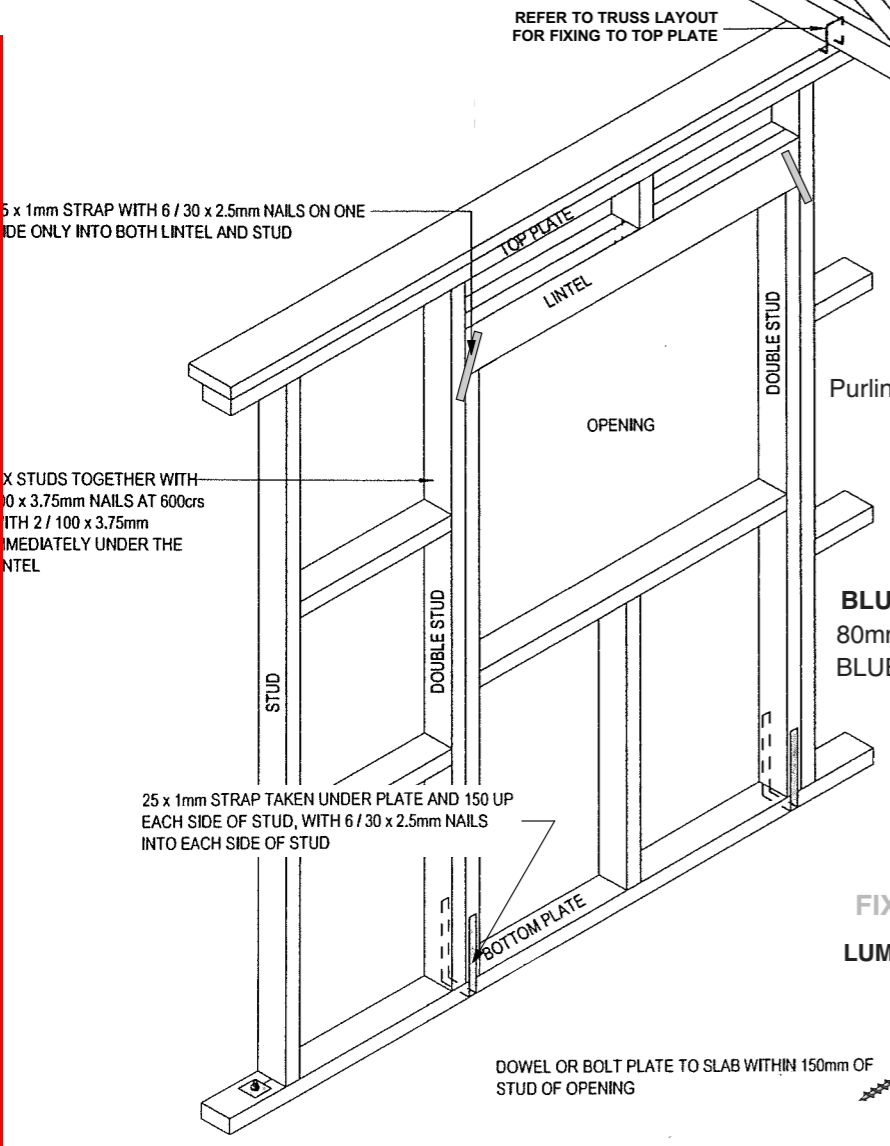
TABLE 1

PURLIN SIZE & ORIENTATION	MAX. CANTILEVER LENGTH	PURLIN CENTRES
45x45mm ☒	200mm	400mm
70x45mm ☒	300mm	900mm
90x45mm ☒	450mm	900mm

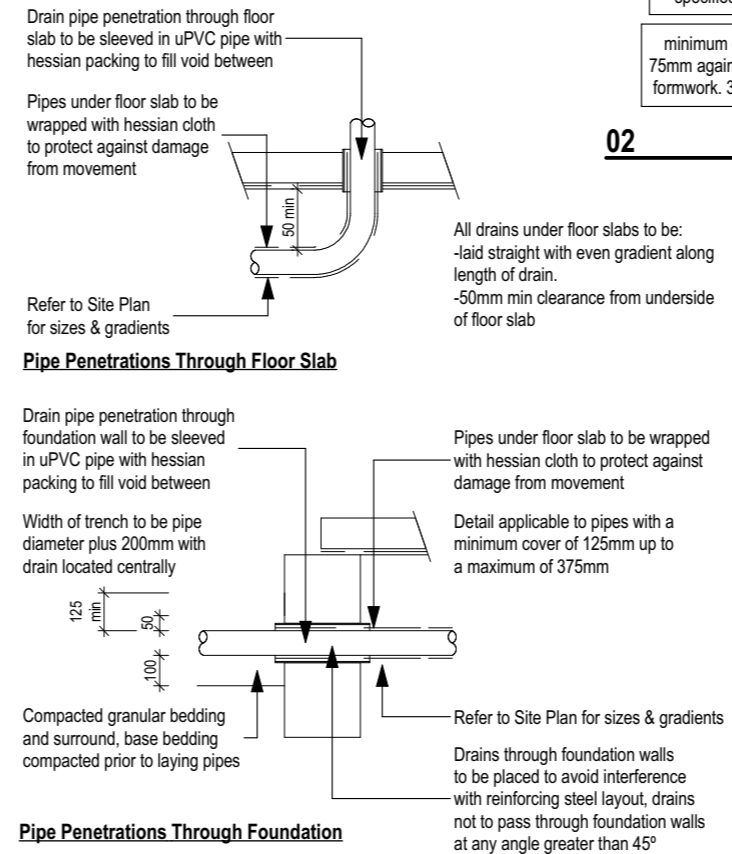
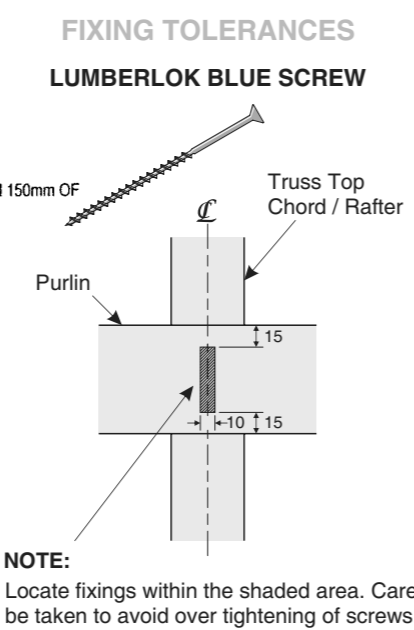


02 Foundation Detail 1:10

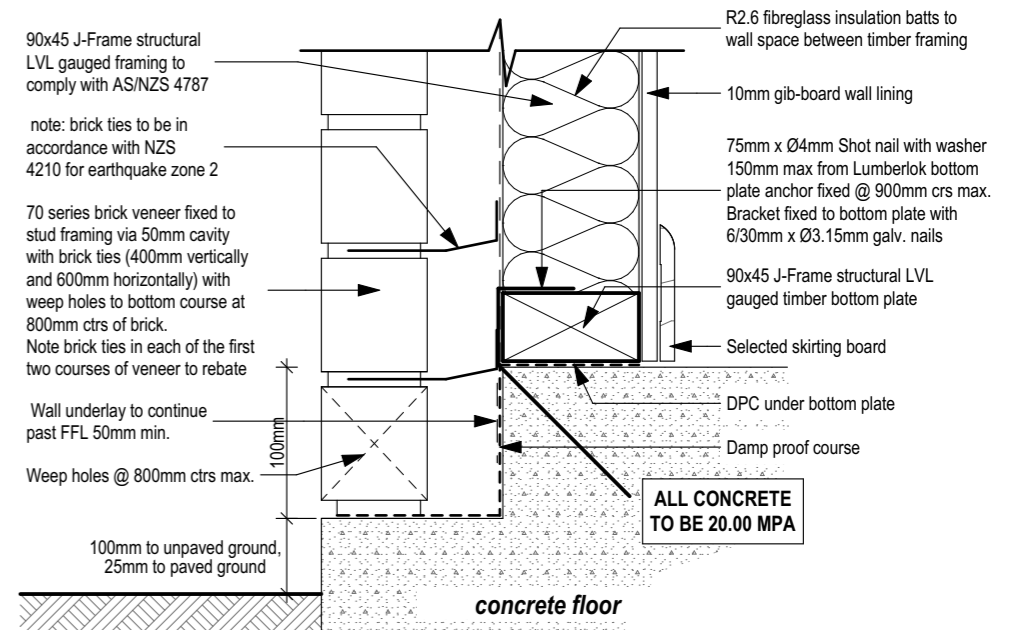
SDC - Approved Building Consent Document - BC211467 - Pg 20 of 30 - 9/09/2021 - camerj



UNLOADED DIMENSION OF WALL	FIXING TYPE
2.0m	2/90x3.15 end nails + 2 wire dogs
3.0m	2/90x3.15 end nails + 2 wire dogs
4.0m	2/90x3.15 end nails + 2 wire dogs
5.0m	2/90x3.15 end nails + 2 wire dogs
6.0m	2/90x3.15 end nails + 2 wire dogs



01 Pipe Penetration Through Foundation Details 1:5



03 Brick Cladding @ Base Detail 1:5



PROJECT INFORMATION:
**Proposed Residence for DP Homes,
 Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
TYP. FIXING DETAILS & DETAIL 01 - 03

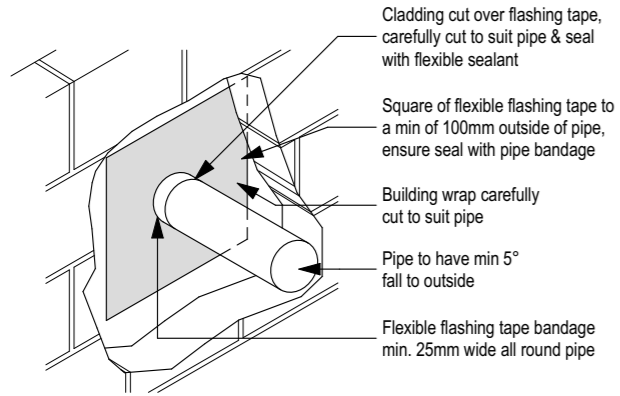
REVISION:

CONSENT DRAWINGS: ISSUE 1
 SCALE: 1:5, 1:10 @ A3
 DRAWN BY: Craig Fitchett

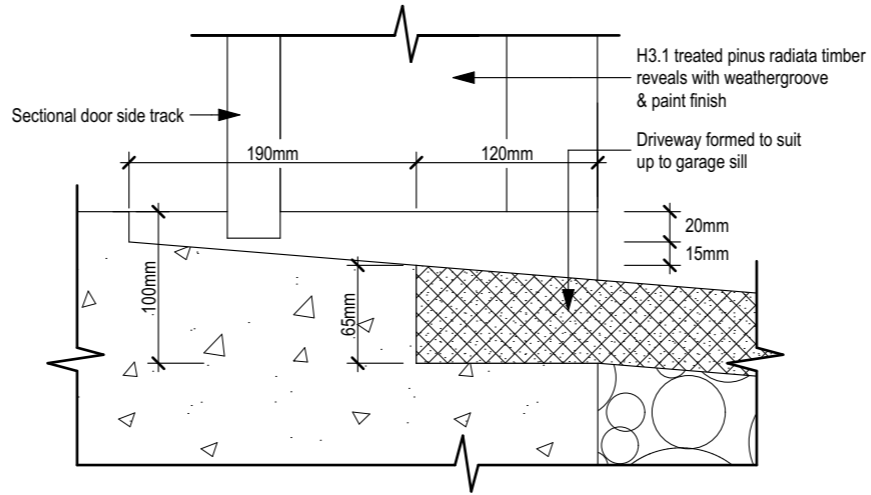
SHEET:
17
 of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
 * ON SITE AMENDMENTS, CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

