

**LEGEND**

- PROPERTY BOUNDARY
- CUT OFF WALL ALIGNMENT
- TOP OF CAP CONTOURS AT 0.1 m INTERVALS
- MONITORING WELL LOCATIONS
- BAROMETRIC PRESSURE MONITORING LOCATION

**REFERENCE(S)**

- BASE MAP SOURCED FROM MONTEATH & POWYS, TITLED "DETAIL SURVEY FOR ARSENIC REMEDIATION PROJECT", DATED 22/07/2015, DRG REF 15-43050, DELIVERED IN .dwg FORMAT
- NEAR MAP IMAGE TRANSFORMED BY GOLDER ASSOCIATES PTY LTD

**SURVEY INFORMATION**

- THE SURVEY IS ON ORICA SITE CO-ORDINATES. BASED ON SURVEY CONTROL MARK MONUMENT 106 NEAR PRILL TOWER E 2580437.0, N893077.0
- ORIGIN OF LEVELS MONUMENT 106 NEAR PRILL TOWER RL 3.962 ORICA DATUM
- CONTOUR INTERVAL IS 100mm.

**NOTE(S)**

- DIVERSION BUND ON THE BATTER TO BE FORMED TO CREATE A MINIMUM 300 mm DEEP DRAIN TOWARDS THE SIDE DRAIN ON THE EASTERN SIDE.

POINT No.	EASTING (m)	NORTHING (m)	POINT No.	EASTING (m)	NORTHING (m)
MWA	2416.22	1277.23	MWM	2438.49	1216.26
MWB	2416.88	1277.98	MWO	2438.96	1217.15
MWC	2415.90	1278.18	MWP	2439.56	1214.30
MWD	2418.24	1275.24	MWQ	2438.56	1214.32
MWE	2418.99	1275.91	MWR	2439.03	1213.44
MWF	2419.19	1274.92			
MWG	2488.74	1245.30			
MWH	2488.75	1244.24			
MWI	2487.83	1244.76			
MWJ	2491.17	1245.29			
MWK	2491.20	1244.32			
MWL	2492.03	1244.83			

**SETOUT TABLE**

POINT No.	EASTING (m)	NORTHING (m)
BPM	2440.50	1216.30

**SETOUT TABLE**

POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
CAP01	2419.08	1279.38	4.56
CAP02	2461.99	1279.38	4.50
CAP03	2491.89	1262.45	4.40
CAP04	2491.89	1230.40	4.70
CAP05	2474.63	1213.14	4.60
CAP06	2463.39	1213.14	4.55
CAP07	2450.20	1213.14	4.49
CAP08	2415.61	1213.13	4.33
CAP09	2415.61	1275.91	4.67

**SETOUT TABLE**

POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
BUND01	2460.93	1276.55	5.63
BUND02	2426.34	1274.85	6.23
BUND03	2420.84	1275.06	6.17
BUND04	2419.48	1274.17	6.14
BUND05	2417.54	1215.03	5.18
BUND06	2461.71	1215.83	5.63
BUND07	2473.81	1215.26	5.49
BUND08	2492.51	1230.60	4.79

**SETOUT TABLE**

POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
DRN01	2463.81	1279.38	4.12
DRN02	2492.33	1263.23	4.10
DRN03	2461.43	1216.29	5.34
DRN04	2473.66	1215.71	5.20
DRN05	2492.73	1231.36	4.41
DRN06	2492.79	1262.45	4.10
DRN07	2426.34	1274.40	5.93
DRN08	2461.15	1276.06	5.33
DRN09	2462.18	1276.46	5.31
DRN10	2420.78	1274.81	5.86
DRN11	2419.91	1273.72	5.84
DRN12	2417.98	1214.73	4.88
DRN13	2450.37	1212.24	4.19

REV	REVISIONS	DRAWN	APP	DATE	REFERENCE DRAWINGS	DRG.No.
02	RE-ISSUED FOR CONSTRUCTION	GOLDER	GRS	24-07-2018		
01	ISSUED FOR CONSTRUCTION	GOLDER	GRS	11-04-2016		

DESIGNED	RH	11.04.16
PREPARED	EJ	11.04.16
REVIEWED	GRS	11.04.16
APPROVED	GRS	11.04.16

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DRAWN:	GOLDERS	DATE:	11-04-2016	SITE:	KOORAGANG ISLAND
CHECKED:		DATE:		PLANT:	SITE SERVICES
PASSED-1:		DATE:		SECTION:	ARCHITECTURAL & CIVIL
PASSED-2:		DATE:		PROJECT - WO No:	OKI-15033
APPROVED:		DATE:		SCALE:	1:500

**ORICA** Kooragang Island N.S.W. Australia

ARSENIC REMEDIATION PROJECT CAPPING SYSTEM TOP OF CAP AND STORMWATER DRAINAGE PLAN

SHEET SIZE: A3 420 x 297

DWG No: 15-43250

STATUS: ISSUED FOR CONSTRUCTION

INDEX: 15.02.01.00

REV: 02




**NSW GOVERNMENT**  
 Planning  
 Issued under the Environmental Planning and Assessment Act 1979  
 Approved Application No. SSD 7831  
 granted on the 10 August 2018  
 Signed: [Signature]  
 Sheet No. 2 of 7

