CONSTRUCTION DRAWINGS

FOR Mehfooz Ahmed & Rashida Parveen

PAKENHAM ROAD PAKENHAM VIC 3810

GENERAL NOTES

DO NOT SCALE DRAWINGS. FIGURE DIMENSIONS TAKE PRECEDENCE OVERALL.

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ENGINEERS COMPUTATIONS & DRAWINGS.

THE BUILDER AND SUBCONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS, SETBACKS, LEVELS AND SPECIFICATIONS AND ALL OTHER RELEVANT DOCUMENTATION PRIOR TO THE COMMENCEMENT OF ANY WORKS. REPORT ALL DISCREPANCIES IMMEDIATELY FOR CLARIFICATION.

INSTALLATION OF ALL SERVICES SHALL COMPLY WITH THE RESPECTIVE SUPPLY AUTHORITY REQUIREMENTS.

ALL WORK TO COMPLY WITH NCC2022 BUILDING CODE OF AUSTRALIA, OTHER RELEVANT BYLAWS & AUTHORITIES.

ALL GLAZING TO COMPLY WITH NCC2022 H1D8 & AS1288-2021.
ALL SAFETY GLAZING TO COMPLY WITH THE NCC2022 H1D8, AS1288-2021 & AS2047-2014.
ALL TIMBER TO COMPLY WITH NCC2022 H1D6 & AS1684-2021.
ALL MASONRY TO COMPLY WITH NCC2022 H1D5 & AS3700-2018.
ALL SMOKE DETECTOR INSTALLATION TO COMPLY WITH NCC2022 H3D6 & AS3786-2014.
WATERPROOFING OF WET AREAS TO COMPLY WITH NCC2022 H4D2 AND AS3740-2021.

EXCAVATIONS TO BE BATTERED AT 45° MAX. FOR SAND/SILT/FILL SITES, UNLESS NOTED OTHERWISE. ALL BATTERS TO BE KEPT WITHIN PROPERTY BOUNDARIES.

THE BUILDER AND SUBCONTRACTOR SHALL ENSURE THAT ALL STORMWATER DRAINS, SEWER PIPES AND THE LIKE ARE LOCATED AT A SUFFICIENT DISTANCE FROM ANY BUILDINGS FOOTING AND / OR SLAB EDGE BEAMS SO AS TO PREVENT MOISTURE PENETRATION, DAMPNESS, WEAKENING AND UNDERMINING OF ANY BUILDING AND ITS FOOTING SYSTEM.

STORMWATER SYSTEM LOCATIONS ARE INDICATIVE ONLY.

DOWNPIPES TO SERVE <12m OF GUTTER. INSTALL DOWNPIPE WITHIN 1200mm OF VALLEY OR PROVIDE OVERFLOWS TO GUTTER.

DOORS TO WC TO HAVE LIFT OFF HINGES, UNLESS 1200mm CLEAR BETWEEN PAN & DOORWAY.

STEP SIZES (OTHER THAN FOR SPIRAL STAIRS) TO BE:
RISERS (R) 190mm MAXIMUM AND 115mm MINIMUM,
GOING (G) 355mm MAXIMUM AND 240mm MINIMUM,
2R + 1G = 700mm MAXIMUM AND 550mm MINIMUM.
WHERE NO STEP PROVIDED, SITE MUST BE GRADED TO ENSURE MAXIMUM STEP DOWN OF 190MM FROM EXTERNAL DOOR TO FSL.

HANDRAILS TO STAIRS TO BE PROVIDED IN ACCORDANCE WITH NCC2022 H5D3

WHERE THE FLOOR BELOW WINDOW(S) IN A BEDROOM IS 2m OR MORE BELOW THE SURFACE BENEATH, RESTRICT WINDOW OPEINGS TO 125mm MAX. IN ACCORDANCE WITH NCC 2022H5D3

PROVIDE NON-SLIP CARPET TO STAIRS WITH A MINIMUM P3 CLASSIFICATION (FOR DRY SURFACES) AS PER TABLE 11.2.4 IN NCC2022 H5D2, TESTED IN ACCORDANCE WITH AS4586.

AS PER NCC2022 H4D9 A PLIABLE BUILDING MEMBRANE TO BE INSTALLED THAT COMPLIES WITH AS/NZS 4200.1 AND TO BE INSTALLED IN ACCORDANCE WITH AS/NZS 4200.2 AND MUST BE A VAPOUR PERMEABLE MEMBRANE FOR CLIMATE ZONES 6/7/8.

AS PER NCC2022 H4D7 EXHAUST FROM A BATHROOM, SANITARY COMPARTMENT, OR LAUNDRY MUST BE DISCHARGED DIRECTLY VIA A SHAFT OR DUCT TO OUTDOOR AIR.

EXTERNAL WALLS TO HAVE 450mm STUD CENTRES. INTERNAL WALLS TO HAVE 600mm STUD CENTRES.

SHEET	SHEET NAME	REV	DESCRIPTION
01	COVER SHEET	A	CONSTRUCTION ADRAWINGS
02	SITE PLAN	A	CONSTRUCTION ADRAWINGS
03	GROUND FLOOR PLAN	A	CONSTRUCTION ADRAWINGS
04	ROOF PLAN	A	CONSTRUCTION ADRAWINGS
05	ELEVATIONS 01	A	CONSTRUCTION ADRAWINGS
06	ELEVATIONS 02	A	CONSTRUCTION ADRAWINGS
07	WINDOW & DOOR SCHEDULE	A	CONSTRUCTION ADRAWINGS
08	SECTIONS 01	A	CONSTRUCTION ADRAWINGS
09	SECTIONS 02	A	CONSTRUCTION ADRAWINGS
10	INTERNAL DOOR DETAILS	A	CONSTRUCTION ADRAWINGS
11	GARAGE DETAILS	A	CONSTRUCTION ADRAWINGS
12	RENDER DETAILS	A	CONSTRUCTION ADRAWINGS
13	WALL TYPE SCHEDULE	A	CONSTRUCTION ADRAWINGS
14	BATH & WC NOGGING DETAILS	A	CONSTRUCTION ADRAWINGS
15	WATERPROOFING DETAILS	A	CONSTRUCTION ADRAWINGS
16	INTERNALS 01	A	CONSTRUCTION ADRAWINGS
17	INTERNALS 02	A	CONSTRUCTION ADRAWINGS
18	INTERNALS 03	A	CONSTRUCTION ADRAWINGS
19	INTERNALS 04	A	CONSTRUCTION ADRAWINGS
20	ELECTRICAL PLANS	A	CONSTRUCTION ADRAWINGS
21	SLAB SETOUT	A	CONSTRUCTION ADRAWINGS
22	DRAINAGE PLAN	A	CONSTRUCTION ADRAWINGS
23	LANDSCAPE PLAN	A	CONSTRUCTION ADRAWINGS

Certificate No. #HR-D5N226-02

Scan QR code or follow website link for rating details.

Assessor name	Briar Gunther
Accreditation No.	DMN/15/1682
Property Address	LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810

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rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

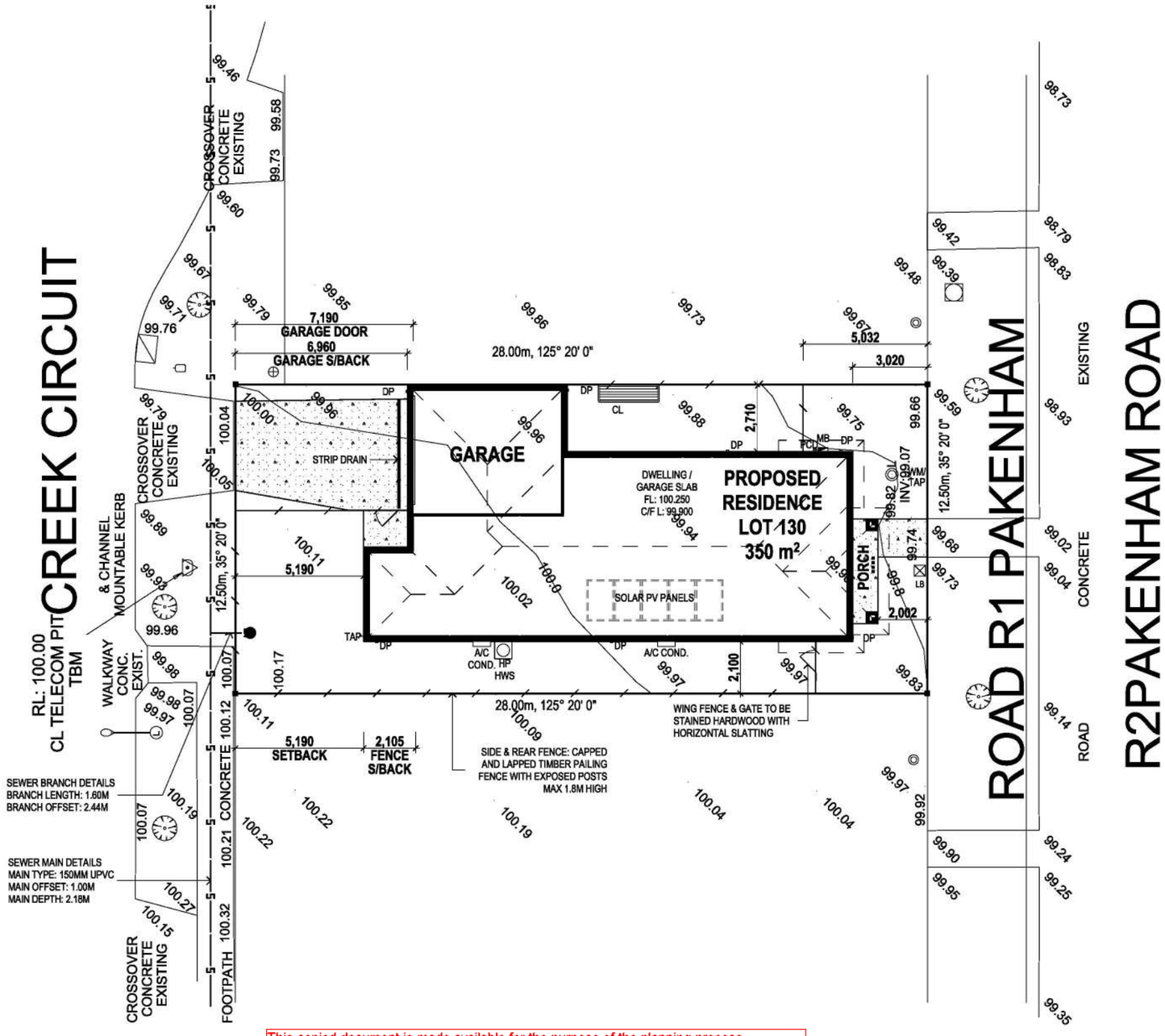
site address	project no.	estate	scale	drawn	sheet
LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810	305923	THE RISE	@A3	RD	01
	drawing name: COVER SHEET			date: 13/01/2025	rev: A

SITE ANALYSIS

	AREA		%
SITE AREA	350.02	m²	100.01
SITE COVERAGE	169.83	m²	48.52
PERMEABLE AREA	154.86	m²	44.24
GARDEN AREA	151.02	m²	43.15

SITE PLAN LEGEND

- METER BOX
- WM/TAP — WATER METER/ GARDEN TAP
- GARDEN TAP
- DP — DOWNPIPE
- DPR — DOWNPIPE & RAINHEAD
- HWS — HOT WATER SYSTEM
- RW TAP — RECYCLED WATER GARDEN TAP
- CL — CLOTHESLINE
- LETTERBOX
- A/C CONDENSER



LEGEND	
INV	INVERT LEVEL
◎	PIPE (UNKNOWN)
▯	SIGN POST
L◎	LEGAL POINT OF DISCHARGE
△	TEMPORARY SITE LEVEL BENCHMARK
⊕	ELECTRICITY PIT
⊙—○	LIGHT POLE (OVERHANGING)
■	TITLE PEG
▢	EXISTING SEWER PIT
▨	STORMWATER JUNCTION PIT

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SITE NOTES

SITE WORKS
- PROVIDE SITE CUT/FILL @ RL 99.900

- NOTE: ALL BATTERS MUST BE STABILISED FOLLOWING CONSTRUCTION. THE GROUND LEVEL IMMEDIATELY ADJACENT TO THE BUILDING SHALL BE GRADED TO A UNIFORM FALL OF 50mm MIN. AWAY FROM THE BUILDING OVER THE FIRST METRE.

SITE PREPARATION
- REMOVE TOP SOIL INCLUDING GRASS ROOTS FROM THE AREA ON WHICH THE FOOTING WILL REST . THIS AREA MUST BE FREE OF LOOSE EARTH, ORGANIC MATERIAL, MUD OR DEBRIS.

WIND SPEED
- MAXIMUM DESIGN GUST WIND SPEED FOR THIS SITE IS **N2**.

SOIL CLASSIFICATION
- SOIL CLASS **M**.
REFER TO SOIL REPORT.

TERMITE TREATMENT
- PROVIDE TERMITE PROTECTION IN ACCORDANCE WITH AS3660.1.

7-STAR REQUIREMENTS
-REFER TO ENERGY RATING REPORT IN RELATION TO NOMINATED INSULATION 'R' VALUES.
- PROVIDE SARKING TO ALL METAL ROOFS (IF APPLICABLE)
- SEAL ALL GAPS & CRACKS.
- WEATHER STRIP FRONT ENTRY DOOR & GARAGE ACCESS DOOR.
- SEAL ALL EXHAUST FANS.
- SLAB WAFFLE PODS ARE MINIMUM 300MM THICK. (REFER TO ENGINEERS SPECIFICATIONS)

FIBRE OPTIC CONNECTION
- FIBRE TO THE PREMISE IS DELIVERED BY **NBN** TO YOUR ALLOTMENT. FIBRE OPTIC WIRING IS REQUIRED TO ALL DWELLINGS.

RECYCLED WATER
- PROVIDE RECYCLED WATER IN ACCORDANCE WITH AS/NZS3500.1 2021 WITH ALL PLASTIC PIPE MATERIALS IN ACCORDANCE WITH AS/ NZS4020-2018.

- PROVIDE RECYCLED WATER CONNECTION TO WC AND GARDEN TAPS IN ACCORDANCE WITH THE DESIGN GUIDLINES.

DEVELOPER APPROVAL
DEVELOPER APPROVAL IS REQUIRED PRIOR TO BUILDING PERMIT IN ACCORDANCE WITH DEVELOPMENT GUIDELINES FROM **THE RISE ESTATE**.

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A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

site address: LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810	project no. 305923	estate THE RISE	scale 1:200@A3	drawn RD	sheet 02
client [redacted]	drawing name SITE PLAN			date 13/01/2025	rev A

FLOOR PLAN LEGEND

BHD	BULKHEAD
CSD	CAVITY SLIDING DOOR
CT	COOKTOP
D	HEATING / COOLING DUCT
DP	DOWNPIPE
DPR	DOWNPIPE/RAINHEAD
DW	DISHWASHER PROVISION
HP HWS	HEAT PUMP HOT WATER SYSTEM
LOH	LIFT OFF HINGE
MW	MICROWAVE PROVISION
PS	PLUMBING STACK
PTY	PANTRY
REF	REFRIGERATOR PROVISION
RH	RANGEHOOD
RW TAP	RECYCLED WATER GARDEN TAP
SD	SLIDING DOOR
UBO	UNDER BENCH OVEN
WM	WASHING MACHINE PROVISION

SD	SMOKE DETECTOR
	EXHAUST FAN
RA	RETURN AIR
WP	CAPPED WATER POINT
	METER BOX
	GARDEN TAP
ST	SOLAR TUBE
	CEILING FAN
	1200 x 900 CIRCULATION SPACE
	WALL REINFORCED AS PER LIVABLE HOUSING DESIGN 6.2(e) & 6.2(f). SEE DETAILS
A/HI	ACCESS HATCH
	A/C CONDENSER

FLOOR PLAN NOTES

ALL SHOWERS TO BE STEP FREE AS PER NCC 2022 10.2.17. ALLOW 30mm STEPDOWN IN SLAB OR 25mm STEPDOWN IN JOIST TO SUIT PRE-FAB SHOWER BASE.

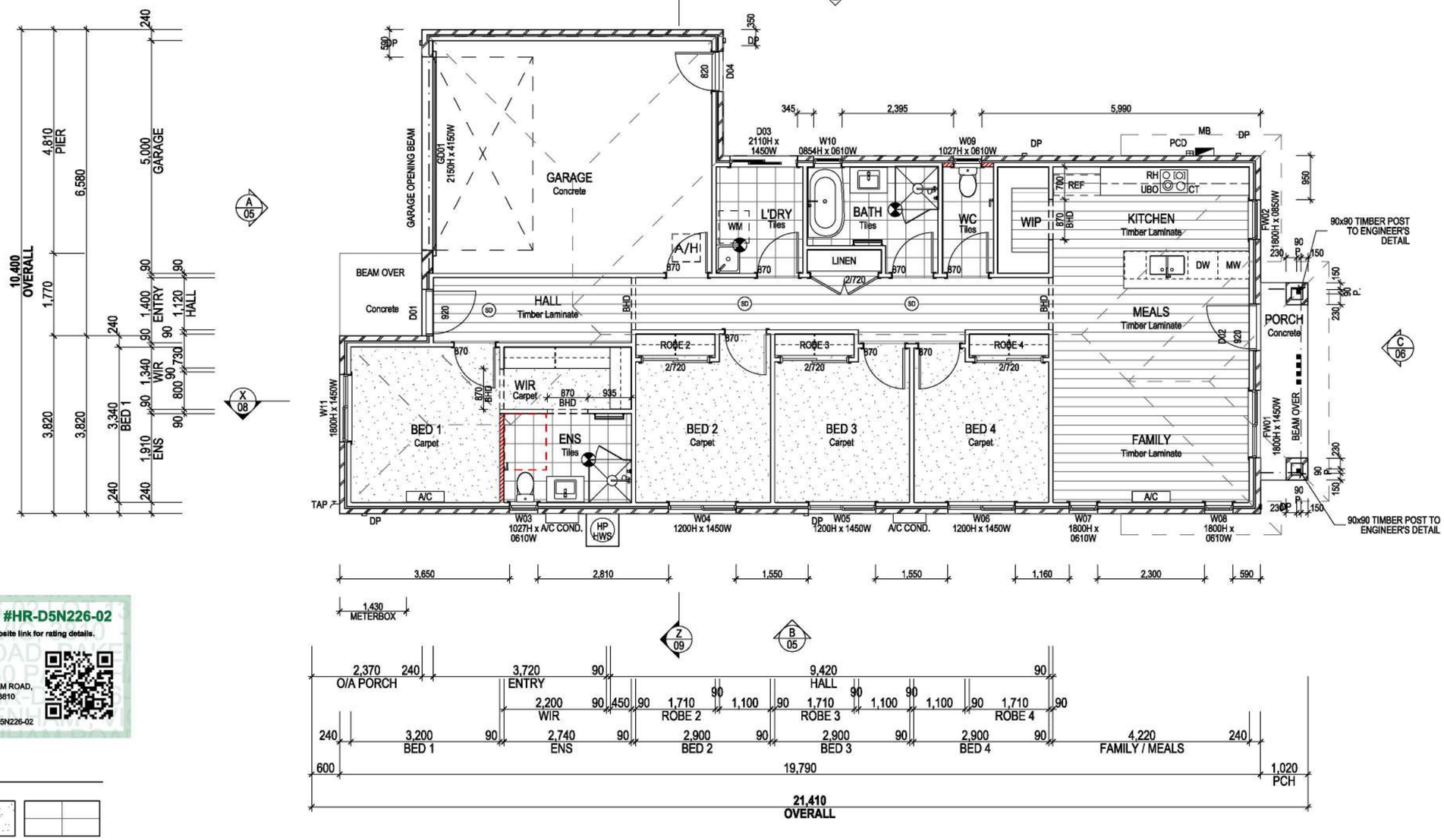
BEAMS TO MANUFACTURERS SPECIFICATION OR ENGINEERS DESIGN.

ALL EXTERNAL DOORS TO BE FITTED WITH WEATHER STRIPS.

SOLID INTERLINKING RAILS AS PER NCC2022 H5D3

GARAGE BOUNDARY WALL MAY REVERT TO BRICK AND PIER CONSTRUCTION AT BUILDER'S DISCRETION.

BULKHEADS AS SHOWN DASHED
2440 CEILING HEIGHT - 250D BHD U.N.O
2590 CEILING HEIGHT - 250D BHD U.N.O
2740 CEILING HEIGHT - 400D BHD U.N.O



FLOOR FINISHES LEGEND

AREA SCHEDULE

	AREA (m²)
Dwelling Ground Floor	129.57
Garage	33.30
Porch	4.32
	167.19 m²

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site address: LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810

project no. 305923 | estate THE RISE | scale 1:100@A3 | drawn RD | sheet 03

drawing name: GROUND FLOOR PLAN | date 13/01/2025 | rev A

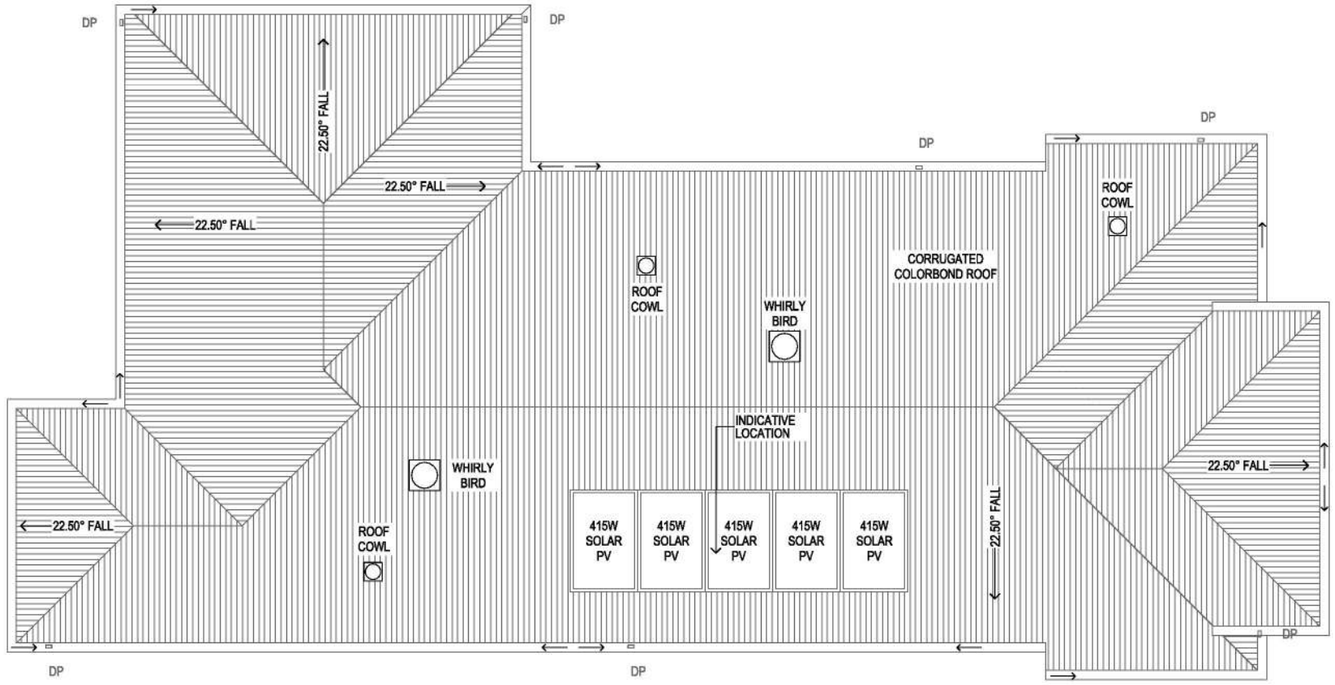
ROOF PLAN NOTES

ROOF SPACE TO BE ADEQUATELY VENTILATED AND TO BE CONSTRUCTED AS PER NCC 2022 PART 10.8.3

ROOF PLAN

DP DOWNPIPE 100 x 50
(EXACT LOCATION TO BE CONFIRMED ON SITE)

→ GUTTER FALL DIRECTION
(NOM. ONLY. TO BE CONFIRMED ON SITE.)



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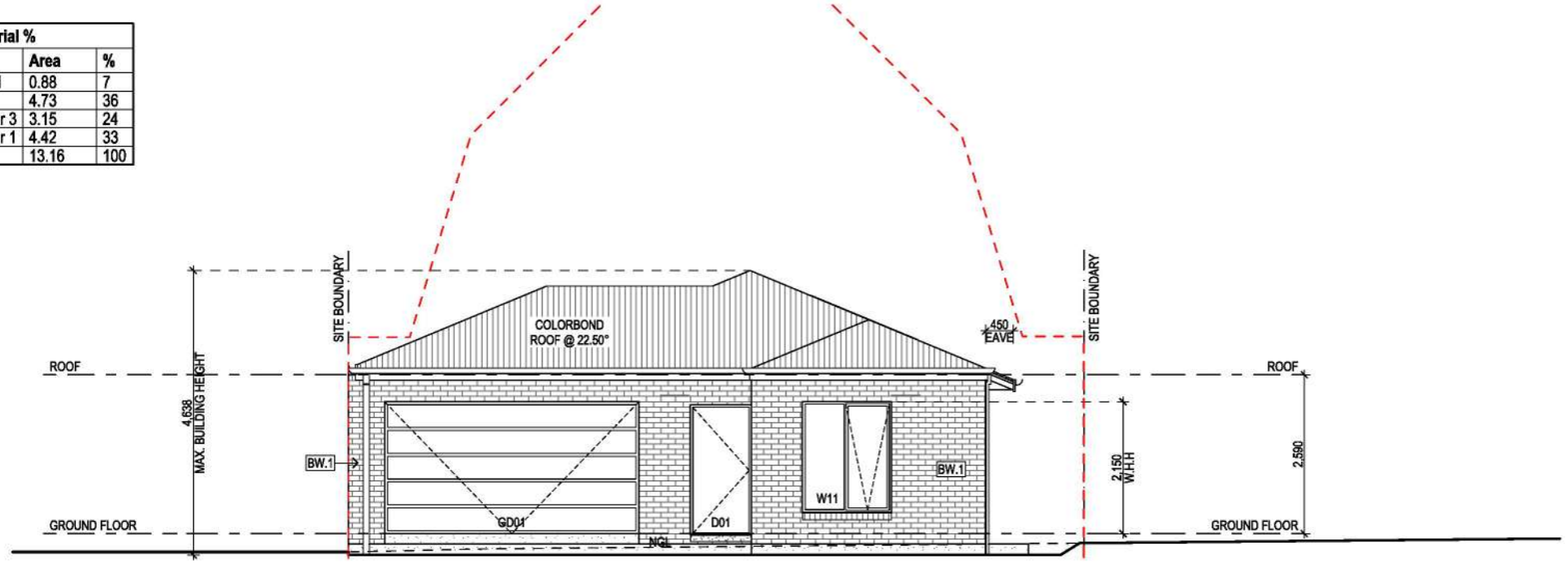
LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810	305923	THE RISE	1:100@A3	RD	04
[redacted]	drawing name: ROOF PLAN			date: 13/01/2025	rev: A

Facade Material %		
Material	**Area**	**%**
Paint Colour 1	0.88	7
Face Brick	4.73	36
Render Colour 3	3.15	24
Render Colour 1	4.42	33
Total	13.16	100



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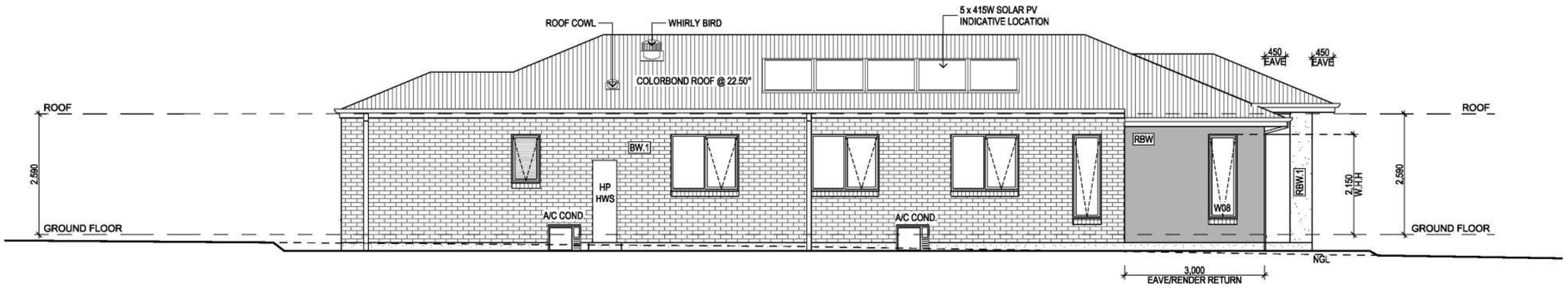

B 03 ELEVATION B 1:100

NOTES

ROLLER BLINDS TO BEDROOMS , LIVING AREAS & KITCHEN.

FLYSCREEN TO ALL OPENING WINDOWS.

RESTRICTED WINDOW OPENING TO UPPER FLOOR WINDOWS IN ACCORDANCE WITH NCC2022 H5D3

EXTERNAL COLOUR SCHEME

AS PER HIA CONTRACT.

MATERIALS / FINISHES SCHEDULE

NO TWO PAIRS OF MATCHING COLOURED FACADES ARE TO BE NEXT TO EACH OTHER.

ALL CLADDINGS TO BE FIXED AS PER MANUFACTURER SPECIFICATIONS & DETAILS.

REFER TO COLOUR DOCUMENT

BW.#	BRICKWORK / JOINT FINISH AS PER SPECIFICATIONS BRICK TYPE AS PER ENDORSED COLOUR SCHEDULE
RBW.#	COLOURED CEMENT RENDER OVER BRICK WALL COLOUR AS PER ENDORSED COLOUR SCHEDULE
RF.#	COLOURED CEMENT RENDER OVER 75mm MASTERWALL FOAMBOARD CLADDING. PAINT FINISH COLOUR AS PER ENDORSED COLOUR SCHEDULE
RAC.#	COLOURED CEMENT RENDER OVER 50mm 'HEBEL' AUTOCLAVED AERATED CONCRETE PANEL (35mm BATTEN TO TIMBER FRAMEWORK). COLOUR AS PER ENDORSED COLOUR SCHEDULE
RFC.#	COLOURED CEMENT RENDER OVER FIBRE CEMENT SHEET COLOUR AS PER ENDORSED COLOUR SCHEDULE
WWG.#	WEATHERTEX WEATHERGROOVE TIMBER LOOK CLADDING COLOUR AS PER ENDORSED COLOUR SCHEDULE
WSL.#	WEATHERTEX SELFLOK TIMBER LOOK CLADDING COLOUR AS PER ENDORSED COLOUR SCHEDULE
BT101	POWDERCOATED ALUMINIUM BALUSTRADE POSTS / RAIL CLEAR GLASS PANL INSERTS
GD01	SECTIONAL LIFE GARAGE DOOR COLOUR AS PER ENDORSED COLOUR SCHEDULE
AC	50mm UN-RENDERED 'HEBEL' AUTOCLAVED AERATED CONCRETE PANEL (35mm BATTEN TO TIMBER FRAMEWORK)

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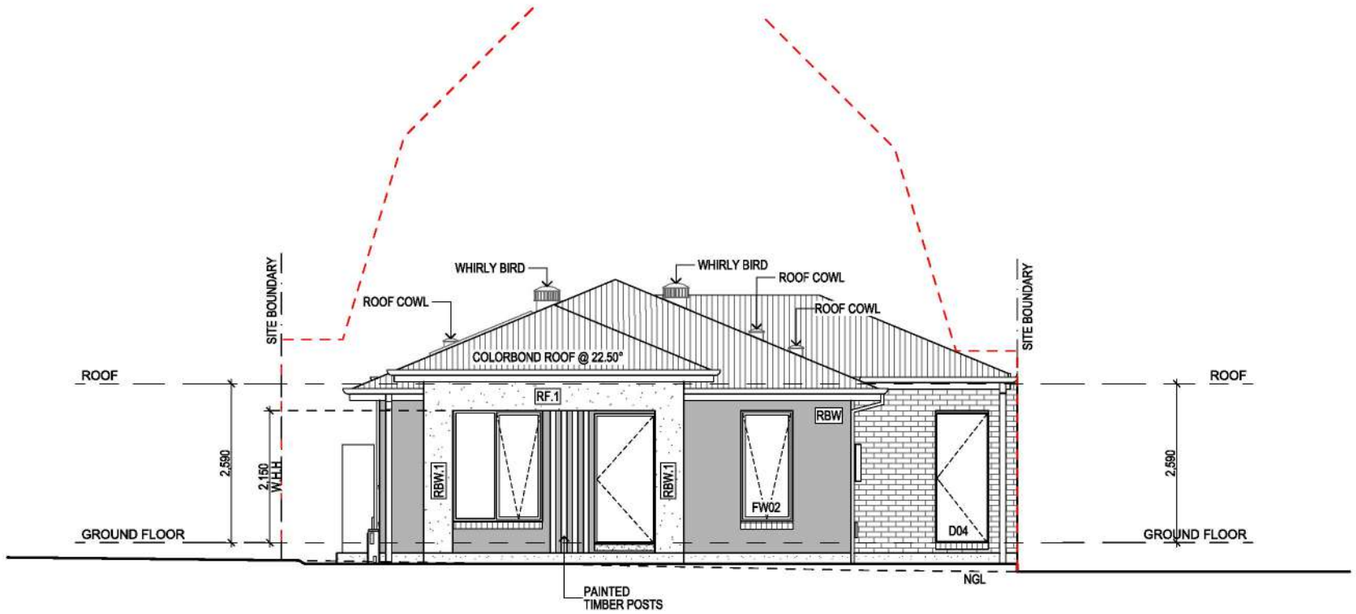
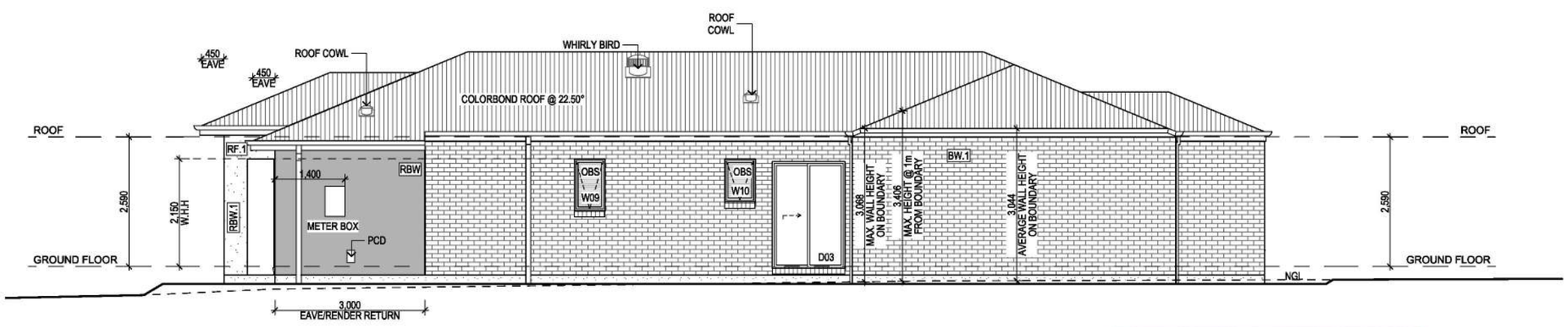
LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810	305923	THE RISE	1:100@A3	RD	05
			drawing name: ELEVATIONS 01	date: 13/01/2025	rev: A



C 03 ELEVATION C
1:100



D 03 ELEVATION D
1:100

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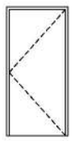
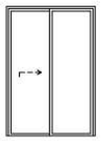
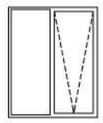
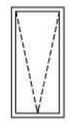
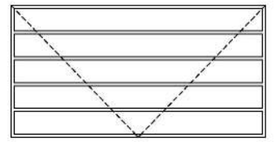
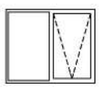
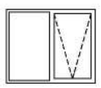
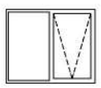
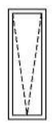
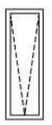
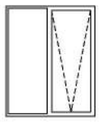
LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810	305923	THE RISE	1:100@A3	RD	06
[redacted]	drawing name: ELEVATIONS 02			date: 13/01/2025	rev: A

Storey	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR
ID	D01	D02	D03	D04	FW01	FW02	GD01
Height	2,100	2,100	2,110	2,100	1,800	1,800	2,150
Width	1,000	1,000	1,450	820	1,450	850	4,150
Privacy	N/A	N/A	Clear	N/A	Clear	Obscure	N/A
Wall Thickness	250	250	250	250	250	250	240
Note							
View from Outside							

Storey	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR	GROUND FLOOR
ID	W03	W04	W05	W06	W07	W08	W09
Height	1,027	1,200	1,200	1,200	1,800	1,800	1,027
Width	610	1,450	1,450	1,450	610	610	610
Privacy	Obscure	Clear	Clear	Clear	Clear	Obscure	Obscure
Wall Thickness	250	250	250	250	250	250	250
Note							
View from Outside							

Storey	GROUND FLOOR	GROUND FLOOR
ID	W10	W11
Height	854	1,800
Width	610	1,450
Privacy	Obscure	Clear
Wall Thickness	250	250
Note		
View from Outside		

NOTES

ROLLER BLINDS TO BEDROOMS, LIVING AREAS & KITCHEN.
FLYSCREEN TO ALL OPENING WINDOWS.

