STANDARD NOTES

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS AND SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT CODES AND AUTHORITY.
3. THE CONTRACTOR SHALL COMPLY WITH ALL REGULATIONS OF AUTHORITIES HAVING JURISDICTION OVER THE WORKS.
4. THESE DRAWINGS MUST NOT BE SCALED.
5. ALL DIMENSIONS AND REDUCED LEVELS MUST BE VERIFIED ON-SITE BEFORE THE COMMENCEMENT OF ANY WORK.
6. SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER.
7. ALL LEVELS ARE FROM THE AUSTRALIAN HEIGHT DATUM.
8. SERVICE INFORMATION SHOWN IS BASED ON PLANS GIVEN BY AUTHORITIES AND IS APPROXIMATE ONLY. BEFORE COMMENCEMENT OF ANY WORKS, THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND SERVICES AND COMPLY WITH ALL REQUIREMENTS OF THOSE AUTHORITIES.
9. EXISTING SURFACE CONTOURS, WHERE SHOWN, ARE INTERPOLATED AND MAY NOT BE ACCURATE.
10. UNLESS NOTED OTHERWISE, ALL VEGETATION SHALL BE STRIPPED TO A MINIMUM DEPTH OF 150mm UNDER ALL PROPOSED PAVEMENT AND BUILDING AREAS.
11. Before THE PLACEMENT OF ANY PAVEMENTS, BUILDINGS, OR DRAINS THE EXPOSED SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 100% STANDARD COMPACTION IN ACCORDANCE WITH TEST 'E1.1' OF A.S. 1289 FOR THE TOP 300mm. ANY SOFT SPOTS SHALL BE REMOVED AND REPLACED WITH GRANULAR FILL TO THE ENGINEER'S APPROVAL AND COMPACTED IN ACCORDANCE WITH THE COMPACTION REQUIREMENTS SET OUT BELOW. ON HIGHLY REACTIVE CLAY AREAS SITE EXCAVATED MATERIAL MAY BE USED WITH THE PRIOR AUTHORISATION OF THE ENGINEER.
12. ALL FILL AND PAVEMENT MATERIALS SHALL BE COMPACTED IN 200mm MAXIMUM LOOSE THICKNESS LAYERS TO THE DENSITIES SPECIFIED BELOW:

LANDSCAPED AREAS	90% STD.
FILL UNDER ANY FOOTINGS AND FLOOR SLABS FOR ANY STRUCTURE	
- FINE CRUSHED ROCK	95% MOD.
- OTHER FILL	95% SMDD
FILL UNDER ROAD PAVEMENTS	
- FINE CRUSHED ROCK	95% MOD.
- OTHER FILL	100% SMDD
ROAD PAVEMENT MATERIALS	
- SUB BASE	95% MOD.
- BASE COURSE	98% MOD.

13. GRADE EVENLY BETWEEN FINISHED SURFACE SPOT LEVELS. FINISHED SURFACE CONTOURS ARE SHOWN FOR CLARITY. WHERE FINISHED SURFACE LEVELS ARE NOT SHOWN, THE SURFACE SHALL BE GRADED SMOOTHLY SO THAT IT WILL DRAIN AND MATCH ADJACENT SURFACES OR STRUCTURES.
14. UNLESS NOTED OTHERWISE ON HYDRAULIC CONSULTANT'S DESIGN DRAWINGS, ALL DOWNPIPES AND GRATED INLETS SHALL BE CONNECTED TO PITS OR MAIN STORMWATER DRAINS WITH U.P.V.C OR EARTHENWARE PIPES OF THE FOLLOWING SIZES LAID AT A MINIMUM GRADE OF 1 IN 100:
    A. 100 DIA. FOR DOMESTIC CONSTRUCTION
    B. 150 DIA. FOR COMMERCIAL/INDUSTRIAL CONSTRUCTION
    C. 100 DIA. FOR BASEMENT GRATED INLETS

    FOR SIPHONIC ROOF DRAINAGE SYSTEMS ALL DOWNPIPE CONNECTION DRAIN SIZES TO BE CONNECTED TO MAIN STORMWATER DRAINS SHALL BE IN ACCORDANCE WITH THE HYDRAULIC ENGINEER'S DRAWINGS.
15. ALL MAIN STORMWATER DRAINS SHALL BE CONSTRUCTED USING ONE OF THE FOLLOWING TYPES OF PIPES WITH RUBBER RING JOINTS:
    A. CLASS 2 RCP IN ACCORDANCE WITH A.S. 4058
    B. SEWER CLASS SEH U.P.V.C. IN ACCORDANCE WITH A.S. 1260.
    C. CLASS 2 F.R.C. TO A.S. 4139

    ANY OTHER TYPES OF PIPE MUST BE REFERRED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

    IF U.P.V.C OR OTHER PIPES ARE TO BE USED APPROVAL MUST BE GIVEN BY THE ENGINEER FOR CLASS, BEDDING, AND BACKFILL REQUIREMENTS.

STANDARD NOTES CONT.

16. GENERALLY FOR TRENCHING WORKS THE CONTRACTOR MUST:
    A. COMPLY WITH THE GENERAL PROVISIONS OF SECTION 21 OF THE 'OCCUPATIONAL HEALTH AND SAFETY ACT'
    B. COMPLY WITH WITH THE 'OCCUPATIONAL HEALTH AND SAFETY CODE OF PRACTICE FOR SAFETY PRECAUTIONS IN TRENCHING OPERATIONS'
17. PRIOR TO THE EXCAVATION OF ANY TRENCH DEEPER THAN 1.5 METERS THE CONTRACTOR MUST:
    A. NOTIFY THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY OF THE APPROPRIATE FORM.
    B. NOMINATE THE MINE MANAGER FOR THE PROJECT.
    C. CARRY OUT ALL EXCAVATION WORKS IN ACCORDANCE WITH THE REQUIREMENTS OF THE 'MINES ACT 1958 REGULATIONS AND STATUTORY RULES'
18. ALL DIMENSIONS GIVEN ARE TO THE FACE OF THE KERB, CENTRE OF PIPE, OR EXTERIOR FACE OF THE BUILDING UNLESS NOTED OTHERWISE.
19. ANY STRUCTURES, PAVEMENTS, OR SURFACES DAMAGED, DIRTIED, OR MADE UNSERVICEABLE DUE TO CONSTRUCTION WORK SHALL BE REINSTATED TO THE SATISFACTION OF THE ENGINEER.
20. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND FOUNDATION DETAILS.
21. ANY FILL REQUIRED SHALL BE APPROVED BY THE ENGINEER.
22. THE CONTRACTOR IS TO ENSURE THAT ALL EXCAVATIONS ARE MAINTAINED IN A DRY CONDITION WITH NO WATER ALLOWED TO REMAIN IN THE EXCAVATIONS.

GENERAL NOTES 1

1. GENERAL
    A. TEMPORARY DRAINAGE CONTROL. FLOW SHOULD BE DIVERTED AROUND THE WORK SITE WHERE POSSIBLE.
    B. ALL DRAINAGE, EROSION AND SEDIMENT CONTROLS TO BE INSTALLED AND BE OPERATIONAL BEFORE COMMENCING UP-SLOPE EARTHWORKS.
    C. ALL CONTROL MEASURES TO BE INSPECTED AT LEAST WEEKLY AND AFTER SIGNIFICANT RUNOFF PRODUCING STORMS.
    D. CONTROL MEASURES MAY BE REMOVED WHEN ON-SITE EROSION IS CONTROLLED AND 70% PERMANENT SOIL COVERAGE IS OBTAINED OVER ALL UPSTREAM DISTURBED LAND.
    E. IN AREAS WHERE RUNOFF TURBIDITY IS TO BE CONTROLLED, EXPOSED SURFACES TO BE EITHER MULCHED, COVERED WITH EROSION CONTROL BLANKETS OR TURFED IF EARTHWORKS ARE EXPECTED TO BE DELAYED FOR MORE THAN 14 DAYS.
    F. STRAW BALE SEDIMENT TRAPS ARE A SECONDARY OPTION WHICH GENERALLY SHOULD NOT BE USED IF OTHER OPTIONS ARE AVAILABLE.
2. SEDIMENT FENCE
    A. NOT TO BE LOCATED IN AREAS OF CONCENTRATED FLOW.
    B. NORMALLY LOCATED ALONG THE CONTOUR WITH A MAXIMUM CATCHMENT AREA 0.6 HA PER 100M LENGTH OF FENCE.
    C. WOVEN FABRICS ARE PREFERRED, NON-WOVEN FABRICS MAY BE USED ON SMALL WORK SITES, I.E. OPERATIONAL PERIOD LESS THAN 6 MONTHS OR ON SITES WHERE SIGNIFICANT SEDIMENT RUNOFF IS NOT EXPECTED.
    D. WHERE FENCES NEED TO BE LOCATED ACROSS THE CONTOUR THE LAYOUT SHALL CONFORM TO 'TYPICAL LAYOUT ACROSS GRADE'.
    E. FENCES ARE REQUIRED 2M MIN FROM TOE OF CUT OR FILL BATTERS, WHERE NOT PRACTICAL ONE FENCE CAN BE AT THE TOE WITH A SECOND FENCE 1M MIN AWAY. FENCE SHOULD NOT BE LOCATED PARALLEL WITH TOE IF CONCENTRATION OF FLOW WILL OCCUR BEHIND THE FENCE.
3. TEMP CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP.
    A. ADJACENT STORMWATER RUNOFF TO BE DIVERTED AWAY FROM ENTRY/EXIT.
    B. WHEEL - WASH OR SPRAY UNIT MAY BE REQUIRED DURING WET WEATHER.
4. SAFETY ISSUES MUST BE CONSIDERED AT ALL TIMES, INCORPORATE TRAFFIC CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT.
5. ALL DIMENSIONS IN MILLIMETERS UNLESS INDICATED OTHERWISE.

GENERAL NOTES 2

1. THESE NOTES ARE RELEVANT TO EIC DRAWINGS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR THE LOCATION OF FIXTURES AND THE BUILDING LAYOUT AND DIMENSIONS WHERE DRAWINGS SHOWING SPECIFIC SERVICES ARE SUPERIMPOSED ON BUILDING PLANS. USE THEM ONLY FOR HYDRAULIC SERVICE PURPOSES. IF THE ULTIMATE CONDITIONS OF THE BUILDING NECESSITATE ANY ALTERATIONS IN ARRANGEMENT OBTAIN APPROVAL OF THE ENGINEER BEFORE PROCEEDING.
3. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS ISSUED FOR THE DURATION OF THE CONTRACT.
4. IF ANY DISCREPANCY OCCURS IN THE ENGINEER DRAWING OR BETWEEN DRAWINGS AND SPECIFICATION, THE CONTRACTOR SHALL DURING TENDER ASSUME THE GREATER/LARGER. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
5. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
7. SUBSTITUTION MUST BE APPROVED BY THE ENGINEER AND INCLUDED IN ANY TENDER.
8. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVER-STRESSED.
9. ALL MATERIALS SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARD AND WHERE A STANDARD DOES NOT EXIST SHALL BEAR THE "WATER MARK" APPROVAL. WHERE AN AUSTRALIAN STANDARD EXISTS, NO SUBSTITUTION IS PERMITTED.

EXISTING SERVICES NOTES

1. EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES BEFORE THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT.
2. THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION, AND REMOVAL IF REQUIRED OF ALL REDUNDANT EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA, AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT.
3. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
4. IF REQUIRED, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT AND THE RELEVANT SERVICE AUTHORITY.
5. INTERRUPTION TO THE SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. THE CONTRACTOR IS TO GAIN APPROVAL FROM THE SUPERINTENDENT FOR TIMES OF INTERRUPTION - THE CONTRACTOR IS RESPONSIBLE FOR ALL LIAISON.
6. ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN Ø80mm U.P.V.C SEWER GRADE CONDUITS EXTENDING A MINIMUM OF 500mm BEYOND THE EDGE OF PAVING.
7. CLEARANCE AND COVER REQUIREMENTS SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY BEFORE THE COMMENCEMENT OF WORKS AND SHALL BE ADHERED TO AT ALL TIMES.
8. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOM OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS ONLY.

SITEWORKS NOTES

1. DATUM: A.H.D
   ORIGIN OF LEVELS: REFER TO SURVEY
   ORIGIN OF CO-ORDINATES: REFER TO SURVEY
   SURVEY PREPARED BY: V.K.
   DRAWN FEB 2020
   REF: 7005/543
2. ALL EXISTING SERVICES (INCLUDING ANY NOT SHOWN ON THE PLANS) MUST BE ACCURATELY LOCATED IN POSITION AND LEVEL BEFORE ANY EXCAVATION. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. MINIMUM SERVICE CLEARANCES SHALL BE MAINTAINED FROM THE RELEVANT SERVICE AUTHORITY.
3. THE CONTRACTOR SHALL ARRANGE FOR ALL SETTING OUT BY A REGISTERED SURVEYOR.
4. THE CONTRACTOR SHALL OBTAIN ALL REGULATORY AUTHORITY APPROVALS AT THEIR OWN EXPENSE.
5. WHERE NEW WORKS BUT EXISTING, THE CONTRACTOR MUST ENSURE THAT A SMOOTH AND EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
6. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UNLESS SPECIFIED OTHERWISE
7. EXCAVATED TRENCHES SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT NATURAL MATERIAL. ANY SUBSIDIES DURING THE PERIOD TO BE RECTIFIED AS DIRECTED BY THE SUPERINTENDENT.
8. ANY EXISTING TREES THAT FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH THE LANDSCAPE ARCHITECT'S DETAILS AND/OR BY-

   PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE, ENSURING THAT NOTHING IS NAILED TO THEM, PROHIBITING PAVING, GRADING, SEDIMENT WASH, OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS -

   ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5m OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICHEVER IS THE GREATER,

   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 300mm.
   CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.
9. RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHTWEIGHT WASTE MATERIALS, AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SUPERINTENDENT OR AS SPECIFIED IN THE WORKS CONTRACT.

TELSTRA - DUTY OF CARE NOTES

TELSTRA'S PLANS SHOW ONLY THE PRESENCE OF CABLES AND PLANT. THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY FENCES ETC. AT THE TIME OF INSTALLATION TELSTRA DOES NOT WARRANT OR HOLD OUT THAT SUCH PLANS ARE ACCURATE THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME. DO NOT ASSUME THE DEPTH OR ALIGNMENT OF CABLES OR PLANTS AS THESE VARY SIGNIFICANTLY. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR TELSTRA CABLES AND PLANTS. BEFORE USING MACHINE EXCAVATORS TELSTRA PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY IT'S LOCATION TELSTRA WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO IT'S PROPERTY AND LOSSES CAUSED TO TELSTRA AND IT'S CUSTOMERS.

EXISTING UNDERGROUND SERVICES NOTES

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE. CORE CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY BEFORE THE COMMENCEMENT OF EXCAVATION WORKS. CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, BEFORE COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON-SITE AT ALL TIMES.

COMMUNICATIONS - DUTY OF CARE NOTE

COMMUNICATIONS AND DATA PROVIDER PLANS SHOW ONLY THE PRESENCE OF CABLES AND PLANT. THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY FENCES ETC. AT THE TIME OF INSTALLATION EACH PROVIDER DOES NOT WARRANT OR HOLD OUT THAT SUCH PLANS ARE ACCURATE THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME. DO NOT ASSUME THE DEPTH OR ALIGNMENT OF CABLES OR PLANTS AS THESE VARY SIGNIFICANTLY. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR COMMUNICATIONS AND DATA CABLES AND PLANTS. BEFORE USING MACHINE EXCAVATORS COMMUNICATIONS PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY IT'S LOCATION, PROVIDERS WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO IT'S PROPERTY AND LOSSES CAUSED TO THE PROVIDERS AND IT'S CUSTOMERS.

300mm
200mm
100
50
0 10mm

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R.	24.09.24

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Architect

Client

Engineer

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Drawn: S.A	Designed: H.R	Approved: H.R
Project No.: S10156	Scale: at A1. N.T.S	
Title: GENERAL NOTES SHEET 1	Drawing No.: C001	Revision: C
Issued By: H.R	Checked By: H.R	Date: 24.09.24

Original sheet size A1 (841x594)

BULK EARTHWORK NOTES

1. EARTHWORKS PROCEDURES:

(a) FOR GENERAL SITE CONDITIONS REFER TO GEOTECH REPORT.

2. COMPACTION CRITERIA

(a) COHESION-LESS SANDS (LESS THAN 5% FINES):
- RELATIVE COMPACTION SHALL BE MEASURED USING DENSITY INDEX (AS1289.5.5.1 AND 5.6.1)

(a) COHESIVE SANDS (FINES OVER 10%)
- RELATIVE COMPACTION SHALL BE MEASURED BY DENSITY RATIO (AS 1289.5.4.1)

(a) INTERMEDIATE SANDS (FINES FROM 5% TO 10%):

- MAY BEHAVE AS EITHER COHESIVE OR COHESION-LESS SOILS COMPACTION OF COHESION-LESS SOILS (GUIDE ONLY)

- OFTEN EFFECTIVELY COMPACTED USING SMOOTH DRUM VIBRATORY ROLLERS AND SIGNIFICANT VOLUMES OF WATER;

- BECAUSE OF SURFACE LOOSENING AFTER COMPACTION DENSITY TESTING IS USUALLY CARRIED OUT ON A LAYER AFTER PLACING AND COMPACTING THE COVERING LAYER;

- A STATIC ROLLER IS USUALLY REQUIRED TO PROVIDE THE SURFACE FINISH;
- WHERE THE WATER TABLE IS AT A SHALLOW DEPTH, IT MAY BE NECESSARY TO USE NON-VIBRATORY ROLLERS TO AVOID COMPACTION DIFFICULTIES DUE TO GROUNDWATER RISE.

(a) COMPACTION OF COHESIVE SOILS:
- COHESIVE SOILS REQUIRE STRICT MOISTURE CONTROL AND COMPACTION IS USUALLY IN THINNER LAYERS (200MM MAXIMUM) AND MAY REQUIRE DIFFERENT PLANTS FOR EFFICIENT COMPACTION.

(e) SUITABILITY OF SITE BORROW OR SPOIL :
- SITE MATERIAL (IF SURPLUS EXISTS) MAY BE USED AS FILL MATERIAL PROVIDED IT MEETS THE SPECIFICATION MATERIAL REQUIREMENTS AND CAN BE PLACED TO MEET COMPACTION REQUIREMENTS;

- AS A GUIDE MATERIALS WITH GREATER THAN 5% INCLUSIONS (BY VOLUME) OF UNSUITABLE MATERIALS (SUCH AS PEAT, ASH, CHARCOAL, WOOD, METAL, OR CERAMIC) SHALL NOT BE USED WITHOUT THE REMOVAL OF THE DELETERIOUS MATERIALS. INCLUSIONS OVER 100MM SHALL BE REMOVED;

- SAND FILLING FOR GENERAL FILL SHALL BE PERMITTED PROVIDED THE SPECIFIED SUB-GRADE AND FILLING COMPACTION CAN BE ACHIEVED;

BULK EARTHWORK NOTES CON.

- ALL SURPLUS EXCAVATION MATERIAL NOT REQUIRED FOR OR NOT SUITABLE FOR FILLING SHALL BE DISPOSED OF OFF-SITE AT AN APPROVED DUMP SITE;
- NO CONTAMINATED SOILS SHALL BE RE-USED ON SITE;
- TOPSOIL IN CUT / FILL AND BORROW AREAS SHALL BE STRIPPED PRIOR TO EARTHWORKS COMMENCEMENT. TOPSOIL SUITABLE FOR LANDSCAPE SHALL BE STOCKPILED AT AN APPROVED LOCATION FOR RE-USE. ALL OTHER TOPSOIL SHALL BE DISPOSED OF OFFSITE AT AN APPROVED TIP.
- ALL PEAT ENCOUNTERED SHALL BE REMOVED AND DISPOSED OF OFFSITE AT AN APPROVED TIP.

3. PERFORMANCE-BASED SPECIFICATION:

(a) THIS IS A PERFORMANCE-BASED SPECIFICATION FOR THE EARTHWORKS. THE CONTRACTOR IS RESPONSIBLE FOR ACHIEVING THE SPECIFIED COMPACTION REQUIREMENTS.

(b) SUB-GRADE PREPARATION: PREP THE SURFACE TO A MINIMUM DEPTH OF 100MM. REMOVE ALL TOPSOIL, RESIDUAL BUILDING MATERIAL, AND VEGETATION FROM THIS ZONE TO BE DISPOSED OF AT AN APPROVED TIP.

- PROOF ROLL EXPOSED SURFACE WITH AN APPROPRIATE ROLLER IN THE PRESENCE OF AN EXPERIENCED GEOTECHNICAL ENGINEER.

- IDENTIFY AND REMOVE ANY SOFT AREAS AS DIRECTED. REPLACE THESE AREAS WITH APPROVED FILLING AND RECOMPACT.

- COMPACT THE SUB-GRADE IN ALL AREAS TO THE FOLLOWING REQUIREMENTS.

SOIL TYPE	DEPTH BELOW FINAL SURFACE	SUBGRADE COMPACTION CRITERIA
COHESIVE	Top 300mm	DENSITY RATIO >98% std.
	300 - 600mm	DENSITY RATIO >95% std.
COHESIONLESS	Top 300mm	DENSITY INDEX >80%
	300 - 600mm	DENSITY INDEX >70%

NOTE: WHERE THE SUBGRADE MATERIAL COMPRISES FILL MATERIALS COMPACTION MAY REQUIRE OVER EXCAVATION AND RECOMPACTION. IMPACT COMPACTION MAY ASSIST.

BULK EARTHWORK NOTES CON.

4. THE CONTRACTOR SHALL SUPPLY A SAMPLE OF THE PROPOSED FILL MATERIALS AND RELEVANT TEST RESULTS CERTIFIED FOR APPROVAL BY THE SUPERINTENDENT PRIOR TO AND AT DELIVERY.

5. THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS, ROLLER MARKS, AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED BY THE CONTRACTOR AT THEIR EXPENSE.

6. TESTING OF THE SUBGRADE SHALL BE CARRIED OUT BY AN APPROVED NATA-REGISTERED LABORATORY AT THE CONTRACTOR'S EXPENSE. RESULTS SHALL BE SUBMITTED TO THE SUPERINTENDENT WITHIN 2 DAYS AFTER SUPPLY BY THE LABORATORY.

7. A 75MM (COMPACTED THICKNESS) CAPPING LAYER OF CRUSHED SANDSTONE SHALL BE SUPPLIED, PLACED AND COMPACTED TO 100% S.D.D. TO THE WHOLE OF THE BULK EARTHWORKS PLATFORM. THE TOP OF THE BULK EARTHWORKS SHALL BE FINISHED TO THE LEVELS SHOWN ON THE PLANS. THESE SHALL BE RECONFIRMED PRIOR TO COMMENCING.

