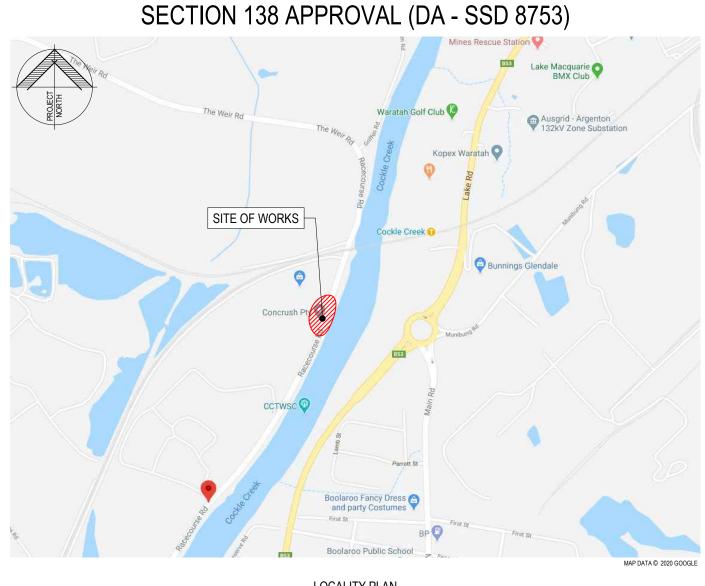
PROPOSED ROAD UPGRADE

21 RACECOURSE ROAD, TERALBA NSW



LOCALITY PLAN

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PROJECT

PROPOSED ROAD UPGRADE 21 RACECOURSE ROAD TERALBA, NSW

CLIENT

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THIS DRAWING	THIS DRAWING CONTAINS COLOURED INFORMATION								
	DRAWING LIST								
DR-C-10000	COVER PAGE AND DRAWING LIST								
DR-C-10001	CONSTRUCTION NOTES								
DR-C-10100	SOIL & WATER MANAGEMENT PLAN								
DR-C-10101	SOIL & WATER MANAGEMENT DETAILS								
DR-C-10102	SOIL & WATER MANAGEMENT NOTES								
DR-C-10200	DETAIL PLAN								
DR-C-10300	LINE MARKING PLAN								
DR-C-10400	TYPICAL SECTIONS								
DR-C-10500	LONGITUDINAL SECTION - MC00 & MC10								
DR-C-10501	LONGITUDINAL SECTION - LIP WESTERN KERB								
DR-C-10502	LONGITUDINAL SECTION - ROAD EASTERN SHOULDER								
DR-C-10600	CROSS SECTIONS MC00 - SHEET 1								
DR-C-10601	CROSS SECTIONS MC00 - SHEET 2								
DR-C-10700	DRAINAGE LONGITUDINAL SECTIONS								

1	REV	DATE	DESCRIPTION	DRN	APP
	P01	01/10/21	ISSUED FOR REVIEW	C.T.	C.G.

COVER PAGE & DRAWING LIST

HEET SIZE

DOCUMENT STATU A3 DRAFT COPY SCALE N.T.S DRAWN C.T. DESIGNED C.G. REVISION DOCUMEN

NOT FOR CONSTRUCTION 16015-LD-DR-C-10000

P01

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CONSTRUCTION NOTES

GENERAL

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL COUNCIL AND DTHER CONSULTANTS' DRAWINGS, SPECIFICATIONS, WORKS AUTHORISATION DEED (WAD) AND CLIENT CONTRACT DOCUMENTS. ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK
- 2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THESE DRAWINGS.
- 3. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE
- SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ALL SETOUT COORDINATES PROVIDED ARE BASED ON MGA-94-56.
- 5. DURING CONSTRUCTION, ALL STRUCTURES SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVER-STRESSED. TEMPORARY STRUCTURES FORMWORK, FALSEWORK, TEMPORARY BRACING, SHORING AND THE LIKE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 6. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS, INCLUDING AMENDMENTS, OF THE RELEVANT SPECIFICATIONS, STANDARDS AND CODES OF PRACTICE, EXCEPT AS VARIED BY THE CONTRACT DOCUMENTS AND THE LAWS AND REQUIREMENTS OF STATUTORY AUTHORITIES.
- ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH ALL WORKCOVER REQUIREMENTS AND OCCUPATIONAL HEALTH AND SAFETY ACT REGULATIONS
- WHERE THE ENGINEERS ARE ENGAGED FOR INSPECTIONS AND/OR SUPERVISION, 8. A MINIMUM OF 24 HOURS NOTICE SHALL BE GIVEN.
- 9. CONSTRUCTION USING THESE DRAWINGS SHALL NOT COMMENCE UNTIL APPROVAL IS ISSUED BY THE PRINCIPAL CERTIFYING AUTHORIT

GEOTECHNICAL REFERENCES:

FOR GEOTECHNICAL REFERENCES REFER TO THE FOLLOWING DOCUMENT: 1. PREPARED BY: RCA AUSTRALIA REPORT No.: 13589-201/1 DATED: JUNE 2020

SURVEY REFERENCES:

- SURVEY INFORMATION USED FOR DESIGN PURPOSES SUPPLIED AS FOLLOWS: EVENIT & EVERIT CONSULTING SURVEYORS 19352DET 1-3, 2-3, 3-3 08/06/2021 SURVEYOR: DOCUMENT No: DATED:
- 2. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
- 3. ALL SURVEY SETOUT SHALL BE UNDERTAKEN BY A REGISTERED SURVEYOR.
- ANY REGISTERED SURVEY MARKS WITHIN THE WORKS AREA OR CLOSE ANY REGISTERED SURVEY MARKS WITHIN THE WORKS AREA OR CLOSE PROXIMITY THAT WILL BE DESTROYED, MUST BE APPROVED BO THE SURVEYORS GENERAL BEFORE CONSTRUCTION COMMENCES. DESTROYED REGISTERED SURVEY MARKS ARE TO BE REPLACED WITH AN FOUNALENT STANDARD MARK IN ACCORDANCE WITH THE RELEVANT STANDARD AND IN AS DIRECTED BY THE SURVEYOR GENERAL, PRIOR TO REMOVAL OF THE EXISTING MARK, IT SHALL ALSO BE COORDINATED AND DOCUMENTED TO EQUIVALENT LANDS DEPARTMENT STANDARDS.

GROUND PREPARATION:

EXCAVATION AND GROUND PREPARATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT SPECIFICATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL REFERENCES AND ANY ADDITIONAL INSTRUCTIONS THAT MAY BE PROVIDED BY A GEOTECHNICAL ENGINEER DURING THE COURSE OF THE PROJECT

INSPECTION AND MAINTENANCE:

- THE SITE MANAGER (PRINCIPAL CONTRACTOR) WILL ENSURE THAT ALI SEDIMENT AND EROSION CONTROL WORKS ARE LOCATED AS INSTRUCTED IN If NSW/RMS OR LMCC SPECIFICATION AS IS REQUIRED.
- ALL BUILDERS AND SUB-CONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES BY THE SITE MANAGER (PRINCIPAL CONTRACTOR) IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.
- RECEPTORS FOR CONCRETE AND MORTAR SI URRIES, PAINTS, ACID WASHINGS, 3 LIGHT WEIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTEID AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT AND GENERALLY OFF SITE.
- AT LEAST WEEKLY, THE CONTRACTOR SHALL INSPECT THE SITE AND ENSURE 4. a) DRAINS OPERATE EFFECTIVELY AND INITIATE REPAIR OR MAINTENANCE AS
 - REQUIRED b) SPILLED SOIL (OR OTHER MATERIAL) IS REMOVED FROM HAZARD AREAS.
 - SPILLED SUL (ON OTHER MALENAL) IS REMOVED FROM TRACKAD AREAS; INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, GUTTERS, PAVED AREAS AND DRIVEWAYS.
 SEDIMENT IS REMOVED FROM BASINS AND/OR TRAPS WHEN LESS THAN 20m OF TRAPPING CAPACITY REMAIN PER 1000m OF DISTURBED LANDS.
 - AND/OR LESS THAN 500mm DEPTH REMAINS IN THE SETTLING ZONE. ANY COLLECTED SEDIMENT WILL BE DISPOSED IN AREAS WHERE FURTHER POLITION TO DOWNSLOPE LANDS AND WATERWAYS IS LINUKELY. d) REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION
 - HAZARD AND INITIATE UPGRADING OR REPAIRS AS APPROPRIATE
- THE CONTRACTOR SHALL PROVIDE A DETAILED 'LOG BOOK' RECORDING INFORMATION & DATA WITH RESPECT TO THE SEDIMENT & EROSION CONTROL PLAN AND TO ENSURE SEDIMENT CONTROL DEVICES ARE FUNCTIONING PROPERLY. THIS IS TO BE KEPT ON SITE AT ALL TIMES AND UPDATED DAILY INFORMATION RECORDED MUST INCLUDE:a) RAINFALL EVENTS
 - RAINEALL IN MILLIMETRES
 - c) RESULTS OF ANY INSPECTIONS

LAND DISTURBANCE:

- THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE AND PRACTICAL. TO THIS END, WORKS IS TO BE UNDERTAKEN IN THE FOLLOWING GENERAL SEQUENCE:-a) CONSTRUCTION OF SEDIMENT AND EROSION CONTROLS PRIOR TO ANY
- WORK COMMENCING. b) REHABILITATION OF ANY DISTURBED LANDS WITHIN 20 WORKING DAYS.
- 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
- THE SITE MANAGER (PRINCIPAL CONTRACTOR) IS TO INFORM ALL CONTRACTORS AND SUBCONTRACTORS OF THEIR OBLIGATIONS UNDER THE 2. EROSION AND SEDIMENT CONTROL PLAN.
- TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED IS TO BE STRIPPED AND STOCKPILED AT THE NOMINATED LOCATION.
- TEMPORARY CUT AND FILL BATTER GRADIENTS TO BE 1 VERTICAL (MAX) : 2 HORIZONTAL (MIN). U.N.O OR FLATTER.

DRAINAGE:

3.

