CONCEPT STORMWATER DRAWINGS FOR

16-20 BURRAWONG CRESCENT &

28 MACARTHUR ROAD, ELDERSLIE NSW 2570

SYMBOLS

RL	PIT SURFACE LEVEL
IL	INVERT LEVEL
TK	TOP OF KERB
B.O.W	BOTTOM OF WALL
T.O.W	TOP OF WALL
SW	STORMWATER DRAINAGE PIPE
RWT	DOWNPIPE TO RAINWATER TANK
SW	OVERFLOW PIPE FROM RAINWATER TANK
	Ø100 SUBSOIL PIPE
	Ø100 SUBSOIL PIPE
FW	FLOOR WASTE 150X150
FW	FLOOR WASTE 150Ø
RWO	RAINWATER OUTLET 300Ø
PG	PLANTER GRATE
DP	DOWN PIPE
CO	CLEAN OUT
IO	INSPECTION OPENING
VD	VERTICAL DROP
VR	VERTICAL RISER
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT
	WIDE GRATED DRAIN
	OVERLAND FLOW PATH
	CAST IN SLAB PIPE

NOTES

1. ALL LINES ARE TO BE MIN. 100Ø UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
5. ALL WORK DO BE DONE IN ACCORDANCE WITH AS/NZ 3500.3 (CURRENT EDITION), COUNCIL SPECIFICATIONS, RELEVANT VOLUME OF NCC (NATIONAL CONSTRUCTION CODE)
6. LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
7. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL AND ALL OTHER RELEVANT CONSULTANT'S PLANS.
8. ALL RAINWATER TANKS TO BE FITTED WITH A FIRST FLUSH DEVICE TO PREVENT POTENTIAL CONTAMINANTS FROM ENTERING THE TANKS.
9. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
10. ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
11. ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES
12. PROVIDE EMERGENCY OVERFLOW TO ALL PLANTER BOX AND BALCONIES.
13. ALL PITS WITH DEPTH MORE THAN 900mm MUST HAVE IRON STEPS AND TO BE BENCHED AND STREAMLINED
14. PROVIDE STORMWATER GRATE 200Wx200D AT THE BASE OF ALL MECHANICAL SHAFTS AND UNCOVERED STAIRS OR OPENINGS.
15. ENSURE ALL DRAINAGE WORKS ARE AWAY FROM TREE ROOTS
16. SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLIED BY THE RELEVANT AUTHORITIES AND FIELD INVESTIGATION AND ARE NOT GUARANTEED COMPLETE NOR CORRECT. IT IS THE CLIENT AND CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL PRIOR TO CONSTRUCTION.
17. ALL VARIATIONS TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY SMART STRUCTURES AUSTRALIA PRIOR TO COMMENCEMENT OF WORKS.
18. THE MINIMUM SIZES OF THE STORMWATER DRAINS SHALL NOT BE LESS THAN DN90 FOR CLASS 1 BUILDINGS AND DN100 FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY THE REGULATORY AUTHORITY
19. ALL STORMWATER DRAINAGE PITS IN GARDEN OR TURFED AREAS TO BE FITTED WITH PERFORATED GALVANISED STEEL MESH UNDER THE LIDS TO PREVENT DEBRIS ENTERING STORMWATER NETWORK.
20. PIPE INSTALLATION TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF CURRENT AS3500.3 AND RELEVANT VOLUME OF NCC (NATIONAL CONSTRUCTION CODE). THIS IS CONTRACTOR'S RESPONSIBILITY TO CHECK IMPACT OF PIPE TRENCHING TO SURROUNDING STRUCTURAL AND NON STRUCTURAL ELEMENTS.

AS 3500.3- TABLE 8.2
SIZE OF MINIMUM INTERNAL DIMENSIONS
FOR STORMWATER AND INLET PITS

DEPTH OF INVERT OF OUTLET	MINIMUM INTERNAL DIMENSIONS (mm)		
	RECTANGULAR		CIRCULAR
	WIDTH	LENGTH	DIAMETER
≤600	450	450	600
>600 ≤900	600	600	900
>900 ≤1200	600	900	1000
>1200	900	900	1000

DRAWING LIST	
DRAWING NUMBER	DRAWING NAME
D00	COVER SHEET, LEGEND & DRAWING SCHEDULE
D01	GROUND LEVEL STORMWATER DRAINAGE PLAN
D02	LEVEL 1 STORMWATER DRAINAGE PLAN
D03	ROOF STORMWATER DRAINAGE PLAN
D04	PRE & POST DEVELOPMENT CATCHMENT PLANS AND MUSIC MODEL RESULTS
D09	STORMWATER DRAINAGE SECTIONS AND DETAILS SHEET 1
D10	STORMWATER DRAINAGE SECTIONS AND DETAILS SHEET 2
D15	EROSION AND SEDIMENT CONTROL PLAN AND DETAILS

DIAL 1100 BEFORE YOU DIG

IMPORTANT:
CONTRACTOR TO OBTAIN CURRENT SET OF "DIAL BEFORE YOU DIG" PLANS ON SITE ALL TIMES AND PRIOR TO CONSTRUCTION WORKS

No.	Description	Date	Issued by	Checked by
B	ISSUED FOR D.A.	08.06.23	J.E.	K.E.
A	ISSUED FOR D.A.	06.12.22	J.E.	K.E.

SCALE BARS
1:20 0 0.1 0.2 0.5 1 2
1:50 0 0.25 0.5 1.25 2.5 5
1:100 0 0.5 1 2.5 5 10
1:200 0 1 2 5 10 20

CLIENT: NSW LAHC
LOCKED BAG 5022
PARRAMATTA NSW 2124
PHONE 1800 738 718

ARCHITECT: MORSON GROUP

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DRAWING TITLE: **COVER SHEET, LEGEND & DRAWING SCHEDULE**

SHEET NO.	REV.	SCALE @ A1
D00	B	NTS
DESIGNED: K.E.	DRAWN: J.E.	AUTHORISED: K.E.

