PROPOSED: NEW RESIDENCE 1

CLIENT: R. LANDER

LOCATION: 29 MYALL STREET, TEA GARDENS

LOT 14 DP: 13103

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IT IS THE BUILDER'S RESPONSIBILITY TO CONFIRM THE EXACT DEPTH AND LOCATION OF SERVICES ON SITE PRIOR TO CONSTRUCTION. SERVICES NOT SHOWN ON DRAWINGS SHOULD BE REPORTED TO POSITIVE FIX PTY LTD IMMEDIATELY

Certificate No. 0009834620
Scan QR code or follow website link for rating details.
Assessor name Joseph Lorriman
Accreditation No. DMN/16/1742
Property Address 29 Myall Street,TEA GARDENS NSW,2324
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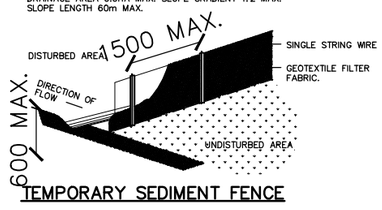
PLAN SCHEDULE

DATE	REV	DESCRIPTION
15.6.22	A	draft floor plan
20.9.24	B	draft engineering plan
18.10.24	C	Engineering plans
19.05.25	D	External wall color

DRAINAGE AREA 0.6HA MAX. SLOPE GRADIENT 1:2 MAX.
SLOPE LENGTH 60m MAX.



TEMPORARY SEDIMENT FENCE

SEDIMENT CONTROL NOTES
1. ALL EROSION & SEDIMENTATION CONTROL MEASURES, INCLUDING REVEGETATION & STORAGE OF SOIL & TOPSOIL, SHALL BE IMPLEMENTED TO THE STANDARDS OF THE SOIL CONSERVATION OF NSW.
2. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED & STABILISED AS EARLY AS POSSIBLE.
3. SEDIMENT TRAPS SHALL BE CONSTRUCTED AROUND ALL INLET PITS, CONSISTING OF 300 WIDE x 300 DEEP TRENCH.
4. ALL SEDIMENT BASINS & TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A 60% FULL OF SOIL MATERIALS, INCLUDING MAINTENANCE PERIOD.
5. ALL DISTURBED AREAS SHALL REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
6. SOIL & TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES & AREA WHERE WATER MAY CONCENTRATE.
7. FILTER SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT) BETWEEN POST AT 1500 CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.

GENERAL NOTES:
1. SHD drawings shall be read in conjunction with all other relevant SHD documentation.
2. Dimensions shall not be scaled from the plans.
3. All dimensions shall be checked by the builder prior to work commencing with NO RESPONSIBILITY IS TAKEN
4. When setting out, dimension shown shall be verified by the builder
5. All dimensions are in millimetres and all levels are in metres unless noted otherwise
6. Levels shown are approximate and to be confirmed by builders surveyer
7. These drawings shall be read in conjunction with all other relevant drawings, including other consultants drawings & specifications included. Any discrepancies shall be referred to the builder.

STRUCTURAL ELEMENTS OF THIS PROJECT HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING CODES:

AS 1170	STRUCTURAL DESIGN ACTIONS – GENERAL PRINCIPLES
AS 1170.1	STRUCTURAL DESIGN ACTIONS – PERMANENT IMPOSED & OTHER ACTIONS
AS 1170.2	STRUCTURAL DESIGN ACTIONS – WIND
AS 1170.4	EARTHQUAKE LOADINGS
AS 1684	RESIDENTIAL TIMBER FRAME CONSTRUCTION
AS 1720	TIMBER STRUCTURES
AS 2870	RESIDENTIAL SLABS & FOOTINGS
AS 3600	CONCRETE STRUCTURES
AS 3700	MASONRY STRUCTURES
AS 4100	STEEL STRUCTURES
AS 4678	EARTH RETAINING STRUCTURES
AS 4773	MASONRY IN SMALL BUILDINGS
AS 1748	TIMBER MECHANICALLY STRESS GRADED FOR STRUCTURAL PURPOSE
AS 2858	SOFTWOOD VISUALLY STRESS GRADED FOR STRUCTURAL PURPOSE
AS 2082	HARDWOOD VISUALLY STRESS GRADED FOR STRUCTURAL PURPOSE
AS 3660	TERMITE MANAGEMENT FOR NEW BUILDING WORK
AS 2047	WINDOWS AND EXTERNAL GLAZED DOORS IN BUILDINGS
AS 1288	GLASS IN BUILDINGS
AS 1926	SWIMMING POOL SAFETY

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PROPOSED:	NEW RESIDENCE
FOR:	R. LANDER

SCALE: 1:100 @ A3 | REV. D
DWG NO: 1324 | DATE: JUNE 2022
SHEET: 1 OF 14

DMN Assessor #16/1742 23rd October 2024 Reference: 162/2024

Evergreen Energy Consultants

Email address: enquiries@evergreenec.com.au **Ph: 1300 584 010**

Important Note for Development Applicants:

The following specification was used to achieve the thermal performance values indicated on the Assessor Certificate. If they vary from drawings or other specifications this Specification shall take precedence. If only one specification option is detailed for a building element, that specification must apply to all instances of that element for the whole project. If alternate specifications are detailed, the location and extent of the alternate specification must be detailed below and / or clearly indicated on referenced documentation.

Once the development is approved by the consent authority, these specifications will become a condition of consent and must be included in the built works. If you do not want to include these requirements, the proposed construction varies to those detailed or need further information, please contact Evergreen Energy Consultants.

This assessment has assumed that the BCA provisions for building sealing will be complied with at construction.

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Thermal Performance Specifications

External Wall Construction	*Insulation*	*Colour (Solar Absorbance)*	*Detail*
Fibro Timber Stud Frame Panel Direct Fix	Anti-glare foil with bulk no gap R2.0	Medium	
Metal Clad Timber Stud Frame Direct Fix	Anti-glare foil with bulk no gap R2.0	Medium	
Internal Wall Construction	*Insulation*	*Detail*	
Timber stud frame, direct fix plasterboard	None		
Timber stud frame, direct fix plasterboard	Bulk insulation R2.0	Internal walls adjoining garage	
Ceiling Construction	*Insulation*	*Detail*	
Plasterboard on Timber	Bulk insulation R3.0		
Roof Construction	*Insulation*	*Colour (Solar Absorptance)*	*Detail*
Corrugated Iron	Bulk, reflective side down, no air gap abov R1.3	Medium	17° pitch
Floor Construction	*Insulation*	*Covering*	
300mm Waffle Pod Slab	None	Carpet, Tiles and Bare	

Windows *Glass and frame type*	*U Value*	*SHGC*	*Area m2*
GJA-013-16 A Aluminium framed 6Clr Sliding Windows Single Glazed	6.30	0.73	
GJA-050-01 A Aluminium framed 6Clr Louvre Windows Single Glazed	6.30	0.72	
GJA-090-12 A Aluminium framed 6Clr Bi-Fold Doors Single Glazed	6.04	0.64	

Fixed shading – Eaves	*Width includes guttering, offset is distance above windows*
As drawn	*Nominal only, refer to plan for detail*
Fixed shading – Other	*Verandah to certain units only*
Shaded areas and shade devices as drawn, adjoining buildings and boundary fences	

House 1 – 29 Myall Street, Tea Gardens

SUMMARY OF BASIX COMMITMENTS

This is a summary of the BASIX Commitments as detailed in the BASIX Certificate.
Refer to the CURRENT BASIX Certificate for Complete details.

WATER COMMITMENTS			
Fixtures			
Alternative Water – Rainwater Tank Size 4,000(L) Tank Connected To:			
Laundry W/M Cold Tap One Outdoor Tap			
Fixtures			
3 Star Shower Heads 4 Star Toilet		4 Star Kitchen Taps	4 Star Basin Taps
THERMAL COMFORT COMMITMENTS - Refer to TPA Specification on plans			
ENERGY COMMITMENTS			
Hot Water	Electric heat pump 15 to 20 STCs or better		
Cooling System	Living	1-phase air conditioning – ducted EER 2.5-3.0	
	Bedrooms	1-phase air conditioning – ducted EER 2.5-3.0	
Heating System	Living	1-phase air conditioning – ducted EER 2.5-3.0	
	Bedrooms	1-phase air conditioning – ducted EER 2.5-3.0	
Ventilation	Bathrooms	Fan ducted to roof/facade	Manual on/off
	Kitchen	Fan ducted to roof/facade	Manual on/off
	Laundry	Fan ducted to roof/facade	Manual on/off
Natural Lighting	Window/Skylight in Kitchen		As Drawn
	Window/Skylight in Bathrooms/Toilets		As Drawn
Artificial Lighting (80% fluoro or LED)	Number of bedrooms		All
	Number of Living/Dining rooms		All
	Kitchen		Yes
	All Bathrooms/Toilets		Yes
	Laundry		Yes
	All Hallways		Yes
OTHER COMMITMENTS			
Outdoor clothes line	No	Indoor or sheltered clothes drying line	No
Stove/Oven	Electric cooktop, electric oven		
Other			

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WINDOW SCHEDULE

MARK	HEIGHT	WIDTH	SHADING
W1	1700	2200	EAVE
W2	1700	2200	EAVE
W3	1460	1800	EAVE
W4	1460	1800	EAVE
W5	1460	2400	ALFRESCO ROOF
W6	1460	1500	ALFRESCO ROOF
W7	2350	3200	ALFRESCO ROOF
W8	2000	1800	NONE
W9	1460	1200	NONE
W10	1200	2100	NONE
W11	600	600	NONE
W12	600	800	NONE

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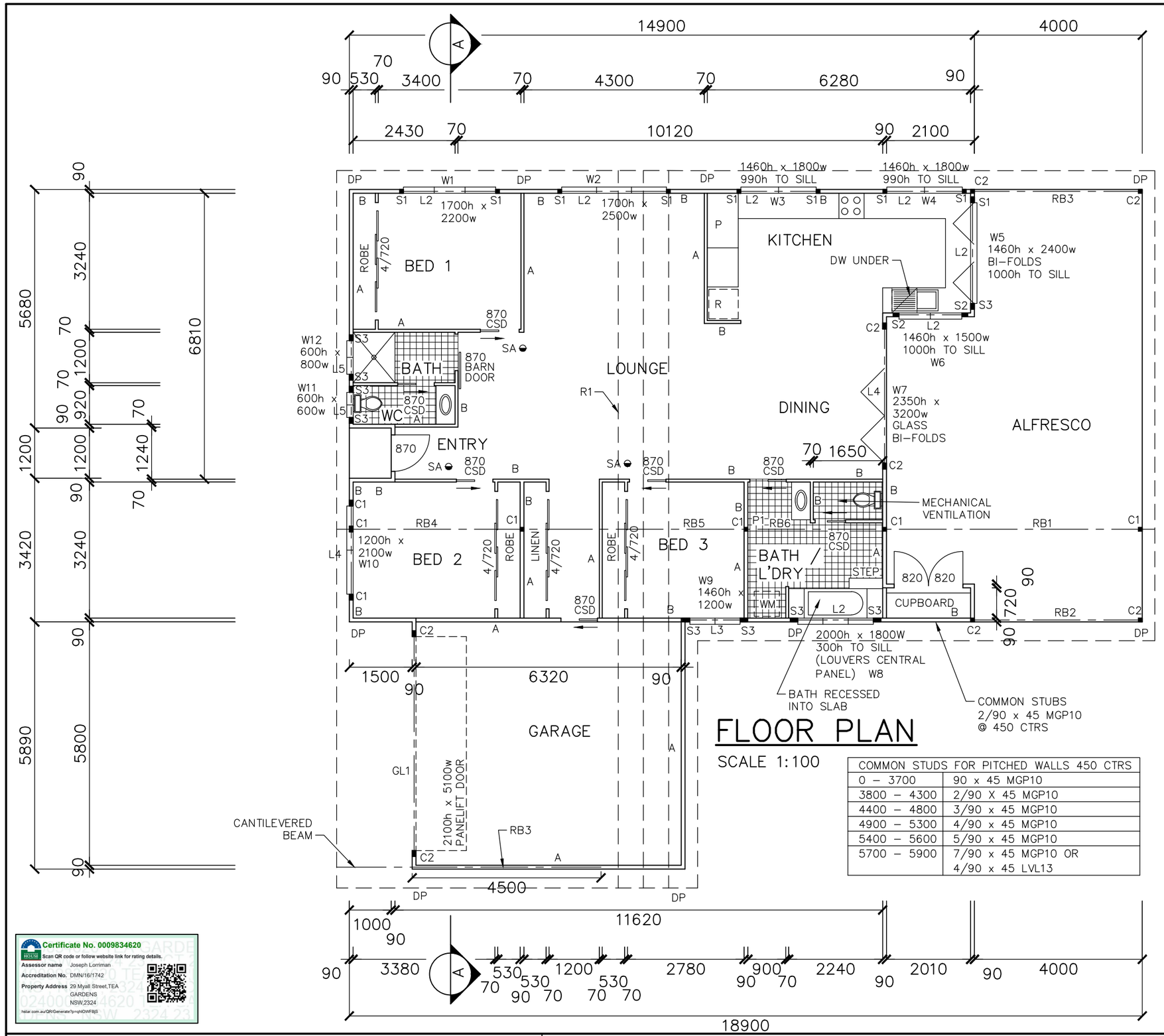
DWG NO: 1324 | DATE: JUNE 2022 | SHEET: 2 OF 14

