PROPOSED DEVELOPMENT
AT 22 FUNDA CRESCENT, LALOR PARK

GENERAL

G1 These drawings shall be read in conjunction with all architectural and other consultants drawings and specifications and with such other written instructions and sketches as may be issued during the course of the Contract. Any discrepancies shall be referred to the Superintendent before proceeding with any related works. Construction from these drawings, and their associated consultant's drawings is not to commence until approved by the Local Authorities.

G2 All materials and workmanship shall be in accordance with the relevant and current Standards Australia codes and with the By-Laws and Ordinances of the relevant building authorities except where varied by the project specification.

G3 All set out dimensions shall be obtained from Architect's and Engineer's details. All discrepancies shall be referred to the Architect and Engineer for decision before proceeding with related work.

G4 During construction the structure shall be maintained in a stable condition and no part shall be overstressed. Temporary bracing shall be provided by the builder/subcontractor to keep the works and excavations stable at all times.

G5 Unless noted otherwise levels are in metres and dimensions are in millimetres.

G6 The alignment and level of all services shown are approximate only. The contractor shall confirm the position and level of all services prior to commencement of construction. Any damage to services shall be rectified at the contractors expense.

G7 Any substitution of materials shall be approved by the Engineer and included in any tender.

G8 All services, or conduits for servicing shall be installed prior to commencement of pavement construction.

G9 Subsoil drainage, comprising 100 agriculture pipe in geo-stocking to be placed as shown and as may be directed by the superintendent. Subsoil drainage shall be constructed in accordance with the relevant local authority construction specification.

G10 The structural components detailed on these drawings have been designed in accordance with the relevant Standards Australia codes and Local Government Ordinances for the following loadings. Refer to the Architectural drawings for proposed floor usage. Refer to drawings for live loads and superimposed dead loads.

DRAINAGE NOTES

D1 All drainage levels to be confirmed on site, prior to any construction commencing.

D2 All pipes within the property to be a minimum of 100 dia upvc @ 1% minimum grade, uno.

D3 All pits within the property are to be fitted with "weldlok" or approved equivalent grates:
- Light duty for landscaped areas
- Heavy duty where subjected to vehicular traffic

D4 All pits within the property to be constructed as one of the following:
1) Precast stormwater pits
2) Cast insitu mass concrete
3) Cement rendered 230mm brickwork subject to the relevant local authority construction specification.

D5 Ensure all grates to pits are set below finished surface level within the property. Top of pit RL's are approximate only and may be varied subject to approval of the engineer. All invert levels are to be achieved.

D6 Any pipes beneath relevant local authority road to be rubber ring jointed RCP, uno.

D7 All pits in roadways are to be fitted with heavy duty grates with locking bolts and continuous hinge.

D8 Provide step irons to stormwater pits greater than 1200 in depth.

D9 Trench back fill in roadways shall comprise sharp, clean granular back fill in accordance with the relevant local authority specification to non-trafficable areas to be compacted by rodding and tamping using a flat plate vibrator.

D10 Where a high early discharge (hed) pit is provided all pipes are to be connected to the hed pit, uno.

D11 Down pipes shall be a minimum of dn100 sw grade upvc or 100 x100 colorbond/zincalume steel, uno.

D12 Colorbond or zincalume steel box gutters shall be a minimum of 450 wide x 150 deep.

D13 Eaves gutters shall be a minimum of 125 wide x 100 deep (or of equivalent area) colorbond or zincalume steel, uno.

D14 Subsoil drainage shall be provided to all retaining walls & embankments, with the lines feeding into the stormwater drainage system, uno.

EROSION AND SEDIMENT CONTROL NOTES

E1 These notes are to be read in conjunction with erosion and sediment control details in this drawing set.

E2 The contractor shall implement all soil erosion and sediment control measures as necessary and to the satisfaction of the relevant local authority prior to the commencement of and during construction. No disturbance to the site shall be permitted other than in the immediate area of the works and no material shall be removed from the site without the relevant local authority approval. All erosion and sediment control devices to be installed and maintained in accordance with standards outlined in nsw department of housing's "managing urban stormwater - soils and constructions".

E3 Place straw bales length wise in a row as parallel as possible to the site contours, uno. Bale ends to be tightly butted. Bales are to be placed so that straws are parallel to the row. Bales are to be placed 1.5m to 2m downslope from the toe of the disturbed batter, uno.

E4 Council approved filter fabric to be entrenched 150mm deep upslope towards disturbed surface. Fabric to be a minimum SF2000 or better. Fix fabric to posts with wire ties or as recomended with manufacturer's specifications. Fabric joints to have a minimum of 150mm overlap. Wire to be strung between posts with filter fabric overlap to prevent sagging.

E5 Stabalised entry/exit points to remain intact until finished driveway is complete. Construction of entry/exit points to be maintained and repaired as required so that it's function is not compromised. Construction of entry/exit point to be in accordance with the detail contained within this drawing set.

E6 All drainage pipe inlets to be capped until:
- downpipes connected
- pits constructed and protected with silt barrier

E6 Provide and maintain silt traps around all surface inlet pits until catchment is revegetated or paved.

E7 The contractor shall regularly maintain all erosion and sediment control devices and remove accumulated silt from such devices such that more than 60% of their capacity is lost. All the silt is to be placed outside the limit of works. The period for maintaining these devices shall be at least until all disturbed areas are revegetated and further as may be directed by the superintendent or council.

E8 The contractor shall implement dust control by regularly wetting down (but not saturating) disturbed area.

E9 Topsoil shall be stripped and stockpiled outside hazard areas such as drainage lines. This topsoil shall be respread later on areas to be revegetated and stabilised only, (i.e. all footpaths, batters, site regarding areas, basins and catchdrains). Topsoil shall not be respread on any other areas unless specifically instructed by the superintendent. If they are to remain for longer than one month stockpiles shall be protected from erosion by covering them with a mulch and hydroseeding and, if necessary, by locating banks or drains downstream of a stockpile to retard silt laden runoff.

E10 Lay 300 wide minimum turf strip on 100 topsoil behind all kerb and gutter with 1000 long returns every 6000 and around structures immediately after backfilling as per the relevant local authority specification.

E11 The contractor shall grass seed all disturbed areas with an approved mix as soon as practicable after completion of earthworks and regrading.

E12 Revegetate all trenches immediately upon completion of backfilling.

E13 When any devices are to be handed over to council they shall be in clean and stable condition.

STANDARD LINE TYPES AND SYMBOLS

- PROPOSED KERB & GUTTER
- EXISTING KERB & GUTTER
- PROPOSED BELOW GROUND PIPELINE
- PROPOSED SUSPENDED PIPELINE
- EXISTING PIPELINE
- SUBSOIL DRAINAGE LINE
- PROPOSED KERB INLET PIT
- EXISTING KERB INLET PIT
- PROPOSED JUNCTION OR INLET PIT
- EXISTING JUNCTION OR INLET PIT
- DESIGN CENTRELINE
- EXISTING EDGE OF BITUMEN
- TELECOMUNICATION CONDUIT
- GAS MAIN
- WATER MAIN
- SEWER MAIN
- UNDERGROUND ELECTRICITY CABLES
- PERMANENT MARK & S.S.M.
- BENCH MARK, SURVEY STATION

STANDARD LINE TYPES AND SYMBOLS

- OVERLAND FLOW PATH
- GUTTER DRAINAGE DIRECTION
- DOWNPIPE
- DOWNPIPE WITH SIDE OVERFLOW
- PERVIOUS (GRASSED) AREAS
- EXISTING (PRE-DEVELOPMENT) RL (× RL= ??)
- POST DEVELOPMENT RL (× RL= ??)
- GRADED IMPERVIOUS AREA (ROOF, CONC SLABS ETC) (FALL)
- SEDIMENT FENCE
- CROSSING PIPES
- NODE POINT (1)

LEGEND

AHD	Australian height datum	SS	Stainless steel
AG	Ag-pipe (Sub soil drainage)	SU	Box gutter sump
ARI	Average recurrence interval	TW	Top of wall
BG	Box Gutter	TWL	Top water level
BWL	Bottom water level	U/S	Underside of slab
CL	Cover level	VG	Vally gutter
CO	Clean out inspection opening	UNO	Unless noted otherwise
DCP	Discharge control pit		
DP	Down pipe		
DRP	Dropper pipe		
EBG	Existing box gutter		
EDP	Existing down pipe		
EEG	Existing eaves gutter		
EG	Eaves gutter		
FRC	Fiber reinforced concrete		
FW	Floor waste		
GD	Grated drain		
GSIP	Grated surface inlet pit		
HED	High early discharge		
HP	High point of gutter		
IL	Invert level		
IO	Inspection opening		
O/F	Overflow		
OSD	On-site detention		
PSD	Permissible site discharge		
P1	Pipe 1		
RCP	Reinforced concrete pipe		
RHS	Rectangular hollow section		
RL	Reduced level		
RRJ	Rubber ring joint		
RRT	Rainwater re-use tank		
RWH	Rain water head		
RWO	Rain water outlet		
SLAP	Sealed lid access pit		
SP	Spreader pipe		
SPR	Spreader		