GENERAL DRAINAGE NOTES

GENERAL DRAINAGE NOTES:

1. IT IS THE RESPONSIBILITY OF THE OWNER TO CHECK AND ENSURE THE EXISTENCE AND THE LEGAL ASPECTS OF ANY EASEMENTS IT IS THE RESPONSIBILITY OF THE BUILDER TO CHECK AND ENSURE THE EXISTENCE OF ANY DRAINAGE PIPES AND OTHER SERVICES ON SITE PRIOR TO CONSTRUCTION ALL LEVELS MUST BE VERIFIED ON SITE START FROM THE MOST DOWNSTREAM POINT.

2. THIS DRAINAGE PLAN SHOULD BE READ STRICTLY IN ACCORDANCE WITH THE COUNCIL-APPROVED ARCHITECTURAL PLANS

3. LOCATIONS OF DOWNPIPES TO BE CONFIRMED BY THE ARCHITECT

4. DEPTH AND LOCATION OF SERVICES TO BE ESTABLISHED PRIOR TO COMMENCEMENT OF DRAINAGE WORKS.

5. ALL GUTTERS TO BE MIN STRAMIT 115 QUAD OR EQUIVALENT

6. ALL BALCONIES TO HAVE FLOOR WASTE CONNECTED TO DOWNPIPE.

7. ALL DRAINAGE PIPES ARE TO BE U.P.V.C GRADE UNLESS NOTED OTHERWISE.

8. THE MINIMUM COVER OVER ALL DRAINAGE PIPES IS TO BE 200mm.

9. ALL DRAINAGE PIPES ARE TO HAVE A MINIMUM PIPE GRADIENT OF 1

10. ALL DRAINAGE PITS ARE TO BE INSTALLED WITH A CHILD-PROOF SAFETY LATCH ON THE ACCESS GRATE

11. ALL DOWNPIPES ARE TO BE 100 x 50 SQUARE BOX SECTIONS UNLESS NOTED OTHERWISE

12. ALL PITS TO BE CONSTRUCTED ARE SHOWN IN REINFORCED CONCRETE, HOWEVER PRECAST OR BRICK PITS OF SIMILAR SIZE AND CONSTRUCTION AND TO THE SAME LEVELS ARE ACCEPTABLE.

ASPHALTIC CONCRETE NOTES

GENERAL

1. ASPHALTIC CONCRETE MIX DESIGN, MANUFACTURE, PLACING AND COMPACTION SHALL BE IN ACCORDANCE WITH RTA SPECIFICATION R116-ASPHALT (DENSE GRADED AND OPEN GRADED) AND AS2150- 2005-HOT MIX ASPHALT-A GUIDE TO GOOD PRACTICE. ANNEXURE R116/1 IS TO BE COMPLETED BY THE SUBCONTRACTOR AND SUBMITTED FOR APPROVAL BY THE SUPERINTENDENT 7 DAYS BEFORE AC WORKS.

2. MINERAL FILLER TO COMPLY WITH AS2150-2005-HOT MIX ASPHALT- A GUIDE TO GOOD PRACTICE.

MIX PROPORTIONS

3. JOB MIX - 7mm NOMINAL SIZE AGGREGATE. MINIMUM BITUMEN CONTENT (%) BY (MASS OF TOTAL MASS) - 5.1%.

4. MIX STABILITY - BETWEEN 16kN AND 36kN AS DETERMINED BY RTA TEST METHOD T601-COMPACTION OF TEST SPECIMENS OF DENSE GRADE BITUMINOUS MIXTURES AND T603-STABILITY OF DENSE GRADE BITUMINOUS MIXTURES.

5. AIR VOIDS IN COMPACTED MIX - BETWEEN 4% OF VOLUME AND 7% OF THE MIX. VOIDS FILLED IN BINDER. 65-80% OF AIR VOIDS IN THE TOTAL MINERAL AGGREGATE FILLED BY BINDER IN ACCORDANCE WITH RTA TEST METHOD T601-COMPACTION OF TEST SPECIMENS OF DENSE GRADE BITUMINOUS MIXTURES, T605-MAXIMUM DENSITY OF BITUMINOUS PLANT MIX AND T606-BULK DENSITY OF COMPACTED DENSE GRADED BITUMINOUS MIXTURES.

PAVEMENT PREPARATION

6. THE EXISTING SURFACE TO BE SEALED, SHALL BE DRY AND BROOMED BEFORE COMMENCEMENT OF WORK TO ENSURE COMPLETE REMOVAL OF ALL SUPERFICIAL FOREIGN AND LOOSE MATTER.

7. ALL DEPRESSIONS OR UNEVEN AREAS ARE TO BE TACK-COATED AND BROUGHT UP TO THE GENERAL LEVEL OF PAVEMENT WITH ASPHALTIC CONCRETE BEFORE LAYING OF MAIN COURSE.

TACK COAT

8. THE WHOLE OF THE AREA TO BE SHEETED WITH ASPHALTIC CONCRETE SHALL BE LIGHTLY AND EVENLY COATED WITH RAPID-SETTING BITUMEN. APPLICATION RATE FOR RESIDUAL BITUMEN SHALL BE 0.15 TO 0.30 LITERS/SQUARE METER. APPLICATION SHALL BE USING A MECHANICAL SPRAYER WITH A SPRAY BAR.

SPREADING

9. ALL ASPHALTIC CONCRETE SHALL BE SPREAD WITH A SELF-PROPELLED PAVING MACHINE.

10. THE ASPHALTIC CONCRETE SHALL BE LAID AT A MIX TEMPERATURE AS SHOWN BELOW -

ROAD SURFACE TEMP IN SHADE (°C)	MIX TEMPERATURES (°C)
5 - 10	NOT PERMITTED
10 - 15	150
15 - 25	145
25+	140

11. ASPHALTIC CONCRETE SHALL NOT BE LAID WHEN THE ROAD SURFACE IS WET OR WHEN COLD WINDS CHILL THE MIX TO ADVERSELY AFFECT THE TEMPERATURE OF THE MIX DURING SPREADING AND COMPACTION OPERATIONS.

12. THE MINIMUM COMPACTED THICKNESS IS 50mm IN TWO (2) LAYERS.

JOINTS

13. THE NUMBER OF JOINTS BOTH LONGITUDINAL AND TRANSVERSE SHALL BE KEPT TO A MINIMUM.

14. THE DENSITY AND SURFACE FINISH AT JOINTS SHALL BE SIMILAR TO THOSE OF THE REMAINDER OF THE LAYER.

COMPACTION

15. ALL COMPACTION SHALL BE UNDERTAKEN USING SELF-PROPELLED ROLLERS.

16. INITIAL ROLLING SHALL BE COMPLETED BEFORE THE MIX TEMPERATURE FALLS BELOW 105°C.

17. SECONDARY ROLLING SHALL BE COMPLETED BEFORE THE MIX TEMPERATURE FALLS BELOW 60°C.

18. MINIMUM CHARACTERISTIC VALUE OF RELATIVE COMPACTION OF A LOT WHEN TESTED IN ACCORDANCE WITH AS2734-2005-HOT MIX ASPHALT-A GUIDE TO GOOD PRACTICE SHALL BE 95%.

FINISHED PAVEMENT PROPERTIES

19. FINISHED SURFACES SHALL BE SMOOTH, DENSE, AND TRUE TO SHAPE AND SHALL NOT VARY MORE THAN 10mm FROM THE SPECIFIED PLAN LEVEL AT ANY POINT AND SHALL NOT DEVIATE FROM THE BOTTOM OF A 3m STRAIGHT EDGE LAID IN ANY DIRECTION BY MORE THAN 5mm.

FLEXIBLE PAVEMENT NOTES

1. ALL SUB-BASE AND BASE COURSE MATERIALS SHALL CONFORM WITH RTA QA SPECIFICATION 3051 "UNBOUND AND MODIFIED BASE AND SUB-BASE MATERIALS FOR SURFACE ROAD PAVEMENTS.

2. ALL SUB BASE & BASE COURSE MATERIALS SHALL BE COMPACTED TO ACHIEVE THE FOLLOWING COMPACTION STANDARDS-

BASE COURSE
MINIMUM 100% SMDD AS1289.5.2.1-1993-METHODS OF TESTING SOILS FOR ENGINEERING PURPOSES

SUB-BASE
MINIMUM 100% SMDD AS1289.5.2.1-1993-METHODS OF TESTING SOILS FOR ENGINEERING PURPOSES

LINEMARKING NOTES

LM1 ALL LINE-MARKING WORKS TO BE IN ACCORDANCE WITH EITHER THE CURRENT AUSTRALIAN STANDARD AS1742.2-2009-MANUAL UNIFORM TRAFFIC CONTROL DEVICES OR AS SHOWN ON THE PLANS OR AS DIRECTED BY THE SUPERINTENDENT.

LM2 THE SCOPE OF WORK SHALL INCLUDE ALL PAVEMENT MARKINGS TO ROADS AND CARPARKS.

LM3 THE WORK CARRIED OUT AND TESTING PERFORMED SHALL COMPLY WITH THE CURRENT, RELEVANT AUSTRALIAN STANDARDS AND RTA STANDARDS WHERE NECESSARY.

LM4 ALL MARKINGS SHALL BE SPOTTED OUT AND APPROVED BY THE SUPERINTENDENT PRIOR TO APPLICATION.

LM5 PAINT SHALL BE APPLIED AT A WET THICKNESS OF BETWEEN 0.35mm - 0.45mm.

LM6 PAINT SHALL ONLY BE APPLIED TO CLEAN AND DRY SURFACES.

LM7 ALL LONGITUDINAL LINES SHALL BE APPLIED BY A SELF-PROPELLED MACHINE.

LM8 LINE-MARKING REMOVAL SHALL BE CARRIED OUT BY GRINDING OR SANDBLASTING. REMOVAL BY BURNING WILL NOT BE PERMITTED.

LM9 THE EXTENT OF LINE-MARKING TO BE ERADICATED SHALL BE CONFIRMED ON SITE PRIOR TO REMOVAL. ANY MARKINGS INCORRECTLY REMOVED SHALL BE REINSTATED AT THE CONTRACTOR'S EXPENSE.

LM10 ALL MARKINGS SHALL BE COMPLETED IN A WORKMANLIKE MANNER AND BE STRAIGHT, SMOOTH AND WITH EVEN CURVES. ANY NON-CONFORMING WORK SHALL BE REMOVED AND REINSTATED AT THE DIRECTION OF THE SUPERINTENDENT AT THE CONTRACTOR'S EXPENSE.

JOINT NOTES

PEDESTRIAN PAVEMENT JOINTS

1. ALL PEDESTRIAN PAVEMENTS ARE TO BE JOINTED AS FOLLOWS. (U.N.O)
2. EXPANSION JOINTS ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX. 10.0m CENTRES.
3. WEAKENED PLANE JOINTS ARE TO BE LOCATED AT A MAX. SPACING OF 2m FOR FOOTPATHS AND 2m FOR SHARED PATHS.
4. WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND OR ADJACENT PAVEMENT JOINTS.
5. MANUFACTURED HINGE JOINTS 'TRIPSTOP' OR APPROVED EQUIVALENT SHALL BE PROVIDED AT ALL EXPANSION JOINTS AND ADJACENT TO TREES.
6. PEDESTRIAN PAVEMENT JOINT DETAIL AS PER COUNCIL GUIDELINES & AUSTRALIAN STANDARDS.

BITUMEN SEALING NOTES

PAVEMENT PREPARATION

BS1 THE SURFACE TO BE SEALED SHALL BE DRY AND BROOMED BEFORE THE COMMENCEMENT OF WORK TO ENSURE THE COMPLETE REMOVAL OF ALL SUPERFICIAL, FOREIGN, AND LOOSE MATTER.

BS2 IF APPROVED BY THE SUPERINTENDENT, ALL DEPRESSIONS OR UNEVEN AREAS ARE TO BE TACK-COATED AND BROUGHT TO THE GENERAL LEVEL OF PAVEMENT WITH ASPHALTIC CONCRETE BEFORE SEALING COMMENCES.

MATERIAL

BS3 BINDER SHALL BE CLASS 170 TO AS2008-1997-RESIDUAL BITUMEN FOR PAVEMENTS OR APPROVED PROPRIETARY MATERIAL FOR PRIMING AND PRIME-SEALING.

BS4 AGGREGATE SHAPE, DURABILITY, AND WET TO DRY STRENGTH SHALL COMPLY WITH AS2758.2-1996-AGGREGATES AND ROCK FOR ENGINEERING PURPOSES FOR CLASS "N" AGGREGATES.

BS5 A 20kg SAMPLE OF AGGREGATE PROPOSED FOR USE SHALL BE APPROVED BY THE SUPERINTENDENT before USE.

BS6 AGGREGATES SHALL BE DELIVERED UNIFORMLY PRECOATED, EXCESSIVE OR UNEVEN PRECOATING MAY RESULT IN AGGREGATES BEING REJECTED.

BS7 FOR TWO-COAT FLUSH SEALS, THE SIZE OF THE AGGREGATE FOR THE SECOND COAT, WHILE NORMALLY HALF THAT OF THE FIRST COAT, SHALL BE DIMENSIONALLY COMPATIBLE WITH THAT OF THE FIRST COAT.

BS8 PRECOATING AGENTS SHALL BE COMPATIBLE WITH THE AGGREGATES AND BINDER TO BE USED.

DESIGN

BS9 DESIGN OF SPRAYED BITUMINOUS SEALS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE AUSTRALIAN ROADS (NAASRA) PUBLICATION, "PRINCIPLES AND PRACTICE OF BITUMINOUS SURFACING, VOLUME 1 - SPRAYED WORK".

BS10 WHERE NOT INDICATED ON THE DRAWINGS, PRIMERS AND PRIMER-SEALS SHALL BE DESIGNED TO REMAIN INTACT UNTIL FINAL SEALING TAKES PLACE, HAVING REGARD FOR THE TRAFFIC AND CLIMATIC CONDITIONS PERTAINING.

BS11 UNLESS OTHERWISE SPECIFIED, BINDER APPLICATION RATES SHALL BE SELECTED TO FILL 85% OF THE THEORETICAL VOIDS OF THE MAT.

PRIMER-SEALING

BS12 A SINGLE COAT PRIMER-SEAL USING A SUITABLE CUT-BACK OR PROPRIETARY BINDER SHALL BE APPLIED TO BASECOURSE MATERIAL FOR THE PROTECTION OF PAVEMENT DURING CONSTRUCTION.

BITUMEN FLUSH SEALING

BS13 BITUMEN FLUSH SEALS SHALL BE EITHER SINGLE OR DOUBLE COAT AS SHOWN ON THE DRAWINGS, eg 20/10 INDICATES A DOUBLE COAT FLUSH SEAL USING TWO APPLICATIONS OF BITUMEN AND AGGREGATE, THE FIRST AGGREGATE LAYER BEING OF 20mm NOM. SIZE, THE SECOND 10mm.

BS14 COVER AGGREGATE SHALL BE SPREAD IMMEDIATELY AFTER SPRAYING OF BINDER. IN NO CASE SHALL SPREADING BE DELAYED MORE THAN 8 MINUTES (OR SO THAT BITUMEN HAS COOLED SUCH THAT ADHESION OF AGGREGATE IS COMPROMISED).

BS15 ALL SPRAY RECORDS, AGGREGATE SUPPLY TONNAGE, AND RECEIPTS SHALL BE RETAINED AND PASSED ONTO THE SUPERINTENDENT AS PART OF THE QUALITY ASSURANCE PROCEDURES.

300mm
200mm
100
50
0 10mm

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R.	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
GENERAL NOTES SHEET 2

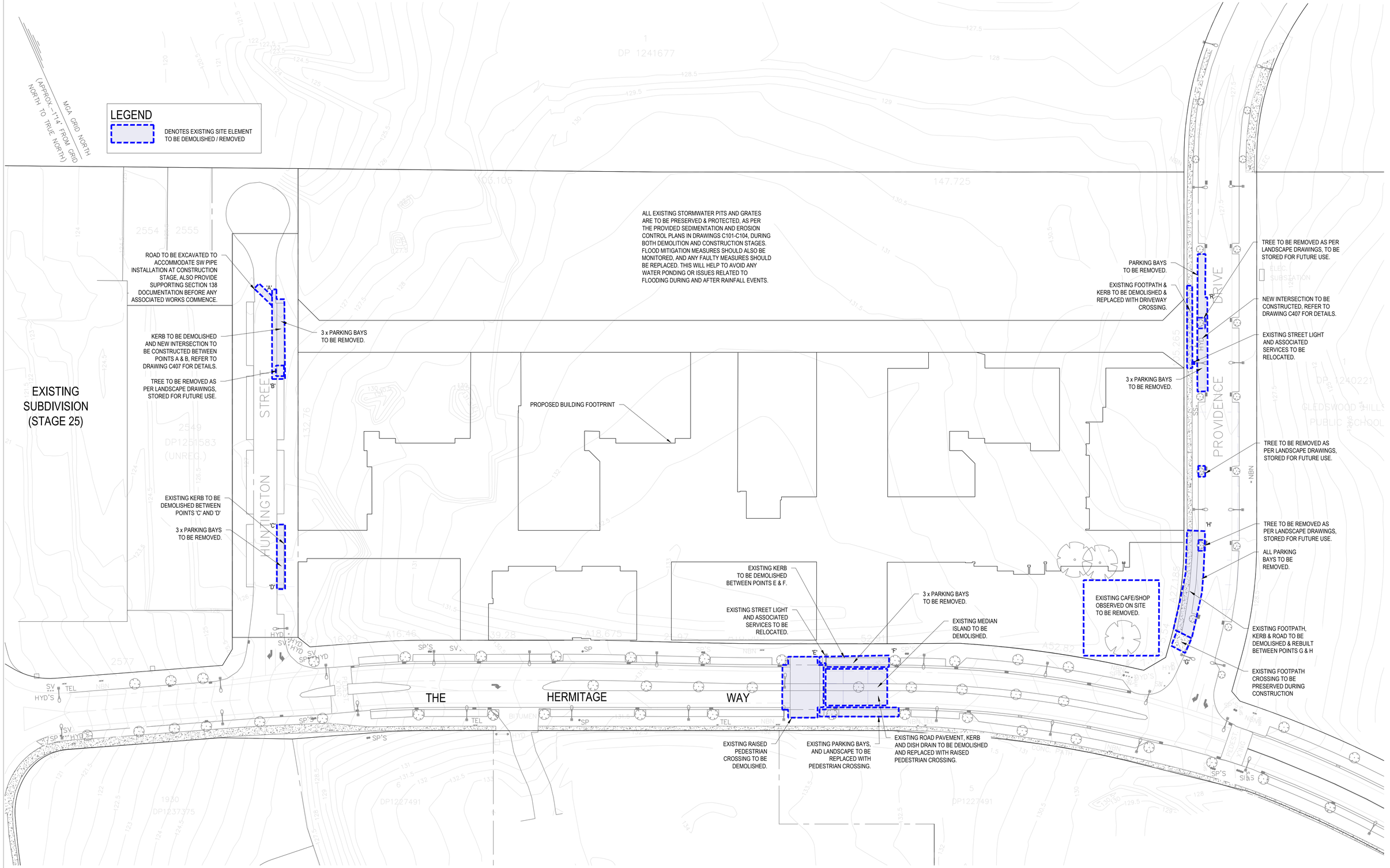
Drawn	Designed	Approved
S.A	H.R	H.R

Project No.	Scale
S10156	at A1. N.T.S

Drawing No.	Revision
C002	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)



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Revision	Amendment	Issued By	Revision Date
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B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
DEMOLITION PLAN

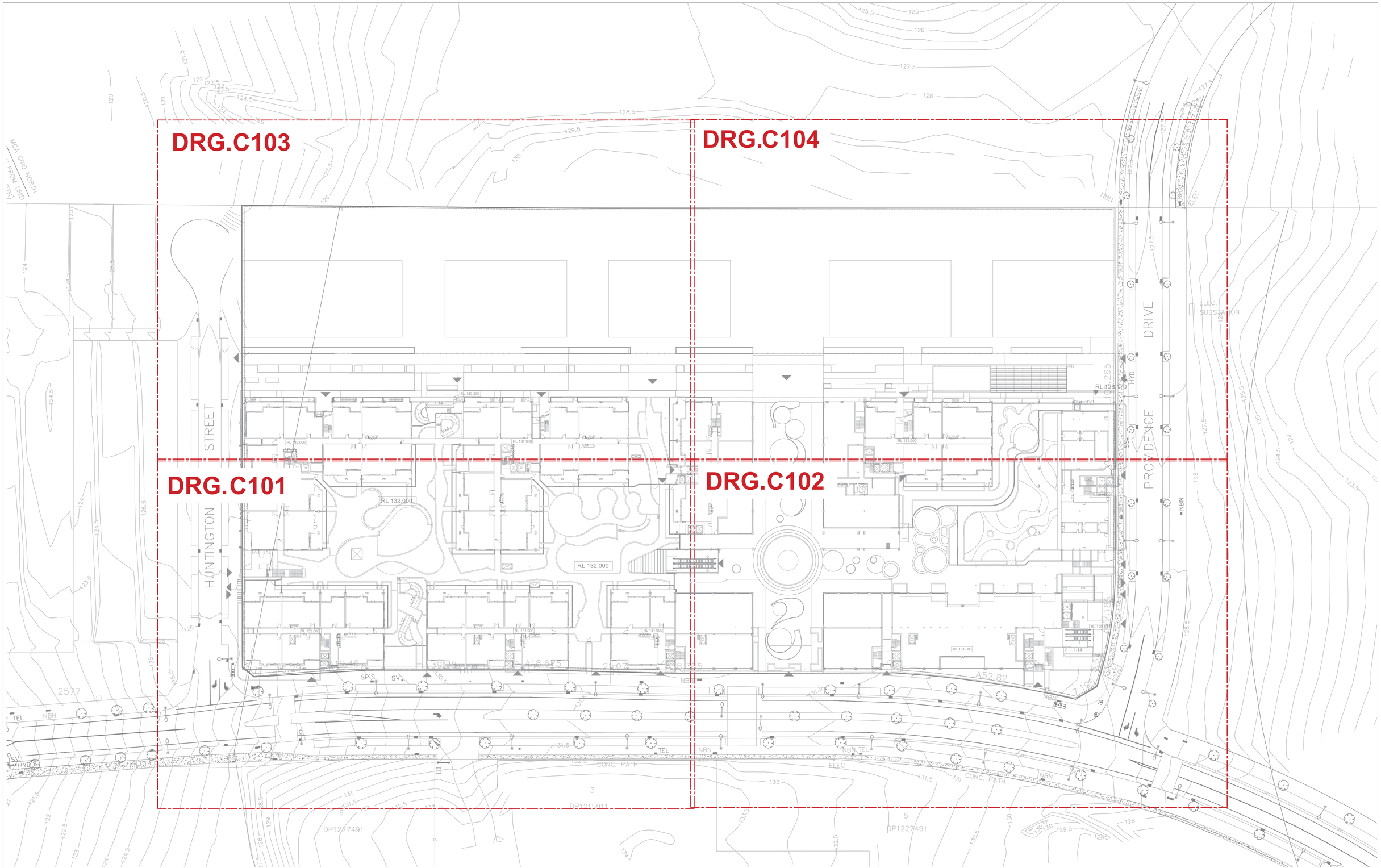
Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:500

