SDC - Approved Building Consent Document - BC 241396 - Pg 1 of 46 - 10-Oct-24 - huangm

Resource Consent # RC245726
has been granted on 14/10/2024

14/10/2024 Rebecca.Adolph

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

For building inspections and enquiries phone ContactUs on:
03 347 0800

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

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14/10/2024 Rebecca.Adolph

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WESTMERE FAMILY TRUST RESIDENCE
LOT 374 WILFIELD WEST MELTON

DRAWING CONTENTS

Sheet	Layout Name
	TITLE
A-01	SITE PLAN
A-02	SITE DRAINAGE & ROOF PLAN
A-03	FOUNDATION & PLUMBING PLAN
A-04	GROUND FLOOR PLAN
A-05	ELEVATIONS
A-06	RISK MATRIX / SCHEDULES & ENERGY EFFICIENCY
A-07	WINDOW & DOOR SCHEDULE
A-08	CROSS SECTION A-A
A-09	CROSS SECTION B
A-10	CROSS SECTION C-C
A-11	CROSS SECTIONS D-D & E-E
A-12	DETAILS
A-13	DETAILS
A-14	DETAILS
A-15	DETAILS
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A-20	DETAILS
A-21	DETAILS
A-22	DETAILS
A-23	DETAILS

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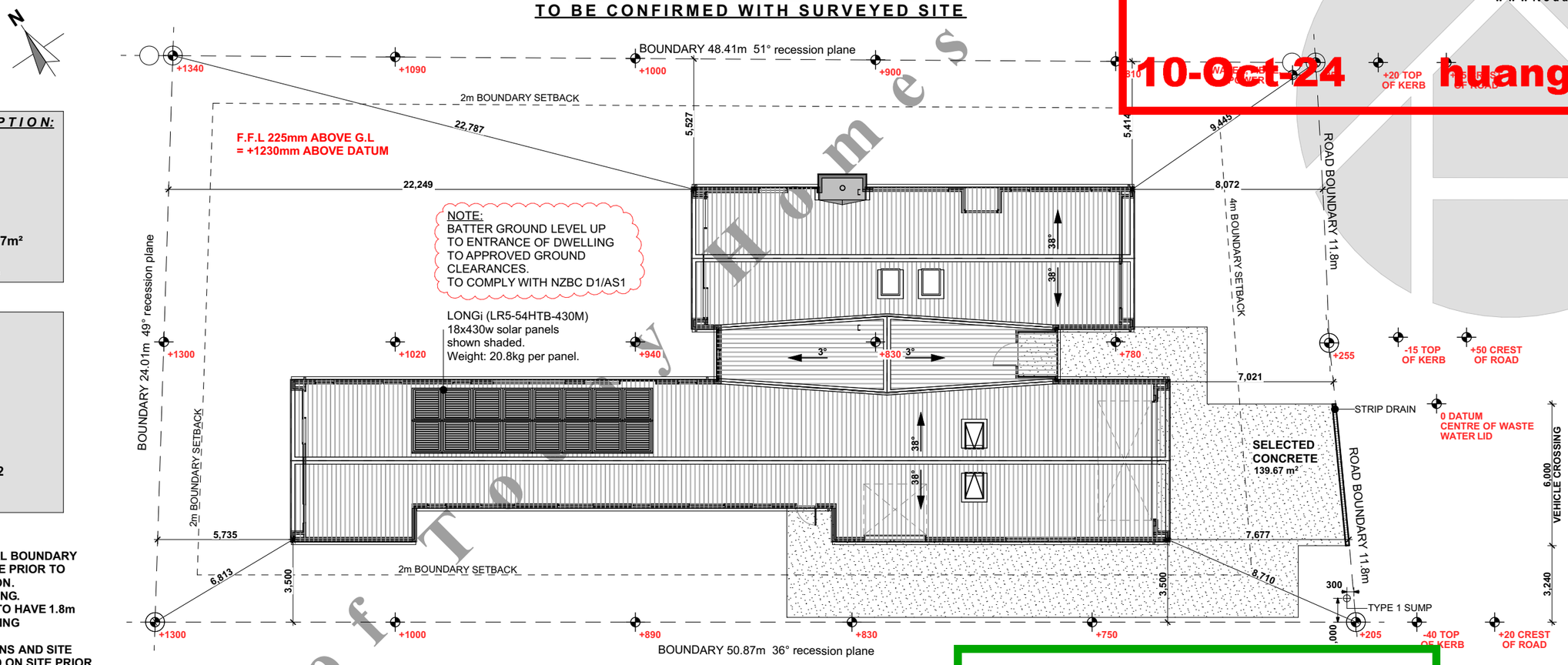
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This site is not located on land within a high hazard area.
The site is likely to be subject to inundation in a 200-year Average Recurrence Interval (ARI) flood event.
Minimum finished floor level shall be the highest of either:
New Zealand Building Code Acceptable Solutions;
OR
at least 225mm above the ground level immediately adjacent to the building platform.

Resource Consent Required
10-Oct-24 huangm

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SITE SETBACKS AND BOUNDARIES TO BE CONFIRMED WITH SURVEYED SITE



Site Plan 1:200

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LEGAL DESCRIPTION:

LOT No: **374**

D.P No: **602505**

SITE AREA: **1180m²**

BUILDING AREA: **349.57m²**

SITE COVERAGE: **30%**

ZONES:

DISTRICT: **SELWYN**

LIVING ZONE: **GRZ**

WIND ZONE: **HIGH**

EXPOSURE ZONE: **C**

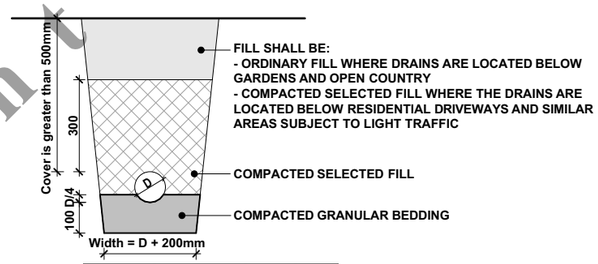
EARTHQUAKE ZONE: **2**

SNOW ZONE: **4**

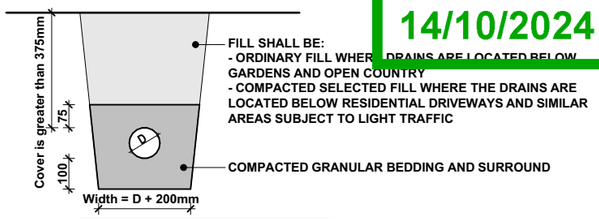
NOTE:
ALL SITE SIDE / INTERNAL BOUNDARY FENCING TO BE IN PLACE PRIOR TO START OF CONSTRUCTION.
1.80m HIGH TIMBER PALING.
ALL REMAINING AREAS TO HAVE 1.8m HIGH SITE SAFETY FENCING

ALL BOUNDARY POSITIONS AND SITE LEVELS TO BE CHECKED ON SITE PRIOR TO ANY SITE WORKS AND CONSTRUCTION. ANY DISCREPANCY SHOULD BE REPORTED TO THE PROJECT MANAGER

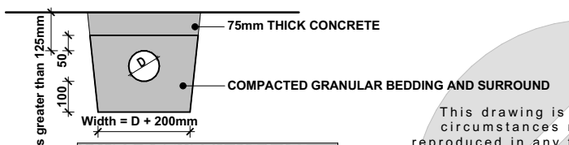
EARTHWORKS TO BE UNDERTAKEN IN ACCORDANCE WITH ANY GEOTECH ENGINEERING REPORT REQUIREMENTS AS APPLICABLE TO THIS SITE. EARTHWORKS CONTRACTOR TO MAKE THEMSELVES AWARE OF AND FAMILIAR WITH SUCH REQUIREMENTS



BEDDING TYPE 'B' OF NZS7643
COVER GREATER THAN 500mm



BEDDING TYPE 'D' OF NZS7643
COVER GREATER THAN 375mm



COVER BETWEEN 125 & 375mm

DRAINAGE BEDDING DETAIL

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SITE PLAN
JOB NO: **610324**
ORIGINAL SHEET SIZE **A3**
DRAWN: **SARAH MAY**
PRINTED:
Wednesday, 2 October 2024

A-01
REVISION

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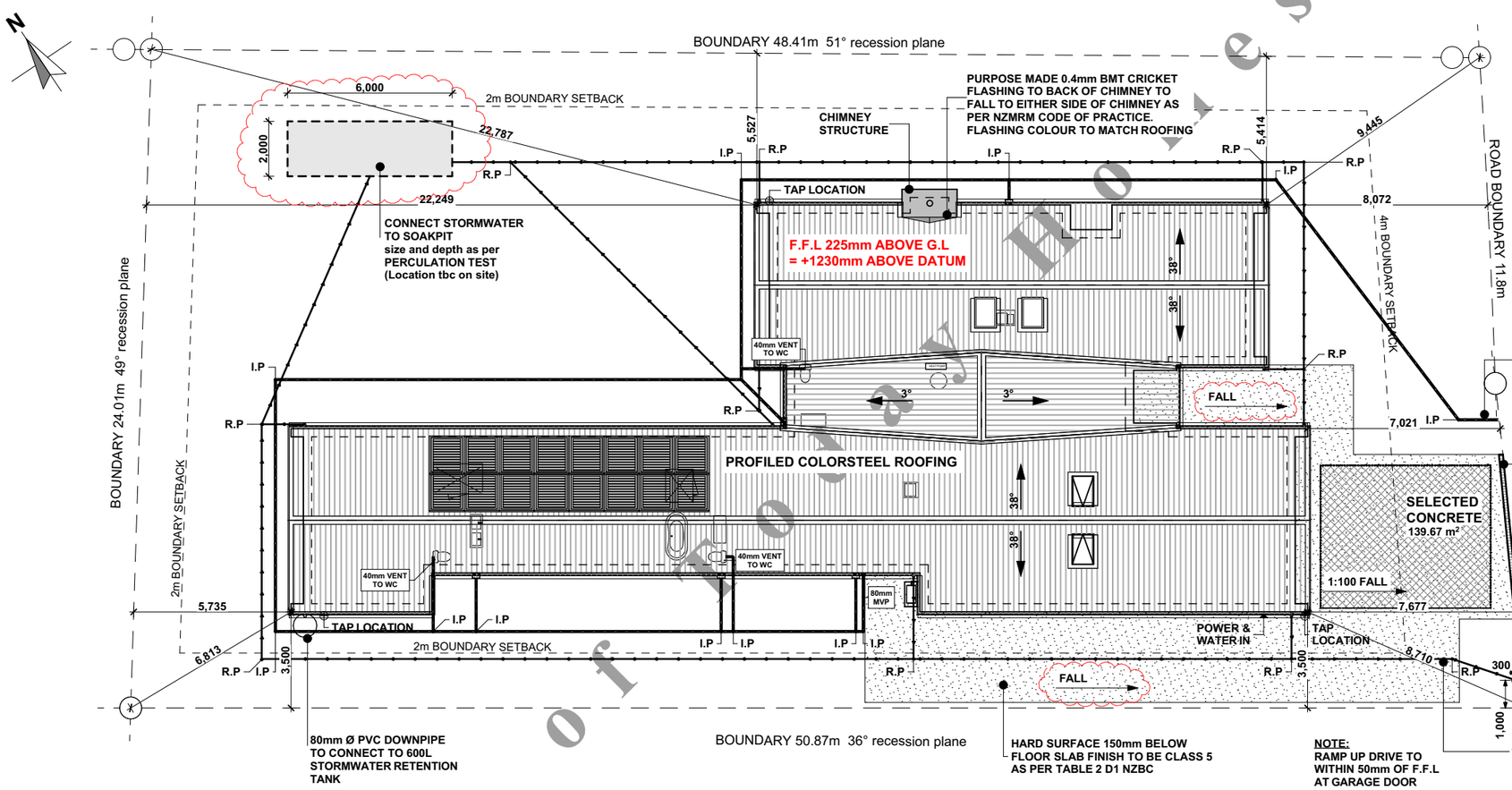
Resource Consent # RC245726 has been granted on 14/10/2024

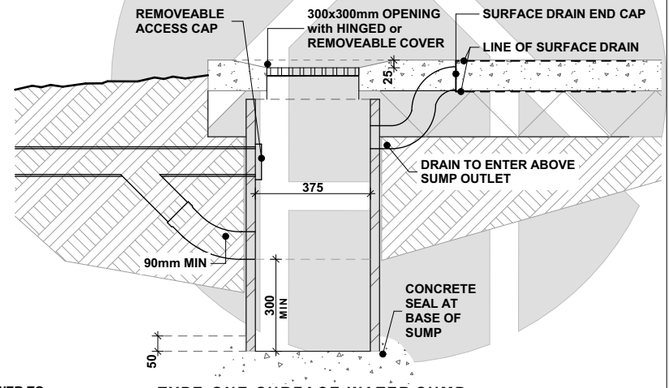
14/10/2024 Rebecca.Adolph

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STORMWATER & FOULWATER DRAIN LAYOUT INDICATIVE ONLY & MAY BE SUBJECT TO CHANGE
FINAL LAYOUT AS PER ON SITE AS-BUILT PLANS BY DRAINLAYER ON COMPLETION & LODGED WITH COUNCIL

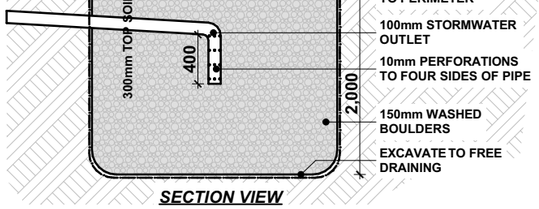
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TYPE ONE SURFACE WATER SUMP TO SURFACE DRAIN IN DRIVEWAY

TYPE 1 SUMP DETAIL



SECTION VIEW

SOAK PIT DETAIL

SOAK PIT CALCULATIONS
ZERO RATED:
Vstore = R.C - Vsoak (Zero)
R.C = 10 coett x Rain intensity x Roof area x hard standing
= 10x0.9x27xA
E1-Vm1 9.0.6
Rock filled Soak pit.
Volume of Soak Pit.
= Vstore divided by 0.38
Roof area = 371m2
Total = 371m2
Vstore = 10x0.9x27x0.0371=9.0153
Volume = 9.0153 divided by 0.38 = 23.72m3
soak pit = 2.000x6.000x2.000

SITE PLAN & SERVICES LEGEND

- SEWER DRAINAGE 100mm Ø @ 1:80 GRADIENT
- STORMWATER DRAINAGE 90mm Ø 1:90 GRADIENT
- GT GULLY TRAP
- I.P INSPECTION POINT
- R.P STORMWATER RODDING POINT
- COURSE GRAVEL - RUMBLE WASH DOWN AREA FOR VEHICLES
- DP 75x50mm RECTANGULAR COLORSTEEL DOWNPIPE

SPOUTING CATCHMENT AREA CALCULATION

RAINFALL INTENSITY APPENDIX A E1/AS1	= 85mm/hr
GUTTER CROSS SECTION	= 6700mm² min
MAX. ROOF AREA FIGURE 15 E1/AS1	= 52m²
MAX USED	= 52m²
GUTTER TO BE COLORSTEEL FASCIA & GUTTER SYSTEM	
DOWNPIPE MIN. SIZE FOR ROOF AREA	
TABLE 5 E1/AS1 35-45°	= 75x50mm

SEDIMENT CONTROL

DOWNPIPES TO BE CONNECTED AS SOON AS ROOF IS FITTED AND DRAINS ARE LAYED. (TEMPORARY IF EXTERIOR CLADDING IS NOT FITTED)

PROJECT MANAGER OR FOREMAN TO OVERSEE SEDIMENT CONTROL

Site/Drainage & Roof Plan 1:200

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LOT 374 WILFIELD WEST MELTON

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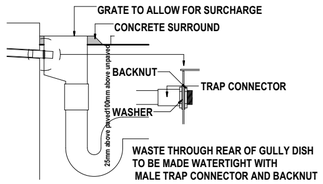
SITE DRAINAGE & ROOF PLAN
JOB NO: 610324
ORIGINAL SHEET SIZE A3
DRAWN: SARAH MAY
PRINTED: Wednesday, 2 October 2024
A-02
REVISION

CORRECT SCALE ON A2 SHEET

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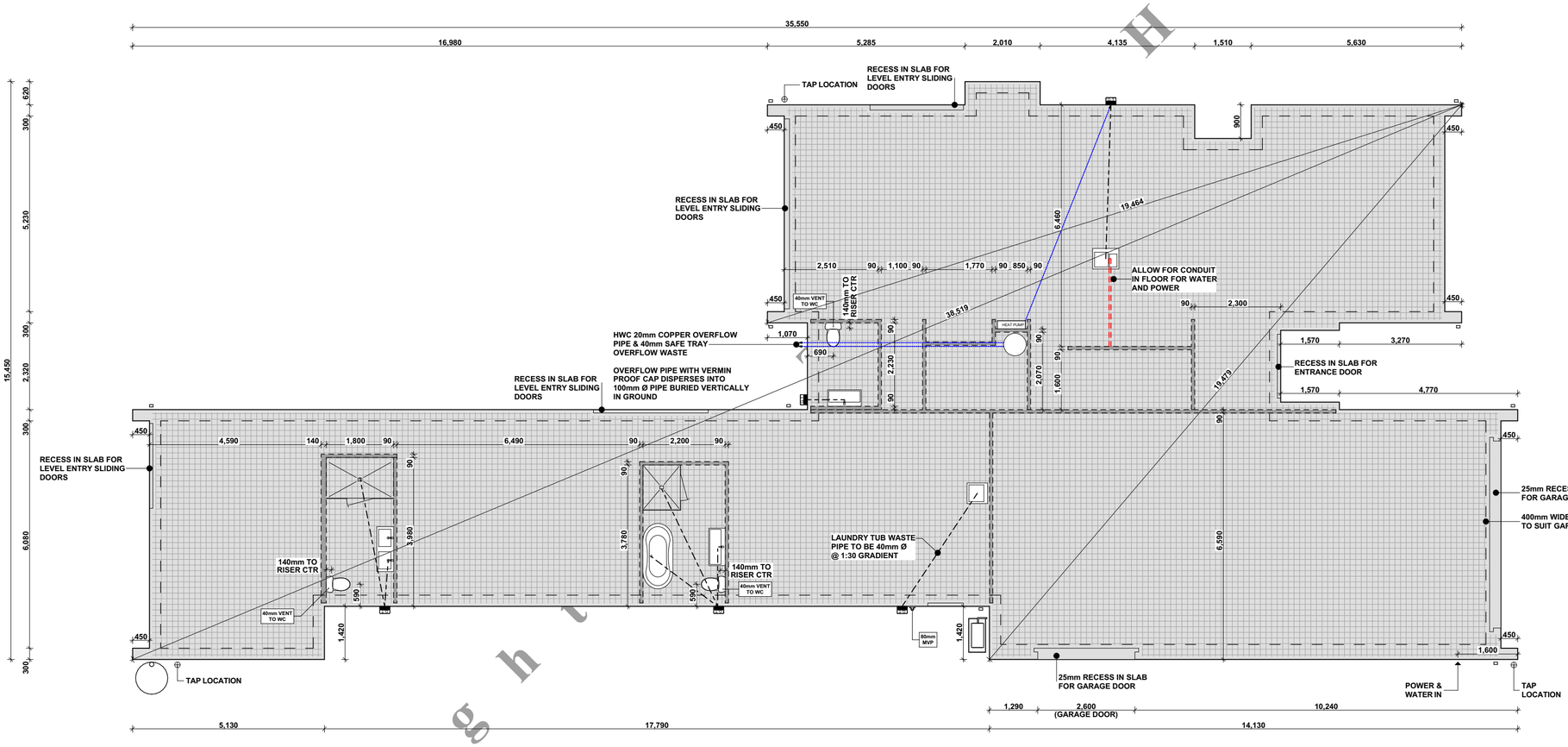
WASTE SLEEVED THROUGH CONCRETE FOUNDATION



WASTE DISCHARGING TO REAR OF GT

FILL MATERIALS SHALL BE
-a) BEDDING MATERIAL OF CLEAN GRANULAR NON COHESIVE MATERIAL WITH MAX PARTICLE SIZE OF 20mm
-b) SELECTED FILL OF FINE-GRAINED SOIL OR GRANULAR MATERIAL THAT IS FREE FROM TOP SOIL AND RUBBISH AND WITH MAX PARTICLE SIZE OF 20mm
c) ORDINARY FILL OF EXCAVATED MATERIAL

5.8 Additional requirements for drains installed under buildings
5.8.1 Drains installed under buildings shall be:
a) Straight and of even gradient,
b) Separated from the building foundation by at least 25 mm, and
c) When passing through concrete, sleeved or wrapped in a durable and flexible material to allow for expansion and contraction.
5.8.2 Drains passing beneath buildings with a concrete slab on the ground floor shall have in addition to Paragraph 5.8.1:
a) 50 mm clearance from the top of the pipe to the underside of the slab, and
b) Junctions beneath the building joining at an angle of not more than 45o



FLOOR & FOUNDATIONS LEGEND

FLOOR & FOUNDATIONS

FOUNDATION BY ENGINEER.
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

REINFORCING MESH TO AREAS INDICATED ON PLAN.
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

FOUNDATION BY ENGINEER.
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

NOTE:
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION FOR ALL REINFORCING

DRAINAGE

ALL WASTE PIPES IN SLAB TO BE 40mm DIAMETER AND HAVE A GRADIENT OF 1:40 (UNLESS NOTED)
W.C WASTE PIPE TO BE 80mm @ 1:60 FALL

GULLY TRAP
ALL FIXTURES 3500mm AWAYFROM GULLY TRAPS OR OVERFLOW RELIEF GULLIES SHALL BE FITTED WITH AIR ADMITTANCE VALVES.

DN20mm MIN COPPER OVERFLOW PIPE

NOTE:

-ALL PLUMBING AND DRAINAGE WORK TO BE IN ACCORDANCE WITH NZBC G13

PLUMBING FITTINGS

TAP	EXTERIOR TAP LOCATION TO BE CONFIRMED
75x50mm DP	DOWNPIPE
80mm MVP	80mm MAIN VENT PIPE

SELECTED SHOWERS

SELECTED VANITIES

SELECTED BATH

SELECTED TOILET SUITE

Foundation & Plumbing Plan 1:100

Resource Consent # RC245726 has been granted on 14/10/2024

14/10/2024 Rebecca.Adolph

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FOUNDATION & PLUMBING PLAN
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ORIGINAL SHEET SIZE A2
DRAWN: SARAH MAY
PRINTED: Wednesday, 2 October 2024
A-03
REVISION

CORRECT SCALE ON A2 SHEET

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AREAS

	Area (m2)	Perimeter (mm)
ENTRY PORCH	3.83	7,940
GARAGE	90.49	42,520
HOUSE	259.09	108,640
OVER FOUNDATION	349.57	125,060
OVER ROOF	370.92	116,520
THERMAL CALCS	248.10	102,320

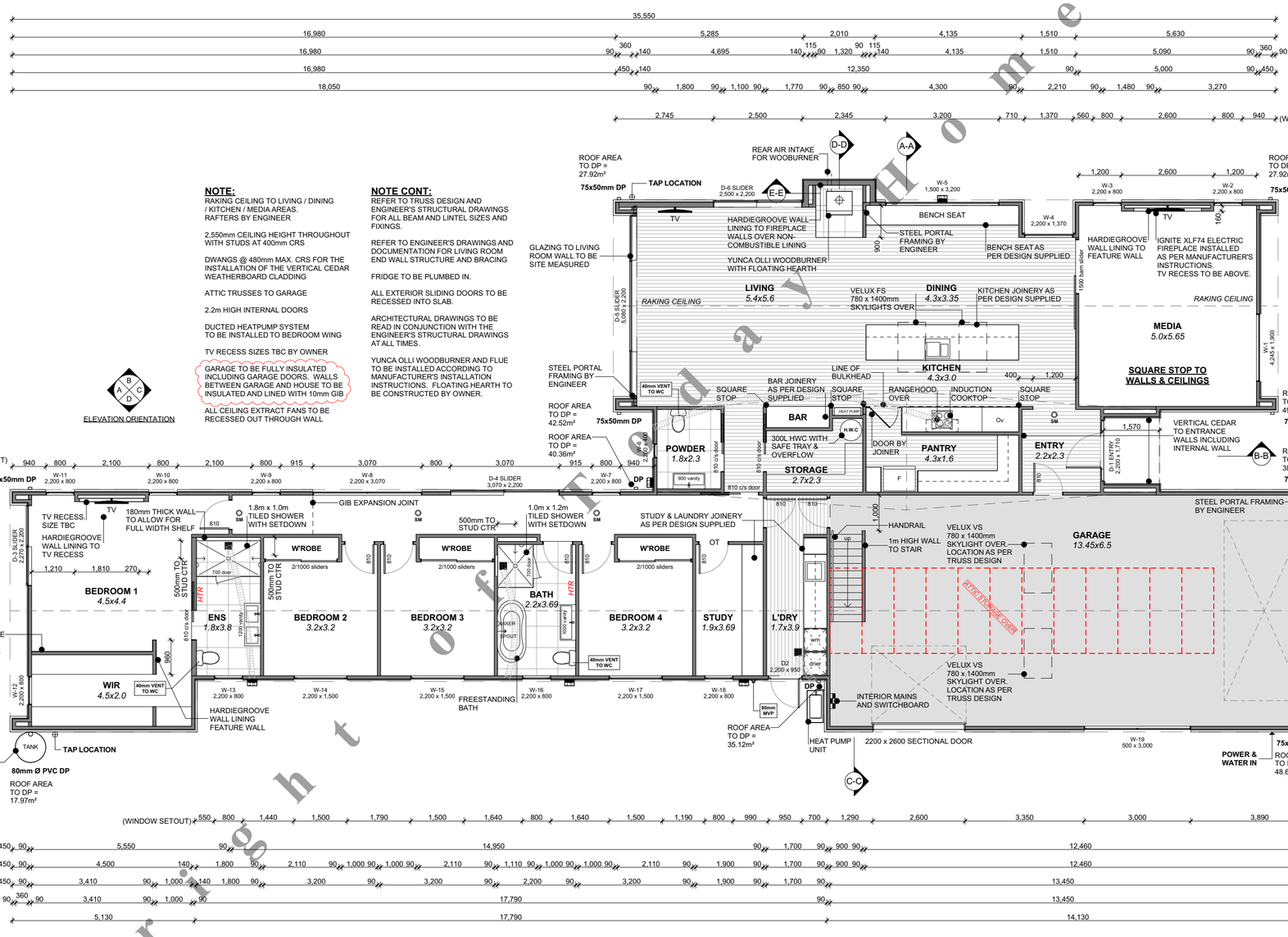
FINISHING SCHEDULE TO WET AREAS

Bathroom:	Tile floor on Float concrete finish with tile skirting.
Ensuite:	Tile floor on Float concrete finish with tile skirting.
Powder:	Tile floor on Float concrete finish with tile skirting.
Laundry:	Quickstep engineered timber floor on Float concrete finish, junction of floor to skirting to be sealed using ms sealant.
Kitchen:	Quickstep engineered timber floor on Float concrete finish, junction of floor to skirting to be sealed using ms sealant.

PAINTING TO WET AREAS

Bathroom, Ensuite, Laundry & WC.

Walls:	10mm Gib Aqualine fixed as per manufacturers instructions , stopped to level 4 paint finish. 1 coat of water based sealer and 2 coats of water based Enamel paint with mould inhibitors to all surfaces in the wet areas.



NOTE:
RAKING CEILING TO LIVING / DINING / KITCHEN / MEDIA AREAS.
RAFTERS BY ENGINEER

2,550mm CEILING HEIGHT THROUGHOUT WITH STUDS AT 400mm CRS

DWANGS @ 480mm MAX. CRS FOR THE INSTALLATION OF THE VERTICAL CEDAR WEATHERBOARD CLADDING

ATTIC TRUSSES TO GARAGE

2.2m HIGH INTERNAL DOORS

DUCTED HEATPUMP SYSTEM TO BE INSTALLED TO BEDROOM WING

TV RECESS SIZES TBC BY OWNER

GARAGE TO BE FULLY INSULATED INCLUDING GARAGE DOORS. WALLS BETWEEN GARAGE AND HOUSE TO BE INSULATED AND LINED WITH 10mm GIB

ALL CEILING EXTRACT FANS TO BE RECESSED OUT THROUGH WALL

NOTE CONT:
REFER TO TRUSS DESIGN AND ENGINEER'S STRUCTURAL DRAWINGS FOR ALL BEAM AND LINTEL SIZES AND FIXINGS.

REFER TO ENGINEER'S DRAWINGS AND DOCUMENTATION FOR LIVING ROOM END WALL STRUCTURE AND BRACING

FRIDGE TO BE PLUMBED IN.

ALL EXTERIOR SLIDING DOORS TO BE RECESSED INTO SLAB.

ARCHITECTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ENGINEER'S STRUCTURAL DRAWINGS AT ALL TIMES.

YUNCA OLLI WOODBURNER AND FLUE TO BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. FLOATING HEARTH TO BE CONSTRUCTED BY OWNER.

ELEVATION ORIENTATION

NOTE:
ALL INTERIOR DOORS AND SLIDERS TO BE 2180mm HIGH
2250mm LINTEL HEIGHT

FLOOR PLAN LEGEND

WALL FRAMING AND CEILINGS
- 10mm GIB BOARD ON 90mm H1.2 TIMBER FRAMING
- CEILING 2.550 — 13mm GIB BOARD CHANGE IN CEILING HEIGHT TO AREAS NOTED. REFER ALSO TO CROSS SECTIONS)
- ROOF OVER INDICATING FASCIA AND GUTTER LINE

FLOOR COVERINGS
- SELECTED CARPET TO THESE AREAS
- SELECTED TIMBER FLOORING TO THESE AREAS
- GARAGE CARPET TO THESE AREAS
- SELECTED NON SLIP TILES TO THESE AREAS

PLUMBING FITTINGS
- TAP — EXTERIOR TAP LOCATION TO BE CONFIRMED
- GULLY TRAP
- 75x50mm DP — DOWNPIPE
- MVP — MAIN VENT PIPE
- SELECTED SHOWER
- SELECTED VANITIES
- SELECTED BATH
- SELECTED TOILET SUITE

UTILITY FITTINGS
- INTERIOR MAINS AND SWITCHBOARD
- SM — SMOKE DETECTOR WITH HUSH BUTTON
- MECHANICAL VENT WITH FLEXI DUCT VENTED OUT THROUGH WALL

Ground Floor Plan 1:100

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14/10/2024 Rebecca.Adolph

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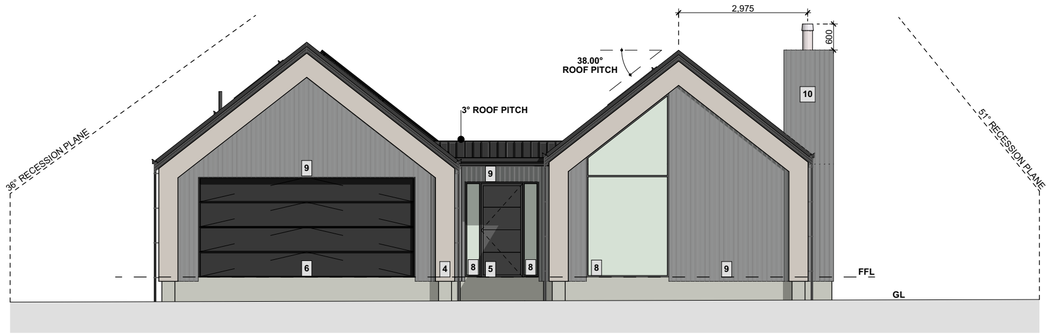
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GROUND FLOOR PLAN
JOB NO: 610324
ORIGINAL SHEET SIZE A2
DRAWN: SARAH MAY
PRINTED: Wednesday, 2 October 2024
A-04
REVISION

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CORRECT SCALE ON A2 SHEET

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Elevation A 1:100

ELEVATIONS LEGEND

ROOF

1. COLORSTEEL PROFILED METAL ROOFING
2. SELECTED METAL FASCIA AND COLORSTEEL SQUARELINE GUTTER
3. COLORSTEEL DOWNPIPES

WALLS

4. 50mm INTEGRA PANEL CLADDING SYSTEM
5. SELECTED ENTRY DOOR
6. SELECTED SECTIONAL GARAGE DOOR
7. SELECTED GLAZED ALUMINIUM WINDOWS AND DOORS
8. SAFETY GLASS AS PER NZS 4223/2016
9. VERTICAL CEDAR WEATHERBOARD CLADDING
10. VERTICAL 200mm OBLIQUE CLADDING

NOTE:

-ALL WINDOW AND DOOR JOINERY TO BE SITE MEASURED WERE NECESSARY PRIOR TO MANUFACTURE.

-CONFIRM SOFFIT HEIGHT WITH TRUSS MANUFACTURER.

NOTE:
ROCKCOTE STANDARD PLASTER DOOR SILL FINISH IS A PAINTED STRIP OF ROCKCOTE UNDERNEATH FINISHING THE SAME HEIGHT AS THE ROCKCOTE ON EACH SIDE

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Elevation B 1:100



Elevation C 1:100



Elevation D 1:100

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ELEVATIONS
JOB NO: 610324
ORIGINAL SHEET SIZE A2
DRAWN: SARAH MAY
PRINTED: Wednesday, 2 October 2024

A-05
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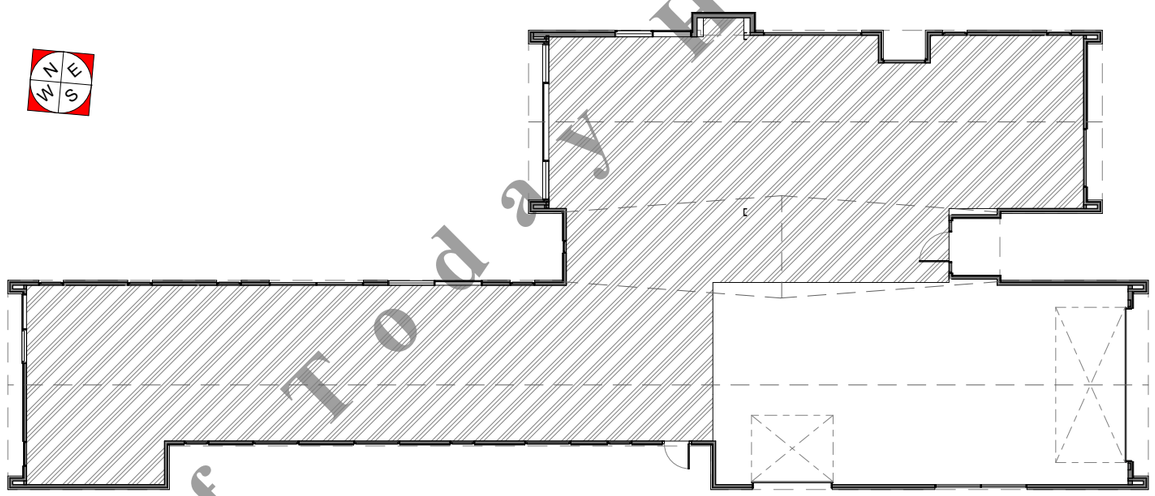
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BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	High risk	3
Deck design	Low risk	0
Total Risk Score:		**10**

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	Very high risk	5
Envelope complexity	High risk	3
Deck design	Low risk	0
Total Risk Score:		**10**

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	Very high risk	5
Envelope complexity	High risk	3
Deck design	Low risk	0
Total Risk Score:		**10**

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	Very high risk	5
Envelope complexity	High risk	3
Deck design	Low risk	0
Total Risk Score:		**10**



INSULATED AREA

H1 ENERGY EFFICIENCY: CLIMATE ZONE 5

CALCULATION METHOD - REFER CALCULATION DOCUMENTS

CONSTRUCTION TYPE: **NON SOLID**

ROOF: 38 & 3 DEGREE COLORSTEEL LONGRUN
ON 90x45 TRUSSES @ 900mm CRS.

WALLS: RESENE CONSTRUCTION SYSTEMS 50mm INTEGRA PANEL CLADDING SYSTEM ON 20mm EPS CAVITY BATTENS ON TIMBER FRAMING. STUDS @ 400mm CRS AND DWANGS @ 800mm CRS.
JSC VERTICAL SHIPLAP CEDAR CLADDING ON 20mm CAVITY BATTENS ON TIMBER FRAMING. STUDS @ 400mm CRS AND DWANGS @ 480mm MAX. CRS.
JAMES HARDIE VERTICAL OBLIQUE CLADDING ON 20mm CAVITY BATTENS ON TIMBER FRAMING. STUDS @ 400mm CRS AND DWANGS @ 600mm MAX. CRS.

FLOOR: FOUNDATION BY ENGINEER.

GLAZING TYPE: THERMALLY BROKEN DOUBLE GLAZED ALUMINIUM WITH LOW E4 GLASS
& ARGON GAS - x4 SKYLIGHTS

TOTAL WALL AREA:
TOTAL EXTERNAL INSULATED WALLS - THERMAL ENVELOPE = **227.1 M²**
TOTAL OF WINDOW AND DOOR OPENINGS = **91.6M²**
TOTAL OPAQUE DOORS = **3.4M²**
PERCENTAGE OF OPENINGS TO WALL AREA = **28.4%**

INSULATION TYPE:
INSULATION TO CEILINGS WILL BE 2 LAYERS GLASS WOOL BATTS **R 3.6**
WITH 1 LAYER TO 400mm PERIMETER
INSULATION TO RAKING CEILINGS TO BE **R3.6** SKILLION GLASS WOOL BATTS
ROOF SPACE CONSTRUCTION R VALUE = 6.6
INSULATION TO WALLS WILL BE GLASS WOOL BATTS **R 2.6**
CONSTRUCTION R VALUE = 2.1
WINDOWS AND DOORS TO BE ALUMINIUM DOUBLE GLAZED
TO ALLOW FOR **R0.50**
CONCRETE QUICKSET TAPER 305/25 FOUNDATION WITH POLYPOD (300mm WIDE PERIMETER)
CONSTRUCTION R = 1.94
CONSTRUCTION R VALUES DERIVED FROM BRANZ INSULATION GUIDE 6th EDITION

Building Risk Matrix 1:200

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LOT 374 WILFIELD WEST MELTON

THE OWNERS ACCEPT AND CONFIRM THAT THESE ARE THE FULL AND FINAL DRAWINGS
Signed: Date:

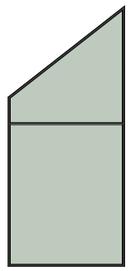
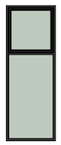
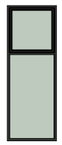
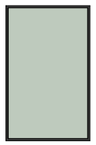
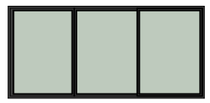
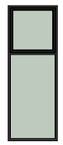
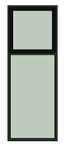
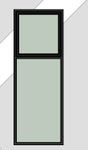
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RISK MATRIX / SCHEDULES & ENERGY EFFICIENCY
JOB NO: **610324**
ORIGINAL SHEET SIZE **A3**
DRAWN: **SARAH MAY**
PRINTED:
Wednesday, 2 October 2024
A-06
REVISION
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ID	W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8	W-9	W
Quantity	1	1	1	1	1	1	1	1	1	
W x H Size	1,900×4,245	800×2,200	800×2,200	1,370×2,200	3,200×1,500	400×2,200	800×2,200	3,070×2,200	800×2,200	800×2
Sill height	0	0	0	0	700	0	0	0	0	
Head height	4,245	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2
3D Front View										
Area (m2)	7.40	1.76	1.76	3.01	4.80	0.88	1.76	6.75	1.76	

W-11	W-12	W-13	W-14	W-15	W-16	W-17	W-18	W-19	W-20	
1	1	1	1	1	1	1	1	1	1	20
200	800×2,200	800×2,200	1,500×2,200	1,500×2,200	800×2,200	1,500×2,200	800×2,200	3,000×500	5,080×2,075	
0	0	0	0	0	0	0	0	1,700	195	
200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,270	
										
2.76	1.76	1.76	3.30	3.30	1.76	3.30	1.76	1.50	7.38	59.22 m²

Door Schedule

ID	810	810 C/S DOOR	1500 BARN SLIDER	D2	D-1 ENTRY	D-3 SLIDER	D-4 SLIDER	D-5 SLIDER	D-6 SLIDER	SECT	SECT	SLIDER	
Quantity	9	4	1	1	1	1	1	1	1	1	1	3	25
W x H Size	850×2,200	850×2,200	1,540×2,200	950×2,200	1,710×2,200	2,270×2,200	3,070×2,200	5,080×2,200	2,500×2,200	2,600×2,200	5,000×2,300	2,040×2,200	
Head height	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,300	2,200	
3D Front View													
Area (m2)	1.87	0.00	3.39	2.09	3.76	4.99	6.75	11.18	5.50	5.72	11.50	4.49	85.18 m²

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LOT 374 WILFIELD WEST MELTON

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Signed: Date:

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WINDOW & DOOR SCHEDULE
JOB NO: 610324
ORIGINAL SHEET SIZE A3
DRAWN: SARAH MAY
PRINTED: Wednesday, 2 October 2024
A-07
REVISION
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Ex 75 X 50mm PURLINS H1.2 TREATED
@ 900mm CRS INTERMEDIATE SPANS
& 600mm CRS AT PERIPHERY OF ROOF
PURLIN FIXING - 1 X 10g SELF DRILLING SCREW 80mm LONG
ALTERNATE PROPRIETERY FIXING 2.4 kN
AT EACH CROSSING
GABLE END PURLINS/FLY RAFTERS 75 X 50 ON EDGE
@ 600mm CRS
METAL PROFILED ROOFING FIXED WITH
TYPE C2 FIXING PATTERN
HIT1, MISS 1, HIT 1 MISS 2...
REF E2 / AS1 TABLE 11

90 x 35 PERIMETER PLATE - SG8 - H1.2
90 X 45 TOP PLATE - SG8 - H1.2
TOP PLATES FIXED TO STUDS and / or LINTEL
SUPPORTING ROOF MEMBERS WITH
2/90 x 3.15 NAILS+ 2 WIRE DOGS TO EACH STUD
OR @ 600mm CRS TO LINTELS
OR 4.7kN PROPRIETERY FIXING

GABLE END BRACING AS PER
MITEK BRACING GUIDE
WITH 90x45 STRONGBACK ON EDGE
AT MID POINT WITH
2/LUMBERLOCK BLUE SCREWS AT
EACH STUD/ TRUSS WEB
90x45 SG8 GABLE BRACE -
FIXINGS AS PER
MITEK GABLE BRACE GUIDE

PLYWOOD GENERALLY USED
FOR BRACING PURPOSES ONLY.
PROVIDE PVC DANBAND
STRAPPING BETWEEN DWANGS
TO PREVENT INSULATION
BULGING INTO CAVITY.

