GENERAL NOTES

Contractor is to confirm all dimensions on site before commencing work.

All discrepancies or omissions must be confirmed with the designer before commencing work.

All work is to be carried out in accordance with the New Zealand Building Code and local bylaws as they apply eg: ECAN

B1/AS1: Structure. Unless noted otherwise all timbers are to be SG8, and all timber framing is to comply with NZS 3604: 2011.

B2/AS1: Durability. Unless noted otherwise all timber is to be treated to H1.2.

C/AS1: Fire Safety. Refer to the smoke alarm positions on the Floor Plan. Ensure only approved 'hush type' smoke alarm to AS3786, BS15446 pt1, or UL217 as per NZBC F7/AS1 are installed

D1/AS1: Access Routes. Ensure all surfaces along exterior access routes are non-slip to the requirements of the code. The minimum level of finish would be:
"Exposed Concrete: Exposed Aggregate concrete Finish"

E1/AS1: Surface Water. Minimum pipe gradients and sizes.
100dia SW pipes fall @ 1:120
Spouting falls to outlet.
74Ø Downpipes min.
Impervious surfaces 1:100 fall min.
All pipes passing through concrete are to be lagged in Denso tape.

E3/AS1: Internal Moisture. 10mm Aqualine GIB behind all wet area fixtures on H1.2 framing; Impervious surface finishes to all bathrooms, Laundries and wet areas.

F2/AS1: Hazardous Building Materials. All glazing to comply with NZS 4223 part 3.

F5/AS1: Construction and Demolition Hazards. All construction and demolition works to comply with the requirements of the code. Site fencing, 2m high to be erected and maintained until build is enclosed and secure.

G4/AS1: Mechanical ventilation shall be provided over kitchen cooktops, showers and baths. The extract fan must have a minimum flowrate of 25L/s for showers and baths, and 50L/s for cooktops.

G9/AS1: Electricity. All Electrical work is to comply with electrical codes of practice and a Certificate of Compliance left with the owner.

G12/AS1: Water Supply. All work carried out to comply with the requirments of this clause. Hot Water Pipes shall be sized to NZBC G12 & NZS 4305:1196. Mains pressure:15mmØ allows 12m max. pipe length. Pipe lengths beyond this must be lagged.

AS/NZS 3500 part 2.2: Foul Water. All work is to comply with the requirements of the standard.
Minimum gradients:
40mm drain 1:40
50mm drain 1:40
65mm drain 1:40
100mm drain 1:60

H1/AS1: Energy Efficiency. Refer to the elevations showing how compliance is met.

Drawing Sheet List

Sheet Number	Sheet Name	Current Revision
000	Cover Sheet	13
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100.3	Landscaping Plan	13
110.1	Ground Floor Plan	13
110.2	First Floor Plan	13
110.3	Foundation & Plumbing Plan	13
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PROPOSED MULTI-UNIT DEVELOPMENT

for
Oak Property Ltd

at
11 Hulbert Street, Linwood, Christchurch, 8062

REVISION				BY
NO.	DESCRIPTION	DATE	DESIGN	- JL
8	RC RFI	2022-11-17	DRAWN	- LH
9	BC RFI	2022-11-28	CHECKED	- JL
10	RC RFI	2023-02-08	APPROVED	- JL
11	BC Update	2023-02-13		
12	Construction Set	2023-02-20		
13	Site Survey Drain Update	2024-07-16		

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TITLE: Oak Property Ltd
Proposed Multi-Unit Development
11 Hulbert Street, Linwood, Christchurch, 8062

Cover Sheet

STATUS: Consent Set

SCALE	PLOT DATE	FILE	SHEET	REVISION
1 : 100	22/07/2024 1:17:48 pm	4637	000	13

ORIGINAL SHEET SIZE A2 [420x594]

GRAPHIC SCALES
150mm
100
50
0 10mm
22/07/2024 1:17:48 pm

LEGAL DESCRIPTION	
Address:	11 Hulbert St, Linwood, Christchurch, 8062
Lot	3
DP	5708
CB	358/105

SITE/PROJECT AREAS	
Wind Region:	A
Earthquake Zone:	2
Exposure:	C
Wind Zone:	Low
Planning Zone:	RMD

GENERAL NOTES:

All dimensions are nominal and are to be checked on site before commencing work.

Unless noted otherwise all timbers H1.2 SG8 to NZS3604:2011 and NZS3602:2003

All work to comply with the relevant section of the New Zealand Building Code.

Location of water supply, power & phone to be confirmed on site.

All pipes passing through concrete are to be lagged in Denso Tape. Pipes shall incorporate expansion joints in accordance with Chapter 8 of NZS 7643.

Hot water pipes shall be sized to NZBC G12 & NZS 4305:1196.
Mains pressure: 15mmØ allows 12m max pipe length. Pipe lengths beyond this must be lagged.

All plumbing and drainage to be installed with AS/NZS 3500

DEVELOPMENT AREAS	
Site Area:	*758.00 m²*
Proposed Unit 1 Ground Area:	*69.20 m²*
Proposed Unit 2 Ground Area:	*41.60 m²*
Proposed Unit 3 Ground Area:	*41.60 m²*
Proposed Unit 4 Ground Area:	*41.60 m²*
Proposed Unit 5 Ground Area:	*41.60 m²*
Total Gross Building Area:	*235.60 m²*

BUILT FORM STANDARDS

Building height and maximum storeys:
• 3 storeys 8m
Outdoor living space:
• Minimum area - *30m²*
• Minimum dimension - *4.0 m*
Daylight recession planes:
Appendix 14.16.2 diagram B
Building setbacks from internal boundaries:
• 1 metres
Balcony setbacks from internal boundaries:
• 4 metres
Road boundary setbacks:
• Building - *2 metres*
• Garage - *2.0 metres*
Street scene amenity:
• ≤50% transparent fencing max 1.8m height
• >50% transparent fencing max 1.0m height
Building overhangs:
• 800mm beyond gross floor area
Minimum unit size:
• 2 bedroom min 60m²
• 3 bedroom min 90m²
Service, storage, and waste spaces:
• 2.25m² and 1.5m min dimension for bins
• 3m² and 1.5m min dimension for washing

Sediment Control

Provide stabilised entry pad & wash down area for contractor vehicles in accordance with ECAN sediment control for small sites.

Vehicles involved in the excavation will be delivered to site and then removed via truck. The use of metal grates will minimize any unnecessary disturbance of the ground.

Excavated topsoil is to be spread around the site and flattened where possible. The rest is to be removed from site. While stored on site all soil is to be covered with impervious sheet.

Storm water drains laid during construction are to be capped until construction is complete to avoid sediment entering the storm water system.

Down pipes installed during construction are to be connect to the permanent underground storm water systems as soon as practical.

All existing vegetation surrounding the building area is to be retained during construction and will act as a vegetation buffer for sediment run off.

All sediment control measures & structures are to be installed prior to major earthworks and are to be checked and maintained every day.

Refer to Erosion and sediment control details in ECAN guidelines in supporting documents. It is the responsaiility of the main contractor to install, inspect and maintain all sediment control measures

Unit 1 Gross Floor Areas

Gross Ground Floor Area	69.2m²
Gross First Floor Area	70.4m²
Gross Floor Area Total	139.6m²

Unit 2 to 5 Gross Floor Areas

Gross Ground Floor Area	41.6m²
Gross First Floor Area	42.4m²
Gross Floor Area	84.0m²

Earthworks Excavation & Fill

Excavation

Asphalt Driveway Volume: 70mm thick x 228.9m² = 16.0m³

Exposed Aggregate Path Volume: 170mm thick x 63.4m² = 10.8m³

Service Court Pavers Volume: 100mm thick x 68.0m² = 6.0m³

Garden Pavers Volume: 100mm thick x 6.1m² = 0.6m³

Deck foundations allow 48 footings x 0.3x0.3x0.2m³ = 0.9m³

Total Excavation = 34.3m³

Fill

Asphalt Driveway Volume: 180mm thick x 228.9m² = 41.2m³

Exposed Aggregate Path Volume: 250mm thick x 63.4m² = 15.8m³

Service Court Pavers Volume: 260mm thick x 68.0m² = 17.7m³

Garden Pavers Volume: 260mm thick x 6.1m² = 1.6m³

Building platform Volume 10mm above min height: 10mm thick x 235.6m² = 2.4m³

Total Fill = 78.7m³

Cumulative Excavation & fill = 113.0m³

Area of Earthworks Excavation & Fill within 5m waterway setback

Excavation

Service Court Pavers Volume: 100mm thick x 13.8m² = 1.4m³

Building Platform Raft: 285mm thick x 4.7m² = 1.3m³

Total Excavation = 2.7m³

Fill

Service Court Pavers Volume: 260mm thick x 13.8m² = 3.6m³

Building Platform Raft: 285mm thick x 4.7m² = 1.3m³

Building platform Volume 10mm above min height: 10mm thick x 10.5m² = 0.1m³

Total Fill = 5.0m³

Cumulative Excavation & fill = 7.7m³

Figure 9 **Sediment fence construction details**

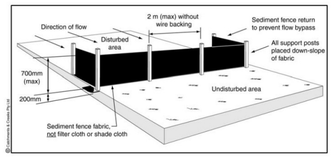
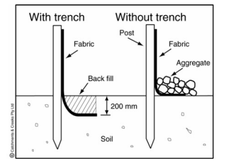
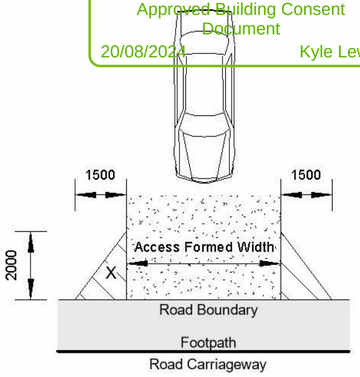


Figure 10 **Alternative sediment fence installations** (with and without a trench)



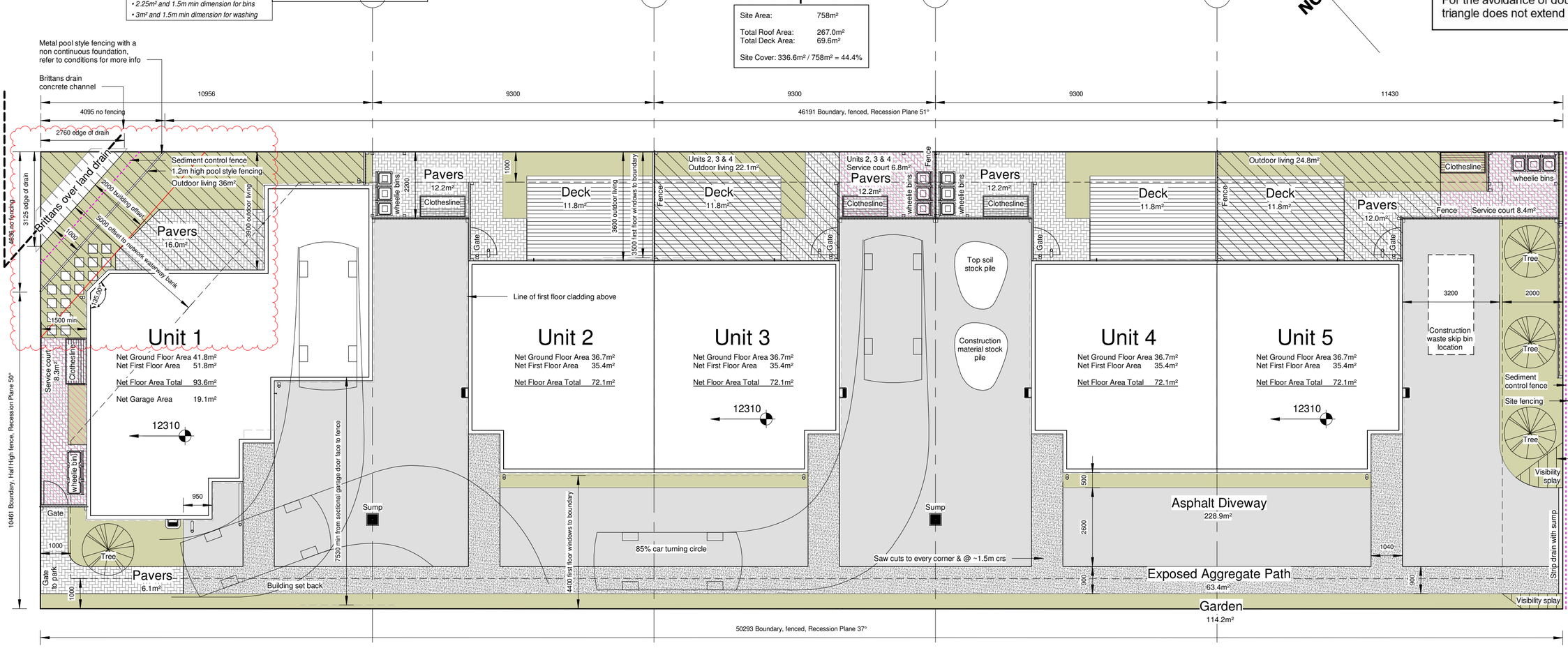
VISIBILITY SPLAY



The visibility splay areas are to be kept clear of obstructions.
Landscaping or other features may not exceed 1.0m in height.
For the avoidance of doubt the clear visibility triangle does not extend into an adjacent site.

Multi Unit Development

Site Area:	758m²
Total Roof Area:	267.0m²
Total Deck Area:	69.6m²
Site Cover: 336.6m² / 758m² = 44.4%	



Site Plan
1 : 100

Minor Variation

REVISION				
NO.	DESCRIPTION	DATE		BY
8	RC RFI	2022-11-17	DESIGN	- JL
9	BC RFI	2022-11-28	DRAWN	- LH
10	RC RFI	2023-02-08	CHECKED	- JL
11	BC Update	2023-02-13	APPROVED	- JL
12	Construction Set	2023-02-20		
13	Site Survey Drain Update	2024-07-16		

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www.apdesign.co.nz

TITLE	Oak Property Ltd Proposed Multi-Unit Development 11 Hulbert Street, Linwood, Christchurch, 8062
	Site Plan
STATUS	Consent Set
SCALE	1 : 100
PLOT DATE	22/07/2024 1:17:50 pm
FILE	4637
SHEET	100.1
REVISION	13

ORIGINAL SHEET SIZE A2 [420x594]

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22/07/2024 1:17:50 pm

GRAPHIC SCALES 150mm 100 50 0 10mm

GENERAL NOTES:
All dimensions are nominal and are to be checked on site before commencing work

Unless noted otherwise all timbers H1.2 SG8 to NZ3604:2011 and NZS3602:2003

All work to comply with the Relevant Sections of the New Zealand Building Code, Local Authority By-laws & regulations, Drainage & Plumbing Regulations, Electrical Wiring Regulations and all current amendments of the above document.