Drawing No.	Revision
C003	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)



300mm
200mm
100
50
0 10mm

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
OVERALL SITE PLAN

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1.1:200

Drawing No.	Revision
C100	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)

REFER TO DRG C103 FOR CONTINUATION

REFER TO DRG C102 FOR CONTINUATION

HUNTINGTON

ASSETS TO BE PRESERVED

ASSET TO BE PRESERVED

TREES TO BE PROTECTED

LEGEND

- SITE FENCE
- SITE ENTRY/EXIT
- TEMPORARY CONSTRUCTION EXIT (WASH DOWN DETAIL)
- SEDIMENT FENCE (SD 6-8)
- TEMPORARY CATCH DRAIN
- MESH AND GRAVEL INLET FILTER (SD 6-11) (SANDBAG)

0 10mm 50 100 200mm 300mm

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
SEDIMENTATION & EROSION CONTROL PLAN
SHEET 1

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1.1:200

Drawing No.	Revision
C101	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)

REFER TO DRG C103 FOR CONTINUATION

REFER TO DRG C101 FOR CONTINUATION

300mm
200mm
100
50
0 10mm

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Revision	Amendment	Issued By	Revision Date
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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
SEDIMENTATION & EROSION CONTROL PLAN
SHEET 2

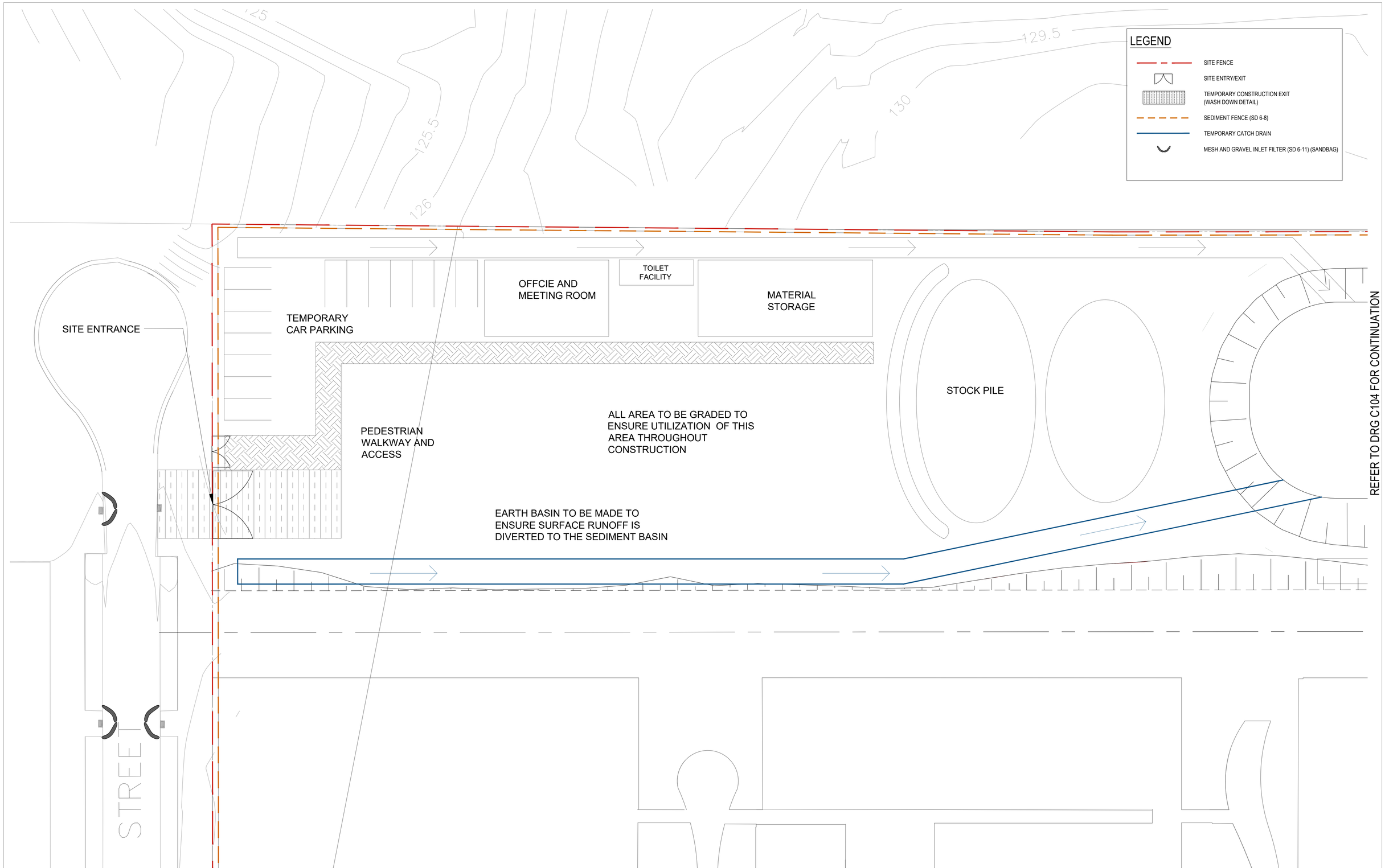
Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1.1:200

Drawing No.	Revision
C102	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)



REFER TO DRG C104 FOR CONTINUATION

REFER TO DRG C102 FOR CONTINUATION

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
SEDIMENTATION & EROSION CONTROL PLAN
SHEET 3

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1.1:200

Drawing No.	Revision
C103	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)

LEGEND

- SITE FENCE
- SITE ENTRY/EXIT
- TEMPORARY CONSTRUCTION EXIT (WASH DOWN DETAIL)
- SEDIMENT FENCE (SD 6-8)
- TEMPORARY CATCH DRAIN
- MESH AND GRAVEL INLET FILTER (SD 6-11) (SANDBAG)

300mm
200mm
100
50
0 10mm

REFER TO DRG C102 FOR CONTINUATION

ASSET TO BE PROTECTED

PUMP OUT MECHANISM FOR DRAINAGE DISCHARGE AFTER SEDIMENT BASIN

CLEAN WATER IS TO BE USED FOR SPRINKLING TO CONTROL DUST

EXCESSIVE WATER TO BE DISCHARGED TO THE DOWNSTREAM DRAINAGE BASIN THROUGH PUMP OUT

CATCH DRAIN

129

127.5

105.26

NBN

ELEC

HYD

SS

DRIVE

VIDENCE

ELEC. SUBSTATION

126

125.5

REFER TO DRG C103 FOR CONTINUATION

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
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Project: THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title: SEDIMENTATION & EROSION CONTROL PLAN SHEET 4

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1.1:200

Drawing No.	Revision
C104	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

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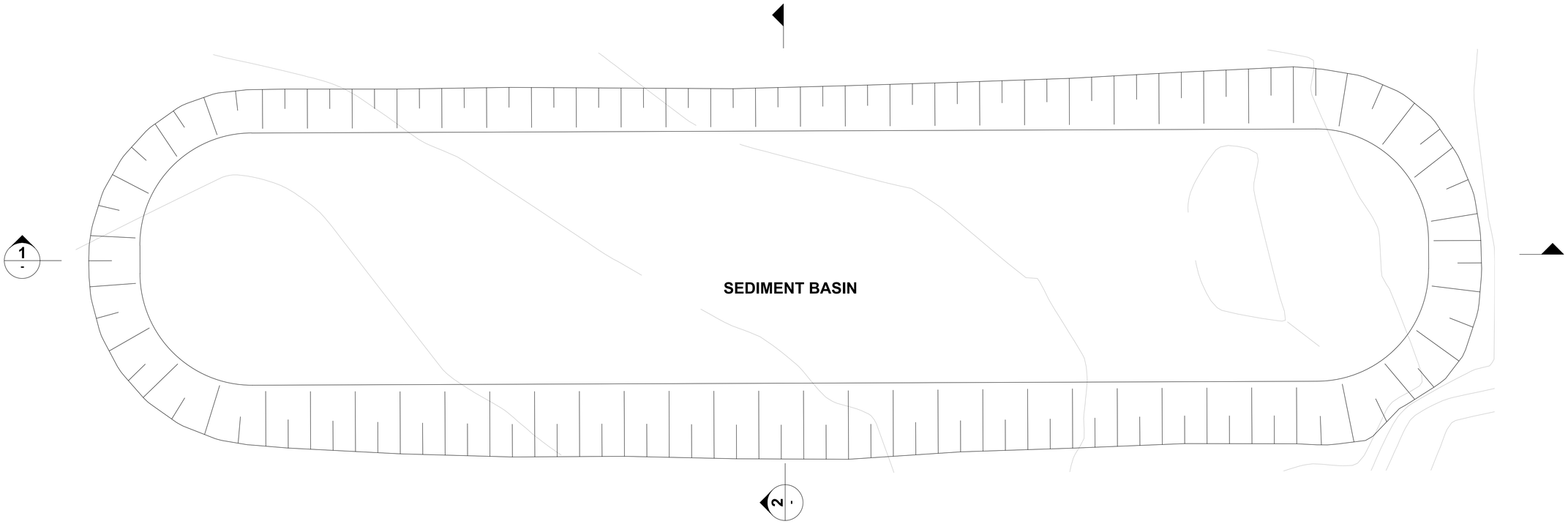
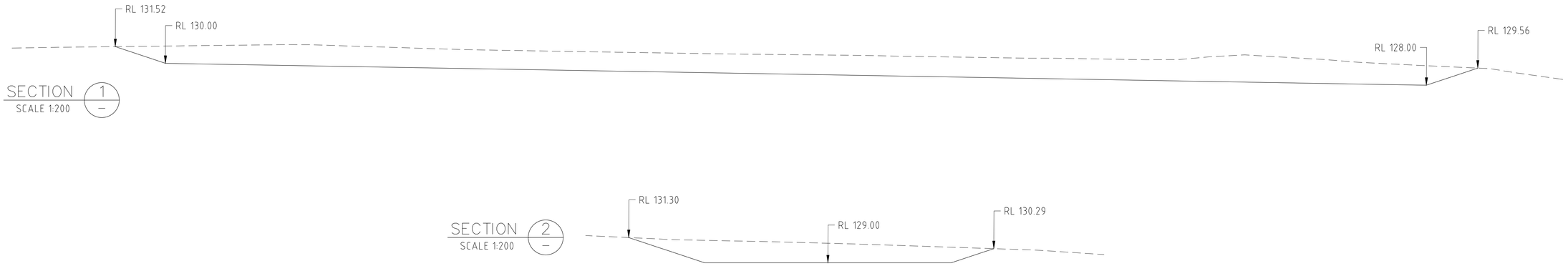


SEDIMENT BASIN PLAN

SCALE 1:200



SEDIMENT BASIN SECTIONS

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Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
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Project: **THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA**

Title: **SEDIMENTATION BASIN PLAN AND SECTIONS**

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

Drawing No.	Revision
C105	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)

1. Erosion Hazard and Sediment Basins

Site Name:	**Gledswood Village**
Site Location:	**The Hermitage Way, Gledswood Hills**
Precinct/Stage:	**DA Stage**
Other Details:	**Commercial Precinct**

Site area	**Sub-catchment or Name of Structure**						**Notes**
Total catchment area (ha)	3.362						
Disturbed catchment area (ha)	3.362						
Soil analysis (enter sediment type if known, or laboratory particle size data)							
Sediment Type (C, F or D) if known:	D						From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)							Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)	31						
% clay (fraction finer than 0.002 mm)	69						
Dispersion percentage	10.0						E.g. enter 10 for dispersion of 10%
% of whole soil dispersible	8.45						See Section 6.3.3(e). Auto-calculated
Soil Texture Group	D						Automatic calculation from above
Rainfall data							
Design rainfall depth (no of days)	5						See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
Design rainfall depth (percentile)	75						
x-day, y-percentile rainfall event (mm)	20.2						
Rainfall R-factor (if known)							Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	9.5						
RUSLE Factors							
Rainfall erosivity (R-factor)	2020						Auto-filled from above
Soil erodibility (K-factor)	0.075						RUSLE LS factor calculated for a high rill/interrill ratio.
Slope length (m)	140						
Slope gradient (%)	4						
Length/gradient (LS-factor)	1.23						
Erosion control practice (P-factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (C-factor)	1	1	1	1	1	1	
Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)							
Storage (soil) zone design (no of months)	2	2	2	2	2	2	Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.79						See Table F2, page F-4 in Appendix F
Calculations and Type D/F Sediment Basin Volumes							
Soil loss (t/ha/yr)	242						
Soil Loss Class	3						See Table 4.2, page 4-13
Soil loss (m3/ha/yr)	186						Conversion to cubic metres
Sediment basin storage (soil) volume (m3)	104						See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m3)	537						See Sections 6.3.4(i) for calculations
Sediment basin total volume (m3)	641						

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).

EROSION AND SEDIMENT CONTROL NOTES

SEDIMENT AND EROSION CONTROL DETAILS

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION TO THE SATISFACTION OF THE COUNCIL, NSW OFFICE OF WATER, AND OFFICE OF ENVIRONMENT AND HERITAGE. THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE DRAWINGS SHALL ONLY BE USED AS A GUIDE BY THE CONTRACTOR, AND SHALL REPRESENT THE MINIMUM REQUIREMENT ONLY.
2. THE CONTRACTOR SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED OR AS OTHERWISE DIRECTED BY THE SUPERINTENDENT. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:
   a. LOCAL AUTHORITY REQUIREMENTS
   b. EPA REQUIREMENTS
   c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.
3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
4. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS.
5. THE CONTRACTOR IS TO ENSURE ALL EROSION AND SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.

LAND DISTURBANCE

6. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
   a. INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
   b. CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
   c. INSTALL SEDIMENT BASIN AS SHOWN ON PLAN (D) INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.
   d. 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.

EROSION CONTROL

7. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
8. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

SEDIMENT CONTROL

9. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METERS OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METERS FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMIZE POSSIBLE POLLUTION TO DOWN SLOPE WATERS, E.G. THROUGH THE INSTALLATION OF SEDIMENT FENCING.

TEMPORARY SITE CONTROL FOR ENTRY/EXIT AREAS

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC ROADS.
2. PERIODIC TOP DRESSING WITH ADDITIONAL AGGREGATE MAY BE REQUIRED TO KEEP THE SITE CONTROL IN A 'USEABLE STATE'.
3. ALL SEDIMENT SPILLED, DROPPED, OR WASHED ONTO PUBLIC ROADS MUST BE REMOVED IMMEDIATELY AND CHECKED DAILY.
4. REMOVAL AND CLEANING OF PUBLIC ROADS BY BROOMS AND SHOVELS ETC. WASHING DOWN ROADS IS NOT PERMITTED.

NOTES

1. WHERE POSSIBLE LAY PIPES TO AVOID EXISTING AND PROPOSED TREE.
2. FINISH GROUND SURFACES AROUND BUILDINGS TO BE GENERALLY GRADED AWAY FROM AND AROUND BUILDING TO AVOID LOW POINTS WHERE WATER CAN ACCUMULATE
3. BUILDER TO CARRY OUT A DIAL BEFORE YOU DIG BEFORE WORKS COMMENCING

EROSION AND SEDIMENT CONTROL NOTES CONT.

1. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
2. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT-FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
3. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.
4. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT WEIGHT WASTE MATERIALS AND LITTER.
5. ANY EXISTING TREES THAT 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.
(I) ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METERS OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICHEVER IS THE GREATER
(II) 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 MILLIMETERS DEPTH
(III) CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.

SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE STANDARDS OF THE SOIL CONSERVATION OF NSW.
2. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
3. TOPSOIL FROM ALL AREAS TO BE DISTURBED, SHALL BE STOCK PILED AND LATER RESPREAD TO AID VEGETATION.
4. SEDIMENT TRAPS SHALL BE CONSTRUCTED AROUND ALL INLET PITS, CONSISTING OF 300mm WIDE X 300mm DEEP TRENCH.
5. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM OF 60 % FULL OF SOIL MATERIALS, INCLUDING THE MAINTENANCE PERIOD.
6. DISTURBANCE TO VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS, AND DRAINAGE LINES. AREAS OTHER THAN SPECIFIED SHALL BE DISTURBED ONLY WITH PRIOR APPROVAL FROM THE COUNCIL ENGINEER.
7. ALL DISTURBED AREAS SHALL BE REVEGITATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
8. SOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREA WHERE WATER MAY CONCENTRATE.
9. FILTER SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT BETWEEN POST AT 3.0m CENTERS). FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.
10. A STRIP OF TURF BEHIND AND FOR THE TOTAL LENGTH OF ALL THE KERBS SHALL BE PROVIDED.
11. PIT GUARDS SHALL BE INSTALLED AROUND DRAINAGE PITS AFTER ROAD WORKS.

SEDIMENT FENCE

1. TO BE USED AS A TEMPORARY BARRIER TO INTERCEPT SEDIMENT-LADEN RUN-OFF FROM SMALL DRAINAGE AREAS.
2. MAXIMUM DRAINAGE AREA FOR OVERLAND FLOW TO A SILT FENCE SHALL NOT EXCEED 0.6Ha PER LINE OF FENCE.
3. DO NOT USE IF CONCENTRATED FLOW IS DIRECTED TO THE SILT FENCE.
4. MAXIMUM ALLOWABLE DISTANCE BETWEEN SILT FENCE FOR VARIOUS GRADES LISTED BELOW:

SLOPE V:H	MAX. SLOPE LENGTH (m)
1:2	15
1:3	25
1:4	40
1:5	50
FLATTER THAN 1:5	60

GENERAL NOTES

1. FIELD INLET
   a) A STABILISED BYPASS OVERLAND FLOW PATH SHOULD EXIST ADJACENT TO THE FIELD INLET.
   b) WATER LEVEL CONTROL PERIMETER BANKS MAY BE REQUIRED.
   c) BLOCKS TO BE RESTRAINED BY A HORIZONTAL TIMBER RAIL AT BLOCK JOINT HEIGHT FIXED TO TIMBER STAKES AT CORNERS.
2. CHECK DAMS
   a) CATCHMENT AREA LIMITED TO 4 HA.
   b) USE IN MINOR OPEN DRAINS ONLY, (VELOCITY CONTROL), SEDIMENT COLLECTION IS A SECONDARY PURPOSE.
3. STRAW BALE BANKS
   A. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR, IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
   B. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 100MM ON THE DOWNSTREAM SIDE AND PLACED SO THE BINDINGS ARE HORIZONTAL.
   C. BALES SHALL BE SECURELY ANCHORED IN PLACE WITH EITHER TWO STAKES OR STEEL PICKETS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER.
   D. INSPECTIONS SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED. REPLACE AT LEAST 3 MONTHLY.
4. SAFETY ISSUES MUST BE CONSIDERED AT ALL TIMES, INCORPORATE TRAFFIC CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT.
5. ALL DIMENSIONS IN MILLIMETRES.

SEDIMENT CONTROL DEVICES

1. ALL HAY BALES SHALL BE BOUND WITH WIRE. HAY BALES SHALL BE PLACED END TO END IN A SINGLE ROLE AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALES SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 600mm INTO THE GROUND AND LOCATED ON THE BALE CENTERLINE.
2. FILTER FENCE SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 3m CENTERS MAXIMUM. FABRIC SHALL BE BURIED INTO THE GROUND 200mm ALONG IT'S LOWER EDGE.

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Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R.	24.09.24

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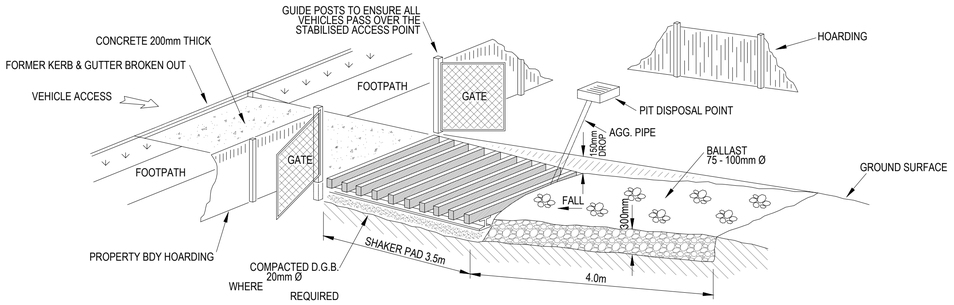
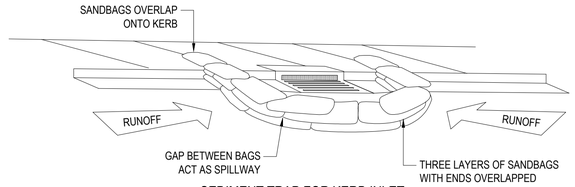
Project	Drawn	Designed	Approved
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	S.A	S.A.	H.R
	Project No.	Scale	
	S10156	at A1. N.T.S	
Title	Drawing No.		Revision
SEDIMENTATION & EROSION CONTROL NOTES	C106		C
	Issued By	Checked By	Date
	H.R	H.R	24.09.24

Original sheet size A1 (841x594)

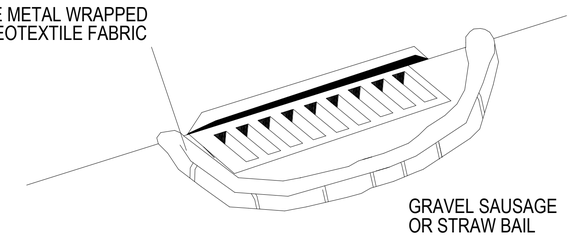


TEMPORARY CONSTRUCTION EXIT

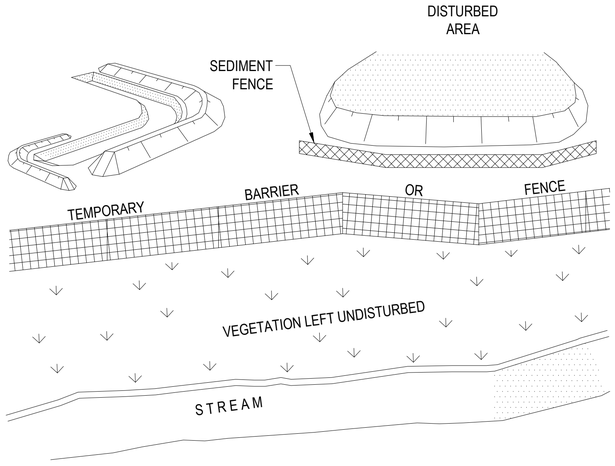


SEDIMENT TRAP FOR KERB INLET
(AT LOW POINT - SANDBAG)

NOT TO SCALE

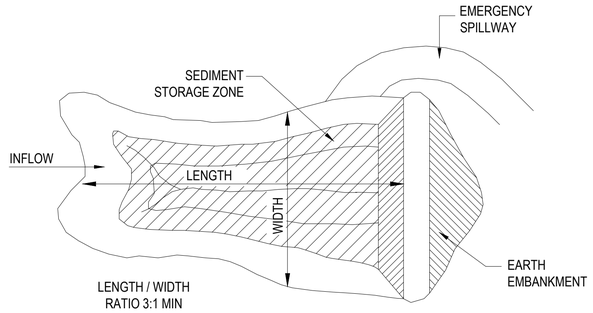


GUTTER PROTECTION.



