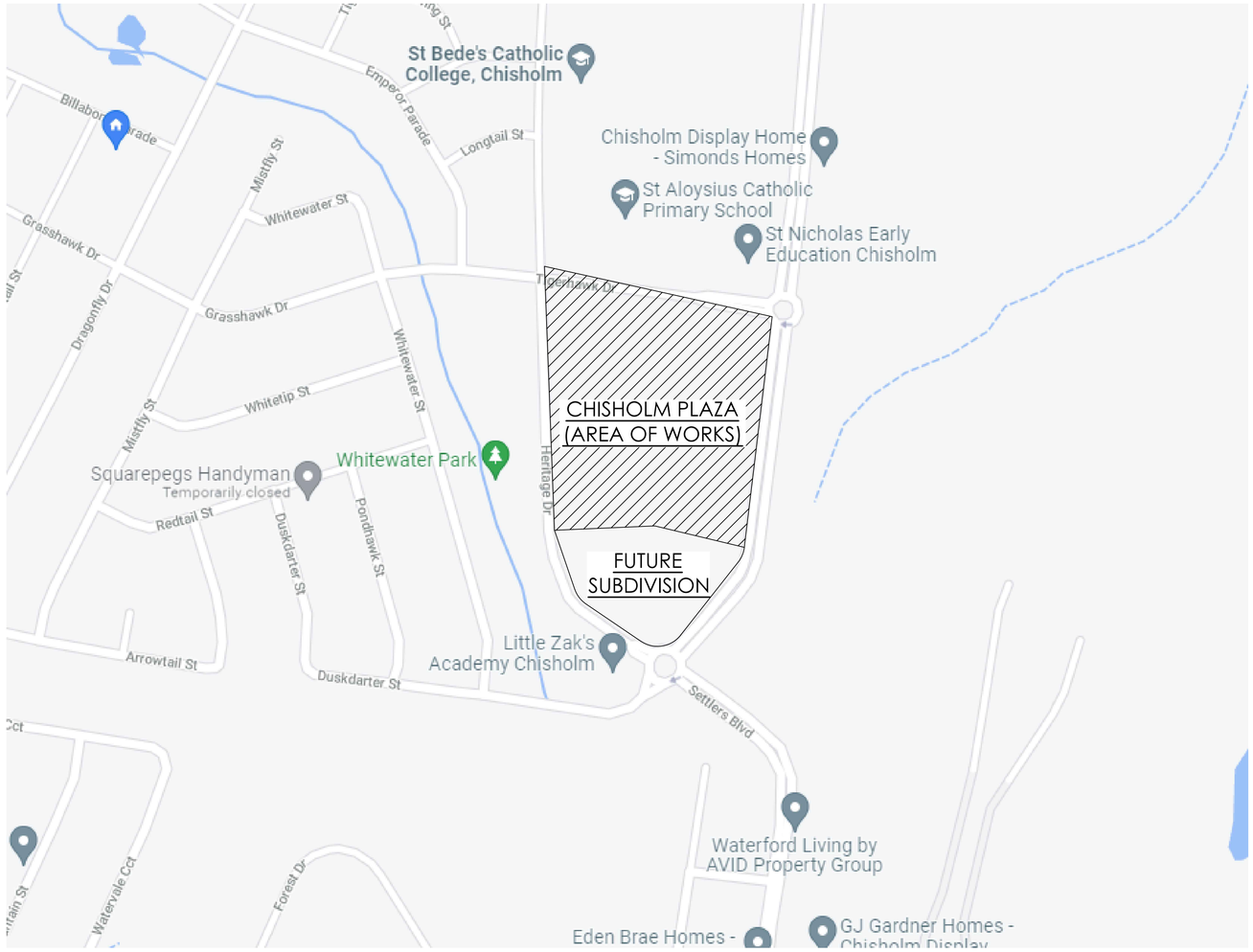
CHISHOLM PLAZA
20 HERITAGE DRIVE
CHISHOLM, NSW 2322
DEVELOPMENT APPLICATION CIVIL ENGINEERING DRAWINGS

DRAWINGS LIST



LOCATION PLAN
N.T.S.

NOTE:
1. THIS IS AN ENGINEERING SURVEY PLAN AND SHALL NOT BE TAKEN AS A CADASTRAL OR IDENTIFICATION SURVEY. BOUNDARY DATA IF SHOWN, SHOULD BE TAKEN AS A GUIDE ONLY.
2. REFER TO THE CERTIFICATE OF TITLE FOR EASEMENT DETAILS (IF ANY).
3. NO UNDERGROUND SERVICES HAVE BEEN LOCATED.

SURVEY:
1. SURVEY PROVIDED BY: LAND DEVELOPMENT SOLUTIONS REF: 6636-DET DATED: 21/10/21
2. ORIGIN OF LEVELS PM 17605.

PM / SSM	EASTING	NORTHING	RL(AHD)
SSM171234	N/A	N/A	N/A

ARCHITECTURAL PLANS BY:
1. ARCHITECTURAL PLANS BY: BN ARCHITECTURE REF: S2117 REVISION/VERSION: F DATED: 8/11//21

GEOTECH ENGINEER:
GEOTECH REPORT TO BE CONFIRMED

NOTE:
THIS IS A PLANNING DRAWING ONLY, FOR THE PURPOSE OF CONCEPTUAL DESIGN AND/OR PLANNING. FURTHER DETAILED ENGINEERING DESIGN INCLUDING SPECIFICATIONS, SIZING AND STORMWATER INVERTS TO BE PROVIDED PRIOR TO BUILDING RULES ASSESSMENT AND CONSTRUCTION.

ISSUE FOR INFORMATION	10.12.21	A	JG
AMENDMENTS	DATE	ISSUE	BY

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NORTH POINT U.N.O.

ARCHITECT
BN ARCHITECTURE
82 ALEXANDER STREET
CROWS NEST, NSW 2065

CLIENT
REVELOP
SUITE 506, LEVEL 5/55
PHILLIP STREET
PARRAMATTA NSW 2150

PROJECT
CHISHOLM PLAZA
HERITAGE DRIVE
CHISHOLM NSW 2322

DESIGNED	DRAWN	DATE	SIZE	CAD REF
--	--	DEC 21	SIZE	TX15901.00 C01

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COMPLEX PROBLEMS RESOLVED SIMPLY

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UNIT 5, 166 HANNELL STREET, MARYVAILLE NSW 2293
PO BOX 3197, TUGGERAH NSW 2259

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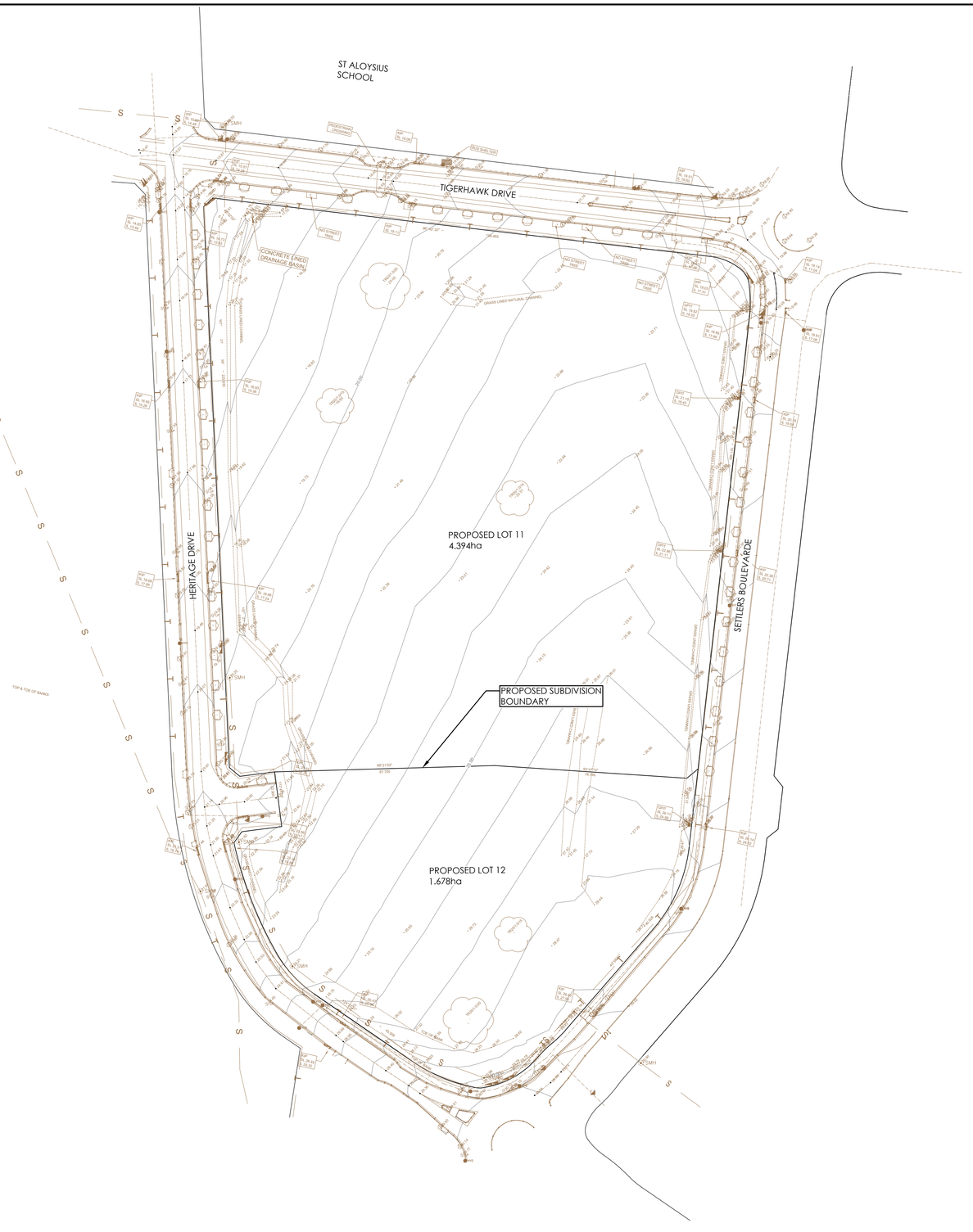
DRAWING TITLE
COVER SHEET