RESTRICTED WINDOW OPENING TO UPPER FLOOR WINDOWS IN ACCORDANCE WITH NCC2022 H5D3.

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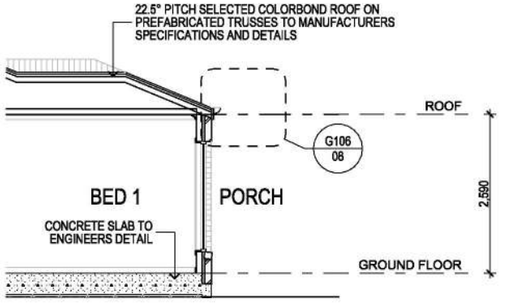
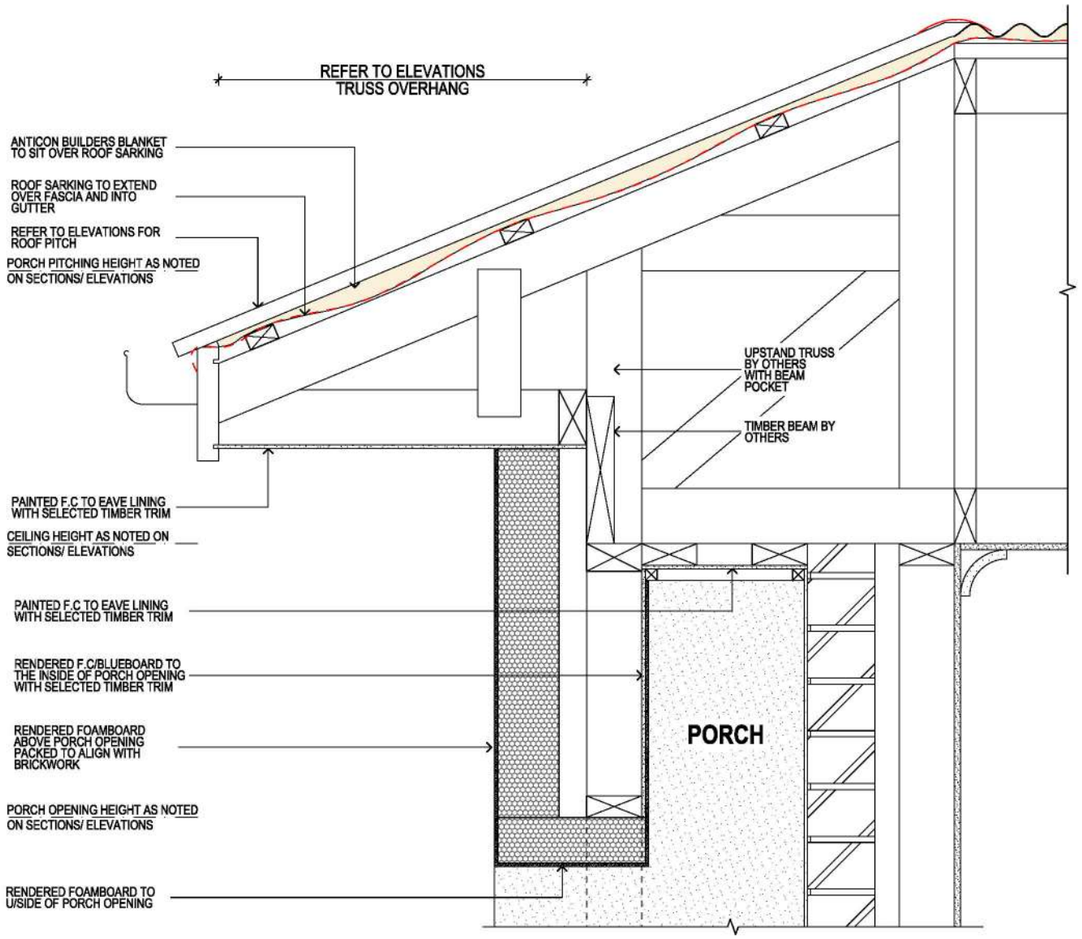
rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

site address: **LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810**
project no.: **305923**
estate: **THE RISE**
scale: **@A3**
drawn: **RD**
sheet: **07**
drawing name: **WINDOW & DOOR SCHEDULE**
date: **13/01/2025**
rev: **A**

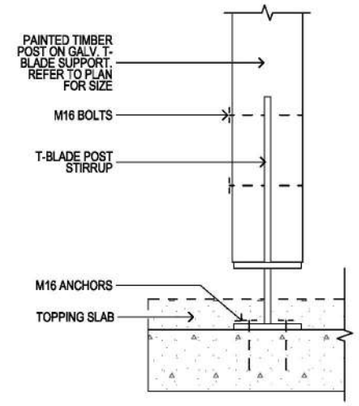


X / 03 SECTION X
1:100

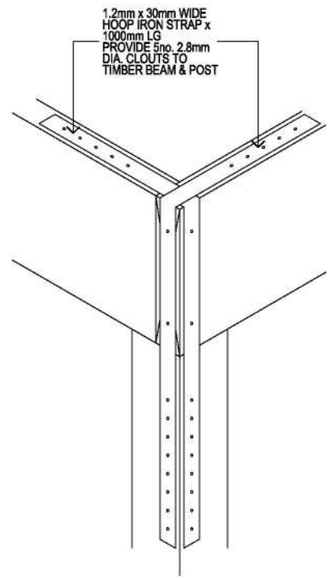


G106

G106 PORCH POP-UP ROOF EPS FOAM
v1 SCALE 1:10



G111 PORCH POST TO SLAB CONNECTION
v1 SCALE 1:10



G113 ENCLOSED POST TO BEAM CONNECTION
v1 SCALE 1:10

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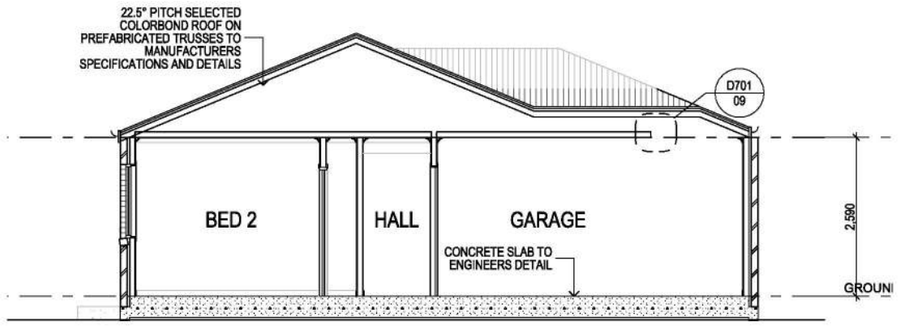
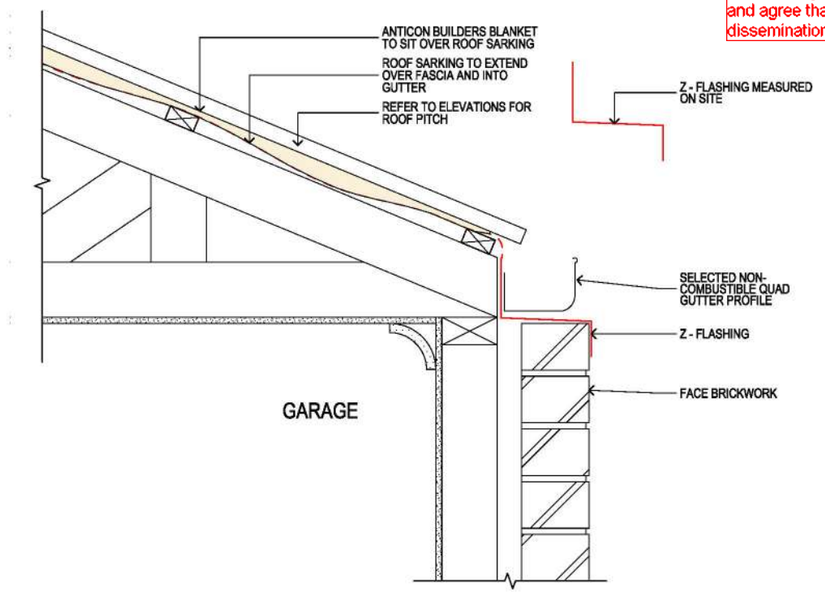
rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

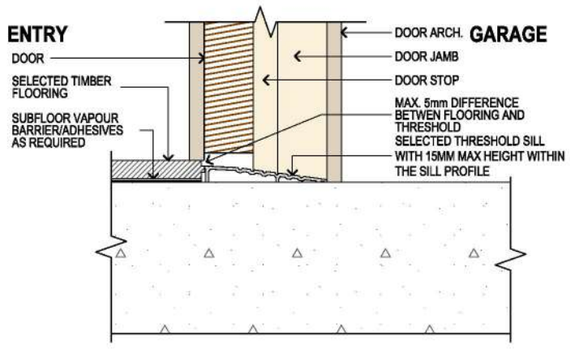
site address: LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810
project no.: 305923
estate: THE RISE
scale: 1:100, 1:10@A3
drawn: RD
sheet: 08
drawing name: SECTIONS 01
date: 13/01/2025
rev: A



Z / 03 — SECTION Z
1:100



D701 v1 — BOUNDARY WALL GUTTER ON BRICKWORK
SCALE 1:10



L202 v1 — GARAGE INTERNAL DOOR THRESHOLD - TIMBER FLOOR
SCALE 1:5

Certificate No. #HR-D5N226-02
Scan QR code or follow website link for rating details.
Assessor name: Briar Gunther
Accreditation No.: DMN/15/1682
Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
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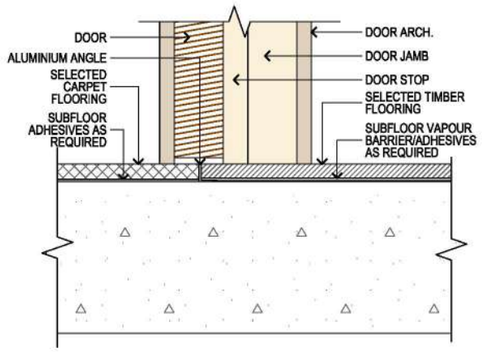
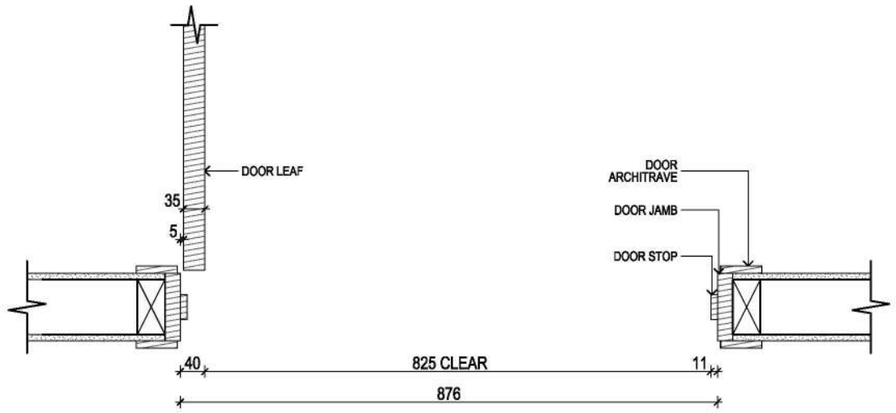
rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

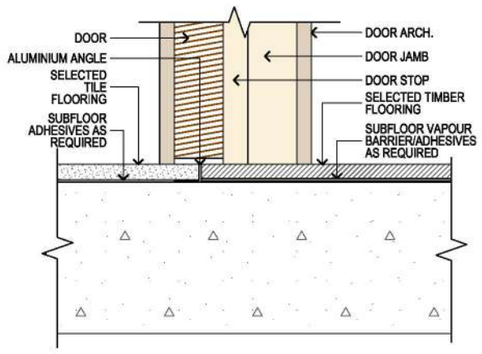
site address: LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810
project no.: 305923
estate: THE RISE
scale: 1:100, 1:10, 1:5@A3
drawn: RD
sheet: 09
drawing name: SECTIONS 02
date: 13/01/2025
rev: A



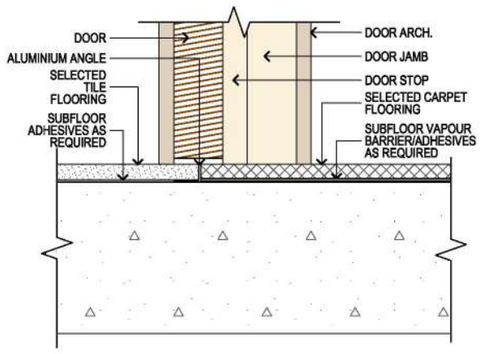
B703 INTERNAL DOOR THRESHOLD - CARPET TO TIMBER
v1 SCALE 1:5



B601 870 DOOR CLEAR OPENING WIDTH
v1 SCALE 1:10



B701 INTERNAL DOOR THRESHOLD - TILE TO TIMBER
v1 SCALE 1:5



B702 INTERNAL DOOR THRESHOLD - TILE TO CARPET
v1 SCALE 1:5

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Assessor name Briar Gunther
Accreditation No. DMN/15/1682
Property Address LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
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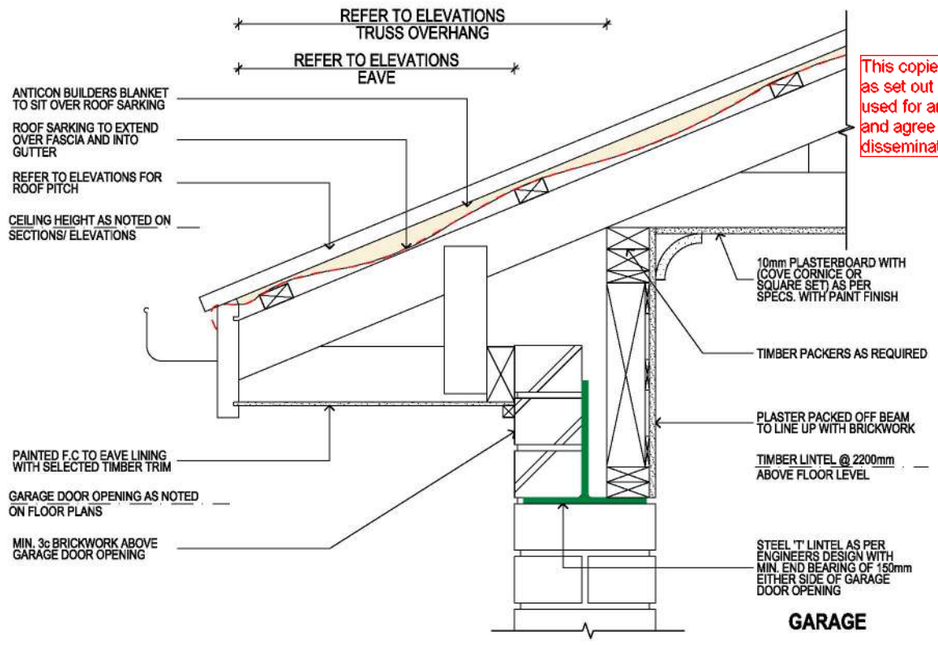
rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

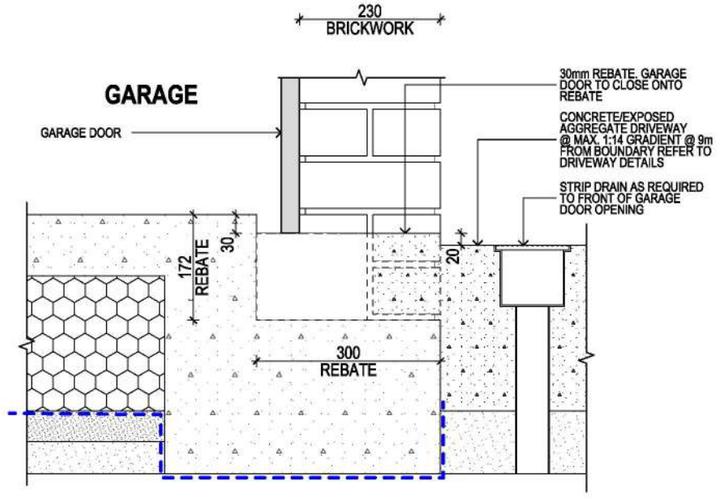
Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

site address: LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810
project no.: 305923
estate: THE RISE
scale: 1:10, 1:5@A3
drawn: RD
sheet: 10
drawing name: INTERNAL DOOR DETAILS
date: 13/01/2025
rev: A



F101
v1

GARAGE DOOR OPENING 400 LVL WITH 150 UA
SCALE 1:10



A202
v1

GARAGE REBATE DETAIL WITH STRIP DRAIN
SCALE 1:10

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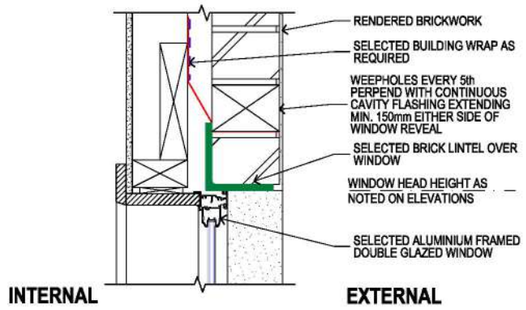
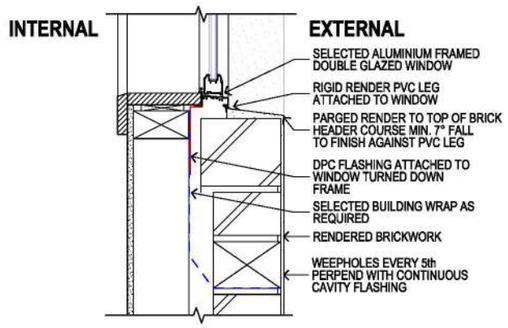
rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

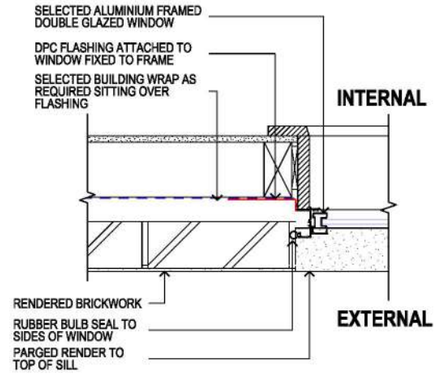
site address: LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810
project no.: 305923
estate: THE RISE
scale: 1:10@A3
drawn: RD
sheet: 11
drawing name: GARAGE DETAILS
date: 13/01/2025
rev: A



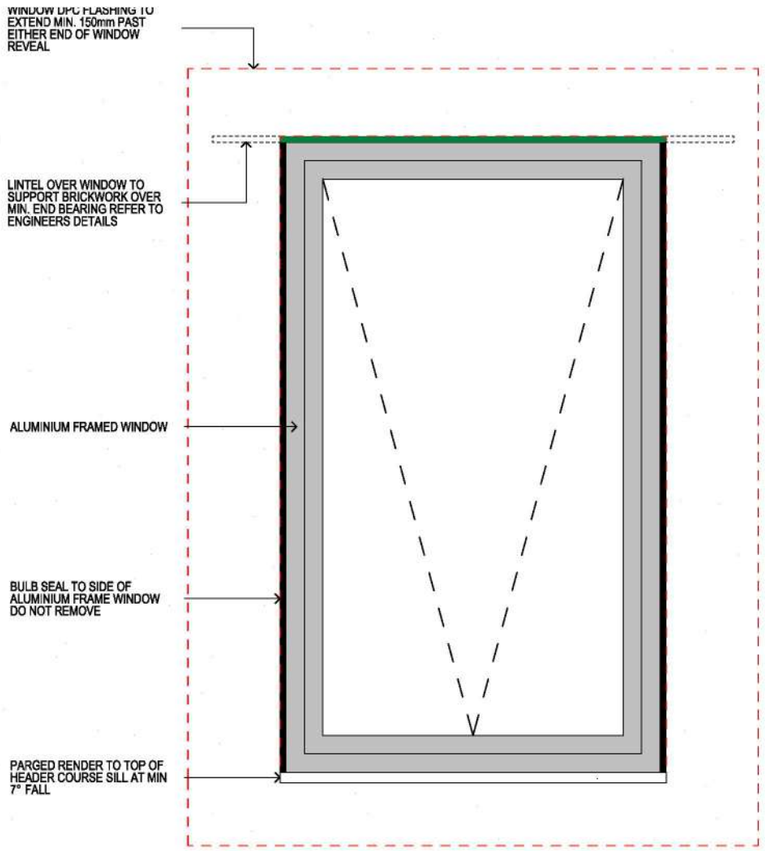
3.2.1 WINDOW HEAD DETAIL
v1 SCALE 1:10



3.2.2 WINDOW HEADER COURSE SILL DETAIL
v1 SCALE 1:10



3.2.3 WINDOW REVEAL PLAN DETAIL
v1 SCALE 1:10



3.2.4 WINDOW ELEVATION PARGED RENDER SILL
v1 SCALE 1:10

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Assessor name Briar Gunther
Accreditation No. DMN/15/1682
Property Address LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
http://www.hero-software.com.au/pdf/HR-D5N226-02

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rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

site address	project no.	estate	scale	drawn	sheet
LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810	305923	THE RISE	1:10@A3	RD	12

drawing name	date	rev
RENDER DETAILS	13/01/2025	A

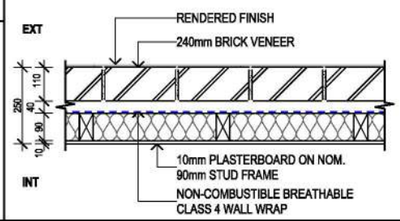
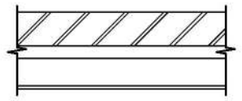
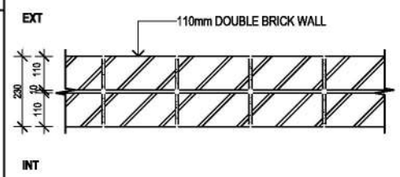
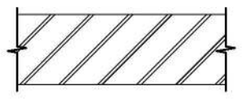
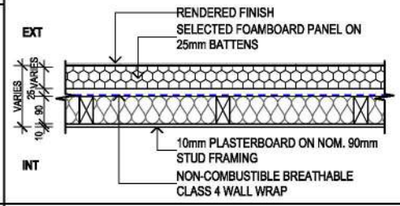
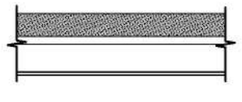
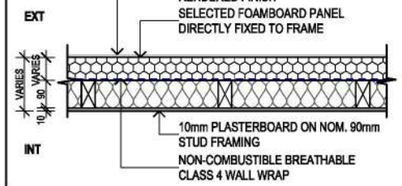
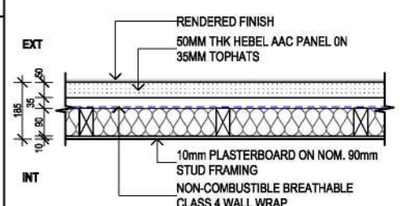
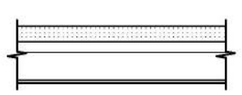
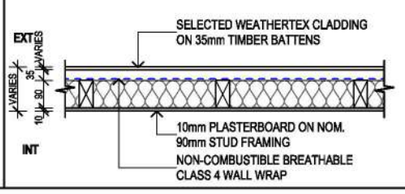
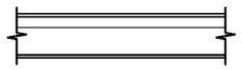
WALL TYPE SCHEDULE

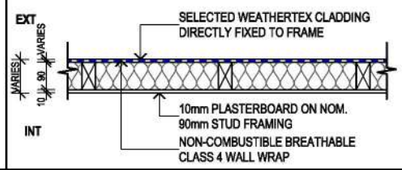
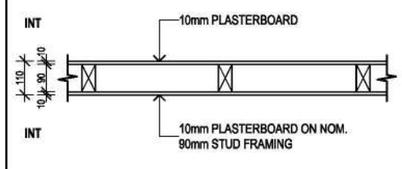
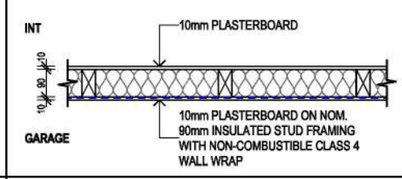
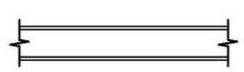
GENERAL NOTES

IN 'WET AREAS' FIX **10mm WATER RESISTANT** PLASTERBOARD IN LIEU OF 10mm STD. PLASTERBOARD.

WALL TYPE SCHEDULE TO BE READ IN CONJUNCTION WITH ENERGY EFFICIENCY ASSESSMENT RATING REPORT.

EXTERNAL WALL CONSTRUCTION TO BE IN ACCORDANCE WITH NCC 2022 PART 10.8.1 REFER TO DETAILS FOR SPECIFICATIONS

WALL ID	DESCRIPTION	PLAN VIEW
WALL TYPE - WT1 ELEV: BW or RBW **BRICK VENEER EXTERNAL WALL (SIMILAR TO CSR 5403)** FRL (FROM INSIDE) -/-/- FRL (FROM OUTSIDE) 60/60/60 Rw/ Rw+Ctr 59/51 (MIN) NOTES - BRICKWORK / JOINT FINISH AS PER SPECIFICATIONS BRICK TYPE AS PER ENDORSED COLOUR SCHEDULE		
WALL TYPE - WT2 ELEV: BW or RBW **DOUBLE BRICK (EXTERNAL WALL TO GARAGE ENTRY)** NOTES - BRICKWORK / JOINT FINISH AS PER SPECIFICATIONS BRICK TYPE AS PER ENDORSED COLOUR SCHEDULE		
WALL TYPE - WT3 ELEV: RF **RENDERED FOAMBOARD EXTERNAL WALL PACKED** FRL (FROM INSIDE) -/-/- FRL (FROM OUTSIDE) -/-/- Rw/ Rw+Ctr - NOTES - R-VALE VAIES DEPENDING ON INSTALLATION SPECIFICATIONS SUCH AS STEEL VS TIMBER BATTENS		
WALL TYPE - WT4 ELEV: RF **RENDERED FOAMBOARD EXTERNAL WALL FIXED** FRL (FROM INSIDE) -/-/- FRL (FROM OUTSIDE) -/-/- Rw/ Rw+Ctr - NOTES - R-VALE VAIES DEPENDING ON INSTALLATION SPECIFICATIONS SUCH AS STEEL VS TIMBER BATTENS		
WALL TYPE - WT5 ELEV: RAC **RENDERED HEBEL EXTERNAL WALL (SIMILAR TO HEB 2000)** FRL (FROM INSIDE) -/-/- FRL (FROM OUTSIDE) -/120/120 Rw/ Rw+Ctr 45/36 (MIN) NOTES - COLOURED CEMENT RENDER OVER 50mm 'HEBEL' AUTOCLAVED AERATED CONCRETE PANEL. COLOUR AS PER ENDORSED COLOUR SCHEDULE		
WALL TYPE - WT6 ELEV: WWG or WSL **WEATHERTEX CLADDING EXTERNAL WALL (SIMILAR TO CSR 5227)** FRL (FROM INSIDE) -/-/- FRL (FROM OUTSIDE) -/-/- Rw/ Rw+Ctr 44/35 (MIN) NOTES - COLOUR AS PER ENDORSED COLOUR SCHEDULE. WEATHERTEX CLADDING WILL VARY UPON SELECTION.		

WALL ID	DESCRIPTION	PLAN VIEW
WALL TYPE - WT6 ELEV: WWG or WSL **WEATHERTEX CLADDING EXTERNAL WALL (SIMILAR TO CSR 5227)** FRL (FROM INSIDE) -/-/- FRL (FROM OUTSIDE) -/-/- Rw/ Rw+Ctr 44/35 (MIN) NOTES - COLOUR AS PER ENDORSED COLOUR SCHEDULE. WEATHERTEX CLADDING WILL VARY UPON SELECTION.		
WALL TYPE - GENERAL INTERNAL WALLS **TIMBER STUD INTERNAL WALL (SIMILAR TO CSR 1008)** FRL -/-/- Rw/ Rw+Ctr 30/22 (MIN) NOTES - IN WET AREAS FIX 10mm WATER RESISTANT PLASTERBOARD IN LIEU OF 10mm STD. PLASTERBOARD.		
WALL TYPE - GARAGE INTERNAL WALLS **TIMBER STUD INTERNAL WALL (SIMILAR TO CSR 1008)** FRL -/-/- Rw/ Rw+Ctr 30/22 (MIN) NOTES - IN WET AREAS FIX 10mm WATER RESISTANT PLASTERBOARD IN LIEU OF 10mm STD. PLASTERBOARD.		

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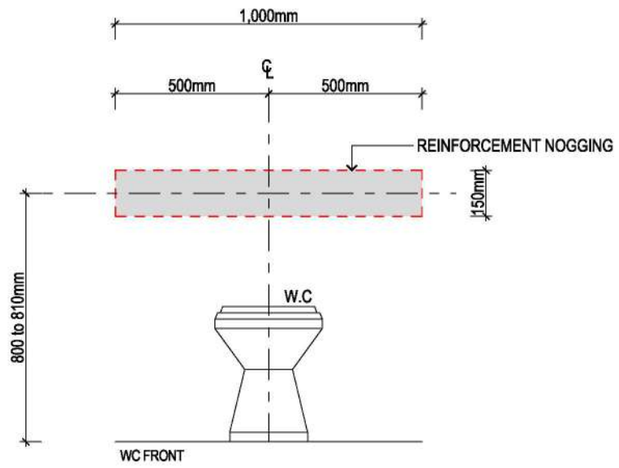
rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

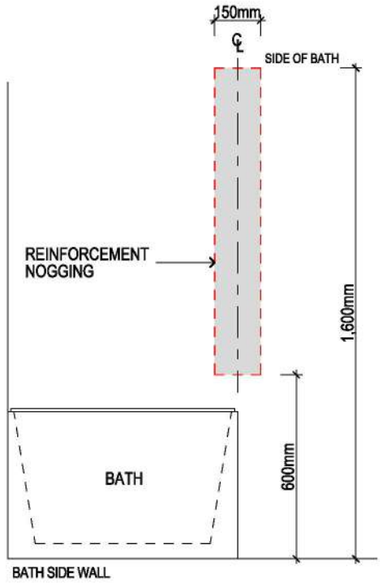
Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

site address: **LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810**
project no.: **305923**
estate: **THE RISE**
scale: **1:20@A3**
drawn: **RD**
sheet: **13**
drawing name: **WALL TYPE SCHEDULE**
date: **13/01/2025**
rev: **A**

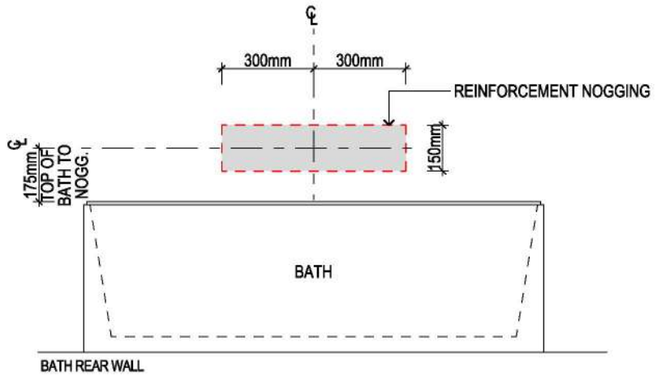
DETAILS FOR REINFORCEMENT OF BATHROOM AND SANITARY COMPARTMENT WALLS



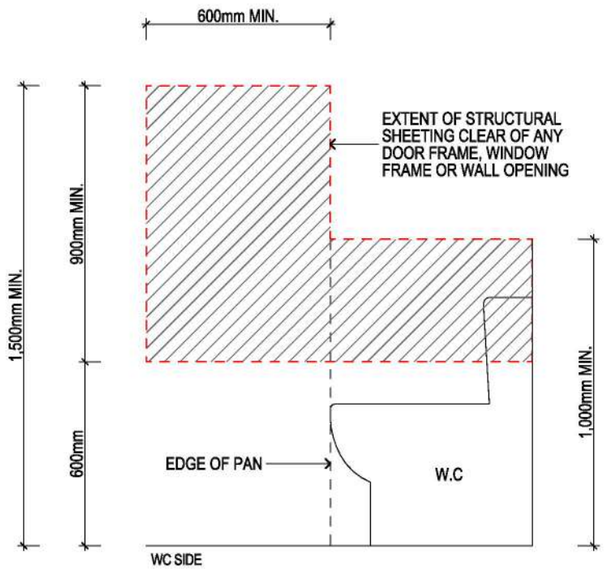
NOGGING LOCATION BEHIND W.C



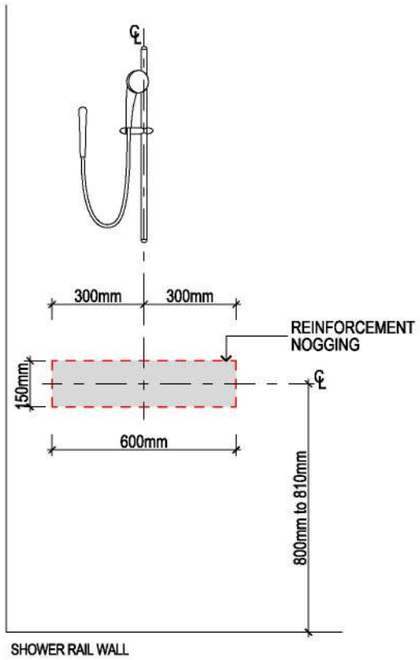
NOGGING LOCATION FOR WALLS AROUND BATHS IN HOBS

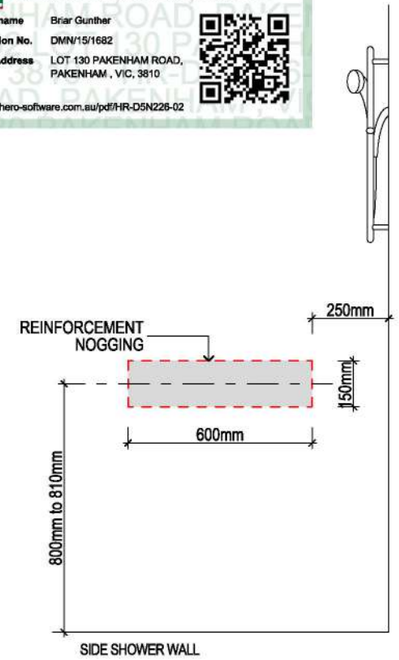


- **REFER TO FLOOR PLANS FOR HIGHLIGHTED W.C FOR NOGGING LOCATIONS AS PER LIVABLE HOUSING DESIGN GUIDELINES PART 8**
- MINIMUM NOGGING THICKNESS TO BE 25mm
- NOGGINGS ONLY REQUIRED TO BATHS WITHIN HOB OR ATTACHED TO WALL, FREE-STANDING DO NOT APPLY.
- TAPS, BATH NICHES, SOAP HOLDERS AND THE LIKE MAY BE LOCATED WITHIN THE POSITIONS OF NOGGING REINFORCEMENT



SHEETING FOR WALL ADJACENT TO W.C





NOGGING LOCATIONS FOR SHOWER WALLS

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A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade

CONSTRUCTION DRAWINGS

Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

site address: **LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810**
project no.: **305923**
estate: **THE RISE**
scale: **1:20@A3**
drawn: **RD**
sheet: **14**
drawing name: **BATH & WC NOGGING DETAILS**
date: **13/01/2025**
rev: **A**

MATERIALS USED MUST COMPLY WITH THE FOLLOWING CLAUSES:

-WATERPROOFING SYSTEMS - 10.2.8
-WATER RESISTANT SUBSTRATES - 10.2.9
-WATER RESISTANT SURFACES - 10.2.10

SHOWERS
-CONTINUOUS FALLS TO WET AREA FLOORS WITHIN THE SHOWER AREA TO BE A MINIMUM 1:80 AND MAXIMUM 1:50

-ENCLOSED SHOWER SCREEN = FRAMED SHOWER SCREEN, SEMIFRAMELESS OR FRAMELESS FITTED WITH SEALS/DEFLECTORS TO CONTROL SPREAD OF WATER FROM SHOWER AREA

-UNENCLOSED SHOWER SCREEN = SEMI-FRAMELESS AND FRAMELESS SHOWER SCREENS

-TO BE SECURELY FIXED TO DOOR AND WALL PRIOR TO APPLYING MEMBRANE

-ENCLOSED SHOWERS WITHOUT HOB OR STEP DOWN

-WATERSTOP TO BE LOCATED AT THE SHOWER SCREEN AND NOT LESS THAN 5MM ABOVE FFL

-ANY JOINT IN THE WATERSTOP MUST BE WATERPROOFED

GENERAL
-SUBSTRATE SURFACE MUST BE CLEAN WITHOUT IMPERFECTIONS PRIOR TO APPLYING MEMBRANE

PENETRATIONS WITHIN SHOWER AREAS
-PENETRATIONS FOR TAPS, NOZZLES OR THE LIKE TO BE WATERPROOFED USING SEALANTS, FLANGES OR BOTH

-SPINDLE HOUSING OF TAP BODY TO BE REMOVABLE WITHOUT DAMAGING SEAL

-PENETRATIONS FOR MECHANICAL FIXINGS/FASTENINGS AND RECESSED NICHES TO BE WATERPROOFED

-PENETRATIONS FOR TAPS, FAUCETS, AND THE LIKE ON HORIZONTAL SURFACES SURROUNDING BATHS TO BE WATERPROOFED USING SEALANTS, FLANGES OR BOTH