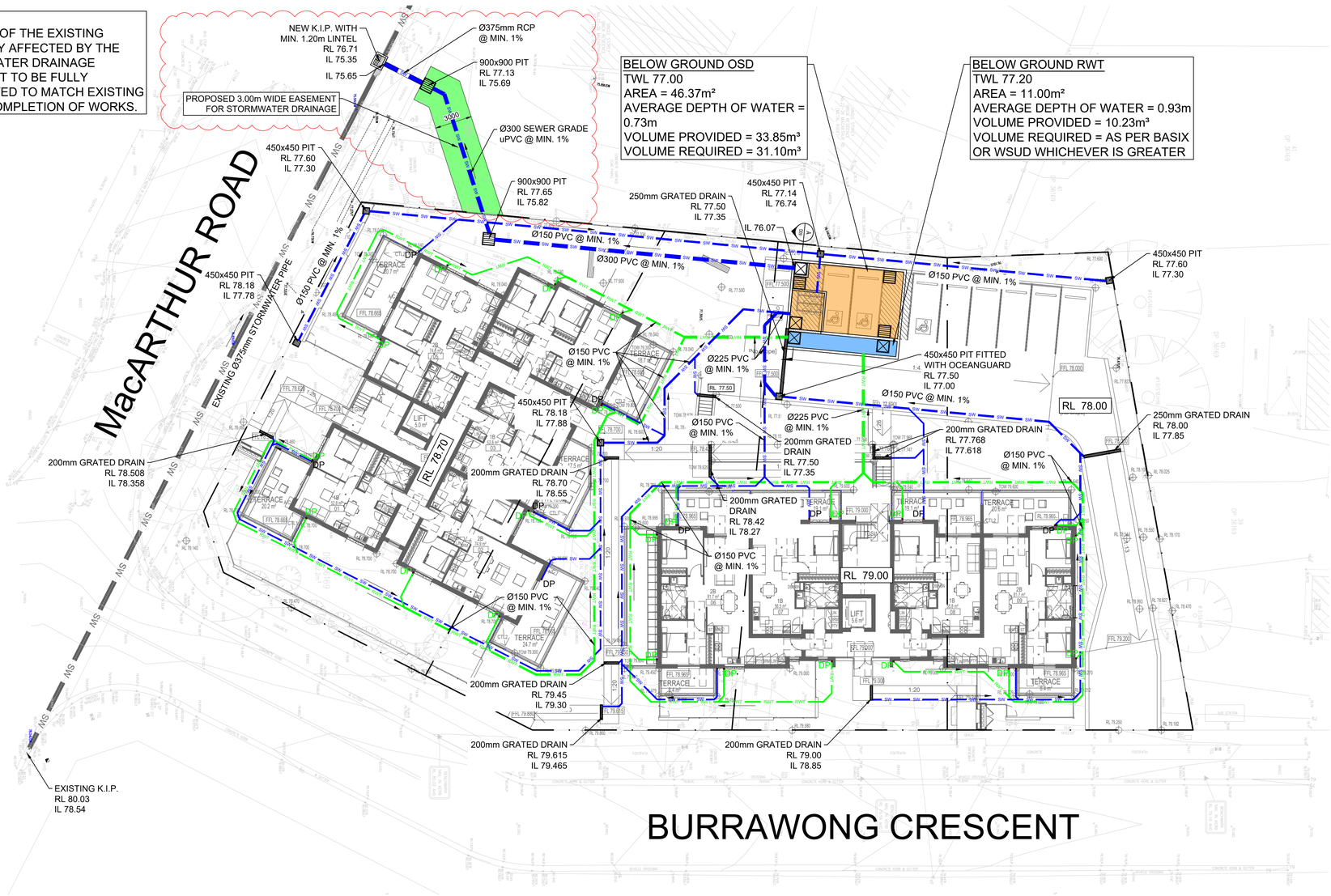
NORTH

PROJECT: 16-20 BURRAWONG CRESCENT & 28 MACARTHUR ROAD, ELDERSLIE NSW 2570

PROJECT NO. 210555

PROJECT START DATE: NOVEMBER 2022

NOTE:
PORTION OF THE EXISTING DRIVEWAY AFFECTED BY THE STORMWATER DRAINAGE EASEMENT TO BE FULLY REINSTATED TO MATCH EXISTING AFTER COMPLETION OF WORKS.



GROUND FLOOR STORMWATER DRAINAGE PLAN
SCALE 1: 200

No.	Description	Date	Issued by	Checked by
D	ISSUED FOR D.A.	30.01.24	J.E.	K.E.
C	ISSUED FOR D.A.	19.09.23	K.E.	K.E.
B	ISSUED FOR D.A.	08.06.23	J.E.	K.E.
A	ISSUED FOR D.A.	06.12.22	J.E.	K.E.

SCALE BARS
1:20 0 0.1 0.2 0.5 1 2
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1:100 0 0.5 1 2.5 5 10
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CLIENT:
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PHONE 1800 738 718

ARCHITECT:
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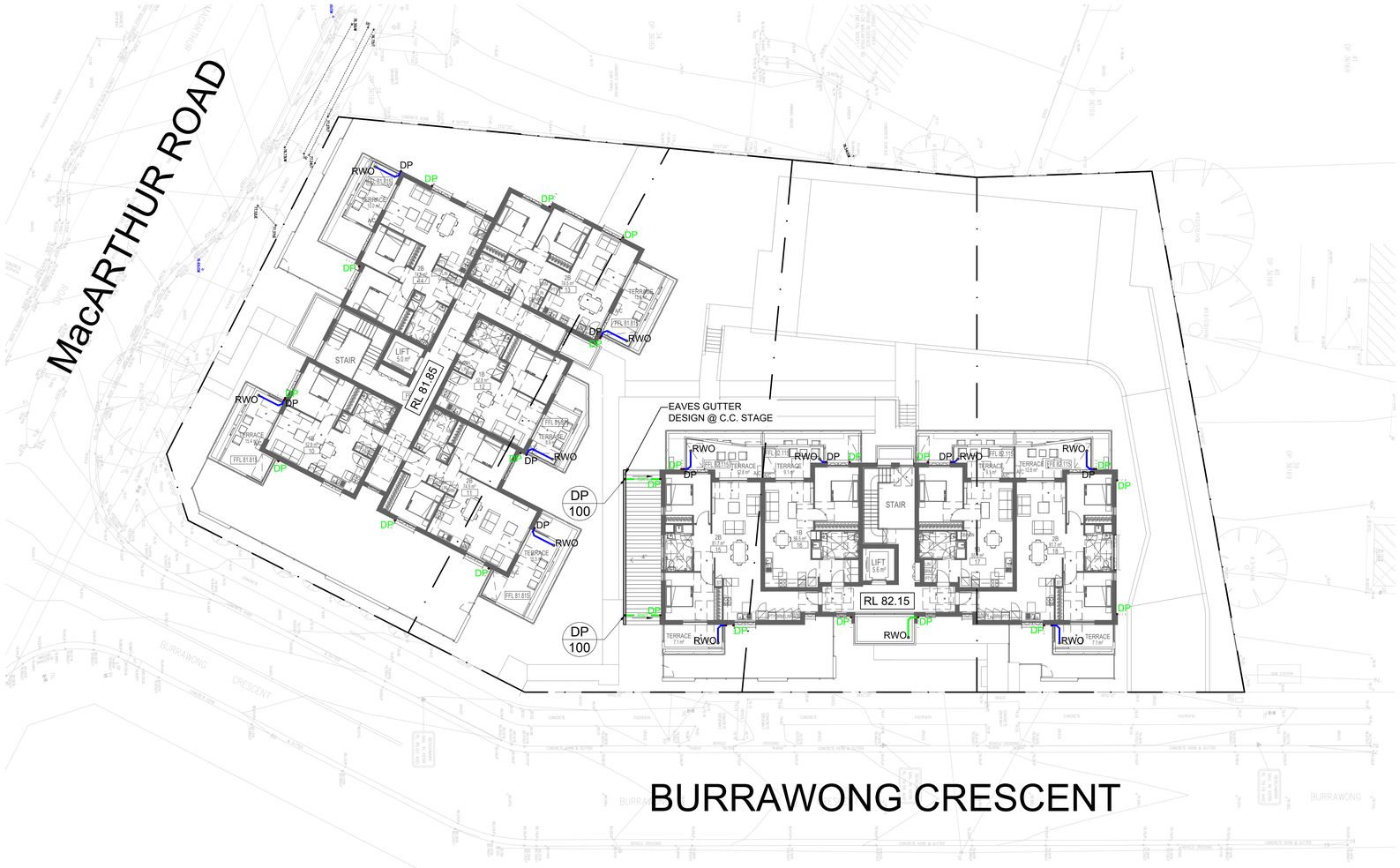
DRAWING TITLE
GROUND FLOOR STORMWATER DRAINAGE PLAN

PROJECT
16-20 BURRAWONG CRESCENT & 28 MACARTHUR ROAD, ELDERSLIE NSW 2570

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D01	D	AS SHOWN		210555
DESIGNED: K.E.	DRAWN: J.E.	AUTHORISED: K.E.		PROJECT START DATE: NOVEMBER 2022



LEVEL 1 STORMWATER DRAINAGE PLAN
SCALE 1: 200

No.	Description	Date	Issued by	Checked by
B	ISSUED FOR D.A.	08.06.23	J.E.	K.E.
A	ISSUED FOR D.A.	06.12.22	J.E.	K.E.