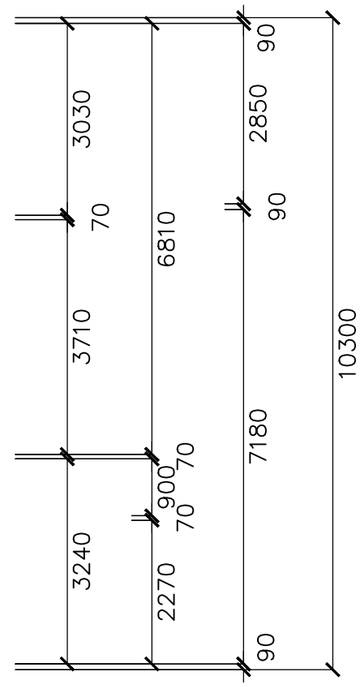


A DENOTES STRAP BRACING I.A.W. TABLE 8.18 (d) OF AS1684.2

B DENOTES PLYWOOD SHEET BRACING I.A.W. TABLE 8.18 (G) OF AS1684.2

SA SMOKE ALARM HARD WIRED

DP DOWN PIPE



FLOOR PLAN

SCALE 1:100

COMMON STUDS FOR PITCHED WALLS 450 CTRS	
0 – 3700	90 x 45 MGP10
3800 – 4300	2/90 X 45 MGP10
4400 – 4800	3/90 x 45 MGP10
4900 – 5300	4/90 x 45 MGP10
5400 – 5600	5/90 x 45 MGP10
5700 – 5900	7/90 x 45 MGP10 OR 4/90 x 45 LVL13

MEMBER SCHEDULE

MARK	MEMBER
RB1	250 PFC
RB2	240 x 45 LVL13
RB3	300 x 63 LVL13
RB4	2/300 x 63 LVL13, NAIL LAMINATED
RB5	2/360 x 63 LVL13, NAIL LAMINATED
RB6	2/200 x 63 LVL13, NAIL LAMINATED
GL1	2/300 x 45 LVL13, NAIL LAMINATED
L1	200 x 45 LVL 13
L2	190 x 45 MGP10
L3	140 x 45 MGP10
L4	150 PFC
L5	120 x 45 MGP10
R1	2/360 x 45 LVL13, NAIL LAMINATED @ 450 CTRS
R1	360 x 63 LVL13 @ 450 CTRS
S1	2/90 x 45 MGP10, NAIL LAMINATED
S2	3/90 x 45 MGP10, NAIL LAMINATED
S3	4/90 x 45 MGP10, NAIL LAMINATED
C1	89 x 89 x 5.0mm SHS
C2	89 x 89 x 3.5mm SHS

NOTES:
BEAMS NOT SPECIFIED ARE TO BE NOMINATED BY FRAME SUPPLIER.

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Principal Engineer

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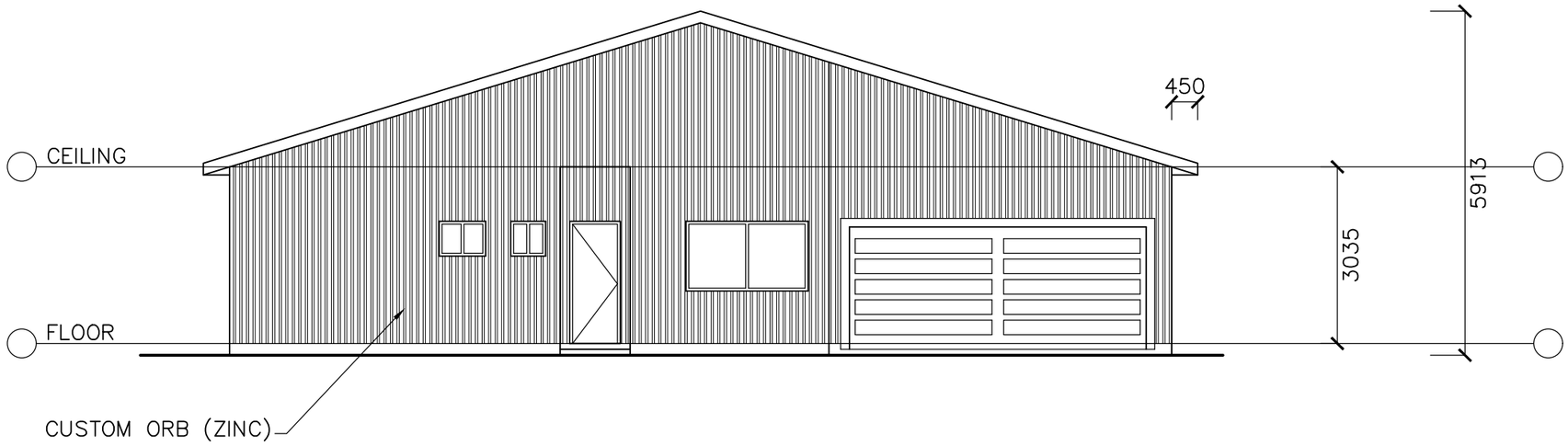
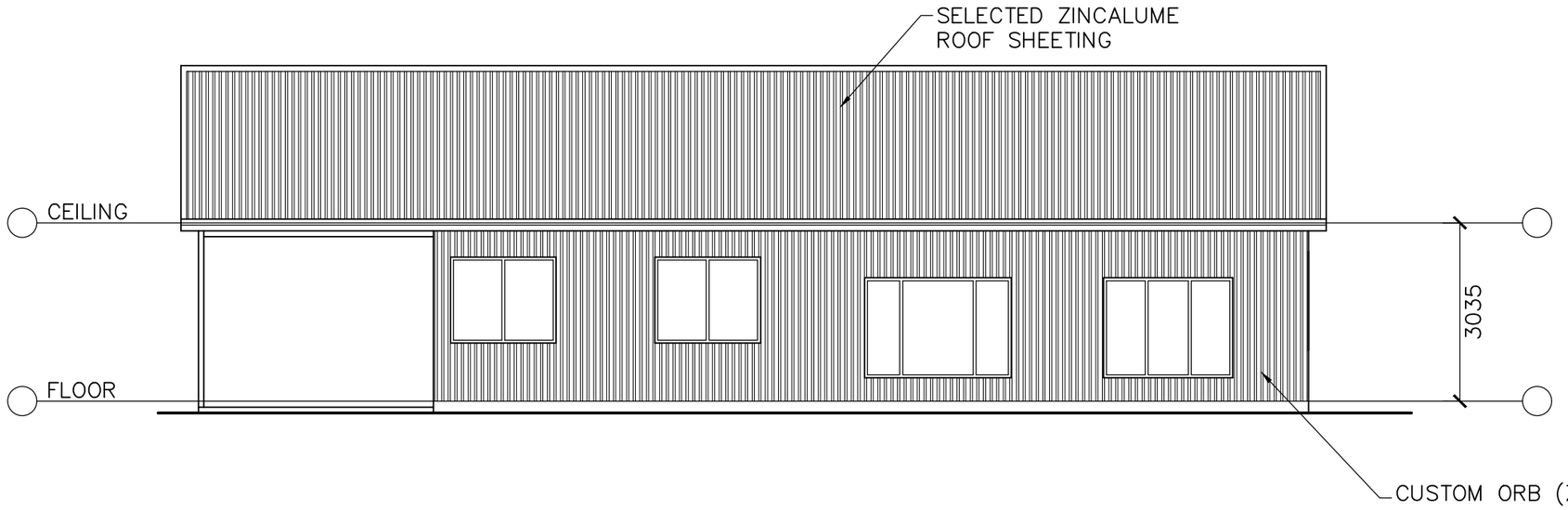


WESTERN ELEVATION

SCALE 1:100



NORTHERN ELEVATION

SCALE 1:100

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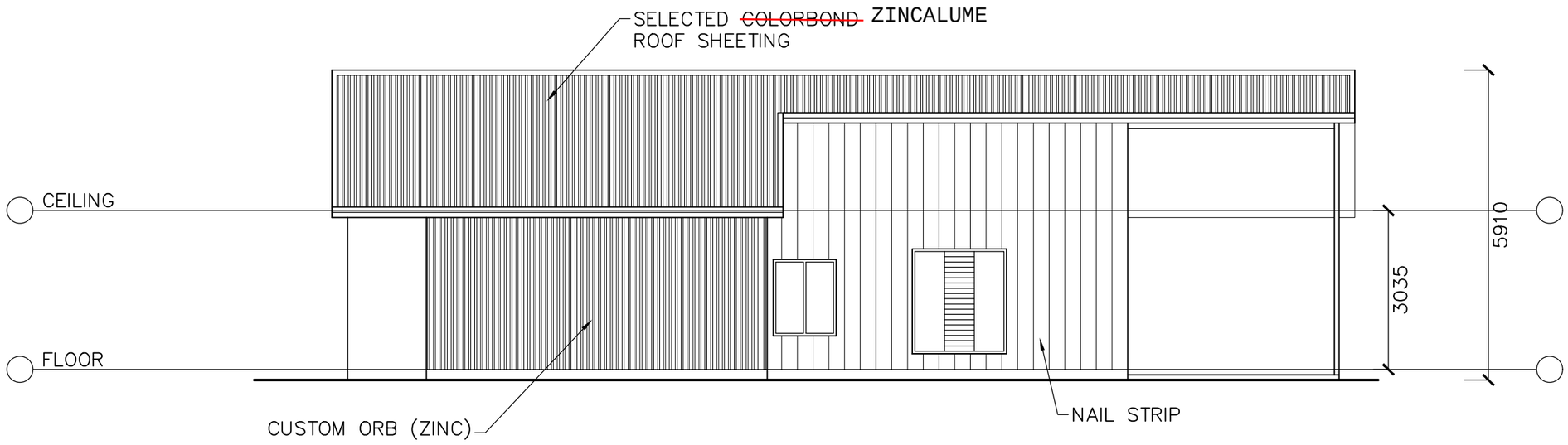
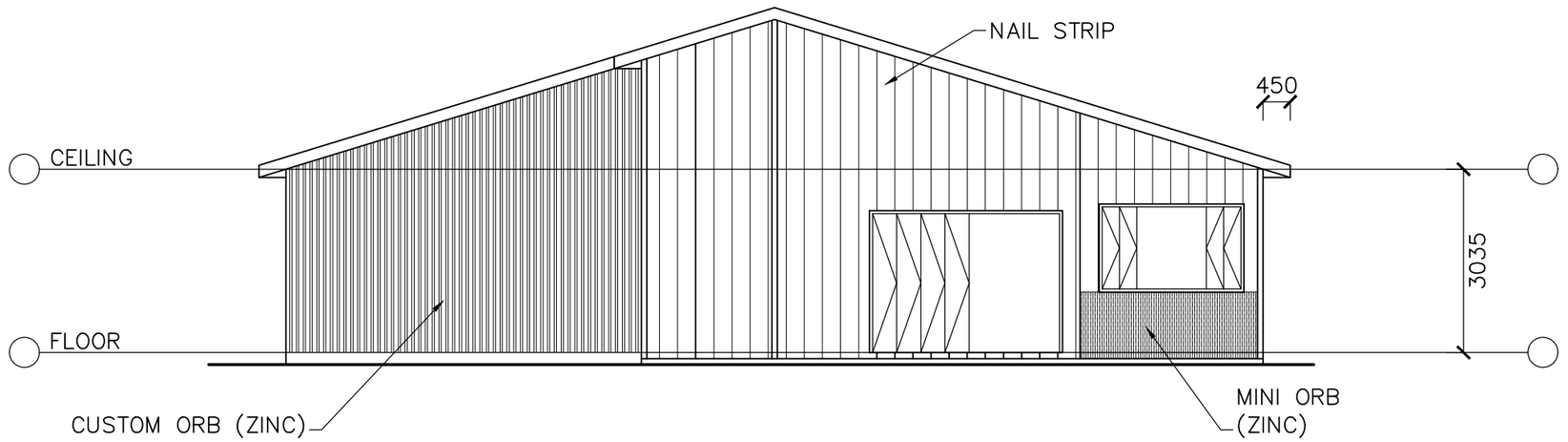