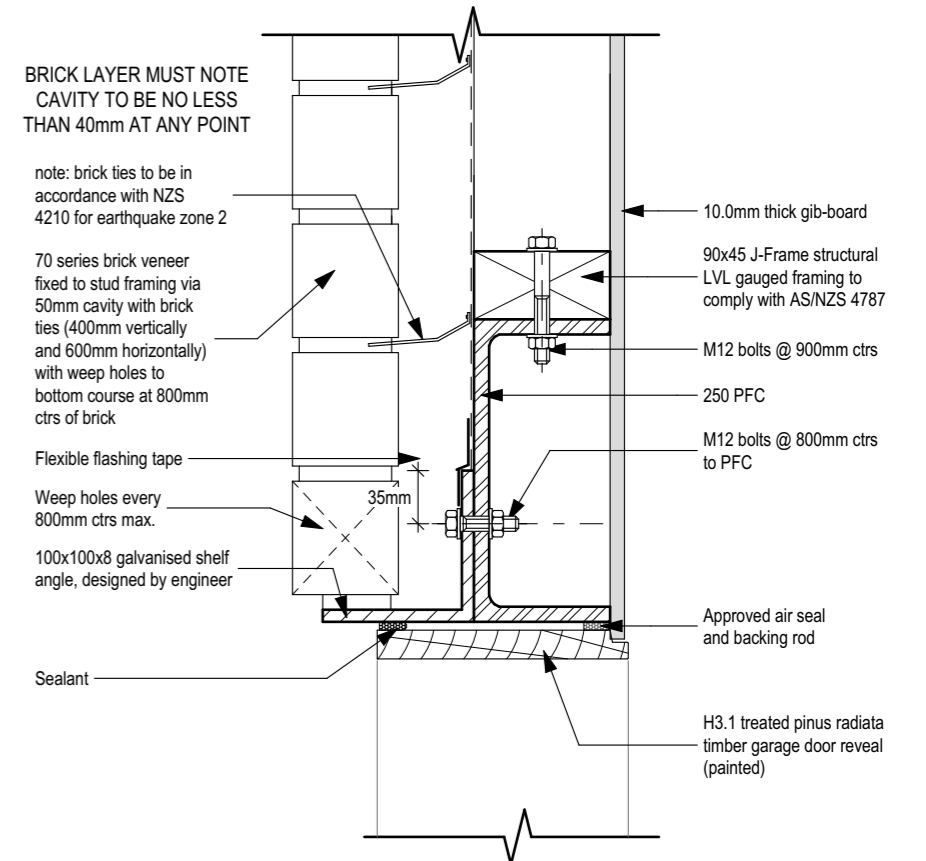
SDC - Approved Building Consent Document - BC211467 - Pg 21 of 30 - 9/09/2021 - camerj



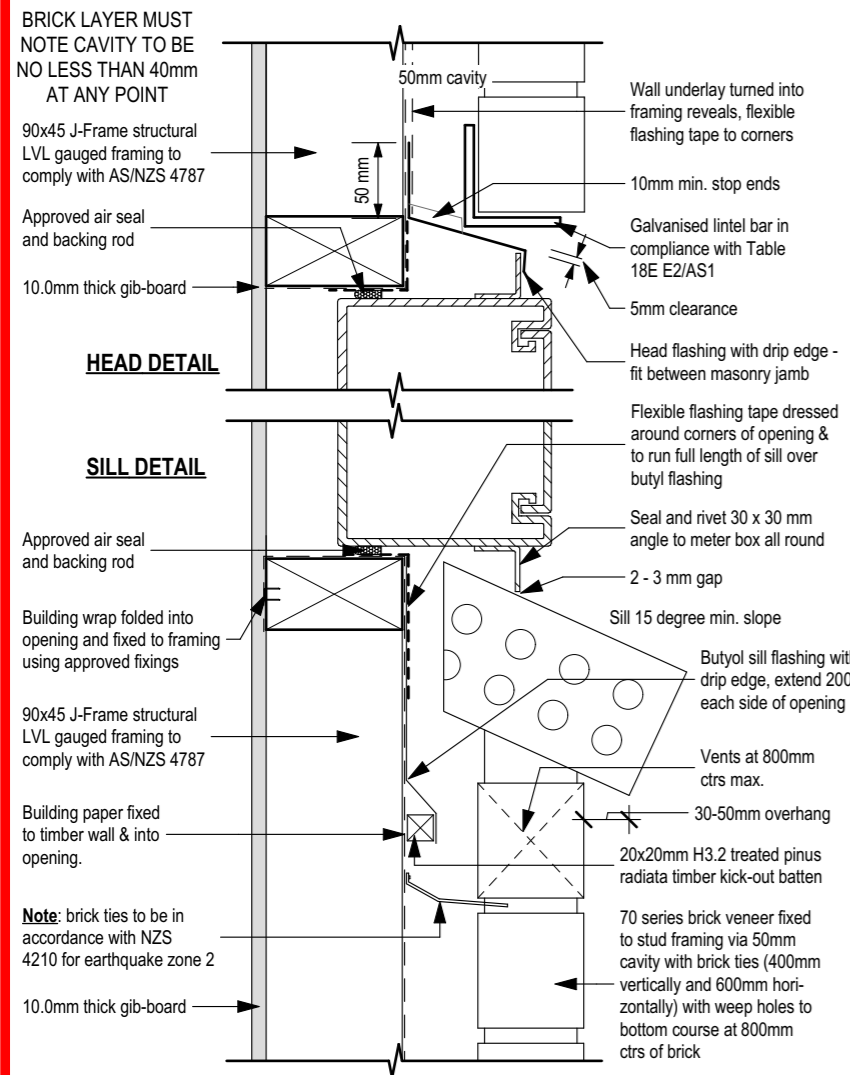
04 Pipe Penetration Through Brick Cladding Detail 1:5



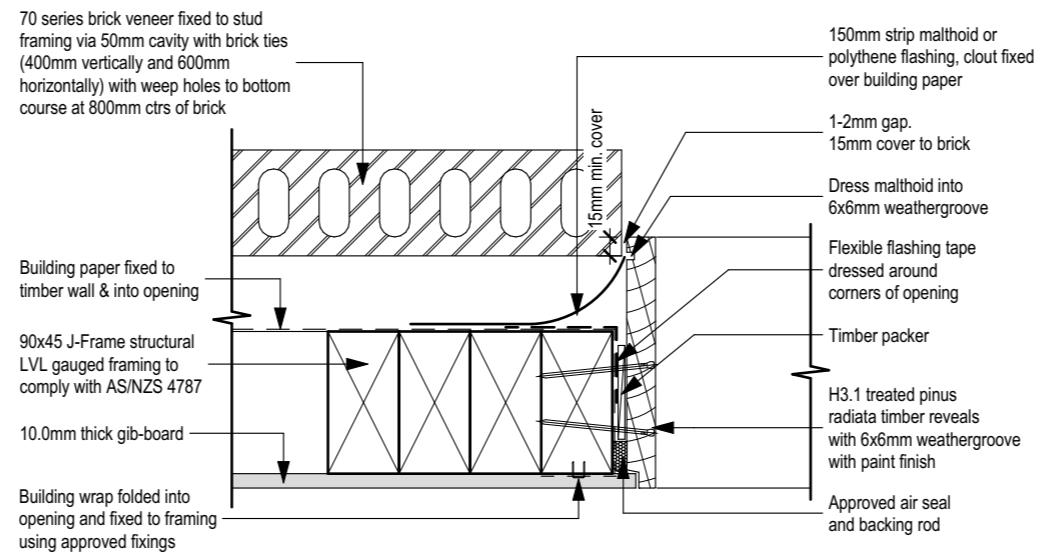
05 Garage Door Rebate Detail 1:5



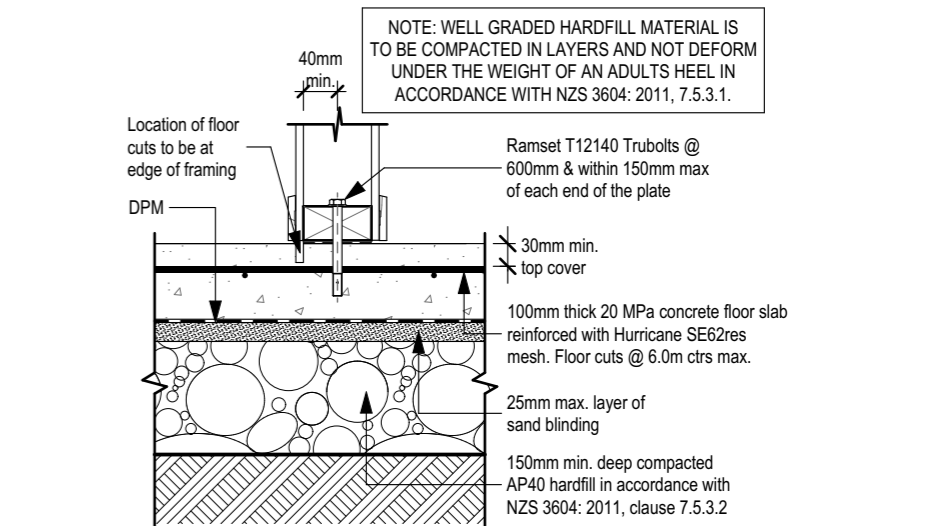
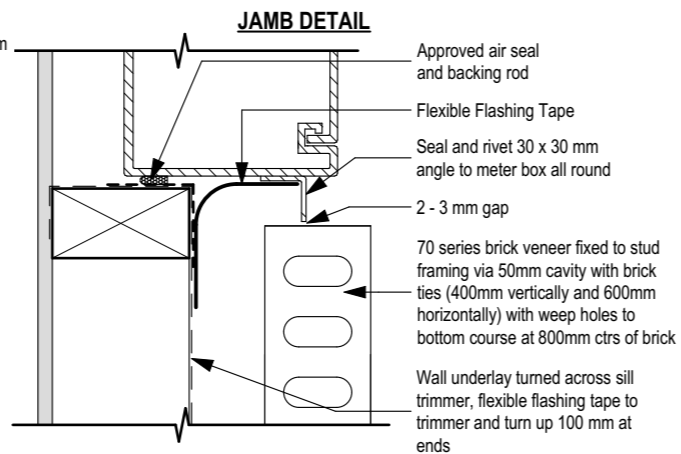
07 Garage Door Head Detail 1:5



08 Meter Box Detail 1:5



06 Garage Door Jamb Detail 1:5



09 Floor Cut Detail 1:10



CRAIG FITCHETT DESIGN LIMITED
 P. 03 343 0833,
 M. 021 216 1438,
 E. craig@craigfitchettdesign.co.nz
 Craig Fitchett
 licence number BP105386

PROJECT INFORMATION:
**Proposed Residence for DP Homes,
 Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
DETAILS 04 - 09