- THE CONTRACTOR SHALL IDENTIFY AND LOCATE ALL SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND INFORM ENGINEER OF ANY CONFLICTS
- THE ENGINEER SHALL BE ADVISED IF ANY EXISTING STRUCTURES ARE WITHIN THE ZONE OF INFLUENCE OF AN EXCAVATION. ANY REQUIRED UNDER-PINNING OR PIERING SHALL BE PROVIDED.
- WHERE EXCAVATING ADJACENT TO BOUNDARIES, ADEQUATE SHORING SHALL 3
- THE CONTRACTOR SHALL ENSURE THAT ALL NEW STRUCTURES ARE FOUNDED BELOW THE ZONE OF INFLUENCE OF ANY EXCAVATIONS WHETHER THEY BE FOR PIPELINES, TANKS OR OTHER DRAINAGE FACILITIES.
- UNTIL COMPLETION OF ALL WORKS, THE CONTRACTOR SHALL FIRSTLY FILTER 5 ALL STORMWATER IN ACCORDANCE WITH APPROVED DETAILS TO ENSURE THE REMOVAL OF ALL CONCRETE FINES, AND OTHER CONSTRUCTION SITE POLLUTANT
- THE CONTRACTOR SHALL SEEK DIRECTION BEFORE COMMENCING ANY EXCAVATION THAT MAY RESULT IN DAMAGE TO ANY EXISTING TREES.
- ALL IMPERVIOUS SURFACES SHALL BE GRADED SUCH THAT THEY ARE FREE 7.
- WHERE AN ENGINEER'S CERTIFICATE WILL BE REQUIRED. THE ENGINEER SHALL BE CALLED ON TO INSPECT THE WORKS PRIOR TO ANY CONCRETE POURS, PRIOR TO BACKFILLING AROUND ANY TANKS, AND AT THE COMPLETION OF WORKS. THE ENGINEER SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE BEFORE AN INSPECTION IS REQUIRED.
- ANY PROPOSED ALTERATIONS TO THE DETAILS SHOWN ON THE DRAWINGS 9 SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL
- LEAF SCREENS, SILT CONTROLS AND ANY OTHER POLLUTANT CONTROL DEVICES SHALL BE REGULARLY SERVICED TO ENSURE THAT THE DRAINAGE SYSTEM REMAINS UNBLOCKED AND OPERATES AS ORIGINALLY INTENDED.
- 11. OVERLAND FLOW PATHS SHALL BE REGULARLY MAINTAINED AND KEPT FREE OF OBSTRUCTIONS TO THE FLOW OF WATER.
- NEW FENCES. RETAINING WALLS AND OTHER LANDSCAPING ITEMS SHALL BE 12 DETAILED IN SUCH A WAY SO AS TO AVOID IMPOUNDING OR DIVERTING SURFACE WATERS ON TO ADJOINING PROPERTIES.
- UPON COMPLETION, CULVERT EXCAVATIONS SHALL BE BACKFILLED WITH SUITABLE COMPACTED MATERIAL IN ACCORDANCE WITH NOTES BELOW. 13.
 - THE CONTRACTOR SHALL ADEQUATELY SHIELD STORMWATER 14 INFRASTRUCTURE AGAINST CONSTRUCTION AND PERMANENT LOADS

CONCRETE:

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600, CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- ALL CONCRETE TO BE MANUFACTURED AND SUPPLIED ACCORDING TO AS1379. 2
- CONSOLIDATE ALL CONCRETE BY MECHANICAL VIBRATION. CURE ALL CONCRETE SURFACES AS DIRECTED IN THE SPECIFICATION. (IF NO SPECIFICATION, IN ACCORDANCE WITH AS3600).
- CONSTRUCTION JOINTS WHERE NOT SHOWN ON DRAWINGS SHALL BE LOCATED 4. SUBJECT TO THE APPROVAL OF THE ENGINEER
- CONCRETE THICKNESSES SHOWN DO NOT INCLUDE THICKNESS OF APPLIED 5
- FORMWORK: THE DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF THE FORMWORK, FALSEWORK AND BACKPROPPING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE PROPOSED METHOD OF INSTALLATION AND REMOVAL OF FORMWORK IS TO BE SUBMITTED TO THE SUPERINTENDENT FOR COMMENT PRIOR TO WORK BEING CARRIED OUT.

KERBING:

- ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON MINIMUM 75mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 5.2.1.
- EXPANSION JOINTS (EJ) TO BE FORMED FROM 10mm COMPRESSIBLE CORK 2 FILLER BOARD FOR FULL DEPTH OF THE SECTION AND CUT TO PROFILE EXPANSION JOINTS TO BE LOCATED AT DRAINAGE PITS ON TANGENT POINTS CALCENT AND A SECOND A SE
- WEAKENED PLANE JOINTS TO BE MINIMUM 3mm WIDE AND LOCATED AT 3m 3 CENTRES EXCEPT FOR INTEGRAL KERBS WHERE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN SLABS.
- PROVIDE BROOM FINISH TO ALL RAMPS AND VEHICULAR CROSSINGS. ALL OTHER KERBS OR DISH DRAINS TO BE STEEL FLOAT FINISHED.
- WHERE REPLACEMENT OF EXISTING KERBING IS REQUIRED, ROAD PAVEMENT IS TO BE SAWCUT 900mm FROM LIP OF GUTTER. UPON COMPLETION OF NEW KERBS, NEW BASECOURSE AND SURFACE IS TO BE LAID 900mm WIDE. MAKE 5. GOOD ANY DAMAGE TO SURROUNDING KERBING OR PAVEMENT, EXISTING KERBS ARE TO BE COMPLETELY REMOVED WHERE NEW KERBS ARE SHOWN

STRUCTURAL

REFER TO STRUCTURAL ENGINEERING DRAWINGS BY LINDSAY DYNAN CONSULTING ENGINEERS FOR CULVERT AND GUARDRAIL DETAILS. REF: 16925-LD-DR-S0001

SURVEY

- SURVEY INFORMATION USED FOR DESIGN PURPOSES SUPPLIED AS FOLLOWS: SURVEYOR: DOCUMENT No: CADENCE CONSULTING SURVEYORS CCS-1676 12 DECEMBER 2019 DATED
- ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD) 2
- 3 SURVEY COORDINATE SYSTEM IS MAP GRID OF AUSTRALIA (MGA)
- ALL SURVEY SETOUT SHALL BE UNDERTAKEN BY A REGISTERED SURVEYOR
- AGED SURVEY MONUMENTS ARE TO BE REPAIRED OR REINSTATED TO THE SATISFACTION OF THE SURVEYOR GENERAL.

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CONSTRUCTION NOTES

 P01
 01/10/2021
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DOCUMENT STATU FOR APPROVAL A3 SCALE DRAWN APPROVE L.Judd R Char M Watso NTS EVISION NOT FOR CONSTRUCTION 16015-LD-DR-C-10001 P01



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SOIL & WATER MANAGEMENT PLAN SCALE 1:1000

	LEGEND
1.0	EXISTING CONTOUR
GT GT	GEOTEXTILE DROP INLET PIT, REFER TO DRAWING 16015-LD-DR-C-10101 FOR DETAILS
sg	MESH AND GRAVEL INLET, REFER TO DRAWING 16015-LD-DR-C-10101 FOR DETAILS
	TEMPORARY CULVERT ENTRY SEDIMENT TRAP, REFER TO DRAWING 16015-LD-DR-C-10101 FOR DETAILS
	SEDIMENT CONTROL DEVICE E.G. SILT FENCE, HAY BAY FILTER, COIR LOG OR SIMILAR REFER TO DRAWING 16015-LD-DR-C-10101 FOR DETAILS
— E —	EXISTING ELECTRICAL SERVICE
OPT	EXISTING OPTICAL FIBRE SERVICE
— s —	EXISTING SEWER SERVICE
UGP	EXISTING UNDERGROUND POWER SERVICE
<u> </u>	BOUNDARY LINE
/	EXISTING FENCE



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PROJECT

PROPOSED ROAD UPGRADE 21 RACECOURSE ROAD TERALBA, NSW

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NOTES

ALL INVESTIGATIONS AND WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICATIONS, LAKE MACQUARE CITY COUNCIL ENGINEERING GUIDELINES AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.

THE ARRANGEMENT OF SOIL & WATER MANAGEMENT MEASURES SHOWN ARE INDICATIVE ONLY AND RELATE TO A PARTICULAR STAGE OF THE CONSTRUCTION WORKS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DESIGN. CONSTRUCT AND MAINTAIN ANY ADDITIONAL MEASURES THAT MAY BE REQUIRED TO SUPPORT THE CONTRACTOR'S CONSTRUCTION METHODOLOGIES, IN ORDER TO MEET ALL CONDITIONS AND REQUIREMENTS IMPOSED BY ANY STATUTORY AUTHORITY.

CONTRACTOR TO VERIFY SETOUT BEFORE COMMENCING EARTHWORKS. REFER ANY DISCREPANCIES TO ENGINEER.

EXISTING CONTOURS ARE SHOWN AT 0.2m INTERVALS.

FOR SOIL AND WATER MANAGEMENT AND NOTES REFER TO DRAWING 16015-LD-DR-C-10102.
 P01
 01/10/2021
 ISSUED FOR REVIEW

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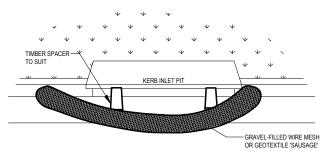
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SOIL & WATER MANAGEMENT PLAN

DOCUMENT STATUS	SHEET SIZE
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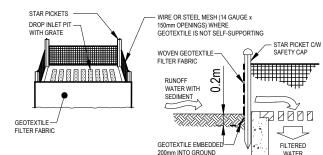


CONSTRUCTION NOTES:

- 2.
- INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH X 400mm WIDE. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT LADEN WATERS CANNOT PASS BETWEEN.
- 5. 6

MESH AND GRAVEL INLET DETAIL - SG

N.T.S. IN ACCORDANCE WITH LANDCOM 'BLUE BOOK' SD6-11 MESH AND GRAVEL INLET FILTER

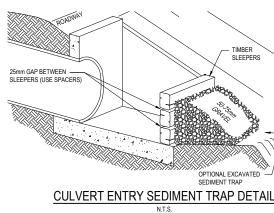


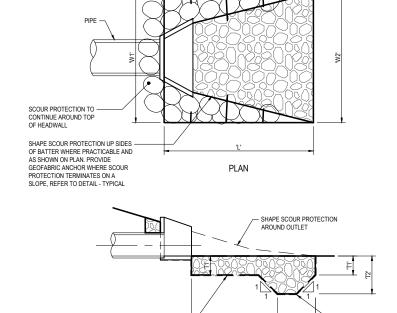
CONSTRUCTION NOTES:

- FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES. FOLLOW BLUE BOOK STANDARD DRAWING 6-7 AND BLUE BOOK STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
- 3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE
- DRAWING 4. DO NOT COVER INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS

GEOTEXTILE DROP INLET PIT FILTER DETAIL - GT

N.T.S. IN ACCORDANCE WITH LANDCOM 'BLUE BOOK' SD6-12 GEOTEXTILE INLET FILTER





ROCKS TO BE PLACED OVER BIDIM A34 -GEOFABRIC OR APPROVED EQUIVALENT

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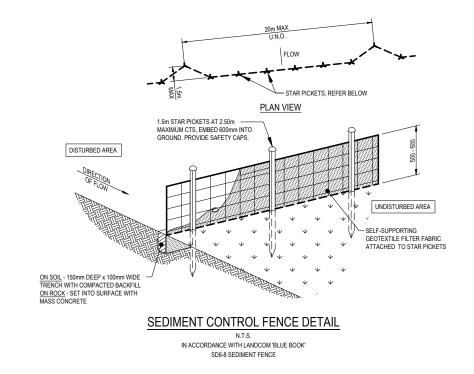
WATER

