

**PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL**

Approval no: DEV2022/1309

Date: 26 October 2022



REFER TO DESIGNFLOW EROSION AND SEDIMENT CONTROL STRATEGY (ESCS) FOR OVERALL SITE STRATEGY AND BES BASIN SIZING. CONTRACTORS CPESC TO PREPARE DETAILED ESC PLAN(S) FOR WORKS AREA AND STAGING PRIOR TO COMMENCEMENT OF WORK AND MODIFY AS NECESSARY TO MAINTAIN CURRENCY OF PLANS TO MATCH EXPOSED AREAS, CATCHMENTS AND DRAINAGE.

TRUCK
SHAKEDOWN
FACILITY

LEGEND

- CD → CATCH DRAIN
- LCD → LINED CATCH DRAIN
- SBC → SANDBAG CHECK DAM
- KERB AND CHANNEL
- FINISHED SURFACE CONTOURS
- NATURAL SURFACE CONTOURS
- SEDIMENT FENCE
- DIVERSION CHANNEL
- BUFFER TOP OF BANK
- SEDIMENT BASIN
- TRUCK SHAKEDOWN FACILITY
- LOCATION TO BE CONFIRMED ON-SITE
- INDICATIVE LOCATION OF PROPOSED SEDIMENT BASIN

DO NOT SCALE THIS DRAWING
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SITE PLAN



