# PROPOSED DEVELOPMENT Lots 23, 24 & 25 (No.26 - 30) CUTLER DRIVE, WYONG STORMWATER MANAGEMENT PLANS

**RAINWATER RE-USE SYSTEM NOTES** 

#### LEGEND DENOTES ON-SITE DETENTION TANK DENOTES ON-SITE RETENTION TANK DENOTES DWELLING FOOTPRINT DENOTES 100mm DIA STORMWATER/SURFACE WATER SYSTEM PIPE AT 1% MIN. GRADE U.N.O. DENOTES 100mm DIA. FULLY SEALED RAINWATER SYSTEM PIPE U.N.O. DENOTES RAINWATER PIPE AND DIA 150 WHEN PIPE EXCEEDS 100mm DIA 150 DENOTES STORMWATER/SURFACE WATER PIPE AND DIA. WHEN PIPE EXCEEDS 100mm DIA 65 DENOTES RISING MAIN AND PIPE DIA. U.N.O. 100 DENOTES SUBSOIL DRAINAGE LINE AND DIA. WRAPPED IN GEOFABRIC U.N.O. DP DENOTES DOWNPIPE 10 DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISHED SURFACE LEVEL CO DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISHED SURFACE LEVEL FOR SYSTEM FLUSHING PURPOSES $\square$ STORMWATER PIT - SOLID COVER 目 STORMWATER PIT - GRATED INLET DENOTES GRATED DRAIN ...... DENOTES ABSORPTION TRENCH И NON RETURN VALVE Ø PUMP 凶 STOP VALVE (ISOLATION VALVE) 240v REQUIRED DENOTES LEVEL OF INLET /OUTLET OF STORMWATER PIPE IL23.31 NOTE: UNLESS NOTED OTHERWISE. THE BASE OF THE PIT IS THE SAME AS THE PIPE INLET/OUTLET

### DIAL BEFORE YOU DIG

TIMES



### IMPORTANT: THE CONTRACTOR IS TO MAINTAIN A CURRENT SET OF "DIAL BEFORE YOU DIG" DRAWINGS ON SITE AT ALL

STORMWATER MANAGEMENT DETAILS SHEET No.1 ON SITE DETENTION REPORT **EROSION & SEDIMENT CONTROL PLAN EROSION & SEDIMENT CONTROL NOTES & DETAILS** PROPOSED DRAINAGE EASEMENT PLAN

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						Client
D	AMENDED TO INCLUDE RAINWATER TANK IN ACCORDANCE WITH THE BASIX REQUIREMENT	02.08.23	RH	BK	North	BARRY RUSH
С	ISSUED FOR TENDER PURPOSES	27.06.23	RH	BK		
В	ISSUED FOR DEVELOPMENT APPROVAL	20.12.22	RH	BK		& ASSOCIATES
A	ISSUED FOR CLIENT REVIEW & COMMENT	28.10.22	RH	BK		PTY LTD
Issue	Description	Date	Drawn	Approved	$  \setminus  $	
1 0	10cm 10cm					

### **GENERAL NOTES**

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- RAINWATER SUPPLY PLUMBING TO BE CONNECTED TO OUTLETS THESE PLANS SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT CONSULTANTS' PLANS, SPECIFICATIONS, CONDITIONS OF WHERE REQUIRED BY BASIX CERTIFICATE (BY OTHERS) DEVELOPMENT CONSENT AND CONSTRUCTION CERTIFICATE TOWN WATER CONNECTION TO RAINWATER TANK TO BE TO THE REQUIREMENTS. WHERE DISCREPANCIES ARE FOUND ACOR 2 SATISFACTION OF THE REGULATORY AUTHORITY. THIS MAY CONSULTANTS (CC) MUST BE CONTACTED IMMEDIATELY FOR REQUIRE PROVISION OF: VERIFICATION PERMANENT AIR GAP 2.1. 2.2. BACKFLOW PREVENTION DEVICE WHERE THESE PLANS ARE NOTED FOR DEVELOPMENT APPLICATION PURPOSES ONLY, THEY SHALL NOT BE USED FOR OBTAINING A NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE 3 CONSTRUCTION CERTIFICATE NOR USED FOR CONSTRUCTION RAIN WATER SUPPLY PURPOSES AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT SUBSOIL DRAINAGE SHALL BE DESIGNED AND DETAILED BY THE THE RAINWATER TANK STRUCTURAL ENGINEER. SUBSOIL DRAINAGE SHALL NOT BE CONNECTED INTO THE STORMWATER SYSTEM IDENTIFIED ON THESE PROVIDE APPROPRIATE FLOAT VALVES AND/OR SOLENOID VALVES PLANS UNLESS APPROVED BY ACOR CONSULTANTS (CC) TO CONTROL TOWN WATER SUPPLY INLET TO TANK IN ORDER TO ACHIEVE THE TOP-UP INDICATED ON THE TYPICAL DETAIL ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED STORMWATER CONSTRUCTION NOTES PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH AS/NZS 3500 (CURRENT EDITION) AND THE REQUIREMENTS OF THE LOCAL PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY COUNCIL'S POLICIES AND CODES A LICENSED ELECTRICIAN THE MINIMUM SIZES OF THE STORMWATER DRAINS SHALL NOT BE ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK LESS THAN DN90 FOR CLASS 1 BUILDINGS AND DN100 FOR OTHER SURFACE WATER INLETS ARE NOT TO BE CONNECTED CLASSES OF BUILDING OR AS REQUIRED BY THE REGULATORY AUTHORITY PIPE MATERIALS FOR RAINWATER SUPPLY PLUMBING ARE TO BE 9 APPROVED MATERIALS TO AS/NZS3500 PART 1 SECTION 2 AND TO BE THE MINIMUM GRADIENT OF STORMWATER DRAINS SHALL BE 1%, CLEARLY AND PERMANENTLY IDENTIFIED AS 'RAINWATER'. THIS MAY UNLESS NOTED OTHERWISE BE ACHIEVED FOR BELOW GROUND PIPES USING IDENTIFICATION TAPE (MADE IN ACCORDANCE WITH AS2648) OR FOR ABOVE GROUND COUNCIL'S TREE PRESERVATION ORDER IS TO BE STRICTLY PIPES BY USING ADHESIVE PIPE MARKERS (MADE IN ACCORDANCE ADHERED TO. NO TREES SHALL BE REMOVED UNTIL PERMIT IS WITH AS1345) OBTAINED EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER 10. PUBLIC UTILITY SERVICES ARE TO BE ADJUSTED AS NECESSARY AT TANK ARE TO BE LABELED 'RAINWATER' ON A METALLIC SIGN IN THE CLIENT'S EXPENSE ACCORDANCE WITH AS1319 ALL PITS TO BE BENCHED AND STREAMLINED. PROVIDE STEP IRONS ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE 11. FOR ALL PITS OVER 1.2m DEEP SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTR MAKE SMOOTH JUNCTION WITH ALL EXISTING WORK VEHICULAR ACCESS AND ALL SERVICES TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM TREE LEGEND INFORMATION SUPPLIED BY THE RELEVANT AUTHORITIES AND FIELD INVESTIGATIONS AND ARE NOT GUARANTEED COMPLETE NOR CORRECT. IT IS THE CLIENT & CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL PRIOR TO CONSTRUCTION DENOTES TREE TO BE REMOVED ANY VARIATION TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY ACOR CONSULTANTS (CC) DENOTES TREE PROTECTION ZONE ON EXISTING PRIOR TO THEIR COMMENCEMENT TREES TO REMAIN. SHEET INDEX DENOTES STRUCTURAL ROOT ZONE ON EXISTING TREES TO REMAIN COVER SHEET & NOTES SHEET C1 STORMWATER MANAGEMENT PLAN SHEET C2 REFER ALSO TO THE LATEST ARBORISTS REPORT SHEET C3 PROVIDE APPROPRIATE PROTECTION MEASURES DURING CONSTRUCTION IN ACCORDANCE WITH ARBORISTS SHEET C4 REQUIREMENTS SHEET C5 SHEET C6 SHEET C7
  - OR