VEGETATIVE FILTER STRIP

NOT TO SCALE



SEDIMENT BASIN (TYPICAL) PLAN - TYPE D AND F SOILS

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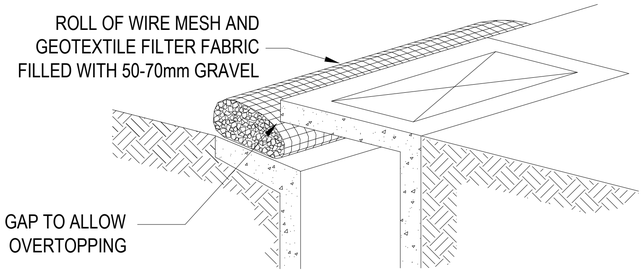
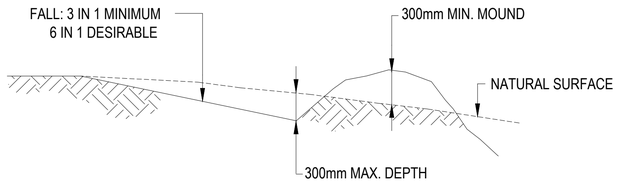


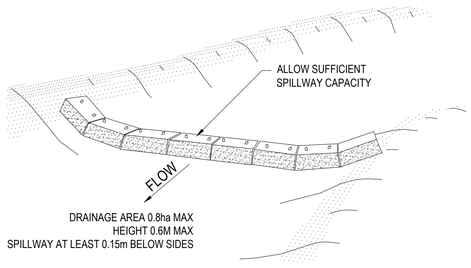
SEDIMENT TRAP FOR KERB INLET
(PORTABLE - GRAVEL)

NOT TO SCALE



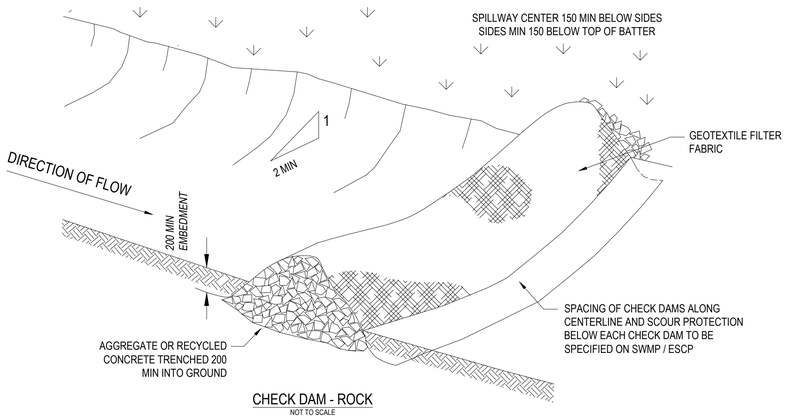
TYPICAL CATCH DRAIN

N.T.S.



CHECK DAM - STRAW BALE

NOT TO SCALE



CHECK DAM - ROCK

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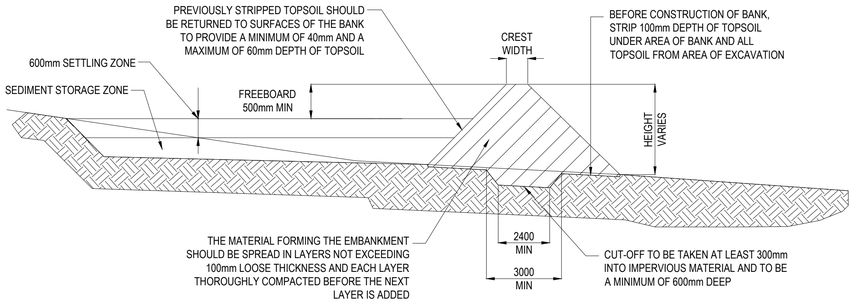

SEDIMENT BASIN WET (TYPICAL) CROSS SECTION - TYPE D AND F SOILS

NOT TO SCALE

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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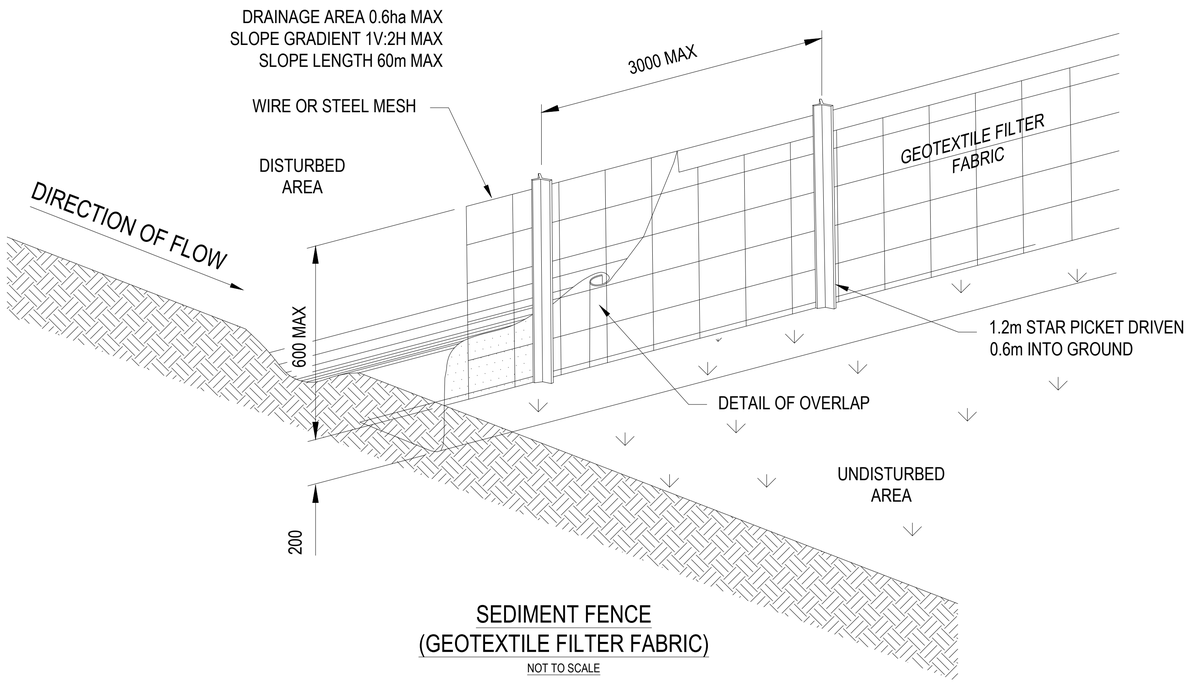
Project	Drawn	Designed	Approved
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	H.R	H.R	H.R
	Project No. S10156	Scale at A1. N/A	
Title: SEDIMENTATION & EROSION CONTROL DETAILS SHEET 1	Drawing No. C107		Revision C
	Issued By H.R	Checked By H.R	Date 24.09.24

Original sheet size A1 (841x594)



SEDIMENT FENCE
(GEOTEXTILE FILTER FABRIC)

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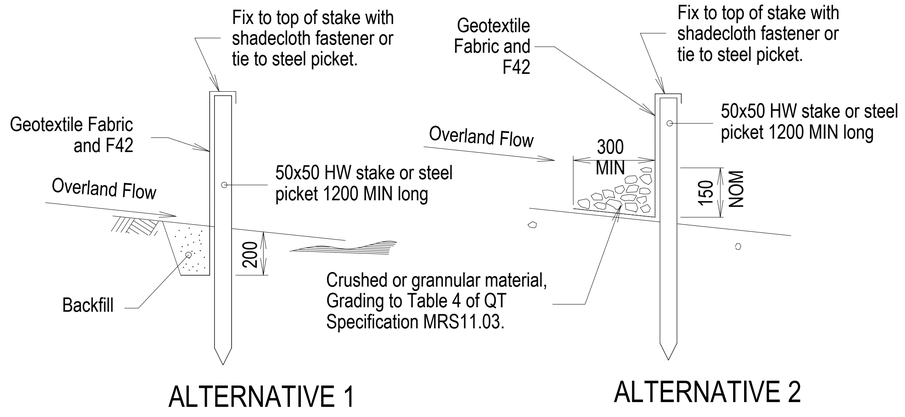
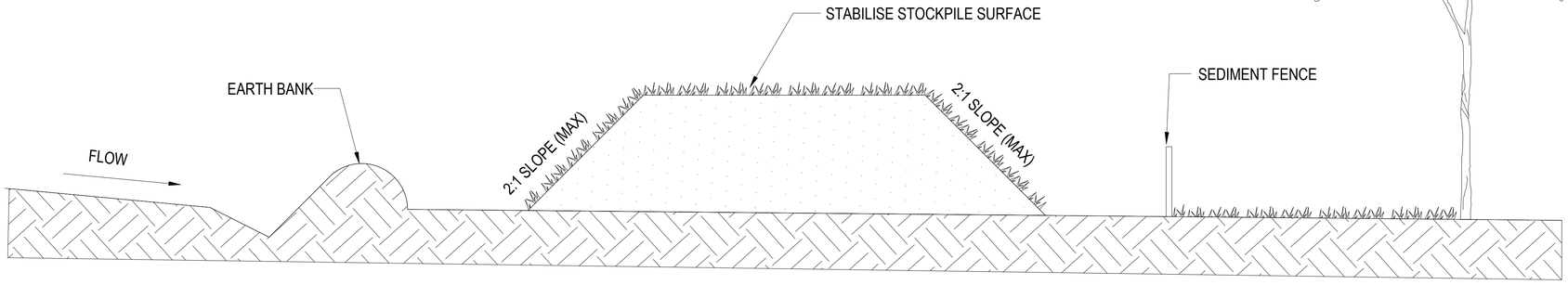


ALTERNATIVE 1 ALTERNATIVE 2

SEDIMENT FENCE

N.T.S.



STOCKPILES

NOT TO SCALE

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 2m IN HEIGHT
4. WHERE THERE 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) 1m TO 2m DOWNSLOPE

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Revision	Amendment	Issued By	Revision Date
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B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
SEDIMENTATION & EROSION CONTROL DETAILS SHEET 2

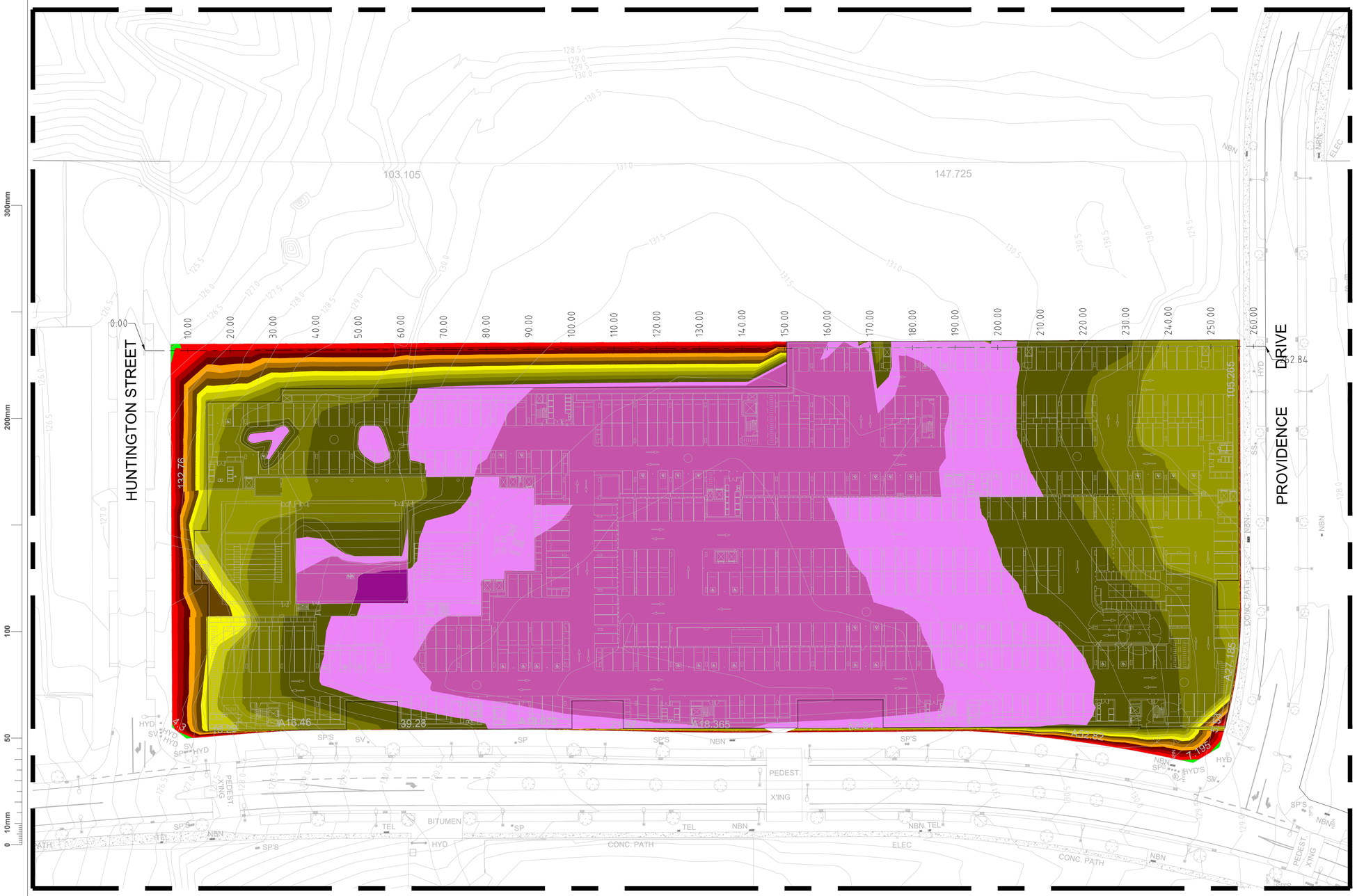
Drawn	Designed	Approved
H.R	H.R	H.R

Project No.	Scale
S10156	at A1. N/A

Drawing No.	Revision
C108	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)



TOTAL CUT AND FILL CALCULATION

NOS.	2D AREA (m^2)	TOTAL CUT (Cu. M)	TOTAL FILL (Cu. M)	NET CUT (Cu. M)
1	23058.744	241935.479	0.017	241935.463

EARTHWORK CALCULATION

Nos.	COLOR	MIN. ELEV. (m)	MAX. ELEV. (m)	2D AREA (m^2)	VOLUME (m^3)
1		-13.524	-13.000	90.2	12059.1
2		-13.000	-12.000	8069.4	19482.8
3		-12.000	-11.000	4861.7	12316.9
4		-11.000	-10.000	3284.2	8369.1
5		-10.000	-9.000	2437.6	5382.0
6		-9.000	-8.000	1936.7	3077.5
7		-8.000	-7.000	343.4	2195.0
8		-7.000	-6.000	325.1	1877.4
9		-6.000	-5.000	313.7	1533.0
10		-5.000	-4.000	265.5	1264.3
11		-4.000	-3.000	270.1	996.7
12		-3.000	-2.000	273.0	724.7
13		-2.000	-1.000	274.4	451.1
14		-1.000	0.000	304.8	175.4
15		0.000	0.020	8.9	0.0

CUT AND FILL PLAN

SCALE - 1:500

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Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R	04.10.24

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Architect

Client

Engineer

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EI Australia
Suite 6.01
55 Miller Street
Pyrmont, NSW 2009
T 02 9516 0722

Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
CUT AND FILL PLAN

Drawn	Designed	Approved
G.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:500

Drawing No.	Revision
C109	C

Issued By	Checked By	Date
H.R	H.R	04.10.24

Original sheet size A1
(841x594)

CONNECT TO
EXISTING SW PIT.
RL. 126.40
IL. 124.52

PROPOSED GRATED KERB
INLET PIT, CONSTRUCTED IN
ACCORDANCE WITH COUNCIL
SPECIFICATIONS (TYP.)
RL. 126.50
IL. 124.79

SW PIT 101
900x900
RL 126.65
IL 124.71

900x900mm SW PIT 108 WITH
600x900mm V-GRATE & FRAME.
RL. 127.73
IL. 126.98

900x900mm SW PIT 109 WITH
600x900mm V-GRATE & FRAME.
RL. 129.33
IL. 128.58

900x900mm SW PIT 110 WITH
600x900mm V-GRATE & FRAME.
RL. 131.19
IL. 130.44

900x900mm SW PIT 111 WITH
600x900mm V-GRATE & FRAME.
RL. 132.20
IL. 131.45

SW PIT 102
900x900
RL 130.00
IL 129.25

PROVIDE PIPE STUB
FOR BUILDING B
DRAINAGE (TYP.)

PROVIDE PIPE STUB
FOR BUILDING C
DRAINAGE (TYP.)

PROVIDE PIPE STUB
FOR BUILDING A
DRAINAGE (TYP.)

CLASS B
GRATED
DRAIN WITH
HEELGUARD

RL 130.300
RL 132.000
RL 131.900
RL 132.000
RL 131.900

1:14
1:20
1:14

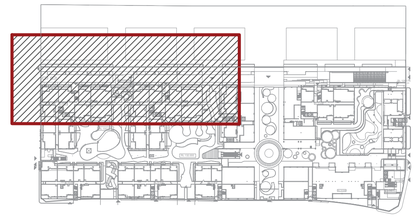
SWD
RWO

STREET
TINGTON
127

300mm
200mm
100
50
0 10mm

LEGEND

SWD	Ø100mm UPVC STORMWATER	RWO — RAIN WATER OUTLET
SWD	Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD	Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD	Ø375mm RCP STORMWATER	
SWD	100mm AGLINE	GRATED DRAIN



GROUND FLOOR LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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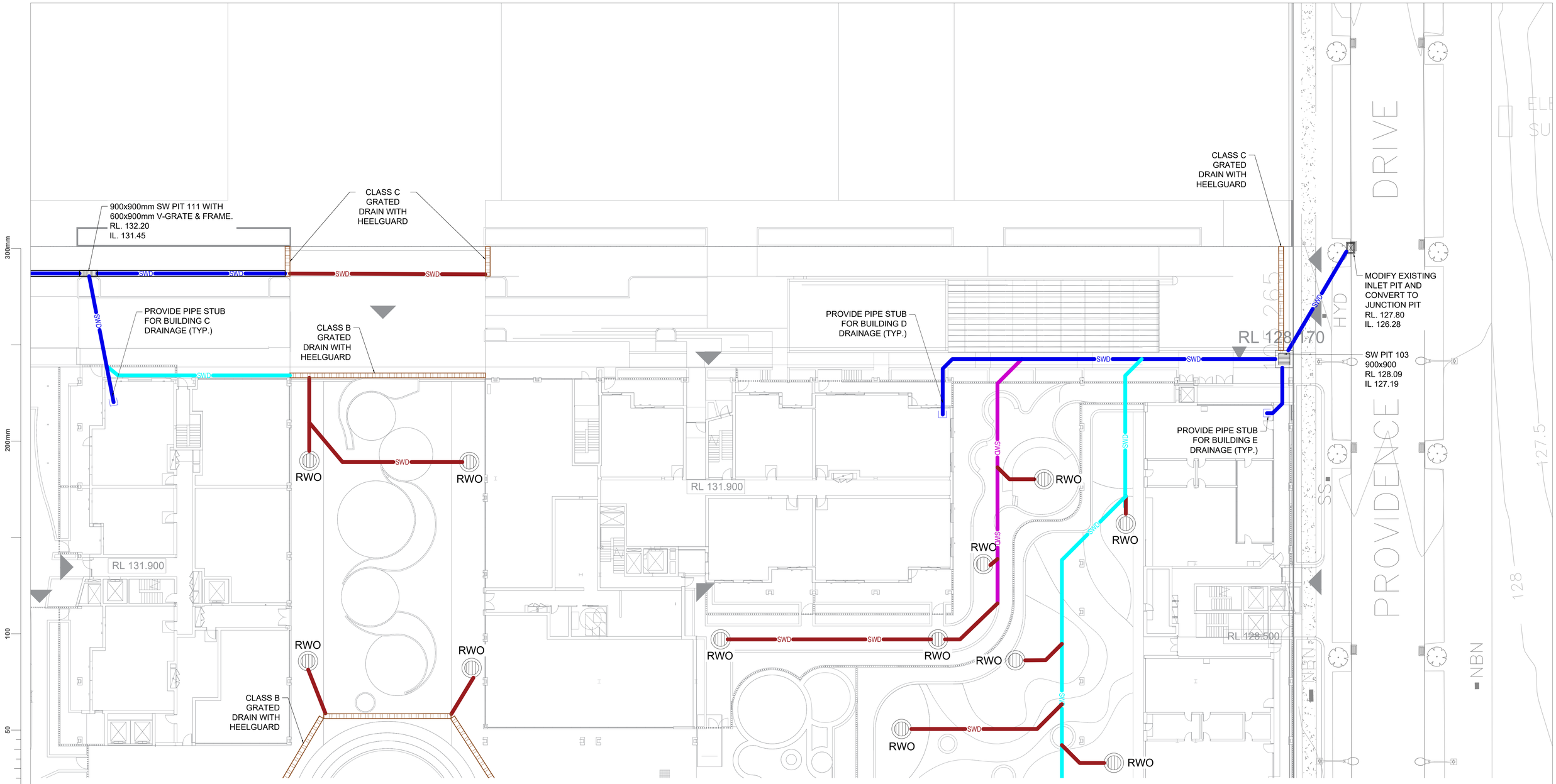
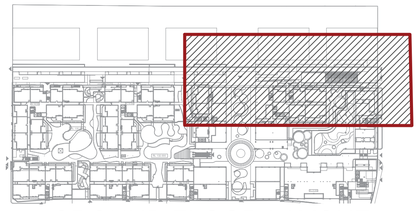
Project	**Drawn**	**Designed** / **Approved**
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	S.A	S.A / H.R
Project No.	**Scale**	
S10156	at A1. 1:200	
Title	**Drawing No.**	**Revision**
GROUND FLOOR SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 01	C200	C
Issued By	**Checked By**	**Date**
S.A	H.R	24.09.24