SOUTHERN ELEVATION

SCALE 1:100



EASTERN ELEVATION

SCALE 1:100

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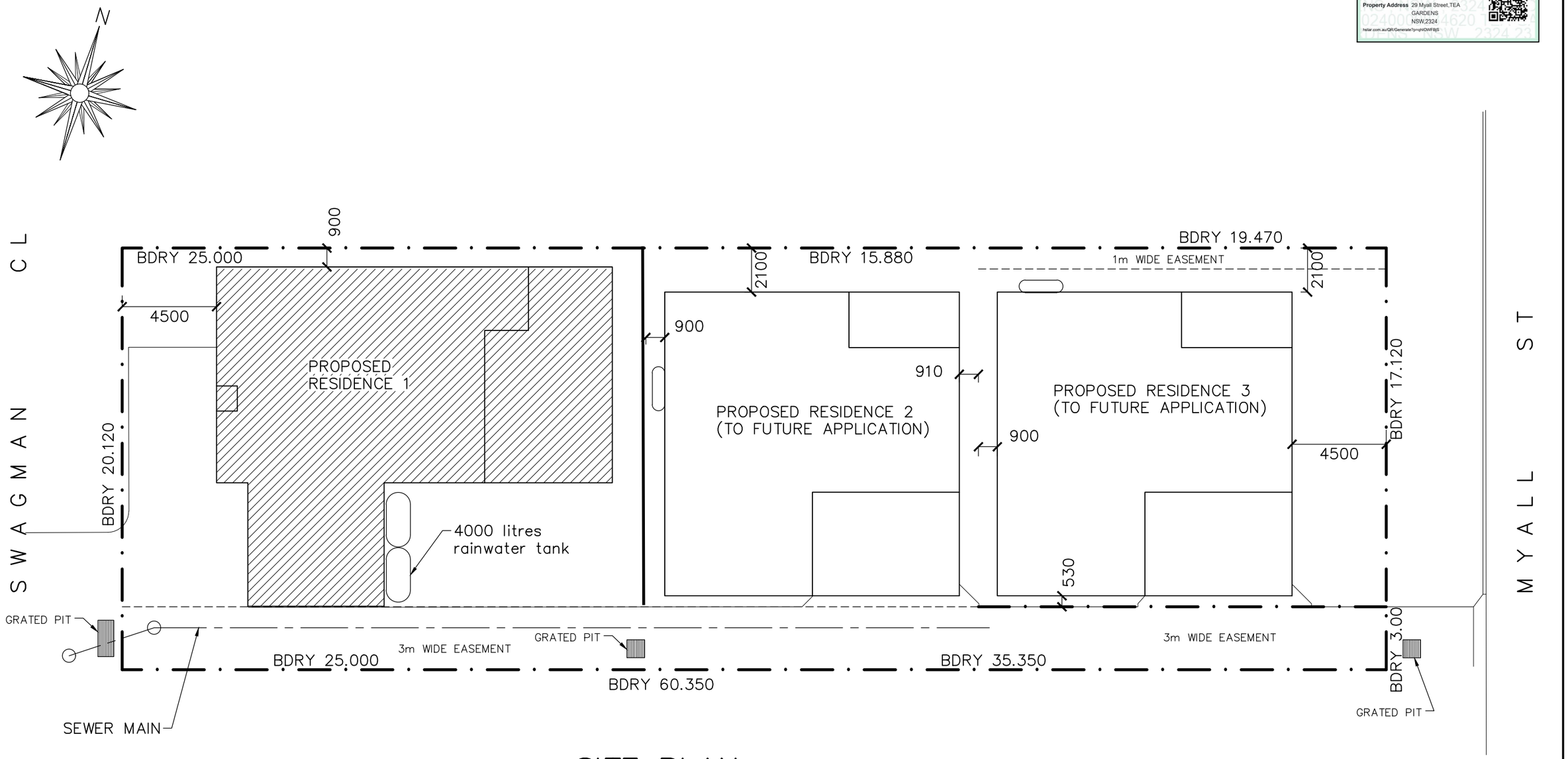

SITE PLAN

SCALE 1:200

SITE AREA 503 SQ M
RESIDENCE AREA 233 SQ M
SITE COVERAGE 0.46

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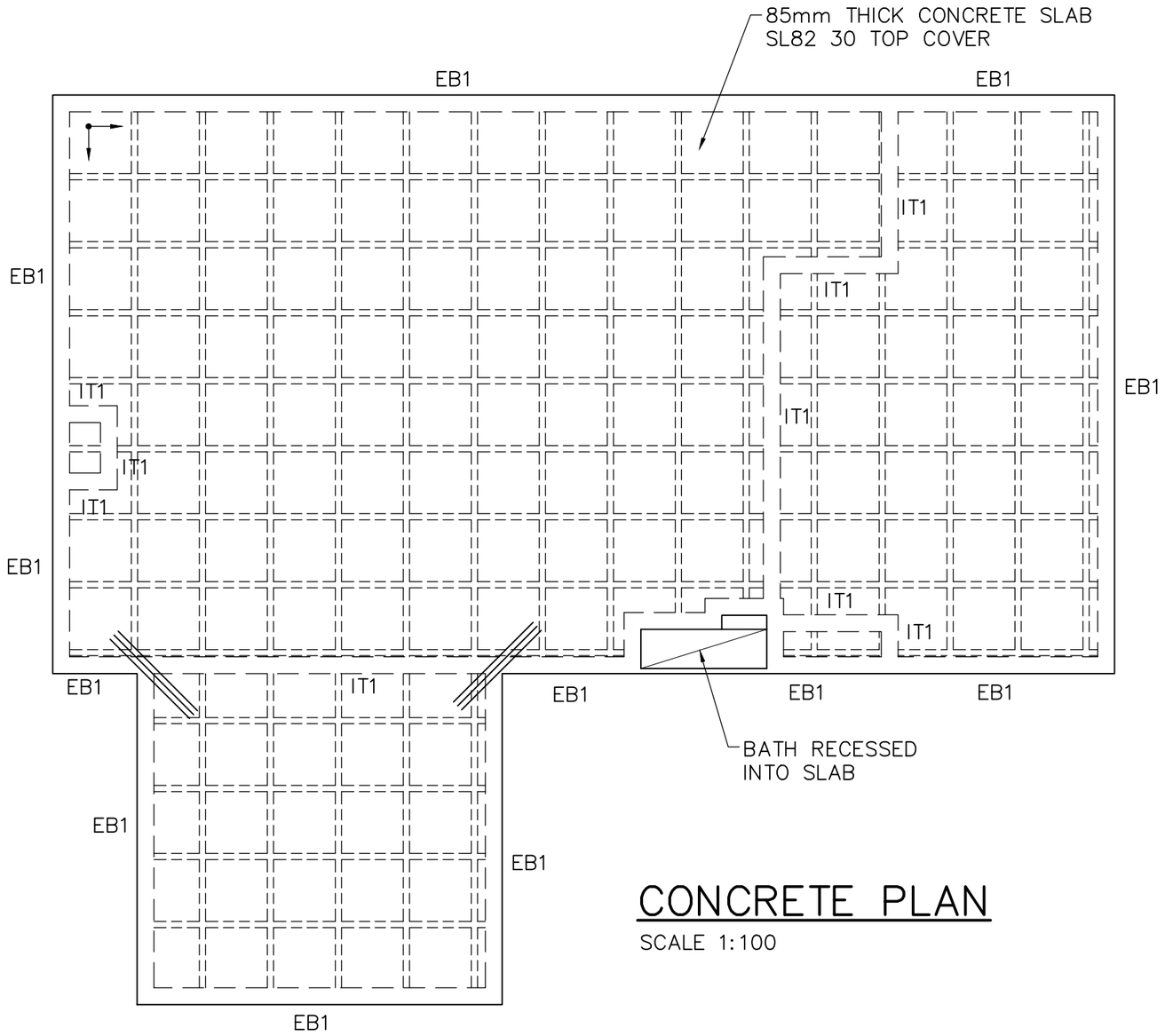

CONCRETE PLAN

SCALE 1:100

LEGEND

INDICATES LOCATION OF FULL POD FOR SETOUT POINT.

DENOTES 3 N12 TRIMMERS, 2000 LONG, TIED TO U/S OF MESH. FIRST BAR 50mm FROM RE-ENTRANT CORNER.

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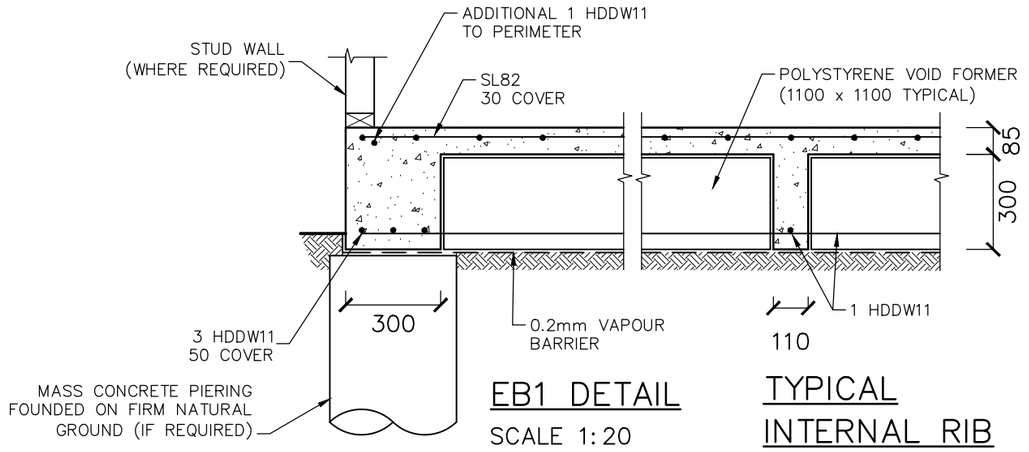
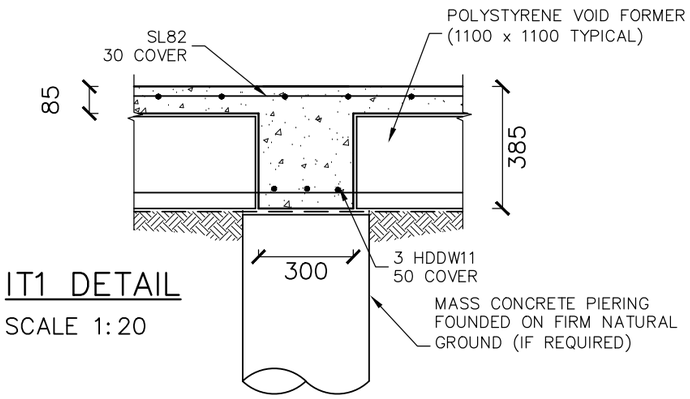


EB1 DETAIL

SCALE 1:20

TYPICAL INTERNAL RIB

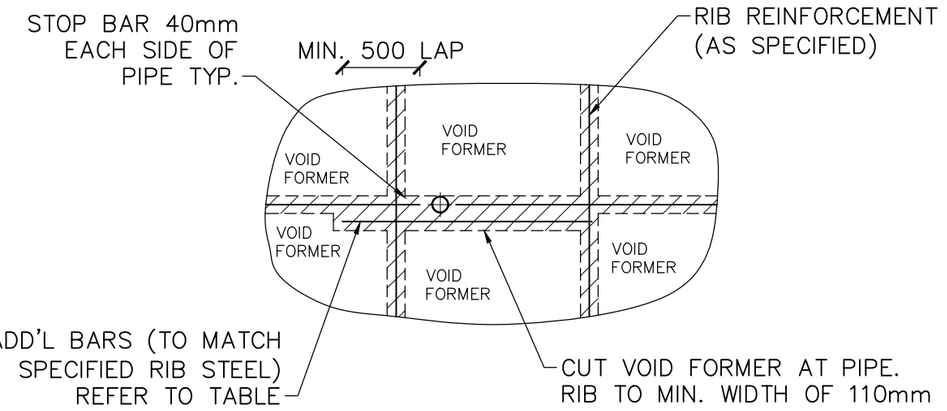
SCALE 1:20



IT1 DETAIL

SCALE 1:20

STEM WIDTH (mm)	ADD'L No. OF TOP BARS	ADD'L No. OF BTM BARS
110 TO 150	0	1–N12
151 TO 220	1–N12	2–N12
221 TO 330	2–N12	3–N12
331 TO 440	3–N12	4–N12
> 441	CONSULT ENGINEER	



PIPE PENETRATION THROUGH RIB–PLAN

N.T.S.