C1-4: Refer to the smoke alarm positions on the floor plans. Ensure only approved 'hush type' smoke alarms to AS3786, BS5446 pt1, or UL217 are installed as per NZBC F7/AS1. Max 3m from Bed rooms

Bathroom / WC Fittings & Fixtures

Bathroom / WC fittings & fixtures to be supplied by the client & installed by the contractor

Client Supplied & Fitted

Kitchen units & bench tops to be supplied & fitted by the client

Carpet & Vinyl to be supplied & fitted by the client

Kitchen Appliances

Kitchen appliances to be supplied by the client & fitted by the contractor

Kitchen, WC & Bathrooms

All sinks, basins & vanitys to have built in overflow protection

Floor Plan Notes:

Exterior & load bearing walls Lower Floor:
90x45mm H1.2 SG8 framing, studs @ 400crs, No dwangs, No notching of studs, double top plate

Exterior & load bearing walls Upper Floor:
90x45mm H1.2 SG8 framing, studs @ 600crs, dwangs @ 900crs,

Internal & non load bearing wall framing:
90x45mm H1.2 SG8 framing, studs @ 600crs, No dwangs

Dwangs as required for fixtures & sheet joints behind showers

First floor 90x45mm packed framing on 2/ 190x45mm stringers fixed & fixed back to 90x45mm first load bearing framing

Balloon Framing
Steel posts to engineers design with 90x45mm studs as per above & dwangs @ 800crs

Intertenancy Fire Wall System INTA120d:
Integra 50mm AAC panel with 25mm gap to both sides fixed to 90x45mm H1.2 SG8 framing with studs @ 600crs & dwangs @ 800crs. R2.8 - 90mm batts both sides & lined with 10mm GIB noiseline Flush stopped to L4 & paint finished

Wall Cladding Lower Floor:
70mm brick veneer with 10mm raked mortar joints over 40mm drained cavity with weep holes to every 3rd perpend along base & fixed to framing with EM brick ties @ 600crs horizontally & 400crs vertically max (material to NZS4210) with 45mm long 12g hex washer face screws

Wall Cladding Upper Floor:
Metalcraft 0.55BMT Espan 340 flat pan powdercoated colorsteel fixed with espan clips to 20mm horizontal cavibats @ 900crs with 60mm long 12g screw, solid cavity batten to top

All fixings to manufacturers specifications

Building RAB: 7mm Ecoply Barrier
(6mm JamesHardies RAB board to balloon framing)

Internal Linings:
Walls standard: 10mm GIB flush stopped to L4, paint finished

Ceilings standard: 13mm GIB flush stopped to L4, paint finished

Wall Wet Areas: 10mm Aqualine GIB flush stopped to L4, paint finished

Ceiling Wet Areas: 13mm Aqualine GIB flush stopped to L4, paint finished

Aluminium Joinery:
Selected profile powdercoated & double glazed with colour matched hardware & 19mm rebated reveals paint finished

Insulation:
Walls: R2.8 - 90mm batts

Mid floor: R1.6 - 70mm Snugfloor batts

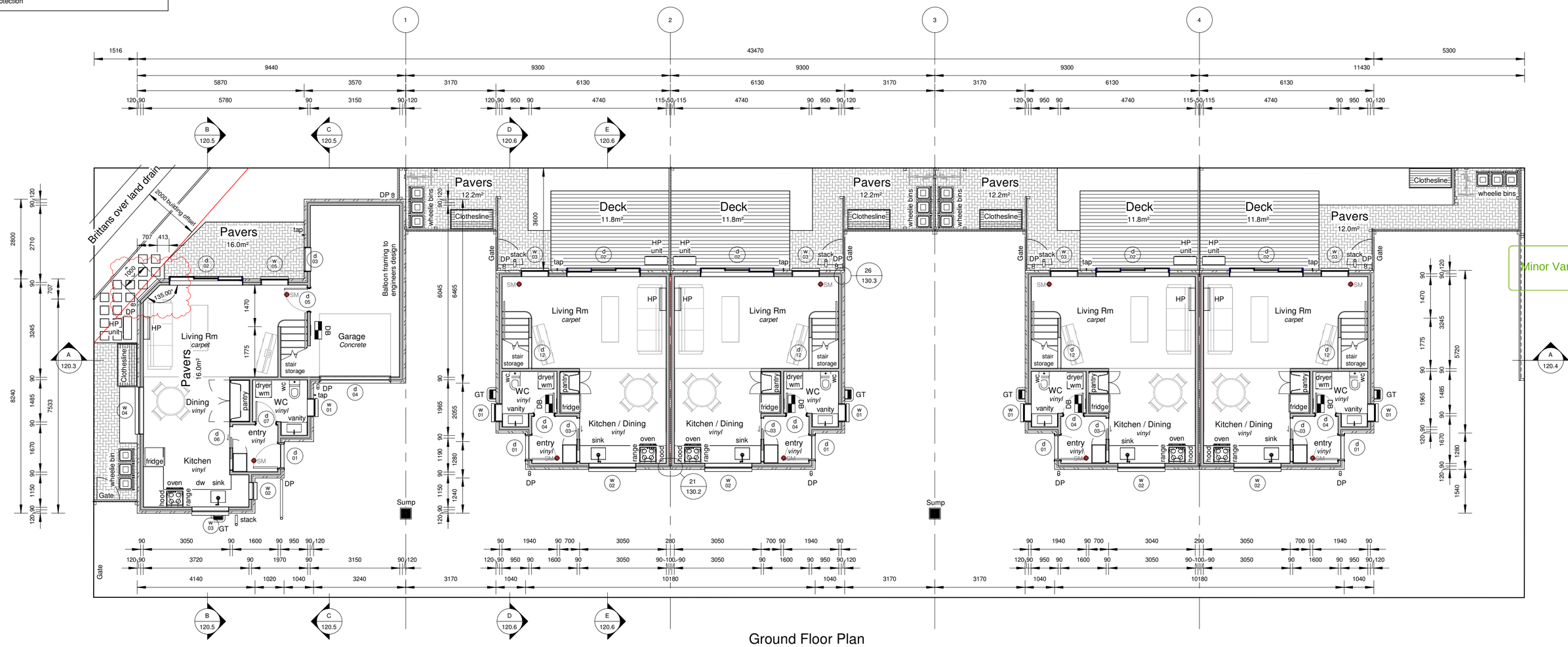
Ceilings: 2 layers, R2.2 - 115mm batts layed in cross directions

Secondary Private Stairs
Tread = 260mm
Riser = 190.7mm
Nosing = 20mm
To be confirmed by stair manufacturer on site

35Ø timber handrail set 45mm from wall & 920mm above pitch line

KEY:

Smoke Alarm:	SM
Hot water cylinder:	HWC
Dishwasher Machine	dw
Washing Machine:	wm
Toilet Suite:	wc
Smart Meter/Distribution Board	DB
Ceiling hatch attic stairs	c:



REVISION			
NO.	DESCRIPTION	DATE	BY
6	Documentation	2022-07-26	- JL
8	RC RFI	2022-11-17	- LH
9	BC RFI	2022-11-28	- JL
10	RC RFI	2023-02-08	
12	Construction Set	2023-02-20	
13	Site Survey Drain Update	2024-07-16	

DESIGN - JL
DRAWN - LH
CHECKED - JL
APPROVED - JL

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TITLE: Oak Property Ltd
Proposed Multi-Unit Development
11 Hulbert Street, Linwood, Christchurch, 8062

Ground Floor Plan

STATUS: Consent Set

SCALE	PLOT DATE	FILE	SHEET	REVISION
1 : 100	22/07/2024 1:17:51 pm	4637	110.1	13

ORIGINAL SHEET SIZE A2 [420x594]

Minor Variation

Landscaping

A minimum of 20% of the site shall be provided for landscaping, 50% of which is to be tress & shrubs.

A minimum of 1 tree shall be provided for every 250m² of gross site area with a minimum of 1 tree to be along the road boundary. Trees to be 1.5m high minimum at planting.

Areas:
Garden = 112.3m²
Decking = 47.2m²
Service Court Permeable Pavers = 68.0m²
Garden Pavers = 6.1m²
Concrete, Exposed Aggregate = 63.4m²
Asphalt, Driveway = 228.9m²

Site Area = 758m²
20% of Site Area = 151.6m² min

Landscaped Area
Garden: 112.3m² / 758m² = 14.81%
Decking: 47.2m² / 758m² = 6.23%
Garden Pavers: 6.1m² / 758m² = 0.8%

Total Landscaping Area = 21.84%

Site Area / 250m² = 3.03 trees required
Trees provided = 12

Note: Worcester Reserve is accessible through the back fence

Pervious Area
Garden: 112.3m² / 758m² = 14.81%
Decking: 47.2m² / 758m² = 6.23%
Garden Pavers: 6.1m² / 758m² = 0.8%
Service Court Pavers: 68.0 / 758 = 8.97%

Total Pervious Area = 30.81%

Note:
Landscaping plan to be printed in colour

Planting types & location are indicative & to be confirmed with client

Provide latches to all gates

LIRIOPE MUSCARI

Grows to 45cm tall & 45cm wide
Spacing 40cm

GRISELINIA 'BROADWAY MINT'

Grows to 5m +
Spacing 0.8m
Trim to 1.5m or as required

LIBERTIA IXOIDES 'TAUPO BLAZE'

Grows to 50cm tall & 50cm Ø
Spacing 40cm

PITTOSPORUM 'HEDGEHOG'

Grows to 50cm tall & 50cm Ø
Spacing 40cm

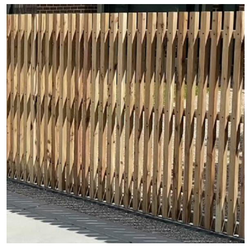
PSEUDOPANX FEROX

Grows to 8m tall & 2m wide

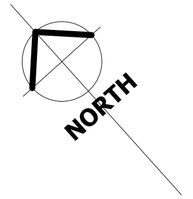
SOPHORA MICROPHYLLA

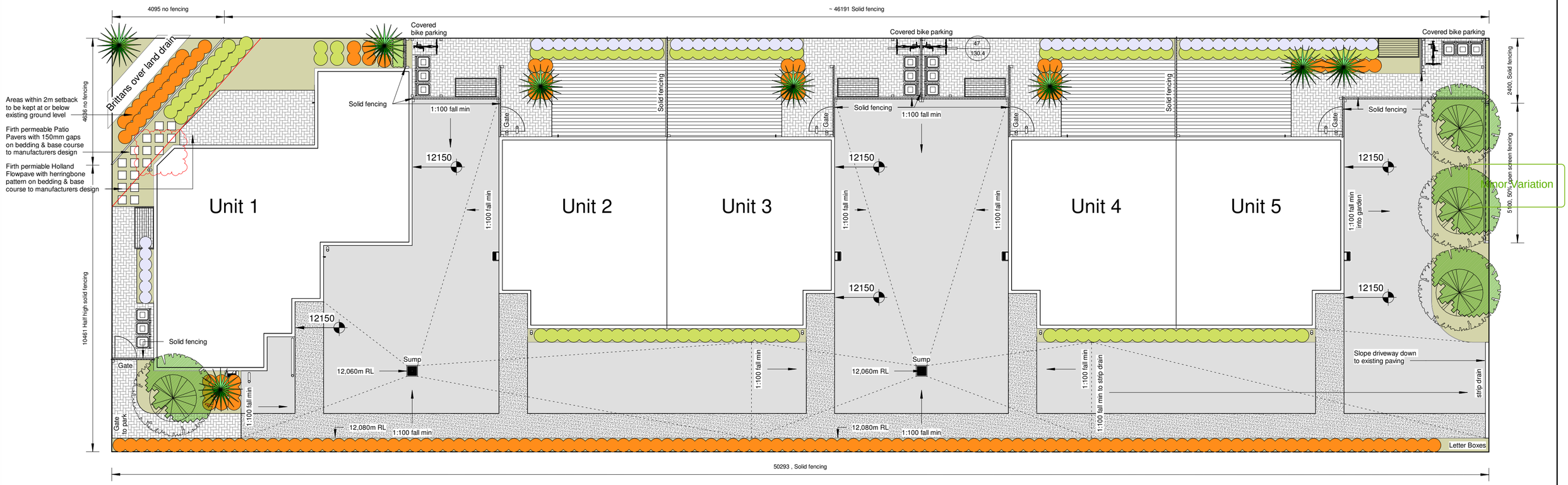
Grows to 8m tall & 3m wide

1.8m high fences between units:
100x100mm H4 fence posts
100x50mm H3.2 fence rails
190x45mm H4 base boards
150x25mm H3.2 paling
140x45mm H3.2 sloped fence cap
All stain finished



1.8m Screen fence along road boundary
100x100mm H4 fence posts
100x50mm H3.2 fence rails
190x45mm H4 base boards
45x45mm H3.2 battens @ 100mm crs
All stain finished





Minor Variation

Landscaping Plan
1 : 100

Type 1 Sump Calculation:

Driveway Area = 292.3m²
Rainfall intensity, I = 39mm/hr

Type 1 sumps can take:
4,500mm/l
4,500/39 = 115m²

Sumps needed
292.3m² / 115m² = 2.5

Unit 1 & 2 sump = 108m²
Units 3 & 4 sump = 104m²
Unit 5 strip drain = 53m²

REVISION			BY
NO.	DESCRIPTION	DATE	
5	Developed Design	2022-06-16	DESIGN - JL
6	Documentation	2022-07-26	DRAWN - LH
8	RC RFI	2022-11-17	CHECKED - JL
10	RC RFI	2023-02-08	APPROVED - JL
12	Construction Set	2023-02-20	
13	Site Survey Drain Update	2024-07-16	

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TITLE Oak Property Ltd
Proposed Multi-Unit Development
11 Hulbert Street, Linwood, Christchurch, 8062

Landscaping Plan

STATUS Consent Set

SCALE	PLOT DATE	FILE	SHEET	REVISION
1 : 100	22/07/2024 1:17:53 pm	4637	100.3	13

ORIGINAL SHEET SIZE A2 [420x594]

GRAPHIC SCALES
150mm 100 50 0 10mm
22/07/2024 1:17:53 pm

GENERAL NOTES:
All dimensions are nominal and are to be checked on site before commencing work

Unless noted otherwise all timbers H1.2 SG8 to NZ3604:2011 and NZS3602:2003

All work to comply with the Relevant Sections of the New Zealand Building Code, Local Authority By-laws & regulations, Drainage & Plumbing Regulations, Electrical Wiring Regulations and all current amendments of the above document.

C1-4: Refer to the smoke alarm positions on the floor plans. Ensure only approved 'hush type' smoke alarms to AS3786, BS5446 pt1, or UL217 are installed as per NZBC F7/AS1. Max 3m from Bed rooms

Bathroom / WC Fittings & Fixtures

Bathroom / WC fittings & fixtures to be supplied by the client & installed by the contractor

Client Supplied & Fitted

Kitchen units & bench tops to be supplied & fitted by the client

Carpet & Vinyl to be supplied & fitted by the client

Kitchen Appliances

Kitchen appliances to be supplied by the client & fitted by the contractor

Kitchen, WC & Bathrooms

All sinks, basins & vanitys to have built in overflow protection

Floor Plan Notes:

Exterior & load bearing walls Lower Floor:
90x45mm H1.2 SG8 framing, studs @ 400crs, No dwangs, No notching of studs, double top plate

Exterior & load bearing walls Upper Floor:
90x45mm H1.2 SG8 framing, studs @ 600crs, dwangs @ 900crs,

Internal & non load bearing wall framing:
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Dwangs as required for fixtures & sheet joints behind showers

First floor 90x45mm packed framing on 2/ 190x45mm stringers fixed & fixed back to 90x45mm first load bearing framing

Balloon Framing
Steel posts to engineers design with 90x45mm studs as per above & dwangs @ 800crs

Intertenancy Fire Wall System INTA120d:
Integra 50mm AAC panel with 25mm gap to both sides fixed to 90x45mm H1.2 SG8 framing with studs @ 600crs & dwangs @ 800crs. R2.8 - 90mm batts both sides & lined with 10mm GIB noiseline Flush stopped to L4 & paint finished

Wall Cladding Lower Floor:
70mm brick veneer with 10mm raked mortar joints over 40mm drained cavity with weep holes to every 3rd perpend along base & fixed to framing with EM brick ties @ 600crs horizontally & 400crs vertically max (material to NZS4210) with 45mm long 12g hex washer face screws

Wall Cladding Upper Floor:
Metalcraft 0.55BMT Espan 340 flat pan powdercoated colorsteel fixed with espan clips to 20mm horizontal cavibats @ 900crs with 60mm long 12g screw, solid cavity batten to top

All fixings to manufacturers specifications

Building RAB: 7mm Ecoply Barrier
(6mm JamesHardies RAB board to balloon framing)

Internal Linings:
Walls standard: 10mm GIB flush stopped to L4, paint finished

Ceilings standard: 13mm GIB flush stopped to L4, paint finished

Wall Wet Areas: 10mm Aqualine GIB flush stopped to L4, paint finished

Ceiling Wet Areas: 13mm Aqualine GIB flush stopped to L4, paint finished

Aluminium Joinery:
Selected profile powdercoated & double glazed with colour matched hardware & 19mm rebated reveals paint finished

Insulation:
Walls: R2.8 - 90mm batts

Mid floor: R1.6 - 70mm Snugfloor batts

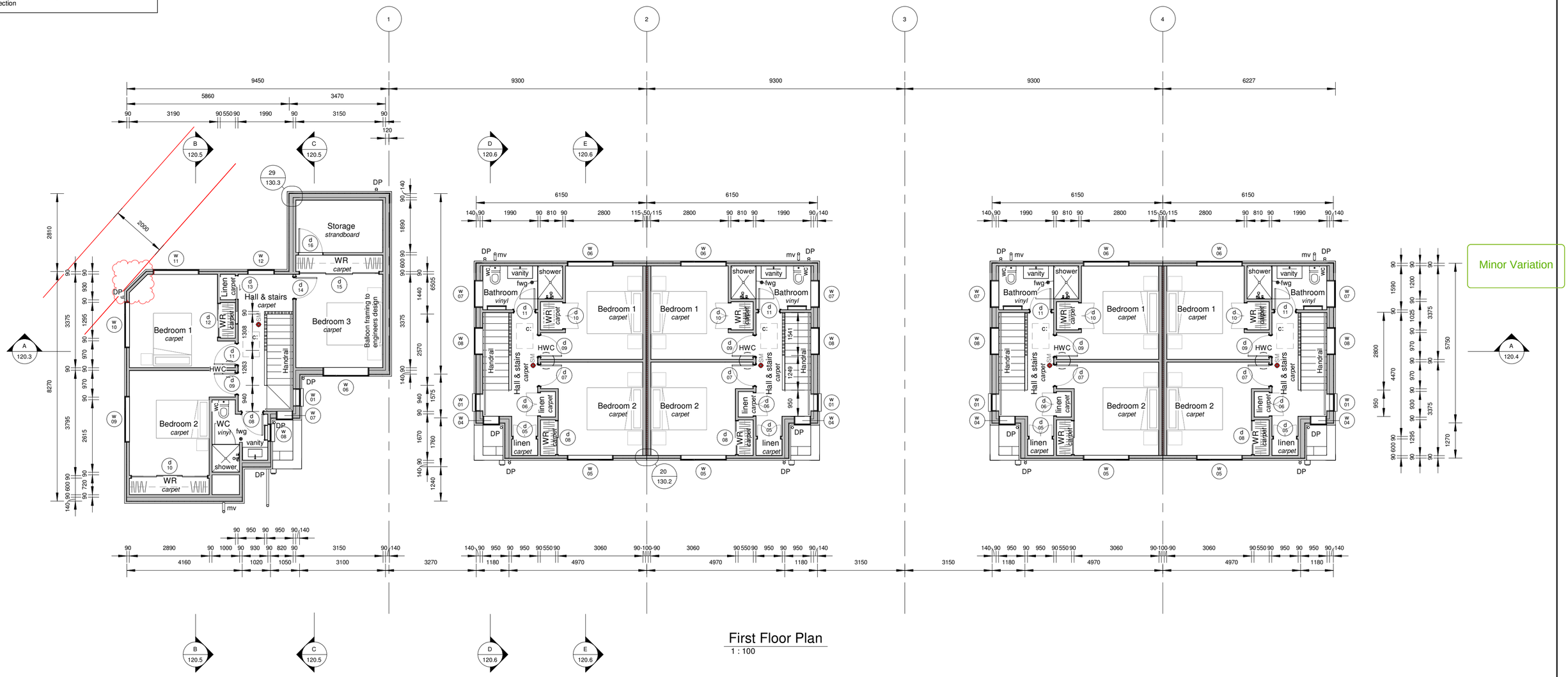
Ceilings: 2 layers, R2.2 - 115mm batts layed in cross directions