FINISHED FLOOR LEVELS
FOR ALL CLADDINGS EXCEPT BRICK VENEER
MIN 225mm ABOVE FINISHED UNPAVED GROUND &
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FOR BRICK VENEER
MIN 200mm ABOVE FINISHED UNPAVED GROUND &
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ALL ABOVE FINISHED LEVELS TO APPLY AFTER
LANDSCAPING IS COMPLETE

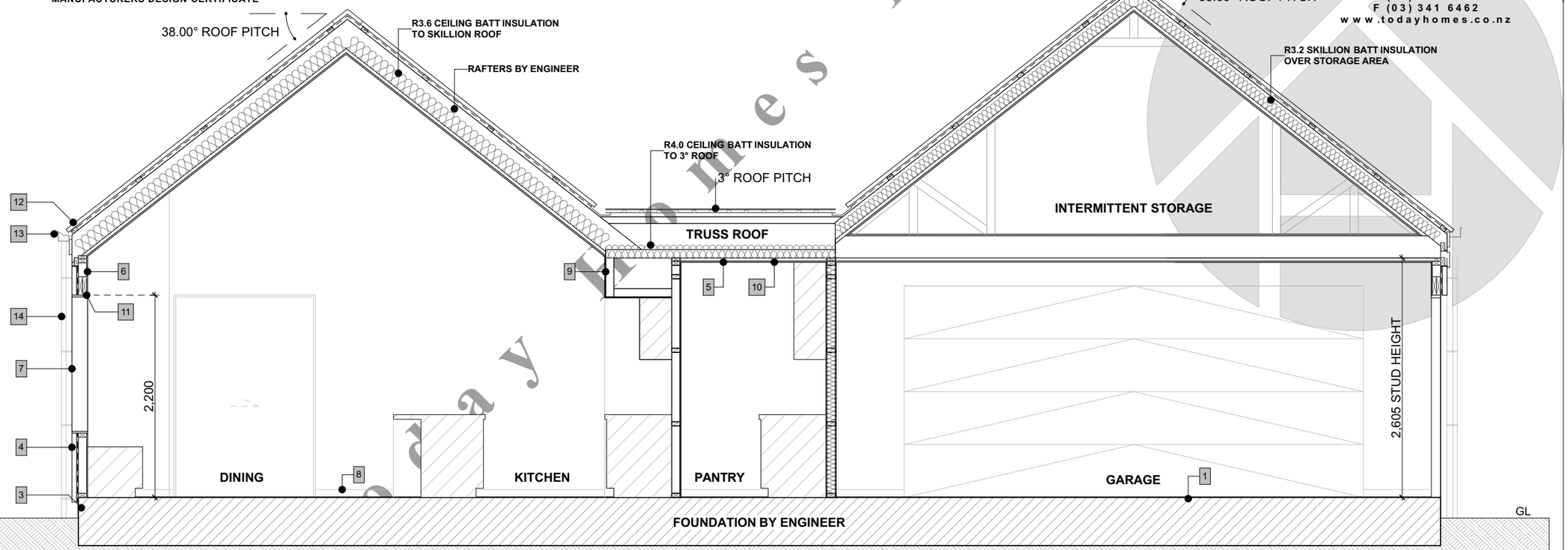
ALL LINTELS SIZED AS PER MANUFACTURERS
DESIGN CERTIFICATE

TRUSS FIXING AND HOLD DOWNS AS PER
MANUFACTURERS DESIGN CERTIFICATE
or at a minimum as per NZS 3604

TRUSS FIXING @ EACH TRUSS
2/90x3.75mm SKEWED NAILS PLUS
2/ WIRE DOGS OR 4.7kN ALTERNATE AS REQUIRED BY
NZS 3604 2011 TABLE 10.14 - TYPE "E" FIXING

ROOF BRACING AS PER
MANUFACTURERS DESIGN CERTIFICATE

MAINTAIN 25mm AIR GAP / CLEARANCE
BETWEEN INSULATION MATERIAL
AND UNDERSIDE OF ROOFING UNDERLAY



Section A-A 1:50

CROSS SECTIONS LEGEND

FLOOR

1 FOUNDATION BY ENGINEER
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

2 BOTTOM PLATE FIXINGS BY ENGINEER
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

3 FOUNDATION FOOTING BY ENGINEER
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

WALLS & CEILING

4 RESENE CONSTRUCTION SYSTEMS 50mm INTEGRA PANEL CLADDING SYSTEM ON 20mm GRAPHEX VERTICAL BATTENS ON RIGID WALL UNDERLAY ON 90 x 45mm H1.2 TIMBER WALL FRAMING WITH STUDS @ 400mm crs AND DWANGS 800mm crs
REFER TO DETAILS

5 13mm GIB BOARD CEILING LINING ON METAL BATTENS @ 600mm crs max. FIBREGLASS INSULATION TO CEILING CAVITY WHERE INDICATED TO BE 2 LAYERS **R3.6** (BOTTOM CHORDS COVERED) TO STANDARD TRUSS AREAS AND **R3.6** SKILLION BATT INSULATION TO SKILLION CEILING AREAS. **R4.0** CEILING BATT INSULATION TO 3° ROOF IN ACCORDANCE TO ZONE 5 AND THE NZBC CLAUSE H1

6 10mm GIB BOARD WALL LINING ON 90x45 H1.2 TIMBER WALL FRAMING GIB AQUALINE IN BATHROOMS TO WALLS WITH TILES APPLIED FIBREGLASS INSULATION TO EXTERIOR WALLS AND WHERE INDICATED TO BE **R2.6** IN ACCORDANCE TO ZONE 5 AND THE NZBC CLAUSE H1

7 SELECTED POWDER COATED GLAZED ALUMINIUM WINDOWS AND DOORS WITH TIMBER REBATED REVEALS ALUMINIUM JOINERY DOUBLE GLAZED STANDARD RESIDENTIAL SUITE - THERMALLY BROKEN LOW E4 GLASS & ARGON GAS SAFETY GLAZING TO COMPLY WITH NZS 4223 2016 REFER TO DETAILS

8 85x12mm MDF SKIRTINGS EXCEPT FOR WET AREAS WHERE PINUS SKIRTINGS ARE TO BE INSTALLED

9 BULKHEADS AND COVES WHERE INDICATED CONSTRUCTED WITH METAL BATTEN FRAMING

10 SQUARE STOP TO CEILINGS

11 LINTELS AS PER NZS3604 2011 - REFER TO BRACING AND LINTEL PLAN AND TRUSS MANUFACTURER'S DOCUMENTATION

ROOF

12 SELECTED PROFILED METAL ROOF CLADDING - 0.40 BMT COLORSTEEL WITH 0.55 BMT COLORSTEEL FLASHINGS SELF SUPPORTING ROOF UNDERLAY - COVERTEK 215 ON ex 75x50mm H1.2 TREATED TIMBER PURLINS ON TRUSSES @ 900mm crs.
TRUSS LAYOUT AND FIXING SPECIFICATIONS TO BE SUPPLIED BY TRUSS MANUFACTURER

13 SELECTED METAL FASCIA AND GUTTER SYSTEM

14 COLORSTEEL DOWNPIPES

NOTE:

-ALL WINDOW AND DOOR JOINERY TO BE SITE MEASURED PRIOR TO MANUFACTURE

-CONFIRM SOFFIT HEIGHT WITH TRUSS MANUFACTURER

-REFER ALSO TO WINDOW AND DOOR SCHEDULE.

-ALL TIMBER TO BE SG 8 UNLESS OTHERWISE NOTED

-ALL FRAMING TIMBERS TO HAVE MOISTURE CONTENT OF 16% OR LESS BEFORE LINING COMMMENCES

TIMBER TREATMENT TABLE:

EXTERIOR WALL FRAMING:

MEMBER:	TIMBER SPECIES AND GRADE:	TREATMENT
WALL FRAMING	RADIATA PINE - SG 8	H1.2

ROOF FRAMING:

MEMBER:	TIMBER SPECIES AND GRADE:	TREATMENT
TRUSSES	RADIATA PINE -SG 8	H1.2
FLAT ROOF FRAMING	RADIATA PINE - SG 8	H1.2

EXTERIOR FINISHING TIMBERS:

MEMBER:	TIMBER SPECIES AND GRADE:	TREATMENT
GARAGE DOOR REVEAL	RADIATA PINE DRESSING GRADES	H3.1
ALUMINIUM JOINERY REVEAL	RADIATA PINE DRESSING GRADES	H3.1

DRAINS UNDER THE BUILDING SHALL BE STRAIGHT AND OF EVEN GRADIENT SEPARATED FROM THE BUILDING FOUNDATION BY AT LEAST 25mm WHEN PASSING THROUGH CONCRETE BE SLEEVED OR WRAPPED IN A DURABLE AND FLEXIBLE MATERIAL TO ALLOW FOR EXPANSION AND CONTRACTION IN ADDITION DRAINS UNDER A CONCRETE FLOOR SLAB SHALL HAVE 50mm CLEARANCE TO THE UNDERSIDE OF THE SLAB & JUNCTIONS UNDER THE BUILDING JOINING AT AN ANGLE OF NOT MORE THAN 45°

NOTE:

INTERIOR DOORS STD HEIGHT 2180 - LINTEL @ 2250
EXTERIOR DOOR HEAD HEIGHT - 2200
WINDOW HEAD HEIGHT - 2200
TO BE VERIFIED BY FRAMING MANUFACTURER
ALL JOINERY TO BE SITE MEASURED PRIOR TO MANUFACTURE

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CROSS SECTION A-A
JOB NO: **610324**
ORIGINAL SHEET SIZE **A3**
DRAWN: **SARAH MAY**
PRINTED:
Wednesday, 2 October 2024

A-08
REVISION

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Ex 75 X 50mm PURLINS H1.2 TREATED
@ 900mm CRS INTERMEDIATE SPANS
& 600mm CRS AT PERIPHERY OF ROOF
PURLIN FIXING - 1 X 10g SELF DRILLING SCREW 80mm LONG
ALTERNATE PROPRIETERY FIXING 2.4 kN
AT EACH CROSSING
GABLE END PURLINS/FLY RAFTERS 75 X 50 ON EDGE
@ 600mm CRS
METAL PROFILED ROOFING FIXED WITH
TYPE C2 FIXING PATTERN
HIT1, MISS 1, HIT 1 MISS 2...
REF E2 / AS1 TABLE 11

90 x 35 PERIMETER PLATE - SG8 - H1.2
90 X 45 TOP PLATE - SG8 - H1.2
TOP PLATES FIXED TO STUDS and / or LINTEL
SUPPORTING ROOF MEMBERS WITH
2/90 x 3.15 NAILS+ 2 WIRE DOGS TO EACH STUD
OR @ 600mm CRS TO LINTELS
OR 4.7kN PROPRIETERY FIXING

GABLE END BRACING AS PER
MITEK BRACING GUIDE
WITH 90x45 STRONGBACK ON EDGE
AT MID POINT WITH
2/LUMBERLOCK BLUE SCREWS AT
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90x45 SG8 GABLE BRACE -
FIXINGS AS PER
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PLYWOOD GENERALLY USED
FOR BRACING PURPOSES ONLY.
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FOR BRICK VENEER
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MIN 150mm ABOVE FINISHED PAVED GROUND
ALL ABOVE FINISHED LEVELS TO APPLY AFTER
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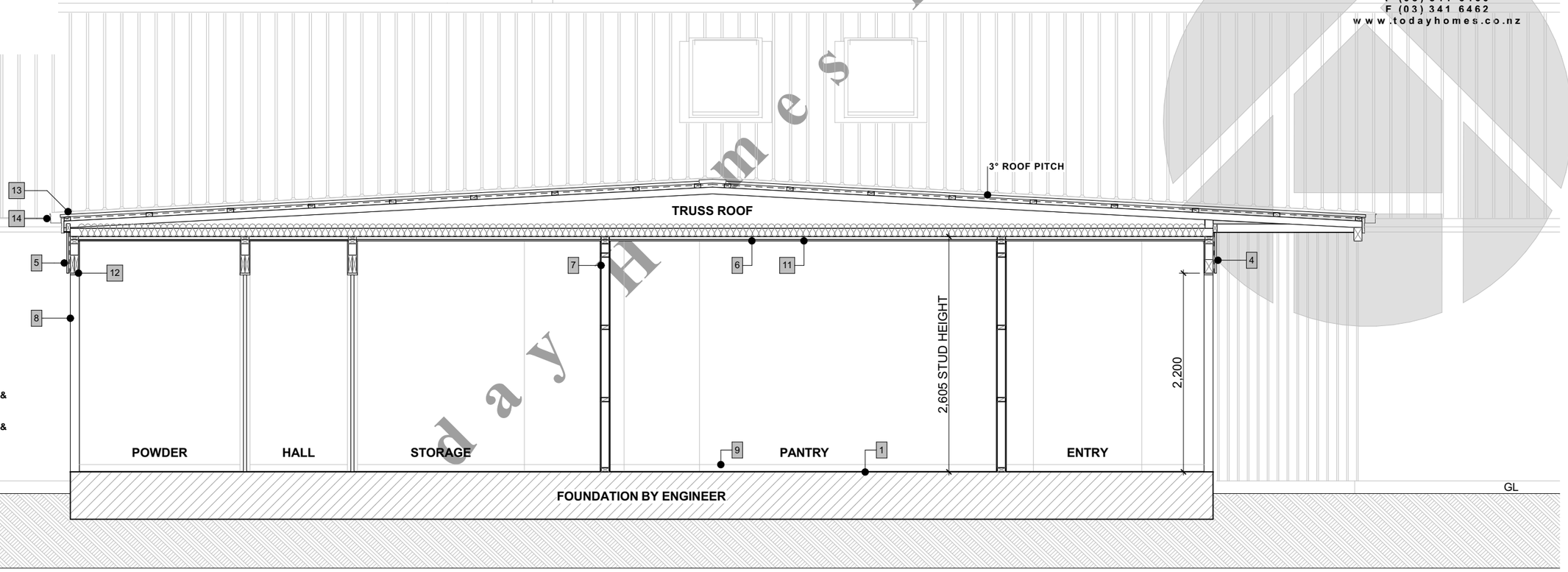
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or at a minimum as per NZS 3604

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NZS 3604 2011 TABLE 10.14 - TYPE "E" FIXING

ROOF BRACING AS PER
MANUFACTURERS DESIGN CERTIFICATE

MAINTAIN 25mm AIR GAP / CLEARANCE
BETWEEN INSULATION MATERIAL
AND UNDERSIDE OF ROOFING UNDERLAY



Section B-S 1:50

CROSS SECTIONS LEGEND

FLOOR

1 FOUNDATION BY ENGINEER
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

2 BOTTOM PLATE FIXINGS BY ENGINEER
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

3 FOUNDATION FOOTING BY ENGINEER
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

WALLS & CEILING

4 JSC VERTICAL SHIPLAP WEATHERBOARD ON HORIZONTALLY INSTALLED JSC-U 45x20mm TIMBER BATTENS ON RIGID WALL UNDERLAY ON 90 x 45mm H1.2 TIMBER WALL FRAMING WITH STUDS @ 400mm crs AND DWANGS @ 480mm MAX. crs
REFER TO DETAILS

5 JAMES HARDIE OBLIQUE WEATHERBOARD FIXED VERTICALLY ON HARDIES HORIZONTAL CAVITY BATTENS ON RIGID WALL UNDERLAY ON 90 x 45mm H1.2 TIMBER WALL FRAMING WITH STUDS @ 400mm crs AND DWANGS @ 600mm MAX. crs
REFER TO DETAILS

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ALUMINIUM JOINERY DOUBLE GLAZED
STANDARD RESIDENTIAL SUITE - THERMALLY BROKEN
LOW E4 GLASS & ARGON GAS
SAFETY GLAZING TO COMPLY WITH NZS 4223 2016
REFER TO DETAILS

9 85x12mm MDF SKIRTINGS EXCEPT FOR WET AREAS
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ROOF

13 SELECTED PROFILED METAL ROOF CLADDING - 0.40 BMT COLORSTEEL WITH 0.55 BMT COLORSTEEL FLASHINGS
SELF SUPPORTING ROOF UNDERLAY - COVERTEK 215 ON
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14 SELECTED METAL FASCIA AND GUTTER SYSTEM

15 COLORSTEEL DOWNPIPES

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-CONFIRM SOFFIT HEIGHT WITH TRUSS MANUFACTURER

-REFER ALSO TO WINDOW AND DOOR SCHEDULE.

-ALL TIMBER TO BE SG 8 UNLESS OTHERWISE NOTED

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TIMBER TREATMENT TABLE:

EXTERIOR WALL FRAMING:

MEMBER:	TIMBER SPECIES AND GRADE:	TREATMENT
WALL FRAMING	RADIATA PINE - SG 8	H1.2

ROOF FRAMING:

MEMBER:	TIMBER SPECIES AND GRADE:	TREATMENT
TRUSSES	RADIATA PINE -SG 8	H1.2
FLAT ROOF FRAMING	RADIATA PINE - SG 8	H1.2

EXTERIOR FINISHING TIMBERS:

MEMBER:	TIMBER SPECIES AND GRADE:	TREATMENT
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ALUMINIUM JOINERY REVEAL	RADIATA PINE DRESSING GRADES	H3.1

DRAINS UNDER THE BUILDING SHALL BE STRAIGHT AND OF EVEN GRADIENT SEPARATED FROM THE BUILDING FOUNDATION BY AT LEAST 25mm WHEN PASSING THROUGH CONCRETE BE SLEEVED OR WRAPPED IN A DURABLE AND FLEXIBLE MATERIAL TO ALLOW FOR EXPANSION AND CONTRACTION IN ADDITION DRAINS UNDER A CONCRETE FLOOR SLAB SHALL HAVE 50mm CLEARANCE TO THE UNDERSIDE OF THE SLAB & JUNCTIONS UNDER THE BUILDING JOINING AT AN ANGLE OF NOT MORE THAN 45^0

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TO BE VERIFIED BY FRAMING MANUFACTURER
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THE OWNERS ACCEPT AND CONFIRM THAT THESE ARE THE FINAL AND FINAL DRAWINGS
Signed: Date:

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WESTMERE FAMILY TRUST RESIDENCE
LOT 374 WILFIELD WEST MELTON

CROSS SECTION B
JOB NO: **610324**
ORIGINAL SHEET SIZE **A3**
DRAWN: **SARAH MAY**
PRINTED:
Wednesday, 2 October 2024

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MAINTAIN 25mm AIR GAP / CLEARANCE
BETWEEN INSULATION MATERIAL
AND UNDERSIDE OF ROOFING UNDERLAY

ALL LINTELS SIZED AS PER MANUFACTURERS
DESIGN CERTIFICATE

TRUSS FIXING AND HOLD DOWNS AS PER
MANUFACTURERS DESIGN CERTIFICATE
or at a minimum as per NZS 3604

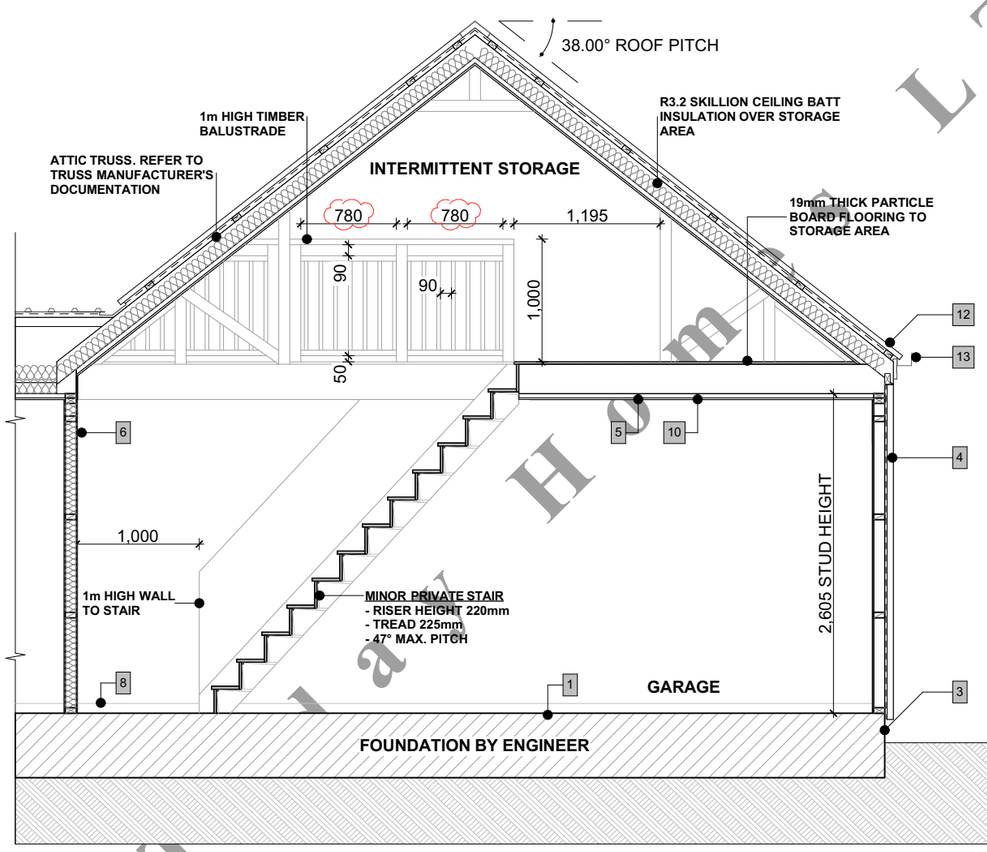
TRUSS FIXING @ EACH TRUSS
2/90x3.75mm SKEWED NAILS PLUS
2/ WIRE DOGS OR 4.7kN ALTERNATE AS REQUIRED BY
NZS 3604 2011 TABLE 10.14 - TYPE "E" FIXING

ROOF BRACING AS PER
MANUFACTURERS DESIGN CERTIFICATE

Ex 75 X 50mm PURLINS H1.2 TREATED
@ 900mm CRS INTERMEDIATE SPANS
& 600mm CRS AT PERIPHERY OF ROOF
PURLIN FIXING - 1 X 10g SELF DRILLING SCREW 80mm LONG
ALTERNATE PROPRIETERY FIXING 2.4 kN
AT EACH CROSSING
GABLE END PURLINS/FLY RAFTERS 75 X 50 ON EDGE
@ 600mm CRS
METAL PROFILED ROOFING FIXED WITH
TYPE C2 FIXING PATTERN
HIT1, MISS 1, HIT 1 MISS 2...
REF E2 / AS1 TABLE 11

90 x 35 PERIMETER PLATE - SG8 - H1.2
90 X 45 TOP PLATE - SG8 - H1.2
TOP PLATES FIXED TO STUDS and / or LINTEL
SUPPORTING ROOF MEMBERS WITH
2/90 x 3.15 NAILS+ 2 WIRE DOGS TO EACH STUD
OR @ 600mm CRS TO LINTELS
OR 4.7kN PROPRIETERY FIXING

GABLE END BRACING AS PER
MITEK BRACING GUIDE
WITH 90x45 STRONGBACK ON EDGE
AT MID POINT WITH
2/LUMBERLOCK BLUE SCREWS AT
EACH STUD/ TRUSS WEB
90x45 SG8 GABLE BRACE -
FIXINGS AS PER
MITEK GABLE BRACE GUIDE



PLYWOOD GENERALLY USED
FOR BRACING PURPOSES ONLY.
PROVIDE PVC DANBAND
STRAPPING BETWEEN DWANGS
TO PREVENT INSULATION
BULGING INTO CAVITY.

FINISHED FLOOR LEVELS
FOR ALL CLADDINGS EXCEPT BRICK VENEER
MIN 225mm ABOVE FINISHED UNPAVED GROUND &
MIN 150mm ABOVE FINISHED PAVED GROUND
FOR BRICK VENEER
MIN 200mm ABOVE FINISHED UNPAVED GROUND &
MIN 150mm ABOVE FINISHED PAVED GROUND
ALL ABOVE FINISHED LEVELS TO APPLY AFTER
LANDSCAPING IS COMPLETE

CROSS SECTIONS LEGEND

FLOOR

1 FOUNDATION BY ENGINEER
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

2 BOTTOM PLATE FIXINGS BY ENGINEER
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

3 FOUNDATION FOOTING BY ENGINEER
REFER TO ENGINEER'S DRAWINGS & DOCUMENTATION

WALLS & CEILING

4 RESENE CONSTRUCTION SYSTEMS 50mm INTEGRA PANEL CLADDING SYSTEM ON 20mm GRAPHEX VERTICAL BATTENS ON RIGID WALL UNDERLAY ON 90 x 45mm H1.2 TIMBER WALL FRAMING WITH STUDS @ 400mm crs AND DWANGS 800mm crs
REFER TO DETAILS

5 13mm GIB BOARD CEILING LINING ON METAL BATTENS @ 600mm crs max.
FIBREGLASS INSULATION TO CEILING CAVITY WHERE INDICATED
TO BE 2 LAYERS **R3.6** (BOTTOM CHORDS COVERED) TO STANDARD TRUSS AREAS AND **R3.6** SKILLION BATT INSULATION TO SKILLION CEILING AREAS
IN ACCORDANCE TO ZONE 5 AND THE NZBC CLAUSE H1

6 10mm GIB BOARD WALL LINING ON 90x45 H1.2 TIMBER WALL FRAMING
GIB AQUALINE IN BATHROOMS TO WALLS WITH TILES APPLIED
FIBREGLASS INSULATION TO EXTERIOR WALLS AND WHERE INDICATED TO BE **R2.6** IN ACCORDANCE TO ZONE 5 AND THE NZBC CLAUSE H1

7 SELECTED POWDER COATED GLAZED ALUMINIUM WINDOWS AND DOORS WITH TIMBER REBATED REVEALS
ALUMINIUM JOINERY DOUBLE GLAZED
STANDARD RESIDENTIAL SUITE - THERMALLY BROKEN
LOW E4 GLASS & ARGON GAS
SAFETY GLAZING TO COMPLY WITH NZS 4223 2016
REFER TO DETAILS

8 85x12mm MDF SKIRTINGS EXCEPT FOR WET AREAS
WHERE PINUS SKIRTINGS ARE TO BE INSTALLED

9 BULKHEADS AND COVES WHERE INDICATED
CONSTRUCTED WITH METAL BATTEN FRAMING

10 SQUARE STOP TO CEILINGS

11 LINTELS AS PER NZS3604 2011 - REFER TO BRACING AND LINTEL PLAN AND TRUSS MANUFACTURER'S DOCUMENTATION

ROOF

12 SELECTED PROFILED METAL ROOF CLADDING - 0.40 BMT
COLORSTEEL WITH 0.55 BMT COLORSTEEL FLASHINGS
SELF SUPPORTING ROOF UNDERLAY - COVERTEK 215 ON
ex 75x50mm H1.2 TREATED TIMBER PURLINS ON TRUSSES @ 900mm crs.
TRUSS LAYOUT AND FIXING SPECIFICATIONS TO BE SUPPLIED BY TRUSS MANUFACTURER

13 SELECTED METAL FASCIA AND GUTTER SYSTEM

14 COLORSTEEL DOWNPIPES

Section C-C 1:50

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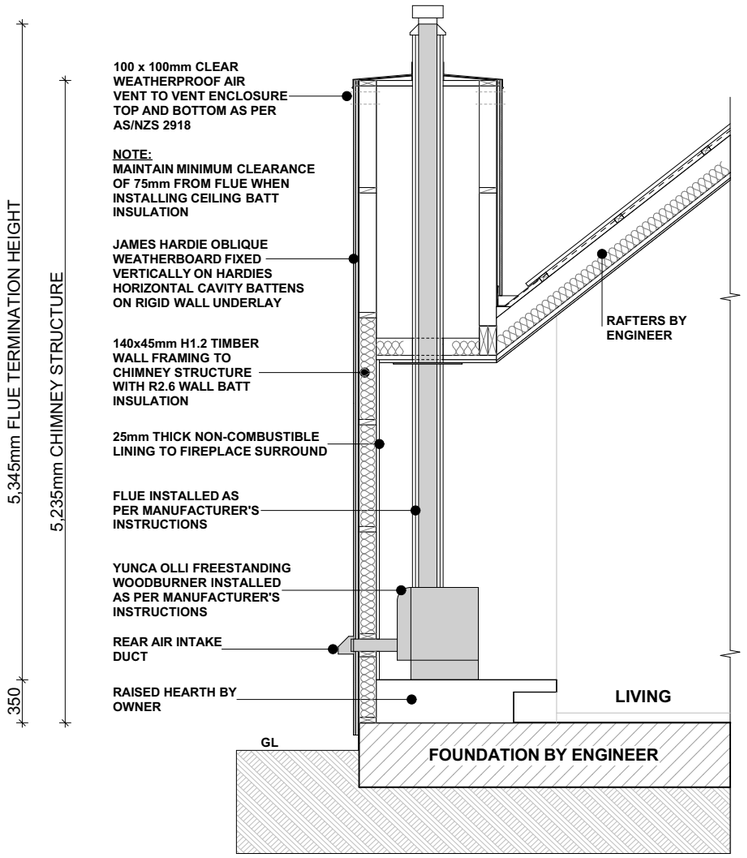
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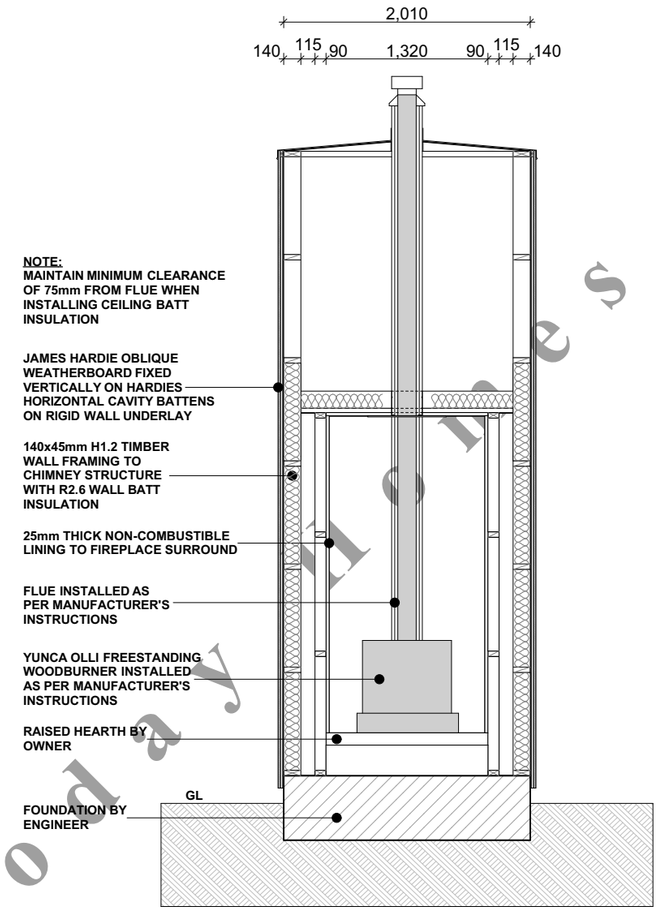
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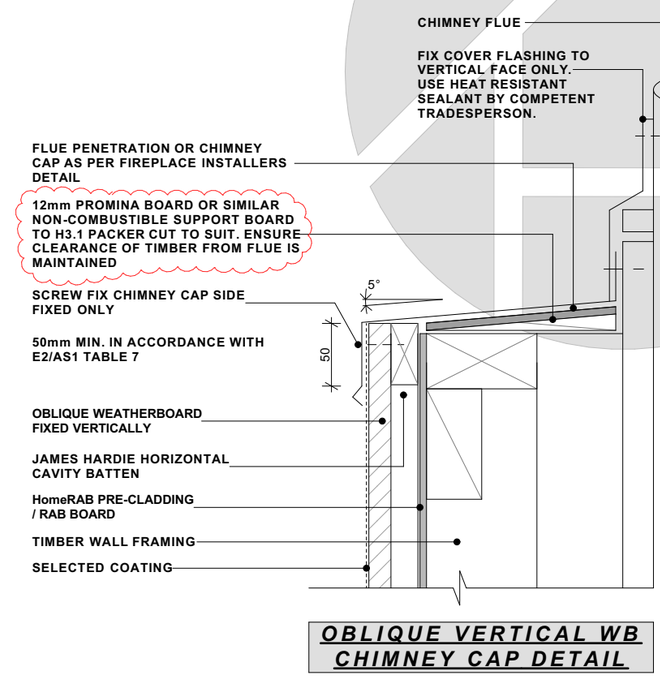
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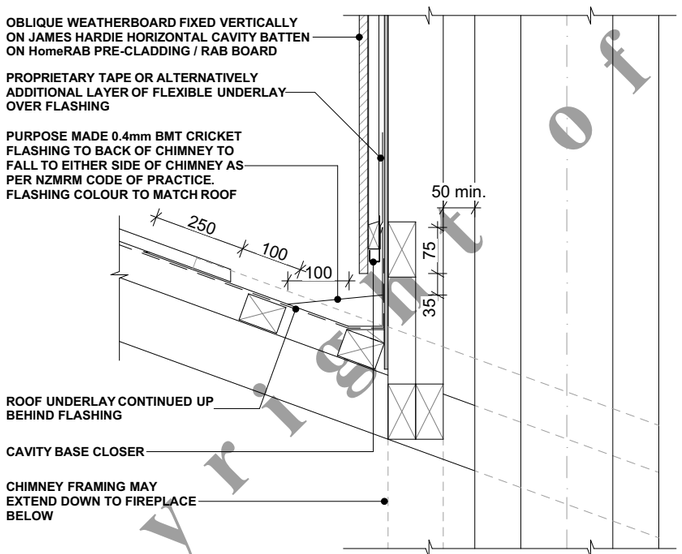
Section D-D 1:50



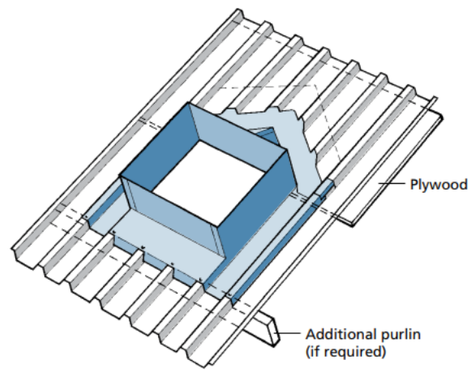
Section E-E 1:50



OBLIQUE VERTICAL WB CHIMNEY CAP DETAIL



CHIMNEY / ROOF ABUTMENT DETAIL



TYPICAL CHIMNEY FLASHING DETAIL

PURPOSE MADE 0.4mm BMT CRICKET FLASHING TO BACK OF CHIMNEY TO FALL TO EITHER SIDE OF CHIMNEY AS PER NZMRM CODE OF PRACTICE. FLASHING COLOUR TO MATCH ROOFING

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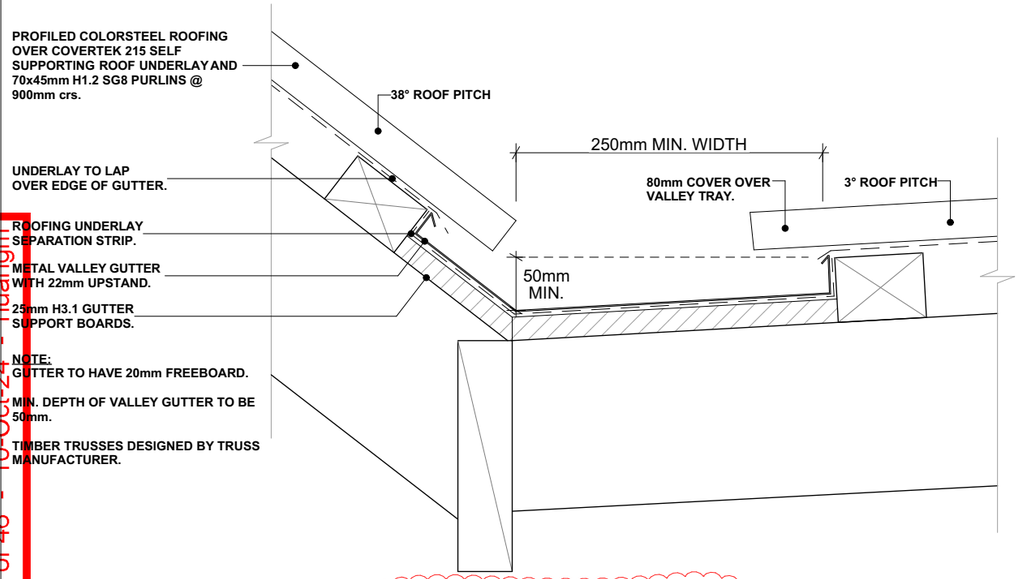
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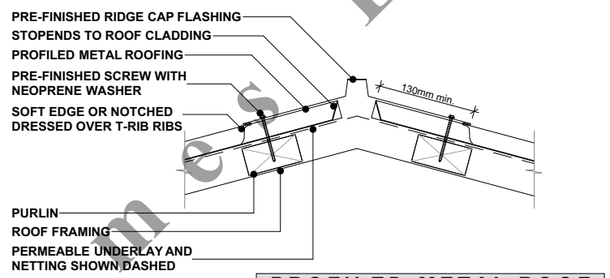
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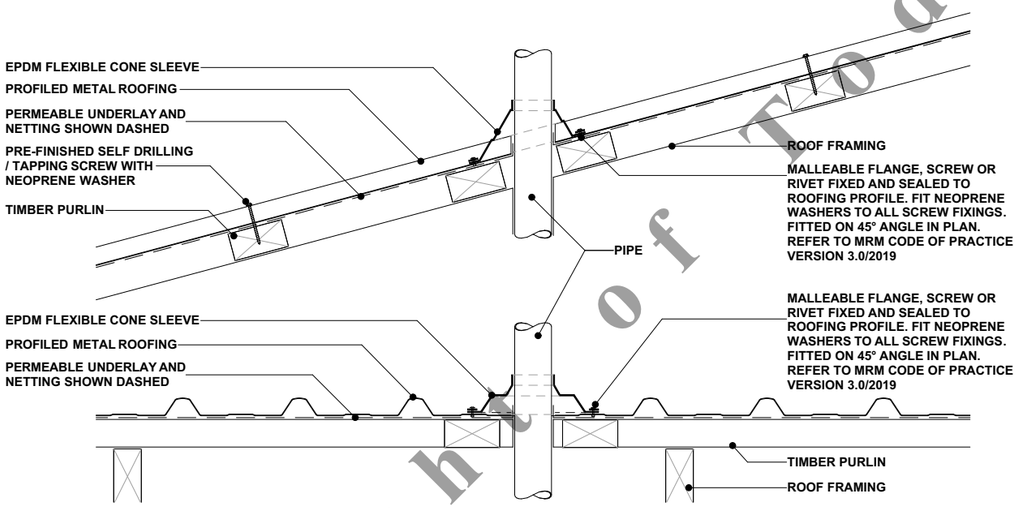
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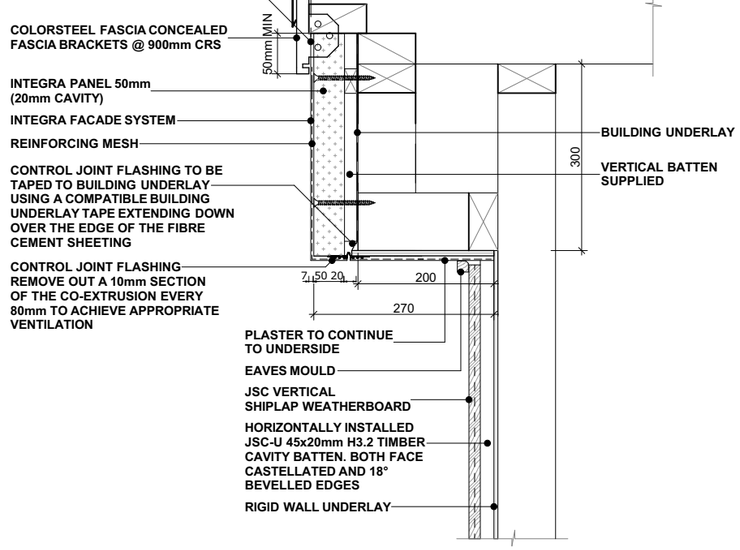
ASYMMETRICAL VALLEY DETAIL



