SURF COAST SHIRE JAN JUC CREEK DAYLIGHTING



LOCALITY	PLAN
SCALE 1:25	00 m

DRAWING INDEX						
DRAWING No.	DRAWING No. DRAWING TITLE					
VC2019-002-DWG-0001	LOCALITY PLAN AND DRAWING INDEX	С				
VC2019-002-DWG-0002	NOTES - SHEET 1 OF 2	С				
VC2019-002-DWG-0003	NOTES - SHEET 2 OF 2	C				
VC2019-002-DWG-0010	DEMOLITION PLAN	A				
VC2019-002-DWG-0100	GENERAL ARRANGEMENT PLAN	С				
VC2019-002-DWG-0200	TYPICAL SECTIONS - SHEET 1 OF 2	C				
VC2019-002-DWG-0201	TYPICAL SECTIONS - SHEET 2 OF 2	С				
VC2019-002-DWG-0300	LONGITUDINAL SECTIONS	С				

	STANDARD DRAWINGS		
DRAWING No.	DRAWING TITLE		
	MELBOURNE WATER STD DRG		
7251/08/206	POST & RAIL SAFETY BARRIER AROUND DROP ZONES		
IDM STD DRG			
SD 497	REINFORCED CONCRETE WINGWALL (IN-SITU)		



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JRF COAST SHIRE N JUC CREEK DAYLIGHTING CALITY PLAN AND DRAWING INDEX

VC2019-002-DWG-0001

- IF ANY ARCHAEOLOGICAL OR CULTURAL MATERIAL IS EXPOSED ON THE WORK SITE ALL WORKS SHALL CEASE. THE DEPARTMENT OF ENERGY, ENVIRONMENT AND CLIMATE ACTION (DEECA), ABORIGINAL HERITAGE COUNCIL AND SURF COAST SHIRE COUNCIL ARE TO BE
- ALL WORKS ARE TO COMPLY WITH THE REQUIREMENTS OF THE ENVIRONMENTAL PROTECTION ACT (E.P.A.), 2017.
- THE POSITIONS SHOWN ON DRAWINGS FOR PUBLIC UTILITIES SERVICES ARE BASED ON SURVEY INFORMATION PROVIDED BY STEP SURVEYING AND BEFORE YOU DIG AUSTRALIA (B.Y.D.A) INFORMATION SUPPLIED AT TIME OF DESIGN AND ARE INDICATIVE ONLY. PRIOR TO CONSTRUCTION THE CURRENT SERVICE AUTHORITY INFORMATION IS TO BE OBTAINED FROM DIAL BEFORE YOU DIG (WEBSITE: WWW.1100.COM.AU OR PHONE 1100). THE POSITION AND DEPTH OF EACH SERVICE IS TO BE VERIFIED BY THE RELEVANT SERVICE AUTHORITY ON SITE AND THE DESIGN VERIFIED BEFORE THE START OF ANY CONSTRUCTION OR ORDERING MATERIALS.
- WHERE REFERENCE IS MADE TO THE SUPERINTENDENT, THIS REFERS TO SURF COAST SHIRE COUNCIL REPRESENTATIVE TO THE SUPERINTENDENT ON SITE, WHERE REFERENCE IS 29. MADE TO THE DESIGNER, THIS REFERS TO ENGENY. WHERE REFERENCE IS MADE TO THE CLIENT, THIS REFERS TO SURF COAST SHIRE COUNCIL WHERE REFERENCE IS MADE TO THE 30. PRINCIPAL. THIS REFERS TO SURF COAST SHIRE COUNCIL
- INFORMATION ON THESE DRAWINGS SHALL TAKE PRECEDENCE IF THERE IS ANY DISCREPANCY AND OR CONFLICT BETWEEN THESE DRAWINGS AND STANDARD DRAWINGS. ADVISE DESIGN SERVICES IMMEDIATELY OF ANY AND ALL DISCREPANCIES.
- THE DRAWINGS LISTED ON THE PROJECT COVER SHEET ARE TO BE READ AS A WHOLE AND NOT IN ISOLATION. ANY ISOLATED DRAWING SEPARATED FROM THE CONTROL SET WILL BE CONSIDERED VOIDED AND IS NOT TO BE USED.
- ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT'S SPECIFICATION AND ALL RELEVANT STANDARD DRAWINGS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS THAT SHALL BE ISSUED DURING THE COURSE OF CONSTRUCTION. ANY DISCREPANCY OR VARIATION SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH WORK.
- ALL DIMENSIONS IN MILLIMETRES UNLESS SPECIFIED OTHERWISE.
- THE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF THE WORK TO BE CARRIED OUT ONLY AND DIMENSIONS SHALL NOT BE OBTAINED BY SCALING
- 10. DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS STAMPED "ISSUED FOR CONSTRUCTION"
- 11. LEVELS SHOWN ARE TO A.H.D.
- 12. DESIGN INCLUDING CONNECTION POINTS AND CROSSINGS AND CLEARANCES OF EXISTING INFRASTRUCTURE HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY SERVICE 3. THE COORDINATE SYSTEM USED IS MGA94 ZONE 55. AUTHORITIES. NO POT HOLING HAS BEEN UNDERTAKEN TO VERIFY EXISTING SERVICE LOCATIONS & DEPTHS. IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERTAKE POT HOLING TO VERIFY THE DESIGN PRIOR TO COMMENCEMENT OF WORK.
- 13. CLASHES, CONFLICTS AND DISCREPANCIES ARE TO BE NOTIFIED TO THE SUPERINTENDENT IMMEDIATELY.
- 14. ANY ASPECTS REQUIRING CLARIFICATION SHOULD BE DIRECTED TO THE SUPERINTENDENT FOR CONFIRMATION.
- 15. NOTWITHSTANDING THE EXTENT OF WORKS SHOWN ON THE DRAWINGS, THE CONTRACTOR 3 . IS NOT PERMITTED TO CARRY OUT WORKS OUTSIDE THE EXTENT OF THE SITE WITHOUT FIRST OBTAINING THE PERMISSION OF THE SUPERINTENDENT.
- 16. DISPOSAL OF DEBRIS RESULTING FROM SITE CLEARANCE SHALL BE IN ACCORDANCE WITH SURE COAST SHIRE COUNCIL POLICY, COMBUSTION OF ANY MATERIAL SHALL NOT BE PERMITTED ON SITE WITHOUT PRIOR WRITTEN APPROVAL OF SURF COAST SHIRE COUNCIL.
- 17. THE CONTRACTOR IS RESPONSIBLE FOR ORGANISING AS CONSTRUCTED SURVEY.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING CONSTRUCTION TOLERANCES. ANY WORKS DEEMED NON-ACCEPTABLE SHALL BE RECTIFIED AT THE CONTRACTORS COST.
- 19. THE CONTRACTOR IS TO ENSURE COMPLIANCE WITH OCCUPATIONAL HEALTH AND SAFETY ACT AND AUSTRALIAN STANDARDS AS 1742, PARTICULARLY IN RESPECT TO WORKS BEING CONDUCTED ON A PUBLIC ROAD, TRAFFIC CONTROL, EXCAVATIONS, TRENCHES AND ENSURING SAFE PUBLIC ACCESS AT ALL TIMES.
- 20. ALL PEGS AND PROFILES PLACED BY THE CONTRACTOR SHALL BE REMOVED ON COMPLETION OF WORK UNLESS OTHERWISE DIRECTED BY SUPERINTENDENT.
- 21. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, AND WHERE APPLICABLE, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT STANDARD OF THE STANDARDS ASSOCIATION OF AUSTRALIA.
- 22. ALL TESTING AND SURVEY AS REQUIRED SHALL BE ARRANGED AND CARRIED OUT BY THE CONTRACTOR AND ALL TEST RESULTS AND SURVEY RECORDS MADE AVAILABLE TO THE 4. SUPERINTENDENT. THE COST OF ALL SUCH TESTING AND SURVEY SHALL BE BORNE BY THE CONTRACTOR.
- 23. THE PRINCIPAL WILL NOT BE RESPONSIBLE FOR THE SAFE-KEEPING OF ANY OF THE CONTRACTOR'S PLANT, EQUIPMENT, TOOLS, MATERIALS OR OTHER PROPERTY. THE CONTRACTOR MAY PROVIDE. AND PAY FOR, ANY SECURITY FENCING CONSIDERED NECESSARY AROUND ANY OFFICE, WORKSHOP OR STORAGE AREA, SUBJECT TO THE SUPERINTENDENT APPROVAL.
- 24. IF EXISTING FENCING IS CUT OR ALTERED BY THE CONTRACTOR, OR IF THERE IS NO EXISTING SITE FENCING. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY

- FENCING TO THE SATISFACTION OF THE SUPERINTENDENT DURING THE CONTRACT TO PREVENT UNAUTHORISED ENTRY INTO THE PROPERTY, AND SHALL REINSTATE THE FENCING AND REMOVE TEMPORARY FENCING ON COMPLETION OF THE WORK.
- 25. CONSTRUCTION WORK CARRIED OUT UNDER THIS CONTRACT ADJACENT TO OR ADJOINING 1 EXISTING WORKS SHALL MAKE SMOOTH JUNCTIONS WITH THE EXISTING WORK.
- 26. NO CLEARING WORKS SHALL COMMENCE PRIOR TO APPROVAL FROM THE SUPERINTENDENT, WHICH SHALL BE ARRANGED BY THE CONTRACTOR. ALL FELLED TREES 2. ALL SEDIMENT CONTROL DEVICES, SEDIMENT FENCES, CHECK DAMS, STONE TRAPS AND SHALL BE CHIPPED AND STOCKPILED ON-SITE WITH MULCH STORED ABOVE TOP OF BANK AS DIRECTED BY THE SUPERINTENDENT.
- 27. DIVERSION OF SURFACE WATER AND THE PROTECTION OF WORKS IS THE CONTRACTORS RESPONSIBILITY.
- NO NOISE OR SMOKE OR OTHER NUISANCE, WHICH IN THE OPINION OF THE SUPERINTENDENT IS UNNECESSARY OR EXCESSIVE SHALL BE PERMITTED BY THE CONTRACTOR IN THE PERFORMANCE OF THE WORKS UNDER THIS CONTRACT. SHOULD WORK OUTSIDE CUSTOMARY WORKING HOURS BE APPROVED, THE CONTRACTOR SHALL NOT USE, DURING ROCK PROTECTION SUCH PERIOD, ANY PLANT, MACHINERY OR EQUIPMENT WHICH IN THE OPINION OF THE SUPERINTENDENT IS CAUSING OR IS LIKELY TO CAUSE A NUISANCE TO THE PUBLIC. THE CONTRACTOR SHALL ENSURE THAT FUGITIVE DUST FROM DISTURBED AREAS IS
- MINIMISED BY A METHOD APPROVED BY THE SUPERINTENDENT.
- GROUND VIBRATION LEVELS, TRANSMITTED FROM OPERATING ITEMS OF PLANT IN THE VICINITY OF PREMISES. SHALL NOT EXCEED LEVELS THAT ARE CLOSE TO THE LOWER LEVEL OF HUMAN PERCEPTION. PRACTICES AND VIBRATION THRESHOLDS ACCEPTABLE SHALL BE DETERMINED IN ACCORDANCE WITH CURRENT STATUTORY REGULATIONS.
- THE CONTRACTOR MUST OBTAIN THE SUPERINTENDENT APPROVAL OF MATERIALS PRIOR
- 32. ALL WASTE OR DEMOLISHED MATERIALS SHALL BE DISPOSED OFF SITE TO AN APPROVED GEOTEXTILE INSTALLATION SITE, ALL FEES AND CHARGES SHALL BE INCLUDED IN THE CONTRACT SUM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE AND COMPENSATION PAYMENTS AS A RESULT OF NON-OBSERVANCE OF THE ABOVE REQUIREMENTS. NO CLAIM 2. GEOTEXTILE IS TO BE INSTALLED AS PER THE MANUFACTURERS SPECIFICATIONS. BY THE CONTRACTOR WILL BE CONSIDERED BY THE PRINCIPAL.
- 34. ALL WATER BODIES TO BE TEMPORARILY FENCED UNTIL PERMANENT ARRANGEMENTS ARE IN PLACE. SAFETY SIGNS, DEPTH INDICATORS AND PERMANENT SAFETY ARRANGEMENTS 4. WHERE TEXTILE IS PLACED ON SLOPES, THE TOP EDGE OF THE TEXTILE MUST BE PINNED

- 1. COORDINATE SETOUT PROVIDED ON THESE DRAWINGS ARE BASED ON STEP SURVEYING (DWG NO: ACAD-2052-FS)
- 2. THE LEVEL DATUM FOR WORKS IS AHD (AUSTRALIAN HEIGHT DATUM).

SERVICES NOTES

- ALL EXISTING SERVICES ARE TO BE PROVEN BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS OR ORDERING MATERIALS.
- THE CONTRACTOR IS TO DETERMINE WHETHER ANY SERVICES REQUIRE MODIFICATION OF THE PROPOSED DESIGN OR EXISTING SERVICES.
- THE CONTRACTOR MUST NOTIFY THE SUPERINTENDENT IN WRITING TO CONFIRM WHETHER THERE IS OR IS NOT AN IMPACT TO THE PROPOSED DESIGN OR SCOPE OF WORKS DUE TO SERVICES PRIOR TO COMMENCEMENT OF WORKS OR ORDERING MATERIALS.