PROJECT No.	DRAWING No.	ISSUE
TX15901.00	DA1.00	A



NOTE:

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2. REFER TO THE CERTIFICATE OF TITLE FOR EASEMENT DETAILS (IF ANY).
3. NO UNDERGROUND SERVICES HAVE BEEN LOCATED.
4. REFER TO COVER SHEET FOR SURVEY INFORMATION.

LEGEND - EXISTING

SYMBOL	DESCRIPTION
22.88	SPOT LEVEL
20.00	CONTOURS (0.5m)
	CONTOURS (0.1m)
	FENCE
	BOUNDARY
D	DRAINAGE LINE
S	SEWER LINE
W	WATER LINE
E	ELECTRICITY UNDERGROUND
OE	ELECTRICITY OVERHEAD
T	TELSTRA LINE
	GAS LINE
	ROAD CENTRELINE
	TREE

NOTE:
ALL UTILITIES ARE TO BE ACCURATELY LOCATED BY CONTRACTOR BEFORE CONSTRUCTION.

DIAL 1100 BEFORE YOU DIG www.1100.com.au

10.0m 0.0 20.0 40.0 60.0 80.0 100.0m

SCALE 1:1000 AT A1 SHEET | 1:2000 AT A3 SHEET

EXISTING SITE PLAN

SCALE 1:1000 AT A1

ISSUE FOR INFORMATION	10.12.21	A	JG
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DRAWING TITLE
EXISTING SITE PLAN

PROJECT No.	DRAWING No.	ISSUE
TX15901.00	DA1.01	A

SEDIMENT & EROSION CONTROL DURING CONSTRUCTION

THIS PLAN IS TO BE USED AS A GUIDE ONLY. CONTRACTOR TO CONFIRM CONSTRUCTION SEQUENCE AND IMPLEMENT APPROPRIATE SEDIMENT AND EROSION CONTROL DETAILS IN ACCORDANCE WITH COUNCIL REQUIREMENTS.

LEGEND - SEDIMENT & EROSION

SYMBOL	DESCRIPTION
	SEDIMENT FENCE
	EXISTING FALL DIRECTION
	GUTTER GROSS POLLUTANT TRAP
	GEOTEXTILE INLET FILTER
STOCKPILE	TEMPORARY STOCKPILE
	STABILISED SITE ACCESS
	SEDIMENT BASIN
	EARTH BANK (LOW FLOW)
	MESH AND GRAVEL INLET FILTER

EAST SEDIMENT BASIN CALCULATIONS

PARAMETER	ADOPTED VALUE
Cv	0.3
SETTLING ZONE VOLUME (m³)	59
SEDIMENT STORAGE VOLUME (m³)	30
TOTAL BASIN VOLUME (m³)	89

WEST SEDIMENT BASIN CALCULATIONS

PARAMETER	ADOPTED VALUE
Cv	0.3
SETTLING ZONE VOLUME (m³)	146
SEDIMENT STORAGE VOLUME (m³)	206
TOTAL BASIN VOLUME (m³)	352

WESTERN SEDIMENT BASIN (WET). REFER DETAIL ON SHEET DA2.02

EASTERN SEDIMENT BASIN (WET). REFER DETAIL ON SHEET DA2.02

FUTURE SUBDIVISION. REFER PLAN BY TRIXIAL CONSULTANTS UNDER SEPARATE COVER

HERITAGE DRIVE

TIGERHAWK DRIVE

SETTLERS BOULEVARD

CONCEPT SEDIMENT AND EROSION CONTROL PLAN

SCALE 1:500 AT A1

5.0m 0.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

ISSUE FOR INFORMATION	10.12.21	A	JG
AMENDMENTS	DATE	ISSUE	BY

NOT FOR CONSTRUCTION

NORTH POINT U.N.O.

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--	--	DEC 21	SIZE	TX15901.00 C01

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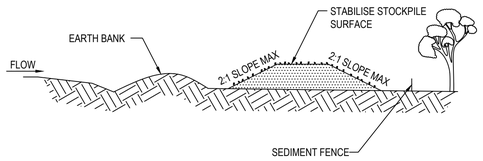
DRAWING TITLE
CONCEPT SEDIMENT AND EROSION CONTROL PLAN

PROJECT No. TX15901.00

DRAWING No. DA2.00

ISSUE A

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION FOURTH EDITION, MARCH 2004 PRODUCED BY THE DEPARTMENT OF HOUSING

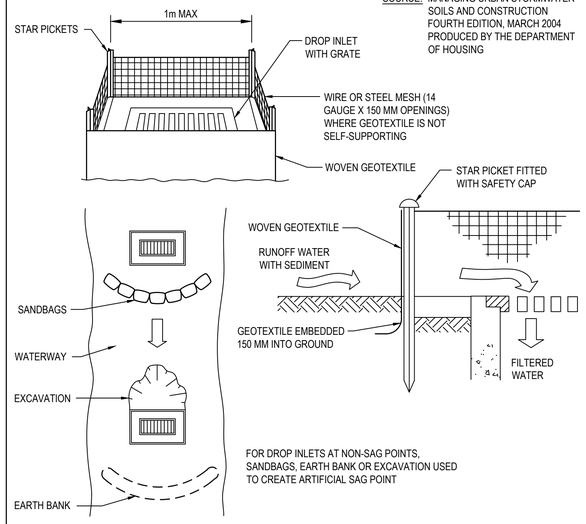


CONSTRUCTION NOTES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCSE (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

STOCKPILES SD 4-1

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION FOURTH EDITION, MARCH 2004 PRODUCED BY THE DEPARTMENT OF HOUSING

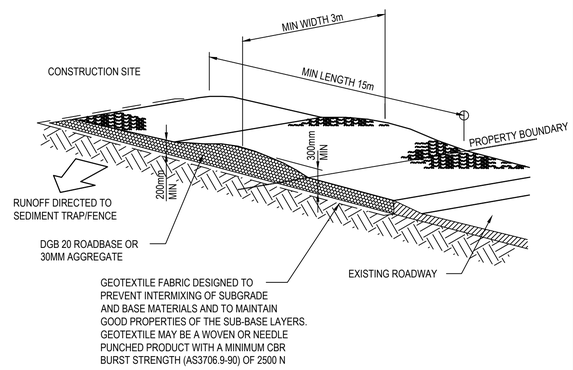


CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW STANDARD DRAWING 6-7 AND 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 IT.