FLASHINGS AT JUNCTIONS AND CORNERS TO BE PURSUANT TO THE REQUIREMENTS OF CLAUSES 10.2.2 - 10.2.5
-PERIMETER FLASHINGS TO WALL/DOOR JUNCTIONS TO HAVE A MINIMUM VERTICAL LEG OF 25MM ABOVE FFL (EXCEPT AT DOORWAYS) AND A MINIMUM 50MM HORIZONTAL LEG

-WATERPROOF SEALANT TO BE USED AT SUBSTRATE JUNCTION AT THE WALL/DOOR JUNCTION WHERE WATER RESISTANT SUBSTRATE IS USED IN CONJUNCTION A WATER RESISTANT SURFACE MATERIAL

-FLOOR LEVEL OPENINGS SUCH AS DOORWAYS MUST HAVE A WATERSTOP INSTALLED ACROSS THE OPENING WITH THE VERTICAL LEG SITTING FLUSH WITH THE FFL. WHERE THE ENTIRE WET AREA FLOOR IS WATERPROOFED, THE WATERSTOP IS TO BE SEALED TO THE WATERPROOF MEMBRANE

-VERTICAL FLASHING EXTERNAL TO THE WET AREA OR INTERNAL TO EXTEND A MINIMUM 1800MM ABOVE FFL

-SHOWER AREAS MUST HAVE MEMBRANE APPLIED OVER THE FLOOR AND 1800MM VERTICALLY ABOVE FFL

-WHERE WATER RESISTANT PLASTERBOARD IS USED ALL CUT EDGES THAT HAVE POTENTIAL TO BE AFFECTED BY MOISTURE MUST BE WATERPROOFED

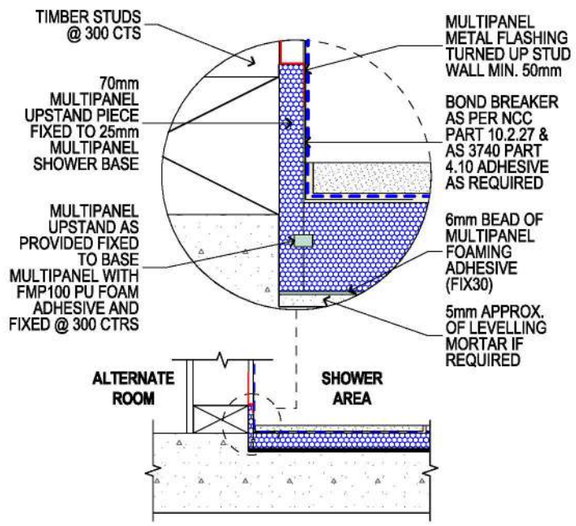
-BOND BREAKERS TO BE INSTALLED PURSUANT TO CLAUSE 10.2.27

INTERNAL WATERPROOF MEMBRANES
-SHOWER WATERSTOP - MEMBRANE MUST BE BROUGHT TO THE TOP OF THE FINISHED DOOR, EXCEPT WHERE IT IS UNDER A FRAMED SHOWER SCREEN WHERE IT SHALL TERMINATE NOT LESS THAN 5MM ABOVE THE FINISHED TILE SURFACE

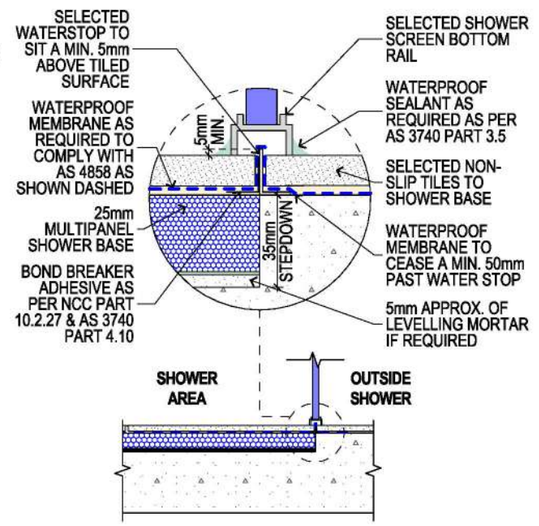
-MEMBRANE TO DRAINAGE CONNECTION MUST COMPLY WITH CLAUSE 10.2.29

-WHERE THE BOTTOM OF THE DOOR JAMB DOES NOT FINISH ABOVE THE FLOOR TILING, THE PORTION OF THE DOOR FRAME BELOW THE TILING MUST WATERPROOFED

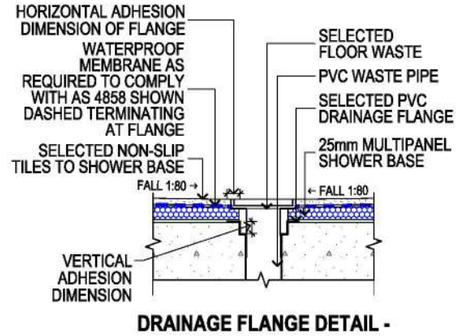
SHOWER SCREENS
-SHOWER WITH NO HOB/STEPDOWN - SCREEN MUST INCORPORATE OR BE MOUNTED ON INVERTED CHANNEL OVER THE TOP OF THE WATERSTOP



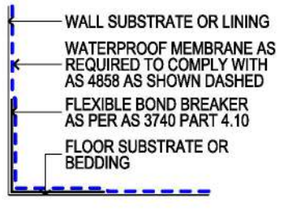
STUD WALL/SHOWER JUNCTION - GROUND FLOOR (35mm STEPDOWN)



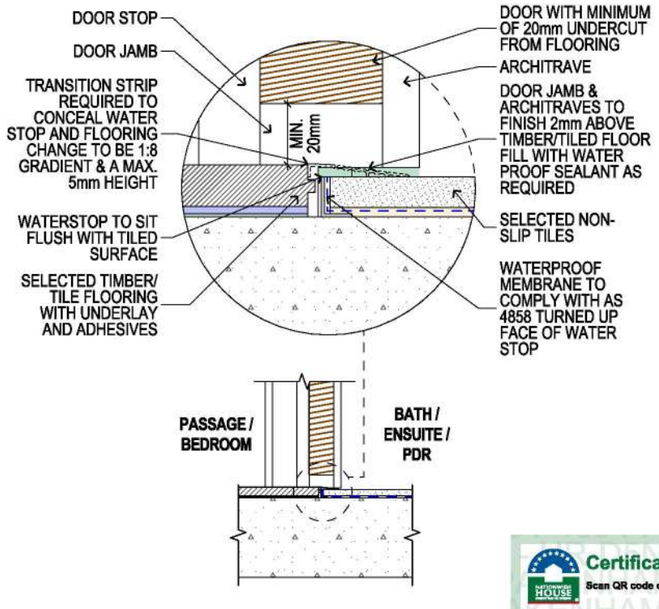
SHOWER SCREEN/FLOOR JUNCTION - GROUND FLOOR (35mm STEPDOWN)



DRAINAGE FLANGE DETAIL - GROUND FLOOR



BOND BREAKER DETAIL



WATER STOP TO WET AREA DOORWAY - HINGE DOOR (TILE & TIMBER FLOOR)

Certificate No. #HR-D5N226-02
Scan QR code or follow website link for rating details.
Assessor name: Briar Gunther
Accreditation No.: DMN/15/1682
Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
http://www.hero-software.com.au/pdf/HR-D5N226-02

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A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

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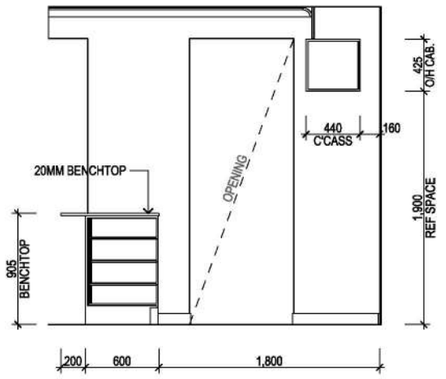
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

site address: LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810
project no.: 305923
estate: THE RISE
scale: 1:10@A3
drawn: RD
sheet: 15
drawing name: WATERPROOFING DETAILS
date: 13/01/2025
rev: A



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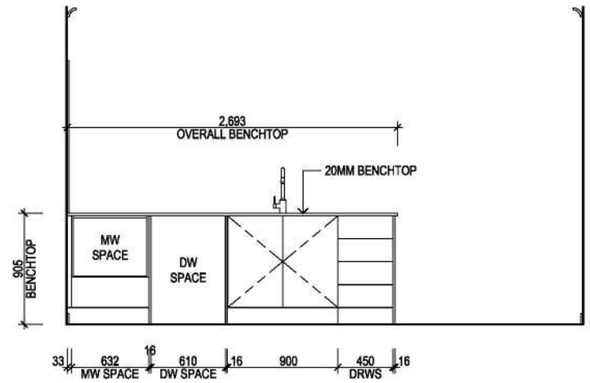
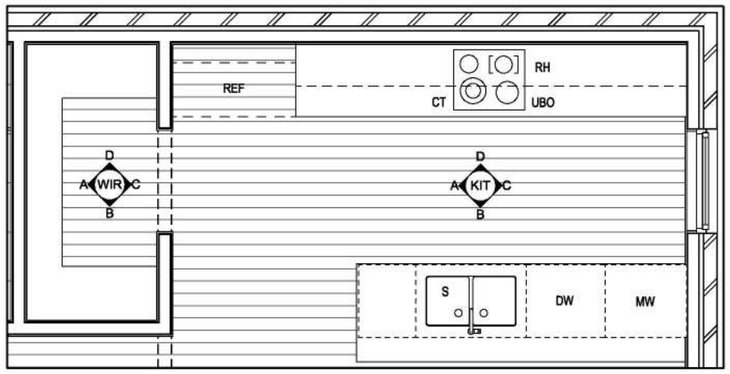


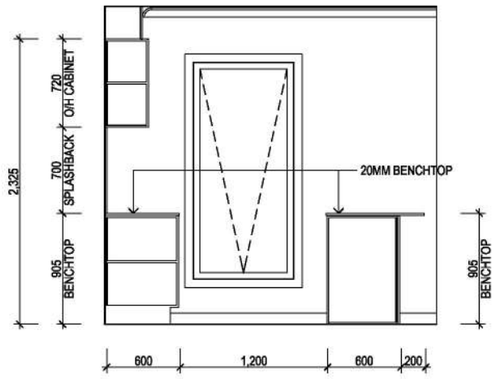
B KIT 1:50

DRAWING LEGEND - INTERNALS

ADJ	ADJUSTABLE
BM	BATH MIXER
BTH	BATH TUB
℄	CENTRE LINE OF
CT	INDUCTION COOKTOP
DW	DISHWASHER PROVISION
EQ	EQUALLY SPACED
FS	FIXED SHELVES
FWT	FEATURE WALL TILES
G	GLASS
HK	ROBE HOOK
HR	HANGING RAIL
HTR	HAND TOWEL RING
LCT	LAUNDRY CABINET TROUGH
M	POLISHED EDGE MIRROR
MDF	MDF BULKHEAD
MW	MICROWAVE PROVISION
OS	OPEN SHELF
PTY	PANTRY
RB	RUBBISH BIN COMPARTMENT
REF	REFRIGERATOR PROVISION
RH	RANGEHOOD
SM	SHOWER MIXER
SPH	SOAP HOLDER
SR	SHOWER RAIL
T	TILES
TM	TROUGH MIXER & TAP
TR	TOWEL RAIL
TRH	TOILET ROLL HOLDER
UBO	UNDER BENCH OVEN
WM	WASHING MACHINE PROVISION



KITCHEN & WIP 1:50



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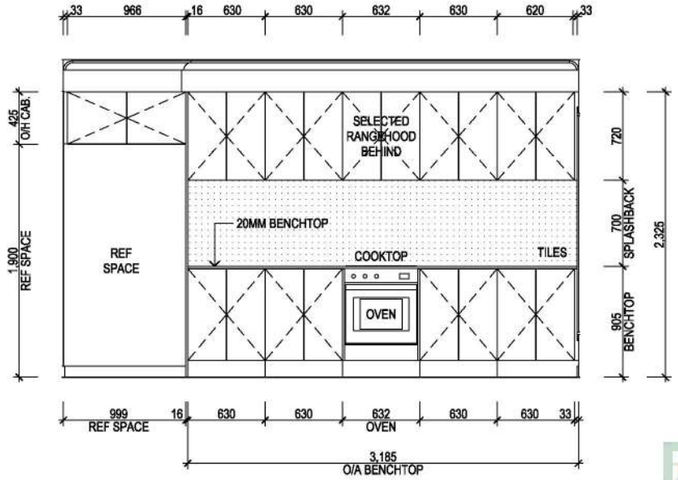

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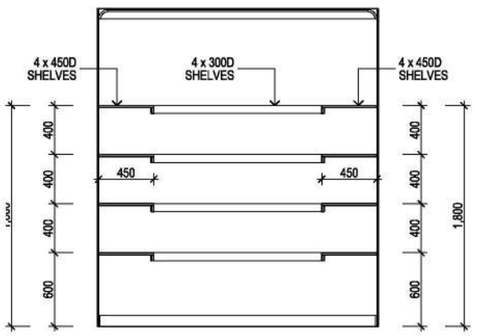

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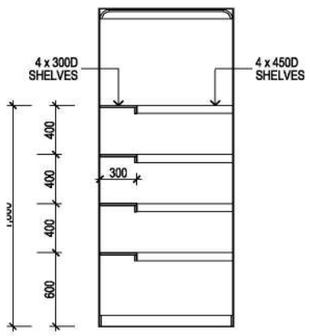

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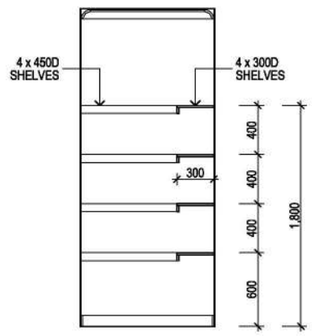

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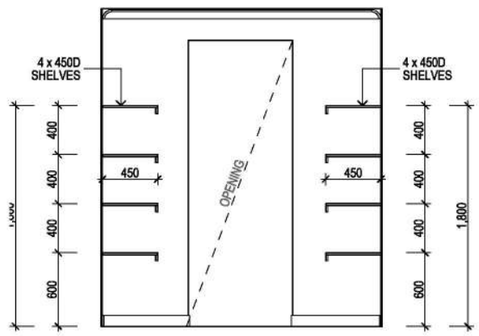

C WIP 1:50

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rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
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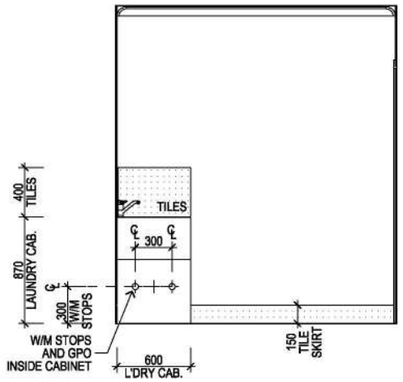
site address	project no.	estate	scale	drawn	sheet
LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810	305923	THE RISE	1:50@A3	RD	16

drawing name: INTERNALS 01
date: 13/01/2025
rev: A



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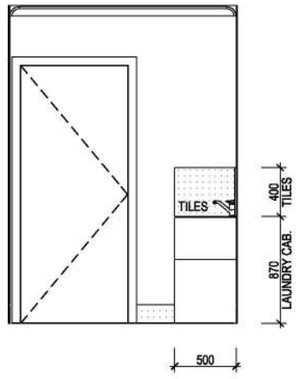
1:50



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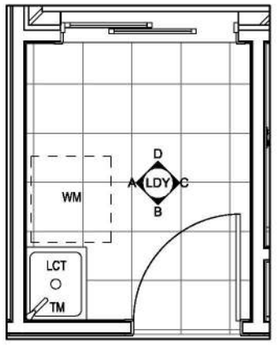
1:50



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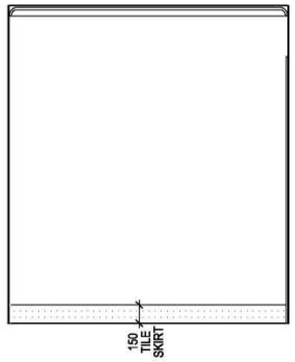

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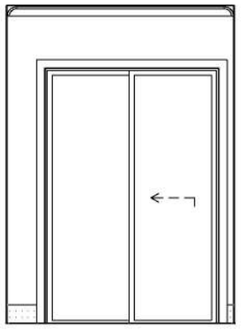

D L'DRY
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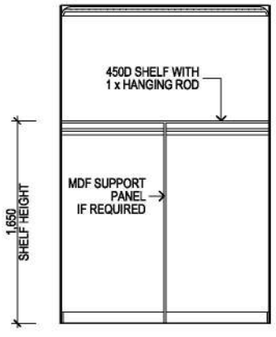
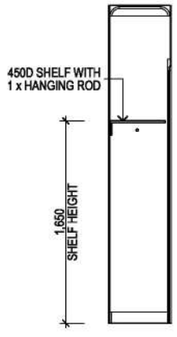


TYP. ROBE
1:50



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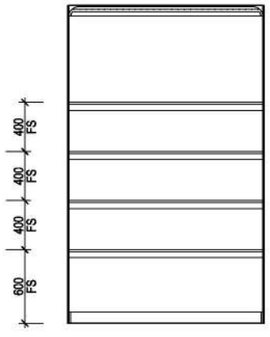
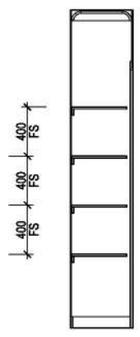


TYP. LINEN
1:50



TYP. LINEN
1:50

DRAWING LEGEND - INTERNALS

ADJ	ADJUSTABLE
BM	BATH MIXER
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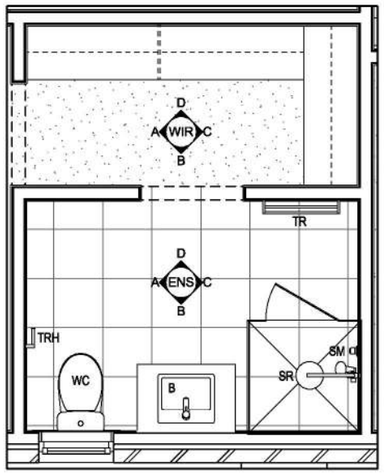
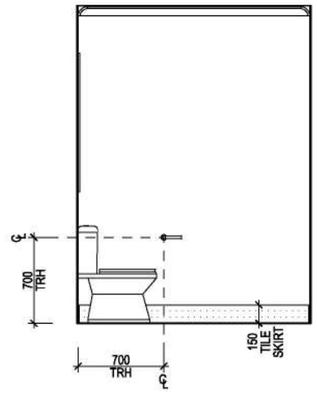
site address: LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810
project no.: 305923
estate: THE RISE
scale: 1:50@A3
drawn: RD
sheet: 17
drawing name: INTERNALS 02
date: 13/01/2025
rev: A



ENS & WIR
1:50



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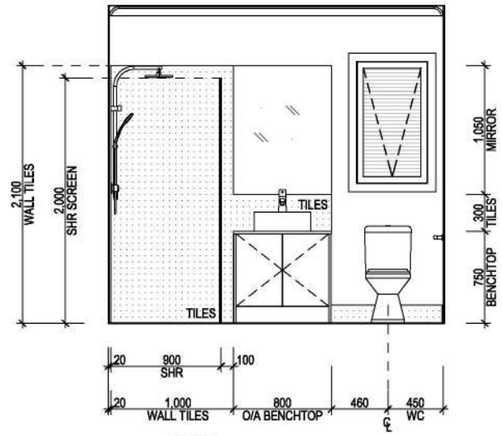

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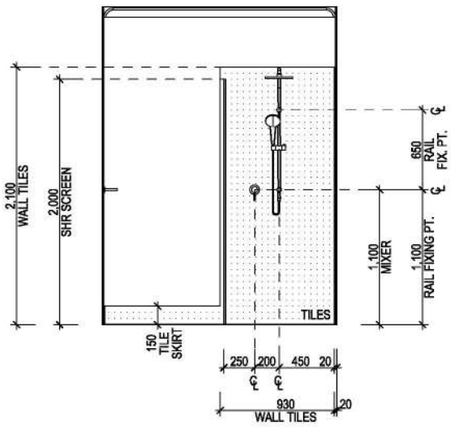

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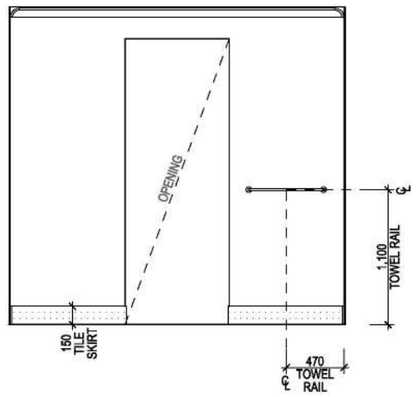

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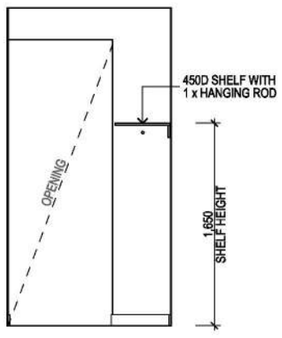

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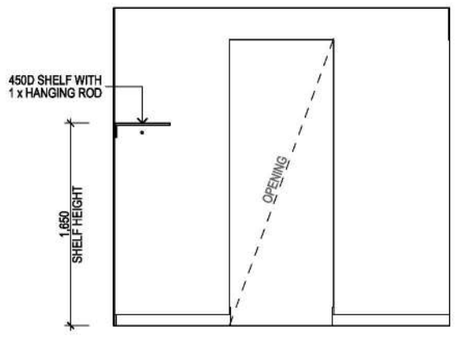

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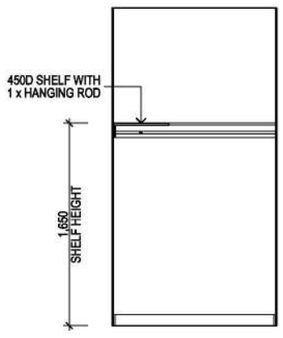

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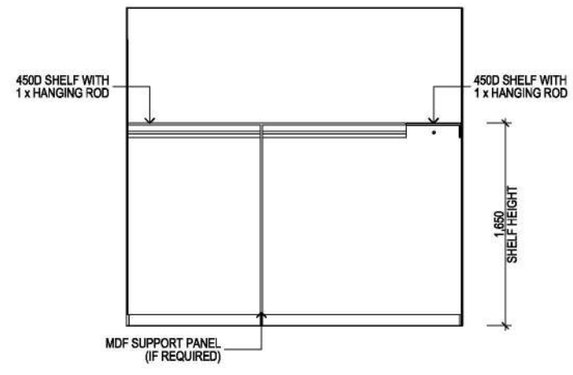

D WIR
1:50

DRAWING LEGEND - INTERNALS

ADJ	ADJUSTABLE
BM	BATH MIXER
BTH	BATH TUB
℄	CENTRE LINE OF
CT	INDUCTION COOKTOP
DW	DISHWASHER PROVISION
EQ	EQUALLY SPACED
FS	FIXED SHELVES
FWT	FEATURE WALL TILES
G	GLASS
HK	ROBE HOOK
HR	HANGING RAIL
HTR	HAND TOWEL RING
LCT	LAUNDRY CABINET TROUGH
M	POLISHED EDGE MIRROR
MDF	MDF BULKHEAD
MW	MICROWAVE PROVISION
OS	OPEN SHELF
PTY	PANTRY
RB	RUBBISH BIN COMPARTMENT
REF	REFRIGERATOR PROVISION
RH	RANGEHOOD
SM	SHOWER MIXER
SPH	SOAP HOLDER
SR	SHOWER RAIL
T	TILES
TM	TROUGH MIXER & TAP
TR	TOWEL RAIL
TRH	TOILET ROLL HOLDER
UBO	UNDER BENCH OVEN
WM	WASHING MACHINE PROVISION

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Assessor name	Briar Gunther
Accreditation No.	DMN/15/1682
Property Address	LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810

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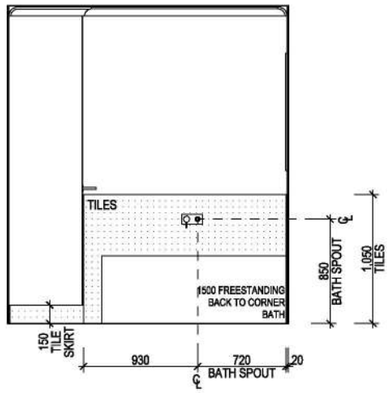
rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

site address	project no.	estate	scale	drawn	sheet
LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810	305923	THE RISE	1:50@A3	RD	18
[redacted]	drawing name: INTERNALS 03			date: 13/01/2025	rev: A



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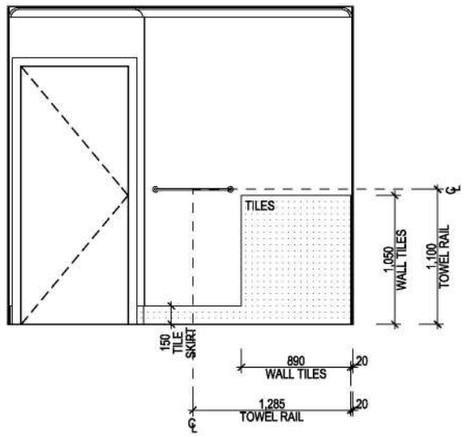

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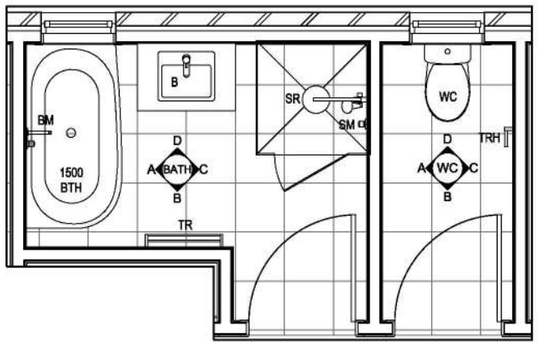
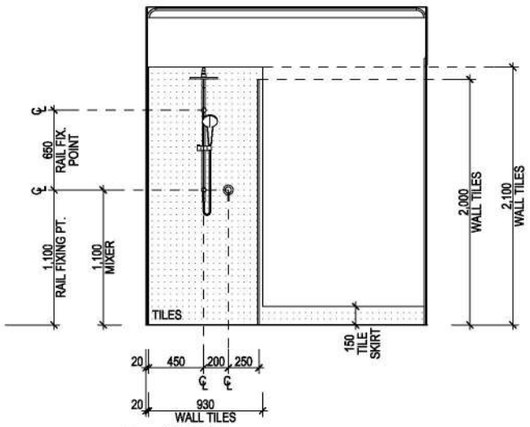


BATH & WC 1:50



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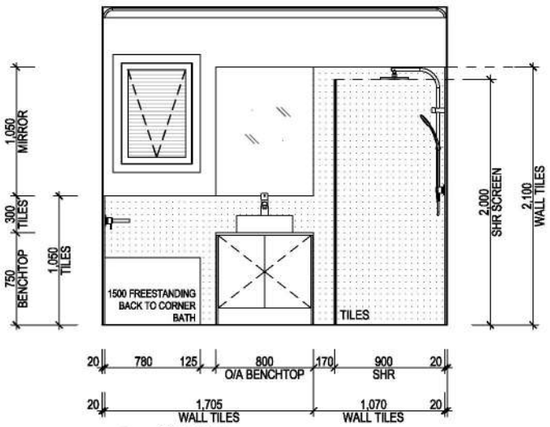

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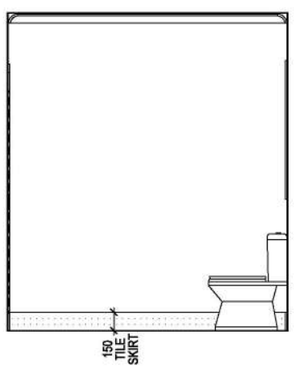

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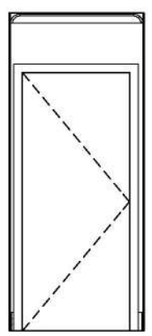

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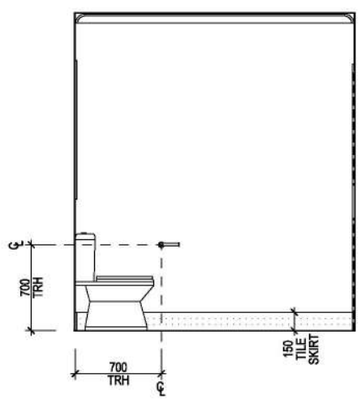

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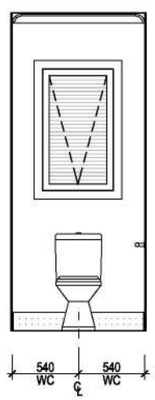

D WC 1:50

DRAWING LEGEND - INTERNALS

ADJ	ADJUSTABLE
BM	BATH MIXER
BTH	BATH TUB
℄	CENTRE LINE OF
CT	INDUCTION COOKTOP
DW	DISHWASHER PROVISION
EQ	EQUALLY SPACED
FS	FIXED SHELVES
FWT	FEATURE WALL TILES
G	GLASS
HK	ROBE HOOK
HR	HANGING RAIL
HTR	HAND TOWEL RING
LCT	LAUNDRY CABINET TROUGH
M	POLISHED EDGE MIRROR
MDF	MDF BULKHEAD
MW	MICROWAVE PROVISION
OS	OPEN SHELF
PTY	PANTRY
RB	RUBBISH BIN COMPARTMENT
REF	REFRIGERATOR PROVISION
RH	RANGEHOOD
SM	SHOWER MIXER
SPH	SOAP HOLDER
SR	SHOWER RAIL
T	TILES
TM	TROUGH MIXER & TAP
TR	TOWEL RAIL
TRH	TOILET ROLL HOLDER
UBO	UNDER BENCH OVEN
WM	WASHING MACHINE PROVISION

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Accreditation No.	DMN/15/1682
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rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
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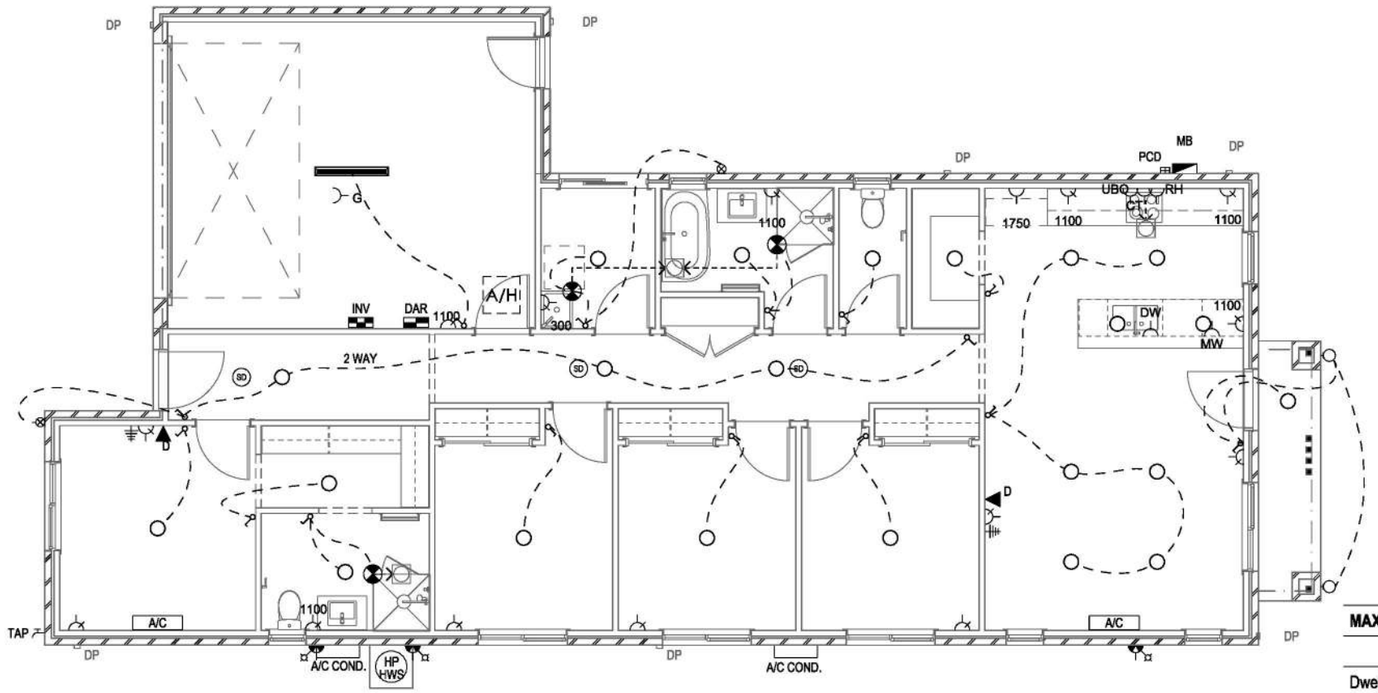
site address: **LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810**
project no.: **305923**
estate: **THE RISE**
scale: **1:50@A3**
drawn: **RD**
sheet: **19**
[redacted]
drawing name: **INTERNALS 04**
date: **13/01/2025**
rev: **A**

SERVICES LEGEND

Item	Description	Qty
	A/C CONDENSER	2
A/C	A/C HEAD UNIT	2
A/H	ACCESS HATCH	1
D	DATA POINT	2
DAR	DATA RETURN	1
	DOUBLE GPO	8
1100	DOUBLE GPO [1100 AFFL]	6
	EXHAUST FAN	3
	FLUORO LIGHT	1
1750	GPO [1750 AFFL]	1
DW	GPO [DW]	1
G	GPO [GARAGE CEILING]	1
CT	GPO [INDUCTION COOKTOP]	1
MW	GPO [MW]	1
UBO	GPO [OVEN]	1
RH	GPO [RANGE HOOD]	1
	HWS [HEAT PUMP]	1
INV	INVERTER	1
	LED DOWNLIGHT	22
MB	METER BOX	1
PCD	NBN Utility Box / Premises Connection Device	1
	ROOF COWL	3
(SD)	SMOKE DETECTOR	3
	SWITCH	15
	TV POINT	2
	WALL LIGHT	2
	WALL LIGHT SENSOR	2

SERVICES LEGEND

Item	Description	Qty
	WEATHER PROOF ISOLATOR	3
	WHIRLY BIRD	2



ELECTRICAL PLAN NOTES

EXHAUST FANS/SYSTEMS TO BE DUCTED EXTERNALLY AS PER NCC 2022 PART 10.8.2 (1) & PART 10.8.2 (2)

EXHAUST FANS SERVING A BATHROOM OR SANITARY COMPARTMENT THAT ARE **NOT** VENTILATED BY A WINDOW/ DOOR TO BE AS PER NCC 2022 PART 10.8.2 (4)
a) BE INTERLOCKED WITH ROOM'S LIGHT SWITCH AND;
b) INCLUDE A RUN-ON TIMER SO THE EXHAUST SYSTEM CONTINUES TO OPERATE 10 MINUTES MIN. AFTER LIGHT SWITCH IS OFF

EXHAUST FANS TO BE PROVIDED WITH MAKE-UP AIR VIA 20mm UNDERCUT TO DOOR AS PER NCC 2022 PART 10.8.2 (5) AND 10.8.2 (6)

EXHAUST FANS & KITCHEN RANGEHOOD TO BE FITTED WITH NON-RETURN DAMPERS AND TO BE DUCTED EXTERNALLY.

DWELLING TO BE CONNECTED TO NATIONAL BROADBAND NETWORK.

ALL LED DOWNLIGHTS TO BE FITTED WITH FIREPROOF COVERS.