RECOMMENDED MAINTENANCE SCHEDULE

DISCHARGE CONTROL PIT (DCP)	FREQUENCY	RESPONSIBILITY	PROCEDURE
Inspect flap valve and remove any blockage.	Six monthly	Owner	Remove grate. Ensure flap valve moves freely and remove any blockages or debris.
Inspect screen and clean.	Six monthly	Owner	Revove grate and screen if required and clean it.
Inspect & remove any blockage of orifice.	Six monthly	Owner	Remove grate & screen to inspect orifice. see plan for location of dcp.
Inspect dcp sump & remove any sediment-sludge.	Six monthly	Owner	Remove grate and screen. Remove sediment/sludge build-up and check orifice and flap valve clear.
Inspect grate for damage or blockage.	Six monthly	Owner	Check both sides of grate for corrosion, (especially corners and welds) damage or blockage.
Inspect return pipe from storage and return any blockage.	Six monthly	Owner	Remove grate and screen. ventilate underground storage if present. open flap valve and remove any blockages in return line. Check for sludge/debris on upstream side of return line.
Inspect outlet pipe and remove any blockage.	Six monthly	Maintenance Contractor	Remove grate and screen. ventilate underground storage if present. Check orifice and remove any blockages in outlet pipe. Flush outlet pipe to confirm it drains freely. Check for sludge/debris on upstream side of return line.
Check fixing of step irons is secure.	Six monthly	Maintenance Contractor	Remove grate and ensure fixings secure prior to placing weight on step iron.
Inspect overflow weir & remove any blockage.	Six monthly	Maintenance Contractor	Remove grate and open cover to ventilate underground storage if present. ensure weir clear of blockages.
Empty basket at overflow weir (if present).	Six monthly	Maintenance Contractor	Remove grate and ventilate underground storage chamber if present. Empty basket, check fixings secure and not corroded.
Check attachment of orifice plate to wall of pit (gaps less than 5 mm).	Annually	Maintenance Contractor	Remove grate and screen. ensure plate mounted securely, tighten fixings if required. seal gaps as required.
Check attachment of screen to wall of pit.	Annually	Maintenance Contractor	Remove grate and screen. ensure screen fixings secure. repair as required.
Check screen for corrosion.	Annually	Maintenance Contractor	Remove grate and examine screen for rust or corrosion, especially at corners or welds.
Check attachment of flap valve to wall of .	Annually	Maintenance Contractor	Remove grate. Ensure fixings of valve are secure.
Check flap valve seals against wall of pit.	Annually	Maintenance Contractor	Remove grate. fill pit with water and check that flap seals against side of pit with minimal leakage.
Check any hinges of flap valve move freely.	Annually	Maintenance Contractor	Remove grate. Test valve hinge by moving flap to full extent.
Inspect dcp walls (internal and external, if appropriate) for cracks or spalling.	Annually	Maintenance Contractor	Remove grate to inspect internal walls. Repair as required. Clear vegetation from external walls if necessary and repair as required.
Check step irons for corrosion.	Annually	Maintenance Contractor	Remove grate. Examine step irons and repair any corrosion or damage.
Check orifice diameter correct and retains sharp edge.	Five yearly	Maintenance Contractor	Compare diameter to design (see work-as- executed) and ensure edge is not pitted or damaged.
STORAGE			
Inspect & remove any blockage of orifice.	Six monthly	Owner	Remove grate and screen. remove sediment/sludge build-up.
Check orifice diameter correct and retains sharp edge.	Six monthly	Owner	Remove blockages from grate and check if pit blocked.
Inspect screen and clean.	Six monthly	Owner	Remove debris and floatable material likely to be carried to grates.
Check attachment of orifice plate to wall of pit (gaps less than 5 mm).	Annually	Maintenance	Remove grate to inspect internal walls. repair as required. clear vegetation from external walls if necessary and repair as required.
Check attachment of screen to wall of pit.	Five yearly	Maintenance Contractor	Compare actual storage available with work-as executed plans. If volume loss is greater than 5%, arrange for reconstruction to replace the volume lost. Council to be notified of the proposal.
Check attachment of screen to wall of pit.	Five yearly	Maintenance Contractor	Check along drainage lines and at pits for subsidence likely to indicate leakages.

NOTE: DO NOT SCALE OFF DRAWINGS. REFER TO ARCHITECTURAL PLANS. VERIFY DIMENSIONS ON SITE

REV	DATE	DESCRIPTION	BY
F	30.08.23	ISSUED FOR 75% CO-ORDINATION	O.G.
E	14.03.23	RE-ISSUED FOR APPROVAL	O.G.
D	14.03.23	RE-ISSUED FOR SUIT ARBORIST COMMENTS	O.G.
C	16.01.23	RE-ISSUED FOR SUIT ARCHITECTURAL	O.G.
B	23.11.22	RE-ISSUED FOR APPROVAL	O.G.

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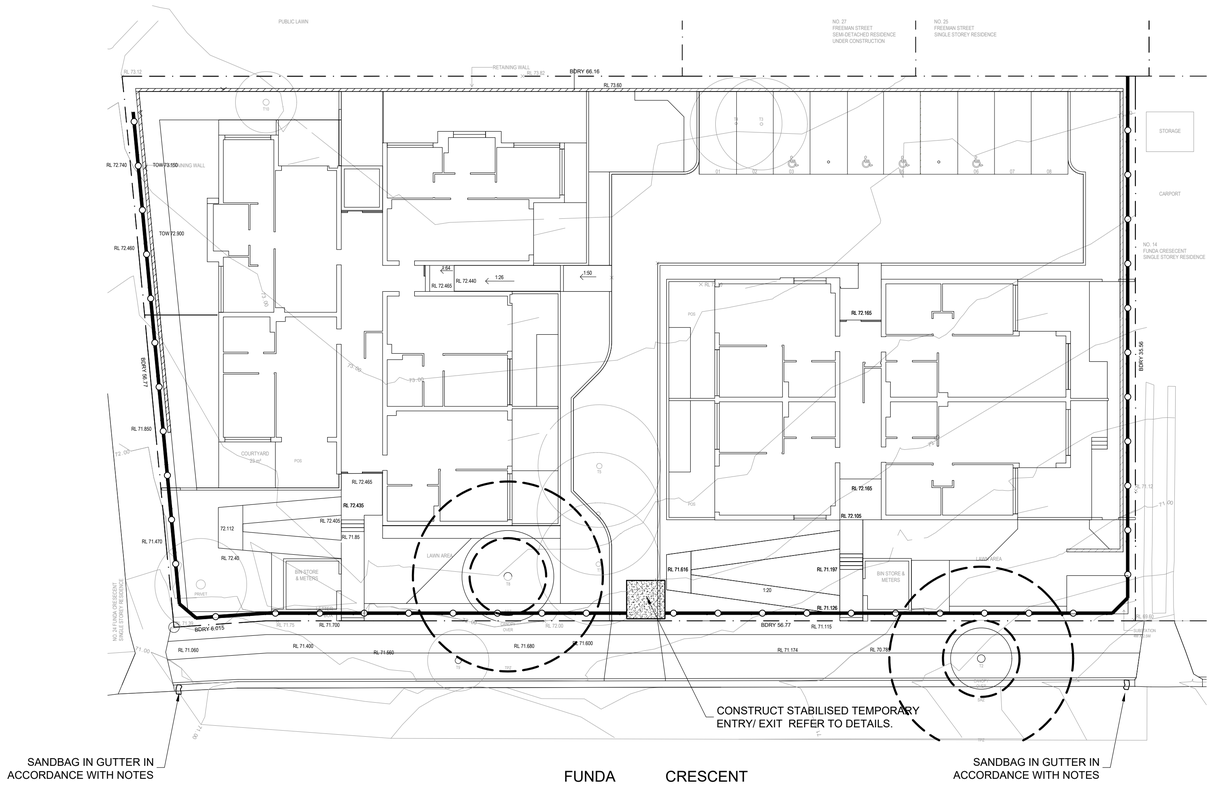
PROPOSED DEVELOPMENT
AT 16-22 FUNDA CRESCENT, LALOR PARK
FOR MODE DESIGN

GENERAL NOTES

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
220109	C00.01	A1
DESIGNED BY: O.G.	DATE: SEPTEMBER 2022	
DRAWN BY: O.G.	SCALE: SCALE	



SEDIMENT & EROSION CONTROL PLAN

1:200

- DENOTES SEDIMENT FENCE

COMMENCEMENT OF WORKS

THE CONTRACTOR SHALL ENSURE THAT NO SPOIL OR FILL ENCROACHES UPON ADJACENT AREAS FOR THE DURATION OF WORKS.

THE CONTRACTOR SHALL ENSURE THAT KERB INLETS AND DRAINS RECEIVING STORMWATER SHALL BE PROTECTED AT ALL TIMES DURING DEVELOPMENT. KERB INLET SEDIMENT TRAPS SHALL BE INSTALLED ALONG THE IMMEDIATE VICINITY ALONG THE STREET FRONTAGE.

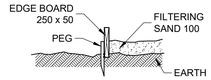
SEDIMENT FENCING SHALL BE SECURED BY POST (WHERE METAL STAR PICKETS ARE USED PLASTIC SAFETY CAPS SHALL BE USED) AT 2000 INTERVALS WITH GEOTEXTILE FABRIC EMBEDDED 200 IN SOIL.

ALL TOPSOIL STRIPPED FORM THE SITE AND STOCKPILED DOES NOT INTERFERE WITH DRAINAGE LINES AND STORMWATER INLETS AND WILL BE SUITABLY COVERED WITH AN IMPERVIOUS MEMBRANE MATERIAL AND SCREENED BY SEDIMENT FENCING.

SEDIMENT TRAP

1000 x 1000 WIDE 500 DEEP PIT, LOCATED AT THE LOWEST POINT TO THE TRAP SEDIMENT.

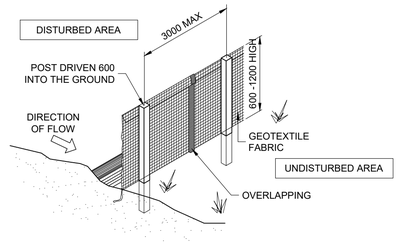
WASHOUT AREA TO BE 1800 x 1800 ALLOCATED FOR THE WASHING OF TOOL & EQUIPMENT.

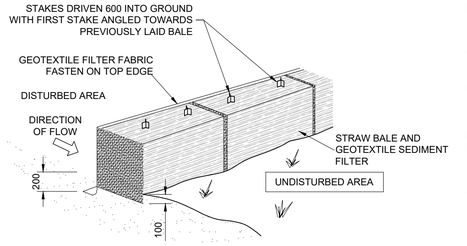


SEDIMENT FENCE

PROVIDE 'SEDIMENT FENCE ON DOWN SLOPE BOUNDARY AS SHOWN ON PLAN.

FABRIC TO BE BURIED BELOW GROUND AT LOWER EDGE.

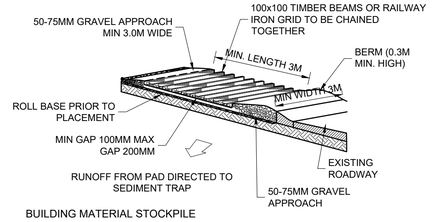




DRAINAGE AREA 0.5 HA. MAX. SLOPE
GRADIENT 1:2 MAX. SLOPE LENGTH 50m.

TEMPORARY CONSTRUCTION ENTRY/EXIT

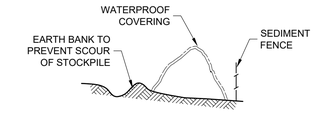
VEHICLE ACCESS TO THE BUILDING SITE SHOULD BE RESTRICTED TO A SINGLE POINT SO AS TO REDUCE THE AMOUNT OF SOIL DEPOSITED ON THE STREET PAVEMENT.



BUILDING MATERIAL STOCKPILE

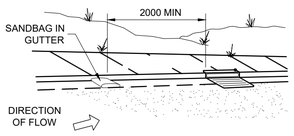
ALL STOCKPILES OF BUILDING MATERIAL SUCH AS SAND AND SOIL MUST BE PROTECTED TO PREVENT SCOUR AND EROSION.