ELEVATION

'T2'

ROCK SCOUR PROTECTION HEADWALL DETAIL

HEADWALL SCOUR PROTECTION SCHEDULE							
HEADWALL	T1	T2	ROCK SIZES		L (m)	W1 (m)	W2 (m)
TILADWALL		12	D ₅₀	D ₁₀	L (III)	vv i (iii)	VVZ (III)
OUTLET	350	-	200	100	3.0	2.0	2.0
INLET	350	-	200	100	3.0	2.0	2.0
I LENGTH AND WIDTH DIMENSIONS SHOWN IN THE TABLE ARE MINIMUM DIMENSIONS AND DO NOT TAKE INTO ACCOUNT ADDITIONAL SH THAT MAY BE REQUIRED AT EACH LOCATION. ALL AREAS OF SCOUR PROTECTION ARE TO BE SHAPED AS SHOWN ON THE PLANS							







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STALL BIDIM A34 GEOFABRIC BENEATH ROCK SCOUR PROTECTION, MIN LAP MANUFACTURER'S SPECIFICATIONS

LENGTHS IN ACCORDANCE WITH

 P01
 01/10/2021
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SOIL & WATER MANAGEMENT DETAILS

DOCUMENT STATU HEET SIZE DRAFT COPY A3 DRAWN C.T. PPROVE SCALE N.T.S DESIGNEI CG EVISION DOCUMEN' P01

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PLOTTED: 30/09/2021 6:37 PM

SOIL AND WATER MANAGEMENT NOTES

THE FOLLOWING NOTES MAY NOT BE RELEVANT TO EACH DEVELOPMENT

GENERAL

- 1 ESCP REFERS TO EROSION AND SEDIMENT CONTROL PLAN OR A SOIL AND WATER MANAGEMENT PLAN (SWMP).
- 2. ESC REFERS TO EROSION AND SEDIMENT CONTROL.
- SEDIMENT, INCLUDES, BUT IS NOT LIMITED TO, CLAY, SILT, SAND, GRAVEL, SOIL, MUD, CEMENT, AND CERAMIC 3.
- ANY REFERENCE TO THE BLUE BOOK REFERS TO MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION, LANDCOM, 2004.
- ANY REFERENCE TO THE IECA WHITE BOOKS (2008) REFERS TO IECA 2008. BEST PRACTICE EROSION AND SEDIMENT CONTROL, BOOKS 1-6, INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIA), PICTON
- ANY MATERIAL DEPOSITED IN ANY CONSERVATION AREA FROM WORKS ASSOCIATED WITH THE DEVELOPMENT 6. SHALL BE REMOVED IMMEDIATELY BY MEASURES INVOLVING MINIMAL GROUND AND/OR VEGETATION DISTURBANCE AND NO MACHINERY, OR FOLLOWING DIRECTIONS BY COUNCIL AND/OR WITHIN A TIMEFRAME ADVISED BY COUNCIL

THE ESCP

- THE ESCP AND ITS ASSOCIATED ESC MEASURES SHALL BE CONSTANTLY MONITORED, REVIEWED, AND MODIFIED AS REQUIRED TO CORRECT DEFICIENCIES. COUNCIL HAS THE RICHT TO DIRECT CHANGES IF, IN ITS OPINION, THE MEASURES THAT ARE PROPOSED OR HAVE BEEN INSTALLED ARE INADEQUATE TO PREVENT POLLUTION
- PRIOR TO ANY ACTIVITIES ONSITE, THE RESPONSIBLE PERSON(S) IS TO BE NOMINATED. THE RESPONSIBLE PERSON(S) SHALL BE RESPONSIBLE FOR THE ESC MEASURES ONSITE. THE NAME, ADDRESS AND 24 HOUR CONTACT DETAILS OF THE PERSON(S) SHALL BE PROVIDED TO COUNCIL IN WRITING COUNCIL SHALL BE ADVISED WITHIN 48 HOURS OF ANY CHANGES TO THE RESPONSIBLE PERSON(S), OR THEIR CONTACT DETAILS,
- AT LEAST 14 DAYS BEFORE THE NATURAL SUBFACE IS DISTURBED IN ANY NEW STAGE THE CONTRACTOR SHALL SUBMIT TO THE CERTIFIER, A PLAN SHOWING ESC MEASURES FOR THAT STAGE. THE DEGREE OF DESIGN DETAIL SHALL BE BASED ON THE DISTURBED AREA.
- 10. AT ANY TIME DURING CONSTRUCTION. THE ESC MEASURES ONSITE SHALL BE APPROPRIATE FOR THE AREA OF AL ANY LIMITE LUMINING UMADITAULITANI, THE ESU MEASURES UNSITE SHALL BE APPROPRIATE FOR THE AREA OF DISTURBANCE AND ITS CHARACTERISTICS INCLUDING SOILS (IN ACCORDANCE WITH THOSE REQUIRED FOR THE STE AS PER DCP).
- THE IMPLEMENTATION OF THE ESCP SHALL BE SUPERVISED BY PERSONNEL WITH APPROPRIATE QUALIFICATIONS AND/OR EXPERIENCE IN ESC ON CONSTRUCTION SITES.
- THE APPROVED ESCP SHALL BE AVAILABLE ON-SITE FOR INSPECTION BY COUNCIL OFFICERS WHILE WORK 12. ACTIVITIES ARE OCCUR
- THE APPROVED ESCP SHALL BE UP TO DATE AND SHOW A TIMELINE OF INSTALLATION, MAINTENANCE AND REMOVAL OF ESC MEASURES. 13.
- ALL ESC MEASURES SHALL BE APPROPRIATE FOR THE SEDIMENT TYPE(S) OF THE SOILS ONSITE, IN ACCORDANCE WITH THE BLUE BOOK, IECA WHITE BOOKS OR OTHER CURRENT RECOGNISED INDUSTRY STANDARD FOR ESC FOR AUSTRALIAN CONDITIONS. 14.
- ADEQUATE SITE DATA, INCLUDING SOIL DATA FROM A NATA APPROVED LABORATORY, SHALL BE OBTAINED TO ALLOW THE PREPARATION OF AN APPROPRIATE ESCP, AND ALLOW THE SELECTION, DESIGN AND SPECIFICATION OF REQUIRED ESC MEASURES.
- ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED ESCP (AS AMENDED FROM TIME TO TIME) UNLESS CIRCUMSTANCES ARISE WHERE:
 - a) COMPLIANCE WITH THE ESCP WOULD INCREASE THE POTENTIAL FOR ENVIRONMENTAL HARM: OR CIRCUMSTANCES CHANGE DURING CONSTRUCTION AND THOSE CIRCUMSTANCES COULD NOT HAVE BEEN FORESEEN: OR
 - COUNCIL DETERMINES THAT UNACCEPTABLE OFF-SITE SEDIMENTATION IS OCCURRING AS A RESULT OF A LAND-DISTURBING ACTIVITY. IN EITHER CASE, THE PERSON(S) RESPONSIBLE MAY BE REQUIRED TO TAKE ADDITIONAL, OR ALTERNATIVE PROTECTIVE ACTION, AND/OR UNDERTAKE REASONABLE RESTORATION WORKS WITHIN THE TIMEFRAME SPECIFIED BY THE COUNCIL.
- ADDITIONAL ESC MEASURES SHALL BE IMPLEMENTED, AND A REVISED ESCP SUBMITTED FOR APPROVAL TO THE CERTIFIER (WITHIN FIVE BUSINESS DAYS OF ANY SUCH AMENDMENTS) IN THE EVENT THAT: a) THERE IS A HIGH PROBABILITY THAT SERIOUS OR MATERIAL ENVIRONMENTAL HARM MAY OCCUR AS A
 - RESULT OF SEDIMENT ADVISED THAT BEAM OF THAT AND A SECOND OF THAT AND A
 - THESE CONDITIONS; OR SITE CONDITIONS SIGNIFICANTLY CHANGE: OR
 - SITE INSPECTIONS INDICATE THAT THE IMPLEMENTED WORKS ARE FAILING TO ACHIEVE THE 'OBJECTIVE" OF THE ESCR
- A COPY OF ANY AMENDED ESCP SHALL BE FORWARDED TO AN APPROPRIATE COUNCIL OFFICER, WITHIN FIVE BUSINESS DAYS OF ANY SUCH AMENDMENTS