EXTERNAL LIGHTING TO BE CONTROLLED VIA DAYLIGHT SENSORS OR HAVE AN AVERAGE LIGHT SOURCE EFFICACY OF NOT LESS THAN 40 LUMENS/W IN ACCORDANCE WITH NCC H6D2 PART 13.7.6 (5)

ALL SMOKE ALARMS TO BE INTERCONNECTED, WITH BATTERY BACKUP AND INSTALLED IN ACCORDANCE WITH NCC2022 H3D6 AND AS3786-2014

MAX. ALLOWABLE WATTAGE

	Area (m²)	Max W/m2	Max Wattage (W)
Dwelling Ground Floor	129.57	5.00	647.87
Garage	33.30	3.00	99.89
Porch	4.32	4.00	17.30

LIGHTING CALCULATOR

	Item	Description	Qty	Total Watts (W)
Dwelling Ground Floor		LED DOWNLIGHT	21	10.00
				210.00
Garage		FLUORO LIGHT	1	18.00
				18.00
Porch		LED DOWNLIGHT	1	10.00
				10.00
				238.00

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rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
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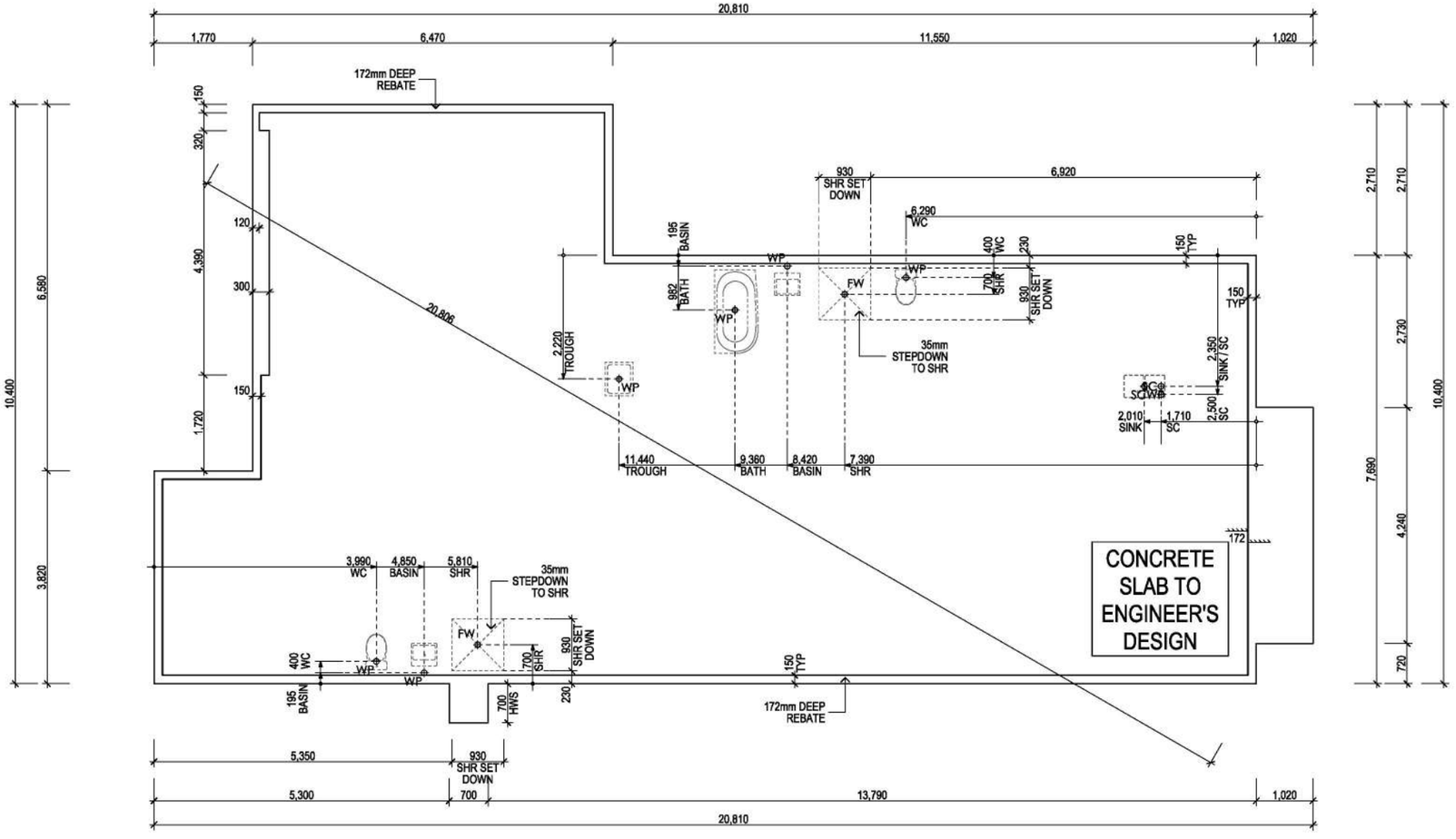
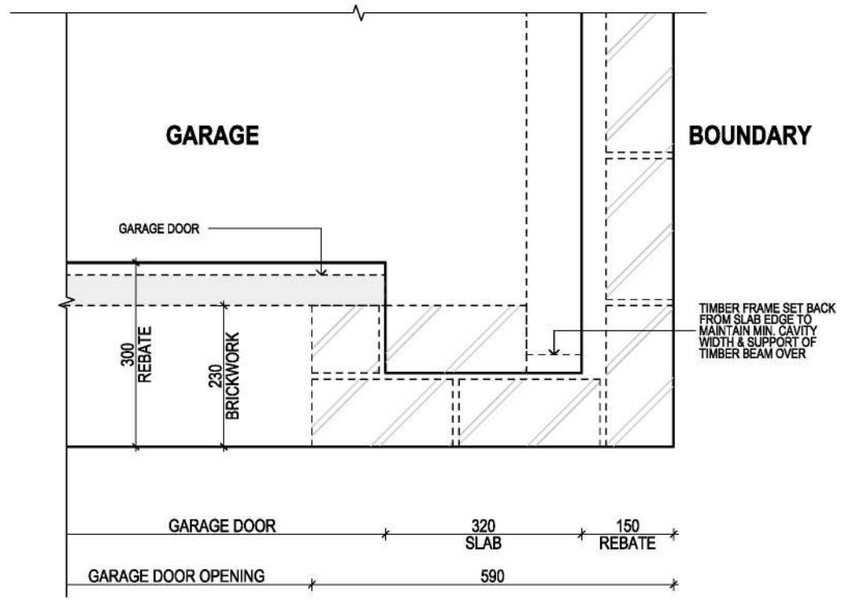
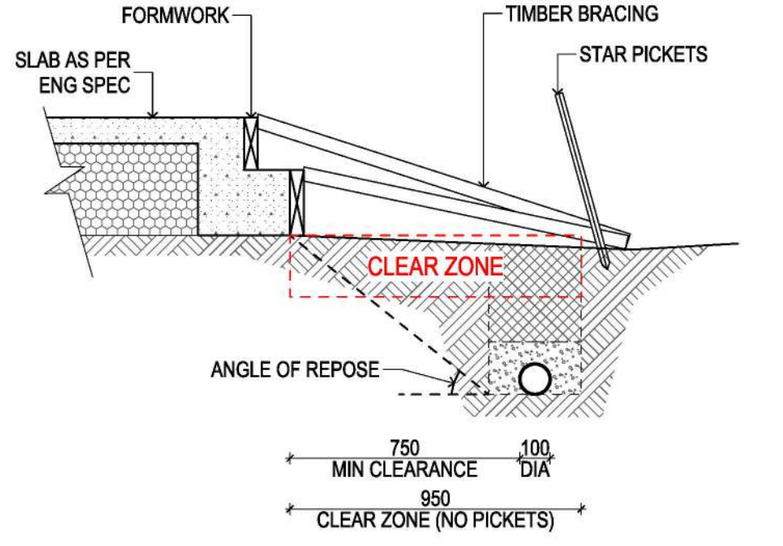
site address: **LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810**
client: [redacted]
project no.: **305923**
estate: **THE RISE**
scale: **1:100@A3**
drawn: **RD**
sheet: **20**
drawing name: **ELECTRICAL PLANS**
date: **13/01/2025**
rev: **A**





GARAGE REBATE PLAN DETAIL
v1 SCALE 1:10



A801 DRAINAGE CLEARANCE
v1 SCALE 1:20

Certificate No. #HR-D5N226-02
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Assessor name Brian Gunther
Accreditation No. DMN/15/1682
Property Address LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
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SLAB SETOUT LEGEND

FW	FLOOR WASTE
WP	WASTE POINT
SC	SERVICE CONDUIT
PS	PLUMBING STACK
EX FW	EXTERNAL FLOOR WASTE

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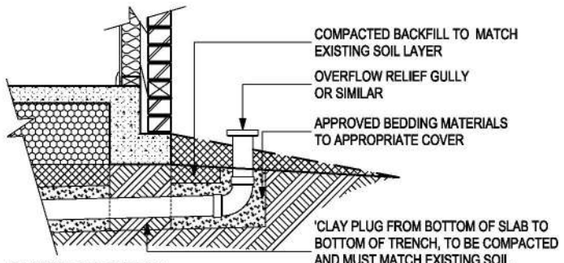
site address: LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810
project no.: 305923
estate: THE RISE
scale: 1:100, 1:10, 1:20@A3
drawn: RD
sheet: 21
client: [redacted]
drawing name: SLAB SETOUT
date: 13/01/2025
rev: A

MIN. REQ. FOR EXPANSION JOINT CAPACITY		
SITE CLASS	EXPANDER MOVEMENT RANGE	SWIVEL ROTATION RANGE
'E'	150mm	15°
'H1' & 'H2'	70mm	15°
'M'	MIN. 25mm LAGGING THROUGH FOOTINGS	NOT APPLICABLE

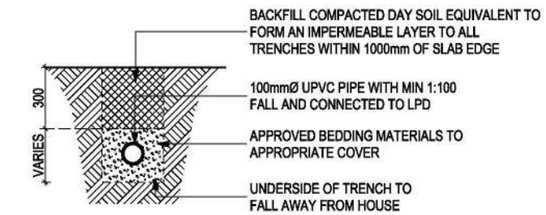
MIN. REQ. FOR SEWER ARTICULATION

SITE CLASS	SEWER EXIT POINTS & ORG		RISERS	
	SWIVEL	EXPANDER	EXPANDER	LAGGING
'M'	1	0	0	MIN. 25mm
'H1'	1	1	1**	MIN. 50mm
'H2'	2	1	1**	
'E'	2	1	X*	MIN. 50mm

* - EXPANDER ON ALL RISERS
** - MAX DEPTH OF SEWER TO UNDERSIDE OF SLAB TO BE 500mm FOR CLASS M & 600mm FOR CLASS H OTHERWISE EXPANDER JOINT REQUIRED



CLAY PLUG DETAIL
NOT TO SCALE



TYPICAL TRENCH DETAIL
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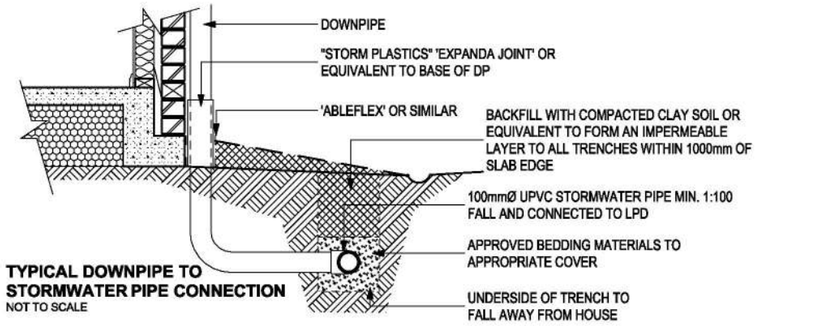
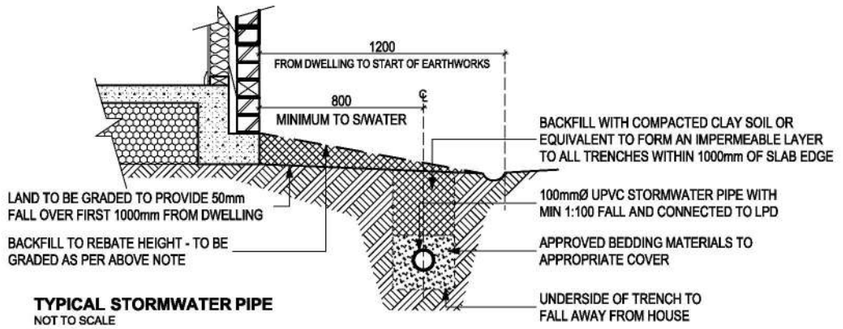
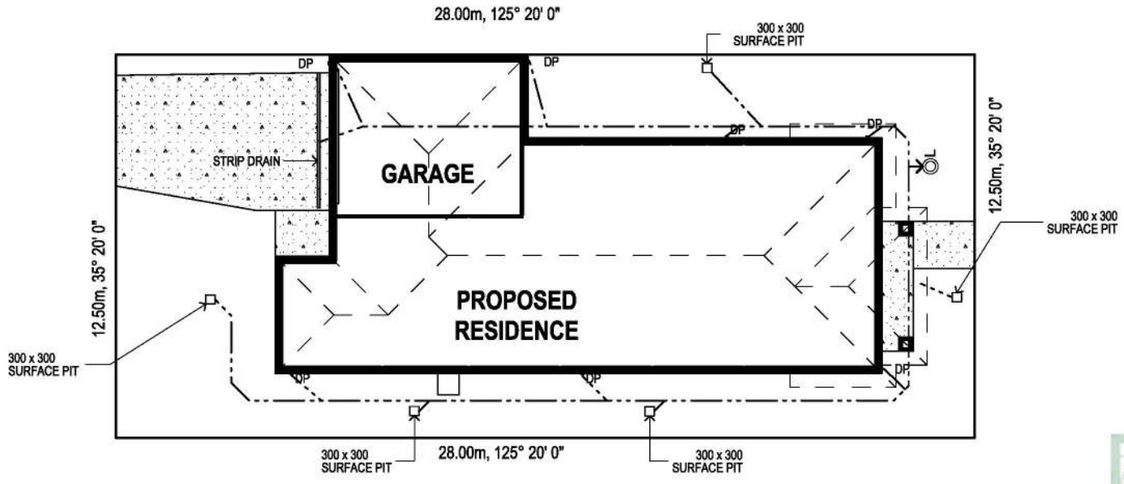


TYPICAL DOWNPIPE TO STORMWATER PIPE CONNECTION
NOT TO SCALE



TYPICAL STORMWATER PIPE
NOT TO SCALE



SITE DRAINAGE NOTES

SITE PREPARATION
- UNLESS NOTED OTHERWISE, EXCAVATIONS TO BE BATTERED AT 45° MAX. FOR SAND/SILT/ FILL SITES. ALL BATTERS TO BE KEPT WITHIN PROPERTY BOUNDARIES.
- ALL CUT & FILL BATTERS MUST BE STABILISED FOLLOWING CONSTRUCTION. THE GROUND LEVEL IMMEDIATELY ADJACENT TO THE BUILDING SHALL BE GRADED TO A UNIFORM FALL OF 50mm MIN. AWAY FROM THE BUILDING OVER THE FIRST METRE.
- PROVIDE AGRICULTURAL DRAIN TO BASE OF SITE CUT CONNECTED TO STORMWATER SYSTEM VIA SILT PIT WHERE SITE CUT IS GREATER THAN 300mm.
- PROVIDE CUT TOE OR SPOON DRAIN @ MIN. FALL TO BASE OF SITE CUT CONNECTED TO STORMWATER SYSTEM VIA SILT.

DRAINAGE REQUIREMENTS
- STORMWATER DRAINAGE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH AS3500.3 - PLUMBING AND DRAINAGE - STORMWATER DRAINAGE.
- IN ACCORDANCE WITH AS2870-2011 SECTION 5.6.3: SURFACE DRAINAGE OF SITE TO BE CONTROLLED FROM START OF SITE PREPARATION AND SHOULD BE COMPLETED BY END OF CONSTRUCTION.
- TRENCH BASES TO SLOPE AWAY FROM BUILDING , TOP 300mm OF TRENCHES TO BE BACK-FILLED WITH COMPACTED CLAY WITHIN 1.5m FROM THE BUILDING.
- TRENCHES UNDER FOOTINGS TO BE PLUGGED WITH CLAY SUBSOIL.
- DRAINS NOT TO BE WITHIN 1.5m FROM BUILDING UNLESS DESIGNED IN ACCORDANCE WITH ENGINEERING PRINCIPLES.

PLUMBING REQUIREMENTS:
- AS PER AS2870 - 2011 SECTION 5.6.4 PENETRATION OF EDGE BEAMS OR FOOTINGS TO BE AVOIDED WHERE PRACTICABLE, BUT WHERE NECESSARY, SHALL BE DETAILED TO ALLOW FOR MOVEMENT.
- DRAINS EMERGING FROM UNDERNEATH THE BUILDING TO INCORPORATE FLEXIBLE JOINTS AND SHOULD ALLOW FOR DIFFERENTIAL MOVEMENT IN ANY DIRECTION EQUAL TO THE ESTIMATED CHARACTERISTIC SURFACE MOVEMENT, Ys. ON SITE WASTEWATER TREATMENT UNITS TO BE LOCATED TO MINIMISE SOIL MOISTURE INCREASE WITHIN THE FOUNDATION. DRAINAGE UNDER THE SLAB TO BE AVOIDED WHERE PRACTICABLE.
- COLD AND HOT WATER PIPES NOT TO BE INSTALLED UNDER THE SLAB, UNLESS PIPES ARE INSTALLED WITHIN A CONDUIT, SO THAT IF THE PIPE LEAKS IT WILL BE NOTICED ABOVE OR OUTSIDE THE SLAB.

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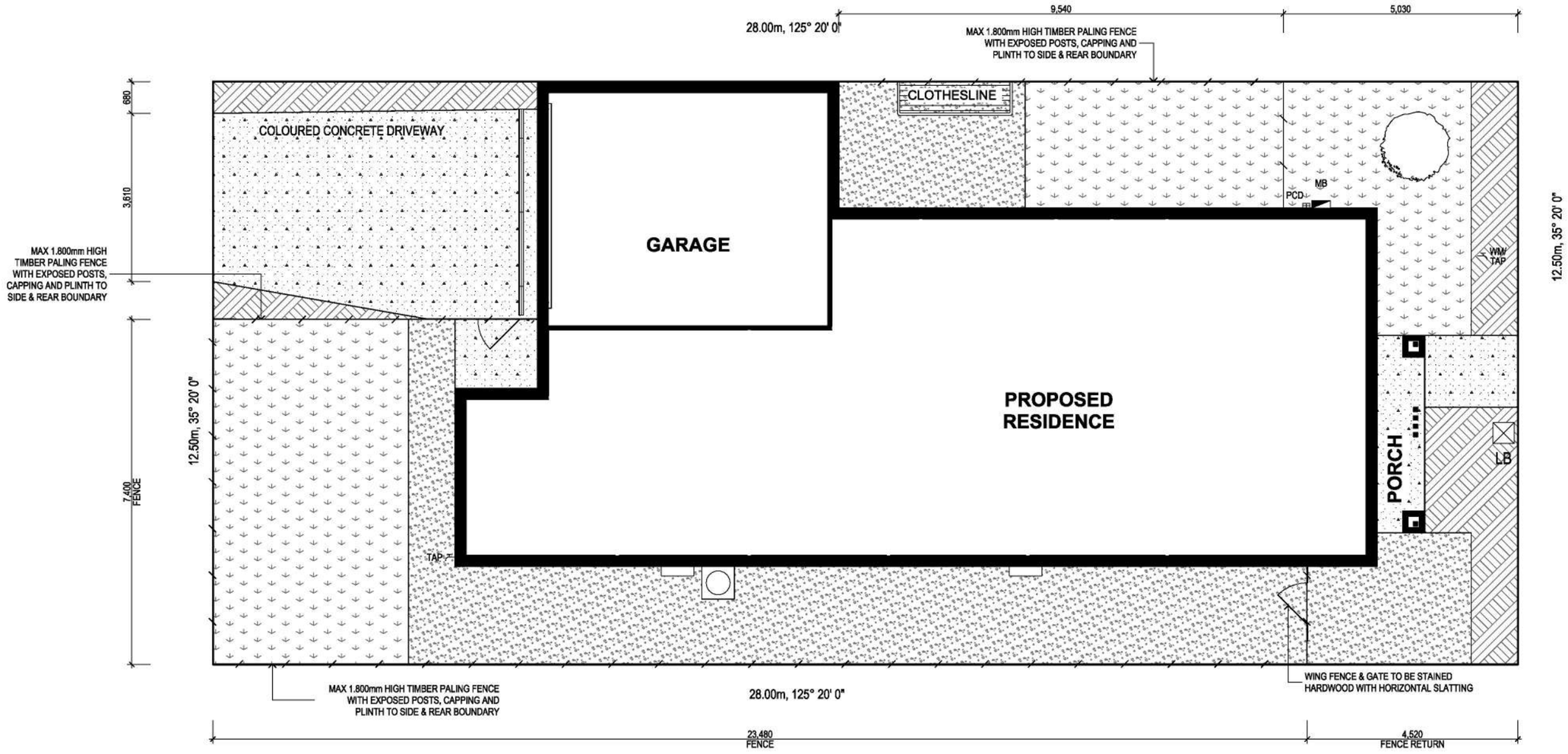
site address: **LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810**
client: [redacted]
project no.: **305923**
estate: **THE RISE**
scale: **1:200@A3**
drawn: **RD**
sheet: **22**
drawing name: **DRAINAGE PLAN**
date: **13/01/2025**
rev: **A**



LANDSCAPING LEGEND

- COLOURED CONCRETE
- PLAIN CONCRETE PAVING
- MULCHED GARDEN BED 75mm x 25mm TREATED PINE EDGING
- TOPSOIL AND INSTANT TURF
- TOPPINGS - LILYDALE

LANDSCAPE AREAS

		Area (m²)
Front Yard		19.92
		19.92 m²
Rear Yard		62.50
Rear Yard		64.96
		127.46 m²
		147.38 m²

QUANTITY | PLANTING

Key	Name	Quantity
	Eleaocarpus Reticulatus "Blueberry Ash"	1

Certificate No. #HR-D5N226-02

Scan QR code or follow website link for rating details.

Assessor name	Briar Gunther
Accreditation No.	DMN/15/1682
Property Address	LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810

http://www.hero-software.com.au/pdf/HR-D5N226-02

creationhomes
LEVEL 12, 484 ST.KILDA ROAD, MELBOURNE, VIC 3004
p: 03 9828 0700 e: info@creationhomes.com.au w: www.creationhomes.com.au

rev	description	by	date
A	CONSTRUCTION ADRAWINGS	RD	6/01/2025

Indi 17 - Wattle Facade
CONSTRUCTION DRAWINGS
Figured dimensions take precedence over scaled dimensions. Contractors must verify all dimensions on site before commencing any work or making shop drawings.

site address: **LOT 130 PAKENHAM ROAD, PAKENHAM VIC 3810**
project no.: **305923**
estate: **THE RISE**
scale: **1:100@A3**
drawn: **RD**
sheet: **23**
client: [redacted]
drawing name: **LANDSCAPE PLAN**
date: **13/01/2025**
rev: **A**

CLIENT INFO

NAME: [redacted]

BUILDING DESIGN BY: CRAETION HOMES

03 9828 0700

info@creationhomes.com.au

DOCUMENT INFO

STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE

ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

STRUCTURAL ENGINEERING

MECHANICAL ENGINEERING

CIVIL ENGINEERING

PROJECT MANAGEMENT

ARCHITECTURE & PLANNING

FABRICATION DRAWINGS

POINT CLOUD SURVEY

FIELD SURVEY

CRESCO AUSTRALIA

WHERE EXPERTISE MEETS INNOVATION

PROJECT NUMBER
2500037

1800 CRESCO
(1800 273 726)

www.cresco-group.com.au

Certificate No. #HR-D5N226-02
Scan QR code or follow website link for rating details.
Assessor name: Brian Gunther
Accreditation No.: DMV151652
Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
http://www.hero-software.com.au/pdf/HR-D5N226-02

CRESCO AUSTRALIA

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Principal: Shane Lutze / B.Eng [Mech] - M.Eng. Sci [Struct]
MIEAust - NER (Mech & Struct):.....7120849
RPE NSW (Mech & Struct):.....PRE0002298
RPE VIC (Mec & Struct):.....PE0010096
RPE QLD (Mech & Struct):.....28994
RPE TAS (Mech & Strcut):.....708732979

REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
A	ISSUED FOR CLIENT REVIEW	23/01/25	AF	RQ	SJL

IMPORTANT NOTES:

- DO NOT SCALE FROM THE DRAWINGS.
- ALL MEASUREMENTS ARE IN MILLIMETRES U.N.O.
- ALL LEVELS ARE IN METERS U.N.O.
- FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
- CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONSTRUCTION METHODOLOGY ON SITE AND SEEK INSTRUCTIONS BEFORE PROCEEDING IF ANY DISCREPANCIES ARE FOUND
- CONTACT CRESCO AUSTRALIA EVER IN DOUBT REGARDING DRAWING AND/OR SPECIFICATIONS.

CLIENT INFO

NAME: [redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME

CRESCO AUSTRALIA PROJECT COVER SHEET - 1

SHEET NUMBER S00

REVISION A

PROJECT NUMBER 2500037

SCALE

FORMAT A1

CLIENT INFO

NAME: [redacted]

BUILDING DESIGN BY: CRAETION HOMES

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DOCUMENT INFO

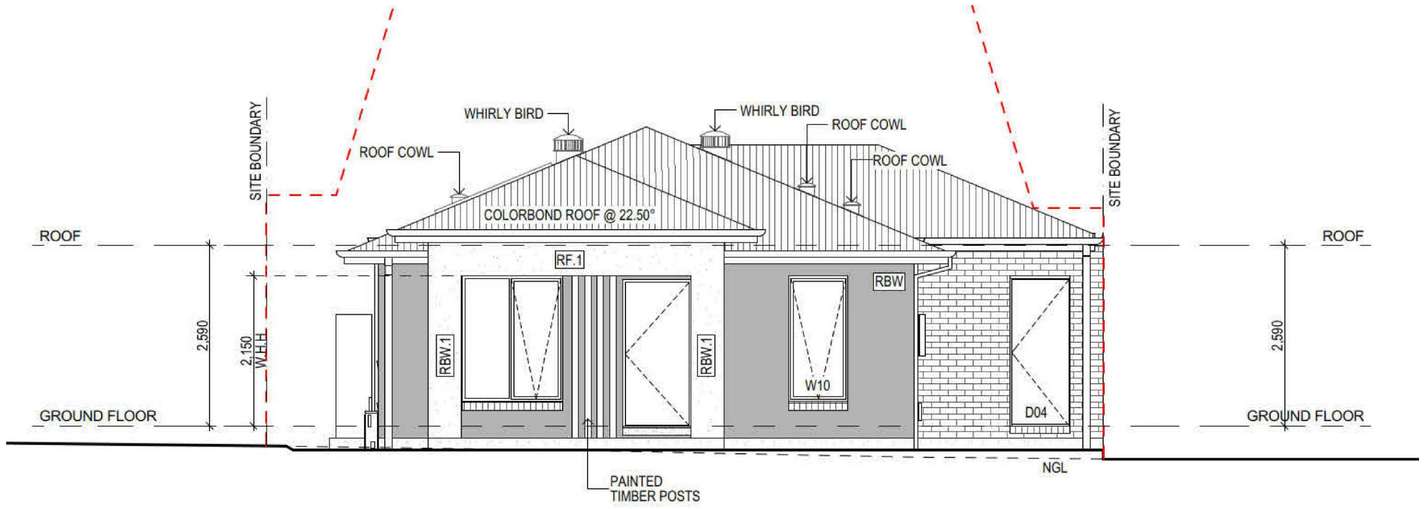
STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE

ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

DRAWING LIST		
SHEET NUMBER	**SHEET TITLE**	**REV.**
S00	CRESCO AUSTRALIA PROJECT COVER SHEET - 1	A
S01	CRESCO AUSTRALIA PROJECT COVER SHEET - 2	A
S02	GENERAL NOTES - SHEET 1	A
S03	GENERAL NOTES - SHEET 2	A
S04	STRUCTURAL DESIGN CRITERIA SHEET	A
S05	STRUCTURAL SPECIFICATIONS SHEET	A
S06	POD LAYOUT PLAN	A
S07	TYPICAL - VARIED EDGE BEAM FILL AREA DETAILS (BIAX)	A
S08	TYPICAL - FOOTING & SLAB DETAILS (BIAX)	A
S09	TYPICAL - FOOTING & SLAB DETAILS (BIAX)	A
S10	TYPICAL - FOOTING & SLAB DETAILS (BIAX)	A
S11	TYPICAL - FOOTING & SLAB DETAILS (BIAX)	A
S12	TYPICAL - FOOTING & SLAB DETAILS (BIAX)	A
S13	TYPICAL - FOOTING & SLAB DETAILS (BIAX)	A
S14	TYPICAL - FOOTING & SLAB DETAILS (BIAX)	A
S15	TYPICAL - FOOTING & SLAB DETAILS (BIAX)	A
S16	TYPICAL - FOOTING & SLAB DETAILS (BIAX)	A
S17	TYPICAL - FOOTING & SLAB DETAILS	A
S18	TYPICAL - FOOTING & SLAB DETAILS	A



CRESCO AUSTRALIA

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MIEAust - NER (Mech & Struct):.....7120849
RPE NSW (Mech & Struct):.....PRE0002298
RPE VIC (Mec & Struct):.....PE0010096
RPE QLD (Mech & Struct):.....28994
RPE TAS (Mech & Struct):.....708732979

REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
A	ISSUED FOR CLIENT REVIEW	23/01/25	AF	RQ	SJL

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- CONTACT CRESCO AUSTRALIA EVER IN DOUBT REGARDING DRAWING AND/OR SPECIFICATIONS.

CLIENT INFO

[redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME

CRESCO AUSTRALIA PROJECT COVER SHEET - 2

SHEET NUMBER S01

REVISION A

PROJECT NUMBER 2500037

SCALE

FORMAT A1

GENERAL NOTES:

GN1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE PRINCIPAL FOR DECISION BEFORE PROCEEDING WITH THE WORK.

GN2. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. THE ENGINEER'S DRAWINGS SHALL NOT BE SCALED.

GN3. WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, BUILDING CODE OF AUSTRALIA, CURRENT S.A.A. CODES INCLUDING AMENDMENTS, BUILDING REGULATIONS, AND THE REQUIREMENTS OF ANY OTHER RELEVANT STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

GN4. THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER BUT IS NOT AN AUTHORIZATION FOR A VARIATION. ANY VARIATION INVOLVED MUST BE TAKEN UP WITH THE PRINCIPAL BEFORE THE WORK COMMENCES.

GN5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. ALL LEVELS ARE EXPRESSED IN METERS.

GN6. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNTIL ISSUED AS "FOR CONSTRUCTION" CRESCO AUSTRALIA.

GN7. ALL DISCREPANCIES SHALL BE REFERRED TO THE PRINCIPAL FOR RESOLUTION BEFORE PROCEEDING WITH THE WORKS.

GN8. THE STRUCTURAL DRAWINGS DO NOT SHOW ALL DETAILS OF FIXTURES, INSERTS, SLEEVES, OPENINGS, RECESSES, CHASES, ETC REQUIRED BY THE VARIOUS TRADES. ALL SUCH DETAILS MUST BE APPROVED BY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.

GN9. THE CONTRACTOR RETAINS RESPONSIBILITY OF THE WORKS EVEN IF THE ENGINEER HAS INSPECTED THE WORKS DURING CONSTRUCTION.

GN10. A COPY OF THESE DRAWINGS SHALL BE KEPT ON-SITE DURING THE CONSTRUCTION PERIOD.

GN11. THE DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF FORMWORK AND FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT CODES.

GN12. THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION PROCEDURE AND ALL LOADS DURING CONSTRUCTION. IF THE CONTRACTOR SUBMITS THIS SUGGESTED CONSTRUCTION PROCEDURE TO THE SUPERINTENDENT FOR REVIEW, THE ACCEPTANCE OF THE PROCEDURE BY THE PRINCIPAL WILL NOT ABSOLVE THE CONTRACTOR FROM HIS RESPONSIBILITY FOR THE PROCEDURE OR FROM ANY CONSEQUENCES WHICH MAY OCCUR DURING CONSTRUCTION.

GN13. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVER-STRESSED UNDER CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL DESIGN AND INSTALL TEMPORARY BRACING AS REQUIRED TO KEEP THE WORKS AND EXCAVATION STABLE AT ALL TIMES. WHEN REQUESTED, THE CONTRACTOR SHALL PROVIDE CALCULATIONS TO JUSTIFY THE ADEQUACY OF THE STRUCTURE TO SAFELY WITHSTAND ANY IMPOSED LOADS AND/OR CONSTRUCTION PROCEDURE.

GN14. WHERE ADDITIONAL CONSTRUCTION LOADS SUCH AS TEMPORARY SHORING, MOBILE CRANES, ETC ARE TO BE IMPOSED ON THE STRUCTURE, THE CONTRACTOR SHALL SUBMIT FULL DETAILS OF THE PROPOSED TEMPORARY SUPPORTS TO THE ENGINEER FOR REVIEW. SUCH INFORMATION MUST BE PROVIDED A MINIMUM OF 7 WORKING DAYS PRIOR TO THE PROPOSED WORKS COMMENCING.

GN15. IF THE CONTRACTOR INTENDS TO VARY THE SCOPE OR METHOD OF WORKS OR MATERIALS USED THE CONTRACTOR SHALL SUBMIT FULL DETAILS OF THE PROPOSAL TO THE ENGINEER FOR CHECKING.

GN16. THE COST FOR CARRYING OUT THE DESIGN AND REVIEW IN CLAUSES 11, 12, 13, 14 & 15 SHALL BE AT THE CONTRACTORS EXPENSE. COSTS INCURRED BY CRESCO AUSTRALIA PTY LIMITED TO CARRY OUT THE ABOVE TASKS SHALL BE RECOVERED FROM THE CONTRACTOR DETERMINED BY THE HOURLY RATES SETOUT IN THE WORKS AGREEMENT.

GN17. PRIOR TO ANY EXCAVATION, DRILLING OR PILE DRIVING, THE CONTRACTOR SHALL CHECK WITH ALL RELEVANT AUTHORITIES AND OBTAIN ALL NECESSARY PERMITS AND BY SITE EXPLORATION IF NECESSARY FOR THE LOCATION OF ANY EXISTING SERVICES WHICH MAY EFFECT THE WORKS. IF SERVICES ARE FOUND TO EXIST, THEN THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT AND OBTAIN INSTRUCTIONS PRIOR TO PROCEEDING.

GN18. ALL PROPRIETARY PRODUCTS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

GN19. ALL REQUIRED TESTS TO COMPLETE THE WORKS SHALL BE AT THE CONTRACTORS EXPENSE.

GN20. THE WORD 'ENGINEER' USED IN THESE NOTES REFERS TO AN EMPLOYEE OR NOMINATED REPRESENTATIVE OF CRESCO AUSTRALIA PTY LIMITED.

GN21. THE CONTRACTOR SHALL ENGAGE A REGISTERED BUILDING PRACTITIONER TO CARRY OUT ALL SITE INSPECTIONS AND TO SUBMIT REPORTS TO THE CONTRACTOR AND PRINCIPAL FOR RECORD. THE BUILDING PRACTITIONER SHALL BE A PRACTICING STRUCTURAL ENGINEER / CIVIL ENGINEER WHO IS NOT INVOLVED WITH DAY TO DAY RUNNING OF THE PROJECT, WHO CAN DEMONSTRATE KNOWLEDGE AND EXPERIENCE IN BUILDINGS OF SIMILAR TYPE AND SIZE AND WHO HAS BEEN GIVEN WRITTEN APPROVAL TO CARRY OUT THE INSPECTIONS BY THE SUPERINTENDENT. ALL FOUNDATIONS, PRE-SLAB, CONCRETE REINFORCEMENT, STRUCTURAL STEELWORK, TIMBER, OR METAL FRAMING ARE TO BE INSPECTED FOR COMPLIANCE WITH STRUCTURAL DOCUMENTS. ADDITIONAL SPOT CHECKS OF MASONRY TIES AND MORTAR JOINTS BY THE REGISTERED BUILDING PRACTITIONER TO BE INCLUDED.

FOUNDATIONS - GENERAL NOTES

FG1. FILL CONSTRUCTION PROCEDURES:

NEW FILL SHOULD BE PLACED IN GENERAL ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN AS3798-1996, "GUIDELINES FOR EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS". TOPSOIL, ROOT AFFECTED AND ANY ORGANIC RICH SOILS SHOULD NOT BE USED FOR NEW ENGINEERED FILLING. THE FILL MATERIALS SOURCED OUTSIDE THE SITE SHOULD BE ASSESSED FOR ITS SUITABILITY BEFORE PLACEMENT AND APPROVED BY THE CONTRACTORS GEOTECHNICAL ENGINEER.

FG2. THE FOLLOWING PROCEDURES ARE RECOMMENDED AS A GUIDE FOR SITE PREPARATION AND PLACEMENT OF NEW FILL:

A. EXCAVATE AND REMOVE TOPSOIL, EXISTING FILL, VEGETATION, ROOT AFFECTED OR OTHER POTENTIALLY DELETERIOUS MATERIAL AND EXCAVATE TO AT LEAST ONE METER BEYOND THE FOOTPRINT OF THE BUILDING PLATFORM.
B. THE EXPOSED NATURAL SOILS SHOULD THEN BE SCARIFIED TO A DEPTH OF 150 mm, MOISTURE CONDITIONED TO WITHIN 1% DRY AND 2% WET OF STANDARD OPTIMUM MOISTURE CONTENT (SOMC) AND THEN RECOMPACTED UP TO 125 mm BELOW UNDERSIDE CONCRETE SLAB FORMATION TO A MINIMUM DRY DENSITY RATIO OF 98% STANDARD IN ACCORDANCE WITH AS1289 CLAUSE 5.1.1, 5.4.1 OR 5.7.1 FOR ALL AREAS.
C. PROOF ROLLING SHALL IDENTIFY ANY SOFT OR WEAK AREAS DURING THE COMPACTION PROCESS. ANY AREAS THAT DO NOT RESPOND TO FURTHER COMPACTION SHOULD BE REMOVED AND REPLACED WITH SUITABLE SITE MATERIALS IN LAYERS NOT EXCEEDING 200 mm LOOSE THICKNESS AND SHOULD BE COMPACTED TO THE ABOVE CRITERIA.
D. SUBSEQUENT LAYERS OF FILL SHOULD BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 200 mm LOOSE THICKNESS, MOISTURE CONDITIONED AND COMPACTED TO THE ABOVE CRITERIA, OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
E. THE FINAL SURFACE SHALL THEN BE COVERED WITH A GRANULAR SUB BASE LAYER MINIMUM 100 mm THICK TO PREVENT DRYING OUT PRIOR TO CONSTRUCTION OF SLAB AND PROVIDE AN ADEQUATE WORKING PLATFORM. THE GRANULAR SUB BASE SHALL BE OF DG20 OR DB40 MATERIAL AND COMPACTED TO 100% SMDD. AN ADDITIONAL BLINDING LAYER OF 25 mm MINIMUM SHALL BE LAID IN SAND OR CONCRETE TO PROTECT ANY WATERPROOF MEMBRANES.
F. THE TOP 150 mm OF NATURAL SUB GRADE BELOW PAVEMENTS OR AT THE TOP 250 mm THICKNESS OF SUBGRADE FILL SHOULD BE COMPACTED TO A MINIMUM DENSITY RATIO OF 100% STANDARD COMPACTION OR EQUIVALENT WITHIN THE ABOVE STATED MOISTURE RANGE, OR AS APPROVED BY GEOTECHNICAL ENGINEERS.