Secondary Private Stairs
Tread = 260mm
Riser = 190.7mm
Nosing = 20mm
To be confirmed by stair manufacturer on site

35Ø timber handrail set 45mm from wall & 920mm above pitch line

KEY:

Smoke Alarm:	SM
Hot water cylinder:	HWC
Dishwasher Machine	dw
Washing Machine:	wm
Toilet Suite:	wc
Smart Meter/Distribution Board	DB
Ceiling hatch attic stairs	c:



First Floor Plan
1 : 100

Minor Variation

REVISION			BY
NO.	DESCRIPTION	DATE	
4	RC Plans	2022-03-23	DESIGN - JL
5	Developed Design	2022-06-16	DRAWN - LH
6	Documentation	2022-07-26	CHECKED - JL
9	BC RFI	2022-11-28	APPROVED - JL
12	Construction Set	2023-02-20	
13	Site Survey Drain Update	2024-07-16	

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www.apdesign.co.nz

TITLE: Oak Property Ltd
Proposed Multi-Unit Development
11 Hulbert Street, Linwood, Christchurch, 8062

First Floor Plan

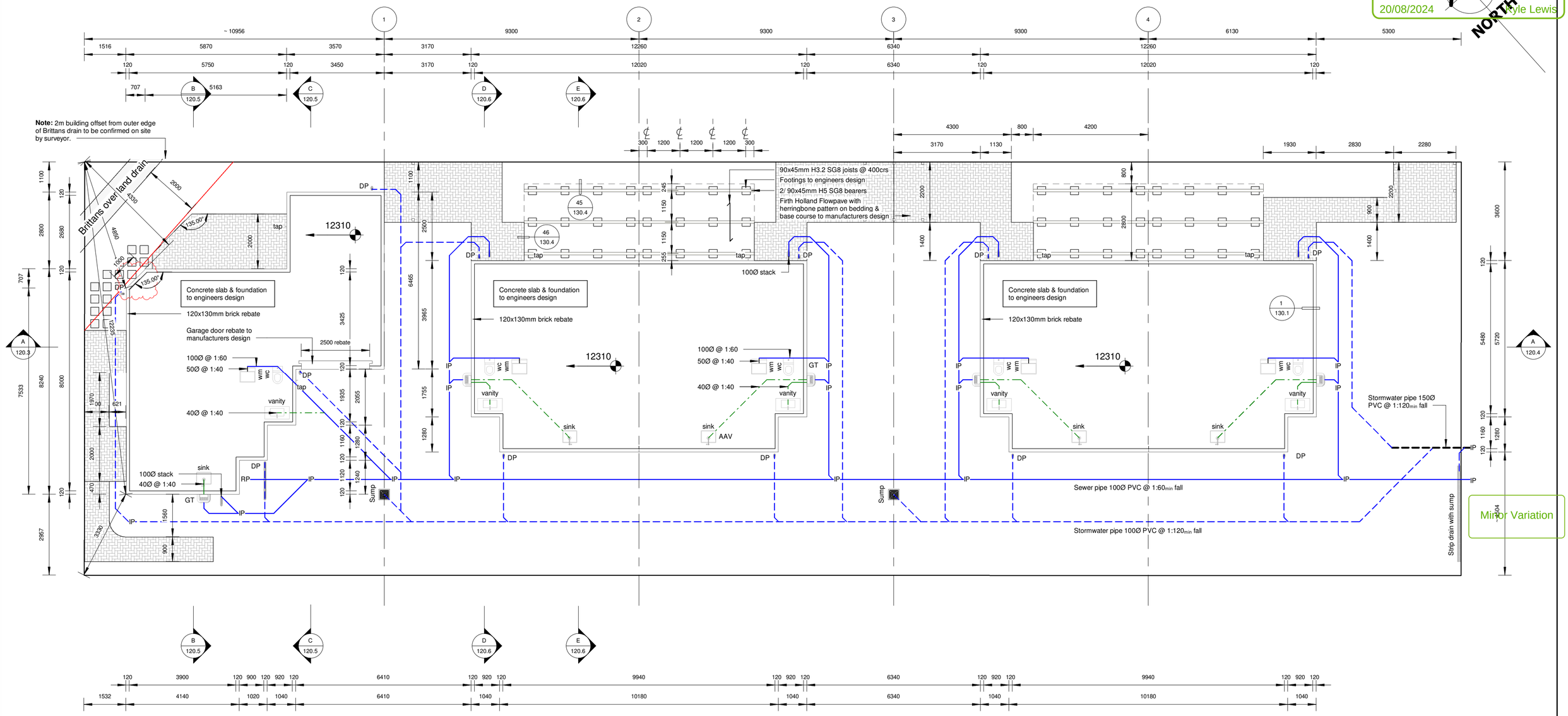
STATUS: Consent Set

SCALE	PLOT DATE	FILE	SHEET	REVISION
1 : 100	22/07/2024 1:17:54 pm	4637	110.2	13

ORIGINAL SHEET SIZE A2 [420x594]

GRAPHIC SCALES
150mm
100
50
0 10mm
22/07/2024 1:17:54 pm

C:\Users\sophie\OneDrive - AP Design Ltd\Documents\11 Hulbert St Main File 2024_sophieCW30C.rvt



Foundation & Plumbing Plan

1 : 100

Drainage Notes AS/NZS 3500:

All plumbing & drainage work is to comply with the requirements of AS/NZS 3500 part 2:

All pipes passing through concrete are to be lagged in Denso tape.

Midfloor drainage pipes to be securly strapped inplace.

HWC 20mm copper relief drain and 40mm PVC overflow shall drain to safe and visible location and shall not drain into gully traps.

Where there is a likelihood of freezing, hot & cold water supply pipes are to be lagged.

Pipes outside of the thermal envelope shall be lagged.

HWC vent pipe shall be lagged to 300mm min above the standing water level.

Hot water supply temperatures:
Laundries tubs and sinks to be 60°C
Baths, basins to be at 45°C
Showers to be at 42°C

Fixture discharge pipe sizes:

Vanity:	40Ø
Shower:	40Ø
Dishwasher:	40Ø
Sink:	40Ø
Washing machine:	50Ø
FWG:	50Ø
WC:	100Ø

Minimum pipe gradients:

40Ø PVC pipes	1:40 fall
50Ø PVC pipes	1:40 fall
100Ø PVC pipes	1:60 fall sewer
100Ø PVC pipes	1:120 fall stormwater

Maximum pipe distance between supports:

Pipe Size	Vertical	Graded
40Ø	1000mm	500mm
50Ø	1000mm	500mm
100Ø	1800mm	1200mm

Maximum developed length:

40Ø	3.5m
50Ø	3.5m
100Ø	6m

Key:

Downpipes:	DP
Main vent:	mv
Floor waste gully:	FWG
Hot water cylinder:	HWC
Dishwasher:	dw
Wshing machine:	wm
Air admittance valve:	AAV

40Ø Waste pipes:
50Ø Waster pipes:
100Ø Sewer pipes:
100Ø Stormwater:
150Ø Stormwater:

Fixture discharge units:
19 per unit x 5 units = 95 discharge units

Modified Catchment Area (MCA)

Refer to E1/AS1 section 3.2 & figure 3

MCA = 0.01AI

A = Roof & paving catchment area
I = Rainfall intensity

Roof plan area = 267m²
Driveway area = 292.3m²

Rainfall intensity as per E1/AS1 Appendix A, Christchurch I = 39

Roof & Driveway: = 0.01 x 559.3 x 39
= 218.1 MCA

100Ø pipe MCA < 200m² @ 1:120min fall
150Ø pipe MCA < 550m² @ 1:120min fall

Note:

Allow to provide underground ducted power, phone, fibre & water supply to each unit

Deck Subfloor Framing setout 2KPa Notes:

Joists: 90x45mm H3.2 SG8 @ 400crs, max span 1.6m with 90x45mm blocking to mid span

Bearers: 2/ 90x45mm H5 SG8 with max loaded dimension of 1.2m & max span of 1.3m

Deck Subfloor Fixings:

Joists to bearers & stringers: 3/ 90x3.15Ø skew nails

Bearers to footings: 4mm (ss) wire looped & embedded 100mm min into footing & wrapped & fixed over bearer with 2/ 3.5mm staples to each end

Deck Footings:

300x300x200mm 17.5MPa concrete

REVISION			BY
NO.	DESCRIPTION	DATE	
5	Developed Design	2022-06-16	DESIGN - JL
6	Documentation	2022-07-26	DRAWN - LH
8	RC RFI	2022-11-17	CHECKED - JL
10	RC RFI	2023-02-08	APPROVED - JL
12	Construction Set	2023-02-20	
13	Site Survey Drain Update	2024-07-16	

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TITLE Oak Property Ltd
Proposed Multi-Unit Development
11 Hulbert Street, Linwood, Christchurch, 8062

Foundation & Plumbing Plan

STATUS Consent Set

SCALE	PLOT DATE	FILE	SHEET	REVISION
1 : 100	22/07/2024 1:17:55 pm	4637	110.3	13

ORIGINAL SHEET SIZE A2 [420x594]

Minor Variation

Timber Floor Notes:

Beams: To engineers design
B.2: 150 PFC
B.3: 2/ 190x45mm H1.2 SG8
B.3a: 2/ 190x45mm H1.2 SG8
B.4: 2/ 190x45mm H1.2 SG8
B.5: 2/ 140x45mm H1.2 SG8
B.6: 2/ 190x45mm H1.2 SG8, 1.3m max cantilever
B.7: 2/ 290x45mm H1.2 SG8

B2.1: 150 PFC
B2.3: 2/ 190x45mm H1.2 SG8
B2.3a: 2/ 190x45mm H1.2 SG8
B2.5: 2/ 140x45mm H1.2 SG8
B2.7: 2/ 290x45mm H1.2 SG8
WB: 180 PFC

B3.1: 150 PFC
B3.3: 2/ 190x45mm H1.2 SG8
B3.3a: 2/ 190x45mm H1.2 SG8
B3.5: 2/ 140x45mm H1.2 SG8
B3.7: 2/ 290x45mm H1.2 SG8
WB: 180 PFC

B4.1: 150 PFC
B4.3: 2/ 190x45mm H1.2 SG8
B4.3a: 2/ 190x45mm H1.2 SG8
B4.5: 2/ 140x45mm H1.2 SG8
B4.7: 2/ 290x45mm H1.2 SG8
WB: 180 PFC

B5.1: 150 PFC
B5.3: 2/ 190x45mm H1.2 SG8
B5.3a: 2/ 190x45mm H1.2 SG8
B5.5: 2/ 140x45mm H1.2 SG8
B5.7: 2/ 290x45mm H1.2 SG8
WB: 180 PFC

Timber Floor Notes:

Flooring: 20mm strandboard flooring, H3.1 superstrand to wet areas

All sheet joints to be staggered & layed perpendicular to support span with all edges suppored

Joists:
J: 190x45mm H1.2 SG8 @ 450crs
J1: 190x45mm H3.2 SG8 @ 400crs
J2: 190x45mm H3.2 SG8 @ 400crs
J3: 2/ 90x45mm H1.2 SG8 over flooring
J4: 190x45mm H3.2 SG8 boundary joist
DJ: 2/ 190x45mm H1.2 SG8
ST: 2/ 190x45mmH1.2 SG8 stringer on 200x190x45mm packing @ fixings

Non load bearing & braced wall blocking: 90x45mm H1.2 SG8 blocking @ 1200crs & to both sides of door openings between joists for walls more than 150mm cl to cl from a joist. Fixed @ each end with 4/ 75x3.15Ø skew nails

Continuous solid bocking to mid span of joists fixed to joists with 2/ 90x3.15Ø end nails each end

Solid blocking between joists @ 1800crs max along support lines fixed to support with 6/ 90x3.15Ø skew nails

Timber Floor Fixing Notes:

J over support: 3/ 90x3.15Ø skew nails to wall plates & beams under joists
J inline with support: JH120x47 Joist hangers with 3/ 30x3.15Ø lumberlok nails per flange

J1 over support: 3/ 90x3.15Ø skew nails to wall plates & beams under joists
J1 inline with support: JH120x47 Joist hangers with 3/ 30x3.15Ø lumberlok nails per flange

J2 inline with support: JH120x47 Joist hangers with 3/ 30x3.15Ø lumberlok nails per flange

J3 over support: 3/ 90x3.15Ø skew nails to wall plates

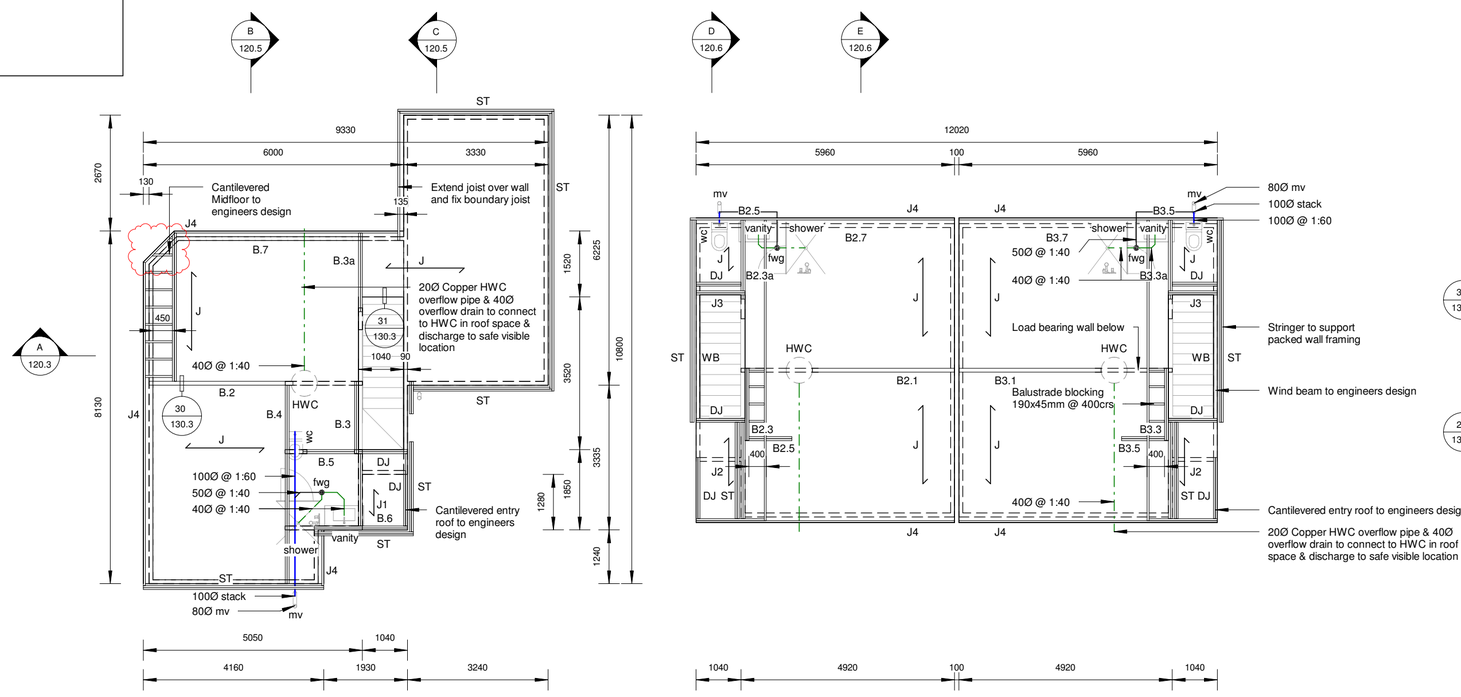
J4 inline with support: 2/ 90x3.15Ø end nails to each joist

ST to Midfloor: M12 bolts with 50x50x3mm washers @ 1200crs

Balustrade blocking fixed as per SPAX boundary joist & post fixing solution

DJ over support: To engineers design
DJ inline with support: To engineers design

Beams: To engineers design



First Floor Framing Plan
1 : 100

Drainage Notes AS/NZS 3500:

All plumbing & drainage work is to comply with the requirements of AS/NZS 3500 part 2:

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Pipes outside of the thermal envelope shall be lagged.

