






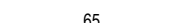















PROPOSED DEVELOPMENT

Lot 10 (No.7) NEW STREET EAST, BALGOWLAH HEIGHTS

STORMWATER MANAGEMENT PLANS

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. WHEN PIPE EXCEEDS 100mm DIA.
	DENOTES STORMWATER/SURFACE WATER PIPE AND DIA. WHEN PIPE EXCEEDS 100mm DIA.
	DENOTES RISING MAIN AND PIPE DIA. U.N.O.
	DENOTES SUBSOIL DRAINAGE LINE AND DIA. WRAPPED IN GEOFABRIC U.N.O.
	DENOTES DOWNPIPE
	DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISHED SURFACE LEVEL
	DENOTES INSPECTION OPENING WITH SCREW DOWN LID AT FINISHED SURFACE LEVEL FOR SYSTEM FLUSHING PURPOSES
	STORMWATER PIT - SOLID COVER
	STORMWATER PIT - GRATED INLET
	DENOTES GRATED DRAIN
	DENOTES ABSORPTION TRENCH
	NON RETURN VALVE
	PUMP
	STOP VALVE (ISOLATION VALVE)
	240v REQUIRED
	DENOTES LEVEL OF INLET /OUTLET OF STORMWATER PIPE. NOTE: UNLESS NOTED OTHERWISE, THE BASE OF THE PIT IS THE SAME AS THE PIPE INLET/OUTLET.

DIAL BEFORE YOU DIG



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

GENERAL NOTES

- THESE PLANS SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT CONSULTANTS' PLANS, SPECIFICATIONS, CONDITIONS OF DEVELOPMENT CONSENT AND CONSTRUCTION CERTIFICATE REQUIREMENTS. WHERE DISCREPANCIES ARE FOUND ACOR CONSULTANTS (CC) MUST BE CONTACTED IMMEDIATELY FOR VERIFICATION
- WHERE THESE PLANS ARE NOTED FOR DEVELOPMENT APPLICATION PURPOSES ONLY, THEY SHALL NOT BE USED FOR OBTAINING A CONSTRUCTION CERTIFICATE NOR USED FOR CONSTRUCTION PURPOSES
- SUBSOIL DRAINAGE SHALL BE DESIGNED AND DETAILED BY THE STRUCTURAL ENGINEER. SUBSOIL DRAINAGE SHALL NOT BE CONNECTED INTO THE STORMWATER SYSTEM IDENTIFIED ON THESE PLANS UNLESS APPROVED BY ACOR CONSULTANTS (CC)

STORMWATER CONSTRUCTION NOTES

- ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH AS/NZS 3500 (CURRENT EDITION) AND THE REQUIREMENTS OF THE LOCAL COUNCIL'S POLICIES AND CODES
- THE MINIMUM SIZES OF THE STORMWATER DRAINS SHALL NOT BE LESS THAN DN90 FOR CLASS 1 BUILDINGS AND DN100 FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY THE REGULATORY AUTHORITY
- THE MINIMUM GRADIENT OF STORMWATER DRAINS SHALL BE 1%, UNLESS NOTED OTHERWISE
- COUNCIL'S TREE PRESERVATION ORDER IS TO BE STRICTLY ADHERED TO. NO TREES SHALL BE REMOVED UNTIL PERMIT IS OBTAINED
- PUBLIC UTILITY SERVICES ARE TO BE ADJUSTED AS NECESSARY AT THE CLIENT'S EXPENSE
- ALL PITS TO BE BENCHED AND STREAMLINED. PROVIDE STEP IRONS FOR ALL PITS OVER 1.2m DEEP
- 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 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
- ANY VARIATION TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY ACOR CONSULTANTS (CC) PRIOR TO THEIR COMMENCEMENT