ALL FILL MATERIAL SHALL BE TESTED BY A NATA REGISTERED LABORATORY TO ENSURE WITH THE ABOVE REQUIREMENTS TO THE SATISFACTION OF A GEOTECHNICAL ENGINEER APPOINTED BY THE CONTRACTOR. AT LEAST 3 TESTS TO BE CARRIED OUT PER LAYER. EARTHWORKS SHOULD BE CARRIED OUT DURING DRY WEATHER CONDITIONS. PROVISION SHOULD BE MADE FOR EFFECTIVE DIVERSION OF SURFACE WATER FROM OUTSIDE THE SITE.

FG3. FOUNDATION MATERIAL SHALL BE APPROVED FOR ALLOWABLE BEARING INTENSITY BY A REGISTERED BUILDING PRACTITIONER BEFORE PLACING MEMBRANE, REINFORCEMENT OR CONCRETE. NOTIFY THE ENGINEER IF CONDITIONS OTHER THAN THOSE DESCRIBED IN THE SOIL REPORT ARE ENCOUNTERED.

FG4. ALL FOUNDATIONS ARE TO BE FREE OF WATER AND LOOSE MATERIAL AT THE TIME OF POURING CONCRETE.

FG5. ALL FOOTINGS SHALL BE CENTRALLY LOCATED UNDER WALLS AND COLUMNS U.N.O.

FG6. THE ENGINEER SHALL BE ADVISED IMMEDIATELY IF ANY UNEXPECTED GROUND WATER IS ENCOUNTERED ON-SITE SO THAT A DECISION CAN BE MADE AS TO WHETHER LOCAL DEWATERING IS REQUIRED.

FOUNDATIONS - RESIDENTIAL NOTES (AS2870-2011 CLAUSE 6.4)

FR1. CLAUSE 6.4.2 FILLING USED IN THE CONSTRUCTION OF A SLAB, EXCEPT WHERE THE SLAB IS SUSPENDED, SHALL CONSIST OF CONTROLLED FILL OR ROLLED FILL AS FOLLOWS:

A. CONTROLLED FILL IS MATERIAL THAT HAS BEEN PLACED AND COMPACTED IN LAYERS BY COMPACTION EQUIPMENT WITHIN A DEFINED MOISTURE RANGE TO A DEFINED DENSITY REQUIREMENT. EXCEPT AS PROVIDED BELOW, CONTROLLED FILL SHALL BE PLACED IN ACCORDANCE WITH AS3798.

- SAND FILL UP TO 800 mm DEEP, WELL COMPACTED IN NOT MORE THAN 300 mm THICK LAYERS BY A VIBRATING PLATE OR VIBRATING ROLLER, SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT. A SATISFACTORY TEST FOR SAND FILL NOT CONTAINING GRAVEL SIZED MATERIAL IS THE ACHIEVEMENT OF A BLOW COUNT 0F 7 OR MORE PER 300 mm USING THE PENETROMETER TEST DESCRIBED IN AS1289.6.3.3.
- NON-SAND FILL UP TO 400 mm DEEP, WELL COMPACTED IN NOT MORE THAN 150 mm LAYERS BY A MECHANICAL ROLLER, SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT. CLAY FILL SHALL BE MOIST DURING COMPACTION.

B. ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 600 mm COMPACTED IN LAYERS NOT MORE THAN 300 mm THICK FOR SAND MATERIAL OR 300 mm COMPACTED IN LAYERS NOT MORE THAN 150 mm FOR OTHER MATERIAL.

NOTE: THE DEPTH OF FILL GIVEN IN THIS CLAUSE ARE THE DEPTHS MEASURED AFTER COMPACTION.

FR2. CLAUSE 6.4.3 FOUNDATIONS FOR SLABS:

A. TOP SOIL CONTAINING GRASS ROOTS OR OTHER ORGANIC MATERIAL SHALL BE REMOVED FROM THE AREA ON WHICH THE SLAB IS TO BE REST.

B. ON SITES SUBJECT TO WIND OR WATER EROSION, THE FOUNDATION OF THE EDGE BEAM OR FOOTING SHALL BE PROTECTED.

C. THE SLAB, INCLUDING EDGE AND INTERNAL BEAMS, SHALL BE FOUNDED AS FOLLOWS:

- SLAB PANELS, EDGE BEAMS, INTERNAL BEAMS AND LOAD SUPPORT THICKENINGS ARE TO BE SUPPORTED ON NATURAL SOIL WITH AN ALLOWABLE BEARING PRESSURE NOT LESS THAN 50 kPa.
- SLAB PANELS, INTERNAL BEAMS AND LOAD SUPPORT THICKENINGS ARE TO BE SUPPORTED ON CONTROLLED OR ROLLED FILL COMPACTED IN ACCORDANCE WITH CLAUSE 6.4.2
- EDGE BEAMS SHALL NOT BE FOUNDED ON ROLLED FILL. EDGE BEAMS MAY BE FOUNDED ON CONTROLLED FILL COMPACTED IN ACCORDANCE WITH CLAUSE 6.4.2(a). THIS FILL SHALL CONTINUE PAST THE EDGE OF THE BUILDING BY AT LEAST 1 m AND SHALL BE RETAINED OR BATTERED BEYOND THIS POINT BY A SLOPE NOT STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL.
- EDGE FOOTINGS NOT TIED TO A FOOTING SLAB SHALL BE FOUNDED IN NATURAL SOIL WITH AN ALLOWABLE BEARING PRESSURE OF 100 kPa OR MAY BE FOUNDED ON CONTROLLED SAND FILL ON A CLASS A OR S SITE.

D. THE BASE OF THE EDGE BEAMS AND FOOTINGS MAY BE STEPPED OR SLOPED NOT MORE THAN 1 IN 10 AS SHOWN BELOW.
E. A BLINDING LAYER OF SAND IS NOT REQUIRED BUT WHERE USED SHALL COMPLY WITH CLAUSE 6.4.2 IF DEEPER THAN 100 mm.

PILING NOTES:

PN1. ALL PILES/BORED PIERS SHALL BE INSTALLED IN ACCORDANCE WITH AS2159, 'PILING - DESIGN AND INSTALLATION'.

PN2. IF THE POSITION OF ANY PILE/BORED PIER REQUIRES ALTERATION, CRESCO AUSTRALIA MUST BE CONSULTED PRIOR TO COMMENCEMENT OF FUTURE WORK.

BULK EXCAVATION NOTES:

BE 1. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM APPROPRIATE AUTHORITIES FOR DISCONTINUANCE OF SERVICES IF IT IS REQUIRED. COST OF CUTTING, SEALING AND RECONNECTION IS TO BE BORN BY THE CONTRACTOR. THE CONTRACTOR MUST PROVIDE ADEQUATE PROTECTION FOR ALL SERVICE ON-SITE.

BE 2. EXCESS EXCAVATION TO BE BACKFILLED WITH 4% CEMENT STABILIZED SAND OR WITH ENGINEERED BACKFILL IF APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER AND AT THE CONTRACTOR'S COST.

BE 3. THE CONTRACTOR MUST TAKE ALL NECESSARY MEASURES TO PREVENT ANY MOVEMENT OF THE STRUCTURES ON SURROUNDING PROPERTIES INCLUDING, BUT NOT LIMITED TO, BUILDINGS, ROADS, PAVEMENTS, FENCES, RETAINING STRUCTURES ETC. THIS INCLUDES OBTAINING ALL NECESSARY APPROVALS FOR SHORING AND ANCHOR SYSTEMS.

BE 4. WHERE ROCK BLASTING IS PERMITTED BY THE ENGINEER AND APPROPRIATE AUTHORITY, IT SHALL BE DONE BY EXPERIENCED PERSONNEL STRICTLY ADHERING TO THE REQUIREMENTS OF RELEVANT AUTHORITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MEASURES NECESSARY FOR THE PROTECTION OF SURROUNDING PROPERTIES AND FOR PUBLIC SAFETY.

BE 5. ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM SITE. THE EXCAVATED MATERIAL CAN BE USED ON-SITE FOR BACKFILLING OR LEVELLING ONLY IF APPROVED BY THE ENGINEER.

BE 6. THE CONTRACTOR MUST ENSURE THAT NO WATER REMAINS IN THE EXCAVATION AT ANY TIME. NECESSARY PUMPS, SUMPS, TEMPORARY DRAINS ETC., REQUIRED FOR DEWATERING OF THE SITE ARE TO BE PROVIDED BY THE CONTRACTOR.

BE 7. EXCAVATION NEAR EXISTING FOOTINGS SHALL NOT EXTEND BELOW FOUNDATION LEVEL WITHOUT THE ENGINEER'S APPROVAL. ANY SUCH POTENTIAL UNDERMINING CONDITIONS MUST BE REFERRED TO THE ENGINEER FOR RESOLUTION.

BE 8. FOUNDATIONS ADJACENT TO SERVICES, EXCAVATIONS OR BATTER, ETC., SHALL BE EXTENDED DOWN SUCH THAT THE INFLUENCE LINE OF THE FOUNDATION IS BELOW THE ADJACENT SERVICE AS SHOWN IN THE DETAILS.

BE 9. FOOTINGS SHALL BE CONSTRUCTED AND BACKFILLED AS SOON AS POSSIBLE FOLLOWING EXCAVATION TO AVOID SOFTENING OR DRYING OUT BY EXPOSURE.

BE 10. WHERE EXCAVATED SURFACES THAT ARE REQUIRED TO SUPPORT FOOTINGS BECOME SOFTENED OR LOOSENED DUE TO ADVERSE WEATHER, GROUND SEEPAGE, OR OTHER CAUSES, ALL SOFT OR LOOSE MATERIAL SHALL BE REMOVED DOWN TO ACCEPTABLE BEARING MATERIAL AND BE REPLACED IMMEDIATELY WITH A LAYER OF CONCRETE BLINDING.

BE 11. BULK EXCAVATION BATTERS AROUND THE PERIMETER OF THE EXCAVATION , U.N.O. ON DRAWINGS, SHALL BE AS PER SKETCH BELOW.

BE 12. GEOTECHNICAL ENGINEER TO INSPECT BATTERS AND ADJUST SLOPES AS NECESSARY DURING CONSTRUCTION TO ENSURE ADEQUATE STABILITY OF BATTERS.

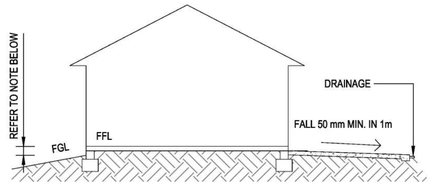
BE 13. ADEQUATE DRAINAGE SHALL BE PROVIDED TO PREVENT WATER PONDING OR COLLECTING ADJACENT TO THE WORKS.

BE 14. TRENCHES UNDER OR ADJACENT TO THE WORKS SHALL BE BACKFILLED WITH COMPACTED CLAY OR CONCRETE.

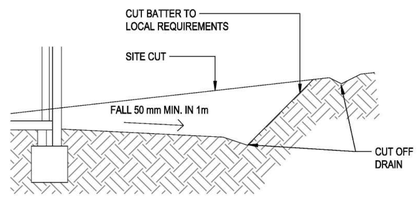
BE 15. TRENCHES PARALLEL TO THE EDGE OF A STRUCTURE SHALL BE OFFSET A DISTANCE AT LEAST EQUAL TO THE DEPTH OF THE TRENCH EXCAVATION.

GENERAL DETAILING REQUIREMENTS

SURFACE WATER DRAINAGE
BCA - CLAUSE 3.1.2.3 (b)
AS2870 - CLAUSE 5.2.2



SURFACE WATER DRAINAGE
BCA - CLAUSE 3.1.2.3 (a)
AS2870 - CLAUSE 5.2.1

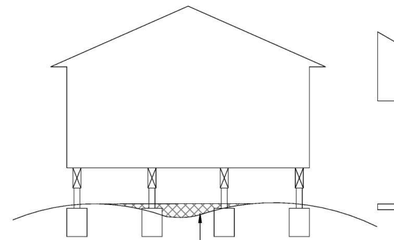


FFL TO FGL NOTE:

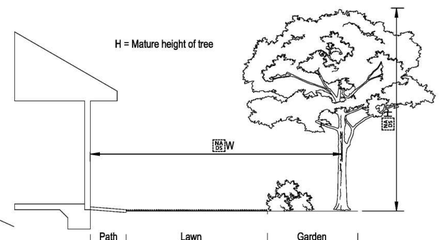
THE HEIGHT OF THE F.F.L ABOVE F.G.L MUST NOT BE LESS THAN:
A. 150 mm ABOVE F.G.L; OR
B. 100 mm ABOVE SANDY, WELL DRAINED AREAS; OR
C. 50 mm ABOVE PAVED OR CONCRETED AREAS THAT SLOPE 50 mm MINIMUM IN ONE METER AWAY FROM BUILDING.

CONSIDERATION TO BE GIVEN TO THE REQUIREMENTS OF:
A. AS3500.2 - MINIMUM OF 150 mm FROM THE TOP OF THE OVERFLOW GULLY RISER TO THE LOWEST PLUMBING FIXTURE CONNECTED TO THE DRAIN;
B. AS3700 - MINIMUM HEIGHT FROM F.G.L ETC TO DAMP PROOF COURSING LEVEL;
C. AS3660.1 - MINIMUM HEIGHT FROM F.G.L. OR PAVING TO SOME TERMITE BARRIERS.

SURFACE WATER DRAINAGE
BCA - CLAUSE 3.1.2.3 (c)



SUGGESTED GARDEN PLAN
CSIRO - BTF # 18

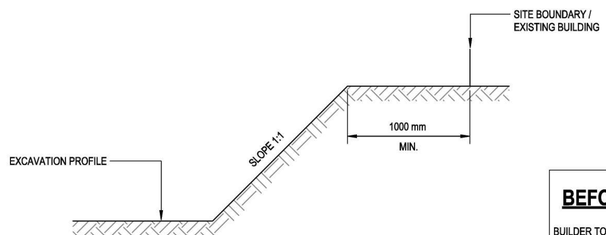


SITE CLASS	W
A,S	0.75 x H
M	1.00 x H
H	1.50 x H

FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE

FM &PN 1. THE OWNER'S ATTENTION IS DRAWN TO APPENDIX B OF AS 2870 PERFORMANCE CRITERIA AND FOUNDATION MAINTENANCE AND CSIRO INFORMATION SHEET NO.BTF 18(2011) - GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE.

FM &PN 2. ATTENTION IS DRAWN IN PARTICULAR TO THE EXISTENCE OF TREES ON CLAY SITES AND PROVISION OF SURFACE DRAINAGE.



BEFORE YOU DIG

BEFORE YOU DIG www.byda.com.au

BUILDER TO DETERMINE THE EXACT LOCATIONS OF EXISTING SERVICES PRIOR TO THE START OF ANY CONSTRUCTION WORK. BUILDER TO CONTACT 'DIAL BEFORE YOU DIG' AND THE AUTHORITIES CONCERNED TO CONFIRM THE ACTUAL LOCATIONS OF EXISTING SERVICES. IN THE EVENT THAT ANY OF THE SERVICES MIGHT BE AFFECTED BY STRUCTURAL WORK, STRUCTURAL ENGINEER IS TO BE NOTIFIED AND CONSULTED IMMEDIATELY TO REVIEW THE STRUCTURAL DETAILS AFFECTING THE SERVICES.

CRESCO AUSTRALIA
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RPE NSW (Mech & Struct):.....PRE0002298
RPE VIC (Mec & Struct):.....PE0010096
RPE QLD (Mech & Struct):.....28994
RPE TAS (Mech & Strcut):.....708732979

REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
A	ISSUED FOR CLIENT REVIEW	23/01/25	AF	RQ	SJL

IMPORTANT NOTES:
- DO NOT SCALE FROM THE DRAWINGS.
- ALL MEASUREMENTS ARE IN MILLIMETRES U.N.O.
- ALL LEVELS ARE IN METERS U.N.O.
- FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
- CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONSTRUCTION METHODOLOGY ON SITE AND SEEK INSTRUCTIONS BEFORE PROCEEDING IF ANY DISCREPANCIES ARE FOUND
- CONTACT CRESCO AUSTRALIA EVER IN DOUBT REGARDING DRAWING AND/OR SPECIFICATIONS.

CLIENT INFO
[redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO
TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO
NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME
GENERAL NOTES - SHEET 1

SHEET NUMBER S02
REVISION A
PROJECT NUMBER 2500037
SCALE
FORMAT A1

CONCRETE NOTES:

CN1. ALL CONCRETE, WORKMANSHIP AND MATERIALS SHALL BE FROM AN APPROVED SOURCE AND IN ACCORDANCE WITH THE FOLLOWING STANDARDS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS:
- AS3600 CONCRETE STRUCTURES
- AS4671 STEEL REINFORCING MATERIALS
- AS3972 PORTLAND CEMENT
- AS1379 READY-MIXED CONCRETE
- AS2758.1 CONCRETE AGGREGATE

THE CONCRETE SHALL BE SUBJECT TO PRODUCT ASSESSMENT FOR COMPLIANCE.

CN2. U.N.O. IN SPECIFICATIONS, CONCRETE QUALITY SHOULD BE AS BELOW;

ELEMENT	SLUMP	MAX. AGG.	CEMENT TYPE	ADMIX	CONCRETE GRADE
MASS CONCRETE FOOTING / PIERS	80	20	GP	NIL	U.N.O. 25 MPa
REINFORCED FOOTING / PIERS	80	20	GP	NIL	U.N.O. 32 MPa
EXTERNAL SLAB ON GROUND	80	20	GP	NIL	U.N.O. 32 MPa
INTERNAL SLAB ON GROUND	80	20	GP	NIL	U.N.O. 32 MPa
EXTERNAL SUSPENDED SLAB / BEAMS	80	20	GP	NIL	U.N.O. 32 MPa
INTERNAL SUSPENDED SLAB / BEAMS	80	20	GP	NIL	U.N.O. 32 MPa
IN-SITU COLUMNS	120	10	GP	NIL	U.N.O. 32 MPa
IN-SITU WALLS	120	10	GP	NIL	U.N.O. 32 MPa

** FOR AFS, DINCEL AND RITEK WALLS REFER TO SUPPLIER'S SPECIFICATIONS.

CN3. U.N.O. ALL CEMENT SHALL BE "GP" GENERAL PURPOSE OR "GB" GENERAL PURPOSE BLENDED CEMENT OR "SR" SULPHATE RESISTANT CEMENT, AS REQUIRED.
CN4. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING. FLY ASH AND SILICA FUME CAN BE USED ONLY IN QUANTITIES ALLOWED BY "GB" CEMENT DESIGN CONCRETE MIX.
CN5. CONCRETE SIZES SHOWN DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
CN6. DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
CN7. FOR CHAMFERS, DRIP GROOVES, REGLETS ETC., REFER TO ARCHITECTURAL DETAILS. MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.
CN8. NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
CN9. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS (HONEY COMBING).
CN10. ALL CONCRETE, INCLUDING SLABS ON-GROUND AND FOOTINGS, SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
CN11. U.N.O., MINIMUM COVER (mm) SHALL BE AS TABULATED BELOW :

AS3600 TABLE 4.3 EXPOSURE CLASSIFICATION

SURFACE & EXPOSURE ENVIRONMENT	REINFORCED OR PRESTRESSED CONCRETE MEMBERS
1. SURFACE OF MEMBERS IN CONTACT WITH THE GROUND	
A. MEMBERS PROTECTED BY A DAMP-PROOF MEMBRANE.	A1
B. RESIDENTIAL FOOTINGS IN NON-AGGRESSIVE SOILS .	A1
C. OTHER MEMBERS IN NON-AGGRESSIVE SOILS.	A2
D. MEMBERS IN AGGRESSIVE SOILS (PERMEABLE SOILS WITH A PH<4.0, OR WITH GROUND WATER CONTAINING MORE THAN 1G PER LITRE OF SULPHATE IONS, WOULD BE CONSIDERED AGGRESSIVE).	REFER TO ENGINEER
2. SURFACE OF MEMBERS IN INTERIOR ENVIRONMENTS	
A. FULLY ENCLOSED WITHIN A BUILDING EXCEPT FOR A BRIEF PERIOD OF WEATHER EXPOSURE DURING CONSTRUCTION.	A1
B. IN INDUSTRIAL BUILDINGS, THE MEMBER BEING SUBJECT TO REPEATED WETTING & DRYING .	B1
3. SURFACE OF MEMBERS IN ABOVE-GROUND EXTERIOR ENVIRONMENT, IN AREAS THAT ARE:	
A. INLAND (>50 KM FROM COASTLINE) ENVIRONMENT BEING -	
• NON-INDUSTRIAL AND ARID CLIMATIC ZONE	A1
• NON-INDUSTRIAL AND TEMPERATE CLIMATIC ZONE	A2
• NON-INDUSTRIAL AND TROPICAL CLIMATIC ZONE	B1
• INDUSTRIAL AND ANY CLIMATIC ZONE	B1
B. NEAR COASTAL (1 KM TO 50 KM FROM COASTLINE) ANY CLIMATIC ZONE.	B1
C. COASTAL (UP TO 1KM FROM COASTLINE BUT EXCLUDING TIDAL AND SPLASH ZONE) ANY CLIMATIC ZONE.	B2
4. SURFACE OF MEMBERS IN WATER	
A. IN FRESH WATER	B1
B. IN SEA WATER -	
• PERMANENTLY SUBMERGED	B2
• IN TIDAL OR SPLASH ZONES	REFER TO ENGINEER
C. IN SOFT OR RUNNING WATER	REFER TO ENGINEER
5. SURFACE OF MEMBERS IN OTHER ENVIRONMENTS ANY EXPOSURE ENVIRONMENT NOT OTHERWISE DESCRIBED IN ITEMS 1 TO 4	REFER TO ENGINEER

AS3600 TABLE 4.10.3.2 REQUIRED COVER (mm) WHERE STANDARD FORMWORK AND COMPACTION ARE USED

EXPOSURE CLASSIFICATION	CHARACTERISTIC STRENGTH f'c							
	CAST AGAINST DAMP-PROOF MEMBRANE				CAST AGAINST GROUND			
	20 MPa	25 MPa	32 MPa	40 MPa	20 MPa	25 MPa	32 MPa	40 MPa
A1	30	30	30	40	40	40	40	40
A2	-	40	35	-	-	50	45	40
B1	-	-	50	-	-	-	60	50
B2	-	-	-	-	-	-	-	65

CONCRETE NOTES (CONTINUED):

CN11. (CONTINUED):
NOTE:

A. COVER IS THE CLEAR DISTANCE BETWEEN ANY REINFORCING (INCLUDING FITMENTS) AND THE FACE OF THE STRUCTURAL ELEMENT.
B. COVER REQUIREMENTS MAY NEED TO BE INCREASED TO SUIT FIRE RATING REQUIREMENTS.
C. FOR ALL EXTERNAL SURFACES PROVIDE FULLY PLASTIC BAR CHAIRS. TIE WIRE SHALL NOT BE NAILED TO THE FORMS REINFORCING BARS SHALL NOT BE USED TO KEEP FORMS APART AND THROUGH TIE STEEL SYSTEM SHALL BE USED TO TIE THE FORMS.
D. PROVIDE AN APPROVED VAPOUR BARRIER FOR SLABS, BEAMS AND THICKENING CAST AGAINST THE GROUND. IN ACCORDANCE TO AS2870 CLAUSE 5.3.3 FOR RESIDENTIAL SLABS, 0.2 mm THICK POLYETHYLENE FILM SHALL BE USED, AND SHALL BE BRANDED CONTINUOUSLY TOGETHER WITH MANUFACTURER'S OR DISTRIBUTOR'S NAME, TRADEMARK OR CODE AND COMPLY IN ACCORDANCE TO THE FOLLOWING:
- VAPOUR BARRIER - MEDIUM IMPACT RESISTANCE.
- DAMP PROOFING - HIGH IMPACT RESISTANCE; THE MEMBRANE SHALL EXTEND UNDER THE EDGE BEAM TO GROUND LEVEL. LAPPING AT JOINTS SHALL NOT BE LESS THAN 200 mm FOR CONTINUITY.

E. IF WEEP HOLES ARE USED, THEY SHALL BE SPACED AT NOT MORE THAN 1200 mm APART AND BE LOCATED ABOVE THE F.G.L. ANY PORTION OF THE DEEPENED REBATE THAT CANNOT BE DRAINED SHALL BE MORTAR FILLED.
F. THE COVERS SHALL BE MAINTAINED USING APPROVED BAR CHAIRS. IN SLABS, BAR CHAIRS SHALL BE AT 1000 x 1000 mm MAXIMUM CENTRES. BARS CHAIRS SHALL BE PROVIDED ALONG THE EDGES OF ALL CONSTRUCTION JOINTS.

CN12. THE CONTRACTOR SHALL ALLOW FOR ALL NECESSARY CONSTRUCTION JOINTS. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR SPECIFICALLY APPROVED BY THE ENGINEER.
CN13. MAXIMUM ALLOWED FREE DROP OF CONCRETE DURING PLACING IS 1000 mm.
CN14. CONDUITS, PIPES ETC., WHEN CAST IN SLABS & WALLS ARE TO BE PLACED AT MIDDLE THIRD OF THICKNESS OF MEMBERS AND SPACED AT NOT LESS THAN 3 TIMES DIAMETER. THE CONDUITS, PIPES ETC. SHALL BE BETWEEN TWO REINFORCEMENT LAYERS AS SHOWN BELOW. WHERE THERE IS ONLY ONE LAYER OF REINFORCEMENT, PROVIDE 50 mm COVER TO THE CONDUIT.
CN15. CURING OF CONCRETE SHALL COMMENCE NO LATER THAN 2 HOURS AFTER FINISHING OPERATIONS HAVE BEEN COMPLETED. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 3 DAYS, AND PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 7 DAYS FOLLOWED BY GRADUAL DRYING OUT. CURING MAY BE PERFORMED BY ONE OF THE FOLLOWING METHOD:
- PONDING OR CONTINUOUS SPRINKLING OF WATER;
- USE OF ABSORPTIVE COVER KEPT CONTINUOUSLY WET;
- COATING WITH AN APPROVED SPRAYED MEMBRANE CURING COMPOUND COMPATIBLE WITH FINISHES;
- USE OF AN APPROVED MOISTURE RETAINING COVERING SUCH AS POLYTHENE OR WET HESSIAN, WHICH SHALL BE PROTECTED FROM WIND, TRAFFIC ETC., AND REMAIN UNDAMAGED DURING THE CURING PERIOD.

CN16. MINIMUM STRIPPING TIMES FOR FORMWORK SHALL BE RECOMMENDED IN ACSE CONCRETE SPECIFICATION OR AS DIRECTED BY THE ENGINEER.
CN17. THE ENGINEER SHALL BE GIVEN 24 HOURS NOTICE FOR WITHIN TOWN PROJECTS AND 3 DAYS NOTICE FOR OUT OF TOWN PROJECTS FOR REINFORCEMENT INSPECTION AND CONCRETE SHALL NOT BE DELIVERED UNTIL FINAL APPROVAL OBTAINED.

SALT AFFECTED AREAS NOTES

SAN1. MINIMUM REQUIREMENTS IN SALT AFFECTED AREAS:
- 25 MPa CONCRETE (W/C = 0.45)
- 50 mm COVER
- MECHANICAL VIBRATION
- 0.2 mm HIGH IMPACT RESISTANT DAMP-PROOFING MEMBRANE
- TYPE SR CEMENT
- DAMP CURE FOR 3 DAYS

TERMITE AND DAMP PROOFING NOTES

TDN1. TERMITE PROTECTION NEEDS TO BE IN ACCORDANCE WITH NCC REQUIREMENTS AND AS3660 PROTECTION OF BUILDINGS FROM SUBTERRANEAN TERMITES.
TDN2. DAMP PROOFING TO BE IN ACCORDANCE WITH NCC REQUIREMENTS.

CORROSION PROTECTION NOTES

CP 1. STRUCTURAL STEELWORK NOT ENCASED IN CONCRETE SHALL HAVE THE FOLLOWING CORROSION PROTECTION.

BOLTS, NUTS, WASHERS & H.D. BOLTS.
-HOT DIP GALV. TO AS/NZS4680
ALL STEELWORK U.N.O.
-REMOVE ALL FABRICATION DEFECTS INCLUDING BUT NOT LIMITED TO; SHARP EDGES AND CORRECTION OF WELDING DEFECTS SUCH AS SPATTER AND ROUGH WELD BEADS. CLEANING SURFACE AS PER AS1627.1
TO BE HOT DIP GALVANIZED TO AS4680

CP 2. ALL GALVANISING OF STRUCTURAL STEELWORK SHALL BE TO AS4680. ANY DAMAGE TO GALVANISING TO BE REPAIRED WITH ZINC ALLOY STICK AS PER AS2312. THE CONTINUOUS AVERAGE ZINC COATING MASS SHALL BE 600 g/m² (550 g/m² MINIMUM). ALL PAINTING IS TO BE APPLIED OFF SITE USING METHODS RECOMMENDED BY PAINT MANUFACTURER.

CP 3. WHERE ONSITE WELDS ARE REQUIRED, ZINC RICH PRIMER TO BE APPLIED TO MANUFACTURERS SPECIFICATIONS.

STRUCTURAL STEEL NOTES:

SSN1. ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH AS4100 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS. FABRICATION SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 14 OF AS4100. ERECTION SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 15 OF AS4100.
SSN2. UNLESS NOTED OTHERWISE, ALL STEEL SHALL BE OF THE FOLLOWING GRADE IN ACCORDANCE WITH THE FOLLOWING AUSTRALIAN STANDARDS:
- (G300) - UNIVERSAL BEAMS & COLUMNS, PARALLEL FLANGE CHANNELS & ANGLES TO AS/NZS3679.1
- (G300) - WELDED SECTIONS TO AS/NZS3679.2
- (G250) - HOT ROLLED PLATES, FLOOR PLATES AND SLABS TO AS/NZS3678
- (C350) - HOLLOW SECTIONS TO AS1163
- (G450)/(Z350) - COLD FORMED PURLINS & GIRTS TO AS1397

SSN3. THE FABRICATOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING OTHER ELEMENTS SHOWN ON ANY OTHER CONSULTANTS DRAWINGS TO THE STEEL WHETHER OR NOT DETAILED ON THE STRUCTURAL DRAWINGS.
SSN4. THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL BE SUPERVISED BY A QUALIFIED PERSON EXPERIENCED IN SUCH SUPERVISION, IN ORDER TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET.
SSN5. ALL MEMBERS SHALL BE SUPPLIED IN SINGLE LENGTHS. SPLICES SHALL ONLY BE PERMITTED IN LOCATIONS SHOWN ON THESE STRUCTURAL DRAWINGS.
SSN6. ALL STEELWORK SHALL BE SECURELY TEMPORARILY BRACED BY THE ERECTOR AS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.
SSN7. GROUT STRUCTURAL STEEL COLUMNS WITH AN APPROVED NON-SHRINK GROUT IN ACCORDANCE WITH AS4100.
SSN8. BOLTING CATEGORIES ARE IDENTIFIED ON THESE STRUCTURAL DRAWINGS IN THE FOLLOWING MANNER.
- (4.6/S) - COMMERCIAL BOLTS OF GRADE 4.6 TO AS1111 SNUG TIGHTENED
- (8.8/S) - HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 SNUG TIGHTENED
- (8.8/TB) - HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 TENSION BOLTED

SSN9. ALL BOLTS SHALL BE M20 CATEGORY 8.8/TB U.N.O. NO CONNECTION SHALL HAVE LESS THAN 2 BOLTS. ALL BOLTS AND WASHERS SHALL BE GALVANISED U.N.O. ALL HOLES SHALL BE 2 mm LARGER THAN THE BOLT DIAMETER U.N.O.
SSN10. REFER TO CORROSION PROTECTION NOTES FOR SURFACE TREATMENT.
SSN11. ALL WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS1554.1. ELECTRODES SHALL BE TO EITHER AS1553, AS1858, AS2203 OR AS2717, AS APPROPRIATE.
SSN12. U.N.O., ALL FILLET WELDS SHALL BE 6 mm CONTINUOUS CATEGORY GP USING E41XX ELECTRODES OR EQUIVALENT U.N.O. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION BUTT WELDS CATEGORY GP TO AS1554.1. THE EXTENT OF NON-DESTRUCTIVE WELD EXAMINATION SHALL BE AS NOTED BELOW.
- FILLET WELDS GP,SP - VISUAL INSPECTION - 100% OF TOTAL LENGTH GF WELD
- BUTT WELDS GP - VISUAL INSPECTION - 100% OF TOTAL LENGTH GF WELD
- BUTT WELDS SP - VISUAL INSPECTION - 100% OF TOTAL LENGTH GF WELD
- BUTT WELDS SP - RADIOGRAPHIC OR ULTRASONIC - 10% OF TOTAL LENGTH GF WELD

REINFORCEMENT NOTES:

RN1. REINFORCEMENT SYMBOLS AND NOTATIONS:

REINFORCEMENT NOTATION

SYMBOL	BAR TYPE	STRENGTH GRADE (MPa)	DUCTILITY CLASS	TO COMPLY WITH AUSTRALIAN STANDARD
S	STRUCTURAL GRADE DEFORMED RIB BAR	250	NORMAL	AS/NZS4671-2019
N	NOT ROLLED DEFORMED RIB BAR	500	NORMAL	AS/NZS4671-2019
R	PLAIN ROUND BAR	250	NORMAL	AS/NZS4671-2019
RL	RECTANGULAR MESH OF DEFORMED RIB BAR	500	LOW	AS/NZS4671-2019
SL	RECTANGULAR MESH OF DEFORMED RIB BAR	500	LOW	AS/NZS4671-2019
L-TM	TRENCH MESH	500	LOW	AS/NZS4671-2019

ALL REINFORCING BARS SHALL BE GRADE D500N TO AS/NZS 4671-2019 AND ALL MESH SHALL BE GRADE 500L TO AS/NZS 4671-2019. UNLESS NOTED OTHERWISE CLASS L REINFORCEMENT SHALL NOT BE USED.

REINFORCEMENT LABELS:

N12-300
- SPACING (mm)
- BAR DIAMETER (mm)
- TYPE OF REINFORCEMENT

SL72
- BAR SPACING IN MULTIPLES OF 100 mm
- BAR DIAMETER (mm)
- DUCTILITY CLASS
- SQUARE MESH

3N12
- BAR DIAMETER (mm)
- TYPE OF REINFORCEMENT
- NUMBER OF BARS

- L12TM
- MESH TYPE
- BAR DIAMETER (mm)
- DUCTILITY CLASS
- NUMBER OF BARS

REINFORCEMENT ABBREVIATION:

C CENTRAL
EF EACH FACE
EW EACH WAY
T TOP
B OR BTM BOTTOM

BAR SIZE	MINIMUM LAP LENGTH mm
N10	600
N12	700
N16	1000
N20	1200

LENGTHS SHOWN APPLY TO HORIZONTAL BARS WITH MORE THAN 300 mm OF CONCRETE CAST BELOW THE BAR. THE DEVELOPMENT LENGTHS ARE FOR MAIN REINFORCEMENT IN f'c=25 MPa CONCRETE WITH 30 mm CLEAR COVER FOR WALLS AND SLABS AND 30 mm CLEAR COVER TO MIN. R10 FITMENTS FOR COLUMNS AND BEAMS.

RN2. REINFORCEMENT SHOWN ON THE DRAWINGS IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
RN3. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT 1000 x 1000mm MAXIMUM CENTRES. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
RN4. CLEAR COVER TO REINFORCEMENT SHALL BE AS SHOWN IN STRUCTURAL DRAWINGS OR AS SPECIFIED IN CONCRETE NOTES.
RN5. REINFORCEMENT SHALL NOT BE CUT OR BENT ON-SITE UNLESS APPROVED BY THE ENGINEER. THE REINFORCEMENT CAN ONLY BE HEATED IF APPROVED IN WRITING BY THE ENGINEER.
RN6. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
RN7. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITION SHOWN ON THE STRUCTURAL DRAWINGS OR AS OTHERWISE APPROVED BY THE ENGINEER. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.
RN8. AS2870 CLAUSE 5.3.2 (b) FABRIC SHALL BE LAPPED BY ONE FULL PANEL OF MESH SO THAT THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF THE SHEET BEING LAPPED. ALTERNATE METHODS OF LAPPING FABRIC IS AS SHOWN BELOW.
RN9. AS2870 CLAUSE 5.3.2 (c) TRENCH MESH IN BEAMS SHALL BE OVERLAPPED BY THE WIDTH OF THE FABRIC AT T AND L- INTERSECTIONS AS SHOWN BELOW. TRENCH MESH SHALL BE SPLICED, WHERE NECESSARY, BY A LAP OF 500 mm.
RN10. AS2870 CLAUSE 5.3.2 (d) REINFORCING BARS SHALL HAVE A LAP LENGTH AT SPLICES NOT LESS THAN AS SPECIFIED ABOVE IN CONCRETE DETAILS SHEETS. AT T- AND L-INTERSECTIONS, THE BARS SHALL BE CONTINUED ACROSS THE FULL WIDTH OF THE INTERSECTION. AT L-INTERSECTIONS, ONE OUTER BAR SHALL BE BENT AND CONTINUED 500 mm, OR A BENT LAP BAR 500 mm LONG ON EACH LEG SHALL BE PROVIDED.
RN11. REFER TO THE CONCRETE NOTES FOR THE SPECIFIED COVERS TO REINFORCEMENT. COVER MUST BE MAINTAINED AT ALL CHAMFERS, DRIP GROOVES AND REGLETS ETC. UNLESS NOTED OTHERWISE ON THE DRAWINGS.