GEOTEXTILE INLET FILTER SD 6-12

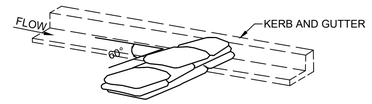
SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION FOURTH EDITION, MARCH 2004 PRODUCED BY THE DEPARTMENT OF HOUSING



CONSTRUCTION NOTES:

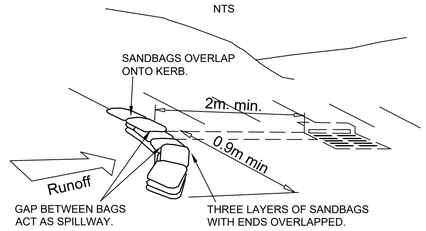
1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200MM THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30MM AGREGATE.\
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METRES WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE

STABILISED SITE ACCESS SD 6-14



GRAVEL FILLED SAUSAGE TEMPORARY GUTTER GROSS POLLUTANT/SEDIMENT TRAP

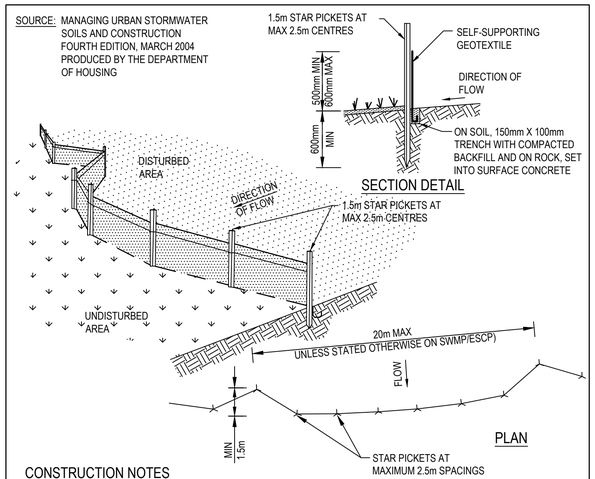
COARSE GRAVEL ROLLED IN NETTING MATERIAL TOTALING 200mm HIGH & PLACED HARD AGAINST FACE OF KERB.
NTS



GUTTER GROSS POLLUTANT TRAP
N.T.S.

NOTE:
SEDIMENT BARRIERS TO BE USED ONLY WHERE ROAD WIDTHS PERMITS AND WHERE SAFETY TO PASSING TRAFFIC IS NOT AFFECTED

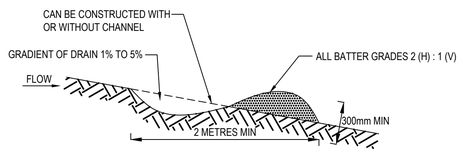
SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION FOURTH EDITION, MARCH 2004 PRODUCED BY THE DEPARTMENT OF HOUSING



CONSTRUCTION NOTES

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALL THE 10 YEAR EVENT.
2. CUT A 150 MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUNDAT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH, FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150 MM OVERLAP.
6. BACKFILL TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE

SEDIMENT FENCE SD 6-8



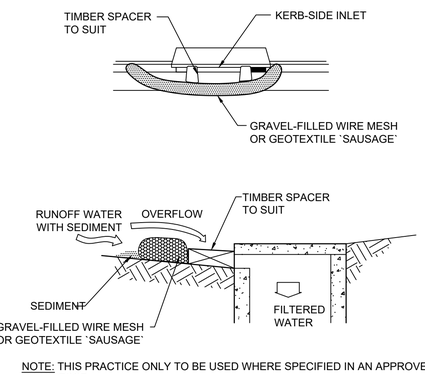
NOTE: ONLY TO BE USED AS A TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES.

CONSTRUCTION NOTES:

1. BUILD WITH GRADIENTS BETWEEN 1% AND 5%.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

EARTH BANK (LOW FLOW) SD 5-5

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION FOURTH EDITION, MARCH 2004 PRODUCED BY THE DEPARTMENT OF HOUSING



NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

CONSTRUCTION NOTES:

1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. 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.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150MM HIGH X 400MM WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. 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.

MESH AND GRAVEL INLET FILTER SD 6-11

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CROWS NEST, NSW 2065

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PROJECT
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HERITAGE DRIVE
CHISHOLM NSW 2322

DESIGNED	DRAWN	DATE	SIZE	CAD REF
--	--	DEC 21	SIZE	TX15901.00 C01

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DRAWING TITLE
CONCEPT SEDIMENT AND EROSION CONTROL DETAILS SHEET 1 OF 2

PROJECT No.	DRAWING No.	ISSUE
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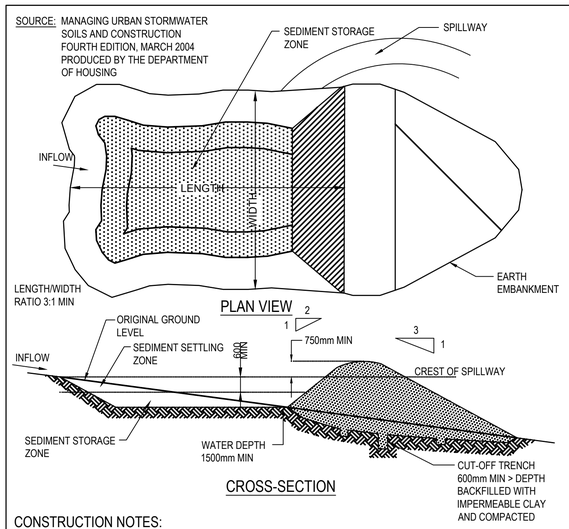

CONSTRUCTION NOTES:

1. REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA.
2. CONSTRUCT A CUT-OFF TRENCH 500 MM DEEP AND 1200 MM WIDE ALONG THE CENTRELINE OF THE EMBANKMENT EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST.
3. MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95 PER CENT STANDARD PROCTOR DENSITY.
4. SELECT FILL FOLLOWING THE SWMP THAT IS FREE OF ROOTS, WOOD, ROCK, LARGE STONE OR FOREIGN MATERIAL.
5. PREPARE THE SITE UNDER THE EMBANKMENT BY RIPPING TO AT LEAST 100 MM TO HELP BOND COMPACTED FILL TO THE EXISTING SUBSTRATE.
6. SPREAD THE FILL IN 100 MM TO 150 MM LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT.
7. CONSTRUCT THE EMERGENCY SPILLWAY.
8. REHABILITATE THE STRUCTURE FOLLOWING THE SWMP.

EARTH BASIN - WET SD 6-4
(APPLIES TO TYPE 'D' AND TYPE 'F' SOILS ONLY)

1. Site Data Sheet

Site Name: 20 Heritage Drive, Chisholm NSW 2322

Site Location: HUNTER - LOWER

Precinct: Eastern Catchment

Description of Site: Soil Landscape: Bersefield (be)
Soil Hydrologic Group: Group C and B
Sediment Type: Type D and F
Soil Erodibility K-factors: 0.033 (Type D)
0.018 (Type D)
0.048 (Type F)
0.028 (Type F)
0.017 (Type F)

Site area	Site 1	2	3	4	5		Remarks
Total catchment area (ha)	0.97	0.97	0.97	0.97	0.97		
Disturbed catchment area (ha)	0.97	0.97	0.97	0.97	0.97		
Soil analysis							
% sand (faction 0.02 to 2.00 mm	53	53	67	67	67		Soil texture should be assessed through mechanical
% silt (fraction 0.002 to 0.02 mm)	30	30	22	22	22		dispersion only. Dispersing agents (e.g. Calgon)
% clay (fraction finer than 0.002 mm)	17	17	11	11	11		should not be used
Dispersion percentage	32.0	32.0	22.0	22.0	22.0		E.g. enter 10 for dispersion of 10%
% of whole soil dispersible	10.24	10.24	4.84	4.84	4.84		See Section 6.3.3(e)
Soil Texture Group	D	D	F	F	F		See Section 6.3.3(c), (d) and (e)
Rainfall data							
Design rainfall depth (days)	5	5	5	5	5		See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)	75	75	75	75	75		See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event	20.3	20.3	20.3	20.3	20.3		See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm	9.79	9.79	9.79	9.79	9.79		See IFD chart for the site
RUSLE Factors							
Rainfall erosivity (*R*-factor)	2130	2130	2130	2130	2130		Automatic calculation from above data
Soil erodibility (*K*-factor)	0.015	0.07	0.015	0.07	0.015		RUSLE data can be obtained from Appendixes A, B and C
Slope length (m)	60	60	60	60	60		
Slope gradient (%)	6	6	6	6	6		
Length/gradient (*LS*-factor)	1.24	1.24	1.24	1.24	1.24		
Erosion control practice (*P*-factor)	1.3	1.3	1.3	1.3	1.3		
Ground cover (*C*-factor)	1	1	1	1	1		
Calculations							
Soil loss (t/ha/yr)	52	240	52	240	52		
Soil Loss Class	1 - V.LOW	3-LOW-MOD	1 - V.LOW	3-LOW-MOD	1 - V.LOW		See Section 4.4.2(b)
Soil loss (m^3/ha/yr)	40	185	40	185	40		
Soil loss (m^3/yr)	38	179	38	179	38		
Sediment basin storage volume, m^3	0	30	0	30	0		See Sections 6.3.4(i) and 6.3.5 (e)

1. Site Data Sheet

Site Name: 20 Heritage Drive, Chisholm NSW 2322

Site Location: HUNTER - LOWER

Precinct: Western Catchment

Description of Site: Soil Landscape: Bersefield (be)
Soil Hydrologic Group: Group C and B
Sediment Type: Type D and F
Soil Erodibility K-factors: 0.033 (Type D)
0.018 (Type D)
0.048 (Type F)
0.028 (Type F)
0.017 (Type F)

