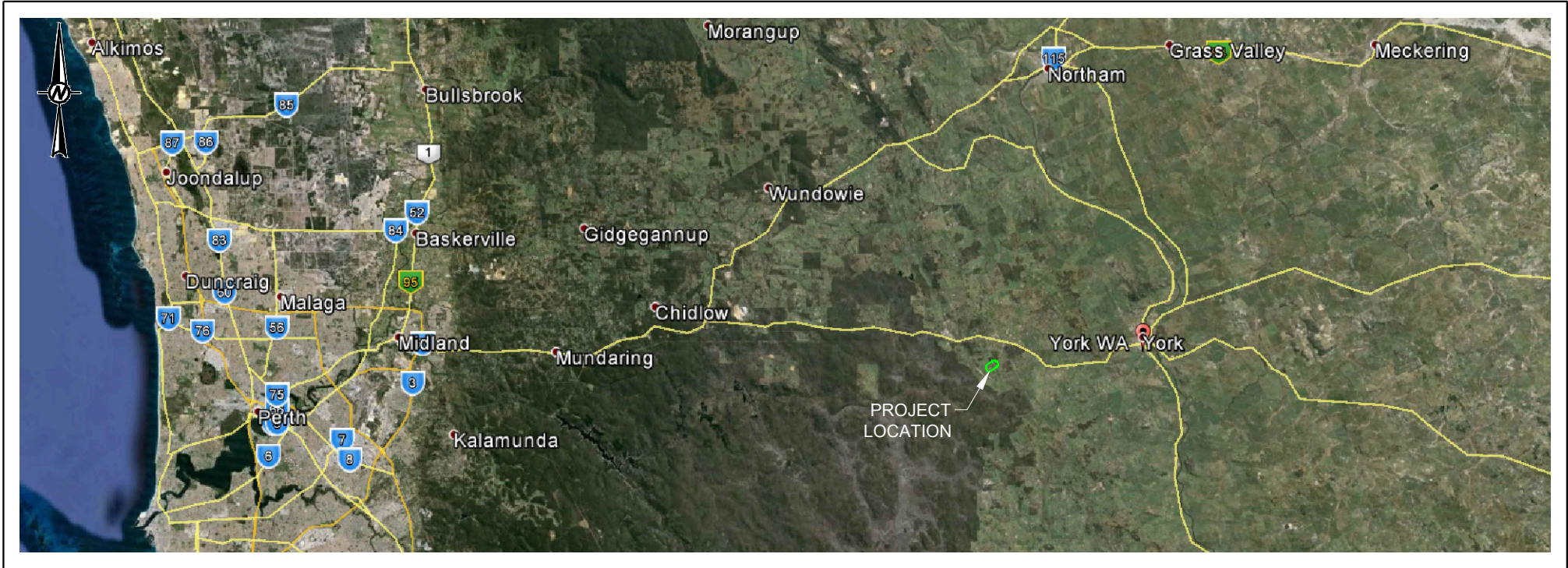


SITA AUSTRALIA, ALLUWUNA FARM LANDFILL

LOTS 4869, 5931, 9926 & 26934 GREAT SOUTHERN HIGHWAY, SAINT RONANS

CELL 1 AND 2 WORKS APPROVAL



LOCALITY PLAN
NOT TO SCALE

MATERIAL LIST

	UNIT 1 - TOPSOIL		UNIT 11 - CUSHION GEOTEXTILE		UNIT 18 - WEARING COURSE
	UNIT 2 - UNSUITABLE MATERIAL		UNIT 12 - SEPARATION GEOTEXTILE		UNIT 19.1 - CONCRETE SPILLWAY AND DISSIPATOR BLOCKS
	UNIT 3 - ENGINEERED CLAYEY MATERIAL		UNIT 13.1 - Ø0.25 M PERFORATED LEACHATE HEADER PIPES		UNIT 19.2 - LOOSELY PLACED ROCK
	UNIT 4 - GENERAL FILL		UNIT 13.2 - Ø0.15 M PERFORATED LEACHATE COLLECTION PIPES		UNIT 19.3 - EROSION PROTECTION MAT
	UNIT 5 - SUBSURFACE DRAIN PIPES		UNIT 13.3 - Ø0.25 M SOLID LEACHATE HEADER PIPE		UNIT 20.1 - SEPARATION GEOTEXTILE
	UNIT 6.1 - SUBSURFACE DRAINAGE AGGREGATE		UNIT 14.1 - REINFORCED CONCRETE SLAB		UNIT 20.2 - EMBANKMENT AGGREGATE
	UNIT 6.2 - SUBSURFACE DRAINAGE SAND		UNIT 14.2 - LEACHATE SUMP OUTLET SLEEVES		
	UNIT 7 - SUBSURFACE SUMP		UNIT 14.3 - TRANSDUCER RISER PIPE		
	UNIT 8 - LEACHATE DRAINAGE AGGREGATE		UNIT 15 - SACRIFICIAL LINER PROTECTION LAYER		
	UNIT 9 - GEOSYNTHETIC CLAY LINER		UNIT 16 - PERMANENT BALLAST		
	UNIT 10 - 2.0 MM HDPE GEOMEMBRANE		UNIT 17 - PROTECTION LAYER		

REFERENCE:

BASE MAP SOURCED FROM NEARMAP WEB SITE <http://maps.au.nearmap.com>, ACCESSED 27.01.2015

DRAWING SCHEDULE		
DRAWING No.	DESCRIPTION	REVISION
D200	COVER SHEET	B
D201	WORKS APPROVAL AREA	B
D202	GENERAL ARRANGEMENT	B
D203	CELL 1 TOP OF PREPARED SUBGRADE AND SETOUT PLAN AND SUBSURFACE DRAINAGE SYSTEM	B
D204	CELL 2 TOP OF PREPARED SUBGRADE AND SETOUT PLAN	B
D205	D205 - CELL 1A & 1B EARTHWORKS PLAN (ISOPACHYTES)	B
D206	CELL 2A & 2B EARTHWORKS PLAN (ISOPACHYTES)	B
D207	CELL 1A & 1B SECTIONS	B
D208	CELL 2A & 2B SECTIONS	B
D209	TYPICAL DETAILS SHEET 1 OF 3	B
D210	TYPICAL DETAILS SHEET 2 OF 3	B
D211	TYPICAL DETAILS SHEET 3 OF 3	B
D212	SUBSURFACE DRAINAGE DETAILS	B
D220	CELL 1 LEACHATE COLLECTIONS PIPES AND SETOUT PLAN	B
D221	CELL 2 LEACHATE COLLECTIONS PIPES AND SETOUT PLAN	B
D222	CELL 1 SUMP LAYOUT PLAN AND SETOUT	B
D223	CELL 2 SUMP LAYOUT PLAN AND SETOUT	B
D224	SUMP OUTLET PIPES	B
D225	LEACHATE COLLECTION PIPE DETAILS	B
D226	LEACHATE POND PLAN AND SECTIONS	B
D230	RETENTION POND PLAN AND SECTIONS	B
D240	STORMWATER DAM PLAN AND SECTIONS	B
D241	STORMWATER DAM SPILLWAY PLAN AND DETAILS	B
D242	STORMWATER DAM DISCHARGE CHANNEL PLAN AND DETAILS	B
D243	SEDIMENT MANAGEMENT STRUCTURE PLAN AND SECTIONS	B

NOTES:

- THESE NOTES APPLY TO ALL PROJECT DRAWINGS IN THE SET UNLESS NOTED OTHERWISE AND SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION NO. 147645033-016-R..
- ALL LEVELS ARE IN METRES TO AUSTRALIAN HEIGHT DATUM (AHD).
- ALL CO-ORDINATES ARE IN METRES TO MAP GRID AUSTRALIA (MGA 94, ZONE 55).
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- DIMENSIONS AND LOCATION OF EXISTING STRUCTURES SHALL BE CONFIRMED ON SITE BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS.
- LOCATION AND DEPTH OF ALL SERVICES TO BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS.
- DIMENSIONS SHALL NOT BE SCALED OFF DRAWINGS.
- DRAWING MUST BE PRINTED IN COLOUR TO CORRECTLY IDENTIFY ALL DESIGN ELEMENTS.

WORKS APPROVAL

B	2015-03-30	ISSUE FOR WORKS APPROVAL	E.KING	L.DuPREEZ	L.DuPREEZ	-
A	2015-02-1	ISSUE FOR COMMENT	E.KING	L.DuPREEZ	L.DuPREEZ	-
Rev.	YYYY-MM-DD	DESCRIPTION	PREPARED	DESIGN	REVIEW	APPROVED

CLIENT
SITA AUSTRALIA

CONSULTANT

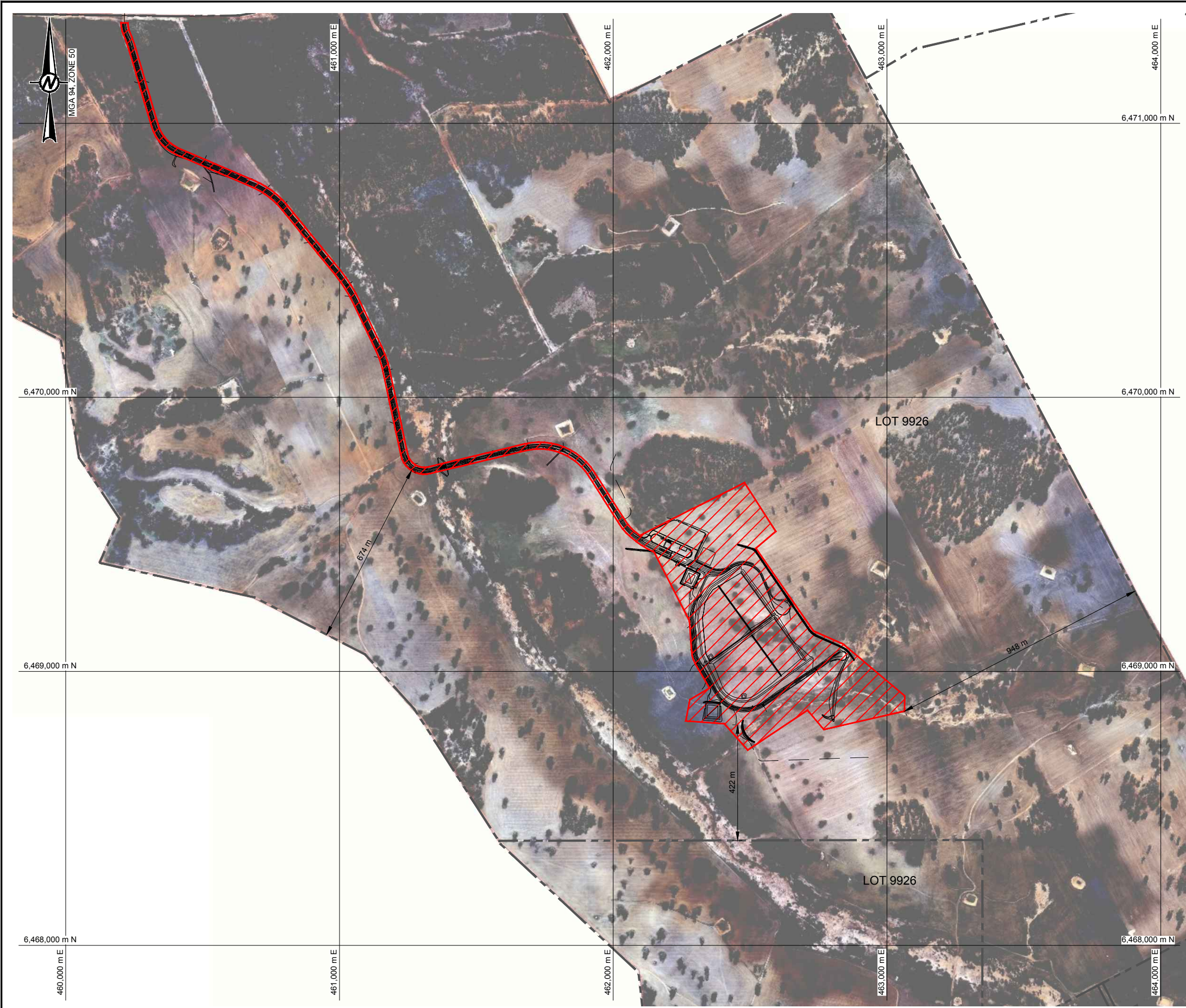


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PROJECT
ALLUWUNA FARM LANDFILL

TITLE
COVER SHEET

PROJECT No. 147645033 DOCUMENT NO. 016-R Rev. B 1 of 27 FIGURE D200



LEGEND:

- CADASTRAL BOUNDARY
- WORKS APPROVAL AREA

NOTE:

- REFER TO D001 FOR GENERAL NOTES.

REFERENCE:

BASE MAP SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD DRG. FILE 'FULL SIZED AERIAL PHOTO.jpg'

WORKS APPROVAL

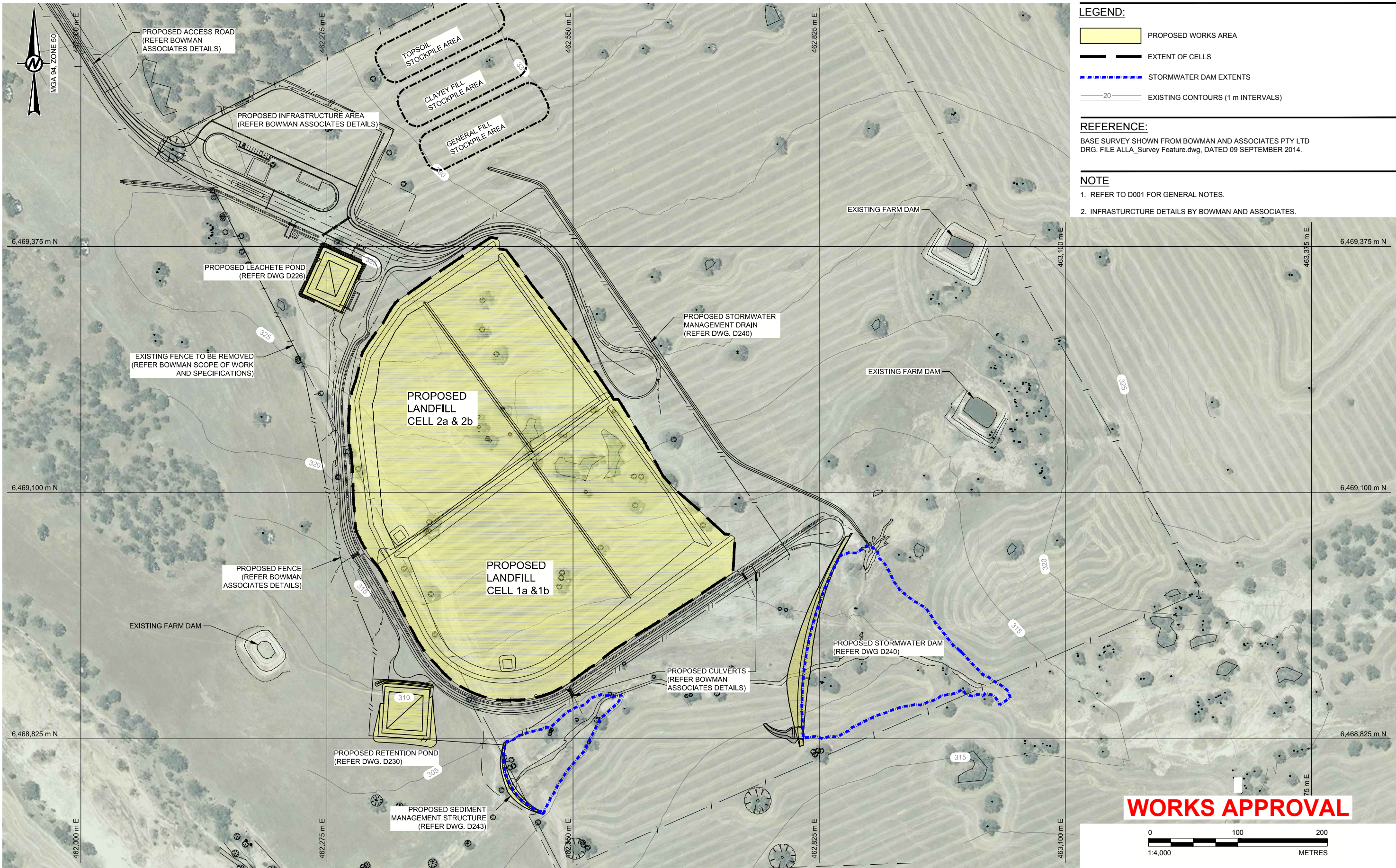


B				2015-03-30	ISSUE FOR WORKS APPROVAL	E.KING	L.DuPREEZ	L.DuPREEZ	-
A				2015-02-1	ISSUE FOR COMMENT	E.KING	L.DuPREEZ	L.DuPREEZ	-
Rev.	YYYY-MM-DD	DESCRIPTION			PREPARED	DESIGN	REVIEW	APPROVED	