BIAX SYSTEM CONSTRUCTION NOTES

BCN1. ALL LOOSE SURFACE FILL, ROOTS AND ORGANIC MATERIAL ARE TO BE REMOVED FROM THE BUILDING PLATFORM.
BCN2. PERFORM THE SITE CUT TO REQ'D BENCH LEVEL.
BCN3. FOLLOWING THE SITE CUT, WHERE THE DEPTH OF THE REMAINING FILL IS GREATER THAN 150 mm:
A. REMOVE ALL FILL DOWN TO 150 mm.
B. COMPACT THE REMAINING 150 mm LAYER OF FILL IN ACCORDANCE WITH AS2870-2011 SECTION 6.4.
C. ANY ADDITIONAL REQ'D FILL IS TO CONFIRMED IN ACCORDANCE WITH NOTE 5 (BELOW).
BCN4. WHERE THE DEPTH OF FILL IS LESS THAN 150 mm, THEN THE FILL IS TO BE COMPACTED IN ACCORDANCE WITH NOTE 5.
BCN5. ANY ADDED FILL FORMING PART OF THE CUT/FILL OPERATIONS SHALL BE COMPACTED IN 150 mm MAXIMUM PER LAYER (OR 300 mm MAXIMUM LAYER FOR SAND FILL) AT OPTIMUM MOISTURE CONTENT. THE LAYERS TO BE COMPACTED IN ACCORDANCE WITH AS2870-2011 SECTION 6.4 EXTEND 1000 mm PAST THE WAFFLE EDGE. (SEE APPENDIX A)
BCN6. IF THE FILL ON THE SITE IS NOT COMPACTED AS PER THE ABOVE SPECIFICATIONS, THE OFFICE SHOULD BE CONTACTED FOR FURTHER ADVICE. (EDGE BEAMS TO BE DEEPENED TO NATURAL OR CONTROLLED FILL MAY BE ACCEPTABLE)
BCN7. IF THE EXTERNAL PATHWAY IS NOT TO BE INSTALLED, PLEASE CONTACT CRESCO AUSTRALIA PRIOR TO CONSTRUCTION

BCN8. THIS DESIGN IS BASED ON NEW RESIDENTIAL SLABS AND FOOTINGS CODE AS.2870-2011

BRICKWORK NOTES:

BRN1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS
BRN2. BRICK COMPRESSIVE STRENGTH f'c SHALL BE 20 MPa min. U.N.O.
BRN3. BRICK MORTAR SHALL BE 1 : 1 : 6 PROPORTIONS BY VOLUME OF CEMENT, LIME AND SAND.
BRN4. PROVIDE MOVEMENT JOINTS EVERY 8 m U.N.O. PROVIDE MOVEMENT JOINTS EVERY 4 m IN PARAPET WALLS.
BRN5. NO BRICKWORK WHICH IS SUPPORTED BY THE SLAB SHALL BE ERECTED UNTIL THE FORMWORK HAS BEEN REMOVED.
BRN6. PROVIDE SMOOTH TROWELED MORTAR BED AND TWO LAYERS OF 'ALCOR' ON TOP OF ALL LOAD BEARING WALLS WHERE SLIP JOINTS ARE NOMINATED.

BLOCKWORK NOTES:

BLN 1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS
BLN 2. BLOCK COMPRESSIVE STRENGTH f'c SHALL BE 15 MPa MIN. U.N.O BLOCK GRADE SHOULD BE CLEARLY INDICATED ON THE DELIVERY DOCKET.
BLN 3. MORTAR SHALL CONSIST OF 1 PART CEMENT, 1 PART LIME AND 6 PARTS SAND. MORTAR SHALL COMPLY WITH AS3700.
BLN 4. REINFORCEMENT SHALL BE PLACED AND SECURELY HELD IN THE LOCATIONS INDICATED. RODS SHALL BE TIED TO STARTER BARS IN CLEANOUT BLOCKS. COVER TO VERTICAL REINFORCEMENT SHALL BE 50 mm FROM THE OUTSIDE OF THE BLOCK WHERE DRAWN ADJACENT TO BLOCK FACE.
BLN 5. MORTAR PROTRUDING INTO CORE HOLES SHALL BE REMOVED BY THE BLOCK LAYER AFTER EACH COURSE IS LAID. EVERY CORE FILLED WITH GROUT SHALL HAVE A CLEANOUT BLOCK IN THE BOTTOM COURSE.
BLN 6. PROVIDE MOVEMENT JOINTS EVERY 8 m AND/OR OVER EVERY FLOOR JOINT U.N.O. PROVIDE MOVEMENT JOINTS EVERY 4 m IN PARAPET WALLS.
BLN 7. PROVIDE SMOOTH TROWELED MORTAR BED AND TWO LAYERS OF 'ALCOR' ON TOP OF ALL LOAD BEARING WALLS WHERE SLIP JOINTS ARE NOMINATED.

TIMBER NOTES:

TN 1. AS 1684 IS RELEVANT TO DOMESTIC CONSTRUCTION IN SHELTERED LOCATIONS.
TN 2. SOFTWOOD MINIMUM GRADE F7 U.N.O. HARDWOOD MINIMUM GRADE F11 U.N.O.
TN 3. EXTERNAL TIMBER TO BE EITHER HARDWOOD DURABILITY CLASS I OR II OR IMPREGNATED GRADE F7. PRESSURE TREATED TO AS1684 AND RE-DRILLED PRIOR TO USE. SUPPLEMENTARY TREATMENT SHALL BE APPLIED TO ALL CUT SURFACES. PROVIDE DOCUMENTATION.
TN 4. ALL BOLTS IN TIMBER CONSTRUCTION TO BE MIN. M16 U.N.O. BOLT HOLES TO BE DRILLED EXACT SIZE. WASHERS UNDER HEADS AND NUTS TO BE AT LEAST 2.5 TIMES BOLT DIAMETER.
TN 5. FINISHED TIMBER SIZES.
SEASONED SOFTWOOD +5,-0 mm
UNSEASONED SOFTWOOD F7+3,-3 mm
F7+2,-4 mm
SEASONED HARDWOOD +2,-0 mm
UNSEASONED HARDWOOD -3,-3 mm
(SEE ALSO CLAUSE 1.6.2 IN AS2082)
TN 6. ALL TIMBER JOINTS AND NOTCHES TO BE 100 mm MINIMUM FROM LOOSE KNOTS. SEVERE SLOPING GRAIN, GUM VEINS OR OTHER MINOR DEFECTS. FOR JOISTS SPANNING GREATER THAN 3 m AND LESS THAN 4.2 m PROVIDE ONE ROW OF BLOCKING MID-SPAN. FOR JOISTS SPANNING GREATER THAN 4.2 m AND UP TO 6.0 m PROVIDE TWO ROWS OF BLOCKING AT 1/3 POINTS. FOR DEEP JOISTED FLOORS WHERE A CONTINUOUS TRIMMING JOIST IS NOT PROVIDED AT END OF JOISTS. BLOCKING IS REQUIRED AT 1800 mm MAXIMUM CENTERS. (REFER TO AS1684)
TN 7. BLOCKING IS NOT REQUIRED FOR JOISTS SPANNING LESS THAN 3 m.

LOADING NOTES:

LN 1. SUPERIMPOSED LOADS ARE GENERALLY IN ACCORDANCE WITH AS1170 AND AS NOTED IN THE SPECIFICATIONS.
LN 2. WIND LOADS ARE IN ACCORDANCE WITH AS1170 AND AS NOTED IN THE SPECIFICATIONS.
LN 3. SNOW AND ICE ACTIONS ARE IN ACCORDANCE WITH AS1170 AND AS NOTED IN THE SPECIFICATIONS.
LN 4. EARTHQUAKE LOADS ARE IN ACCORDANCE WITH AS1170 AND AS NOTED IN THE SPECIFICATIONS.
LN 5. IF THERE IS A LOADING PLAN PROVIDED IT TAKES PRECEDENCE IN THE CALCULATIONS.

SITE CLASSIFICATION NOTES:

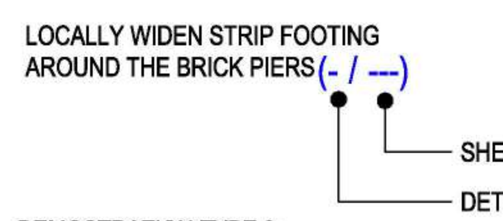
SCN1. THIS DESIGN HAS BEEN BASED UPON INFORMATION PROVIDED TO OUR OFFICE AND/OR GATHERED BY OUR STAFF.
SCN2. THIS DESIGN HAS BEEN PREPARED IN ACCORDANCE WITH AS2870 AND RELEVANT STATE LEGISLATION.
SCN3. SHOULD SOIL CONDITIONS ENCOUNTERED ON SITE DIFFER SIGNIFICANTLY FROM THOSE INDICATED IN THE SOIL TEST NOTED ABOVE, THE ENGINEER MUST BE NOTIFIED BEFORE PROCEEDING AS THE SITE CLASSIFICATION MAY NEED REVISING AND MODIFICATIONS TO THE DESIGN MAY BE REQUIRED.
SCN4. THE SITE INVESTIGATION MAY BE RENDERED IRRELEVANT IF THE LOCATION OF PROPOSED STRUCTURES VARY FROM THAT SPECIFIED AT THE TIME OF THIS REPORT. THIS REPORT RELATES TO THE CONDITIONS EXISTING ON THE LAND AT THE TIME OF THE SITE INVESTIGATION. THIS REPORT IS BASED UPON THE PROPOSED CUT / FILL INFORMATION PROVIDED BY THE CLIENT. ANY UNADVISED EXTENSIVE CUTTING OR FILLING MAY RENDER THIS DESIGNTO BECOME IRRELEVANT.
SCN5. WHILE A REASONABLE EFFORT IS MADE TO ASSESS THE SITE'S SUITABILITY FOR THE PROPOSED CONSTRUCTION, THIS REPORT DOES NOT TAKE INTO ACCOUNT SLOPE STABILITY. IF REQUIRED BY THE COUNCIL, A SUITABLY QUALIFIED PERSON SHOULD BE ENGAGED TO UNDERTAKE A SLOPE STABILITY.

ARTICULATION JOINT NOTES:

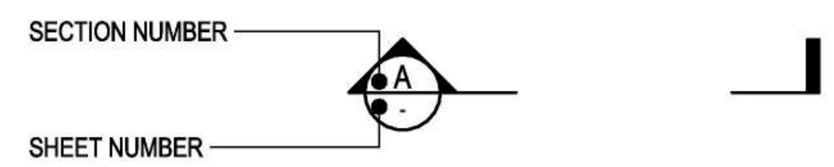
AJN 1. THIS DESIGN ASSUMES THAT MASONRY ARTICULATION JOINTS WILL BE INSTALLED UNLESS NOTED OTHERWISE ON PLANS ANY MASONRY ARTICULATION JOINTS SHALL BE POSITIONED IN ACCORDANCE WITH THE RELEVANT STANDARDS. PRODUCED BY CEMENT CONCRETE & AGGREGATES AUSTRALIA AND AS3700 SECTION 12.16.4. REFER TO THE MASONRY ARTICULATION PLAN (IF PROVIDED) FOR SPECIFIC LOCATIONS AND DETAILS FOR RENOVATIONS OR EXTENSIONS TO EXISTING STRUCTURES.
AJN 2. MASONRY ARTICULATION JOINTS SHALL BE POSITIONED WHERE EVER NEW BRICKWORK MEETS OLD BRICKWORK.
AJN 3. WHERE MASONRY ARTICULATION IS SHOWN BESIDE OPENINGS WITH BRICKWORK ABOVE THE OPENING, CARE SHOULD BE TAKEN TO PROVIDE A SLIP JOINT AROUND THE END OF THE LINTEL.
AJN 4. WHERE MASONRY ARTICULATION IS SHOWN BESIDE OPENINGS, THE JOINT IS TO CONTINUE BETWEEN THE WINDOW/DOOR FRAME AND THE BRICKWORK TO THE FULL HEIGHT OF THE WALL. AT THESE LOCATIONS, THE FRAMES ARE TO BE FIXED WITH FASTENERS THAT WILL ALLOW MOVEMENT OF THE JOINT.

SECTION DEMONSTRATION TYPE NOTES:

SDN1. DEMOSTRATION TYPE 1:



SDN2. DEMOSTRATION TYPE 2:



CRESCO AUSTRALIA

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MIEAust - NER (Mech & Struct):............7120849
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RPE TAS (Mech & Strcut):.....................708732979

REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
A	ISSUED FOR CLIENT REVIEW	23/01/25	AF	RQ	SJL

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- ALL LEVELS ARE IN METERS U.N.O.
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CLIENT INFO
[redacted]
BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO
TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO
NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME
GENERAL NOTES - SHEET 2

SHEET NUMBER S03
REVISION A
PROJECT NUMBER 2500037
SCALE
FORMAT A1

STRUCTURAL DESIGN CRITERIA 1

STRUCTURAL DESIGN LOADS SUMMARY

THE STRUCTURAL ELEMENTS SPECIFIED IN THESE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED IN COMPLIANCE WITH THE APPLICABLE AUSTRALIAN STANDARDS AND THE BUILDING CODE OF AUSTRALIA TO ACCOMMODATE THE FOLLOWING LOAD REQUIREMENTS.

SC1-1. PERMANENT, IMPOSED & OTHER ACTIONS (#REF - AS/NZS 1170.1:2002)

FLOOR	LIVE LOAD		DEAD LOAD (kPa)
	UDA (kPa)	CA (kN)	
ROOF	**0.25**	**1.10**	**0.40**
FLOOR	**1.5**	**1.80**	**-**

SC1-2. WIND ACTIONS (#REF - AS/NZS 1170.2:2021)

WIND REGION	**A5**
IMPORTANCE LEVEL	**2**
ANNUAL PROBABILITY OF EXCEEDANCE	**500 Years**
ULT. REGIONAL WIND SPEEDS (V_{r})	**45 m/s**
SERV. REGIONAL WIND SPEEDS ($V_{r,S}$)	**37 m/s**
CRITICAL WIND DIRECTION	**WEST**
WIND DIRECTION MULTIPLIER (M_d)	**1.0**
TERRAIN CATEGORY	**2.5**
TERRAIN/HEIGHT MULTIPLIER ($M_{z,cat}$)	**0.8576**
SHIELDING MULTIPLIER (M_s)	**1.0**
TOPOGRAPHIC MULTIPLIER (M_t)	**1.0063**
HILL - SHAPE MULTIPLIER (M_h)	**1.0**
MIN. ULTIMATE SPEED ($V_{des,\theta}$)	**37.35**
ULTIMATE WIND PRESSURE ($q_{des,\theta}$)	**0.8370**
EQUIVALENT AS 4055:2021 WIND CLASS	**N1**

SC1-3. SNOW & ICE ACTIONS (#REF - AS/NZS 1170.3:2003)

SNOW ACTION (F_{sn})	**N/A**
ICE ACTION (F_{ice})	**N/A**

SC1-4. EARTHQUAKE ACTIONS IN AUSTRALIA (#REF - AS/NZS 1170.4:2007)

IMPORTANCE LEVEL, TYPE OF STRUCTURE	**2**
PROBABILITY FACTOR (k_p)	**1**
HAZARD FACTOR (Z)	**0.09**
SITE SUB-SOIL CLASS	**Ce**
STRUCTURE HEIGHT (h_n)	**4.7 m (APPROX.)**
EARTHQUAKE DESIGN CATEGORY	**N/A**

SC1-5. CLIMATE ZONE (#REF - CLIMATIC FACTORS FROM AS2870)

CLIMATE ZONE	**2 - WET TEMPERATE**
DEPTH OF DESIGN SUCTION CHANGE (Hs)	**1.8 m**

SC1-6. RETAINING WALL (#REF - AS/NZS AS4678:2002)

SURCHARGE PRESSURE	**N/A**

STRUCTURAL DESIGN CRITERIA 2

ADDITIONAL INFORMATION PROVIDED TO CRESCO AUSTRALIA

BELOW INFORMATION MADE AVAILABLE TO CRESCO AUSTRALIA DURING DESIGN

TITLE	OWNER	DATE	REVISION	REMARKS
ARCHITECTURAL PLAN	CREATION HOMES	06/01/2025	A	305923
GEO REPORT	STRUCTERRE CONSULTING	01/11/2024	-	-
FRAME & TRUSS PLAN	-	DD/MM/YYYY	-	-
EXISTING ENGINEERING	-	DD/MM/YYYY	-	-
SURVEY	-	DD/MM/YYYY	-	-

STRUCTURAL DESIGN CRITERIA 3

SCHEDULE OF STRUCTURAL ELEMENTS & DEFINITIONS

ELEMENT NAME	ELEMENT DEFINITION	COMMENTS	INCLUDED OR EXCLUDED IN SOW
BORED PIER	SUBSTRUCTURE	DESIGNED	INCLUDED
FOOTING DESIGN & POD LAYOUT PLAN	SUBSTRUCTURE	DESIGNED	INCLUDED
WALL & ROOF BRACING DESIGN	BRACING	BY OTHERS	EXCLUDED FROM SOW
STRUCTURAL MEMBER DESIGN	BEAMS, LINTELS & COLUMNS	BY OTHERS	EXCLUDED FROM SOW
ARTICULATION JOINT PLAN	WALL JOINTS	BY OTHERS	EXCLUDED FROM SOW
FRAME & TRUSS DESIGN	ROOF TRUSSES & WALL FRAMING	BY OTHERS	EXCLUDED FROM SOW

STRUCTURAL DESIGN CRITERIA 4

ADHERING TO AUSTRALIAN STANDARDS

CODE COMPLIANCE NOTE

SC4-1. THE STRUCTURAL DESIGN ADHERES TO ALL APPLICABLE AND LATEST AUSTRALIAN STANDARDS LISTED BELOW, WITH INTERNATIONAL STANDARDS APPLIED WHERE RELEVANT TO ENSURE A COMPREHENSIVE APPROACH.

SC4-2. WHILE EVERY EFFORT HAS BEEN MADE TO ENSURE ACCURACY AND COMPLIANCE,WE DO NOT ACCEPT LIABILITY FOR THE OUTCOMES OR INTERPRETATIONS ARISING FROM PEER REVIEW METHODS CONDUCTED BY EXTERNAL PARTIES.

- BCA - BUILDING CODE OF AUSTRALIA
- NCC VOLUME 1 – COMMERCIAL BUILDINGS (CLASS 2 TO 9)
- NCC VOLUME 2 – RESIDENTIAL BUILDINGS (CLASS 1 AND 10)
- AS 1657 – FIXED PLATFORMS, WALKWAYS, STAIRWAYS, AND LADDERS
- AS 1684 – RESIDENTIAL TIMBER-FRAMED CONSTRUCTION
- AS 1684.2 – TIMBER FRAMING CODE
- AS 1720.1 – TIMBER STRUCTURES
- AS 2159 – PILING DESIGN AND INSTALLATION
- AS 2870 – RESIDENTIAL SLABS AND FOOTINGS
- AS 3600 – CONCRETE STRUCTURES
- AS 3700 – MASONRY STRUCTURES
- AS 4055 – WIND LOADS FOR HOUSING
- AS 4100 – STEEL STRUCTURES
- AS 4678 – EARTH-RETAINING STRUCTURES
- AS/NZS 1170 – STRUCTURAL DESIGN ACTIONS (ALL)
- AS/NZS 2890 – PARKING FACILITIES
- AS/NZS 4600 – COLD-FORMED STEEL STRUCTURES

SC4-3. ENGINEER MAY REFER TO THE INTERNATIONAL STANDARDS FOR JUSTIFICATION WHERE RELEVANT. ALL CALCULATIONS ARE THE INTELLECTUAL PROPERTY OF CRESCO AUSTRALIA.

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CLIENT INFO

[redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

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LOT: 130
LGA: CARDINIA SHIRE COUNCIL

Certificate No. #HR-D5N226-02
Scan QR code or follow website link for rating details.
Assessor name: Brian Gunther
Accreditation No.: DMN/15/1592
Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
http://www.hero-software.com.au/pdf/HR-D5N226-02

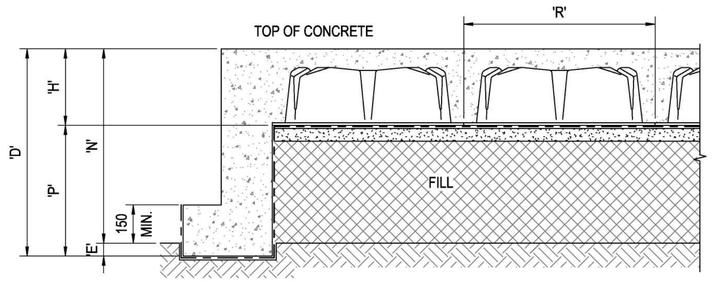
SHEET NAME

STRUCTURAL DESIGN CRITERIA SHEET

SHEET NUMBER	REVISION
S04	**A**

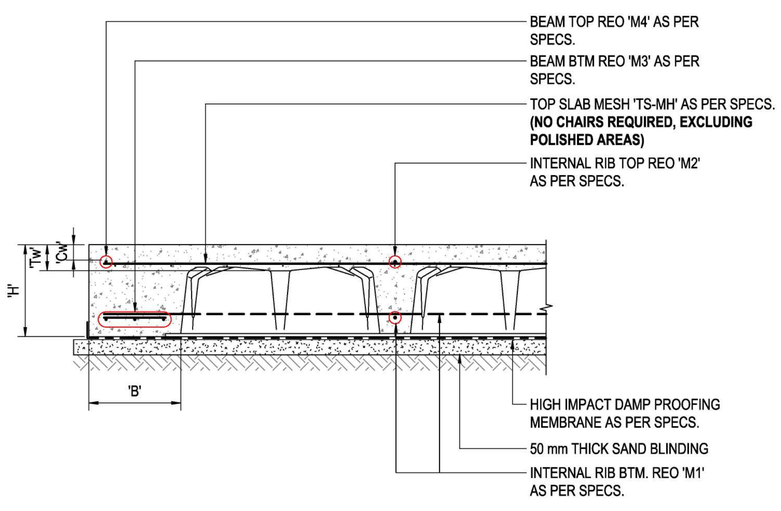
PROJECT NUMBER	SCALE	FORMAT
2500037		A1

GENERAL DEMONSTRATION & NOTES FOR BIAX SLAB



H: BIAX SLAB OVERALL DEPTH
R: RIB SPACING
B: EDGE BEAM MIN. WIDTH
D: EDGE BEAM OVERALL DEPTH
E: EMBEDMENT DEPTH
P: PROTRUSION BEYOND BIAX SLAB OVERALL DEPTH
N: DISTANCE FROM T.O.C. TO NATURAL GROUND

BIAX SLAB DIMENSIONS



BIAX SLAB REINFORCEMENT

STRUCTURAL ELEMENTS & SPECIFICATIONS

ELEMENT - 1	BIAX OR RAFT OR WAFFLE SLAB SPECIFICATIONS
TYPE:	VOID FORMER: FULLY SUSPENDED BIAX SLAB AS SPECIFIED IN RELEVANT POD LAYOUT
MATERIAL:	REINFORCED CONCRETE
CONSTRUCTION TYPE:	CAST IN PLACE, OVER 0.2 mm THICK IMPACT RESISTANT DAMP PROOFING MEMBRANE TO UNDERSIDE OF SLAB.
WAFFLESUITE DESIGN REPORT #	CRSE - 6982 - 0125
DESIGN CRITERIA 1: MATERIAL STRENGTH	25 MPa 'REINFORCED' CONCRETE,
DESIGN CRITERIA 2: SITE CLASS & REACTIVITY	'P' CLASS SITE Ys = 40 mm, Yt = 36 mm

DESIGN CRITERIA 3: DIMENSIONS

BIAX SLAB DIMENSIONS SUMMARY TABLE	ABR	215 POD	145 POD
BIAX SLAB OVERALL DEPTH	'H'	300 mm	230 mm
RIB SPACING	'R'	750 mm	750 mm
EDGE BEAM MINIMUM WIDTH	'B'	300 mm	300 mm
EDGE BEAM OVERALL DEPTH	'D'	300 mm	230 mm
EMBEDMENT DEPTH	'E'	0 mm	0 mm
PROTRUSION BEYOND BIAX SLAB OVERALL DEPTH	'P'	D - H = 0 mm	D - H = 0 mm
DISTANCE FROM T.O.C. TO NATURAL GROUND	'N'	D - E	D - E

DESIGN CRITERIA 4: REINFORCEMENT

BIAX SLAB REINFORCEMENT SUMMARY TABLE	ABR	215 POD	145 POD
INTERNAL RIB BOTTOM (BTM) REO	'M1'	1N12	1N12
INTERNAL RIB TOP (T) REO	'M2'	-	-
BEAM BOTTOM (BTM) REO	'M3'	3-L11TM	3-L11TM
BEAM TOP (T) REO	'M4'	1N12	1N12
TOP SLAB MESH (NO CHAIRS REQ'D, U.N.O)	'TS-MH'	SL82	SL82
SLAB THICKNESS	'T_w'	85 mm	85 mm
SLAB COVER	'C_w'	30 mm (MIN.)	30 mm (MIN.)

- UNLESS NOTED OTHERWISE, SLAB TO BE INSTALLED ON 50 mm SAND BLINDING AND REINFORCED WITH LAYER OF FABRIC PLACED WITH A MINIMUM COVER OF 30 mm FROM TOP OF SLAB, WITH ADDITIONAL REINFORCEMENT AS INDICATED ON SLAB PLANS.
- IF POLISHED CONCRETE SLAB IS TO BE USED, REFER TO TYPICAL DETAILS (CONTACT CRESCO AUSTRALIA, IF UNSURE)

STRUCTURAL ELEMENTS & SPECIFICATIONS

ELEMENT - 2	BORED PIER SPECIFICATIONS
TYPE:	BORED PIER 'BP1'
MATERIAL:	REINFORCED CONCRETE
CONSTRUCTION TYPE:	CAST IN PLACE
DESIGN CRITERIA 1: MATERIAL STRENGTH	25 MPa 'REINFORCED' CONCRETE
DESIGN CRITERIA 2: DIAMETER OF PIERS	Ø: 450 mm BORED PIERS
DESIGN CRITERIA 3: FOUNDING LAYER TYPE	VERY SANDY CLAY AT A MINIMUM DEPTH OF 2500 mm.
DESIGN CRITERIA 4: ALLOWABLE BEARING PRESSURE ON FOUNDING LAYER	100 kPa

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BLDG. DESIGN BY: CREATION HOMES

DOCUMENT INFO
TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO
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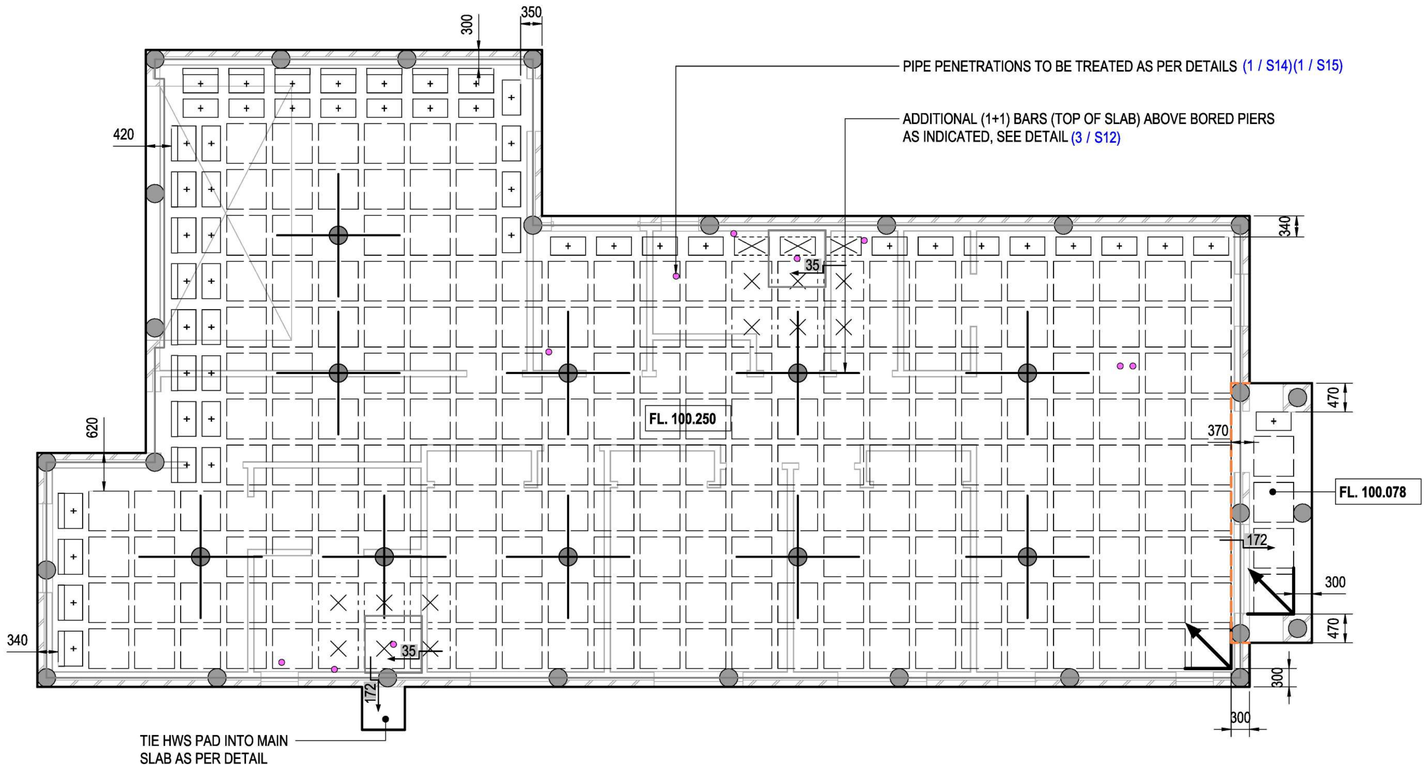
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME
STRUCTURAL SPECIFICATIONS SHEET

SHEET NUMBER S05
REVISION A
PROJECT NUMBER 2500037
SCALE
FORMAT A1



1 POD LAYOUT PLAN
1 : 50

POD TYPE	QTY
500-POD	0
215-POD	210
145-POD	12
215-MINI	51
145-MINI	3
215-ADJ	19
KEYSTONE (PKT 20)	12
AUSCHAIRS (PKT 20)	5

AutoPOD v1.4

SLAB VOLUME	50.21	m^3
POD VOLUME	19.948	m^3
CONCRETE VOLUME	33.288	m^3
(10% WASTAGE)	3.026	m^3
SLAB AREA	167.684	m^2
SLAB VOLUME RATIO	0.2	%
REINF STOCK LENGTH	6000	mm
REINF LAP LENGTH	600	mm
No STOCK LENGTHS	78	UNITS
No EDGE STOCK LENGTHS	15	UNITS
No 2 m LONG PIER REINF	20	UNITS
No MESH SHEETS	13	UNITS
No EDGE TM SHEETS	12	UNITS
No INTERNAL TM SHEETS	1	UNITS
NUMBER OF PILES	38	
NUMBER OF SCREW PILES	-	
NUMBER OF EXTERNAL PILES	-	

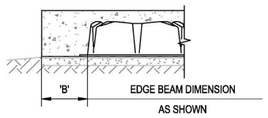
NOTES:

1. CONCRETE VOLUME CORRESPONDS TO THE THEORETICAL VOLUME OF CONCRETE INCAPSULATED BY THE BIAX VOID FORMER (TM) AND THE EDGE FORMWORK.
2. THE POD QUANTITIES CORRESPOND TO THE THEORETICAL DESIGN LAYOUT OF THE SLAB.
3. THE REINFORCEMENT QUANTITIES ARE ESTIMATES ONLY BASED ON THE THEORETICAL DESIGN LAYOUT OF THE SLAB.
4. SUMMARY TABLE DOESN'T INCORPORATE STRIP FOOTING CONRETE VOLUME & REINFORCEMENT.

BIAX AND CRESCO AUSTRALIA ARE NOT LIABLE FOR QUANTITIES OF THE PODS AND REINFORCEMENT OR THE VOLUME OF CONCRETE AND A FULL SCHEDULE/TAKEOFF IS TO BE COMPLETED BY THE RELEVANT SUPPLIERS TO ENSURE QUANTITIES ARE ACCURATE AT TIME OF ORDER.

LEGEND

- FULL SIZE 215 BIAX POD
- 215 BIAX MINI POD
- 215 BIAX MINI POD & ADJUSTABLE POD
- FULL SIZE 145 BIAX POD
- 145 MINI POD
- DENOTES LAYOUT STARTING POD
- XX — STEP DOWN
- SLAB EDGE
- SOFFIT STEP 172 mm
- TOP STEP 35/172 mm
- PIPE PENETRATION
- CONCRETE PIER 'BP1'



POD SETOUT DIMENSION

NOTE:
ALL DIMENSION TO BOTTOM FACE OF PODS - NOT LIP

REFER TO ARCHITECTURAL FOR ALL FFL, HOB, FALL & KERB LOCATIONS.
IF DEPTH OF FILL EXCEEDS 300 mm DUE TO SITE CONDITIONS AND NO PIERS ARE SHOWN, PLEASE CONTACT CRESCO AUSTRALIA, THE DESIGN MAY BECOME OBSOLETE IN THAT SCENARIO.

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MIEAust - NER (Mech & Struct):.....7120849
RPE NSW (Mech & Struct):.....PRE0002298
RPE VIC (Mec & Struct):.....PE0010096
RPE QLD (Mech & Struct):.....28994
RPE TAS (Mech & Strcut):.....708732979

REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
A	ISSUED FOR CLIENT REVIEW	23/01/25	AF	RQ	SJL

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CLIENT INFO
NAME: M[redacted]
P[redacted]

BLDG. DESIGN BY: CREATION HOMES

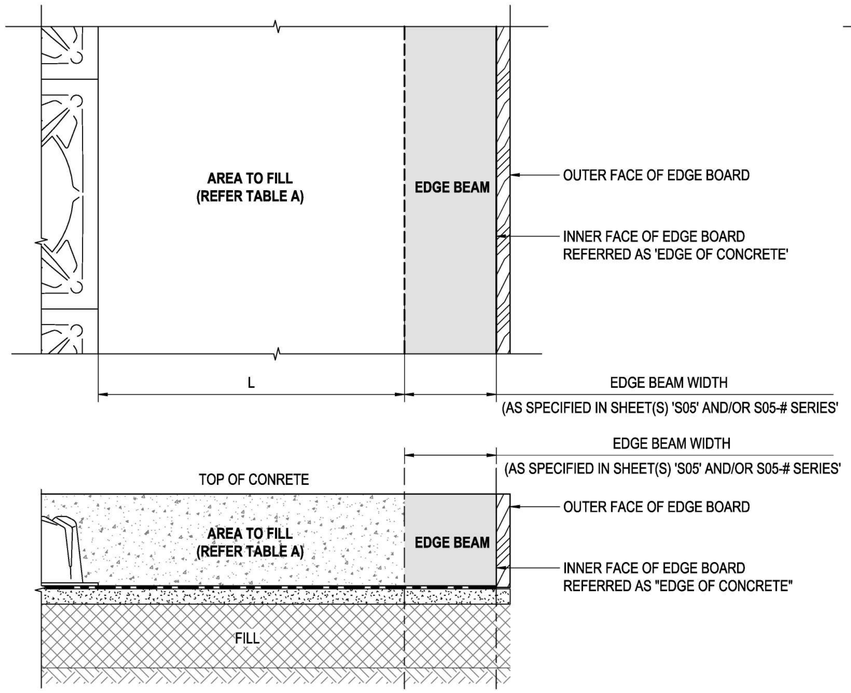
creationhomes

DOCUMENT INFO
TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO
NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME
POD LAYOUT PLAN

SHEET NUMBER **S06**
REVISION **A**
PROJECT NUMBER 2500037
SCALE AS SHOWN
FORMAT A1



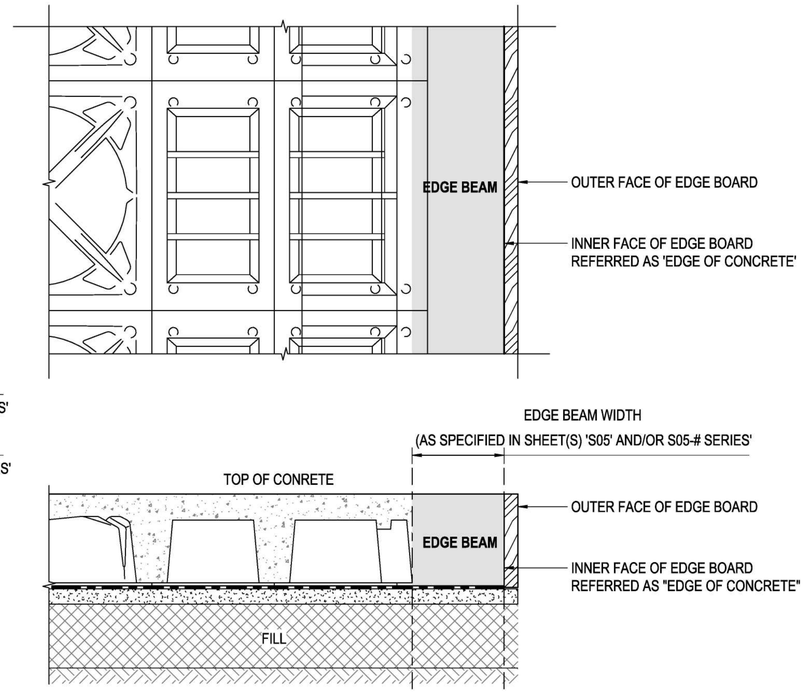
NOT SHOWN ELEMENTS ARE OMITTED FOR CLARITY

1 EDGE BEAM WIDTH DETAIL

1 : 10

NOTE:

- EDGE BOARD IS NOT SHOWN ON ANY OTHER PLANS.
- SHOWN SLAB EDGES REFERS ON ANY PLANS TO THE INNER FACE OF EDGE BOARD.