Site area	Site 1	2	3	4	5		Remarks
Total catchment area (ha)	3.38	3.38	3.38	3.38	3.38		
Disturbed catchment area (ha)	3.38	3.38	3.38	3.38	3.38		
Soil analysis							
% sand (faction 0.02 to 2.00 mm	53	53	67	67	67		Soil texture should be assessed through mechanical
% silt (fraction 0.002 to 0.02 mm)	30	30	22	22	22		dispersion only. Dispersing agents (e.g. Calgon)
% clay (fraction finer than 0.002 mm)	17	17	11	11	11		should not be used
Dispersion percentage	32.0	32.0	22.0	22.0	22.0		E.g. enter 10 for dispersion of 10%
% of whole soil dispersible	10.24	10.24	4.84	4.84	4.84		See Section 6.3.3(e)
Soil Texture Group	D	D	F	F	F		See Section 6.3.3(c), (d) and (e)
Rainfall data							
Design rainfall depth (days)	5	5	5	5	5		See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)	75	75	75	75	75		See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event	20.3	20.3	20.3	20.3	20.3		See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm	9.79	9.79	9.79	9.79	9.79		See IFD chart for the site
RUSLE Factors							
Rainfall erosivity (*R*-factor)	2130	2130	2130	2130	2130		Automatic calculation from above data
Soil erodibility (*K*-factor)	0.015	0.07	0.015	0.07	0.015		RUSLE data can be obtained from Appendixes A, B and C
Slope length (m)	190	190	190	190	190		
Slope gradient (%)	5	5	5	5	5		
Length/gradient (*LS*-factor)	1.7	1.7	1.7	1.7	1.7		
Erosion control practice (*P*-factor)	1.3	1.3	1.3	1.3	1.3		
Ground cover (*C*-factor)	1	1	1	1	1		
Calculations							
Soil loss (t/ha/yr)	71	329	71	329	71		
Soil Loss Class	1 - V.LOW	3-LOW-MOD	1 - V.LOW	3-LOW-MOD	1 - V.LOW		See Section 4.4.2(b)
Soil loss (m^3/ha/yr)	54	253	54	253	54		
Soil loss (m^3/yr)	184	857	184	857	184		
Sediment basin storage volume, m^3	31	146	31	146	31		See Sections 6.3.4(i) and 6.3.5 (e)

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82 ALEXANDER STREET
CROWS NEST, NSW 2065

CLIENT
REVELOP
SUITE 506, LEVEL 5/55
PHILLIP STREET
PARRAMATTA NSW 2150

PROJECT
CHISHOLM PLAZA
HERITAGE DRIVE
CHISHOLM NSW 2322

DESIGNED -- DRAWN -- DATE DEC 21 SIZE SIZE CAD REF TX15901.00 C01

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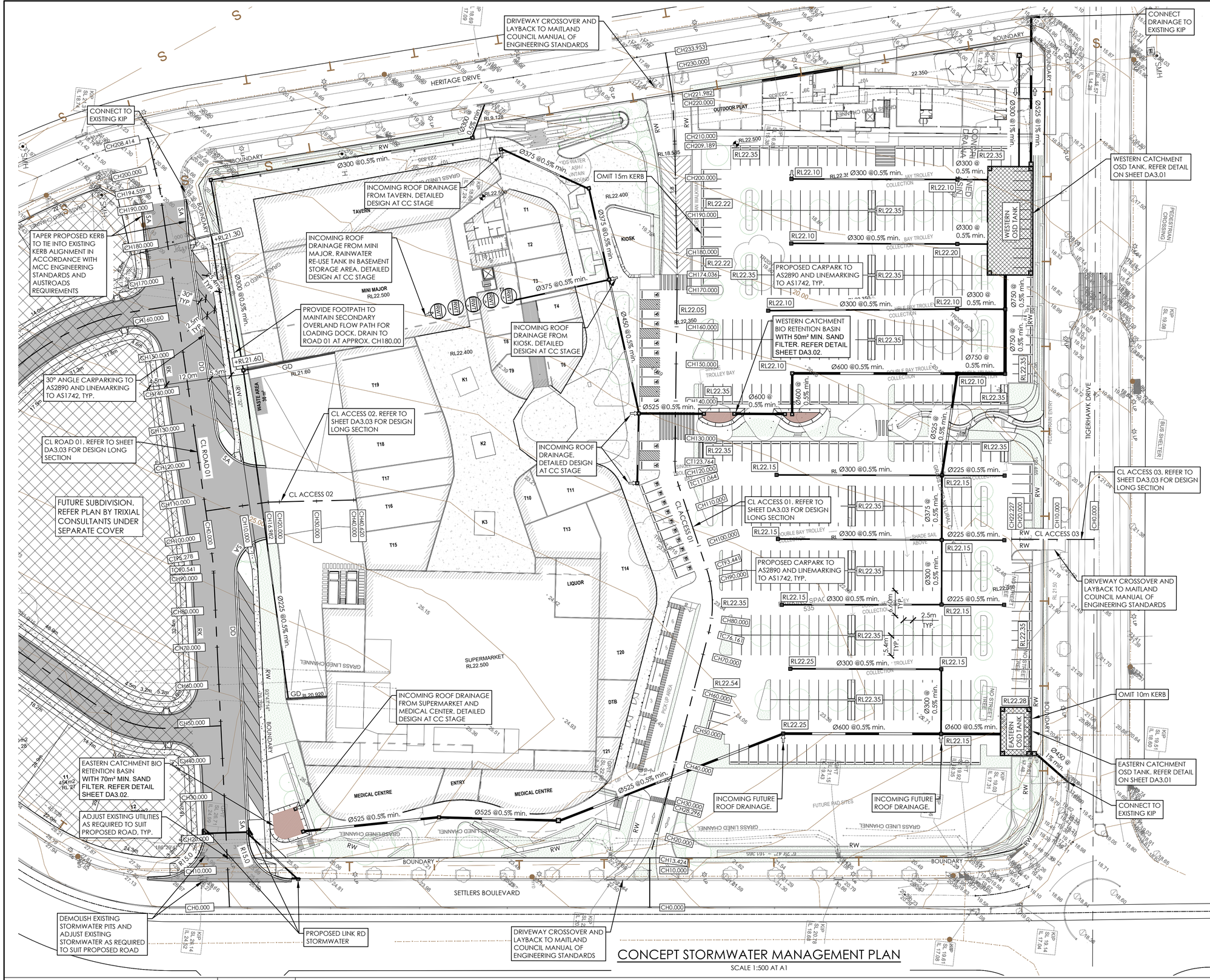
DRAWING TITLE
CONCEPT SEDIMENT AND EROSION CONTROL DETAILS SHEET 2 OF 2

PROJECT No. TX15901.00 DRAWING No. DA2.02 ISSUE A



CONCEPT STORMWATER MANAGEMENT PLAN

SCALE 1:500 AT A1

LEGEND

SYMBOL	DESCRIPTION
	ASPHALT PAVEMENT
	CONCRETE PATH. FINISH TO ARCHITECTS DETAIL
	VEGETATION / LANDSCAPING
	OSD TANK
	PROPOSED BUILDINGS
	BIO-RETENTION BASINS
	GRATED INLET PIT (GIP) (U.N.O.)
	JUNCTION PIT (JP) (U.N.O.)
	KERB INLET PIT (KIP) (U.N.O.)
	STORMWATER PIPE @ 0.5% MIN. U.N.O.
GD	0.3m WIDE HD GRATED DRAIN
RWT	34,000L RAINWATER RE-USE TANK
DD	DISH DRAIN TO MAITLAND COUNCIL STANDARD DRAWINGS.
SA	SA TYPE KERB AND GUTTER TO MAITLAND COUNCIL STANDARD DRAWINGS.
RK	ROLL TOP KERB AND GUTTER TO MAITLAND COUNCIL STANDARD DRAWINGS.
RW	RETAINING WALL DETAIL BY OTHERS
RL54.20	NOMINAL FINISHED SURACE LEVEL - REFER TO ARCHITECTURAL PLANS BY BN ARCHITECTURE FOR FINISHED FLOOR LEVELS AND SITE FINISHED SURFACE LEVEL

NOTE:
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5m 0 10 20 30 40 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