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SITE ESTABLISHMENT INCLUDING CLEARING AND MULCHING

21

- NO LAND CLEARING SHALL BE UNDERTAKEN UNLESS PRECEDED BY THE INSTALLATION OF ADEQUATE DRAINAGE AND SEDIMENT CONTROL MEASURES, UNLESS SUCH CLEARING IS REQUIRED FOR THE PURPOSE OF INSTALLING SUCH MEASURES, IN WHICH CASE, ONLY THE MINIMUM CLEARING REQUIRED TO INSTALL SUCH MEASURES SHALL OCCUR
- BULK TREE CLEARING AND GRUBBING OF THE SITE SHALL BE IMMEDIATELY FOLLOWED BY SPECIFIED TEMPORARY EROSION CONTROL MEASURES (E.G. TEMPORARY GRASSING OR MULCHING) PRIOR TO COMMENCEMENT OF EACH STAGE OF CONSTRUCTION WORKS.
- TREES AND VEGETATION CLEARED FROM THE SITE SHALL BE MULCHED ONSITE WITHIN 7 DAYS OF CLEARING.
- APPROPRIATE MEASURES SHALL BE UNDERTAKEN TO CONTROL ANY DUST ORIGINATING DUE TO THE 22. MULCHING OF VEGETATION ONSITE
- ALL OFFICE FACILITIES AND OPERATIONAL ACTIVITIES SHALL BE LOCATED SUCH THAT ANY EFFLUENT, INCLUDING WASH-DOWN WATER, CAN BE TOTALLY CONTAINED AND TREATED WITHIN THE SITE.
- ALL REASONABLE AND PRACTICABLE MEASURES SHALL BE TAKEN TO ENSURE STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT SYSTEMS, DRAINS TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
- 25. SITE EXIT POINTS SHALL BE APPROPRIATELY MANAGED TO MINIMISE THE RISK OF SEDIMENT BEING TRACKED ONTO SEALED. PUBLIC ROADWAY
- STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT POINTS SHALL DRAIN TO AN 26. PPROPRIATE SEDIMENT CONTROL DEVICE.
- THE APPLICANT SHALL ENSURE AN ADEQUATE SUPPLY OF ESC, AND APPROPRIATE POLLUTION CLEAN-UP 27 MATERIALS ARE AVAILABLE ON-SITE AT ALL TIMES.
- ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND SEDIMENT BASIN EMBANKMENTS SHALL BE MACHINE-COMPACTED, SEEDED AND MULCHED WITHIN TEN (10) DAYS OF FORMATION FOR THE PURPOSE OF ESTABLISHING A VEGETATIVE COVER, OR LINED APPROPRIATELY.
- SEDIMENT DEPOSITED OFF SITE AS A RESULT OF ON-SITE ACTIVITIES SHALL BE COLLECTED AND THE AREA 29. CLEANED/REHABILITATED AS SOON AS REASONABLE AND PRACTICABLE.
- CONCRETE WASTE AND CHEMICAL PRODUCTS. INCLUDING PETROLEUM AND OIL-BASED PRODUCTS. SHALL BE 30 CUNCRETE WAS TE AND CHEMICAE PRODUCTS, INCLUDING FEI ROLEUM AND OLE-BASED PRODUCTS, SHALL B PREVENTED FROM ENTERING ANY INTERNAL OR EXTERNAL WATER BODY, OR ANY EXTERNAL DRAINAGE SYSTEM, EXCLUDING THOSE ON-SITE WATER BODIES SPECIFICALLY DESIGNED TO CONTAIN AND/OR TREAT SUCH MATERIAL. APPROPRIATE MEASURES SHALL BE INSTALLED TO TRAP THESE MATERIALS ONSITE.
- BRICK, TILE OR MASONRY CUTTING SHALL BE CARRIED OUT ON A PERVIOUS SURFACE (E.G. GRASS OR OPEN SOL) AND IN SUCH A MANNER THAT ANY RESULTING SEDIMENT-LADEN RUNOFF IS PREVENTED FROM DISCHARGING INTO A GUTTER, DRAIN OR WATER. APPROPRIATE MEASURES SHALL BE INSTALLED TO TRAP THESE MATERIALS ONSITE
- NEWLY SEALED HARD-STAND AREAS (E.G. ROADS, DRIVEWAYS AND CAR PARKS) SHALL BE SWEPT THOROUGHLY AS SOON AS PRACTICABLE AFTER SEALING/SURFACING TO MINIMISE THE RISK OF COMPONENTS OF THE SURFACING COMPOUND ENTERING STORMWATER DRAINS.
- STOCKPILES OF ERODIBLE MATERIAL SHALL BE PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER 33. (SYNTHETIC OR ORGANIC) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS.
- STOCKPILES. TEMPORARY OR PERMANENT, SHALL NOT BE LOCATED IN AREAS IDENTIFIED AS NO-GO ZONES. INCLUDING, BUT NOT LINITED TO, RESTRICTED ACCESS AREAS, BUFFER ZONES, OR AREAS OF NON-DISTURBANCE) ON THE ESCP.
- NO MORE THAN 150m OF A STORMWATER, SEWER LINE OR OTHER SERVICE TRENCH SHALL TO BE OPEN AT ANY 35. 63
- SITE SPOIL SHALL BE LAWFULLY DISPOSED OF IN A MANNER THAT DOES NOT RESULT IN ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
- WHEREVER REASONABLE AND PRACTICABLE, STORMWATER RUNOFF ENTERING THE SITE FROM EXTERNAL AREAS, AND NON-SEDIMENT LADEN (CLEAN) STORMWATER RUNOFF ENTERING A WORK AREA OR RAREA OF SOLI DISTURBANCE, SHALL BE DIVERTED AROUND OR THROUGH THAT AREA IN A MANNER THAT MINIMISES SOLI EROSION AND THE CONTAMINATION OF THAT WATER FOR ALL DISCHARGES UP TO THE SPECIFIED DESIGN STORM DISCHARGE

SITE MANAGEMENT INCLUDING DUST

- 38 PRIORITY SHALL BE GIVEN TO THE PREVENTION, OR AT LEAST THE MINIMISATION, OF SOIL FROSION, RATHER THAN THE TRAPPING OF DISPLACED SEDIMENT. SUCH A CLAUSE SHALL NOT REDUCE THE RESPONSIBILITY TO APPLY AND MAINTAIN, AT ALL TIMES, ALL NECESSARY ESC MEASURES.
- MEASURES USED TO CONTROL WIND EROSION SHALL BE APPROPRIATE FOR THE LOCATION AND PREVENT SOIL 67. EROSION AT ALL TIMES, INCLUDING WORKING HOURS, OUT OF HOURS, WEEKENDS, PUBLIC HOLIDAYS, AND DURING ANY OTHER SHUTDOWN PERIODS.
- 40 THE APPLICATION OF LIQUID OR CHEMICAL-BASED DUST SUPPRESSION MEASURES SHALL ENSURE THAT EDIMENT-LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OF ENVIRONMENTAL HAZARD
- ALL CUT AND FILL EARTH BATTERS LESS THAN 3m IN ELEVATION SHALL BE TOPSOILED, AND GRASS SEEDED/HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF GRADING IN CONSULTATION WITH COUNCIL 41.
- ONCE CUT/FILL OPERATIONS HAVE BEEN FINALISED IN A SECTION, ALL DISTURBED AREAS THAT ARE NOT BEING 42. WORKED ON SHALL BE STABILISED IN ACCORDANCE WITH TIME LINES IN THE BLUE BOOK
- ALL REASONABLE AND PRACTICABLE MEASURES SHALL BE TAKEN TO PREVENT OR AT LEAST MINIMISE. THE 43 RELEASE OF SEDIMENT FROM THE SITE
- SUITABLE ALL-WEATHER MAINTENANCE ACCESS SHALL BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.
- SEDIMENT CONTROL DEVICES, OTHER THAN SEDIMENT BASINS, SHALL BE DE-SILTED AND MADE FULLY 45. OPERATIONAL AS SOON AS REASONABLE AND PRACTICABLE AFTER A SEDIMENT-PRODUCING EVENT, WHETHER NATURAL OR ARTIFICIAL, IF THE DEVICE'S SEDIMENT RETENTION CAPACITY FALLS BELOW 75% OF ITS DESIGN RETENTION CAPACITY.
- LL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, SHALL BE IAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THEIR OPERATIONAL LIVES.
- WASHING/FLUSHING OF SEALED ROADWAYS SHALL ONLY OCCUR WHERE SWEEPING HAS FAILED TO REMOVE 47. VICIFICIENT SEDIMENT AND THERE IS A COMPELLING NEED TO REMOVE THE REMAINING SEDIMENT (IE.G. FOR SAFETY REASONS). IN SUCH CIRCUMSTANCES, ALL REASONABLE AND PRACTICABLE SEDIMENT CONTROL MEASURES SHALL BE USED O PREVENT, OR AT LEAST MINING, THE RELASE OF SEDIMENT INTO RECEIVING WATERS ONLY THOSE MEASURES THAT WILL NOT CAUSE SAFETY AND PROPERTY ELOODING ISSUES SHALL BE TELOS: ONE TINOS ENERGINES AND THE WEEK OF DAGE SALE BE DISPOSED OF IN A LAWFUL MANNER THAT DOES TO AUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM. EMPLOYED
- SEDIMENT REMOVED FROM SEDIMENT TRAPS AND PLACES OF SEDIMENT DEPOSITION SHALL BE DISPOSED OF 48. IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM

SEDIMENT BASINS - INSTALLATION, MAINTENANCE AND REMOVAL INCLUDING DIMENT TRAPS

- AS-CONSTRUCTED PLANS SHALL BE PREPARED FOR ALL CONSTRUCTED SEDIMENT BASINS AND ASSOCIATED EMERGENCY SPILLWAYS. SUCH PLANS SHALL VERIFY THE BASINS DIMENSIONS, LEVELS AND VOLUMES COMPLY WITH THE APPROVED DESIGN DRAWINGS. THESE PLANS MAY BE REQUESTED BY THE CERTIFIER OR COUNCIL
- SEDIMENT BASINS SHALL BE CONSTRUCTED AND FULLY OPERATIONAL PRIOR TO ANY OTHER SOIL DISTURBANCE IN THEIR CATCHMEN
- INSTALL AN INTERNAL GATED VALVE, OR SIMILAR, IN ANY OUTLET PIPE ONCE PIPES INSTALLED, OR INSTALL A SACRIFICIAL PIPE FROM BASIN THROUGH WALL TO EXTERNAL OUTLET POINT. THE VALVE SHALL BE CONNECTED TO A RISER MADE FROM SLOTTED PIPE IN THE BASIN. THE VALVE MAY BE OPENED ONCE CAPTURED WATER MEETS WATER QUALITY REQUIREMENTS. THE FINAL SETUP FOR TEMPORARY INTERNAL OUTLET STRUCTURES TO BE CONFIRMED PRIOR TO CONSTRUCTION WITH COUNCIL. THIS SETUP WILL ENABLE DISCHARGE OF TREATED WATER FROM SITE WITHOUT NEED FOR PUMPING.
- A SEDIMENT STORAGE LEVEL MARKER POST SHALL BE WITH A CROSS MEMBER SET JUST BELOW THE TOP OF THE SEDIMENT STORAGE ZONE (AS SPECIFIED ON THE APPROVED ESCP). AT LEAST A 75mm WIDE POST SHALL BE FIRMLY SET INTO THE BASIN FLOOR.
- THE SITE MANAGER SHALL OBTAIN THE RELEVANT APPROVALS FROM THE RELEVANT ORGANISATIONS TO 53 DISCHARGE TREATED WATER FROM ANY EXISTING BASINS, ORGANISATIONS MAY INCLUDE, BUT NOT BE LIMITED TO, HUNTER WATER, AND COUNCIL.
- WHERE MORE THAN ONE STAGE IS TO BE DEVELOPED AT ONE TIME, OR BEFORE THE PRECEDING STAGE IS COMPLETE, THE SEDIMENT BASIN(S) FOR THESE STAGES SHALL HAVE SUFFICIENT CAPACITY TO CATER FOR ALL AREA DIRECTED TO THE BASIN(S).
- PRIOR TO ANY FORECAST WEATHER EVENT LIKELY TO RESULT IN RUNOFF, ANY BASINS/TRAPS SHALL BE DEWATERED TO PROVIDE SUFFICIENT CAPACITY TO CAPTURE SEDIMENT LADEN WATER FROM THE SITE. 55.
- SUFFICIENT QUANTITIES OF CHEMICAL S/AGENTS TO TREAT CAPTURED WATER SHALL BE PLACED SUCH THAT WATER ENTERING THE BASIN MIXES WITH THE CHEMICAL/AGENTS AND IS CARRIED INTO THE BASIN TO SPEED UP CLARIFICATION
- ANY BASIN SHALL BE DEWATERED WITHIN THE X-DAY RAINFALL DEPTH USED TO CALCULATE THE CAPACITY OF 57. 85 THE BASIN, AFTER A RAINFALL EVENT
- SUFFICIENT QUANTITIES OF CHEMICALS/AGENTS TO TREAT TURBID WATER SHALL BE SECURELY STORED ON-SITE TO PROVIDE FOR AT LEAST THREE COMPLETE TREATMENTS OF ALL BASINS REQUIRING CHEMICALLY REATMENT ONSITE
- PRIOR TO THE CONTROLLED DISCHARGE (E.G. DE-WATERING ACTIVITIES) FROM EXCAVATIONS AND/OR SEDIMENT BASINS, THE FOLLOWING WATER QUALITY OBJECTIVES SHALL BE ACHIEVED: a) TOTAL SUSPENDED SOLIDS (TSS) TO A MAXIMUM 50mg/L;