REVISIONS

No	Description	Date	By
A	FOR APPROVAL	05.07.22	CE

Associated Consultants



Client



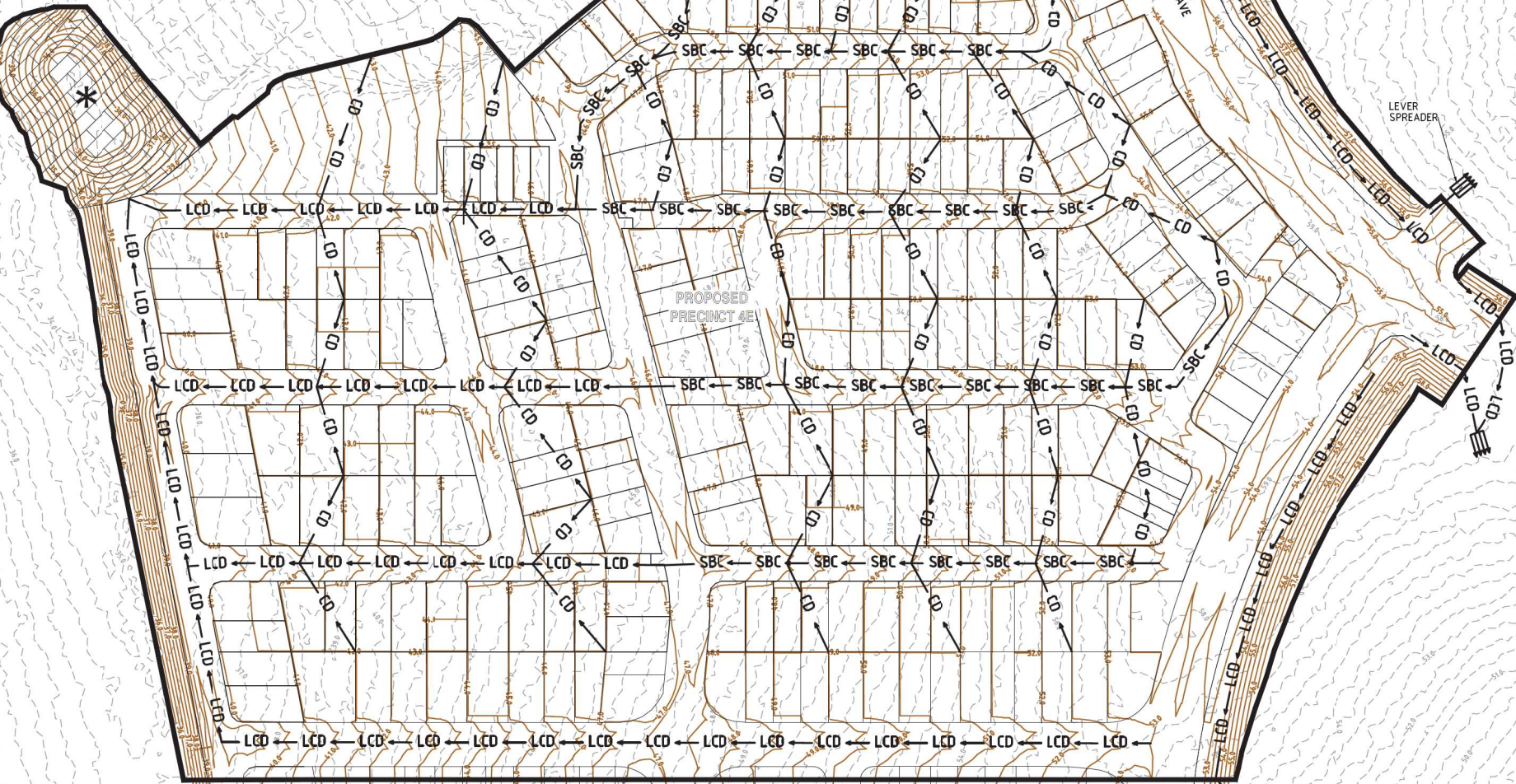
Project



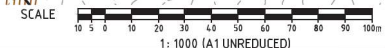
Approved: RPEQ 12805
Robert William Mander
BEEng(Civil) CPENG
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2022-07-07 16:22:55 +1000

Drawing Title
**EROSION AND SEDIMENT
CONTROL - LAYOUT PLAN**

Drawn SLK	Designed JAS	Checked RWM	Date JUL 22
Scale AS SHOWN	Drawing No 22-146-03	Sheet 03 of 06	Revision A