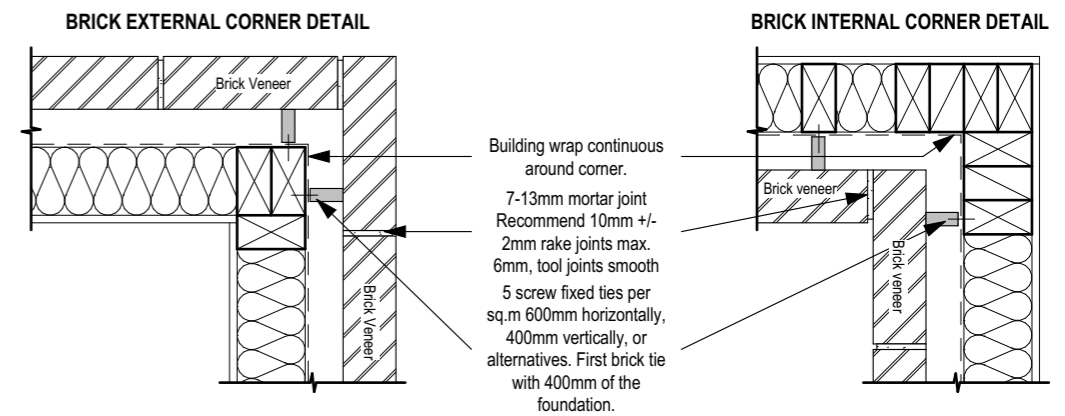
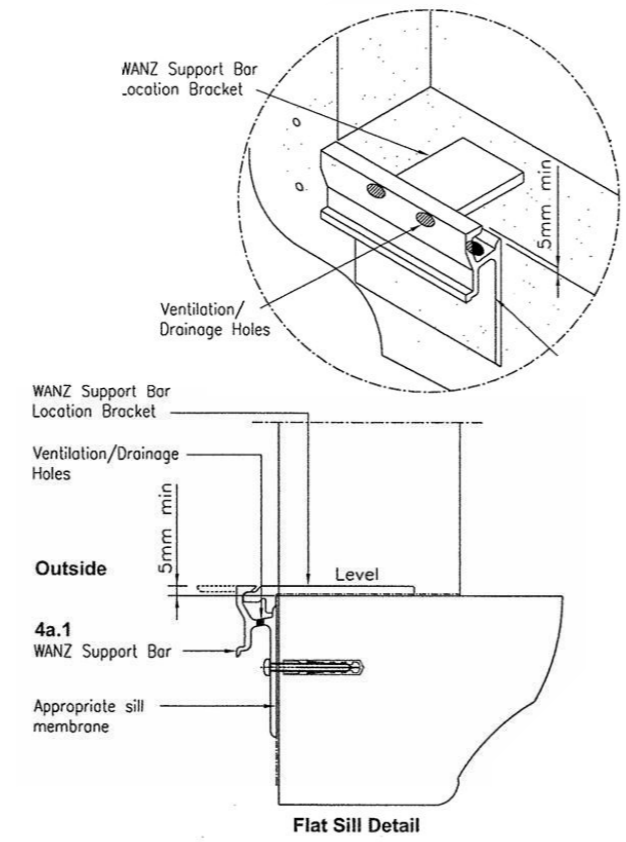
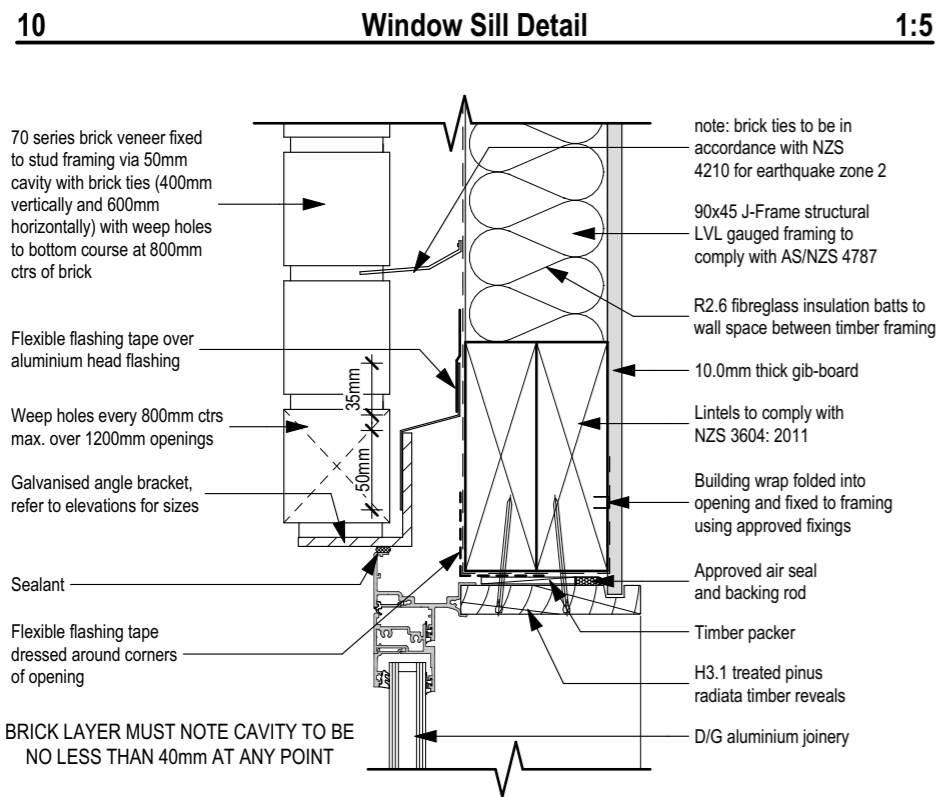
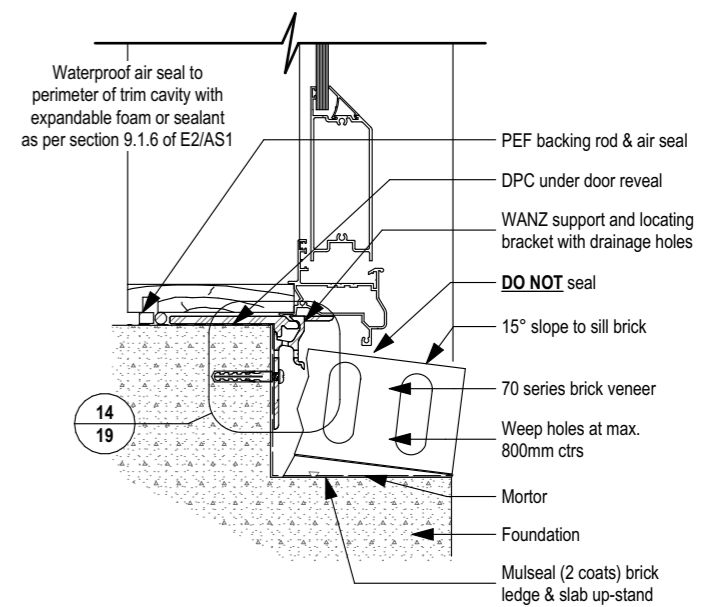
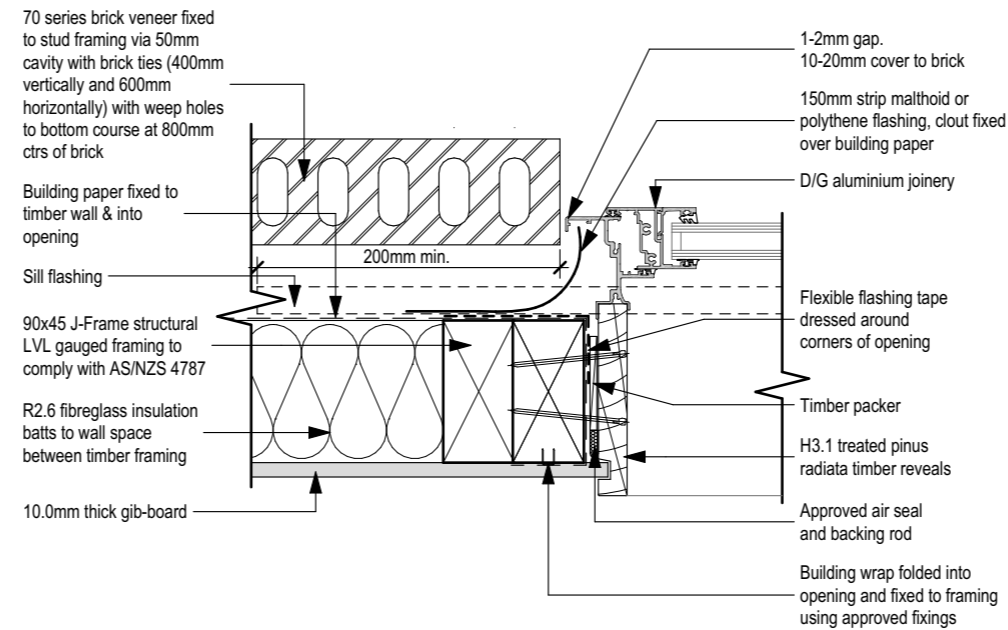
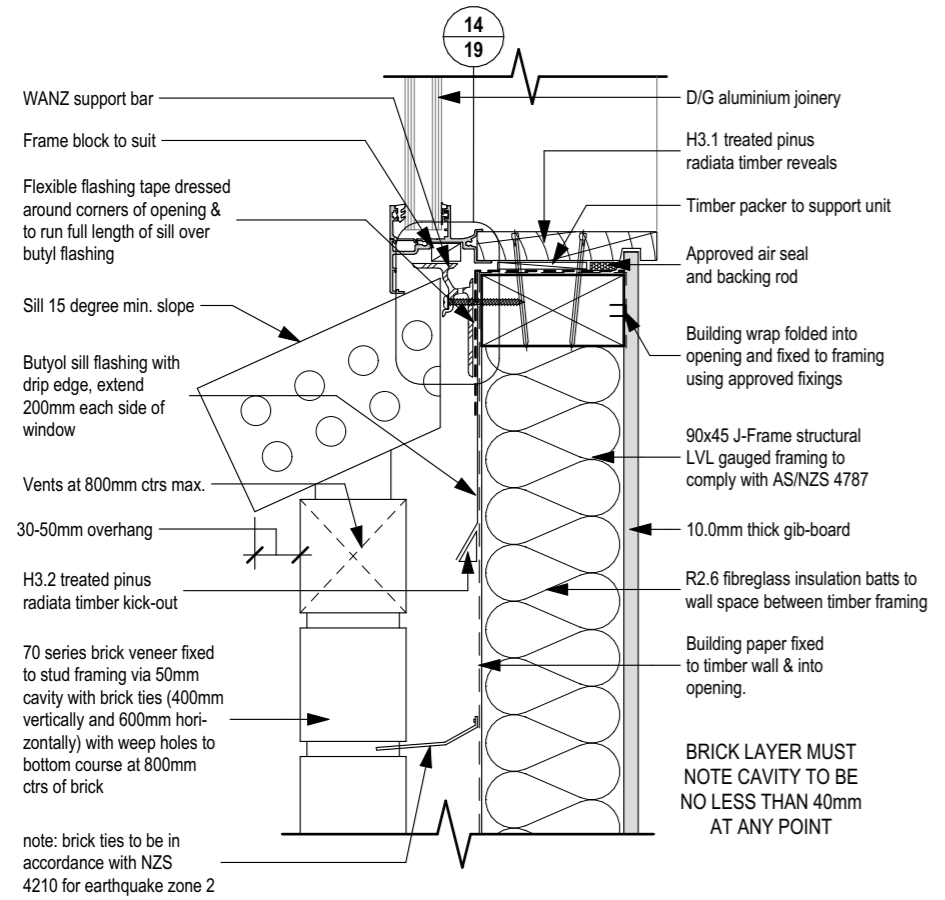
REVISION:

CONSENT DRAWINGS: ISSUE 1
 SCALE: 1:10, 1:5 @ A3
 DRAWN BY: Craig Fitchett
 DATE OF ISSUE: 07-Jun-21
 JOB NUMBER: 2021-005

SHEET:
18
 of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
 * ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

SDC - Approved Building Consent Document - BC211467 - Pg 22 of 30 - 9/09/2021 - camerj



PROJECT INFORMATION:
**Proposed Residence for DP Homes,
 Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
DETAILS 10 - 15