#### ACOR Consultants (CC) Ptv Ltd Platinum Building, Suite 2.01, 4 Ilya Avenue ERINA NSW 2250, Australia PROPOSED RE T +61 2 4324 3499 DEVELOPMENT LOTS 23, 24 & 25 No. 26-30 CUTLER DRIVE WYONG ONSULTANTS ENGINEERS MANAGERS INFRASTRUCTURE PLANNERS DEVI

1 SITE AREA (m<sup>2</sup>) 3 5.

> GRATE T A - EXTRA LIGHT B - LIGHT C - MEDI

D - HEAV

TABLE AS CONDITIONS



### **CENTRAL COAST COUNCIL**

1688

2. POST DEVELOPED IMPERVIOUS AREA (m<sup>2</sup>) 1034 (61%)

RAINWATER RE-USE RAINWATER REUSE TANK PROVIDED IN ACCORDANCE WITH BASIX REQUIREMENT. VOLUME PROVIDED = 15m<sup>3</sup>.

ON-SITE DETENTION DRAINS SOFTWARE ADOPTED FOR MODELLING, REFER TO DRAINS FILE CC210520.drr

VOLUME PROVIDED = 15m<sup>3</sup>. OSD PSD = 87 l/sec ORIFICE SIZE = 223mm

DESIGN HAS BEEN PREPARED IN ACCORDANCE WITH COUNCIL'S "CENTRAL COAST DEVELOPMENT CONTROL PLAN 2022", CIVIL WORKS DESIGN GUIDELINE, AR & R AND AS/NZS 3500.

PIT GRATE INLET TYPE							
YPE	TRAFFIC CONDITIONS						
RA T DUTY	FOOTWAYS AND AREAS ACCESSIBLE ONLY TO PEDESTRIANS AND PEDAL CYCLISTS.						
T DUTY	FOOTWAYS THAT CAN BE MOUNTED BY VEHICLE						
UM DUTY	MALLS AND PEDESTRIAN AREAS OPEN TO SLOW MOVING COMMERCIAL VEHICLES.						
Y DUTY	CARRIAGEWAYS OF ROADS AND AREAS OPEN TO COMMERCIAL VEHICLES.						
	- LATEST EDITION. ENGINEER TO BE NOTIFIED IF LOAD						