CUTOFF WALL & CAPPING LAYER

INFILTRATION PIT  
50,000 LITRE WATER TANK

CUTOFF WALL CONTRACTOR LAYDOWN AREA


CONSTRUCTION AMENITIES


HAUL ROAD

WATER CATCHMENT BASIN

ARSENIC REMEDIATION CONSTRUCTION ZONE

**LEGEND:**

 PERMANENT WORKS  
- WILL REMAIN AT THE COMPLETION OF THE PROJECT

 TEMPORARY CONSTRUCTION ZONE  
- WILL BE REMOVED AT THE COMPLETION OF THE PROJECT

01	ISSUED FOR PROJECT REVIEW	DV		29.08.16	
02	REVISED TO SHOW SITE WORK TO DATE	DV		13.07.17	
REV	REVISIONS	DRAWN	APP	DATE	REFERENCE DRAWINGS

**AECOM**  
AECOM Australia Pty Ltd A.B.N. 23 083 846 930

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM AUSTRALIA QUALITY ASSURANCE SYSTEM CERTIFIED TO AS/NZS ISO 9001-2000 PREPARED FOR ORICA AUSTRALIA LTD. ACN 004 117 828 ABN 99 004 117 828

DRAWN BY: D.VASILEV      CHECKED BY: \_\_\_\_\_  
 ENGINEER  
 AECOM REFERENCE: \_\_\_\_\_      AECOM PROJECT No. 80331640  
 AECOM APPROVAL: \_\_\_\_\_      APPROVAL DATE: \_\_\_\_\_

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ORICA AUSTRALIA LTD.  
ACN 004 117 026      ABN 99 004 117 828  
15 GREENLEAF ROAD, KOORAGANG ISLAND NSW 2304  
PO BOX 80 MAYFIELD NSW 2304 AUSTRALIA

DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE

 **Kooragang Island N.S.W. Australia**

TITLE: **ARSENIC REMEDIATION PROJECT  
CUT-OFF WALL AND CAPPING LAYER  
CONSTRUCTION AREA**

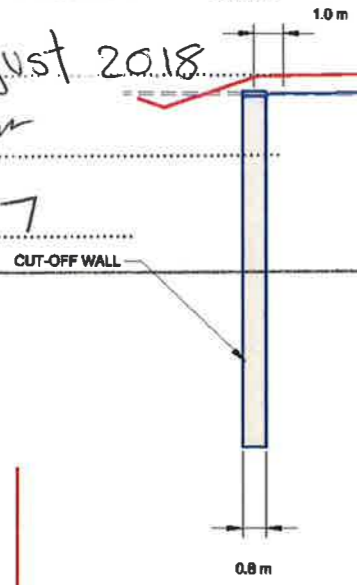
SHEET SIZE: **A1**      DWG No: **15-43239**      INDEX: **02**

STATUS: **WORK IN PROGRESS**      INDEX: **15.01.04.00**

564



CUT-OFF WALL



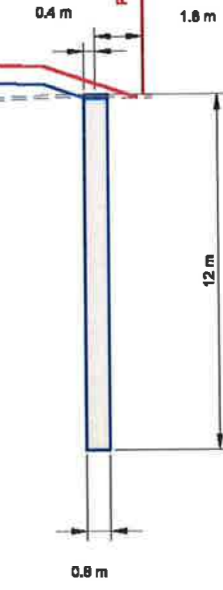
PROPOSED TOP OF CAP

PROPOSED TOP OF FILL

EXISTING GROUND

STRIPPING SURFACE 100 mm BELOW EXISTING

SCALE 1:500 m **A** SOUTH-NORTH - SECTION



PROPOSED TOP OF CAP

PROPOSED TOP OF FILL

EXISTING GROUND

STRIPPING SURFACE 100 mm BELOW EXISTING

SCALE 1:500 m **B** WEST-EAST - SECTION

ISSUED FOR  
**CONSTRUCTION**



REV	REVISIONS	DRAWN	APP	DATE	REFERENCE DRAWINGS	DRG.No.
02	RE-ISSUED FOR CONSTRUCTION	GOLDER	GRS	24-07-2018		
01	ISSUED FOR CONSTRUCTION	GOLDER	GRS	11-04-2016		

DESIGNED	RH	11 04 16
PREPARED	EJ	11 04 16
REVIEWED	GRS	11 04 16
APPROVED	GRS	11 04 16



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CHECKED:		DATE:		PLANT:	SITE SERVICES
PASSED-1:		DATE:		SECTION:	ARCHITECTURAL & CIVIL
PASSED-2:		DATE:		PROJECT - WD No:	OKI-15033
APPROVED:		DATE:		SCALE:	1:250



Kooragang Island  
N.S.W. Australia

TITLE

**ARSENIC REMEDIATION PROJECT**  
CAPPING SYSTEM  
TYPICAL CROSS SECTIONS

SHEET SIZE: **A3** (420 x 297)  
DWG No: **15-43251**  
STATUS: ISSUED FOR CONSTRUCTION  
INDEX: 15.02.01.00

02



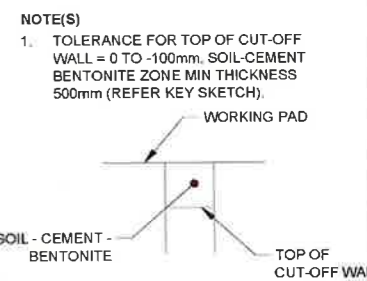
NSW GOVERNMENT  
Planning  
Issued under the Environmental Planning and Assessment Act 1979  
Approved Application No. **SSD 7831**  
granted on the **10 August 2018**  
Signed *[Signature]*  
Sheet No. **1** of **7**