SCALE BARS
1:20 0 0.1 0.2 0.5 1 2
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1:100 0 0.5 1 2.5 5 10
1:200 0 1 2 5 10 20

CLIENT: NSW LAHC
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PARRAMATTA NSW 2124
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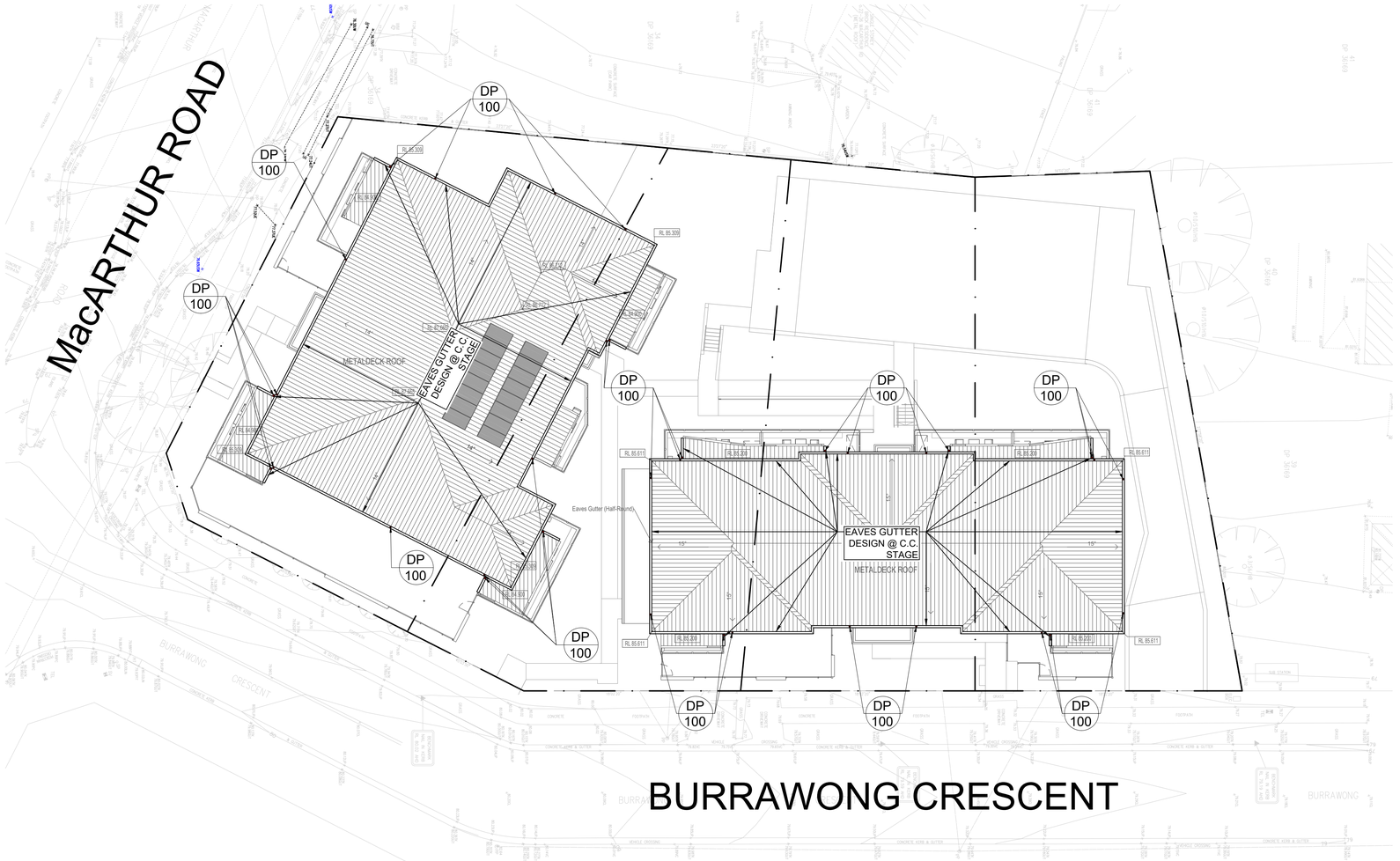
DRAWING TITLE: **LEVEL 1 STORMWATER DRAINAGE PLAN**

PROJECT: 16-20 BURRAWONG CRESCENT & 28 MACARTHUR ROAD, ELDERSLIE NSW 2570

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D02	B	AS SHOWN		210555
DESIGNED: K.E.	DRAWN: J.E.	AUTHORISED: K.E.		PROJECT START DATE: NOVEMBER 2022



ROOF STORMWATER DRAINAGE PLAN
SCALE 1: 200

No.	Description	Date	Issued by	Checked by
B	ISSUED FOR D.A.	08.06.23	J.E.	K.E.
A	ISSUED FOR D.A.	06.12.22	J.E.	K.E.

SCALE BARS

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1:50	0	0.25	0.5	1.25	2.5	5
1:100	0	0.5	1	2.5	5	10
1:200	0	1	2	5	10	20

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PARRAMATTA NSW 2124
PHONE 1800 738 718

ARCHITECT:
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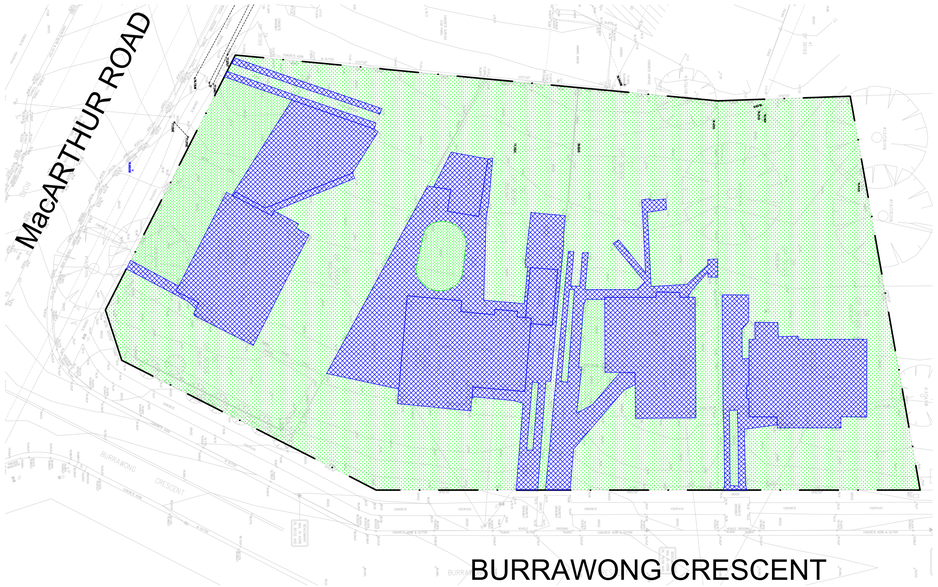
DRAWING TITLE: ROOF STORMWATER DRAINAGE PLAN

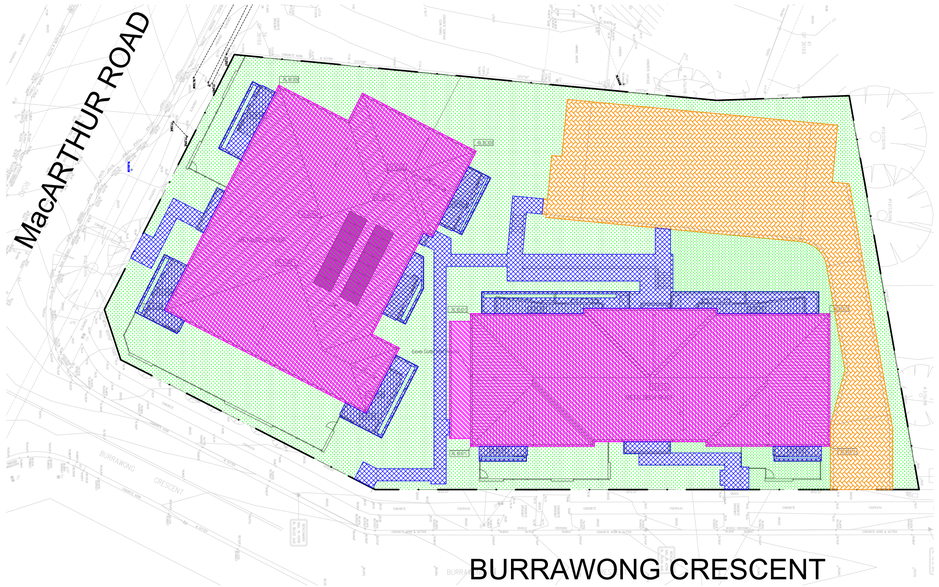
PROJECT: 16-20 BURRAWONG CRESCENT & 28 MACARTHUR ROAD, ELDERSLIE NSW 2570

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D03	B	AS SHOWN		210555
DESIGNED: K.E.	DRAWN: J.E.	AUTHORISED: K.E.		PROJECT START DATE: NOVEMBER 2022