CLIENT SITA AUSTRALIA		PROJECT ALLAWUNA FARM LANDFILL	
CONSULTANT 		TITLE WORKS APPROVAL AREA	
PERTH OFFICE LEVEL 3, HAVELOCK STREET WEST PERTH, WA 6055 AUSTRALIA [+61] (8) 9213 7600 www.golder.com	PROJECT No. 147645033	DOCUMENT NO. 016-R	Rev. B
			2 of 27
			FIGURE D201

Path: \\p1-15-filer2\JOBS-MINING\Jobs\14\Design\147645033 - SITA Allawuna Farm Landfill\Technical\Drawings\Works Approval\1 - File Name: 147645033_001-R_D201.dwg

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3



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A				2015-02-1	ISSUE FOR COMMENT	E.KING	L.DuPREEZ	L.DuPREEZ	-
Rev.	YYYY-MM-DD	DESCRIPTION			PREPARED	DESIGN	REVIEW	APPROVED	

CLIENT
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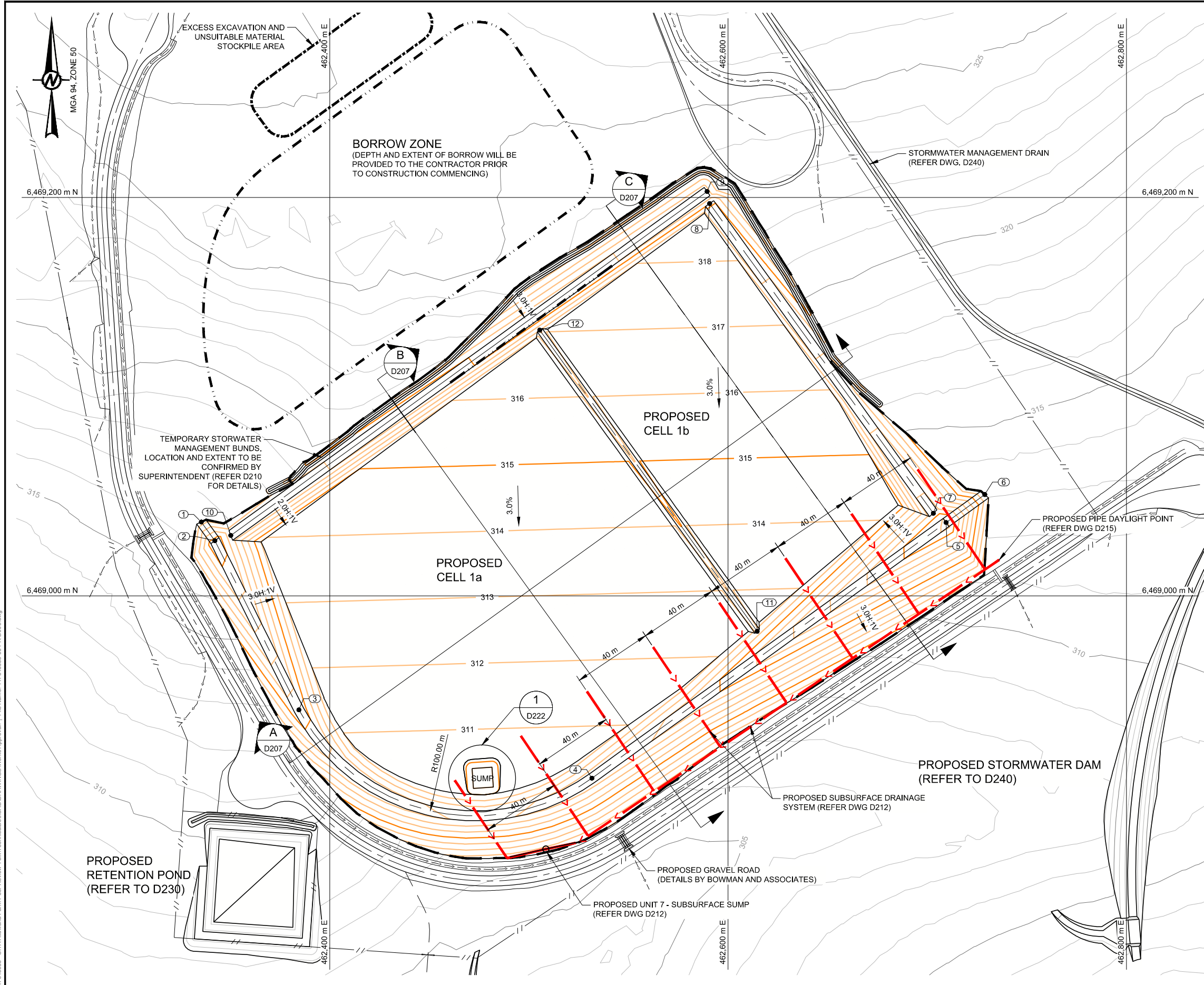


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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
GENERAL ARRANGEMENT

PROJECT No. 147645033	DOCUMENT NO. 016-R	Rev. B	3 of 27	FIGURE D202
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LEGEND:

- EXTENT OF CELL WORKS
- 20 TOP OF SUBGRADE CONTOURS (1 m INTERVALS)
- 20 EXISTING CONTOURS (1 m INTERVALS)
- > UNIT 5 - SUBSURFACE DRAIN PIPES

NOTE

1. REFER TO D001 FOR GENERAL NOTES.

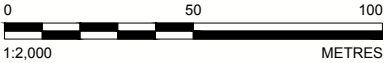
2. INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

CELL 1A, 1B SETOUT			
POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
1	462335.51	6469037.06	316.51
2	462342.31	6469027.64	320.39
3	462384.48	6468942.74	315.47
4	462531.62	6468908.42	313.47
5	462709.45	6469036.81	321.08
6	462728.88	6469050.85	313.09
7	462703.04	6469041.41	319.28
8	462590.73	6469196.96	320.03
9	462589.46	6469203.00	321.63
10	462350.30	6469030.32	318.33
11	462614.59	6468982.20	313.37
12	462505.43	6469133.38	318.04

WORKS APPROVAL



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A 2015-02-1 ISSUE FOR COMMENT				E.KING L.DuPREEZ L.DuPREEZ -			
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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
CELL 1 TOP OF PREPARED SUBGRADE AND SETOUT PLAN
AND SUBSURFACE DRAINAGE SYSTEM

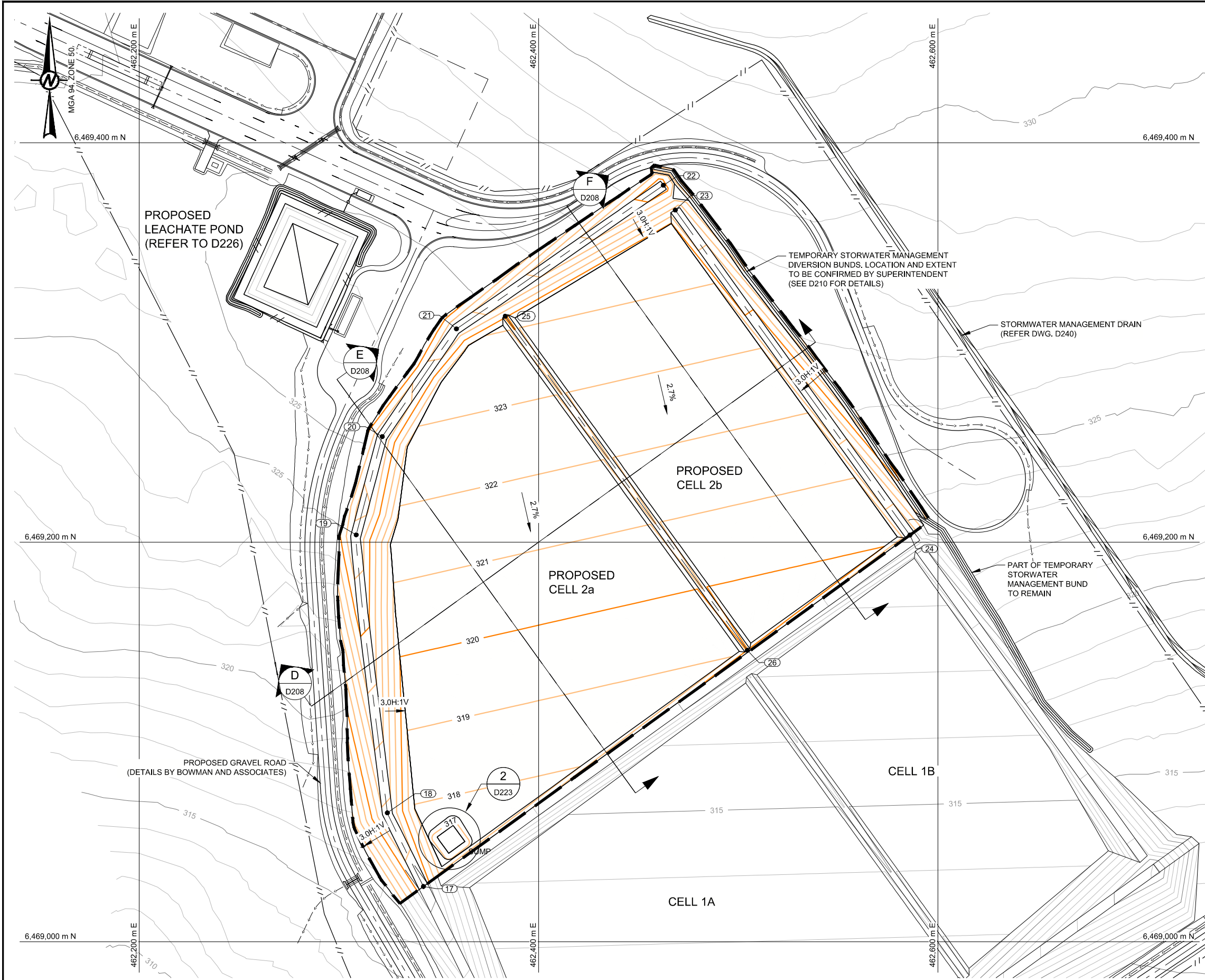
PROJECT No.
147645033

DOCUMENT NO.
016-R

Rev.
B

4 of 27

FIGURE
D203



LEGEND:

— EXTENT OF CELL WORKS

—20— TOP OF SUBGRADE CONTOURS (1 m INTERVALS)

—20— EXISTING CONTOURS (1 m INTERVALS)

NOTE

1. REFER TO D001 FOR GENERAL NOTES.

2. INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

CELL 2A, 2B SETOUT			
POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
17	462342.34	6469027.66	320.39
18	462324.26	6469064.52	321.82
19	462308.65	6469203.70	326.70
20	462321.75	6469252.89	326.48
21	462358.86	6469306.82	326.58
22	462462.54	6469378.71	330.41
23	462468.47	6469366.31	326.58
24	462585.97	6469203.56	321.60
25	462383.32	6469313.13	325.20
26	462504.60	6469145.90	320.04

WORKS APPROVAL

0 50 100
1:2,000 METRES

B 2015-03-30 ISSUE FOR WORKS APPROVAL				E.KING L.DuPREEZ L.DuPREEZ -			
A 2015-02-1 ISSUE FOR COMMENT				E.KING L.DuPREEZ L.DuPREEZ -			
Rev.	YYYY-MM-DD	DESCRIPTION		PREPARED	DESIGN	REVIEW	APPROVED

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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
CELL 2 TOP OF PREPARED SUBGRADE
AND SETOUT PLAN

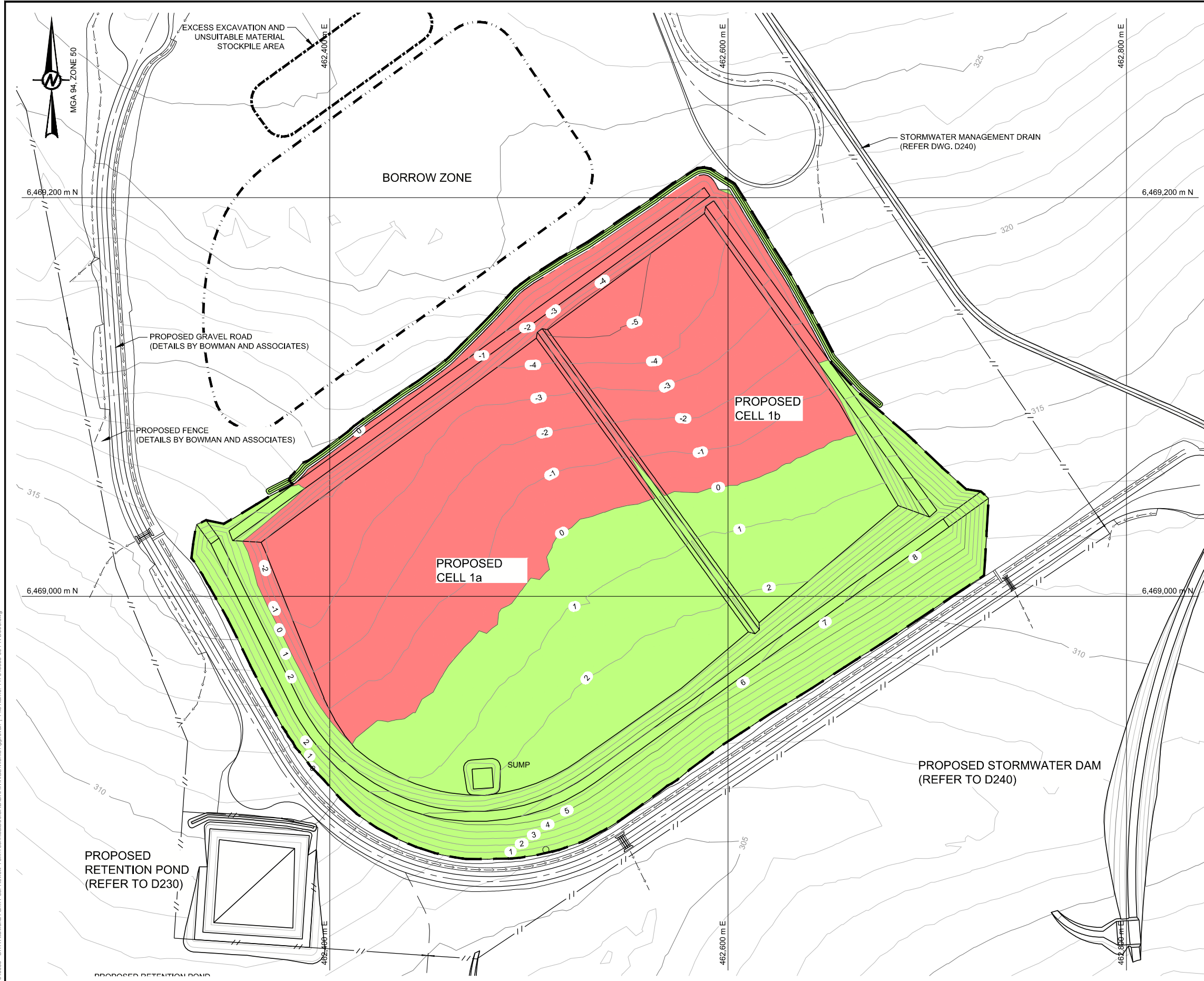
PROJECT No.
147645033

DOCUMENT NO.
016-R

Rev.
B

5 of 27

FIGURE
D204



LEGEND:

- EXTENT OF CELL WORKS
- CUT
- FILL
- INDICATIVE SUBGRADE CONTOURS (1 m INTERVALS)
- EXISTING CONTOURS (1 m INTERVALS)

NOTE

1. REFER TO D001 FOR GENERAL NOTES.

2. INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

SUBGRADE EARTHWORKS				
DESCRIPTION	MIN. ELEV. (m)	MAX. ELEV. (m)	AREA (m2)	VOLUME (m3)
CUT	-5.69	0.00	42,114	81,700
FILL	0.00	8.96	41,603	92,905

WORKS APPROVAL



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				TITLE CELL 1A & 1B EARTHWORKS PLAN (ISOPACHYTES)			
				PROJECT No. 147645033 DOCUMENT NO. 016-R Rev. B 6 of 27 FIGURE D205			
B	2015-03-30	ISSUE FOR WORKS APPROVAL		E.KING	L.DuPREEZ	L.DuPREEZ	-
A	2015-02-1	ISSUE FOR COMMENT		E.KING	L.DuPREEZ	L.DuPREEZ	-
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Path: \\p01-15-filer2\JOBS-MINING\Jobs\147645033 - SITA Alluvium Farm Peer Review\York\Technical\Drawings\Works Approval\J File Name: 147645033-01-R-D205.dwg

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3



LEGEND:

- EXTENT OF CELL WORKS
- CUT
- FILL
- INDICATIVE SUBGRADE CONTOURS (1 m INTERVALS)
- EXISTING CONTOURS (1 m INTERVALS)

NOTE

1. REFER TO D001 FOR GENERAL NOTES.

2. INFRASTRCTURE DETAILS BY BOWMAN AND ASSOCIATES.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

SUBGRADE EARTHWORKS				
DESCRIPTION	MIN. ELEV. (m)	MAX. ELEV. (m)	AREA (m2)	VOLUME (m3)
CUT	-6.59	0.00	51,415	145,326
FILL	0.00	4.65	9,737	15,308

WORKS APPROVAL

0 50 100
1:2,000 METRES

					CLIENT					PROJECT				
					SITA AUSTRALIA					ALLAWUNA FARM LANDFILL				
B	2015-03-30	ISSUE FOR WORKS APPROVAL			E.KING	L.DuPREEZ	L.DuPREEZ	-		TITLE				
A	2015-02-1	ISSUE FOR COMMENT			E.KING	L.DuPREEZ	L.DuPREEZ	-		CELL 2A & 2B EARTHWORKS PLAN (ISOPACHYTES)				
Rev.	YYYY-MM-DD	DESCRIPTION			PREPARED	DESIGN	REVIEW	APPROVED		PROJECT No.	DOCUMENT NO.	Rev.	7 of 27	FIGURE

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PROJECT No. 147645033

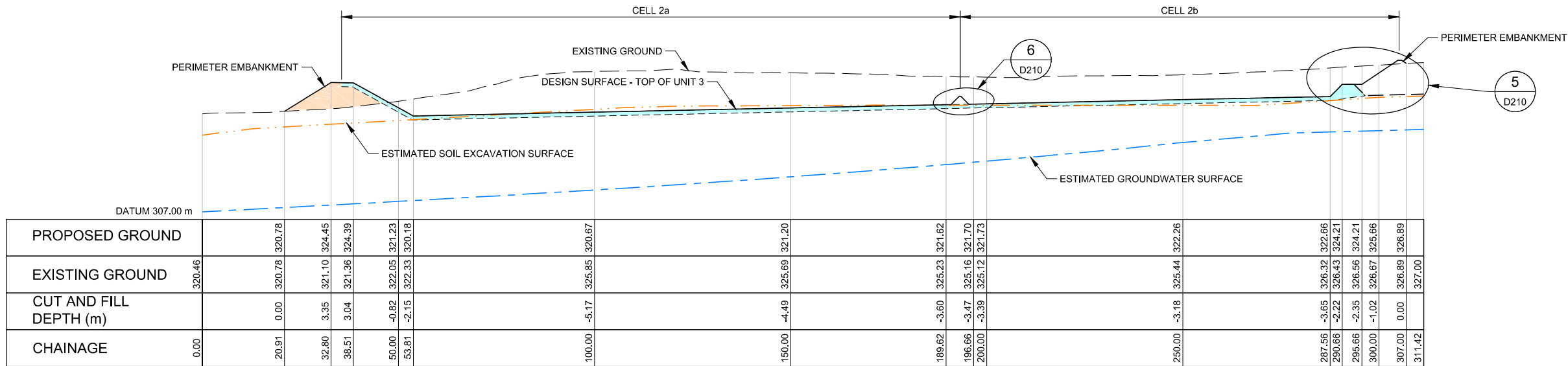
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Rev. B

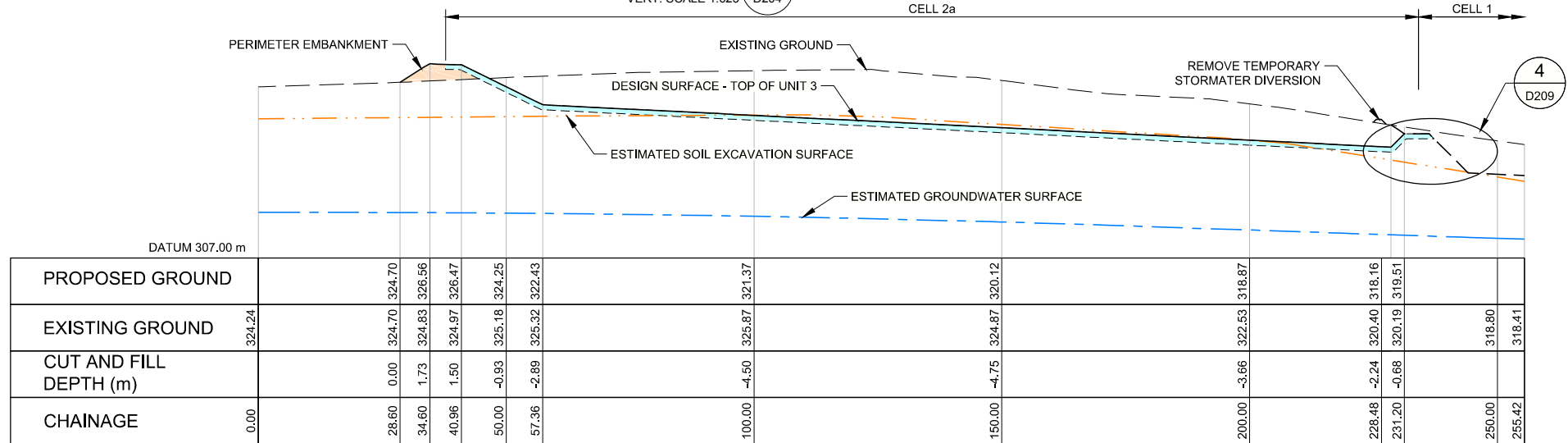
FIGURE D206

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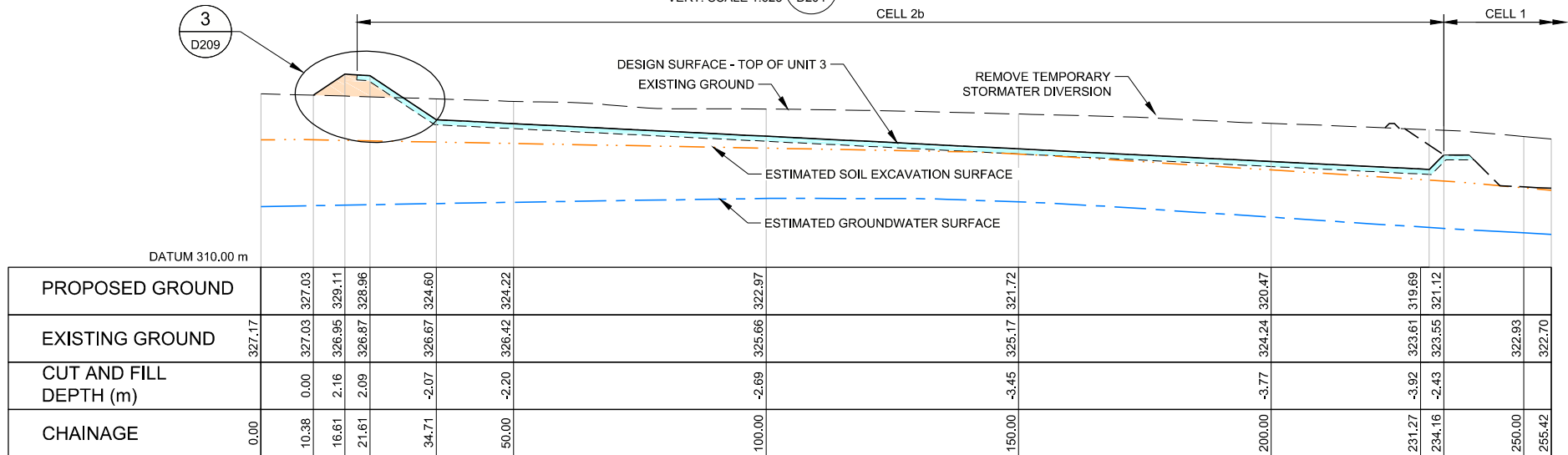
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3 25 mm



HOR. SCALE 1:1,125
VERT. SCALE 1:625
D CELL 2 SECTIONS
D204



HOR. SCALE 1:1,125
VERT. SCALE 1:625
E CELL 2 SECTIONS
D204



HOR. SCALE 1:250
VERT. SCALE 1:625
F CELL 2 SECTIONS
D204

LEGEND:

- UNIT 3 - ENGINEERED CLAYEY MATERIAL
- UNIT 4 - GENERAL FILL

NOTE:

1. DESIGN SURFACE IS TOP OF COMPLETED UNIT 3 - 0.5 m COMPACTED CLAYEY SUBGRADE.

WORKS APPROVAL



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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
CELL 2A & 2B SECTIONS

PROJECT No.
147645033

DOCUMENT NO.
016-R

Rev.
B

1 of 27

FIGURE
D208

B 2015-03-30 ISSUE FOR WORKS APPROVAL

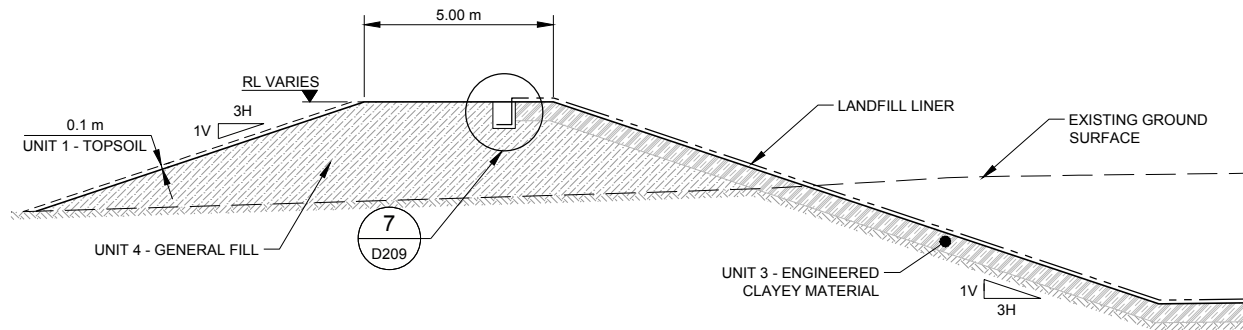
A 2015-02-1 ISSUE FOR COMMENT

Rev. YYYY-MM-DD DESCRIPTION

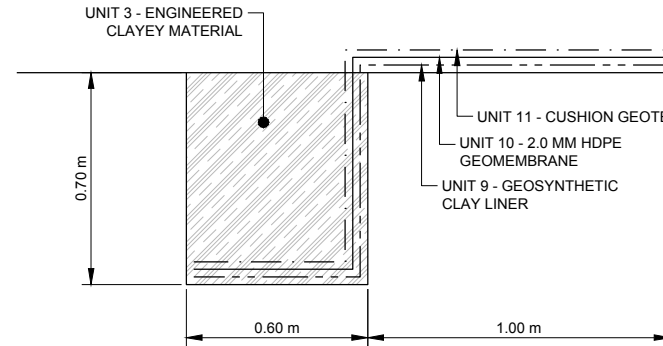
E.KING L.DuPREEZ L.DuPREEZ -

E.KING L.DuPREEZ L.DuPREEZ -

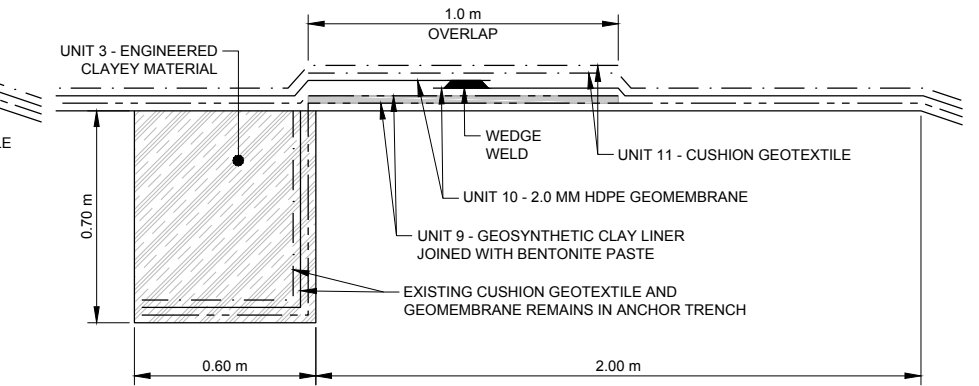
PREPARED DESIGN REVIEW APPROVED



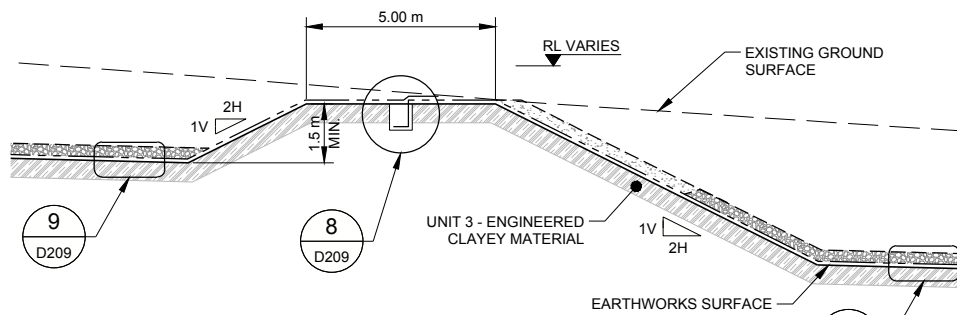
SCALE 1:200
3 TYPICAL PERIMETER EMBANKMENT DETAIL
D207