Original sheet size A1 (841x594)



LEGEND

SWD	Ø100mm UPVC STORMWATER	RWO	RAIN WATER OUTLET
SWD	Ø150mm UPVC STORMWATER		DOWNPIPE UPVC
SWD	Ø225mm UPVC STORMWATER		GRATED SW PIT
SWD	Ø375mm RCP STORMWATER		
SWD	100mm AGLINE		GRATED DRAIN



GROUND FLOOR LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
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B	ISSUED FOR DA	M.W	05.10.23
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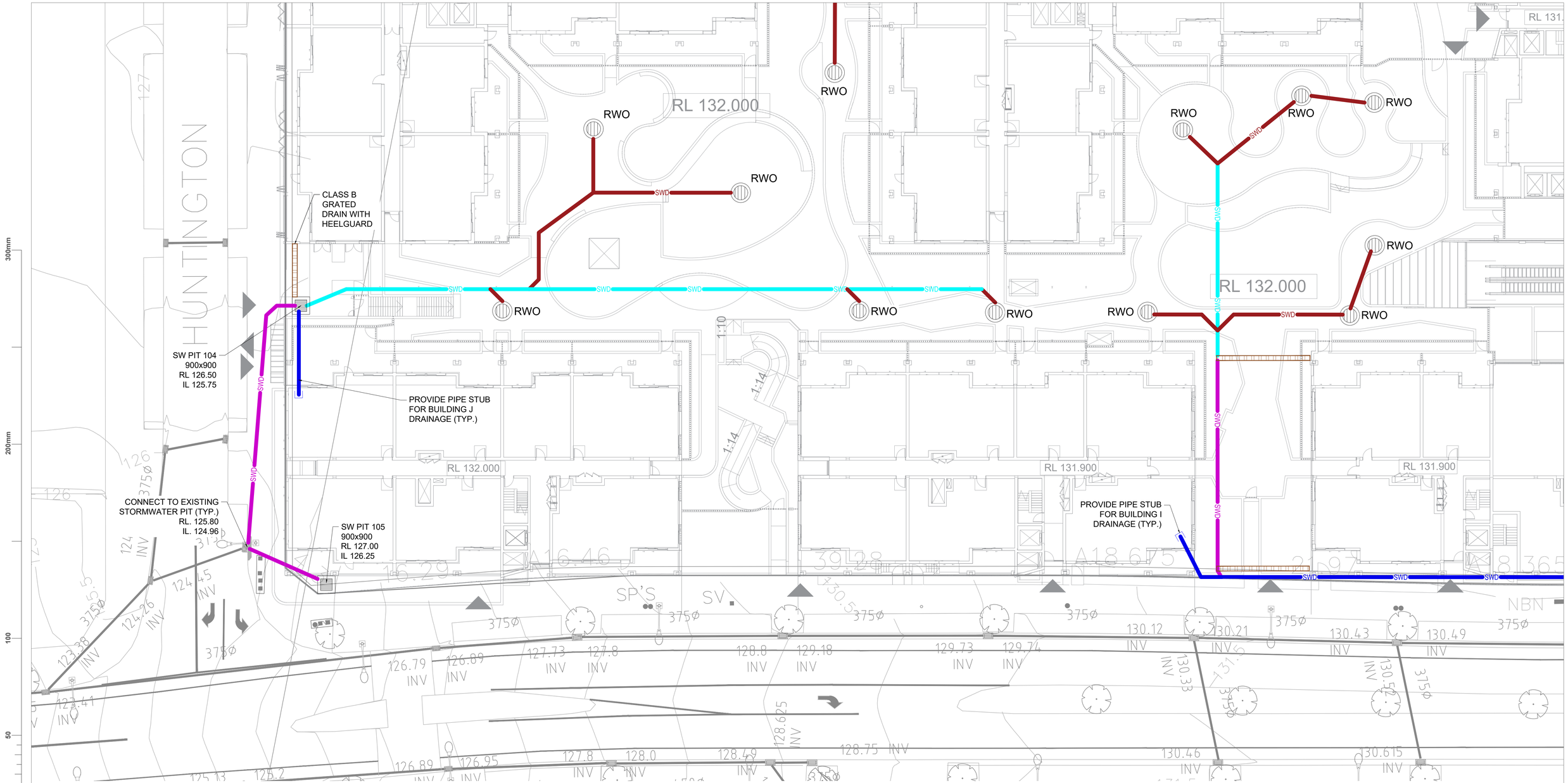
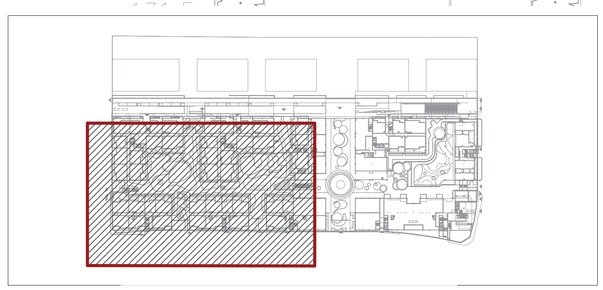
Project		
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA		
Drawn	**Designed**	**Approved**
S.A	S.A	H.R
Project No.	**Scale**	
S10156	at A1. 1:200	
Title	**Drawing No.**	**Revision**
GROUND FLOOR SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 02	C201	C
Issued By	**Checked By**	**Date**
H.R	H.R	24.09.24

Original sheet size A1 (841x594)



LEGEND

SWD Ø100mm UPVC STORMWATER	RWO RAIN WATER OUTLET
SWD Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD Ø375mm RCP STORMWATER	
SWD 100mm AGLINE	GRATED DRAIN



GROUND FLOOR LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
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Project	**Drawn**	**Designed** / **Approved**
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	S.A	S.A / H.R
Project No.	**Scale**	
S10156	at A1. 1:200	
Title	**Drawing No.**	**Revision**
GROUND FLOOR SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 03	C202	C
	Issued By / **Checked By** / **Date**	
	H.R / H.R / 24.09.24	

Original sheet size A1 (841x594)

RWO
CLASS B GRATED DRAIN WITH HEELGUARD
SWD
SW PIT 106 900x900 RL 131.50 IL 130.75
PROVIDE PIPE STUB FOR BUILDING G DRAINAGE (TYP.)
CONNECT TO EXISTING SW PIT RL. 131.40 IL. 130.29
PROVIDE PIPE STUB FOR BUILDING H DRAINAGE (TYP.)
PROVIDE PIPE STUB FOR BUILDING F DRAINAGE (TYP.)
RL 131.900
SW PIT 107 600x600 RL 130.50 IL 129.75
CONNECT TO EXISTING SW PIT. RL. 130.00 IL. 129.03
RL 128.500
RL 129.100
1:14
NBN
TEL
300mm
200mm
100
50
10mm

LEGEND

SWD	Ø100mm UPVC STORMWATER	RWO	RAIN WATER OUTLET
SWD	Ø150mm UPVC STORMWATER		DOWNPIPE UPVC
SWD	Ø225mm UPVC STORMWATER		GRATED SW PIT
SWD	Ø375mm RCP STORMWATER		
SWD	100mm AGLINE		GRATED DRAIN

GROUND FLOOR LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
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B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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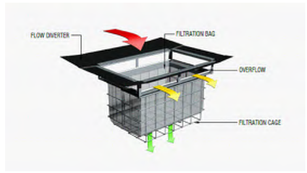
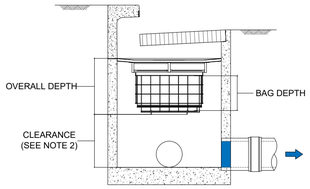
Project	Drawn	Designed	Approved
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	S.A	S.A	H.R
	Project No. S10156	Scale at A1. 1:200	
Title: GROUND FLOOR SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 04	Drawing No. C203		Revision C
	Issued By H.R	Checked By H.R	Date 24.09.24

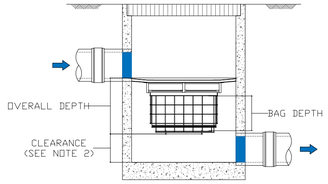
Original sheet size A1 (841x594)



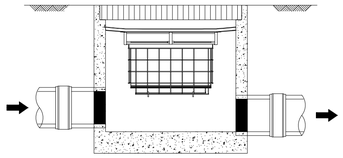
TYPICAL OCEANGUARD DETAIL
(TO BE INSTALLED IN ALL EXISTING PIT TAKING STORMWATER FROM GRATE)



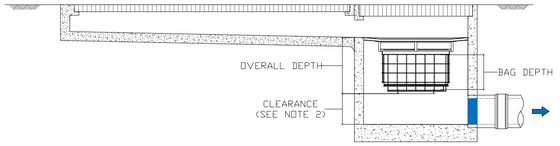
SURFACE FLOW CONFIGURATION



PIPE FLOW CONFIGURATION

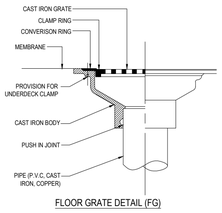


PIPE FLOW CONFIGURATION

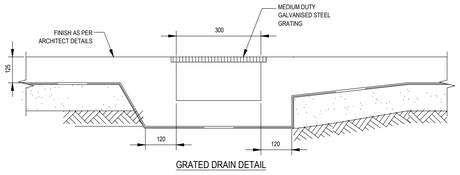


GRATED STRIP DRAIN CONFIGURATION

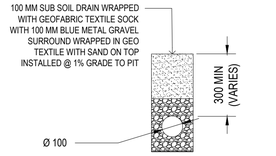
REFER OCEANGUARD PRODUCT SPECIFICATION & NOTES FOR DETAILS



FLOOR GRATE DETAIL (FG)



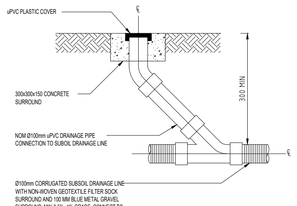
GRATED DRAIN DETAIL



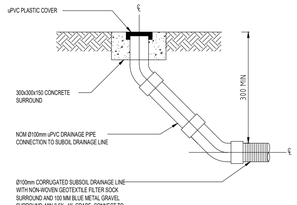
TYPICAL ENLARGEMENT SUBSOIL DRAIN SECTION

PIT SCHEDULE						
Pit Name	RL	IL	Depth	Pit Size	Condition	Cover Description
SW101	126.65	124.71	1.94	900x900	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW102	130.00	129.25	0.75	900x900	New Pit	Class B Galvanised Mild Street Grate Hinged to Frame
SW103	128.09	127.19	0.90	900x900	New Pit	Class B Galvanised Mild Street Grate Hinged to Frame
SW104	126.50	125.75	0.75	900x900	New Pit	Class B Galvanised Mild Street Grate Hinged to Frame
SW105	127.00	126.25	0.75	900x900	New Pit	Class B Galvanised Mild Street Grate Hinged to Frame
SW106	131.50	130.75	0.75	900x900	New Pit	Class B Galvanised Mild Street Grate Hinged to Frame
SW107	130.50	129.75	0.75	600x600	New Pit	Class B Galvanised Mild Street Grate Hinged to Frame
SW108	127.73	126.98	0.75	900x900	New Pit	600x900 Class C Road Use 'V' Grate & Frame
SW109	129.33	128.58	0.75	900x900	New Pit	600x900 Class C Road Use 'V' Grate & Frame
SW110	131.19	130.44	0.75	900x900	New Pit	600x900 Class C Road Use 'V' Grate & Frame
SW111	132.20	131.45	0.75	900x900	New Pit	600x900 Class C Road Use 'V' Grate & Frame
SW301	119.60	119.15	0.45	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW302	119.60	118.90	0.70	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW303	119.60	118.60	1.00	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW304	120.25	119.80	0.45	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW305	120.25	119.65	0.60	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW306	120.25	119.50	0.75	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW307	120.25	119.15	1.10	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW308	120.25	119.30	0.95	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW309	120.25	118.95	1.30	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW310	119.60	119.15	0.45	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW311	119.60	119.00	0.60	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW312	119.60	119.15	0.45	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW313	119.60	119.00	0.60	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW314	119.60	119.15	0.45	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW315	119.60	118.65	0.95	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW316	120.25	119.80	0.45	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW317	120.25	119.65	0.60	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW318	120.25	119.50	0.75	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW319	120.25	119.80	0.45	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW320	120.25	119.65	0.60	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW321	120.25	119.20	1.05	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame
SW322	120.25	119.80	0.45	600x600	New Pit	Class C Galvanised Mild Street Grate Hinged to Frame

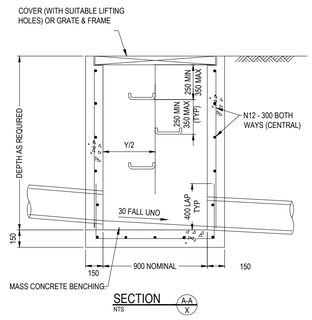
NOTES:
1. ALL GRATED DRAINS TO BE MINIMUM 300mm ON ACCESS LANE AND ROAD AREAS, TO BE FORMED IN CONCRETE SLAB.
2. ALL PITS NEED TO BE PROVIDED WITH HEELSAFE GRATES.



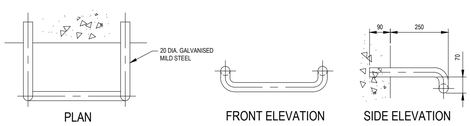
INTERMEDIATE RISER (IR)
SCALE 1:10



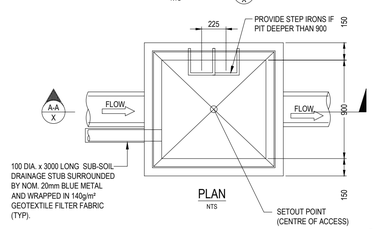
HIGH END RISER (HER)
SCALE 1:10



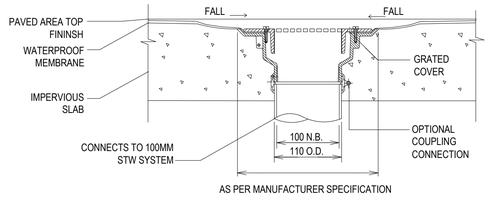
SECTION
NTS



PLAN
FRONT ELEVATION
SIDE ELEVATION
FRONT ELEVATION
NTS

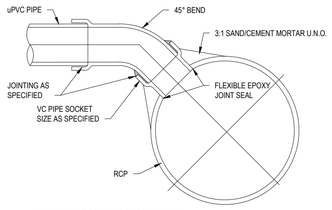


PLAN
NTS

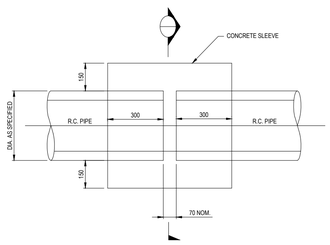


SECTION VIEW

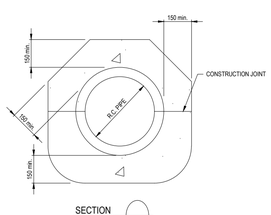
RAINWATER OUTLET DETAIL
NTS



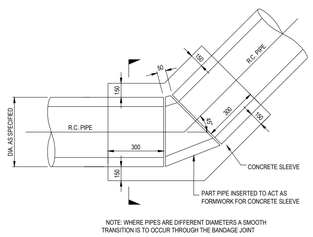
DIRECT CONNECTION DETAIL
NTS



PIPE TO PIPE CONNECTION DETAIL
N.T.S.



SECTION



NOTE: WHERE PIPES ARE DIFFERENT DIAMETERS A SMOOTH TRANSITION IS TO OCCUR THROUGH THE BANDAGE JOINT

PIPE TO PIPE CONNECTION DETAIL
(45° BEND) N.T.S.

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	HR	28.08.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Architect

Client

Engineer

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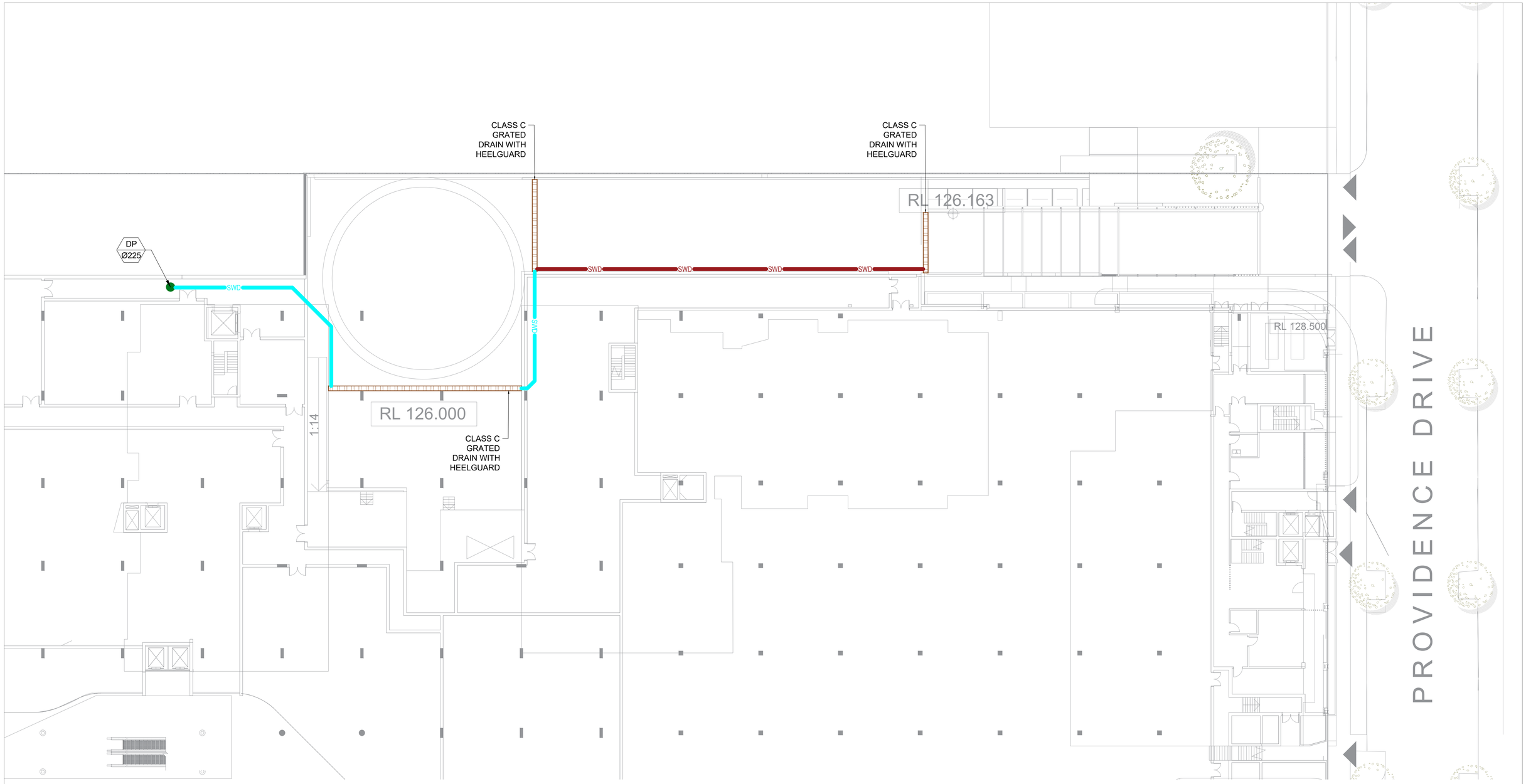
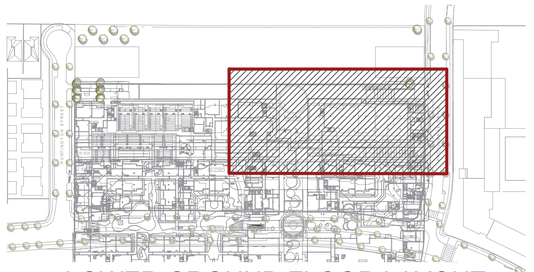
Project	Drawn	Designed	Approved
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	S.A	S.A	H.R
	Project No. S10156	Scale at A1.N.T.S	
Title: STORMWATER DETAILS	Drawing No. C204		Revision C
	Issued By H.R	Checked By H.R	Date 24.09.24

Original sheet size A1 (841x594)



LEGEND

SWD	Ø100mm UPVC STORMWATER	RWO	RAIN WATER OUTLET
SWD	Ø150mm UPVC STORMWATER		DOWNPIPE UPVC
SWD	Ø225mm UPVC STORMWATER		GRATED SW PIT
SWD	Ø375mm RCP STORMWATER		
SWD	100mm AGLINE		GRATED DRAIN



LOWER GROUND FLOOR LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project	**Drawn** S.A	**Designed** S.A / **Approved** H.R
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	**Project No.** S10156	**Scale** at A1. 1:200
Title LOWER GROUND SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 01	**Drawing No.** C204	**Revision** C
	Issued By H.R	**Checked By** H.R / **Date** 24.09.24

Original sheet size A1 (841x594)

HUNTINGTON STR

RL 128.500

RL 127.000

RWO

SWD

RWO

1:20 1:8 1:4

SWD

SWD

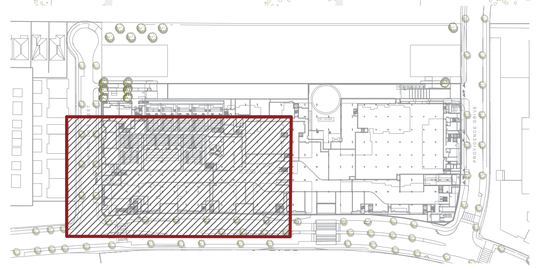
SWD

SW PIT 105
REFER TO C202 FOR DISCHARGE

300mm
200mm
100
50
0 10mm

LEGEND

SWD Ø100mm UPVC STORMWATER	RWO RAIN WATER OUTLET
SWD Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD Ø375mm RCP STORMWATER	
SWD 100mm AGLINE	GRATED DRAIN



LOWER GROUND FLOOR LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
LOWER GROUND SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 03