 - WATER PH BETWEEN 6.5 AND 8.5, UNLESS OTHERWISE REQUIRED BY THE COUNCIL; TURRIDITY (MEASURED IN NTUS) TO A MAXIMUM OF 60 NTU); AND
 - EC LEVELS NO GREATER THAN BACKGROUND LEVELS.
- THE DEVELOPMENT APPROVAL MAY REQUIRE TESTING OF ADDITIONAL WATER QUALITY ELEMENTS PRIOR TO DISCHARGE. E.G. HEAVY METALS.
- A SAMPLE OF THE RELEASED TREATED WATER SHALL BE KEPT ONSITE IN A CLEAR CONTAINER WITH THE SAMPLE DATE RECORDED ON IT
- WATER QUALITY SAMPLES SHALL BE TAKEN AT A DEPTH NO LESS THAN 200MM BELOW THE WATER SURFACE 62 OF THE BASIN
- NO ALUMINIUM BASED PRODUCTS MAY BE USED TREAT CAPTURED WATER ONSITE WITHOUT THE PRIOR WRITTEN PERMISSION FROM AN APPROPRIATE COUNCIL OFFICER. THE APPLICANT SHALL HAVE A DEMONSTRATED ABILITY TO USE SUCH PRODUCTS CORRECTLY AND WITHOUT ENVIRONMENTAL HARM PRIOR TO ANY APPROVAL
- THE CHEMICAL/AGENT USED IN TYPE D AND TYPE F BASINS TO TREAT CAPTURED WATER CAPTURED IN THE BASIN SHALL BE APPLIED IN CONCENTRATIONS SUFFICIENT TO ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES WITHIN THE X-DAY RAINFALL DEPTH USED TO CALCULATE THE CAPACITY OF THE BASIN, AFTER A RAINFALL EVENT
- ALL MANUFACTURERS' INSTRUCTIONS SHALL BE FOLLOWED FOR ANY CHEMICALS/AGENTS USED ONSITE, 65. EXCEPT WHERE APPROVED BY THE RESPONSIBLE PERSON OR AN APPROPRIATE COUNCIL OFFICER
- THE APPLICANT SHALL ENSURE THAT ON EACH OCCASION A TYPE F OR TYPE D BASIN WAS NOT DE-WATERED PRIOR TO BEING SURCHARGED BY A FOLLOWING RAINFALL EVENT, A REPORT IS PRESENTED TO AN APPROPRIATE COUNCIL OFFICER WITHIN 5 DAYS LIDENTIFYING THE CIRCUMSTANCES AND PROPOSED AMENDMENTS, IF ANY, TO THE BASINS OPERATING PROCEDURES.
- SETTLED SEDIMENT SHALL BE REMOVED AS SOON AS REASONABLE AND PRACTICABLE FROM ANY SEDIMENT
- a) IT IS ANTICIPATED THAT THE NEXT STORM EVENT IS LIKELY TO CAUSE SEDIMENT TO SETTLE ABOVE THE BASIN'S SEDIMENT STORAGE ZONE: OR
- b) THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE TOP OF THE BASIN'S SEDIMENT STORAGE ZONE;
- THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE BASINS SEDIMENT MARKER LINE
- SCOUR PROTECTION MEASURES PLACED ON SEDIMENT BASIN EMERGENCY SPILLWAYS SHALL APPROPRIATELY PROTECT THE SPILLWAY CHUTE AND ITS SIDE BATTERS FROM SCOUR, AND SHALL EXTEND A MINIMUM OF 3M BEYOND THE DOWNSTREAM TOE OF THE BASIN'S EMBANKMENT.
- 69 SUITABLE ALL-WEATHER MAINTENANCE ACCESS SHALL BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.
- MATERIALS, WHETHER LIQUID OR SOLID, REMOVED FROM ANY ESC MEASURES DURING MAINTENANCE OR DECOMMISSIONING, SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
- ALL SEDIMENT BASINS SHALL REMAIN FULLY OPERATIONAL AT ALL TIMES UNTIL THE BASIN'S DESIGN CATCHMENT ACHIEVES 70% GROUND COVER OR SURFACE STABILISATION ACCEPTABLE TO COUNCIL
- 72 THE ESC MEASURES INSTALLED DURING THE DECOMMISSIONING AND REHABILITATION OF A SEDIMENT BASIN SHALL COMPLY WITH SAME STANDARDS SPECIFIED FOR THE NORMAL CONSTRUCTION WORK
- A SEDIMENT BASIN SHALL NOT BE DECOMMISSIONED UNTIL ALL UP-SLOPE SITE STABILISATION MEASURES HAVE BEEN IMPLEMENTED AND ARE APPROPRIATELY WORKING TO CONTROL SOIL EROSION AND SEDIMENT RUNOFF
- IMMEDIATELY PRIOR TO THE CONSTRUCTION OF THE PERMANENT STORMWATER TREATMENT DEVICE APPROPRIATE FLOW BYPASS CONDITIONS SHALL BE ESTABLISHED TO PREVENT SEDIMENT-LADEN WATER ENTERING THE DEVICE.

REVEGETATION/ STABILISATION

76

86.

REGUEST

INSTREAM WORKS

SITE STAGING METHODOLOGY

FINAL ISED

90.

- PNEUMATICALLY APPLIED EROSION CONTROLS.
- ALL CUT AND FILL EARTH BATTERS LESS THAN 3m IN ELEVATION SHALL BE TOPSOILED, AND GRASS
- THE LMCC SEED MIX SHALL BE USED UNLESS STATED ON THE ESCP/SWI 78

AND/OR SOIL ANALYSIS

/EGETATION PRIOR TO INITIATING THE ESTABLISHMENT OF VEGETATION

BLANKETS, OR TEMPORARY SOIL BINDERS.

CONSTRUCTION AND MAINTENANCE PHASE.

NAME OF REGULATORY AUTHORITY] ON REQUEST.

SITE MONITORING AND MAINTENANCE

NON REWETTABLE BINDER SHALL BE USED IN ALL HYDROMULCH/ HYDROSEED/ POLYMER MIXES ON SLOPES OR WORKS ADJACENT TO A WATER COURSE.

TEMPORARY STABILISATION MAY BE ATTAINED USING VEGETATION, NON REWETTABLE SOIL POLYMERS, OR

YDROMULCHED WITHIN 10 DAYS OF COMPLETION OF GRADING IN CONSULTATION WITH COUNCIL

ONCE CUT/FILL OPERATIONS HAVE BEEN FINALISED IN A SECTION, ALL DISTURBED AREAS THAT ARE NOT BEING WORKED ON SHALL BE STABILISED IN ACCORDANCE WITH TIME LINES IN THE BLUE BOOK.

THE PH LEVEL OF TOPSOIL SHALL BE APPROPRIATE TO ENABLE ESTABLISHMENT AND GROWTH OF SPECIFIED

SOIL AMELIORANTS SHALL BE ADDED TO THE SOIL IN ACCORDANCE WITH AN APPROVED LANDSCAPE PLAN, VEGETATION MANAGEMENT PLAN, AND/OR SOIL ANALYSIS.

SURFACE SOIL DENSITY, COMPACTION AND SURFACE ROUGHNESS SHALL BE ADJUSTED PRIOR TO SEEDING/PLANTING IN ACCORDANCE WITH AN APPROVED LANDSCAPE PLAN. VEGETATION MANAGEMENT PLAN

PROCEDURES FOR INITIATING A SITE SHUTDOWN, WHETHER PROGRAMMED OR UN-PROGRAMMED, SHALL INCORPORATE REVEGETATION OF ALL SOIL DISTURBANCES UNLESS OTHERWISE APPROVED BY COUNCIL. THE STABILISATION WORKS SHALL NOT RELY UPON THE LONGEVITY OF NON-VEGETATED EROSION CONTROL

THE APPLICANT SHALL ENSURE THAT APPROPRIATE PROCEDURES AND SUITABLY QUALIFIED PERSONNEL ARE ENGAGED TO PLAN AND CONDUCT SITE INSPECTIONS AND WATER QUALITY MONITORING THROUGHOUT THE

ALL ESC MEASURES SHALL BE INSPECTED AND ANY MAINTENANCE LINDERTAKEN IMMEDIATELY AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE); AND AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE); AND AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON-SITE); AND WITHIN 24HRS OF A RAINFALL EVENT THAT CAUSES RUNOFF ON THE SITE.

WRITTEN RECORDS SHALL BE KEPT ONSITE OF ESC MONITORING AND MAINTENANCE ACTIVITIES CONDUCTED DURING THE CONSTRUCTION AND MAINTENANCE PERIODS, AND BE AVAILABLE TO COUNCIL OFFICERS ON

ALL ENVIRONMENTALLY RELEVANT INCIDENTS SHALL BE RECORDED IN A FIELD LOG THAT SHALL REMAIN ACCESSIBLE TO ALL RELEVANT REGULATORY AUTHORITIES.

ALL WATER QUALITY DATA, INCLUDING DATES OF RAINFALL, DATES OF TESTING, TESTING RESULTS AND DATES OF WATER RELEASE, SHALL BE KEPT IN AN ON-SITE REGISTER. THE REGISTER IS TO BE MAINTAINED UP TO DATE FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON-SITE FOR INSPECTION BY [INSERT

89. AT NOMINATED INSTREAM WATER MONITORING SITES, A MINIMUM OF 3 WATER SAMPLES SHALL BE TAKEN AND ANALYSED, AND THE AVERAGE RESULT USED TO DETERMINE QUALITY.

ALL INSTREAM WORKS (INCLUDING IN OR AD JACENT TO WATERCOURSES NATURAL OR MANMADE, FLOWING OR NOT) SHALL BE CARRIED OUT IN ACCORDANCE WITH THE IECA WHITE BOOKS.