THEY SHOULD NEVER BE PLACED IN THE STREET GUTTER WHERE THEY WILL WASH AWAY WITH THE FIRST RAINSTORM.



SANDBAG KERB SEDIMENT TRAP

IN CERTAIN CIRCUMSTANCES EXTRA SEDIMENT TRAPPING MAY BE NEEDED IN THE STREET GUTTER.



GENERAL NOTES

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH OTHER SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

ALL DIMENSIONS ARE IN MILLIMETRES & ALL LEVELS ARE IN METRES, UNO (UNLESS NOTED OTHERWISE). NO DIMENSION SHALL BE OBTAINED BY SCALING THE DRAWINGS.

ALL LEVELS AND SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORK.

DURING EXCAVATION WORK THE STRUCTURE SHALL BE MAINTAINED IN A STABLE AND NO PART SHALL BE OVERSTRESSED.

ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS & THE SPECIFICATION.

EXISTING SERVICES WHERE SHOWN HAVE BEEN PLOTTED FROM SUPPLIED DATA AND SUCH THEIR ACCURACY CAN NOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK.

ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACK FILLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL COUNCIL.

ALL TRENCH BACK FILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.

ON COMPLETION OF STORMWATER INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS, UNLESS DIRECTED OTHERWISE.

CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS UNLESS DIRECTED OTHERWISE.

STORMWATER DRAINAGE_

THE STORMWATER DRAINAGE DESIGN HAS BEEN CARRIED OUT IN ACCORDANCE WITH
AS/NZS 3500.3 - 1990 "STORMWATER DRAINAGE" & AS/NZS 3500.3.2-1998 "STORMWATER DRAINAGE - ACCEPTABLE SOLUTIONS".

ANY VARIATIONS TO THE NOMINATED LEVELS SHALL BE REFERRED TO ENGINEER IMMEDIATELY.

ANY VARIATIONS TO SPECIFIED PRODUCTS OR DETAILS SHALL BE REFERRED TO THE ENGINEER FOR APPROVAL.

DOWN PIPES SHALL BE A MINIMUM OF DN100 SW GRADE uPVC OR 100 X 100 COLORBOND OR ZINCALUME STEEL, UNO.

BOX COLORBOND OR ZINCALUME STEEL. GUTTERS SHALL BE A MINIMUM OF 450 WIDE X 150 DEEP.

EAVES GUTTERS SHALL BE A MINIMUM OF 125 WIDE X 100 DEEP (OR OF EQUIVALENT AREA) COLORBOND OR ZINCALUME STEEL.

SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM.

SEDIMENT AND EROSION CONTROL NOTES

SEDIMENT AND EROSION CONTROL SHALL BE EFFECTIVELY MAINTAINED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL THE SITE HAS BEEN STABILISED OR LANDSCAPED TO THE SUPERINTENDENT'S SATISFACTION

A SINGLE ALL WEATHER ACCESS WAY WILL BE PROVIDED AT THE FRONT OF THE PROPERTY CONSISTING OF 50-75 AGGREGATE OR SIMILAR MATERIAL AT A MINIMUM THICKNESS OF 150 LAID OVER NEEDLE-PUNCHED GEOTEXTILE FABRIC AND CONSTRUCTED PRIOR TO COMMENCEMENT OF WORKS.

SOIL CONSERVATION NOTE

PRIOR TO COMMENCEMENT OF CONSTRUCTION PROVIDE 'SEDIMENT FENCE,' 'SEDIMENT TRAP' AND WASHOUT AREA TO ENSURE THE CAPTURE OF WATER BORNE MATERIAL GENERATED FROM THE SITE.

MAINTAIN THE ABOVE DURING THE COURSE OF CONSTRUCTION, AND CLEAR THE 'SEDIMENT TRAP AFTER EACH STORM.

NOTE: DO NOT SCALE OFF DRAWINGS. REFER TO ARCHITECTURAL PLANS. VERIFY DIMENSIONS ON SITE

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F	30.08.23	ISSUED FOR 75% CO-ORDINATION	O.G.
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PROPOSED DEVELOPMENT

AT 16-22 FUNDA CRESCENT, LALOR PARK
FOR MODE DESIGN

SEDIMENT & EROSION CONTROL PLAN

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
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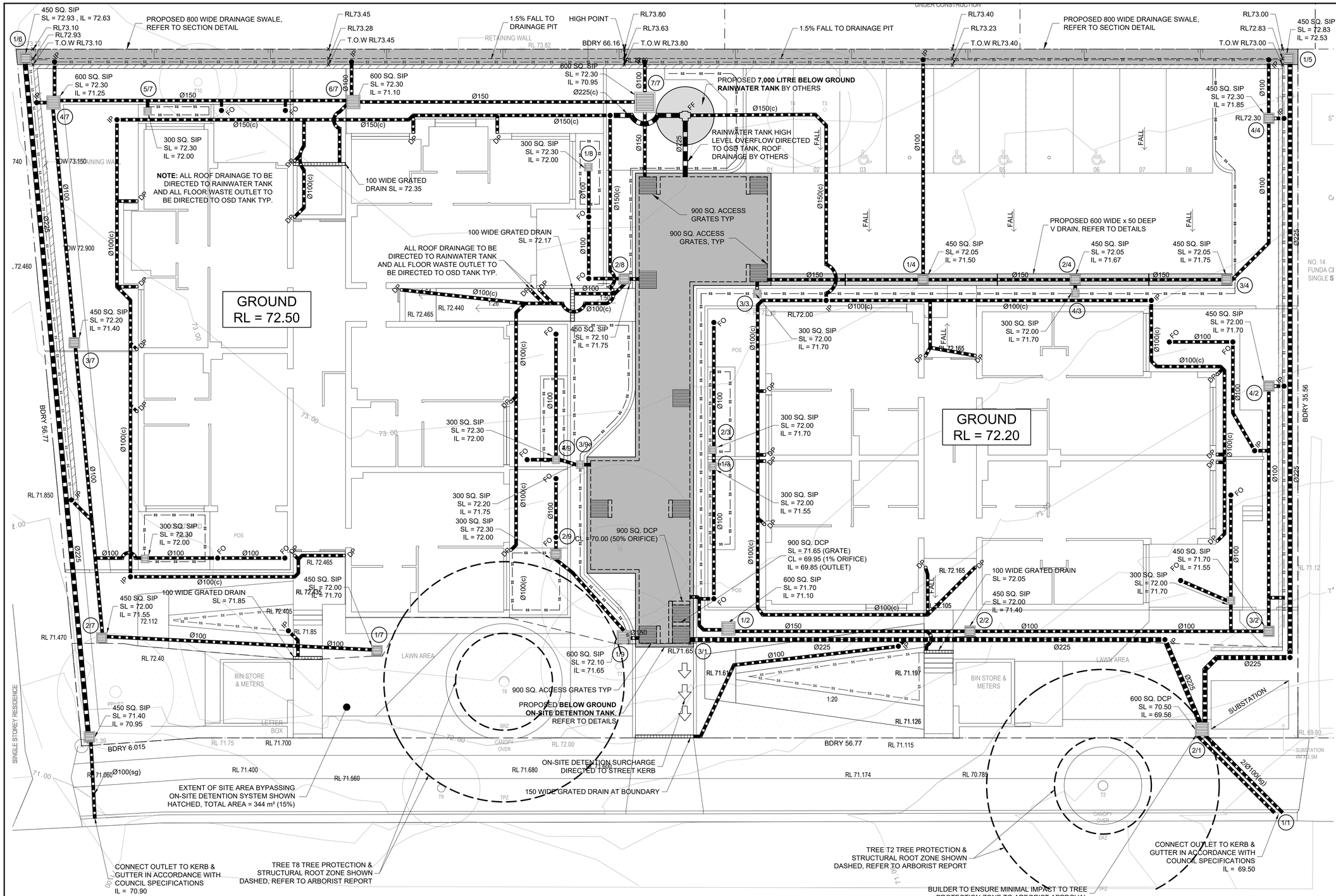

STORMWATER DESIGN SUMMARY

COUNCIL: BLACKTOWN CITY COUNCIL

100 YEAR, 5 MIN STORM	= 225 mm/h
20 YEAR, 5 MIN STORM	= 172 mm/h
TOTAL SITE AREA	= 2294.0 m^2
PROPOSED BUILDING FOOTPRINT	= 852.0 m^2
IMPERVIOUS PATHS & DRIVEWAYS	= 587.0 m^2
TOTAL IMPERVIOUS SITE AREA	= 1439.0 m^2
IMPERVIOUS SITE PERCENTAGE	= 62%

100% PROPOSED ROOF AREA DIRECTED TO 7,000 LITRE RAINWATER RE-USE TANK TO BUILDERS DETAILS IN ACCORDANCE WITH BASIX SPECIFICATIONS. HIGH LEVEL OVERFLOW DIRECTED TO PROPOSED BELOW GROUND ON-SITE DETENTION (OSD) TANK. OSD DISCHARGE DIRECTED TO STREET KERB & GUTTER VIA GRAVITY IN ACCORDANCE WITH COUNCIL STORMWATER SPECIFICATIONS.

WATER SENSITIVE URBAN DESIGN SUMMARY

SITE LOCATED WITHIN SECTION 7.11 CONTRIBUTIONS PLAN No.19 - BLACKTOWN GROWTH PRECINCT AREA THEREFORE NO WATER CONSERVATION & QUALITY CONTROLS REQUIRED SUBJECT TO VOLUNTARY CONTRIBUTION IN ACCORDANCE WITH BLACKTOWN COUNCIL CODE.