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DESIGNED	DRAWN	DATE	SIZE	CAD REF
--	--	DEC 21	SIZE	TX15901.00 C01

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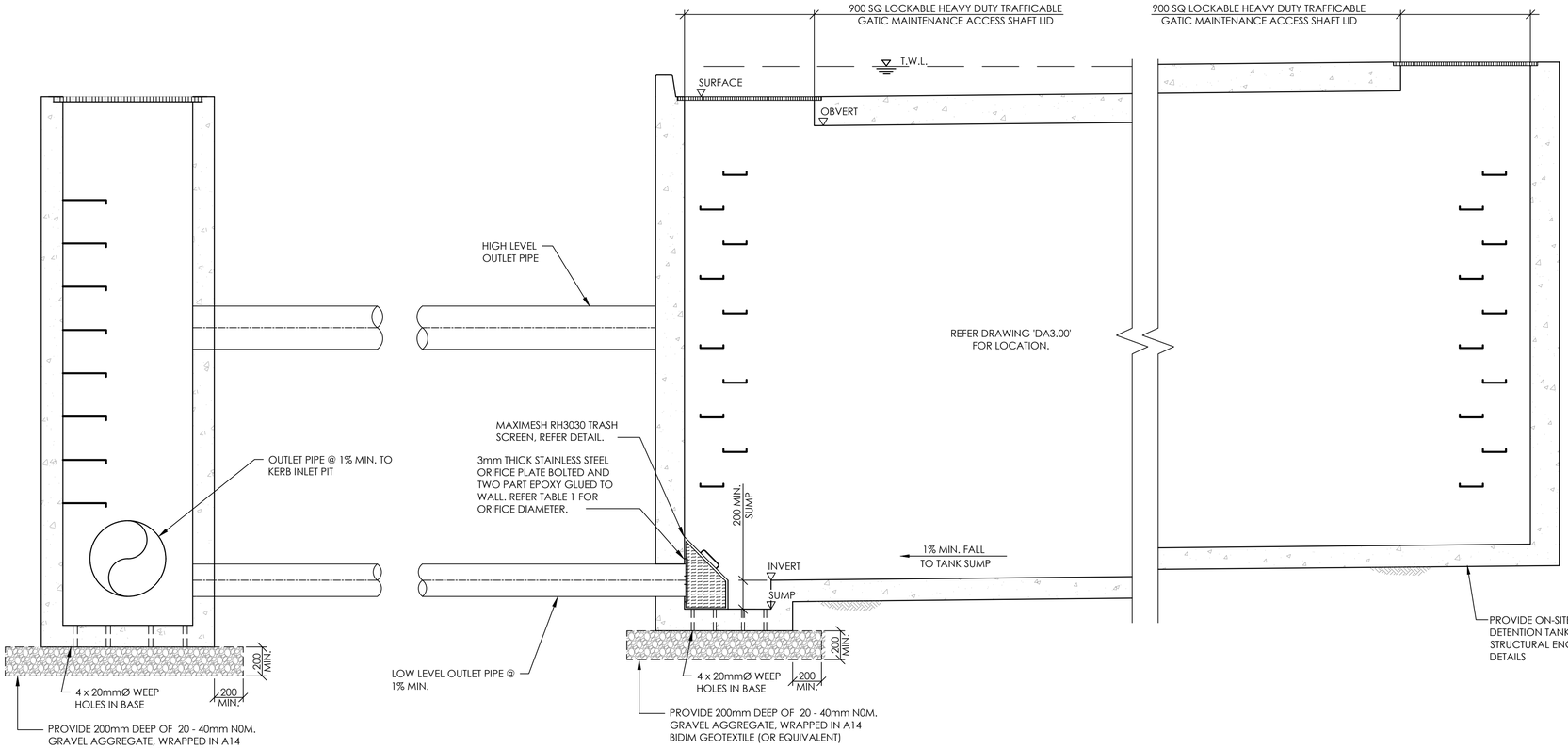
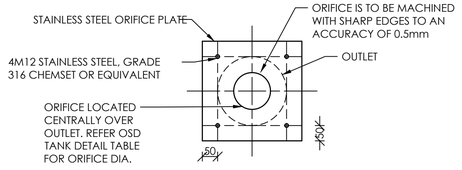


TYPICAL SECTION THROUGH EASTERN/WESTERN OSD TANK

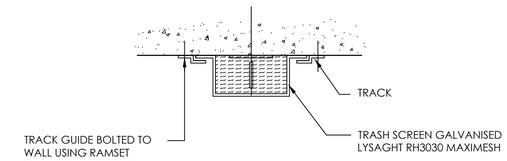
SCALE - 1:20 @ A1

OSD TANK DETAILS			
TANK	WESTERN	EASTERN	
SURFACE RL	22.20m	22.20m	(AHD)
OBVERT RL	22.00m	22.00m	(AHD)
BASE RL	20.00m	20.00m	(AHD)
SUMP RL	19.80m	19.80m	(AHD)
LOW LEVEL OUTLET DIAMETER	300mm	300mm	
LOW LEVEL OUTLET INVERT RL	19.85m	19.85m	(AHD)
ORIFICE DIAMTER	150mm	112mm	
ORIFICE CENTERLINE RL	20.00m	20.00m	(AHD)
HIGH LEVEL OUTLET DIAMETER	2X300mm	300mm	
HIGH LEVEL OUTLET INVERT RL	21.65m	21.45m	(AHD)
OVERFLOW WEIR LENGTH	16.00m	10.00m	
OVERFLOW WEIR RL	22.23m	22.28m	(AHD)
SURFACE AREA	350m^2	120m^2	
TOP WATER LEVEL	22.30m	22.35m	(AHD)
1% AEP OSD VOLUME (m^3)	780.7m^3	342.9m^3	

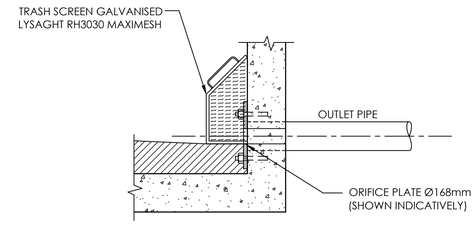


ORIFICE PLATE DETAILS

SCALE 1:10



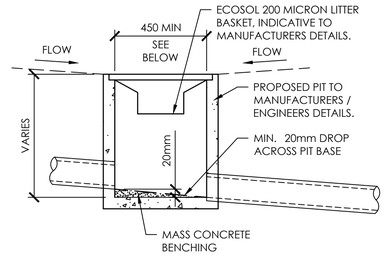
PLAN



SIDE VIEW CROSS SECTION

MAXIMESH TRASH SCREEN DETAIL

SCALE NTS



TYPICAL GRATED SURFACE INLET PIT DETAIL

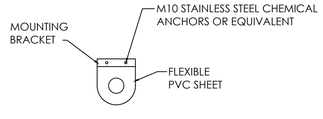
N.T.S.

450 X 450 PLAN INTERNAL PIT DIMENSIONS FOR PITS LESS THAN 600 DEEP
600 X 600 PLAN INTERNAL PIT DIMENSIONS FOR PITS LESS THAN 900 DEEP
600 X 900 PLAN INTERNAL PIT DIMENSIONS FOR PITS 900 TO 1200 DEEP
900 X 900 PLAN INTERNAL PIT DIMENSIONS FOR PITS GREATER THAN 1200 DEEP

NOTE: STORMWATER PITS LESS THAN 600 SQUARE AND 600 DEEP MAY BE REPLACED WITH PLASTIC PITS IF NOT LOCATED IN ROADWAYS AND WRITTEN PERMISSION IS OBTAINED FROM THE ENGINEER.

COLOURS:

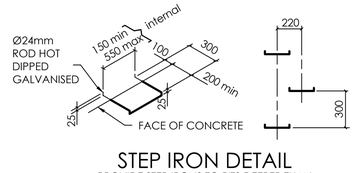
"DANGER" AND BACKGROUND	WHITE
ELLIPTICAL AREA	RED
RECTANGLE CONTAINING ELLIPSE	BLACK
OTHER LETTERING AND BORDER	BLACK



NICHOLAS FLEXI FLAP VALVE

SCALE 1:20

INSTALLED TO MANUFACTURERS DETAILS



STEP IRON DETAIL

PROVIDE STEP IRONS TO PITS DEEPER THAN 1200mm & TO 6000mm MAX DEPTH. (TO COMPLY WITH AS1657-1992, 5.7)