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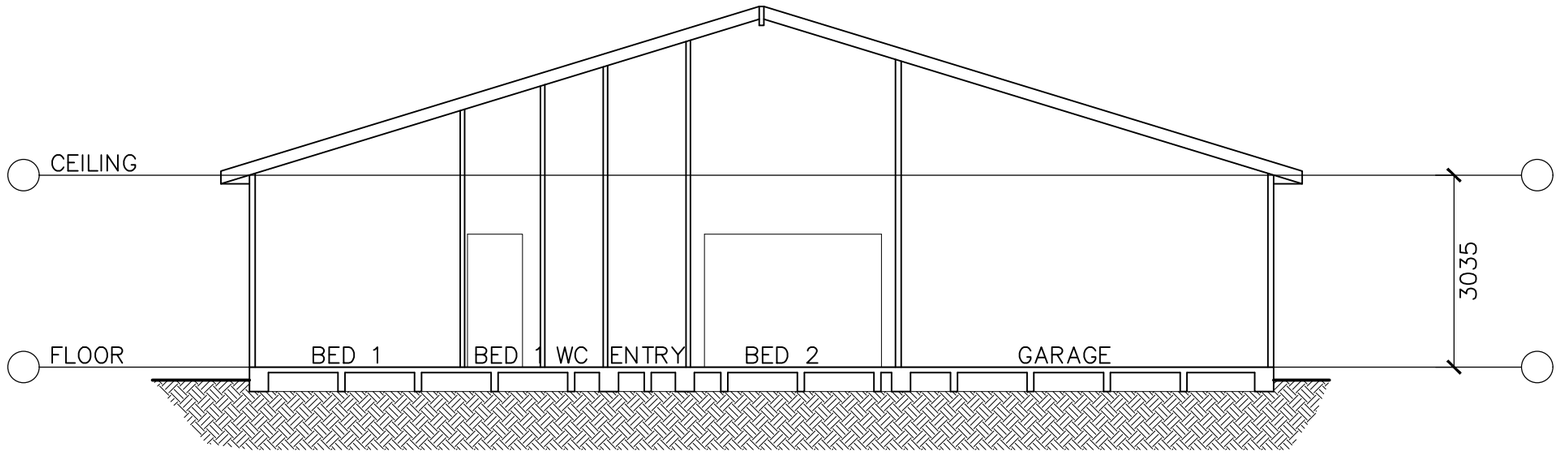
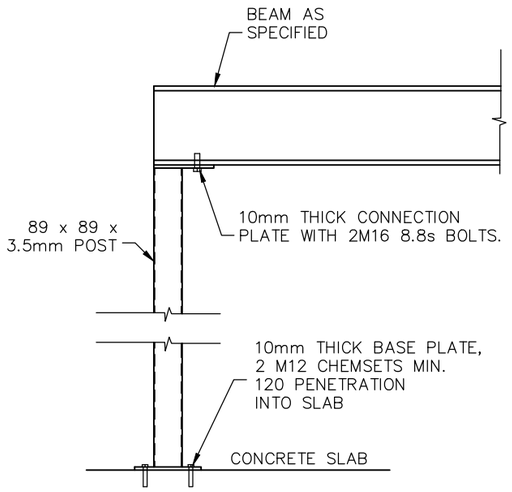


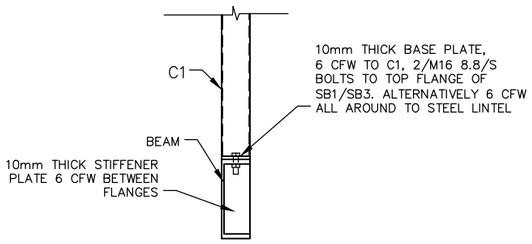
SECTION A–A

SCALE 1:100



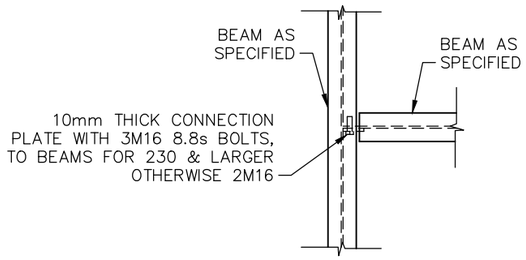
TYPICAL CONNECTION DETAIL

SCALE 1:20



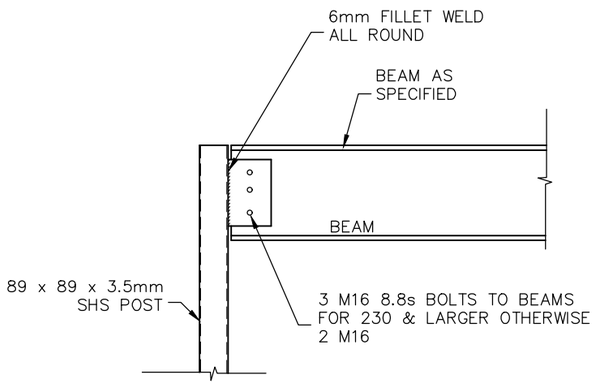
C1 TO BEAM/LINTEL CONNECTION DETAIL

SCALE 1:20



BEAM CONNECTION DETAIL PLAN

SCALE 1:20



ALTERNATIVE CONNECTION DETAIL

SCALE 1:20

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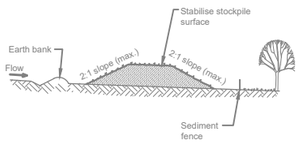
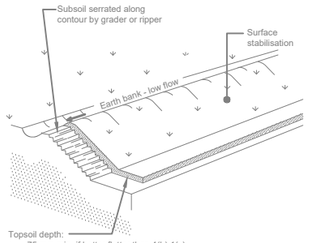


Construction Notes

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the c-factor to less than 0.10.
5. Construct earth banks (standard drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (standard drawing 6-8) 1 to 2 metres downslope.

STOCKPILES SD 4-1

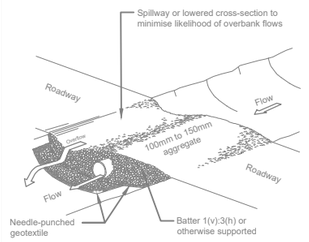


Topsoil depth:
- 75 mm min. if batter flatter than 4(h):1(v).
- 40 mm to 60 mm if batter steeper than 4(h):1(v).
- Specialised techniques required if batter slopes steeper than 2(h):1(v).

Construction Notes

1. Scarify the ground surface along the line of the contour to a depth of 50 mm to 100 mm to break up any hardsetting surfaces and to provide a good bond between the respread material and subsoil.
2. Add soil ameliorants as required by the ESCP or SWMP.
3. Rip to a depth of 300 mm if compacted layers occur.
4. Where possible, replace topsoil to a depth of 40 to 60 mm on lands where the slope exceeds 4(H):1(V) and to at least 75 mm on lower gradients.

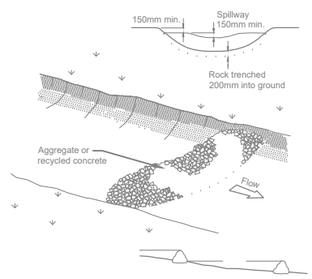
REPLACING TOPSOIL SD 4-2



Construction Notes

1. Prohibit all traffic until the access way is constructed.
2. Strip any topsoil and place a needle-punched textile over the base of the crossing.
3. Place clean, rigid, non polluting aggregate or gravel in the 100 mm to 150 mm size class over the fabric to a minimum depth of 200 mm.
4. Provide a 3-metre wide carriageway with sufficient length of culvert pipe to allow less than a 3(H): 1 (V) slope on side batters.
5. Install a lower section to act as an emergency spillway in greater than
6. Ensure that culvert outlets extend beyond the toe of fill embankments.

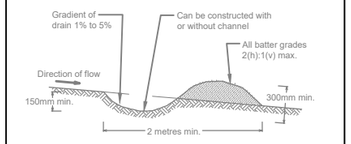
TEMPORARY WATERWAY CROSSING SD 5-1



Construction Notes

1. Check dams can be built with various materials, including rocks, logs, sandbags and straw bales. The maintenance program should ensure their integrity is retained, especially where constructed with straw bales. In the case of bales, this might require their replacement each two to four months.
2. Trench the check dam 200 mm into the ground across its whole width. Where rock is used, fill the trenches to at least 100 mm above the ground surface to reduce the risk of undercutting.
3. Normally, their maximum height should not exceed 600 mm above the gully floor. The centre should act as a spillway, being at least 150 mm lower than the outer edges.
4. Space the dams so the toe of the upstream dam is level with the spillway of the next downstream dam.

ROCK CHECK DAM SD 5-4

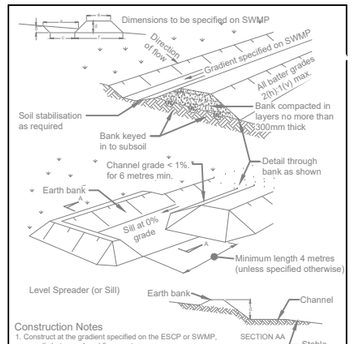


NOTE: Only to be used as temporary bank where maximum upslope length is 80 metres.

Construction Notes

1. Build with gradients between 1 percent and 5 percent.
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction.

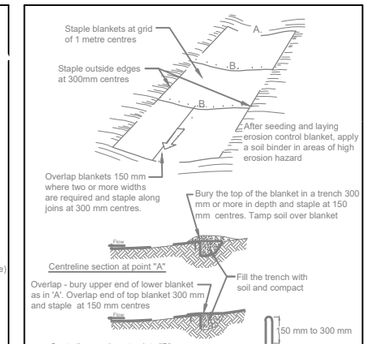
EARTH BANK (LOW FLOW) SD 5-5



Construction Notes

1. Construct at the gradient specified on the ESCP or SWMP, normally between 1 and 5 percent
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V-shaped, at the dimensions shown on the SWMP.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction following Table 5.2 in Landcom (2004).
7. Where discharging to erodible lands, ensure they outlet through a properly constructed level spreader.
8. Construct the level spreader at the gradient specified on the ESCP or SWMP, normally less than 1 percent or level.
9. Where possible, ensure they discharge waters onto either stabilised or undisturbed disposal sites within the same subcatchment area from which the water originated. Approval might be required to discharge into other subcatchments.

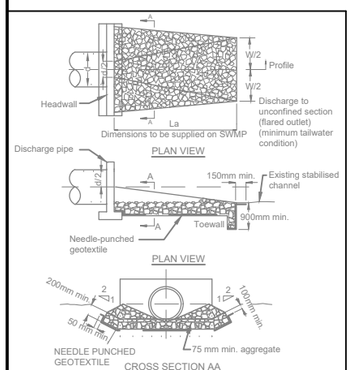
EARTH BANK (HIGH FLOWS) SD 5-6



Construction Notes

1. Remove any rocks, clods, sticks or grass from the surface before laying matting
2. Ensure that topsoil is at least 75 mm deep.
3. Complete fertilising and seeding before laying the matting.
4. Ensure fabric will be continuously in contact with the soil by grading the surface carefully first.
5. Lay the fabric in "shingle-fashion", with the end of each upstream roll overlapping those downstream. Ensure each roll is anchored properly at its upslope end.
6. Ensure that the full width of flow in the channel is covered by the matting up to the design storm event, usually in the 10-year ARI time of concentration storm event.
7. Divert water from the structure until vegetation is stabilised properly.

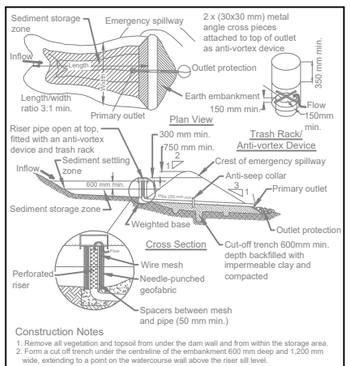
RECP : CONCENTRATED FLOW SD 5-7



Construction Notes

1. Compact the subgrade fill to the density of the surrounding undisturbed material.
2. Prepare a smooth, even foundation for the structure that will ensure that the needle-punched geotextile does not sustain serious damage when covered with rock.
3. Should any minor damage to the geotextile occur, repair it before spreading any aggregate. For repairs, patch one piece of fabric over the damage, making sure that all joints and patches overlap more than 300 mm.
4. Lay rock following the drawing, according to Table 5.2 of Landcom (2004) and with a minimum diameter of 75 mm.
5. Ensure that any concrete or riprap used for the energy dissipater or the outlet protection conforms to the grading limits specified on the SWMP.