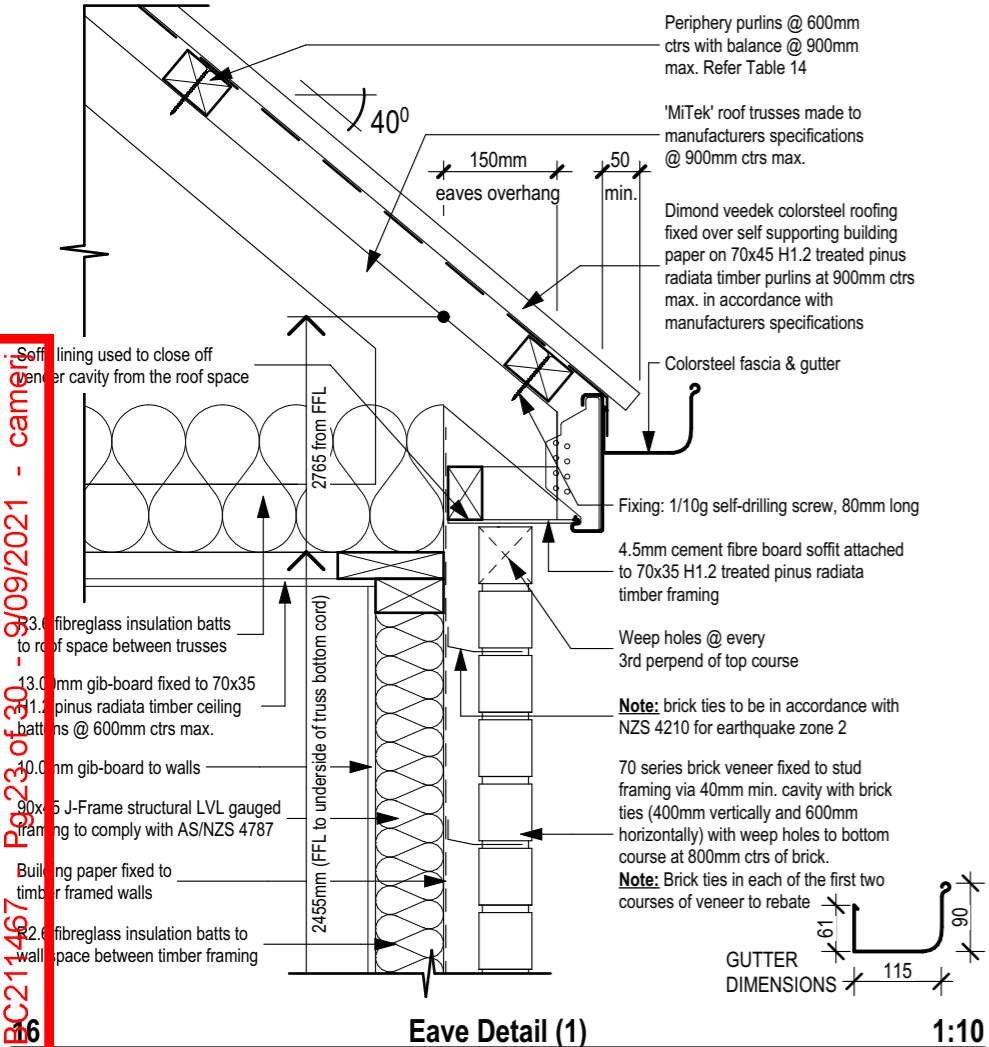
REVISION:

CONSENT DRAWINGS: ISSUE 1
 SCALE: 1:10, 1:5 @ A3
 DRAWN BY: Craig Fitchett

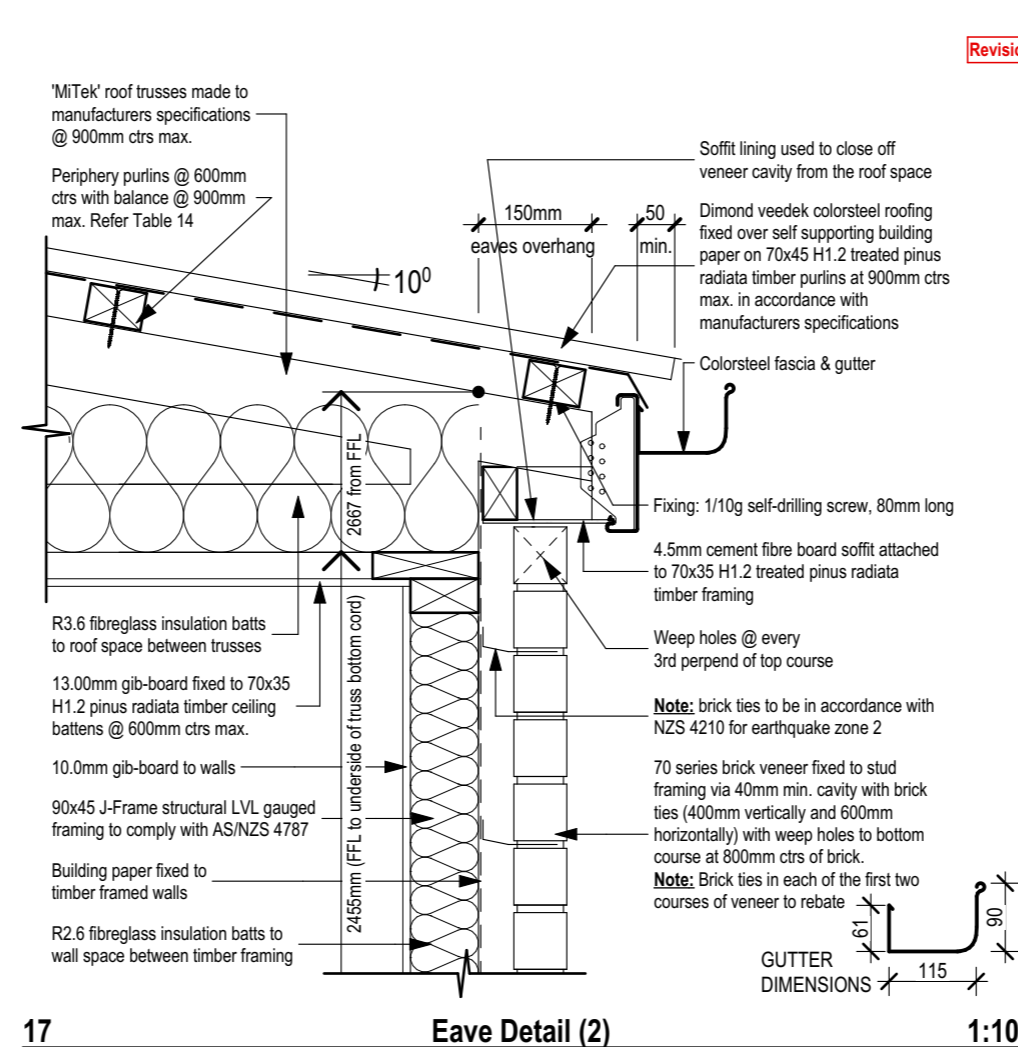
SHEET:
19
 of 21

* ALL CONSTRUCTION IS TO COMPLY WITH NEW ZEALAND BUILDING CODE AND ALL RELEVANT DOCUMENTS, AND WITH THE LOCAL TERRITORIAL AUTHORITY REGULATIONS.
 * THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & LEVELS ARE CORRECT PRIOR TO COMMENCING ANY WORK.
 * THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT LOCAL TERRITORIAL CONSENT.
 * THESE DRAWINGS ARE TO READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENTS, ENGINEERING DETAILS/DRAWINGS, MANUFACTURER'S SPECIFICATIONS & TRUSS DESIGNER'S MANUFACTURER'S DRAWINGS.
 * ON SITE AMENDMENTS: CRAIG FITCHETT DESIGN IS TO BE NOTIFIED IN WRITING (via email) BEFORE THE AMENDMENT IS TO COMMENCE.

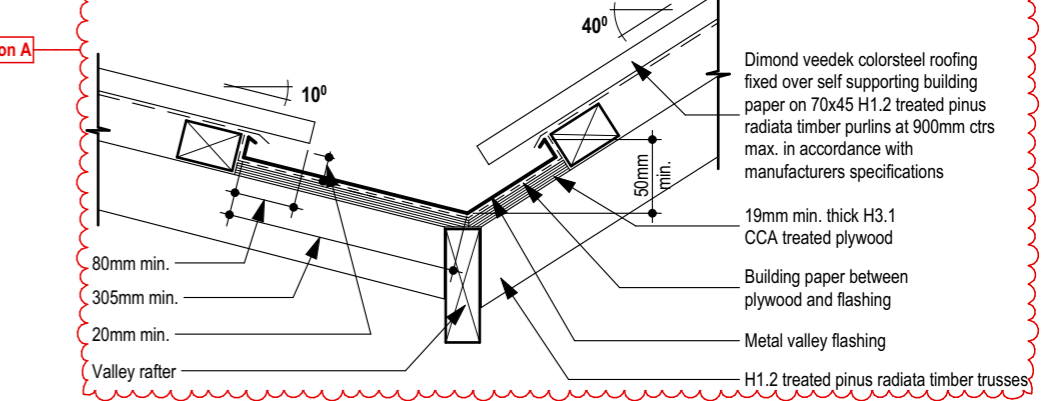
BEFORE CONSTRUCTION BEGINS, BUILDER MUST CHECK ALL DIMENSIONS ARE CORRECT AND ALL CONSTRUCTION WORK COMPLIES WITH THE NEW ZEALAND BUILDING CODE, LOCAL BODY BYLAWS AND RELEVANT NEW ZEALAND STANDARDS