SAFETY IN DESIGN NOTES

- POTENTIAL SAFETY HAZARDS IDENTIFIED BY THE DESIGNER HAVE BEEN ASSESSED FOR 2. THE PARTICLE SIZE DISTRIBUTION FOR THE DUMPED ROCK IS PROVIDED BELOW. NO ROCK THIS PROJECT IN ACCORDANCE WITH SAFE DESIGN OF STRUCTURES - CODE OF PRACTICES BY SAFE WORK AUSTRALIA, 2012. REFER TO THE SAFETY IN DESIGN REGISTER FOR THE POTENTIAL SAFETY HAZARDS.
- <u>DISCLAIMER:</u> NEW AND/OR DIFFERENT RISKS MAY BECOME APPARENT DURING EACH PROJECT PHASE. THE DESIGNER HAS ENSURED, SO FAR AS REASONABLY PRACTICABLE, THAT THE STRUCTURE/MUNICIPAL WORK IS DESIGNED TO BE WITHOUT RISK TO THE HEALTH AND SAFETY OF PERSONS INVOLVED IN CONSTRUCTION OR USE RELATED ACTIVITIES.
- ANY PERSON WHO UNDERTAKES ALTERATIONS, VARIATIONS OR MODIFICATIONS TO THESE DESIGN DRAWINGS, WITHOUT CONSULTATION AND APPROVAL FROM THE ORIGINAL OR SUBSEQUENT DESIGNER. WILL ASSUME THE DUTIES OF A DESIGNER AND WILL BE HELD RESPONSIBLE FOR THE SAFETY IN DESIGN FOR THIS PROJECT.
- ALL WORKS MUST COMPLY WITH OCCUPATIONAL HEALTH AND SAFETY ACT (O.H. & S.) ACT, 2004.
- WATERWAY POOLS ARE TO HAVE A VEGETATED SAFETY BENCH BETWEEN NWL AND 350mm BELOW NWL (AT MINIMUM) TO RESTRICT PUBLIC ACCESS (LANDSCAPING BY OTHERS). TEMPORARY FENCING TO BE INSTALLED AROUND PERIMETER OF POOLS TO RESTRICT ACCESS TO OPEN WATER BODY DURING CONSTRUCTION AND PLANT ESTABLISHMENT.

EROSION AND SEDIMENT CONTROL NOTES

- DURING CONSTRUCTION ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION. MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT ANY DOWNSTREAM CONSTRUCTION
- ENTRY/EXIT SEDIMENT TRAPS AS APPROVED BY THE SUPERINTENDENT.
- DURING CONSTRUCTION PROVIDE INLET PROTECTION AT AFFECTED INLETS.
- 4. UNLESS SHOWN OTHERWISE ON THE DRAWINGS, PLACE REINFORCED TURF MATTING TO INVERT OF ALL EARTH V-DRAINS OR AS DIRECTED OTHERWISE BY THE SUPERINTENDENT.
- 5. EXISTING GRASSED AREAS TO BE MAINTAINED WHERE POSSIBLE.

SURFACE PREPARATION

- 1. PRIOR TO THE PLACEMENT OF DUMPED ROCK, SURFACES MUST BE TRIMMED AND COMPACTED TO THE LINES AND LEVELS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. AFTER TRIMMING, THE WHOLE AREA UNDER THE DUMPED ROCK MUST BE COVERED WITH GEOTEXTILE AS INDICATED ON THE DRAWINGS. REFER BELOW FOR
- 2. NO GEOTEXTILE MUST BE PLACED UNTIL THE ENGINEER HAS INSPECTED THE PREPARATION OF THE SURFACE UPON WHICH IT IS TO BE PLACED.

- 1. GEOTEXTILE MUST BE TEXCELL OR AN APPROVED EQUIVALENT.
- 3. GEOTEXTILE IS TO BE PINNED, ANY LAP IN THE GEOTEXTILE MUST NOT BE LESS THAN
- WITH A MINIMUM OF 6 PINS PER GEOTEXTILE PANEL.
- 5. PINS AT THE TOP OF THE SLOPE ARE TO BE REMOVED FOLLOWING PLACEMENT OF DUMPED ROCK IN THE KEY TRENCH, TO ALLOW THE GEOTEXTILE TO ADEQUATELY COVER / MOULD TO THE BENCHED BATTER SLOPE.
- 6. ADEQUATE ADDITIONAL LENGTH OF GEOTEXTILE IS TO BE PROVIDED AT THE TOP OF THE SLOPE, TO ALLOW FOR MOVEMENT IN THE GEOTEXTILE AS THE DUMPED ROCK IS PLACED.
- 7. SURPLUS GEOTEXTILE EXPOSED ABOVE THE MAXIMUM HEIGHT OF THE DUMPED ROCK BUTTRESS IS TO BE FOLDED OVER AND COVERED IN DUMPED ROCK TO HOLD IN PLACE.

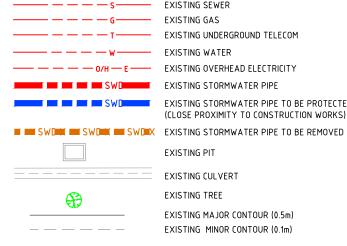
MATERIALS: DUMPED ROCK MUST CONSIST OF HARD, DURABLE ROUGHLY EQUI-DIMENSIONAL ROCK SOURCED FROM AN APPROVED COMMERCIAL QUARRY.