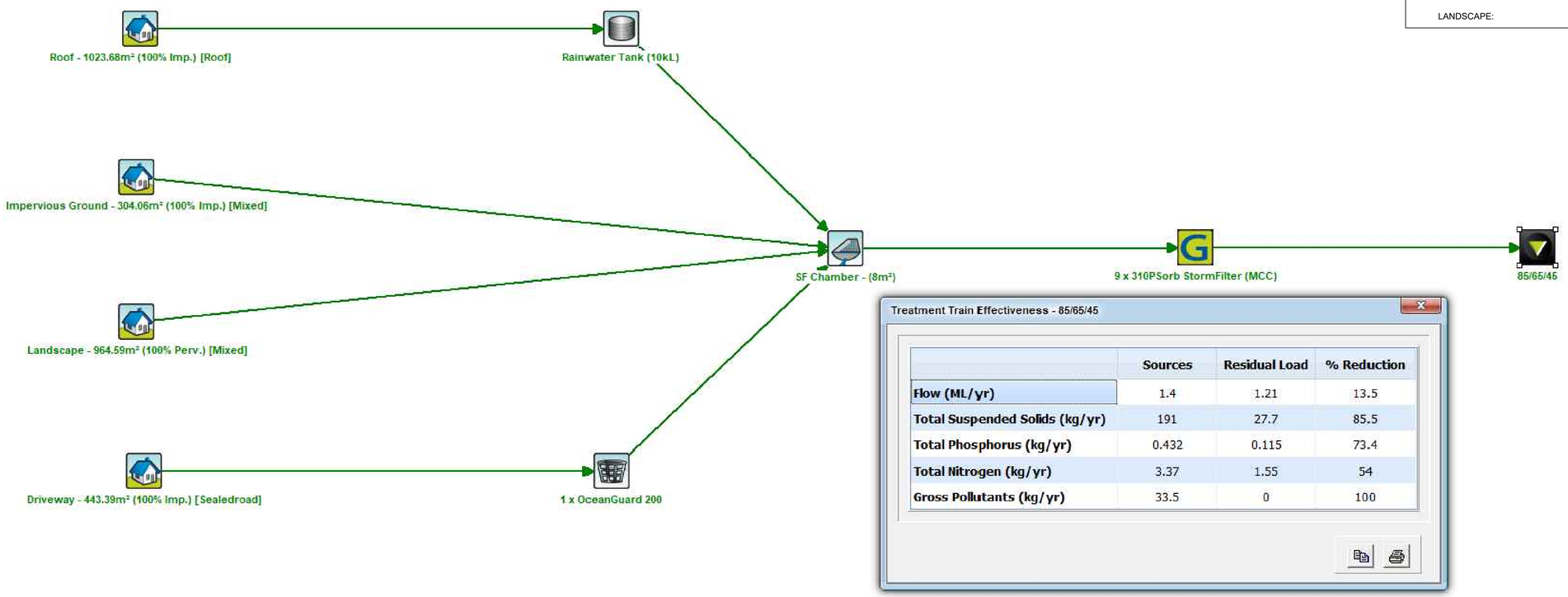
PRE DEVELOPMENT CATCHMENT PLAN
SCALE 1: 300

PRE DEVELOPMENT CATCHMENT ANALYSIS:	
TOTAL SITE AREA:	2735.72 m²
IMPERVIOUS:	852.72 m²
PERVIOUS:	1883.00 m²



POST DEVELOPMENT CATCHMENT PLAN
SCALE 1: 300

POST DEVELOPMENT CATCHMENT ANALYSIS:	
TOTAL SITE AREA:	2735.72 m²
ROOF:	1023.68 m²
DRIVEWAY:	443.39 m²
HARDSTAND:	304.06 m²
LANDSCAPE:	964.59 m²



Treatment Train Effectiveness - 85/65/45

	Sources	Residual Load	% Reduction
Flow (ML/yr)	1.4	1.21	13.5
Total Suspended Solids (kg/yr)	191	27.7	85.5
Total Phosphorus (kg/yr)	0.432	0.115	73.4
Total Nitrogen (kg/yr)	3.37	1.55	54
Gross Pollutants (kg/yr)	33.5	0	100

MUSIC MODEL RESULTS
SCALE NTS

No.	Description	Date	Issued by	Checked by
B	ISSUED FOR D.A.	08.06.23	J.E.	K.E.
A	ISSUED FOR D.A.	06.12.22	J.E.	K.E.

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DRAWING TITLE: PRE & POST DEVELOPMENT CATCHMENT PLANS AND MUSIC MODEL RESULTS
PROJECT: 16-20 BURRAWONG CRESCENT & 28 MACARTHUR ROAD, ELDERSLIE NSW 2570

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D04	B	AS SHOWN		210555
DESIGNED: K.E.	DRAWN: J.E.	AUTHORISED: K.E.		PROJECT START DATE: NOVEMBER 2022

ON-SITE DETENTION REQUIREMENTS

IN ACCORDANCE WITH CAMDEN COUNCIL ENGINEERING DESIGN SPECIFICATION - SECTION 3.6, ON-SITE DETENTION SYSTEMS (OSD) IS REQUIRED FOR THE SUBJECT DEVELOPMENT. BASED ON THE COUNCIL CRITERIA, OSD TO BE DESIGNED TO RESTRICT THE MAXIMUM DISCHARGE FROM THE POST-DEVELOPMENT SITE TO THE PRE-DEVELOPMENT FLOWS FOR ALL STORMS UP TO AND INCLUDING THE 1% AEP.

PRE-DEVELOPMENT SITE DETAILS:

TOTAL SITE AREA: 2735.72 m^2

- IMPERVIOUS AREA: 852.72 m^2
- PERVIOUS AREA: 1883.00 m^2

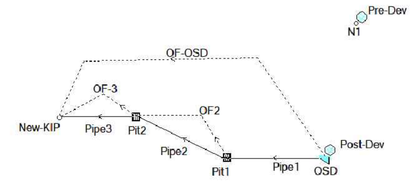
POST DEVELOPMENT SITE DETAILS:

TOTAL SITE AREA: 2735.72 m^2

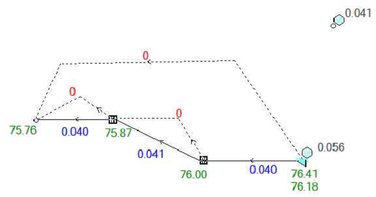
- IMPERVIOUS AREA: 1771.13 m^2
- PERVIOUS AREA: 964.59 m^2

A DRAINS MODEL DEVELOPED TO SIZE ON-SITE DETENTION SYSTEM TO LIMIT THE DISCHARGE FROM POST-DEVELOPMENT SCENARIO TO PRE-DEVELOPMENT CONDITIONS FOR ALL STORM EVENTS UP TO 1% AEP. DRAINS MODEL AND RESULTS ARE PRESENTED IN THIS PLAN.

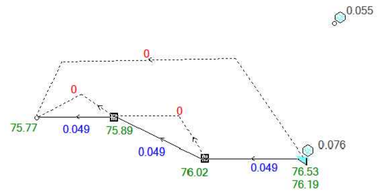
ON-SITE DETENTION DRAINS DESIGN SUMMARY				
STORM EVENT	PRE-DEVELOPMENT (l/s)	OSD OUTFLOW (l/s)	OSD VOL. (m^3)	TOP WATER LEVEL (m AHD)
5 YR ARI (20% AEP)	41	40	6.7	76.41
10 YR ARI (10% AEP)	55	49	12.1	76.53
20 YR ARI (5% AEP)	71	57	17.5	76.65
100 YR ARI (1% AEP)	105	73	31.1	76.95