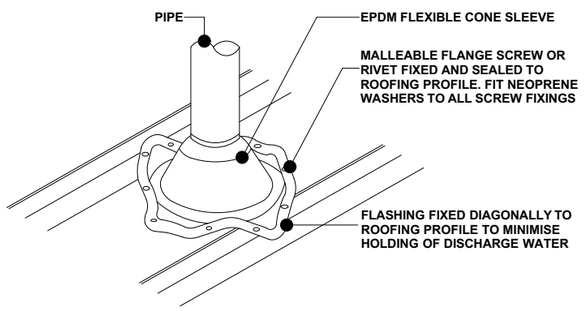
PROFILED METAL ROOF RIDGE DETAIL



PROFILED METAL ROOF PIPE PENETRATION DETAIL



BOXED SOFFIT EDGE DETAIL



SMALL PIPE FLASHING DETAIL

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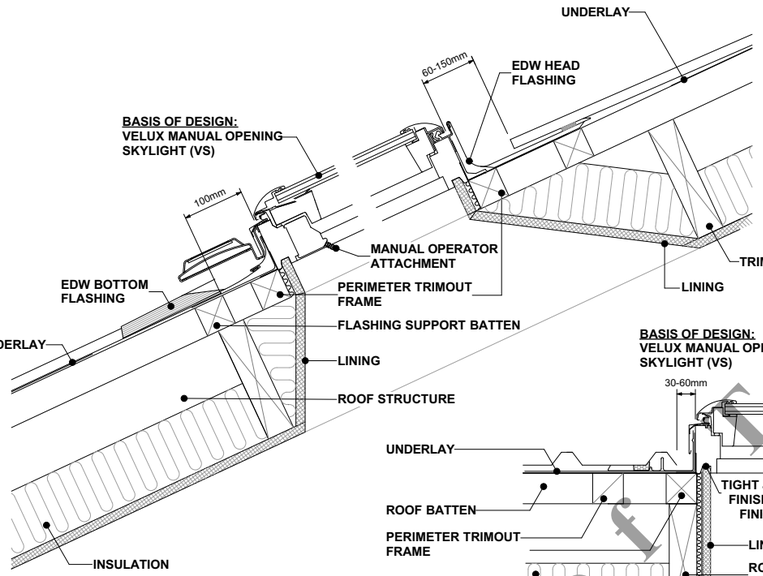
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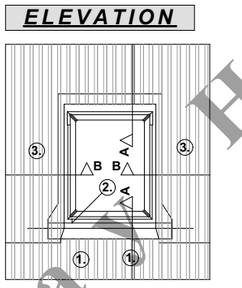
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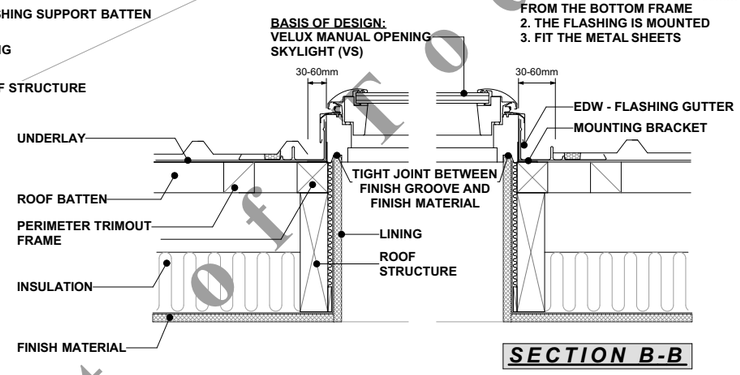
SECTION A-A



ELEVATION

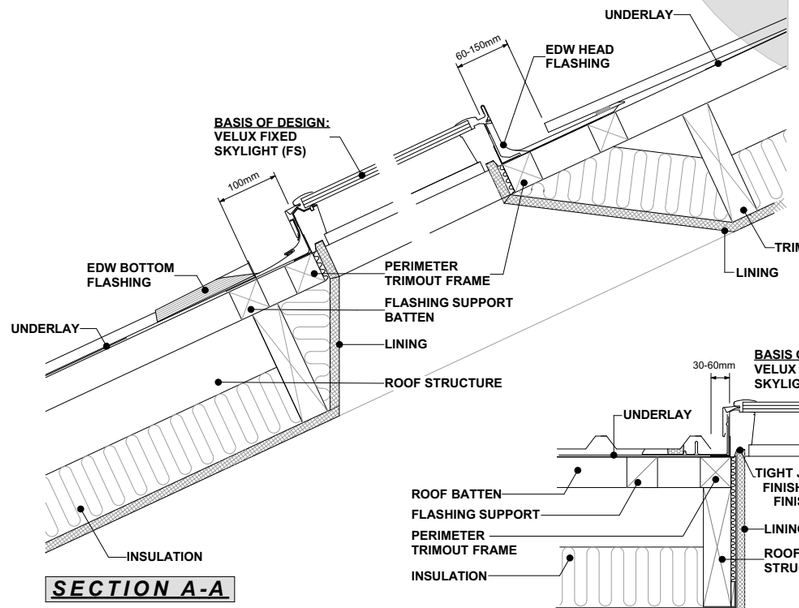
VELUX SKYLIGHT INSTALLED IN NEW METAL ROOFING

1. THE SHEETS ARE FITTED 100mm FROM THE BOTTOM FRAME
2. THE FLASHING IS MOUNTED
3. FIT THE METAL SHEETS

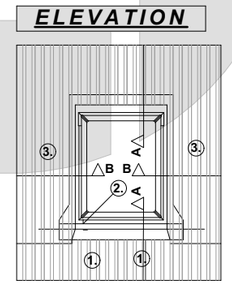


SECTION B-B

VELUX VS SKYLIGHT DETAIL



SECTION A-A



ELEVATION

VELUX SKYLIGHT INSTALLED IN NEW METAL ROOF:

1. THE SHEETS ARE FITTED 100mm FROM THE BOTTOM FRAME
2. THE FLASHING IS MOUNTED
3. FIT THE METAL SHEETS

SECTION B-B

VELUX FS SKYLIGHT DETAIL

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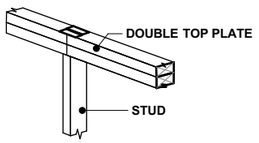
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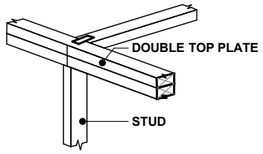
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THE CONNECTION IN LINE OF A TOP PLATE IN A WALL THAT CONTAINS BRACING ELEMENTS SHALL HAVE A 3kN CONNECTION WHERE BU's LESS THAN 100 IN HIGHEST RATED BRACE PANEL
FIX WITH 3/30X3.15mm NAILS PER SIDE AND
6kN CONNECTION WHERE BU'S MORE THAN 100 IN HIGHEST RATED BRACE PANEL
FIX WITH 6/30X3.15mm NAILS PER SIDE



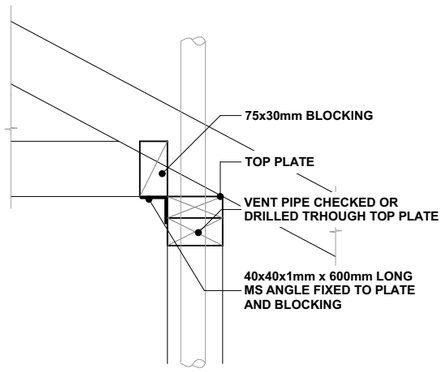
SEE NZS 3604:2011 - FIG 8.15

EACH WALL THAT CONTAINS ONE OR MORE BRACING ELEMENTS SHALL BE CONNECTED AT TOP PLATE LEVEL TO EXTERNAL WALLS AT RIGHT ANGLES TO IT WITH
6kN CONNECTION WHERE BU's NOT MORE THAN 125
FIX WITH 6/30X3.15mm NAILS PER SIDE -(FIX TO ONE EXT WALL)
2X6kN CONNECTION WHERE BU's NOT MORE THAN 250
FIX WITH 6/30X3.15mm NAILS PER SIDE -(FIX TO TWO EXT WALLS)
WALLS WITH BU's > 250 FIX WITH 2.4kN PER 100 BU's-
(FIX TO TWO EXT WALLS)

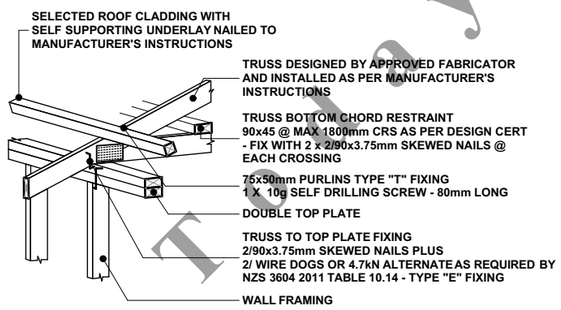


SEE NZS 3604:2011 - FIG 8.16

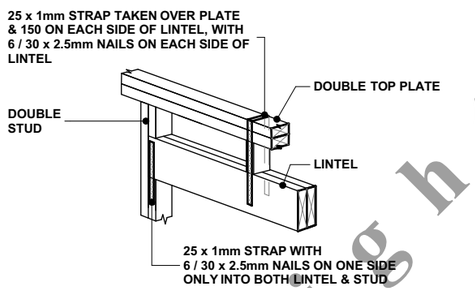
TOP PLATE DETAILS



TOP PLATE STRENGTHENING DETAIL

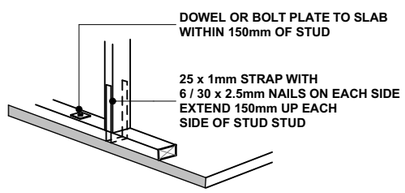


TRUSS TO TOP PLATE FIXING DETAIL



LINTELS SUPPORTING TRUSSES SHALL BE SECURED AGAINST UPLIFT AS PER TABLE 8.14 NZS 3604 2011 FOR - WIND - HIGH - LIGHT ROOF

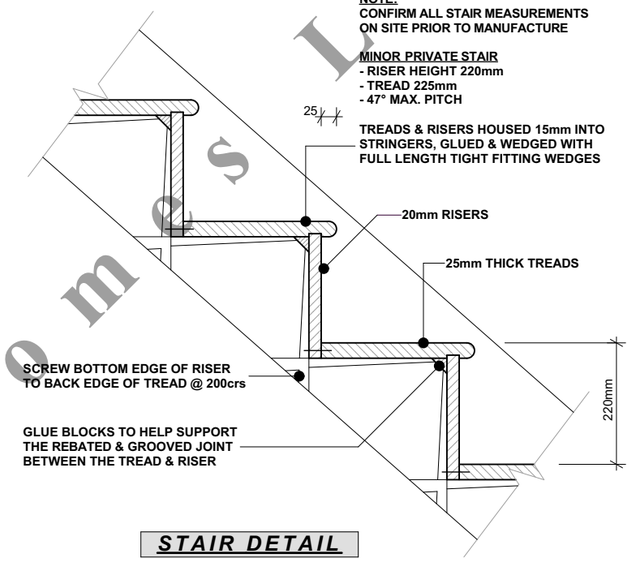
LINTEL FIXING TO ALL LINTELS SUPPORTING RAFTERS OR TRUSSES



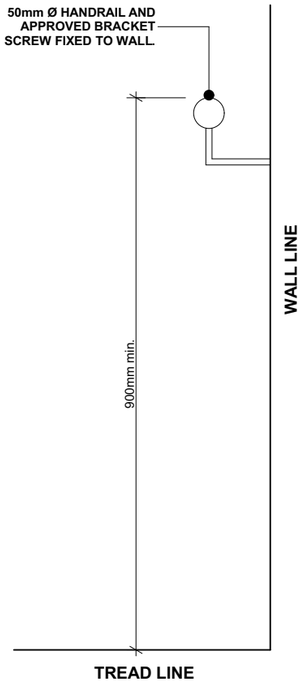
TRIMMING STUD BASE DETAIL

NOTE:
CONFIRM ALL STAIR MEASUREMENTS ON SITE PRIOR TO MANUFACTURE

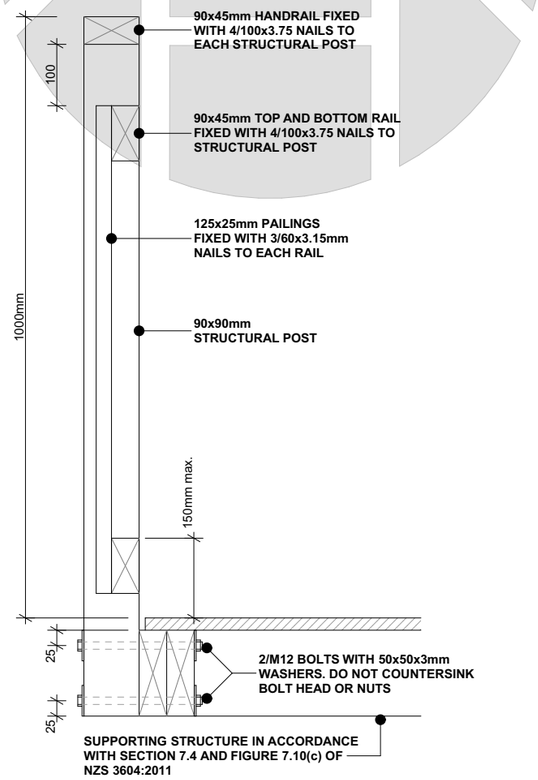
MINOR PRIVATE STAIR
- RISER HEIGHT 220mm
- TREAD 225mm
- 47° MAX. PITCH



STAIR DETAIL



STAIR HANDRAIL DETAIL



BALUSTRADE DETAIL

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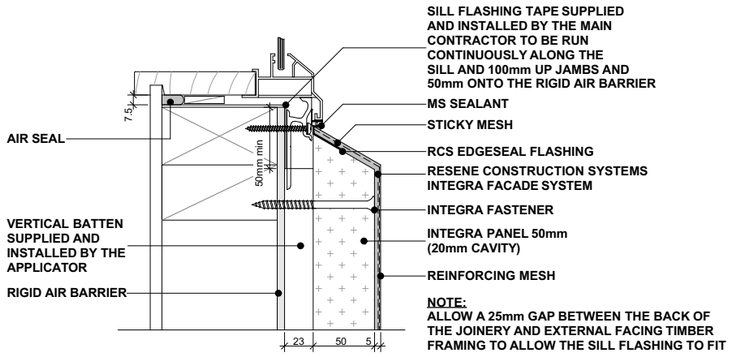
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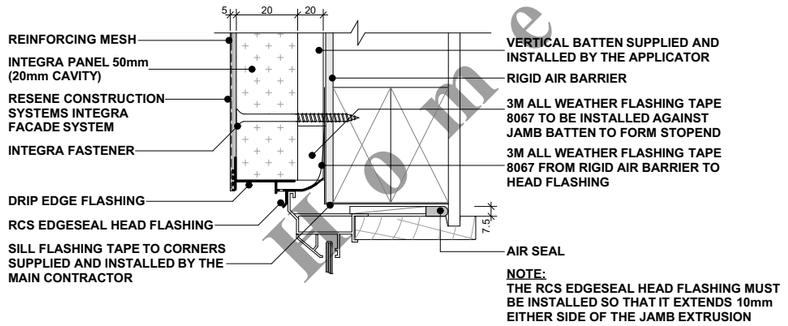
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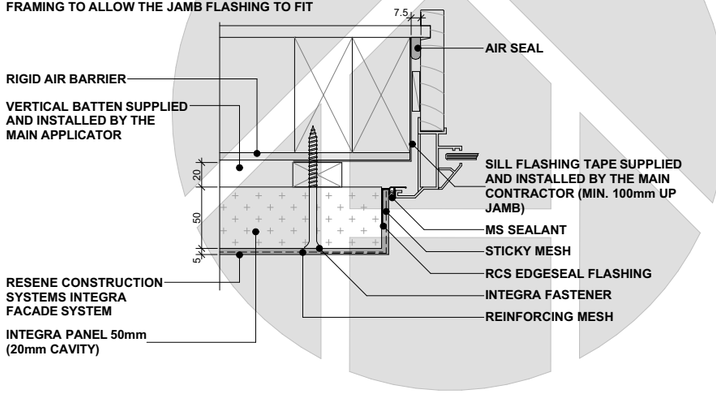
NOTE:
ALLOW A 25mm GAP BETWEEN THE BACK OF THE JOINERY AND EXTERNAL FACING TIMBER FRAMING TO ALLOW THE SILL FLASHING TO FIT

INTEGRA PANEL WINDOW SILL DETAIL

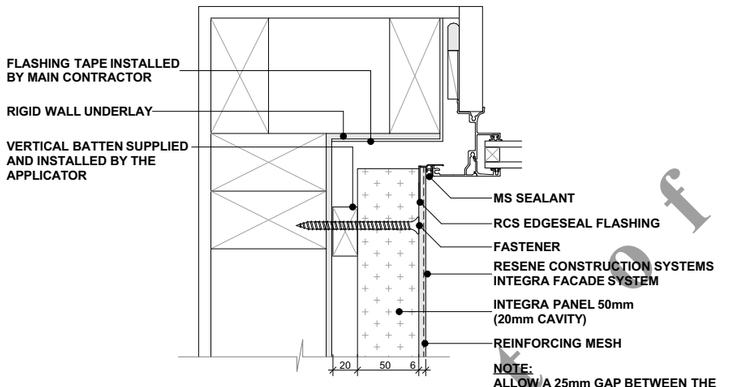


NOTE:
THE RCS EDGESEAL HEAD FLASHING MUST BE INSTALLED SO THAT IT EXTENDS 10mm EITHER SIDE OF THE JAMB EXTRUSION

INTEGRA PANEL WINDOW HEAD DETAIL

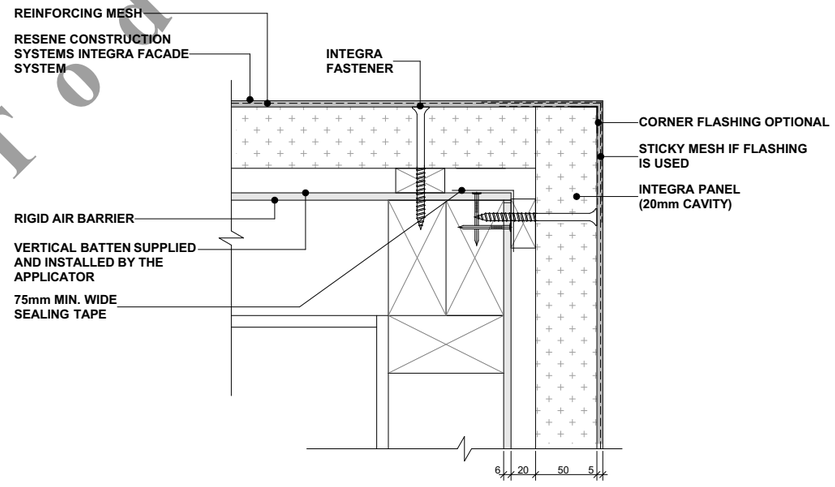


INTEGRA PANEL WINDOW JAMB DETAIL

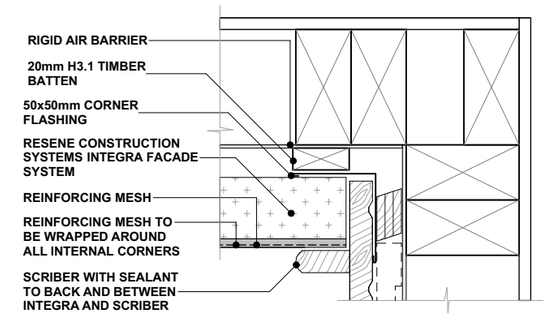


NOTE:
ALLOW A 25mm GAP BETWEEN THE BACK OF THE JOINERY AND EXTERNAL FACING TIMBER FRAMING TO ALLOW THE JAMB FLASHING TO FIT

INTEGRA PANEL INTERNAL CORNER TO WINDOW JAMB DETAIL



INTEGRA PANEL EXTERNAL CORNER DETAIL



INTEGRA PANEL & JSC SHIPLAP WB INTERNAL CORNER DETAIL

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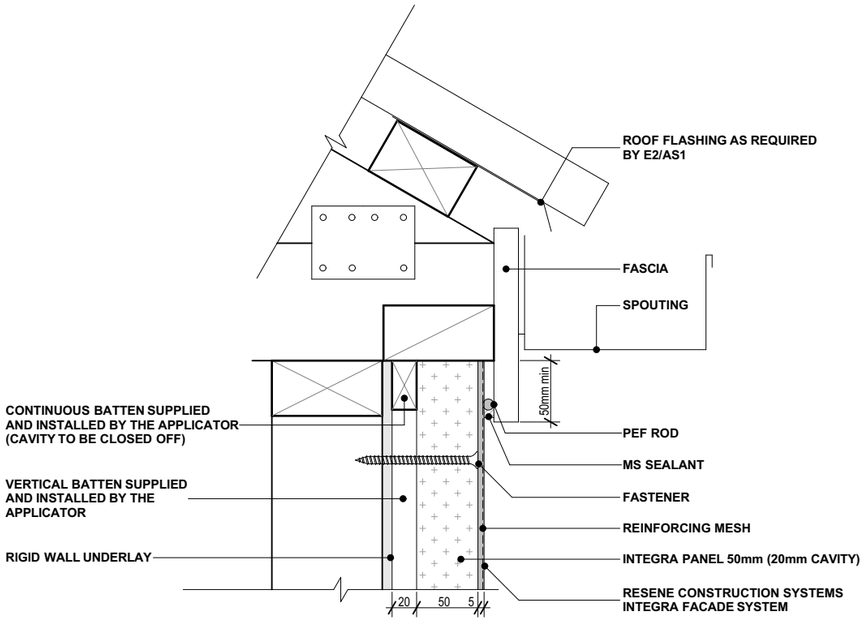
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ORIGINAL SHEET SIZE A3
DRAWN: **SARAH MAY**
PRINTED:
Wednesday, 2 October 2024

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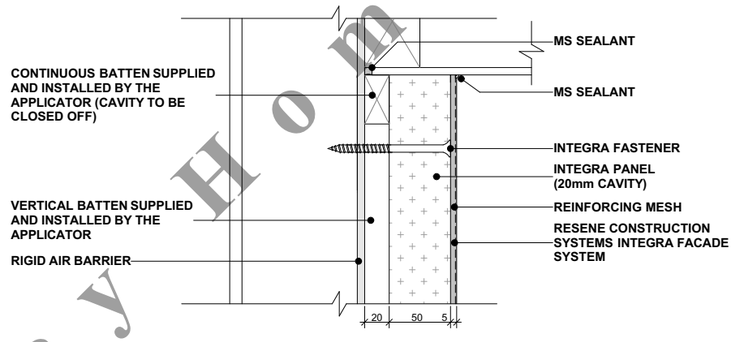
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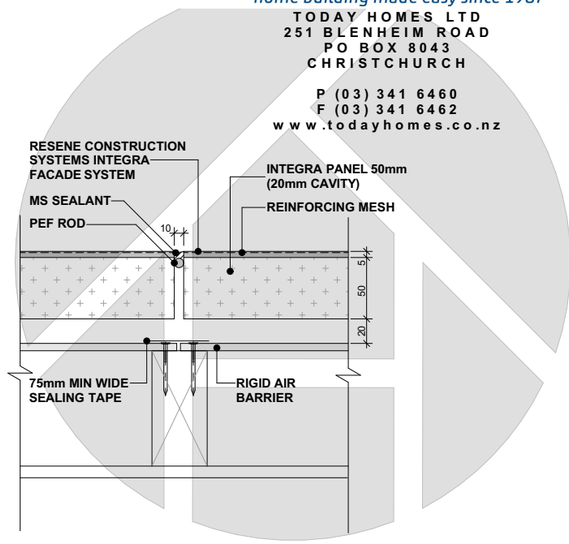
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INTEGRA PANEL FACE FIXED FASCIA DETAIL

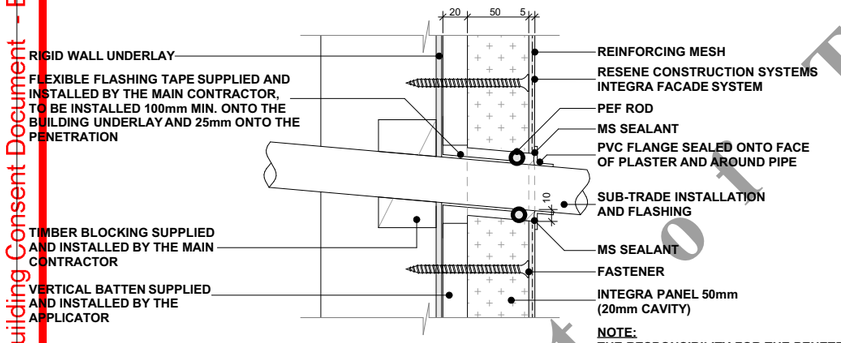


INTEGRA PANEL SOFFIT DETAIL



NOTE:
ALL CONTROL JOINT SPACINGS AND SETOUTS ARE THE RESPONSIBILITY OF THE DESIGNER, FOR SUGGESTED LOCATIONS REFER TO RCS TRADESPEC DOCUMENT 1.4

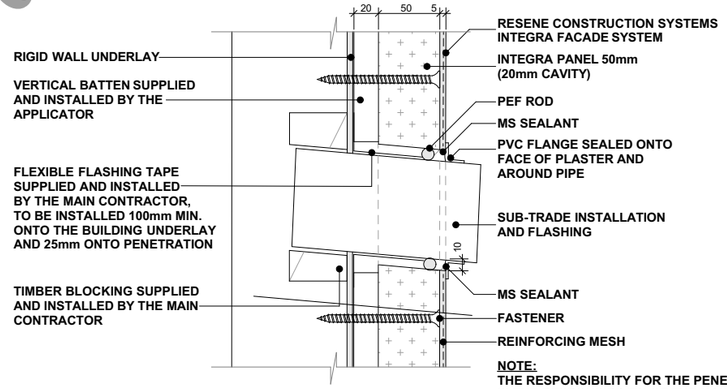
INTEGRA PANEL VERTICAL CONTROL JOINT DETAIL



NOTE:
THE RESPONSIBILITY FOR THE PENETRATION IS THE RESPONSIBILITY OF THE MAIN CONTRACTOR, WHERE POSSIBLE AND PRACTICAL USE A FLANGE.

IT IS IMPORTANT THAT THERE IS ADEQUATE SUPPORT FOR THE PENETRATION IN THE FORM OF TIMBER PACKING. THE PENETRATION SHOULD BE ANGLED SLIGHTLY AWAYFROM THE CLADDING SO ANY MOISTURE IS DIVERTED AWAYFROM THE CLADDING.

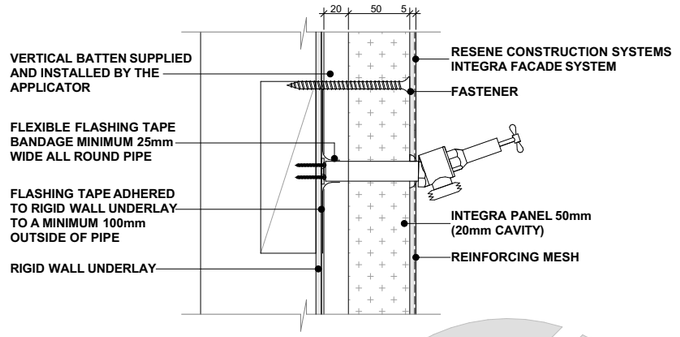
INTEGRA PANEL PIPE PENETRATION DETAIL



NOTE:
THE RESPONSIBILITY FOR THE PENETRATION IS THE RESPONSIBILITY OF THE MAIN CONTRACTOR, WHERE POSSIBLE AND PRACTICAL USE A FLANGE.

IT IS IMPORTANT THAT THERE IS ADEQUATE SUPPORT FOR THE PENETRATION IN THE FORM OF TIMBER PACKING. THE PENETRATION SHOULD BE ANGLED SLIGHTLY AWAYFROM THE CLADDING SO ANY MOISTURE IS DIVERTED AWAYFROM THE CLADDING.

INTEGRA PANEL HEATPUMP PENETRATION DETAIL



INTEGRA PANEL TAP FITTING DETAIL

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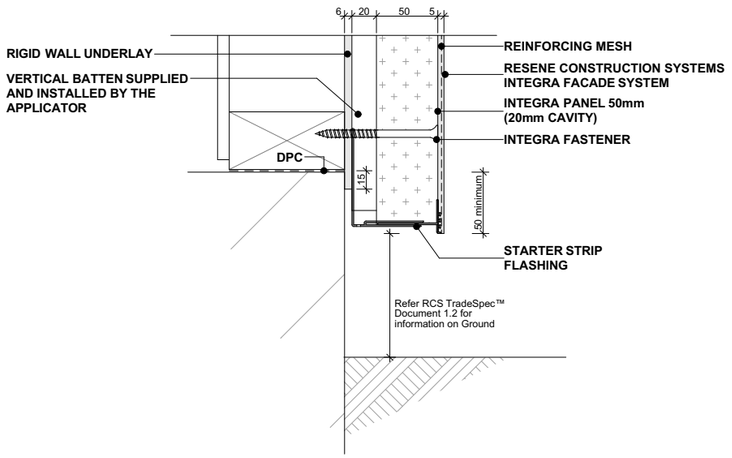
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ORIGINAL SHEET SIZE **A3**
DRAWN: **SARAH MAY**
PRINTED:
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A-16
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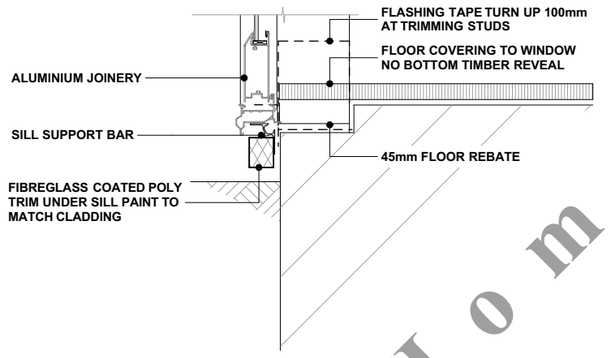
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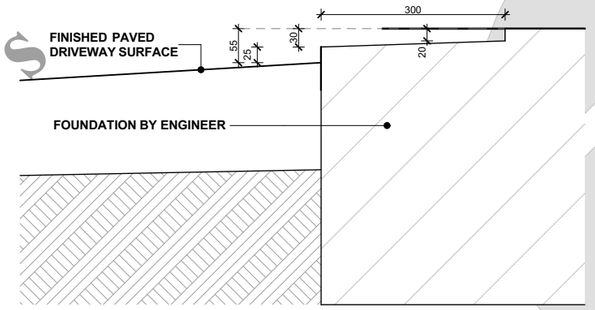
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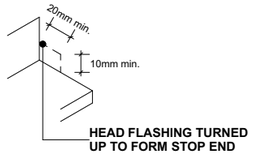
INTEGRA PANEL FOUNDATION DETAIL

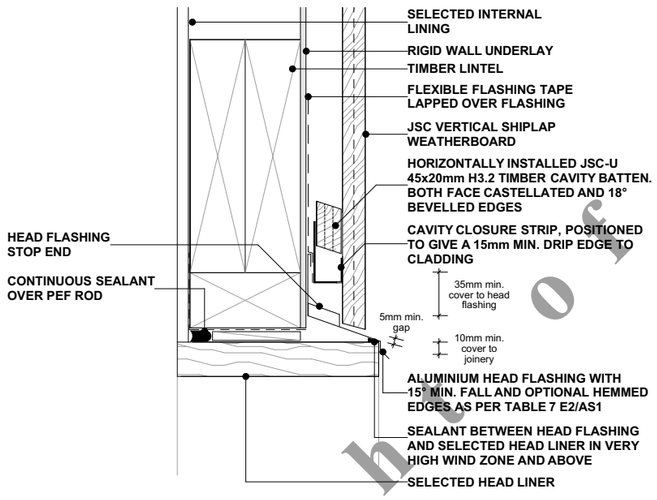


REBATED DOOR SILL DETAIL

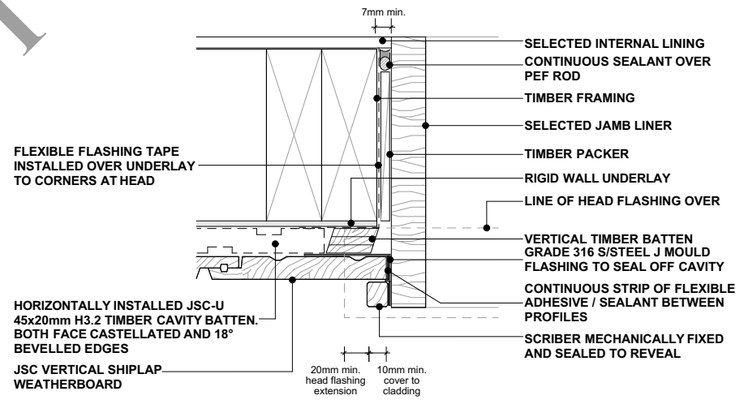


GARAGE DOOR SILL DETAIL

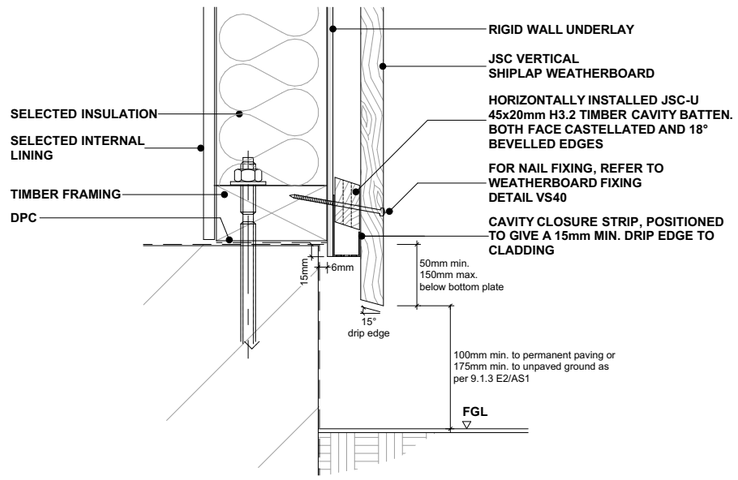




JSC VERTICAL SHIPLAP GARAGE DOOR HEAD DETAIL



JSC VERTICAL SHIPLAP GARAGE DOOR JAMB DETAIL



JSC VERTICAL SHIPLAP FOUNDATION DETAIL

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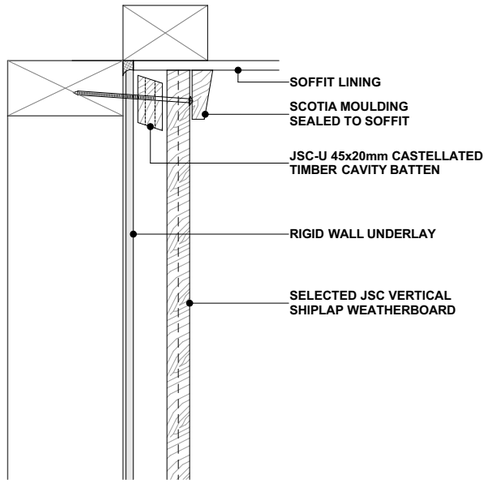
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PRINTED:
Wednesday, 2 October 2024

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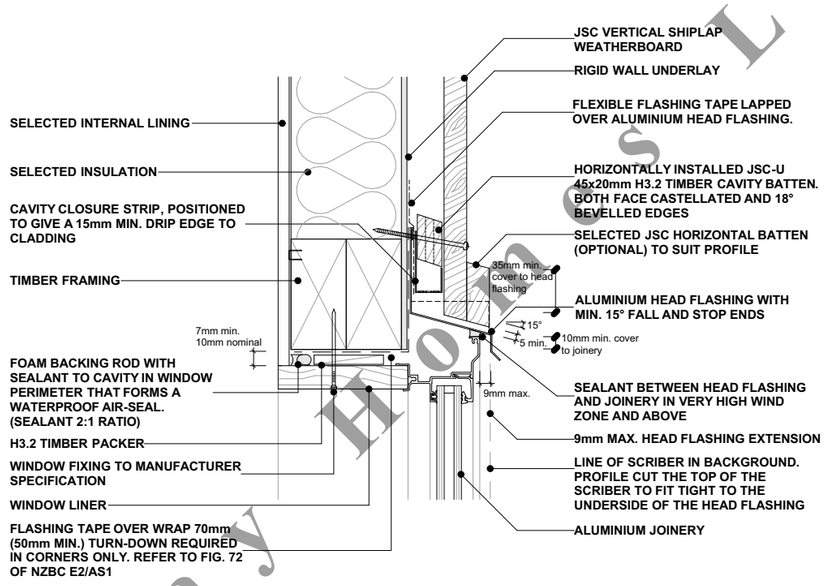
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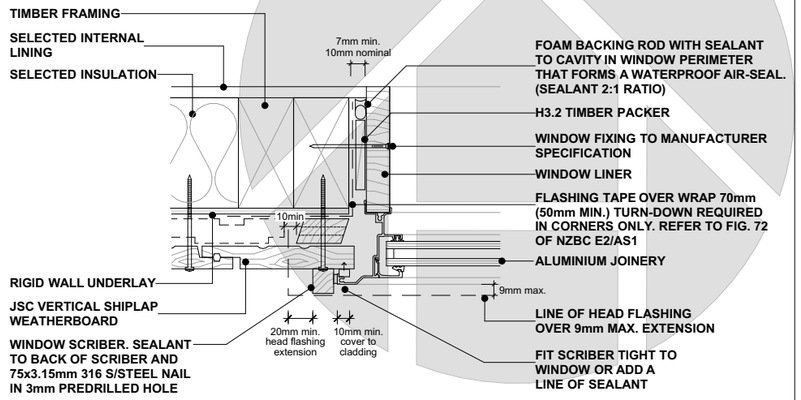
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JSC VERTICAL SHIPLAP SOFFIT DETAIL