100mm 0 200 400 600 800 1000mm — SCALE 1:10 AT A1 SHEET | 1:20 AT A3 SHEET

200mm 0 500 1000 1500 2000mm — SCALE 1:20 AT A1 SHEET | 1:40 AT A3 SHEET

500mm 0 1 2 3 4 5m — SCALE 1:50 AT A1 SHEET | 1:100 AT A3 SHEET

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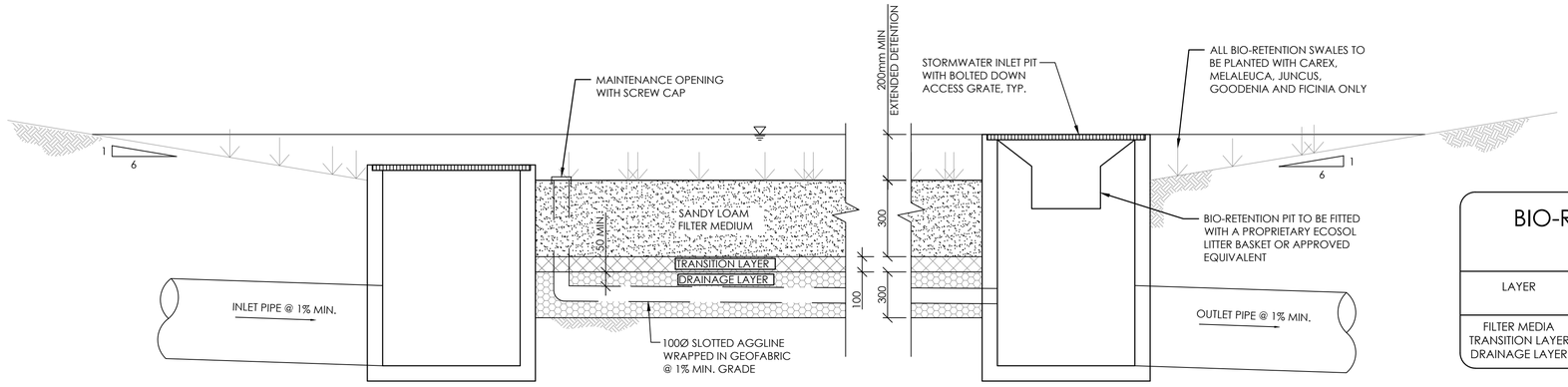
DRAWING TITLE
CONCEPT STORMWATER MANAGEMENT DETAILS SHEET 1 OF 2

PROJECT No. TX15901.00

DRAWING No. DA3.01

ISSUE A



TYPICAL SECTION THROUGH BIO-RETENTION FILTER

SCALE NTS

FILTER AREAS

BIO RETENTION ZONE No.	AREA (m^2)
EAST	70
WEST	50

BIO-RETENTION FILTER MATERIAL SCHEDULE

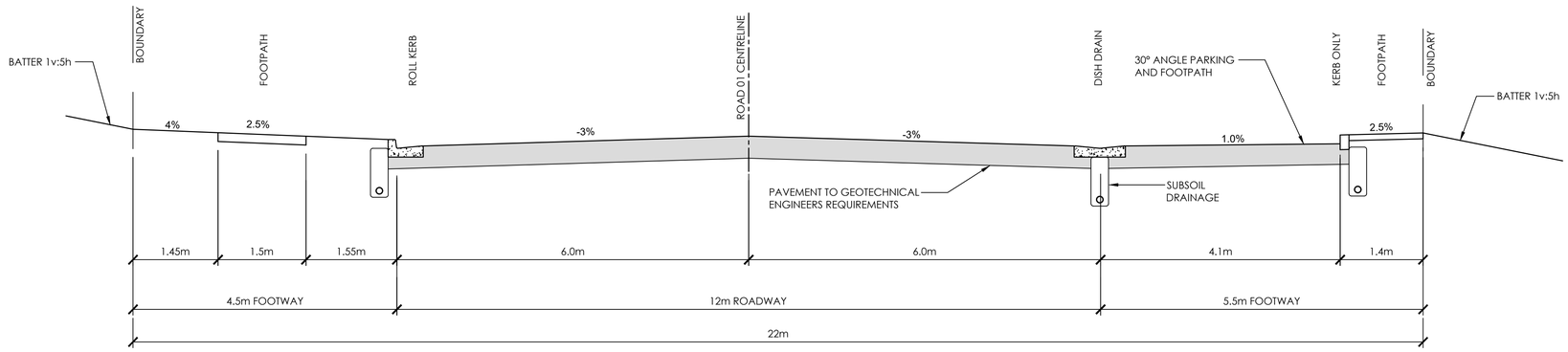
LAYER	SOIL TYPE	PARTICLE SIZE (mm)	SATURATED HYDRAULIC CONDUCTIVITY (mm/hr)
FILTER MEDIA	SANDY LOAM	0.5	180
TRANSITION LAYER	COARSE SAND	1	3600
DRAINAGE LAYER	GRAVEL	2	36000

BIO-RETENION FILTER NOTES

1. FILTERS, SWALES AND BASINS TO BE CONSTRUCTED IN LOCATIONS AS LOCATED UPON THE DRAWINGS AND IN ACCORDANCE WITH THE DETAILS WITHIN THE DRAWING SET.
2. FILTER MEDIA AS SPECIFIED IS TO BE IN ACCORDANCE WITH THE FOLLOWING TABLE:

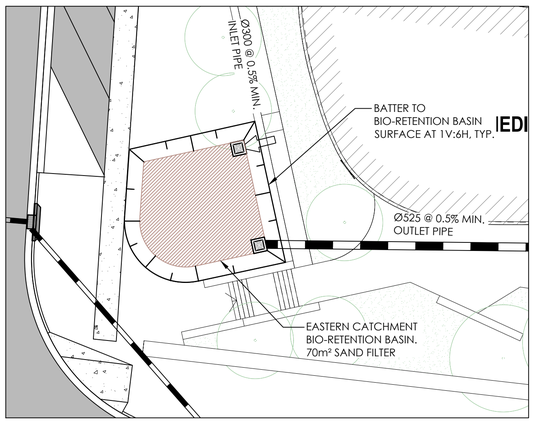
FILTER MEDIA TYPE	MEDIAN PARTICLE SIZE (mm)	MAX SATURATED HYDRAULIC CONDUCTIVITY (mm/hr)
GRAVEL	2	36000
COARSE SAND	1	3600
SAND	0.7	360
SANDY LOAM	0.45	180

3. CONTRACTOR IS TO PROVIDE RELEVANT TESTING CERTIFICATION FROM THE MEDIA SUPPLIER SHOWING CONFORMANCE WITH THE ABOVE TABLE WITH RESPECT TO PARTICLE SIZE.
4. SUBSOIL DRAINS ARE TO BE INSTALLED UPON A 100mm LAYER OF THE FILTER MEDIA, WITHIN 300mm OF THE FILTER PIT EXCAVATION PERIMETER, AND AT A MAXIMUM 5 METRE GRID THROUGHOUT THE FILTER AREA.
5. FILTERS OF LESS THAN OR EQUAL TO 2m WIDTH, I.E. FILTER TRENCHES MAY HAVE A SINGLE SUBSOIL DRAIN LOCATED CENTRALLY TO THE FILTER TRENCH AND IS TO EXTEND FOR THE FULL EXTENT OF THE FILTER TRENCH.
6. OUTLET LINES FROM FILTER AREAS ARE TO BE CONNECTED IMMEDIATELY TO FITTINGS TO SUIT THE OUTLET LINE DIAMETER AND PIPE MATERIAL. THE OUTLET LINE IS TO FALL AT A MINIMUM OF 1% GRADIENT TO POINT OF OUTLET AS SHOWN ON THE DRAWINGS.
7. PERFORATED SUBSOIL uPVC CONDUITS ARE NOT TO BE USED THROUGH EARTHEN BASIN WALLS WITHOUT APPROVAL FROM THE DESIGNING ENGINEER.
8. THE CERTIFYING ENGINEER IS TO INSPECT AND VERIFY THE FILTER EXCAVATION PIT DIMENSIONS AND CONFIRM ADEQUACY PRIOR TO PLACEMENT OF FILTER MEDIA.
9. PLANTINGS UPON FILTER AREAS ARE TO BE AS SPECIFIED ON THE DRAWINGS AND SHOULD BE OF A GRASS OR SHRUB OF TYPE CAREX, JUNCUS, GOODENIA OR FICINIA UNLESS NOTED OTHERWISE, AND AT A DENSITY AS SPECIFIED ON THE DRAWINGS OR IF NOT NOTED AS SPECIFIED BY A QUALIFIED LANDSCAPE/ HORTICULTURE CONSULTANT.