THF INTENDED SITE CONSTRUCTION STAGING IS AS FOLLOWS:

ENDED SHE CONSTRUCTION STAGENES AS POLCONS: INSTALL SEDMENT FENCING AS REQUIRED. CONSTRUCT THE PERMANENT ON-SITE DETENTION BASIN AND OUTLET STRUCTURES TO BE UTILISED AS THE SITE SEDMENT BASIN. LOW FLOW OUTLET TO BE CAPPED DURING CONSTRUCTION. INSTALL DIVERSION SWALES TO DIRECT SEDIMENT LADEN WATER TO SEDMENT BASIN.

CONSTRUCT SITE BENCHING AND ROADWAYS DE-SILT SEDIMENT BASIN ONCE REQUIRED GROUND COVER IS ACHIEVED

RE-INSTATE BASIN AS ON-SITE DETENTION. LOW FLOW STRUCTURES AND BIO-BASIN FEATURES TO BE



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PROJECT

PROPOSED ROAD UPGRADE 21 RACECOURSE ROAD TERALBA, NSW

CLIEN

CONCRUSH PTY LTD

THIS DRAWING CONTAINS COLOURED INFORMATION C M Y

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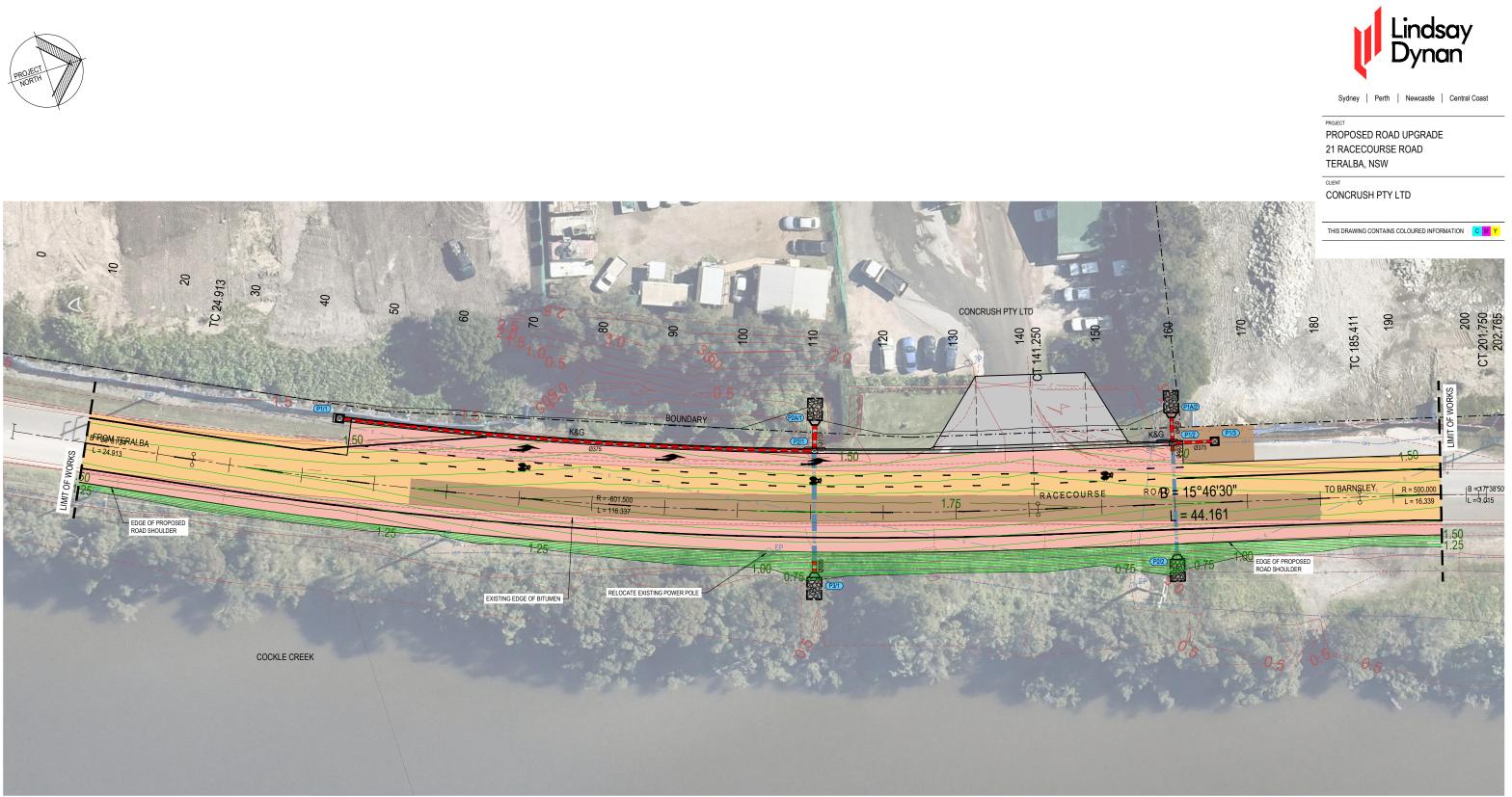
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SOIL & WATER MANAGEMENT NOTES

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DETAIL PLAN

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	DENOTES NEW FLEXIBLE ROAD PAVEMENT, REFER TO DRAWING 16015-LD-DR-C-10400 FOR DETAILS	K&G	STANDARD CONCRETE KERB & GUTTER, REFER TO LMCC FOR DETAILS.	ALL WO CURRE GUIDEI
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	DENOTES NEW CONCRETE DRIVEWAY AND CROSSING (200mm THICK), REFER TO LMCC DRAWING EGSD-104 FOR DETAILS	1.0	EXISTING CONTOUR (0.5m INTERVALS)	THE PO REGAR
		450	EXISTING STORMWATER Ø450 PIPE	COMPR
	DENOTES PAVEMENT MILLING AND ASPHALTIC CONCRETE WEARING COURSE 50mm THICK (AC14)	600	EXISTING STORMWATER Ø600 PIPE	DETER AUTHC
		— E —	EXISTING ELECTRICAL SERVICE	BENCH
	ASPHALTIC CONCRETE CORRECTIVE COURSE VARIABLE THICKNESS (INCLUDES ASPHALTIC CONCRETE WEARING COURSE 50mm THICK)	OPT	EXISTING OPTICAL FIBRE SERVICE	CONST
		— s —	EXISTING SEWER SERVICE	EARTH
× (P1/1)	NEW STORMWATER DRAINAGE PIT	UGP	EXISTING UNDERGROUND POWER SERVICE	PAVEM
∇	NEW STORMWATER DRAINAGE HEADWALL			WITH T
Ø375	NEW RCP STORMWATER DRAINAGE PIPELINE		BOUNDARY LINE	ALL PR WITH E
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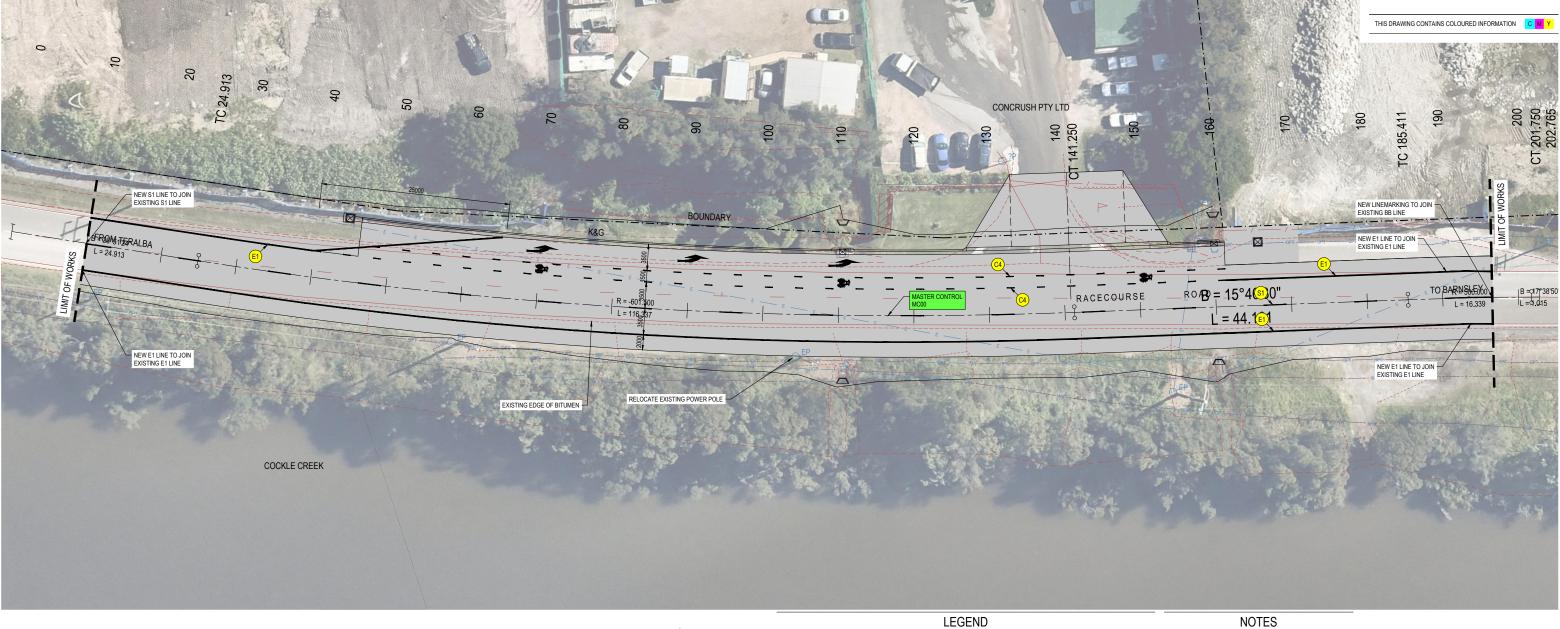
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LINE MARKING	PLAN
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ROAD CENTRE LINE	K&G	STANDARD CONCRETE KERB & GUTTER, REFER TO LMCC FOR DETAILS	ALL V CURF GUID
BICYCLE LANE, CONTINITY LINE	450	EXISTING STORMWATER Ø450 PIPE	STAT
PAVEMENT TURN ARROW	600	EXISTING STORMWATER Ø600 PIPE	THE I
PAVEMENT SYMBOL TYPIE PS-2	E	EXISTING ELECTRICAL SERVICE	COM
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NEW STORMWATER DRAINAGE PIT	UGP	EXISTING UNDERGROUND POWER SERVICE	CON
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PROJECT

PROPOSED ROAD UPGRADE 21 RACECOURSE ROAD TERALBA, NSW

CLIENT

CONCRUSH PTY LTD

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HE POSITION OF ALL EXISTING SERVICES SHOWN SHOULD BE EGARDED AS APPROXIMATE ONLY AND NOT NECESSARILY OMPREHENSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TERMINE THE EXACT SERVICE LOCATIONS AND INFORM ALL JTHORITIES PRIOR TO ANY EXCAVATION.