ON-SITE DETENTION DESIGN SUMMARY

CATCHMENT: UPPER PARRAMATTA RIVER CATCHMENT
ON-SITE DETENTION REQUIRED FOR PROPOSED COMMERCIAL DEVELOPMENTS IN ACCORDANCE WITH THE **'UPPER PARRAMATTA RIVER CATCHMENT TRUST ON-SITE STORMWATER DETENTION HANDBOOK'.**

PERCENTAGE OF TOTAL SITE DRAINED	= 86.5%
DETERMINED SITE STORAGE REQUIREMENT 50%	= 68.82 m^3
DETERMINED SITE STORAGE REQUIREMENT 1%	= 104.37 m^3
DETERMINED PERMISSIBLE SITE DISCHARGE	= 24.3 l/s
MAXIMUM HEAD TO ORIFICE CENTRE LINE	= 1.70 m
DETERMINED **100 YEAR ORIFICE DIAMETER**	= 98.5 mm
DETERMINED **1.5 YEAR ORIFICE DIAMETER**	= 58.5 mm
STORAGE PROVIDED IN OSD TANK (50%)	= 69.35 m^3
STORAGE PROVIDED IN OSD TANK (1%)	= 106.50 m^3

STORMWATER DRAINAGE NOTES

- ALL DRAINAGE LINES SHALL BE uPVC (CLASS SH) STORMWATER DRAINAGE PIPE, U.N.O.
- ALL DRAINAGE LINES SHALL BE LAID @ 1% FALL MIN, U.N.O.
- FIRST FLUSH RAINWATER DEVICES TO BE FITTED TO DRAINAGE LINES TO BUILDER'S DETAIL, TYPICAL

LEGEND

DP	DOWNPIPE BY OTHERS
IP	INSPECTION POINT
FF	FIRST FLUSH RAINWATER DEVICE TO BUILDERS DETAIL
X 100.00	PROPOSED FINISHED SURFACE LEVEL
(c)	CHARGED PIPE
	PROPOSED BELOW GROUND PIPELINE
SS	SUBSOIL DRAINAGE LINE
	PROPOSED SURFACE INLET PIT
	OVERLAND FLOW PATH

NOTE: DO NOT SCALE OFF DRAWINGS. REFER TO ARCHITECTURAL PLANS. VERIFY DIMENSIONS ON SITE

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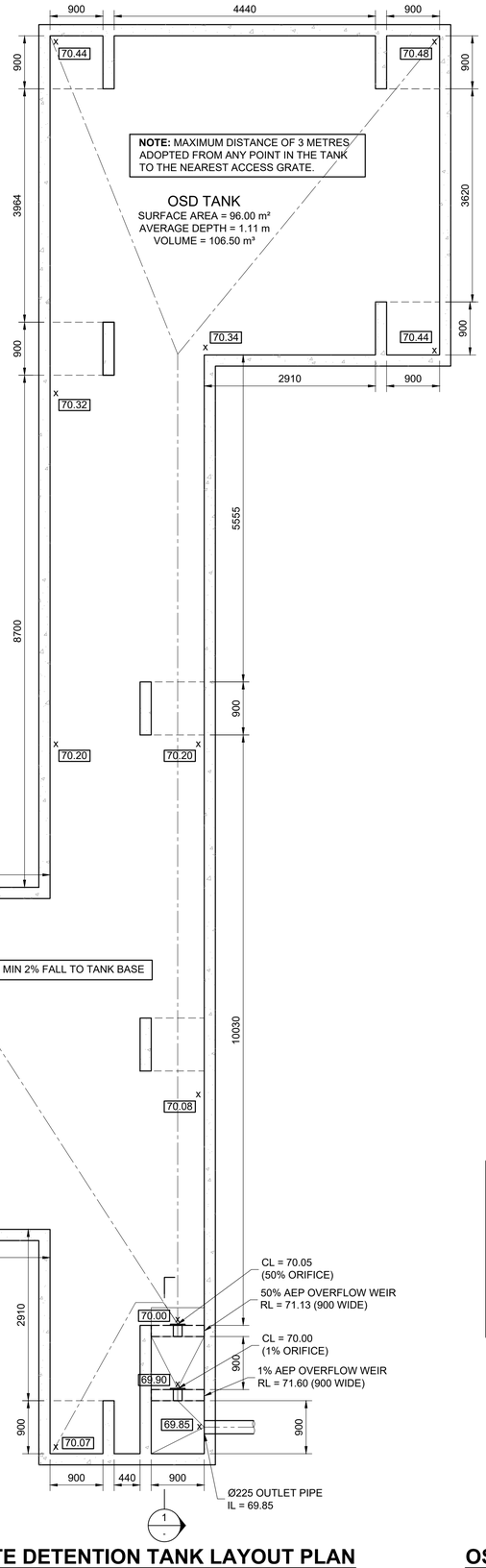
NORWEST NSW 2153

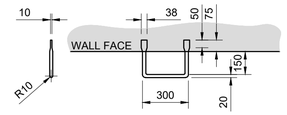
PROPOSED DEVELOPMENT
AT 16-22 FUNDA CRESCENT, LALOR PARK
FOR MODE DESIGN

STORMWATER DRAINAGE PLAN

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
220109	C02.01	A1
DESIGNED BY: O.G.	DATE: SEPTEMBER 2022	
DRAWN BY: O.G.	SCALE: 1:200 U.N.O.	

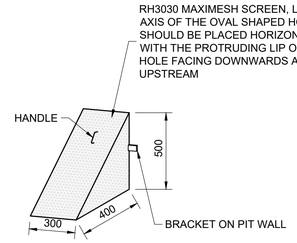


ON-SITE DETENTION TANK LAYOUT PLAN
1:50

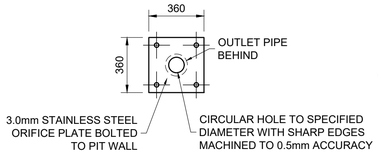


NOTE:
1. FIRST RUNG 150mm DOWN FROM TOP, THEN SPACED AT 300 CENTRES.
2. STEP IRON MATERIAL, 20m DIAMETER MILD STEEL, HEAVY GALVANISED.

STEP IRONS FOR DRAINAGE PITS
1:20

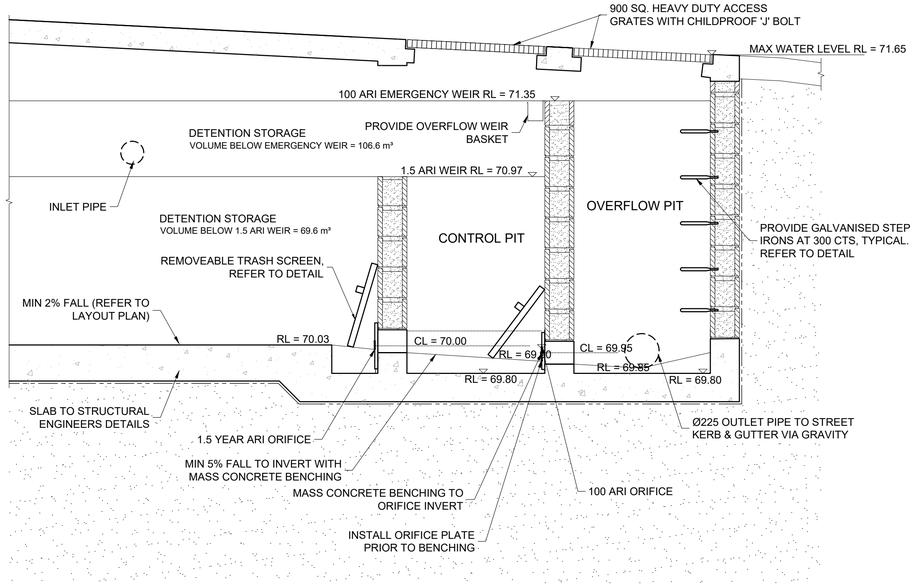


STANDARD TRASH SCREEN
1:20

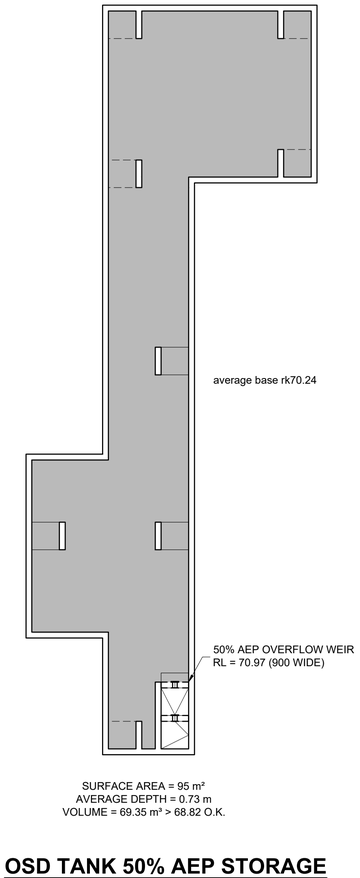


ORIFICE PLATE DETAIL
NTS
REFER TO ON-SITE DETENTION SUMMARY FOR ORIFICE DIAMETER

TYPICAL FLAP VALVE DETAIL
NTS

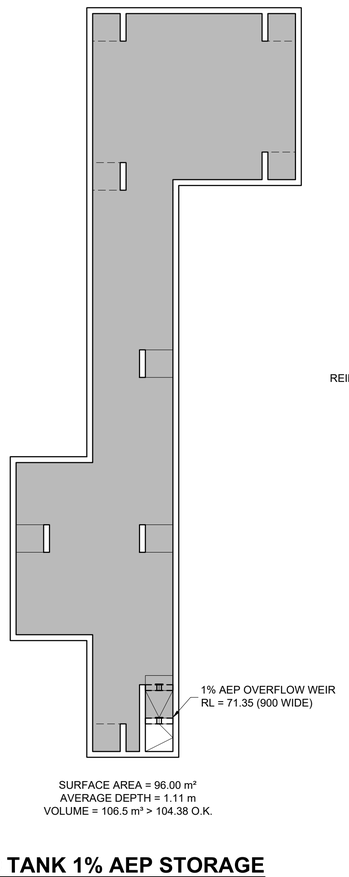


SECTION 1/-
1:20



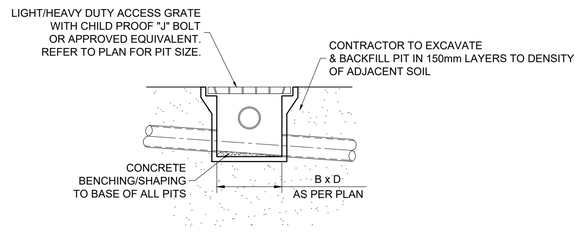
SURFACE AREA = 95 m²
AVERAGE DEPTH = 0.73 m
VOLUME = 69.35 m³ > 68.82 O.K.

OSD TANK 50% AEP STORAGE
1:100

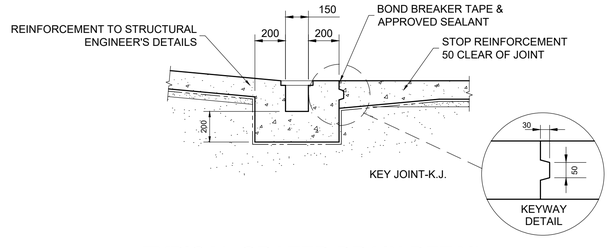


SURFACE AREA = 96.00 m²
AVERAGE DEPTH = 1.11 m
VOLUME = 106.5 m³ > 104.38 O.K.