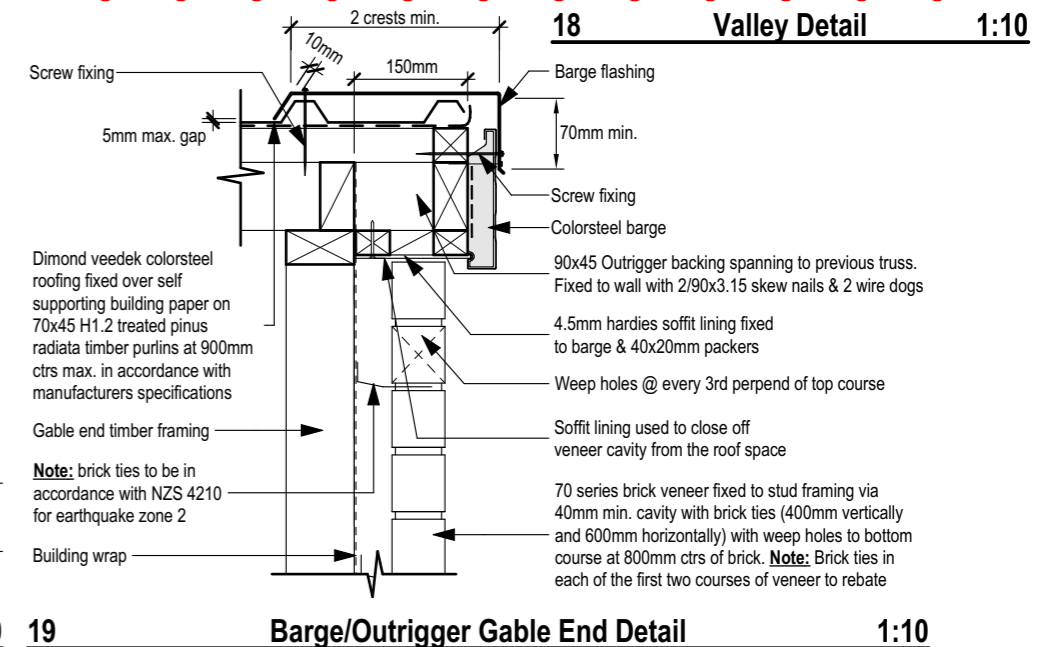
Eave Detail (1) 1:10



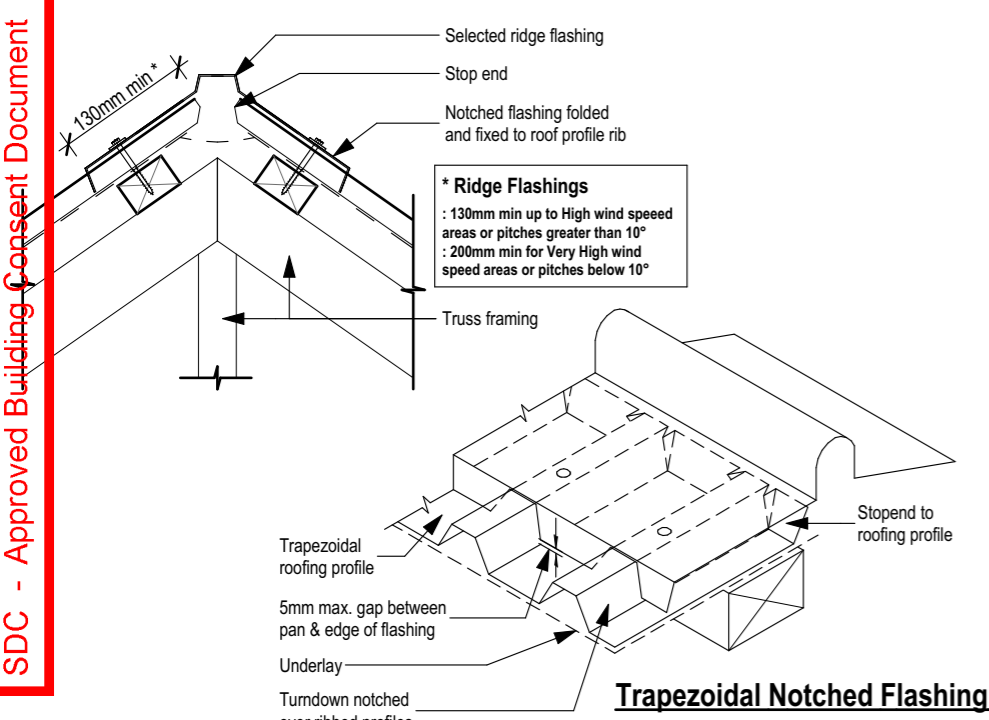
Eave Detail (2) 1:10



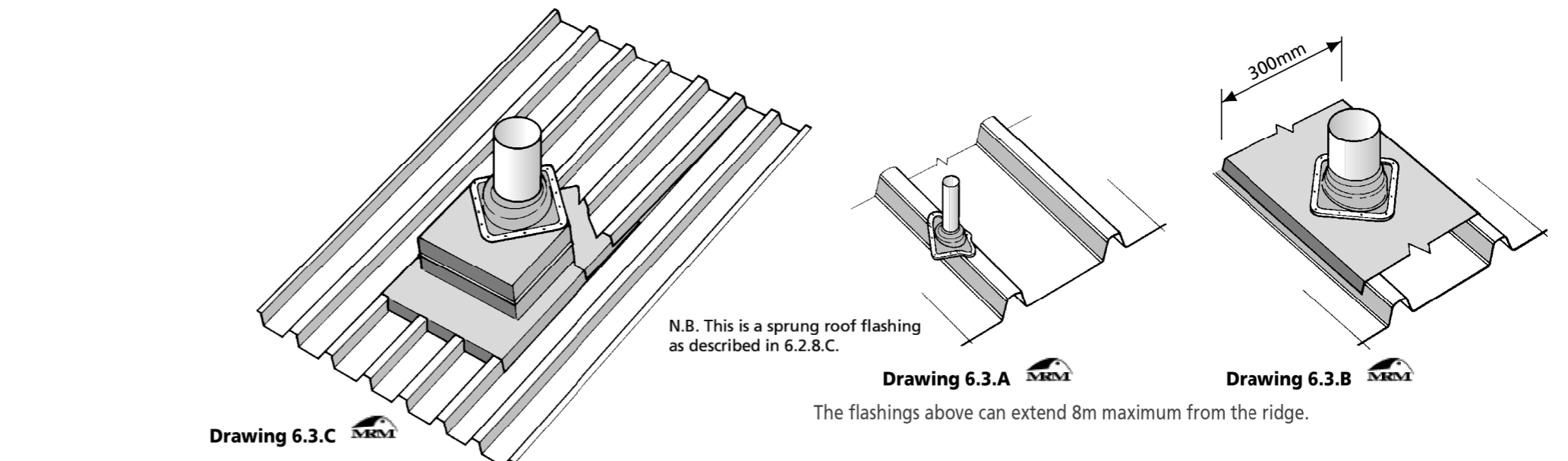
18 Valley Detail 1:10



19 Barge/Outrigger Gable End Detail 1:10



Ridge Detail 1:10



Pipe Penetration Through Roof Detail n.t.s

20 Ridge Detail 1:10

21 Pipe Penetration Through Roof Detail n.t.s

dp HOMES

mb MASTER BUILDERS

CRAIG FITCHETT DESIGN LIMITED

P. 03 343 0833, M. 021 216 1438, E. craig@craigfitchettdesign.co.nz

Craig Fitchett licence number BP105386

REGISTERED BUILDING PRACTITIONER www.dhb.govt.nz

PROJECT INFORMATION:

Proposed Residence for DP Homes, Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.

DRAWING TITLE:

DETAILS 16 - 21

REVISION:

A Valley detail amended.

CONSENT DRAWINGS: ISSUE 1

SCALE: 1:10, 1:20 @ A3

DATE OF ISSUE: 11-Aug-21

DRAWN BY: Craig Fitchett

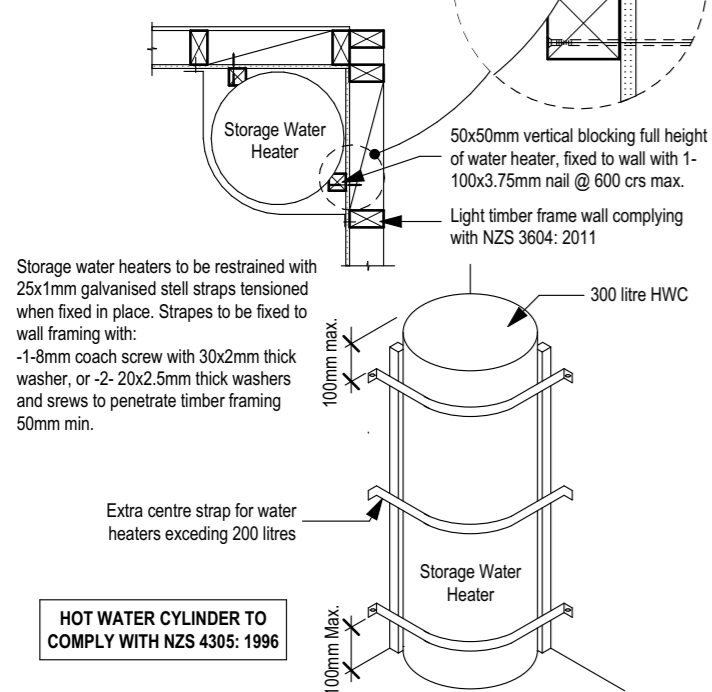
JOB NUMBER: 2021-005

SHEET: **20** of 21

SDC - Approved Building Consent Document - BC211467 - 9/09/2021 - camera

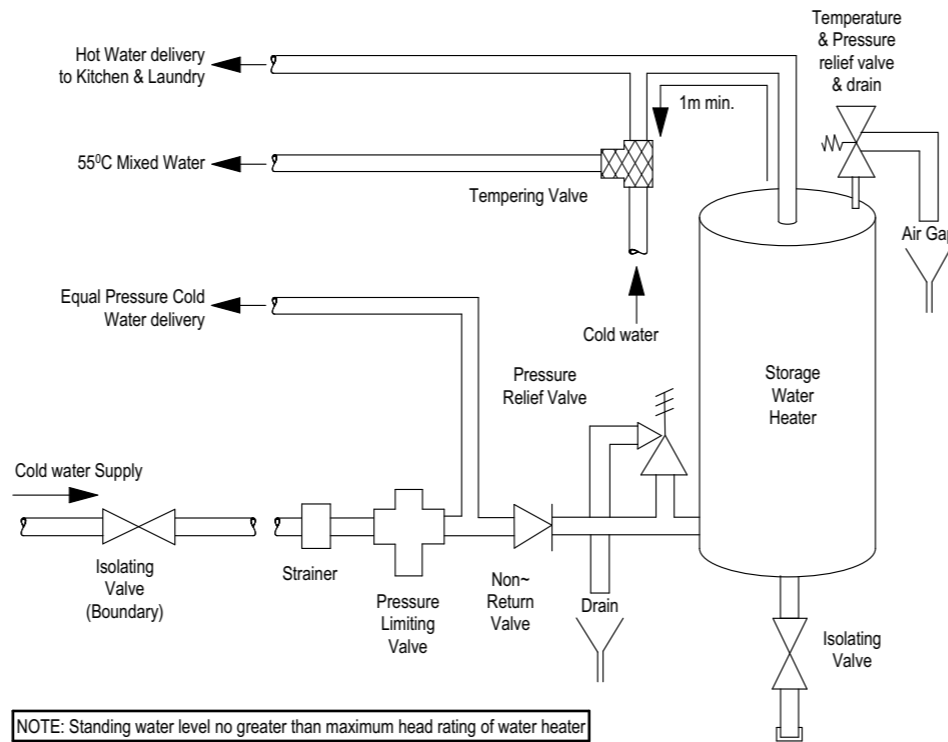
6.14.3 Legionella bacteria
Irrespective of whether a mixing device is installed, the storage water heater control thermostat shall be capable of being set at a temperature of not less than 60°C to prevent the growth of Legionella bacteria.

Safe Tray
Locate a safe tray below the HWC. The safe tray shall incorporate a drain with a minimum diameter of 40 mm. Where the HWC discharges into the safe tray, the diameter of the safe tray drain shall be greater than the overflow pipe from the tank.

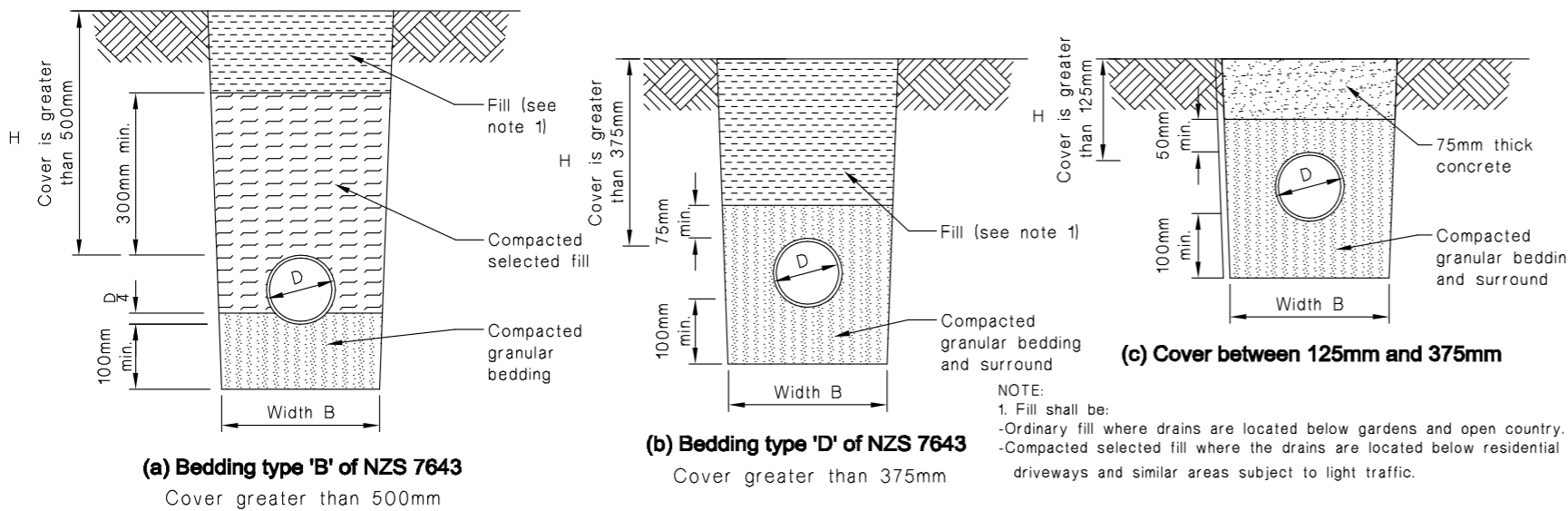


Seismic Restraint of Storage Water Heaters 90-360 Litres (AS1/ G12 Fig 14)