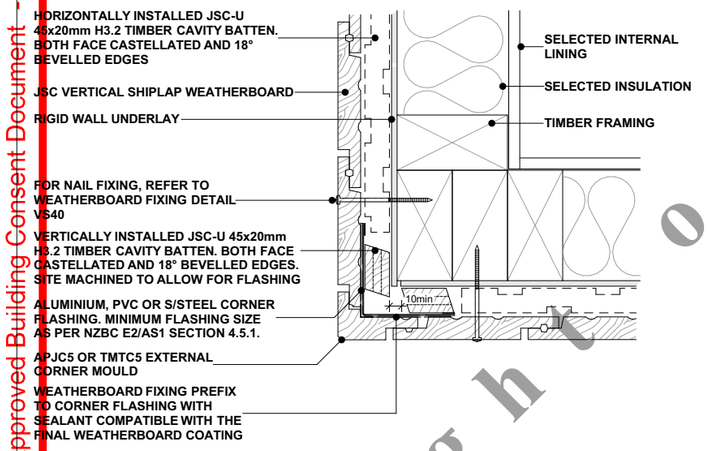


JSC VERTICAL SHIPLAP WINDOW HEAD DETAIL

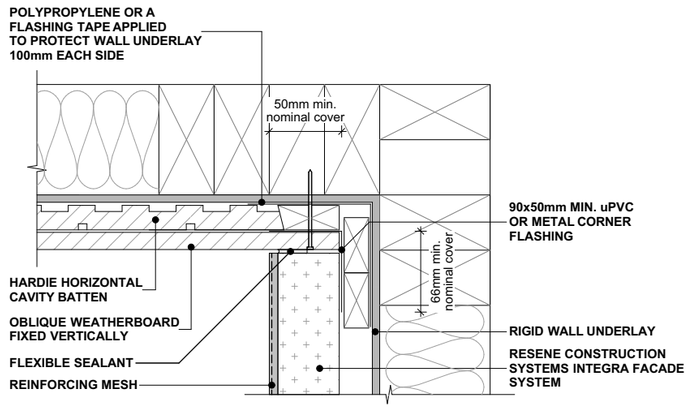


NO SCRIBER OPTION NOTE:
THE ALUMINIUM JOINERY MUST SIT HARD AGAINST THE BACK OF THE JOINERY FLANGE AND THE TIMBER WEATHERBOARDS WITH A E.P.S COMPRESSIBLE BOND BREAKER FOAM SEAL BETWEEN

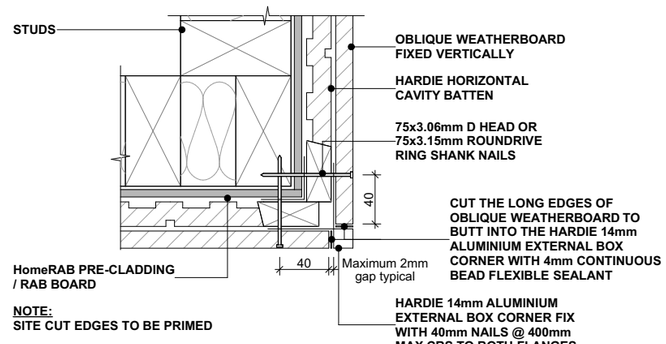
JSC VERTICAL SHIPLAP WINDOW JAMB DETAIL



JSC VERTICAL SHIPLAP EXTERNAL CORNER DETAIL



INTEGRA AND OBLIQUE INTERNAL CORNER DETAIL



NOTE:
SITE CUT EDGES TO BE PRIMED

OBLIQUE VERTICAL WB EXTERNAL CORNER DETAIL

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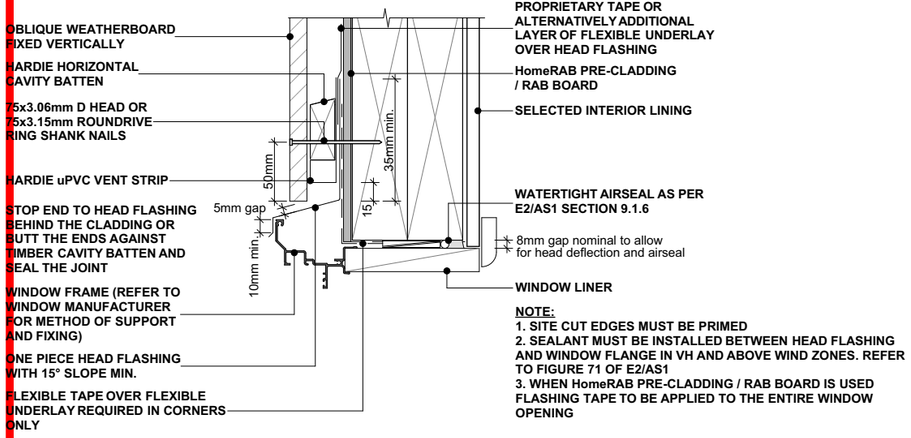
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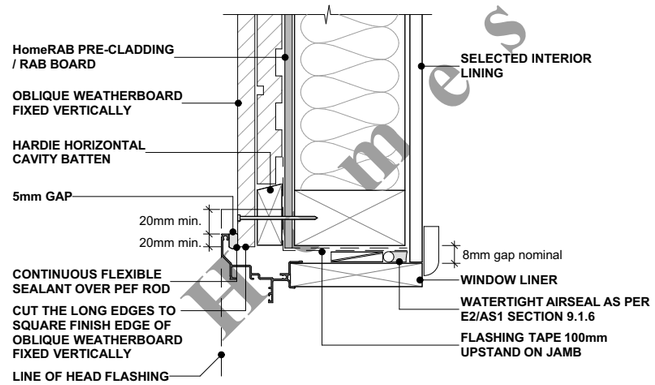
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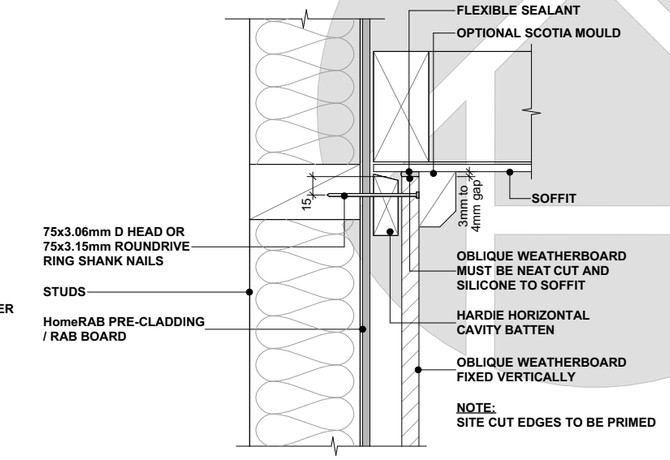
NOTE:
1. SITE CUT EDGES MUST BE PRIMED
2. SEALANT MUST BE INSTALLED BETWEEN HEAD FLASHING AND WINDOW FLANGE IN VH AND ABOVE WIND ZONES. REFER TO FIGURE 71 OF E2/AS1
3. WHEN HomeRAB PRE-CLADDING / RAB BOARD IS USED FLASHING TAPE TO BE APPLIED TO THE ENTIRE WINDOW OPENING

OBLIQUE VERTICAL WB WINDOW HEAD DETAIL



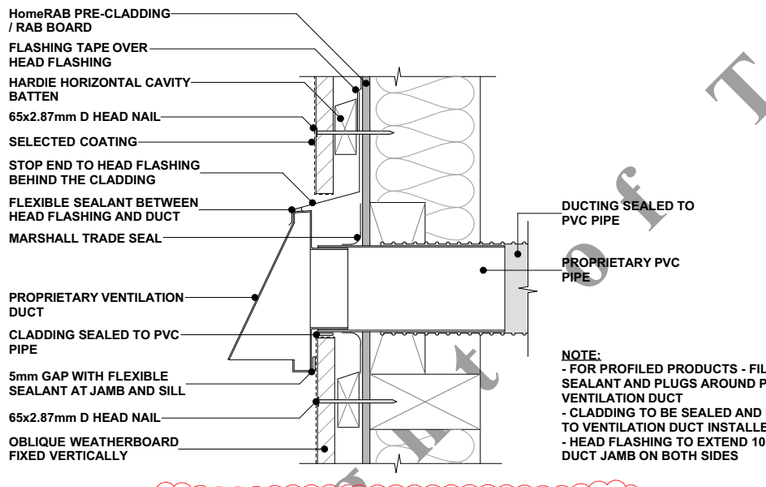
NOTE:
WHEN JAMES HARDIE RIGID AIR BARRIERS ARE USED FLASHING TAPE TO BE APPLIED TO THE ENTIRE WINDOW OPENING

OBLIQUE VERTICAL WB WINDOW JAMB DETAIL



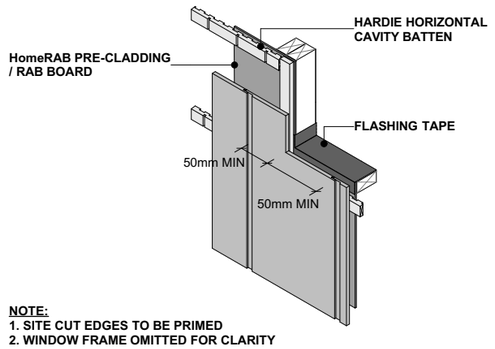
NOTE:
SITE CUT EDGES TO BE PRIMED

OBLIQUE VERTICAL WB SOFFIT DETAIL



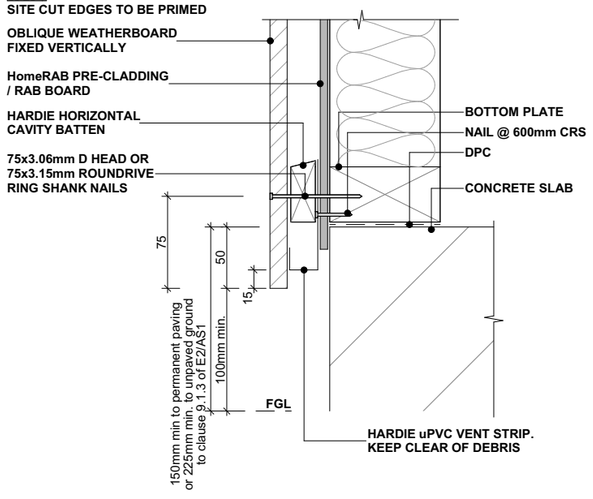
NOTE:
- FOR PROFILED PRODUCTS - FILL PROFILE WITH SEALANT AND PLUGS AROUND PERIMETER OF VENTILATION DUCT
- CLADDING TO BE SEALED AND PAINTED PRIOR TO VENTILATION DUCT INSTALLED
- HEAD FLASHING TO EXTEND 10mm MINIMUM PAST DUCT JAMB ON BOTH SIDES

OBLIQUE VERTICAL WB VENT THROUGH WALL DETAIL



NOTE:
1. SITE CUT EDGES TO BE PRIMED
2. WINDOW FRAME OMITTED FOR CLARITY

OBLIQUE VERTICAL WB WINDOW JAMB DETAIL (3D)



NOTE:
SITE CUT EDGES TO BE PRIMED

OBLIQUE VERTICAL WB FOUNDATION DETAIL

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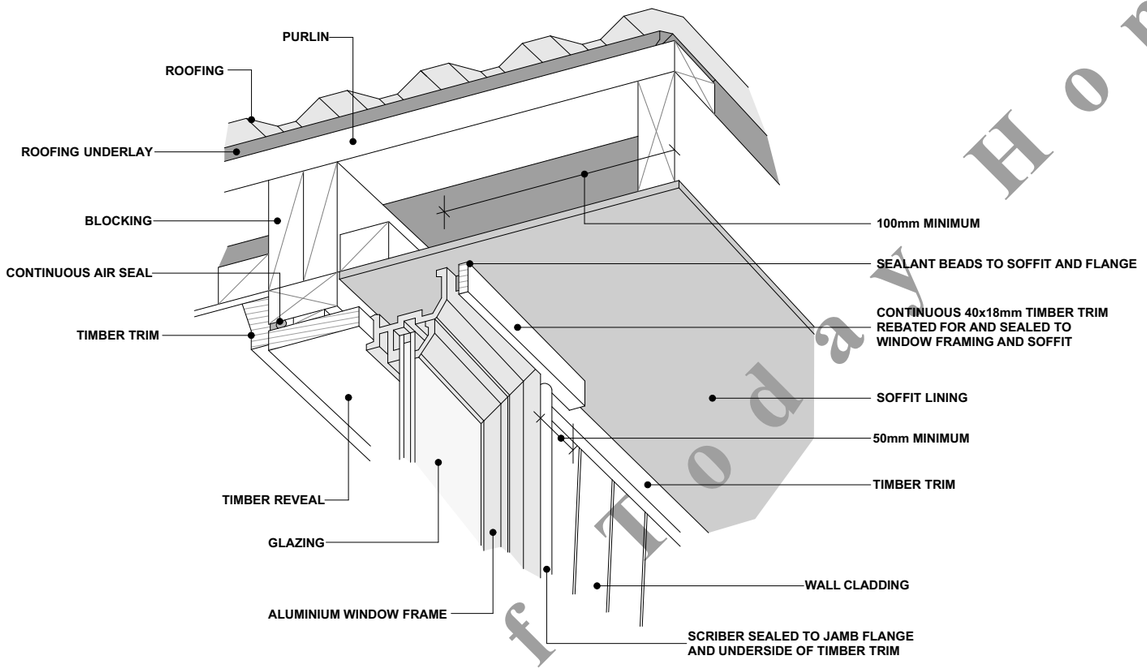
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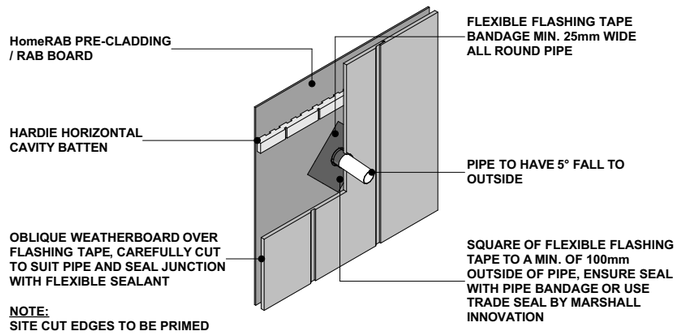
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RAKED WINDOW UNDER SOFFIT DETAIL



OBLIQUE VERTICAL WB PIPE PENETRATION DETAIL (3D)

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DRAWN: **SARAH MAY**
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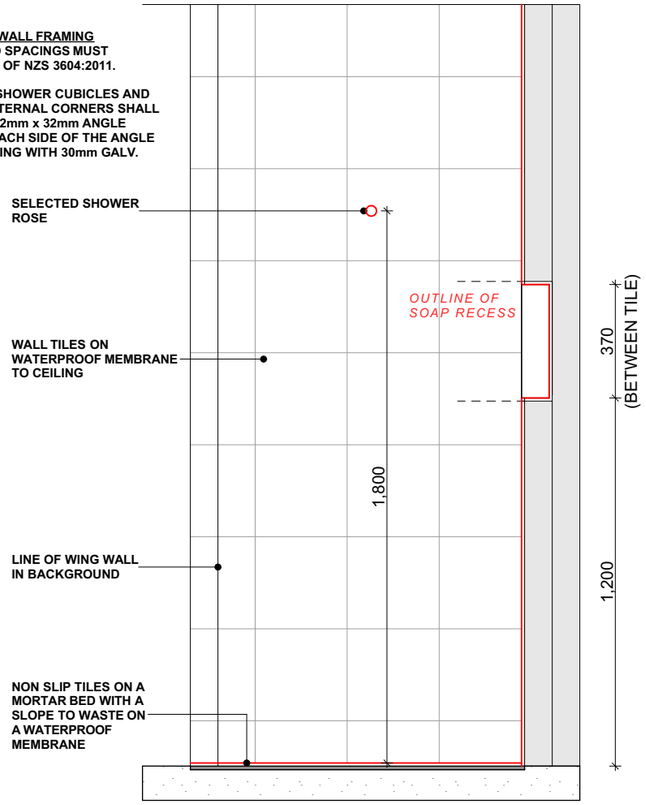
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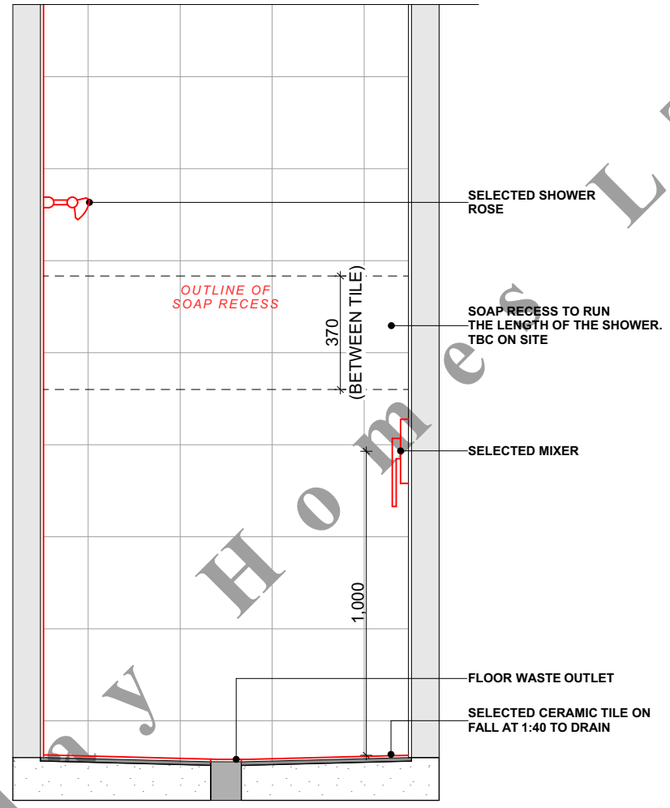
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FIXING DETAILS FOR TILED WALLS WALL FRAMING
TIMBER FRAMING DIMENSIONS AND SPACINGS MUST COMPLY WITH THE REQUIREMENTS OF NZS 3604:2011.

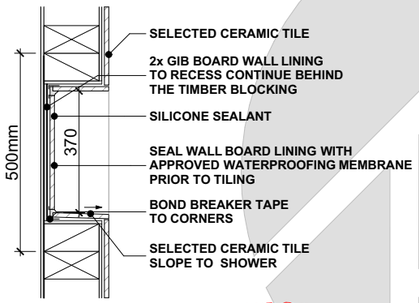
PRIOR TO LINING IN TILED AREAS (SHOWER CUBICLES AND SHOWER OVER BATH ONLY) THE INTERNAL CORNERS SHALL BE REINFORCED WITH A MINIMUM 32mm x 32mm ANGLE SUCH AS NZ18 OR GIBFIX ANGLE. EACH SIDE OF THE ANGLE SHALL BE FASTENED TO THE FRAMING WITH 30mm GALV. CLOUTS AT 300mm CENTRES.



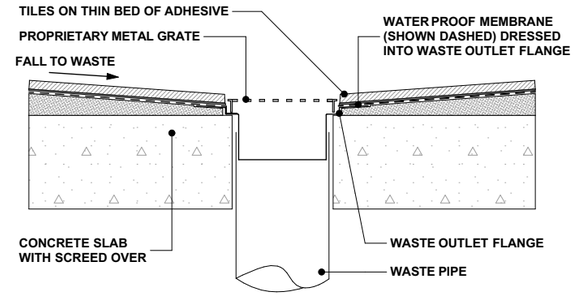
TILED SHOWER SECTION



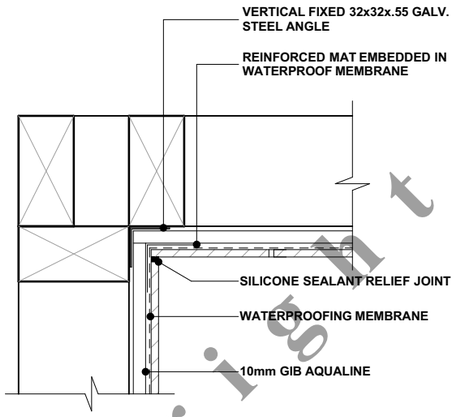
TILED SHOWER SECTION



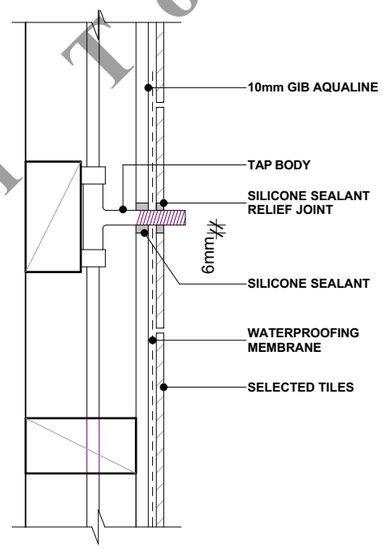
BATHROOM TILED RECESS DETAIL



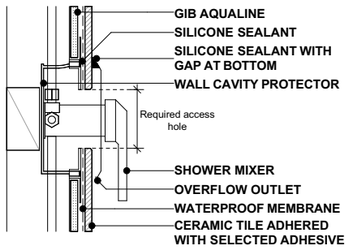
DRESSING THE MEMBRANE INTO FLOOR WASTE OUTLET



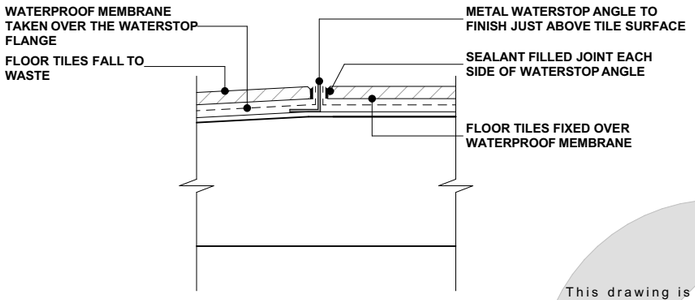
TILED SHOWER INTERNAL CORNER DETAIL



PLUMBING PENETRATION DETAIL



TILED SHOWER PENETRATION MIXER DETAIL



TILED SHOWER FLOOR WATERSTOP DETAIL

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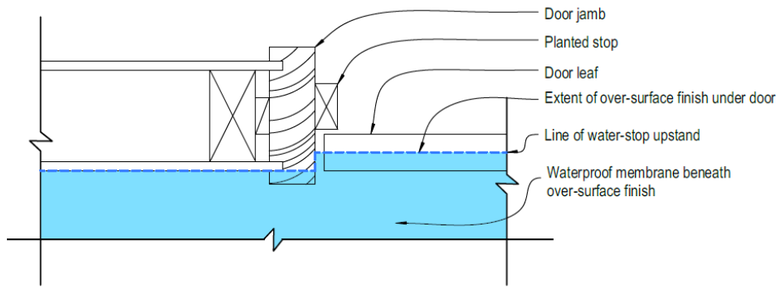


FIGURE 18: PLAN VIEW OF WATER-STOP UNDER DOOR JAMB

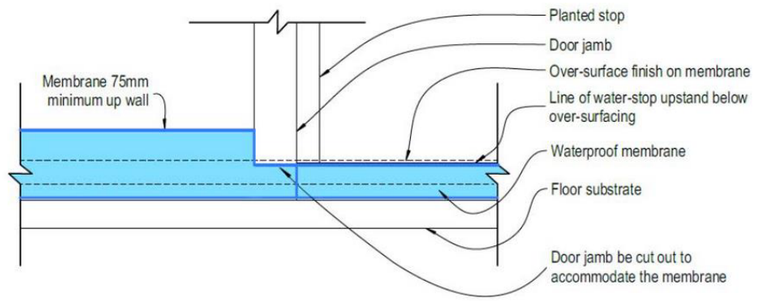


FIGURE 19: ELEVATION / EDGE OF DOOR JAMB WITH WATER-STOP UNDER DOOR

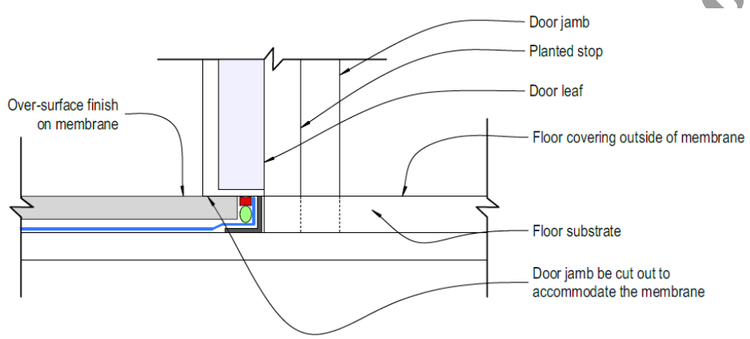


FIGURE 20: FACE OF DOOR JAMB WITH WATER-STOP UNDER DOOR

NOTES:
1. WHERE ARCHITRAVES WILL BE USED, THESE MUST BE FITTED AFTER THE WATERPROOF MEMBRANE AND THE BASE OF THE ARCHITRAVE MUST ALIGN WITH THE TOP CUT-OUT IN THE DOOR JAMB. THE ARCHITRAVE WILL OBSCURE PART OF THE UPSTAND OF THE WATERPROOF MEMBRANE.
2. REFER TO FIGURE 14 (p45) FOR DETAILING OF THE WATER-STOP.

4.5.1 WATER-STOPS
WATER-STOPS MUST BE CONSTRUCTED AS SHOWN IN FIGURE 14 BELOW.
AT DOOR THRESHOLDS, THE MEMBRANE MUST BE DRESSED TO THE BASE OF THE DOOR JAMB AS SHOWN IN FIGURES 18-20 (p47).

WATER-STOPS ARE REQUIRED BY SECTION 4.0, DESIGN (p20) AT EDGES OF A WET-AREA WATERPROOF MEMBRANE SYSTEM WHERE AN UPSTAND AGAINST A WALL CANNOT BE FORMED.

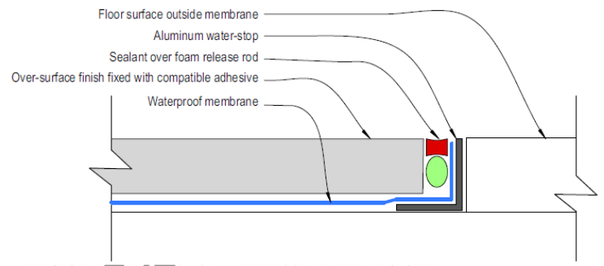


FIGURE 14: WATER-STOP AT TERMINATION OF WATERPROOF MEMBRANE SYSTEM

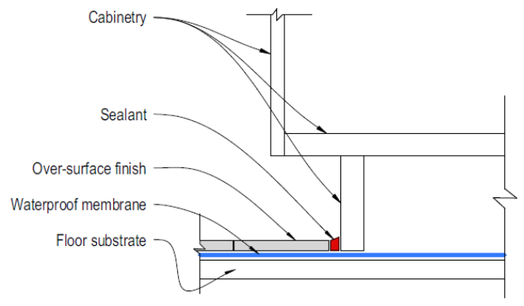


FIGURE 15: WATERPROOF MEMBRANE SYSTEM INSTALLED BEFORE CABINETRY

4.5.2 FLOOR-TO-WALL JUNCTIONS
AT THE PERIMETER OF THE ROOM, THE WATERPROOF MEMBRANE SYSTEM MUST FORM AN UPSTAND OF AT LEAST 75mm ABOVE FLOOR LEVEL, AS SHOWN IN FIGURE 21 BELOW. WHERE A MEMBRANE WILL ALSO BE PROVIDED TO THE WALL FACE, THIS MUST BE CONTINUOUS WITH THE MEMBRANE TO THE FLOOR AS SHOWN IN FIGURE 22 (p49).

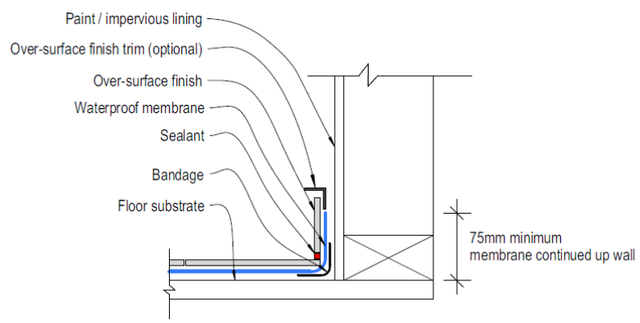
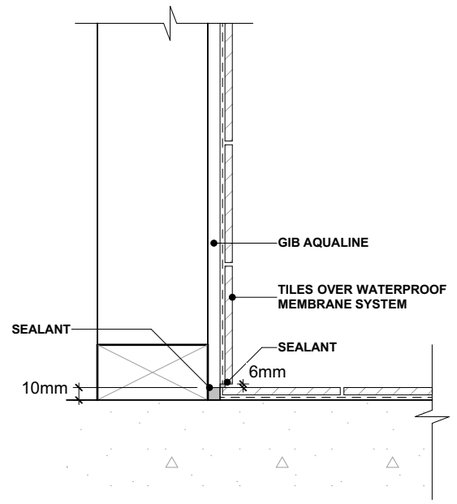


FIGURE 21: WATERPROOF MEMBRANE SYSTEM BEHIND SKIRTING

NOTES:
1. PROVIDE A 20 x 20mm TIMBER FILLET (CCA-TREATED TO H3.2) OR A SEALANT FILLET, WHERE REQUIRED BY THE SUPPLIER'S HANDLING / INSTALLATION INSTRUCTIONS.
2. FOR WATERPROOF MEMBRANE SYSTEMS WITH A SELF-FINISH, THE OVER-SURFACE FINISH TO THE FLOOR, THE SEALANT BEAD, AND IF THE SKIRTING ARE NOT REQUIRED.
3. IF THE MEMBRANE WILL NOT ALSO BE PROVIDED TO THE WALL FACE, THEN IT MUST BE APPLIED TO A MINIMUM 75mm ABOVE FLOOR LEVEL.



TILED WALL TO FLOOR JUNCTION DETAIL

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Figure 8: Mains Pressure Storage Water Heater System (unvented)
Paragraphs 6.1.2 and 6.2.1 b)

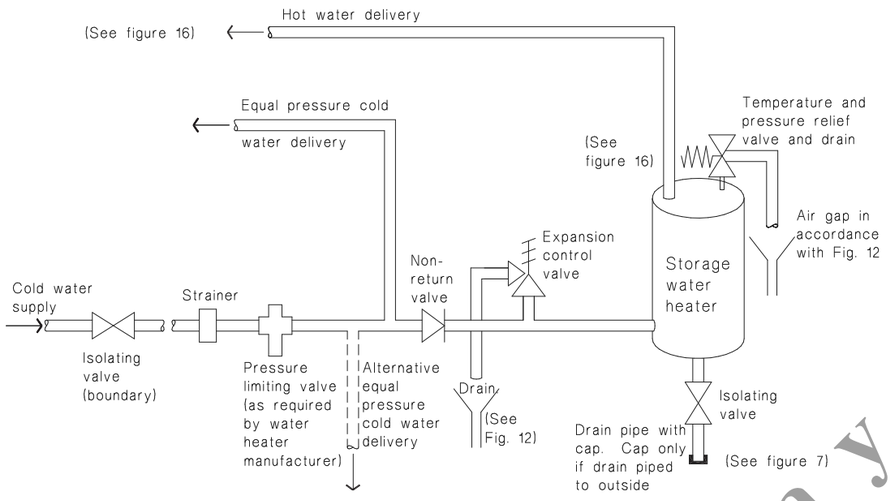
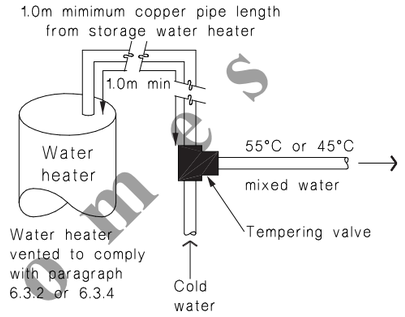
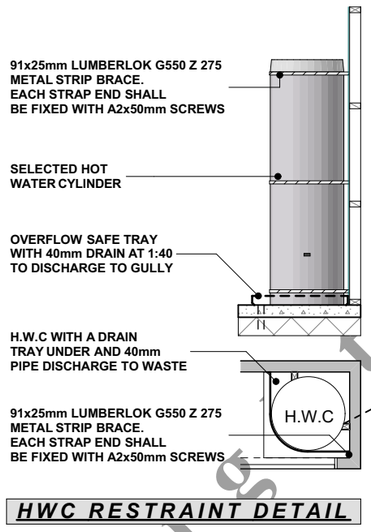


Figure 16: Tempering Valve Installation
Paragraph 6.14.2 a)



(b) Where all hot water is tempered

Note:
1. For optimum system efficiency the tempering valve, for other than a mains pressure system, may be located as low as practicable to achieve the manufacturer's recommended head, at the tempering valve.
2. 1.0m minimum copper pipe length from storage water heater.



HWC RESTRAINT DETAIL

MAINS PRESSURE HOT WATER HEATER FITTED WITH - TEMPERATURE & PRESSURE RELIEF VALVE AND DRAIN - 20mm COPPER COMBINE WITH MAIN DRAIN TEMPERING VALVE NON RETURN VALVE & MAIN DRAIN PIPE - 20mm COPPER - DRAIN TO GULLY TRAP

STORAGE HOT WATER HEATER TO BE SECURED WITH 3 STRAP PROPRIETARY METAL BRACES

AND 50 x 50 VERTICAL BLOCKING TO FULL HEIGHT FIX TO WALL FRAMING WITH 100 x 3.75mm NAILS @ 600mm CRS

SAFE TRAY NOTE:
PERFORMANCE E3.3.2: STATES THAT; FREE WATER FROM ACCIDENTAL OVERFLOW FROM SANITARY FIXTURES OR SANITARY APPLIANCES MUST BE DISPOSED OF IN A WAY THAT AVOIDS LOSS OF AMENITY OR DAMAGE TO HOUSEHOLD UNITS OR OTHER PROPERTY. AN ACCEPTABLE METHOD OF PREVENTING WATER DAMAGE IS TO LOCATE A SAFE TRAY BELOW THE WATER TANK (SEE FIGURE 4). THE SAFE TRAY SHALL INCORPORATE A DRAIN WITH A MINIMUM DIAMETER OF 40mm. WHERE THE TANK OVERFLOW DISCHARGES INTO THE SAFE TRAY, THE DIAMETER OF THE SAFE TRAY DRAIN SHALL BE GREATER THAN THE OVERFLOW PIPE FROM THE TANK AND COMPLY WITH PARAGRAPH 5.2.2.