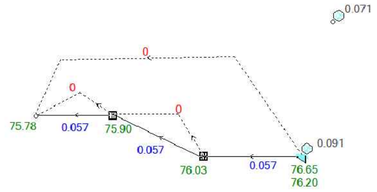
DRAINS MODEL



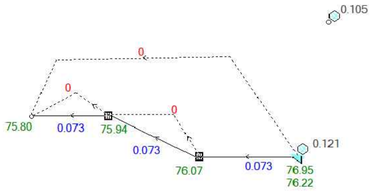
20% AEP POST DEVELOPMENT



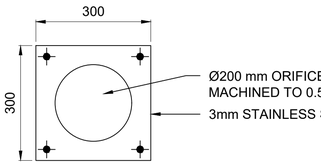
10% AEP POST DEVELOPMENT



5% AEP POST DEVELOPMENT

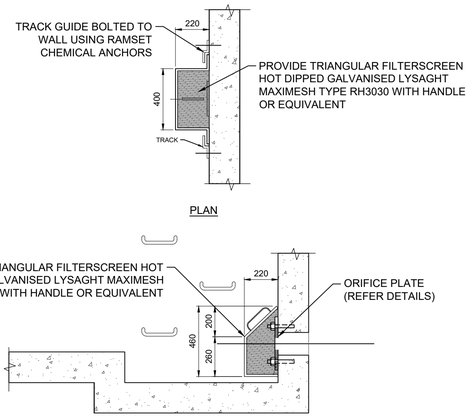


1% AEP POST DEVELOPMENT



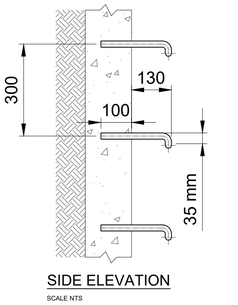
ORIFICE PLATE ELEVATION

SCALE NTS



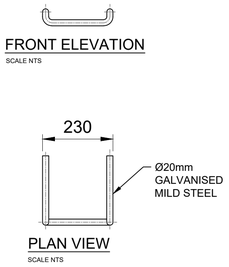
REMOVABLE FILTERSCREEN

SCALE NTS



SIDE ELEVATION

SCALE NTS



PLAN VIEW

SCALE NTS

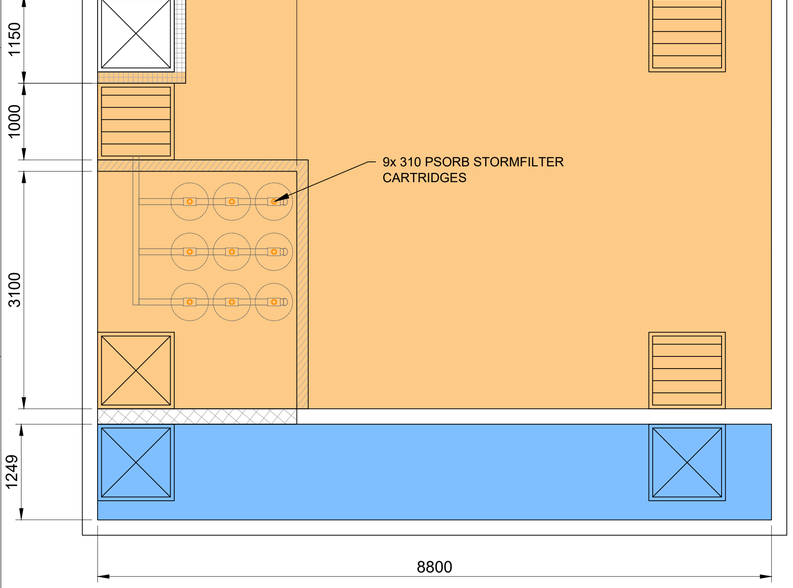
FRONT ELEVATION

SCALE NTS

STEP IRON DETAIL

SCALE NTS

NOTE: INSTALL WHERE PITS ARE DEEPER THAN 900



OSD TANK PLAN VIEW

SCALE NTS

BELOW GROUND RWT

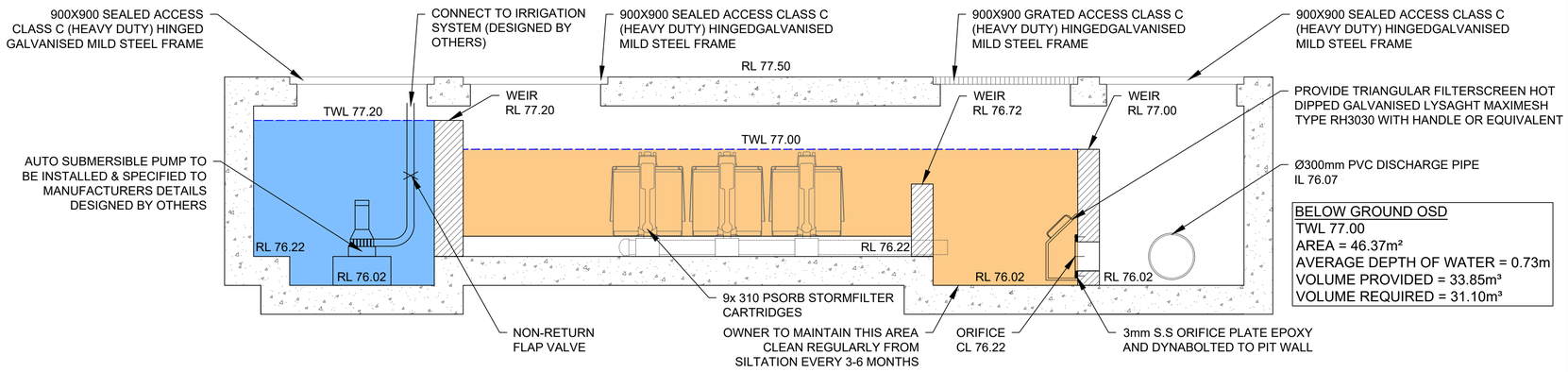
TWL 77.20

AREA = 11.00m²

AVERAGE DEPTH OF WATER = 0.93m

VOLUME PROVIDED = 10.23m³

VOLUME REQUIRED = AS PER BASIX



BELOW GROUND OSD

TWL 77.00

AREA = 46.37m²

AVERAGE DEPTH OF WATER = 0.73m

VOLUME PROVIDED = 33.85m³

VOLUME REQUIRED = 31.10m³

SECTION THROUGH OSD TANK

SCALE NTS

A D01

No.	Description	Date	Issued by	Checked by
B	ISSUED FOR D.A.	08.06.23	J.E.	K.E.
A	ISSUED FOR D.A.	06.12.22	J.E.	K.E.

SCALE BARS

1:20 0 0.1 0.2 0.5 1 2

1:50 0 0.25 0.5 1.25 2.5 5

1:100 0 0.5 1 2.5 5 10

1:200 0 1 2 5 10 20

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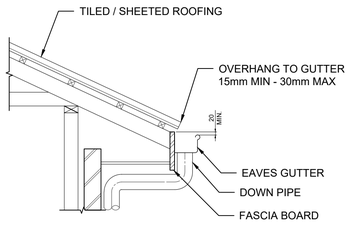
DRAWING TITLE: STORMWATER DRAINAGE SECTIONS AND DETAILS SHEET 1

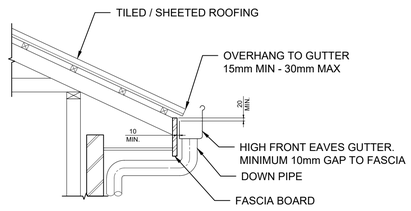
PROJECT: 16-20 BURRAWONG CRESCENT & 28 MACARTHUR ROAD, ELDERSLIE NSW 2570

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D09	B	NTS		210555

DESIGNED:	DRAWN:	AUTHORISED:	PROJECT START DATE:
K.E.	J.E.	K.E.	NOVEMBER 2022



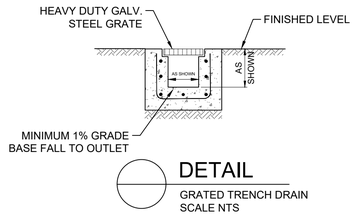
FRONT OVERFLOW



REAR OVERFLOW

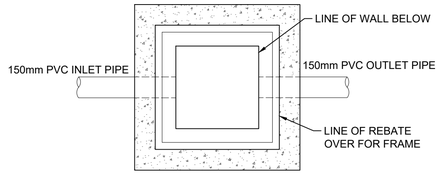
TYPICAL EAVES GUTTER DETAIL

SCALE NTS



DETAIL

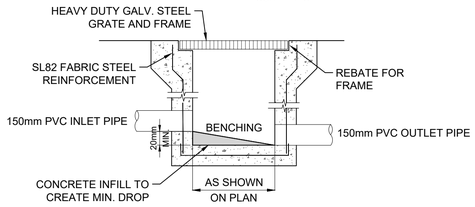
GRATED TRENCH DRAIN
SCALE NTS

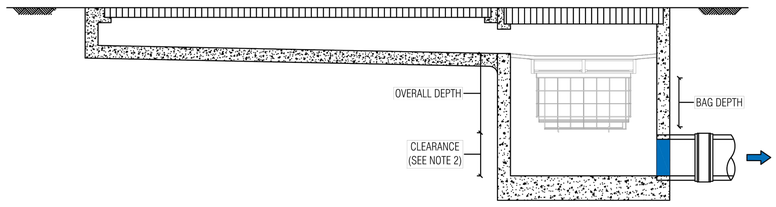


PLAN WITHOUT GRATE

DETAIL

STORMWATER PIT
SCALE NTS





GRATED STRIP DRAIN CONFIGURATION

PLAN ID	MAXIMUM PIT PLAN DIMENSIONS
S	450mm x 450mm
M	600mm x 600mm
L	900mm x 900mm
XL	1200mm x 1200mm