#### LOCALITY PLAN NOT TO SCALE

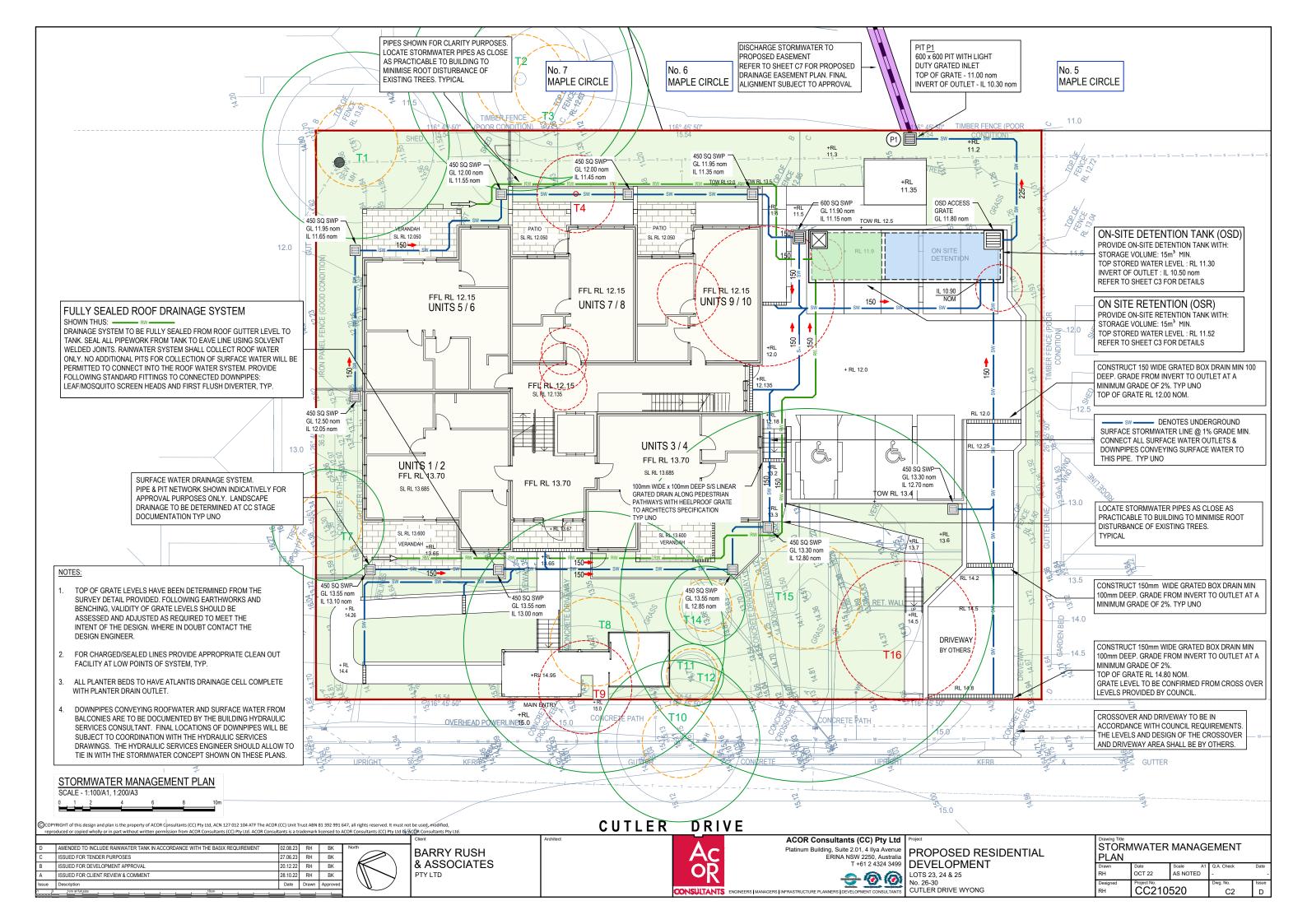
### ISSUE FOR TENDER PURPOSES NOT FOR CONSTRUCTION

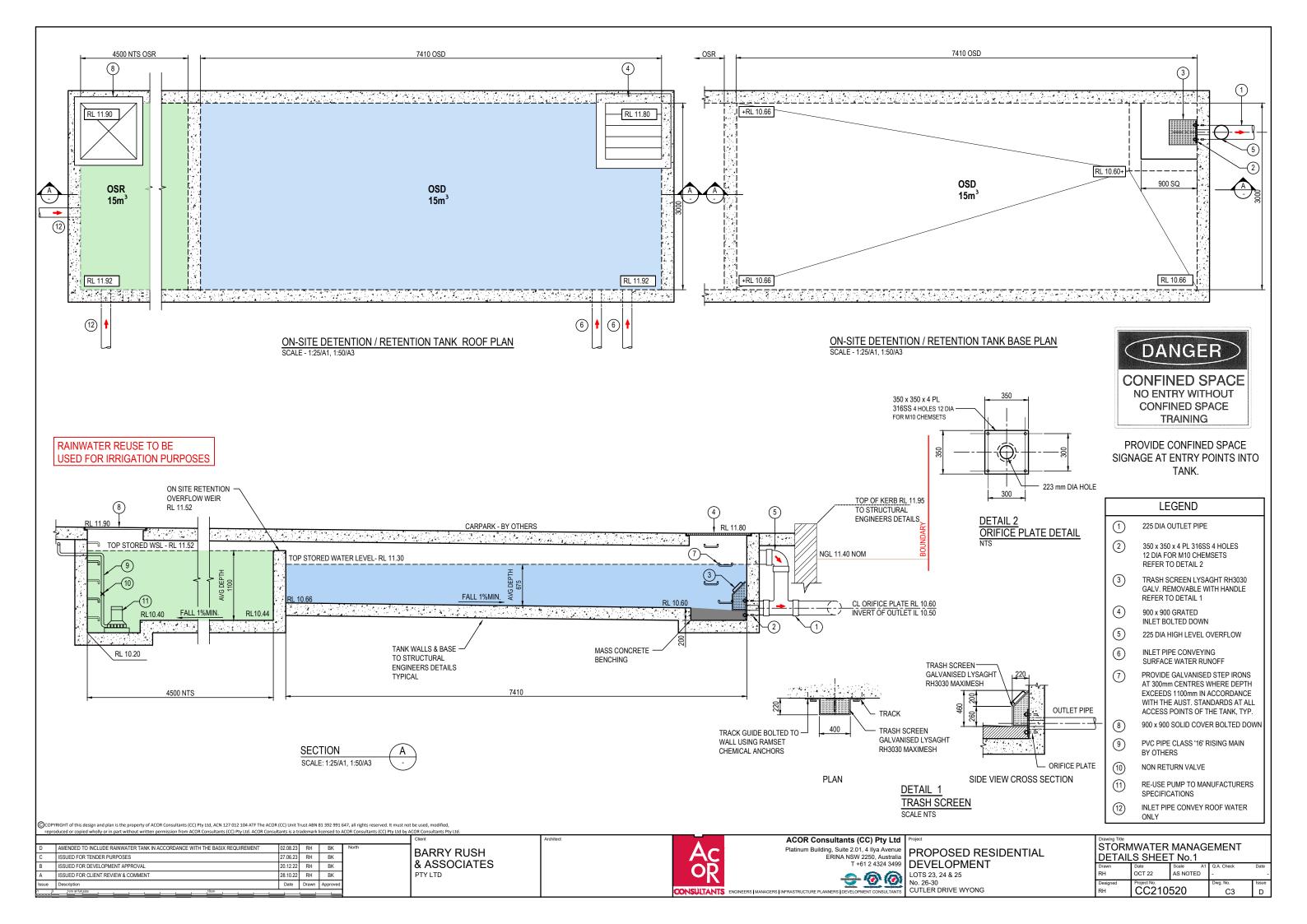
### DRAWINGS MUST BE PRINTED IN COLOUR

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# **COVER SHEET & NOTES**

Drawn	Date	Scale	A1	Q.A. Check	Date
RH	OCT 22	AS NOT	ED		
Designed	Project No.			Dwg. No.	Issue
BK	CC210	)520		C1	D