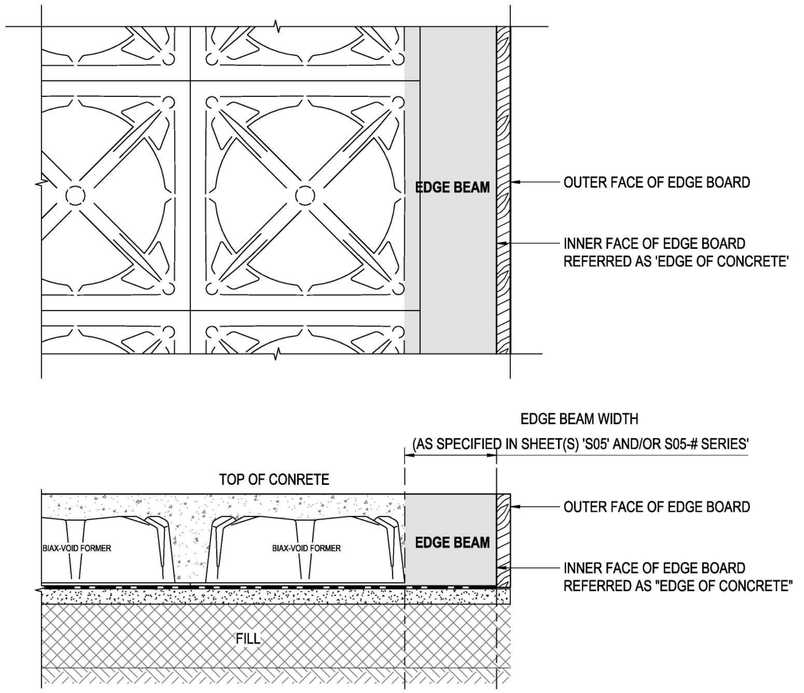
NOT SHOWN ELEMENTS ARE OMITTED FOR CLARITY

2 EDGE BEAM WIDTH DETAIL - ADJUSTABLE

1 : 10

NOTE:

- EDGE BOARD IS NOT SHOWN ON ANY OTHER PLANS.
- SHOWN SLAB EDGES REFERS ON ANY PLANS TO THE INNER FACE OF EDGE BOARD.



NOT SHOWN ELEMENTS ARE OMITTED FOR CLARITY

3 EDGE BEAM WIDTH DETAIL - FULL POD

1 : 10

NOTE:

- EDGE BOARD IS NOT SHOWN ON ANY OTHER PLANS.
- SHOWN SLAB EDGES REFERS ON ANY PLANS TO THE INNER FACE OF EDGE BOARD.

TABLE A

L (mm)	RECOMMENDED SOLUTION FOR AREA TO FILL
50	FILL WITH SOLID CONCRETE (EDGE BEAM WIDTH INCREASES BY 50 mm)
100	FILL WITH SOLID CONCRETE (EDGE BEAM WIDTH INCREASES BY 100 mm)
150	REMOVE 1 FULL POD PLACE 2 MINIPODS EXTEND EXTERNAL MINIPOD BY 100 mm WITH 1 ADJ POD
200	REMOVE 1 FULL POD PLACE 2 MINIPODS EXTEND EXTERNAL MINIPOD BY 150 mm WITH 1 ADJ POD
250	REMOVE 1 FULL POD PLACE 2 MINIPODS EXTEND EXTERNAL MINIPOD BY 200 mm WITH 1 ADJ POD
300	REMOVE 1 FULL POD PLACE 2 MINIPODS EXTEND EXTERNAL MINIPOD BY 250 mm WITH 1 ADJ POD
350	REMOVE 1 FULL POD PLACE 2 MINIPODS EXTEND EXTERNAL MINIPOD BY 300 mm WITH 1 ADJ POD

TABLE A

L (mm)	RECOMMENDED SOLUTION FOR AREA TO FILL
400	PLACE 1 MINIPOD
450	PLACE 1 MINIPOD (EDGE BEAM WIDTH INCREASES BY 50 mm)
500	PLACE 1 MINIPOD EXTEND THE MINIPOD BY 100 mm WITH 1 ADJ POD
550	PLACE 1 MINIPOD EXTEND THE MINIPOD BY 150 mm WITH 1 ADJ POD
600	PLACE 1 MINIPOD EXTEND THE MINIPOD BY 200 mm WITH 1 ADJ POD
650	PLACE 1 MINIPOD EXTEND THE MINIPOD BY 250 mm WITH 1 ADJ POD
700	PLACE 1 MINIPOD EXTEND THE MINIPOD BY 300 mm WITH 1 ADJ POD

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CLIENT INFO

NAME: [redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

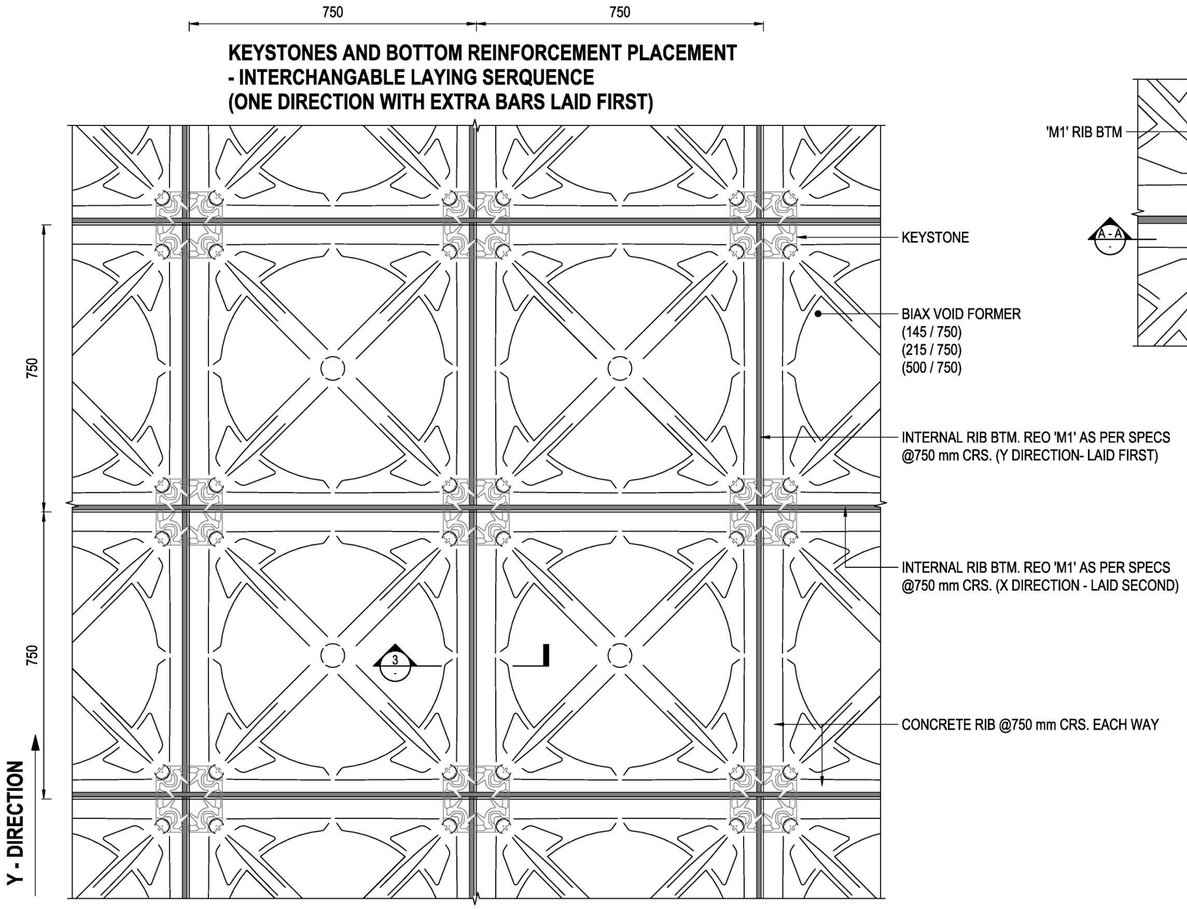
SHEET NAME

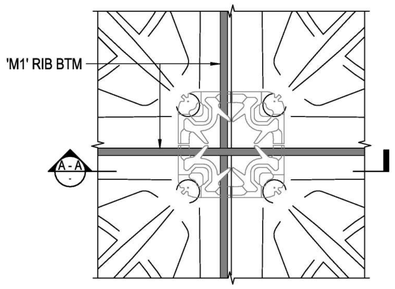
TYPICAL - VARIED EDGE BEAM FILL AREA DETAILS (BIAX)

SHEET NUMBER	REVISION
S07	A

PROJECT NUMBER	SCALE	FORMAT
2500037	AS SHOWN	A1

KEYSTONES AND BOTTOM REINFORCEMENT PLACEMENT - INTERCHANGABLE LAYING SERQUENCE (ONE DIRECTION WITH EXTRA BARS LAID FIRST)





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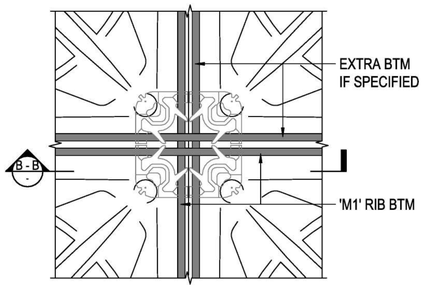

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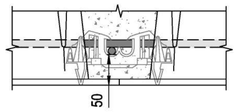
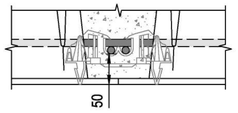
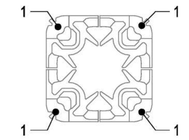


SECTION A - A



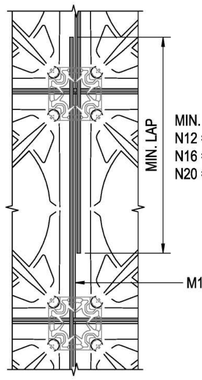
SECTION B - B

KEYSTONE

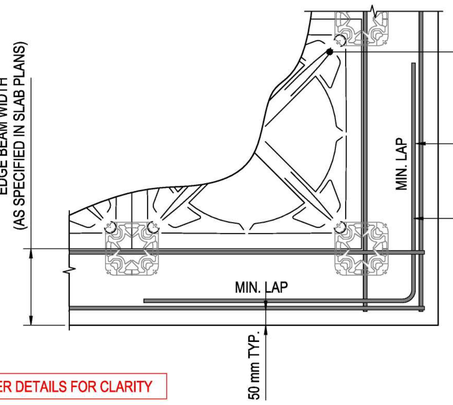


SPECIFICATIONS

TECHINICAL DATA:
L x L x HEIGHT = 220 x 220 x 120 mm
WEIGHT = 120 g
MATERIAL = RE-MILLED BLACK POLYPROPYLENE
MAXIMUM NUMBER OF BARS = 2 IN EACH WAY
MAXIMUM DIAMETER OF BARS = 20 mm
MIN. DIAMETER OF BARS = 12 mm
BOTTOM SPACING FOR COVER = 50 mm
LATERAL SPACING FOR COVER = 35 mm



NOTE:
INTERNAL RIB REINFORCEMENT TO CONTINUE TO OUTSIDE FACE OF EXTERNAL BEAMS



KEYSTONE ARE OMITTED ON ANY OTHER DETAILS FOR CLARITY

1 TYPICAL BIAX PODS KEYSTONE & REINFORCEMENT INSTALLATION TO BOTTOM

NTS

INSTALLATION PROCEDURE:

1. AFTER POD LAYOUT COMPLETED. ENGAGE THE KEYSTONE PINS WITH THE HOLES AT EACH CORNER OF THE PODS.
2. INSTALL ALL KEYSTONES BEFORE PROCEEDING WITH REINFORCING PLACEMENT.
3. FIRMLY SECURE REINFORCING BARS BENEATH THE KEYSTONES RETAINERS NO TIES ARE REQUIRED FOR BARS LOCKED BY THE KEYSTONES.
4. INSTALL ALL BARS IN ONE DIRECTION FIRST AS SHOWN IN FIGURE ON.

NOTES:

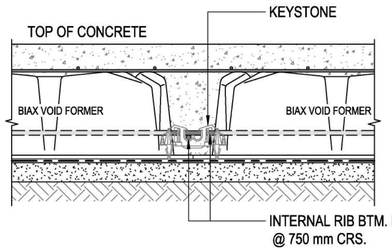
- PREFER REINFORCING OVERLAPPING WHERE THE RIBS ARE REINFORCED WITH ONE BAR ONLY.
- NO TIES ARE NEEDED FOR BARS RETAINED WITH THE KEYSTONE.

KEYSTONE ARE OMITTED ON ANY OTHER DETAILS FOR CLARITY

MESH AND TOP BARS OMITTED FOR CLARITY

2 TYPICAL REINFORCEMENT PLACING ON BIAX SLAB & CORNERS

NTS



REINFORCEMENT OTHER THAN SHOWN OMITED FOR CLARITY

INTERCHANGABLE LAYING SEQUENCE - LAY ALL BARS IN ONE DIRECTION FIRST ONLY (INCLUDING ADDITIONAL BARS)

3 TYPICAL KEYSTONE AND LAYING SEQUENCE OF THE BARS IN BIAX SLAB

1 : 8

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CLIENT INFO
[redacted]
PARVEEN

BLDG. DESIGN BY: CREATION HOMES

creationhomes

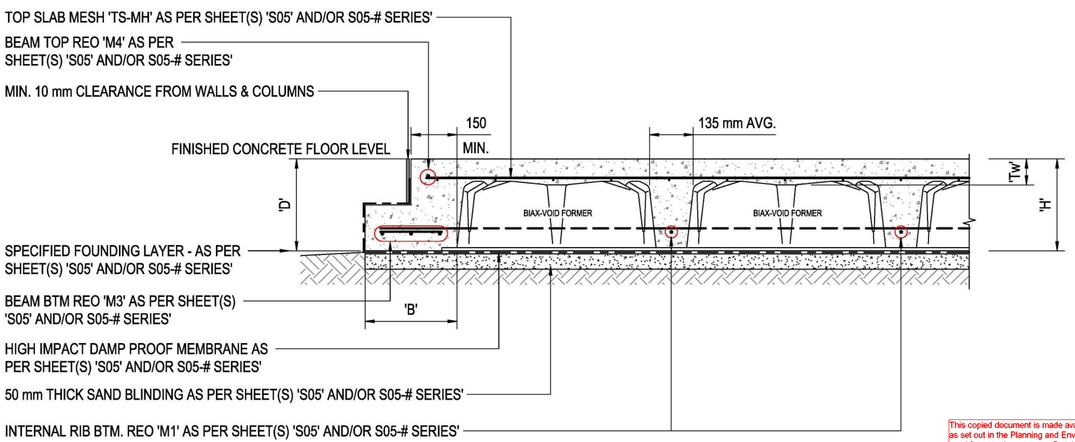
DOCUMENT INFO
TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO
NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME
TYPICAL - FOOTING & SLAB DETAILS (BIAX)

SHEET NUMBER S08
REVISION A
PROJECT NUMBER 2500037
SCALE AS SHOWN
FORMAT A1

WAFFLE RAFT BIAX SLAB REINFORCEMENT SUMMARY TABLE AS PER AS PER SHEET(S) 'S05' AND/OR S05-# SERIES'			
		215 POD	145 POD
INTERNAL RIB BTM REO	M1	1N12	1N12
INTERNAL RIB TOP REO	M2	-	-
EDGE BEAM RIB BTM REO	M3	3-L11TM	3-L11TM
EDGE BEAM RIB TOP REO	M4	1N12	1N12
TOP SLAB MESH	TS-MH	SL82	SL82



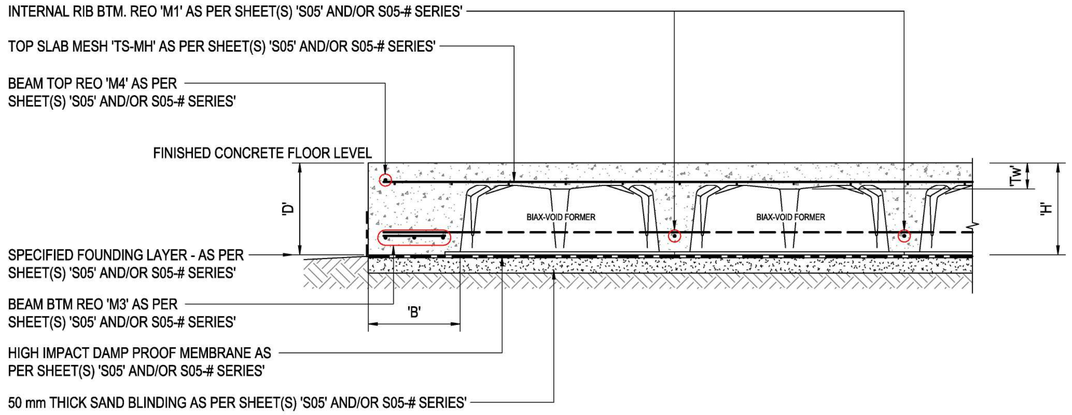
LOAD BEARING, NON-LOAD BEARING ELEMENTS AND/OR REINFORCEMENT OTHER THAN SHOWN OMITTED FOR CLARITY

1 TYPICAL BIAX SLAB - FLAT EDGE BEAM WITH REBATE (EQUAL HEIGHT PODS)

1 : 10

NOTE(S):

- EDGE BEAMS TO BE CONSTRUCTED AS PER SPECIFICATIONS ON SHEET 'S05 SERIES'.
- REFER TO SPECIFICATIONS FOR NUMBER, SIZE AND COVER OF THE REINFORCEMENTS. TYPICAL DETAILS MAY NOT SHOW IT.
- REFER TO ARCHITECTURAL DRAWINGS FOR HOBS/FALLS/REBATES MAY NOT BE SHOWN ON TYPICAL DETAILS.
- REFER TO THE POD LAYOUT PLAN FOR JOB SPECIFIC DETAILS. TYPICAL DETAILS MAY NOT REFLECT THE ACTUAL CASE.



LOAD BEARING, NON-LOAD BEARING ELEMENTS AND/OR REINFORCEMENT OTHER THAN SHOWN OMITTED FOR CLARITY

2 TYPICAL BIAX SLAB - FLAT EDGE BEAM WITHOUT REBATE ((EQUAL HEIGHT PODS) (IF REQ'D)

1 : 10

NOTE(S):

- EDGE BEAMS TO BE CONSTRUCTED AS PER SPECIFICATIONS ON SHEET 'S05 SERIES'.
- REFER TO SPECIFICATIONS FOR NUMBER, SIZE AND COVER OF THE REINFORCEMENTS.
- REFER TO ARCHITECTURAL DRAWINGS FOR HOBS/FALLS/REBATES MAY NOT BE SHOWN ON TYPICAL DETAILS.
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REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
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BLDG. DESIGN BY: CREATION HOMES

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Certificate No. #HR-D5N226-02
Scan QR code or follow website link for rating details.
Assessor name: Brian Gunther
Accreditation No.: DMN/19/1682
Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
http://www.hero-software.com.au/pdf/HR-D5N226-02

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME

TYPICAL - FOOTING & SLAB DETAILS (BIAX)

SHEET NUMBER S09

REVISION A

PROJECT NUMBER 2500037

SCALE

FORMAT A1

WAFFLE RAFT BIAX SLAB REINFORCEMENT SUMMARY TABLE AS PER AS PER SHEET(S) 'S05' AND/OR S05-# SERIES'			
		215 POD	145 POD
INTERNAL RIB BTM REO	M1	1N12	1N12
INTERNAL RIB TOP REO	M2	-	-
EDGE BEAM RIB BTM REO	M3	3-L11TM	3-L11TM
EDGE BEAM RIB TOP REO	M4	1N12	1N12
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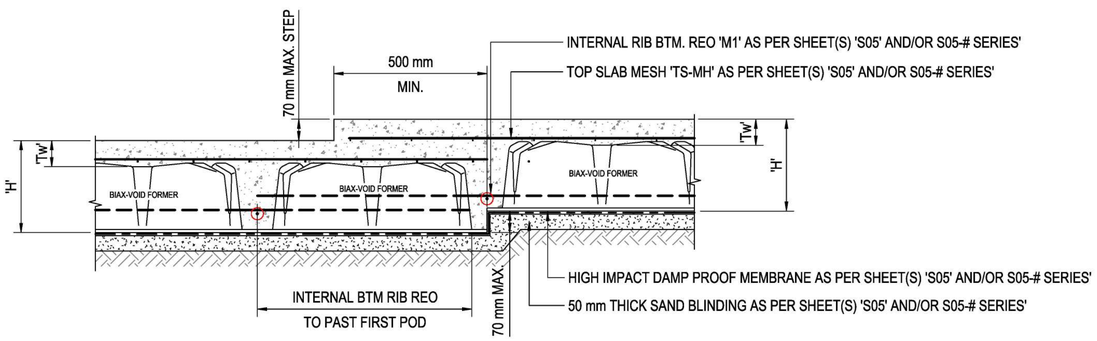

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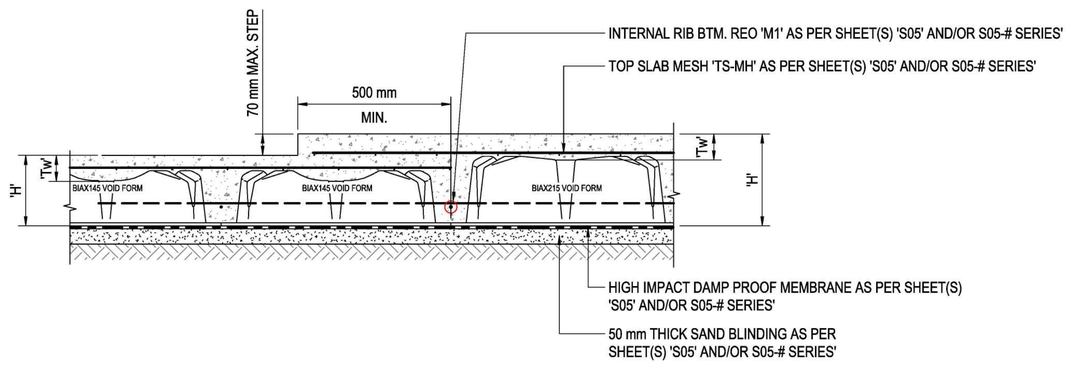

LOAD BEARING, NON-LOAD BEARING ELEMENTS AND/OR REINFORCEMENT OTHER THAN SHOWN OMITTED FOR CLARITY

1 TYPICAL BIAX SLAB - INTERNAL RIB SETDOWN (EQUAL HEIGHT PODS) TOP STEP 0-70 mm

1 : 10

NOTE(S):

- SLAB TO BE CONSTRUCTED AS PER SPECIFICATIONS
- REFER TO SPECIFICATIONS FOR NUMBER, SIZE AND COVER OF THE REINFORCEMENTS
- REFER TO ARCHITECTURAL DRAWINGS FOR HOBS/ FALLS/ REBATES, MAY NOT BE SHOWN ON TYPICAL DETAILS
- REFER TO THE POD LAYOUT PLAN FOR JOB SPECIFIC DETAILS. TYPICAL DETAILS MAY NOT REFLECT THE ACTUAL CASE

2 TYPICAL BIAX SLAB - INTERNAL RIB SETDOWN (VARIED HEIGHT PODS - 215 & 145) MAX 70 mm

1 : 10

NOTE(S):

- SLAB TO BE CONSTRUCTED AS PER SPECIFICATIONS ON SHEET 'S05'
- REFER TO SPECIFICATIONS FOR NUMBER, SIZE AND COVER OF THE REINFORCEMENTS
- REFER TO ARCHITECTURAL DRAWINGS FOR HOBS/ FALLS/ REBATES, MAY NOT BE SHOWN ON TYPICAL DETAILS
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CLIENT INFO

NAM [redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME

TYPICAL - FOOTING & SLAB DETAILS (BIAX)

SHEET NUMBER S10

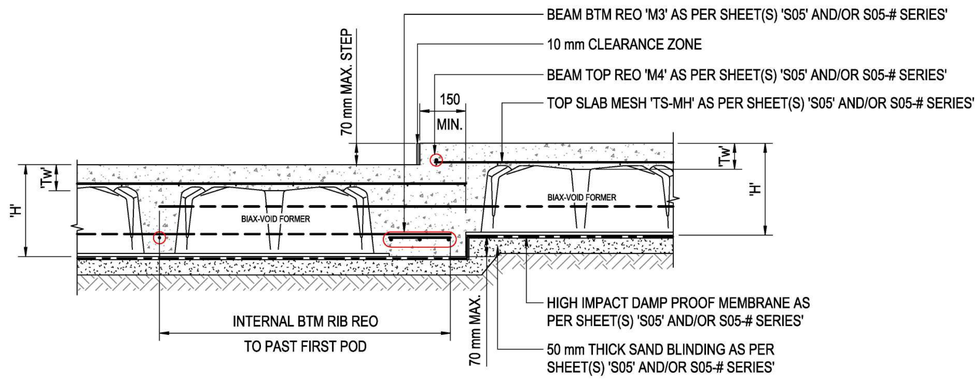
REVISION A

PROJECT NUMBER 2500037

SCALE

FORMAT A1

WAFFLE RAFT BIAX SLAB REINFORCEMENT SUMMARY TABLE AS PER AS PER SHEET(S) 'S05' AND/OR S05-# SERIES'			
		215 POD	145 POD
INTERNAL RIB BTM REO	M1	1N12	1N12
INTERNAL RIB TOP REO	M2	-	-
EDGE BEAM RIB BTM REO	M3	3-L11TM	3-L11TM
EDGE BEAM RIB TOP REO	M4	1N12	1N12
TOP SLAB MESH	TS-MH	SL82	SL82

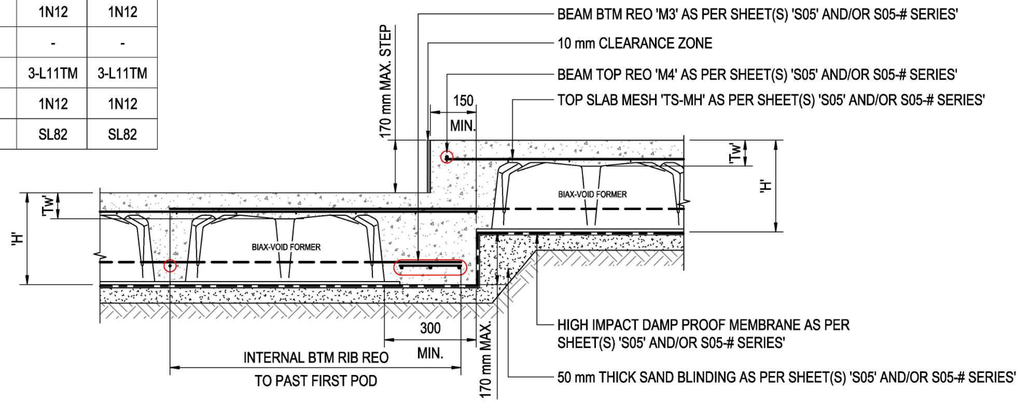


LOAD BEARING, NON-LOAD BEARING ELEMENTS AND/OR REINFORCEMENT OTHER THAN SHOWN OMITTED FOR CLARITY

1 TYPICAL BIAX SLAB - INTERNAL BEAM SETDOWN (EQUAL HEIGHT PODS) TOP STEP 0-70 mm

1 : 10

NOTE(S):
- INTERNAL BEAM TO BE CONSTRUCTED AS PER SPECIFICATIONS
- REFER TO SPECIFICATIONS FOR NUMBER, SIZE AND COVER OF THE REINFORCEMENTS
- REFER TO ARCHITECTURAL DRAWINGS FOR HOBS/ FALLS/ REBATES, MAY NOT BE SHOWN ON TYPICAL DETAILS
- REFER TO THE POD LAYOUT PLAN FOR JOB SPECIFIC DETAILS. TYPICAL DETAILS MAY NOT REFLECT THE ACTUAL CASE

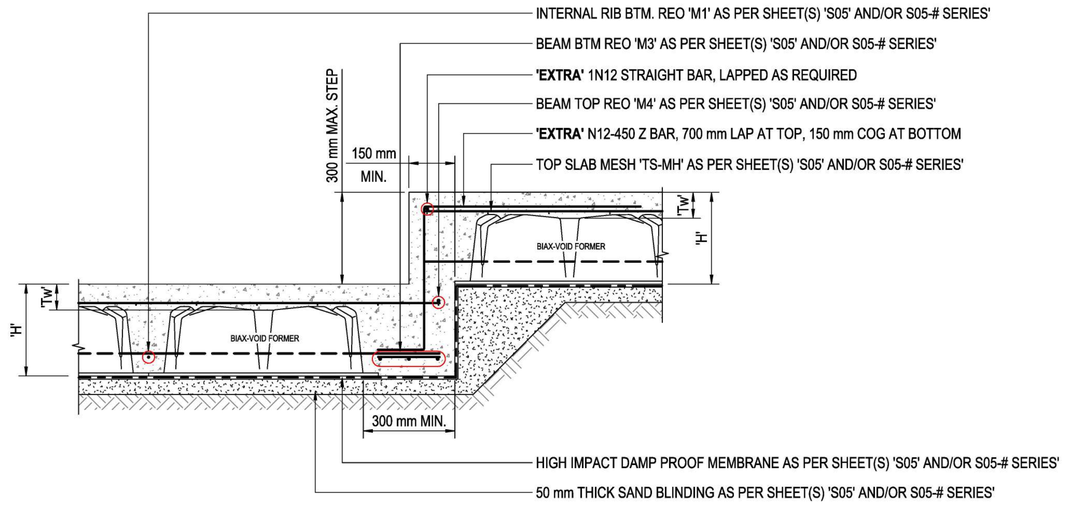


LOAD BEARING, NON-LOAD BEARING ELEMENTS AND/OR REINFORCEMENT OTHER THAN SHOWN OMITTED FOR CLARITY

2 TYPICAL BIAX SLAB - INTERNAL BEAM SETDOWN (EQUAL HEIGHT PODS) TOP STEP 71 -170 mm

1 : 10

NOTE(S):
- INTERNAL BEAM TO BE CONSTRUCTED AS PER SPECIFICATIONS
- REFER TO SPECIFICATIONS FOR NUMBER, SIZE AND COVER OF THE REINFORCEMENTS
- REFER TO ARCHITECTURAL DRAWINGS FOR HOBS/ FALLS/ REBATES, MAY NOT BE SHOWN ON TYPICAL DETAILS
- REFER TO THE POD LAYOUT PLAN FOR JOB SPECIFIC DETAILS. TYPICAL DETAILS MAY NOT REFLECT THE ACTUAL CASE



LOAD BEARING, NON-LOAD BEARING ELEMENTS AND/OR REINFORCEMENT OTHER THAN SHOWN OMITTED FOR CLARITY

3 TYPICAL BIAX SLAB - INTERNAL BEAM SETDOWN (EQUAL HEIGHT PODS) - TOP STEP 171 mm - 300 mm

1 : 10

NOTE(S):
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- REFER TO SPECIFICATIONS FOR NUMBER, SIZE AND COVER OF THE REINFORCEMENTS
- REFER TO ARCHITECTURAL DRAWINGS FOR HOBS/ FALLS/ REBATES, MAY NOT BE SHOWN ON TYPICAL DETAILS
- REFER TO THE POD LAYOUT PLAN FOR JOB SPECIFIC DETAILS. TYPICAL DETAILS MAY NOT REFLECT THE ACTUAL CASE
- BARS MARKED WITH 'EXTRA' MAY NOT BE SHOWN ON THE OTHER DRAWINGS

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MIEAust - NER (Mech & Struct):.....7120849
RPE NSW (Mech & Struct):.....PRE0002298
RPE VIC (Mec & Struct):.....PE0010096
RPE QLD (Mech & Struct):.....28994
RPE TAS (Mech & Struct):.....708732979

REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
A	ISSUED FOR CLIENT REVIEW	23/01/25	AF	RQ	SJL

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- ALL LEVELS ARE IN METERS U.N.O.
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- CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONSTRUCTION METHODOLOGY ON SITE AND SEEK INSTRUCTIONS BEFORE PROCEEDING IF ANY DISCREPANCIES ARE FOUND
- CONTACT CRESCO AUSTRALIA EVER IN DOUBT REGARDING DRAWING AND/OR SPECIFICATIONS.

CLIENT INFO
NAM[redacted]
BLDG. DESIGN BY: CREATION HOMES
creationhomes

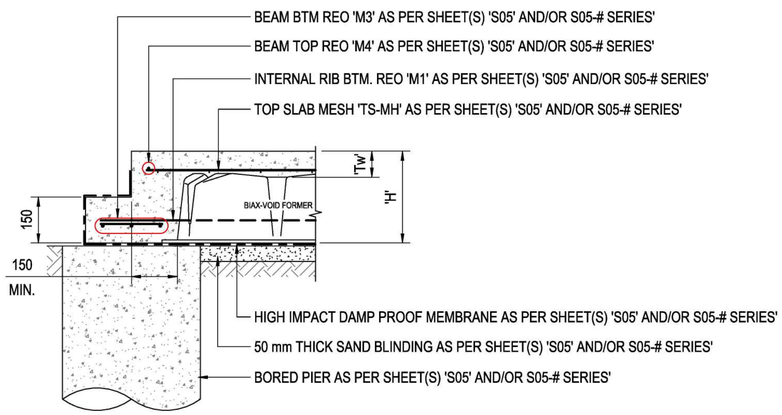
DOCUMENT INFO
TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO
NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

Certificate No. #HR-D5N226-02
Scan QR code or follow website link for rating details.
Assessor name: Brian Gunther
Accreditation No.: DMN/19/992
Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
http://www.hero-software.com.au/pdf/HR-D5N226-02

SHEET NAME
TYPICAL - FOOTING & SLAB DETAILS (BIAX)

SHEET NUMBER S11
REVISION A
PROJECT NUMBER 2500037
SCALE
FORMAT A1



LOAD BEARING, NON-LOAD BEARING ELEMENTS AND/OR REINFORCEMENT OTHER THAN SHOWN OMITTED FOR CLARITY

1 TYPICAL EDGE BEAM (WITH REBATE) ON BORED PIER

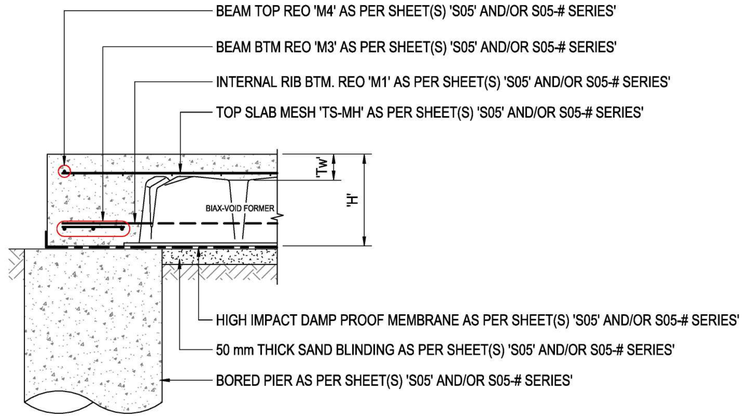
1 : 10

NOTE(S):

- STRUCTURAL ELEMENTS TO BE CONSTRUCTED AS PER SPECIFICATIONS ON SHEET 'S05 SERIES'.
- REFER TO SPECIFICATIONS FOR NUMBER, SIZE AND COVER OF THE REINFORCEMENTS. TYPICAL DETAILS MAY NOT SHOW IT.
- REFER TO ARCHITECTURAL DRAWINGS FOR HOBS/FALLS/REBATES MAY NOT BE SHOWN ON TYPICAL DETAILS.