DEPTH ID	BAG DEPTH	OVERALL DEPTH
1	170	270
2	300	450
3	600	700

PLAN ID	DEPTH ID 1	DEPTH ID 2	DEPTH ID 3
S	■		
M	■	■	
L	■	■	■
XL	■	■	■

GENERAL NOTES

1. THE MINIMUM CLEARANCE DEPENDS ON THE CONFIGURATION (SEE NOTE 2) AND THE LOCAL COUNCIL REQUIREMENTS.
2. CLEARANCE FOR ANY PIT WITHOUT AN INLET PIPE (ONLY USED FOR SURFACE FLOW) CAN BE AS LOW AS 50mm. FOR OTHER PITS, THE RECOMMENDED CLEARANCE SHOULD BE GREATER OR EQUAL TO THE PIPE OBVERT SO AS NOT TO INHIBIT HYDRAULIC CAPACITY.
3. OCEAN PROTECT PROVIDES TWO FILTRATION BAG TYPES:- 200 MICRON BAGS FOR HIGHER WATER QUALITY FILTERING AND A COARSE BAG FOR TARGETING GROSS POLLUTANTS.
4. DRAWINGS NOT TO SCALE.

OCEAN PROTECT
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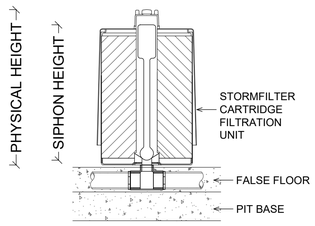
OCEAN PROTECT
OCEANGUARD
TYPCIAL ARRANGEMENTS
SPECIFICATION DRAWING

STORMFILTER DESIGN TABLE

- STORMFILTER TREATMENT CAPACITY VARIES BY NUMBER OF FILTER CARTRIDGES INSTALLED.
- THE STANDARD CONFIGURATION IS SHOWN. ACTUAL CONFIGURATION OF THE SPECIFIED STRUCTURE(S) PER CERTIFYING ENGINEER WILL BE SHOWN ON SUBMITTAL DRAWING(S).
- FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF-CLEANING. RADIAL MEDIA DEPTH SHALL BE 178mm.

CARTRIDGE NAME / SIPHON HEIGHT (mm)	690	460	310
CARTRIDGE PHYSICAL HEIGHT (mm)	840	600	600
TYPICAL WEIR HEIGHT **[H]** (mm)	920	690	540
CARTRIDGE FLOW RATE FOR ZPG MEDIA (L/s)	1.6	1.1	0.7
CARTRIDGE FLOW RATE FOR PSORB MEDIA (L/s)	0.9	0.46	0.39



STORMFILTER CARTRIDGE DETAIL

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	[ ]
NUMBER OF CARTRIDGES REQ'D	[ ]
SIPHON HEIGHT (310 / 460 / 690)	[ ]
MEDIA TYPE (ZPG / PSORB)	[ ]
WATER QUALITY FLOW RATE (L/S)	[ ]
DIMENSION A	[ ]
DIMENSION B	[ ]

TOTAL CARTRIDGE BAY AREA (A x B) TO MATCH AREA REQUIRED BY MUSIC MODELLING OR COUNCIL SPECIFIC REQUIREMENTS

GENERAL NOTES

1. INLET AND OUTLET PIPES TO BE IN ACCORDANCE WITH APPROVED PLANS.
2. A HIGH FLOW BYPASS ARRANGEMENT OR DISSIPATION STRUCTURE MAY BE REQUIRED TO MINIMISE RE-SUSPENSION OF SOLIDS OR ANY SIGNIFICANT INERTIAL FORCES ON THE CARTRIDGES.
3. ALL WATER QUALITY TREATMENT DEVICES REQUIRE PERIODIC MAINTENANCE. REFER TO OPERATION AND MAINTENANCE MANUAL FOR GUIDELINES AND ACCESS REQUIREMENTS.
4. SITE SPECIFIC PRODUCTION DRAWING WILL BE PROVIDED ON PLACEMENT OF ORDER.
5. THE INVERT LEVEL OF THE INLET PIPE MUST BE GREATER THAN THE RL OF THE FALSE FLOOR WITHIN THE CARTRIDGE CHAMBER.
6. CONCRETE STRUCTURE AND ACCESS COVERS DESIGNED AND PROVIDED BY OTHERS. ACCESS COVERS TO BE A MINIMUM 900 X 900 ABOVE CARTRIDGES. OH&S REGARDING ACCESS COVERS AND TANK ACCESS TO BE ASSESSED BY OTHERS ON SITE.
7. THE STRUCTURE THICKNESSES SHOWN ARE FOR REPRESENTATIONAL PURPOSES.
8. DRAWINGS NOT TO SCALE.

INSTALLATION NOTES

1. UNDERDRAIN AND FALSE FLOOR INSTALLED BY OCEAN PROTECT.

OCEAN PROTECT
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OCEAN PROTECT
STORMFILTER SYSTEM
SPECIFICATION DRAWING

No.	Description	Date	Issued by	Checked by
B	ISSUED FOR D.A.	08.06.23	J.E.	K.E.
A	ISSUED FOR D.A.	06.12.22	J.E.	K.E.

SCALE BARS
1:20 0 0.1 0.2 0.5 1 2
1:50 0 0.25 0.5 1.25 2.5 5
1:100 0 0.5 1 2.5 5 10
1:200 0 1 2 5 10 20

CLIENT: NSW LAHC
LOCKED BAG 5022
PARRAMATTA NSW 2124
PHONE 1800 738 718

ARCHITECT: MORSON GROUP

SMART STRUCTURES AUSTRALIA
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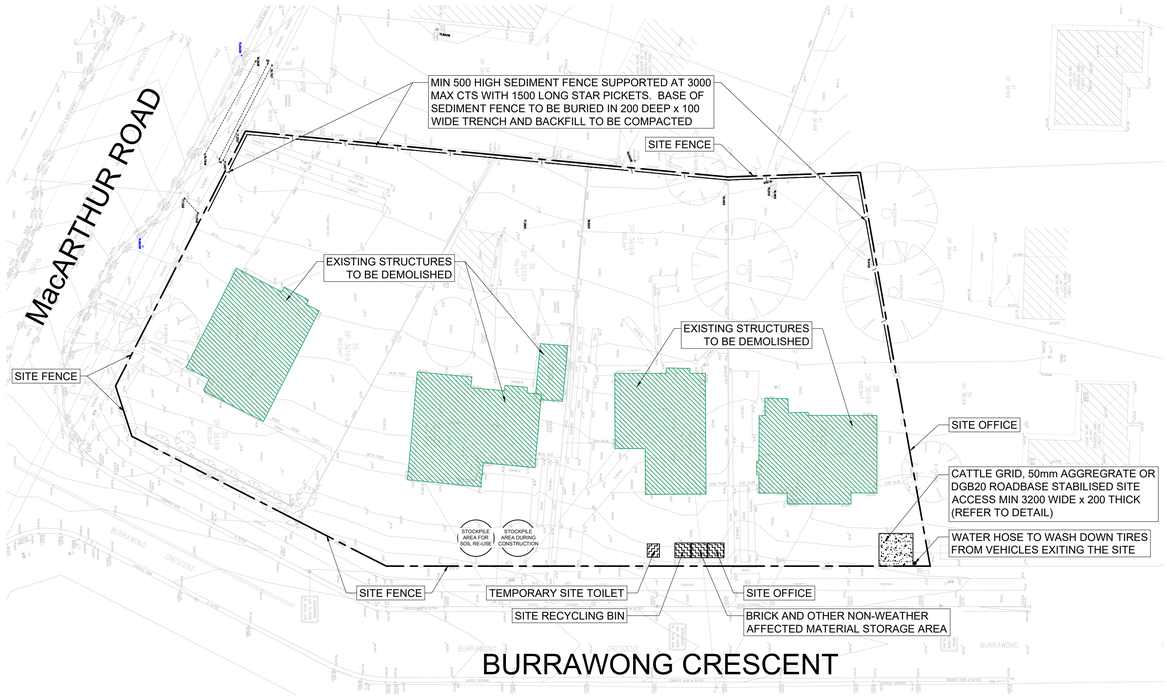
35 WATERLOO RD., MACQUARIE PARK, NSW, 2113
info@smartstructs.com.au | www.smartstructs.com.au