**LEGEND**  
 PROPERTY BOUNDARY  
 CUT-OFF WALL  
 EXISTING CONTOURS AT 0.1 m INTERVALS

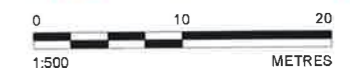
**REFERENCE(S)**  
 • BASE MAP SOURCED FROM MONTEATH & POWYS, TITLED "DETAIL SURVEY FOR ARSENIC REMEDIATION PROJECT", DATED 22/07/2015, DRG REF 15-43050, DELIVERED IN .dwg FORMAT  
 • NEAR MAP IMAGE TRANSFORMED BY GOLDER ASSOCIATES PTY LTD  
**SURVEY INFORMATION**  
 1. THE SURVEY IS ON ORICA SITE CO-ORDINATES, BASED ON SURVEY CONTROL MARK MONUMENT 106 NEAR PRILL TOWER E 2580437.0, N893077.0  
 2. ORIGIN OF LEVELS MONUMENT 106 NEAR PRILL TOWER RL 3.962 ORICA DATUM  
 3. CONTOUR INTERVAL IS 100mm.

Station	TOP OF RL CUT-OFF WALL (m) (NOTE 1)
0	4.17
5	4.05
10	4.05
15	4.04
20	4.03
25	4.03
30	4.02
35	4.01
40	4.01
45	4.00
50	3.98
55	3.97
60	3.95
65	3.94
70	3.92
75	3.91
80	3.92
85	3.97
90	4.02
95	4.07
100	4.12
105	4.17
110	4.19
115	4.17
120	4.15
125	4.13
130	4.11
135	4.14
140	4.20
145	4.20
150	4.19
155	4.13
160	4.07
165	4.01
170	3.96
175	3.90
180	3.84
185	3.79
190	3.78
195	3.81
200	3.85
205	3.88
210	3.91
215	3.95
220	3.98
225	4.02
230	4.05
235	4.09
240	4.12
245	4.16
247.54	4.17

SETOUT TABLE		
POINT No.	EASTING (m)	NORTHING (m)
COW01	2419.66	1277.98
COW02	2460.09	1277.98
COW03	2489.74	1261.19
COW04	2489.74	1231.29
COW05	2473.74	1215.30
COW06	2417.01	1215.30
COW07	2417.01	1275.33



ISSUED FOR  
**CONSTRUCTION**



REV	REVISIONS	DRAWN	APP	DATE	REFERENCE DRAWINGS	DRG.No.
02	RE-ISSUED FOR CONSTRUCTION	GOLDER	GRS	24-07-2018		
01	ISSUED FOR CONSTRUCTION	GOLDER	GRS	11-04-2016		

DESIGNED	RH	11.04.16
PREPARED	EJJ	11.04.16
REVIEWED	GRS	11.04.16
APPROVED	GRS	11.04.16

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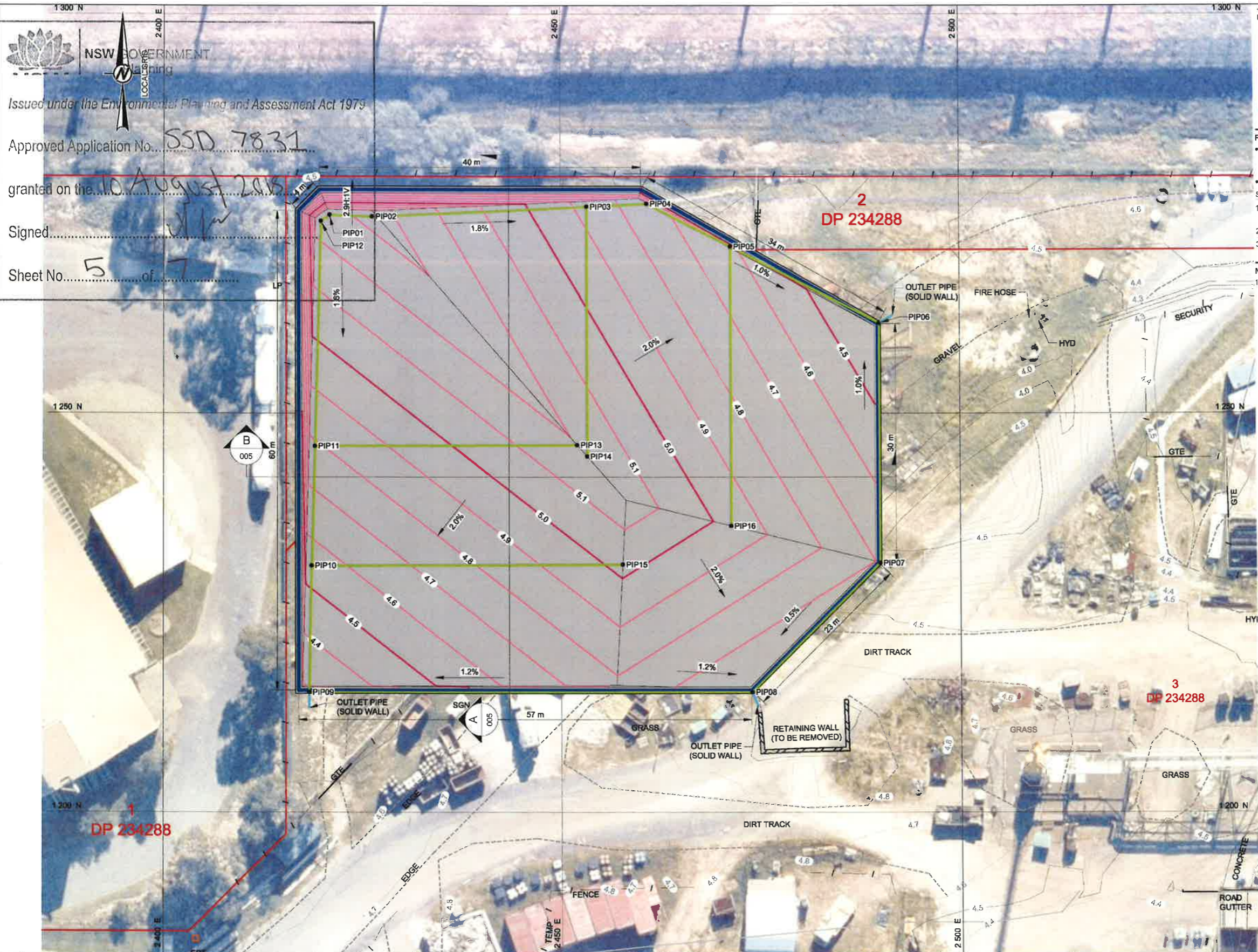
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CHECKED:		DATE:		PLAN:	SITE SERVICES
PASSED-1:		DATE:		SECTION:	ARCHITECTURAL & CIVIL
PASSED-2:		DATE:		PROJECT - WO No:	04-15033
APPROVED:		DATE:		SCALE:	1:500