RAINWATER RE-USE SYSTEM NOTES

- RAINWATER SUPPLY PLUMBING TO BE CONNECTED TO OUTLETS WHERE REQUIRED BY BASIX CERTIFICATE (BY OTHERS)
- TOWN WATER CONNECTION TO RAINWATER TANK TO BE TO THE SATISFACTION OF THE REGULATORY AUTHORITY. THIS MAY REQUIRE PROVISION OF:
 - PERMANENT AIR GAP
 - BACKFLOW PREVENTION DEVICE
- NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE RAIN WATER SUPPLY
- AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT THE RAINWATER TANK
- PROVIDE APPROPRIATE FLOAT VALVES AND/OR SOLENOID VALVES 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 PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE
- PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN
- ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK. SURFACE WATER INLETS ARE NOT TO BE CONNECTED
- PIPE MATERIALS FOR RAINWATER SUPPLY PLUMBING ARE TO BE APPROVED MATERIALS TO AS/NZS3500 PART 1 SECTION 2 AND TO BE CLEARLY AND PERMANENTLY IDENTIFIED AS 'RAINWATER'. THIS MAY BE ACHIEVED FOR BELOW GROUND PIPES USING IDENTIFICATION TAPE (MADE IN ACCORDANCE WITH AS2648) OR FOR ABOVE GROUND PIPES BY USING ADHESIVE PIPE MARKERS (MADE IN ACCORDANCE WITH AS1345)
- EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELED 'RAINWATER' ON A METALLIC SIGN IN ACCORDANCE WITH AS1319
- ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTRY

SHEET INDEX

COVER SHEET & NOTES	SHEET C1
STORMWATER MANAGEMENT PLAN	SHEET C2
STORMWATER MANAGEMENT DETAILS SHEET No.1	SHEET C3
ON SITE DETENTION CHECKLIST	SHEET C4
EROSION & SEDIMENT CONTROL PLAN	SHEET C5
EROSION & SEDIMENT CONTROL NOTES & DETAILS	SHEET C6
SITE CATCHMENT PLAN	SHEET C7

NORTHERN BEACHES COUNCIL REQUIREMENTS

- SITE AREA (m²) 792.3
- STORMWATER CONTROL ZONE..... REGION 3
- PRE-DEVELOPED IMPERVIOUS AREA (m²) 508
- POST DEVELOPED IMPERVIOUS AREA (m²) 473.5
- RAINWATER RE-USE
RAINWATER REUSE TANK TO BE PROVIDED IN ACCORDANCE WITH BASIX REQUIREMENT.
- 13,600 LITRES OF RAINWATER REUSE HAS BEEN PROVIDED
- ON-SITE DETENTION
ON SITE DETENTION TANK HAS BEEN PROVIDED IN THIS REGARD WE REFER TO DRAINS MODEL CC230039.drm
- 8m³ OF STORAGE HAS BEEN PROVIDED
- DESIGN HAS BEEN PREPARED IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL'S WATER MANAGEMENT POLICY, AR&R AND AS/NZS 3500

DEVELOPMENT APPLICATION ISSUE
NOT FOR CONSTRUCTION

DRAWINGS MUST BE PRINTED IN COLOUR

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<table><tr><td>C</td><td>RE-ISSUED FOR DEVELOPMENT APPROVAL</td><td>18.08.23</td><td>RH</td><td>BK</td></tr><tr><td>B</td><td>RE-ISSUED FOR DEVELOPMENT APPROVAL</td><td>14.08.23</td><td>RH</td><td>BK</td></tr><tr><td>A</td><td>ISSUED FOR DEVELOPMENT APPROVAL</td><td>22.03.23</td><td>RH</td><td>BK</td></tr><tr><td>Issue</td><td>Description</td><td>Date</td><td>Drawn</td><td>Approved</td></tr></table>					C	RE-ISSUED FOR DEVELOPMENT APPROVAL	18.08.23	RH	BK	B	RE-ISSUED FOR DEVELOPMENT APPROVAL	14.08.23	RH	BK	A	ISSUED FOR DEVELOPMENT APPROVAL	22.03.23	RH	BK	Issue	Description	Date	Drawn	Approved	North 	Client PENTECOST	Architect  AcOR CONSULTANTS ENGINEERS MANAGERS INFRASTRUCTURE PLANNERS DEVELOPMENT CONSULTANTS	ACOR Consultants (CC) Pty Ltd Platinum Building, Suite 2.01, 4 Ilya Avenue ERINA NSW 2250, Australia T +61 2 4324 3499	Project PROPOSED RESIDENTIAL DEVELOPMENT Lot 10 (No.7) NEW STREET EAST BALGOWLAH HEIGHTS	Drawing Title COVER SHEET & NOTES			
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Drawing Title				
STORMWATER MANAGEMENT PLAN				
Drawn	Date	Scale	A1	Q.A. Check
ED	MARCH 2023	AS NOTED	-	-
Designed	Project No.	Dwg. No.	Issue	
BK	CC230039	C2	C	



Appendix 16 – On-site Detention Checklist

This checklist is to be used to determine the on-site stormwater disposal requirement for developments and must be completed and included with the submission of any development application for these works. Please read this form carefully for its notes, guidelines, definition and relevant policies.