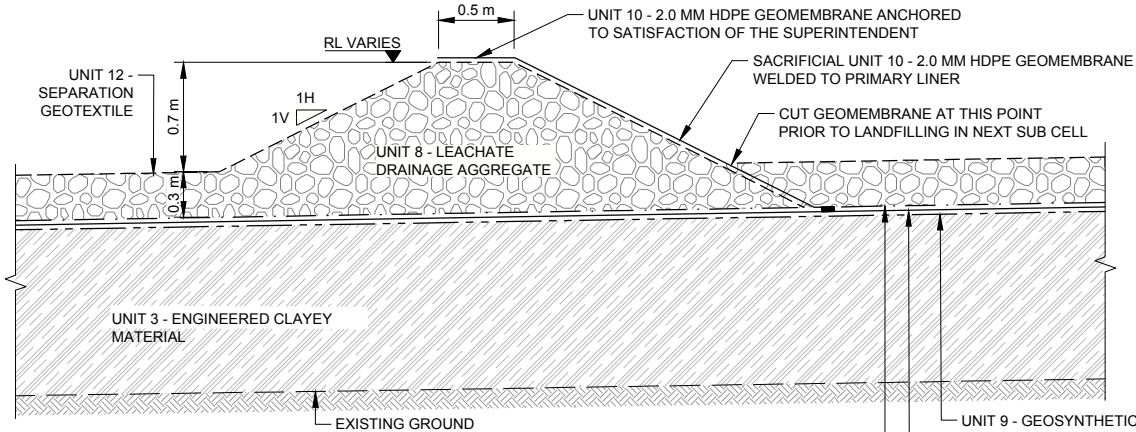
SCALE 1:25
7 TYPICAL ANCHOR TRENCH DETAIL ON PERIMETER EMBANKMENT
D222 D223



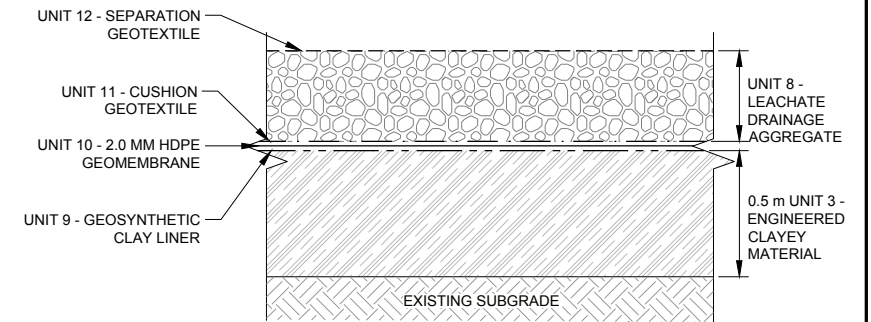
SCALE 1:25
8 TYPICAL ANCHOR TRENCH DETAIL ON DIVISION EMBANKMENT
D223



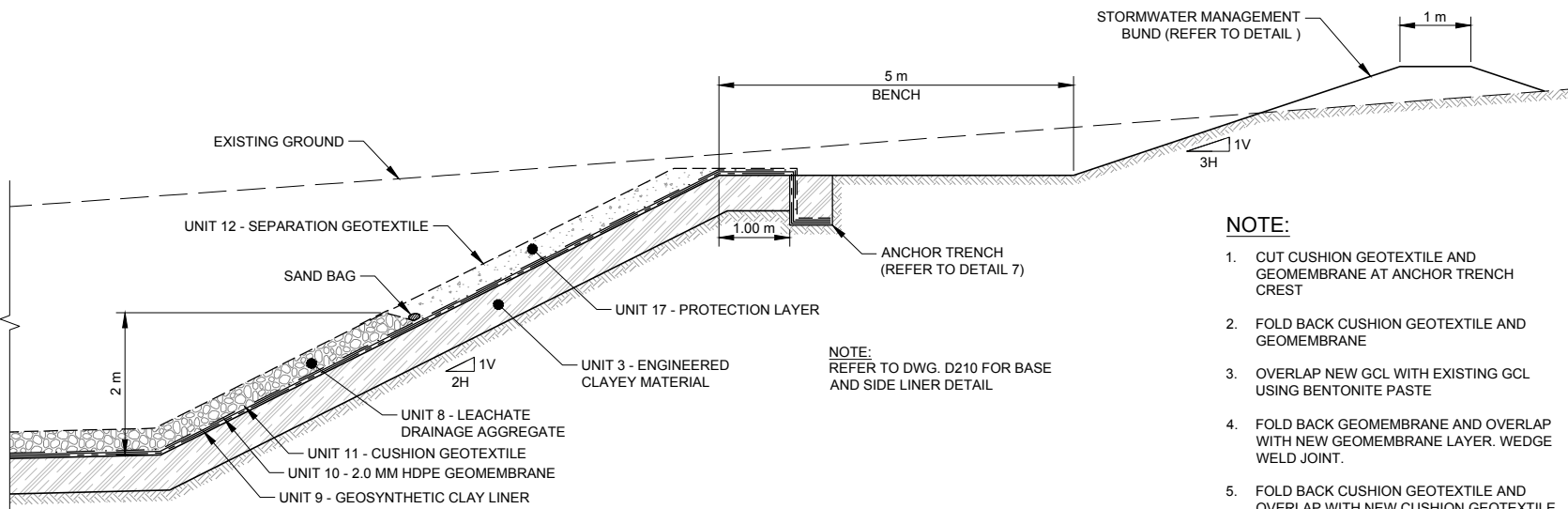
SCALE 1:200
4 TYPICAL DIVISION EMBANKMENT DETAIL (BEWTEEN CELL 1 & 2)
D207



SCALE 1:100
6 TYPICAL STORMWATER MANAGEMENT BUND ON CELL FLOOR
D207 D208



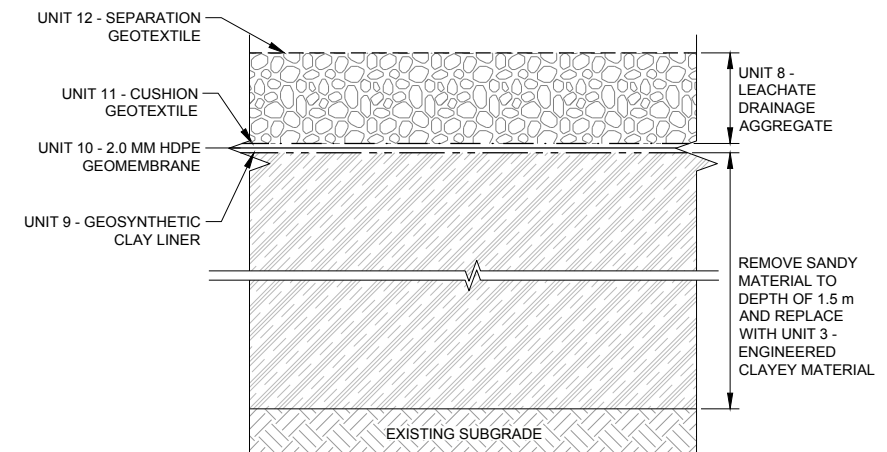
SCALE 1:25
9 TYPICAL LINER DETAIL
D209



SCALE 1:100
5 TYPICAL PERIMETER EXCAVATION DETAIL
D207 D208

NOTE:

1. CUT CUSHION GEOTEXTILE AND GEOMEMBRANE AT ANCHOR TRENCH CREST
2. FOLD BACK CUSHION GEOTEXTILE AND GEOMEMBRANE
3. OVERLAP NEW GCL WITH EXISTING GCL USING BENTONITE PASTE
4. FOLD BACK GEOMEMBRANE AND OVERLAP WITH NEW GEOMEMBRANE LAYER. WEDGE WELD JOINT.
5. FOLD BACK CUSHION GEOTEXTILE AND OVERLAP WITH NEW CUSHION GEOTEXTILE. STITCH OR HEAT TACK THE OVERLAP.

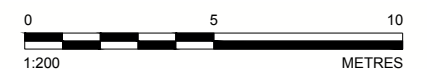


TYPICAL LINER DETAIL FOR SANDY AREAS
SCALE 1:25

NOTE:

1. SANDY AREAS TO BE IDENTIFIED BY QAI AND SUPERINTENDENT

WORKS APPROVAL



B 2015-03-30 ISSUE FOR WORKS APPROVAL

A 2015-02-1 ISSUE FOR COMMENT

REV. YYYY-MM-DD DESCRIPTION

L.DuPREEZ E.KING L.DuPREEZ -

L.DuPREEZ E.KING L.DuPREEZ -

DESIGNED PREPARED REVIEWED APPROVED

CLIENT
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PROJECT
ALLAWUNA FARM LANDFILL

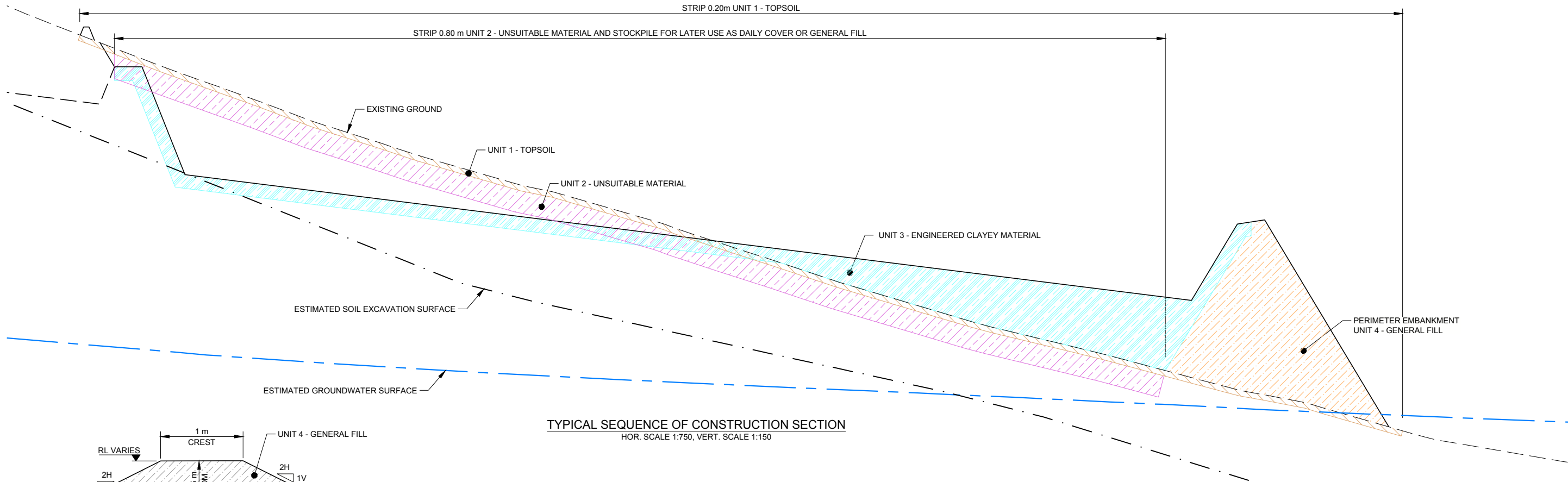
TITLE
TYPICAL DETAILS
SHEET 1 OF 3

PROJECT NO.
147645033

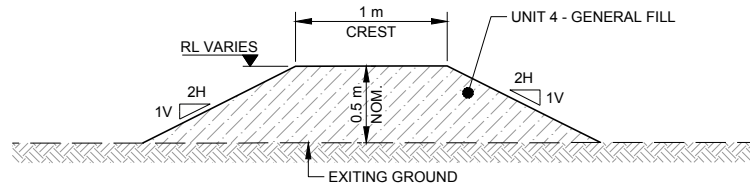
DOCUMENT NO.
016-R

REV. 10 of 27
B

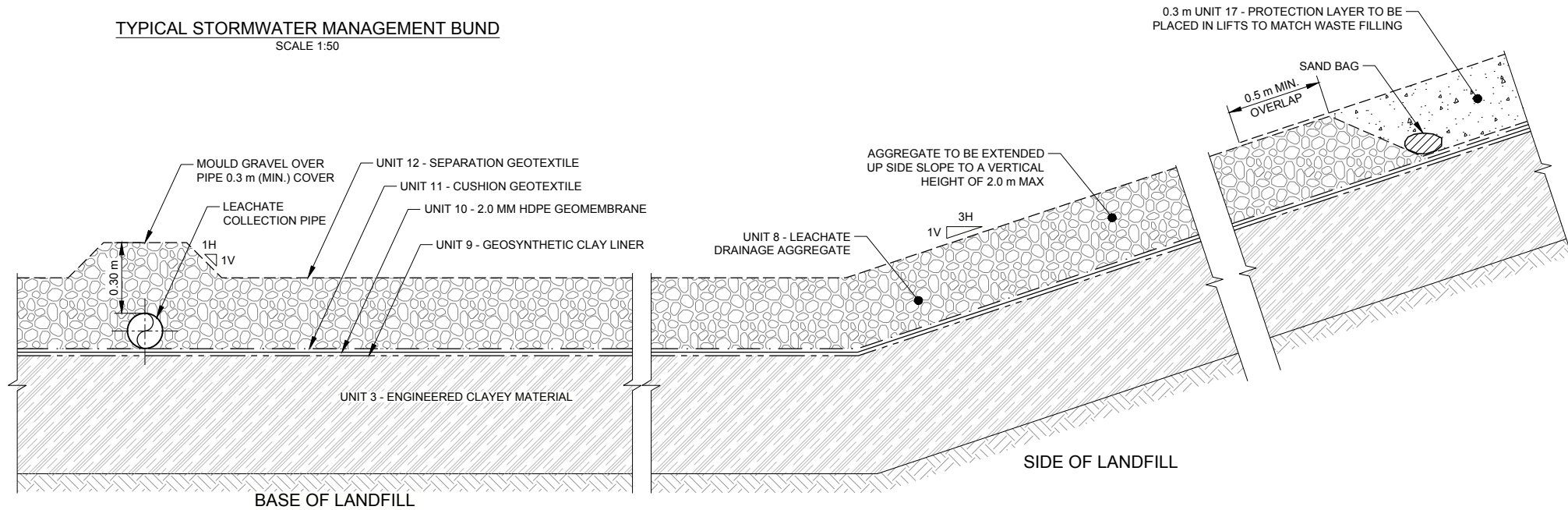
FIGURE
D209



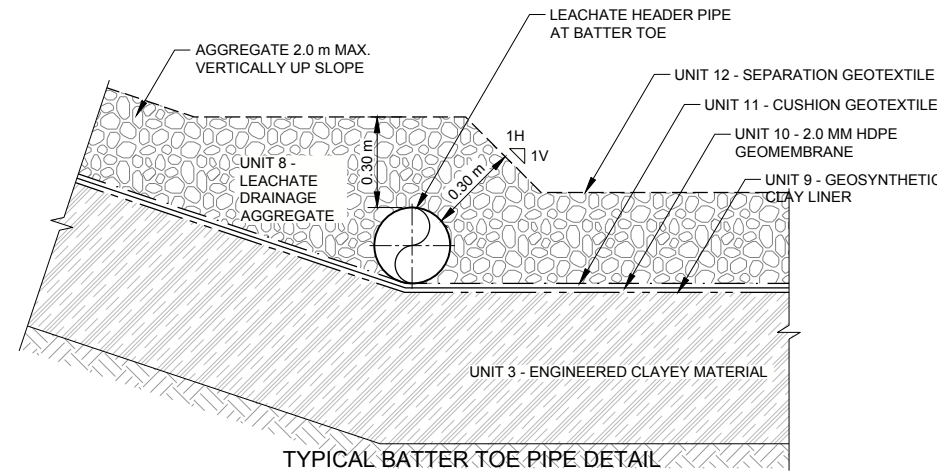
TYPICAL SEQUENCE OF CONSTRUCTION SECTION
HOR. SCALE 1:750, VERT. SCALE 1:150



TYPICAL STORMWATER MANAGEMENT BUND
SCALE 1:50

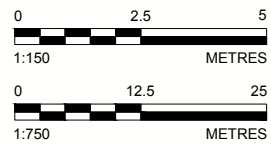
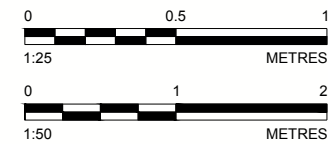


TYPICAL BASE AND SIDE LINER DETAIL
SCALE 1:25



TYPICAL BATTER TOE PIPE DETAIL
SCALE 1:25

WORKS APPROVAL



B	2015-03-30	ISSUE FOR WORKS APPROVAL
A	2015-02-1	ISSUE FOR COMMENT

L.DuPREEZ	E.KING	L.DuPREEZ	-
L.DuPREEZ	E.KING	L.DuPREEZ	-
DESIGNED	PREPARED	REVIEWED	APPROVED

CLIENT
SITA AUSTRALIA

CONSULTANT



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PROJECT
ALLAWUNA FARM LANDFILL