22 HWC Restraint Detail n.t.s

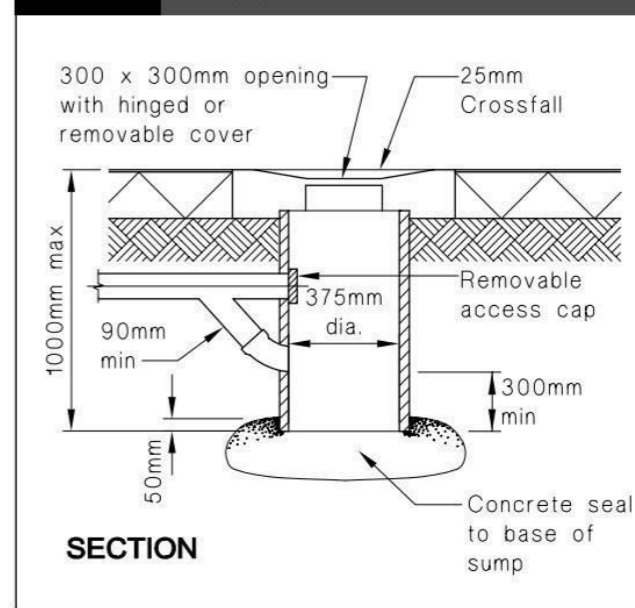


23 HWC Valves Diagram n.t.s



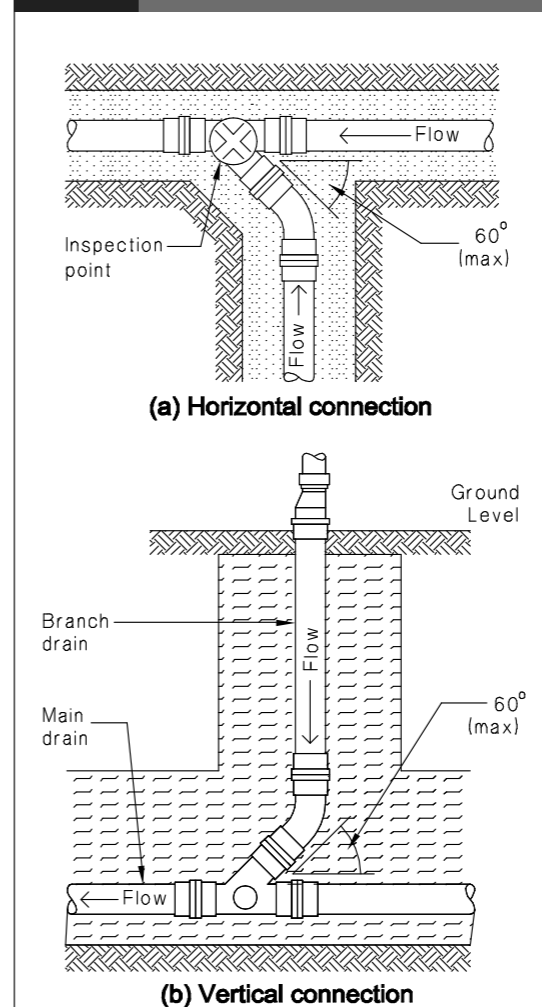
25 Bedding Details n.t.s

Figure 8: Type-one Surface Water Sump Paragraph 3.6.2



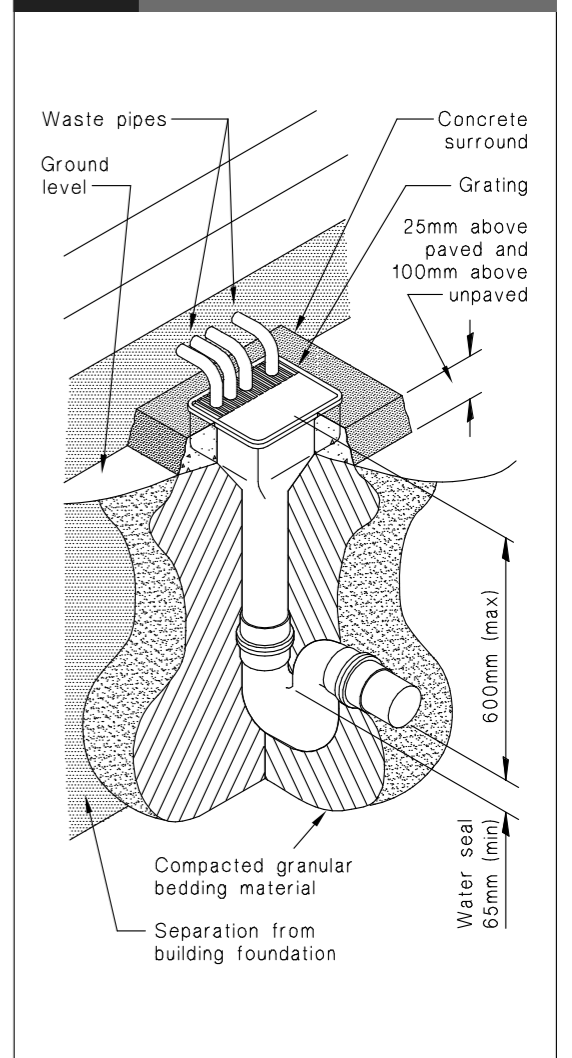
24 Sump Detail n.t.s

Figure 1: Connection of drains Paragraph 3.2.1



26 Connection of Drains Detail & Gully Trap Detail n.t.s

Figure 2: Details of gully traps Paragraph 3.3.1



SDC - Approved Building Consent Document - BC211467 - Pg 24 of 30 - 9/09/2021 - camerj



PROJECT INFORMATION:
**Proposed Residence for DP Homes,
Lot 70, # 33 Monte Crescent, Verdeco Park, Lincoln.**

DRAWING TITLE:
DETAILS 22 - 26

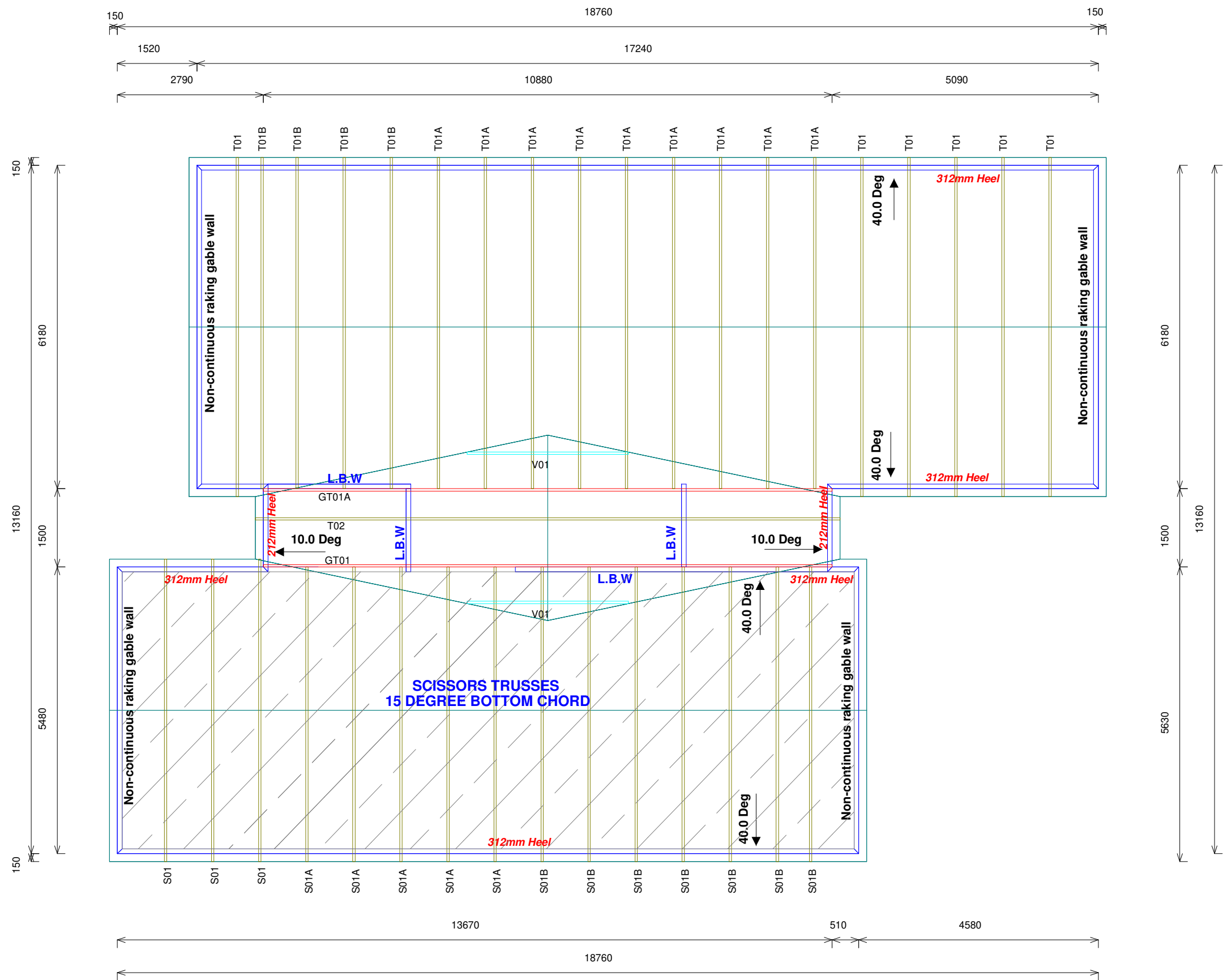
REVISION:

CONSENT DRAWINGS: ISSUE 1
SCALE: N.T.S. DATE OF ISSUE: 07-Jun-21
DRAWN BY: Craig Fitchett JOB NUMBER: 2021-005

SHEET:
21
of 21

SDC - Approved Building Consent Document - BC211467 - Pg 25 of 30 - 9/09/2021 - camerj

Layout is null and void if trusses not supplied by PlaceMakers



Site Address :
 Lot 70,
 Verdeco Park
 Lincoln
 Selwyn

Sheet Title :
**For Building Consent
 Buildable Truss Layout**

Date : Aug 17, 2021
 Drawn : Tram Nguyen
 Scale : 1 : 100
 System : MiTek 20/20

Job Details:
 Roof Pitch : 40.0 / 10.0 Deg
 Roof Material : Longrun Iron .55mm
 Ceiling Material : Gib Board 13mm
 Wind Zone : High
 Roof Snow Load : 0.630 kPa

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

PrimeCad v4.7.346

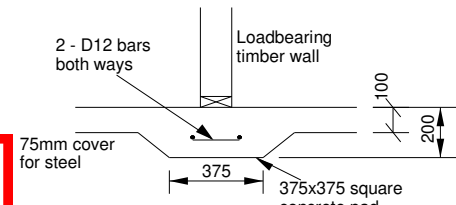
Job Title :
BL206399

Sheet :
1

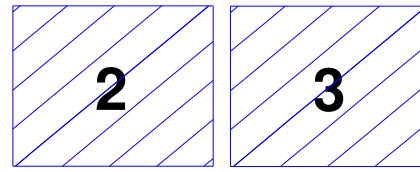
Revision Number :