For assistance and support, please contact Council's Development Engineering and Certification team on 1300 434 434.

Part 1 Location of the Property			
House Humber	7	Legal Property Description	
Street	NEW STREET EAST	Lot	10
Suburb	BALGOWLAH HEIGHTS	Section	
Postcode	2093	DP	9561

Part 2 Site Details			
Northern Beaches Stormwater Regions (refer to Map 2 of Northern Beaches Council's Water Management for Development policy)	REGION 3	Total Site Area	792.3
Pre-Development Impervious Area		Post-Development Impervious Area	
Is the site of the development located within an established Flood Prone Land as referred to Council's Local Environmental Plans?			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If yes, On-site stormwater Detention system (OSD) is not required and please proceed to part 5 of this checklist If no, please proceed to part 3 of this checklist.			

Part 3: Northern Beaches Stormwater Regions (refer to Map 2 of Northern Beaches Council's Water Management for Development policy)	
If the site of the development located within Region 1, please proceed to the part 4.1 of this checklist	
If the site of the development located within Region 2, please proceed to the part 4.2 of this checklist	
If the site of the development located within Region 3, please proceed to the part 4.3 of this checklist	
If the site of the development located within Region 4, please refer to Council's Warriewood Valley Water Management Specification.	



Part 4.3 Northern Beaches Stormwater Region 3	
Part 4.3.1 Stormwater Zone	
In the region, the method of stormwater control to be applied shall depend on the location of the site. Please refer to Map 3 of Northern Beaches Council's Water Management for Development policy.	
If the site of the development located within stormwater zone 1, please proceed to the part 4.3.2 of this checklist	
If the site of the development located within stormwater zone 2, please provide a design in accordance with the section 9.3.3.3 of Council's Water Management for Development Policy.	
If the site of the development located within stormwater zone 3, please provide a design in accordance with the section 9.3.3.4 of Council's Water Management for Development Policy.	
If the site of the development located within stormwater zone 4, please provide a design in accordance with the section 9.3.3.5 of Council's Water Management for Development Policy.	
Part 4.3.2 Determination of OSD requirements in Stormwater Zone 1	
Part 4.3.2.1 For A New Building	
1) Exemption	a) Is the site area less than 400? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> b) Is the post-development impervious area less than 190 m²? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes to both questions, OSD is not required. If no to any of the above questions, please process to calculation
2) Calculation	a) Site area 792.3 m² x 0.35 = 277 m² + 50 = 327 m² b) Post- development impervious area 473.5 m² OSD will not be required when (b) is less than 250 m² and (a) is greater than (b) Is OSD required for this development? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, provide a design in accordance with the section 9.3.3.2 of Council's Water Management for Development Policy. If no, OSD is not required and please proceed to part 5.
Part 4.3.2.2 For Alterations and Additions	
If the current impervious area of the site is more than 60% of the site area, OSD will be required. Alternatively, please proceed to the next calculation section.	
1) Calculation	Is the post development impervious area increased by less than 50 m²? Yes <input type="checkbox"/> No <input type="checkbox"/> Is the post development impervious area less than 60% of the site area? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes to both questions, OSD is not required. If no to any of the above questions, provide a design in accordance with section 9.3.3.2 of Council's Water Management for Development Policy



Part 5 Disposal of Stormwater

Does the site fall naturally towards the street?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If yes, provide a design in accordance with section 5.1 of Council's Water Management for Development Policy. If no, provide a design in accordance with section 5.5 of Council's Water Management for Development Policy.	