DRAWING TITLE: **STORMWATER DRAINAGE SECTIONS AND DETAILS SHEET 2**

PROJECT: 16-20 BURRAWONG CRESCENT & 28 MACARTHUR ROAD, ELDERSLIE NSW 2570

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D10	B	NTS		210555
DESIGNED: K.E.	DRAWN: J.E.	AUTHORISED: K.E.		PROJECT START DATE: NOVEMBER 2022



EROSION AND SEDIMENT CONTROL PLAN

SCALE 1: 300

EROSION CONTROL NOTES

1. ALL EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH 'MANAGING URBAN STORMWATER, 3RD EDITION' PRODUCED BY THE NSW DEPARTMENT OF HOUSING.
2. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND REMOVED REGULARLY DURING CONSTRUCTION
3. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC- CONTRACTOR TO MINIMISE DISTURBED AREAS.
4. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER
5. NOT WITHSTANDING DETAILS SHOWN, IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
6. ALL DISTURBED AREAS AND STOCKPILES TO BE STABILISED WITHIN 14 DAYS. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTERS AND FOOTPATHS.
7. TOPSOIL TO BE STRIPPED, STOCKPILED AND RE-SPREAD ON COMPLETION OF EARTHWORKS. NONE TO BE REMOVED.
8. NO DISTURBANCE OF SITE PERMITTED OTHER THAN IMMEDIATE AREA OF THE WORKS.
9. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.

NON-COMPLIANCE MAY RESULT IN A $1500 FINE

SYMBOLS

31.09TK — EXISTING LEVELS

SILT FENCE

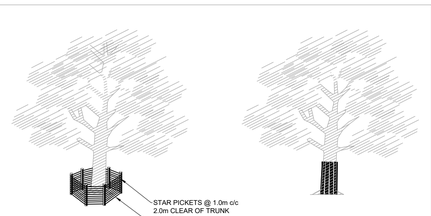
SITE FENCE

STABILISED SITE ACCESS

EXISTING STRUCTURES TO BE DEMOLISHED

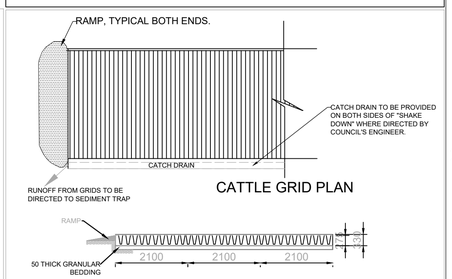
NOTES THIS DRAWING

1. ALL DOCUMENTS WILL BE SUBMITTED TO COUNCIL FOR APPROVAL.
2. ALL SEDIMENT CONTROL MEASURES ARE TO BE IN PLACE.
3. INSTALLATION OF SILT FENCING, SEDIMENTATION BARRIERS AROUND DRAINS.
4. FENCING IS TO BE 1.8m(min) HEIGHT, PLACED AROUND THE SITE UNTIL THE WORK COMPLETE.
5. THE SITE GATES WILL BE LOCATED AT BURRAWONG CRESCENT.
6. THE HARDSTAND AREAS OR CATTLE GRIDS WILL BE PLACED AT THE SITE ENTRANCES AND EXITS. TO REMOVE THE BULK OF DIRT AND MUD THAT MAY ACCUMULATE ON TRUCK TYRES.
7. CONTRACTOR WILL CONDUCT REGULAR STREET SWEEPS ALONG THE ACCESS ROUTE TO ENSURE THE ROADS ADJACENT TO THE SITE ENTRANCES ARE KEPT CLEAN OF ANY DIRT AND DEBRIS.
8. REGULAR ENVIRONMENTAL INSPECTIONS WILL BE CARRIED OUT BY CONTRACTOR'S PERSONNEL TO ENSURE COMPLIANCE WITH THIS PLAN.

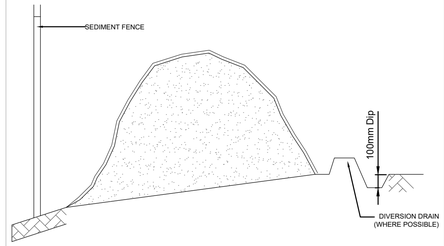


TREE PROTECTION DETAIL — MINIMUM TREE PROTECTION

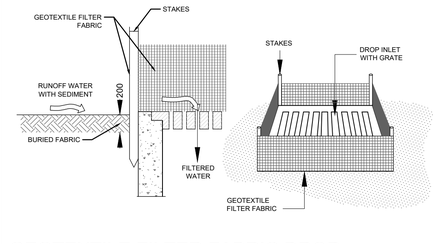
TREE PROTECTION DETAIL



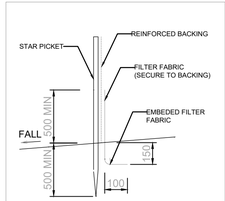
CATTLE GRID ALTERNATIVE



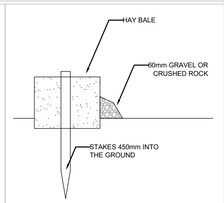
SOIL STOCK PILE



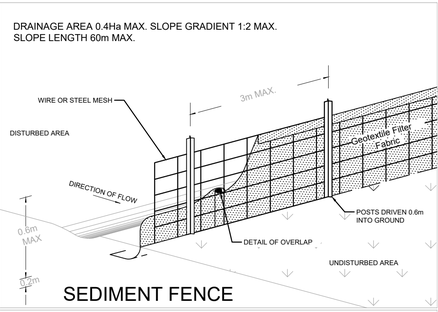
GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP



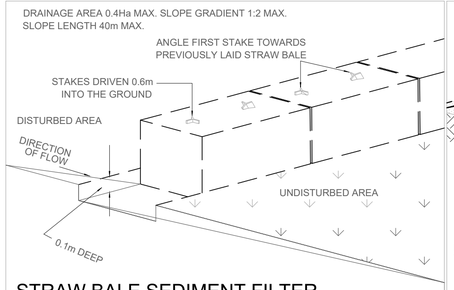
SILT FENCE DETAIL



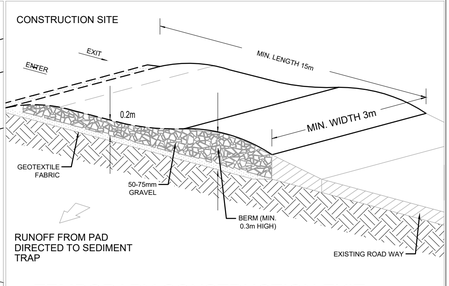
HAY BALE DETAIL



SEDIMENT FENCE



STRAW BALE SEDIMENT FILTER



TEMPORARY CONSTRUCTION EXIT

GENERAL INSTRUCTIONS:

SWM01
THESE PLANS PRESENT A CONCEPTUAL SOIL AND WATER MANAGEMENT PLAN (SWMP) ONLY AND SHOWS A POSSIBLE WAY OF MANAGING SOIL AND EROSION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT AND MANAGEMENT OF THE SITE AND PREPARING A DETAILED PLAN AND OBTAINING APPROVAL FROM THE RELEVANT AUTHORITY PRIOR TO THE COMMENCEMENT OF ANY WORKS.

SWM02
THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS AND ANY OTHER PLANS, WRITTEN INSTRUCTIONS, SPECIFICATION OR DOCUMENTATION THAT MAY BE ISSUED AND RELATING TO DEVELOPMENT OF THE SUBJECT SITE.

SWM03
THE CONTRACTOR WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE CONSISTENT WITH ' MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION' - ALSO KNOWN AS ' THE BLUE BOOK'.

SWM04
ALL BUILDERS AND SUB-CONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.