# **ON-SITE STORMWATER DETENTION REPORT**

### 1.1. METHODOLOGY

1.1.1. THE DRAINS PROGRAM WAS ADOPTED AS AN APPROPRIATE MODEL FOR THIS PROJECT. PRE-DEVELOPED AND POST-DEVELOPED HYDROLOGICAL AND HYDRAULIC MODELS WERE DEVELOPED FOR THE 1, 2, 5, 10, 20, 50 AND 100 YEAR ARI DESIGN STORM EVENTS, ASSESSING STACKED RAINFALL PATTERNS RANGING FROM 5 MINUTES TO 2 HOURS. THE ADOPTED PRE & POST DEVELOPED FLOWS ARE THOSE ASSIGNED TO THEIR RESPECTIVE PEAKS.

### 1.2. PRE-DEVELOPED DRAINS MODEL

- 1.2.1. THE PRE-DEVELOPED DRAINS MODEL COMPRISED A SINGLE SUB-CATCHMENT DISCHARGING TO A DUMMY NODE. THE PARAMETERS INPUT TO THE DRAINS MODEL FOR THE SUB-CATCHMENT ARE IDENTIFIED IN THE DRAINS SUB-CATCHMENT DATA INPUT FILE. REFER TO DRAINS FILE "GOSFORD CC210520.dm" THE CATCHMENT AREA ADOPTED IS 0.1667ha. THE PRE & POST DEVELOPED IMPERVIOUS AREAS ADOPTED IN THE MODEL ARE 0% AND 65% RESPECTIVELY.
- 1.2.2. THE PRE-DEVELOPED PEAK FLOWRATES CALCULATED BY THE DRAINS PROGRAM ARE SUMMARISED BELOW:

SITE AREA (m <sup>2</sup> )	1667 (39% PERVIOUS)
ARI (YEARS)	PEAK FLOWRATE (PRE-DEVELOPED) (L/s)
5	50
20	-
100	76

### 1.3. POST-DEVELOPED MODEL

- 1.3.1. THE POST DEVELOPED DRAINS MODEL COMPRISES OF TWO SUB CATCHMENTS FORMED BY THE POST DEVELOPED ROOF AREA WHICH DRAINS TO RAINWATER TANKS WITH OVERFLOWS TO DETENTION TANK, AND RESIDUAL SURFACE AREAS THAT DRAIN DIRECTLY TO DETENTION TANK. REFER TO DRAINS MODEL "CC210520.drn" FOR DETAIL.
- 1.3.2. THE PARAMETERS INPUT INTO THE DRAINS MODEL FOR THE POST-DEVELOPED DETENTION TANK IS IDENTIFIED IN THE DRAINS SUB-CATCHMENT DATA. REFER TO DRAINS MODEL "CC210520.dm' FOR DETAILS.
- 1.3.3 THE OSD STORAGE/OUTFLOW PARAMETERS ADOPTED IN THE DRAINS MODEL ARE IDENTIFIED IN DRAINS MODEL "CC210520.dm"
- 1.3.4 THE PEAK STORAGE VOLUME CALCULATED BY THE DRAINS MODEL OCCURS DURING THE 100 YEAR ARI 25 MINUTE DESIGN STORM EVENT. THE VOLUMETRIC GRAPH FOR THIS STORM EVENT IS IDENTIFIED IN DRAINS MODEL "CC210520.drn".

### 1.3. POST-DEVELOPED MODEL (CONTINUED)

- THE INFLOW AND OUTFLOW HYDROGRAPH FOR THIS STORM EVENT 1.3.5. IS IDENTIFIED IN DRAINS MODEL "CC210520.drn"
- 1.3.6. THE PEAK FLOWRATES AND WATER SURFACE LEVELS DEVELOPED BY THE DRAINS MODEL FOR THE 100 YEAR ARI DESIGN STORM EVENT. REFER TO DRAINS MODEL "CC210520.drn" FOR DETAIL.
- 1.3.7 THE POST-DEVELOPED PEAK FLOWRATES ARE TABLED BELOW:

ARI (YEARS)	PEAK FLOWRATE (POST-DEVELOPED) (L/s)
5	50
20	-
100	87

## 1.4. CONCLUSION

1.4.6. ARE TABLED BELOW:

	PEAK FLOW	/RATE (L/s)	
ARI (YEARS)	OVERAL		
	PRE	POST	OSD STORAGE (m³)
5	50	50	6
20	-	-	-
100	76	87	15

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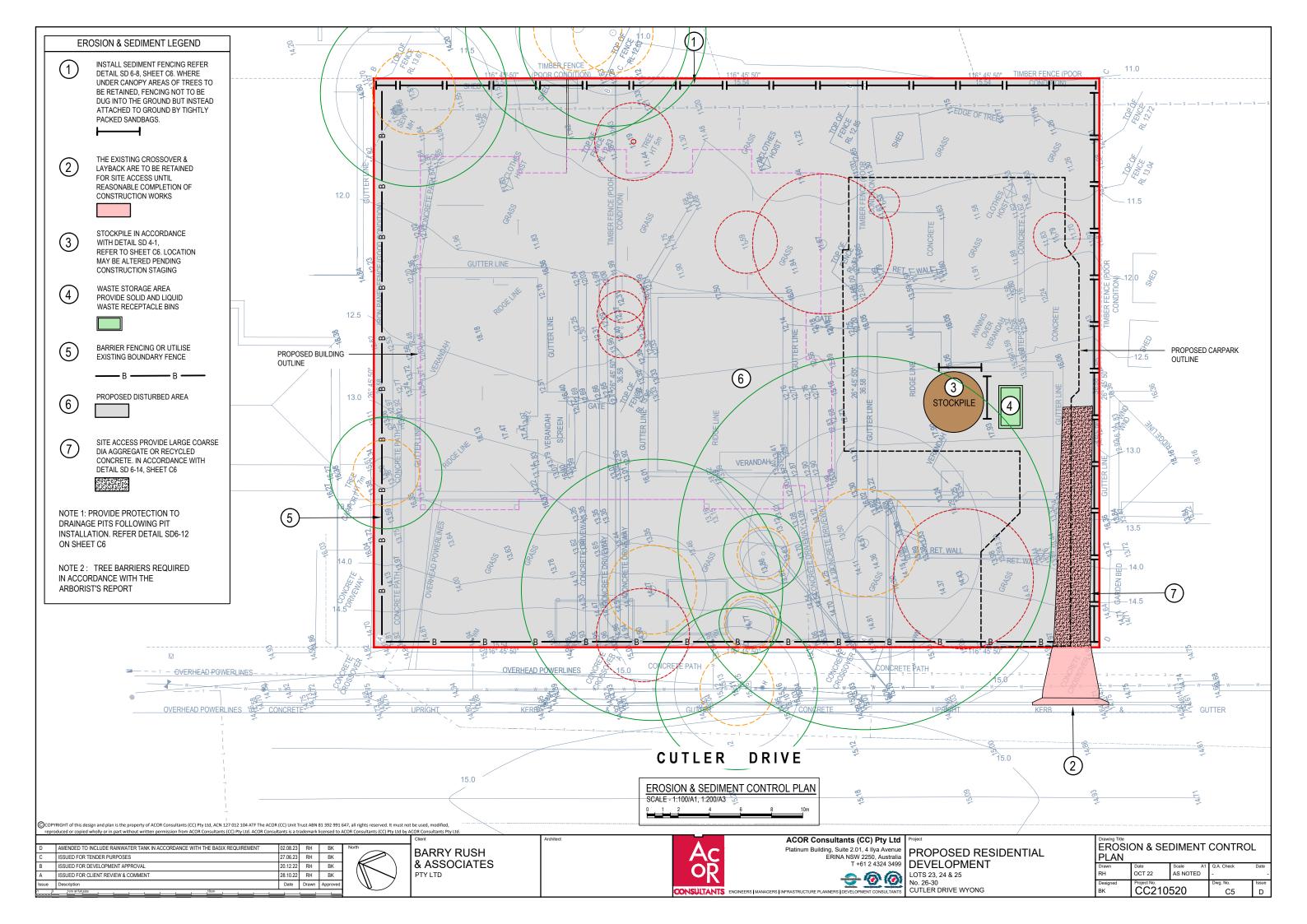
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Issue	Description	Date	Drawn	Approved	1					
1 0	10cm 10cm				1					

RUSH CIATES



BASED ON THE FOREGOING THE PROPOSED OSD TANK WILL ATTENUATE POST-DEVELOPED PEAK FLOWRATES TO EQUIVALENT FLOWRATES OR LESS THAN THE COMPARABLE PRE-DEVELOPED FLOWRATES. THE PEAK FLOWRATES FOR THE PRE & POST-DEVELOPED STORM EVENTS FOR THE ENTIRE CATCHMENT DISCHARGE TO THE EXISTING STORMWATER SYSTEM

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11	Drawn	Date	Scale A1	Q.A. Check	Date
	RH	OCT 22	AS NOTED	-	-
	Designed	Project No.	500	Dwg. No.	Issue
5	BK	CC210	520	C4	D



### EROSION AND SEDIMENT CONTROL NOTES

### GENERAL INSTRUCTIONS

- THIS SOIL AND WATER MANAGEMENT PLAN IS TO BE READ 7. IN CONJUNCTION WITH OTHER ENGINEERING PLANS RELATING TO THIS DEVELOPMENT
- CONTRACTORS WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS INSTRUCTED IN THIS SPECIFICATION AND CONSTRUCTED FOLLOWING THE GUIDELINES OF "MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION", DEPT OF HOUSING, 1998 (BLUE BOOK)
- ALL SUBCONTRACTORS WILL BE INFORMED OF THEIR RESPONSIBILITIES IN REDUCING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE AREAS.

### LAND DISTURBANCE INSTRUCTIONS

- DISTURBANCE TO BE NO FURTHER THAN 5 (PREFERABLY 2) METRES FROM THE EDGE OF ANY ESSENTIAL ENGINEERING ACTIVITY AS SHOWN ON APPROVED PLANS ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE ZONES THAT, WHERE APPROPRIATE, ARE IDENTIFIED WITH BARRIER FENCING (UPSLOPE) AND SEDIMENT FENCING (DOWNSLOPE) OR SIMILAR MATERIALS.
- ACCESS AREAS ARE TO BE LIMITED TO A MAXIMUM WIDTH OF 10 METRES THE SITE MANAGER WILL DETERMINE AND MARK THE LOCATION OF THESE ZONES ON-SITE. ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE BOUNDARIES THAT, WHERE APPROPRIATE, ARE IDENTIFIED WITH BARRIER FENCING (UPSLOPE) AND SEDIMENT FENCING (DOWNSLOPE) OR SIMILAR MATERIALS
- ENTRY TO LANDS NOT REQUIRED FOR CONSTRUCTION OR 6 ACCESS IS PROHIBITED EXCEPT FOR ESSENTIAL THINNING OF PLANT GROWTH
- WORKS ARE TO PROCEED IN THE FOLLOWING SEQUENCE: INSTALL ALL BARRIER AND SEDIMENT FENCING A)
- WHERE SHOWN ON THE PLAN B) CONSTRUCT THE STABILISED SITE ACCESS
- CONSTRUCT DIVERSION DRAINS AS REQUIRED C)
- INSTALL MESH AND GRAVEL INLETS FOR ANY D) ADJACENT KERB INLETS
- INSTALL GEOTEXTILE INLET FILTERS AROUND ANY E) ON-SITE DROP INLET PITS.
- CLEAR SITE AND STRIP AND STOCKPILE TOPSOIL IN F) LOCATIONS SHOWN ON THE PLAN
- UNDERTAKE ALL ESSENTIAL CONSTRUCTION G) WORKS ENSURING THAT ROOF AND/OR PAVED AREA STORMWATER SYSTEMS ARE CONNECTED TO PERMANENT DRAINAGE AS SOON AS PRACTICABLE
- GRADE LOT AREAS TO FINAL GRADES AND APPLY H) PERMANENT STABILISATION (LANDSCAPING) WITHIN 20 DAYS OF COMPLETION OF CONSTRUCTION WORKS
- REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER THE PERMANENT LANDSCAPING HAS BEEN COMPLETED.
- ENSURE THAT SLOPE LENGTHS DO NOT EXCEED 80 METRES WHERE PRACTICABLE. SLOPE LENGTHS ARE DETERMINED BY SILTATION FENCING AND CATCH DRAIN SPACING
- ON COMPLETION OF MAJOR WORKS LEAVE DISTURBED LANDS WITH A SCARIFIED SURFACE TO ENCOURAGE WATER INFILTRATION AND ASSIST WITH KEYING TOPSOIL LATER