Layout is null and void if trusses not supplied by PlaceMakers

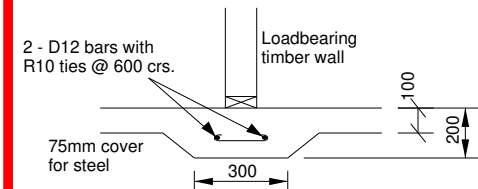
Slab Thickening Details



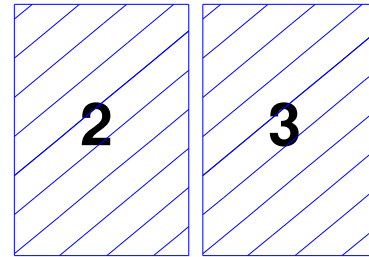
TYPE FP1 - 375x375mm Pad



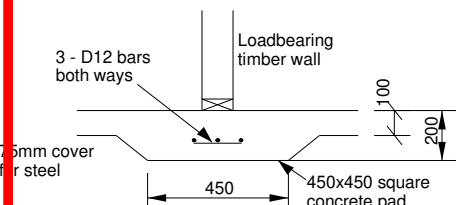
Number of Understuds



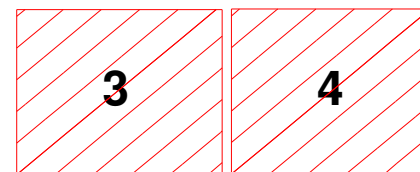
TYPE FS1 - 300mm Strip footing



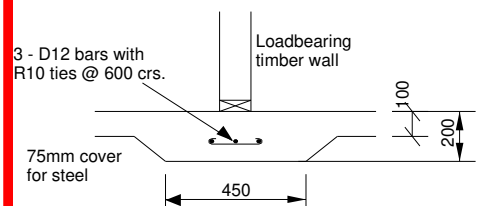
Number of Understuds



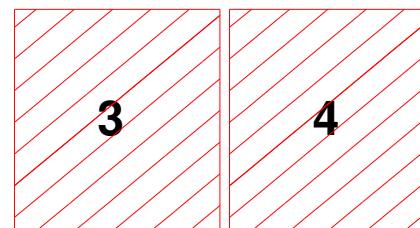
TYPE FP2 - 450x450mm Pad



Number of Understuds



TYPE FS2 - 450mm Strip footing



Number of Understuds

NOTES:

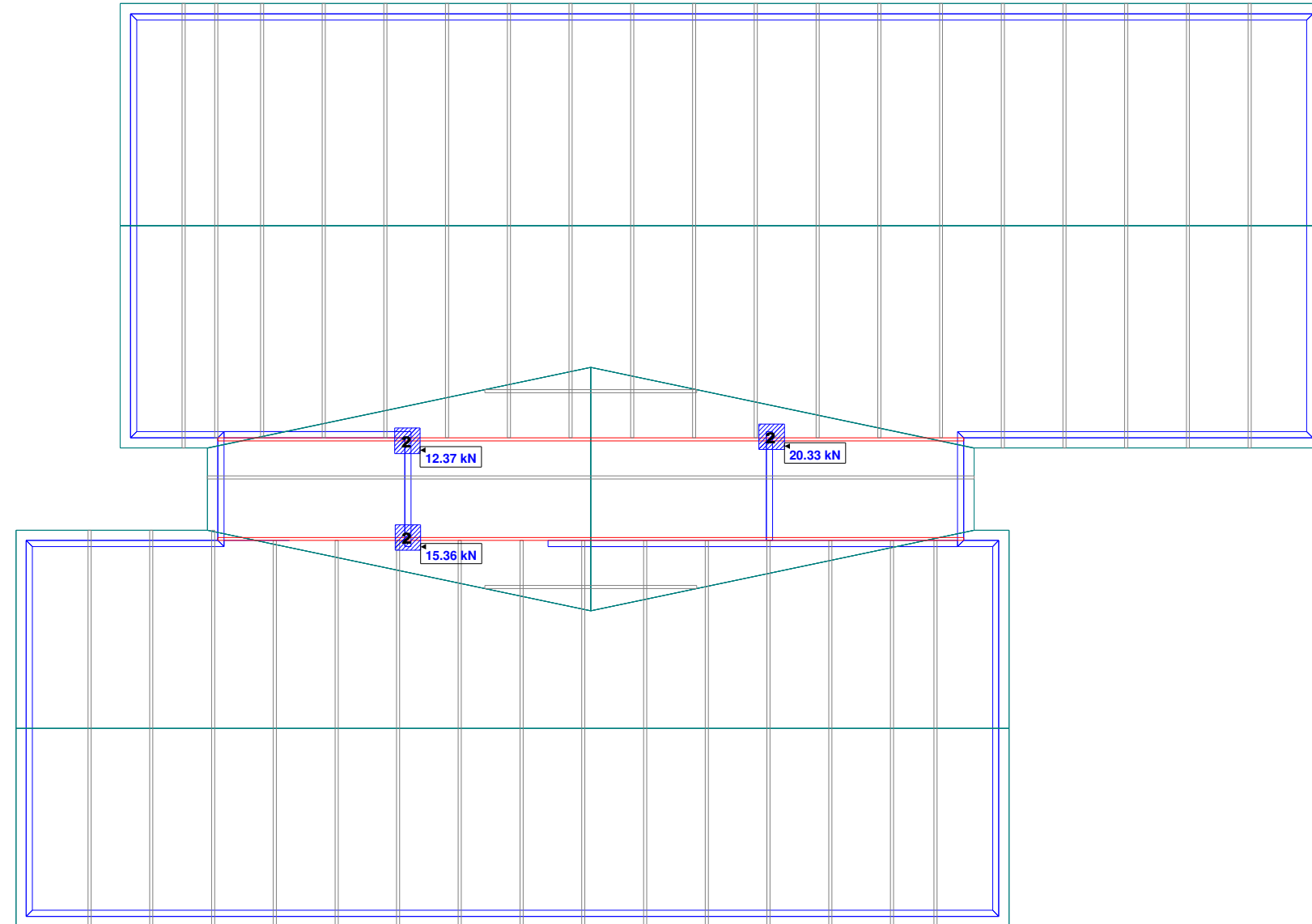
All point loads exceeding 10.0kN are indicated.

All walls shown to be considered load bearing.

The numbers found within the hatched area are the number of studs required below each truss.

Refer to:

GANG-NAIL Internal Load Bearing on Concrete Floor Slabs brochure 10/2011



SDC - Approved Building Consent Document - BC211467 - Pg 26 of 30 - 9/09/2021 - camerij



Site Address :
 Lot 70,
 Verdeco Park
 Lincoln
 Selwyn

Sheet Title :
**For Building Consent
 Slab Thickening**

Date : Aug 17, 2021 Drawn : Tram Nguyen
 Scale : 1 : 100 System : MiTek 20/20

Job Details:
 Roof Pitch : 40.0 / 10.0 Deg
 Roof Material : Longrun Iron .55mm
 Ceiling Material : Gib Board 13mm
 Wind Zone : High
 Roof Snow Load : 0.630 kPa

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

PrimeCad v4.7.346

Job Title :
BL206399

Sheet :
2

Revision Number :

Lintel Fixing Details

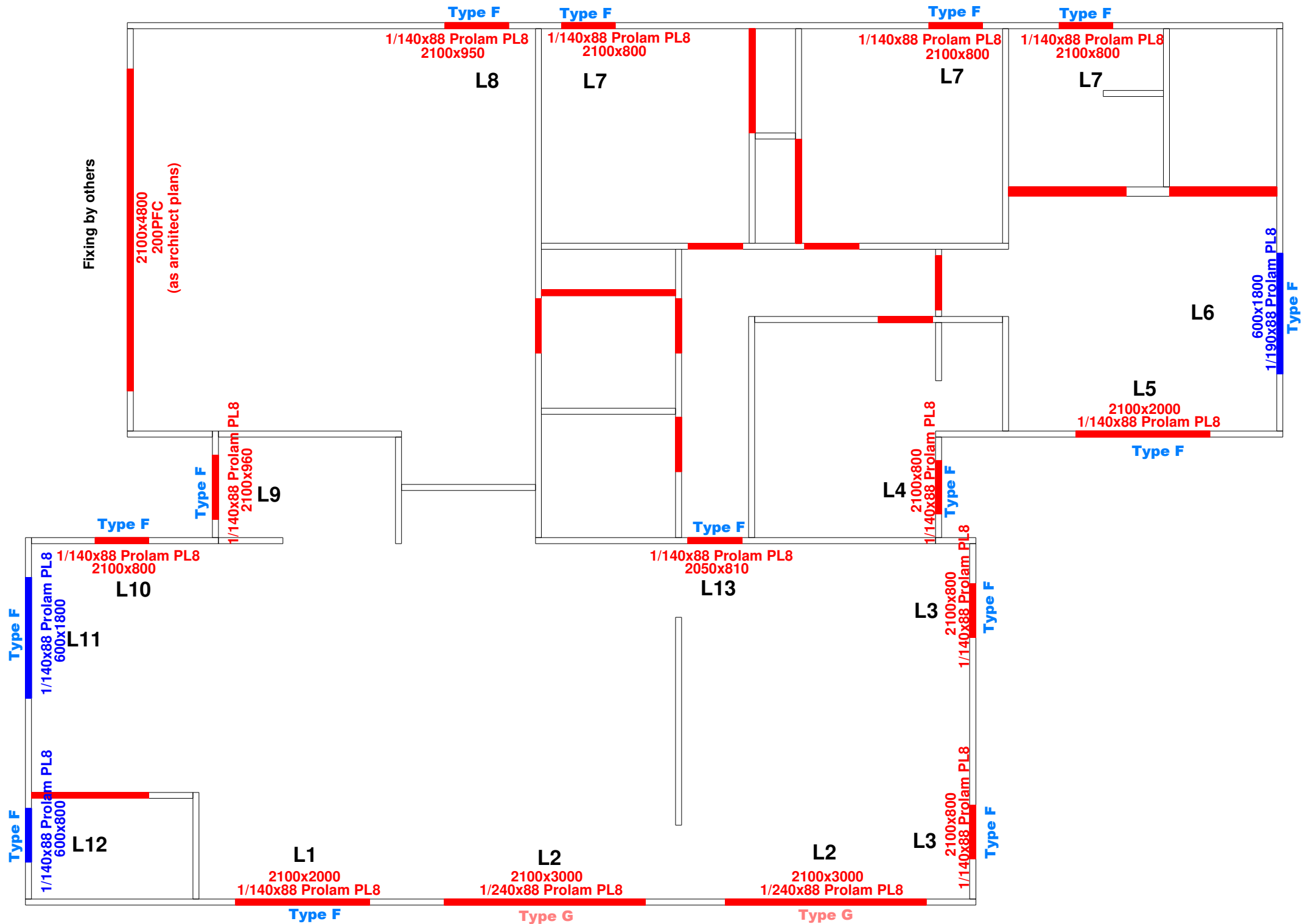
Layout is null and void if trusses not supplied by PlaceMakers

TYPE E
1.4kN

TYPE F
4.0kN

TYPE G
7.5kN

TYPE H
13.5kN



NOTES:

Refer to:
Lintel Fixing Schedule 01/2018
pages 73 & 74, Structural Fixings
On-site Guide for Building Code
Compliance 2018 Edition

(Alternative to NZS 3604:2011
Table 8.14 & Figure 8.12)

PlaceMakers
Know how. Can do.

Site Address :
Lot 70,
Verdeco Park
Lincoln
Selwyn

Sheet Title :
**For Building Consent
Lintel Fixing**

Date : Aug 17, 2021
Scale : 1 : 100
Drawn : Tram Nguyen
System : MiTek 20/20

Job Details:
Roof Pitch : 40.0 / 10.0 Deg
Roof Material : Longrun Iron .55mm
Ceiling Material : Gib Board 13mm
Wind Zone : High
Roof Snow Load : 0.630 kPa

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

MiTek

PrimeCad v4.7.346

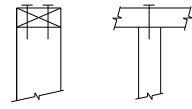
Job Title :
BL206399
Sheet :
3
Revision Number :

Stud to top plate fixing details

Type A is minimum fixing required unless specified otherwise

FIXING TYPE A
0.7kN

2/90x3.33 plain steel wire nails driven vertically into stud.