**ORICA** Kooragang Island N.S.W. Australia

TITLE: **ARSENIC REMEDIATION PROJECT CAPPING SYSTEM EXISTING FEATURES**

SHEET SIZE: **A3** DWG No: **15-43248** P L V 02

STATUS: ISSUED FOR CONSTRUCTION INDEX: 15.02.01.00



**LEGEND**

- PROPERTY BOUNDARY
- CUT OFF WALL ALIGNMENT
- UNIT 10 SUB-SURFACE DRAINAGE PIPE (PERFORATED)
- UNIT 10 SUB-SURFACE DRAINAGE PIPE (SOLID WALL)
- TOP OF FILL CONTOURS AT 0.1 m INTERVALS

**REFERENCE(S)**

- BASE MAP SOURCED FROM MONTEATH & POWYS, TITLED "DETAIL SURVEY FOR ARSENIC REMEDIATION PROJECT", DATED 22/07/2015, DRG REF 15-43050, DELIVERED IN .dwg FORMAT
- NEAR MAP IMAGE TRANSFORMED BY GOLDER ASSOCIATES PTY LTD

**SURVEY INFORMATION**

- THE SURVEY IS ON ORICA SITE CO-ORDINATES, BASED ON SURVEY CONTROL MARK MONUMENT 106 NEAR PRILL TOWER E 2560437.0, N893077.0
- ORIGIN OF LEVELS MONUMENT 106 NEAR PRILL TOWER RL 3.962 ORICA DATUM
- CONTOUR INTERVAL IS 100mm.

**NOTE(S)**

- OUTLET PIPES OF THE SUB-SURFACE DRAINAGE SYSTEM TO BE DRAINED INTO ADJACENT SURFACE WATER DRAINAGE STRUCTURE.

NSW GOVERNMENT  
 Issued under the Environmental Planning and Assessment Act 1979  
 Approved Application No. SSD 7831  
 granted on the 10 August 2015  
 Signed [Signature]  
 Sheet No. 5 of 7

**SETOUT TABLE**

POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL, m)
PIP01	2420.90	1274.80	5.27
PIP02	2426.26	1274.59	5.33
PIP03	2453.24	1275.82	4.87
PIP04	2460.79	1276.18	4.74
PIP05	2471.24	1270.82	4.61
PIP06	2489.86	1261.26	4.40
PIP07	2489.91	1231.22	4.70
PIP08	2473.83	1215.07	4.60
PIP09	2418.32	1215.05	4.30
PIP10	2418.62	1230.90	4.55
PIP11	2419.03	1245.90	4.79
PIP12	2419.82	1274.02	5.24
PIP13	2451.99	1246.02	5.20
PIP14	2453.24	1244.80	5.19
PIP15	2457.68	1231.04	5.03
PIP16	2471.24	1235.87	4.97

**ISSUED FOR CONSTRUCTION**

0 10 20  
1:500 METRES

REV	REVISIONS	DRAWN	APP	DATE	REFERENCE DRAWINGS	DRG.No
02	RE-ISSUED FOR CONSTRUCTION	GOLDER	GRS	24-07-2015		
01	ISSUED FOR CONSTRUCTION	GOLDER	GRS	11-04-2016		

DESIGNED	RH	11.04.16
PREPARED	EJ	11.04.16
REVIEWED	GRS	11.04.16
APPROVED	GRS	11.04.16

Golder Associates

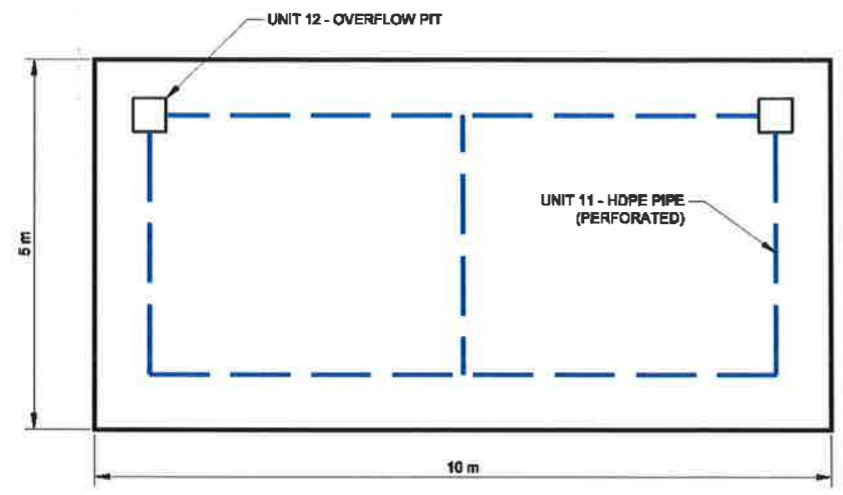
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DRAWN:	GOLDERS	DATE:	11-04-2016	SITE:	KOORAGANG ISLAND
CHECKED:		DATE:		PLANT:	SITE SERVICES
PASSED-1:		DATE:		SECTION:	ARCHITECTURAL & CIVIL
PASSED-2:		DATE:		PROJECT - W/O No:	00-15033
APPROVED:		DATE:		SCALE:	1:500