### SITE MAINTENANCE INSTRUCTIONS

- THE SITE SUPERINTENDENT WILL INSPECT THE SITE AT LEAST WEEKLY AND AT THE CONCLUSION OF EVERY STORM EVENT TO:
- ENSURE THAT DRAINS OPERATE PROPERLY AND A) TO EFFECT ANY NECESSARY REPAIRS.
- B) REMOVE SPILLED SAND OR OTHER MATERIALS FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 5 METRES FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS ESPECIALLY WATERWAYS AND PAVED AREAS.
- C) REMOVE TRAPPED SEDIMENT WHENEVER THE DESIGN CAPACITY OF THAT STRUCTURE HAS BEEN EXCEEDED
- ENSURE REHABILITATED LANDS HAVE D) EFFECTIVELY REDUCED THE EROSION HAZARD AND TO INITIATE UPGRADING OR REPAIR AS NECESSARY
- E) CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS, MAKE ONGOING CHANGES TO THE PLAN WHERE IT PROVES INADEQUATE IN PRACTICE OR IS SUBJECTED TO CHANGES IN CONDITIONS ON THE WORK-SITE OR ELSEWHERE IN THE CATCHMENT
- F) MAINTAIN EROSION AND SEDIMENT CONTROL STRUCTURES IN A FULLY FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE
- COMPLETED AND THE SITE IS REHABILITATED THE SITE SUPERINTENDENT WILL KEEP A LOGBOOK MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL. ENTRIES WILL INCLUDE:
- THE VOLUME AND INTENSITY OF ANY RAINFALL A) EVENTS.
- THE CONDITION OF ANY SOIL AND WATER B) MANAGEMENT WORKS
- THE CONDITION OF VEGETATION AND ANY NEED TO C) IRRIGATE THE NEED FOR DUST PREVENTION STRATEGIES.
- ANY REMEDIAL WORKS TO BE UNDERTAKEN F)
- THE LOGBOOK WILL BE KEPT ON-SITE AND MADE
- AVAILABLE TO ANY AUTHORISED PERSON UPON REQUEST. IT WILL BE GIVEN TO THE PROJECT MANAGER AT THE CONCLUSION OF THE WORKS.