HWC vent pipe shall be lagged to 300mm min above the standing water level.

Hot water supply temperatures:
Laundries tubs and sinks to be 60°C
Baths, basins to be at 45°C
Showers to be at 42°C

Fixture discharge pipe sizes:
Vanity: 40Ø
Shower: 40Ø
Dishwasher: 40Ø
Sink: 40Ø
Washing machine: 50Ø
FWG: 50Ø
WC: 100Ø

Minimum pipe gradients:
40Ø PVC pipes 1:40 fall
50Ø PVC pipes 1:40 fall
100Ø PVC pipes 1:60 fall sewer
100Ø PVC pipes 1:120 fall stormwater

Maximum pipe distance between supports:

Pipe Size	Vertical	Graded
40Ø	1000mm	500mm
50Ø	1000mm	500mm
100Ø	1800mm	1200mm

Maximum developed length:
40Ø 3.5m
50Ø 3.5m
100Ø 6m

Key:
Downpipes: DP
Main vent: mv
Floor waste gully: FWG
Hot water cylinder: HWC
Dishwasher: dw
Wshing machine: wm
Air admittance valve: AAV

40Ø Waste pipes:
50Ø Waster pipes:
100Ø Sewer pipes:
100Ø Stormwater:
150Ø Stormwater:

Fixture discharge units:
19 per unit x 5 units = 95 discharge units

REVISION		
NO.	DESCRIPTION	DATE
5	Developed Design	2022-06-16
6	Documentation	2022-07-26
9	BC RFI	2022-11-28
12	Construction Set	2023-02-20
13	Site Survey Drain Update	2024-07-16

	BY
DESIGN	- JL
DRAWN	- LH
CHECKED	- JL
APPROVED	- JL

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www.apdesign.co.nz

TITLE: Oak Property Ltd
Proposed Multi-Unit Development
11 Hulbert Street, Linwood, Christchurch, 8062

First Floor Framing & Plumbing Plan

STATUS: Consent Set
SCALE: 1 : 100
PLOT DATE: 22/07/2024 1:17:56 pm
FILE: 4637
SHEET: 110.4
REVISION: 13

ORIGINAL SHEET SIZE A2 [420x594]

Minor Variation

GRAPHIC SCALES
150mm
100
50
0 10mm
22/07/2024 1:17:56 pm

Roof Plan Notes:

Flashing:
0.55BMT powdercoated colorsteel to match roofing

Roofing:
Metalcraft 0.55BMT Espan 340 flat pan powdercoated colorsteel fixed with espan clips to purlins with 35mm long 12g screw

Fascia:
0.55BMT powdercoated colorsteel to match roofing

Gutter:
Metalcraft 125mm Box gutter with external brackets

Membrane roofing:
Ardex 1.5mm Butynol roofing, Black, on 18mm H3.1 CD grade structural plywood substrate

Scupper:
Ardex 10276 scupper with 210x80mm opening extending 50mm min into colorsteel rainhead

RainHead:
0.55BMT Colorsteel rainhead 200mm deep x 400mm wide x 225mm high with a 70Ø overflow opening to each end & an 80Ø downpipe dropper. Powdercoated to match cladding

Roof Underlay:
Thermakraft Covertek 407

Purlins:
70x45mm H1.2 SG8 purlins @ 900crs (600crs to top & bottom purlins), fixed to each truss with 2/ 90x3.15 gun nails

Rafters:
190x45mm H1.2 SG8 rafters @ 900crs fixed to framing @ each ends with 2/ 90x3.15Ø skew nails & 2 wire dogs

Entry Soffits:
4.5mm fibre cement sheet, paint finished. No joints

Entry Soffit Bearers:
90x45mm H1.2 SG8 soffit bearers @ 600crs fixed to joists with with 2/ 100x3.75Ø skew nails

Note:

All fixings to manufacturers specifications

All colorsteel powdercoated in selected colours

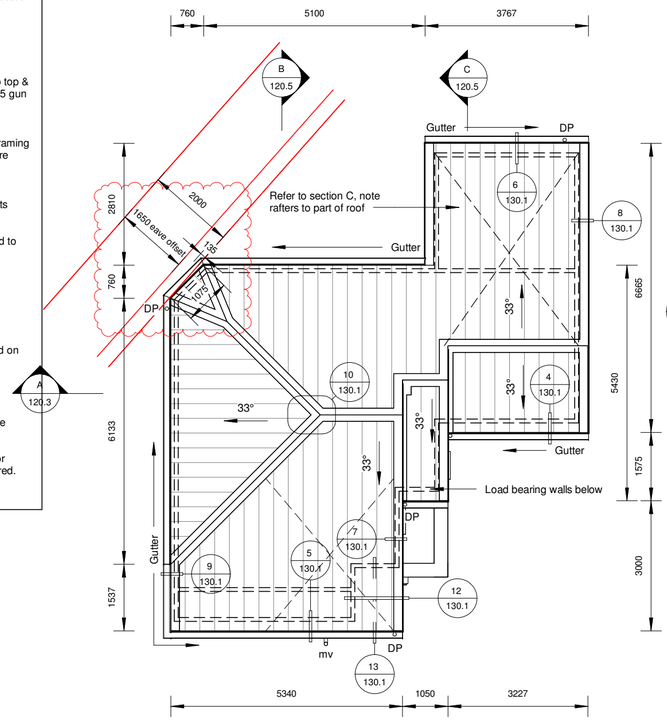
All dimensions are nominal and are to be checked on site before commencing work.

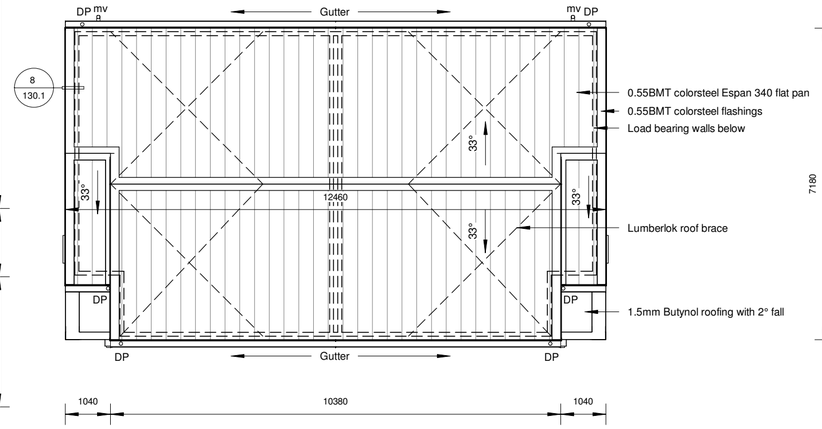
Unless noted otherwise all timbers H1.2 SG8 to NZS3604:2011

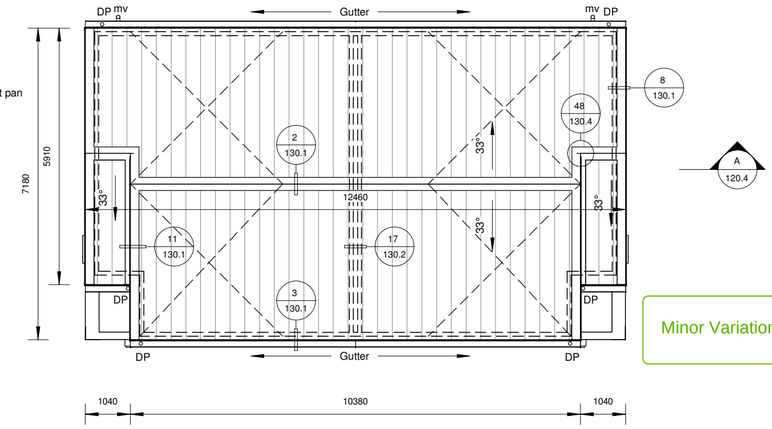
All work to comply with the relevent sections of the NZBC.

Refer to Truss Manufacturers plans and details for layout and fixing of Trusses and Bracing as required.

All downpipes to be 80Ø round Colorsteel







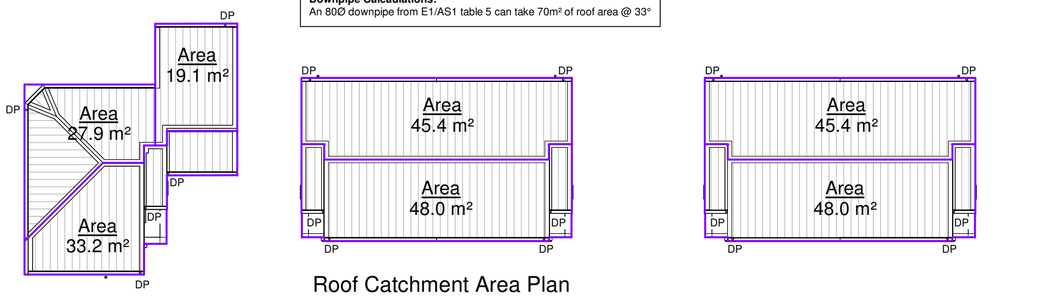
Roof Plan
1 : 100

Roof Catchment Area Notes:

125mm Box gutter Calculations:

Effective cross sectional area	8435mm²
Min fall	1:500
Free board	15mm

Downpipe Calcaulations:
An 80Ø downpipe from E1/AS1 table 5 can take 70m² of roof area @ 33°



Roof Catchment Area Plan
1 : 200

Minor Variation

REVISION			
NO.	DESCRIPTION	DATE	BY
4	RC Plans	2022-03-23	- JL
5	Developed Design	2022-06-16	- LH
6	Documentation	2022-07-26	- JL
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DESIGN - JL
DRAWN - LH
CHECKED - JL
APPROVED - JL

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TITLE: Oak Property Ltd
Proposed Multi-Unit Development
11 Hulbert Street, Linwood, Christchurch, 8062

Roof Plan

STATUS: Consent Set
SCALE: As indicated
PLOT DATE: 22/07/2024 1:17:58 pm
FILE: 4637
SHEET: 110.5
REVISION: 13

ORIGINAL SHEET SIZE A2 [420x594]

GRAPHIC SCALES
150mm
100
50
0 10mm
22/07/2024 1:17:58 pm

NEW UNIT DWELLINGS
11 HULBERT ST.
LINWOOD

STRUCTURAL DRAWING LIST
13404

DWG No.	TITLE					
S1.01	FOUNDATION LAYOUT	0	0	0	0	1
S1.02	GROUND FLOOR LAYOUT WITH 1ST FLOOR STRUCTURE OVER	0	1	1	1	2
$1.03	GROUND FLOOR BRACING LAYOUT	0	1	1	1	2
S1.04	FIRST FLOOR BRACING LAYOUT	0	1	1	1	2
S2.01	FOUNDATION DETAILS	0	0	1	1	1
S3.01	STRUCTURAL BEAM CONNECTION DETAILS	0	1	1	1	1
S3.02	STRUCTURAL BEAM CONNECTION DETAILS	0	0	0	0	0
S3.03	STRUCTURAL BEAM CONNECTION DETAILS	0	1	1	2	2
ISSUED TO:						
	simon.oakproperty@gmail.com	A	B	C	D	E
	DATE	12-07-2022	28-07-2022	02-08-2022	07-11-2022	25-07-2024

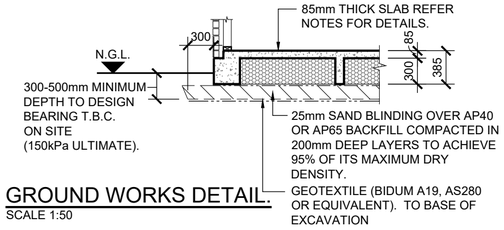
Minor Variation

constructure
structural engineering

Christchurch.
Unit 6, 75 Peterborough St, Christchurch.
PO Box 21381, Christchurch 8143.
Phone 03 365 3243,
Email cory@constructure.co.nz

Auckland Office
63 Ponsonby Road, Suite 2.1,
Ponsonby, Auckland 1021
Phone: 09 320 5226
Email: james@constructure.co.nz

CONSTRUCTION ISSUE



GROUND WORKS DETAIL:

SCALE 1:50

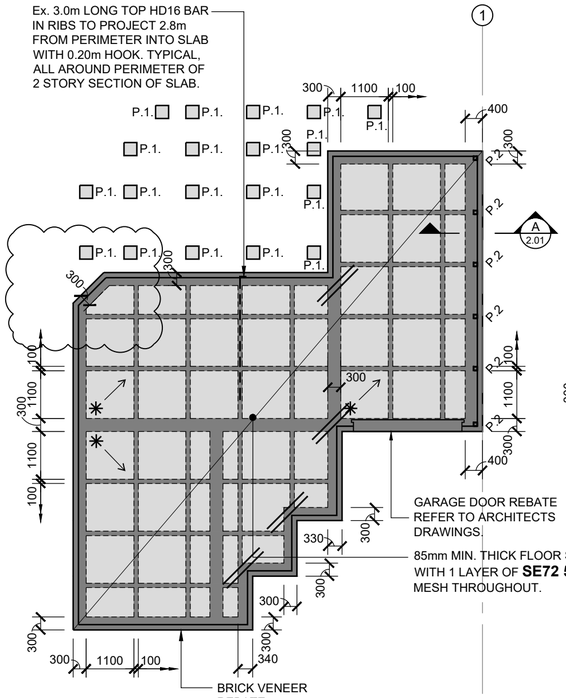
CURING AND PROTECTION:

- TAKE CARE TO PROTECT AND CURE ALL CONCRETE ADEQUATELY, AND IN ACCORDANCE WITH NZS 3109.
- APPLY A CURING COMPOUND TO ALL CONCRETE FLOOR SLABS IMMEDIATELY ON COMPLETION OF THE SURFACE FINISHING, OR ALTERNATIVELY, CURE BY PONDING.

FOUNDATION AND SLAB TO BE FORMED IN SINGLE POUR USING EITHER ALLIED/ASHBY CONCRETE MIX CODE 252 CONSF, READYMIX 2519RRS, FIRTH RP2519TC2 OR SIMILAR APPROVED STEEL FIBRE REINFORCED CONCRETE.

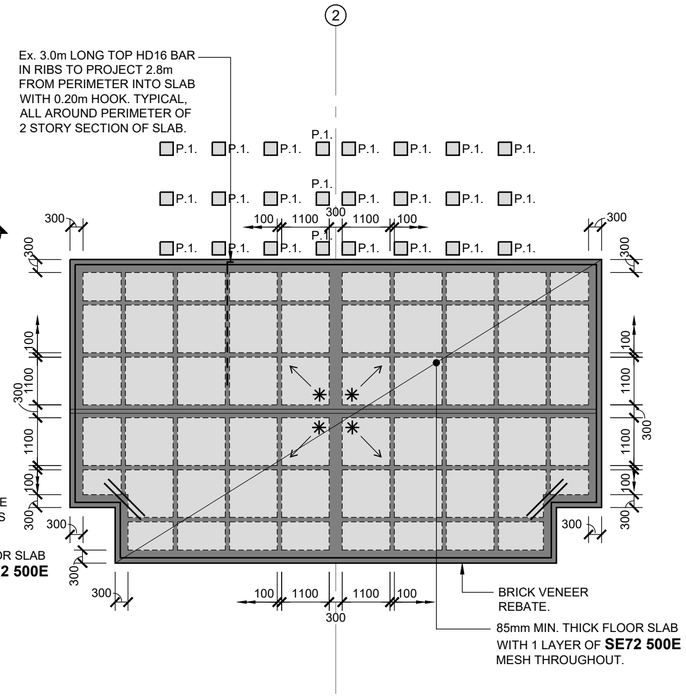
LEGEND:

- DENOTES 2 HD12 BARS, 1200mm LONG TO INTERNAL CORNERS OF SLAB, SPACE 50mm FROM CORNER AND 75mm APART.
- DENOTES 1100x1100x300mm POLYSTYRENE PODS. CUT TO SUIT ON SITE AS REQUIRED.
- DENOTES 300mm WIDE PERIMETER STRIP FOOTING.
- DENOTES 100mm WIDE RIB IN BETWEEN PODS.
- DENOTES 300mm WIDE INTERNAL STRIP FOOTING. (TO BE LOCATED UNDER ALL LOAD BEARING WALLS WHERE APPLICABLE)
- DENOTES SPECIFIC SETOUT PODS/POINT. PODS RADIATE FROM THERE.
- S.P. — DENOTES SPECIFIC (1.5x1.5m SPAN MAX.) POLYSTYRENE PODS BY ADDING HALF PODS TO THE END IF THE STRIP IS MORE THAN 500mm WIDE. CUT TO SUIT ON SITE.
- P.1. — DENOTES DECK PILES AS PER 3604. FOOTING SIZE FOR 150kPa ULTIMATE BEARING CAPACITY ARE 300x300x200 DEEP.
- P2 — 89x6 SHS FIRE POST @ RIB LOCATIONS. MAX. HEIGHT 6400mm.