- THE FOLLOWING ROCK TYPES MUST NOT BE USED AS ROCK PROTECTION
 - MUDSTONE
 - SANDSTONE
 - **VOLCANIC BRECCIA**
 - SHALE
 - HIGHLY WEATHERED OR ALTERED ROCKS
- MUST BE IMPORTED TO SITE UNTIL THE CONTRACTOR HAS SUPPLIED ALL TEST RESULTS, SPECIFIED BELOW. TO DEMONSTRATE THE SOURCE. THE ENGINEER MUST PROVIDE APPROVAL IN WRITING BEFORE IMPORT IS TO COMMENCE.
- 3. DUMPED ROCK SHALL NOT BE LESS THAN THE NOMINATED D50. IF THE NOMINATED SIZE IS NOT AVAILABLE THEN ADVISE THE COMPANY'S REPRESENTATIVE OF THE PROPOSED REPLACEMENT ROCK SIZE FOR APPROVAL.
- STONE SIZE VALUE OF D50 MEANS 50% OF THE STONE SIZE WILL BE OF THE SIZE QUOTED AND THE REST OF THE STONES SHALL BE LARGER BUT NOT GREATER THAN 1.5 TIMES. DUMPED ROCK MUST BE PLACED OVER THE GEOTEXTILE USING A HYDRAULIC EXCAVATOR CARE MUST BE EXERCISED TO AVOID SEGREGATION OF THE MATERIAL. THE DUMPED ROCK MUST BE SMOOTHED TO THE FINAL LINES AND GRADES SHOWN ON THE DRAWINGS. WHERE NECESSARY; MANUAL PLACEMENT OF THE ROCK PROTECTION SHALL BE DIRECTED BY THE ENGINEER

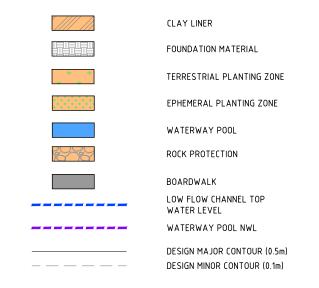
DUMPED ROCK REQUIREMENT BELOW

DUMPED ROCK				
DESIGNATED SOURCE/S	HARD DURABLE ROCK SOU APPROVED COMMERCIAL SOU			
	% PASSING	D50=300		
MATERIAL PROPERTIES	100	450		
	<50	300		
	<10 150			
PARTICLE DENSITY	>2.6t/m ³			
WATER ABSORPTION	<=2.0%			
LOS ANGELES ABRASION (LAV)	<=35%			
UCS	>=50MPa			
SODIUM SULPHATE SOUNDNESS AVERAGE LOSS	<=9.0%			

LEGEND - EXISTING SERVICES



LEGEND - PROPOSED FEATURES



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SURF COAST SHIRE

IAN JUC CREEK DAYLIGHTING IOTES SHEET 1 OF 2

VC2019-002-DWG-0002

CLAY LINER

SURFACE PREPARATION

- TOPSOIL SHALL BE FERTILE, FRIABLE SOIL CONTAINING ORGANIC MATTER, WHICH IS REASONABLY FREE FROM SUBSOIL, REFUSE, TREE ROOTS LARGER THAN 20 MM IN DIAMETER AND 300 MM IN LENGTH, NOXIOUS WEEDS, CLAY LUMPS AND STONES LARGER THAN 50 MM DIAMETER. ALL TOPSOIL SHALL COMPLY WITH AS 4419. TOPSOIL WHICH ARE WON ONSITE SHALL BE STOCKPILED IN THE DESIGNATED AREA OF THE SITE.
- TOPSOIL SHALL BE SPREAD OVER THE EMBANKMENTS TO ACHIEVE THE DESIGN MINIMUM THICKNESS MEASURED NORMAL TO THE SLOPE AS SHOWN ON THE DRAWINGS. TOPSOIL SHALL BE PLACED AT MOISTURE CONTENT WHICH WILL ALLOW FOR UNIFORM SPREADING AND COMPACTION

ENGINEERED FILL **GENERAL**

- ALL MATERIALS USED IN THE ENGINEERED FILL (ALSO FOR EMBANKMENTS) SHALL BE FREE FROM RUBBLE AND DELETERIOUS MATERIAL AND SHALL BE APPROVED BY THE SITE MANAGER. NO MATERIAL CONTAINING THE FOLLOWING MAY BE USED:
- ORGANIC MATERIAL, INCLUDING VEGETATION AND TOPSOIL
- MATERIALS, WHICH, IN THE OPINION OF THE SITE MANAGER, WILL SUFFER UNDUE SCOUR OR DISPERSION.

MATERIAL REQUIREMENTS

MATERIALS USED FOR THE ENGINEERED FILL MUST BE FREE FROM ORGANIC IMPURITIES AND OTHER DELETERIOUS SUBSTANCES AND COMPLY WITH THE FILL MATERIAL SPECIFICATION BELOW.

TABLE 1: ENGINEERED FILL

ITEM	DESCRIPTION				
DESIGNATED SOURCE/S	EXPECTED USE OF SITE WON MATERIALS WHERE THEY CAN BE DEMONSTRATED TO COMPLY WITH THE MATERIAL PROPERTIES BELOW				
	GRADING (COMPACTED IN	PARTICLE SIZE (mm)	% PASSING		
	PLACE)	37.5	100		
MATERIAL PROPERTIES		0.075	35-95		
	PLASTICITY: PLOTS ABOVE THE 'A-LINE'				
	WEIGHTED PLASTICITY INDEX: < 3200				
	EMERSON CRUMB CLASS NUMBER ≥ 3				
COMPACTION STANDARD	≥ 95 % STANDARD MDD				
MOISTURE CONTENT	OMC - 2 % TO OMC +3 %				

- WHERE GENERALLY SHOWN ON THE DRAWINGS, AND AS DIRECTED BY THE SITE MANAGER THE ENGINEERED FOUNDATION SHOULD BE PREPARED IN ACCORDANCE WITH THE
- STRIP OFF ANY TOPSOIL, ROOT MAT, OR FILL TO EXPOSE MEDIUM DENSE/ FIRM (AS MINIMUM) FOUNDATION MATERIAL.
- ANY SOFT OR WEAK AREAS IDENTIFIED WITHIN THE EXPOSED FOUNDATION SHOULD BE REMOVED AND REPLACED WITH ENGINEERED FILL (AS PER TABLE 1). THE FILL SHALL BE PLACED IN LAYERS NOT EXCEEDING 200 MM LOOSE THICKNESS AND SHOULD BE COMPACTED TO ACHIEVE A DENSITY RATIO OF NOT LESS THAN 95 % OF STANDARD MAXIMUM DRY DENSITY (SMDD), WITH A PERMISSIBLE MOISTURE CONTENT RANGE OF +/- 2 % OF OMC.
- EXCAVATIONS TO REMOVE ANY SOFT OR WEAK AREAS SHOULD HAVE SIDE SLOPES BATTERED NO STEEPER THAN 1V:2H. ABOVE GROUNDWATER
- GEOTECHNICAL ENGINEER SHALL BE PRESENT TO INSPECT FOUNDATION CONDITIONS PRIOR TO PLACEMENT OF FILL. [HOLD POINT]