WAFFLE RAFT BIAX SLAB REINFORCEMENT SUMMARY TABLE AS PER AS PER SHEET(S) 'S05' AND/OR S05-# SERIES'

		215 POD	145 POD
INTERNAL RIB BTM REO	M1	1N12	1N12
INTERNAL RIB TOP REO	M2	-	-
EDGE BEAM RIB BTM REO	M3	3-L11TM	3-L11TM
EDGE BEAM RIB TOP REO	M4	1N12	1N12
TOP SLAB MESH	TS-MH	SL82	SL82



LOAD BEARING, NON-LOAD BEARING ELEMENTS AND/OR REINFORCEMENT OTHER THAN SHOWN OMITTED FOR CLARITY

2 TYPICAL EDGE BEAM (WITHOUT REBATE) ON BORED PIER

1 : 10

NOTE(S):

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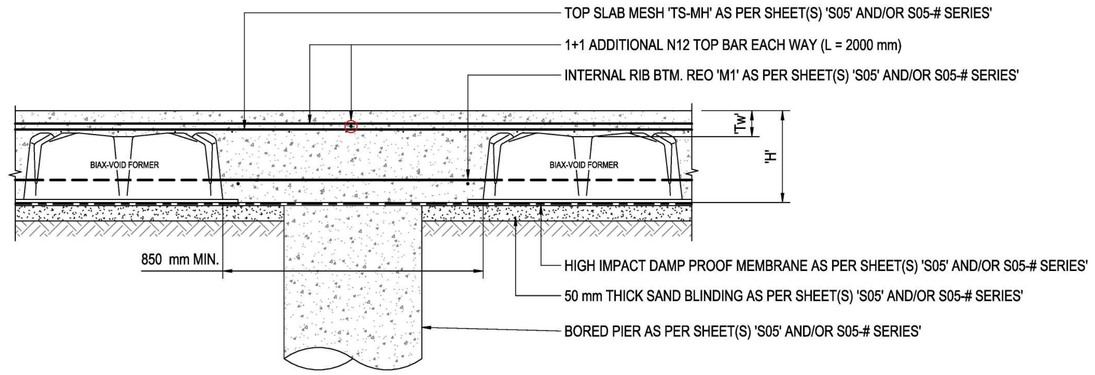

LOAD BEARING, NON-LOAD BEARING ELEMENTS AND/OR REINFORCEMENT OTHER THAN SHOWN OMITTED FOR CLARITY

3 INTERNAL RIB ON BORED PIER DETAIL

1 : 10

NOTE(S):

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CLIENT I
NAME [redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO
TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO
NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME
TYPICAL - FOOTING & SLAB DETAILS (BIAX)

SHEET NUMBER S12
REVISION A
PROJECT NUMBER 2500037
SCALE
FORMAT A1

WAFFLE RAFT BIAX SLAB REINFORCEMENT SUMMARY TABLE AS PER AS PER SHEET(S) 'S05' AND/OR S05-# SERIES'			
		215 POD	145 POD
INTERNAL RIB BTM REO	M1	1N12	1N12
INTERNAL RIB TOP REO	M2	-	-
EDGE BEAM RIB BTM REO	M3	3-L11TM	3-L11TM
EDGE BEAM RIB TOP REO	M4	1N12	1N12
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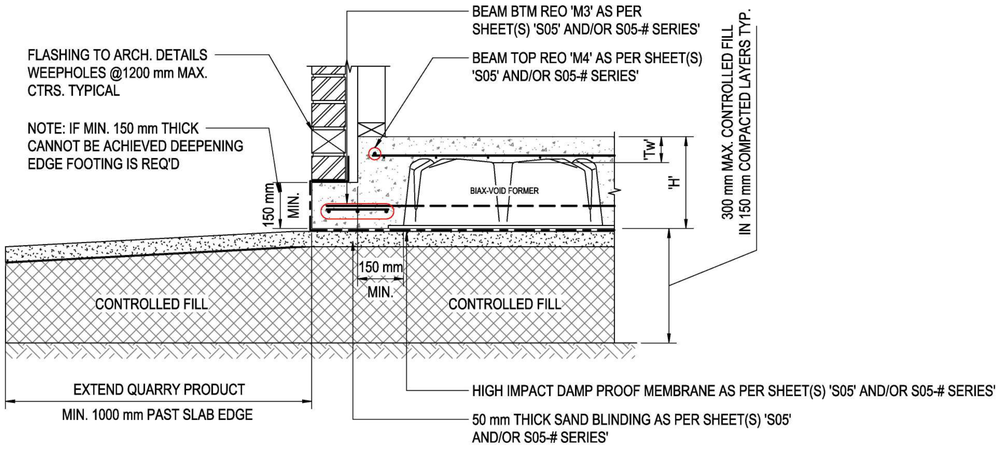
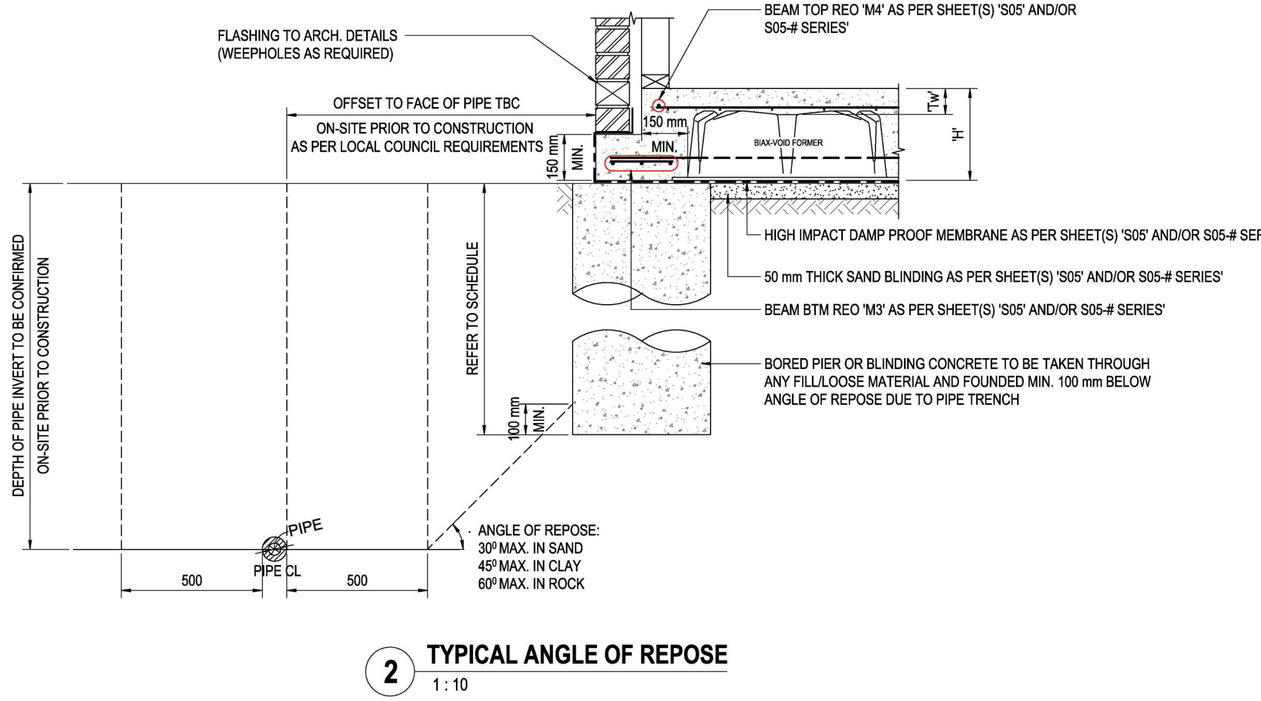
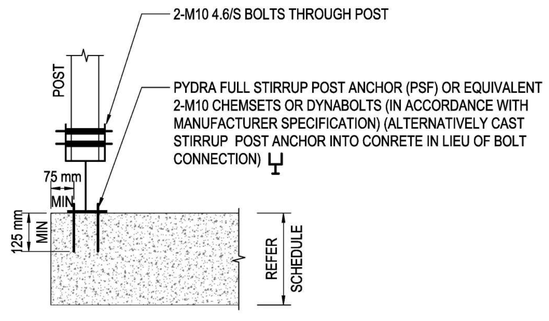


1 TYPICAL EDGE BEAM WITH REBATE & WEEPHOLES
1 : 10



2 TYPICAL ANGLE OF REPOSE
1 : 10



3 TYPICAL TIMBER STIRRUP POST ON CONCRETE SLAB/ FOOTING DETAIL
1 : 10

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NAME [redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

Certificate No. #HR-D5N226-02
Assessor name: Brian Gunther
Accreditation No.: DMN/15/1682
Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
http://www.hero-software.com.au/p/d/HR-D5N226-02

SHEET NAME

TYPICAL - FOOTING & SLAB DETAILS (BIAX)

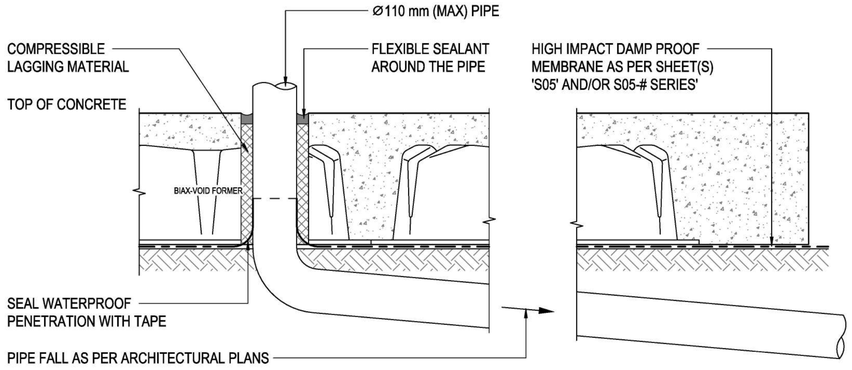
SHEET NUMBER S13

REVISION A

PROJECT NUMBER 2500037

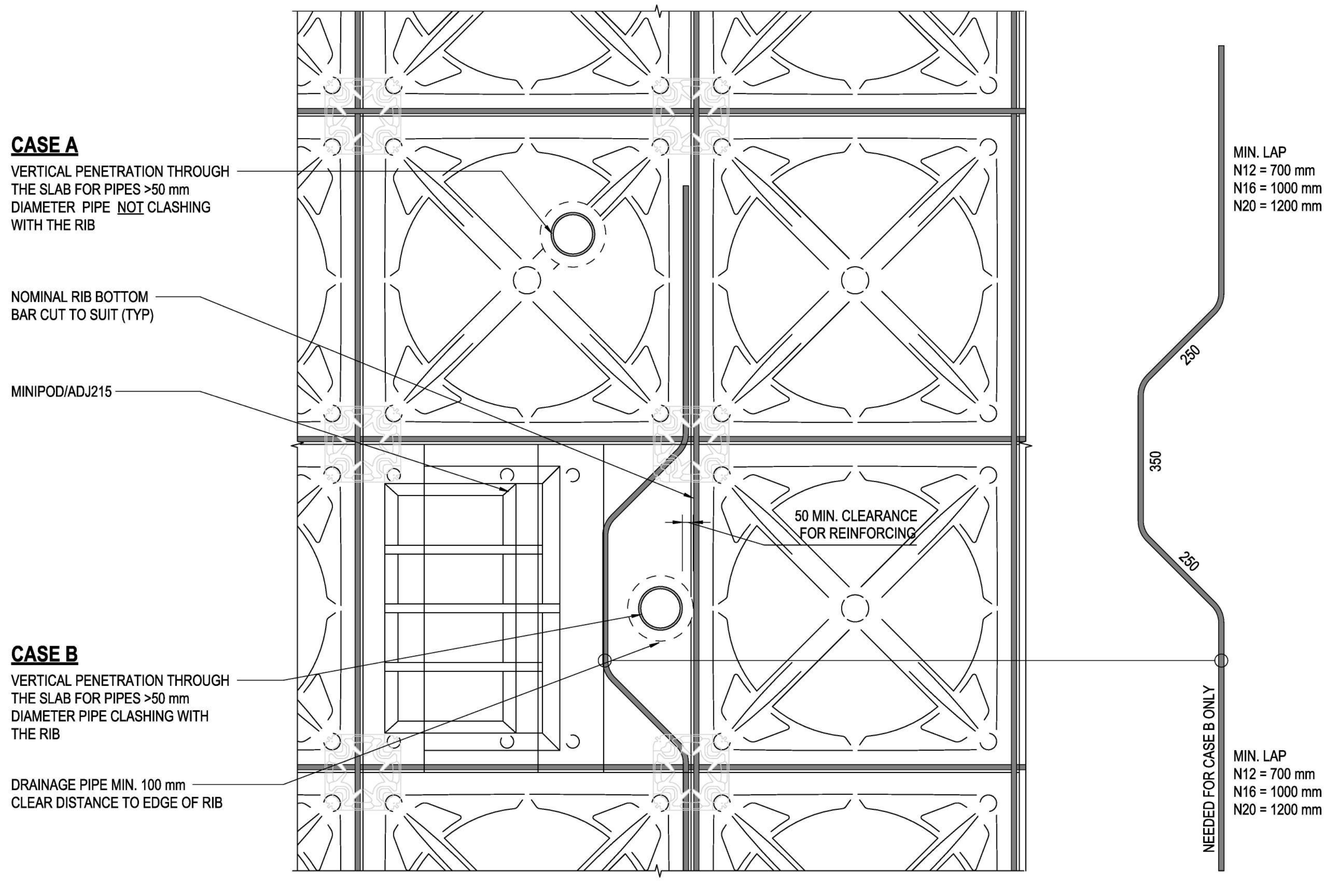
SCALE AS SHOWN

FORMAT A1



SECTION ALONG THE PIPE LINE

MINIMUM PIPE LAGGING	
SOIL CLASS	LAGGING THK (T)
P/M	25 mm



PLAN VIEW

NOTE: REINFORCING MESH OMITTED FOR CLARITY

1 TYPICAL VERTICAL PENETRATIONS DETAIL AT INTERNAL RIB LOCATION

NTS

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CLIENT INFO

NAME [redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

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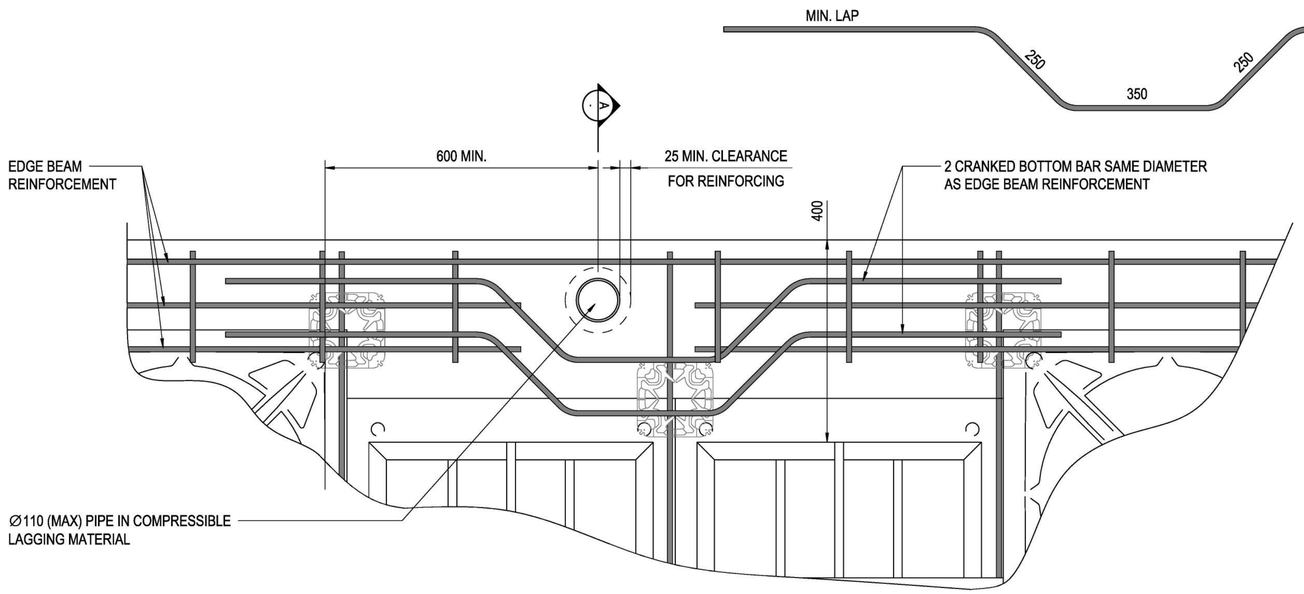
Assessor name: Brian Gunther
Accreditation No.: DMN/15/1582
Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
http://www.hero-software.com.au/pdf/HR-D5N226-02

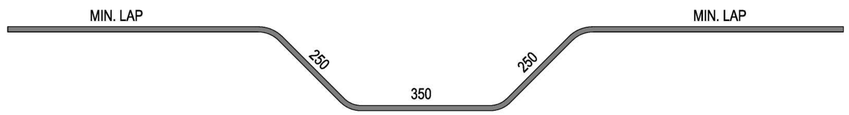
SHEET NAME

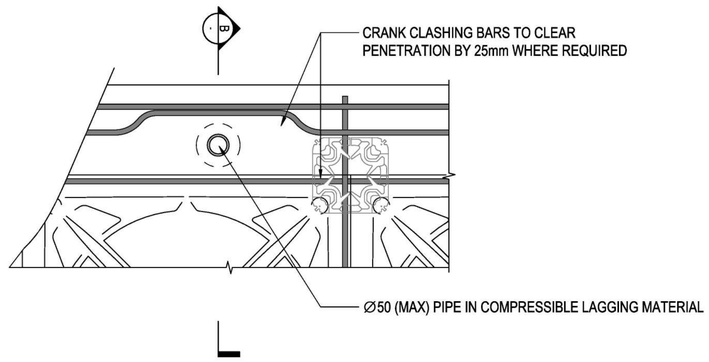
TYPICAL - FOOTING & SLAB DETAILS (BIAX)

SHEET NUMBER	REVISION
S14	A

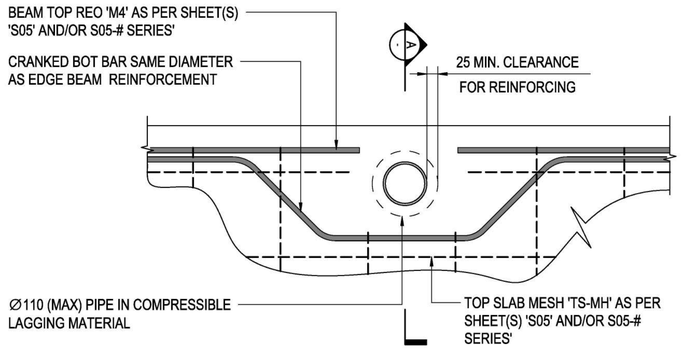
PROJECT NUMBER	SCALE	FORMAT
2500037	AS SHOWN	A1



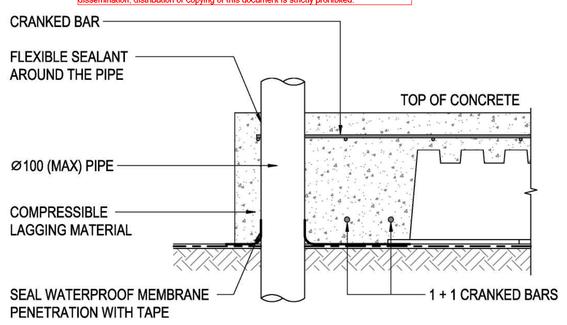




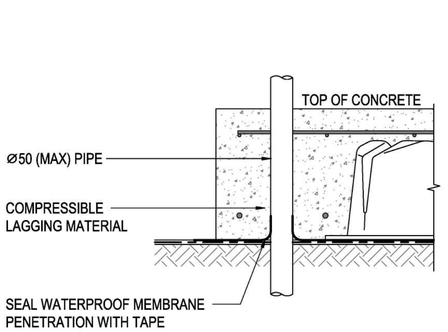
BOTTOM REINFORCING



TOP REINFORCING



SECTION - A



SECTION - B

1 TYPICAL VERTICAL PENETRATIONS DETAIL AT EDGE BEAM LOCATION (WITHOUT REBATE)

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REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
A	ISSUED FOR CLIENT REVIEW	23/01/25	AF	RQ	SJL

IMPORTANT NOTES:

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CLIENT INFO

NAME: M[redacted]
P

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

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Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
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SHEET NAME

TYPICAL - FOOTING & SLAB DETAILS (BIAX)

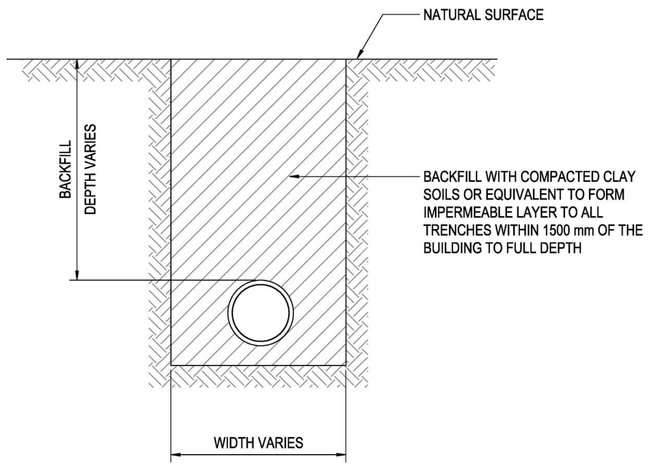
SHEET NUMBER S15

REVISION A

PROJECT NUMBER 2500037

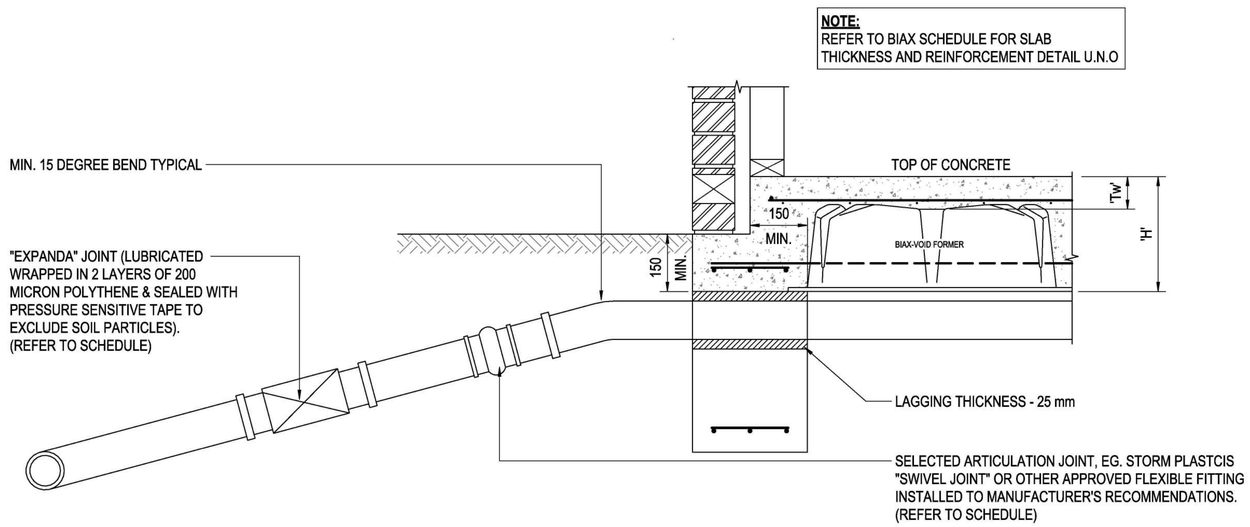
SCALE AS SHOWN

FORMAT A1



1 TYPICAL CLAY PLUG DETAIL

NTS

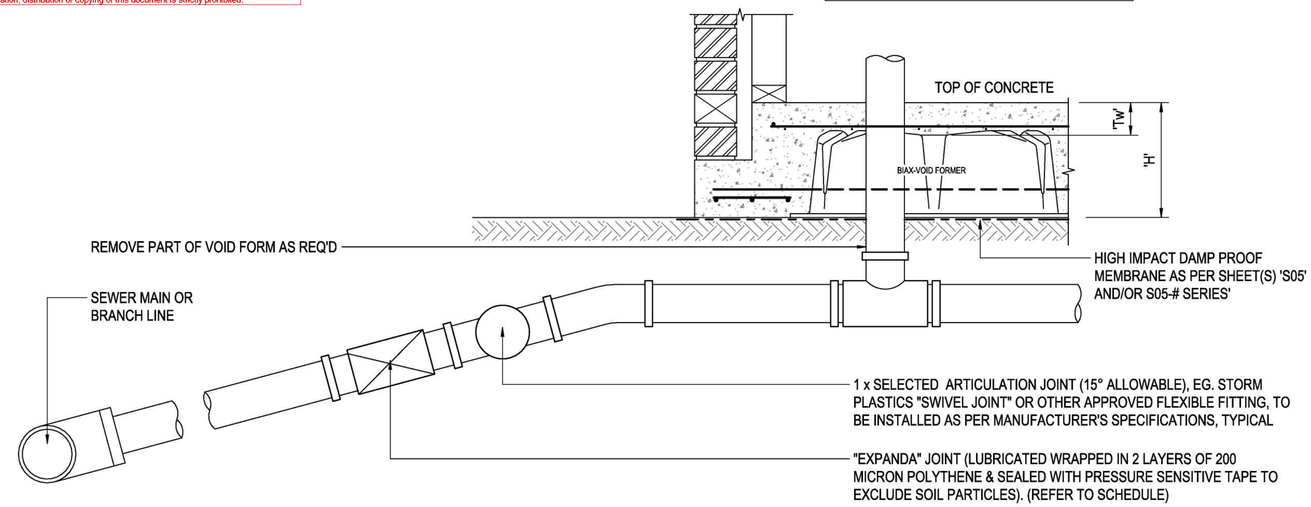


2 TYPICAL PIPE THROUGH FOOTING DETAIL - SECTION

NTS

MINIMUM REQUIREMENTS FOR SEWER ARTICULATION			
SOIL CLASS	DESIGN Y_S MOVEMENT (mm)	SEWER EXIT POINTS & ORG	
		SWIVEL	EXPANDER
P/M	$20< Y_S \leq 40$	1	1

NOTE:
MAX. DEPTH OF SEWER TO UNDERSIDE OF SLAB TO BE 600 mm FOR CLASS H1. OTHERWISE EXPANDER REQUIRED



3 UNDER BIAX SEWER DRAIN DETAIL CLASS P SITE

NTS

Certificate No. #HR-D5N226-02
Scan QR code or follow website link for rating details.
Assessor name: Brian Gunther
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CLIENT INFO

NAM[redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

SHEET NAME

TYPICAL - FOOTING & SLAB DETAILS (BIAX)

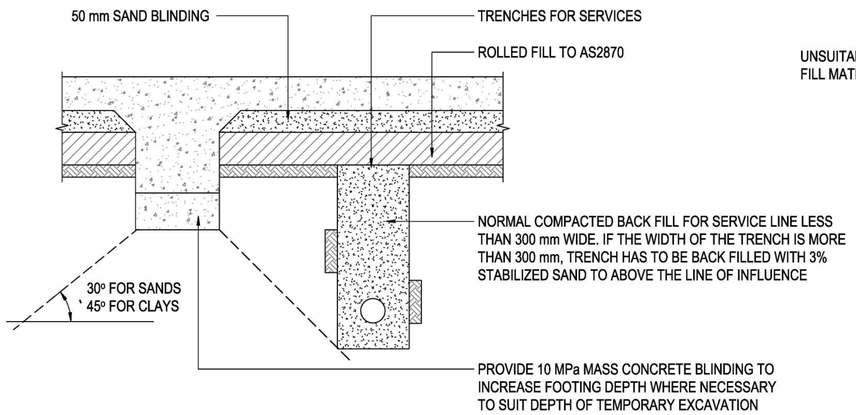
SHEET NUMBER S16

REVISION A

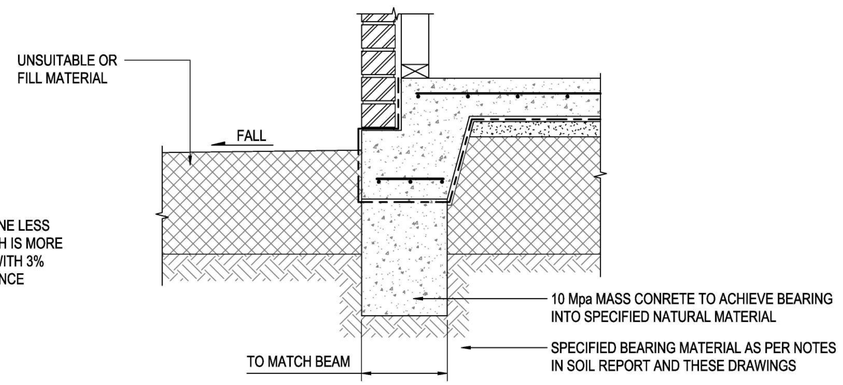
PROJECT NUMBER 2500037

SCALE AS SHOWN

FORMAT A1

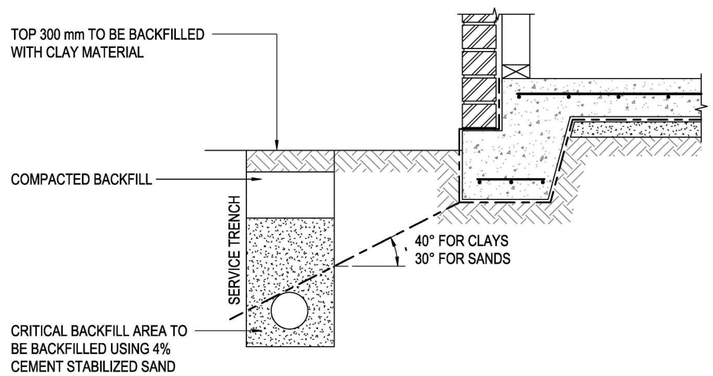


1 TYPICAL TRENCH BACK FILL DETAILS
1 : 10



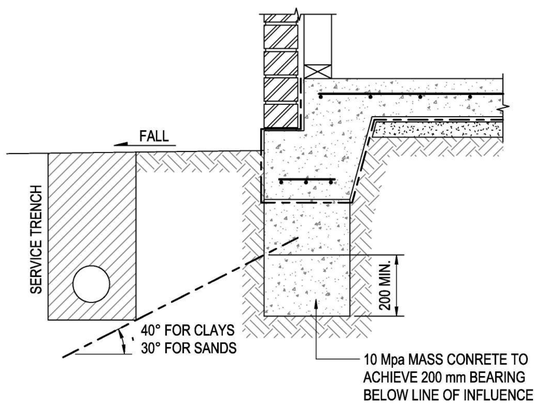
NOTE: STABILITY OF SERVICE TRENCHES TO BE MAINTAINED DURING CONSTRUCTION

2 TYPICAL UNDERPIN DETAIL TO ACHIEVE MINIMUM BEARING
1 : 10



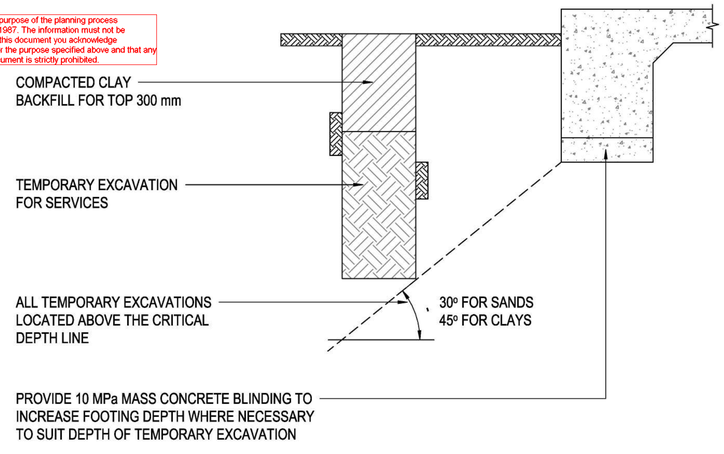
NOTE: STABILITY OF SERVICE TRENCHES TO BE MAINTAINED DURING CONSTRUCTION

3 TYPICAL SERVICE TRENCH
1 : 10



NOTE: STABILITY OF SERVICE TRENCHES TO BE MAINTAINED DURING CONSTRUCTION

4 TYPICAL UNDERPIN DETAIL AT EXISTING SERVICE TRENCH
1 : 10



NOTE: ENSURE TRENCHES GRADE AWAY FROM STRUCTURE

5 TYPICAL TEMPORARY EXCAVATION
1 : 10

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MIEAust - NER (Mech & Struct):.....7120849
RPE NSW (Mech & Struct):.....PRE0002298
RPE VIC (Mec & Struct):.....PE0010096
RPE QLD (Mech & Struct):.....28994
RPE TAS (Mech & Struct):.....708732979

REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
A	ISSUED FOR CLIENT REVIEW	23/01/25	AF	RQ	SJL

IMPORTANT NOTES:

- DO NOT SCALE FROM THE DRAWINGS.
- ALL MEASUREMENTS ARE IN MILLIMETRES U.N.O.
- ALL LEVELS ARE IN METERS U.N.O.
- FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
- CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONSTRUCTION METHODOLOGY ON SITE AND SEEK INSTRUCTIONS BEFORE PROCEEDING IF ANY DISCREPANCIES ARE FOUND
- CONTACT CRESCO AUSTRALIA EVER IN DOUBT REGARDING DRAWING AND/OR SPECIFICATIONS.

CLIENT INFO

NAME: [redacted]

BLDG. DESIGN BY: CREATION HOMES

creationhomes

DOCUMENT INFO

TYPE: STRUCTURAL ENGINEERING DESIGN

PROJECT INFO

NAME: PROPOSED NEW RESIDENCE
ADDRESS: PAKENHAM ROAD, PAKENHAM VIC 3810
LOT: 130
LGA: CARDINIA SHIRE COUNCIL

Certificate No. #HR-D5N226-02
Scan QR code or follow website link for rating details.
Assessor name: Brian Gunther
Accreditation No.: DMN/15/1682
Property Address: LOT 130 PAKENHAM ROAD, PAKENHAM , VIC, 3810
http://www.hero-software.com.au/p/d/H1-D5N226-02

SHEET NAME

TYPICAL - FOOTING & SLAB DETAILS

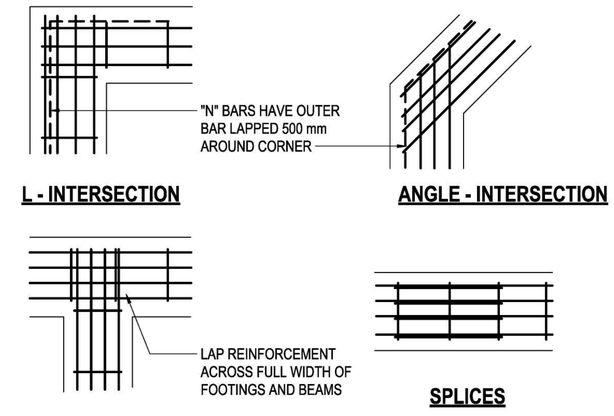
SHEET NUMBER S17

REVISION A

PROJECT NUMBER 2500037

SCALE

FORMAT A1



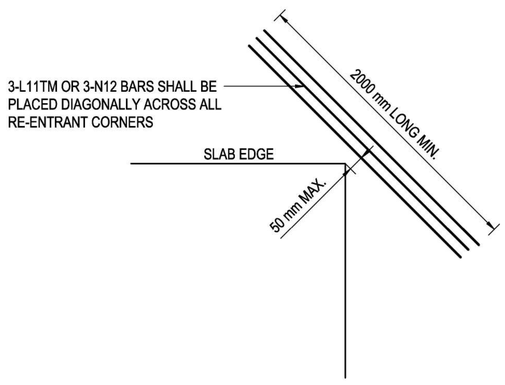
NOTE: DETAILS ARE TYPICAL FOR TOP AND BOTTOM OF STRIP FOOTINGS AND BOTTOM OF RAFT SLAB BEAMS

MINIMUM LAP REQUIREMENTS

REINFORCEMENT	MIN. SPLICES	MIN. LAP AT "T" INTERSECTIONS	MIN. LAP AT "L" INTERSECTIONS
N12 BARS	700 mm	FULL WIDTH OF JUNCTION	MIN 500
N16 BARS	1000 mm	FULL WIDTH OF JUNCTION	FULL WIDTH OF JUNCTION
N20 BARS	1200 mm	FULL WIDTH OF JUNCTION	FULL WIDTH OF JUNCTION
TRENCH MESH	500 mm	FULL WIDTH OF JUNCTION	FULL WIDTH OF JUNCTION

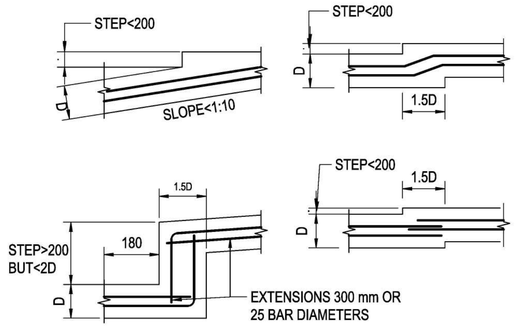
1 REINFORCEMENT LAPPING DETAILS

1 : 10



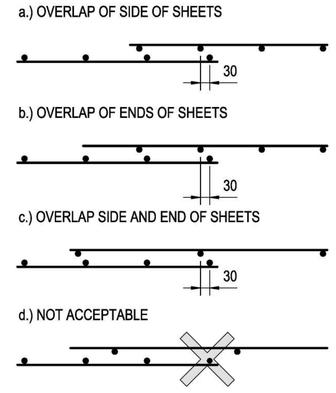
3 RE-ENTRANT CORNER DETAIL

NTS



2 ACCEPTABLE METHODS OF STEPPING STRIP FOOTINGS (IF REQ'D)

1 : 10



NOTE: THE WIRE ORIENTATION IS ILLUSTRATIVE ONLY

4 ALTERNATIVE METHODS OF LAPPING OF FABRIC

1 : 10

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SHEET NAME

TYPICAL - FOOTING & SLAB DETAILS

SHEET NUMBER S18

REVISION A

PROJECT NUMBER 2500037

SCALE AS SHOWN

FORMAT A1