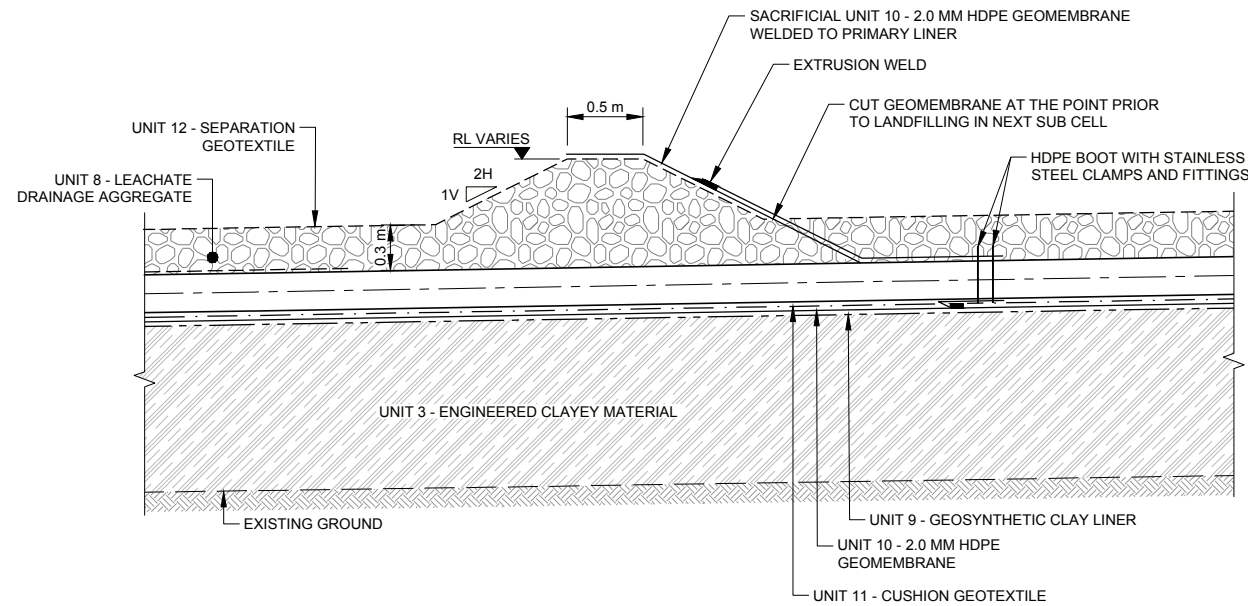
TITLE
TYPICAL DETAILS
SHEET 2 OF 3

PROJECT NO. 147645033	DOCUMENT NO. 016-R	REV. B	11 of 27	FIGURE D210
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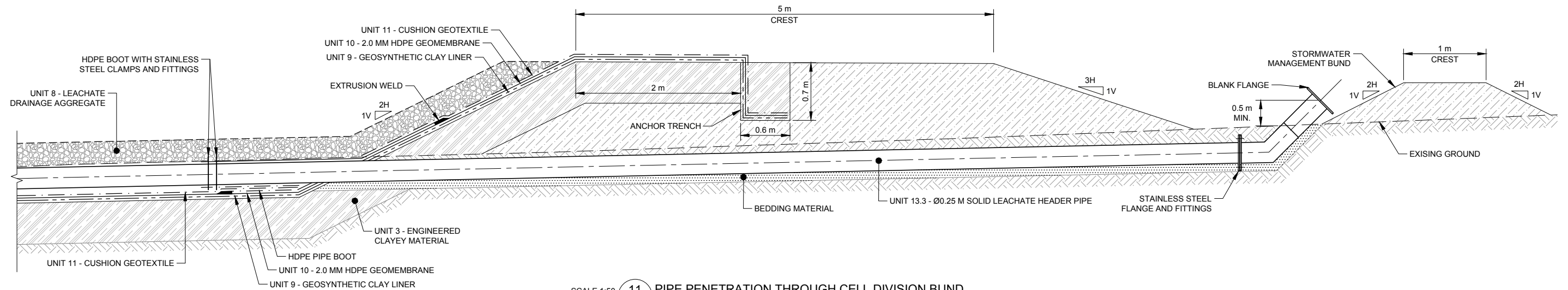
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NOTE:

1. STORMWATER MANAGEMENT BUND AND SACRIFICIAL HDPE TO BE REMOVED PRIOR TO FILLING COMMENCING IN THE ADJACENT CELL 1B AND 2B.
2. LINER INSTALLER TO COMMUNICATE BOOT WELDING REQUIREMENTS TO CONTRACTOR TO ALLOW FOR LOCAL ADAPTATION OF BUND OR LINER CONFIGURATION TO SUIT INSTALLATION.

SCALE 1:100 **10** PIPE PENETRATION THROUGH STORMWATER MANAGEMENT BUND ON CELL FLOOR
D220 D221



NOTE:

1. LINER INSTALLER TO COMMUNICATE BOOT WELDING REQUIREMENTS TO CONTRACTOR TO ALLOW FOR LOCAL ADAPTATION OF BUND OR LINER CONFIGURATION TO SUIT INSTALLATION.

SCALE 1:50 **11** PIPE PENETRATION THROUGH CELL DIVISION BUND
D220 D221

WORKS APPROVAL



B	2015-03-30	ISSUE FOR WORKS APPROVAL	L.DUPREEZ	E.KING	L.DUPREEZ	-
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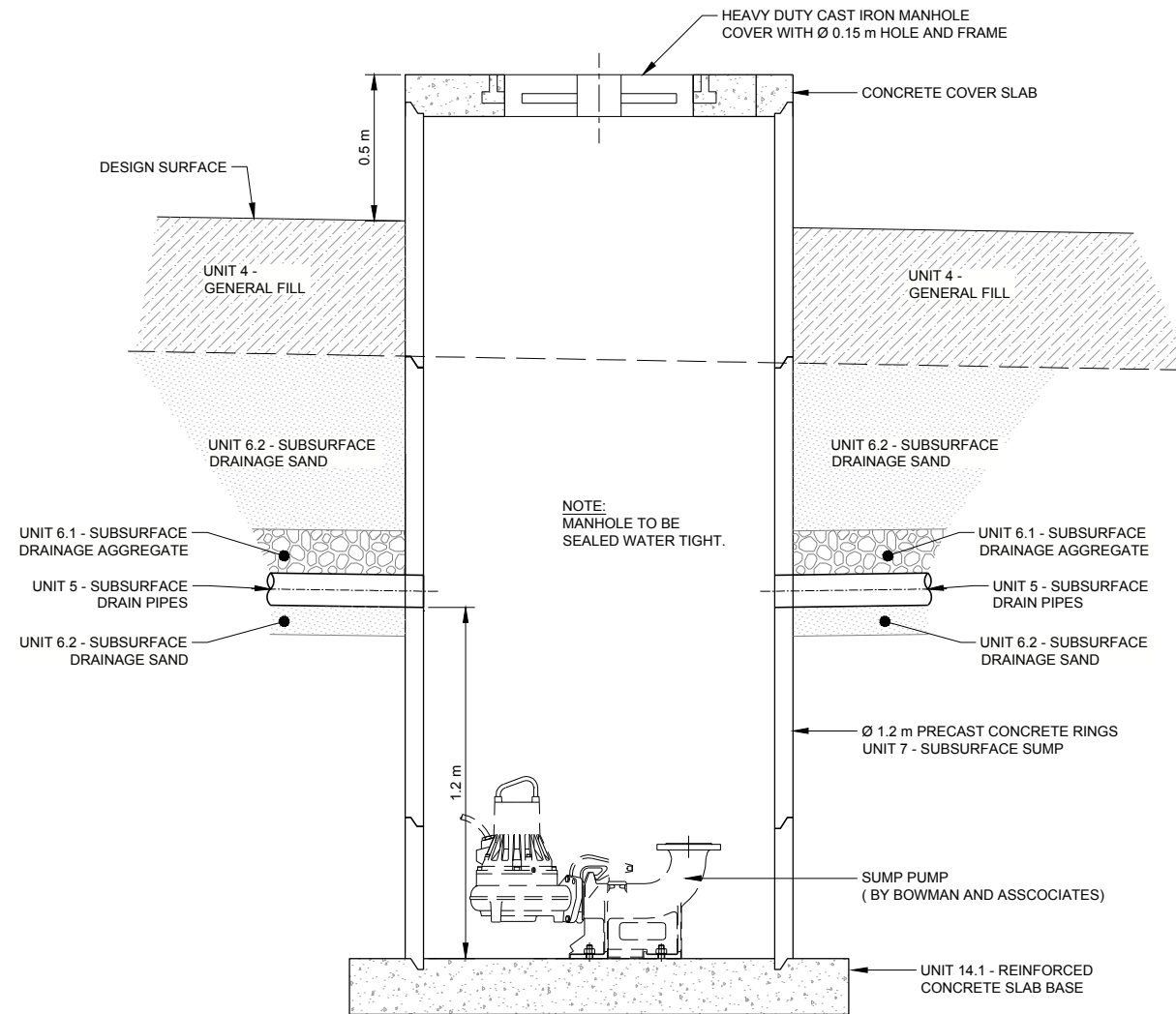
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PROJECT
ALLAWUNA FARM LANDFILL

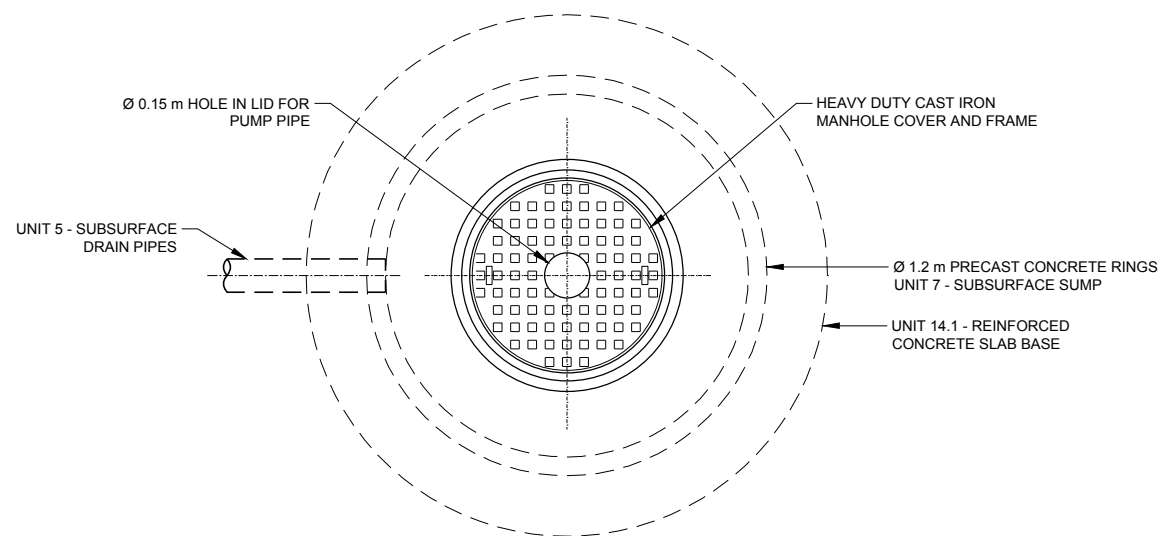
TITLE
**TYPICAL DETAILS
SHEET 3 OF 3**

PROJECT NO. 147645033 DOCUMENT NO. 016-R REV. B 12 of 27 FIGURE D211

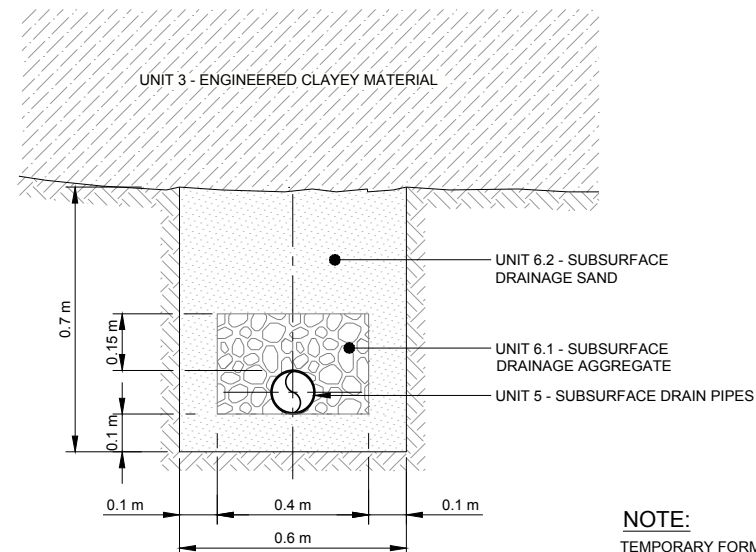
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TYPICAL SUBSURFACE SUMP DETAIL
SCALE 1:25

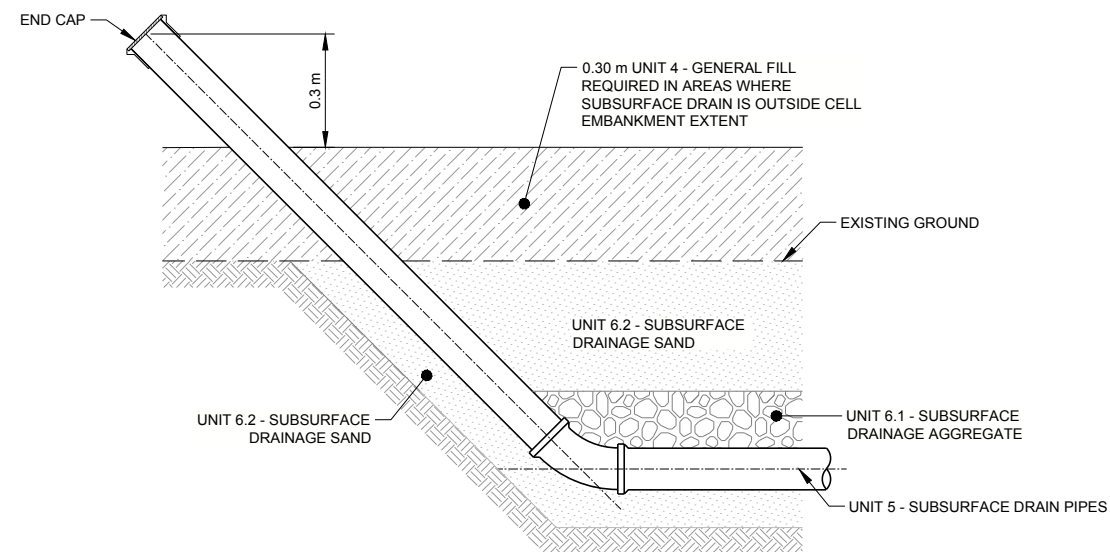


TYPICAL SUBSURFACE SUMP DETAIL
SCALE 1:25



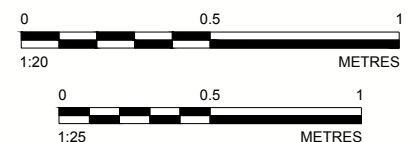
TYPICAL SUBSURFACE DRAIN DETAIL
SCALE 1:20

NOTE:
TEMPORARY FORMWORK REQUIRED TO
ACHIEVE SUBSURFACE DRAINAGE MEDIA
CONFIGURATION



TYPICAL SUBSURFACE DRAIN DAYLIGHT DETAIL
SCALE 1:20

WORKS APPROVAL



REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
B	2015-03-30	ISSUE FOR WORKS APPROVAL	L.DUPREEZ	E.KING	L.DUPREEZ	-
A	2015-02-1	ISSUE FOR COMMENT	L.DUPREEZ	E.KING	L.DUPREEZ	-