BULK EARTHWORKS PLAN
SCALE 1:1000



1. THIS PROGRAM AND ASSOCIATED PLANS SHOULD BE READ IN CONJUNCTION WITH THE SITE MANAGEMENT SPECIFICATION INCORPORATED IN THE CONTRACT DOCUMENTS. THE PROVISIONS OF THE SPECIFICATION ARE TO BE STRICTLY ADHERED TO.
2. EROSION AND SEDIMENT CONTROL ON THE SITE MUST MEET THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION ACT (AS THESE APPLY TO PRIORITY DEVELOPMENT AREAS) IN PARTICULAR PARTS S44.02G AND S319.
3. THE BASIC OBJECTIVES OF THE EROSION AND SEDIMENT CONTROL ARE:
 - I. IDENTIFY CRITICAL AREAS AND PROVIDE APPROPRIATE ATTENTION TO THOSE AREAS.
 - II. PLAN SITE LAYOUTS SO THAT ACCESS TO ALL REQUIRED DRAINAGE EROSION AND SEDIMENT CONTROL MEASURE IS MAINTAINED.
 - III. LIMIT EXPOSURE TIME BY PROGRAMMING TO MINIMISE THE AREA OF LAND EXPOSED TO POTENTIALLY ADVERSE WEATHER CONDITIONS AT ANY ONE TIME. I.E. PROGRESSIVELY CLEAR AND REVEGETATE.
 - IV. PROVIDE BEST PRACTICE CONTROL MEASURES INCLUDING TEMPORARY AND PERMANENT DRAINAGE, EROSION AND SEDIMENT CONTROLS.
3. TO COMPLY WITH THE REQUIREMENTS OF THE EP ACT AND BEST PRACTICE DESIGN THE SEDIMENT BASINS ON THE SITE MUST BE DESIGN TO ACHIEVE THE FOLLOWING: SEDIMENT BASINS ARE TO BE DESIGNED, IMPLEMENTED AND MAINTAINED TO A STANDARD WHICH WOULD ACHIEVE AT LEAST 90% OF THE AVERAGE ANNUAL RUNOFF VOLUME OF THE CONTRIBUTING CATCHMENT TREATED (IE. 90% HYDROLOGIC EFFECTIVENESS) TO 50mg/LTSS OR LESS AND PH IN THE RANGE 6.5-8.5.
4. THE EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH BEST PRACTICE FOR EROSION AND SEDIMENT CONTROL AND THE QUEENSLAND URBAN DRAINAGE MANUAL.
5. CONSTRUCTION SEQUENCE THE CONSTRUCTION SEQUENCE WILL GENERALLY BE:
 - I. OBTAIN ALL NECESSARY PERMITS AND APPROVALS BEFORE SITE ESTABLISHMENTS.
 - II. HOLD A PRE-CONSTRUCTION CONFERENCE.
 - III. STABILISE ALL CONSTRUCTION ACCESS ROUTES AND ENTRY/EXIT POINTS.
 - IV. ESTABLISH SEDIMENT CONTROL STRUCTURES AND TEMPORARY DRAINAGE CONTROL MEASURES AS NECESSARY AND SPECIFICALLY ALL SEDIMENT BASINS AND DIVERSION CHANNELS.
 - V. CARRY OUT BULK EARTHWORKS.
 - VI. MAINTAIN AND REPAIR DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES.
 - VII. REMOVE SEDIMENT CONTROL MEASURES WHEN THE SITE IS STABILISED. I.E. ~70% GROUND COVER
 - VIII. THE CONTRACTOR SHALL PREPARE A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO SUIT HIS/HER CONSTRUCTION METHODOLOGY, AND SUBMIT THIS PLAN FOR APPROVAL TO THE SUPERINTENDENT. IT SHOULD BE NOTED THAT ANY SIGNIFICANT VARIATION TO THIS PLAN MAY REQUIRE RESUBMISSION TO COUNCIL FOR APPROVAL. THE CLIENT SHALL NOT BE RESPONSIBLE FOR ANY SUCH ASSOCIATED DELAY.
5. ALL ESC DEVICES ARE TO BE INSPECTED WEEKLY, PRIOR TO EXPECTED AND AFTER RAINFALL ANY DAMAGE IS TO BE REPAIRED AS REQUIRED TO MAINTAIN THEIR EFFICACY.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL (ESC) MEASURE TO BE MAINTAINED AND FULLY OPERATIONAL DURING THE MAINTENANCE PERIOD AND ARE TO BE REMOVED UPON THE SATISFACTORY COMPLETION OF AN OFF-MAINTENANCE INSPECTION BY COUNCIL AND PRIOR TO FORMAL ACCEPTANCE "OFF MAINTENANCE" BY COUNCIL.
7. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR IS TO PROVIDE A DETAILED PROGRAM TO THE SUPERINTENDENT SHOWING THE TIMING FOR ALL WORKS ASSOCIATED WITH THE PROJECT, NOMINATING, IN PARTICULAR, THE PROGRAM FOR INSTALLATION OF SOIL AND EROSION CONTROL SYSTEMS.
8. EARTHWORKS SHALL BE CARRIED OUT IN SUCH A MANNER THAT THE SITE IS MAINTAINED IN A WELL DRAINED CONDITION, AREAS OF LOOSE SOIL ARE MINIMISED AND CONCENTRATIONS OF STORMWATER ARE MINIMISED. BULK EARTHWORKS WILL BE CARRIED OUT OVER THE ENTIRE SITE IN ONE STAGE.
9. CONSTRUCTION ACCESS AREAS SHALL BE AT ONE NOMINATED POINT ON SOUTH JEEBING CREEK ROAD. A SHAKE DOWN AS DETAILED ON THE PLAN COMPRISING FREE DRAINAGE GRAVEL SHALL BE LOCATED ADJACENT TO THE POINT OF ACCESS WHERE VEHICLES CAN BE WASHED DOWN PRIOR TO EXIT TO THE STREET SYSTEM IF REQUIRED. THE WASH DOWN AREA SHALL BE KEPT FREE OF MUD.
10. FOR DETAILS OF ENTRY/EXIT SEDIMENT PAD REFER TO BEST PRACTICE EROSION & SEDIMENT CONTROL BOOK 1, PAGE 2.48, FIGURE 2.6.
11. SUPPLEMENTARY EROSION AND SEDIMENT CONTROL DEVICES MAY BE REQUIRED AT THE DISCRETION OF THE SUPERINTENDENT.
12. SEDIMENTATION FENCES TO BE PLACED AS SHOWN. FOR DETAILS OF SEDIMENT FENCE REFER BEST PRACTICE EROSION & SEDIMENT CONTROL BOOK 1, PAGE 2.50, FIGURE 2.8.
13. WHERE SEDIMENT FENCES OR CATCH DRAINS ARE SHOWN TO BE CONSTRUCTED IN AREAS OF SIGNIFICANT EARTHWORKS, ERECTION OF THE FENCE MAY BE DEFERRED UNTIL COMPLETION OF THE BULK EARTHWORKS, SUBJECT TO ABSENCE OF RAIN.