PLACEMENT REQUIREMENTS

- 1. THE ENGINEERED FILL MATERIAL WILL BE:
 - PLACED IN CONTINUOUS, APPROXIMATELY HORIZONTAL LAYERS FOR THE FULL WIDTH OF THE ZONE, HAVING A COMPACTED THICKNESS OF NOT MORE THAN 300 MM.
 - PLACED AS NEAR AS POSSIBLE TO OPTIMUM MOISTURE CONTENT (OMC), WITH A PERMISSIBLE RANGE OF -2 % TO + 3 % OF OMC AND COMPACTED TO A DENSITY RATIO OF NOT LESS THAN 95 % OF STANDARD MAXIMUM DRY DENSITY (SMDD).
 - SUPERVISION AND TESTING OF ALL FILLING IN ACCORDANCE WITH CLAUSE 8.3 OF AS 3798 - 2007, "LEVEL 1 SAMPLING AND TESTING". SITE RECORDS ARE TO BE KEPT AND BE MADE AVAILABLE TO THE SITE MANAGER

COMPACTED CLAY LINER FOR WATERWAY POOLS

GENERAL

- 1. ALL MATERIALS USED IN THE COMPACTED CLAY LINER FOR THE TWO WATERWAY POOLS SHALL BE FREE FROM RUBBLE AND DELETERIOUS MATERIAL AND SHALL BE APPROVED BY THE SITE MANAGER. NO MATERIAL CONTAINING THE FOLLOWING MAY BE
 - ORGANIC MATERIAL, INCLUDING VEGETATION AND TOPSOIL.
 - MATERIALS, WHICH, IN THE OPINION OF THE SITE MANAGER, WILL SUFFER UNDUE SCOUR OR DISPERSION.

MATERIAL REQUIREMENTS

1. MATERIALS USED AS COMPACTED CLAY LINER MUST BE FREE FROM ORGANIC IMPURITIES AND OTHER DELETERIOUS SUBSTANCES AND COMPLY WITH THE CLAY LINER MATERIAL SPECIFICATION BELOW.

TABLE 2: COMPACTED CLAY LINER

ITEM	DESCRIPTION				
DESIGNATED SOURCE/S	EXPECTED USE OF SITE WON MATERIALS WHERE THEY CAN BE DEMONSTRATED TO COMPLY WITH THE MATERIAL PROPERTIES BELOW				
		PARTICLE SIZE (mm)	% PASSING		
		37.5	100		
	GRADING (COMPACTED IN	19	90-100		
	PLACE)	2.36	70-100		
		0.425	50-90		
MATERIAL PROPERTIES		0.075	40-85		
	PLASTICITY: PLOTS ABOVE THE 'A-LINE'				
	PLASTICITY INDEX (AS1289 3.3.1): ≥ 20%				
	LIQUID LIMIT (AS1289 3.1.1 OR 3.1.2): ≥ 40%				
	EMERSON CRUMB CLASS NUMBER ≥ 4 (AMELIORATED USING NOMINAL 3% HYDRATED LIME IF SITE WON MATERIAL IS USED. ACTUAL PERCENTAGE TO BE DETERMINED THROUGH SITE TRIALS)				
MINIMUM THICKNESS		500 mm			
IN-SITU COEFFICIENT PERMEABILITY	LESS THAN 1 X 10 ⁻⁹ M/S				
COMPACTION STANDARD	≥ 98 % STANDARD MDD				
MOISTURE CONTENT	OMC -	2 % TO OMC +3 %			

2. BASED ON THE GEOTECHNICAL INVESTIGATION REPORT (LR PARDO, 2024), IT WAS INFERRED THAT GROUND PROFILE CONSISTS OF A THIN CLAYEY FILL UP TO 0.5M THICK 2. OVERLYING NATURAL RESIDUAL SOILS (SILTY CLAY AND SANDY CLAY) TO 5M (MAXIMUM INVESTIGATION DEPTH). THE SITE-WON CLAY MATERIALS ARE CONSIDERED APPROPRIATE FOR USE IN THE CONSTRUCTION OF THE CLAY LINER PROVIDED THEY COMPLY WITH THE MATERIAL PROPERTIES SHOWN IN TABLE 2 ABOVE, IF THEY ARE NON-COMPLIANT. THE SITE DERIVED CLAY CAN BE AMELIORATED USING NOMINAL 3% HYDRATED LIME (ACTUAL PERCENTAGE TO BE DETERMINED THROUGH SITE TRIALS) TO MEET THE MATERIAL PROPERTY REQUIREMENTS ABOVE. THIS IS TO BE CONFIRMED ON SITE BY THE SITE MANAGER.

FOUNDATION PREPARATION

- WHERE GENERALLY SHOWN ON THE DRAWINGS, AND AS DIRECTED BY THE SITE MANAGER, THE CLAY LINER FOUNDATION SHOULD BE PREPARED OR TREATED IN ACCORDANCE WITH THE FOLLOWING:
- STRIP OFF ANY TOPSOIL, ROOT MAT, OR FILL TO EXPOSE NATURAL SUBGRADE AND WHERE NECESSARY, FURTHER EXCAVATE TO THE SPECIFIED UNDERSIDE OF THE DESIGN CLAY LINER AND EXPOSE TO STIFF/MEDIUM DENSE (AS MINIMUM) FOUNDATION
- PROOF ROLL THE EXPOSED NATURAL SUBGRADE IN ACCORDANCE WITH CLAUSE 5.5 OF AS3798 (2007), USING A 10-12 TONNE FULLY LOADED DUMP TRUCK OR WATER CART. THE SUBGRADE SHALL COMPRISE STIFF CLAY AND NOT PRESENT ANY RUTTING OR DEFLECT UNDER THE PROOF ROLL. WHERE RUTTING OR DEFLECTION IS OBSERVED, THE SUBGRADE SHOULD BE EXCAVATED UNTIL A SUITABLE FOUNDATION MATERIAL IS ENCOUNTERED AND BACKFILLED WITH COMPACTED CLAY LINER APPROVED MATERIAL.
- SCARIFY THE BASE AND MOISTURE CONDITION TO A MOISTURE VARIATION OF -1 % TO + 3 % OF OMC
- COMPACT THE EXPOSED BASE TO A DENSITY RATIO OF NOT LESS THAN 98%

- STANDARD (AS1289: 5.1.1, 5.4.1 OR 5.7.1).
- BATTERED NO STEEPER THAN 1V:2H ABOVE GROUNDWATER.
- THE EXCAVATED SIDES WITHIN THE WATERWAY POOLS SHOULD BE BATTERED TO PERMANENT SLOPES NO STEEPER THAN 1V:4H, AS SPECIFIED ON DRAWINGS.
- GEOTECHNICAL ENGINEER SHALL BE PRESENT TO INSPECT THE PREPARED FOUNDATION CONDITIONS PRIOR TO PLACEMENT OF FILL. [HOLD POINT]