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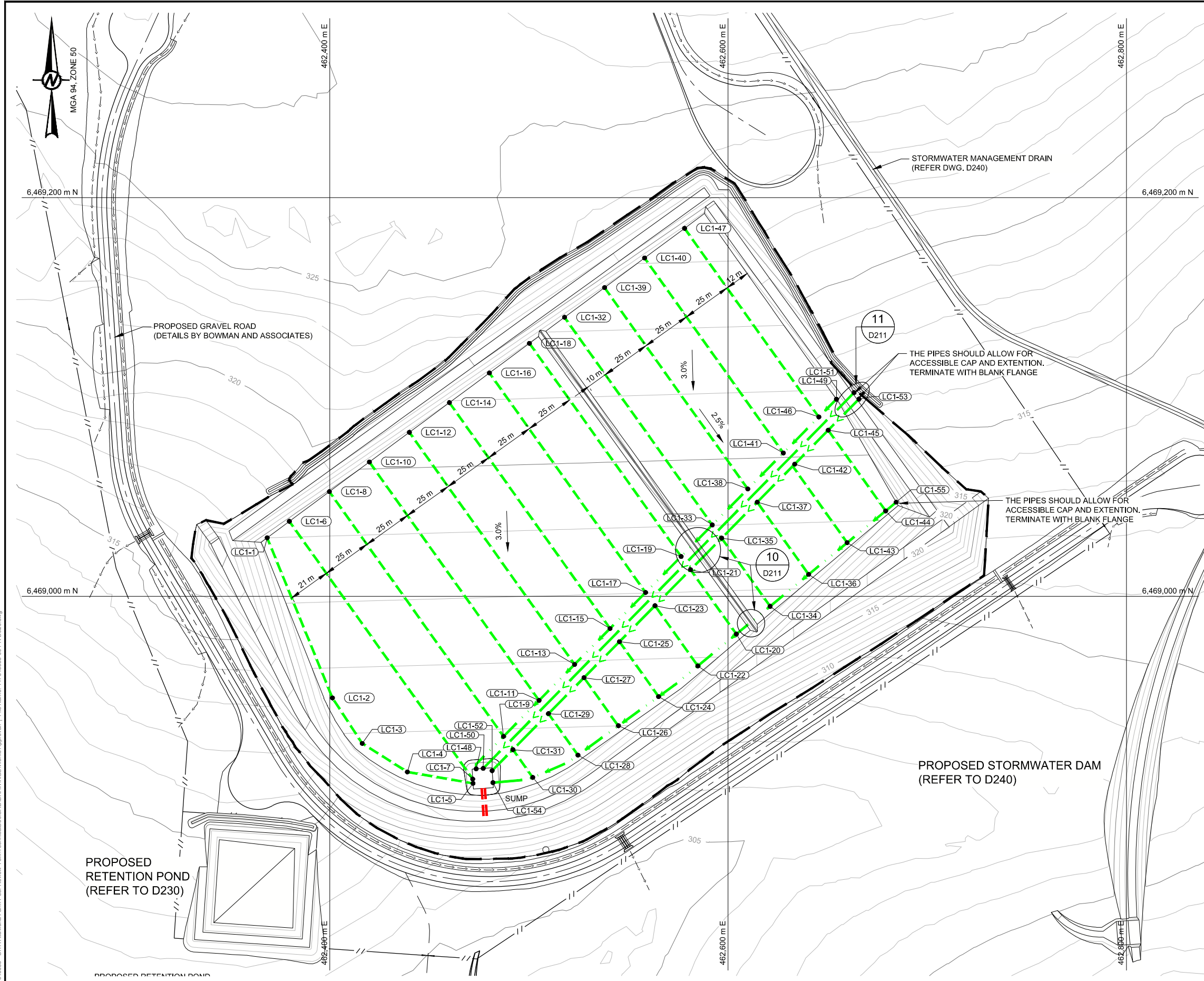


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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
SUBSURFACE DRAINAGE DETAILS

PROJECT NO. 147645033
DOCUMENT NO. 016-R
REV. B
13 of 27
FIGURE D212



LEGEND:

- EXTENT OF CELL WORKS
- CONTOURS (1 m INTERVALS)
- UNIT 13.1 - Ø0.25 M PERFORATED LEACHATE HEADER PIPES
- UNIT 13.2 - Ø0.15 M PERFORATED LEACHATE COLLECTION PIPES
- UNIT 13.3 - Ø0.25 M SOLID LEACHATE HEADER PIPE
- UNIT 14.2 - LEACHATE SUMP OUTLET SLEEVES

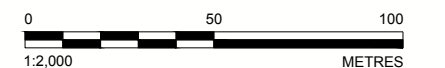
NOTE

- REFER TO D001 FOR GENERAL NOTES.
- INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.
- SUBSURFACE DRAINAGE NOT SHOWN.
- LEACHATE COLLECTION PIP CONFIGURATION DICTATED BY DRAINAGE CONFIGURATION OF FUTURE CELL 1 & 6.

REFERENCE:
BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

LEACHATE COLLECTION PIPES			LEACHATE COLLECTION PIPES		
POINT No.	EASTING (m)	NORTHING (m)	POINT No.	EASTING (m)	NORTHING (m)
LC1-1	462368.58	6469029.33	LC1-29	462509.79	6468941.11
LC1-2	462401.34	6468948.97	LC1-30	462501.90	6468909.09
LC1-3	462416.30	6468926.17	LC1-31	462491.96	6468923.05
LC1-4	462438.95	6468911.85	LC1-32	462517.88	6469139.96
LC1-5	462471.92	6468906.13	LC1-33	462592.06	6469035.77
LC1-6	462379.71	6469037.60	LC1-34	462621.11	6468994.98
LC1-7	462471.78	6468908.27	LC1-35	462596.77	6469029.16
LC1-8	462399.79	6469052.48	LC1-36	462640.44	6469010.92
LC1-9	462487.25	6468929.67	LC1-37	462614.61	6469047.21
LC1-10	462419.89	6469067.37	LC1-38	462609.90	6469053.83
LC1-11	462505.08	6468947.72	LC1-39	462537.97	6469154.85
LC1-12	462439.98	6469082.25	LC1-40	462558.06	6469169.73
LC1-13	462522.92	6468965.78	LC1-41	462627.73	6469071.88
LC1-14	462460.07	6469097.14	LC1-42	462633.42	6469066.26
LC1-15	462540.75	6468983.83	LC1-43	462659.78	6469026.87
LC1-16	462480.16	6469112.02	LC1-44	462679.12	6469042.82
LC1-17	462558.58	6469001.88	LC1-45	462650.27	6469083.32
LC1-18	462500.25	6469126.91	LC1-46	462645.56	6469089.94
LC1-19	462576.42	6469019.94	LC1-47	462578.15	6469184.62
LC1-20	462604.15	6468980.99	LC1-48	462473.52	6468913.40
LC1-21	462581.13	6469013.32	LC1-49	462654.38	6469098.86
LC1-22	462584.81	6468965.05	LC1-50	462477.04	6468913.64
LC1-23	462563.30	6468995.27	LC1-51	462663.24	6469102.13
LC1-24	462565.11	6468949.63	LC1-52	462481.52	6468912.48
LC1-25	462545.46	6468977.21	LC1-53	462665.70	6469098.93
LC1-26	462544.96	6468935.02	LC1-54	462481.92	6468906.50
LC1-27	462527.63	6468959.16	LC1-55	462684.41	6469047.18
LC1-28	462524.62	6468920.27			

WORKS APPROVAL



B 2015-03-30 ISSUE FOR WORKS APPROVAL			E.KING L.DuPREEZ L.DuPREEZ -		
A 2015-02-1 ISSUE FOR COMMENT			E.KING L.DuPREEZ L.DuPREEZ -		
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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
CELL 1 LEACHATE COLLECTIONS PIPES AND SETOUT PLAN

PROJECT No. 147645033
DOCUMENT NO. 016-R
Rev. B 14 of 27
FIGURE D220



LEGEND:

- EXTENT OF CELL WORKS
- CONTOURS (1 m INTERVALS)
- UNIT 13.1 - Ø0.25 M PERFORATED LEACHATE HEADER PIPES
- UNIT 13.2 - Ø0.15 M PERFORATED LEACHATE COLLECTION PIPES
- UNIT 13.3 - Ø0.25 M SOLID LEACHATE HEADER PIPE
- UNIT 14.2 - LEACHATE SUMP OUTLET SLEEVES

NOTE

1. REFER TO D001 FOR GENERAL NOTES.

2. INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

LEACHATE COLLECTION PIPES			LEACHATE COLLECTION PIPES		
POINT No.	EASTING (m)	NORTHING (m)	POINT No.	EASTING (m)	NORTHING (m)
LC2-1	462348.31	6469055.33	LC2-19	462356.18	6469278.46
LC2-2	462341.27	6469067.22	LC2-20	462476.98	6469143.29
LC2-3	462330.15	6469200.00	LC2-21	462366.27	6469299.52
LC2-4	462338.78	6469247.29	LC2-22	462509.34	6469166.97
LC2-5	462365.14	6469294.49	LC2-23	462400.57	6469319.72
LC2-6	462363.98	6469060.62	LC2-24	462525.48	6469178.78
LC2-7	462338.87	6469095.90	LC2-25	462417.74	6469330.09
LC2-8	462380.13	6469072.43	LC2-26	462541.63	6469190.59
LC2-9	462335.46	6469135.16	LC2-27	462434.92	6469340.45
LC2-10	462396.27	6469084.24	LC2-28	462557.77	6469202.40
LC2-11	462332.11	6469174.34	LC2-29	462452.09	6469350.81
LC2-12	462412.41	6469096.05	LC2-30	462358.94	6469056.84
LC2-13	462331.83	6469209.22	LC2-31	462572.25	6469213.00
LC2-14	462428.55	6469107.86	LC2-32	462582.30	6469216.51
LC2-15	462336.84	6469236.67	LC2-33	462360.69	6469054.41
LC2-16	462444.70	6469119.67	LC2-34	462362.32	6469051.94
LC2-17	462345.39	6469259.14	LC2-35	462584.73	6469213.36
LC2-18	462460.84	6469131.48			

WORKS APPROVAL

0 50 100
1:2,000 METRES

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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
CELL 2 LEACHATE COLLECTIONS PIPES
AND SETOUT PLAN

PROJECT No.
147645033

DOCUMENT NO.
016-R

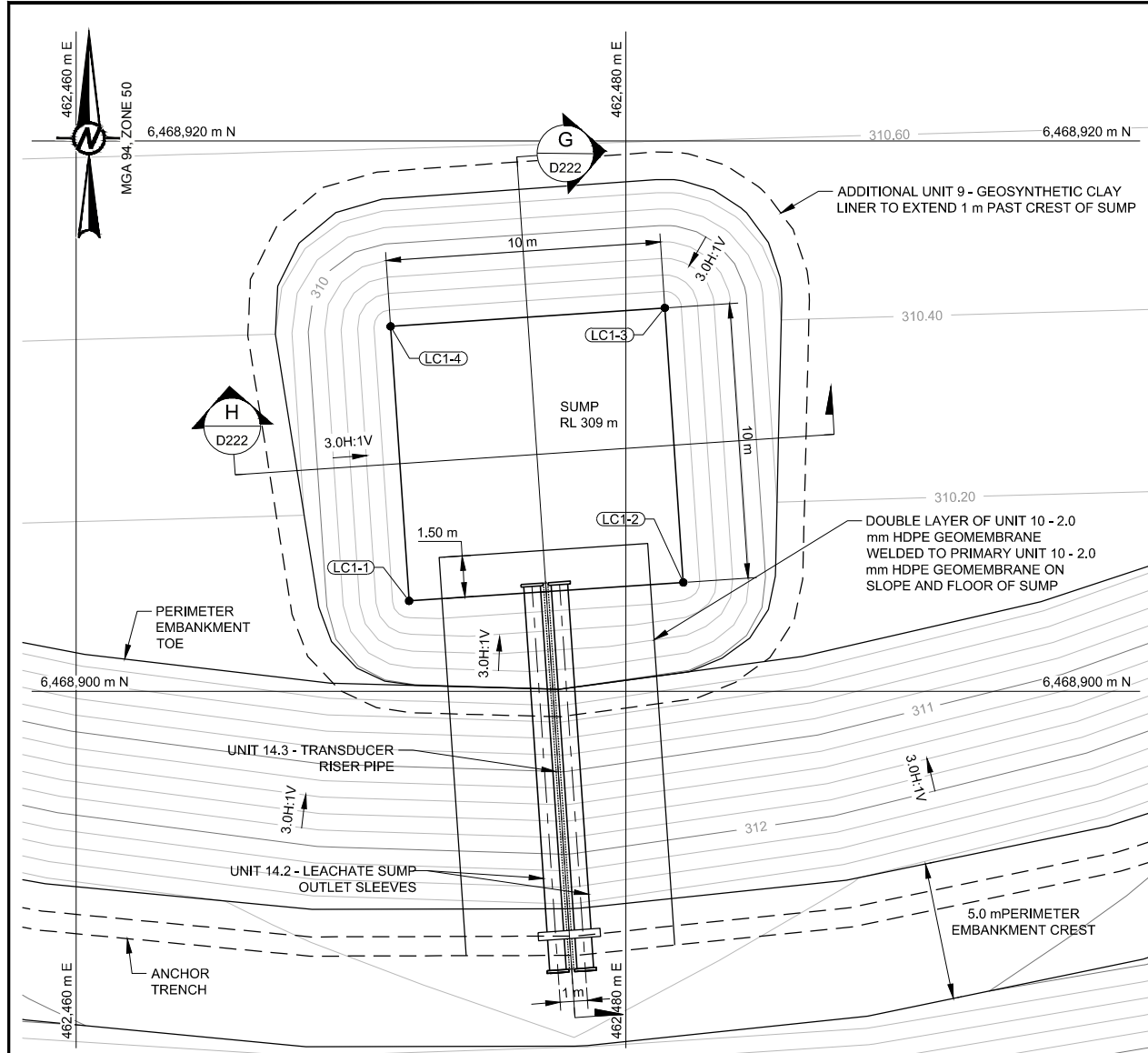
Rev.
B

15 of 27

FIGURE
D221

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SCALE 1:250 1 CELL 1 SUMP DETAIL D222

SUMP SETOUT			
POINT No.	EASTING (m)	NORTHING (m)	RL (m)
S1-1	462472.11	6468903.28	309.0
S1-2	462482.09	6468903.96	309.0
S1-3	462481.42	6468913.93	309.0
S1-4	462471.44	6468913.26	309.0

LEGEND:

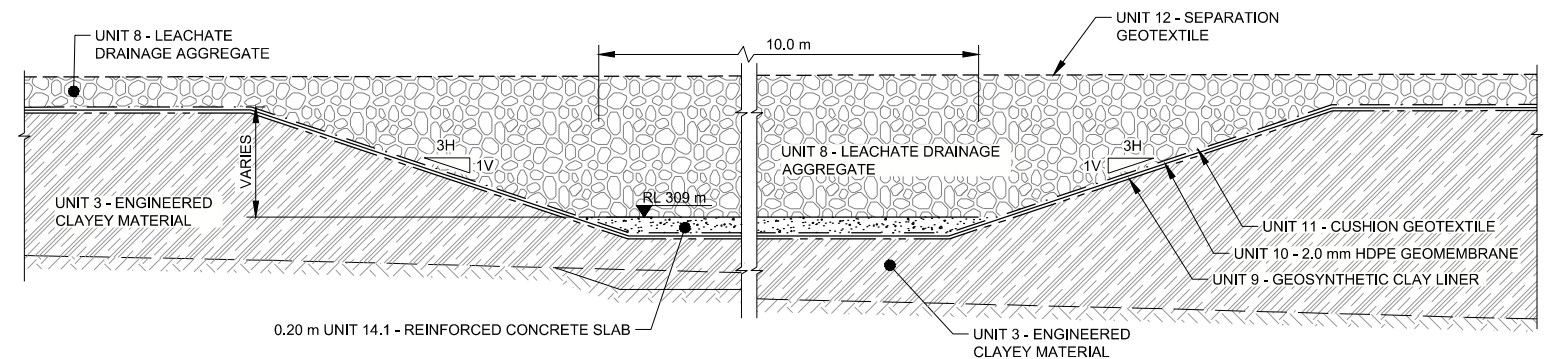
20 CONTOURS (1 m INTERVALS)

NOTE

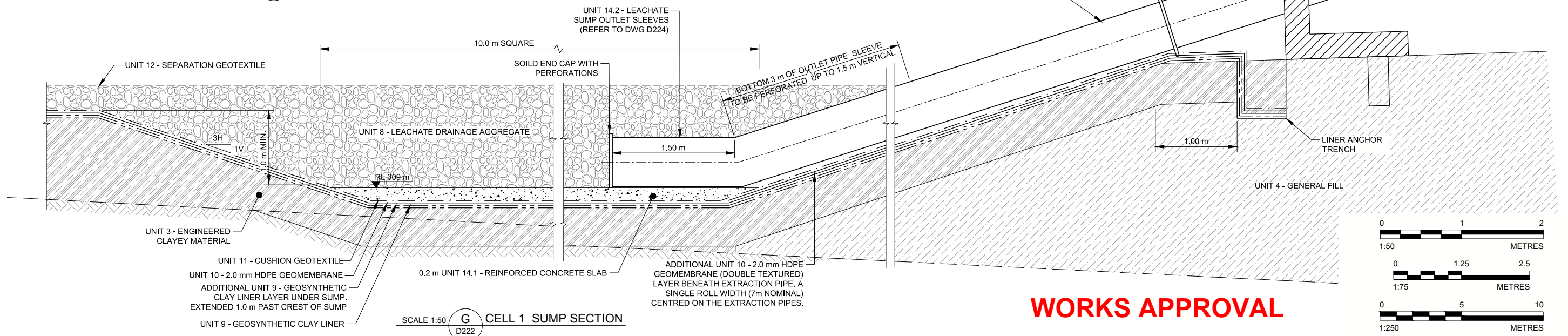
- REFER TO D001 FOR GENERAL NOTES.
- INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