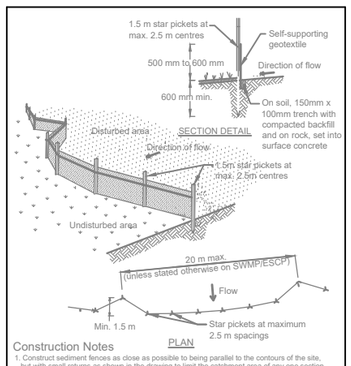
ENERGY DISSIPATER SD 5-8



Construction Notes

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Form a cut off trench under the centreline of the embankment 600 mm deep and 1,200 mm wide, extending to a point on the watercourse wall above the riser sill level.
3. Maintain the trench free of water and recompact the materials with equipment as specified in the SWMP to 95 per cent Standard Proctor Density.
4. Select fill according to the SWMP that is free from roots, wood, rock, large stone or foreign material.
5. Prepare the site under the embankment by ripping to at least 100 mm to help bond the compacted fill to the existing substrate.
6. Spread the fill in 100 mm to 150 mm layers and compact it at optimum moisture content following the SWMP.
7. Install the pipe outlet with seepage collars as specified in the SWMP and Standard Drawing 6-3b.
8. Form batter grades at 2(H):1(V) upstream and 3(H):1(V) downstream or as specified in the SWMP

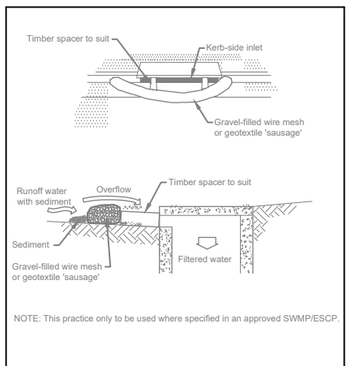
EARTH BASIN - DRY
(APPLIES TO TYPE C SOILS ONLY) SD 6-3



Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE SD 6-8

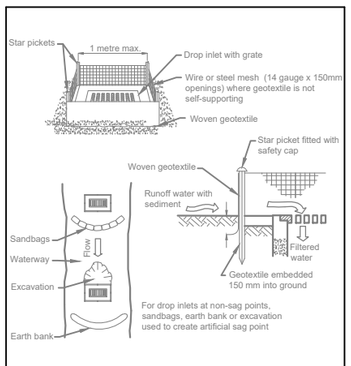


NOTE: This practice only to be used where specified in an approved SWMP/ESCP.

Construction Notes

1. Install filters to kerb inlets only at sag points.
2. Fabricate a sleeve made from geotextile or wire mesh longer than the length of the inlet pit and fill it with 25 mm to 50 mm gravel.
3. Form an elliptical cross-section about 150 mm high x 400 mm wide.
4. Place the filter at the opening leaving at least a 100-mm space between it and the kerb inlet. Maintain the opening with spacer blocks.
5. Form a seal with the kerb to prevent sediment bypassing the filter.
6. Sandbags filled with gravel can substitute for the mesh or geotextile providing they are placed so that they firmly abut each other and sediment-laden waters cannot pass between.

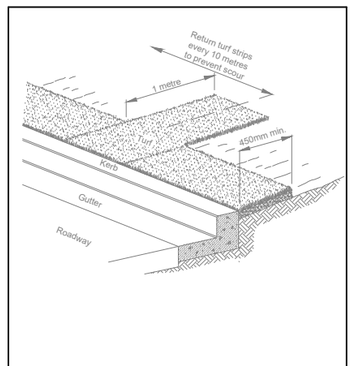
MESH AND GRAVEL INLET FILTER SD 6-11



Construction Notes

1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-8 for installation procedures for the straw bales or geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. Do not cover the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

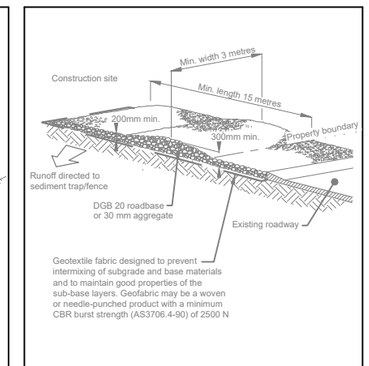
GEOTEXTILE INLET FILTER SD 6-12



Construction Notes

1. Install a 450 mm minimum wide roll of turf on the footpath next to the kerb and at the same level as the top of the kerb.
2. Lay 1.4 metre long turf strips normal to the kerb every 10 metres.
3. Rehabilitate disturbed soil behind the turf strip following the ESCP/SWMP.

KERBSIDE TURF STRIP SD 6-13



Construction Notes

1. Strip the topsoil, level the site and compact the subgrade.
2. Cover the area with needle-punched geotextile.
3. Construct a 200 mm thick pad over the geotextile using road base or 30 mm aggregate.
4. Ensure the structure is at least 15 metres long or to building alignment and at least 3 metres wide.
5. Where a sediment fence joins onto the stabilised access, construct a hump in the stabilised access to divert water to the sediment fence

STABILISED SITE ACCESS SD 6-14

SEDIMENT & EROSION CONTROL DETAILS

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DO NOT SCALE, ONLY REFER TO DIMENSIONS | ALL MEASUREMENTS MUST BE CHECKED BEFORE ANY CONSTRUCTION TAKES PLACE "ON SITE'

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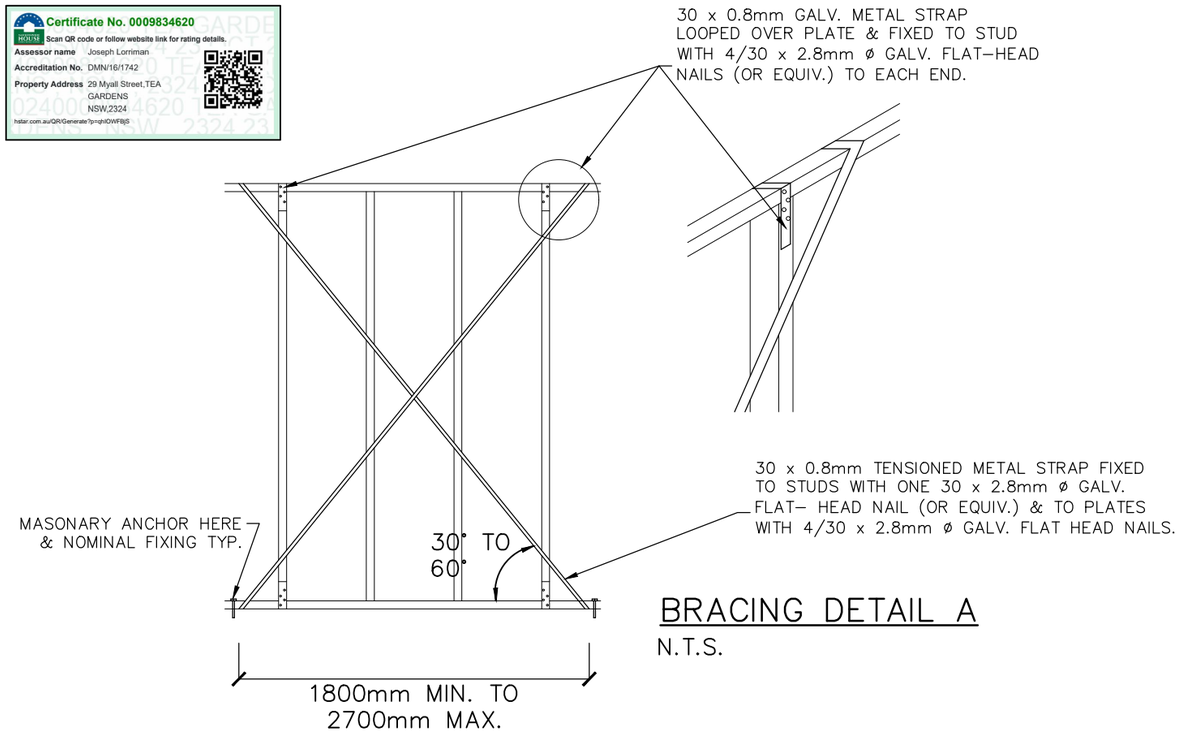
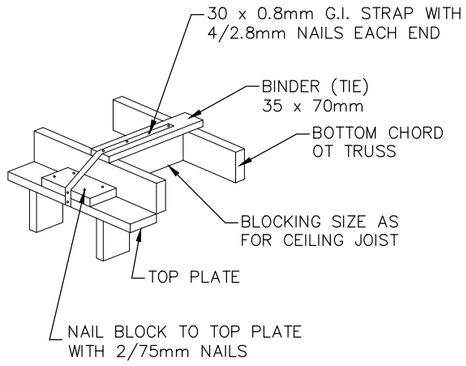
LOCATION:	29 MYALL STREET, TEA GARDENS
PROPOSED:	NEW RESIDENCE
FOR:	R. LANDER

SCALE: @ A3 | REV. D
DWG NO: 1324 | DATE: JUNE 2022 | SHEET: 10 OF 14

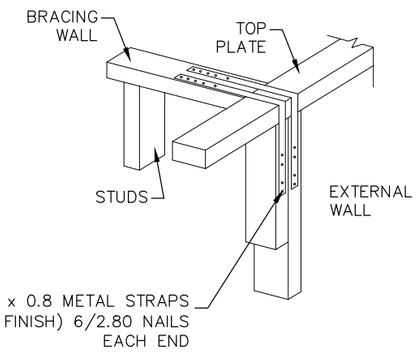


BRACING DETAIL A
N.T.S.

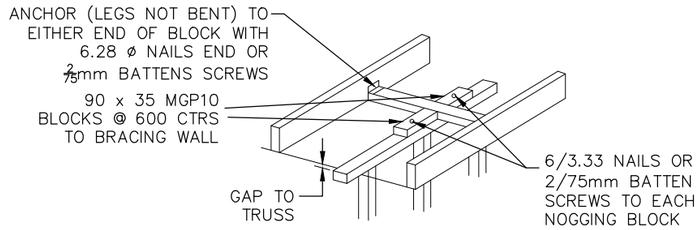


FIXING OF NON– LOADING EXTERNAL WALLS AT MAX. 3000mm CTRS
N.T.S.

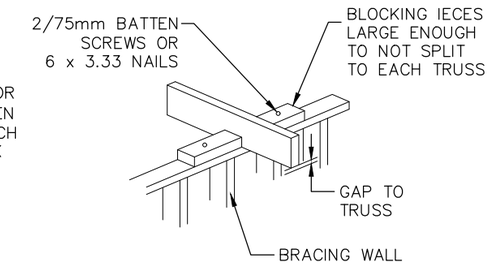
THIS DETAIL WILL TRANSFER A MAX. 1.5m BRACING PANEL IF LENGTH EXCEEDS 1.5m APPLY ADDITIONAL TRANSFER FIXINGS



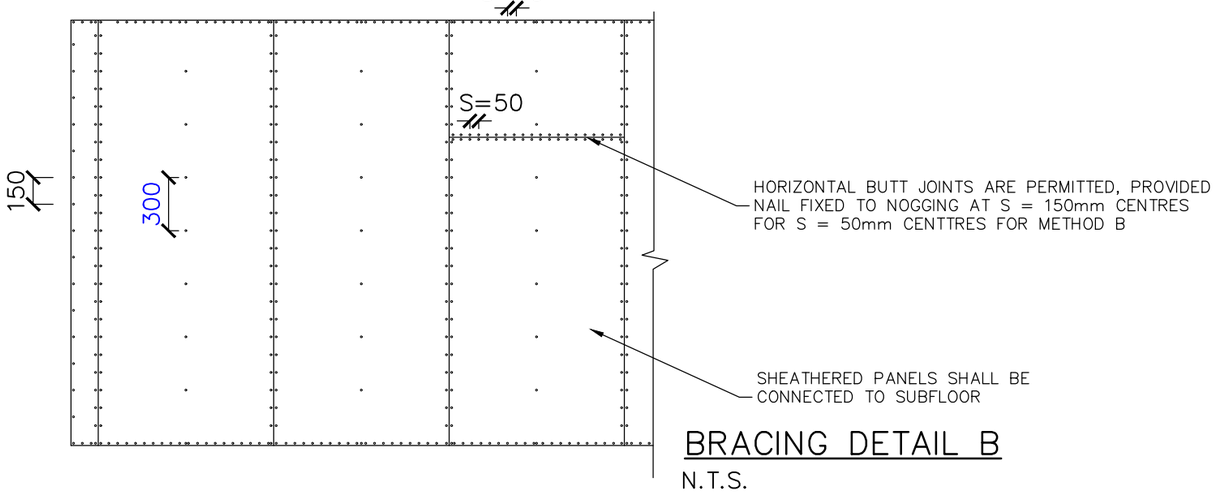
BRACING WALL TO EXTERNAL WALL JUNCTION
N.T.S.



FIXING OF TOP OF BRACING WALLS
BRACING WALLS PARRALEL TO TRUSSES. N.T.S.



FIXING OF TOP OF BRACING WALLS
BRACING WALLS PERPENDICULAR TO TRUSSES. N.T.S.



BRACING DETAIL B
N.T.S.

PLYWOOD SHALL BE NAILED TO FRAME USING 30 x 2.8 ø GALV. FLAT NAILS OR EQUIV.

FIXING OF BOTTOM PLATE TO FLOOR FRAME OR SLAB, A 13KN CAPACITY CONNECTION AT EACH END & INTERMEDIATELY AT MAX. 1200mm CTRS.