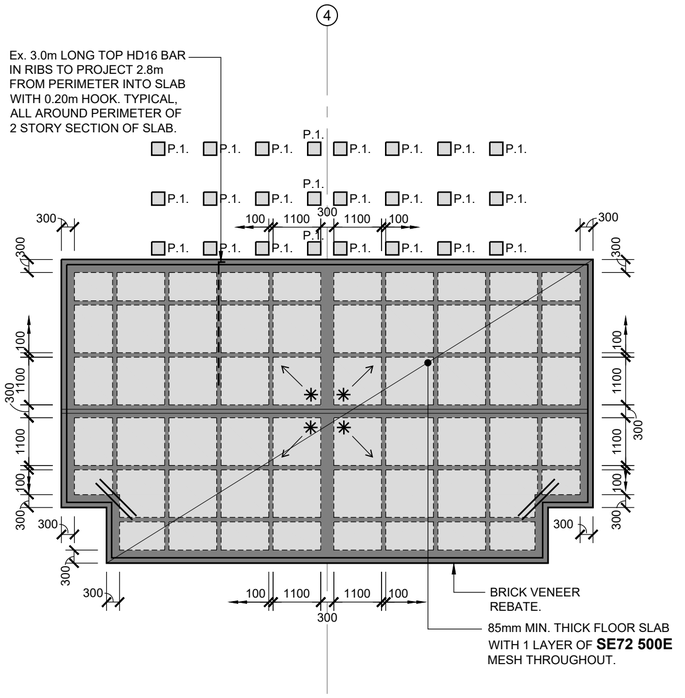
UNIT 1.
FOUNDATION LAYOUT

SCALE 1:100



UNIT 2.

UNIT 3.



UNIT 4.

UNIT 5.

NOTES:

- 300mm WIDE EXTERNAL STRIP FOOTING CAN BE THICKENED TO A MAX. OF 500mm WIDE TO MINIMIZE CUTTING OF PODS. THE SAME REINFORCING TO BE USED WITH MASS CONCRETE ON THE OPPOSITE SIDE OF WALL LOCATION.
- 300mm WIDE INTERNAL STRIP FOOTING CAN BE THICKENED TO A MAX. OF 500mm WIDE TO MINIMIZE CUTTING OF PODS. THE SAME REINFORCING TO BE USED (REINFORCING CAGE TO BE LOCATED UNDER WALLS WHERE APPLICABLE).
- FLOOR SLABS TO BE ~~85mm THICK~~ WITH 1 LAYER MESH. LAP ALL MESH A MINIMUM OF 2-CROSS WIRES, BUT NOT LESS THAN 225mm.
- FOR ALL REBATES AND OTHER SLAB RECESSES DRAINAGE LOCATION REFER TO ARCHITECTS DRAWINGS.
- NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES.
- **300mm MIN. FOUNDATION BEAMS SETOUT AS PER DRAWINGS, POD AND 100mm RIB SETOUT INDICATIVE.**

CONSTRUCTION ISSUE

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCHITECT'S DRAWINGS

constructure structural engineering

Christchurch Office
Unit 6, 75 Peterborough St, Christchurch.
PO Box 21381, Christchurch 8143.
Phone 03 365 3243,
Email cory@constructure.co.nz

Auckland Office
63 Ponsonby Road, Suite 2.1,
Ponsonby, Auckland 1021
Phone: 09 320 5226
Email: james@constructure.co.nz

CLIENT: OAK PROPERTY LTD.

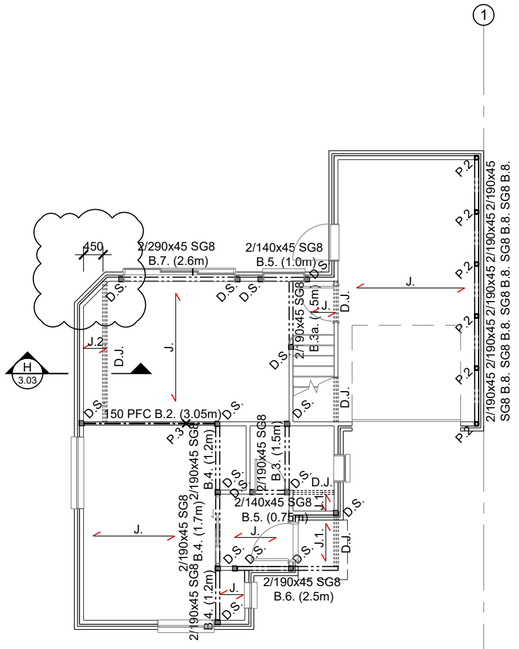
PROJECT TITLE: 11 HULBERT ST. LINWOOD, CHRISTCHURCH

DRAWING TITLE: FOUNDATION LAYOUT AND GROUND WORKS DETAIL

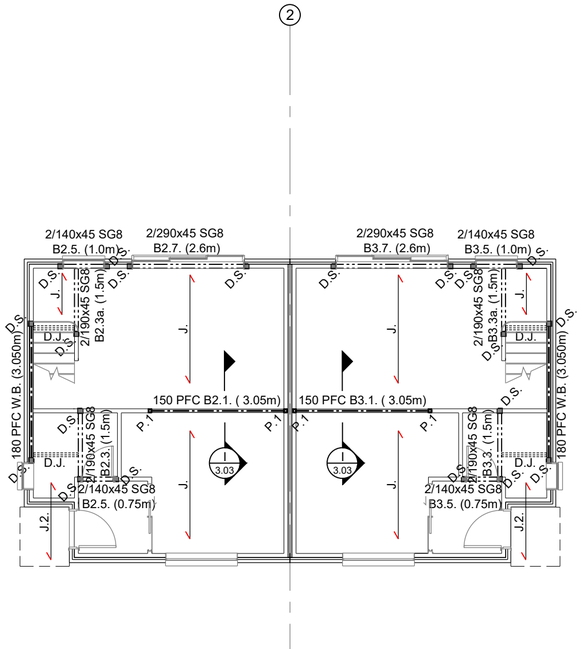
REV.	BY.	DATE:	COMMENT:
0	T.T.	12-07-2022	ISSUED FOR CONSTRUCTION
1	K.M.	25-07-2024	UNIT 1 LAYOUT REVISED

DESIGN. S.D. | JOB No. 13404 | DRAWING No. S1.01 | REV. 1

DRAWN. T.T. | SCALE @ A2 1:100/1:50

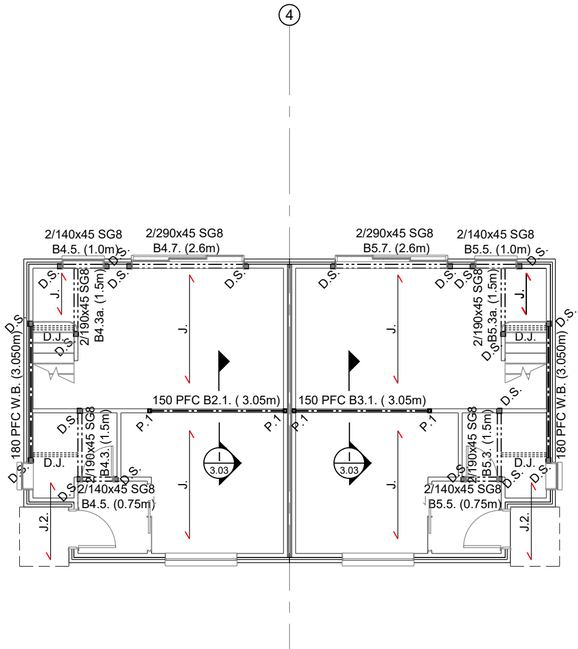


UNIT 1.



UNIT 2.

UNIT 3.



UNIT 4.

UNIT 5.

GROUND LAYOUT WITH FIRST FLOOR STRUCTURE OVER

SCALE 1:100

LEGEND

- P.1 ▪ 75x50 H1.2/SG8 POST
- P.2 ▪ 90x45 H1.2/SG8 POST
- P.3 ✕ POINT LOAD FROM TRUSS DESIGN 12.8 kN CHARACTERISTIC LOAD
- D.S. ▪ DOUBLE STUD.

JOISTS: #

- J. 190x45 SG8 @ 450crs
- J.1 190x45 SG8 @ 400crs (MAX.SPAN 3.2m)
- J.2. CANTILEVER ENTRY JOIST 190x45 SG8 @ 400crs (1300mm MAX. CANTILEVER) FIX BACK TO D.J. WITH JOIST HANGER.
- D.J. DOUBLE JOIST 2/190x45

JOIST FIXINGS TO TOP PLATE:
SG8 - 2/100x3.75 HAND DRIVEN SKEWED NAILS OR 3/90x3.15 POWER DRIVEN SKEWED NAILS.

- DOUBLE JOISTS ARE TO BE PLACED UNDER ALL LOAD BEARING AND BRACED WALLS THAT RUN PARALLEL TO JOISTS. (FOR NON-LOAD BEARING WALLS SOLID BLOCKING BETWEEN JOISTS AT 1200crs MAX. MAY BE USED. REFER NZS3604 7.1.3.5)
- SOLID BLOCKING TO BE FIXED UNDER ALL WALLS RUNNING PERPENDICULAR TO JOISTS AND AT MID SPAN WHERE SPANS EXCEED 2.5m.

TRUSSES: T.

TRUSS FIXINGS TO TOP PLATE:
SG8 - 2/WIRE DOGS WITH EITHER 2/100x3.75 HAND DRIVEN SKEWED NAILS OR 2/90x3.15 POWER DRIVEN SKEWED NAILS.

FOR STRUCTURAL BEAM CONNECTIONS DETAILS REFER TO THE FOLLOWING DRAWINGS:

BEAM B2.1	-	SHEET S3.01
BEAM B3.1	-	SHEET S3.01
BEAM B4.1	-	SHEET S3.01
BEAM B5.1	-	SHEET S3.01
BEAM B.2	-	SHEET S3.01
BEAM B.3	-	SHEET S3.01
BEAM B2.3	-	SHEET S3.01
BEAM B3.3	-	SHEET S3.01
BEAM B4.3	-	SHEET S3.01
BEAM B5.3	-	SHEET S3.01
BEAM B.3a	-	SHEET S3.01
BEAM B2.3a	-	SHEET S3.01
BEAM B3.3a	-	SHEET S3.01
BEAM B4.3a	-	SHEET S3.01
BEAM B5.3a	-	SHEET S3.01
LINTEL B.4	-	SHEET S3.01
LINTEL B.5	-	SHEET S3.02
LINTEL B2.5	-	SHEET S3.02
LINTEL B3.5	-	SHEET S3.02
LINTEL B4.5	-	SHEET S3.02
LINTEL B5.5	-	SHEET S3.02
BEAM B.6	-	SHEET S3.02
LINTEL B.7	-	SHEET S3.02
LINTEL B2.7	-	SHEET S3.02
LINTEL B3.7	-	SHEET S3.02
LINTEL B4.7	-	SHEET S3.02
LINTEL B5.7	-	SHEET S3.02
WIND BEAM W.B.	-	SHEET S3.02
BEAM B8	-	SHEET S3.03

STEEL NOTES:

- LENGTH NOTED NEXT TO BEAM MEMBERS ARE MAXIMUM DESIGNED SPAN AND NOT TO BE USED AS BEAM LENGTH. CONFIRM LENGTH ON SITE PRIOR TO FABRICATION. NOTIFY THE STRUCTURAL ENGINEER IF THE ACTUAL LENGTH IS LONGER THAN THE DESIGN LENGTH.
- ALL BEAMS, LINTELS AND SHS POSTS TO BE CENTRED ON STUD FRAMING LINES (U.N.O).
- TIMBER BEAM DEPTHS AS SHOWN ARE MINIMUM REQUIRED DEPTHS. DEPTH OF TIMBER BEAMS CAN BE INCREASED TO SUIT FLOOR DEPTH IF SO DESIRED.
- ALLOW FOR 45mm THICK SG8 STUDS/ PLATES TO BE BOLTED TO STEEL MEMBERS IF REQUIRED TO ALLOW FOR FIXING OF TIMBER FRAMING OR JOINERY.
- NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES.

CONSTRUCTION ISSUE

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCHITECT'S DRAWINGS

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Email: james@constructure.co.nz

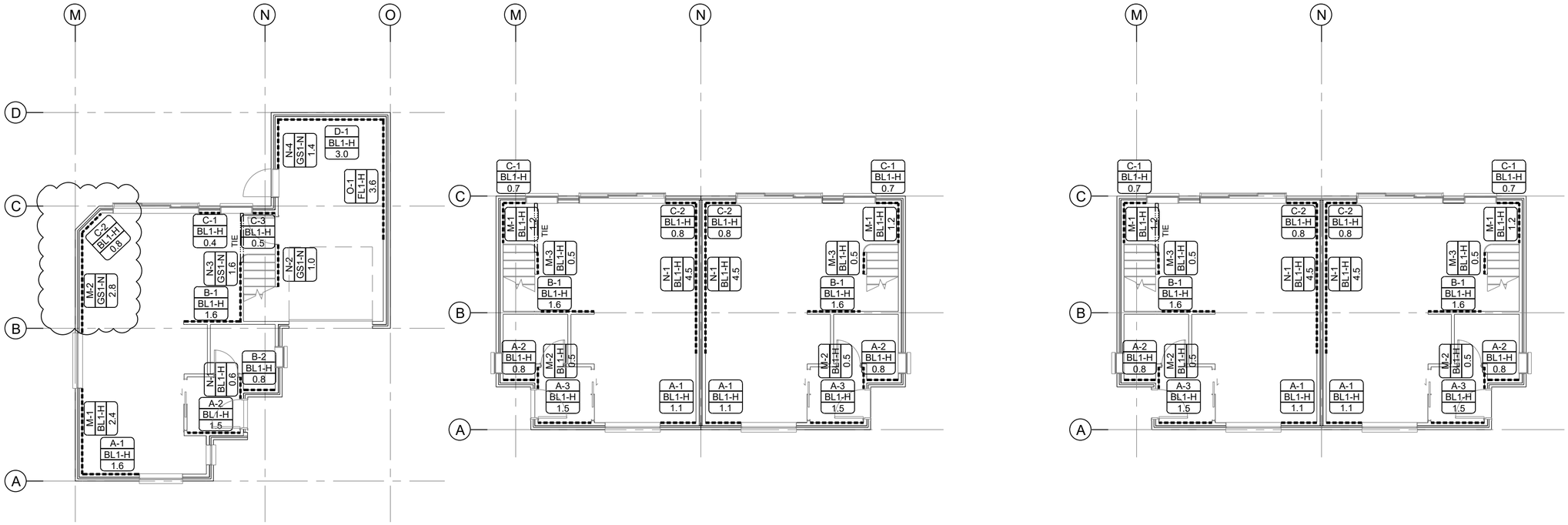
CLIENT: OAK PROPERTY LTD.

PROJECT TITLE: 11 HULBERT ST. LINWOOD, CHRISTCHURCH

DRAWING TITLE: GROUND FLOOR LAYOUT WITH ROOF SUPPORT OVER.

REV.	BY.	DATE:	COMMENT:
0	T.T.	12-07-2022	ISSUED FOR CONSTRUCTION
1	T.T.	28-07-2022	AMENDED PFC, BEAM B.8, ADDED POINT LOAD
2	K.M.	25-07-2024	UNIT 1 LAYOUT REVISED

DESIGN.	JOB No.	DRAWING No.	REV.
S.D.	13404	S1.02	2
DRAWN. T.T.	SCALE @ A2 1:100		



UNIT 1.
GROUND FLOOR BRACING LAYOUT
SCALE 1:100

UNIT 2. UNIT 3. UNIT 4. UNIT 5.

KEY

A-1 GBF400 2.0 — BRACING ELEMENT NUMBER. BRACING SYSTEM. ELEMENT LENGTH IN METRES.

TIE — WALLS ON THIS LINE TO BE CONNECTED TO THE PERIMETER WALLS AT TOP PLATE LEVEL, EITHER DIRECTLY OR THROUGH FRAMING MEMBERS IN LINE WITH THE TOP OF THE WALL AS PER NZS3604: 2011 8.7.3.4 (CONNECTION CAPACITY TO BE A MIN. OF 6kN).

BRACING NOTES:

- LENGTHS SHOWN ARE MINIMUMS USED FOR CALCULATIONS. USE FULL WALL LENGTHS IN CONSTRUCTION WHERE PRACTICAL.
- REFER TO MANUFACTURERS SPECIFICATION FOR FASTENERS DETAILS FOR EACH BRACING SYSTEM.
- **TOP PLATE CONNECTIONS:** THE TOP PLATE OF A WALL THAT CONTAINS ONE OR MORE WALL BRACING ELEMENTS SHALL BE JOINED WITH 6kN CONNECTIONS (25x0.9mm GALVANISED MS STRAP AND SIX 30x2.5mm GALVANISED NAILS ON EACH END, A LUMBERLOK 'PLATELOCK' OR APPROVED SIMILAR).
- **TOP PLATE CONNECTIONS, INTERNAL WALL TO EXTERNAL WALLS:** THE TOP PLATE OF AN INTERNAL WALL THAT CONTAINS ONE OR MORE WALL BRACING ELEMENTS SHALL BE JOINED TO THE EXTERNAL WALL WITH 6kN CONNECTIONS (25x0.9mm GALVANISED MS STRAP AND SIX 30x2.5mm GALVANISED NAILS ON EACH END, A LUMBERLOK 'PLATELOCK' OR APPROVED SIMILAR).
- REFER TO NZS 3604:2011 FOR DURABILITY REQUIREMENTS OF ALL FIXINGS.