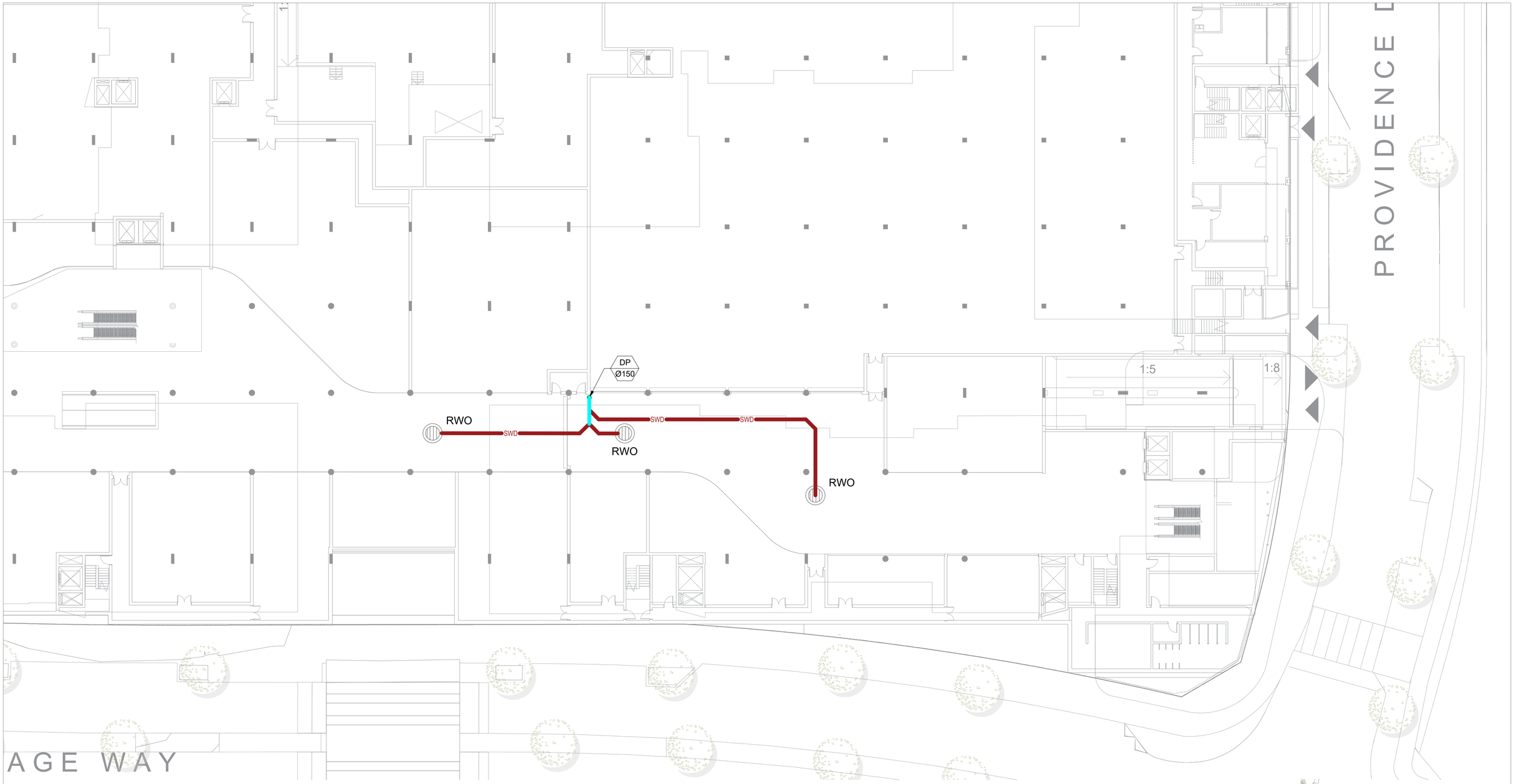
Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

Drawing No.	Revision
C205	C

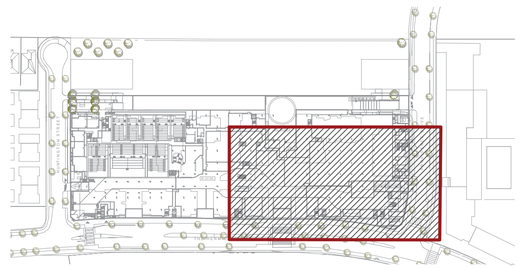
Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)



LEGEND

SWD	Ø100mm UPVC STORMWATER	RWO — RAIN WATER OUTLET
SWD	Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD	Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD	Ø375mm RCP STORMWATER	
SWD	100mm AGLINE	GRATED DRAIN



LOWER GROUND FLOOR LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED		

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
LOWER GROUND SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 04

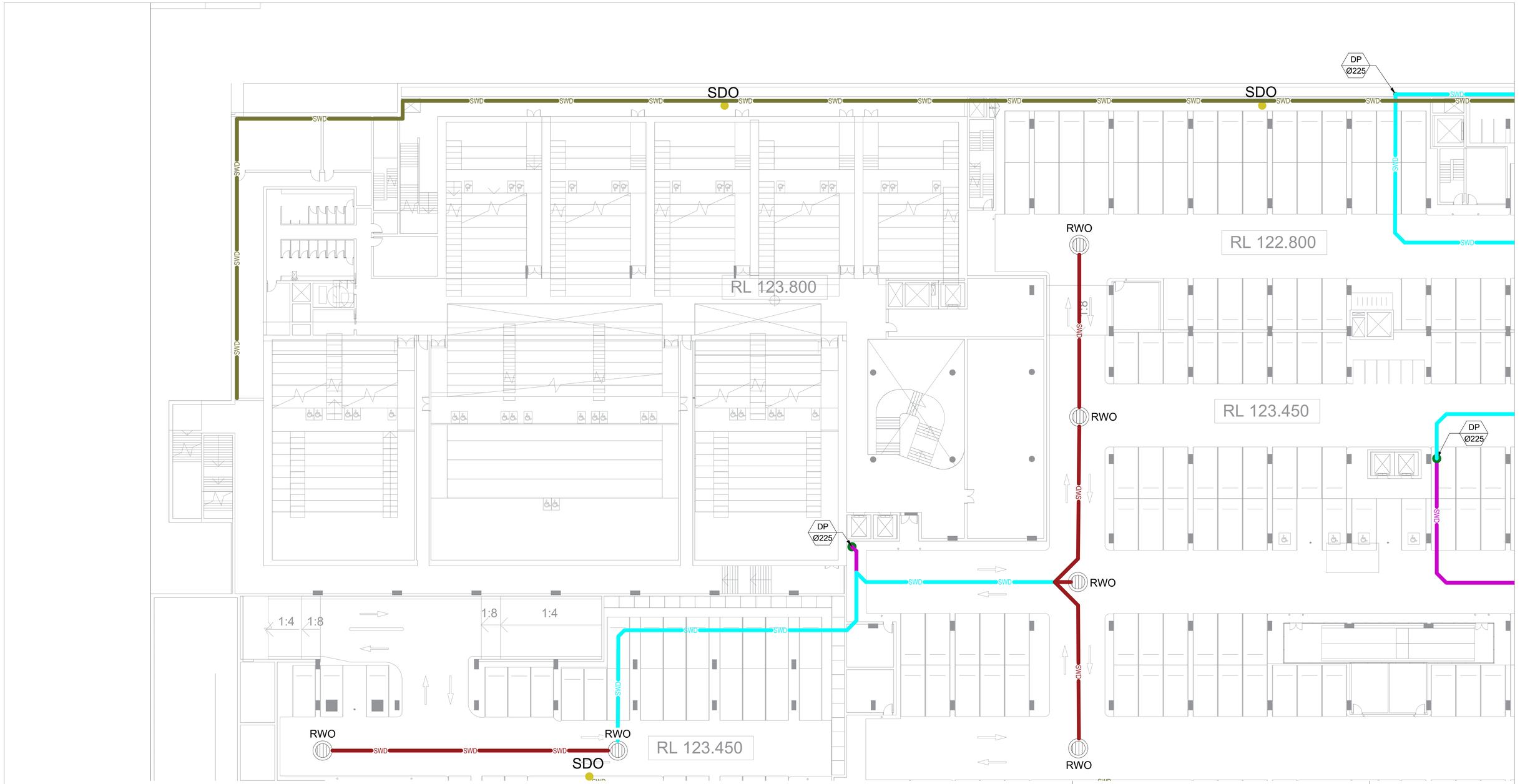
Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

Drawing No.	Revision
C206	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)



LEGEND

SWD	Ø100mm UPVC STORMWATER	RWO — RAIN WATER OUTLET
SWD	Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD	Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD	Ø375mm RCP STORMWATER	
SWD	100mm AGLINE	GRATED DRAIN

BASEMENT 1 LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Drawn	Designed	Approved
S.A	S.A	H.R

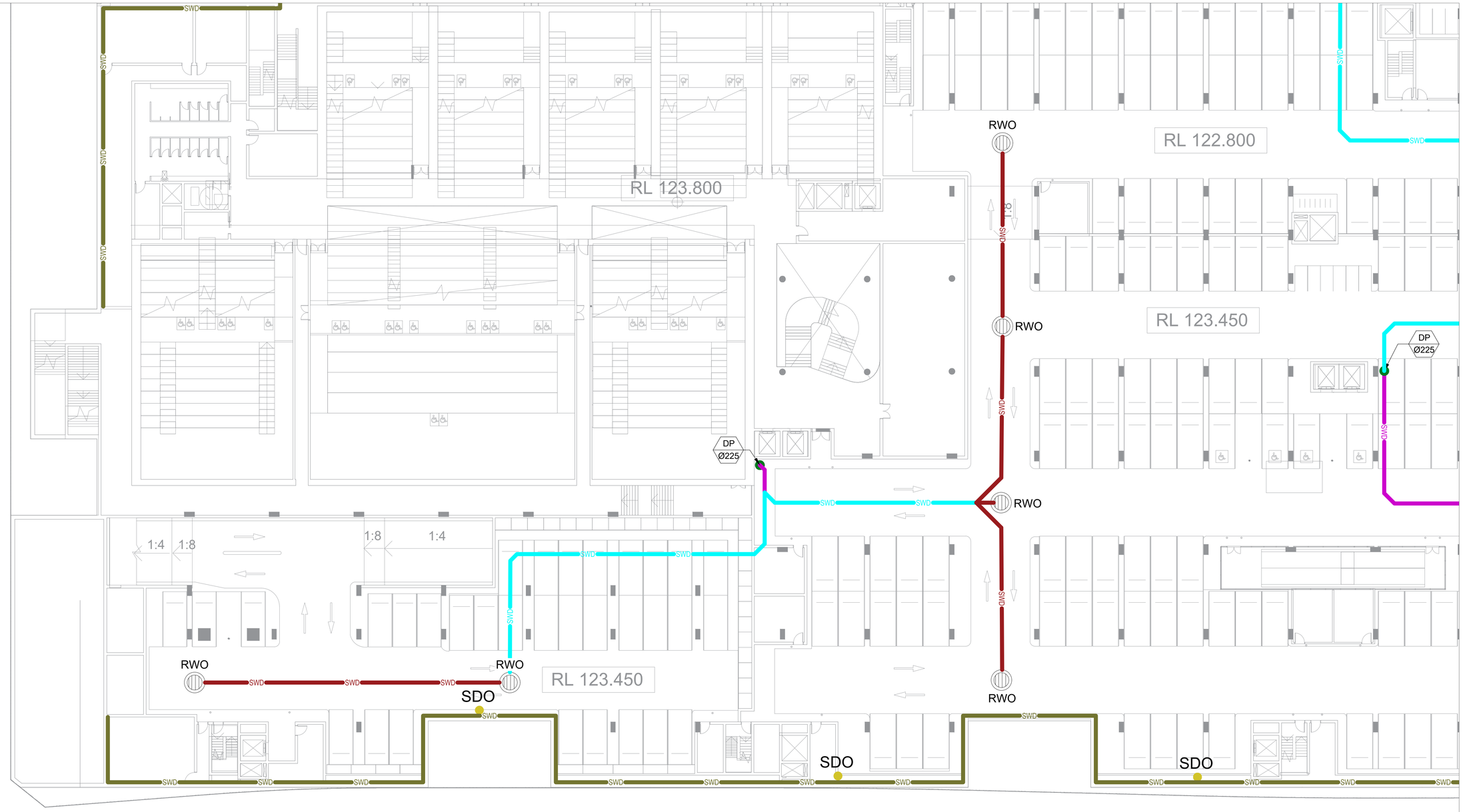
Project No.	Scale
S10156	at A1. 1:200

Title
BASEMENT 01 SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 01

Drawing No.	Revision
C207	C

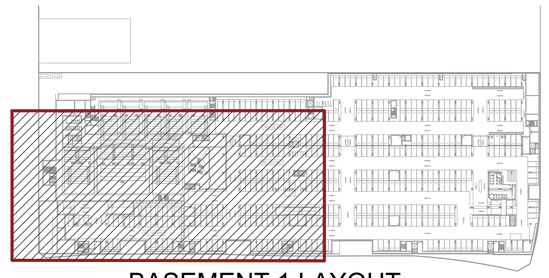
Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)



LEGEND

SWD Ø100mm UPVC STORMWATER	RWO RAIN WATER OUTLET
SWD Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD Ø375mm RCP STORMWATER	
SWD 100mm AGLINE	GRATED DRAIN



BASEMENT 1 LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	03.10.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
BASEMENT 01 SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 02

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

Drawing No.	Revision
C208	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

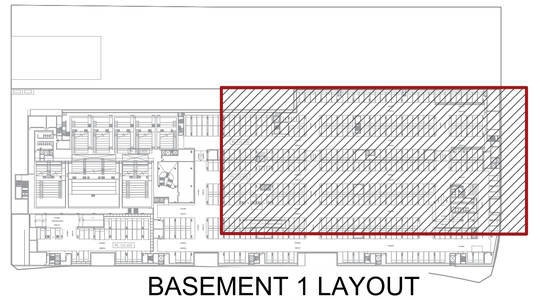
Original sheet size A1 (841x594)

SDO
SDO
SDO
DP Ø225
SDO
RWO
RWO
RWO
RWO
RL 122.800
1:8
1:8
RL 123.450
RWO
RWO
RWO
DP Ø225
RWO
RWO
DP Ø150
1:8
1:5
1:8
SDO
SWD

300mm
200mm
100
50
0 10mm

LEGEND

SWD Ø100mm UPVC STORMWATER	RWO RAIN WATER OUTLET
SWD Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD Ø375mm RCP STORMWATER	
SWD 100mm AGLINE	GRATED DRAIN



BASEMENT 1 LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
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GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
BASEMENT 01 SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 03

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

Drawing No.	Revision
C209	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)

RL 122.800

RL 123.450

RWO

SDO

SWD

DP Ø225

DP Ø150

1:8

1:5

300mm

200mm

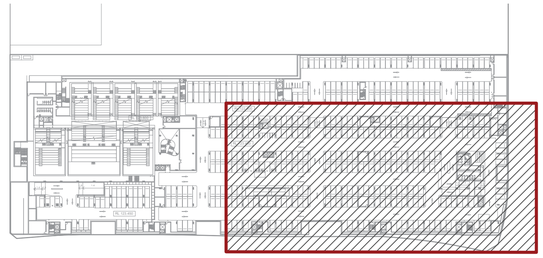
100

50

0 10mm

LEGEND

SWD Ø100mm UPVC STORMWATER	RWO RAIN WATER OUTLET
SWD Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD Ø375mm RCP STORMWATER	GRATED DRAIN
SWD 100mm AGLINE	



BASEMENT 1 LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
BASEMENT 01 SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 04

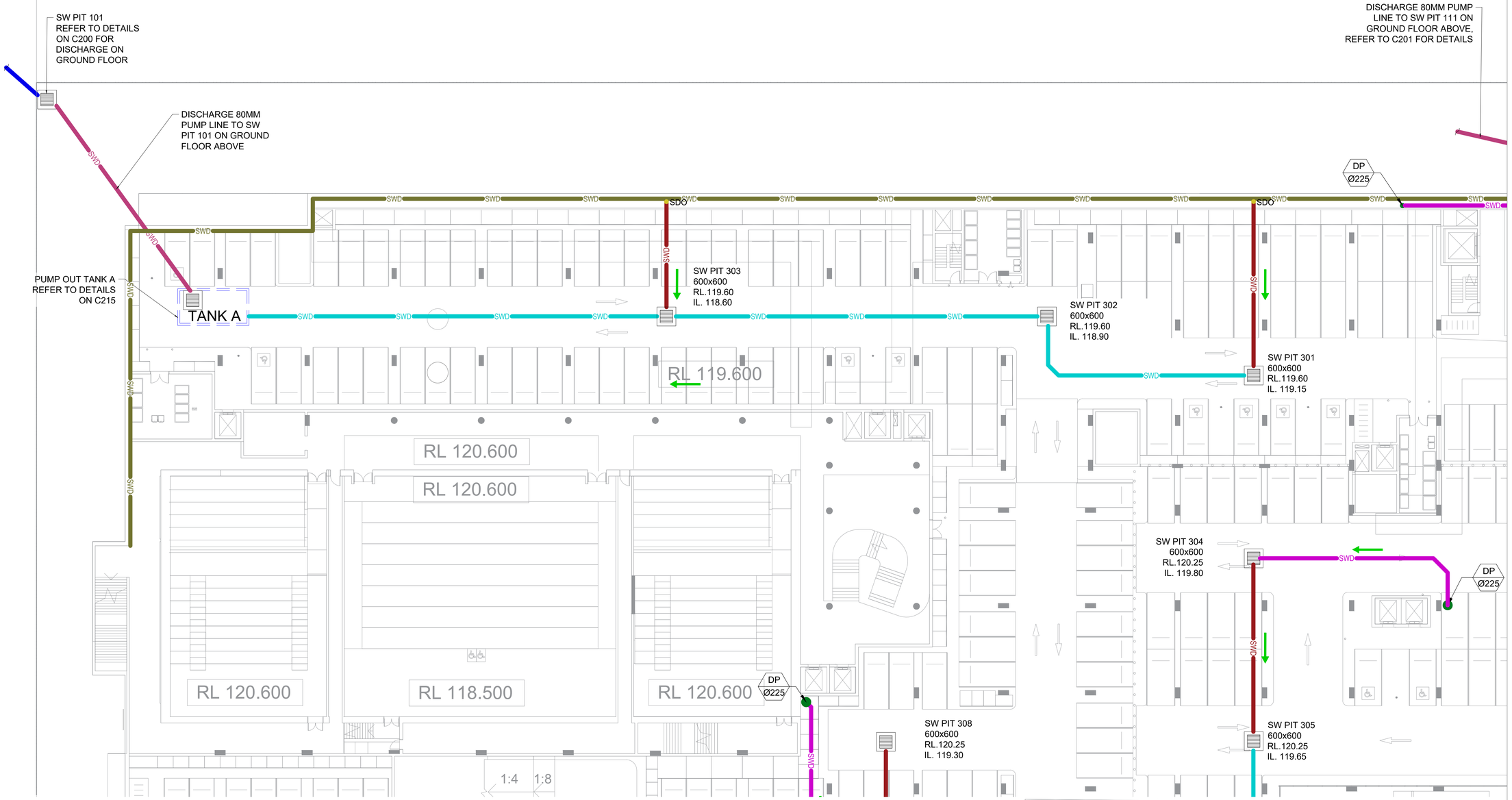
Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

Drawing No.	Revision
C210	C

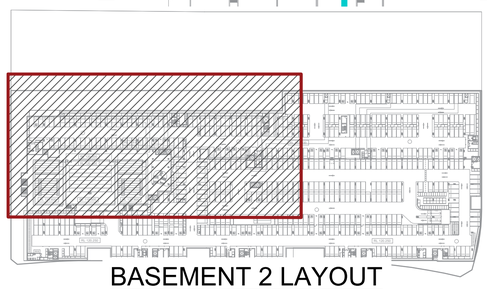
Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)



LEGEND

SWD Ø100mm UPVC STORMWATER	RWO RAIN WATER OUTLET
SWD Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD Ø375mm RCP STORMWATER	
SWD 100mm AGLINE	GRATED DRAIN



BASEMENT 2 LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
BASEMENT 02 SITEWORKS AND
STORMWATER MANAGEMENT PLAN SHEET 01

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

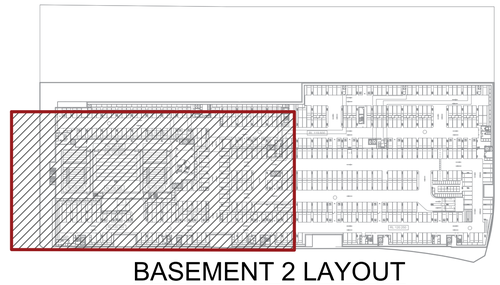
Drawing No.	Revision
C211	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)

LEGEND

SWD Ø100mm UPVC STORMWATER	RWO RAIN WATER OUTLET
SWD Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD Ø375mm RCP STORMWATER	
SWD 100mm AGLINE	GRATED DRAIN



BASEMENT 2 LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Client

Engineer

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
BASEMENT 02 SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 02

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

Drawing No.	Revision
C212	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)

DISCHARGE 80MM PUMP LINE TO SW PIT 111 ON GROUND FLOOR ABOVE, REFER TO C201 FOR DETAILS

PUMP OUT TANK B REFER TO DETAILS ON C215

PUMP OUT TANK C REFER TO DETAILS ON C215

DISCHARGE 80MM PUMP LINE TO SW PIT 103 ON GROUND FLOOR ABOVE

SW PIT 103 REFER TO DETAILS ON C202 FOR DISCHARGE ON GROUND FLOOR

TANK B

TANK C

DP Ø225

SDO

SW PIT 301 600x600 RL.119.60 IL. 119.15

SW PIT 310 600x600 RL.119.60 IL. 119.15

SW PIT 311 600x600 RL.119.60 IL. 119.00

SW PIT 312 600x600 RL.119.60 IL. 119.15

SW PIT 313 600x600 RL.119.60 IL. 119.00

SW PIT 314 600x600 RL.119.60 IL. 119.15

SW PIT 315 600x600 RL.119.60 IL. 118.65

RL 119.600

SW PIT 304 600x600 RL.120.25 IL. 119.80

SW PIT 316 600x600 RL.120.25 IL. 119.80

SW PIT 319 600x600 RL.120.25 IL. 119.80

SW PIT 322 600x600 RL.120.25 IL. 119.80

300mm
200mm
100
50
10mm
0

LEGEND

SWD Ø100mm UPVC STORMWATER	RWO RAIN WATER OUTLET
SWD Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD Ø375mm RCP STORMWATER	
SWD 100mm AGLINE	GRATED DRAIN

BASEMENT 2 LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
BASEMENT 02 SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 03

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

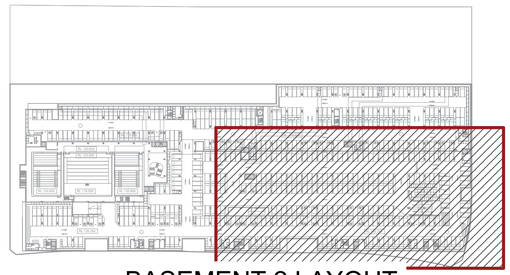
Drawing No.	Revision
C213	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)