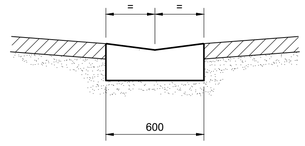
OSD TANK 1% AEP STORAGE
1:100



TYPICAL SURFACE INLET PIT 'SIP' DETAIL
1:20



TYPICAL GRATED DRAIN DETAIL
1:20



TYPICAL CONCRETE V DRAIN DETAIL
1:20

NOTE: DO NOT SCALE OFF DRAWINGS. REFER TO ARCHITECTURAL PLANS. VERIFY DIMENSIONS ON SITE

REV	DATE	DESCRIPTION	BY
F	30.08.23	ISSUED FOR 75% CO-ORDINATION	O.G.
E	14.03.23	RE-ISSUED FOR APPROVAL	O.G.
D	14.03.23	RE-ISSUED FOR SUIT ARBORIST COMMENTS	O.G.
C	16.01.23	RE-ISSUED FOR SUIT ARCHITECTURAL	O.G.
B	23.11.22	RE-ISSUED FOR APPROVAL	O.G.

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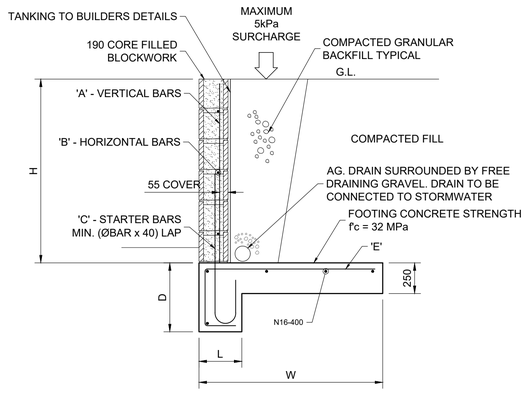
PROPOSED DEVELOPMENT
AT 16-22 FUNDA CRESCENT, LALOR PARK
FOR MODE DESIGN

STORMWATER DETAILS SHEET 1

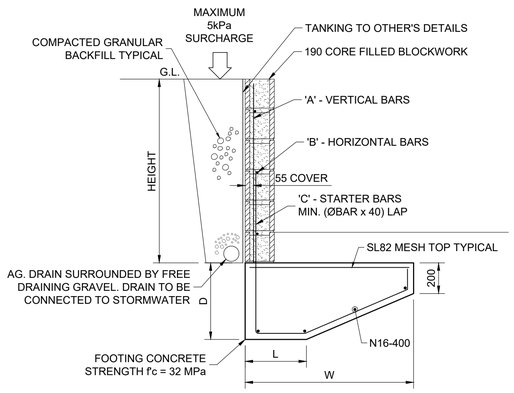
JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
220109	C02.02	A1
DESIGNED BY: O.G.	DATE: SEPTEMBER 2022	
DRAWN BY: O.G.	SCALE: 1:20 U.N.O.	



TYPICAL RETAINING WALL DETAILS 'RW1' - TYPE 1

1:20

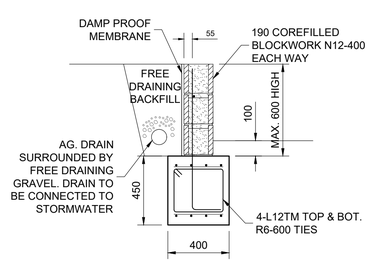
SCHEDULE FOR RETAINING WALL RW1 - TYPE 1							
HEIGHT	'D'	'W'	'L'	A	B	C	E
800	450	800	230	N12-400	N12-400	N12-400	N12-400
1000	450	900	230	N12-400	N12-400	N12-400	N12-400
1200	450	1000	230	N12-400	N12-400	N12-400	N12-400
1400	450	1100	230	N16-400	N16-400	N16-400	N16-400
1600	450	1200	230	N16-400	N16-400	N16-400	N16-400
1800	450	1400	230	N16-400	N16-400	N16-400	N16-400
2000	450	1600	230	N16-400	N16-400	N20-400	N16-400



TYPICAL RETAINING WALL 'RW1' DETAIL- TYPE 2

1:20

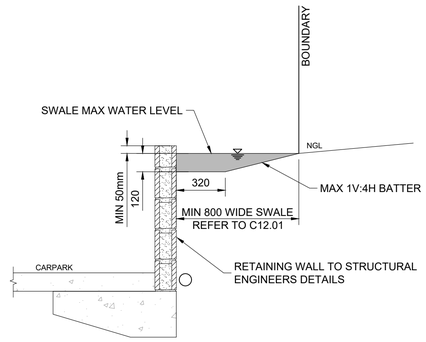
SCHEDULE FOR RETAINING WALL RW1 - TYPE 2						
HEIGHT	'D'	'W'	'L'	A	B	C
800	300	700	300	N12-400	N12-400	N12-400
1000	300	800	300	N12-400	N12-400	N12-400
1200	300	900	300	N12-400	N12-400	N12-400
1400	500	1000	400	N16-400	N16-400	N16-400
1600	500	1100	400	N16-400	N16-400	N16-400
1800	600	1300	400	N16-400	N16-400	N16-400
2000	650	1400	450	N16-400	N16-400	N20-400



RETAINING WALL 'RW1' DETAIL

1:20

ENSURE ALL STARTER BARS FOR WALLS ARE PLACED PRIOR TO POURING FOOTING



TYPICAL SWALE SECTION DETAIL

1:20

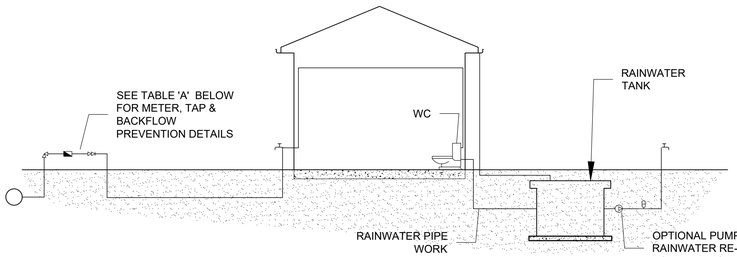


TABLE A			
RAINWATER TANK LOCATION	METER SIZE (mm)	TYPE OF TAP	TYPE OF BACKFLOW PREVENTION
ABOVE GROUND	20	BALL VALVE	DUAL CHECK VALVE (COMBINED WITH METER)
	25	BALL VALVE	DUAL CHECK VALVE
	> 32	BALL VALVE	DUAL CHECK VALVE
BELOW GROUND	20	BALL VALVE	TESTABLE DOUBLE CHECK VALVE
	25	BALL VALVE	TESTABLE DOUBLE CHECK VALVE
	> 32	BALL VALVE	TESTABLE DOUBLE CHECK VALVE

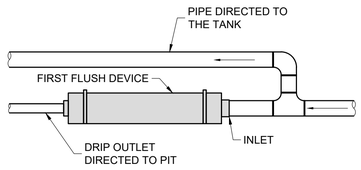
LEGEND	
	PRESSURE VESSEL
	METER
	BALL VALVE RIGHT ANGLE TYPE
	DUAL CHECK VALVE
	PUMP
	GARDEN TAP
	DRINKING WATER SUPPLY PIPES
	RAINWATER SUPPLY PIPES
	DOWN PIPES

DIAGRAM NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH SYDNEY WATER PLUMBING REQUIREMENTS
2. FOR TANKS 10,000 LITRES OR LESS, COUNCIL DEVELOPMENT CONSENT IS NOT REQUIRED, IF THEIR CONDITIONS FOR INSTALLATION ARE FOLLOWED.
3. FOR TANKS GREATER THAN 10,000 LITRES COUNCIL DEVELOPMENT CONSENT IS GENERALLY REQUIRED.
4. FOR TANKS MORE THAN 10,000 LITRES APPROVAL IS REQUIRED FOR BUILDING OVER SEWERS.
5. SYDNEY WATER'S APPROVAL IS REQUIRED FOR ANY TOP UP FROM DRINKING WATER SUPPLY, REGARDLESS OF TANK SIZE. NO DIRECT CONNECTION IS ALLOWED BETWEEN THE DRINKING WATER SUPPLY AND THE RAINWATER TANK SUPPLY.
6. RAINWATER PIPEWORK IS SHOWN ON THE DIAGRAM AS SUPPLYING INTERNAL AND EXTERNAL RAINWATER USES. CUSTOMERS MAY WANT ONE OR THE OTHER.
7. ANY DESIGNED ACCESS LID INTO RAINWATER RE-USE TANK IS TO HAVE A LOCKABLE LID. IF THE LID IS DESIGNED TO BE ACCESSED BY A MAINTENANCE PERSON, IT MUST BE AT LEAST 600 mm x 900 mm IN SIZE.

DUAL DRINKING WATER & RAINWATER SUPPLY DIAGRAM

N.T.S.



TYPICAL FIRST FLUSH DETAIL

N.T.S.