TYPICAL SECTION - ROAD 01

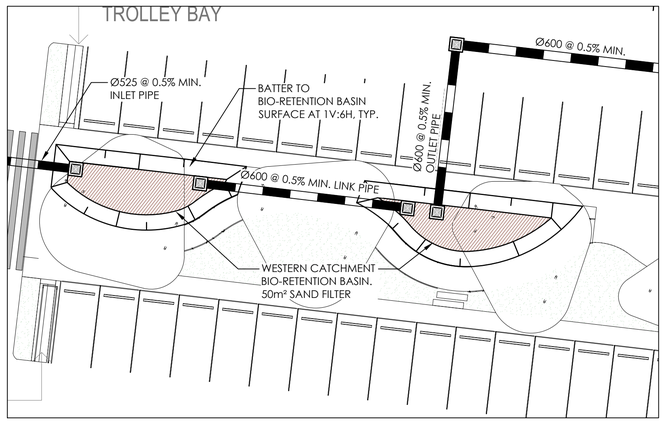
SCALE 1:50



EASTERN BIO BASIN INSET PLAN

SCALE 1:200

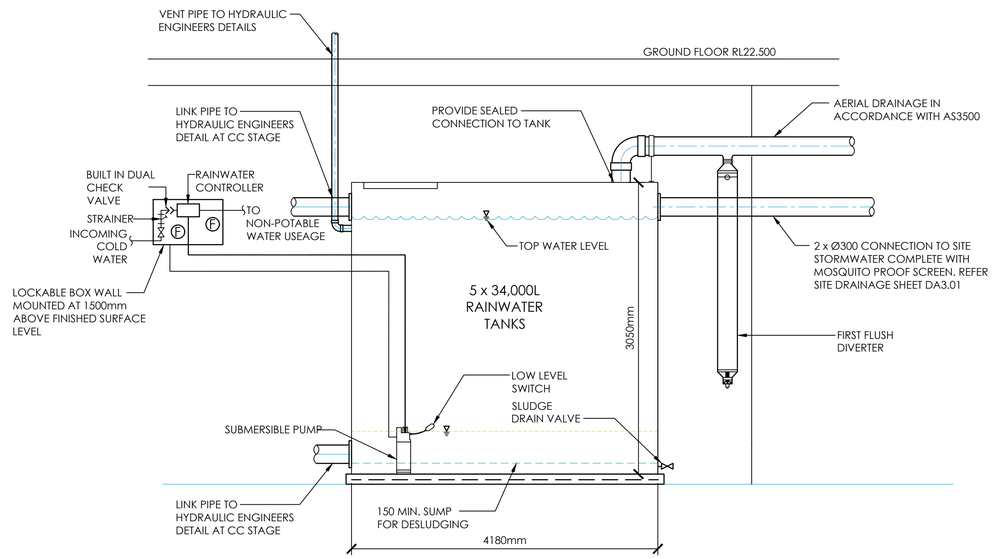
NOTE: REFER SHEET DA3.00 FOR OVERALL SITE PLAN



WESTERN BIO BASIN INSET PLAN

SCALE 1:200

NOTE: REFER SHEET DA3.00 FOR OVERALL SITE PLAN



RAINWATER RE-USE TANK DETAIL

N.T.S.

500mm 0 1 2 3 4 5m

SCALE 1:50 AT A1 SHEET | 1:100 AT A3 SHEET

2m 0 5 10 15 20m

SCALE 1:200 AT A1 SHEET | 1:400 AT A3 SHEET

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HERITAGE DRIVE
CHISHOLM NSW 2322

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CONCEPT STORMWATER MANAGEMENT DETAILS SHEET 2 OF 2

PROJECT No.	DRAWING No.	ISSUE
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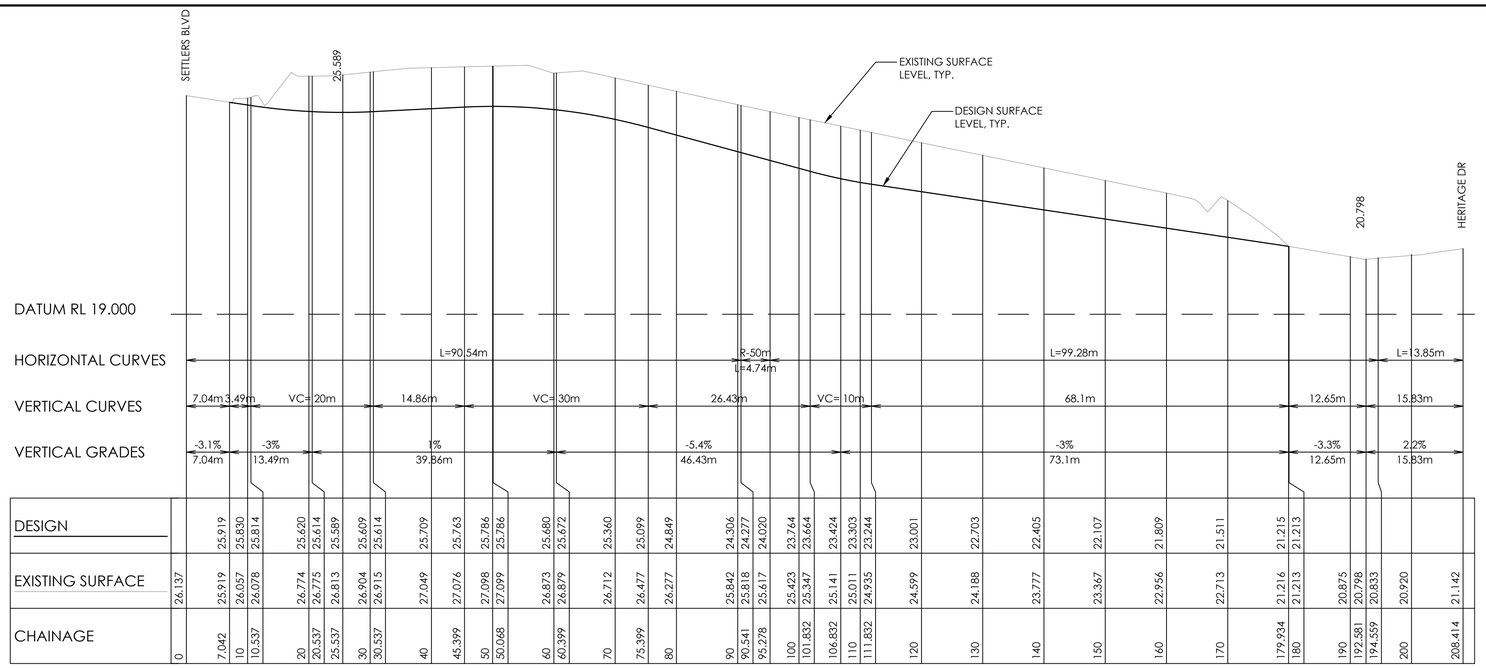

SETTLERS BLVD
25.589
EXISTING SURFACE LEVEL, TYP.
DESIGN SURFACE LEVEL, TYP.
20.798
HERITAGE DR
DATUM RL 19.000
HORIZONTAL CURVES
L=90.54m
R-50m
L=4.74m
L=99.28m
L=13.85m
VERTICAL CURVES
7.04m 3.49m VC= 20m 14.86m VC= 30m 26.43m VC= 10m 68.1m 12.65m 15.83m
VERTICAL GRADES
-3.1% -3% 1% -5.4% -3% -3.3% 2.2%
7.04m 13.49m 39.86m 46.43m 73.1m 12.65m 15.83m