Definitions

Designed to help you fill out this application	Site area: This refers to the area of the land bounded by its existing or proposed boundaries. Impervious area: This refers to driveways, parking spaces, pathways, paved areas, hardstand areas, roofed areas, garages and outbuildings. Pre Development Impervious area: This refers all impervious areas of the site before the development. Post Development Impervious areas: This refers all the impervious areas within the site after the development is completed.
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<div><div><div>Issue</div><div>Description</div><div>Date</div><div>Drawn</div><div>Approved</div></div><div><div>C</div><div>RE-ISSUED FOR DEVELOPMENT APPROVAL</div><div>18.08.23</div><div>RH</div><div>BK</div></div><div><div>B</div><div>RE-ISSUED FOR DEVELOPMENT APPROVAL</div><div>14.08.23</div><div>RH</div><div>BK</div></div><div><div>A</div><div>ISSUED FOR DEVELOPMENT APPROVAL</div><div>22.03.23</div><div>RH</div><div>BK</div></div></div> <div>10m at full scale</div> <div>North</div>					Client PENTECOST	Architect	<div><div><div>AcOR</div><div>CONSULTANTS</div></div><div>ENGINEERS MANAGERS INFRASTRUCTURE PLANNERS DEVELOPMENT CONSULTANTS</div></div> <div>ACOR Consultants (CC) Pty Ltd Platinum Building, Suite 2.01, 4 Ilya Avenue ERINA NSW 2250, Australia T +61 2 4324 3499</div>	Project PROPOSED RESIDENTIAL DEVELOPMENT Lot 10 (No.7) NEW STREET EAST BALGOWLAH HEIGHTS	<div>Drawing Title ON SITE DETENTION CHECKLIST</div> <table><tr><td>Drawn</td><td>Date</td><td>Scale</td><td>A1</td><td>Q.A. Check</td><td>Date</td></tr><tr><td>RH</td><td>MARCH 2023</td><td>AS NOTED</td><td>-</td><td>-</td><td>-</td></tr><tr><td>Designed</td><td>Project No.</td><td>Dwg. No.</td><td colspan="3">Issue</td></tr><tr><td>BK</td><td>CC230039</td><td>C4</td><td colspan="3">C</td></tr></table>	Drawn	Date	Scale	A1	Q.A. Check	Date	RH	MARCH 2023	AS NOTED	-	-	-	Designed	Project No.	Dwg. No.	Issue			BK	CC230039	C4	C		
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EROSION & SEDIMENT LEGEND

1

INSTALL SEDIMENT FENCING REFER
DETAIL SD 6-8, SHEET C6. WHERE
UNDER CANOPY AREAS OF TREES TO
BE RETAINED, FENCING NOT TO BE
DUG INTO THE GROUND BUT INSTEAD
ATTACHED TO GROUND BY TIGHTLY
PACKED SANDBAGS.

2

THE EXISTING CROSSOVER &
LAYBACK ARE TO BE RETAINED
FOR SITE ACCESS UNTIL
REASONABLE COMPLETION OF
CONSTRUCTION WORKS

3

SITE ACCESS PROVIDE LARGE COARSE
DIA AGGREGATE OR RECYCLED
CONCRETE. IN ACCORDANCE WITH
DETAIL SD 6-14, SHEET C6

4

STOCKPILE IN ACCORDANCE WITH
DETAIL SD 4-1,
REFER TO SHEET C6

5

WASTE STORAGE AREA
PROVIDE SOLID AND LIQUID
WASTE RECEPTACLE BINS

6

BARRIER FENCING OR UTILISE
EXISTING BOUNDARY FENCE

7

PROPOSED DISTURBED AREA

NOTE: 1. TREE BARRIERS REQUIRED IN
ACCORDANCE WITH THE ARBORIST'S REPORT

NOTE: 2. PROVIDE PROTECTION TO DRAINAGE PITS
FOLLOWING PIT INSTALLATION. REFER DETAIL
SD6-12 ON SHEET C6

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Issue	Description	Date	Drawn Approved

Client
PENTECOST

Architect

AcOR

CONSULTANTS

ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

ACOR Consultants (CC) Pty Ltd

Platinum Building, Suite 2.01, 4 Ilya Avenue
ERINA NSW 2250, Australia
T +61 2 4324 3499

Project

PROPOSED RESIDENTIAL DEVELOPMENT
Lot 10 (No.7)
NEW STREET EAST
BALGOWLAH HEIGHTS

Drawing Title EROSION & SEDIMENT CONTROL PLAN				
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Designed	Project No.	Dwg. No.	Issue	
BK	CC230039	C5	C	

EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

- THIS SOIL AND WATER MANAGEMENT PLAN IS TO BE READ 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 ACCESS IS PROHIBITED EXCEPT FOR ESSENTIAL THINNING OF PLANT GROWTH.
- WORKS ARE TO PROCEED IN THE FOLLOWING SEQUENCE:
 - INSTALL ALL BARRIER AND SEDIMENT FENCING WHERE SHOWN ON THE PLAN.
 - CONSTRUCT THE STABILISED SITE ACCESS.
 - CONSTRUCT DIVERSION DRAINS AS REQUIRED.
 - INSTALL MESH AND GRAVEL INLETS FOR ANY ADJACENT KERB INLETS.
 - INSTALL GEOTEXTILE INLET FILTERS AROUND ANY ON-SITE DROP INLET PITS.
 - CLEAR SITE AND STRIP AND STOCKPILE TOPSOIL IN LOCATIONS SHOWN ON THE PLAN.
 - UNDERTAKE ALL ESSENTIAL CONSTRUCTION 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 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 TO EFFECT ANY NECESSARY REPAIRS.
 - 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.
 - REMOVE TRAPPED SEDIMENT WHENEVER THE DESIGN CAPACITY OF THAT STRUCTURE HAS BEEN EXCEEDED.
 - ENSURE REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND TO INITIATE UPGRADING OR REPAIR AS NECESSARY.
 - 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.
 - 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 EVENTS.
 - THE CONDITION OF ANY SOIL AND WATER MANAGEMENT WORKS.
 - THE CONDITION OF VEGETATION AND ANY NEED TO IRRIGATE.
 - THE NEED FOR DUST PREVENTION STRATEGIES.
 - ANY REMEDIAL WORKS TO BE UNDERTAKEN.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 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 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.
- 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 THE PERMANENT DRAINAGE SYSTEM UNLESS THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR WATER HAS BEEN TREATED BY AN APPROVED DEVICE.
- TEMPORARY SEDIMENT TRAPS WILL REMAIN IN PLACE UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.
- ACCESS TO SITES SHOULD BE STABILISED TO REDUCE THE LIKELIHOOD OF VEHICLES TRACKING SOIL MATERIALS ONTO PUBLIC ROADS AND ENSURE ALL-WEATHER ENTRY/EXIT.

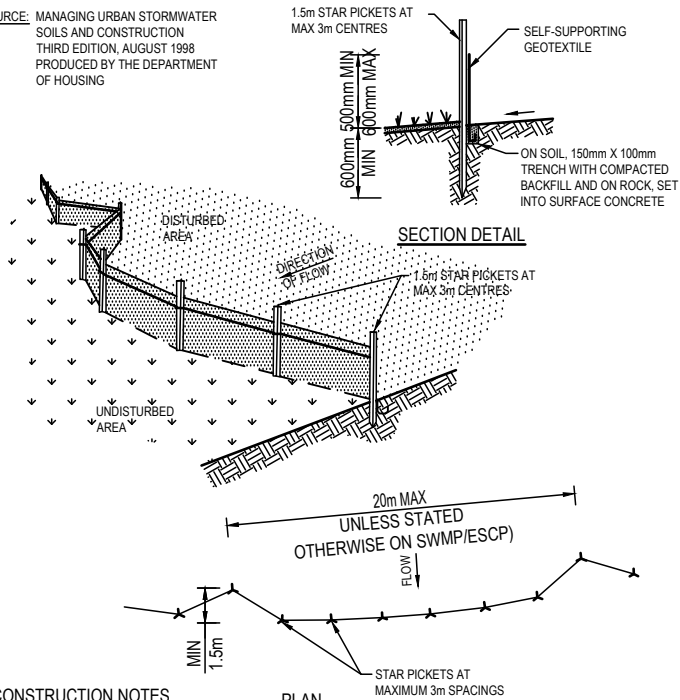
SOIL EROSION CONTROL INSTRUCTIONS

- 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 OUTLETS WILL BE CONSTRUCTED TO BE STABLE IN AT LEAST THE 1:20 YEAR ARI, TIME OF CONCENTRATION STORM EVENT.
- WATERWAYS AND OTHER AREAS SUBJECT TO CONCENTRATED FLOWS AFTER CONSTRUCTION ARE TO HAVE A MAXIMUM GROUND COVER 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 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, 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.
- 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.
- PERMANENT REHABILITATION OF LANDS AFTER CONSTRUCTION WILL ACHIEVE A GROUND-COVER C-FACTOR OF LESS THAN 0.1 AND LESS THAN 0.05 WITHIN 60 DAYS. NEWLY PLANTED LANDS WILL BE WATERED REGULARLY 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 NATURAL SPECIES. NATURAL SURFACE SOILS SHOULD BE REPLACED AND NON-PERSISTANT ANNUAL COVER CROPS SHOULD BE USED.