NOTE: DO NOT SCALE OFF DRAWINGS. REFER TO ARCHITECTURAL PLANS. VERIFY DIMENSIONS ON SITE

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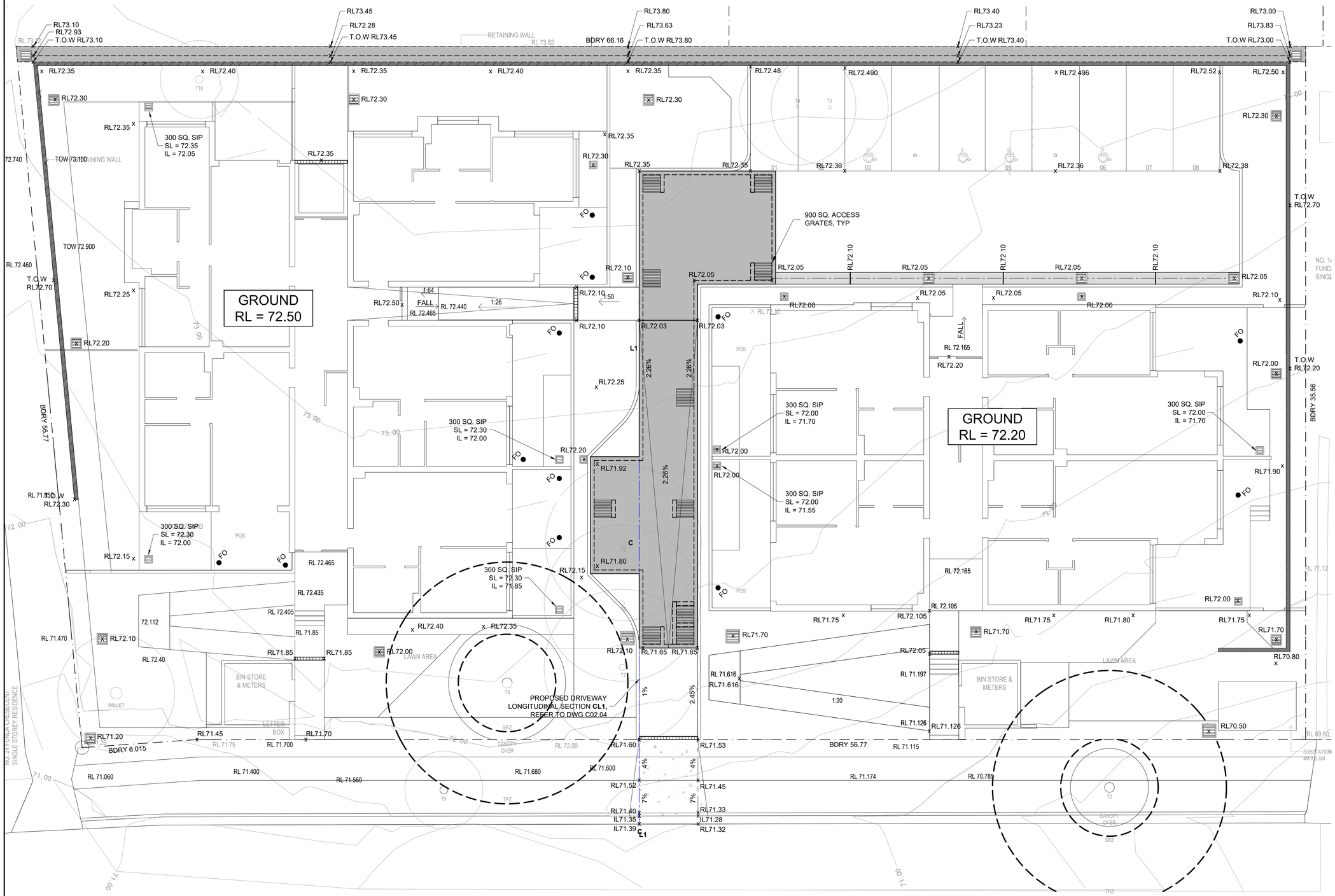
PROPOSED DEVELOPMENT

AT 16-22 FUNDA CRESCENT, LALOR PARK
FOR MODE DESIGN

TYPICAL DETAILS SHEET 2

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
220109	C02.03	A1
DESIGNED BY: O.G.	DATE: SEPTEMBER 2022	
DRAWN BY: O.G.	SCALE: 1:200 U.N.O.	



PROPOSED DESIGN LEVELS

1:100

NOTE: DO NOT SCALE OFF DRAWINGS. REFER TO ARCHITECTURAL PLANS. VERIFY DIMENSIONS ON SITE

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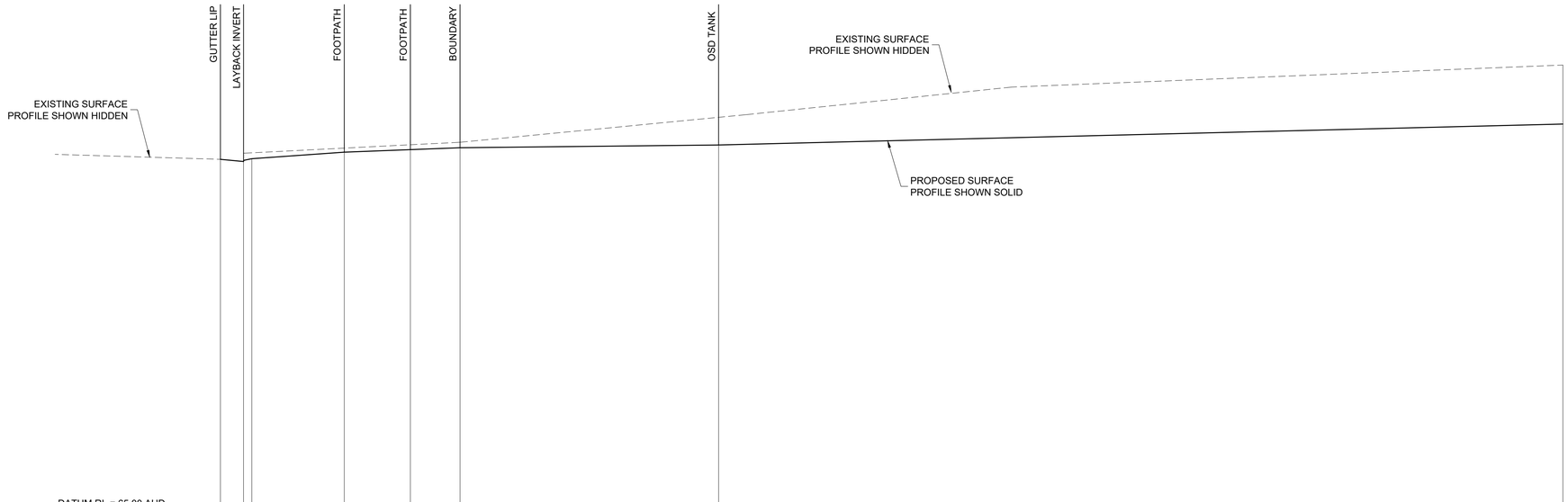
PROPOSED DEVELOPMENT
AT 16-22 FUNDA CRESCENT, LALOR PARK
FOR MODE DESIGN

PROPOSED DESIGN LEVELS

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
220109	C02.04	A1
DESIGNED BY: O.G.	DATE: SEPTEMBER 2022	
DRAWN BY: O.G.	SCALE: 1:200 U.N.O.	

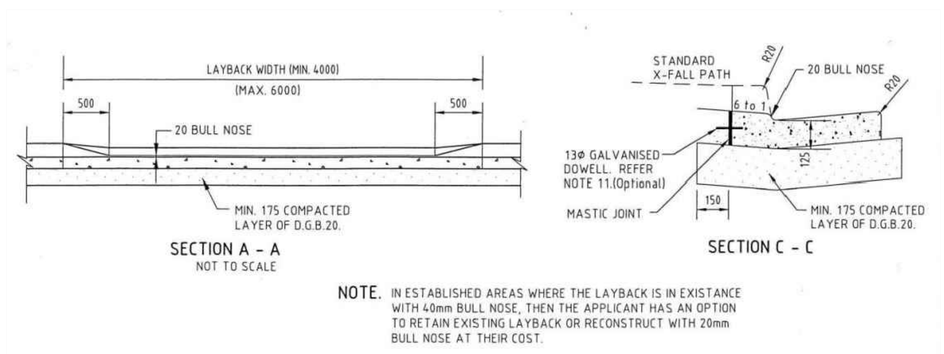


DATUM RL = 65.00 AHD

CHAINAGE (m)	-00.45		00.00	00.15				01.83		03.03		03.93								08.62			23.93
EXISTING SURFACE	71.39		71.35	71.50				71.68				71.75								72.16			73.10
PROPOSED LEVEL	71.39		71.35	71.40				71.52				71.60								71.65			72.03
GRADIENT (%)				7%				4%				1%								2.26%			

PROPOSED DRIVEWAY LONGSECTION CL1

1:50



NOTE. IN ESTABLISHED AREAS WHERE THE LAYBACK IS IN EXISTANCE WITH 40mm BULL NOSE, THEN THE APPLICANT HAS AN OPTION TO RETAIN EXISTING LAYBACK OR RECONSTRUCT WITH 20mm BULL NOSE AT THEIR COST.

TYPICAL DRIVEWAY LAYBACK DETAIL

1:50

IN ACCORDANCE WITH BLACKTOWN CITY COUNCIL SPECIFICATIONS

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PROPOSED DEVELOPMENT
AT 16-22 FUNDA CRESCENT, LALOR PARK
FOR MODE DESIGN

DRIVEWAY LONGSECTION

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
220109	C02.05	A1
DESIGNED BY: O.G.	DATE: SEPTEMBER 2022	
DRAWN BY: O.G.	SCALE: 1:200 U.N.O.	

EXTERNAL CATCHMENT SWALE ANALYSIS

1:500

EXTERNAL CATCHMENT CALCULATIONS

COUNCIL: BLACKTOWN CITY COUNCIL
100 YEAR, 5 MIN STORM = 225 mm/h
20 YEAR, 5 MIN STORM = 172 mm/h

CRITICAL UPSTREAM CATCHMENT A1 & A2 = 770 m²

DETERMINED RUNOFF COEFFICIENT: C = 0.80
RAINFALL INTENSITY 100 YEAR, 5 MIN STORM: I_{100} = 225 mm/h
CATCHMENT AREA A = 770 m²
DETERMINED UPSTREAM FLOW RATE Q = 38.5 l/s
(AS PER COUNCIL ASSESSMENT)

PROPOSED SWALE CAPACITY: Q_{SWALE} = 59.8 l/s

THEREFORE UPSTREAM RUNOFF FULLY CONTAINED WITHIN PROPOSED DRAINAGE SWALE. REFER TO C02.01 FOR DETAILS.