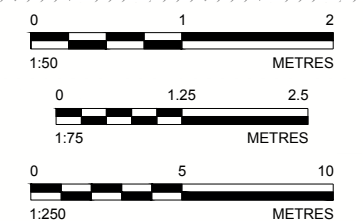


SCALE 1:75 H CELL 1 SUMP SECTION D222



SCALE 1:50 G CELL 1 SUMP SECTION D222

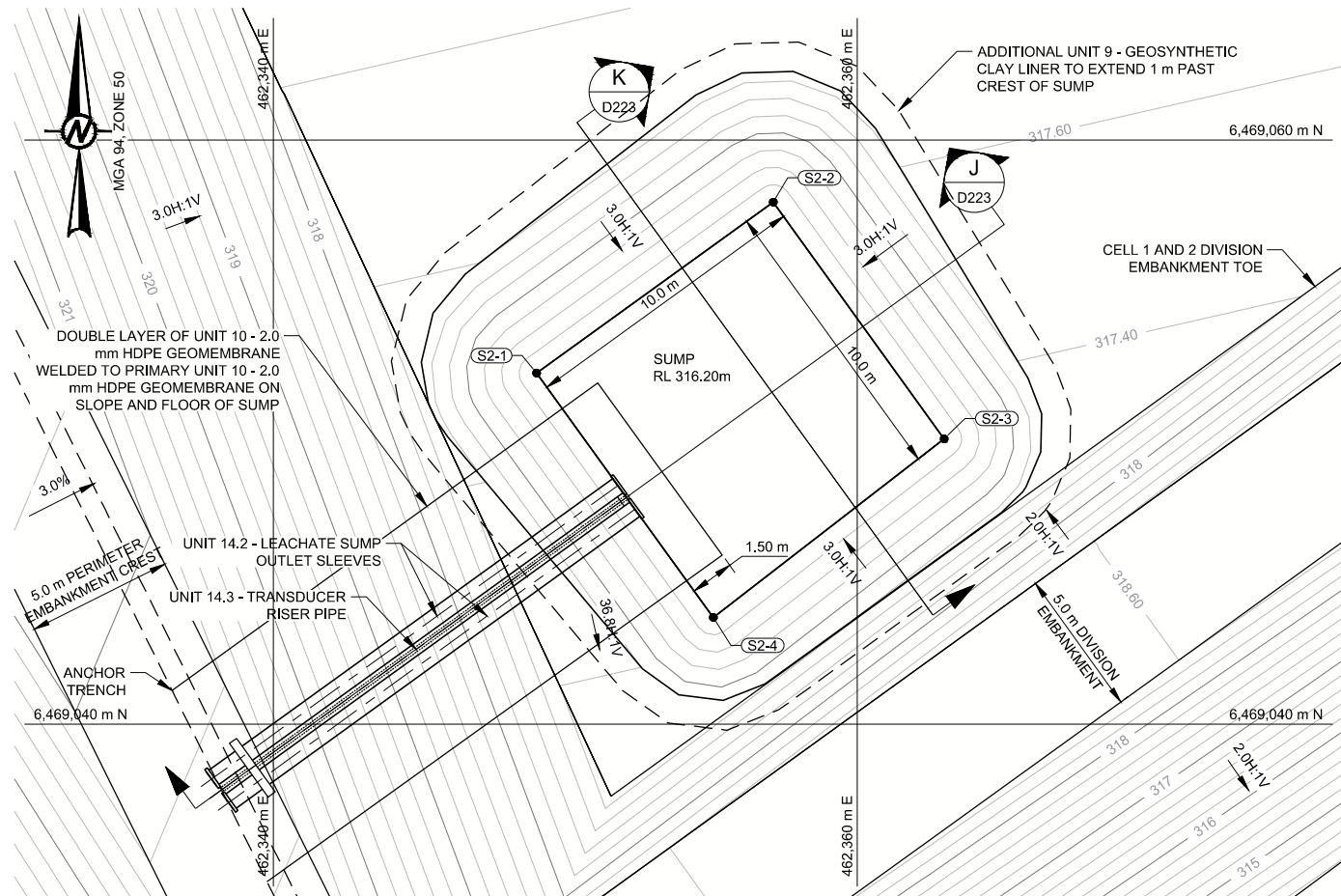
WORKS APPROVAL



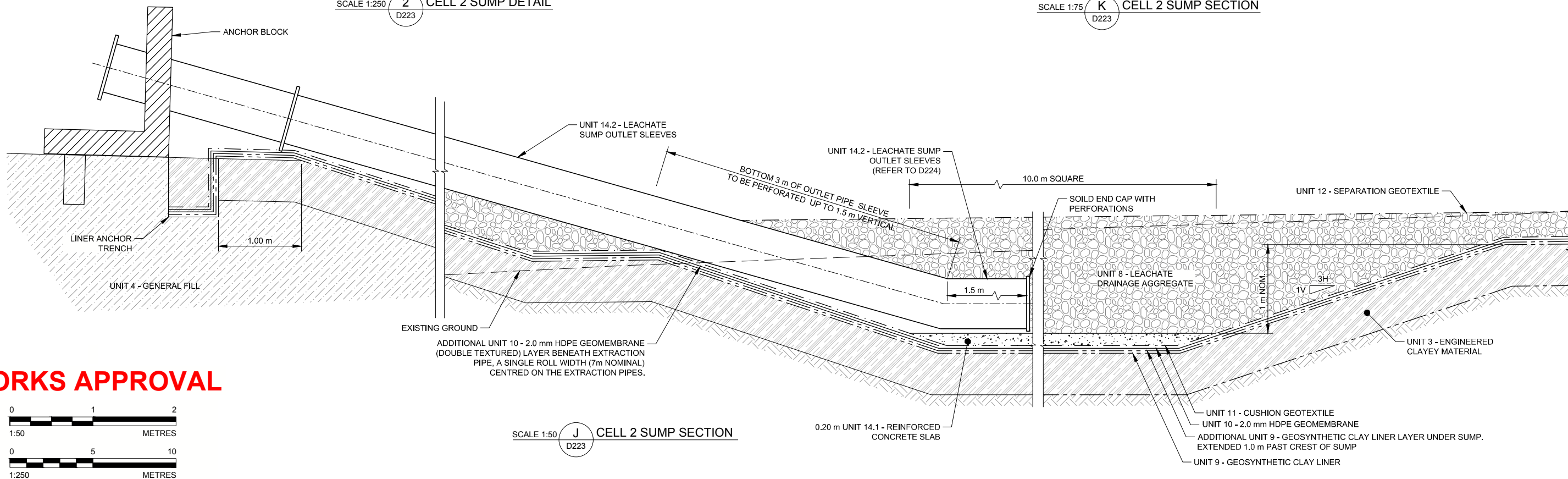
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A 2015-02-1 ISSUE FOR COMMENT				E.KING L.DuPREEZ L.DuPREEZ -			
Rev.	YYYY-MM-DD	DESCRIPTION		PREPARED	DESIGN	REVIEW	APPROVED

CLIENT SITA AUSTRALIA		PROJECT ALLAWUNA FARM LANDFILL	
CONSULTANT 		TITLE CELL 1 SUMP LAYOUT PLAN AND SETOUT	
PERTH OFFICE LEVEL 3, HAVELOCK STREET WEST PERTH, WA 6055 AUSTRALIA [+61] (8) 9213 7600 www.golder.com		PROJECT No. 147645033	DOCUMENT NO. 016-R
		Rev. B	16 of 27 FIGURE D222



SCALE 1:250 **2** CELL 2 SUMP DETAIL
D223



SCALE 1:50 **J** CELL 2 SUMP SECTION
D223

SCALE 1:75 **K** CELL 2 SUMP SECTION
D223

CELL 2 SUMP SETOUT			
POINT No.	EASTING (m)	NORTHING (m)	RL (m)
S2-1	462349.02	6469052.03	316.2
S2-2	462357.13	6469057.88	316.2
S2-3	462362.98	6469049.77	316.2
S2-4	462355.07	6469043.66	316.2

LEGEND:

20 CONTOURS (1 m INTERVALS)

NOTE

1. REFER TO D001 FOR GENERAL NOTES.

2. INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

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Rev.	YYYY-MM-DD	DESCRIPTION	PREPARED	DESIGN	REVIEW	APPROVED
B	2015-03-30	ISSUE FOR WORKS APPROVAL	E.KING	L.DuPREZ	L.DuPREZ	-
A	2015-02-1	ISSUE FOR COMMENT	E.KING	L.DuPREZ	L.DuPREZ	-

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PROJECT
ALLAWUNA FARM LANDFILL

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TITLE
CELL 2 SUMP LAYOUT PLAN AND SETOUT

PROJECT No.
147645033

DOCUMENT NO.
016-R

Rev.
B

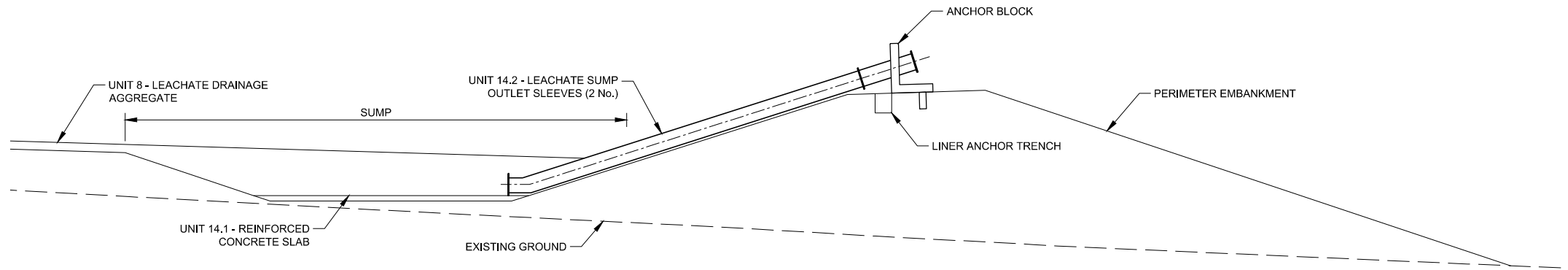
17 of 27

FIGURE
D223

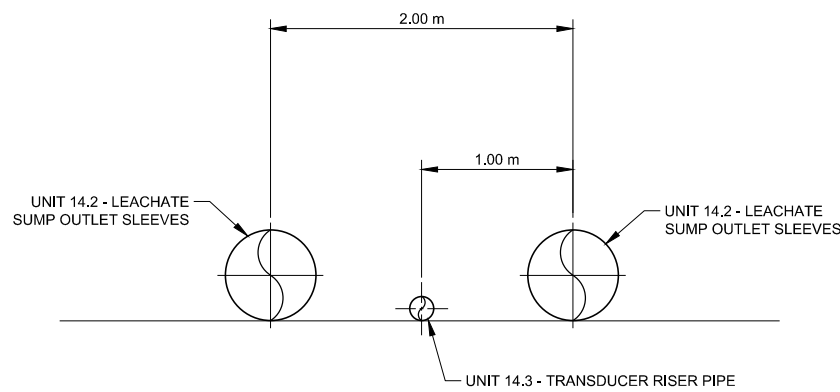
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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

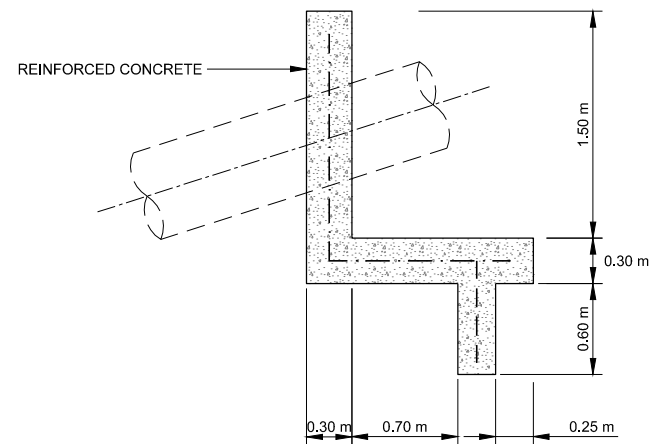
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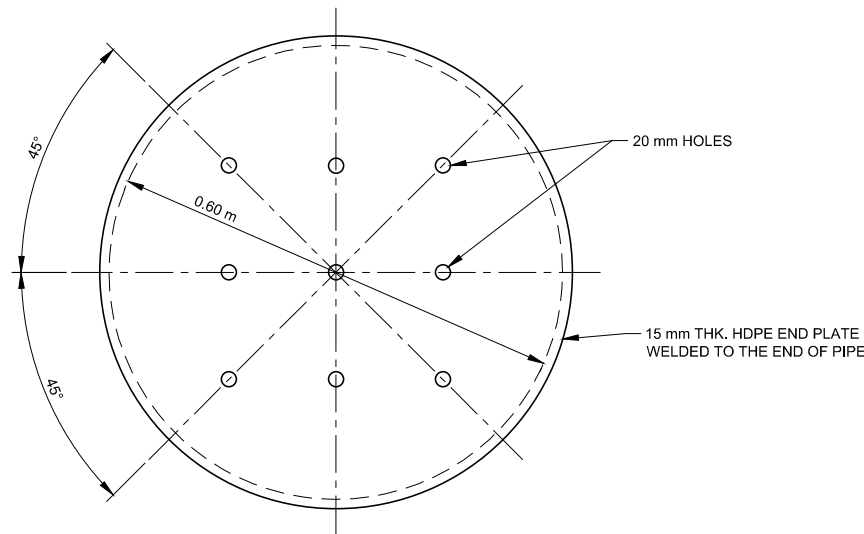
TYPICAL SUMP OUTLET SLEEVE DETAIL
SCALE 1:200



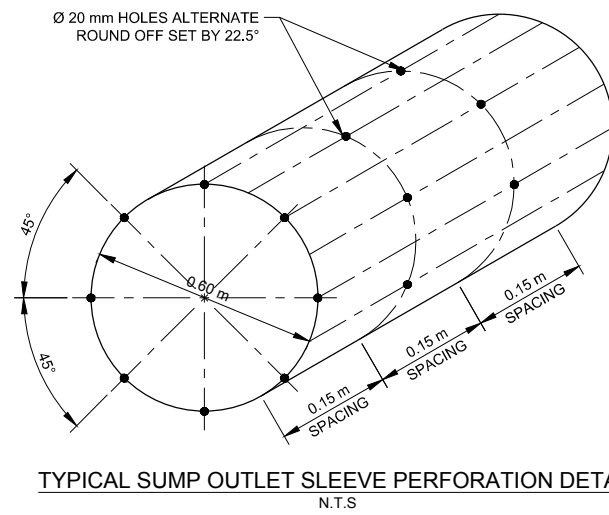
TYPICAL SUMP OUTLET PIPE SECTION
SCALE 1:50



TYPICAL ANCHOR BLOCK DETAIL
SCALE 1:50

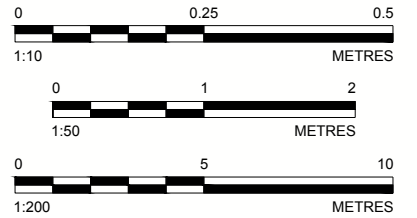


TYPICAL END PLATE DETAIL
SCALE 1:10



TYPICAL SUMP OUTLET SLEEVE PERFORATION DETAIL
N.T.S.