PLACEMENT REQUIREMENTS

- 1. THE CLAY LINER MATERIAL WILL BE:
 - PLACED IN CONTINUOUS, APPROXIMATELY HORIZONTAL LAYERS FOR THE FULL WIDTH OF THE ZONE, HAVING A COMPACTED THICKNESS OF NOT MORE THAN 200 MM
 - PLACED AS NEAR AS POSSIBLE TO OPTIMUM MOISTURE CONTENT (OMC), WITH A PERMISSIBLE RANGE OF -1 % TO + 3 % OF OMC AND COMPACTED TO A DENSITY RATIO OF NOT LESS THAN 98 % OF STANDARD MAXIMUM DRY DENSITY (SMDD).
- SUPERVISION AND TESTING OF ALL FILLING IN ACCORDANCE WITH CLAUSE 8.3 OF AS 3798 – 2007, "LEVEL 1 INSPECTION AND TESTING". THE FREQUENCY OF THE FIELD DENSITY TESTS ARE TO BE IN ACCORDANCE WITH TABLE 3 - QA TESTING REQUIREMENTS. SITE RECORDS ARE TO BE KEPT AND BE MADE AVAILABLE TO THE
- EACH LAYER OF CLAY MATERIAL MUST BE COMPACTED WITH A TAMPING FOOT (PAD FOOT OR SHEEP'S FOOT) ROLLER, OR OTHER EQUIPMENT DETERMINED APPROPRIATE BY COMPACTION TRIALS, OR AS APPROVED BY THE SITE MANAGER.
- AFTER THE FINAL LAYER OF CLAY LINER HAS BEEN CONSTRUCTED, IT SHALL BE SUITABLY MOISTURE-CONDITIONED AND SMOOTH DRUM ROLLED TO CREATE A SMOOTH AND UNIFORM SURFACE, TO REDUCE THE POTENTIAL OF DRYING AND DESICCATION OF THE SURFACE. GEOTECHNICAL ENGINEER SHALL BE PRESENT TO INSPECT THE CONSTRUCTED COMPACTED CLAY LINER [HOLD POINT]
- 2. COMPACTED CLAY LINER SHALL BE MAINTAINED AS DESCRIBED BELOW

EXTENT AND THICKNESS OF CLAY LINER

- 1. THE COMPACTED CLAY LINER SHALL BE PLACED TO THE FULL EXTENT OF THE LIMITS OF THE LINER AS SHOWN ON THE DESIGN PLANS.
- 2. THE COMPACTED CLAY LINER SHOULD BE AT LEAST 500 MM THICK.
- 3. WHERE SHOWN ON THE DRAWINGS AND / OR WHERE DIRECTED BY THE SITE MANAGER, THE BOTTOM OF CLAY LINER MUST BE EXCAVATED TO PROVIDE FOR THE CLAY LINER THICKNESS SPECIFIED ON THE DRAWINGS

MAINTENANCE OF CLAY LINER

- 1. ON-SITE CLAYS ARE SUBJECT TO SHRINKING, DESICCATION AND CRACKING OR DRYING IF
- THE CONTRACTOR SHALL MAINTAIN THE CLAY LINER IN A PROPER CONDITION AND NOT LET THE SURFACE DRY OUT OR DETERIORATE IN ANY WAY UNTIL FINISHED SURFACE FINISHES ARE APPLIED. THE CONTRACTOR SHALL USE AN APPROVED PROCEDURE TO ENSURE THAT THE LINER IS IN THE REQUIRED CONDITION AS SPECIFIED HEREIN LINTU TOPSOIL IS PLACED. THIS MAY BE ACHIEVED BY REGULAR WATERING OF THE SURFACE OR COVERING THE CLAY WITH CRUSHED ROCK OR TOPSOIL TO FINISHED SURFACE LEVELS.

TESTING OF CLAY LINER

EXCAVATIONS TO REMOVE ANY SOFT OR WEAK AREAS SHOULD HAVE SIDE SLOPES 1. THE CONTRACTOR IS TO PROVIDE THE THE SITE MANAGER WITH DOCUMENTED EVIDENCE THAT THE CLAY LINER HAS BEEN CONSTRUCTED CORRECTLY. THIS WILL INVOLVE THE CONTRACTOR ENGAGING A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER TO UNDERTAKE SITE SUPERVISION, MONITORING, FIELD TESTING AND REPORTING WITH NATA ACCREDITED LABORATORIES.

-DWG-0003

TABLE 3: QUALITY ASSURANCE TESTING REQUIREMENTS

QUALITY ASSURANCE TESTING REQUIREMENTS						
MATERIAL	TEST	APPLICABLE STANDARD	MAXIMUM LOT SIZE	MINIMUM NUMBER OF TESTS PER LOT OR PART THEREOF		
	DENSITY RATIO	AS 1289.5.4.1 / 5.7.1	1000 m ³	4		
	PARTICLE SIZE DISTRIBUTION	AS1289.3.6.1	1000 m ³	2		
CLAY LINER	LIQUID LIMIT / PLASTIC LIMIT / PLASTICITY INDEX	AS 1289.3.1.2 / 3.2.1 / 3.3.1	1000 m ³	2		
	EMERSON CRUMB DISPERSION	AS 1289.3.8.1	1000 m ³	2		
	DENSITY RATIO	AS 1289.5.4.1 / 5.7.1	400 m ³	1		
	PARTICLE SIZE DISTRIBUTION	AS1289.3.6.1	400 m ³	1		
ENGINEERING FILL	LIQUID LIMIT / PLASTIC LIMIT / PLASTICITY INDEX	AS 1289.3.1.2 / 3.2.1 / 3.3.1	400 m ³	1		
	EMERSON CRUMB DISPERSION	AS 1289.3.8.1	400 m ³	1		