**ORICA** Kooragang Island N.S.W. Australia

ARSENIC REMEDIATION PROJECT  
 CAPPING SYSTEM  
 TOP OF FILL PLAN AND  
 SUB-SURFACE DRAINAGE PIPE

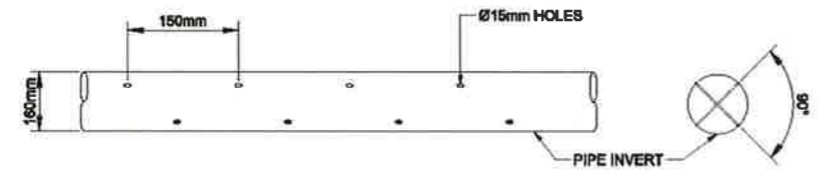
SHEET SIZE: **A3** (420 x 297)  
 Dwg No: **15-43249**  
 STATUS: ISSUED FOR CONSTRUCTION  
 INDEX: 15.02.01.00



INFILTRATION PIT LAYOUT  
SCALE 1:100 m

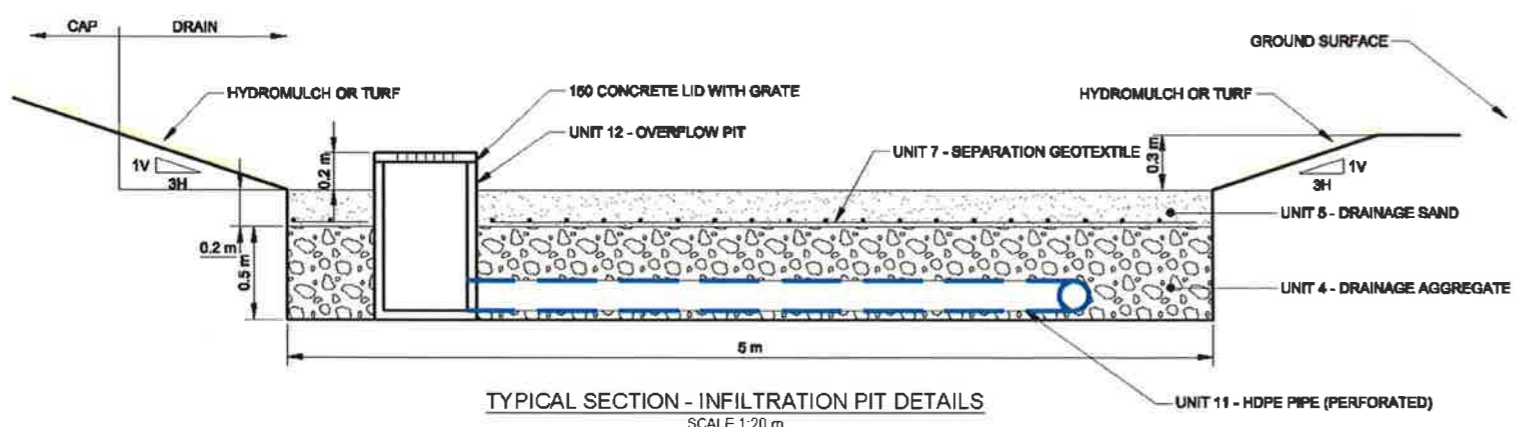
LEGEND  
 HDPE PIPE Ø160 PERFORATED  
 OVERFLOW PIT

NSW GOVERNMENT  
 Planning  
 Issued under the Environmental Planning and Assessment Act 1979  
 Approved Application No. SSD 7831  
 granted on the 10 August 2018  
 Signed [Signature]  
 Sheet No. 6 of 7