LEGEND

SWD Ø100mm UPVC STORMWATER	RWO RAIN WATER OUTLET
SWD Ø150mm UPVC STORMWATER	DOWNPIPE UPVC
SWD Ø225mm UPVC STORMWATER	GRATED SW PIT
SWD Ø375mm RCP STORMWATER	
SWD 100mm AGLINE	GRATED DRAIN



BASEMENT 2 LAYOUT

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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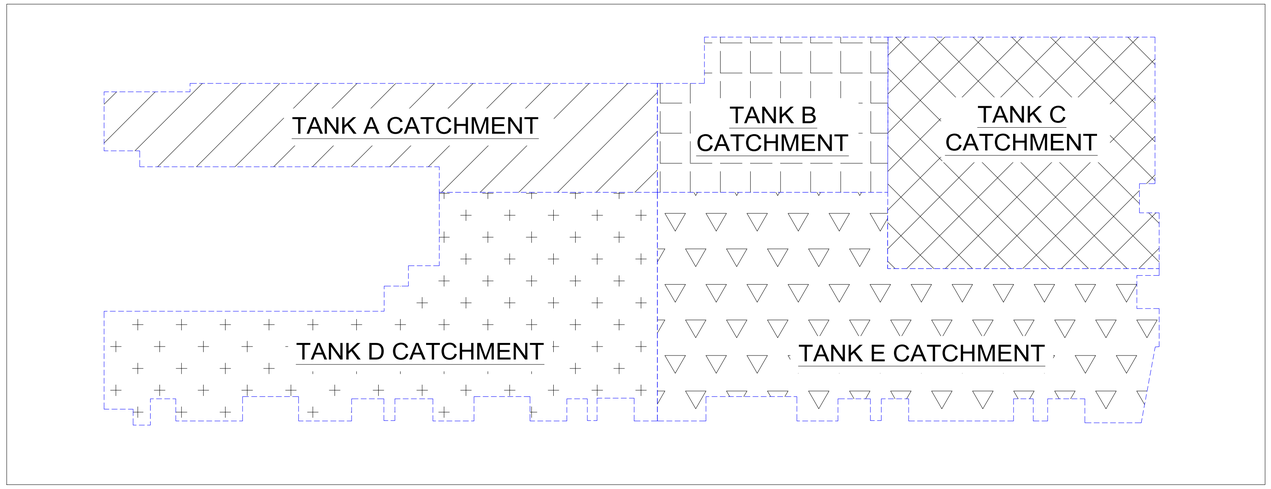
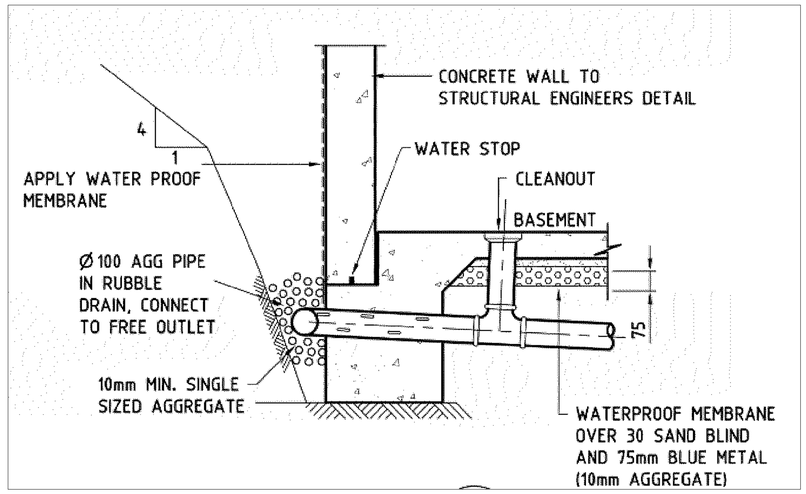
Project	Drawn	Designed	Approved
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	S.A	S.A	H.R
	Project No. S10156	Scale at A1. 1:200	
Title: BASEMENT 02 SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 04	Drawing No. C214		Revision C
	Issued By H.R	Checked By H.R	Date 24.09.24

Original sheet size A1 (841x594)



AREA ANALYSIS FOR PUMP OUT SYSTEM



TYP. BASEMENT SECTION

PUMP OUT DESIGN SUMMARY

COEFFICIENT OF DISCHARGE = 0.9
RAINFALL INTENSITY (I) = 42.90 mm/hr
(100 Yr ARI FOR 2 HR)

Basement Pump Out Volume	A	B	C	D	E
Pump Out Area Considered (m2)	329.38	656.25	402.50	536.88	573.13
Peak Discharge (Q) in L/h/m2	38.61	38.61	38.61	38.61	38.61
Volume Required (m3)	25.43	50.68	31.08	41.46	44.26

PUMP OUT SELECTION

PUMPOUT RATE PROVIDED =20 l/sec
HEAD =10m ((6+1.3)*1.25=9.125)
PROVIDE 2 AUTO STANDARD PUMPS FOR EACH PUMP OUT TANK, DETAILS WILL BE PROVIDED DURING CC STAGE.

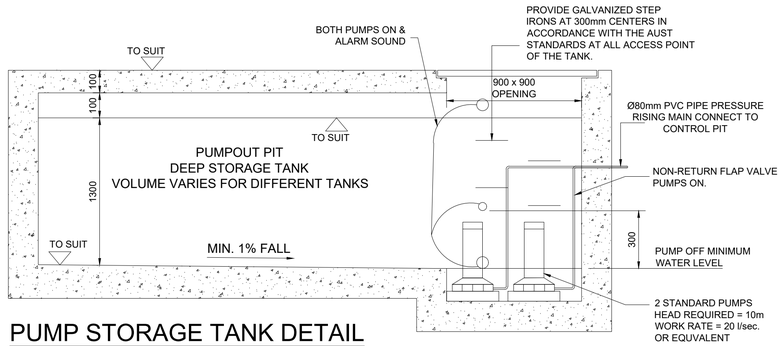
PUMP OUT TANK DIMENSION

Tank Dimensions	A	B	C	D	E
Length (m)	6.40	9.30	6.00	8.00	8.60
Width (m)	3.10	4.20	4.00	4.00	4.00
Depth (m)	1.30	1.30	1.30	1.30	1.30
Volume Proposed (m3)	25.79	50.78	31.20	41.60	44.72

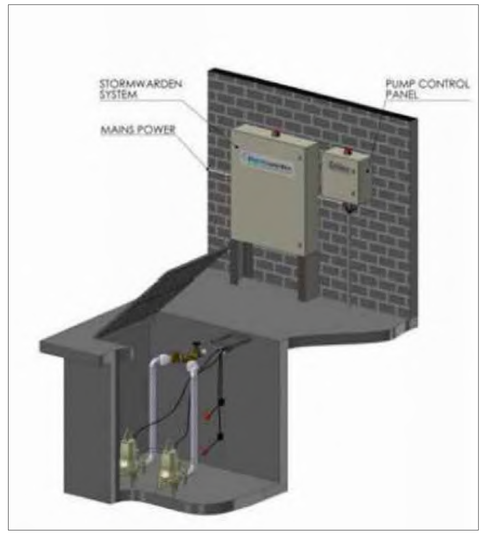
STANDARD PUMP OUT DESIGN NOTES

THE PUMP OUT SYSTEM SHALL BE DESIGNED TO BE OPERATED IN THE FOLLOWING MANNER :-

- THE PUMP SHALL BE PROGRAMMED TO WORK ALTERNATIVELY SO AS TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.
- A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AN OFF SWITCH FOR THE PUMPS.
- A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE AND DRAIN THE TANK TO THE LEVEL OF THE LOW-LEVEL FLOAT.
- A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM. IT WILL BE 100mm ABOVE THE INLET PIPE.
- AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT AND A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.



PUMP STORAGE TANK DETAIL
N.T.S



PUMP & CONTROL LAYOUT SKEMATIC

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	27.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	24.09.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
BASEMENT 02 SITEWORKS AND STORMWATER MANAGEMENT PLAN SHEET 05

Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:200

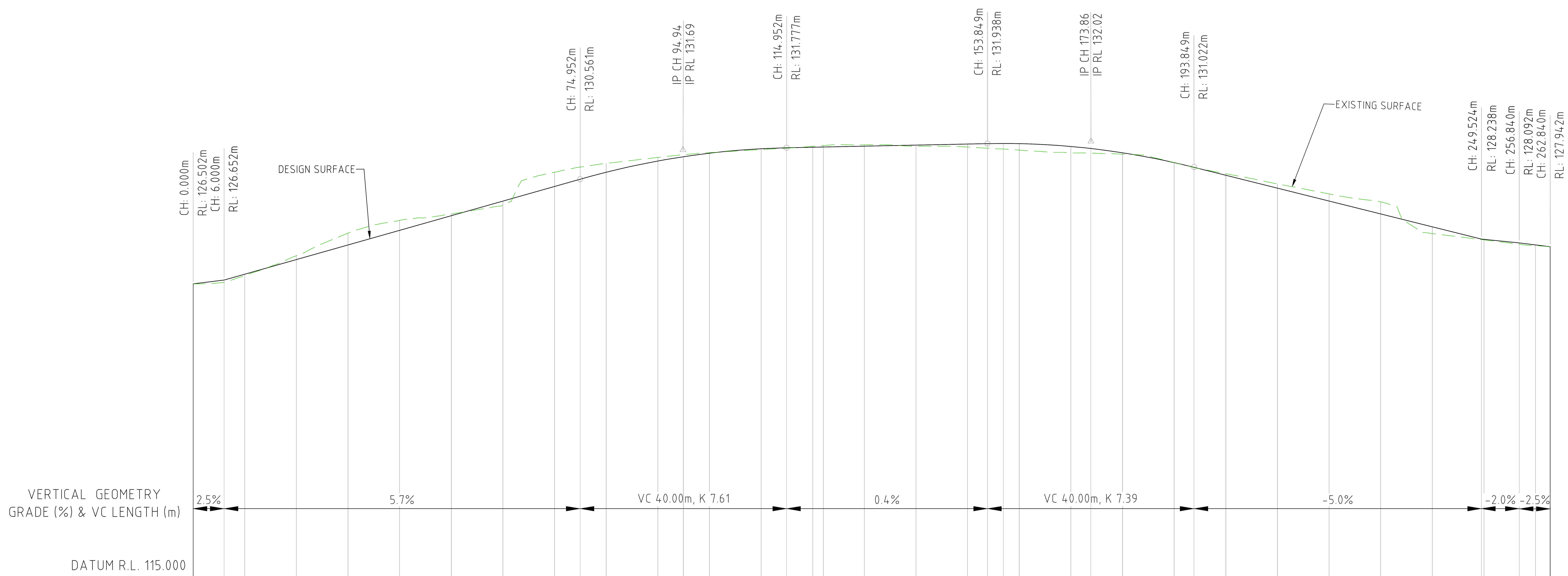
Drawing No.	Revision
C215	C

Issued By	Checked By	Date
H.R	H.R	24.09.24

Original sheet size A1 (841x594)

PLAN

SCALE - 1:500



CHAINAGE	EXISTING SURFACE LEVELS	CUT / FILL DEPTH TO EXISTING	FINISHED LEVELS
0.000	126.502	0.000	126.502
6.000	126.561	0.091	126.652
10.000	126.829	0.050	126.879
20.000	127.594	-0.148	127.446
30.000	128.469	-0.456	128.013
40.000	128.964	-0.385	128.580
50.000	129.212	-0.065	129.146
60.000	129.559	0.154	129.713
70.000	130.832	-0.551	130.280
74.952	131.029	-0.468	130.561
80.000	131.174	-0.343	130.830
90.000	131.404	-0.139	131.265
94.936	131.512	-0.081	131.431
100.000	131.588	-0.020	131.568
110.000	131.709	0.032	131.740
114.952	131.762	0.015	131.777
120.000	131.833	-0.036	131.798
122.050	131.864	-0.058	131.806
130.000	131.894	-0.055	131.839
140.000	131.838	0.043	131.881
150.000	131.809	0.113	131.922
153.849	131.760	0.178	131.938
156.916	131.733	0.212	131.944
160.000	131.690	0.248	131.938
170.000	131.577	0.252	131.829
173.862	131.569	0.181	131.750
180.000	131.529	0.055	131.584
190.000	131.206	-0.002	131.204
193.849	131.010	0.011	131.022
200.000	130.776	-0.062	130.714
210.000	130.379	-0.165	130.214
220.000	129.992	-0.278	129.714
230.000	129.679	-0.465	129.214
240.000	128.455	0.259	128.714
249.524	128.220	0.018	128.238
250.000	128.209	0.020	128.228
256.840	128.040	0.052	128.092
260.000	127.983	0.029	128.013
262.840	127.942	0.000	127.942

ACCESS LANE LONGITUDINAL SECTION

HORIZONTAL SCALE - 1:500
VERTICAL SCALE - 1:100

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R	04.10.24

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
ACCESS LANE PLAN

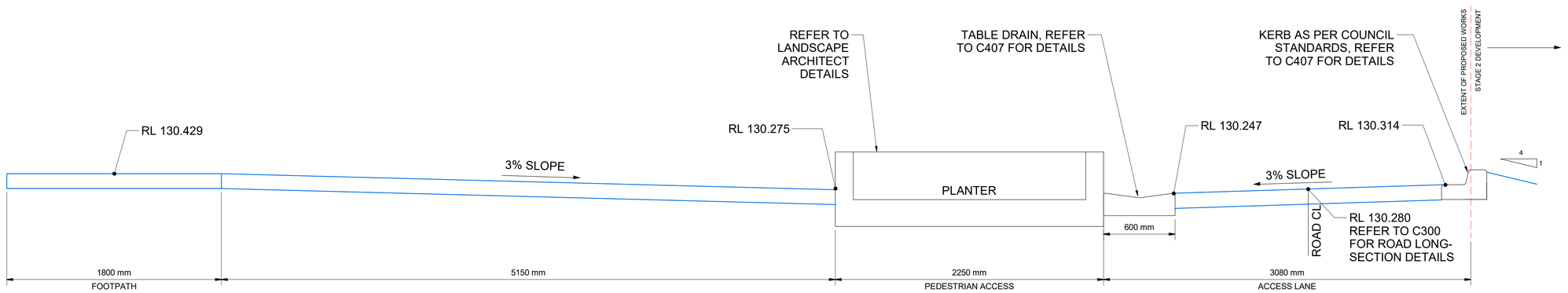
Drawn	Designed	Approved
G.A	S.A	H.R

Project No.	Scale
S10156	at A1. 1:500

Drawing No.	Revision
C300	C

Issued By	Checked By	Date
H.R	H.R	04.10.24

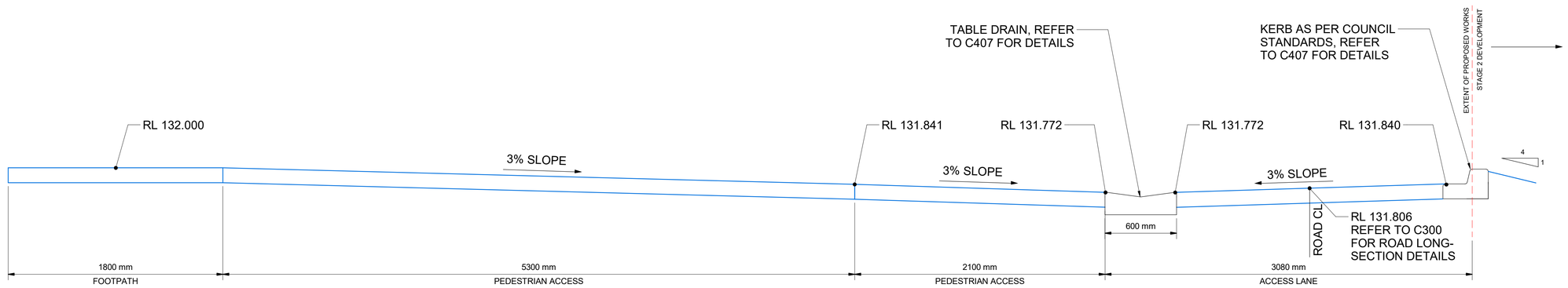
Original sheet size A1
(841x594)



CH70.000

SECTION 1 (C300)

1 : 20



CH122.050

SECTION 2 (C300)

1 : 20

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R	03.10.24

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Project: THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title: ACCESS LANE DETAILED CROSS SECTIONS SHEET 1

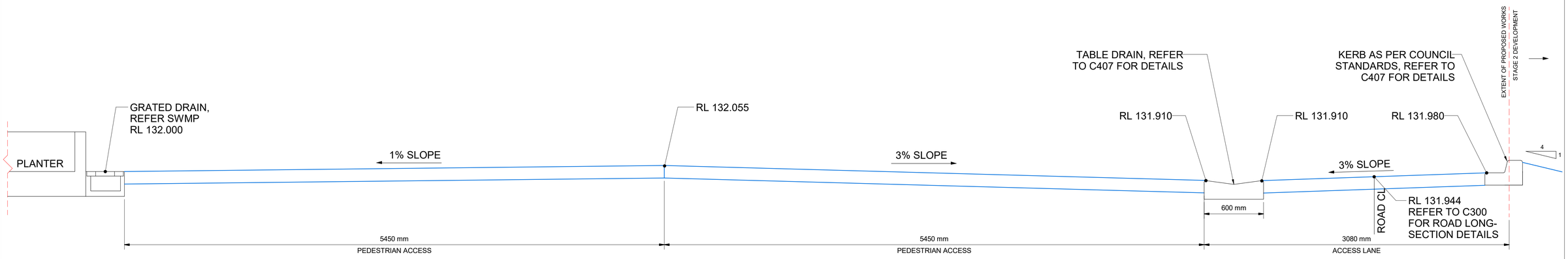
Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	1 : 20 at A1.

Drawing No.	Revision
C304	C

Issued By	Checked By	Date
H.R	H.R	03.10.24

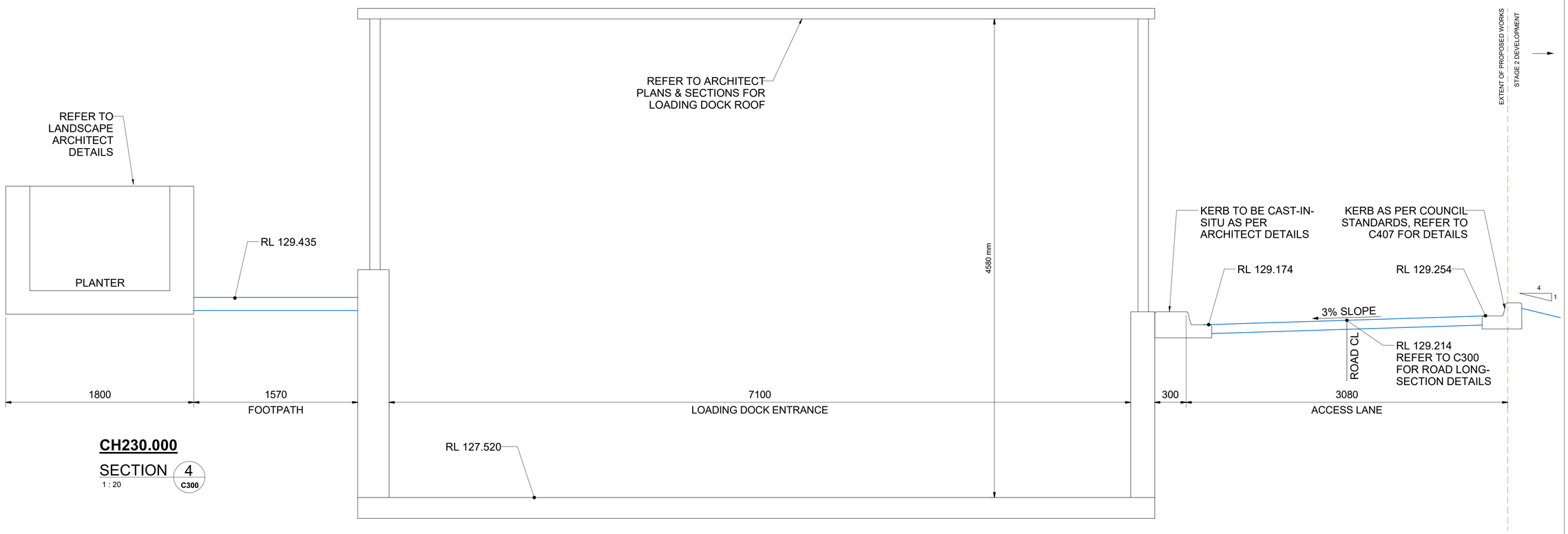
Original sheet size A1 (841x594) Plot date: 4/10/2024 3:28:24 PM Z:\07.5 - Projects STRUCTURAL\S10156_Gledswood Hills Stage 1_EQ\04_Design\Civil\Syed Working\S10156 Gledswood Public Domain 2022.rte



CH160.000

SECTION 3 (C300)

1 : 20



CH230.000

SECTION 4 (C300)

1 : 20

300mm
200mm
100
50
0 10mm

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R	03.10.24

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Project: THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title: ACCESS LANE DETAILED CROSS SECTIONS SHEET 2

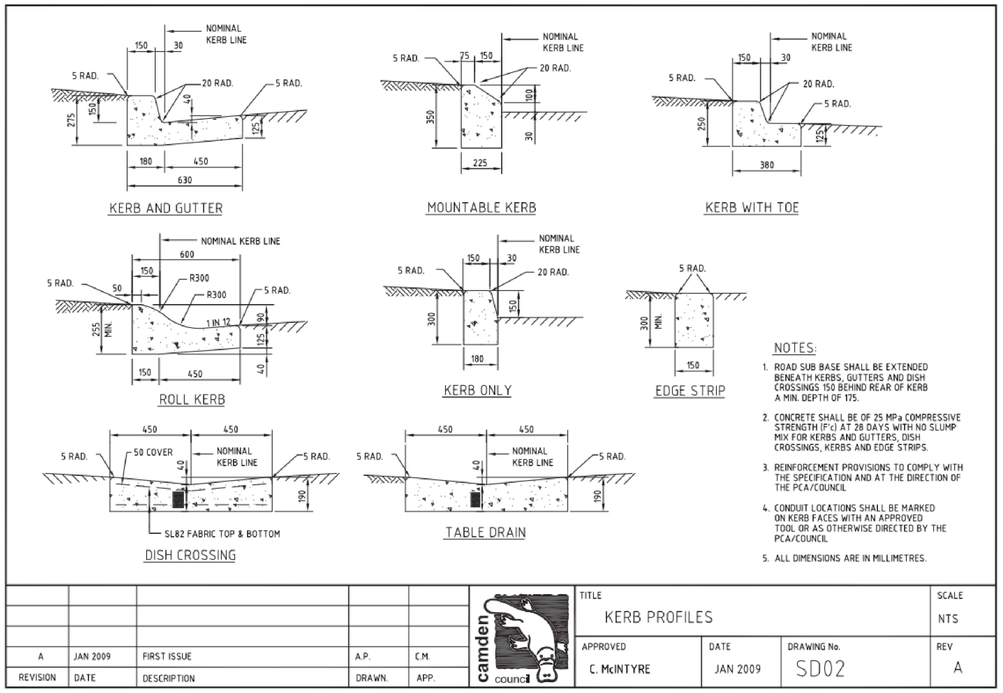
Drawn	Designed	Approved
S.A	S.A	H.R

Project No.	Scale
S10156	1 : 20 at A1.