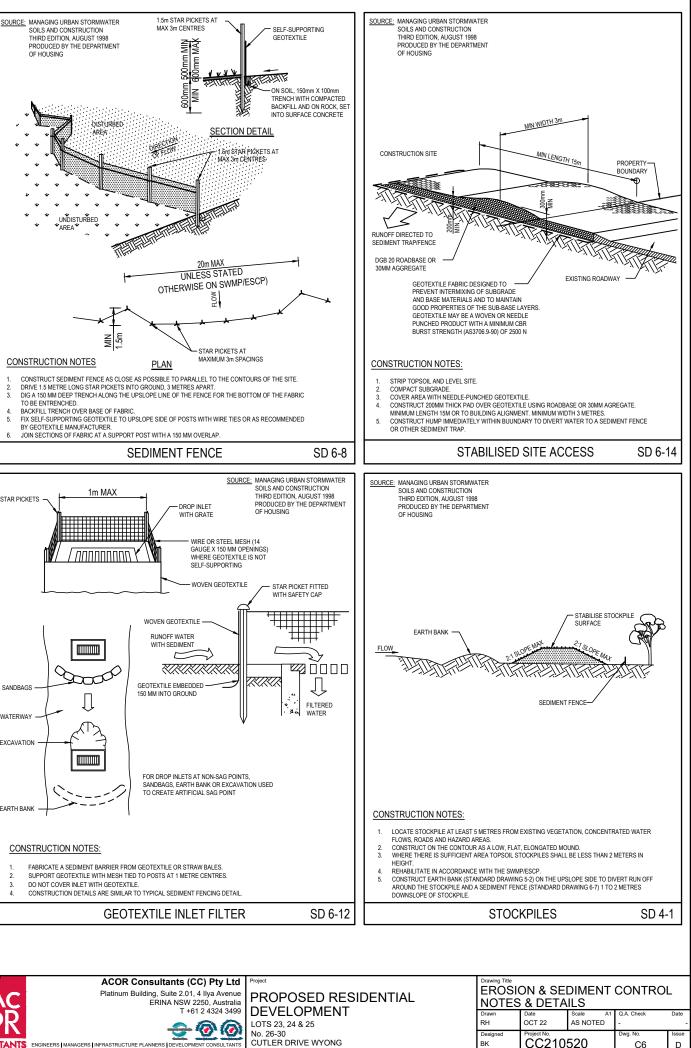
### SEDIMENT CONTROL INSTRUCTIONS

- SEDIMENT FENCES WILL BE INSTALLED AS SHOWN ON THE WASTE CONTROL INSTRUCTIONS 9 PLAN AND ELSEWHERE AT THE DISCRETION OF THE SITE SUPERINTENDENT TO CONTAIN SOIL AS NEAR AS POSSIBLE TO THEIR SOURCE
- SEDIMENT FENCES WILL NOT HAVE CATCHMENT AREAS 10. EXCEEDING 900 SQUARE METRES AND HAVE A STORAGE DEPTH OF AT LEAST 0.6 METRES SEDIMENT REMOVED FROM ANY TRAPPING DEVICES WILL
- BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS CANNOT OCCUR
- 12. STOCKPILES ARE NOT TO BE LOCATED WITHIN 5 METRES OF HAZARD AREAS INCLUDING AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS AND DRIVEWAYS
- WATER WILL BE PREVENTED FROM DIRECTLY ENTERING 13 THE PERMANENT DRAINAGE SYSTEM UNLESS THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR WATER HAS BEEN TREATED BY AN APPROVED DEVICE. 14 TEMPORARY SEDIMENT TRAPS WILL REMAIN IN PLACE
- UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.
- 15 ACCESS TO SITES SHOULD BE STABILISED TO REDUCE THE LIKELIHOOD OF VEHICLES TRACKING SOIL MATERIALS ONTO PUBLIC ROADS AND ENSURE ALL-WEATHER ENTRY/EXIT

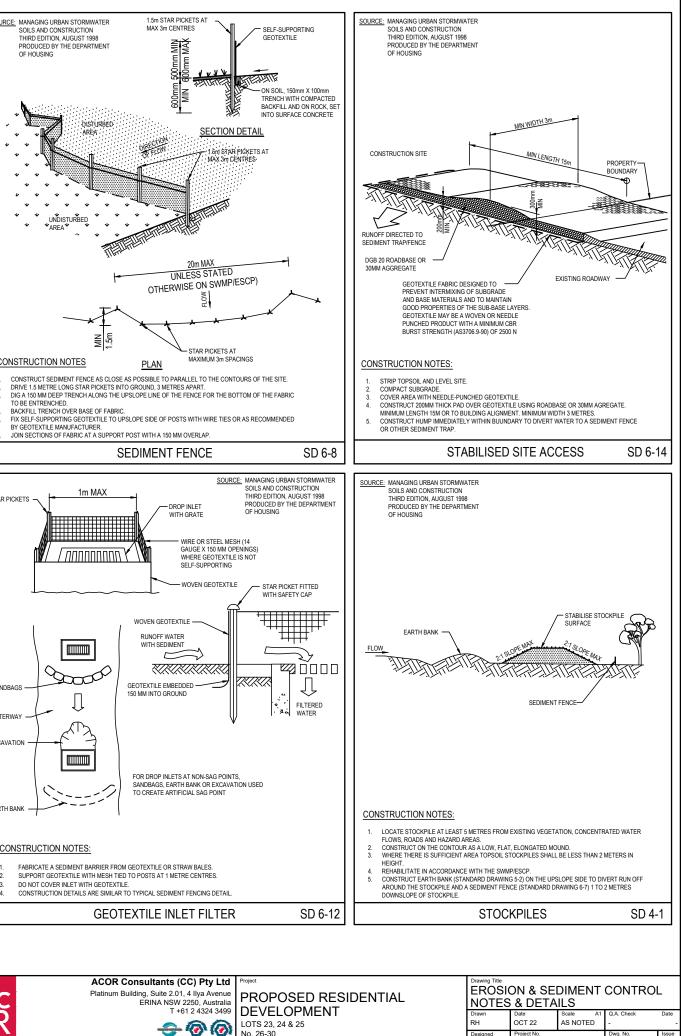


- 16. EARTH BATTERS WILL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER, UNLESS OTHERWISE NOTED, THAN:
  - 2(H):1(V) WHERE SLOPE LENGTH LESS THAN 12 METRES
  - 2.5(H):1(V) WHERE SLOPE LENGTH BETWEEN 12 AND 16 METRES.
  - 3(H):1(V) WHERE SLOPE LENGTH BETWEEN 16 AND 20 METRES.
  - 4(H):1(V) WHERE SLOPE LENGTH GREATER THAN 20 METRES
- ALL WATERWAYS, DRAINS, SPILLWAYS AND THEIR 17 OUTLETS WILL BE CONSTRUCTED TO BE STABLE IN AT LEAST THE 1:20 YEAR ARI, TIME OF CONCENTRATION STORM EVENT.
- 18. WATERWAYS AND OTHER AREAS SUBJECT TO CONCENTRATED FLOWS AFTER CONSTRUCTION ARE TO HAVE A MAXIMUM GROUNDCOVER C-FACTOR OF 0.05 (70% GROUND COVER) WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION. FLOW VELOCITIES ARE TO BE LIMITED TO THOSE SHOWN IN TABLE 5-1 OF "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION", DEPT OF HOUSING 1998 (BLUE BOOK). FOOT AND VEHICULAR TRAFFIC WILL BE PROHIBITED IN THESE AREAS.
- STOCKPILES AFTER CONSTRUCTION ARE TO HAVE A 19 MAXIMUM GROUND-COVER C-FACTOR OF 0.1 (60% GROUND-COVER) WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION.
- ALL LANDS, INCLUDING WATERWAYS AND STOCKPILES, 20. DURING CONSTRUCTION ARE TO HAVE A MAXIMUM GROUND-COVER C-FACTOR OF 0.15 (50% GROUND COVER) WITHIN 20 WORKING DAYS FROM INACTIVITY EVEN THOUGH WORKS MAY CONTINUE LATER.
- 21 FOR AREAS OF SHEET FLOW USE THE FOLLOWING GROUND COVER PLANT SPECIES FOR TEMPORARY COVER: JAPANESE MILLET 20 KG/HA AND OATS 20 KG/HA.
- 22. PERMANENT REHABILITATION OF LANDS AFTER CONSTRUCTION WILL ACHIEVE A GROUND-COVER C-EACTOR OF LESS THAN 0.1 AND LESS THAN 0.05 WITHIN 60 DAYS NEWLY PLANTED LANDS WILL BE WATERED. REGULARI Y UNTIL AN EFFECTIVE COVER IS ESTABLISHED AND PLANTS ARE GROWING VIGOROUSLY, FOLLOW-UP SEED AND FERTILISER WILL BE APPLIED AS NECESSARY REVEGETATION SHOULD BE AIMED AT RE-ESTABLISHING 23
- NATURAL SPECIES, NATURAL SURFACE SOILS SHOULD BE REPLACED AND NON-PERSISTANT ANNUAL COVER CROPS SHOULD BE USED