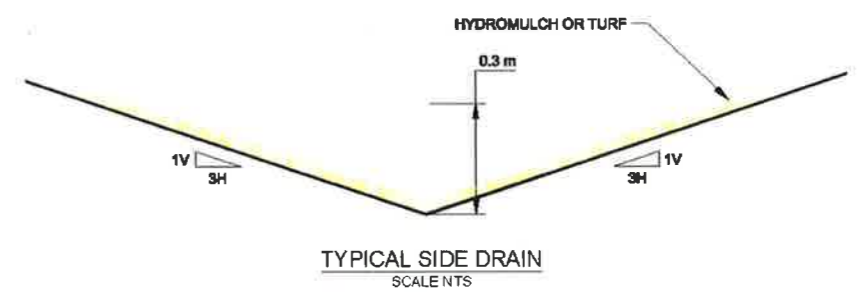


PIPE PERFORATION DETAIL  
SCALE 1:20

NOTE: PIPE TO BE INSTALLED WITH HOLES IN ORIENTATION SHOWN

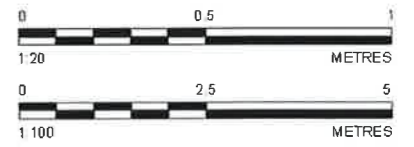


TYPICAL SECTION - INFILTRATION PIT DETAILS  
SCALE 1:20 m



TYPICAL SIDE DRAIN  
SCALE NTS

ISSUED FOR  
**CONSTRUCTION**



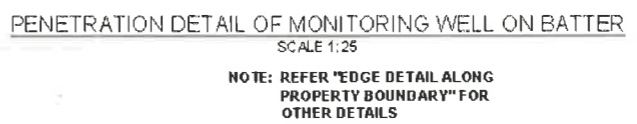