MINIMUM PLYWOOD THICKNESS, mm		
STRESS GRADE	STUD SPACING mm	
	450	600
F8	7	9
F11	6	7
F14	4	6
F27	4	4.5

FASTENER SPACING (S) mm	
TOP & BOTTOM PLATE	50
VERTICAL EDGES	150
INTERMEDIATE STUDS	300

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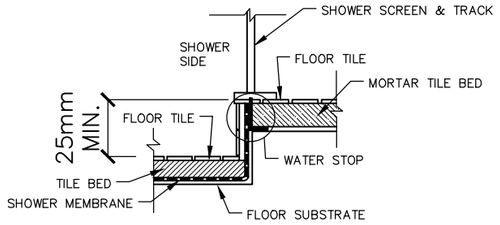
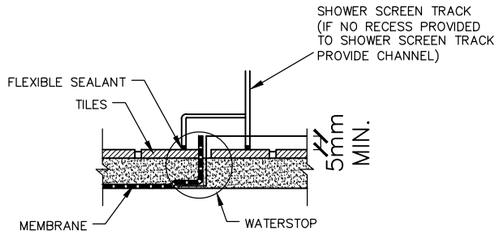
LOCATION:	29 MYALL STREET, TEA GARDENS
PROPOSED:	NEW RESIDENCE
FOR:	R. LANDER

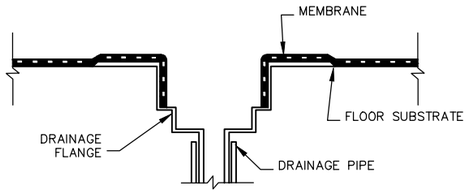
SCALE: 1:100 @ A3 | REV. D
DWG NO: 1324 | DATE: JUNE 2022 | SHEET: 11 OF 14



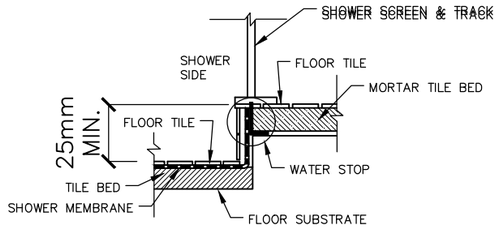
TYPICAL ENCLOSED STEPPED DOWN SHOWER CONSTRUCTION (MEMBRANE BELOW TILE BED)
N.T.S.



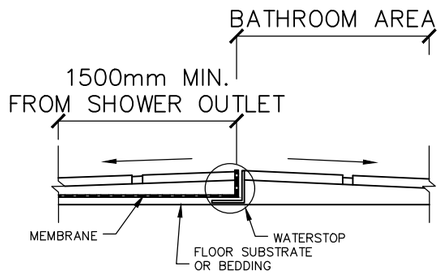
TYPICAL HOBLESS CONSTRUCTION
N.T.S.



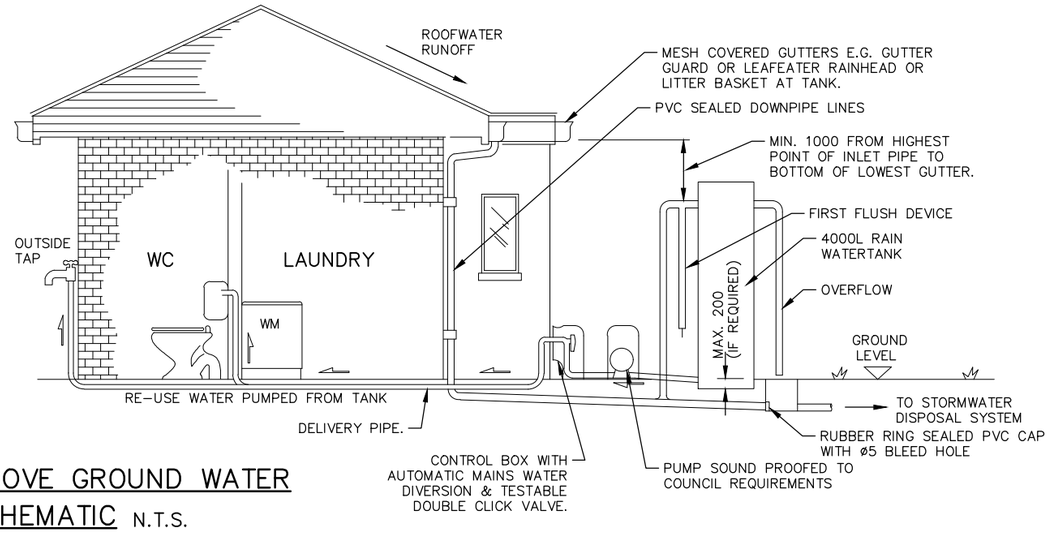
TYPICAL MEMBRANE TERMINATION AT DRAINAGE OUTLET
N.T.S.



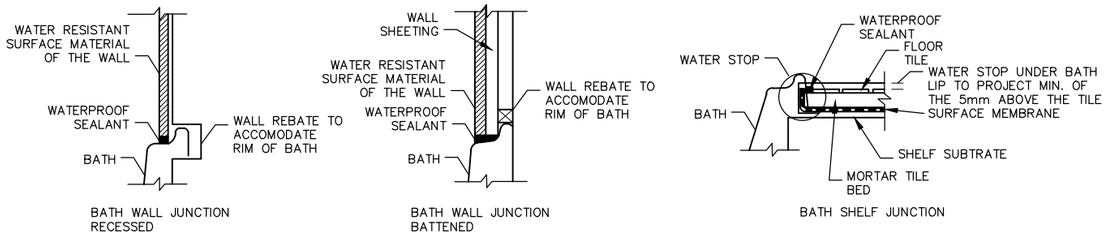
TYPICAL ENCLOSED STEPPED DOWN SHOWER CONSTRUCTION (MEMBRANE ABOVE TILE BED)
N.T.S.



TYPICAL TERMINATION OF MEMBRANE AT EXTENT OF SHOWER AREA
N.T.S.



ABOVE GROUND WATER SCHEMATIC N.T.S.



TYPICAL BATH JUNCTIONS
N.T.S.

STAIRS – RISER & GOING DIMENSIONS

STAIRS	RISER (R)		GOING (G)		SLOP RELATIONSHIP 2R + G	
	MIN	MAX	MIN	MAX	MIN	MAX
OTHER THAN SPIRAL	115	190	240	355	550	700
SPIRAL	140	220	210	370	590	680

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PROPOSED:	NEW RESIDENCE
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SCALE: @ A3 | REV. D
DWG NO: 1324 | DATE: JUNE 2022 | SHEET: 12 OF 14

GENERAL NOTES

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL & OTHER CONSULTANTS DRAWINGS / SPECIFICATIONS & WITH OTHER SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE CONSTRUCTION. ANY DISCEPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE COMMENCING THE WORK.
2. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS NOTED OTHERWISE.
3. THESE DRAWINGS SHALL NOT BE SCALED, REFER TO DIMENSIONS GIVEN ONLY OR REFER TO THE ARCHITECTURAL DRAWINGS.
4. ALL LEVELS & SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK.
5. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION NO PART BEING OVERSTRESSED WITH TEMPORARY SUPPORTS / BRACING INSTALLED AS REQUIRED.
6. THE ENGINEER SHALL APPROVE ANY PROPOSED SUBSTITUTION PRIOR TO THE COMMENCEMENT OF WORKS.

EARTHWORKS

1. THE EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE GEOTECHNICAL REPORT & ENGINEERING SPECIFICATIONS.
2. THE SITE SHALL BE STRIPPED A MINIMUM DEPTH OF 150mm UNDER PAVEMENTS & BUILDINGS TO REMOVE THE TOP SOIL. ANY REMAINING UNCONTROLLED FILL MATTER, ORGANIC MATERIAL, REFUSE OR ROOTS SHALL BE REMOVED.
3. IF A VIBRATING TYPE ROLLER IS USED, CONSIDERATION SHALL BE GIVEN TO THE EFFECTS ON ADJACENT PROPERTIES.
4. ALL FILLING SHALL BE UNDER THE SUPERVISION OF THE PROJECT GEOTECHNICAL ENGINEER WHO SHALL PROVIDE COMPACTION CERTIFICATES TO THE ENGINEER FOR APPROVAL.

I HEREBY CERTIFY THE THE ABOVE MENTIONED WORKS ARE STRUCTURALLY ADEQUATE FOR THEIR INTENDED PURPOSE. THE CERTIFICATION IS LIMITED TO THE STRUCTURAL ELEMENTS DETAILED, AND BASED ON THE WORKS BEING CARRIED OUT IN ACCORDANCE WITH THESE STRUCTURAL / CIVIL PLANS. THE STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING:

- AS/NZ 1170.0:2002: STRUCTURAL DESIGN ACTIONS – GENERAL PRINCIPLES
- AS/NZ 1170.1:2002: STRUCTURAL DESIGN ACTIONS – PERMANENT, IMPOSED & OTHER ACTIONS
- AS/NZS 1170.2:2011: STRUCTURAL DESIGN ACTIONS – WIND ACTIONS
- AS 4055–2012: WIND LOADS FOR HOUSING
- AS 4100–1998: STEEL STRUCTURES
- AS 1163–1991: STRUCTURAL STEEL HOLLOW SECTIONS
- AS/NZ 1111–1996: ISO METRIC HEXAGON COMMERCIAL BOLTS & SCREWS
- AS 3600–2009: CONCRETE STRUCTURES.
- AS 3700–2011: MASONRY STRUCTURES
- AS 2870–2011: RESIDENTIAL SLABS & FOOTINGS CONSTRUCTION
- AS 1684–2010: RESIDENTIAL TIMBER FRAMED CONSTRUCTION
- AS 1720–2010: TIMBER STRUCTURES DESIGN METHODS
- AS 3959–2009: CONSTRUCTION OF BUILDINGS IN BUSHFIRE PRONE AREAS
- BUILDING CODE OF AUSTRALIA (BCA)

ALL WORKS SHALL BE CARRIED BY A LICENSED BUILDER IN ACCORDANCE WITH THE CURRENT EDITION OF THE BUILDING CODE OF AUSTRALIA (BCA) & RELEVANT AUSTRALIA STANDARDS FOR CONSTRUCTION.
BASED ON THE ABOVE PARAMETERS, I HERE CERTIFY THAT THE STRUCTURAL COMPONENTS ARE ADEQUATE UNDER THE IMPOSED LOADING PROVIDED THAT THEY ARE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT STANDARDS.
I CERTIFY THAT I AM A QUALIFIED & PRACTISING STRUCTURAL ENGINEER IN ACCORDANCE WITH REQUIREMENTS OF THE BUILDING CODE OF AUSTRALIA & THE INSTITUTION OF ENGINEERS, AUSTRALIA

FORMWORK:

1. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS3610 & AS3600, EXCEPT WHERE VARIED BY THE PROJECT DOCUMENTATION.
2. THE DESIGN CERTIFICATION & THE PERFORMANCE OF THE FORMWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. DURING CONSTRUCTION SUPPORT PROPPING SHALL BE REQUIRED WHERE THERE ARE LOADS FROM STACKED MATERIALS, FORMWORK & OTHER SUPPORTED SLABS. ONCE THE CONCRETE HAS ACHIEVED ITS NOMINATED 28 DAYS STENGHT, THE IMPOSED LOADS SHALL NOT EXCEED THOSE GIVEN IN THE LOADING TABLE.
4. WITH MULTISTORY CONSTRUCTION, IT IS EXPECTED THAT SUPPORT PROPPING WILL EXTEND A MINIMUM OF 3 LEVELS BELOW THE SLAB BEING POURED. PROP REMOVAL IS TO BE PROGRAMMED SO AS NOT TO OVERSTRESS PREVIOUSLY CAST FLOORS & SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
5. THE SUSPENDED SLABS SHALL BE PROPPED UNTIL THE 28 DAYS STRENGTH HAS BEEN ACHIEVED FOR THE SLABS. THE FORMWORK MAY BE REMOVED ONCE 20 MPa STRENGTH HAS BEEN ACHIEVED, HOWEVER THE SLAB WILL NEED TO BE BACK PROPPED UNTIL 28 DAYS STENGTH HAS BEEN ACHIEVED. NO MASONRY OR PARTITION WALLS ARE TO BE CONSTRUCTED ON SUSPENDED LEVELS UNTIL ALL PROPPING IS REMOVED.
6. ALL EXPOSED CORNERS SHALL HAVE A 20mm CHAMFER UNO.
7. ALL FINISHED SHALL BE IN ACCORDANCE WITH THE ARCHITECTURAL SPECIFICATION.