- ACCEPTABLE BINS WILL BE PROVIDED FOR ANY 24 CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHING, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES WILL BE PROVIDED AT LEAST WEEKLY. DISPOSAL OF WASTE WILL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT.
- 25. ALL POSSIBLE POLLUTANT MATERIALS ARE TO BE STORED WELL CLEAR OF ANY POORLY DRAINED AREAS, FLOOD PRONE AREAS, STREAMBANKS, CHANNELS AND STORMWATER DRAINAGE AREAS. STORE SUCH MATERIALS IN A DESIGNATED AREA UNDER COVER WHERE POSSIBLE AND WITHIN CONTAINMENT BUNDS.
- ALL SITE STAFF AND SUB-CONTACTORS ARE TO BE 26. INFORMED OF THEIR OBLIGATION TO USE WASTE CONTROL FACILITIES PROVIDED
- ANY DE-WATERING ACTIVITIES ARE TO BE CLOSELY 27. MONITORED TO ENSURE THAT WATER IS NOT POLLUTED BY SEDIMENT, TOXIC MATERIALS OR PETROLEUM PRODUCTS
- 28. PROVIDE DESIGNATED VEHICULAR WASHDOWN AND MAINTENANCE AREAS WHICH ARE TO HAVE CONTAINMENT BUNDS



C6



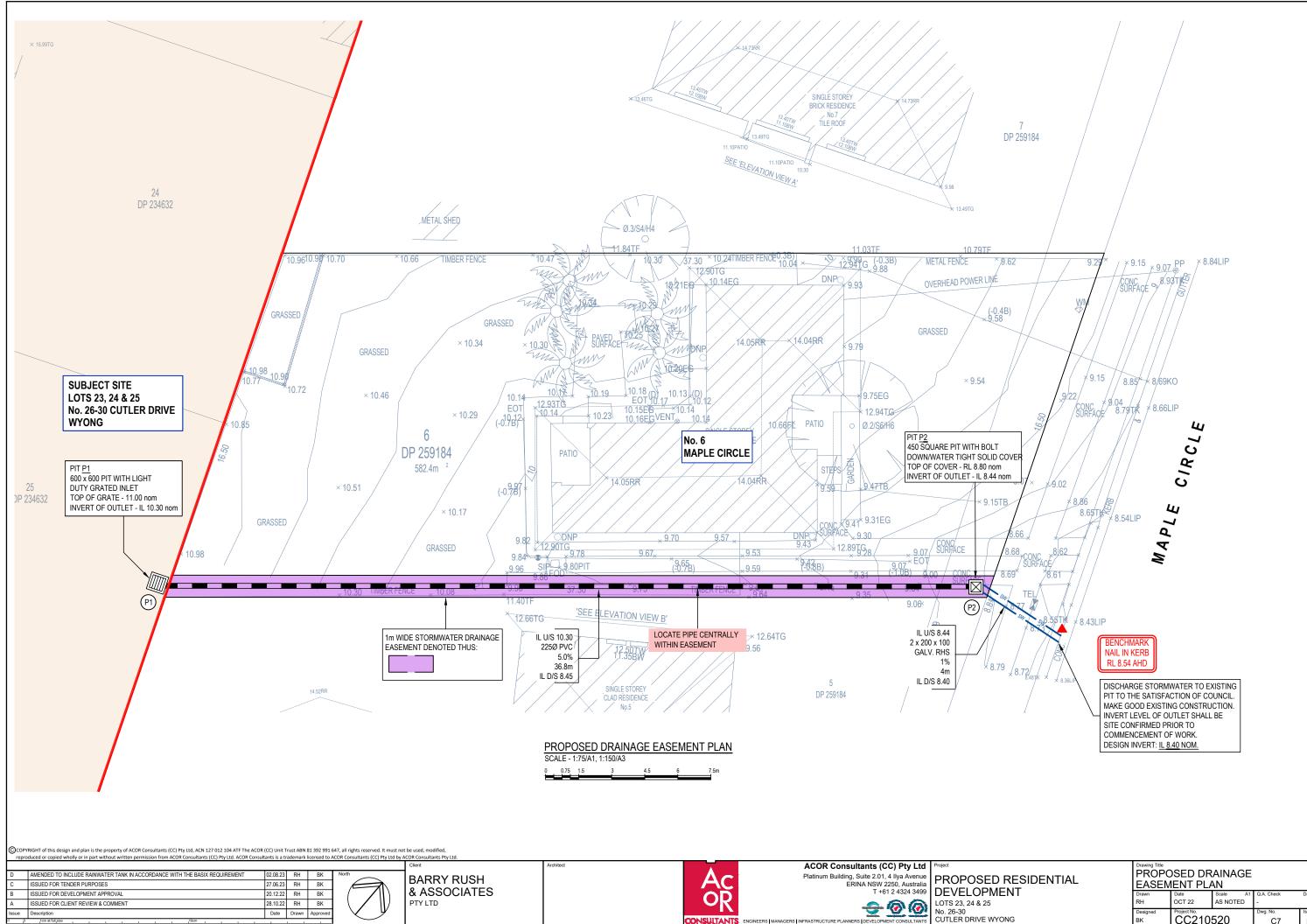
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Issue	Description	Date	Drawn	Approved		
1 0	1cm at full size 10cm					

SH **ATES** 



- 📀 CUTLER DRIVE WYONG



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	RH	-	-						
	Designed Project No. BK CC210520								
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