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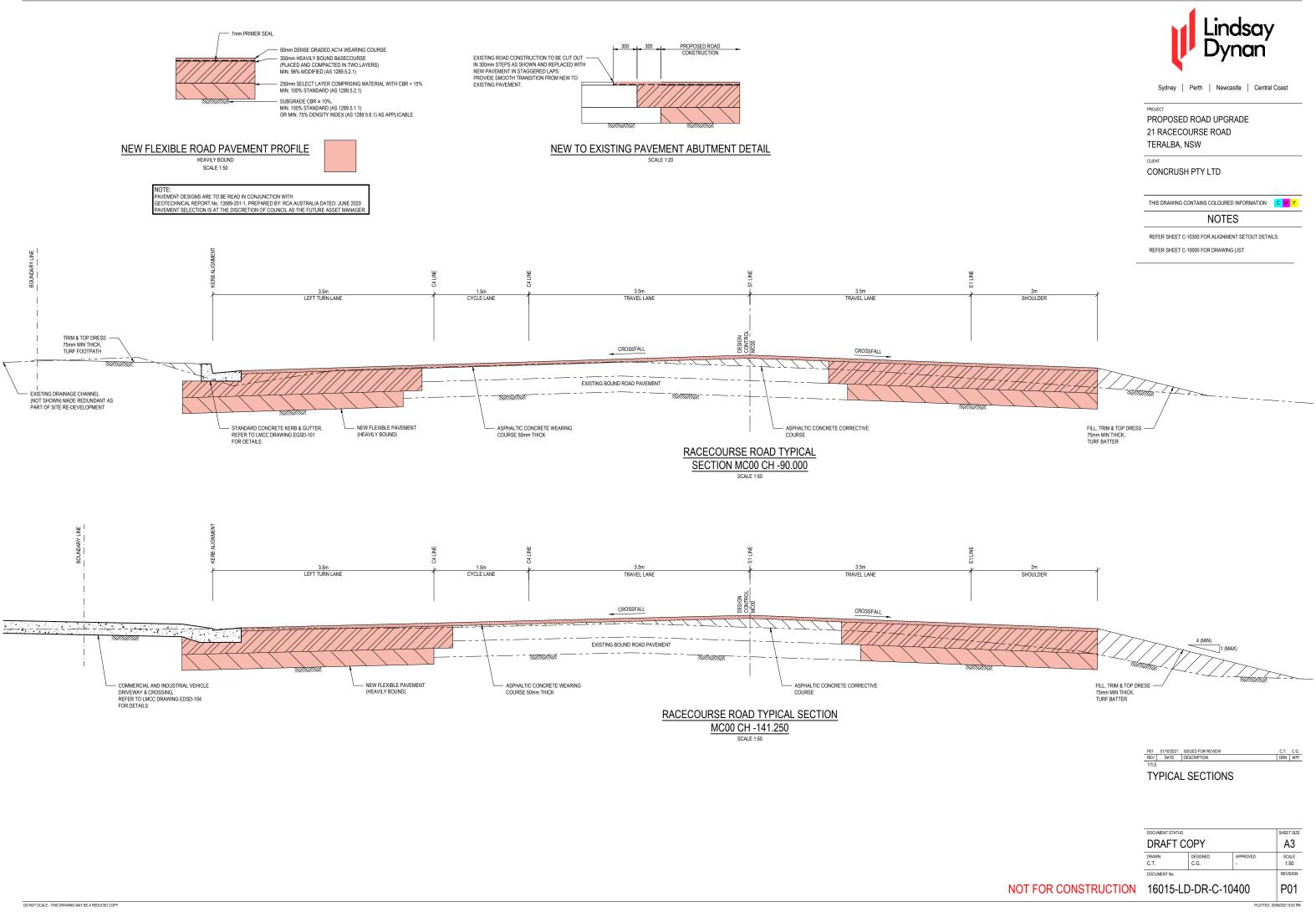
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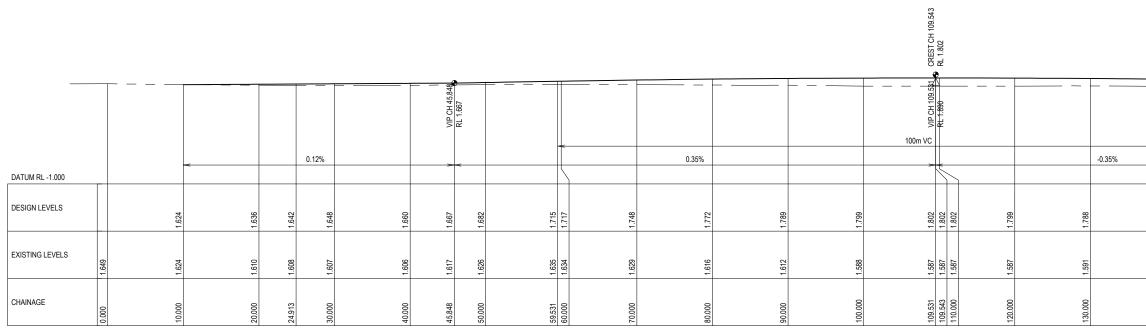
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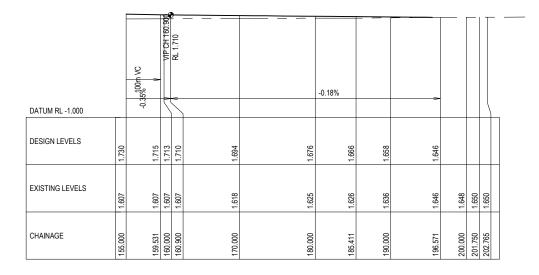






LONGITUDINAL SECTION ALONG CONTROL MC00

HORIZONTAL SCALE 1:500 VERTICAL SCALE 1:100



LONGITUDINAL SECTION ALONG CONTROL MC00

HORIZONTAL SCALE 1:500 VERTICAL SCALE 1:100

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1.7	1.767	1.745	1.730	
	-			
œ	1.575	4	~	
1.578	12	1.604	1.607	
-	-		-	
8	20	8	8	
0.0	141.250	0.0	155.000	
4	4	150.000	15	

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PROPOSED ROAD UPGRADE 21 RACECOURSE ROAD TERALBA, NSW

CONCRUSH PTY LTD

PROJECT

CLIENT

WEST LIP OF GUTTER EXISTING SURFACE									
	<		0.45%	×	-0.35%		0.35%	>	<
Datum R.L3.000									
CUT/FILL	+0.231 +0.233	+0.253	+0.252 +0.248	+0.202	+0.220	+0.279	-0.059 +0.011 +0.010	-0.014 -0.013 +0.011	+0.012
DESIGN WEST LIP OF GUTTER									
	1.426	1.488	<u>1 532</u>	1.576	1 506	<u>1.471</u> <u>1.470</u>	1.504 1.518 1.527	1.538 1.549 1.573	1.535
EXISTING SURFACE	1.195	1.213	<u>1.277</u> 1.284	1.373	<u>1.321</u> 1.162	1.192	1.563 1.507 1.516	1.552 1.563 1.562	1.555
CHAINAGE		50.378	<u>70,000</u>	80.000	9	110.000 110.350 110.451	120.000 124.086 126.580	000	141.250 148.356

Scale Horizontal 1:250 Vertical 1:50

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LONGITUDINAL SECTION ALONG LIP WESTERN KERB

HORIZONTAL SCALE 1:500 VERTICAL SCALE 1:100



P01

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DOCUMENT STA	RAFT COPY					
DRAFT	COPY		A3			
DRAWN	DESIGNED	APPROVED	SCALE			
C.T.	C.G.	M.Watson	AS NOTED			
DOCUMENT No.	·		REVISION			

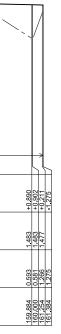
LONGITUDINAL SECTION -LIP WESTERN KERB

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 01/10/2021
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 DATE
 DESCRIPTION

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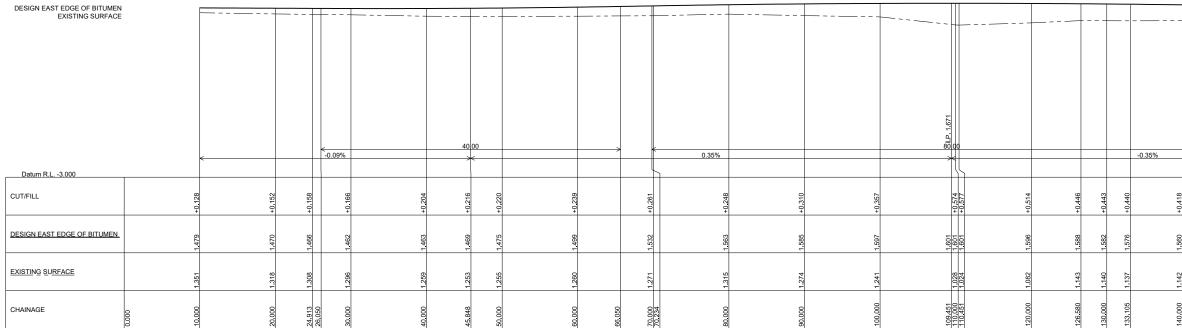
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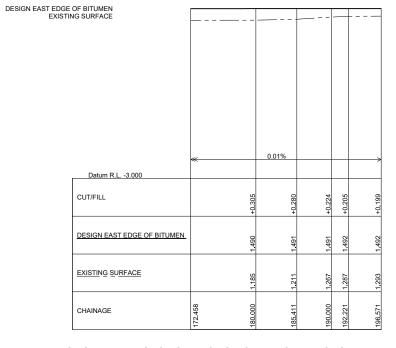






LONGITUDINAL SECTION ALONG ROAD EASTERN SHOULDER

HORIZONTAL SCALE 1:500 VERTICAL SCALE 1:100



LONGITUDINAL SECTION ALONG ROAD EASTERN SHOULDER

HORIZONTAL SCALE 1:500 VERTICAL SCALE 1:100

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PROPOSED ROAD UPGRADE 21 RACECOURSE ROAD TERALBA, NSW

CLIENT

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								THIS DRAWING	CON	TAIN	S COLOURED INFORMATION	C M Y
		 	*			2	0.00	0.01%		۸ »		
			Ц	Ţ	7		Ţ			1		
+0.418	+0.411	+0.433	+0.439		+0.450	+0.319 +0.317	+0.311		+0.307			
	1.556	1.534	1.528		1.515	<u>1 500</u> 1 500			1.490			
1.142	1.145	1.101	1.090		1.065	<u>1 181</u> 1 183	1.186		1.183			
140.000	141.250	148.356	150.000	150.234	153 854	159.884 160.000	161.384		170.000	172.458		