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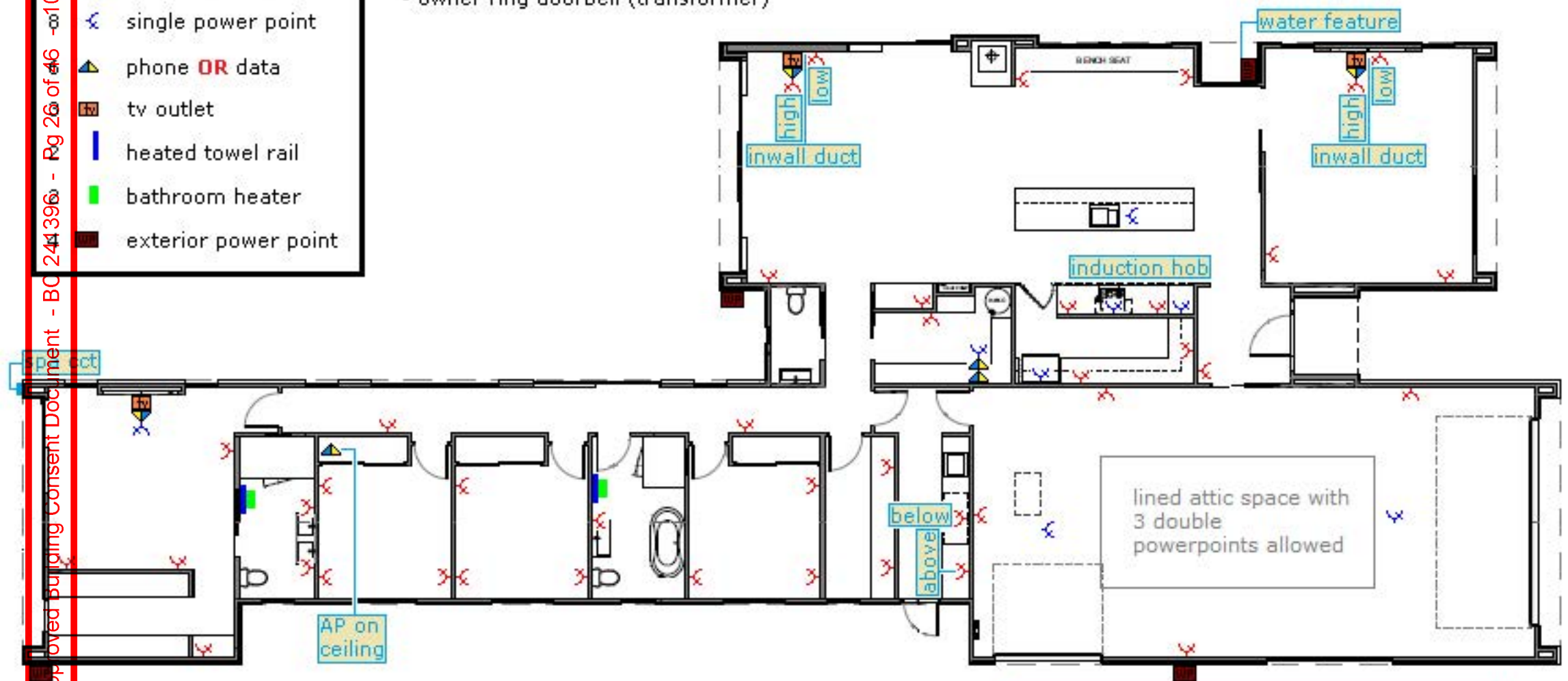
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- 03 double power point
- 08 single power point
- phone **OR** data
- tv outlet
- heated towel rail
- bathroom heater
- exterior power point

- camera system
- owner ring doorbell (transformer)



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DISCLAIMER: positions may have to move on-site due to construction restraints (trusses, load bearing beams etc)

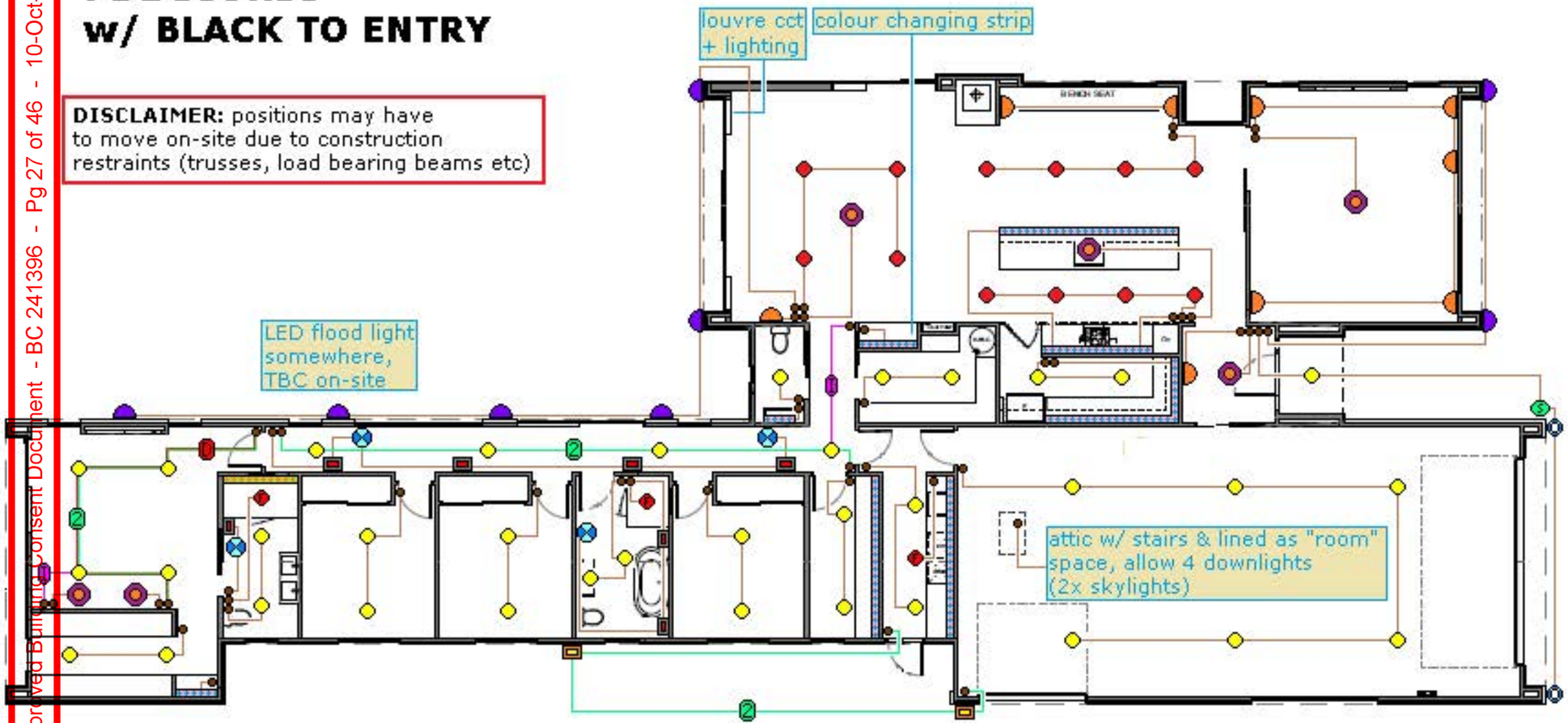
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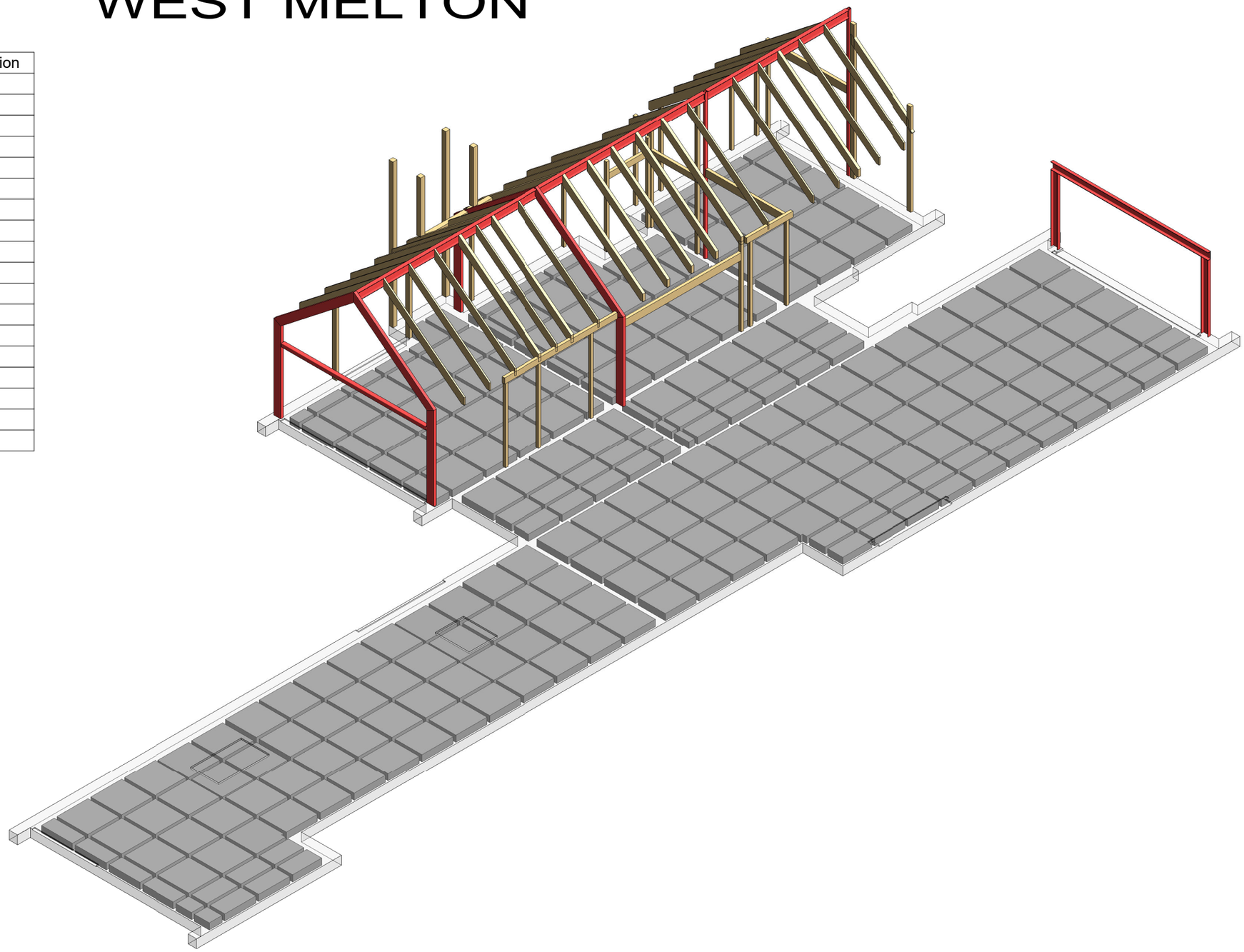
40	white round LED downlight
12	white gimbal LED downlight
3	150mm inline fan
1	sensor only
2	round up-down light
2	LED flood light
8	joiner supplied LED striplight
1	IP rated LED striplight
8	owner supplied wall light exterior
9	owner supplied wall light interior
6	owner supplied pendant
7	LED treadlight
4	360deg internal sensor
1	dimmer
2	intermediate switch
3	two way switch
	light switch

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Lot 374 Wilfield, West Melton

PROPOSED HOUSE AT
LOT 374, WILFIELD,
WEST MELTON

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SHEET NO.	SHEET NAME	Revision
G001	GENERAL NOTES - STRUCTURAL	A
G002	GENERAL NOTES - STRUCTURAL STEEL	A
G003	GENERAL NOTES - FOUNDATION	A
G004	STANDARD FIXING DETAILS	A
G005	ROOF BRACING SPECIFICATION	A
S100	FOUNDATION PLAN	A
S101	POD LAYOUT	A
S102	ROOF FRAMING LAYOUT	B
S103	BRACING LAYOUT	B
S201	BRACING DETAILS	A
S300	FOUNDATION DETAILS	B
S301	FOUNDATION DETAILS	B
S302	PIPE PENETRATION DETAILS	A
S400	STRUCTURAL DETAILS	B
S401	STRUCTURAL DETAILS	B
S402	STRUCTURAL DETAILS	B
S403	STRUCTURAL DETAILS	B
S404	STRUCTURAL DETAILS	B



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GENERAL NOTES STRUCTURAL

GENERAL.

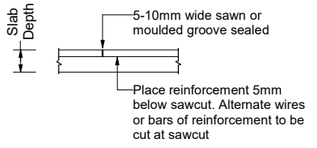
1. Structural drawings shall be read in conjunction with the Specifications, Architectural, Civil, and Engineering Services documents.
2. Unless otherwise noted, all levels are in meters, and all dimensions are in millimeters and shall be checked by contractor prior to construction.
3. Dimensions shall not be obtained by scaling from drawings.
4. All discrepancies shall be referred to the Architect or Engineer for resolution before proceeding with the work.
5. The stability of the structure during construction is the responsibility of the Builder.
6. All materials and workmanship shall be in accordance with the current Codes of Practice except where varied by the Specification and/or Drawings.
7. Where proprietary products are specified in the documents the contractor may submit an alternative product for approval.
8. Temporary work and propping is the responsibility of the Builder.

FOUNDATIONS.

1. Foundation material shall be approved by the Engineer for safe bearing capacity before construction of Footings. Blinding concrete to be used where necessary. Typically not shown on drawings. Foundations are assumed to have a minimum safe bearing capacity of 100 kPa. unless noted otherwise This may be deemed satisfied by compliance with NZS3604 section 3 (ultimate bearing strength of 300kPa). If foundation material is less than 100KPa safe bearing the design engineer is to be contacted for alternative design.
2. Sub grade below Hard core (Base Course) for slabs shall be suitable material compacted to 95% of maximum dry density determined by test NZS 4402: Test 4.1.1. or equivalent unless noted otherwise.
3. All walls and columns shall be concentric with supporting foundations unless otherwise noted on drawings.
4. Unless noted other wise the floor slab level shall be 150mm min. above the finished ground level.

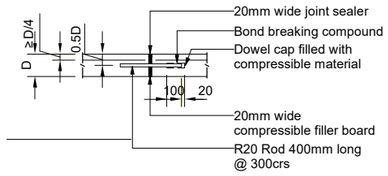
CONCRETE.

1. Minimum concrete strengths shall be as follow:
   20 MPa - Non Sea Spray Zone
   25 MPa - Sea Spray Zone
2. Sizes of concrete elements do not include thickness of applied finishes.
3. Construction Joints where not shown on drawings shall be located to the approval of the Engineer.
4. No penetrations, chases or embedments of pipes other than those shown on the Structural drawings shall be made in concrete members without the prior approval of the Engineer.
5. Finishes to concrete to be as per specification and Architectural drawings.
6. Propriety Precast components referred to on these drawings shall be designed and detailed by the supplier and a copy of the documentation submitted to the Engineer.
7. Tolerances to be as per specification.
8. All penetrations through concrete slabs shall be trimmed by 2- HD12 bars to each edge of the penetrations. Trimmer bars to extend 600mm beyond the return of the penetration.
9. Sawcut joint:



Slab depth	Sawcut depth
100	30
125	35
150	45
175	50
200	60

10. Construction joint:



REINFORCEMENT

1. All reinforcing shall be as follows:

SYMBOL	TYPE
R	Structural grade plain bars to NZS 3679.1 (300 MPa)
M	Mesh to NZS 3421 (485 MPa)
D	Deformed bars grade 300 E to NZS 4671 (300 MPa)
HD	Deformed bars grade 500 E to NZS 4671 (500 MPa)
HR	Plain bars grade 500 E to NZS 4671 (500 MPa)

2. No reinforcement splices shall be made other than those shown on the Structural Drawings, or in table below without the prior approval of the Engineer. Reinforcement laps in concrete to comply with the tables below:

Minimum Lap, 30MPa Concrete (x 1.22 for 20 MPa)

BAR SIZE	TOP STEEL IN BEAMS		BOTTOM STEEL		WALLS		COLUMNS	
	GRADE		GRADE		GRADE		GRADE	
	300	500	300	500	300	500	300	500
10	-	-	-	-	300	400	-	-
12	-	-	-	-	350	450	-	-
16	650	850	500	750	450	750	450	750
20	850	1300	700	1000	600	1000	500	1000
25	1200	1800	950	1300	1300	-	700	1300
32	1600	2000	1250	1800	-	-	1250	1800

Minimum lap for fabric shall be one mesh bar spacing plus 25mm

3. Clear cover to all reinforcement, including stirrups, ties etc. shall be as follows, unless noted otherwise on the drawings.

EXPOSURE SITUATION	FOUNDATIONS	BEAMS AND COLUMNS		SLABS, WALLS AND RIBS DIA<24 /DIA / 24
		MAIN BARS	STIRRUP TIES AND SPIRALS	
Cast against and exposed to earth	75	75	75	75
Exposed to weather or earth -Cast in place -Pre cast	50 40	50 40	40 30	35/45 30/40
Not Exposed to weather or earth -Cast in place -Pre cast	- -	45 35	25 20	20/30 15/25

4. Epoxy grouting of reinforcing bars into concrete. Holes for vertical bars shall be vertical and horizontal starters shall slope down at 15 degrees. Depth of hole and embedment of the reinf. bars to comply with the table below:

BAR SIZE	10	12	16	20	25
HOLE DIA.	16	18	22	26	30
D	160	200	270	350	430
HD	270	350	450	600	750

The tabulated values above apply to a deformed bar epoxy grouted into a hole with rough sides brushed clean of dust and loose material, in dry concrete.

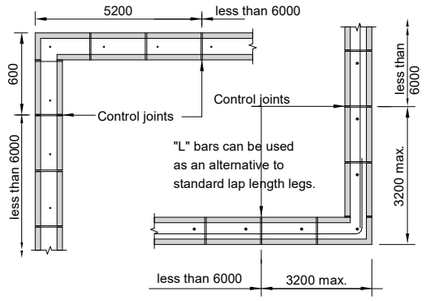
5. Welding of reinforcement is not permitted unless shown on the drawings or approved by the Engineer.
6. Top and bottom reinforcement in slabs shall be adequately supported to insure all reinforcing stays in place during concrete pouring.
7. Hooks, laps and bends are to be in accordance with NZS 3109.
8. Legend used for reinforcement in plan and elevations.

b	Top bars, bottom layer
B	Bottom bars, bottom layer
t	Bottom bars, top layer
T	Top bars, top layer
e./w.	Each way
e./f.	Each Face
n./f.	Near Face
f./f.	Far Face

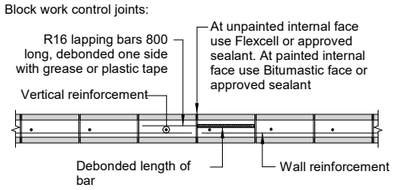
9. Hard drawn steel wire and strands made up of stress relieved cold drawn wire shall comply with BS 5896 or AS 1311.

MASONRY

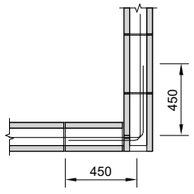
1. All masonry is laid in running bond configuration unless noted otherwise.
2. All masonry within the building structure is Grade B as defined in NZS 4230.
3. Concrete masonry blocks shall conform to NZS 3102 unless noted otherwise. Density shall be > 1750 kg/m.
4. Mortar shall comply with the requirements of NZS 4210. Compressive strength of mortar shall be not less than 17.5 MPa.
5. All cores shall be grout filled (20 MPa) unless noted otherwise on the drawings. (25 MPa concrete in Sea Spray Zone)
6. Clean out openings to be provided at bottom course (1.2m centers max.). Mortar joints to be 10mm thick with blocks fully bedded and perpends filled. Joints to be tooled at exposed or rendered surfaces. Before placing vertical reinforcement cores are to be cleaned of all mortar fines and droppings through clean out openings. After inspection the face shells are to be mortared in at clean out ports and braced prior to grouting. Grout to be rodded to ensure filling of cores with a max. continuous pour height of 2400mm.
7. Control joints should be provided at max. 6.0m centers. Where not shown on the drawings the joints should be located in accordance with NZS 4229:1999 and to the approval of the Engineer.



8. Block work control joints:



9. All block work horizontal reinforcing must lap adequately at corners and junctions as indicated below:



NOTE:
"L" bars can be used as an alternative to standard lap length legs.

10. Chasing of load bearing masonry units is not permitted without the prior approval of the Engineer.
11. Reinforcement laps in block work to comply with the table below:

BAR SIZE	min.	10	12	16	20	25
D	450	450	480	640	800	960
HD	-	700	840	1120	1400	1750

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JOB TITLE
PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

DRAWING TITLE
GENERAL NOTES - STRUCTURAL

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DATE PLOTTED: 20/09/2024 10:58:14 am

GENERAL STRUCTURAL STEEL WORK NOTES

1.0 GENERAL

1.1 Construction Category, Treatment Grades & Coating Quality Level
For this project, and in accordance with AS/NZS 5131 the following shall apply:

	Element	Importance Level	Service Category	Fabrication Category	Construction Category
1	All structural steelwork (hereafter, UNO.).	IL2	SC1	FC1	CC2

1.2 Treatment Grades
Unless noted otherwise in the Project Drawings, the treatment grades according to AS/NZS5131 shall be:

Element	Treatment Grade
All painted structural steelwork UNO.	P2
AESS, where specified. Refer to architectural drawings and specifications.	P3

1.3 Coating Quality Level
The Coating Quality Level assessed according to AS/NZS 5131 shall be as given in the table below

Item	Coating Quality Level
UNO, for coatings applied in atmospheric corrosivity category C1 or less critical C2 environments or where preparation is by hand or power tool cleaning or abrasive blast cleaning to Sa1.	PC1
UNO, for coatings applied in any other atmospheric corrosivity category or for systems where abrasive blasting is required	PC2

1.4 Quality Assurance
The Structural Steel Contractor shall maintain a quality management system to Appendix D of AS/NZS 5131 relevant to the project Construction Category and the project Coating Quality level. In addition, Factory Production Control (FPC) for welding fabrication shall comply with AS/NZS ISO 3834.3 for CC2.

1.5 Structural Steel Contractor Qualification
The Structural Steel Contractor shall have Steel Fabrication Certification to at least the defined Construction Category level through Steel Construction New Zealand and HERA Certifications Ltd.

2.0 STRUCTURAL STEELWORK FABRICATION

2.1 Workmanship and quality
All structural steelwork shall be fabricated in accordance with AS/NZS 5131.
All work on this project shall be undertaken by competent personnel. Requirements and examples of qualifications for competent personnel are contained in AS/NZS 5131.
Steelwork shall be fabricated by fabricators certified under the Steel Fabricator Certification (SFC) scheme (refer www.steelfabcert.co.nz)

2.2 Tolerances
Fabrication tolerances shall conform to the requirements of AS/NZS 5131. The tolerance class for functional tolerances
shall be Class 1 UNO. Class 2 shall be used for IL3 importance level structure.

2.3 Steel materials

2.3.1 Grades
All structural steel material shall conform to the following table UNO:

Component	To conform with Standard	Minimum Grade
Hot rolled steel sections	AS/NZS 3679.1; TS 102	300
Plate	AS/NZS 3678; TS 102	300
Flats	AS/NZS 1594; TS 102	300
Hollow sections: Circular(CHS) Square (SHS) Rectangular (RHS)	AS/NZS 1163; TS 102	C350LO
Welded beams and columns	AS/NZS 3679.2; TS 102	300
Shear studs (composite slab to steel)	AS/NZS 1554.2	380
Quench & tempered plate	AS 3597	690
Purlins and girts	AS 1397	450

Member sizes shall be as shown on the structural drawings. No substitution is permitted without approval in writing from the engineer.
Documentation supplied with materials and components shall conform to the requirements of AS/NZS 5131.

2.3.2 Lamellar tearing, Z-plate requirement & supplementary ultrasonic testing
Joint details which are susceptible to lamellar tearing (LT) are indicated on the project drawings as 'LT susceptible', with the specific plate with high through-thickness stress noted. The specific plate in joints that are indicated as 'LT susceptible' shall be supplied ultrasonically tested to AS 1710 Class 1.

Joints that are designated 'LT susceptible' and further require plate to a nominated Z-value are indicated on the project drawings with a designated Z-value. The plate used for these joints shall be ordered to the designated Z-value.

Supplementary ultrasonic testing to AS 2207 and AS/NZS 1554.1 is required for all plates 40mm thickness and over.

2.3.4 Steel quality
All structural steel shall be sourced from mills with a relevant JAS ANZ accredited third-party certification scheme such as the ACRS Scheme (see http://steelcertification.com/). Alternative sourcing of third- party certified structural steel shall be submitted for review and must be approved prior to the commencement of procurement.

2.3.5 Identification and traceability
The Structural Steel Contractor shall implement systems to ensure identification and traceability complying with AS/NZS 5131 for the appropriate Construction Category, including by all subcontractors.

2.3.6 Splicing of structural members
All structural steelwork members shall be supplied in a single length, except where otherwise indicated with splice locations shown on the structural drawings. Splices at other locations shall be approved by the engineer prior to fabrication commencing.

2.5 Bolting
2.5.1 Bolt designation

4.6/S	Commercial Grade 4.6 bolts to AS 1111, tightened to a snug tight condition to AS/NZS 5131
8.8/S	High strength structural bolts of Grade 8.8 to AS/NZS 1252.1, tightened to a snug tight condition to AS/NZS 5131
8.8/TB	High strength structural bolts of Grade 8.8 to AS/NZS 1252.1, fully tensioned to AS/NZS 5131 as a bearing joint
8.8/TF	High strength structural bolts of Grade 8.8 to AS/NZS 1252.1, fully tensioned to AS/NZS 5131 as a friction joint

2.5.2 Bolt quality, method of tensioning, contact surfaces in tensioned connections & bolt finish
- Provide documentation for commercial and high strength bolts, including 'hold-down' bolts/threaded rods, demonstrating compliance to the relevant standard above prior to delivery to site. Bolts/threaded rods delivered to site without complete documentation shall be rejected.
- High strength structural bolts and threaded rods are required to have verification testing in accordance with SCNZ Steel Advisor MAT1011.
  Provide documentation and a 'Supplier Declaration of Conformity' (SDoC) as defined in Steel Advisor MAT1011.
- /TB and /TF bolt categories shall be installed using either the part turn method or the direct tension indicator method to AS/NZS 5131.
- For connections where 8.8/TF bolts are specified, a friction coefficient of 0.35 has been assumed for the design. The contact surfaces
  shall be prepared according to AS/NZS 5131 and be free from paint, lacquer or other applied finishes unless the applied finish has been
  tested in accordance with AS/NZS 5131 Appendix G and a friction coefficient of 0.35 or higher is determined.
- All bolts shall be hot-dip galvanized to AS/NZS 1214.

2.6 Welding
Welding shall conform to the requirements of AS/NZS 5131 and AS/NZS 1554. Fabricator's Factory Production (FPC) shall comply with AS/NZS ISO 3834.3 for CC2.

2.6.1 Welding consumables
Welding consumables shall conform to the requirements of NZS 3404, based on the yield strength of the steel to be welded, as defined in the table below:

Nominal yield strength of steel to be welded	To conform with New Zealand Standard
≤ 500 MPa	AS/NZS 1554.1
>500MPa; ≤ 690 MPa	AS/NZS 1554.4

The nominal tensile strength of weld metal, fuw, shall be 480 MPa UNO.
All shop and site welds shall be S.P. weld category UNO.

2.6.2 Non-destructive examination
The extent of non-destructive examination (NDE) shall be as defined in Table 13.6.2.2(A) of AS/NZS 5131.

2.7 Minimum connection detailing guidelines
Unless specifically noted otherwise on the drawings, connection details shall be in accordance with the following minimum requirements:

(a) All welds shall be 6mm continuous fillet weld (CFW) all round.
(b) All steel to steel bolted connections shall be minimum two M20 Grade 8.8/S.
(c) A minimum of two threads shall extend past the nut.
(d) All plates shall be 10mm minimum thick.
(e) All purlin cleats shall be 8mm minimum thick.
(f) Welding of hollow sections shall incorporate internal sections or backing plates as necessary to complete the specified weld.
(g) All butt welds shall be full penetration

The ends of hollow section members shall be sealed with nominal thickness plates and continuous seal welded unless noted otherwise.
If hollow sections are to be hot-dip galvanized, vent and drainage holes shall be provided conforming to the requirements of AS/NZS 5131 in non-viewable locations.

2.8 Surface treatment and corrosion protection

Unless noted otherwise in the contractual documentation, the minimum surface treatment of both internal and external steelwork shall conform to the requirements of AS/NZS 5131 and SNZ TS 3404:2018.
All steelwork exposed to view to have weld splatter, flux, dogs and burrs removed and all sealing and butt welds ground smooth.
Structural steelwork to be galvanized shall conform to the requirements of AS/NZS 5131 and detailed in accordance with available galvanizing bath dimensions
Corrosion protection system shall be based on the surface-specific atmospheric corrosivity of the steel element considered, tabulated below;

Surface-specific atmospheric corrosivity categories

Macroclimate Corrosion Category (defined in Design Features Report)	Typically	Location	Characterised by	Surface-specific atmospheric corrosivity				
				External			Internal	
				Exposed	Sheltered	Wet	Dry	Damp
C3	More than 5km to 50 km from salt water	East coast of South island	No Marine influence	C2	C3	C4	C1	C3

Note:
1.The atmospheric corrosivity categories given provide an indication of the environment corrosivity to assist in the selection of a suitable corrosion protection system, taking into account the microclimate and where required microclimate effects

Exposed – Opened to airborne salts, is washed away by the rain and can dry quickly after wetting
Sheltered - Open to airborne salts but unwashed by the rain, such as under an awning or the deck of a steel bridge.
Wet - Often wet for extended periods of time, such as crevices, or in low points and pockets that are not drained.
Dry – Internal environment, such as within a fully air-conditioned office or apartment building.
Damp - Internal environment where condensation may occur, such as non-air conditioned or poorly insulated carparks and warehouses;
or in a high humidity environment with some pollution, such as in some foot processing plants, sewage treatment buildings, and animal shelters.

Internal steelwork – Coating required only for appearance, surface-specific corrosivity category C1 and temporary protection during construction

System Designation [a]	Allowance surface-specific corrosivity during construction [b]
ALK6	C4
IZS1	
PUR1	C4
ALK1 [c]	C2 [d]
ALK3	C3

Note – All galvanized coatings are suitable for internal steelwork

a. Based on AS/NZS 2312.1:2014.
b. Based on a maximum of 1 year's exposure during construction.
c. The alkyd primer system ALK1 should not be used in grey colour because the breakdown of the system will be highly visible. Red oxide colour is prefered to reduce the visual impact of minor and structurally acceptable rusting that may occur on ALK1 system in a few years
d. Based on a maximum of 4 weeks' exposure during construction.

Surface-specific corrosivity category	Years	System Designation a
C2	40	HDG390
C3	40	HDG600 OR HDG600-5D
C4	40	HDG600-5D OR 5I
C5-M	25	HDG600-5D OR 5I
	40	TSA225S (e)

2.9 Architecturally exposed structural steelwork
Architecturally exposed structural steel (AESS) shall conform to the requirements of AS/NZS 5131.
Areas to be treated as AESS and the AESS category (1, 2, 3, 4 or C) are designated on the project drawings.

Architecturally sensitive connection details are indicated on the project drawings. AESS components
shall be AESS 2 UNO.

Where steel elements shown on the structural or architectural drawings are required to be curved, bent or rolled, the fabrication contractor shall be responsible for the methods to achieve the required shapes without localised distortion or compromising the strength of the members.

2.10 Light gauge steel members
Light gauge steel members, comprising purlins, girts and structural decking, shall conform to the requirements of AS/NZS 5131.

2.11 Mechanical and chemical anchors
Mechanical and chemical anchors shall conform to the requirements of AS/NZS 5131.

2.12 Concrete encased steel
UNO, concrete encased steelwork shall be unpainted and free of scale. All steelwork above ground shall be placed centrally with 50mm minimum cover concrete encasement. All steelwork below ground shall be placed centrally with 75mm minimum cover concrete encasement. Refer to drawings for any reinforcement requirements.

2.13 Fire protection to steel
Refer to Fire Engineer & Architect's specifications and details for fire protection requirements. Members requiring intumescent paint, must not be painted and must be free of scale. For members to be protected with fire rated plasterboards, installation and jointing of the plasterboards are to the architect's details
and manufacturer's specifications.

2.14 Connection to timber frame construction
UNO, provide holes in steelwork to allow for M12 bolt fixings at 600 mm centers to timber framing.

2.15 Shop drawings
The Structural Steel contractor at their expense shall prepare shop drawings and any supporting documentation providing the range of information required for the shop detailing documentation in AS/NZS 5131. Shop drawings are to include all provisions documented in all project drawings and any other relevant documents across all design disciplines involved in the project to show full construction details. Where discrepancies are noted in the drawings, it shall be the duty of the Contractor to notify the Design Engineer as soon as they become evident.

Shop drawings numbers shall be maintained. Changes to shop drawings shall be clouded.

The Structural Steel Contractor is to submit all proposed changes to the documented design for approval prior to submitting shop drawings for approval.

The shop drawings shall be reviewed by the Design Engineer for design concept and general arrangement only. Allow two (2) weeks for review. The accuracy
and adequacy of the shop drawings are the Contractors responsibility.

UNO, shop drawings shall be submitted for approval. No steelwork shall be fabricated until final approval of the shop detail drawings has been received and all
review comments on the workshop drawings have been resolved.

3.0 STRUCTURAL STEELWORK ERECTION

3.1 General
Structural steelwork erection shall conform to the requirements of AS/NZS 5131.

3.2 Camber
All members having a natural camber within the straightness tolerance shall be erected with the natural camber up.

3.3 Tolerances
Erection tolerances shall conform to the requirements of AS/NZS 5131. The tolerance class for functional tolerances shall be Class 1 for CC2.

3.4 Post-installed anchors
The installation of mechanical and chemical anchors shall conform to the requirements of AS/NZS 5131.
Post-installed anchors shall only be used where specified on the drawings. Contractor shall obtain written approval from engineer prior to using post-installed anchors for missing or misplaced anchors.
Care shall be given to avoid conflicts with existing reinforcing when drilling holes. Holes shall be drilled and cleaned per the manufacturer's details.
Anchors shall be installed per the manufacturer's installation guidelines.
Site testing shall be performed on mechanical and chemical anchors to validate correct installation (proof testing). A minimum test sample population shall be three specimens or 2.5% of the total relevant anchor population, whichever is greater. If a single failure is recorded, the minimum test sample population shall be increased to six test specimens or 5% of the total relevant anchor population, whichever is greater. If two or more test samples fail, all anchors in the relevant anchor population shall be tested.
The 'test sample population' is defined as a group of anchors representative of the relevant anchor population, having the same type of anchor, the same base material (that has not experienced different environmental exposure), same installation method and same installation personnel. Where any of these variables change, this group of anchors shall be considered a separate anchor population.
All site testing of post-installed anchors shall be undertaken according to the requirements of AEFAC Technical Note – Site testing guidelines Volumes 1 to 4 (available at www.aefac.org.au/resources).

3.5 Connection to footings
Footing bolts shall meet the requirements of AS/NZS 5131.
All hold down/anchor bolts shall be Property Class 4.6 bolts unless noted otherwise.
Materials used for grouting under steel base plates and bearing plates shall meet the requirements defined in AS/NZS 5131.
High strength non-shrink cementitious grout, such as SikaGrout – 212 HP NZ, shall be provided underneath all baseplates and
shall have a compressive strength equal to or greater than the compression strength of the adjacent concrete. Refer specification for testing requirements.
Drypack may be used when specified on the structural drawings.

3.6 Cast-in components
All bolts, nuts and washers, including hold down bolts, cast-in ferrules and masonry anchors are to be hot-dip galvanized unless noted otherwise.
All galvanized components to be cast into concrete must be passivated.

3.7 Erection Sequence Methodology
Where assessed as required from the risk planning workshops, submit the Erection Sequence Methodology' (ESM) for approval.
The structural steelwork erector shall be responsible for temporary stability during erection.
The structural steelwork erector shall provide and leave in place until permanent bracing elements are constructed, such temporary bracing as is necessary to securely stabilise the structure during erection.
Where the structure has been designed with bracing elements providing lateral stability, the steelwork may not be stable until the precast panels are in their final position with the fixings in place. The contractor shall ensure that the steel structure is in a stable and safe condition until the bracing elements are completed.

3.8 Proprietary items
Proprietary items (e.g. purlins, roof/wall sheeting, ferrules) shall be installed in accordance with the manufacturer's specifications.

3.9 Site weld approval
Other than site welds (if any) shown on the shop drawings, do not weld on site without prior approval. Where possible, locate site welds in positions for down hand welding.

4.0 Site modifications
No site modification to any steel member, connection component, mechanical fastener, weld or corrosion protection shall be made without a detailed written procedure.

REV	DATE	AMENDMENT	BY
A	22.07.2024	CONSENT ISSUE	JZ

HFC GROUP
CIVIL & STRUCTURAL ENGINEERS

DESIGN ISSUED BY HFC STRUCTURES LTD, PART OF THE HFC GROUP OF COMPANIES. AUCKLAND 09 367 1070 CHRISTCHURCH 03 339 7000 QUEENSTOWN 03 499 0051 WARKWORTH 09 367 1070

JOB TITLE
PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

DRAWING TITLE
GENERAL NOTES - STRUCTURAL STEEL

DRAWING STATUS
CONSENT ISSUE

SCALE @ A1	DATE	SHEET NO.
1 : 10	09.07.2024	G002
DRAWN	JZ	
DESIGNED	RZ	JOB NO. 23640 / REV. A
CHECKED	JL	

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DATE PLOTTED: 20/09/2024 10:58:14 am

General Notes:

1. Foundation drawings shall be read in conjunction with the geotechnical report and the building consent drawings and specifications by any other consultants involved in the building consent.
2. Unless otherwise noted, all levels are in meters, and all dimensions are in millimeters. and shall be checked by contractor prior to construction.
3. Dimensions shall not be obtained by scaling from drawings. Refer to architects drawings for all setout dimensions, recesses and service positions. Internal slab thickenings and pad foundations to be accurately set out using the Architects drawings
4. All discrepancies shall be referred to the architect or engineer for resolution before proceeding with the work.
5. The stability of the structure during construction is the responsibility of the builder.
6. All materials and workmanship shall be in accordance with the current codes of practice except where varied by the specification and/or drawings.
7. Where proprietary products are specified in the documents the contractor may submit an alternative product for approval.
8. Temporary work and propping is the responsibility of the builder.
9. Concrete slabs should be cured for 7 days in accordance with NZS3109. Saw cuts are recommended to mitigate shrinkage cracking. Sawcuts can be omitted providing the contractor takes appropriate measures and it responsible for controlling shrinkage.
10. Mesh chair G25/40 are to be used to support steel mesh. Raft/pod rails are not allowed to be used to support steel mesh/bar reinforcement.

Site soil conditions:

A. Allowable bearing pressure = 100kPa

B. Dependable bearing pressure = 150kPa

C. Geotechnical ultimate bearing = 300kPa

D. Subgrade (if required) to be prepared as per geotechnical report or compacted to 95% of maximum dry density determined by test NZS 4402: Test 4.1.1. or equivalent unless noted otherwise.

Cover & Strength:
Cast against DPM = 50mm
Within Ribs: Side cover = 40mm
Cast against ground = 75mm
Foundations and slab to be 25MPa (min)
Refer Mix Code below

Surface Finishes: (NZS 3114:1987)
Concealed work = F1
Exposed edges of foundation = F5
Floor slab = U3

Reinforcing:

SYMBOL	TYPE
R	Plain bars grade 300E to NZS 4671 (300 MPa)
D	Deformed bars grade 300E to NZS 4671 (300 MPa)
HR	Plain bars grade 500E to NZS 4671 (500 MPa)
HD	Deformed bars grade 500E to NZS 4671 (500 MPa)

BAR SIZE HD	10	12	16
LAP LENGTH (25MPa)	450	600	900

NOTE 1: Site excavation (Indicative only)
±300 topsoil & unsuitable material should be removed from building platform. Certified compacted hard fill (well graded AP40) extending 200mm(or the depth of the hardfill which ever is greater) out from building footprint may be required to bring slab up to level. The depth of hardfill or engineered fill required will need to be confirmed on site accounting for the FFL, existing ground levels and topsoil/unsuitable soil depths found on site. Refer to the geotechnical report for subsoil conditions. Poorly graded river gravels (tailings or 20/40 rounded river stone) that have commonly been used in Christchurch as subgrade material shall not be used.

NOTE 2: Inspection Schedule notes
Contact Inspecting engineer as below for the following inspections to enable a PS4 to be issued for construction review. It is the responsibility of contractor to arrange below inspections.
1. Cut platform inspection
2. Certify gravel raft and compaction where building contractor to submit to HFC
   1.) Less than 250mm gravel provide either a heel test or cleggs hammer test, more than 250mm gravel (more than 1 lift) provide NDT test
   2.) 95% Max dry density laboratory result
   3.) Material (Hardfill) sourced Docket
   4.) PS3 from Building contractor
3. Pre pour inspection and any other structural items if applicable to this consent.
Please allow 48hrs notice to ensure availability of the inspecting engineer.
Refer to inspection schedule attached with PS1 for a full list of required inspections.

Scan to Book Inspection

NOTE 3: Bridging note
Bridging of public services has not been allowed for unless indicated on the foundation layout (refer S100).

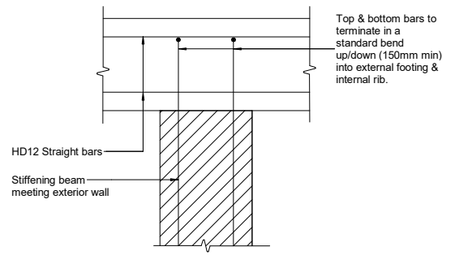
No construction is permitted within a 45 degree line of influence from 500mm below the pipe invert (or as per geotechnical or council requirements). Minimum proximity and pile embedment's as per local council and government standards need to be followed when constructing in this zone.

HFC and the architect should be notified for specific bridging design if applicable.