Drawing No.	Revision
C305	C

Issued By	Checked By	Date
H.R	H.R	03.10.24

Original sheet size A1 (841x594) Plot date: 3/10/2024 1:20:06 PM Z:\07.5 - Projects STRUCTURAL\S10156_Gledswood Hills Stage 1_EQ\04_Design\Civil\Syed Working\S10156 Gledswood Public Domain 2022.rte



A	JAN 2009	FIRST ISSUE	A.P.	C.M.
REVISION	DATE	DESCRIPTION	DRAWN.	APP.

camden council

TITLE: KERB PROFILES — SCALE: NTS

APPROVED	DATE	DRAWING No.	REV
C. McINTYRE	JAN 2009	SD02	A

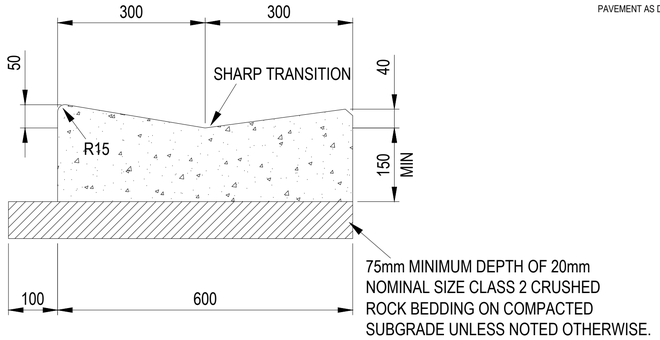
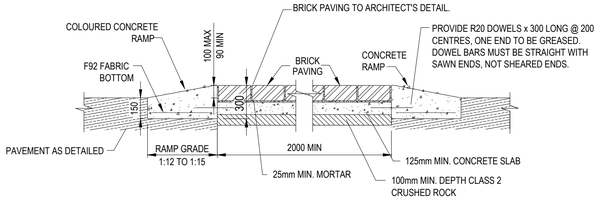


TABLE DRAIN 600mm

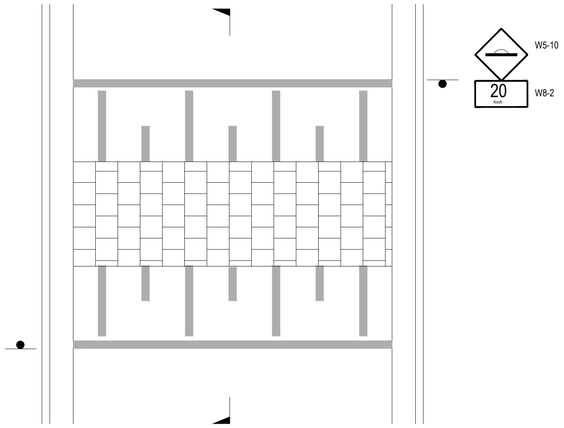
N.T.S.

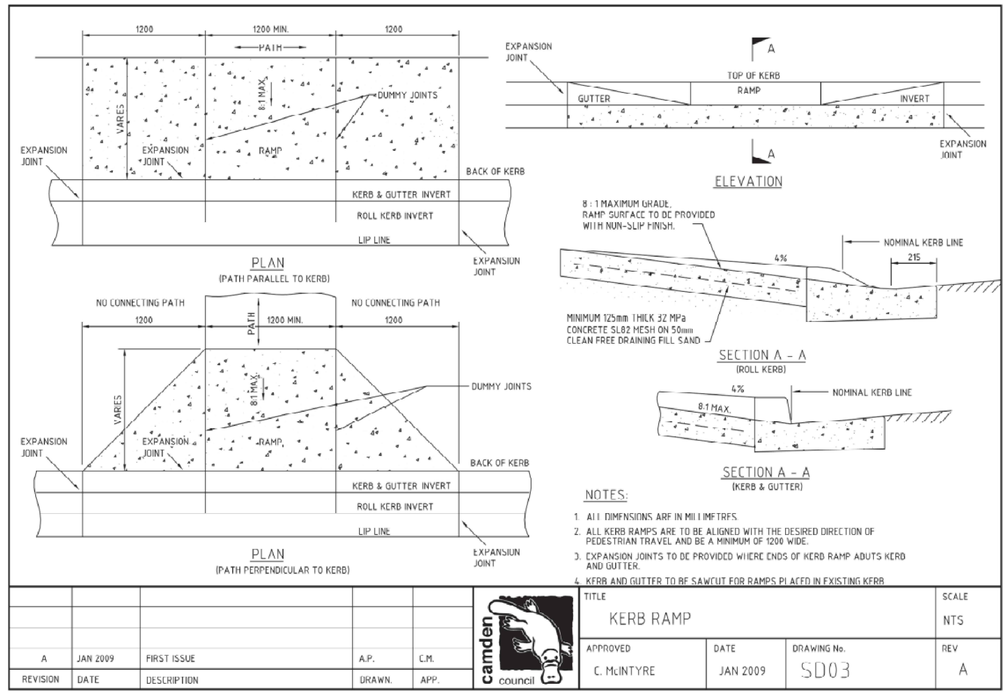
600mm TABLE DRAIN IS PROPOSED ALONG ACCESS LANE TO ACCOMMODATE 600mmx900mm SW PITS. HOWEVER, IF 900mm TABLE DRAIN IS REQUIRED BY COUNCIL IT CAN BE PROVIDED AS PER COUNCIL DETAILS.



SECTION A-A

N.T.S.





A	JAN 2009	FIRST ISSUE	A.P.	C.M.
REVISION	DATE	DESCRIPTION	DRAWN.	APP.

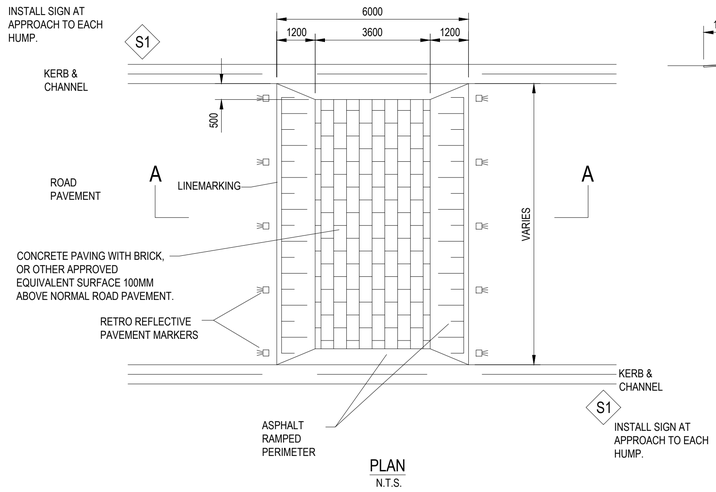
camden council

TITLE: KERB RAMP — SCALE: NTS

APPROVED	DATE	DRAWING No.	REV
C. McINTYRE	JAN 2009	SD03	A

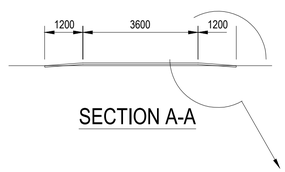
SIGN LEGEND

SIGN		SYMBOL
W5-10	SPEED HUMP	S1
W8-2A	20 KM/H	

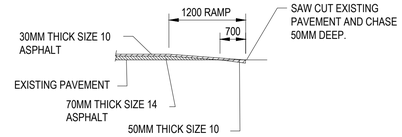


PLAN

N.T.S.



SECTION A-A



RAMP DETAIL

N.T.S.

PLAN - TRAFFIC MANAGEMENT DEVICE

NOTE: CONTRACTION JOINTS TO BE PROVIDED AT 5m INTERVALS. N.T.S.

SUBJECT TO COUNCIL APPROVAL

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR REVIEW	H.R	27.09.23
B	ISSUED FOR DA	H.R	05.10.23
C	ISSUED FOR DA - REVISED	H.R	04.10.24

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Project	Drawn	Designed	Approved
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	S.A	H.R	H.R
	Project No.	Scale	
	S10156	at A1. N.T.S	
Title	Drawing No.		Revision
PAVEMENT AND LINEMARKING DETAIL	C407		C
	Issued By	Checked By	Date
	H.R	H.R	04.10.24

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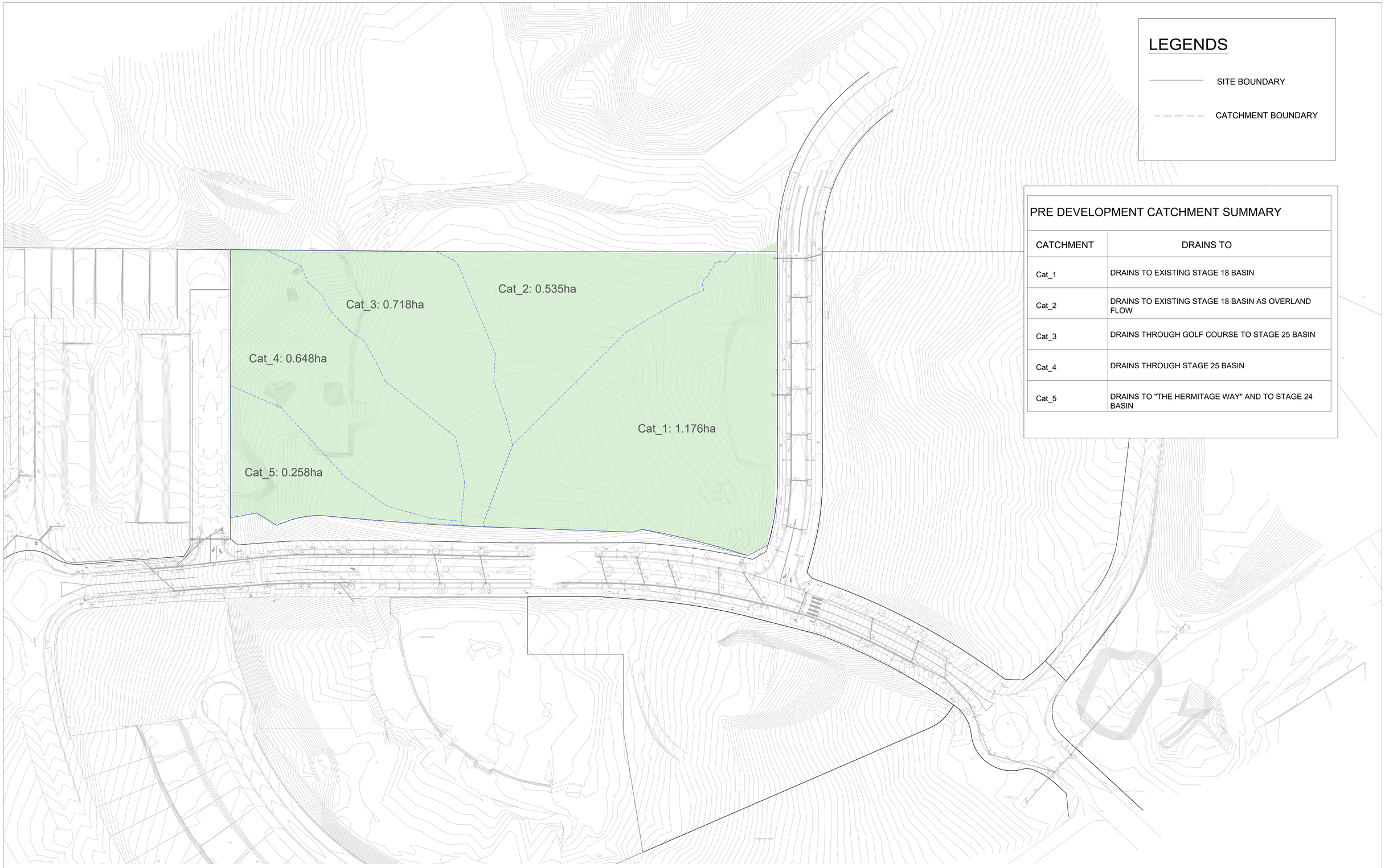

LEGENDS

SITE BOUNDARY

CATCHMENT BOUNDARY

PRE DEVELOPMENT CATCHMENT SUMMARY

CATCHMENT	DRAINS TO
Cat_1	DRAINS TO EXISTING STAGE 18 BASIN
Cat_2	DRAINS TO EXISTING STAGE 18 BASIN AS OVERLAND FLOW
Cat_3	DRAINS THROUGH GOLF COURSE TO STAGE 25 BASIN
Cat_4	DRAINS THROUGH STAGE 25 BASIN
Cat_5	DRAINS TO "THE HERMITAGE WAY" AND TO STAGE 24 BASIN

300mm 200mm 100 50 0 10mm

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
A	ISSUED FOR DISCUSSION	M.W	29.09.23
B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	27.09.24

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Architect

Client

Engineer

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Project
THE HERMITAGE WAY,
GLEDSWOOD HILLS, NSW 2557, AUSTRALIA

Title
PRE-DEVELOPMENT CATCHMENT PLAN

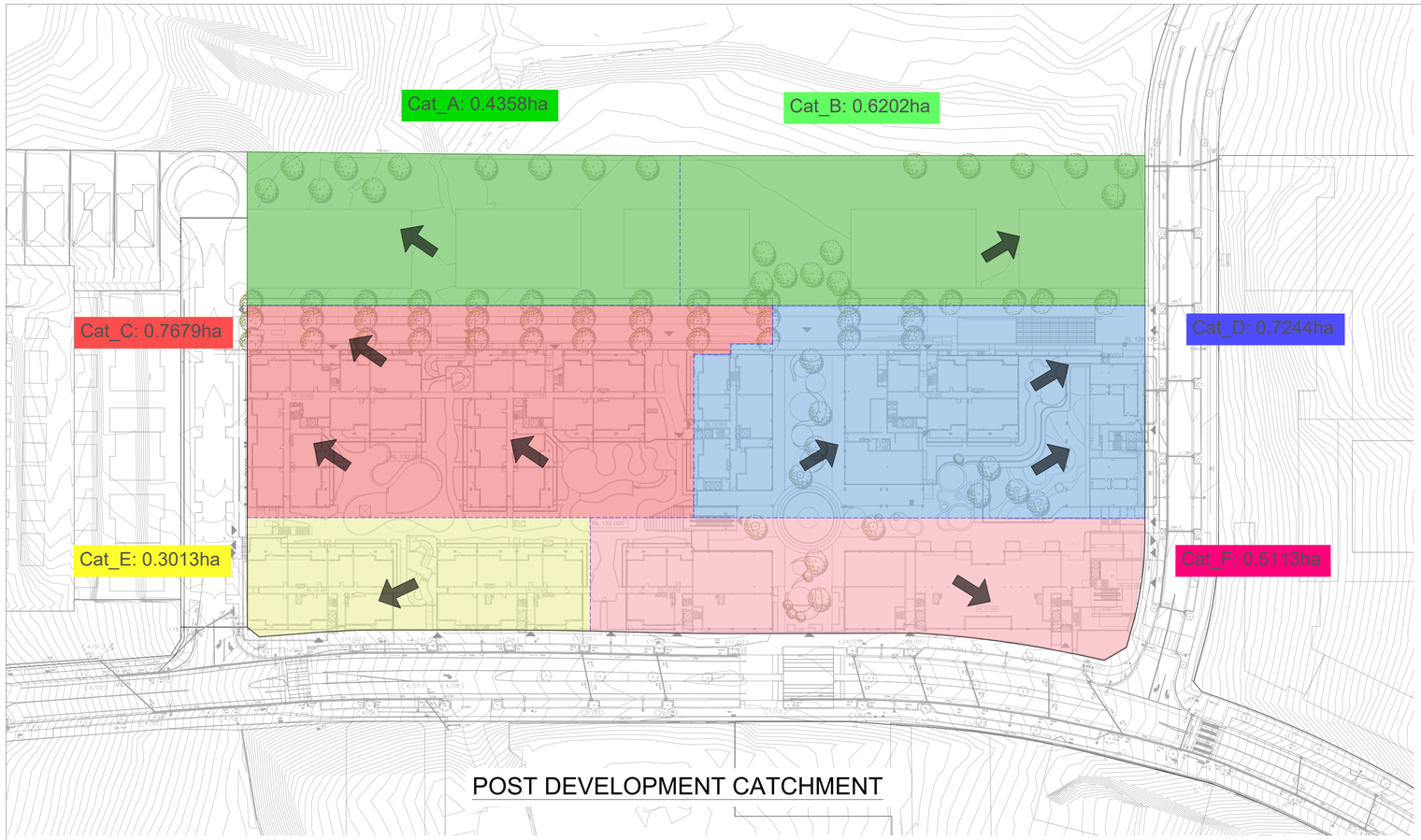
Drawn	Designed	Approved
M.W	M.W	H.R

Project No.	Scale
S10156	at A1. 1:800

Drawing No.	Revision
C600	C

Issued By	Checked By	Date
H.R	H.R	27.09.24

Original sheet size A1 (841x594)



POST DEVELOPMENT CATCHMENT

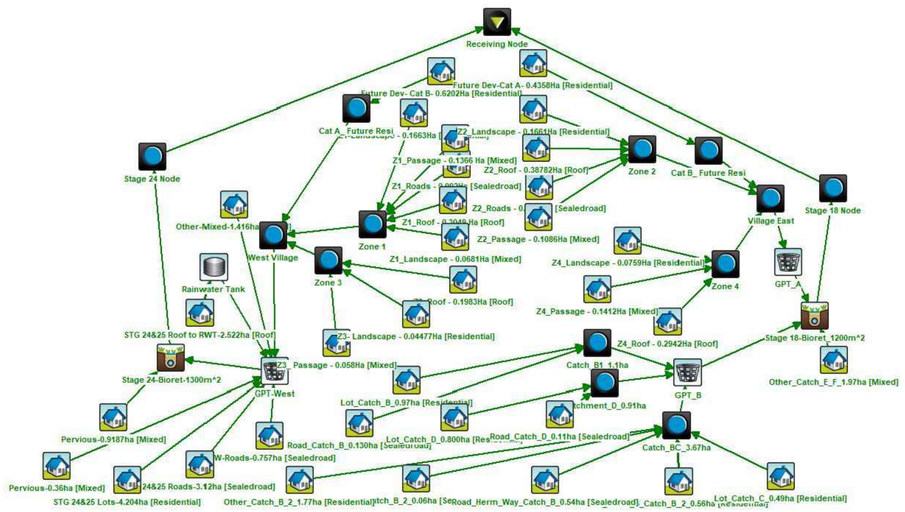
LEGENDS

SITE BOUNDARY

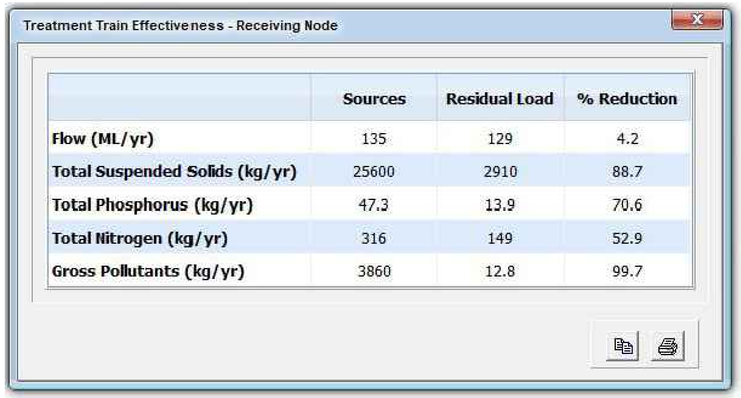
CATCHMENT BOUNDARY

Discharge Treatment Point			Catchment Name	Surface Type	Surface Area (ha)
Village West	Bio-retention Basin – Stage 24	Discharge to existing pit and pipe network in Huntington Drive and The Hermitage Way	**Catchment C (MUSIC Zone 1)**	Roof (Impervious)	0.3049
				Road (Impervious)	0.0920
				Pavement (Mixed)	0.1163
				Landscape (Mixed)	0.1663
				Landscape (Pervious)	0.0681
				Total	**0.7679**
			Catchment E (MUSIC Zone 3)	Roof (Impervious)	0.1983
				Pavement (Mixed)	0.0583
				Landscape (Pervious)	0.0447
				Total	**0.3013**
Village East	Bio-retention Basin – Stage 18	Discharge to existing pit and pipe network in Providence Drive and The Hermitage Way	**Catchment D (MUSIC Zone 2)**	Roof (Impervious)	0.3878
				Road (Impervious)	0.0619
				Pavement (Mixed)	0.1086
				Landscape (Pervious)	0.1661
				Total	**0.7244**
			Catchment F (MUSIC Zone 4)	Roof (Impervious)	0.2942
				Pavement (Mixed)	0.1412
				Landscape (Pervious)	0.0759
				Total	**0.5113**

CATCHMENT SURFACES BREAKDOWN



MUSIC MODEL



	Sources	Residual Load	% Reduction
Flow (ML/yr)	135	129	4.2
Total Suspended Solids (kg/yr)	25600	2910	88.7
Total Phosphorus (kg/yr)	47.3	13.9	70.6
Total Nitrogen (kg/yr)	316	149	52.9
Gross Pollutants (kg/yr)	3860	12.8	99.7

MUSIC OUTCOME

SATELLITE MAP (Source: Sixmap)

ISSUED FOR DA

Revision	Amendment	Issued By	Revision Date
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B	ISSUED FOR DA	M.W	05.10.23
C	ISSUED FOR DA - REVISED	H.R	27.09.24

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Architect	Client	Engineer
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Project	Drawn	Designed	Approved
THE HERMITAGE WAY, GLEDSWOOD HILLS, NSW 2557, AUSTRALIA	S.A	S.A	H.R
	Project No. S10156	Scale at A1. 1:200	
Title: POST-DEVELOPMENT CATCHMENT PLAN AND MUSIC MODEL	Drawing No. C601		Revision C
	Issued By H.R	Checked By H.R	Date 27.09.24

Original sheet size A1 (841x594)