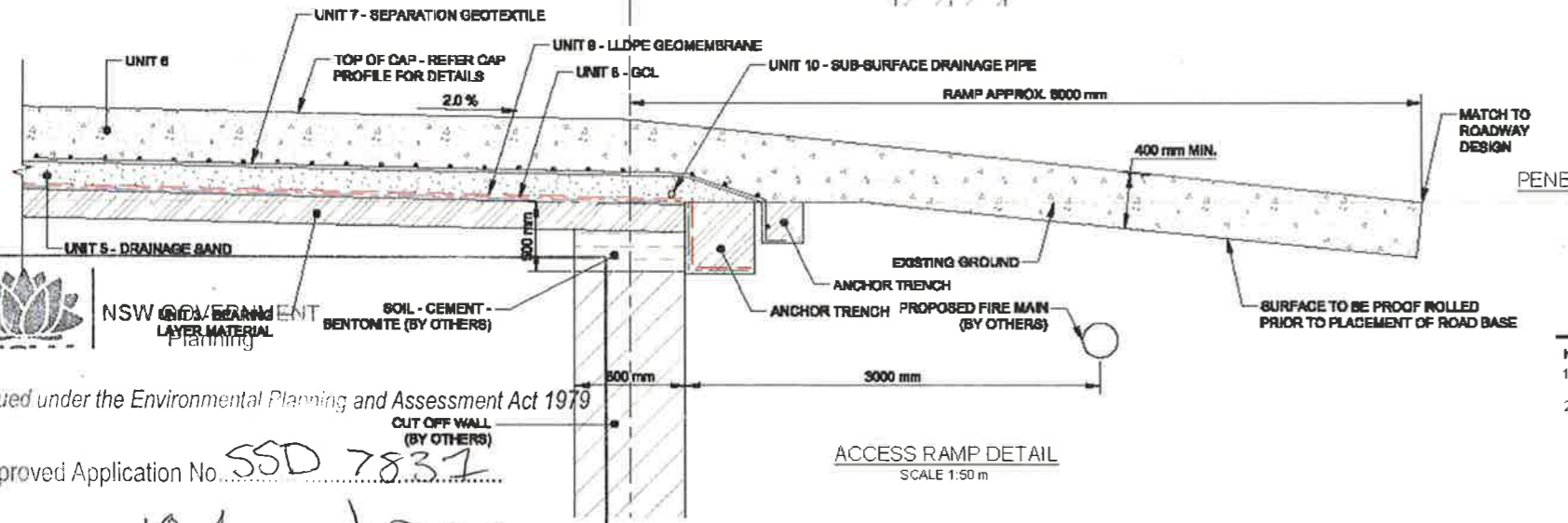
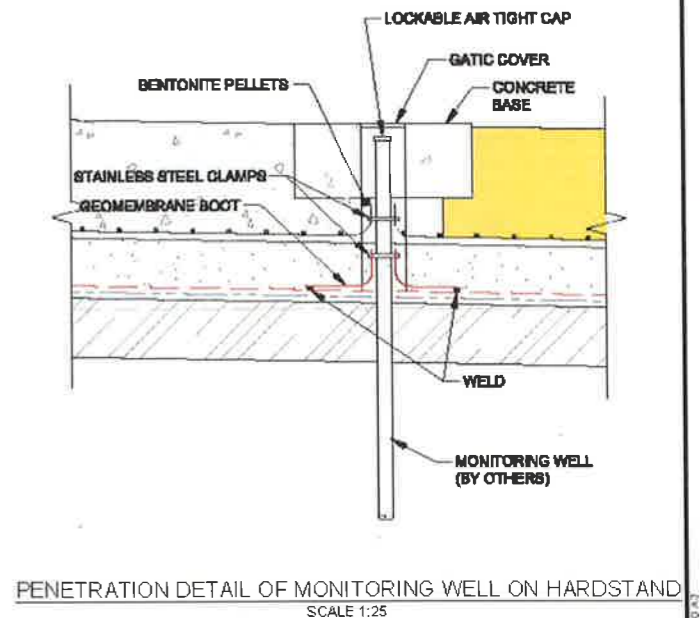
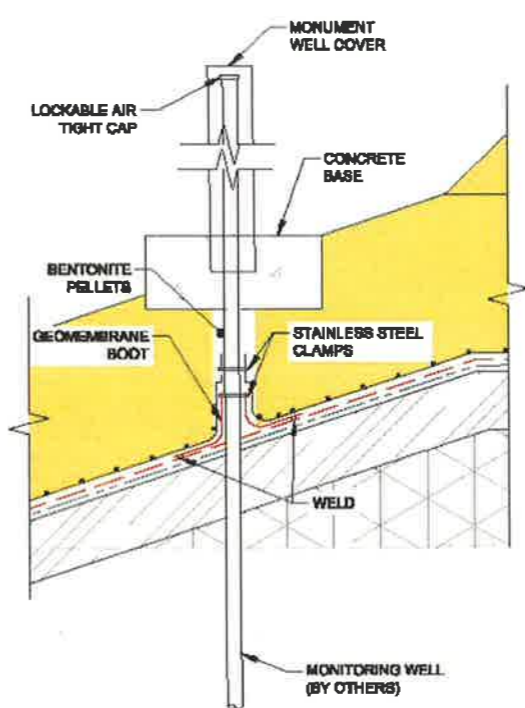
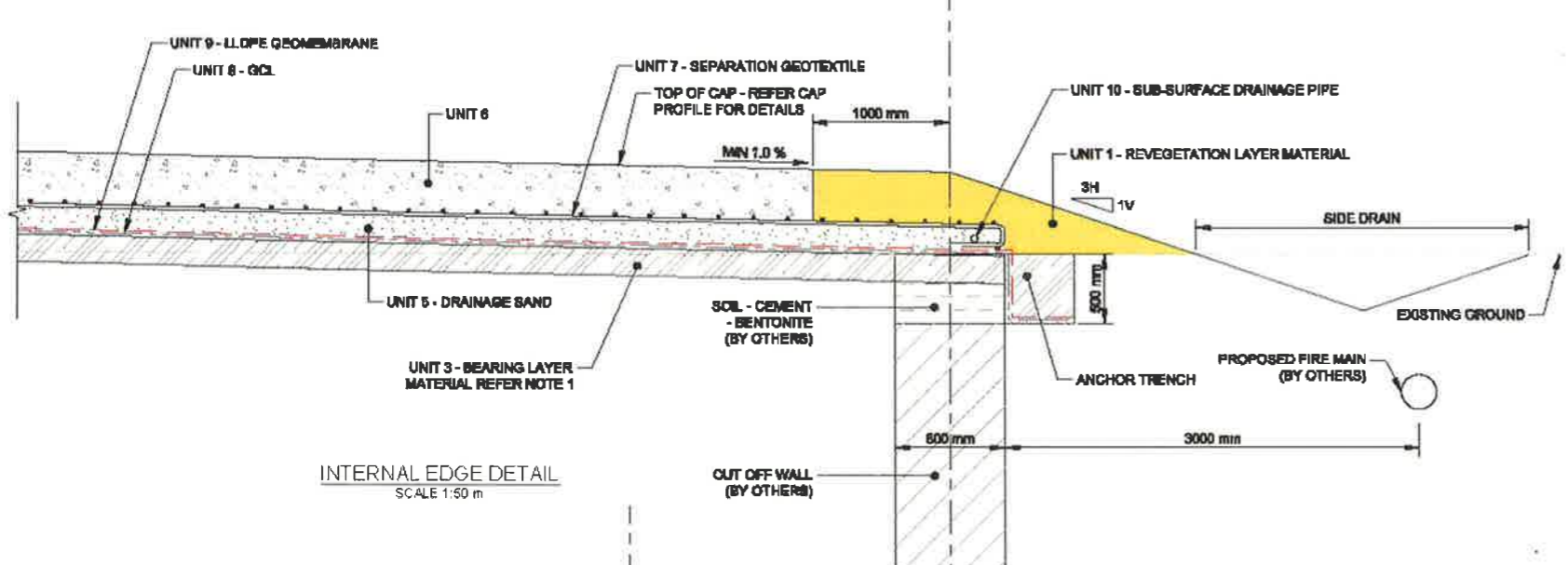
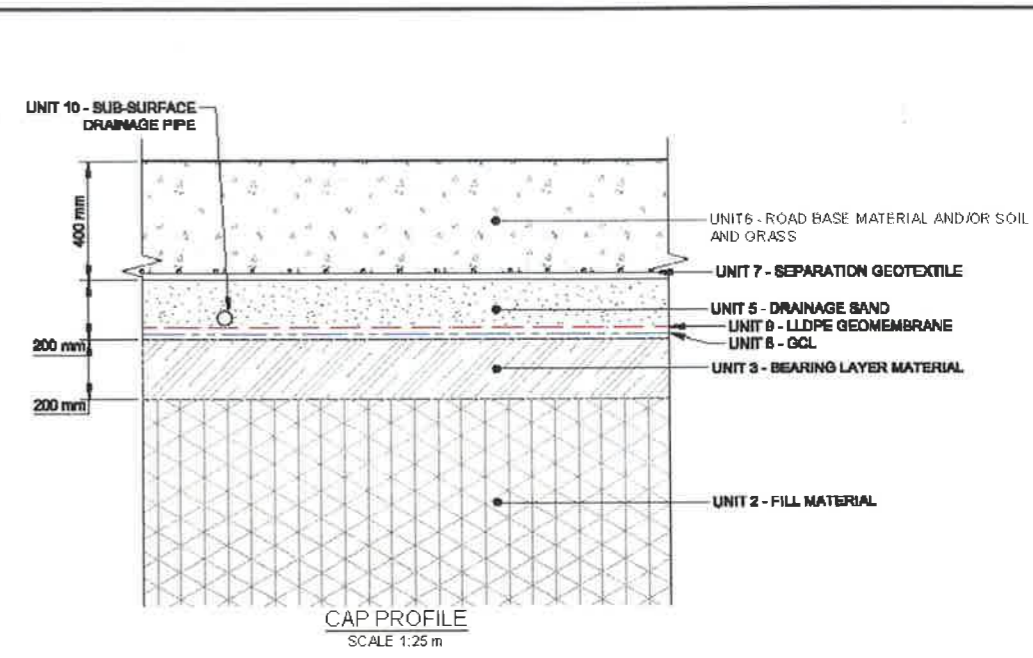
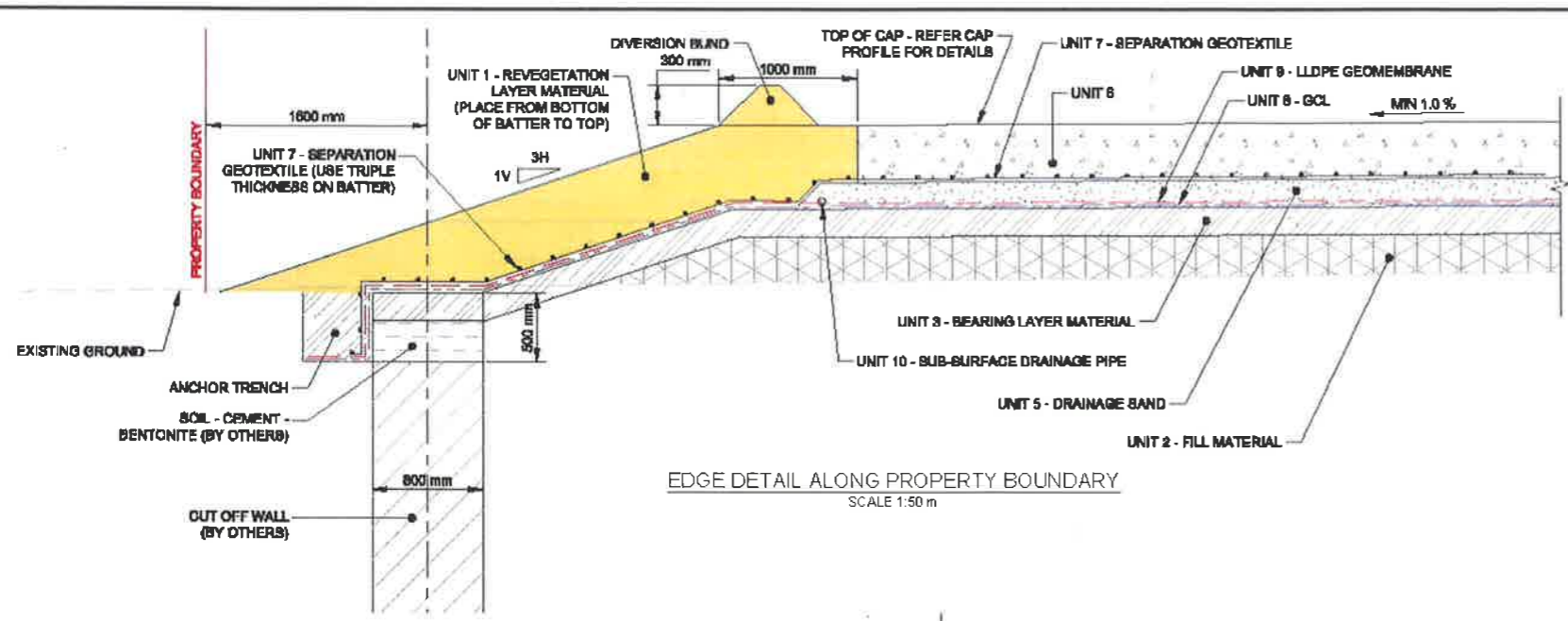
0	2016-04-11	ISSUED FOR CONSTRUCTION	RH	EJJ	GRS	GRS
REV	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED

CLIENT  
 ORICA AUSTRALIA PTY LTD.  
 CONSULTANT  
  
 SYDNEY OFFICE  
 124 PACIFIC HIGHWAY  
 ST LEONARDS, NSW  
 AUSTRALIA  
 [+61] (2) 9478 3900  
 www.golder.com

PROJECT  
 ORICA KOORAGANG ISLAND ARSENIC REMEDIATION PROJECT  
 TITLE  
**DRAIN AND INFILTRATION PIT DETAILS**  
 PROJECT NO 1418917  
 SPECIFICATION 038  
 REV 0  
 7 of 7  
 DRAWING 007

Path: g:\oec\05\pac\env\geomat\sc\ORICA\_AUST\PA\uk\02\_PROJECTS\1418917\_43\work\can\implementation\02\_PROD\CD\CD\06\_11\1418917\_023-0-017.dwg

25mm IF THIS MEASUREMENT DOES NOT MATCH WHAT'S SHOWN ON THE SHEET SIZE HAS BEEN TROOPED (PAGE 05/04)



NSW GOVERNMENT  
Planning

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No. SSD 7837

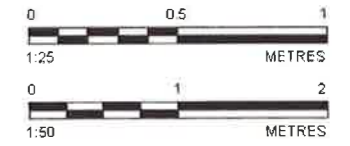
Granted on the 10 August 2018

Signed [Signature]

Sheet No. 7 of 7

- NOTE(S)
- EXISTING MATERIAL SHALL BE REWORKED OR REPLACED BY OTHER SUITABLE ON-SITE MATERIAL TO FORM THE BEARING LAYER.
  - CAP MATERIAL SHALL BE AS FOLLOWS:
    - ON 3:1 BATTERS - REVEGETATION MATERIAL
    - ON 2% PLATFORM: 200 mm DRAINAGE SAND UNDERLYING 400 mm ROAD BASE MATERIAL.

ISSUED FOR  
**CONSTRUCTION**



CLIENT  
ORICA AUSTRALIA PTY LTD.

PROJECT  
ORICA KOORAGANG ISLAND ARSENIC REMEDIATION PROJECT

CONSULTANT



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TITLE  
TYPICAL SECTIONS AND DETAILS

PROJECT NO. 1418917    SPECIFICATION 038    REV. 0    6 of 7    DRAWING 006

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
0	2018-04-11	ISSUED FOR CONSTRUCTION	RH	EJJ	GRS	GRS