FOUNDATION MAINTENANCE:

1. ALL SOILS ARE AFFECTED BY WATER, SILTS ARE WEAKENED BY WATER & SOME SANDS CAN SETTLE IF HEAVILY WATERED, BUT MOST PROBLEMS ARISE ON CLAY FOUNDATIONS. CLAYS SWELL & SHRINK DUE TO CHANGES IN MOISTURE CONTENT & THE POTENTIAL AMOUNT OF TEH MOVEMENT IS IMPLIED IN THE SITE CLASSIFICATION IN AUSTRALIAN STANDARD AS 2870, WHICH IS SPECIFIED AS FOLLWS:
   A – STABLE (NON – REACTIVE) B – SLIGHTLY REACTIVE
   M – MODERATELY REACTIVE H – HIGHLY REACTIVE
   E – EXTREMELY REACTIVE
2. ALL SITES SHALL BE MAINTAINED AT ESSENTIALLY STABLE MOISTURE CONDITIONS & EXTREMES OF WETTING & DRYING PREVENTED. THIS WILL REQUIRE ATTENTION TO THE FOLLOWING.
3. SITE DRAINAGE: THE SITE SHALL BE GRADED OR DRAINED SO THAT WATER CANNOT POND AGAINST OR NEAR THE HOUSE. THE GROUND IMMEDIATELY ADJACENT TO THE HOUSE SHALL BE GRADED TO A UNIFORM FALL OF 50mm MINIMUM AWAY FROM THE HOUSE OVER THE FIRST METER. THE SUBFLOOR SPACE FOR THE HOUSES WITH SUSPENDED FLOORS SHALL BE GRADED OR DRAINED TO PREVENT PONDING. THE SITE DRAINAGE REQUIREMENTS SHALL BE MAINTAINED.
4. GARDENS: THE GARDENS SHALL NOT INTERFERE WITH DRAINAGE REQUIREMENTS OR THE SUBFLOOR VENTILATION & WEEP HOLES DRAINAGE REQUIREMENTS. GARDEN BEDS ADJACENT TO THE HOUSE SHOULD BE AVOIDED. OVER WATERING OF GARDENS CLOSE TO THE HOUSE SHALL BE AVOIDED.
5. RESTRICTIONS ON TREES / SHRUBS: PLANTING OF TREES SHALL BE AVOIDED NEAR THE FOOTINGS OF THE HOUSE OR NEIGHBORING HOUSE ON REACTIVE SITES AS THEY CAN CAUSE DAMAGE DUE TO DRYING THE CLAY. TO MINIMISE THE POSSIBILITY OF DAMAGE, TREE PLANTING SHOULD BE RESTRICTED TO A DISTANCE FROM THE HOUSE OF:
   – 1.50 x THE MATURE HEIGHT FOR CLASS E SITES.
   – 1.00 x THE MATURE HEIGHT FOR CLASS H SITES.
   – 0.75 x THE MATURE HEIGHT FOR CLASS M SITES
6. WHERE ROWS OR GROUPS OF TREES ARE INVOLVED, THE DISTANCE FROM THE BUILDING SHOULD BE INCREASED. REMOVAL OF TREES FROM THE SITE CAN ALSO CAUSE SIMILAR PROBLEMS.
7. REPAIR OF LEAKS: LEAKS IN PLUMBING, INCLUDING STORMWATER & SEWERAGE DRAINAGE SHOULD BE REPAIRED PROMPTLY.
8. THE OWNERS ATTENTION IS DRAWN TO CSIRO PAMPHLET 'GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE & FOOTING PERFORMANCE'. OWNER SHOULD COMPLY WITH THE RECOMMENDATIONS OF THIS PAMPHLET. THE SITE AROUND THE BUILDING PERIMETER & SERVICE TRENCHES ARE TO BE GRADED TO DRAIN AWAY FROM THE BUILDING PERIMETER.

SAFETY IN DESIGN:

1. WORKSPACE HEALTH & SAFETY (WHS) IS IMPORTANT TO VISION ENGINEERS & 'SAFETY IN DESIGN' IS A CORE COMPONENT OF OUR SERVICE. WE RECOGNISE THAT IDENTIFYING DESIGN SOLUTIONS THAT ELIMINATE HAZARDS, NOT ONLY IMPROVES WHS OUTCOMES, BUT ALSO HAS POTENTIAL TO REDUCE COSTS ASSOCIATED WITH FIXING DESIGN PROBLEMS.
2. UNDER THE NEW HARMONISED MODEL OF WORK HEALTH SAFETY LEGISLATION, THERE A RANGE OF NEW LEGISLATION & REGULATORY REQUIREMENTS, SUPPORTED BY A SUITE OF CODES OF PRACTICE CLARIFYING HOW THESE OBLIGATIONS CAN BE MET. VISION ENGINEERS IS COMMITTED TO ITS LEGISLATIVE OBLIGATIONS. THE COMPONENTS DESIGNED BE VISION ENGINEERS HAVE BEEN DESIGNED IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS & TO MEET THE PERFORMANCE CRITERIA OF THE NATIONAL CONSTRUCTION CODE (NCC). IN THE INSTANCE WE CANNOT FORSEE ANY SIGNIFICANT WHS IMPLICATIONS OR RISKS THAT CAN BE AVOIDED OR MITIGATED BY DESIGN.
3. THE BEAMS, COLUMNS & CONNECTIONS CAN REASONABLY BE EXPECTED TO BE CONSTRUCTED IN ACCORDANCE WITH A CONSTRUCTION PROCESS THAT IS AN 'INDUSTRY STANDARD' CONSTRUCTION PROCESS WITHIN THE CAPABILITIES OF A COMPETENT LICENSED CONTRACTOR. FURTHERMORE, THIS PROCESS IS GENERALLY A LOW RISK OPERATION & THE SITE IN QUESTION DOES NOT POSE ANY UNIQUE RISKS OR HAZARDS. THEREFORE, PROVIDING THAT ALL OTHER PARTIES ASSOCIATED WITH THE DESIGN CONDUCT THEIR DUTIES IN A PROFESSIONAL MANNER & IN ACCORDANCE WITH RELEVANT SAFE WORK AUSTRALIA CODES OF PRACTICE, ALL REQUIREMENTS RELATING TO THE WORK HEALTH & SAFETY ACT 2011 NO. 10 WILL BE SATISFIED. IF YOU REQUIRE & FURTHER INFORMATION PLEASE CONTACT THE VISION ENGINEERS OFFICE.

VEA
Vision Engineers Australia
MPalmer
Murray Palmer
BEng (Civil & Structural) Hons
Member No: 3798337
Principal Engineer

STRUCTURAL STEEL:

1. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS4100 & AS/NZ4600.
2. THE STRUCTURAL DESIGN HAS BEEN BASED ON THE FOLLOWING STEEL GRADES, UNO.
   – HOT ROLLED UNIVERSAL BEAMS, COLUMNS, CHANNELS & ANGLES: 300PLUS
   – CIRCULAR, SQUARE & RECTANGULAR HOLLOW SECTIONS: C350/C450LOC
   – COLD FORMED LIPPED CEE & ZED PURLINS G550/G500/G450
3. THE STRUCTURAL DESIGN HAS BEEN BASED ON MBPMA NOMINAL SIZE CEE & ZED LIPPED PURLINS.
4. QUALIFICATIONS FOR WELDING PROCEDURES & PERSONNEL SHALL CONFORM TO SECTION 4 IF AS 1554.1 NON DESTRUCTIVE TESTING OF WELDS SHALL INCLUDE 100% VISUAL INSPECTION & ADDITIONAL TESTING AS SHOWN ON THE DRAWINGS.
5. ALL WELDS SHALL BE 6mm CONTINUOUS FILLET TYPE GP, UNO. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION IN ACCORDANCE WITH AS1554.1 UNO.
6. BOLT DESIGNATION:
   – 4.6/S – COMMERCAIL BOLTS TO AS 1111, SNUG TIGHTENED.
   – 8.8/S – HIGH STRENGTH STRUCTURAL BOLTS TO AS1562, SNUG TIGHTENED
   – 8.8/TB – HIGH STRENGTH STRUCTURAL BOLTS TO AS1562, FULLY TENSIONED BEARING JOINT.
   – 8.8/TB – HIGH STRENGTH STRUCTURAL BOLTS TO AS1562, FULLY TENSIONED FRICTION JOINT.
7. ALL BOLTS SHALL BE M16 8.8/S, WITH A MINIMUM OF 2 BOLTS PER CONNECTION UNO.
8. FIN PLATES SHALL BE A MINIMUM OF 10mm THICK, GRADE 300PLUS STEEL, UNO.
9. CONCRETE ENCASED STEELWORK SHALL BE WRAPPED WITH SL62 MESH & SHALL HAVE A MINIMUM 50mm OF COVER, UNO.
10. STEELWORK TO BE ENCASED IN CONCRETE SHALL HAVE THE FOLLOWING SURFACE TREATMENT, UNO.

EXPOSURE CLASSIFICATION TO AS3600	STEELWORK PROTECTION REQUIRED
A1 / A2	POWER TOOL CLEAN TO AS1627 CLASS 1, 1 COAT ALKYD PRIMER (ZINC PHOSPHATE)
B1	ABRASIVE BLAST TO AS1627 CLASS 2.5 1 COAT INORGANIC ZINC SILICATE
B2	HOT DIPPED GALVANIZED TO AS1650

11. WHERE SEALED TUBE MEMBERS ARE HOT DIPPED GALVANIZED, THE FABRICATOR SHALL PROVIDE DRILL HOLES TO ALLOW GASES TO ESCAPE.
12. ALL TRANSPORT & ERECTION DAMAGE, SITE WELD ETC, SHALL BE REINSTALLED TO AN EQUIVALENT FINISH TO ADJACENT STEELWORK.
13. IT STEEL BEAMS & POSTS ARE DESIGNATED TO BE GALVANIZED, THEN END PLATES, CAP PLATES, & BASE PLATES SHALL ALSO BE GALVANIZED.
14. ALL NUTS & BOLTS SHALL BE GALVANIZED OR MARINE GRADE STAINLESS STEEL.
15. A MINIMUM OF TWO (2) COPIES OF ALL WORKSHOP DRAWINGS SHALL BE SUPPLIED TO THE ENGINEER FOR APPROVAL.

TIMBER:

1. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS1684 & AS1720.
2. AS1684 SHALL BE APPLIED TO DOMESTIC CONSTRUCTION IN SHELTERED LOCATIONS.
3. SOFTWOOD TO BE A MINIMUM OF F7 MGP10 & HARDWOOD TO BE MINIMUM OF F17 UNO.
4. EXTERNAL TIMBER SHALL BE EITHER HARDWOOD DURABILITY CLASS 1 OR 2 AS PER AS1720 OR IMPREGNATED PINE GRADE F7 MGP10, PRESSURE TREATED TO AS1604 & RE–DRIED PRIOR TO USE. SUPPLEMENTARY TREATMENT SHALL BE APPLIED TO ALL CUT SURFACES.
5. TWO (2) COPIES OF TIMBER TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL, CLEARLY INDICATING DESIGN LOADS & POINT LOADS APPLIED TO THE STRUCTURE.
6. ALL BOLTS IN TIMBER CONSTRUCTION SHALL BE M16 4.6/S UNO, WASHERS UNDER HEADS & NUTES SHALL BE 2.5 TIMES THE BOLT DIAMETER. ALL TIMBER JOINTS & NOTCHES SHALL BE A MINIMUM ON 100mm AWAY FROM LOOSE KNOTS, SEVERE SLOPING GRAIN, GUM VEINS OR OTHER MINOR DEFECTS.

DO NOT SCALE, ONLY REFER TO DIMENSIONS | ALL MEASUREMENTS MUST BE CHECKED BEFORE ANY CONSTRUCTION TAKES PLACE "ON SITE'

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LOCATION:	29 MYALL STREET, TEA GARDENS
PROPOSED:	NEW RESIDENCE
FOR:	R. LANDER

SCALE: @ A3 | REV. D
DWG NO: 1324 | DATE: JUNE 2022 | SHEET: 13 OF 14

MASONRY:

1. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS3700.
2. THE DESIGN STRENGTH OF MASONRY SHALL BE:

EXPOSURE CLASSIFICATION TO AS3600	BRICK COMPRESSIVE STRENGTH (MPa)	BRICK SALT RESISTANCE GRADE	DURABILITY CLASSIFICATION OF BUILT IN COMPONENTS	MORTAR MIX	
				GP PORTLAND E CEMENT LIME: SAND	F'C MPa
A1 / A2	20	GENERAL	R3	1.0 : 1.0 : 6.0	2.8
B1	20	PURPOSE	(GALVANIZED)	1.0 : 1.0 : 6.0	2.8
B2	20	EXPOSURE	B2	1.0 : 0.5 : 4.5	2.8

3. ALL MASONRY WALLS SUPPORTING CONCRETE SLABS & BEAMS SHALL HAVE A SLIP JOINT COMPRISING OF TWO LAYERS OF GALVANIZED STEEL IN BETWEEN THE CONCRETE & MASONRY.
4. ALL MASONRY WALLS SUPPORTING BY CONCRETE FLOORS SHALL HAVE VERTICAL JOINTS LOCATED TO MATCH & CONTROL / CONSTRUCTION JOINTS IN THE CONCRETE.
5. DO NOT CONSTRUCT ANY MASONRY WALLS ON SUSPENDED JOINTS UNTIL THE SLAB FORMWORK HAS BEEN STRIPPED & DE–PROPPED.
6. NON LOAD BEARING MASONRY WALLS SHELL BE SEPARATED FROM CONCRETE SLAB OR BEAM ABOVE BY 20mm THICK COMPRESSIBLE FILLER.
7. PROVIDE VERTICAL CONTROL JOINTS AT 6m MAXIMUM CENTERS, & 4 METERS MAXIMUM FROM CORNERS IN MASONRY WALLS, & BETWEEN NEW & EXISTING BRICKWORK. THE JOINT SHALL HAVE EXPANSION JOINT TIES & SUITABLY SEALED WITH MASTIC SEALANT.
8. MASONRY RETAINING WALLS ARE TO BE BACK FILLED WITH EITHER OF THE FOLLOWING MATERIAL:
   - COARSE GRAINED SOIL WITH LOW SALT CONTENT
   - RESIDUAL SOIL CONTAINING STONES
   - FINE SILTY SAND
   - GRANULAR MATERIALS WITH LKOW CLAY CONTENT