BRACING KEY:

GS1-N: GIB STANDARD PLASTER BOARD ONE SIDE. FIXINGS AT 50, 100, 150, 225, 300mm FROM EACH CORNER AND AT 150mm Crs. THEREAFTER AROUND PERIMETER OF ELEMENT. INTERMEDIATE FIXING AT 300mm Crs.

BL1-H: GIB BRACELINE TO ONE SIDE. GIB HANDIBRAC END STUD HOLD-DOWN FIXINGS. FIXINGS AT 50, 100, 150, 225, 300mm FROM EACH CORNER AND AT 150mm Crs. THEREAFTER AROUND PERIMETER OF ELEMENT. INTERMEDIATE FIXING AT 300mm Crs.

FL1-H: 16mmGIB FYRELINE TO ONE SIDE. GIB HANDIBRAC END STUD HOLD-DOWN FIXINGS. FIXINGS AT 50, 100, 150, 225, 300mm FROM EACH CORNER AND AT 100mm Crs. THEREAFTER AROUND PERIMETER OF ELEMENT. INTERMEDIATE FIXING AT 300mm Crs. FASTENER TYPE AND LENGTH TO BE AS PER THE FIRE SYSTEM SPECIFIED.

CONSTRUCTION ISSUE

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Phone: 09 320 5226
Email: james@constructure.co.nz

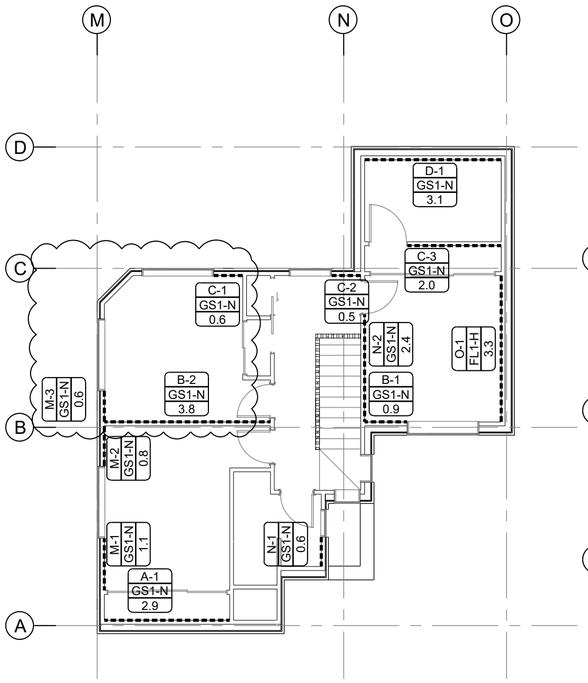
CLIENT: OAK PROPERTY LTD.

PROJECT TITLE: 11 HULBERT ST. LINWOOD, CHRISTCHURCH

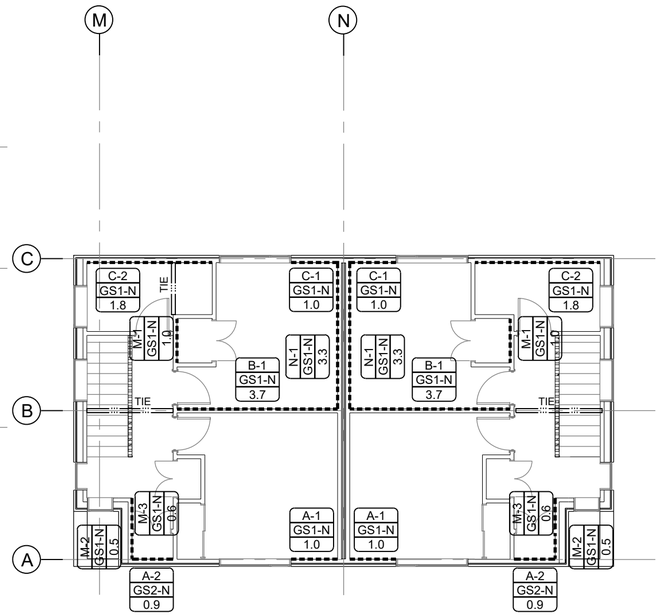
DRAWING TITLE: BRACING.

REV.	BY.	DATE:	COMMENT:
0	T.T.	12-07-2022	ISSUED FOR CONSTRUCTION
1	T.T.	28-07-2022	AMENDED ELEMENT O-1, ADDED FL1-H
2	K.M.	25-07-2024	UNIT 1 LAYOUT REVISED. BRACING M-2&C-2 REVISED

DESIGN. S.D. | DRAWN. T.T. | JOB No. 13404 | SCALE @ A2 1:100 | DRAWING No. S1.03 | REV. 2

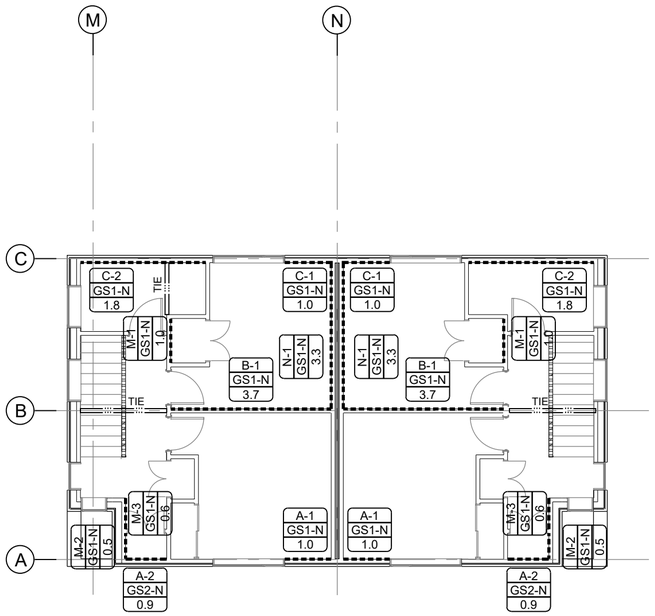


UNIT 1.
FIRST FLOOR BRACING LAYOUT
SCALE 1:100



UNIT 2.

UNIT 3.



UNIT 4.

UNIT 5.

KEY

A-1 / GBF-90 / 2.0 — BRACING ELEMENT NUMBER. BRACING SYSTEM. ELEMENT LENGTH IN METRES.

TIE — WALLS ON THIS LINE TO BE CONNECTED TO THE PERIMETER WALLS AT TOP PLATE LEVEL, EITHER DIRECTLY OR THROUGH FRAMING MEMBERS IN LINE WITH THE TOP OF THE WALL AS PER NZS3604: 2011 8.7.3.4 (CONNECTION CAPACITY TO BE A MIN. OF 6kN).

BRACING NOTES:

- LENGTHS SHOWN ARE MINIMUMS USED FOR CALCULATIONS. USE FULL WALL LENGTHS IN CONSTRUCTION WHERE PRACTICAL.
- REFER TO MANUFACTURERS SPECIFICATION FOR FASTENERS DETAILS FOR EACH BRACING SYSTEM.
- **TOP PLATE CONNECTIONS:** THE TOP PLATE OF A WALL THAT CONTAINS ONE OR MORE WALL BRACING ELEMENTS SHALL BE JOINED WITH 6kN CONNECTIONS (25x0.9mm GALVANISED MS STRAP AND SIX 30x2.5mm GALVANISED NAILS ON EACH END, A LUMBERLOK 'PLATELOCK' OR APPROVED SIMILAR).
- **TOP PLATE CONNECTIONS, INTERNAL WALL TO EXTERNAL WALLS:** THE TOP PLATE OF AN INTERNAL WALL THAT CONTAINS ONE OR MORE WALL BRACING ELEMENTS SHALL BE JOINED TO THE EXTERNAL WALL WITH 6kN CONNECTIONS (25x0.9mm GALVANISED MS STRAP AND SIX 30x2.5mm GALVANISED NAILS ON EACH END, A LUMBERLOK 'PLATELOCK' OR APPROVED SIMILAR).
- REFER TO NZS 3604:2011 FOR DURABILITY REQUIREMENTS OF ALL FIXINGS.

BRACING KEY:

GS1-N: GIB STANDARD PLASTER BOARD ONE SIDE. FIXINGS AT 50, 100, 150, 225, 300mm FROM EACH CORNER AND AT 150mm Crs. THEREAFTER AROUND PERIMETER OF ELEMENT. INTERMEDIATE FIXING AT 300mm Crs.

BL1-H: GIB BRACELINE TO ONE SIDE. GIB HANDIBRAC END STUD HOLD-DOWN FIXINGS. FIXINGS AT 50, 100, 150, 225, 300mm FROM EACH CORNER AND AT 150mm Crs. THEREAFTER AROUND PERIMETER OF ELEMENT. INTERMEDIATE FIXING AT 300mm Crs.

FL1-H: 16mmGIB FYRELINE TO ONE SIDE. GIB HANDIBRAC END STUD HOLD-DOWN FIXINGS. FIXINGS AT 50, 100, 150, 225, 300mm FROM EACH CORNER AND AT 100mm Crs. THEREAFTER AROUND PERIMETER OF ELEMENT. INTERMEDIATE FIXING AT 300mm Crs. FASTENER TYPE AND LENGTH TO BE AS PER THE FIRE SYSTEM SPECIFIED.

CONSTRUCTION ISSUE

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CLIENT: OAK PROPERTY LTD.

PROJECT TITLE: 11 HULBERT ST. LINWOOD, CHRISTCHURCH

DRAWING TITLE: BRACING.

REV.	BY.	DATE:	COMMENT:
0	T.T.	12-07-2022	ISSUED FOR CONSTRUCTION
1	T.T.	28-07-2022	AMENDED ELEMENT O-1, ADDED FL1-H
2	K.M.	25-07-2024	UNIT 1 LAYOUT REVISED. BRACING M-3 & C-1 REVISED

DESIGN. S.D. | DRAWN. T.T. | JOB No. 13404 | SCALE @ A2 1:100 | DRAWING No. S1.04 | REV. 2

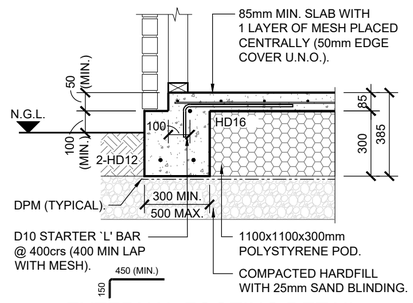
REINFORCEMENT NOTES:

BAR LAP LENGTHS:
D10 - 300mm HD12 - 600mm
D12 - 400mm HD16 - 800mm
D16 - 500mm HD20 - 1000mm

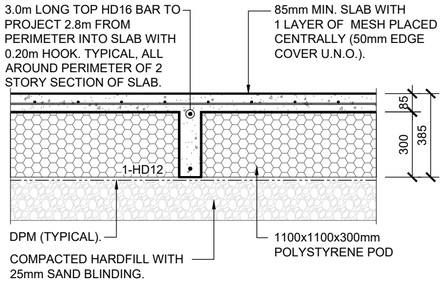
BAR GRADES:
R - STRUCTURAL GRADE ROUND BAR.
D - DEFORMED BAR GRADE 300E
HD - DEFORMED BAR GRADE 500E

ALL FLOOR MESH TO BE TRIMMED TO HAVE 50mm EDGE COVER. IF MESH IS NOT LAPPED A MIN. OF 225mm OVER FOUNDATION BEAM INSTALL D10 STARTERS @ 400crs.

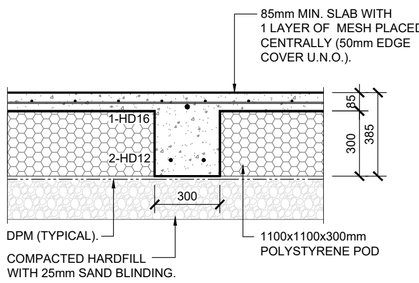
COVER:
-50mm TO BOTTOM OF FOUNDATIONS.
-50mm TO SIDES OF EXTERNAL FOUNDATION BEAMS.
-40mm TO SIDES OF INTERNAL FOUNDATIONS AND RIBS.
-MESH CENTRAL IN SLAB.



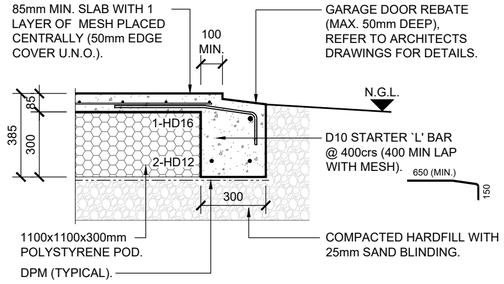
EXTERNAL FOOTING DETAIL
SCALE 1:20



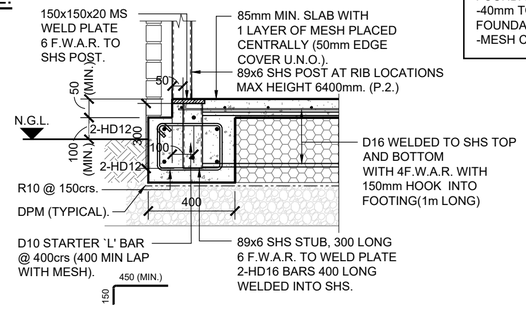
RIB DETAIL.
SCALE 1:20



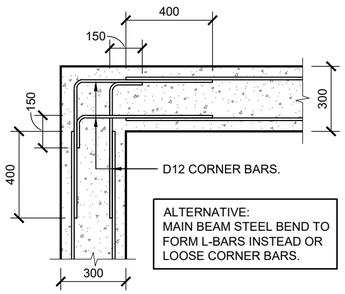
INTERNAL BEAM DETAIL.
SCALE 1:20



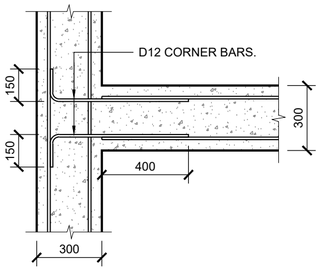
GARAGE DOOR REBATE DETAIL.
SCALE 1:20



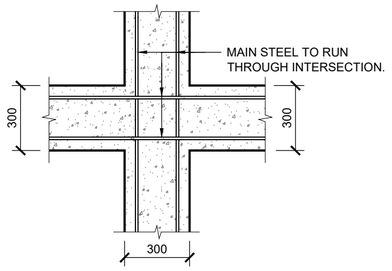
A 1.01 89x6 SHS POST CAST IN DETAIL
SCALE 1:20



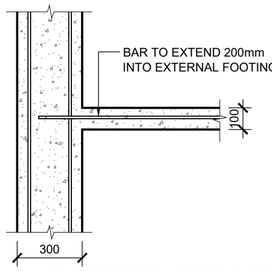
MAIN BEAM CORNER DETAIL (BOTTOM BARS).



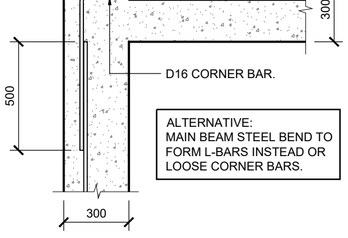
MAIN BEAM 'TEE' DETAIL (BOTTOM BARS).



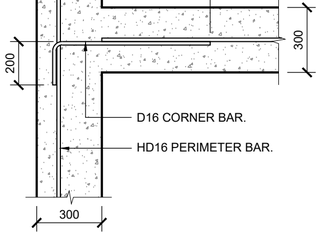
INTERNAL JUNCTION DETAIL (BOTTOM BARS).



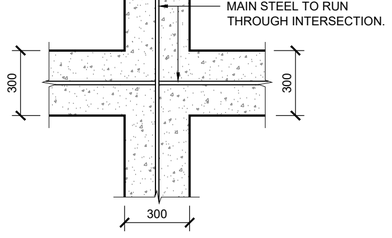
MAIN BEAM TO RIB DETAIL (BOTTOM BARS).



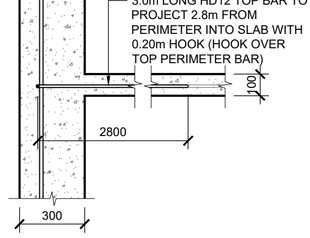
MAIN BEAM CORNER DETAIL (TOP BARS).



MAIN BEAM 'TEE' DETAIL (TOP BARS).

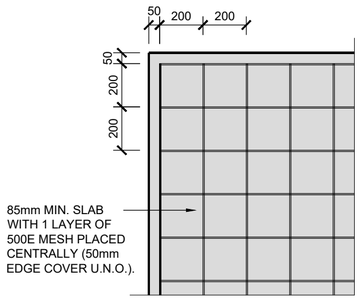


INTERNAL JUNCTION DETAIL (TOP BARS).