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 01/10/2021
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 DATE
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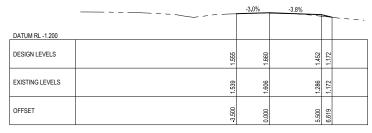
ROAD EASTERN SHOULDER

LONGITUDINAL SECTION -

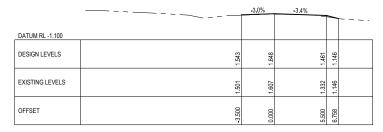
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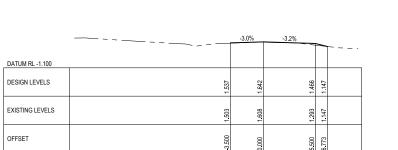
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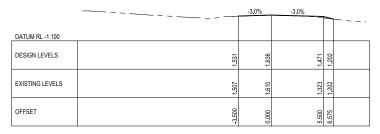




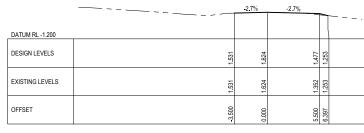














	~		2.5%	_			-2.7%	-3.9%	_
DATUM RL -1.000			\rightarrow	1	\geq	\geq]		
DESIGN LEVELS		1.600	1.701	1 6.42	1.493	1.533	1.748	1.532	1.308
EXISTING LEVELS		1.600	1.587	1 386	1.380	1,287	1,629	1.360	1.308
OFFSET		11 403	-10.997	0.000	8.500	8.050	0000	5.500	6.395

2.5%

489 647 599 449 489

1,489 1,469 1,280 1,266 1,263 1,263

500 530

CH 60.000

DATUM RL -1.000

DESIGN LEVELS

EXISTING LEVELS

DATUM RL -1.000

DESIGN LEVELS

EXISTING LEVELS

DATUM RL -1.200

DESIGN LEVELS

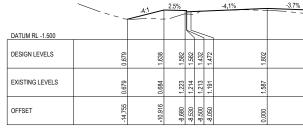
EXISTING LEVELS

OFFSET

OFFSET

OFFSET



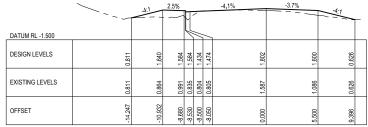


496 336

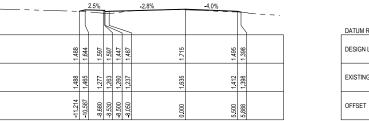
1.378

5.500 6.142

CH 110.000



CH 109.543



-4.0%

461

1.304 1.213

500

CH 59.531

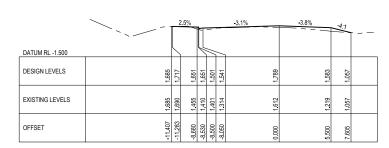
-2.9%

CH 50.000

DATUM RL -1.200 DESIGN LEVELS 1.617 1.617 1.617 1.467 611 EXISTING LEVELS 1.143 1.096 1.086 2200

2.5%

CH 100.000



CH 90.000

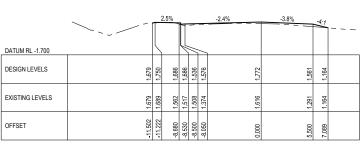
							0.0%	4.007		
		1		F	-	-	-3.0%	-4.0%	-	
DATUM RL -1.200		Ц		Ŕ		\geq				
DESIGN LEVELS	1449	1.575	1.536	1.536	1.386	1.426	1.667	1.446	1.188	
EXISTING LEVELS	1.449	1.418	1.218	1.198	1.195	1.199	1.617	1.291	1.188	
OFFSET	-10.737	-10.233	-8.680	-8.530	-8.500	-8.050	000 0	5.500	6,535	

1 449 1 554 1 554 1 404 1 444

1 449 1 396 1 222 1 204 1 204 1 216

10.658 10.095 8.680 8.530 8.500

CH 45.848



CH 80.000

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DRAWN C.T.	SCALE 1:200		
DOCUMENT No.	REVISION		
16015-LE)-DR-C-10)600	P01



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 DATE
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C.T. C.G. DRN APP



-3.7%





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PROPOSED ROAD UPGRADE

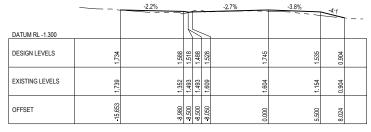
21 RACECOURSE ROAD

CONCRUSH PTY LTD

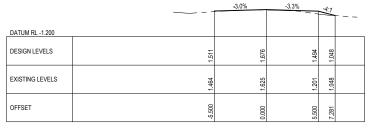
TERALBA, NSW

PROJECT

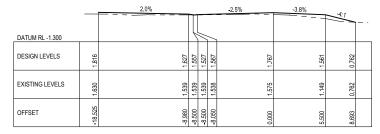
CLIENT



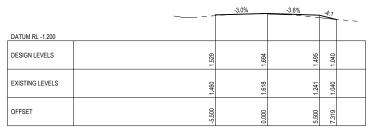




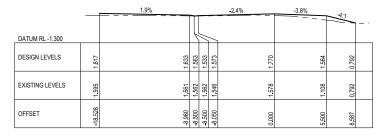
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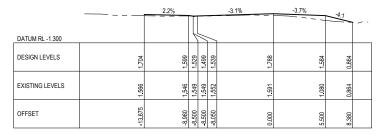




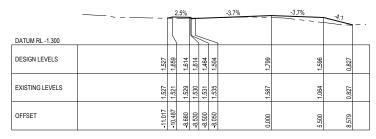












DATUM RL -1.400		2.5%	Į		_	-2.9%	-3.9%	4:1	
DESIGN LEVELS	1.632	1.587	1.587	1.437	1.477	1.709	1.496	0.641	
EXISTING LEVELS		1.204	1.211	1.212	1.245	1.608	1.152	0.641	
OFFSET	-10.506	-8.680	-8.530	-8.500	-8.050	0000	5.500	8.919	

83

35

0.506

3.264

DATUM RL -1.700

DESIGN LEVELS

EXISTING LEVELS

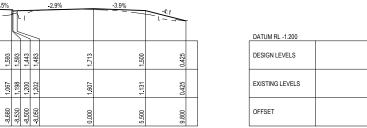
OFFSET

CH 161.384

-2.4% 2.6% 4:1 DATUM RL -1.300 DESIGN LEVELS 503 80 EXISTING LEVELS 1.292 OFFSET

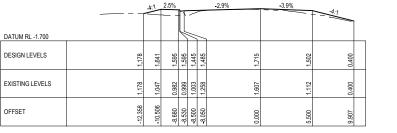
CH 196.570

-3.0%





CH 190.000



CH 159.531

		-3.0%	-3.1%	_	
DATUM RL -1.200					
DESIGN LEVELS	.501	1.666	1.493	1.196	
EXISTING LEVELS	-1.464 464	1.626	1.322	1.196	
OFFSET	-2 200 - 2 500	000'0	5.500	6.690	

CH 185.411

PLOTTED: 01/10/2021 1:29 PM

C.T. C.G. DRN APP

DOCUMENT STATUS	SHEET SIZE		
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DRAWN C.T.	DESIGNED C.G.	APPROVED -	SCALE 1:200
DOCUMENT No.	REVISION		
16015-LE	P01		

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SHEET 2

CROSS SECTIONS - MC00







PROPOSED ROAD UPGRADE 21 RACECOURSE ROAD TERALBA, NSW CLIENT

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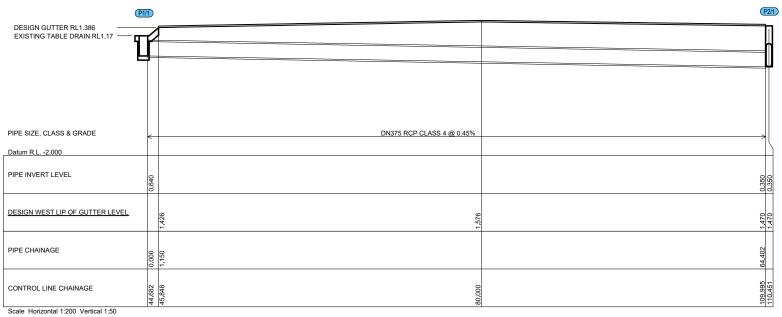
PROJECT

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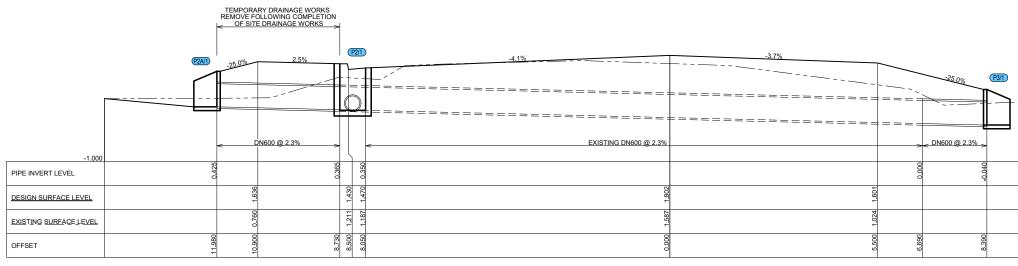


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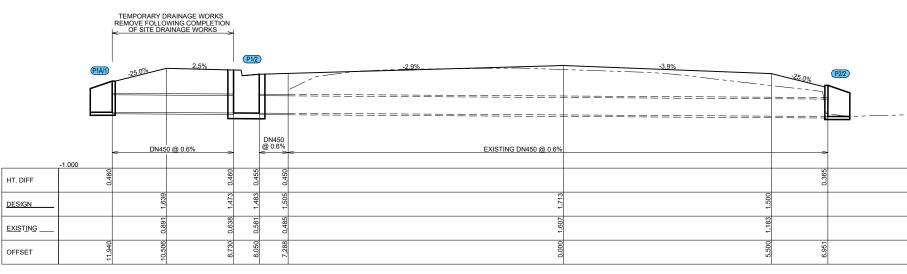
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DRAINAGE PROFILE LINE 1



DRAINAGE PROFILE LINE 1 (AT CONTROL LINE CH 110.451) Scale Horizontal 1:50 Vertical 1:50



DRAINAGE PROFILE LINE 2 (AT CONTROL LINE CH 160.000) Scale Horizontal 1:50 Vertical 1:50

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DOCUMENT STATUS	SHEET SIZE		
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DRAWN C.T.	DESIGNED C.G.	APPROVED	SCALE 1:200
DOCUMENT No.	REVISION		
16015-LD-DR-C-10700			

CROSS SECTIONS - MC00 SHEET 5

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 01/10/2021
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PROPOSED ROAD UPGRADE 21 RACECOURSE ROAD TERALBA, NSW

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