Manning Open Channel			
Trapezoid Channel			
Required Capacity	38.5	l/s	
Total Width of Channel	0.8	m	
Base Width of Channel B	0.32	m	
Depth of Channel	0.12	m	
Channel Bed Slope 1:	2.00		
Wetted Perimeter Pw	0.86	m	
Area A	0.0672	m2	
Hydraulic Radius R	0.08	m	
Channel Length	33.5	m	
U/S RL	73.6		
D/S	73		
Gradient	1.5%		
Channel Bed Material	Short Grass		
Mannings 'n'	0.025		
Flow Capacity Q	0.06	m3/s	
Flow Capacity Q	59.8	l/s	**OK**
Velocity V	0.89	m3/s	
Velocity x D	0.11		**OK**

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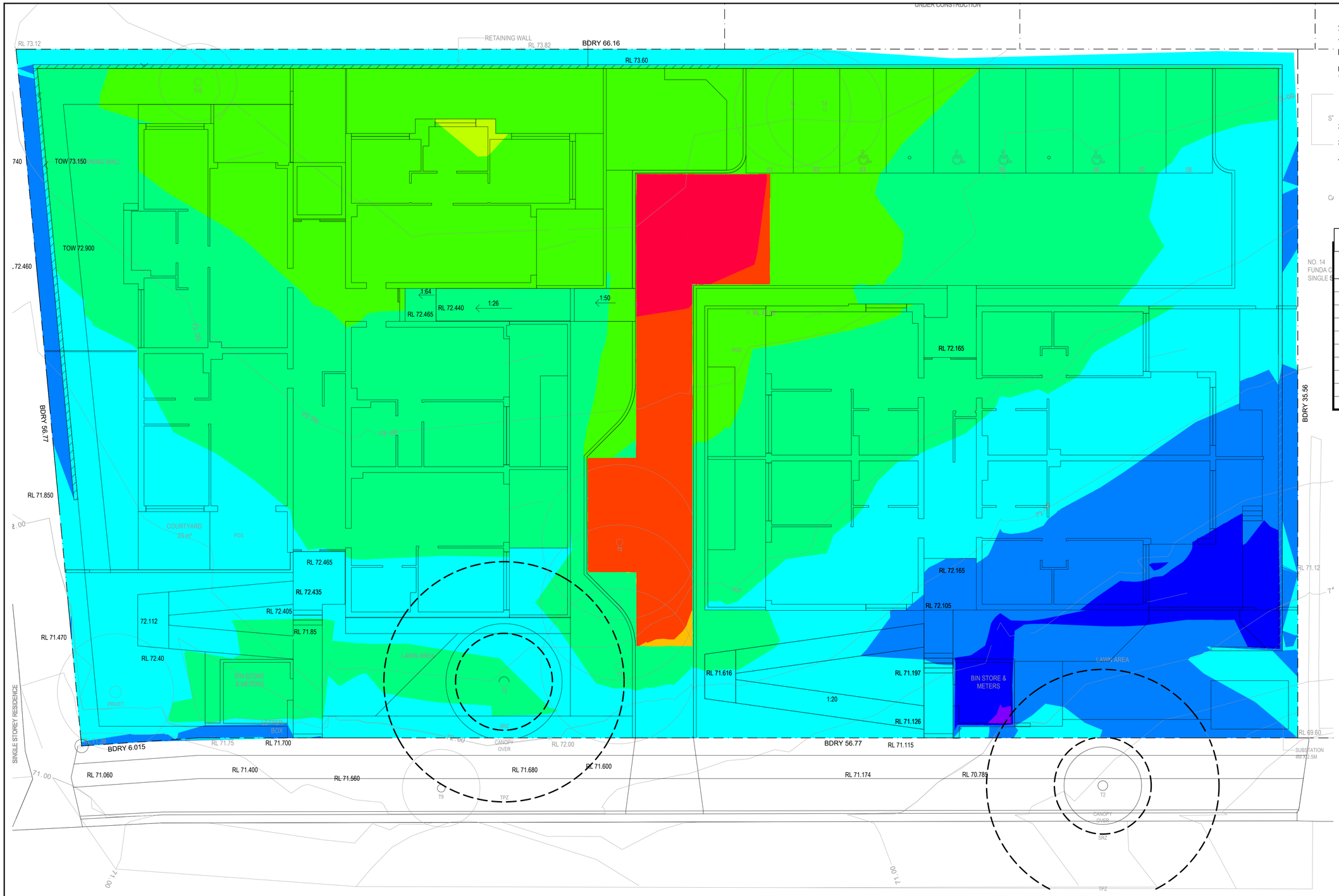
EXTERNAL CATCHMENT SWALE ANALYSIS

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
220109	C02.06	A1
DESIGNED BY:	DATE:	
O.G.	SEPTEMBER 2022	
DRAWN BY:	SCALE:	
O.G.	1:200 U.N.O.	



FUNDA CRESCENT

BULK EXCAVATION PLAN

1:100

BULK EXCAVATION SUMMARY

TOTAL CUT = 1632.2 m^3
TOTAL FILL = 70.1 m^3
BALANCE = 1562.1 m^3

NOTE:
1. CUT AND FILL BASED ON FINISHED GROUND SURFACES APART FROM OSD TANK BASE AND BUILDING PAD LEVELS. BULK EXCAVATION LEVEL HAS BEEN SET 250mm BELOW THE PROPOSED FINISHED FLOOR LEVEL FOR THE BUILDING. BULK EXCAVATION LEVELS HAVE BEEN SET 100mm BELOW THE OSD TANK BASE SLAB LEVELS.
2. NO ALLOWANCE FOR STRIPPING AND REPLACEMENT OF TOPSOIL.
3. NO ALLOWANCE FOR EXCAVATION OF DRAINAGE TRENCHES OR STRUCTURAL FOUNDATIONS.
4. NO ALLOWANCE FOR ANY UNSUITABLE MATERIAL FOUND ANYWHERE ON SITE.

EARTHWORKS VOLUME TABLE

	LOWER VALUE	UPPER VALUE	CUT VOLUME (m^3)	FILL VOLUME (m^3)
	-3.50	-3.00	3.4	-
	-3.00	-2.50	39.4	-
	-2.50	-2.00	54.2	-
	-2.00	-1.50	54.4	-
	-1.50	-1.00	138	-
	-1.00	-0.50	468	-
	-0.50	0.00	874.9	-
	0.00	0.50	-	62.0
	0.50	1.00	-	8.0
	1.00	1.50	-	0.00

NOTE: DO NOT SCALE OFF DRAWINGS. REFER TO ARCHITECTURAL PLANS. VERIFY DIMENSIONS ON SITE

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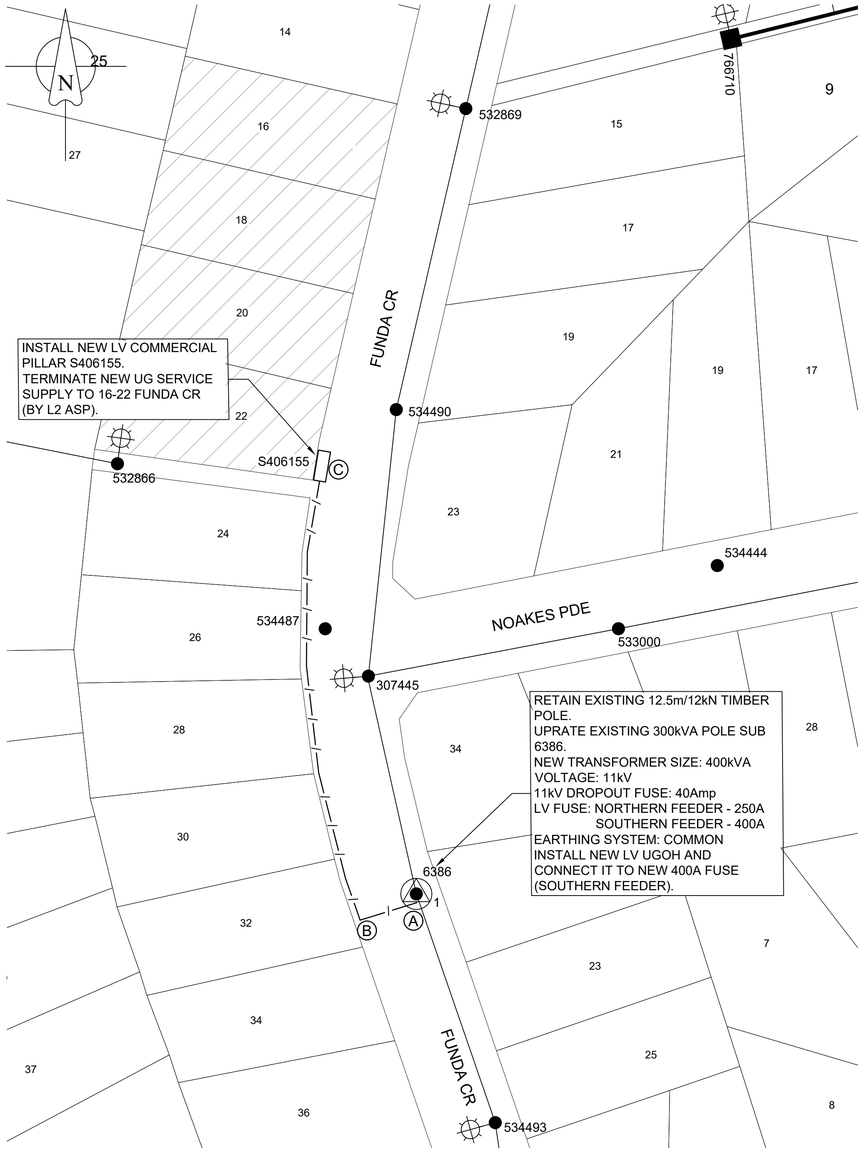
FOR MODE DESIGN

BULK EXCAVATION PLAN

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
220109	C03.01	A1
DESIGNED BY:	DATE:	
O.G.	SEPTEMBER 2022	
DRAWN BY:	SCALE:	
O.G.	1:200 U.N.O.	



SITE PLAN

SCALE 1:500

SITE LEGEND

- EXISTING OH MAINS
- NEW TRENCH
- EXISTING POLE
- EXISTING SL COLUMN
- EXISTING STREET LIGHT
- NEW LV PILLAR
- EXISTING POLE SUBSTATION

DESIGN COMPLIANCE AND INDEMNITY

This design complies with Endeavour Energy's relevant standards as current at this time and as listed on the Endeavour Energy Accredited Service Provider's Internet site. These standards include, but are not limited to:

CP:	Connection Policy
EMS:	Environmental Management Standard
MCI:	Mains Construction Instruction
MDI:	Mains Design Instruction
PDI:	Protection Design Instruction
SDI:	Substation Design Instruction
SAD 0001:	Design Drawing Standard
MMI:	Mains Maintenance Instruction
SMI:	Substation Maintenance Instruction
LDI 0001:	Public lighting Electrical Design Element

Additionally, where relevant, the design complies with AS/NZS 7000 "Overhead Line Design - Detailed Procedures" published by The Australian Standards.

NSW POWER PROJECTS indemnifies Endeavour Energy for any loss or damage resulting from non-compliance of the design with the above standards.

Signed: Krishna Tuladhar

Name: KRISHNA TULADHAR

Service Provider Number: 4954 Date: 21.02.2023

WORKS COMPLETED/FIELD BOOK

CONSTRUCTED BY: _____

WORKS COMPLETED: _____

SIGNATURE: _____ DATE: _____

INSPECTED BY: _____

SIGNATURE: _____ DATE: _____

ASSET RECORDING

I: _____

OF: _____

CONTACT No.: _____

HEREBY CERTIFY THAT ASSETS MARKED AS-BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 0004.