1. ENSURE COMPLIANCE WITH THE REQUIREMENTS OF AS4970 - TREES ON CONSTRUCTION SITES. THIS MAY REQUIRE CONSULTATION AND GUIDANCE FROM A CLASS V CERTIFIED ARBORIST AS TREES OUTSIDE THE IMMEDIATE WORK AREA MAY BE AFFECTED.

Date: 26 October 2022



1. STRIP AND STOCKPILE AVAILABLE TOPSOIL (ASSUMED AVERAGE DEPTH 150MM) FROM ALL DISTURBED AREAS PRIOR TO BULK EARTHWORKS. STOCKPILES TO BE STABILISED WITH APPLICATION OF VITAL CHEMICALS VITAL-BON STONEWALL OR EQUIVALENT.
2. MINIMUM SLOPE ACROSS ALLOTMENTS TO BE 1%.
3. ALL FOOTPATHS, BATTERS, AND EARTHWORKS AFFECTED ALLOTMENTS ARE TO BE TOPSOILED TO A MINIMUM DEPTH OF 150MM (LIGHTLY COMPACTED) AND TURFED WHERE SPECIFIED.
4. SEDIMENT FENCES TO BE PLACED AS SHOWN. FOR DETAILS OF SEDIMENT FENCE REFER BEST PRACTICE EROSION & SEDIMENT CONTROL BOOK 1, PAGE 250, FIGURE 2.7. SEDIMENT FENCED TO BE REPAIRED AND EXCESSIVE SEDIMENT DEPOSITS SHALL BE REMOVED ONCE CAPACITY FALLS BELOW 75%

1. CAT-DRAINS ARE TO BE PROVIDED PARALLEL TO THE CONTOUR AND AT MAXIMUM SPACINGS AND DIMENSIONS SPECIFIED (REFER STANDARD DETAIL).
2. WITHIN AREAS OF ACTIVE EARTHWORKS THE CATCH-DRAINS ARE TO BE INSTALLED WITH SURFACE AMELIORATED WITH GYPSUM AT A RATE OF 5t/Ha AND STABILISED WITH VITAL BON-MATT STONEWALL OR EQUIVALENT (REFER STANDARD DETAIL)
3. CATCH DRAINS TO BE MAXIMUM LENGTH OF 50m BEFORE JOINING INTO A DRAIN WHICH RUNS PERPENDICULAR TO THE CONTOUR AND JOINS WITH A DIVERSION CHANNEL. THESE DRAINS ARE TO BE 0.2m BASE WIDTH, 1:4 SIDE SLOPES, 0.5m DEPTH AND HAVE A SURFACE AMELIORATED WITH GYPSUM AT A RATE OF 5T/Ha AND STABILISED WITH GEOFABRIC OR VITAL BON-MATT STONEWALL.