| DESIGN | | |

LEGEND

SYMBOL	DESCRIPTION
	OSD CATCHMENT BOUNDARY

UNCAPTURED DRIVEWAY CATCHMENT AREA = 0.04ha

WESTERN OSD CATCHMENT AREA = 2.78ha

UNCAPTURED LOADING BAY CATCHMENT AREA = 0.18ha

EASTERN OSD CATCHMENT AREA = 1.40ha

FUTURE SUBDIVISION. REFER PLAN BY TRIXIAL CONSULTANTS UNDER SEPARATE COVER

HERITAGE DRIVE

TIGERHAWK DRIVE

SETTLERS BOULEVARD

BOUNDARY

TAVERN

MINI MAJOR RL22.500

SUPERMARKET RL22.500

MEDICAL CENTRE

MEDICAL CENTRE

ENTRY

KIOSK

LIQUOR

OUTDOOR PLAY

KIDS WATER SPLASH / FOUNTAIN PLAYGROUND

PEDESTRIAN WAY

PEDESTRIAN ENTRY

PICK UP AREA

WASTE AREA 30 m²

FUTURE PAD SITES

PARKING SPACES 535

SHADE SAIL ABOVE

DOUBLE BAY TROLLEY COLLECTION

SINGLE TROLLEY BAY

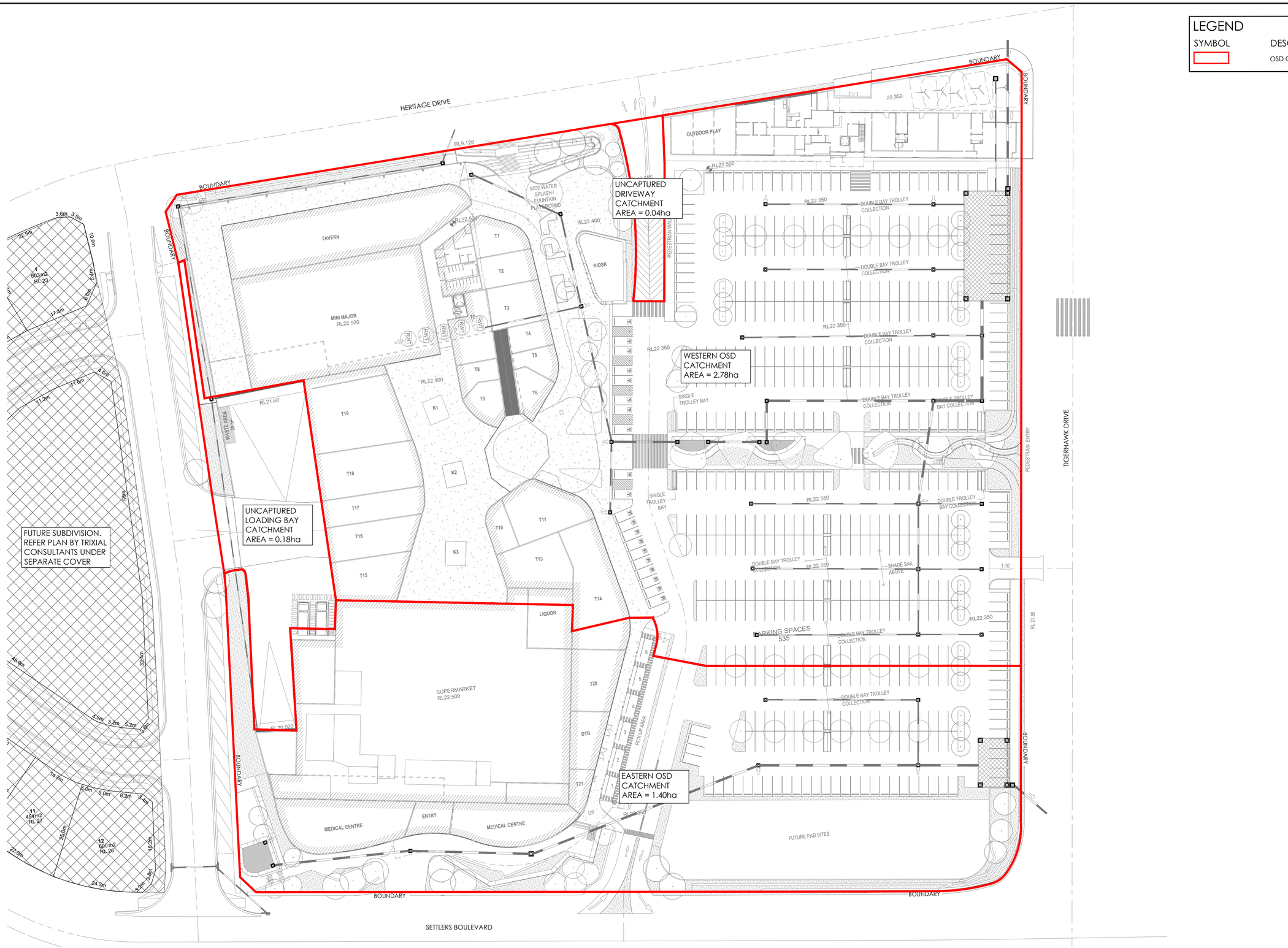
DOUBLE TROLLEY BAY COLLECTION

T1 T2 T3 T4 T5 T6 T8 T9 T10 T11 T13 T14 T15 T16 T17 T18 T19 T20 T21 DTB K1 K2 K3

1 603 m2 RL 23

11 454 m2 RL 27

12 600 m2 RL 26



SCALE 1:500 AT A1

5m 0 10 20 30 40 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

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CONCEPT STORMWATER CATCHMENT PLAN

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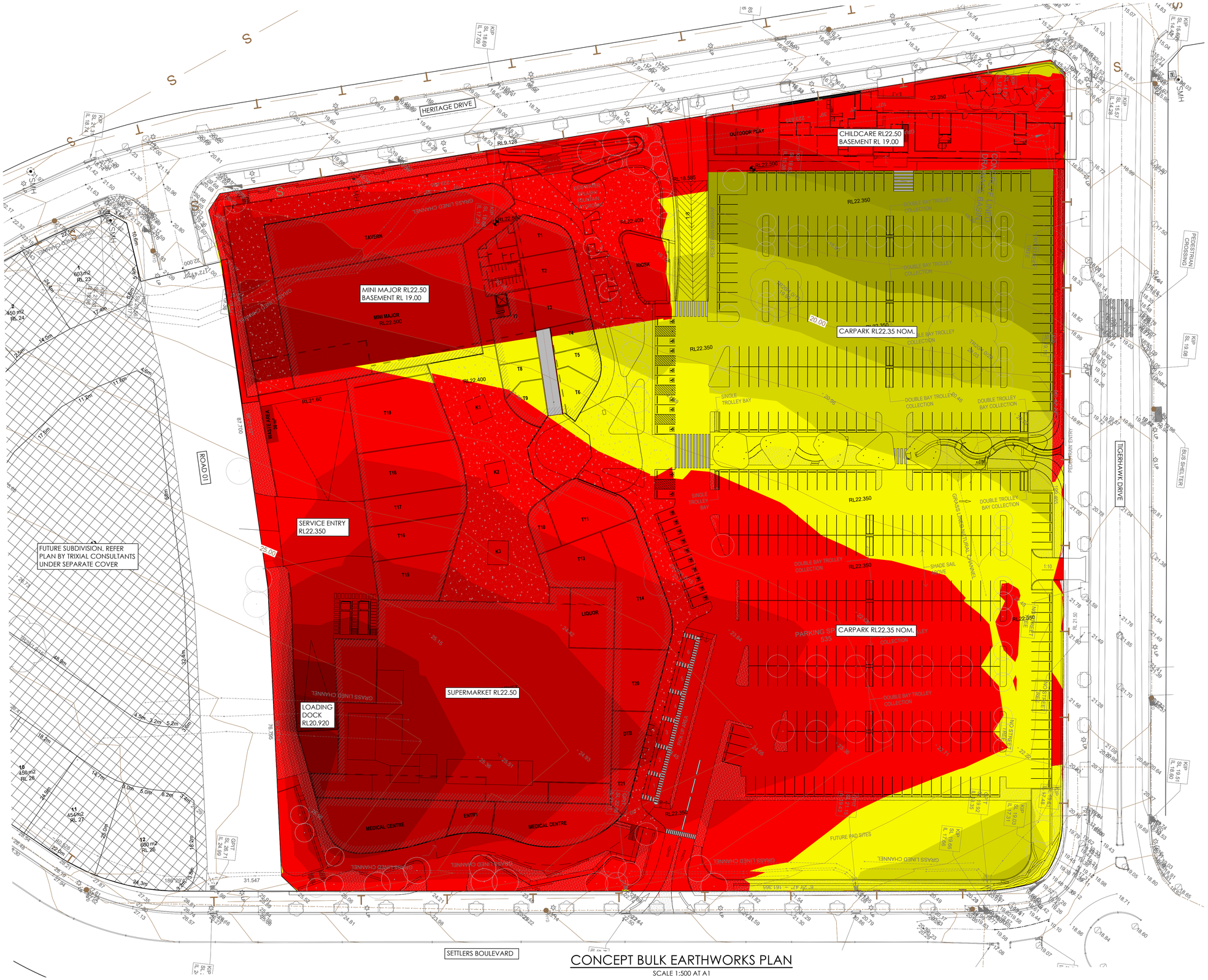

EARTHWORKS DEPTH RANGE

DEPTH (m)			
-8.0	to	-7.0	
-7.0	to	-6.0	
-6.0	to	-5.0	
-5.0	to	-4.0	
-4.0	to	-3.0	
-3.0	to	-2.0	
-2.0	to	-1.0	
-1.0	to	0	
0	to	1.0	
1.0	to	2.0	
2.0	to	3.0	
3.0	to	4.0	
4.0	to	5.0	
6.0	to	7.0	
8.0	to	9.0	
9.0	to	10.0	

BULK EARTHWORKS NOTES

1. THE CONCEPTUAL BULK EARTHWORK LEVELS SHOWN ARE NOMINAL FINISHED SURFACE LEVEL. FINAL DETAIL TO BE CONFIRMED AT CC STAGE
2. RETAINING WALL DETAILS AND LEVELS TO BE STRUCTURALLY DESIGNED AND CONFIRMED AT CC STAGE.
3. SITE CONDITIONS, COMPACTION REQUIREMENTS, TEMPORARY BATTERS AND FILLING TO BE IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS REQUIREMENTS.

CONCEPTUAL EARTHWORKS VOLUMES

STRIP AREA OF WORKS AND STOCKPILE FOR RE-USE IN ACCORDANCE WITH GEOTECH ENGINEERS RECOMMENDATIONS.

CONCEPTUAL BULKEARTHWORKS VOLUMES (m^3)

TOTAL SITE CUT VOLUME	= 42,710m^3 NOM.
TOTAL SITE FILL VOLUME	= 22,480m^3 NOM.

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CONCEPT BULK EARTHWORKS PLAN

SCALE 1:500 AT A1

5m 0 10 20 30 40 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

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