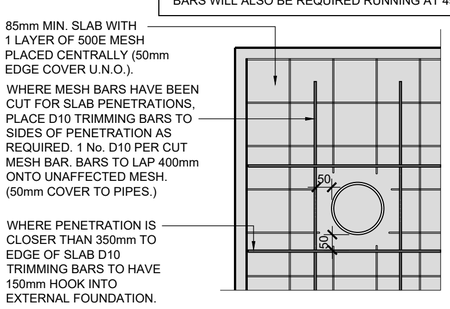
MAIN BEAM TO RIB DETAIL. (TOP BARS).

FOUNDATION INTERSECTION DETAILS - PLAN.
SCALE 1:20

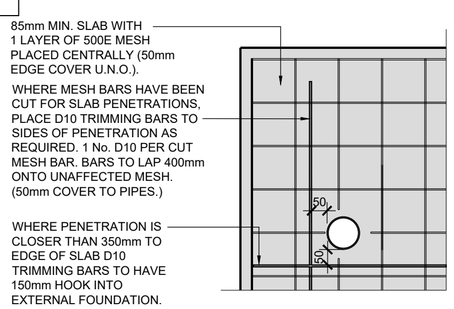


MESH LAYOUT - PLAN.
SCALE 1:20

IF SQUARE FORMS ARE USED FOR DRAIN OR PIPE RECESSES IN THE SLAB REENTRANT BARS WILL ALSO BE REQUIRED RUNNING AT 45 DEGREES AT EACH CORNER.



WHERE PENETRATIONS ARE **NOT** CLOSER THAN 350mm TO EDGE OF SLAB, A SECTION OF MESH MAY BE USED TO REPLACE THE CUT BAR/BARS IN LIEU OF A D10. LAP MESH A MINIMUM OF 2-CROSS WIRES, BUT NOT LESS THAN 225mm.

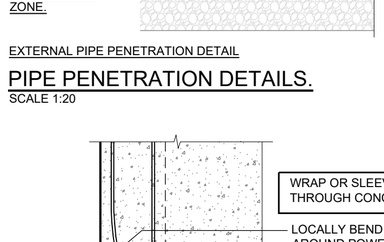


MESH PENETRATION LAYOUT.
SCALE 1:20

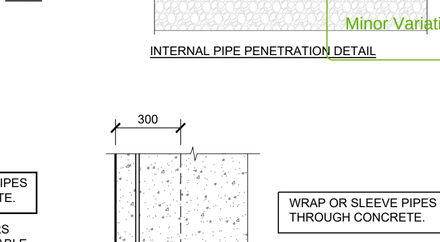
FLEXIBLE CONNECTIONS TO ALL PIPES WHERE THEY EXIT THE SLAB.

PIPE PENETRATION DETAILS FOR HIGH SEISMIC ZONES REFER TO MBIE GUIDLINE SECTION 'A FIGURE 5.14&5.15 AND BUILDING CODE CLAUSE G13.

FOR PIPE DETAILS INCLUDING PROTECTION REFER TO ARCHITECTS DRAWINGS.

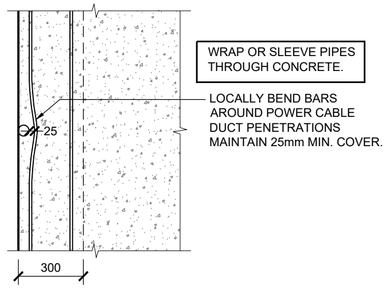


EXTERNAL PIPE PENETRATION DETAIL

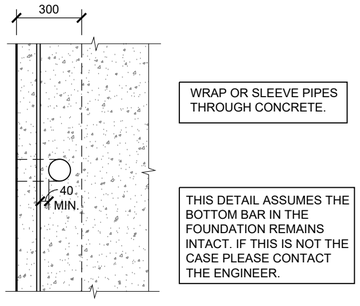


INTERNAL PIPE PENETRATION DETAIL

PIPE PENETRATION DETAILS.
SCALE 1:20



POWER CABLE DUCT PENETRATION DETAIL (BOTTOM BARS).



PIPE PENETRATION DETAIL (TOP BAR).

Minor Variation

CONSTRUCTION ISSUE

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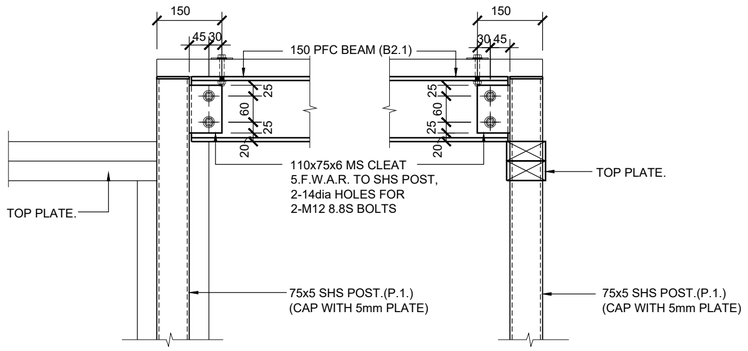
CLIENT: OAK PROPERTY LTD.

PROJECT TITLE: 11 HULBERT ST. LINWOOD, CHRISTCHURCH

DRAWING TITLE: FOUNDATION DETAILS.

REV.	BY.	DATE:	COMMENT:
0	T.T.	12-07-2022	ISSUED FOR CONSTRUCTION
10	T.T.	02-08-2022	Amended D16 to SHS

DESIGN. S.D. | JOB No. 13404 | DRAWING No. S2.01 | REV. 1
DRAWN. T.T. | SCALE @ A2 1:20

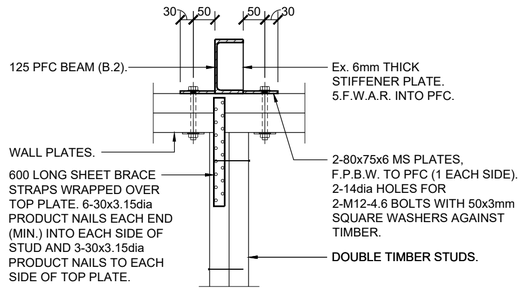


BEAM B2.1 - 150 PFC.
SCALE 1:10

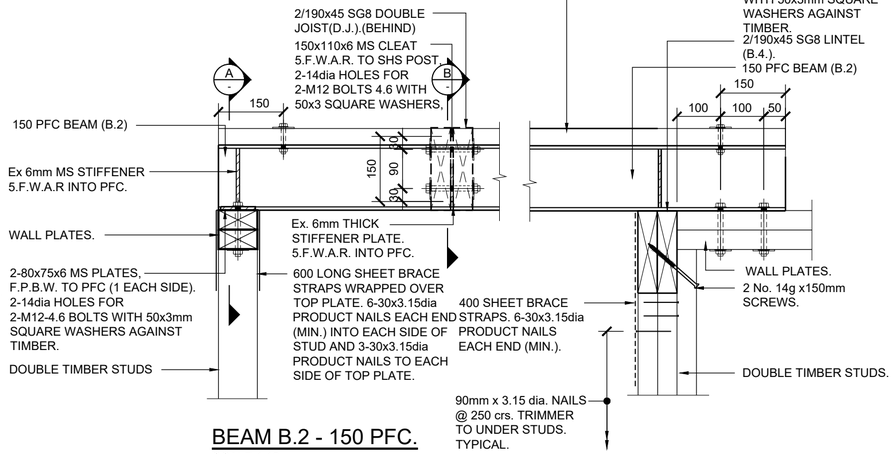
BEAM B3.1 - 150 PFC.(mirrored)
SCALE 1:10

BEAM B4.1 - 150 PFC.
SCALE 1:10

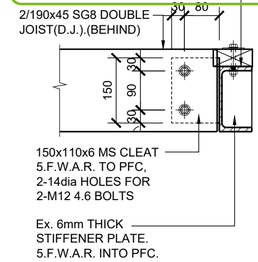
BEAM B5.1 - 150 PFC.(mirrored)
SCALE 1:10



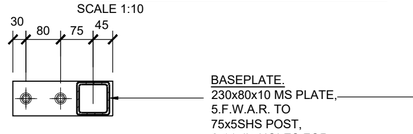
A - SECTION A-A
SCALE 1:10

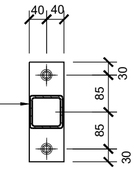


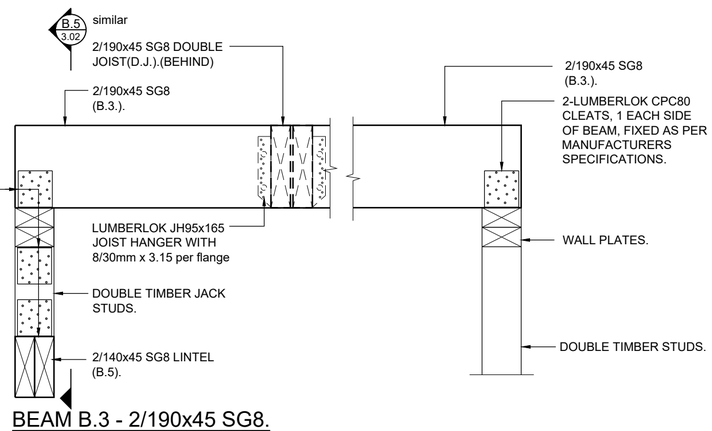
BEAM B.2 - 150 PFC.
SCALE 1:10



B - SECTION B-B
SCALE 1:10







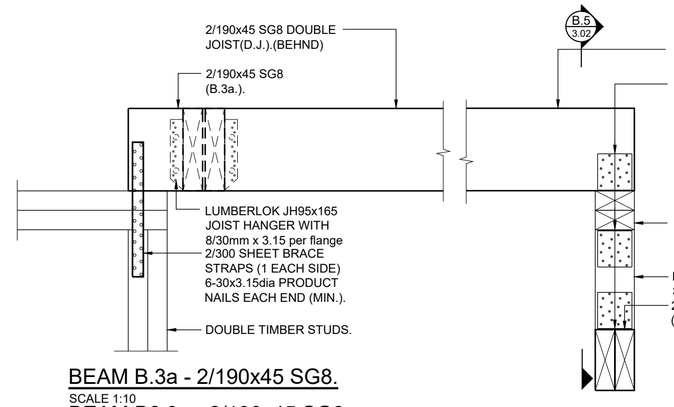
BEAM B.3 - 2/190x45 SG8.
SCALE 1:10

BEAM B2.3 - 2/190x45 SG8.
SCALE 1:10

BEAM B3.3 - 2/190x45 SG8.(mirrored)
SCALE 1:10

BEAM B4.3 - 2/190x45 SG8.
SCALE 1:10

BEAM B5.3 - 2/190x45 SG8.(mirrored)
SCALE 1:10



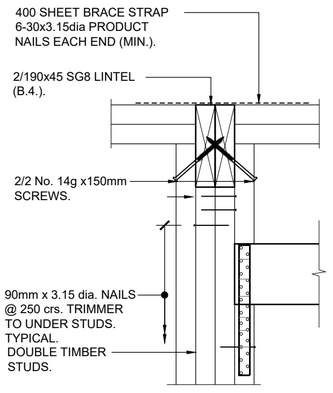
BEAM B.3a - 2/190x45 SG8.
SCALE 1:10

BEAM B2.3a - 2/190x45 SG8.
SCALE 1:10

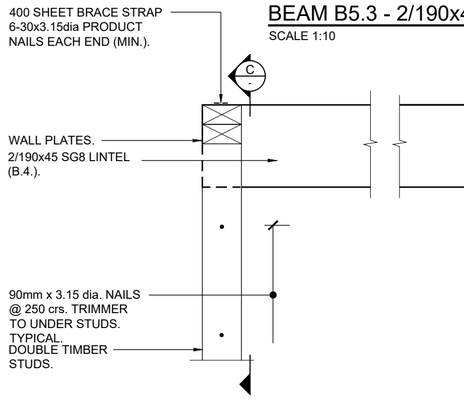
BEAM B3.3a - 2/190x45 SG8.(mirrored)
SCALE 1:10

BEAM B4.3a - 2/190x45 SG8.
SCALE 1:10

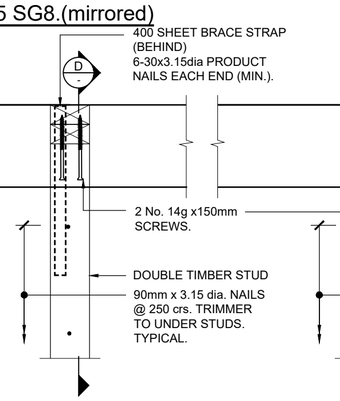
BEAM B5.3a - 2/190x45 SG8.(mirrored)
SCALE 1:10



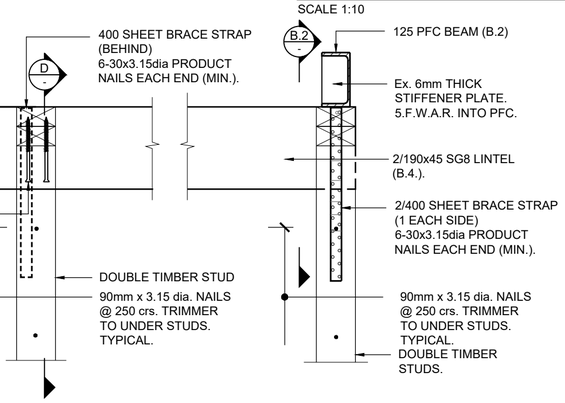
C - SECTION C-C
SCALE 1:10



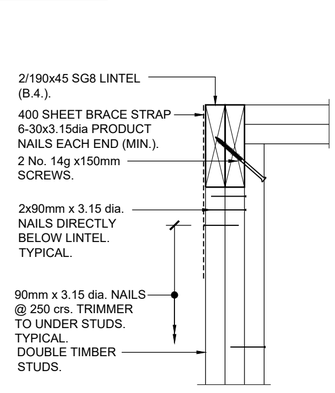
BEAM B.4 - 2/190x45 SG8.
SCALE 1:10



BEAM B.4 - 2/190x45 SG8.
SCALE 1:10



BEAM B.4 - 2/190x45 SG8.
SCALE 1:10



D - SECTION D-D
SCALE 1:10

Minor Variation

GENERAL NOTES:

- WHERE REQUIRED ALLOW FOR SG8 TIMBER PLATES TO BE BOLTED TO STEEL MEMBERS WITH M12-4.6 BOLTS @ 800crs.
- ALL BOLTS TO TIMBER TO HAVE 50x3mm SQUARE WASHERS.
- ORIENTATION, SET-OUT AND DIMENSION OF STEEL MEMBERS TO BE CONFIRMED PRIOR TO FABRICATION.
- ALLOW FOR 400 SHEET BRACE STRAPS TO EACH SIDE OF TOP PLATE WHERE SUPPORT POSTS OF BEAMS ARE LOCATED SO THAT IT CUTS THROUGH THE TOP PLATE. 6-30x3.15dia PRODUCT NAILS EACH END (MIN.).
- **ANY EXPOSED STEELWORK TO BE EITHER GALVANISED OR ZINC EPOXY PAINTED. INTERNAL STEELWORK TO BE PRIMED. REFER TO ARCHITECTS DRAWINGS FOR FINISHES.**
- **IF POSTS ARE TO BE GALVANISED, GALVANISING TO EXTEND A MAXIMUM OF 100mm INTO CONCRETE POST HOLE FOOTINGS.**
- PROVIDE DRYPACK MORTAR / NON-SHRINK LEVELLING GROUT UNDER STEEL BASE PLATE WHERE REQUIRED, 20mm MAX.
- REFER TO NZS 3604:2011 FOR DURABILITY REQUIREMENTS OF ALL FIXINGS.
- TIMBER FIXINGS TO BE IN ACCORDANCE WITH NZS3604: 2011 AND MANUFACTURERS OR ARCHITECTS SPECIFICATION.
- NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES.

- EPOXY ANCHORS: RAMSET EPCON C6 EPOXY WITH M12/M16 5.6 ANCHOR STUDS (LENGTH TO SUIT) INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

CONSTRUCTION ISSUE

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCHITECT'S DRAWINGS

constructure structural engineering

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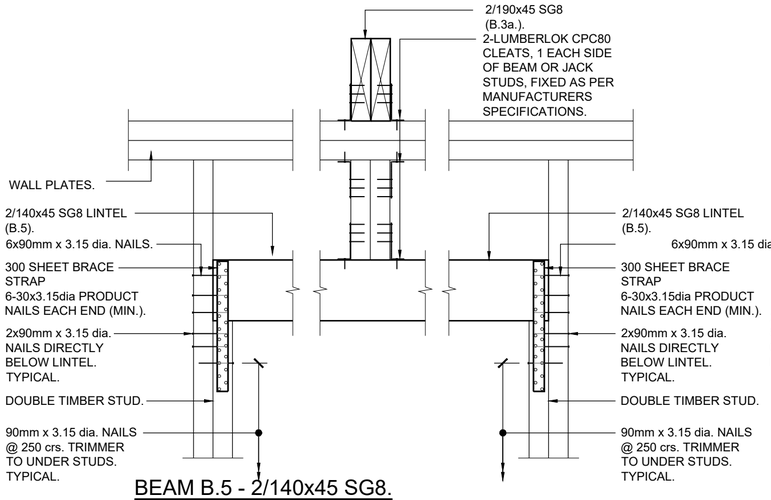
CLIENT: OAK PROPERTY LTD.