1. PROVIDE TURFING TO ENTIRE WIDTH OF ALL SWALES, FOOTPATHS, AND ' IN 4 CUT AND FILL BATTERS.
2. FOOTPATH BATTERS ARE TO BE STABILISED WITH TOPSOIL (AND TURFED) AS SOON AS PRACTICAL AFTER THE BATTERS HAVE BEEN COMPLETED.

1. THE AMOUNT OF AREA EXPOSED AT ANY ONE TIME TO BE MINIMISED BY STAGING THE WORKS WHEREVER POSSIBLE AND AIMING TO ACHIEVE FINISHED LEVEL IN EACH AREA AS QUICKLY AS POSSIBLE BEFORE OPENING NEW AREAS.
2. TOPSOIL TO BE STRIPPED AND STOCKPILED SEPARATELY TO SUB-SOILS.
3. STOCKPILES TO BE PROVIDED WITH SURFACE COVER USING A CHEMICAL SURFACE STABILISER SUCH AS VITAL CHEMICALS VITAL-BON MATT STONEWALL.
4. IF WORKS ARE DELAYED OR PUT ON HOLD THEN TEMPORARY EROSION CONTROL COVERING TO BE PROVIDED USING VITAL CHEMICALS VITAL-BON MATT P47-VRI OR EQUIVALENT.
5. ONCE AREAS REACH FINISHED LEVEL:
 - I. TOPSOIL TO BE SPREAD TO CAP/BURY THE DISPERSIVE SUBSOILS
 - II. TOPSOIL TO BE DRILL-SEEDDED WITH A MIXTURE OF ANNUAL AND PERENNIAL GRASS SPECIES (REFER TABLE) AT SEEDING RATE OF 80kg/ha AND FERTILISER WITH CROP-KING 88 (0.3t/ha)
 - III. TEMPORARY SOIL COVER TO BE APPLIED CONSISTING OF VITAL CHEMICALS VITAL-BON MATT P47-VRI OR EQUIVALENT.
 - IV. WATERING UNDERTAKEN AS NECESSARY UNTIL STABLE GRASS SURFACE COVER ESTABLISHED.

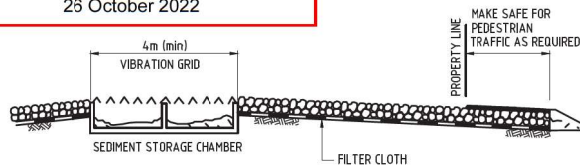
SEED MIXES			
	SUMMER BLEND (APPLICATIONS NOVEMBER - DECEMBER)	MID SEASON BLEND (APPLICATIONS MARCH/APRIL & SEPTEMBER/OCTOBER)	WINTER BLEND (APPLICATIONS MAY/AUGUST)
UNHULLED GREEN COUCH (CYNODON DACTYLON) OR BLUE COACH (DIGITARIA DIOCYCLA)	25%	25%	25%
HULLED GREEN COUCH (CYNODON DACTYLON) OR BLUE COACH (DIGITARIA DIOCYCLA)	25%	25%	25%
JAPANESE MILLET	30%	15%	N/A
RYE GRASS	N/A	15%	30%
CARPET GRASS (AXONOPUS AFFINIS)	20%	20%	20%

A1	Drawing No 22-146-05	Revision A
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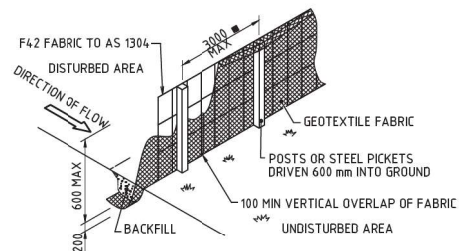
Queensland
Government