WASTE CONTROL INSTRUCTIONS

- ACCEPTABLE BINS WILL BE PROVIDED FOR ANY 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.
- 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 INFORMED OF THEIR OBLIGATION TO USE WASTE CONTROL FACILITIES PROVIDED.
- ANY DE-WATERING ACTIVITIES ARE TO BE CLOSELY MONITORED TO ENSURE THAT WATER IS NOT POLLUTED BY SEDIMENT, TOXIC MATERIALS OR PETROLEUM PRODUCTS.
- PROVIDE DESIGNATED VEHICULAR WASHDOWN AND MAINTENANCE AREAS WHICH ARE TO HAVE CONTAINMENT BUNDS.

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING



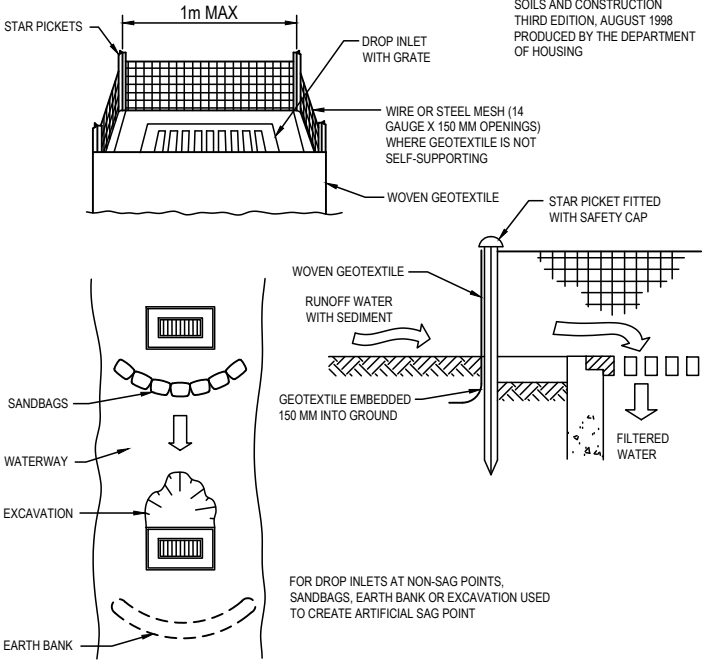
CONSTRUCTION NOTES

- CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
- DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND, 3 METRES APART.
- DIG A 150 MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
- BACKFILL TRENCH OVER BASE OF FABRIC.
- FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150 MM OVERLAP.

SEDIMENT FENCE

SD 6-8

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING



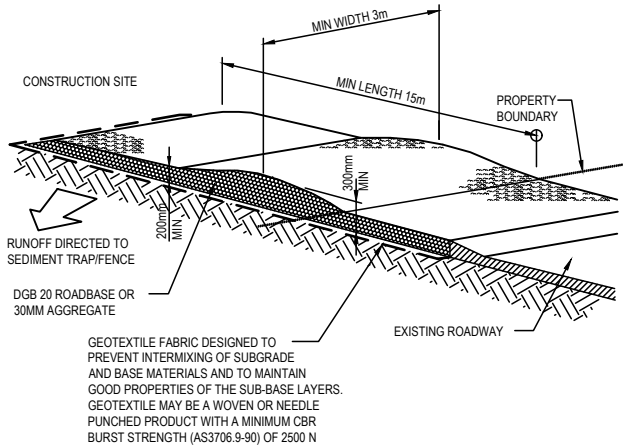
CONSTRUCTION NOTES:

- FABRICATE A SEDIMENT BARRIER FROM GEOTEXTILE OR STRAW BALES.
- SUPPORT GEOTEXTILE WITH MESH TIED TO POSTS AT 1 METRE CENTRES.
- DO NOT COVER INLET WITH GEOTEXTILE.
- CONSTRUCTION DETAILS ARE SIMILAR TO TYPICAL SEDIMENT FENCING DETAIL.