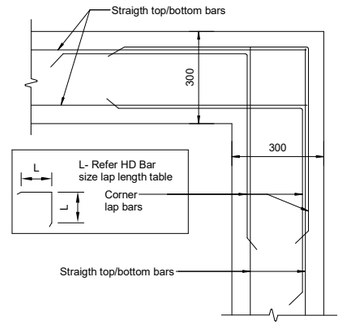
CONCRETE AND REINFORCING MESH SUMMARY

MESH OPTIONS - 146.1mm²/m, 2.29kg/m² or greater Mesh SE62 as per AS/NZS4671),
Concrete - Allied super Slab
Use mix code 252RSS

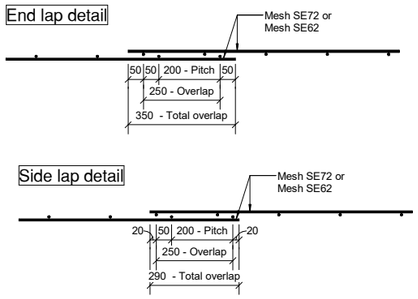
Allied Concrete



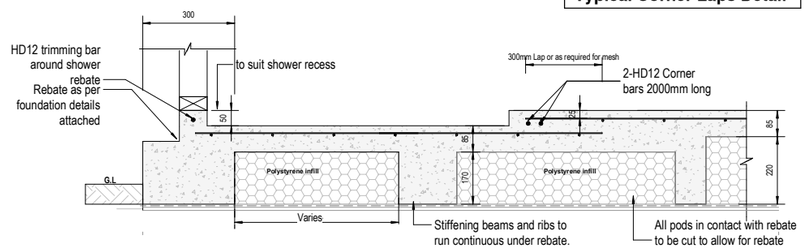
Typical Stiffening Detail



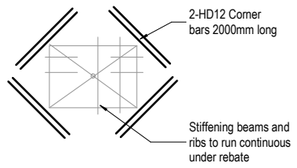
Typical Corner Laps Detail



Mesh Minimum Lapping



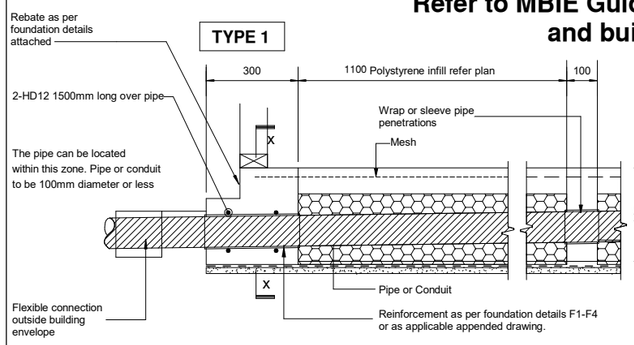
Typical Shower Recess Detail if shower rebate required

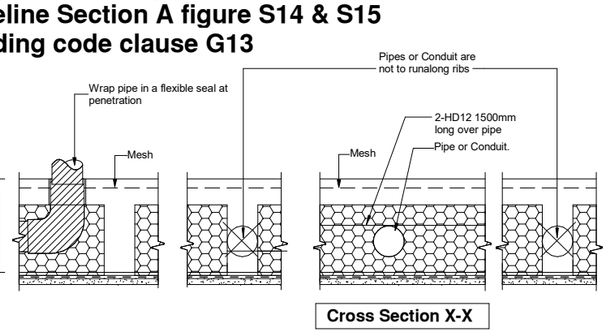


SHOWER PLAN VIEW

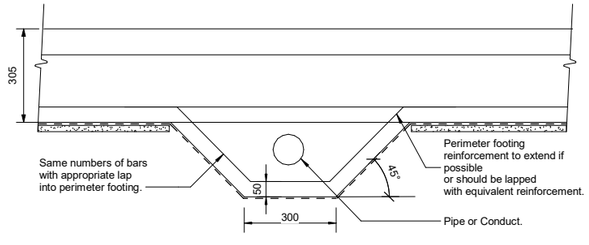
Pipe Penetration Details For High Seismic Zones
Refer to MBIE Guideline Section A figure S14 & S15 and building code clause G13

TYPE 1





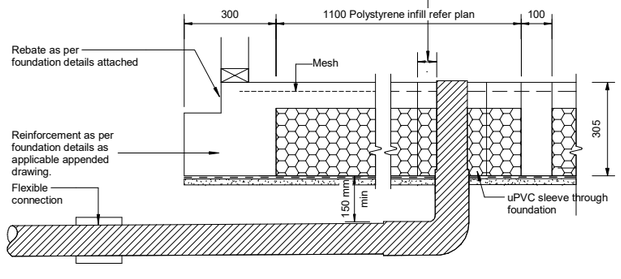
Cross Section X-X



Typical deepened edge penetration detail for Type 1 where required

TYPE 2

Refer MBIE guidance part A fig 5.14
The clearance around the pipe is required to minimize the risk of shearing and critically damaging the services in a ULS earthquake (Ultimate limit state - where code limits are to preserve life safety only)
Adopt 25mm clearance minimum, 63mm clearance is recommended as per the MBIE guidance



REV	DATE	AMENDMENT	BY
A	22.07.2024	CONSENT ISSUE	JZ

HFC GROUP
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DESIGN ISSUED BY HFC STRUCTURES LTD, PART OF THE HFC GROUP OF COMPANIES. AUCKLAND 09 367 1070 CHRISTCHURCH 03 339 7000 QUEENSTOWN 03 499 0051 WARKWORTH 09 367 1070

JOB TITLE
PROPOSED HOUSE AT
LOT 374, WILFIELD,
WEST MELTON

DRAWING TITLE
GENERAL NOTES - FOUNDATION

DRAWING STATUS
CONSENT ISSUE

SCALE @ A1 As indicated @ A3 1:	DATE 09.07.2024	SHEET NO. G003	
DRAWN	JZ		
DESIGNED	RZ	JOB NO. 23640	ISSUE A
CHECKED	JL		

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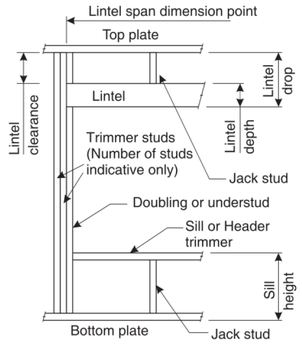
LINTEL FIXING SCHEDULE

ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12
NZS 3604:2011

NOTE:

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

DEFINITIONS



Lintel Supporting Girder Trusses

Roof Tributary Area	Light Roof Wind Zone			Heavy Roof Wind Zone		
	L, M, H	VH	EH	L, M, H	VH	EH
8.6m²	G	G	H	G	G	H
11.6m²	G	H	H	G	G	H
12.1m²	G	H	H	G	H	H
15.3m²	H	H	-	G	H	H
19.1m²	H	-	-	G	H	-
20.9m²	H	-	-	H	H	-
21.8m²	H	-	-	H	-	-
34.3m²	-	-	-	H	-	-

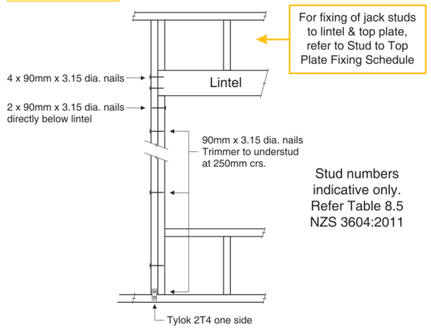
NOTES:
1. Roof Tributary Area = approx. 1/2 x (Total roof area on girder and rafter trusses supported by lintel)
2. Assumed girder truss is at mid-span or middle third span of lintel
3. Use similar fixings for both ends of lintel
4. All other cases require specific engineering design

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

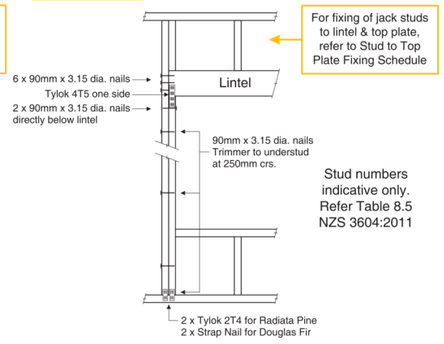
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LINTEL FIXING OPTIONS

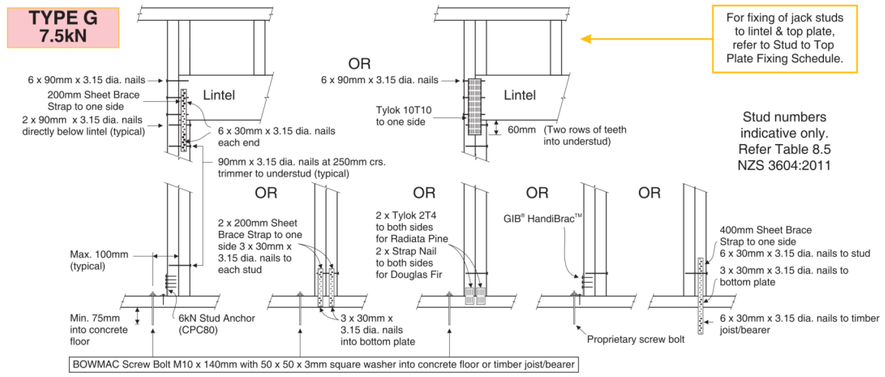
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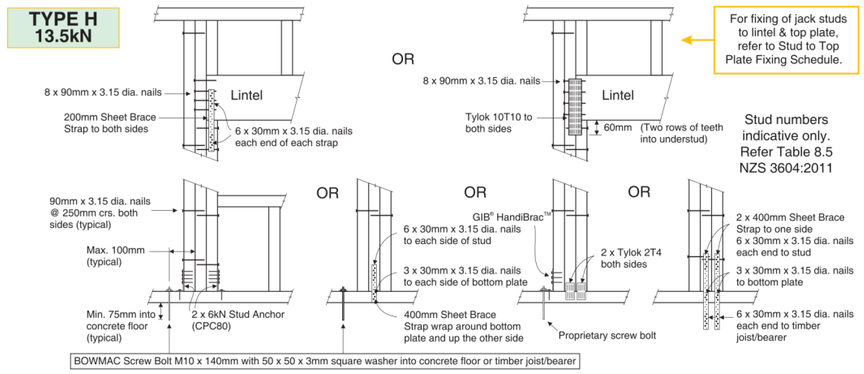
TYPE F 4.0kN



TYPE G 7.5kN



TYPE H 13.5kN



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A	22.07.2024	CONSENT ISSUE	JZ

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JOB TITLE
PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

DRAWING TITLE
STANDARD FIXING DETAILS

DRAWING STATUS
CONSENT ISSUE

SCALE @ A1 / @ A3 1:	DATE	SHEET NO.
	09.07.2024	G004
DRAWN	JZ	
DESIGNED	RZ	JOB NO. 23640 / ISSUE A
CHECKED	JL	

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10/2011

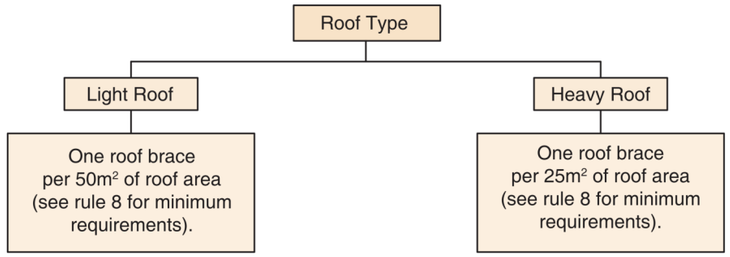
LUMBERLOK®

ROOF BRACING SPECIFICATION

AS PER NZS 3604:2011

- ★ Covers roof bracing requirements to resist horizontal loads as set out in Section 10 NZS 3604:2011.
- ★ A definitive guide to the description and installation of Roof Plane Braces and Roof Space Braces.

Roof Bracing Requirements



Roof Bracing - Rules & Definitions

1. The bracing described in this brochure covers both framed roofs and fully trussed roofs.
2. Roof planes less than 6m² (e.g. dormers & porches) do not require bracing.
3. Roof braces can consist of either
   i) Roof Plane Brace or
   ii) Roof Space Brace or combination of the two.
4. Roof braces are not required on roofs where sarking is installed as per Clause 10.4.4 NZS 3604:2011 or where a ceiling diaphragm is installed and is attached to the rafters.
5. Roof area is the actual plan area of the roof and includes overhangs.
6. A hip or valley rafter running continuously from ridge to top plate can be classed as one roof plane brace.
7. A pair of crossed LUMBERLOK Strip Brace (preferred for ease of installation) can be classed as one roof plane brace and shall be installed as detailed in this brochure.
8. There must be at least one roof plane brace in each roof plane. Each ridge line shall have a minimum of two roof braces.
9. Every design effort should be made to distribute the roof braces as evenly as possible over the entire roof area and run alternately in opposite directions.

SCAN FOR SPECIFICATION VIDEO

https://vimeo.com/117353345

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10. ROOF FRAMING

LUMBERLOK®

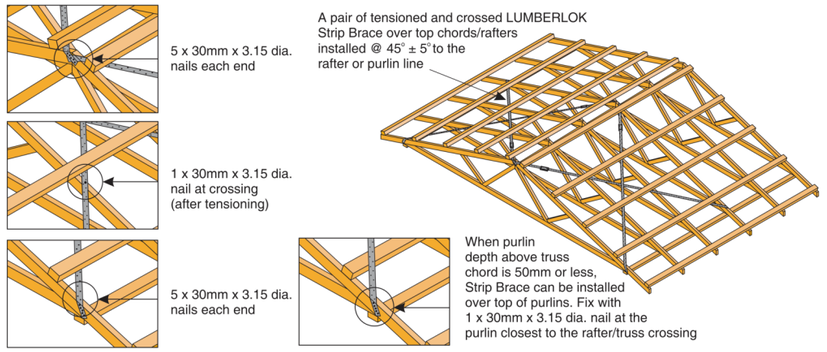
Roof Bracing Options

i) ROOF PLANE BRACE

Each roof plane brace can be:
- A hip or valley rafter running continuously from ridge to the top plate in accordance with Clauses 10.2.1.3.2 or 10.2.1.3.3 NZS 3604:2011.

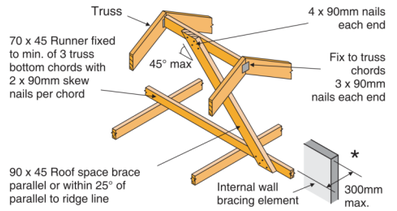
OR

- A pair of tensioned and crossed LUMBERLOK Strip Brace running continuously from ridge to top plate installed as detailed below.

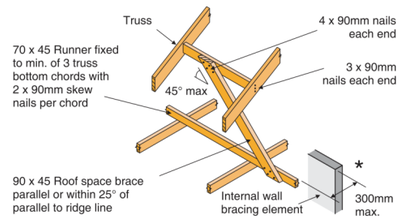


ii) ROOF SPACE BRACE

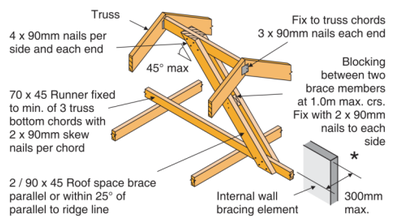
(A) Less than 2m long



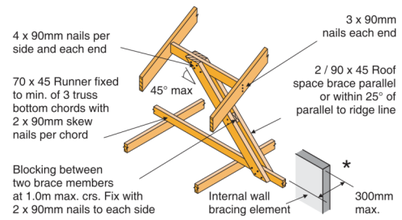
(C) Not directly under the ridge - less than 2m long



(B) More than 2m long (Max. 4.8m)



(D) Not directly under the ridge - more than 2m long



*Not required when a ceiling diaphragm complying with Clause 13.5 NZS 3604:2011 is used.

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JOB TITLE: PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

DRAWING TITLE: ROOF BRACING SPECIFICATION

DRAWING STATUS: CONSENT ISSUE

SCALE @ A1 / @ A3 1:	DATE: 09.07.2024	SHEET NO.: G005	
DRAWN: JZ			
DESIGNED: RZ	JOB NO.: 23640	ISSUE: A	
CHECKED: JL			

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NOTES:

Drawings to be read in conjunction with Architectural documentation.

Contractor to confirm all set out dimensions, rebates, opening sizes, slab set downs, falls and service penetrations with Architect drawings.

All drawing to be read in conjunction with General Notes sheets and project specifications.

Contractor to provide shop drawings to engineer for all structural steelwork & Precast drawings for review prior to fabrication.

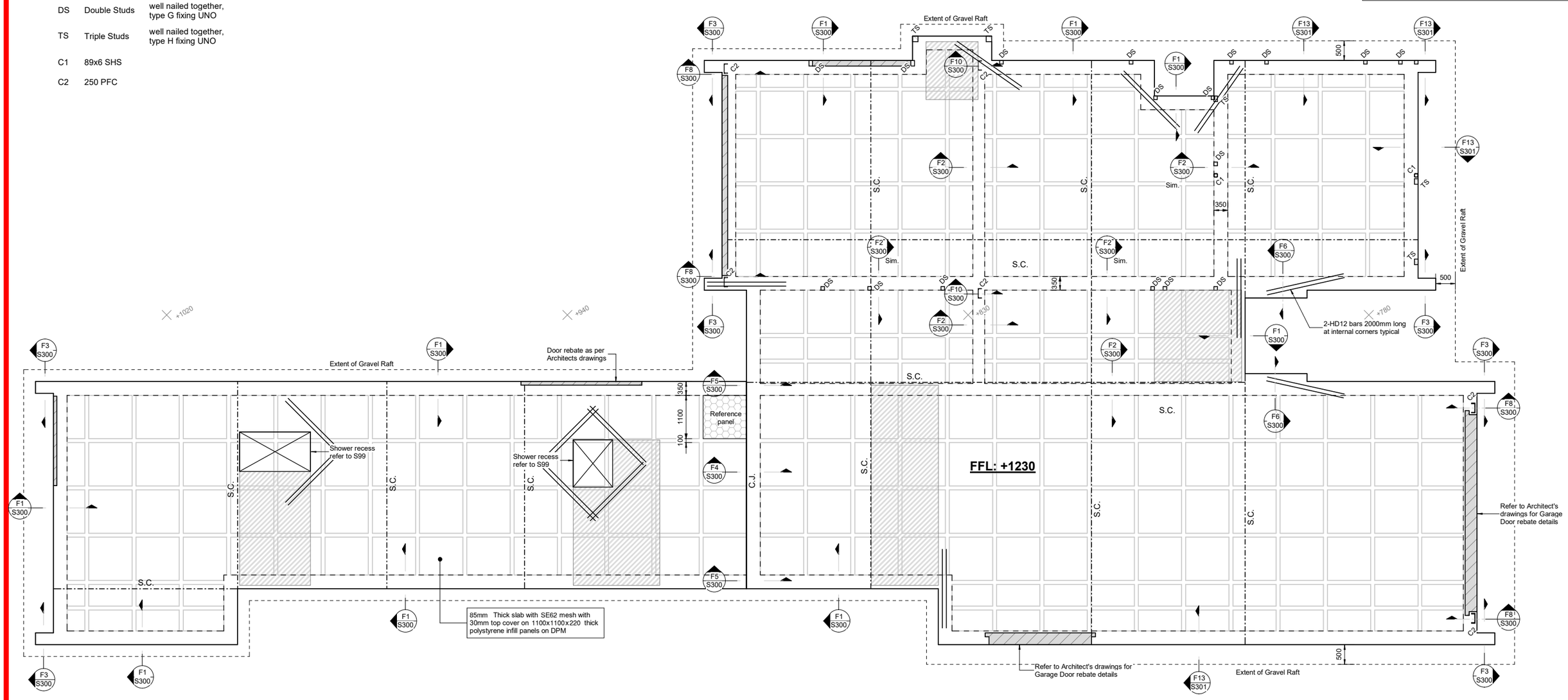
Do not scale from drawings. HFC drawings are not allowed to be used as shop drawings.

All timber works other than shown on drawings to be as per NZS 3604: 2011

Contractor to ensure no direct contact between slab and timber framing

Column Notes:

DS	Double Studs	well nailed together, type G fixing UNO
TS	Triple Studs	well nailed together, type H fixing UNO
C1	89x6 SHS	
C2	250 PFC	



FOUNDATION LAYOUT

SCALE 1 : 50

Tiled area. Any Sawcuts crossing tiled area require a free joint in the tiles above the sawcut.

Point Load

Internal Stiffening beam or Thickening for Load Bearing Walls or Point Loads larger than 13kN

SC **25mm Deep saw cut within 24 hours. Refer to sheet G003 General notes item 9.**

REFER TO SHEET G003 FOR GENERAL NOTES AND INSPECTIONS REQUIREMENTS FOR FOUNDATIONS

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JOB TITLE

PROPOSED HOUSE AT
LOT 374, WILFIELD,
WEST MELTON

DRAWING TITLE

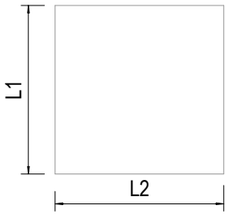
FOUNDATION PLAN

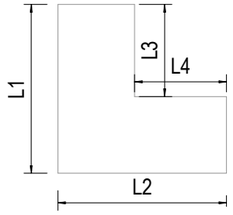
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CONSENT ISSUE

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DESIGNED RZ	JOB NO. 23640	ISSUE A	
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POD SCHEDULE (NORMAL)				
Mark	L1	L2	Count	Material: Name
1	1100	1100	137	POLYPOD
2	330	200	1	POLYPOD
3	550	200	1	POLYPOD
4	520	200	1	POLYPOD
5	530	450	1	POLYPOD
6	1100	200	5	POLYPOD
7	330	520	1	POLYPOD
8	330	880	1	POLYPOD
9	550	450	1	POLYPOD
10	550	600	1	POLYPOD
11	520	600	1	POLYPOD
12	950	600	1	POLYPOD
13	530	1030	2	POLYPOD
14	550	1030	2	POLYPOD
15	530	1050	1	POLYPOD
16	550	1050	1	POLYPOD
17	330	1100	9	POLYPOD
18	530	1100	11	POLYPOD
19	520	1100	9	POLYPOD
20	550	1100	20	POLYPOD
21	960	1100	15	POLYPOD
22	630	1100	1	POLYPOD
23	1100	1050	4	POLYPOD
24	1100	880	4	POLYPOD
25	1100	720	3	POLYPOD
26	630	720	1	POLYPOD
27	1100	600	5	POLYPOD
28	1100	520	4	POLYPOD
29	1100	450	4	POLYPOD

Mark	L1	L2	L3	L4	Count	Material: Name
L1	1100	1100	140	70	1	POLYPOD-L(220-1100)
L2	1100	1100	70	140	1	POLYPOD-L(220-1100)
L3	1100	950	615	620	1	POLYPOD-L(220-1100)

POD SCHEDULE (SHOWER RECESS)				
Mark	L1	L2	Count	Material: Name
S1	1100	1100	10	POLYPOD 170 SHOWER

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NOTES:

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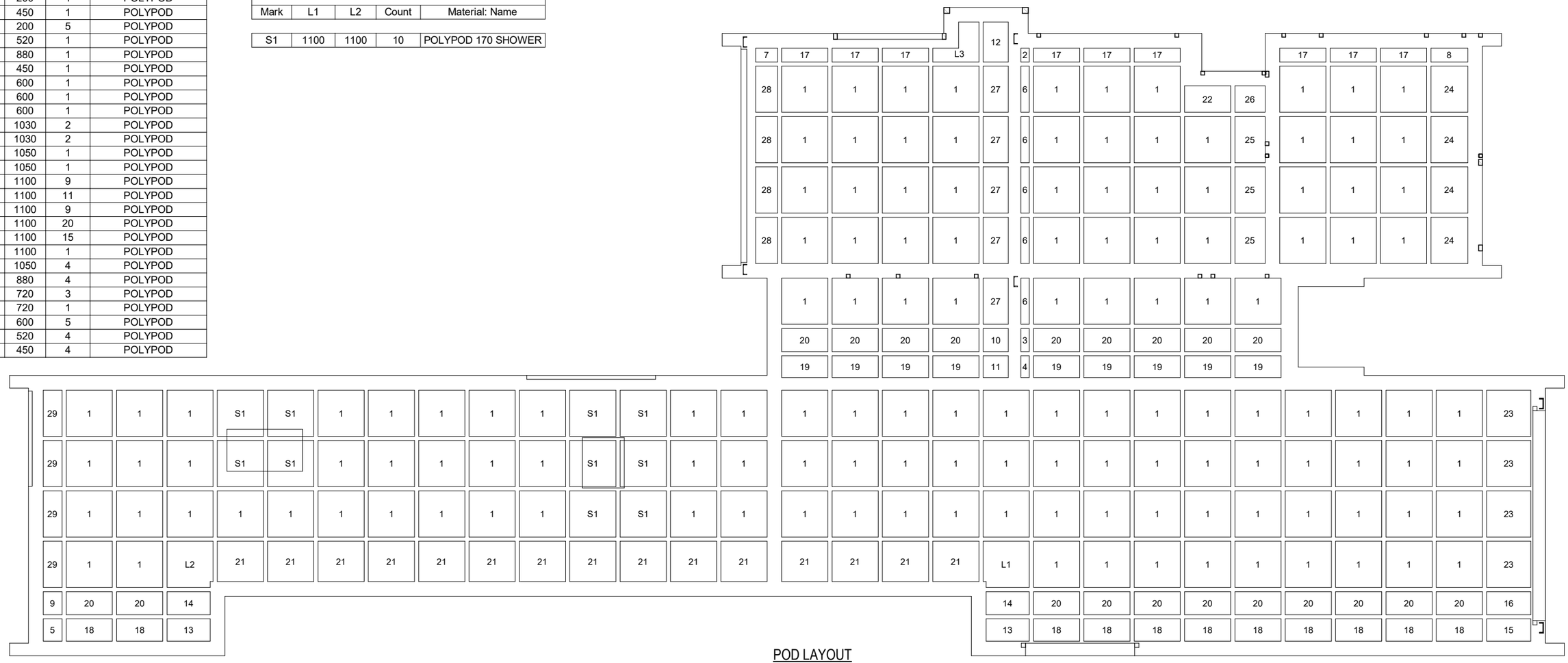
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Do not scale from drawings. HFC drawings are not allowed to be used as shop drawings.

All timber works other than shown on drawings to be as per NZS 3604: 2011

Contractor to ensure no direct contact between slab and timber framing



POD LAYOUT

SCALE 1 : 50

NOTE: Approximate quantities only, no allowance for site wastage & insulation void

STRUCTURAL FOUNDATION MATERIAL TAKE OFF							
Structural Material	Foundation Thickness	Total Length	Total Width	Material: Volume	Perimeter	Area	Area Comments
Concrete, 25MPa	305	37050	15450	52.09 m³	125060	343.34 m²	Excluding all rebate areas

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JOB TITLE

PROPOSED HOUSE AT
LOT 374, WILFIELD,
WEST MELTON

DRAWING TITLE

POD LAYOUT

DRAWING STATUS

CONSENT ISSUE

SCALE @ A1 As indicated @ A3 1:	DATE 09.07.2024	SHEET NO. S101	
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DESIGNED	RZ	JOB NO. 23640	ISSUE A
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NOTES:

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BEAM & LINTEL SCHDULE

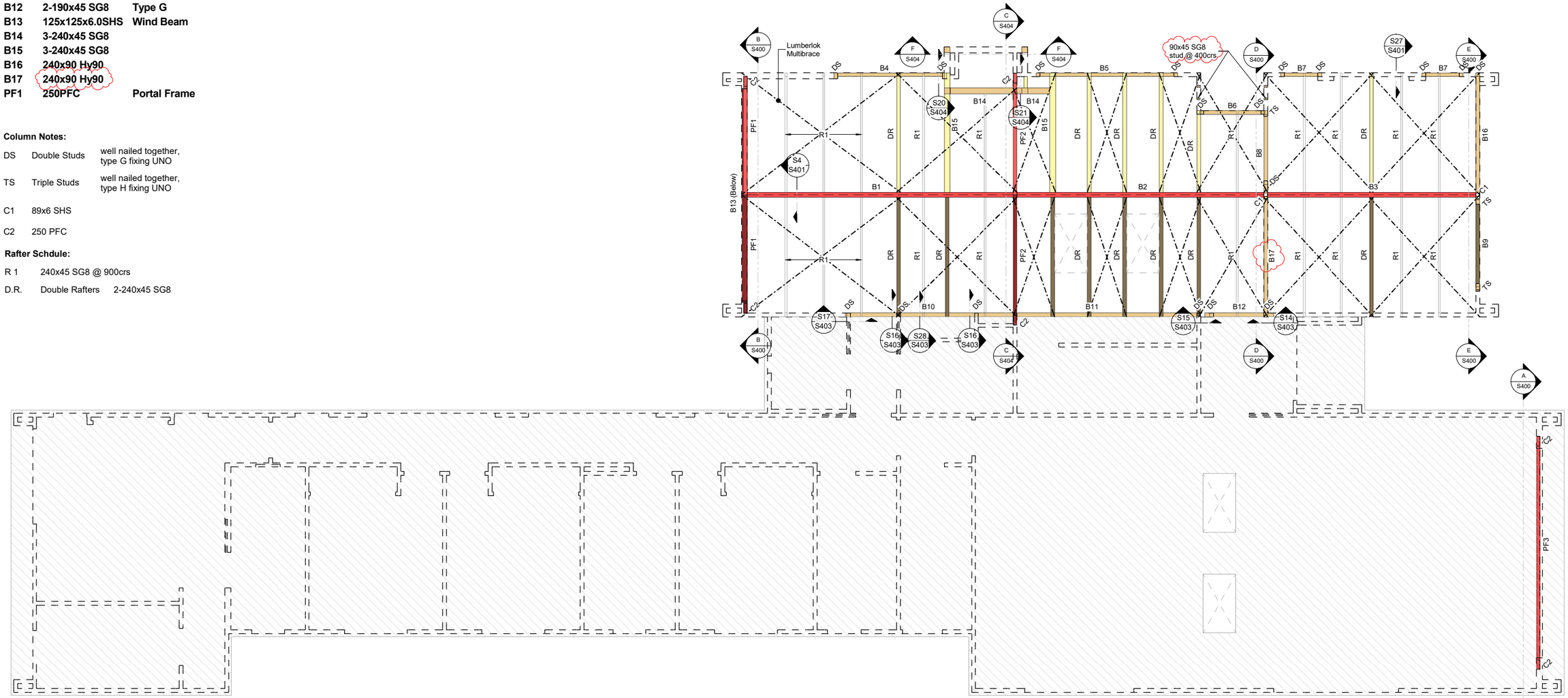
B1	250UB25.7	
B2	250UB25.7	
B3	250UB25.7	
B4	2-240x45 SG8	Type G
B5	2-240x45 SG8	Type G
B6	2-190x45 SG8	Type G
B7	2-140x45 SG8	Type G
B8	2-190x45 SG8	Type G
B9	240x90 Hy90	Type H
B10	2-190x45 SG8	Type G
B11	2-240x45 Hyspan	Type G
B12	2-190x45 SG8	Type G
B13	125x125x6.0SHS	Wind Beam
B14	3-240x45 SG8	
B15	3-240x45 SG8	
B16	240x90 Hy90	
B17	240x90 Hy90	
PF1	250PFC	Portal Frame

Column Notes:

DS	Double Studs	well nailed together, type G fixing UNO
TS	Triple Studs	well nailed together, type H fixing UNO
C1	89x6 SHS	
C2	250 PFC	

Rafter Schdule:

R 1	240x45 SG8 @ 900crs	
D.R.	Double Rafters	2-240x45 SG8



ROOF FRAMING LAYOUT
SCALE 1 : 50

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A	22.07.2024	CONSENT ISSUE	JZ

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JOB TITLE
PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

DRAWING TITLE
ROOF FRAMING LAYOUT

DRAWING STATUS
CONSENT ISSUE

SCALE @ A1 As indicated @ A3 1:	DATE 09.07.2024	SHEET NO. S102	
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DESIGNED RZ	JOB NO. 23640	ISSUE B	
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DATE PLOTTED: 20/09/2024 10:58:23 am SAVE PATH: B:\23640 - Lot 374 Wilfield, West Melton\05 CAD files\02 Revit\23640 - Lot 374 Wilfield, West Melton.rvt

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CEILING DIAPHRAGM NOTES:

Nailing 100mm crs for: Diaphragms up to 7.5 in length, no steeper than 45°, Diaphrams up to 12m in length, no steep than 25°.

- Linings must be installed over the entire area of the diaphragm.

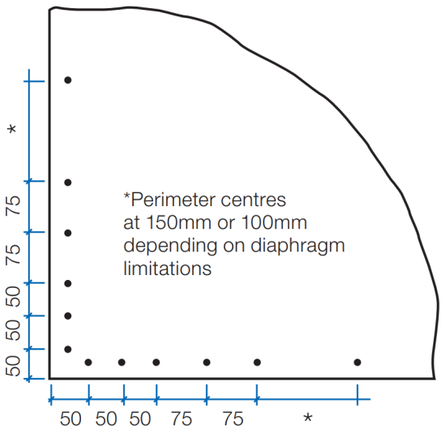
- Fastening must be no less than 12mm from sheet edges and not less than 18mm from sheet ends

-Sheets must be supported by framing members (e.g., ceiling battens) spaced at no more than 500mm centres for 10mm GIB plasterboard and no more than 600mm centres for 13mm GIB plasterboard.

-Sheets within the diaphragm area may be fastened and finished conventionally in accordance with the publication entitled, “GIB® Site Guide”. All joints shall be GIB® Joint Tape reinforced and stopped. It is recommended that sheet butt joints are formed off framing and back-blocked (see “GIB® Site Guide”).

-Use full width sheets where possible. At least 900mm wide sheets with a length not less than 1800mm shall be used. Sheets less than 900mm wide but no less than 600mm may be used provided all joints with adjacent sheets are back-blocked (see “GIB® Site Guide” and figure 22).

-Fasteners are placed at the specified centres around the ceiling diaphragm with the corners fastened using the GIB EzyBrace® fastener pattern.



Unless stated all fastener spacings are maximums.

PRINT IN COLOUR

NOTES:

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Contractor to provide shop drawings to engineer for all structural steelwork & Precast drawings for review prior to fabrication.

Do not scale from drawings. HFC drawings are not allowed to be used as shop drawings.

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Contractor to ensure no direct contact between slab and timber framing

BRACING LAYOUT

SCALE 1 : 50

BRACING NOTES:

- Bracing lengths shown are the minimum used for calculations. Use full wall lengths available where practical.

- GIB bracing shall be installed in strict accordance with the manufacturers written instructions.

- Continuous top plate

REV	DATE	AMENDMENT	BY
B	13.09.2024	CONSENT ISSUE	JZ
A	22.07.2024	CONSENT ISSUE	JZ

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JOB TITLE

PROPOSED HOUSE AT
LOT 374, WILFIELD,
WEST MELTON

DRAWING TITLE

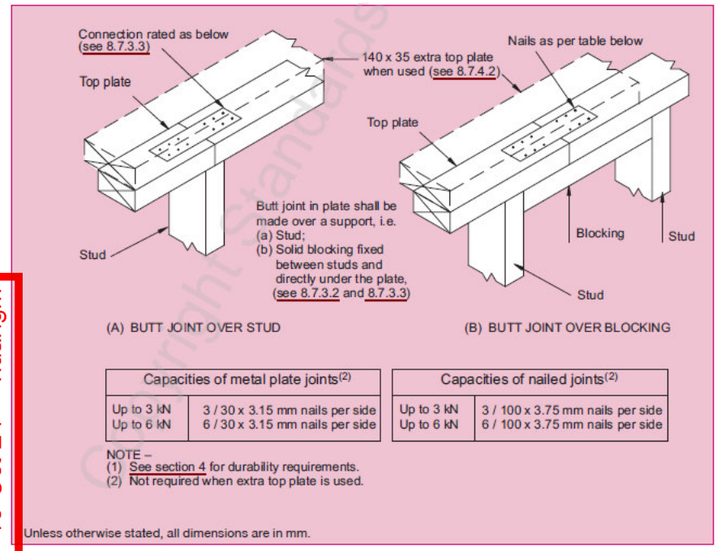
BRACING LAYOUT

DRAWING STATUS

CONSENT ISSUE

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DESIGNED	RZ	JOB NO. 23640	ISSUE B
CHECKED	JL		

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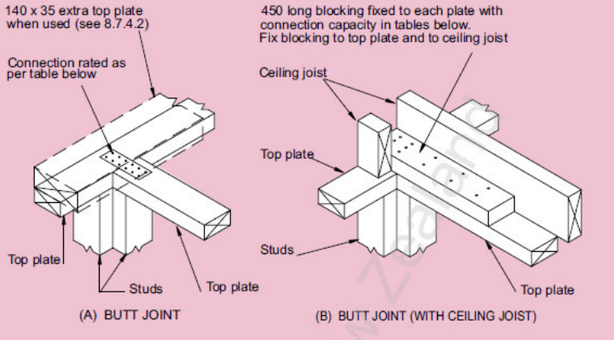
Capacities of metal plate joints(2)	
Up to 3 kN	3 / 30 x 3.15 mm nails per side
Up to 6 kN	6 / 30 x 3.15 mm nails per side

Capacities of nailed joints(2)	
Up to 3 kN	3 / 100 x 3.75 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.

Unless otherwise stated, all dimensions are in mm.

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



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

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

NOTE – See section 4 for durability requirements.

Unless otherwise stated, all dimensions are in mm.

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

8.7.3.3
For single-*storey* buildings the connection in line of the *top plate* of a *wall* that contains one or more *wall bracing elements* shall be jointed according to the *bracing capacity* of the highest-rated individual *wall bracing elements* as follows:

(a) *Bracing capacity* not exceeding 100 *bracing units*: A 3 kN connection as shown in figure 8.15 or by an alternative fixing of 3 kN *capacity* tension and compression along the *plate*;

(b) *Bracing capacity* exceeding 100 *bracing units*: A 6 kN connection as shown in figure 8.15 or by an alternative fixing of 6 kN *capacity* tension and compression along the *plate*.

(c) *Wall top plates* to which ceiling *diaphragms* are attached: A 6 kN connection as shown in figure 8.15 or by an alternative fixing of 6 kN *capacity* in tension and compression along the *plate*.

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* fixing(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 6 kN *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*.

STANDARD BRACING WALL TOP PLATES DETAILS
1 : 5 @ A1

8. WALLS

MiTek® LUMBERLOK®

2024 EDITION V1

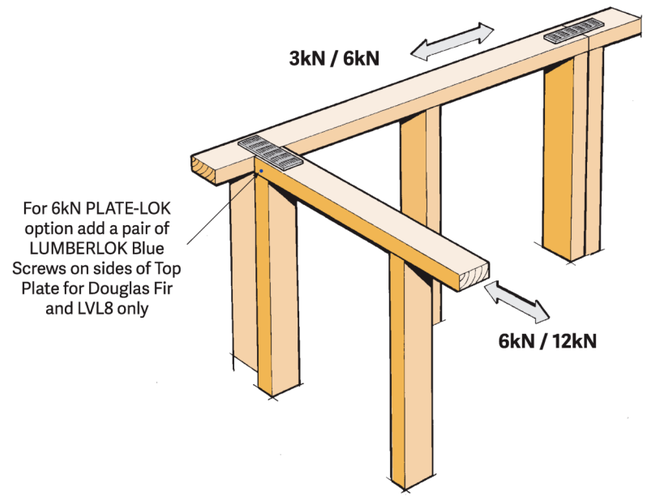
TOP PLATE JOINTING
AS PER CLAUSE 8.7.3 NZS 3604:2011

Top Plates at Right Angles

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

Top Plates in Line

Connection capacity	LUMBERLOK Connector
3kN	Tylok 6T5
6kN	Tylok 6T10 **OR** PLATE-LOK



Available from leading Builders Supply Merchants throughout New Zealand

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A	22.07.2024	CONSENT ISSUE	JZ

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JOB TITLE: PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

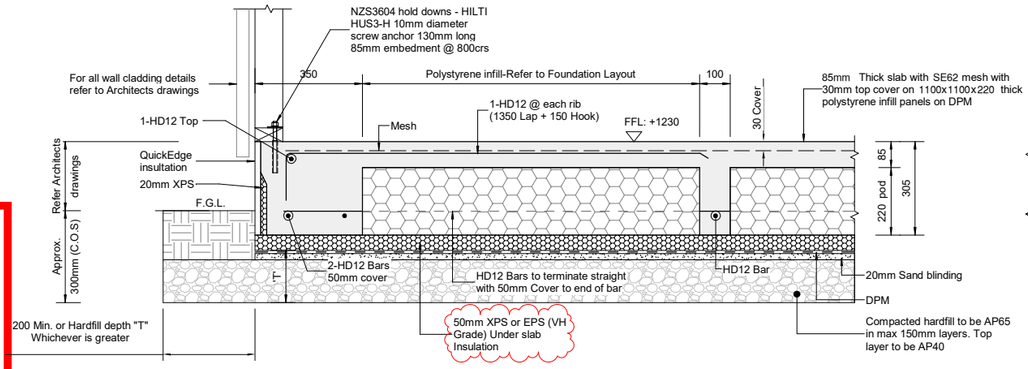
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DRAWING STATUS: CONSENT ISSUE

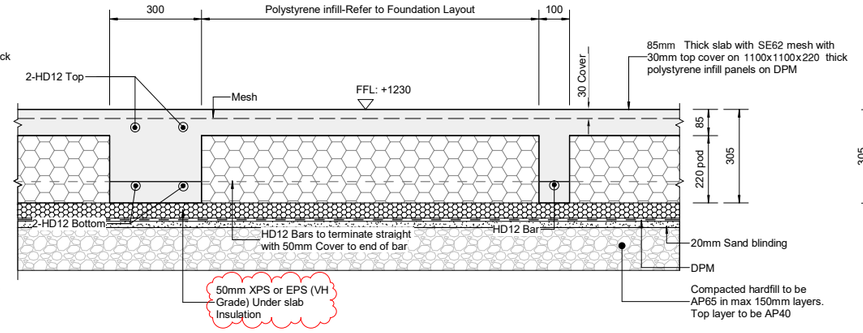
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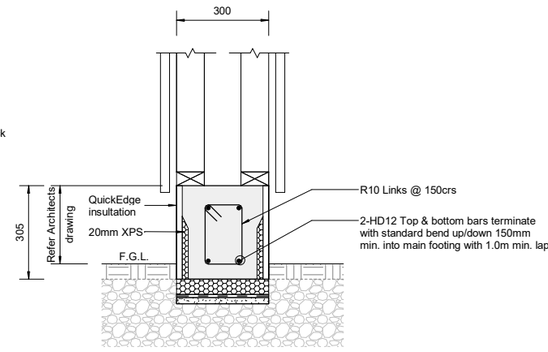
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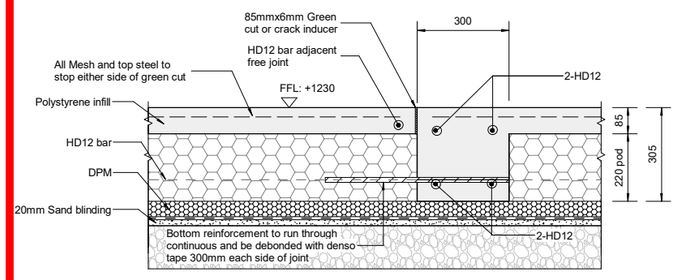
DETAIL F1 S100
SCALE 1 : 10



DETAIL F2
SCALE 1 : 10

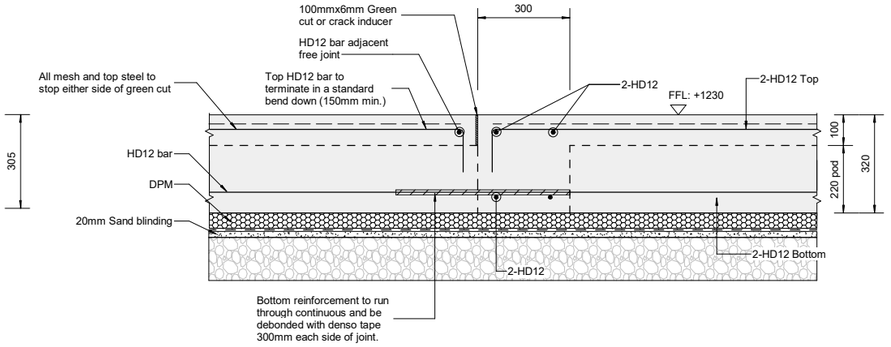


DETAIL F3
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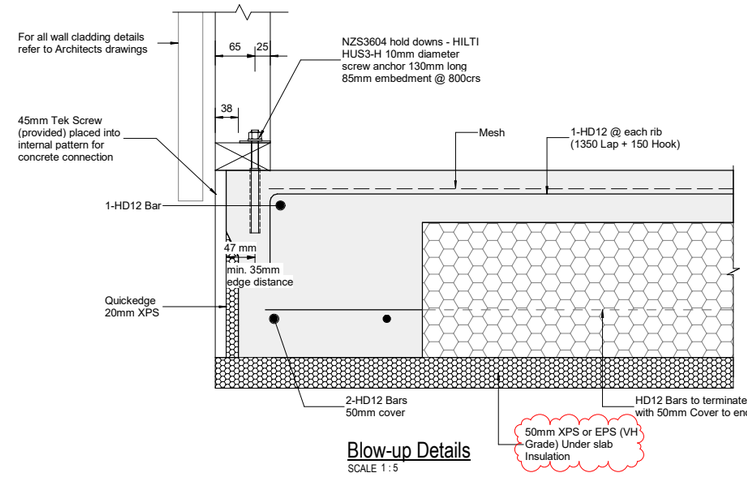


Control Joint Detail

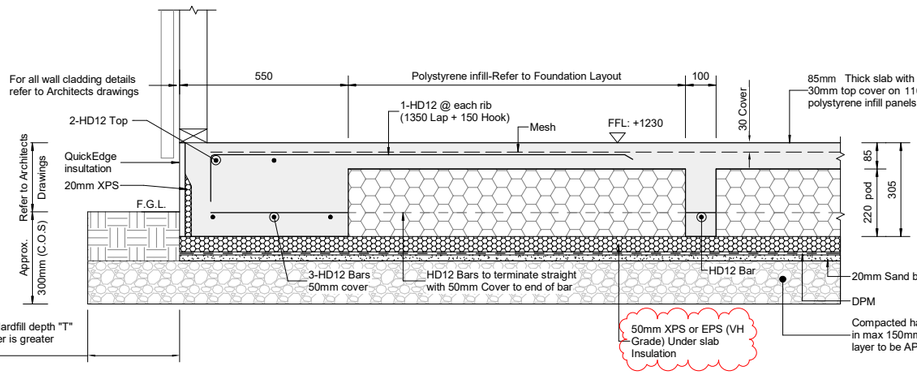
Floor coverings and cladding crossing this joint should be detailed appropriately as per product specifications.