PROJECT TITLE: 11 HULBERT ST. LINWOOD, CHRISTCHURCH

DRAWING TITLE: STRUCTURAL BEAM CONNECTION DETAILS.

REV.	BY.	DATE:	COMMENT:
0	T.T.	12-07-2022	ISSUED FOR CONSTRUCTION
1	T.T.	28-07-2022	AMENDED B.2 150 PFC

DESIGN. S.D. | JOB No. 13404 | DRAWING No. S3.01 | REV. 1
DRAWN. T.T. | SCALE @ A2 1:20



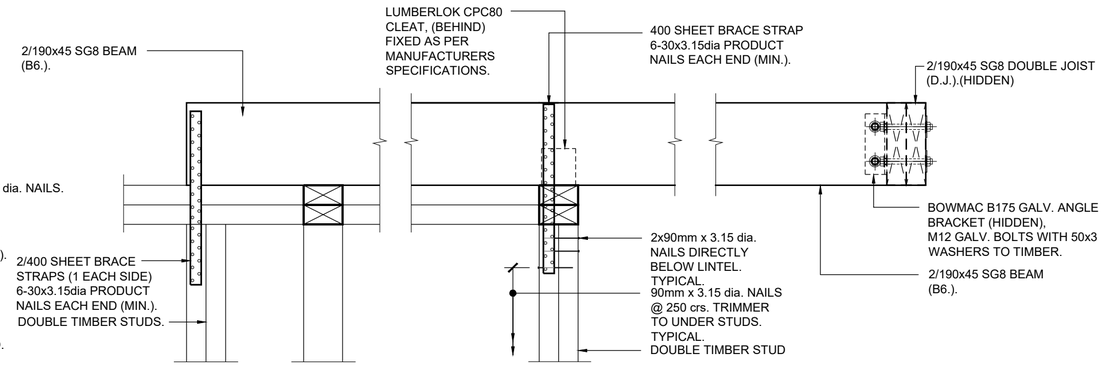
BEAM B.5 - 2/140x45 SG8.
SCALE 1:10

BEAM B2.5 - 2/140x45 SG8.
SCALE 1:10

BEAM B3.5 - 2/140x45 SG8.
SCALE 1:10

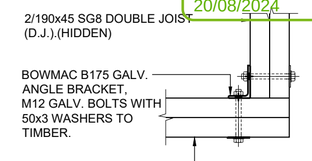
BEAM B4.5 - 2/140x45 SG8.
SCALE 1:10

BEAM B5.5 - 2/140x45 SG8.
SCALE 1:10

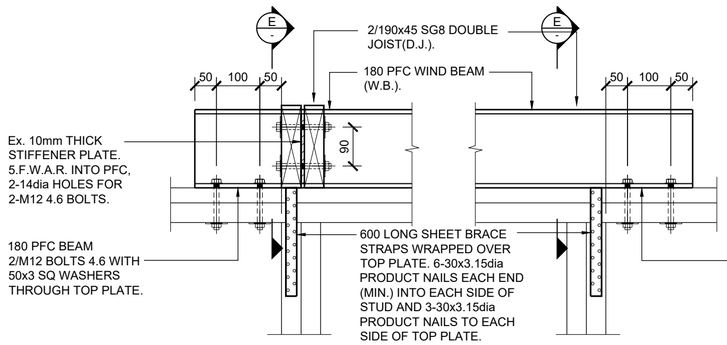


1.2m CANTILEVER AND 1.2m BACK SPAN.

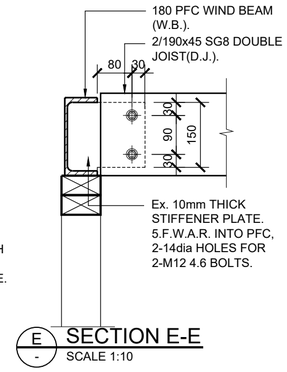
CANTILEVERED BEAM B.6 - 2/190x45 SG8.
SCALE 1:10



PLAN



WIND BEAM W.B. - 180 PFC.
SCALE 1:10



E - SECTION E-E
SCALE 1:10

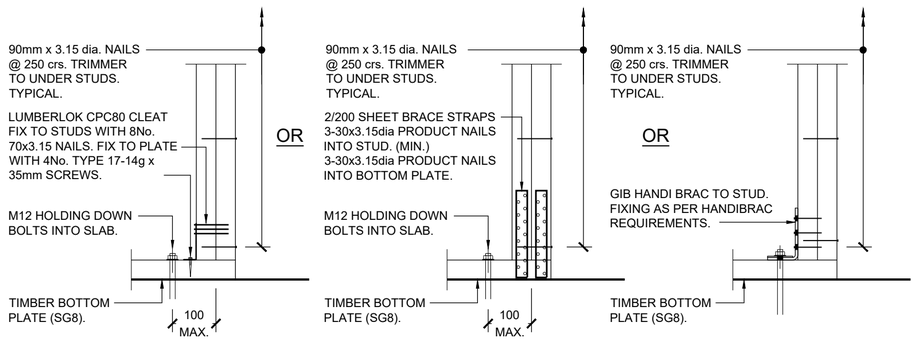
BEAM B.7 - 2/290x45 SG8.
SCALE 1:10

BEAM B2.7 - 2/290x45 SG8.
SCALE 1:10

BEAM B3.7 - 2/290x45 SG8.
SCALE 1:10

BEAM B4.7 - 2/290x45 SG8.
SCALE 1:10

BEAM B5.7 - 2/290x45 SG8.
SCALE 1:10



DOUBLE STUD TO SLAB CONNECTION.
SCALE 1:10

GENERAL NOTES:

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Minor Variation

CONSTRUCTION ISSUE

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Auckland Office
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Ponsonby, Auckland 1021
Phone: 09 320 5226
Email: james@constructure.co.nz

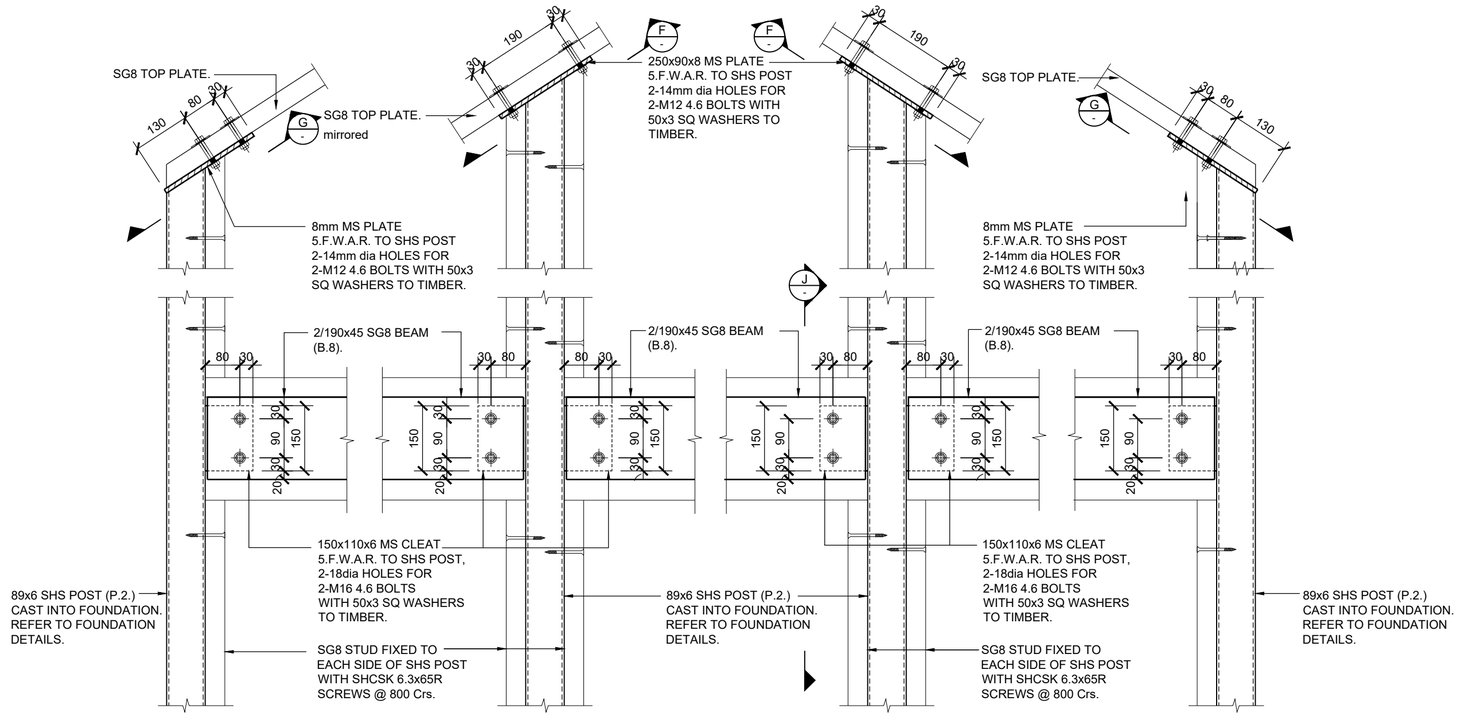
CLIENT: OAK PROPERTY LTD.

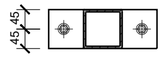
PROJECT TITLE: 11 HULBERT ST. LINWOOD, CHRISTCHURCH

DRAWING TITLE: STRUCTURAL BEAM CONNECTION DETAILS.

REV.	BY.	DATE:	COMMENT:
0	T.T.	12-07-2022	ISSUED FOR CONSTRUCTION

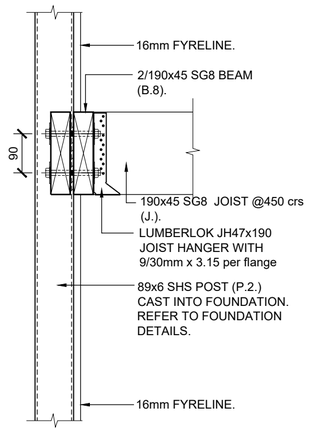
DESIGN. S.D. | JOB No. 13404 | DRAWN. T.T. | SCALE @ A2 1:20 | DRAWING No. S3.02 | REV. 0





F - PLAN
SCALE 1:10

G - PLAN
SCALE 1:10

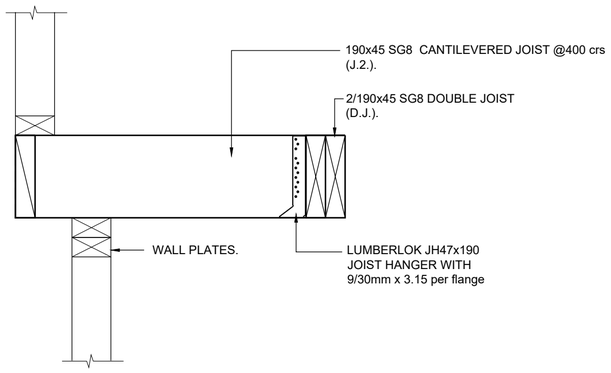


J - SECTION J-J
SCALE 1:10

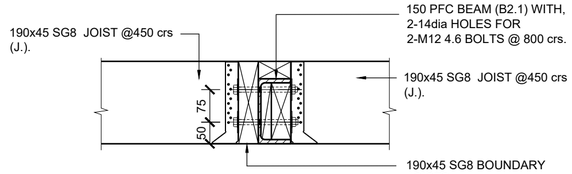
Minor Variation

BEAM B.8 - 2/190x45 SG8.
SCALE 1:10

DETAIL TO BE READ IN CONJUNCTION WITH EXTERNAL FOOTING DETAIL A SHEET 2.01.



H - 1.02 SECTION H-H
SCALE 1:10



I - 1.02 SECTION I-I
SCALE 1:10

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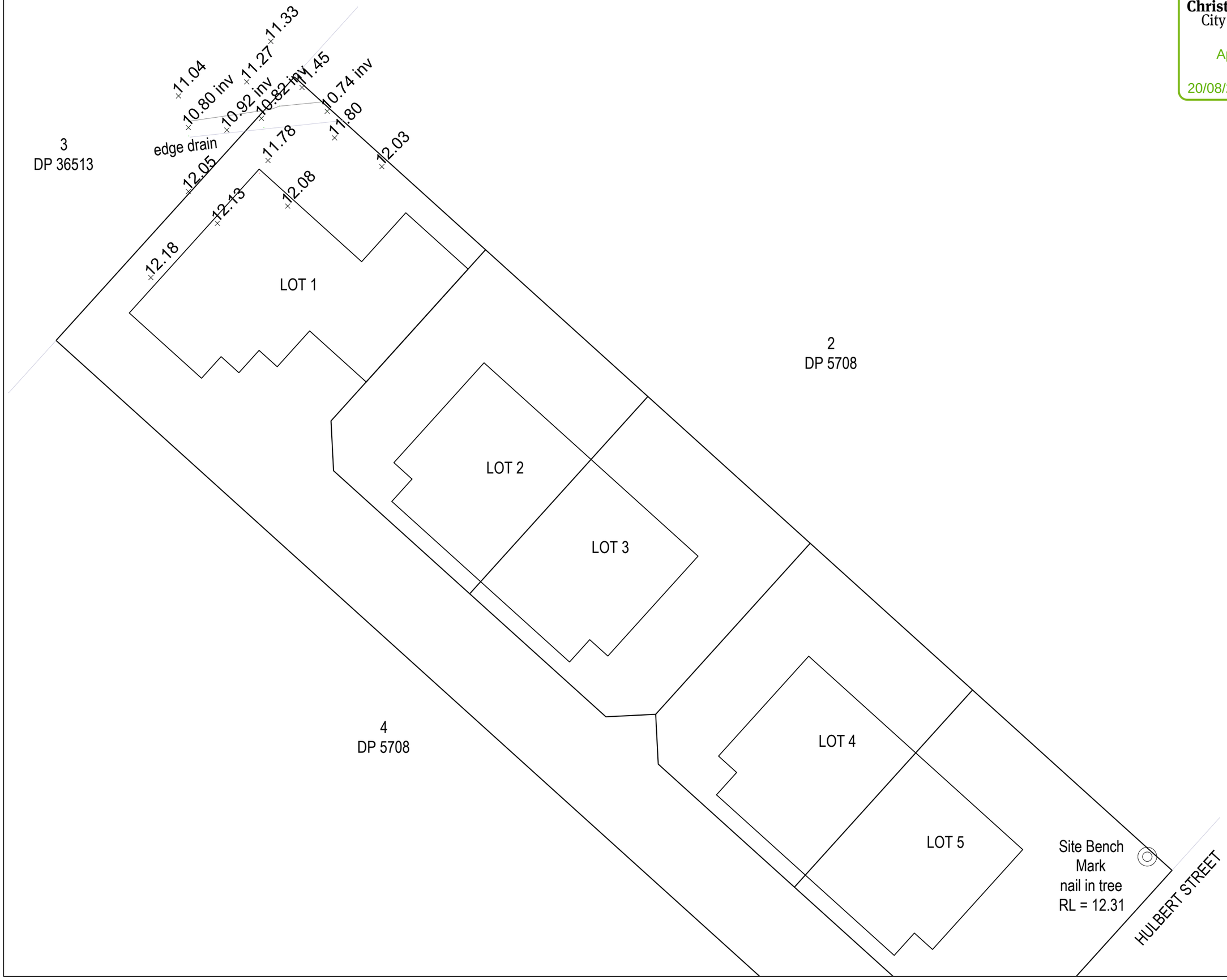
PROJECT TITLE: 11 HULBERT ST. LINWOOD, CHRISTCHURCH

DRAWING TITLE: STRUCTURAL BEAM CONNECTION DETAILS.

REV.	BY.	DATE:	COMMENT:
0	T.T.	12-07-2022	ISSUED FOR CONSTRUCTION
1	T.T.	28-07-2022	AMENDED ELEMENT B.8, ADDED SECTION J
2	N.M.	07-11-2022	REFERENCING OF SECTION 'J' CORRECTED.

DESIGN.	JOB No.	DRAWING No.	REV.
S.D.	13404	S3.03	2
DRAWN. T.T.	SCALE @ A2 1:20		



NOTES:

- Levels 17/07/2024
- Levels in terms of Christchurch Drainage Datum
- Origin of levels BM0101 (EKR1) RL=11.431 (2019).

REV	DATE	REVISION DETAILS	ISSUED
		Minor Variation	
A	05/02/2024	For Record of Survey	MCD

PROJECT

Oak Property Ltd
11 Hulbert Street Linwood

CLIENT

SURVUS CONSULTANTS
PLANNING + SURVEYING + ENGINEERING

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P 03 352 5599 AMBERLEY 03 314 9200
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TOLL FREE 0508 787 887 DARFIELD 03 318 8151

DRAWING TITLE

Diagram of Ground Levels

STATUS	SCALE	SIZE
FOR INFORMATION	1:150	A3

PROJECT NO		REVISION
15229	OCC-01	A