GEOTEXTILE INLET FILTER

SD 6-12

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING



GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMIXING OF SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD PROPERTIES OF THE SUB-BASE LAYERS. GEOTEXTILE MAY BE A WOVEN OR NEEDLE PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706-9-90) OF 2500 N

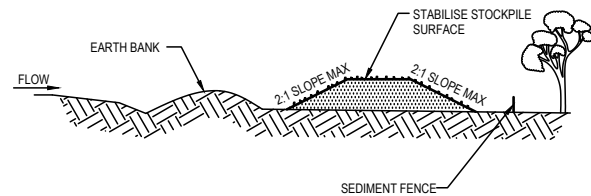
CONSTRUCTION NOTES:

- STRIP TOPSOIL AND LEVEL SITE.
- COMPACT SUBGRADE.
- COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
- CONSTRUCT 200MM THICK PAD OVER GEOTEXTILE USING ROADBASE OR 30MM AGGREGATE. MINIMUM LENGTH 15M OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES.
- CONSTRUCT HUMP IMMEDIATELY WITHIN BUANDARY TO DIVERT WATER TO A SEDIMENT FENCE OR OTHER SEDIMENT TRAP.

STABILISED SITE ACCESS

SD 6-14

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING



CONSTRUCTION NOTES:

- LOCATE STOCKPILE AT LEAST 5 METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOWS, ROADS AND HAZARD AREAS.
- CONSTRUCT ON THE CONTOUR AS A LOW, FLAT, ELONGATED MOUND.
- WHERE THERE IS SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT.
- REHABILITATE IN ACCORDANCE WITH THE SWMP/ESCP.
- CONSTRUCT EARTH BANK (STANDARD DRAWING 5-2) ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE AND A SEDIMENT FENCE (STANDARD DRAWING 6-7) 1 TO 2 METRES DOWNSLOPE OF STOCKPILE.

STOCKPILES

SD 4-1

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Issue				Description			Date			Drawn			Approved		
C				RE-ISSUED FOR DEVELOPMENT APPROVAL			18.08.23			RH			BK		
B				RE-ISSUED FOR DEVELOPMENT APPROVAL			14.08.23			RH			BK		
A				ISSUED FOR DEVELOPMENT APPROVAL			22.03.23			RH			BK		
Issue				Description			Date			Drawn			Approved		

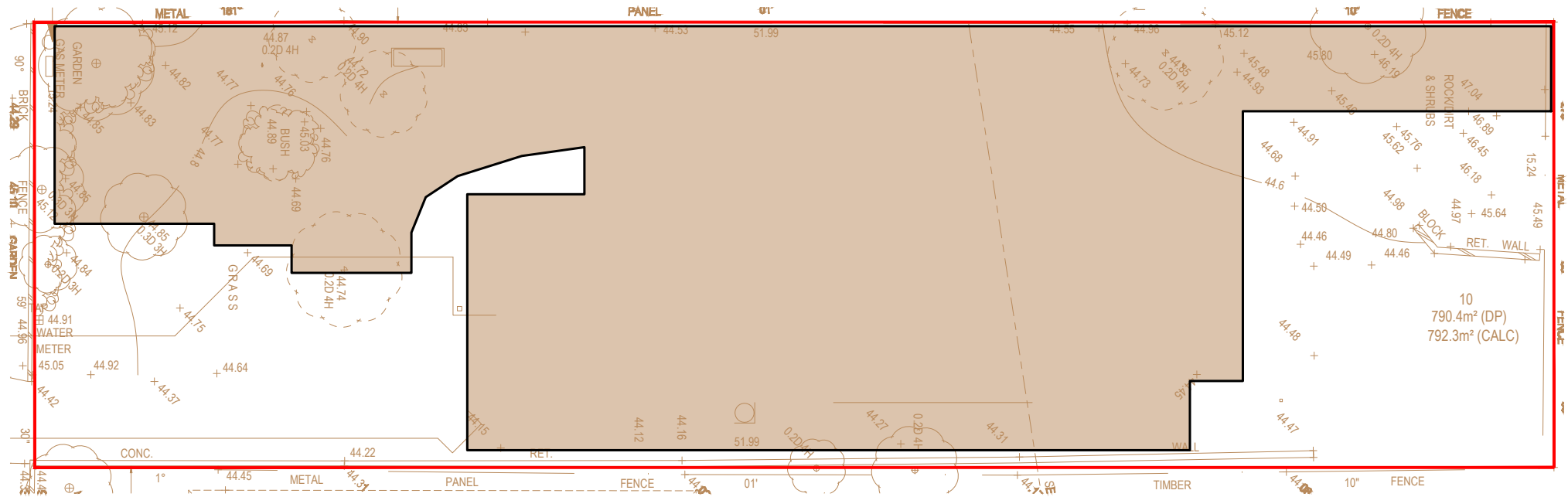
Client		Architect	
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Architect	