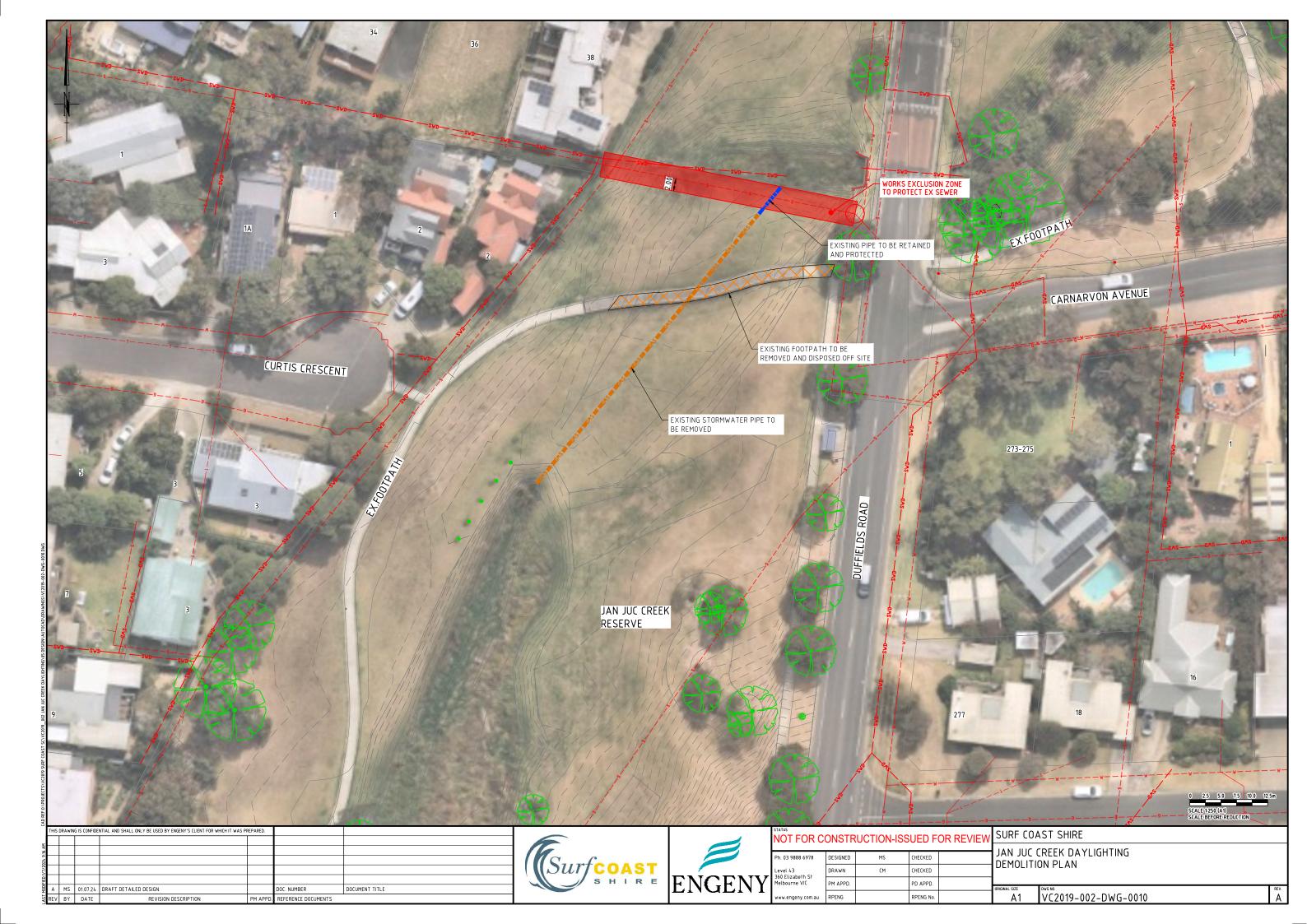
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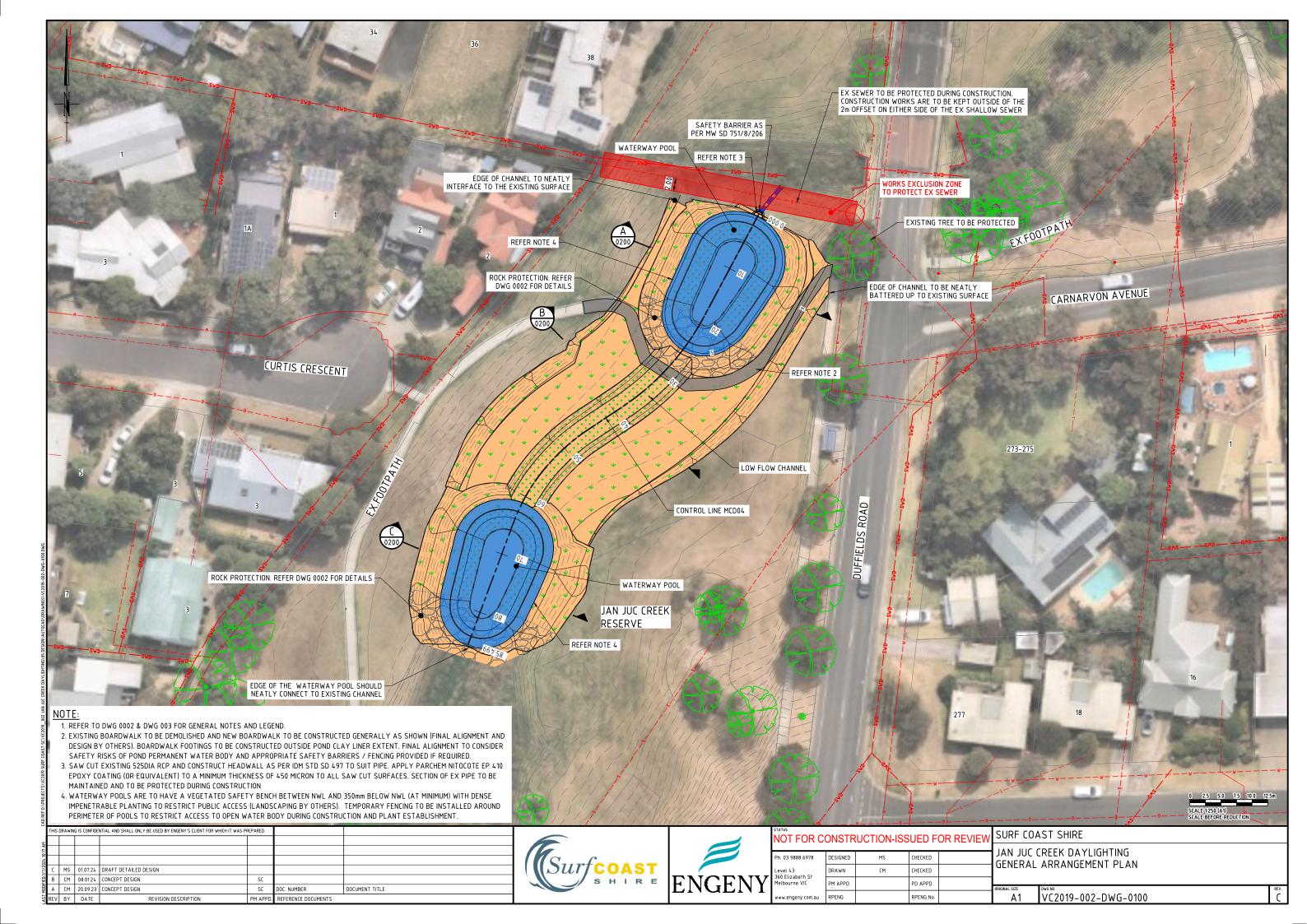