SIGNATURE: _____

DATE: _____

CERTIFIED BY ENDEAVOUR ENERGY

Amendment: A

Date Approved: 7/03/2023

Examiner's Signature: _____

Print Name: Waheed Ebrahimi

This Certification is issued subject to Endeavour Energy's Standard Certification Terms

THIS DRAWING SUPPLIES 1 RESIDENTIAL DEVELOPMENT WITH 18 UNITS

C.A.P. No	FILE No	LOT Nos	No.of LOTS	DEVELOPER	DEVELOPERS REP	PHONE No
UML10591		LOT 360-363 DP 31954	4	CORE CONSULTING ENGINEERS	STEPHEN CUTHBERT	02 8961 3250

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH RELEVANT ENDEAVOUR ENERGY NETWORK STANDARDS AND CONNECTION POLICY.
2. ENDEAVOUR ENERGY CONTACT PHONE: 131081
3. DESIGN CERTIFICATION SHALL LAPSE WHERE:
   (i) NOTICE OF INTENT HAS NOT BEEN RECEIVED WITHIN SIX (6) MONTHS OF THIS CERTIFICATION, OR
   (ii) CONSTRUCTION HAS BEEN INTERRUPTED FOR MORE THAN SIX (6) MONTHS WHERE DESIGNER CERTIFICATION HAS LAPSED, THE DESIGN MUST BE RESUBMITTED FOR THE CERTIFICATION BY THE ACCREDIATED DESIGNER.
4. ATTENTION:
   PERMANENT SURVEY MARKS MAY EXIST IN THIS AREA. THESE ARE TO BE LOCATED BY SURVEYOR PRIOR TO COMMENCEMENT OF WORK.
5. ATTENTION:
   ALL SERVICES SEARCHES MUST BE CHECKED BEFORE CONSTRUCTION.
6. WARNING:
   LIVE ENDEAVOUR ENERGY CABLES & OTHER SERVICES IN THIS AREA. PLEASE CONTACT DIAL BEFORE YOU DIG ON TELEPHONE; 1100 FOR
   SEARCHES TWO DAYS PRIOR TO EXCAVATION.
7. ATTENTION:
   SERVICE PROVIDER TO NOTIFY ENDEAVOUR ENERGY'S ASSET DATA CUSTOMER DEPT DAILY WHEN CABLE WORKS IS IN PROGRESS.
   TELEPHONE: 131081.
8. OPERATIONAL LIMITS
   UNLESS APPROVED OTHERWISE, INTERRUPTION TO ANY CUSTOMER'S SUPPLY MUST BE AVOIDED. THE FOLLOWING ALTERNATIVES SHOULD BE CONSIDERED
   - MOBILE GENERATORS AND SUBSTATIONS
   -LIVE LINE WORK
   -DESIGN ALTERNATIVES
   -LOW VOLTAGE PARALLELS
   -WORK PRACTICES/STANDARDS
   THE COST IS TO BE FUNDED BY THE CUSTOMER/DEVELOPER.
9. REIMBURSEMENTS WILL BE PAID TO THE NOMINATED PARTY ON THE LETTER OF INTENT AFTER THE WORKS HAVE BEEN COMPLETED AND THE LETTER OF ACCEPTANCE HAS BEEN ISSUED. THE REIMBURSED AMOUNT IS SHOWN IN THE FUNDING ARRANGEMENTS FOR SCOPE OF WORK. ANY DISAGREEMENT WITH THE AMOUNT SHOULD BE RESOLVED WITH ENDEAVOUR ENERGY PRIOR TO COMMENCEMENT OF WORKS.
10. HAVE ALL THE EXISTING ASSETS BEEN FIELD CHECKED AND ARE ACCURATE AT THE TIME OF DESIGN? YES.
11. LOCAL AUTHORITY TO BE NOTIFIED OF PROPOSED WORK PRIOR TO CONSTRUCTION.
12. ENVIRONMENTAL MANAGEMENT PLAN EMS0001 IS PART OF THIS DESIGN.
13. ALL EARTHING INSTALLATION WORKS MUST COMPLY WITH ENDEAVOUR ENERGY EARTHING STANDARDS EDI100.

	534488						0.0	0.0	EX	EX+LUGOH	EX	EX	EX		EX				X		1
NEW	EXISTING	NEW	REMOVE	EXISTING	REPLACE	BRACKET	SPAN LENGTH	LINE DEV DEGREES	HV	LV	DIA mm	DEPTH m	TYPE	STAY	FOOTING	RELOCATE	REPLACE	NEW	EXISTING	REMOVE	NUMBER
FIELD POLE NUMBER		LANTERNS					CONSTRUCTION				HOLE		POLE								

DUCT BREAKDOWN TABLE

Route	Configuration	Route Length (m)	Reimbursement (m) x ($)	Existing Duct Usage Charge (m) x ($)
A - B	NEW TRENCH LV	12m	Route Length x Reimbursement Amount NIL	Route Length x Reimbursement Amount NIL
B - C	PB NEW TRENCH LV	74m	Route Length x Reimbursement Amount NIL	Route Length x Reimbursement Amount NIL
	TOTAL	86m	NIL	NIL

DUCT LEGEND

SPARE 125mm DUCT — NEW CABLE IN 125mm DUCT — – – –PB PROPERTY BOUNDARY

AUTHORISATION OF ESTIMATE VALUE OF ENDEAVOUR ENERGY FUNDED ASSETS

Signed: _____

Print Name: Waheed Ebrahimi

Service Number: 38367

Funding Amount: $9,543.00

Date: 7/03/2023

KEY DOCUMENTS TABLE

THE CERTIFICATION OF THIS PROJECT IS SUPPORTED BY THE FOLLOWING KEY DOCUMENTS

DOCUMENT NAME	NOTATION DATE
SUMMARY ENVIRONMENTAL REPORT(SER) - FAT0038 part of EMS0001	21.02.2023
AGREEMENT FOR ENTRY, GRANT and CREATION OF EASEMENT - FPJ5013	N/A
EQUIPMENT TO BE RETURNED TO ENDEAVOUR ENERGY - FPJ4252	N/A
EQUIPMENT TO BE RETURNED TO ENDEAVOUR ENERGY - FPJ4253	N/A
TELECOMMUNICATION ASSET AGREEMENT - FPJ4184	N/A
PROJECT DEFINITION	
LIST ANY KEY DOCUMENTS SUPPORTING THE CERTFICATION:	
1) DESIGNER'S SAFETY REPORT	21.02.2023

PIONEER COST SHARE REIMBURSEMENT SCHEME - Expiry Date: dd mmm yyyy Pro-Rata Reimbursement for Customer Load Over 50kVA

Asset	Asset Cost Estimate ($)	Unit Quantity	Net Asset Capacity (kVA)	Original Customer Utilisation (kVA)	Maximum Reimbursement Amount ($)
HV Mains	N/A	N/A	N/A	N/A	N/A
LV Mains	N/A	N/A	N/A	N/A	N/A
Substation	N/A	N/A	N/A	N/A	N/A

FUNDING ARRANGEMENTS FOR SCOPE OF WORKS

ASP LEVEL 1 ELECTRICAL WORKS

ENDEAVOUR ENERGY SUPPLIED MATERIALS

- None

ENDEAVOUR ENERGY FUNDED & CONSTRUCTED

Works Required Prior to Completion of Customer Contestable Project	Works Required in Association of Customer Contestable Project
None	None

ENDEAVOUR ENERGY FUNDED & ASP L1 CONSTRUCTED – REIMBURSEMENT (exc GST)

400kVA 11kV 3PH Transformer = $8,672.00
Total EE Capital Contribution (ex PM & Design) = $8,672.00
EE Capital Contribution (HV reimbursed) = ~~$9,540.00~~
$9,543.00

CUSTOMER FUNDED NON–CONTESTABLE WORKS

- Network switching
- Substation commissioning
- Contract Inspection
- ADSS cable jointing and testing

CUSTOMER FUNDED CONTESTABLE WORKS

All other works and materials including but not limited to:
- Uprate existing 300kVA pole sub to 400kVA with new HV and LV fuses.
- Trenching.
- Installation of conduit/LV cable.
- Installation of LV UGOH.
- Installation of LV Pillar.
- Other works as per design.

CUSTOMER

CUSTOMER FUNDED

Includes but not limited to:
- Pegging of property boundaries & infrastructure locations
- Providing site access
- Own service & service connection
- Confirm finished ground levels

EXISTING DUCT USAGE CHARGES (exc GST)

Nil

CO–ORDINATION SUPPLY REQUIRED DATE

(TO BE CONFIRMED BY THE CUSTOMER)

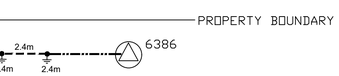
DAY: 30 MONTH: 04 YEAR: 2023

ASSET TO BE RETURNED TO NEAREST ENDEAVOUR ENERGY DEPOT BY L1 ASP

- 1 x 300kVA transformer (Pole sub 6386)

EARTHING DETAILS

Soil Resistivity (ohms.m)	Layer 1	65.34	Depth (m)	0.92
	Layer 2	38.95		∞
Designed earth resistance limit (ohms)				11.0
Measured earth resistance (ohms)				
Number of electrodes				2
Insulated depth (m)				0
Length of bare electrode (m)				2.4m
Connector type (CAD or CRIMP)				CRIMP
Location Category: F-frequented, R-remote, S-special				F
What design tool used ?				3E
Fault level (kA)				1.362



EARTHING CONSTRUCTION TO EDI-0006

INFORMATION UPDATED AFTER COMMISSIONING ON ___/___/_____

POLE SUBSTATION 6386

COMMON EARTHING LAYOUT

(NOT TO SCALE)

AMENDMENTS: A ORIGINAL ISSUE 01

NSW POWER PROJECTS
29 Annaluke Street
Riverstone
NSW, 2765
Email: info@nswpowerprojects.com.au
Mobile: 0431 563 837
L3ASP Accreditation No:- 4954

TEMPLATE VERSION No:5.20

REFERENCE DRAWING'S

WORK ORDERS: GENERAL; OVERHEAD; UNDERGROUND; SUBSTATIONS

CAMS File No.	UML10591
AM PROJ. No.	
HV SWITCHING	
EE DEPOT	KINGS PARK
EE REGION	NORTHERN
HV OP DIAG	
LOCAL GOV AREA	BLACKTOWN

ORIGINAL SCALE AS SHOWN

DRAWN S.T. | DATE 21.02.2023 | CH'D K.T.

DO NOT SCALE DIMENSIONS IN METRES

DESIGN K.T.

16-22 FUNDA CRESCENT
LALOR PARK
UML10591
CONNECTION OF LOAD

Endeavour Energy

A1 | 528598 | A

SHEET No 1 OF 2 SHEETS

96920