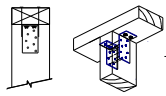


FIXING TYPE B
4.7kN

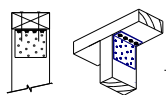
2 x 90mm x 3.15 dia. plain steel wire nails driven vertically into stud.

Plus 2x LUMBERLOK CPC40

AND

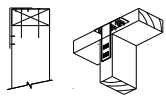


OR



Plus LUMBERLOK 6 kN Stud Anchor (CPC80)

OR



Plus LUMBERLOK Stud Strap (One face only)

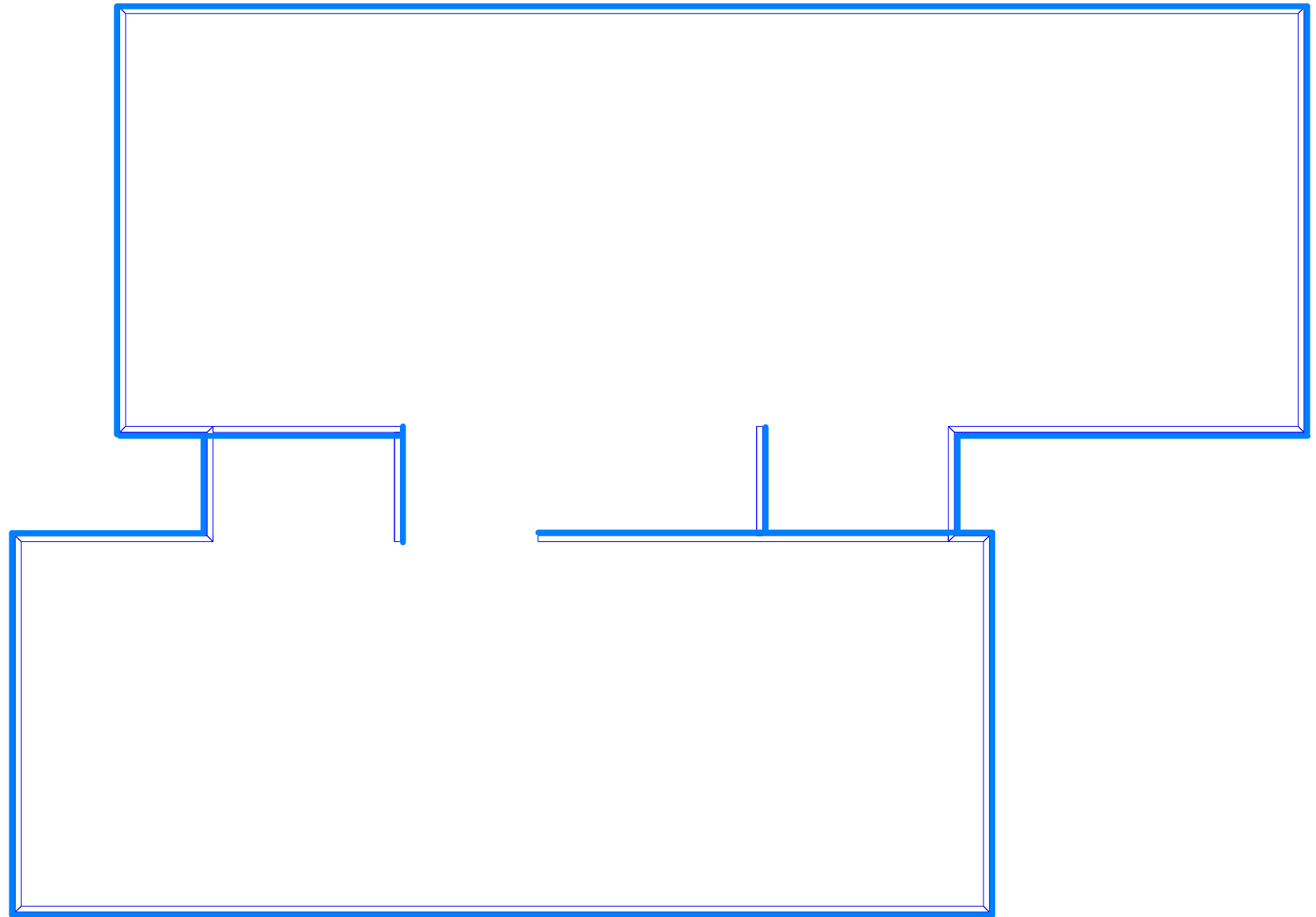
Recommended for internal wall options to avoid lining issues.

NOTES:

Refer to:
LUMBERLOK Wall Fixing Chart - Stud to Top Plate Fixing Schedule 09/2011

(Alternative to NZS3604:2011 Table 8.18)

Layout is null and void if trusses not supplied by PlaceMakers



SDC - Approved Building Consent Document - BC211467 - Pg 28 of 30 - 9/09/2021 - camerij



Site Address :
Lot 70,
Verdeco Park
Lincoln
Selwyn

Sheet Title :
**For Building Consent
Stud To Top Plate Fixing**

Date : Aug 17, 2021 Drawn : Tram Nguyen
Scale : 1 : 100 System : MiTek 20/20

Job Details:
Roof Pitch : 40.0 / 10.0 Deg
Roof Material : Longrun Iron .55mm
Ceiling Material : Gib Board 13mm
Wind Zone : High
Roof Snow Load : 0.630 kPa














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



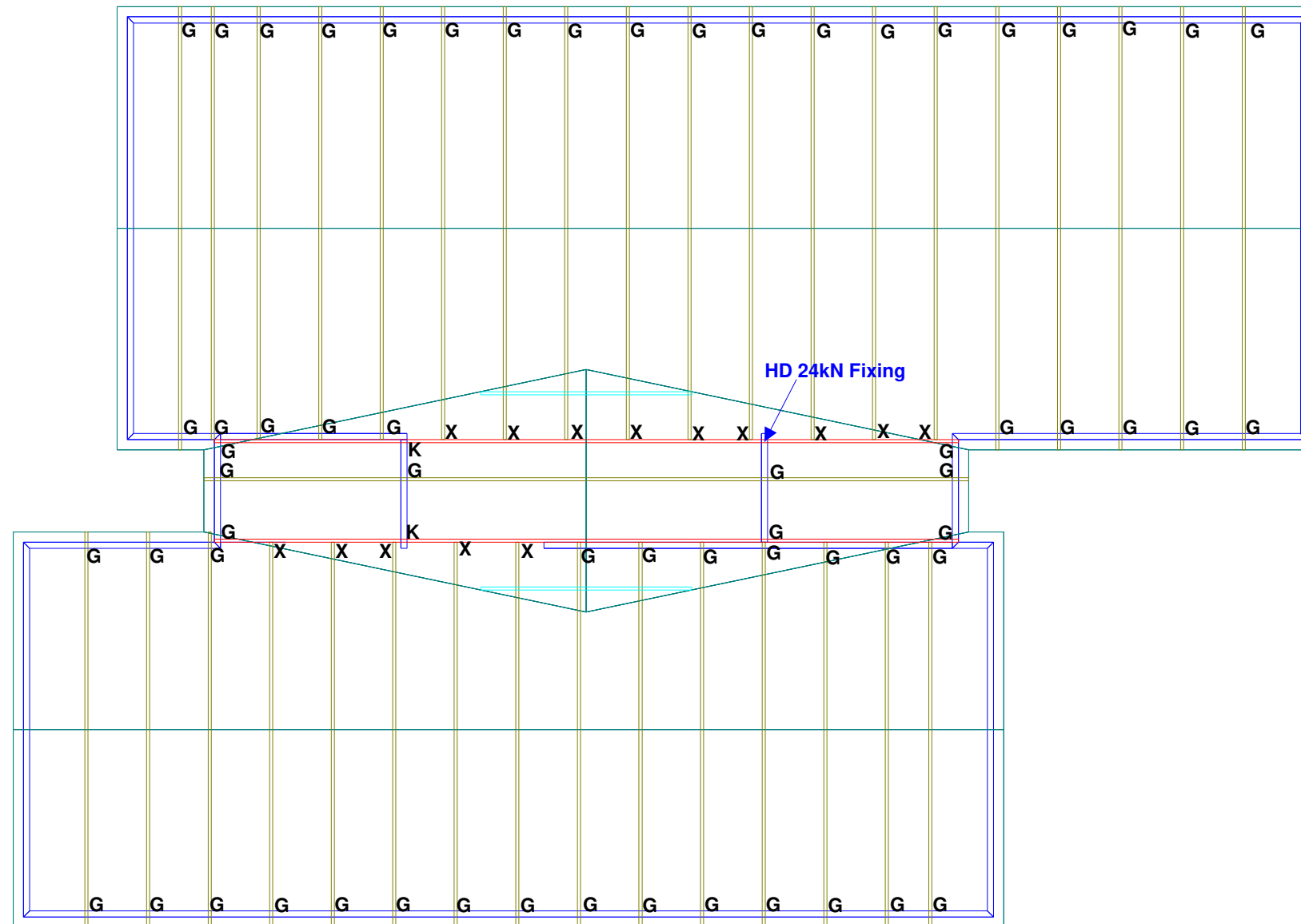
PrimeCad v4.7.346

Job Title :
BL206399
Sheet :
4
Revision Number :

Truss Fixings

-  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
-  G - LUMBERLOK TTP 9kN Truss to Top Plate set

Layout is null and void if trusses not supplied by PlaceMakers



SDC - Approved Building Consent Document - BC211467 - Pg 29 of 30 - 9/09/2021 - camerj

NOTES:

All other areas must have at the minimum 2/90x3.15mm skew nails + 2 wire dogs (4.7kN) for truss to top plate connections.

Refer to:
LUMBERLOK Timber Connectors Characteristic Loadings Data brochure 03/4



Site Address :
Lot 70,
Verdeco Park
Lincoln
Selwyn

Sheet Title :
**For Building Consent
Truss Fixings**

Date : Aug 17, 2021 Drawn : Tram Nguyen
Scale : 1:100 System : MiTek 20/20

Job Details:
Roof Pitch : 40.0 / 10.0 Deg
Roof Material : Longrun Iron .55mm
Ceiling Material : Gib Board 13mm
Wind Zone : High
Roof Snow Load : 0.630 kPa

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



Job Title :
BL206399
Sheet :
5
Revision Number :

PrimeCad v4.7.346

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

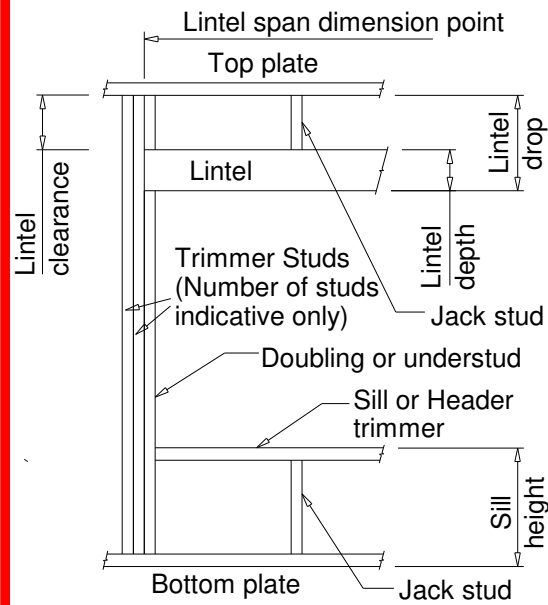
SELECTION CHART FOR LINTEL FIXING

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

NOTE:

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

DEFINITIONS



Lintel Supporting Girder Trusses:

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

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

TYPE E 1.4kN

TYPE F 4.0kN

TYPE G 7.5kN

TYPE H 13.5kN

SDC - Approved Building Consent Document - BC211467 - Pg 30 of 30 - 9/09/2021 - camerj