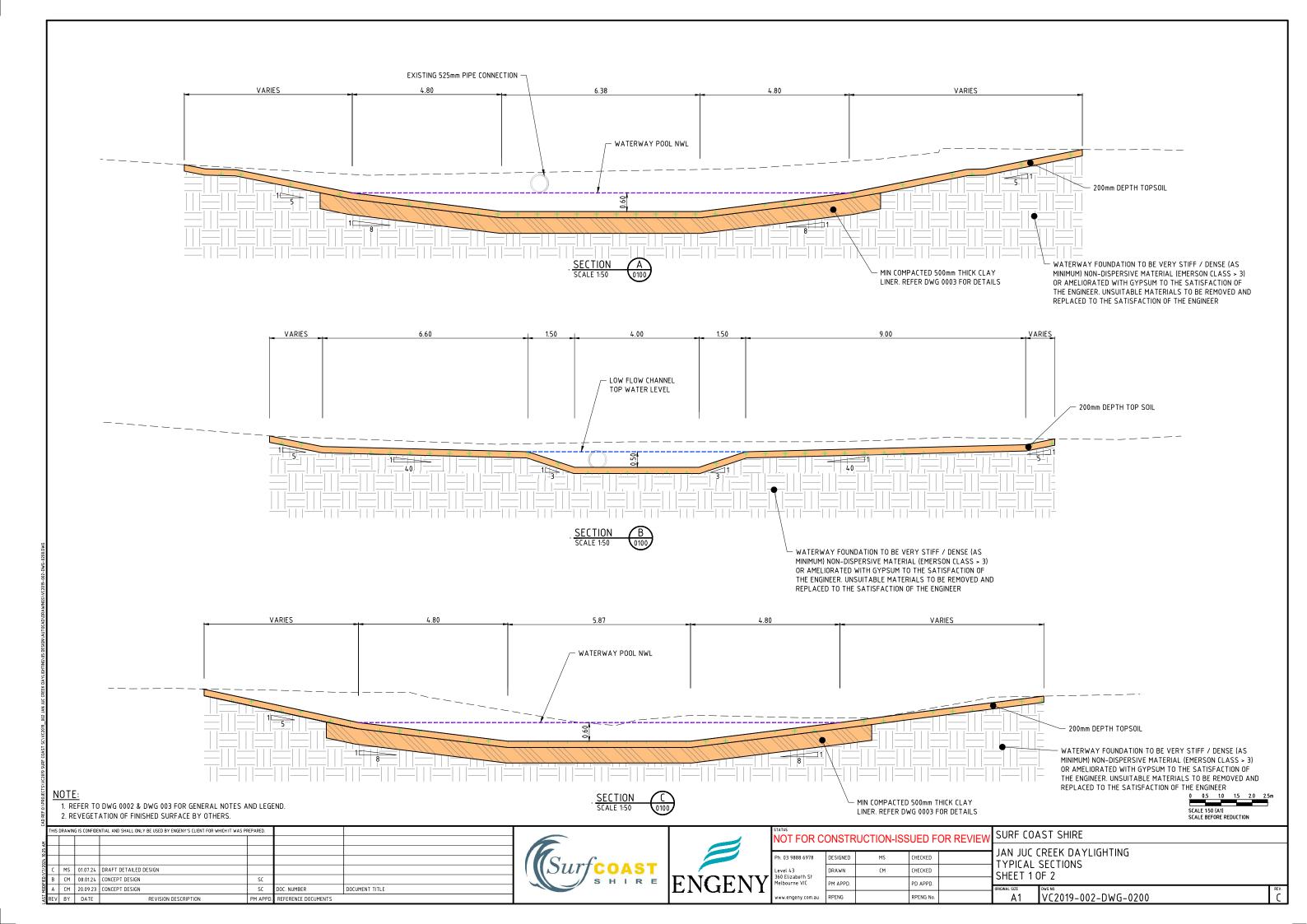


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600mm THICK DSD = 300mm ROCK UNDERLAIN BY 100mm
THICK GRANULAR FILTER LAYER UNDERLAIN BY TEXCEL
900R GEOFABRIC OR APPROVED EQUIVALENT REFER
DWG 0002 FOR DETAILS.

3.00

EDGE ROCK

WATERWAY POOL NWL

500mm THICK CLAY LINER.
REFER DWG 0003 FOR DETAILS.

TYPICAL ROCK PROTECTION SECTION
SCALE 1:25

NOTE:

1. REFER TO DWG 0002 & DWG 003 FOR GENERAL NOTES AND LEGEND.

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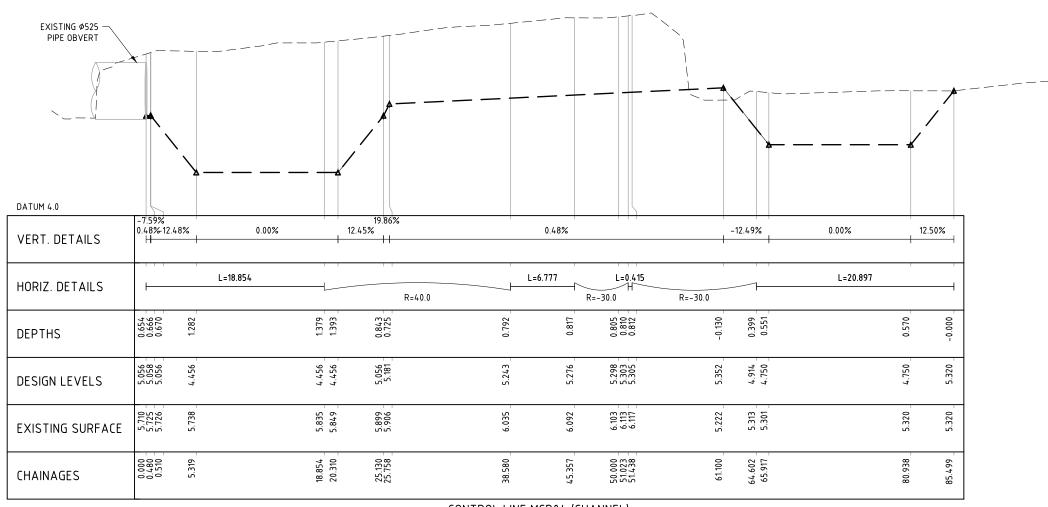
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JAN JUC CREEK DAYLIGHTING
TYPICAL SECTIONS
SHEET 2 OF 2

ORIGINAL SIZE DIMG NO.
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CONTROL LINE MCD04 (CHANNEL)

SCALE 1:200 HORIZ

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LEGEND

EXISTING SURFACE
DESIGN SURFACE

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