EROSION CONTROL:

SWM05
WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNTIL SEDIMENT CONCENTRATION IS LESS THEN OR EQUAL TO 50MG/L, IE THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/ OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AND APPROVED STRUCTURE.

SWM06
ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD THE SURFACE WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.

SWM07
ACCEPTABLE RECEPTORS WILL BE CONSTRUCTED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.

SWM08
'SEDIMENT' FENCING WILL BE INSTALLED AS INDICATED ON THE PLANS AND AT THE DIRECTION OF SITE SUPERINTENDENT TO ENSURE CONTAINMENT OF SEDIMENT. THE SEDIMENT FENCING WILL OUTLET OR OVERFLOW UNDER STABILISED CONDITIONS INTO THE SEDIMENT BASIN, TO SAFELY CONVEY WATER INTO A SUITABLE FILTERING SYSTEM SHOULD THE PORES IN THE FABRIC BLOCK.

SWM09
THE SEDIMENT BASINS WILL BE CONSTRUCTED WITH THE MINIMUM WET SEDIMENT CAPACITY OF CUM CUBIC METERS AND DESIGNED TO REMAIN STABLE IN AT LEAST THE 1 IN CDSE YEAR CRITICAL DURATION STORM EVENT. ARTIFICIAL FLOCCULATION OF THE FINER PARTICLES MAY NOT BE NECESSARY IN THIS INSTANCE.

SWM10
STOCKPILES SHOULD NOT BE LOCATED WITHIN 5M OF TREES AND HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, DRAINAGE LINES, PAVED AREAS AND DRIVEWAYS. WHERE THEY ARE WITHIN 5M FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSTREAM WATERS. MEASURE SHOULD ALSO BE APPLIED TO PREVENT THE EROSION OF THE STOCKPILE.

SWM11
ALL CUT AND FILL BATTERS ARE TO BE SEEDED AND MULCHED WITHIN 14 DAYS OF COMPLETION OF FORMATION.

SWM12
ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY -
A. PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE,
B. ENSURING THAT NOTHING IS NAILED TO THEM,
C. PROHIBITING PAVING GRADING SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS -
1. ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE GREATER,
2. A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH,
3. CARE IS TAKEN.

SWM13
DURING WINDY WEATHER, LARGE DISTURBED UNPROTECTED AREAS SHOULD BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.

SWM14
TEMPORARY PROTECTION FROM EROSIVE FORCES WILL BE UNDERTAKEN ON LANDS WHERE FINAL SHAPING HAS NOT BEEN COMPLETED BUT WORKS ARE UNLIKELY TO PROCEED FOR PERIODS OF TWO MONTHS OR MORE (EG. ON TOP SOIL STOCKPILES). THIS MAY BE ACHIEVED WITH A VEGETATIVE COVER. A RECOMMENDED LISTING OF PLANT SPECIES FOR SOIL AND WATER MANAGEMENT NOTES:
TEMPORARY COVER IS -
I) AUTUMN/WINTER SOWING -OATS/RYECORN AT 20KG/HA
-JAPANESE MILLET AT 10KG/HA
II) SPRING/SUMMER SOWING -JAPANESE MILLET AT 20KG/HA
- OATS/RYECORN AT 10 KG/HA

SWM15
DIVERSION BANKS/ CHANNELS WILL BE REHABILITATED AS SOON AS POSSIBLE AND WITHIN 5 WORKING DAYS FROM THEIR FINAL SHAPING. OTHER THAN IN THE WINTER MONTHS, SUITABLE MATERIALS'S INCLUDE TURF GRASSES SUCH S COUCH OR KIKUYU. DURING WINTER, OR AT OTHER TIMES WHEN TEMPORARY REHABILITATION (MORE THAN 3 MONTHS) IS REQUIRED, IT IS SUGGESTED THAT HESSIAN CLOTH IS USED BUT ONLY IF TACKED WITH APPROPRIATE PEGS AND AN ANIONIC BITUMEN EMULSION. FOOT AND VEHICULAR TRAFFIC SHOULD BE KEPT AWAY FROM THESE AREAS.

SWM16
UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

CONSTRUCTION SEQUENCE

SWM17
WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE SHOULD BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE -
I) INSTALL INLET SEDIMENT TRAPS TO ALL GULLY PITS FRONTING THE SITE,
II) INSTALL A 1.8M CHAIN WIRE FENCE AROUND THE BOUNDARIES AND ATTACH HESSIAN CLOTH OR SIMILAR TO IT ON THE WINDWARD SIDE (TIES AT THE TOP, CENTRE AND BOTTOM AND AT 1M INTERVALS OR AS INSTRUCTED BY THE SUPERINTENDENT),
III) INSTALL GEOFABRIC SEDIMENT FENCE AND SEDIMENT TRAPS AROUND ALL PERMANENT STORMWATER RETICULATION STRUCTURES AS SHOWN ON THE PLAN,
IV) CONSTRUCT STABILISED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN OR TO LOCATION AS DETERMINED BY SUPERINTENDENT,
V) INSTALL DIVERSION BANKS ALONG THE BOUNDARY WHERE REQUIRED, REHABILITATE DISTURBED LANDS DOWNSLOPE FROM THE BASINS WITHIN 20 WORKING DAYS,
VI) ENSURE THAT THE SEDIMENT BASIN IS DIRECTED ONTO A TURFED AREA AND DRAINS TO A SUITABLE LOCATION. A TEMPORARY STORMWATER LINE MAY BE NECESSARY TO CONVEY THE FLOWS TO THIS LOCATION. CONSTRUCT DIVERSION CHANNELS AT THE BOUNDARY TO DRAIN INTO THE SEDIMENT BASIN AS SHOWN ON PLANS.
VII) AT COMPLETION STABILISE SITE AND DECOMMISSION SEDIMENT BASIN AND ALL EROSION CONTROL DEVICES.

SWM18
TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

SWM19
FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

SITE INSPECTION AND MAINTENANCE

SWM 20
AT LEAST WEEKLY AND AFTER EVERY RAIN FALL EVENT, THE CONTRACTOR WILL INSPECT THE SITE AND ENSURE THAT -
I) DRAINS AND ALL SEDIMENT CONTROL DEVICES OPERATE EFFECTIVELY AND INITIATE REPAIR OR MAINTENANCE AS REQUIRED,
II) RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANOR APPROVED BY THE SUPERINTENDENT,
III) SPILL SAND (OR OTHER MATERIALS) IS REMOVED FROM HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, GUTTERS, PAVED AREAS AND DRIVEWAYS,
IV) SEDIMENT IS REMOVED FROM BASINS AND / OR TRAPS WHEN LESS THAN 20M^3 OF TRAPPING CAPACITY REMAIN PER 1000M^2 OF DISTRIBUTED LANDS, AND OR LESS THAN 500 DEPTH REMAINS IN THE SETTLING ZONE. ANY COLLECTED SEDIMENT WILL BE DISPOSED IN AREAS WHERE FURTHER POLLUTION TO DOWN SLOPE LANDS AND WATERWAYS IS UNLIKELY,
V) REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND INITIATE UPGRADING OR REPAIR AS APPROPRIATE.

SWM 21
THE CONTRACTOR SHALL PROVIDE ALL MONITORING CONTROL AND TESTING.

No.	Description	Date	Issued by	Checked by
B	ISSUED FOR D.A.	08.06.23	J.E.	K.E.
A	ISSUED FOR D.A.	06.12.22	J.E.	K.E.

SCALE BARS

1:20 — 0, 0.1, 0.2, 0.5, 1, 2
1:50 — 0, 0.25, 0.5, 1.25, 2.5, 5
1:100 — 0, 0.5, 1, 2.5, 5, 10
1:200 — 0, 1, 2, 5, 10, 20

CLIENT: NSW LAHC
LOCKED BAG 5022
PARRAMATTA NSW 2124
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ARCHITECT: MORSON GROUP

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DRAWING TITLE: **EROSION AND SEDIMENT CONTROL PLAN AND DETAILS**

PROJECT: 16-20 BURRAWONG CRESCENT & 28 MACARTHUR ROAD, ELDERSLIE NSW 2570

SHEET NO.	REV.	SCALE @ A1	NORTH	PROJECT NO.
D15	B	AS SHOWN		210555

DESIGNED:	DRAWN:	AUTHORISED:	PROJECT START DATE:
K.E.	J.E.	K.E.	NOVEMBER 2022