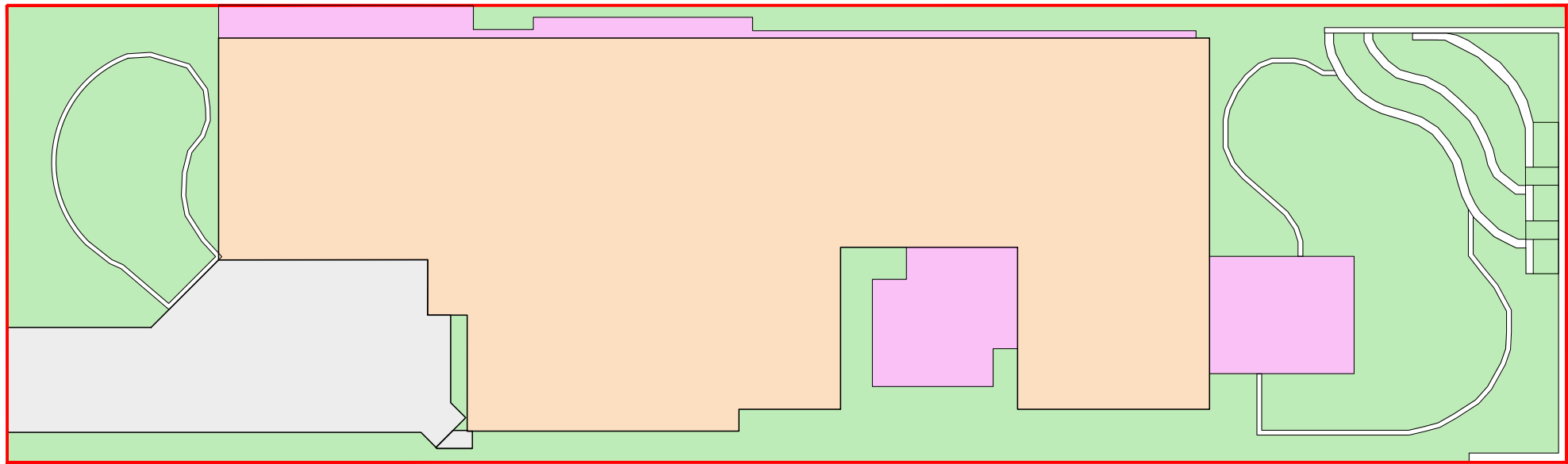
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ENGINEERS MANAGERS INFRASTRUCTURE PLANNERS DEVELOPMENT CONSULTANTS	

Project	
PROPOSED RESIDENTIAL DEVELOPMENT	
Lot 10 (No.7) NEW STREET EAST BALGOWLAH HEIGHTS	





Drawing Title					
EROSION & SEDIMENT CONTROL NOTES & DETAILS					
Drawn	Date	Scale	A1	Q.A. Check	Date
RH	MARCH 23	AS NOTED		-	-
Designed	Project No.	Dwg. No.		Issue	
BK	CC230039	C6		C	



PRE - DEVELOPED IMPERVIOUS AREA PLAN = 508m² (64%)



POST - DEVELOPED IMPERVIOUS AREA PLAN = 473.5m² (60%)

SITE AREA 792.3m ²			
CATCHMENT AREA TO OSD		CATCHMENT AREA BYPASSING OSD	
ROOF AREA = 345m ²		DRIVEWAY AREA = 71m ²	
		PAVING / PATHS = 57.5m ²	
		LANDSCAPE AREA = 318.8m ²	
		TOTAL AREA TO OSD = 345m ² (43.5%) - 100% IMPERVIOUS	
TOTAL AREA BYPASSING OSD = 447.3m ² (56.4%) - IMPERVIOUS AREA = 128.5m ² (29% IMPERVIOUS) - PERVIOUS AREA = 318.8m ²			

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				PENTECOST				ACOR Consultants (CC) Pty Ltd Platinum Building, Suite 2.01, 4 Ilya Avenue ERINA NSW 2250, Australia T +61 2 4324 3499		PROPOSED RESIDENTIAL DEVELOPMENT			
								Lot 10 (No.7) NEW STREET EAST BALGOWLAH HEIGHTS		Drawn		Date	
										RH		MARCH 23	
										Scale		A1	
										AS NOTED		-	
										Q.A. Check		Date	
										-		-	
										Designed		Project No.	
										BK		CC230039	
										Dwg. No.		C7	
										Issue		C	