BLOCKWORK:

1. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS3700.
2. REINFORCED CONCRETE BLOCKWORK SHALL COMPLY WITH THE FOLLOWING, UNO.
   - BLOCKS: MINIMUM 10 MPa UNCONFINED COMPRESSIVE STRENGTH CONFORING TO AS4455.
   - MORTAR: 1.0 : 1.0 : 6.0 RATIO CEMENT: LIME: SAND UNO.
   - BLOCKS SHALL BE EITHER 'H' OR 'DOUBLE 'U' CONFIGURATION.
   - PROVIDE CLEAN OUT HOLES AT THE BASE OF THE WALL & ROD CORE HOLES TO REMOVE EXCESS MORTAR.
   - OCRE FILLING SHALL BE 20 MPa CONCRETE WITH MAXIMUM 10mm AGGREGATE SIZE WITH A MAXIMUM SLUMP OF 120mm +–20mm
   - MINIMUM COVER OF 55mm FROM THE OUTSIDE OF THE BLOCKWORK.
3. MASONRY RETAINING WALLS ARE TO BE BACK FILLED WITH EITHER OF THE FOLLOWING MATERIAL:
   - COARSE GRAINED SOIL WITH LOW SALT CONTENT
   - RESIDUAL SOIL CONTAINING STONES
   - FINE SILTY SAND
   - GRANULAR MATERIALS WITH LOW CLAY CONTENT
4. VERTICAL CONTROL JOINTS SHALL BE PROVIDED AT MAX. 8m CENTERS. THEY SHALL BE REINFORCED WITH N20–400 DOWELS 600mm LONG. ONE END SHALL BE GREASED & CAPPED.
5. NO ADMIXTURES SHALL BE USED IN THE MORTAR MIX OR THE CORE FILL MAX WITHOUT PRIOR WRITTEN CONSENT FROM THE ENGINEER..

PERMANENT METAL FORMWORK:

1. THE PERMANENT METAL FORMWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS & SHALL NOT BE SUBSTITUTED FROM THE PRODUCT SPECIFIED WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
2. THE PERMANENT METAL FORMWORK SHALL BE SUITABLY PROPPED.
3. THE PERMANENT METAL FORMWORK SHALL NOT BE SPLICED OR JOINED MIDSPAN.
4. THE PERMANENT METAL FORMWORK SHALL HAVE A MINIMUM END BEARING OF 50mm.
5. THE PERMANENT METAL FORMWORK SHALL BE FIXED TO THE SUPPORTING STRUCTURE WITH SPOT WELDS OR FASTENERS, THERE SHALL BE A MINIMUM OF 1 FIXING PER SHEET TO THE SUPPORT EACH END ADJACENT TO THE SIDE LAP.
6. THE PERMANENT METAL FORMWORK MAY NEED TO HAVE THE SIDE LAP FASTENED TOGETHER MIDSPAN, THIS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

CONCRETE:

1. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 & AS2870, EXCEPT WHERE VARIED BY THE PROJECT DOCUMENTATION.
2. CONCRETE SLABS & FOOTINGS HAVE BEEN DESIGNED TO SATISFY THE PERFORMANCE CRITERIA OF SECTION 3 OF AS2870 – RESIDENTIAL SLABS & FOOTINGS.
3. IN ARES OF BRITTLE FLOOR COVERINGS EG. SLATE OR TILE, IT WOULD BE RECOMMENDED THE ONE OF THE FOLLWING MEASURES BE UTILISED:
   – INCREASE MESH SIZE TO SL92 OR DOUBLE MESH LAYER.
   – USE A RUBBERISED FLEXIBLE ADHESIVE BEDDING.
   – DELAY [;ACING TILES FOR A MINIMUM OF 3 MONTHS.
4. CONCRETE QUALITY SHALL BE AS FOLLOWS (SUBJECT TO SUBGRADE BEING SATISFIED):

ELEMENT	SLUMP (mm)	MAXIMUM AGGREGATE SIZE (mm)	CEMENT TYPE	STRENGTH 28 DAYS (MPa)	ADMIXTURE
FOOTINGS	80	20	NORMAL PORTLAND TYPE A CEMENT	25	–
BORED PIERS & PILE CAPS	80	20		25	–
FLOOR SLABS ON GROUND	80	20		25	–
SUSPENDED FLOOR SLABS	80	20		32	–
HOLLOWCORE FLOOR SLABS	80	20		32	–
WALLS & COLUMNS	80	20		32	–
MASONRY PIERS	150	20		20	–
RETAINING WALLS	80	20		32	–

5. THE ENGINEER SHALL APPROVE ANY ADMIXTURES TO BE USED IN THE CONCRETE MIX.
6. THE CLEAR CONCRETE COVER TO ALL REINFORCEMENT SHALL BE AS FOLLOWS UNO:

EXPOSURE CLASSIFIACTION TO AS3600	STRENGTH 28 DAYS (MPa)	AGAINST FORMWORK		AGAINST GROUND	
		INTERIOR SURFACE	EXTERIOR SURFACE	WITH MEMBRANE	WITH NO MEMBRANE
A1	20	20	30	30	50
A2	25	40	30	40	50
B1	32	40	40		
B2	40	45	45		

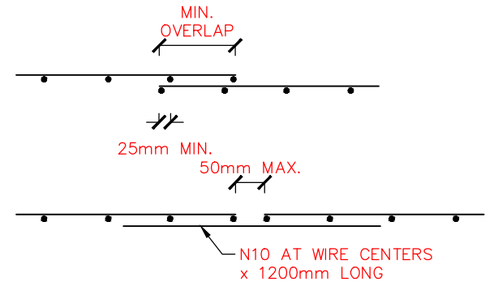
7. COVER TO REINFORCEMENT SHALL BE OBTAINED BY THE USE OF APPROVED BAR CHAIRS PLACED AT MAXIMUM 750mm CTRS IN EACH DIRECTION.
8. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED & THE VIBRATORS SHALL NOT BE USED TO SPREAD THE CONCRETE.
9. SIZE OF THE CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF THE APPLIED FINAL FINISHES.
10. APPROVAL SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO THE DRILLING OF ANY HOLES OR CUTTING IN ANY CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS.
11. CONSTRUCTION JOINTS WHERE NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE LOCATED IN ACCORDANCE WITH THE ENGINEERS APPROVAL.
12. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS (10 DAYS IN SUMMER MONTHS), & PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 10 DAYS FOLLOWED BY GRADUAL DRYING OUT. APPROVED SPRAY ON COMPOUNDS COMPLYING WITH AS3799 MAY BE USED PROVIDED THAT THEY DO NOT INTERFERE WITH THE PERFORMANCE OF TEH PROPOSED FLOOR FINISHES. POLYTHENE SHEETING OR WET HESSIAN MAY BE USED IF PROTECTION FROM WIND & TRAFFIC.
13. THE SUSPENDED SLABS SHALL BE PROPPED UNTIL 28 DAY STRENGTH HAS BEEN ACHIEVED FOR SLABS. THE FORMWORK MAY BE REMOVED ONCE 20MPa STRENGTH HAS BEEN ACHIEVED, HOWEVER THE SLAB WILL NEED TO BE BACK PROPPED UNTIL 28 DAYS STRENGTH HAS BEEN ACHIEVED. NO MASONRY OR PARTITION WILLS ARE TO BE CONSTRUCTED ON SUSPENDED LEVELS UNTIL ALL PROPPING IS REMOVED.
14. CONDUITS, PIPES ETC, SHALL ONLY BE PLACED IN THE MIDDLE THIRD OF THE SLAB DEPTH & PLACED AT NOT LESS THAN 3 DIAMETERS,. THEY SHALL NO BE PLACED WITHIN THE COVER OF THE REINFORCEMENT.
15. REINFORCEMENT SYMBOLS:
    S – DENOTES GRADE 250 S BARS TO AS1302
    N – DENOTES GRADE 500 NORMAL DUCTILITY DEFORMED BARS TO AS4671
    R – DENOTES 250 NORMAL DUCTILITY ROUND BARS TO AS4671
    SL – DENOTES GRADE 500 LOW DUCTILITY SQUARE WELDED MESH TO AS 4671
    RL – DENOTED GRADE 500 LOW DUCTILITY RECTANGULAR WELDED MESH TO AS4671.
    L – DENOTED GRADE 500 LOW DUCTILITY TRENCH WELDED MESH TO AS4671.
16. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY & IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
17. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED BY THE ENGINEER.

CONCRETE CONTINUED:

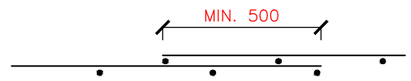
18. LAPS & COGS SHALL BE IN ACCORDANCE WITH AS3600 & NOT LESS THEN THE BELOW:

	MINIMUM SPLICE LENGTHS	MINIMUM OVERALL COG LENGTHS
N12	400mm	200mm
N16	600mm	225mm
N20	800mm	275mm
N24	1100mm	325mm
N28	1400mm	375mm

19. SITE BENDING OF DEFORMED REINFORCING BARS SHALL BE DONE WITHOUT HEATING & USING MECHANICAL BENDING TOOLS.
20. WELDING OF THE REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPORVED BY THE ENGINEER.
21. JOGGLES TO THE BAR BE 1 BAR DIAMETER OVER A LENGTH OF 12 BAR DIAMETERS.
22. BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETERS CENTERS WITH 3 WRAPS TO TIE WIRE.
23. MESH SHALL BE LAPPED 2 TRANVERSE PLUS 25mm.



24. TRENCH MESH SHALL BE LAPPED A MINIMUM OF 500mm.



PRECAST PANELS:

1. ALL WORKMANSHIP & MATERIALS SHALL IN ACCORDANCE WITH AS3600.
2. THE PRECAST PANEL CONCRETE STRENGTH AT 28 DAYS SHALL BE A MINIMUM OF 40MPa. THE CONCRETE SHALL BE A MINIMUM OF 20 MPa BEFORE REMOVAL FROM MOLDS.
3. DIMENSIONS SHWON AS FINAL CONCRETE SIZE & ADDITIONAL CONCRETE MUST BE PROVIDED TO ALLOW FOR LOSS OF STRUCTURAL THICKNESS DUE TO SURFACE TREATMENT, ETC.
4. PANEL STRUCTURAL THICKNESS SHALL BE NOTES.
5. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, REBATES, ETC.
6. ALL METAL WORK & CAST–IN FERRULES SHALL BE HOT DIPPED GALVANIZED WHICH ARE EXPOSED TO THE EXTERNAL ENVIRONMENT.
7. ALL CAST–IN FERRULES SHOWN ON THE DRAWINGS ARE TO REMAIN SEALED UNTIL THE ERECTION OF THE PANEL & SHALL NOT BE USED FOR LIFTING.
8. LIFTING FERRULES ARE CONTRACTORS RESPONSIBILITY & EXTRA REINFORCEMENT NEEDS TO BE PROVIDED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
9. CONCRETE COVER SHALL BE IN ACCORDANCE WITH STRUCTURAL DRAWING.
10. FABRIC IN THE PANELS SHALL BE ONE SHEET, NO LAPPING IS PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
11. PENETRATIONS FOR SERVICES SHALL BE NEAT FORMED HOLES, HOLE BORING IS NOT PERMITTED.
12. TEMPORARY STEEL PACKERS MAY BE USED UNDER THE PANELS PROVIDED THEY HAVE A MINIMUM OF 50mm COVER FROM THE CONCRETE SLAB OR GROUT.
13. A MINIMUM OF TWO (2) COPIES OF ALL WORKSHOP DRAWINGS SHALL BE SUPPLIED TO THE ENGINEER FOR APPROVAL. THE SHOP DRAWINGS SHALL SHOW ALL CAST–IN INSERTS.

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Member No: 3798337
Principal Engineer

DO NOT SCALE, ONLY REFER TO DIMENSIONS | ALL MEASUREMENTS MUST BE CHECKED BEFORE ANY CONSTRUCTION TAKES PLACE "ON SITE'

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LOCATION:	29 MYALL STREET, TEA GARDENS
PROPOSED:	NEW RESIDENCE
FOR:	R. LANDER

SCALE: @ A3 | REV. D
DWG NO: 1324 | DATE: JUNE 2022 | SHEET: 14 OF 14