Date: 26 October 2022

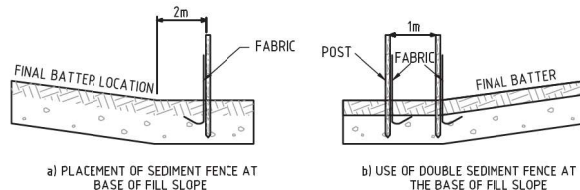


TYPICAL PROFILE OF A VIBRATION GRID

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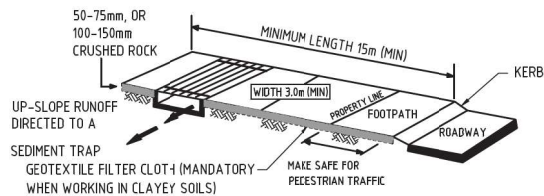


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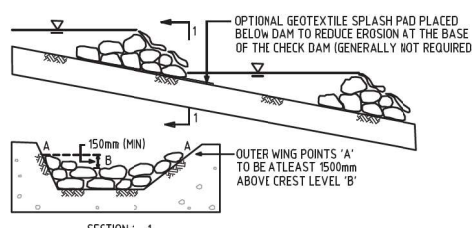


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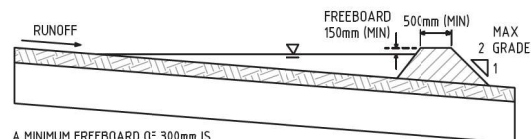
LOCATION OF SEDIMENT FENCE AT BASE OF FILL SLOPE



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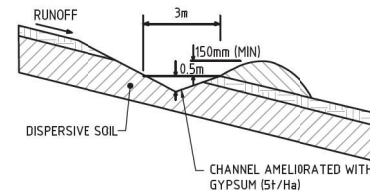


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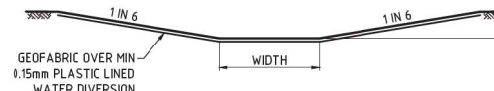
A MINIMUM FREEBOARD OF 300mm IS
RECOMMENDED FOR NON-VEGETATED EARTH EMBANKMENTS

N.T.S.



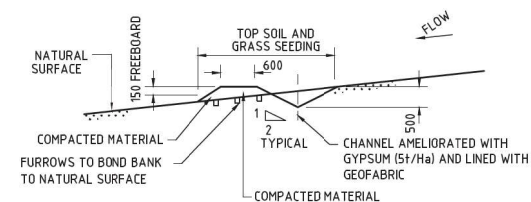
OPEN EARTH SLOPES						VEGETATED SLOPES		
SLOPE	HORIZ.	VERT.	SLOPE	HORIZ.	VERT.	SLOPE	HORIZ.	VERT.
1%	80m	0.9m	15%	19m	2.9m	>10%	NO MAXIMUM	
2%	60m	1.2m	20%	16m	3.2m	12%	100m	
4%	4.0m	1.6m	25%	14m	3.5m	15%	80m	12m
6%	3.2m	1.9m	30%	12m	3.5m	20%	55m	11m
8%	28m	2.2m	35%	10m	3.5m	25%	40m	10m
10%	25m	2.5m	40%	9m	3.5m	30%	30m	9m
12%	22m	2.6m	50%	6m	3.5m	>34%	CASE SPECIFIC	

CATCH DRAINS DIMENSIONS & SPACINGS



SCALE 1:40

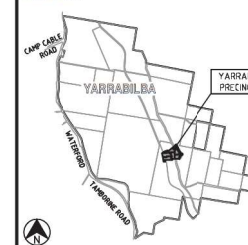
SIZING TO BE DETERMINED DURING CONSTRUCTION



N. I. S.

DO NOT SCALE THIS DRAWING
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SITE PLAN



REVISIONS

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Associated Consultants



Client



Project



PRECINCT 4E BULK EARTHWORKS



Approved - RPEQ 12805

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BEng(Civil), CPEng.
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2022.07.07 16:25:53 +10'00

Drawing Title
EROSION AND SEDIMENT
CONTROL - DETAILS

Drawn SLK	Designed JAS	Checked RWM	Date JUL 22
Scale AS SHOWN			Sheet 06 of 0
A1	Drawing No 22-146-06		Revision A