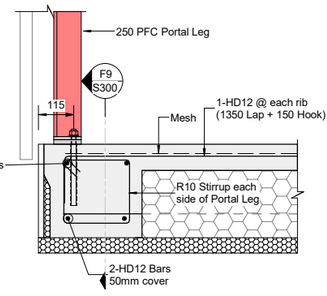
DETAIL F5
SCALE 1 : 10



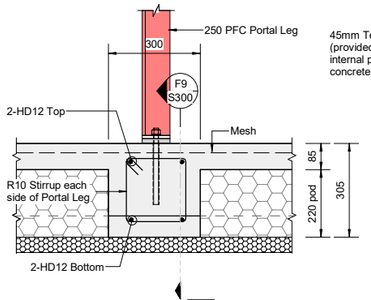
Blow-up Details
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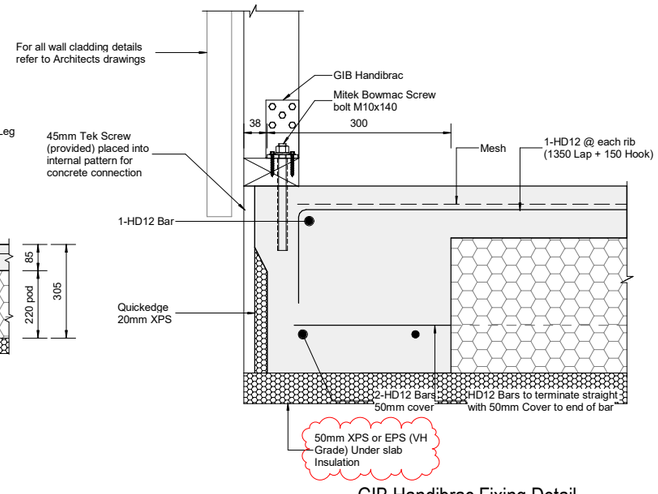
DETAIL F6
SCALE 1 : 10



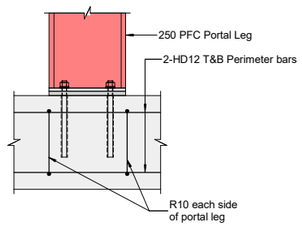
DETAIL F8
SCALE 1 : 10



DETAIL F10
SCALE 1 : 10



GIB Handibrac Fixing Detail
SCALE 1 : 5



DETAIL F9
SCALE 1 : 10

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A	22.07.2024	CONSENT ISSUE	JZ

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JOB TITLE
PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

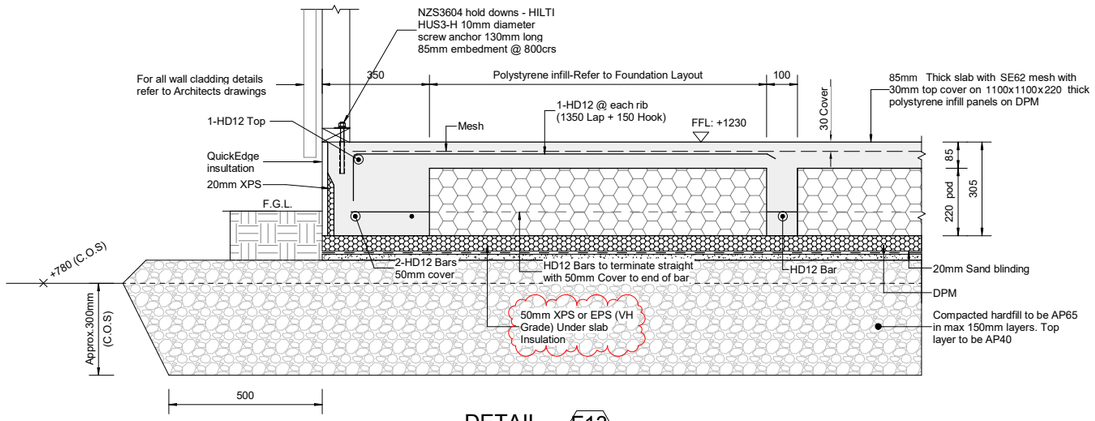
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FOUNDATION DETAILS

DRAWING STATUS
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DESIGNED	RZ	JOB NO. 23640	ISSUE B
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DETAIL F13
SCALE 1 : 10 S100

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NOTES:

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REV	DATE	AMENDMENT	BY
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JOB TITLE
PROPOSED HOUSE AT
LOT 374, WILFIELD,
WEST MELTON

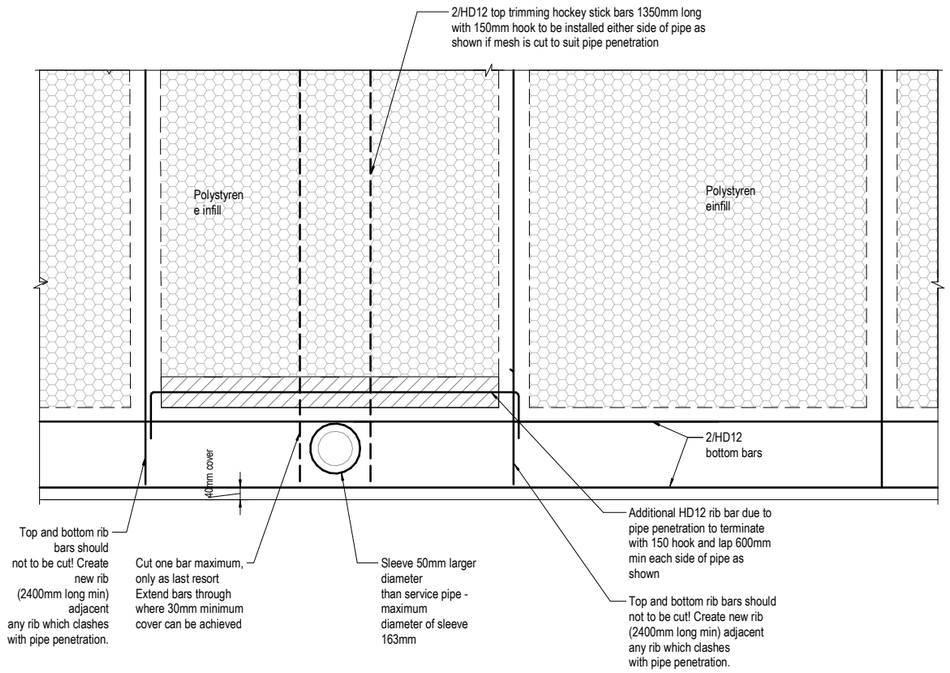
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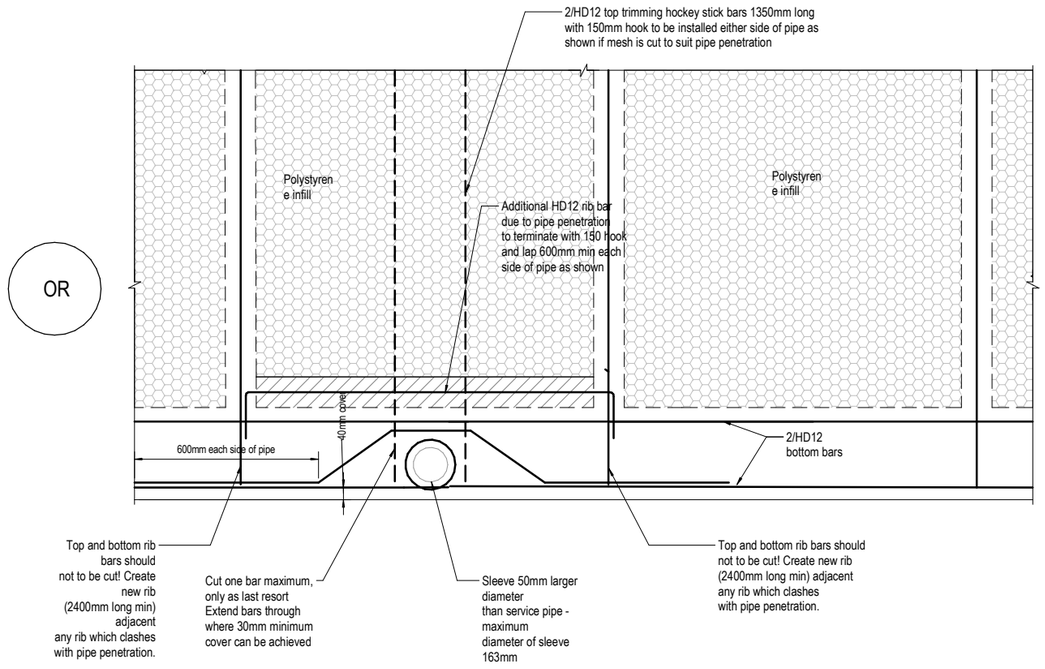
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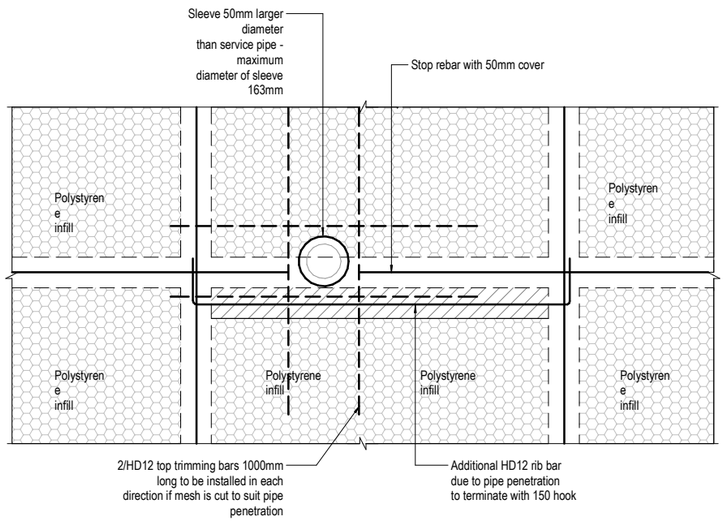


TYPICAL SERVICES THROUGH PERIMETER FOOTING

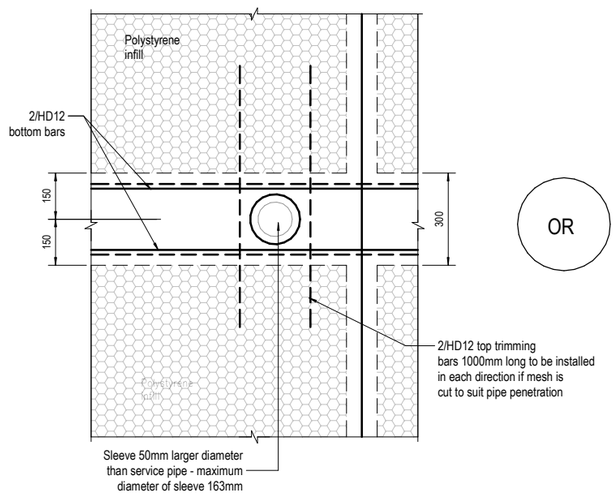
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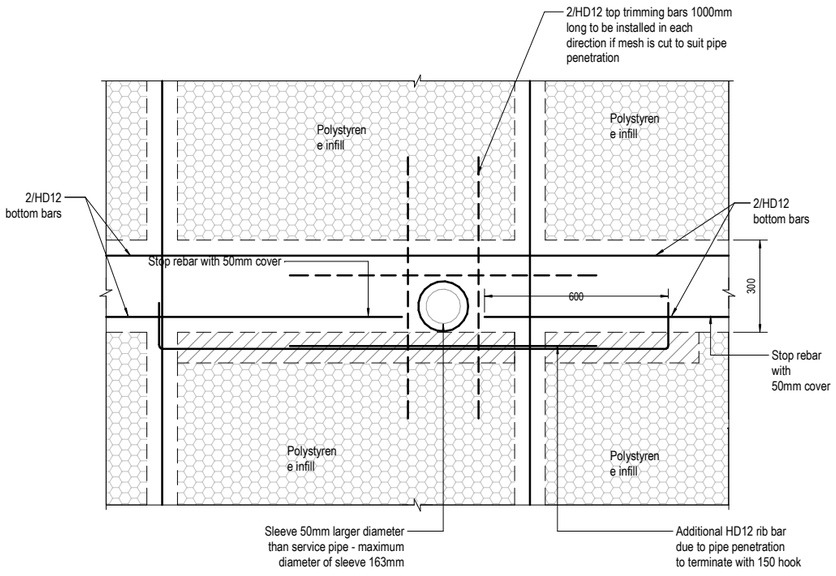


TYPICAL SERVICES THROUGH RIBS



TYPICAL PENETRATION IN LOAD BEARING THICKENING - PIPE CENTRAL

OR



TYPICAL PENETRATION IN LOAD BEARING THICKENING - PIPE NOT CENTRAL

REV	DATE	AMENDMENT	BY
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JOB TITLE
PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

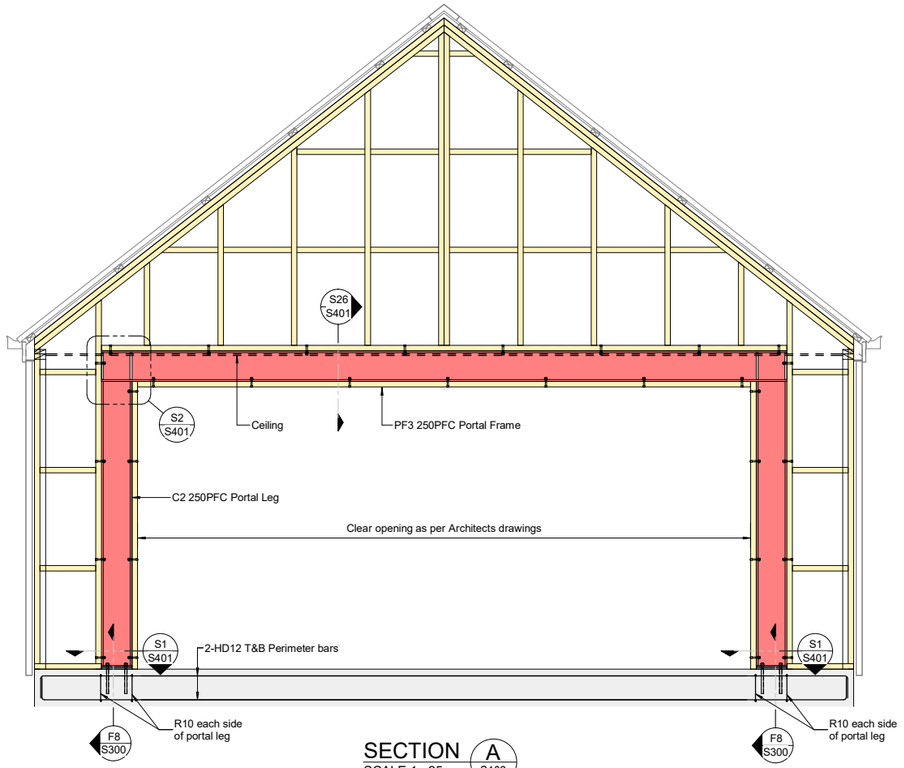
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PIPE PENETRATION DETAILS

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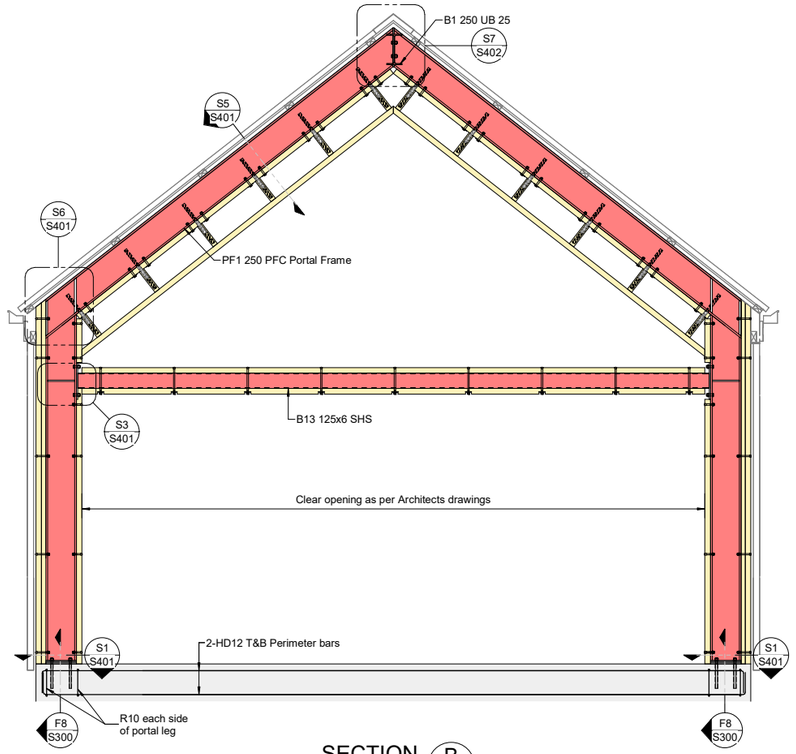
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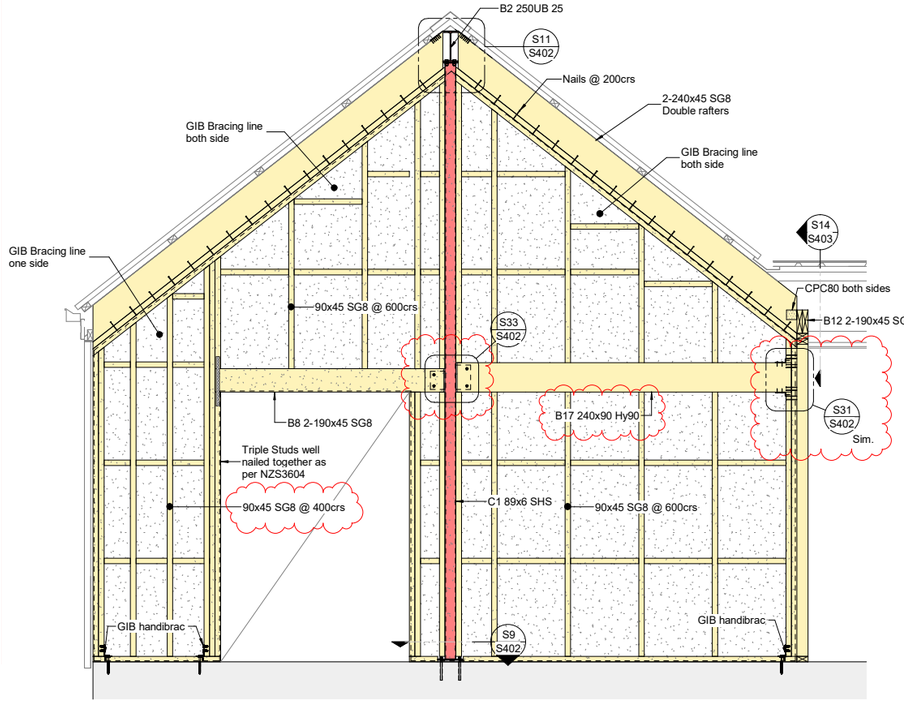
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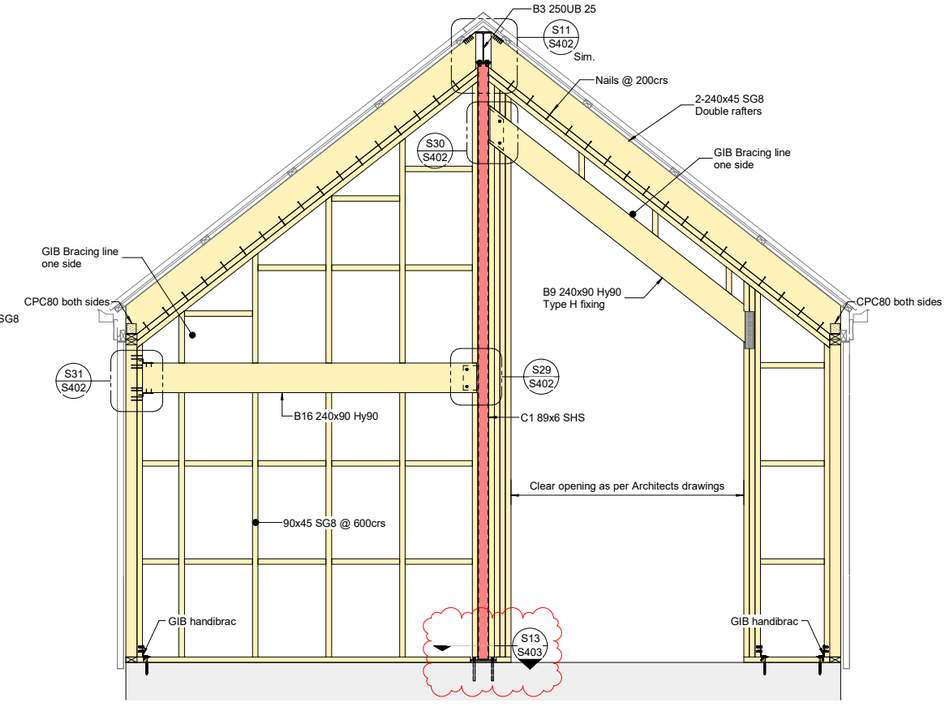
SECTION A
SCALE 1 : 25 S102



SECTION B
SCALE 1 : 25 S102



SECTION D
SCALE 1 : 25 S102



SECTION E
SCALE 1 : 25 S102

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JOB TITLE
PROPOSED HOUSE AT
LOT 374, WILFIELD,
WEST MELTON

DRAWING TITLE
STRUCTURAL DETAILS

DRAWING STATUS
CONSENT ISSUE

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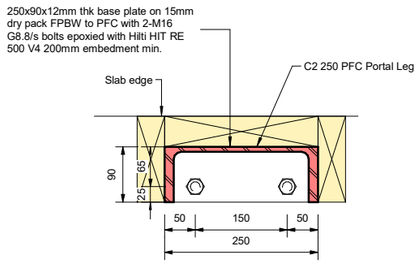
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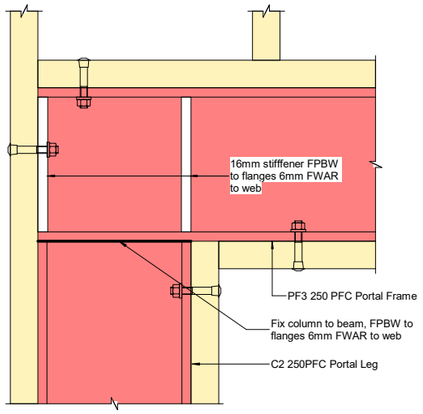
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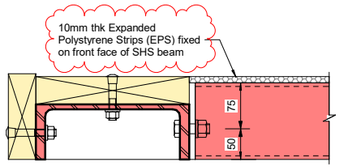
Contractor to ensure no direct contact between slab and timber framing



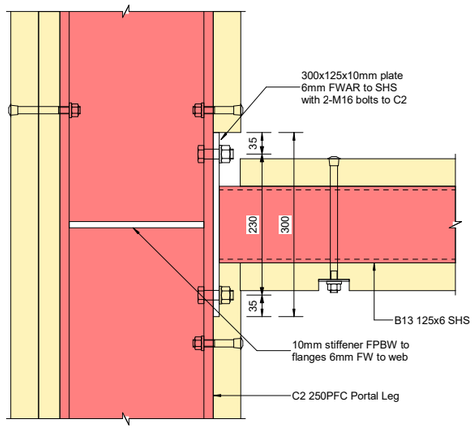
DETAIL S1 — SCALE 1 : 5 — S400



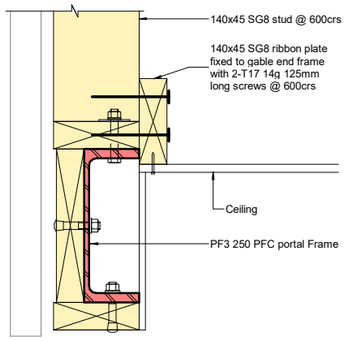
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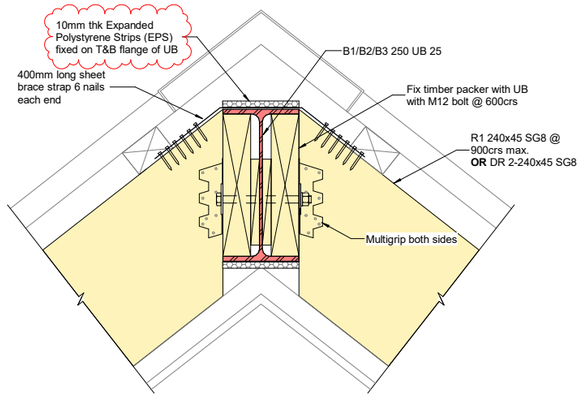
Top View



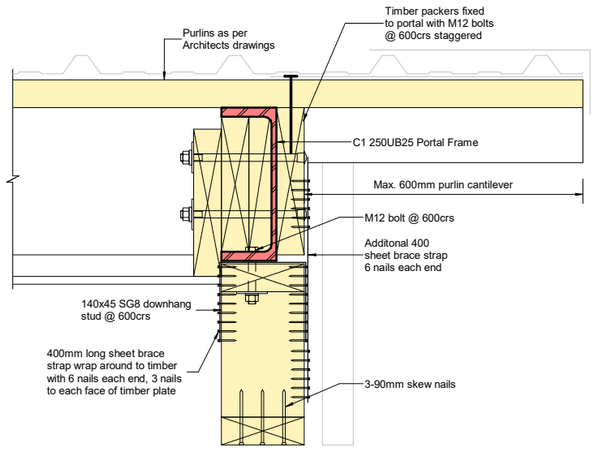
DETAIL S3 — SCALE 1 : 5 — S400



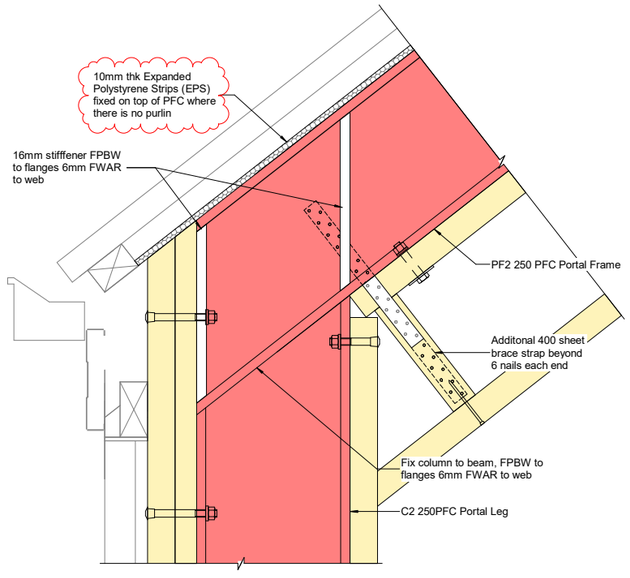
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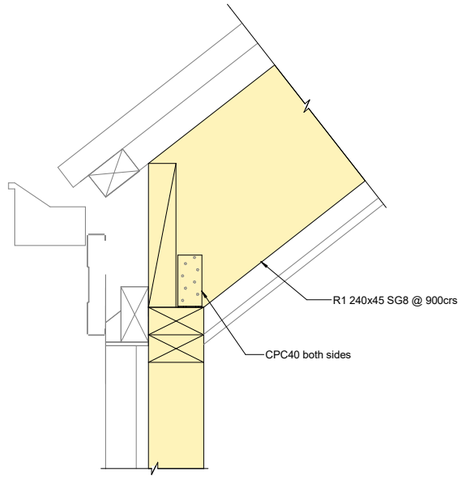
DETAIL S4 — SCALE 1 : 5 — S102



DETAIL S5 — SCALE 1 : 5 — S400



DETAIL S6 — SCALE 1 : 5 — S400



DETAIL S27 — SCALE 1 : 5 — S102

REV	DATE	AMENDMENT	BY
B	13.09.2024	CONSENT ISSUE	JZ
A	22.07.2024	CONSENT ISSUE	JZ

HFC GROUP
CIVIL & STRUCTURAL ENGINEERS

DESIGN ISSUED BY HFC STRUCTURES LTD, PART OF THE HFC GROUP OF COMPANIES. AUCKLAND 09 367 1070 CHRISTCHURCH 03 339 7000 QUEENSTOWN 03 499 0051 WARKWORTH 09 367 1070

JOB TITLE

PROPOSED HOUSE AT
LOT 374, WILFIELD,
WEST MELTON

DRAWING TITLE

STRUCTURAL DETAILS

DRAWING STATUS: **CONSENT ISSUE**

SCALE @ A1 1 : 5 @ A3 1:	DATE 09.07.2024	SHEET NO. S401	
DRAWN	JZ		
DESIGNED	RZ	JOB NO. 23640	ISSUE B
CHECKED	JL		

DATE PLOTTED: 20/09/2024 10:58:28 am SAVE PATH: B:\23640 - Lot 374 Wilfield, West Melton\05 CAD files\02 Revit\23640 - Lot 374 Wilfield, West Melton.rvt

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PRINT IN COLOUR

NOTES:

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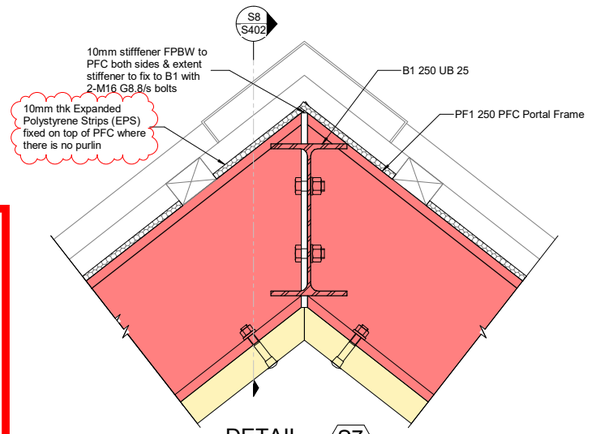
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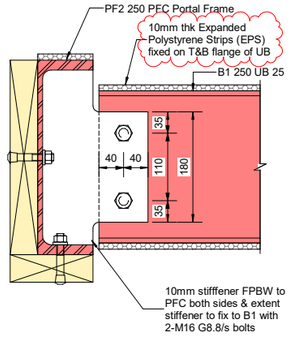
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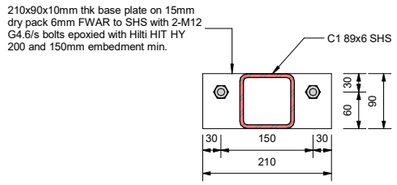
Contractor to ensure no direct contact between slab and timber framing



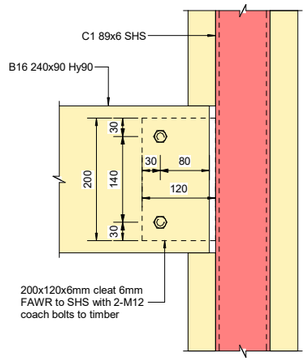
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SCALE 1 : 5 S400



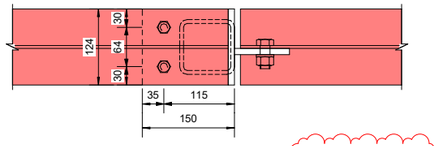
DETAIL S8
SCALE 1 : 5 S402

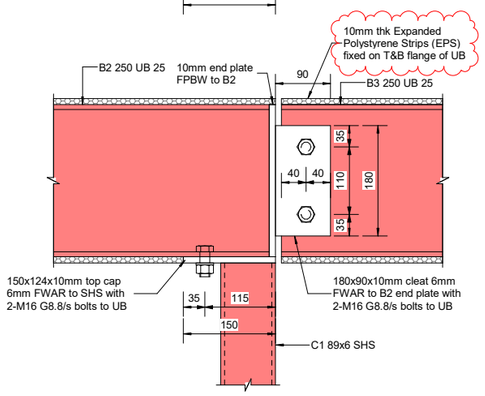


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SCALE 1 : 5 S400

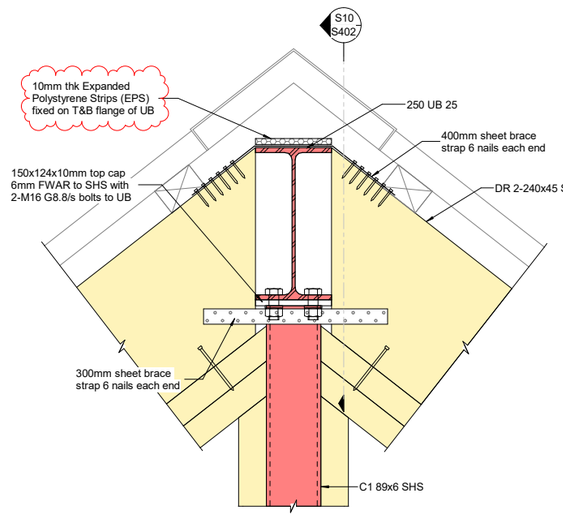


DETAIL S29
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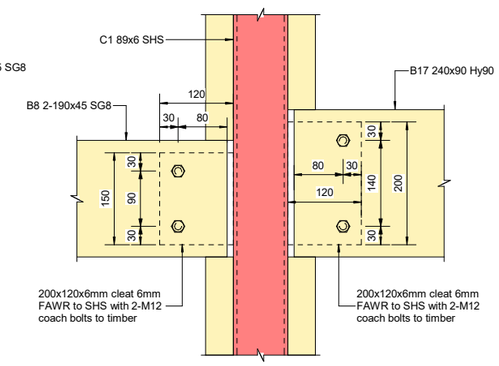




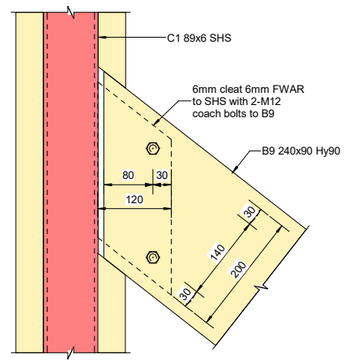
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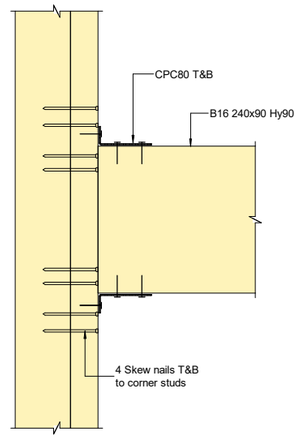
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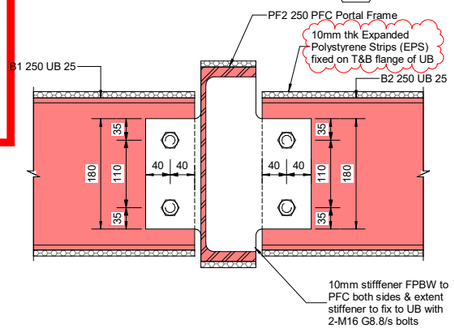
DETAIL S33
SCALE 1 : 5 S400



DETAIL S30
SCALE 1 : 5 S400



DETAIL S31
SCALE 1 : 5 S400



DETAIL S12
SCALE 1 : 5 S404

REV	DATE	AMENDMENT	BY
B	13.09.2024	CONSENT ISSUE	JZ
A	22.07.2024	CONSENT ISSUE	JZ

HFC GROUP
CIVIL & STRUCTURAL ENGINEERS

DESIGN ISSUED BY HFC STRUCTURES LTD, PART OF THE HFC GROUP OF COMPANIES AUCKLAND 09 367 1070 CHRISTCHURCH 03 339 7000 QUEENSTOWN 03 499 0051 WARKWORTH 09 367 1070

JOB TITLE
PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

DRAWING TITLE
STRUCTURAL DETAILS

DRAWING STATUS
CONSENT ISSUE

SCALE @ A1 1 : 5 @ A3 1:	DATE 07/11/24	SHEET NO. S402	
DRAWN	JZ		
DESIGNED	RZ	JOB NO. 23640	ISSUE B
CHECKED	JL		

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PRINT IN COLOUR

NOTES:

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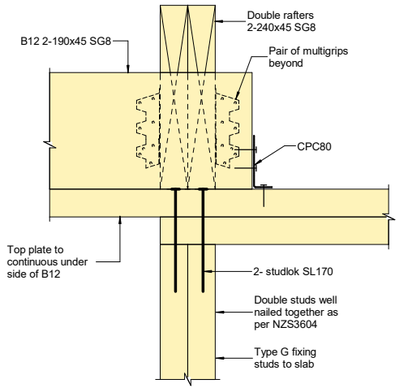
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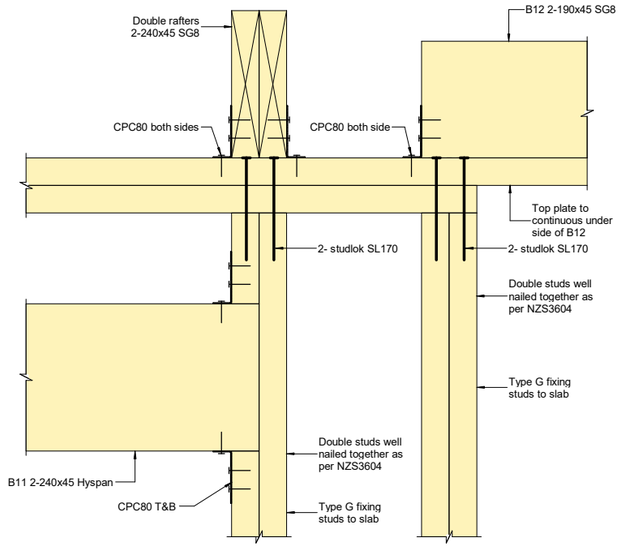
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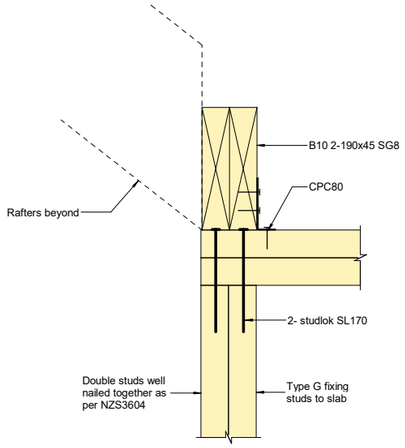
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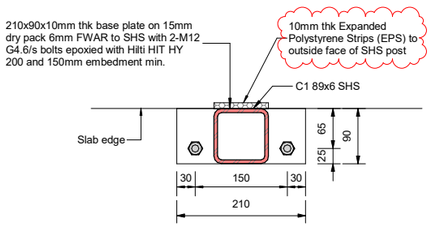
DETAIL S14 / S102
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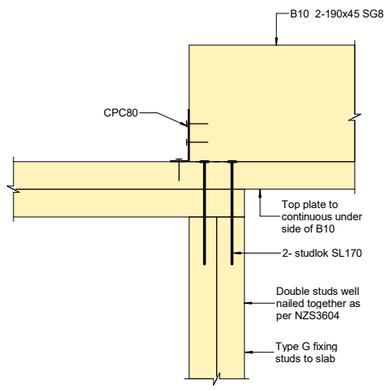
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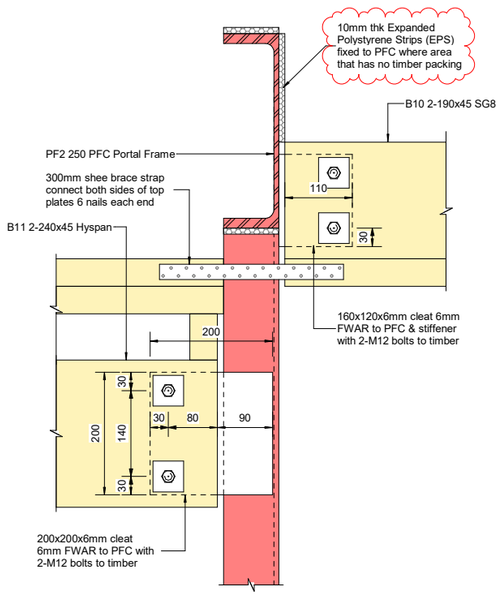
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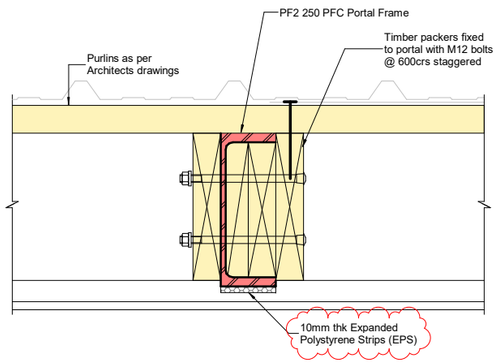
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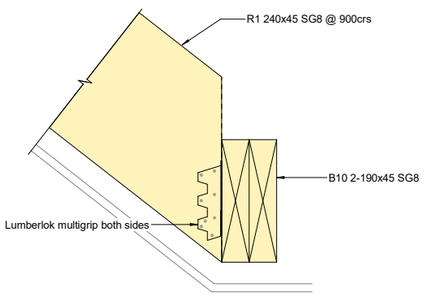
DETAIL S17 / S102
SCALE 1 : 5



DETAIL S18 / S404
SCALE 1 : 5



DETAIL S19 / S404
SCALE 1 : 5



DETAIL S28 / S102
SCALE 1 : 5

REV	DATE	AMENDMENT	BY
B	13.09.2024	CONSENT ISSUE	JZ
A	22.07.2024	CONSENT ISSUE	JZ

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CIVIL & STRUCTURAL ENGINEERS
DESIGN ISSUED BY HFC STRUCTURES LTD, PART OF THE HFC GROUP OF COMPANIES. AUCKLAND 09 367 1070 CHRISTCHURCH 03 339 7000 QUEENSTOWN 03 499 0051 WARKWORTH 09 367 1070

JOB TITLE
PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

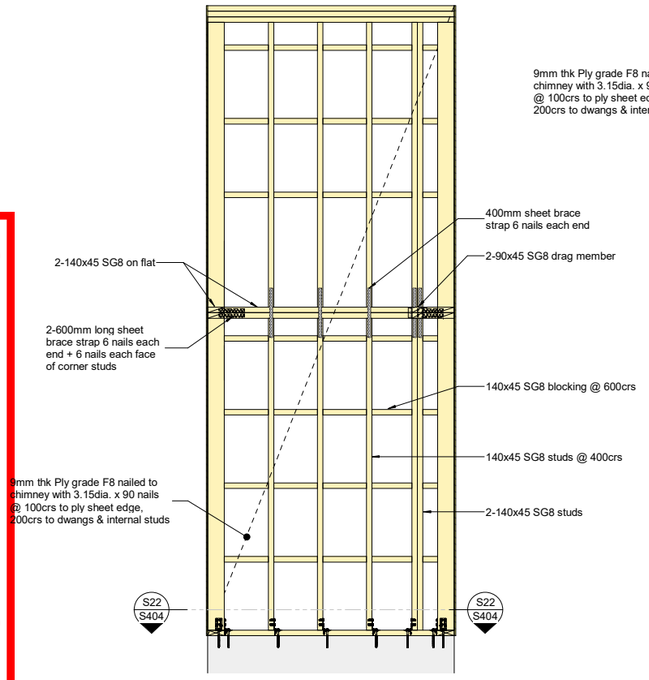
DRAWING TITLE
STRUCTURAL DETAILS

DRAWING STATUS
CONSENT ISSUE

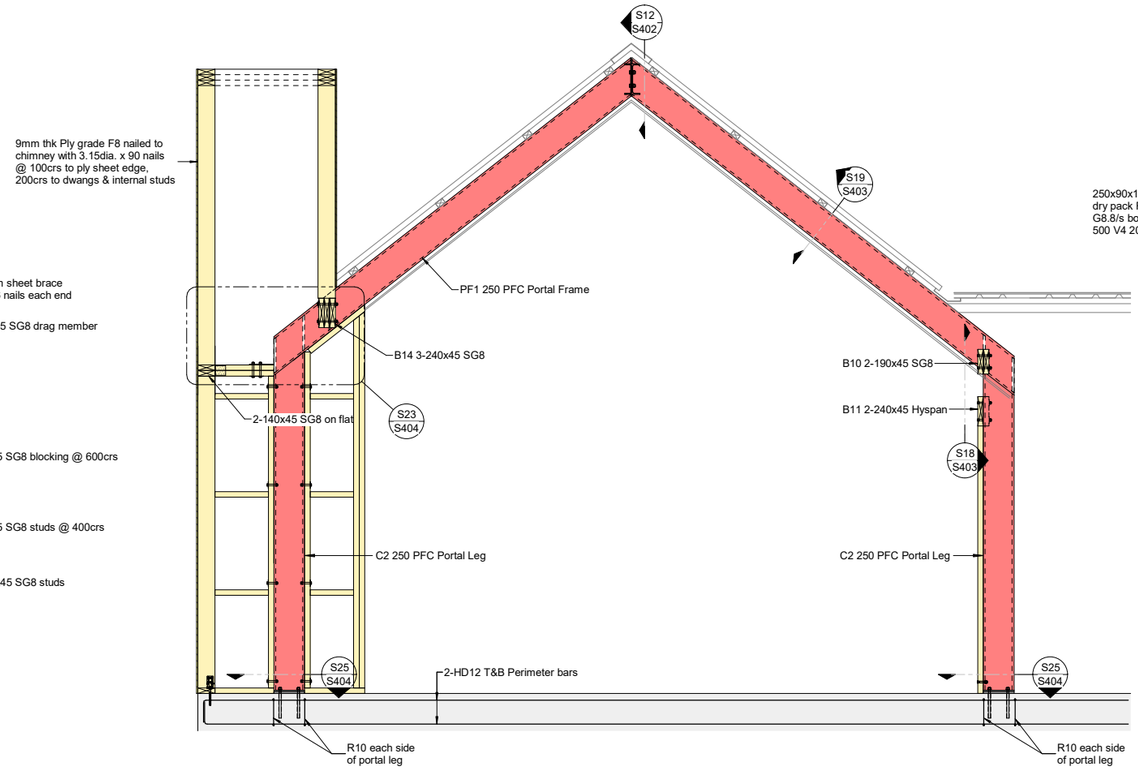
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DRAWN JZ			
DESIGNED RZ	JOB NO. 23640	ISSUE B	
CHECKED JL			

DATE PLOTTED: 20/09/2024 10:58:29 am SAVE PATH: B:\23640 - Lot 374 Wilfield, West Melton\05 CAD files\02 Revit\23640 - Lot 374 Wilfield, West Melton.rvt

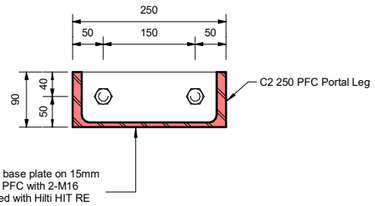
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DETAIL F S102
SCALE 1 : 25



SECTION C S102
SCALE 1 : 25



DETAIL S25 S404
SCALE 1 : 5

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NOTES:

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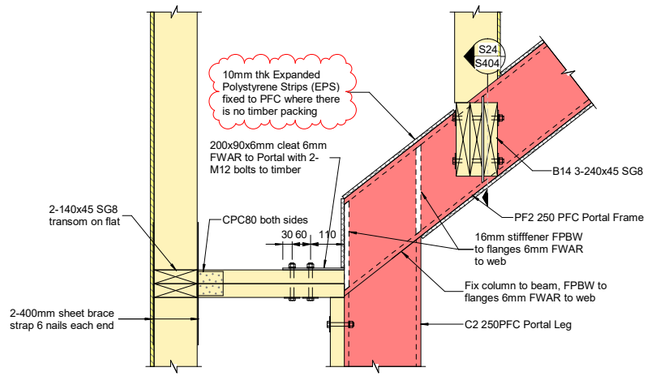
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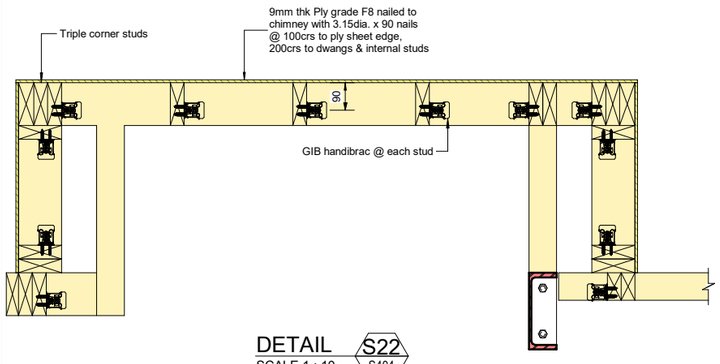
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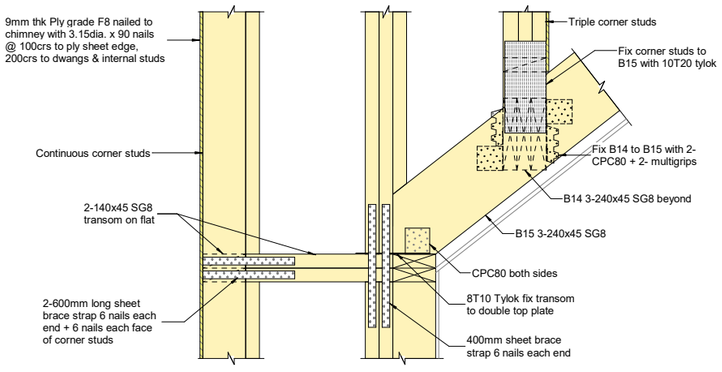
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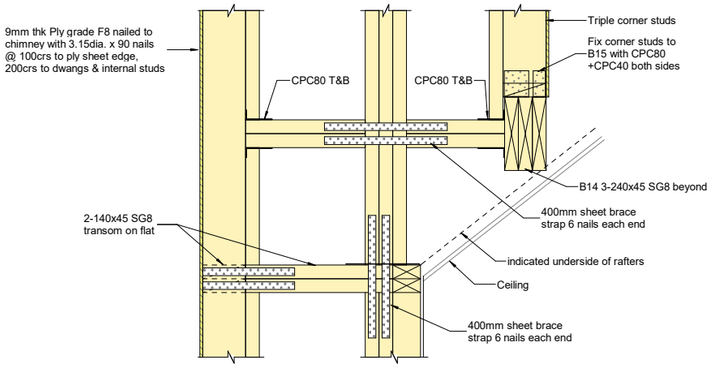
DETAIL S23 S404
SCALE 1 : 10



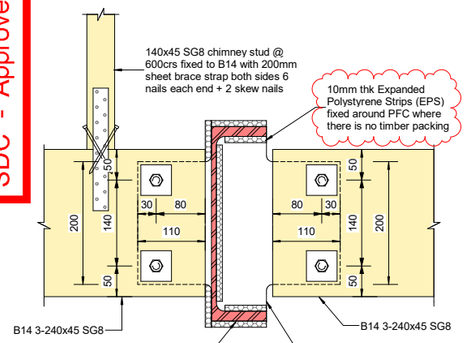
DETAIL S22 S404
SCALE 1 : 10



DETAIL S20 S102
SCALE 1 : 10



DETAIL S21 S102
SCALE 1 : 10



DETAIL S24 S404
SCALE 1 : 5

REV	DATE	AMENDMENT	BY
B	13.09.2024	CONSENT ISSUE	JZ
A	22.07.2024	CONSENT ISSUE	JZ

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JOB TITLE
PROPOSED HOUSE AT LOT 374, WILFIELD, WEST MELTON

DRAWING TITLE
STRUCTURAL DETAILS

DRAWING STATUS
CONSENT ISSUE

SCALE @ A1 As indicated @ A3 1:	DATE 07/11/24	SHEET NO. S404	
DRAWN	JZ		
DESIGNED	RZ	JOB NO. 23640	ISSUE B
CHECKED	JL		

DATE PLOTTED: 20/09/2024 10:58:30 am SAVE PATH: B:\23640 - Lot 374 Wilfield, West Melton\05 CAD files\02 Revit\23640 - Lot 374 Wilfield, West Melton.rvt

Form 5
Building consent - BC241396
Section 51, Building Act 2004

The building

Street address of building:	18 Panama Crescent West Melton
Legal description of land where building is located:	LOT 374 DP 602505
Building name:	
Location of building within site/block number:	18 Panama Crescent West Melton
Level/unit number:	0

The owner

Name of owner:	Westmere Family Trust
Contact person:	Jon Sanders
Mailing address:	33 Ridgeland Way West Melton 7618
Street address/registered office:	
Phone number:	Landline: Mobile: 0274205565
Daytime:	No information provided
After hours:	No information provided
Facsimile number:	No information provided
Email address:	jon@todayhomes.co.nz
Website:	No information provided

First point of contact for communications with the building consent authority:
Today Homes Limited (Today Homes); Mailing Address: PO Box 8043
Riccarton
Christchurch 8440; Phone: 033416460; Email: brendon@todayhomes.co.nz

Building work

The following building work is authorised by this building consent:
Construction of detached dwelling - two storey with 4 bedrooms and attached garage

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

alteration, demolition, or removal would be in breach of any other Act.

Conditions

This building consent is subject to the following conditions:

Section 90 - Inspections by Building Consent Authorities: (1) Every building consent is subject to the condition that agents authorised by the building consent authority for the purposes of this section are entitled, at all times during normal working hours or while building work is being done, to inspect-
(a) land on which building work is being or is proposed to be carried out; and
(b) building work that has been or is being carried out on or off the building site; and
(c) any building.

(2) The provisions (if any) that are endorsed on a building consent in relation to inspection during the carrying out of building work must be taken to include the provisions of this section.

(3) In this section, inspection means the taking of all reasonable steps to ensure that building work is being carried out in accordance with a building consent.

Construction monitoring requirements
Please contact the following consultants directly to arrange the construction monitoring identified which they have been engaged to carry out.

- HFC Structures:
  Producer statement construction review PS4 is to be submitted by the engineer for the observation of the construction (eg. Structurally Designed Elements and its fixing) as listed below; confirming that the work complies with the design approved by the building consent and is in accordance with any relevant New Zealand Building Code clauses.

  Soil:
  - Site Scrape
  - Building platform prior to foundation construction

  Structural:
  - Foundation prepour
  - Site SED beams, columns and associated connection
  - Roof strap bracing

- Portal frames
- Bracing

Copies of all site reports/records must be provided to the Building Consent Authority as work proceeds for their records. Please ensure the required documents listed on the Building Consent Form 5 are uploaded to the consent record via the customer portal (https://consents-sdc.abcs.co.nz/).

Inspections

The following inspections are required:

- Wastepipes
- Framing / Pre-wrap
- Post Wrap / Cavity
- Preline
- Drainage
- Floor Slab
- Concrete / Tilt panel / Steel frame
- Pre-plaster
- Internal Membrane
- Final

Documents required

Wastepipes

- B1: Engineer - Site Inspection Notice - Foundation Platform
- B1: Engineer - Site Inspection Notice - Foundation Excavation

Floor Slab

- B1: Engineer - Site Inspection Notice - Foundation PrePour

Framing / Pre-wrap

- B1: Engineer - Site Inspection Notice - Structure - SED Member And Connections
- B1: Engineer - Site Inspection Notice - Portal Frame
- B1: Truss Certification - As Built Documentation

Concrete / Tilt panel / Steel frame

- B1: Portal frame - Construction monitoring records

Post Wrap / Cavity

- H1: Statement Of Thermal Performance For Windows And Doors _R0.5

Preline

- B1: Engineer - Site Inspection Notice - Roof Bracing
- G12: Pipework pressure test documentation

Post Line

- B1: Engineer - Site Inspection Notice - Bracing

Internal Membrane

- E3: Internal Waterproofing Membrane Product And PS3

Drainage

- E1: Stormwater drain leakage test and as-built plans
- G13: As-builts, drainlayer details, pipework test

Final

- B1: Engineer - Construction Monitoring Records PS4 - HFC Group
- Form 6a - LBP Record Of Building Work - Carpentry
- Form 6a - LBP Record Of Building Work - Roof Cladding
- Form 6a - LBP Record Of Building Work - Oblique
- Form 6a - LBP Record Of Building Work - JSC Cedar
- Form 6a - LBP Record Of Building Work - Integra
- C: Solid fuel heater - Installers Declaration
- G9: Energy works certificate

Compliance schedule

A compliance schedule is not required for the building.

Attachments

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

- Advice notes
- Project Information Memorandum (PIM): BC241396
- Form 4: Certificate attached to PIM

Signature: Martin Huang
Position: Building Surveyor Residential Processing
On behalf of: Selwyn District Council
Issue Date: 14 October 2024

Advice notes

Section 92 - Application for Code Compliance Certificate: Section 92 – Application for Code Compliance Certificate
An owner must apply for a Code Compliance Certificate as soon as practicable after the building work is completed. Please complete the application within the AlphaOne system and upload the relevant documentation to ensure a code compliance decision can be made by the BCA.

Section 92 (2A) – Restricted Building Work
Where the building work involves restricted building work, the owner must include records of work provided by all licensed building practitioners who carried out or supervised restricted building work under this consent. Records of work must be in the prescribed form (Form 6A), detailing what restricted building work has been carried out or supervised. The records of building work must be submitted via the customer portal against the relevant consent.

Section 92 (3 and/or 3A) – Modular Components
Where the building work involves the manufacture of and/or use of a modular component the code compliance certificate application must be accompanied by a current manufacturers certificate for that component.

Section 92 (4) – Energy Work (Electricity and/or Gas)
Where the building work involves energy work in relation to the granted building consent the owner must include any energy works certificates relating to the energy work.

If no application for a Code Compliance Certificate is made within 24 months of the date on which the building consent was granted, the BCA will make a Code Compliance Certificate decision in accordance with Section 93.

Section 37 - RMA: This consent is issued subject to section 37 of the Building Act 2004. A resource consent is required under the Resource Management Act 1991 for district plan non-compliance and has not yet been obtained. Until this approval has been received from the relevant Territorial Authority no building work may proceed OR building work may only proceed to the extent stated on the Form 4 certificate.

Construction changes to be advised to the BCA that may result from satisfying a Resource Consent requirement.
Your building consent has been issued with a Section 37 Certificate that advises Resource Consent under the Resource Management Act (RMA) is required as a separate application to this building consent. It is common that, after Section 37 notices are issued, there are revisions made to the plans and specifications in order to show compliance with the RMA, or compliance with specific conditions of a Resource Consent.
Please note: Any proposed changes shown in any revised documents that may relate to satisfying these requirements are not approved by the BCA until they are provided by the owner or agent as an application for

a minor variation, or as an application for amendment to this building consent. An assessment must be made regarding their impact on compliance with the building code.
Please note: It is a requirement that the completed work matches the documented consent at BCA inspections, and for a Code Compliance Certificate to be issued. Documented minor variations and amendments allow for this.

Section 362T - Residential: This section of the Building Act requires that where a building contractor has carried out building work under a residential building contract then as soon as practicable after completion of the building work, the building contractor must provide in writing the information and documentation prescribed by regulations made under this Act to the following persons:

- the client; and
- the relevant territorial authority.

Persons failing to do so, commit an infringement offence and is liable to a fine not exceeding $2,000.

Ground Bearing: Confirmation of suitability of ground bearing conditions to support imposed loads will be required at time of inspection and before commencement of pouring of any concrete.

Required Documents: It is essential that required documents are provided as work proceeds as this information is relied on to confirm compliance of the building work.
Throughout the construction phase of the building work approved under this building consent, the Building Inspector may place a BLOCK on Inspections until outstanding required documents are received and reviewed by Council. Please ensure that required documents are uploaded within AlphaOne promptly when available to avoid any delays in resolving issues. No further inspections will be able to be booked until the BLOCK is removed.

Design Engineer: Council reserves the right to call on the project design engineer, at any time to inspect the fabrication and construction of the structure, referenced on the design drawings, to verify that the structure meets the relevant regulatory performance requirements and publicised standards. The design engineer will, following satisfactory inspection (including remedial actions and re-inspection), provide copies of the site inspection / instruction(s) and verify that the works have been completed / installed correctly.

Plaster systems: Written verification and supporting documentation to confirm the exterior plaster cladding system has been completed in accordance with the manufacturers specifications or where solid plastering has been used NZS 4251, should be supplied to the owner to submit with their documentation for code compliance certificate application.

Solid Fuel Burning Appliance: It is the owners responsibility to ensure any curtains, drapes or other such combustibles which would present risk of fire are kept tied back so as not to encroach within the safety clearance of the appliance.

Waterproofing System - Inspection: The installer of internal waterproofing membrane in all wet areas must

ensure that the system is installed strictly in accordance with the manufacturer's specifications and follows installation instructions and system requirements. Membrane must be trafficable at the time of the inspection. A Waterproofing Construction Statement is to be completed and provided to the Building Inspector at the time of the internal membrane inspection.

Soakpit: Please provide confirmation from a registered drainlayer that adequate soakage and catchment calculation testing is achieved prior to the installation of the soakpit.

This building consent will lapse and be of no effect if the building work to which it relates does not commence within 12 months after the date of issue of the building consent.

Project information memorandum

Section 34, Building Act 2004

Application

PIM Number:	241396P
Owner:	Westmere Family Trust C/- Today Homes PO Box 8043 Riccarton Christchurch 8440
Issue Date:	16 August 2024

Project

Description:	Construction of detached dwelling - two storey with 4 bedrooms and attached garage
Intended use:	2.0 Housing: 2.0.2 Detached Dwelling
Location:	18 Panama Crescent West Melton
Legal description:	LOT 374 DP 602505
Valuation number:	2354134595

Building work can proceed following formal notification of Building Consent Approval being received from the Selwyn District Council Building Consent Authority and approvals being obtained from the agencies identified in this Project Information Memorandum.

This project information memorandum does NOT constitute a building consent.

"Land concerned" means the land on which the proposed building work is to be carried out; and includes any other land likely to affect or be affected by the building work.

"Special feature of the land concerned" includes, without limitation, potential natural hazards, or the likely presence of hazardous contaminants, that -
a) are likely to be relevant to the design and construction or alteration of the building or proposed building; and
b) is known to the Territorial Authority; and
c) is not apparent from the District Plan under the Resource Management Act 1991.

Planning

Special features of the land concerned
Special feature(s) of the land concerned are: This property is identified in the Partially Operative District Plan as being located within a Natural Hazard Overlay.

For further information visit https://apps.canterburymaps.govt.nz/SelwynNaturalHazards/ or contact the duty planner on 0800SELWYN (0800735996)

Other information
Decisions on the Proposed Selwyn District Plan, Variation 1 and recommendations on designations were notified on 19 August 2023. This means that this Project Information Memorandum has taken into account compliance with the current Operative Selwyn District Plan and the Partially Operative Selwyn District Plan.

The Partially Operative Selwyn District Plan can be viewed in ePlan format at www.selwyn.govt.nz/proposedeplan and more information about the District Plan Review process can be found at www.selwyn.govt.nz/districtplanreview

For further enquiries regarding the proposed project contact the Planning department planning.information@selwyn.govt.nz or 03 347 2868.

Building

Special features of the land concerned
Special feature(s) of the land concerned are: The Listed Land Use Register (LLUR) does not currently have any information listed about hazardous activities and industries on this property.

If there are any investigations underway on this site, this information regarding investigations relating to the site can be accessed by contacting Environment Canterbury on 0800 324 636 or via http://llur.ecan.govt.nz/Public/.

Council does not hold site specific information on subsoil classifications or ground bearing capacities. The owner will need to supply a copy of the site subsoil investigations to verify that 'Good Ground' can be achieved on the site and to determine the subsoil classification in accordance with NZS1170.

Verification of site investigation data will need to be submitted as part of the documentation for building consent.

The definition of 'Good Ground' can be found in the definitions section of the New Zealand Building Code Handbook. Appropriate test methods are detailed in either NZS3604, or NZBC B1/VM4.

This site may be subject to natural hazards requiring specific engineered design. Hazard relevant to this site is inundation (including flooding, overland flow, storm surge, tidal effects, and ponding).

Residential stormwater in this area is covered by a Global Stormwater Discharge Consent issued by Environment Canterbury. Any discharge must comply with requirements in this consent. Refer to the Environment Canterbury website for further details - www.ecan.govt.nz.

Adequate stormwater soakage may not be available at depths less than 5 metres. Percolation testing in accordance with E1/VM1 will be required to determine that adequate soakage is achievable.

Other information
Approval may be required from Environment Canterbury to install the following:

- Solid fuel heater - discharge to air

To obtain further information contact Environment Canterbury on 0800 324 636 or www.ecan.govt.nz.

For further enquiries regarding the proposed project contact the Building department bca@selwyn.govt.nz or 03 347 2839.

Infrastructure Utilities

Details of existing stormwater or wastewater systems relating to proposed building work
There are existing wastewater utility services available on, or adjacent to, the site of the proposed building work.

Wastewater
Council sewerage scheme is available to this site for connection.

Stormwater
Stormwater from the roof(s) is to be disposed of to the ground via a soak hole. This property may be located within an area covered by an Environment Canterbury stormwater consent. It is the responsibility of the property owner to contact Environment Canterbury to ensure that any activity undertaken on site complies with the relevant consent conditions. For further information contact Environment Canterbury customer services on 0800 324 636 or visit their website www.ecan.govt.nz.

Water

West Melton water supply is available but not connected. The supply is metered.

Advice note: Please ensure that the toby box is not buried or covered over during the building or landscaping process. Any plantings must be kept a minimum of 0.5 metres away from the toby box to avoid problems with maintenance or access in the future.

Other information

No lateral map is currently available. Please contact Assets Customer Service on 03 347 2857 for more information on Council services relating to the proposed building work.

Before undertaking any excavation work check the service maps showing the location of underground pipes and cables available from www.beforeudig.co.nz .

For further enquiries regarding the proposed project contact the Assets department water.services@selwyn.govt.nz or 03 347 2857.

NOTE

The information supplied in this project information memorandum is specific to the building project to which this application relates. It reflects Selwyn District Council's current understanding of information relevant to this project, based on information provided and currently held on Council files and records. No property inspection or title search has been undertaken. Note that further relevant information may come into the Council's possession subsequent to the date of issue.

Selwyn District Council has used its best endeavours to ensure that all information provided in this project information memorandum is correct and complete in all material respects. As a result the Council is not in a position to warrant that the information is complete or without error, and accepts no liability for any inaccuracy in, or omission from this information.

In the event that a material error or omission can be proven, the Council's liability, whether in contract or in tort will be limited to the fee paid by the applicant of this project information memorandum to Council to obtain this report.

Should you find any incorrect or omitted information contained within this document please contact Council on (03) 347 2800 with the details to enable the property file to be updated.

Form 4

Certificate Attached to Project Information Memorandum

Section 37, Building Act 2004

RE: BC241396, Westmere Family Trust, 18 Panama Crescent
West Melton

Restrictions on commencing building work under the Resource Management Act 1991

The building work referred to in the attached project information memorandum or building consent is also required to have the following resource consents under the Resource Management Act 1991:

1) This building or this building in combination with other buildings on the site, exceeds the maximum site coverage for permitted activities in the Operative District Plans. The maximum area of any site which can be covered in buildings in this zone is 30% (*Measured over cladding the dwelling meaures 30.38% of the net site area)*. Building work should not commence until either: the building is modified to comply with the site coverage requirements; or a resource consent is obtained for the additional site coverage shown on the building plans. Please contact the Council's Planning Department for information on how to apply for a resource consent.

As the above District Plan non-compliances have been identified, building work should not proceed until either: the application is amended to comply; or a resource consent is obtained.

Failure to comply with the requirements of this notice may result in legal action being taken against you under the Resource Management Act 1991.

For further information regarding this memorandum please contact the Council's Planning Department via planning.technical@selwyn.govt.nz or calling the duty planner on 0800 SELWYN (735 996).

Craig Marshall
Planning Technician
On behalf of: Selwyn District Council
Issue Date: 15 August 2024

Form 7
Code compliance certificate

Section 95, Building Act 2004

The building

Street address of building:	18 Panama Crescent, West Melton
Legal description of land where building is located:	LOT 374 DP 602505
Building name:	N/A
Location of building within site/block number:	18 Panama Crescent West Melton
Level/unit number:	0
Current, lawfully established, use:	2.0 Housing: 2.0.2 Detached Dwelling
Year first constructed:	2024

The owner

Name of owner:	Westmere Family Trust
Contact person:	Jon Sanders
Mailing address:	33 Ridgeland Way, West Melton
Street address/registered office:	N/A
Phone number:	Landline: N/A Mobile: 0274205565
Daytime:	Landline: N/A Mobile: 0274205565
After hours:	Landline: N/A Mobile: 0274205565
Facsimile number:	No information provided
Email address:	jon@todayhomes.co.nz
Website:	No information provided

First point of contact for communications with the council/building consent authority:
Today Homes Limited (Today Homes); Mailing Address: PO Box 8043
Riccarton
Christchurch 8440; Phone: 033416460; Email: brendon@todayhomes.co.nz

Building work

Building consent number:	BC241396
Description:	Construction of detached dwelling - two storey with 4 bedrooms and attached garage
Issued by:	Selwyn District Council

Code compliance

The building consent authority named below is satisfied, on reasonable grounds, that - the building work complies with the building consent.

Signature: Chris Westwood
Position: Building Surveyor Commercial Inspection
On behalf of: Selwyn District Council
Date: 20 May 2025

Flood Assessment Certificate
FC240334

Issued pursuant to NH-SCHED1 of the Partially Operative Selwyn District Plan.

Property Address:	Wilfield Rise – Stages 21, 23, 24 & 28, West Melton
Legal Description:	Lots 300-309, 312-314, 352-375, 425-428, 600-607, 701-708, 710-716 DP 602505
Date of Issue:	25/07/2024
This certificate is valid until:	25/07/2026

The sites are not located on land within a high hazard area.

The sites are likely to be subject to inundation in a 200-year Average Recurrence Interval (ARI) flood event.

For Lots 300-309, 312-314, 352-375, 425, 427, 600-607, 701-708 & 710-716 only:

No minimum finished floor level is required to meet the partially operative district plan natural hazard rules.

For Lot 426 only:

+80.47m LVD1937

For Lot 428 only:

+80.77m LVD1937

Disclaimers:

1. Whether the site is likely to be subject to inundation in a 200-year ARI flood event, and the minimum finished floor level have been determined with reference to:
   (a) The most up to date models and maps held by Selwyn District Council or Canterbury Regional Council;
   (b) Any relevant field information; and
   (c) Any site specific flood assessment prepared by a suitably qualified and experienced person, including a site specific Flood Hazard Assessment prepared by Canterbury Regional Council.
2. This certificate is based on the best information available to Selwyn District Council at the time the certificate was issued. This information is subject to change and may be updated at any time, including during the valid period of this certificate. Selwyn District Council accepts no liability for changes in this information.
3. This certificate relies on flood modelling. Flood modelling is a tool that predicts what might happen in a flood event of a given magnitude. A flood model uses hypothetical scenarios and makes assumptions about how a flood event might unfold however there are many more variables that can influence how a site is affected in an actual flood event. The minimum finished floor level does not infer that no damage will occur to a structure built above the minimum finished floor level in a flood event.
4. The Building Act 2004 also manages flood risk. The minimum floor level certified under the Partially Operative District Plan may be different to the floor level required by the Building Act 2004, which must be met in order to obtain a building consent.

5. Any activity or construction carried out on a site where a Flood Assessment Certificate is issued is carried out at your own risk, and Council recommend that you carefully consider the impact of any flooding risk associated with this site.

Advice notes:

a) For a new residential unit or principal building or the alteration of, or addition to any residential unit or principal building to be a permitted activity under the Selwyn District Plan as a whole, all other relevant rules must be complied with.

b) If the certified level is for a particular location on the site, the certified level is the minimum floor level for the proposed building location shown on the attached plan. If you wish to build elsewhere on the site the minimum floor level may be different, and you will need to request another certificate for the new location.

c) For the purposes of this certificate, ground level means:

   a. The actual finished surface level of the ground after the most recent subdivision that created at least one additional allotment was completed (when the record of title is created);

   b. If the ground level cannot be identified under paragraph (a), the existing surface level of the ground;

   c. If, in any case under paragraph (a) or (b), a retaining wall or retaining structure is located on the boundary, the level of the exterior surface of the retaining wall or retaining structure where it intersects the boundary.

d) You must reference this certificate when applying for a building consent or the building consent will not be accepted.

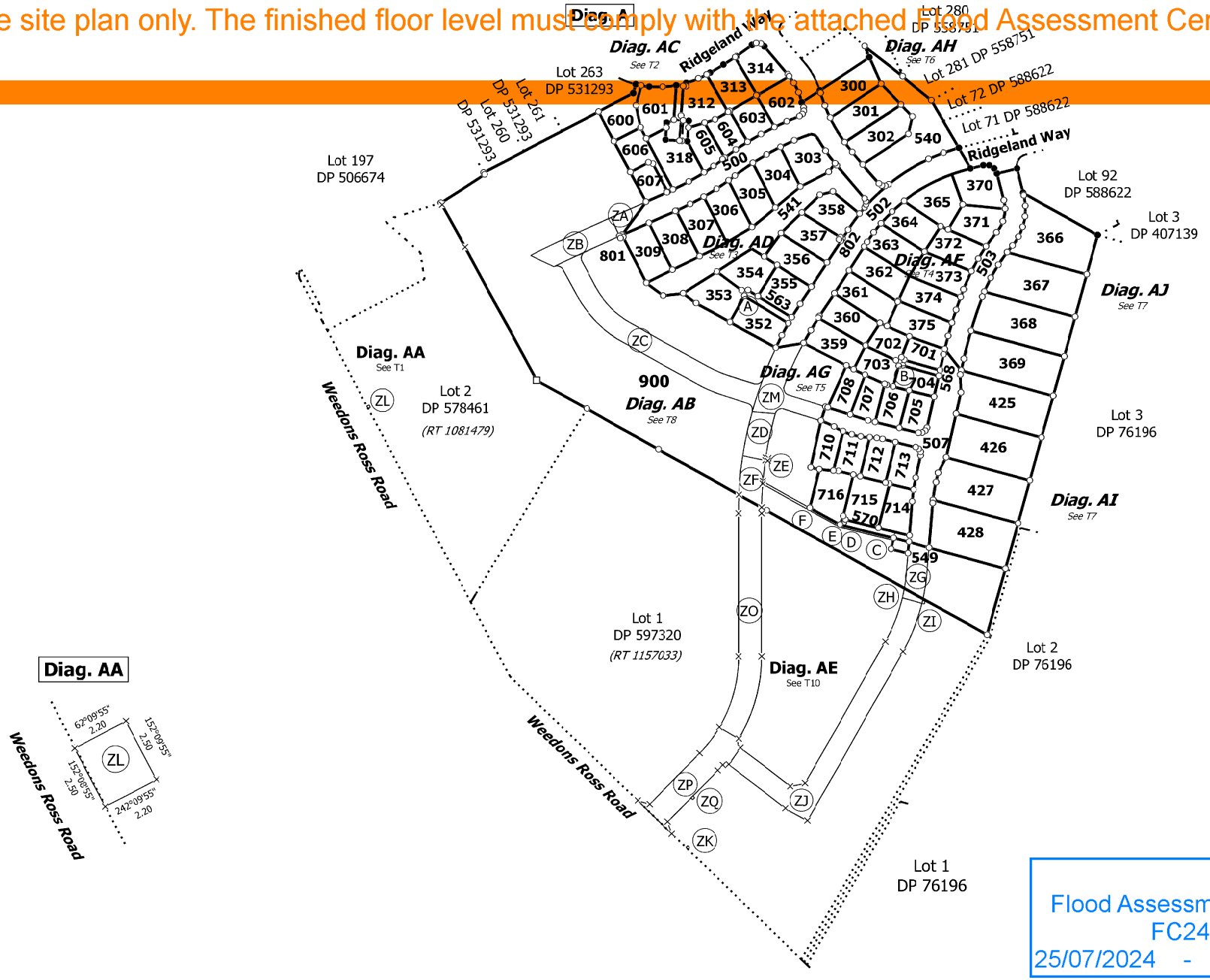
Signed for and on behalf of the Selwyn District Council:



Emma Larsen

Head of Resource Consents

Indicative site plan only. The finished floor level must comply with the attached Flood Assessment Certificate



Flood Assessment Certificate
FC240334
25/07/2024 - yasmine.binnie

Land District: Canterbury Digitally Generated Plan Generated on: 02/07/2024 2:02pm Page 7 of 16	Lots 300-309, 312-314, 318, 352-375, 425-428, 500, 502, 503, 507, 540, 541, 549, 563, 568, 570, 600-607, 701-708, 710-716, 801, 802 & 900 Being Subdivision of Lot 300 DP 588622 and Easements Over Lot 2 DP 578461 and	Surveyor: Paul Kevin Durkin Firm: 43below	Title Plan LT 602505 Approved on: 2/07/2024