WORKS APPROVAL



Rev.	YYYY-MM-DD	DESCRIPTION	PREPARED	DESIGN	REVIEW	APPROVED
B	2015-03-30	ISSUE FOR WORKS APPROVAL	E.KING	L.DuPREEZ	L.DuPREEZ	-
A	2015-02-1	ISSUE FOR COMMENT	E.KING	L.DuPREEZ	L.DuPREEZ	-

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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
SUMP OUTLET PIPES

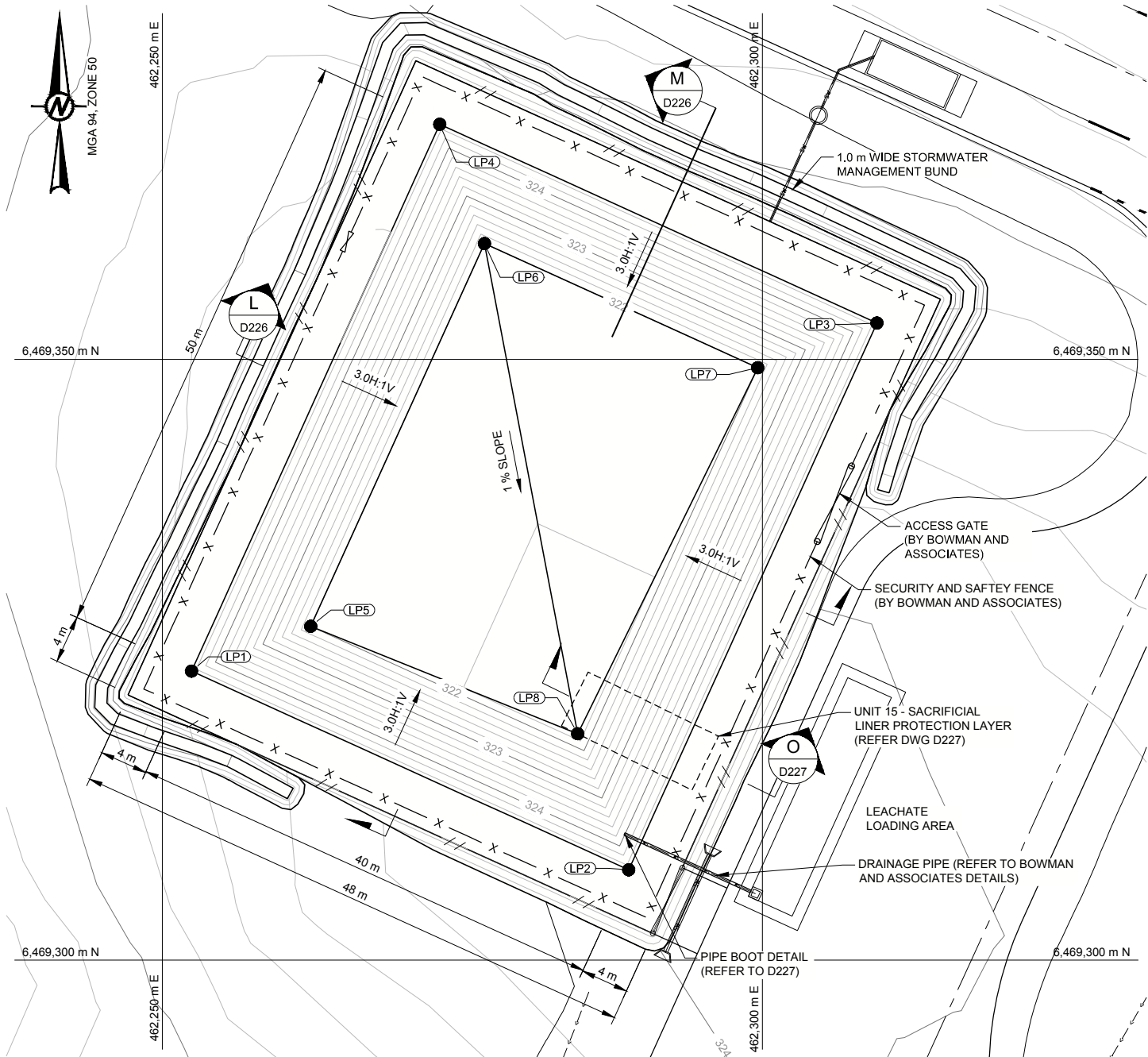
PROJECT No.
147645033

DOCUMENT NO.
016-R

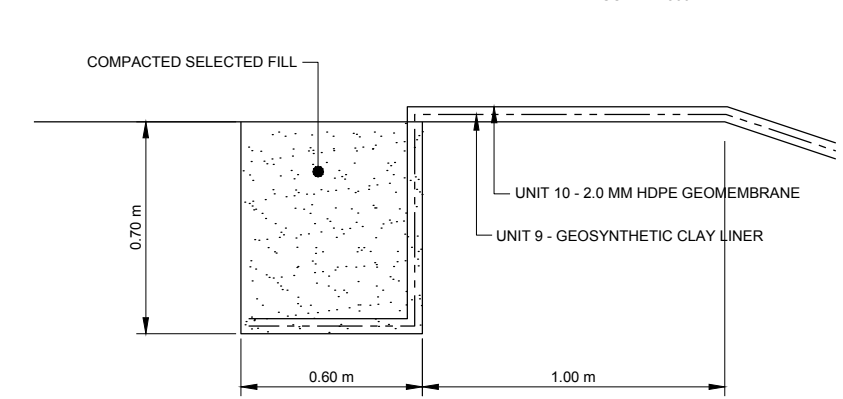
Rev. B
18 of 27

FIGURE
D224

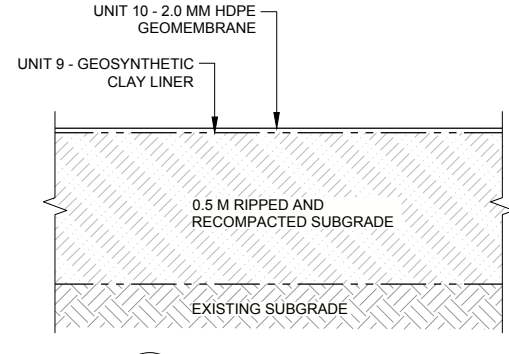
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LEACHATE POND LAYOUT PLAN
SCALE 1:500



TYPICAL CREST ANCHOR TRENCH DETAIL
SCALE 1:25



SCALE 1:25 13 LEACHATE DAM LINER DETAIL
D226

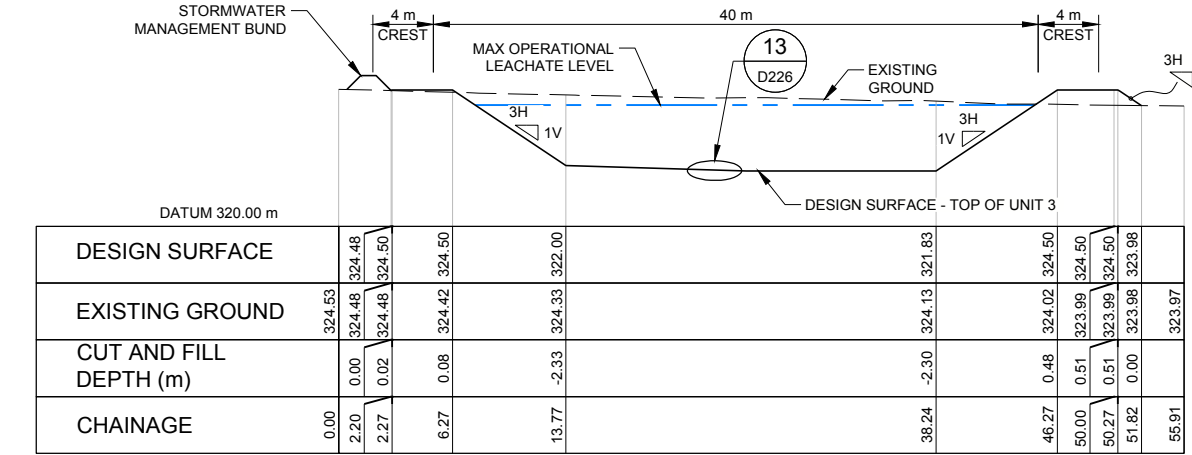
LEACHATE POND SETOUT			
POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
LP1	462252.43	6469324.06	324.50
LP2	462288.85	6469307.51	324.50
LP3	462309.53	6469353.04	324.50
LP4	462273.11	6469369.58	324.50
LP5	462262.36	6469327.78	322.00
LP6	462276.84	6469359.65	322.00
LP7	462299.60	6469349.31	322.00
LP8	462284.60	6469318.84	321.65

LEACHATE POND STORAGE		
HEIGHT (m RL)	STORAGE (m³)	DESCRIPTION
324.50	3602.00	MAX HEIGHT OF POND
324.00	2668.00	0.5 m FREEBOARD
323.50	1186.00	
323.00	1169.00	
322.50	586.00	
322.00	102.00	
321.65	0	LOWEST POINT IN POND

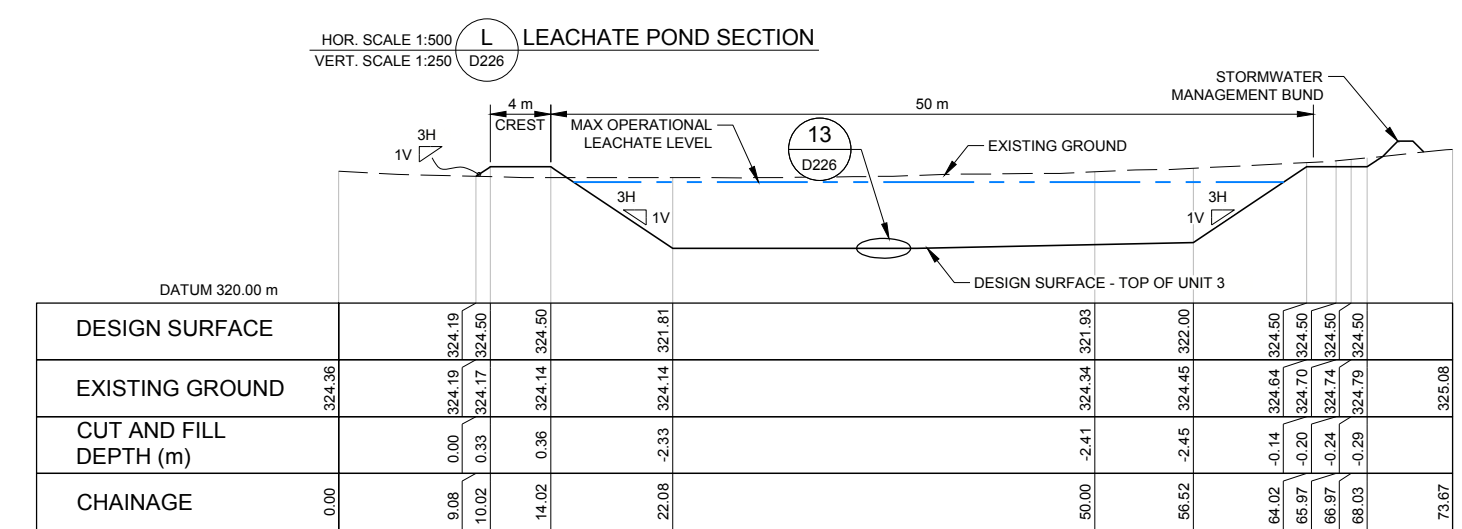
REFERENCE:
BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

NOTE

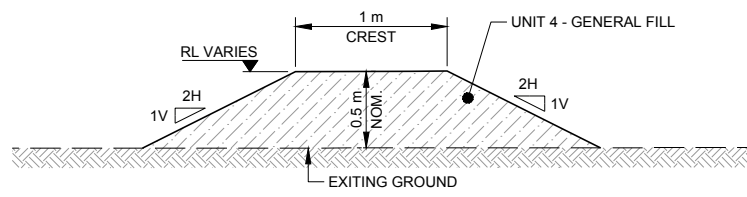
- REFER TO D001 FOR GENERAL NOTES.
- INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.
- FENCING DETAILS BY BOWMAN AND ASSOCIATES.



HOR. SCALE 1:500 VERT. SCALE 1:250 L LEACHATE POND SECTION
D226

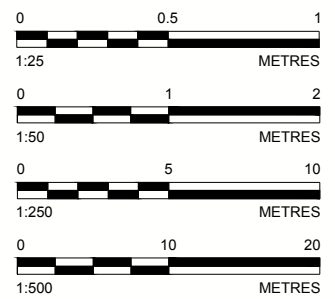


HOR. SCALE 1:500 VERT. SCALE 1:250 M LEACHATE POND SECTION
D226



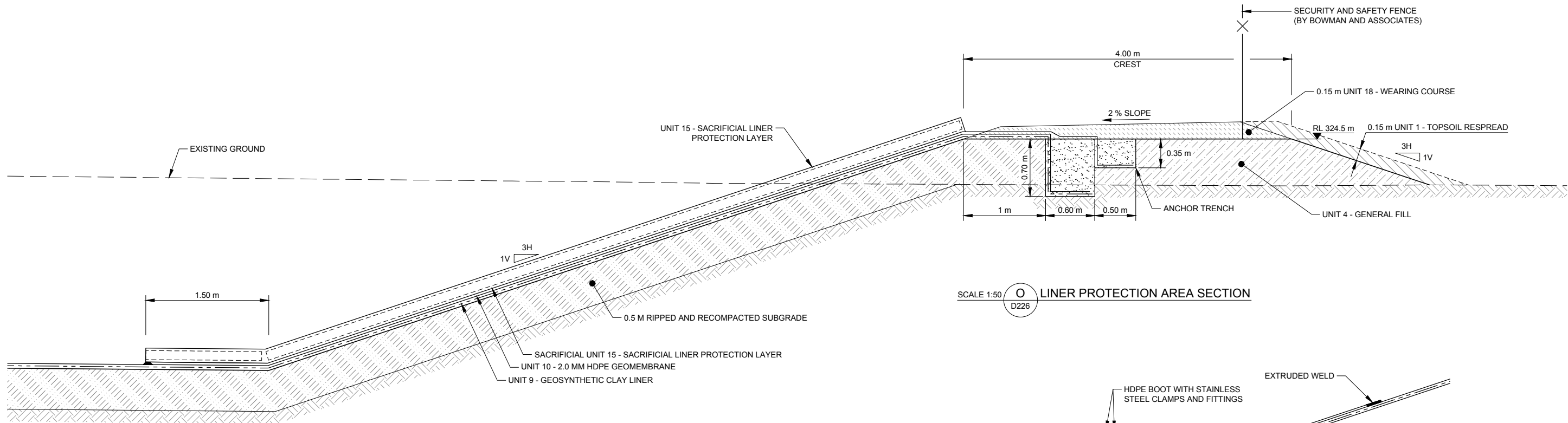
TYPICAL STORMWATER MANAGEMENT BUND
SCALE 1:50

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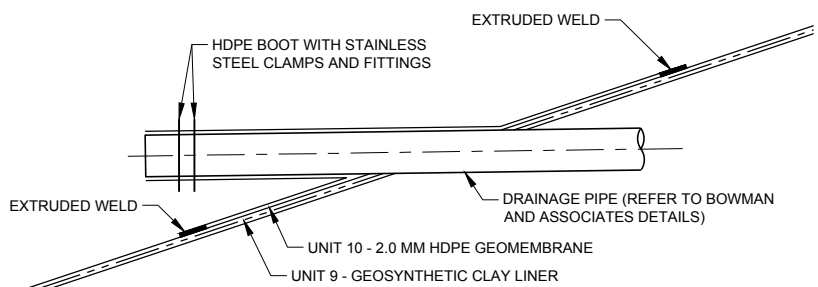


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A	2015-02-1	ISSUE FOR COMMENT	L.DUPREEZ	E.KING	L.DUPREEZ	-

CLIENT SITA AUSTRALIA	PROJECT ALLAWUNA FARM LANDFILL
CONSULTANT Golder Associates	TITLE LEACHATE POND PLAN AND SECTIONS
PERTH OFFICE LEVEL 3, HAVELOCK STREET WEST PERTH, WA 6055 AUSTRALIA [+61] (8) 9213 7600 www.golder.com	PROJECT NO. 147645033
	DOCUMENT NO. 016-R
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	FIGURE D226

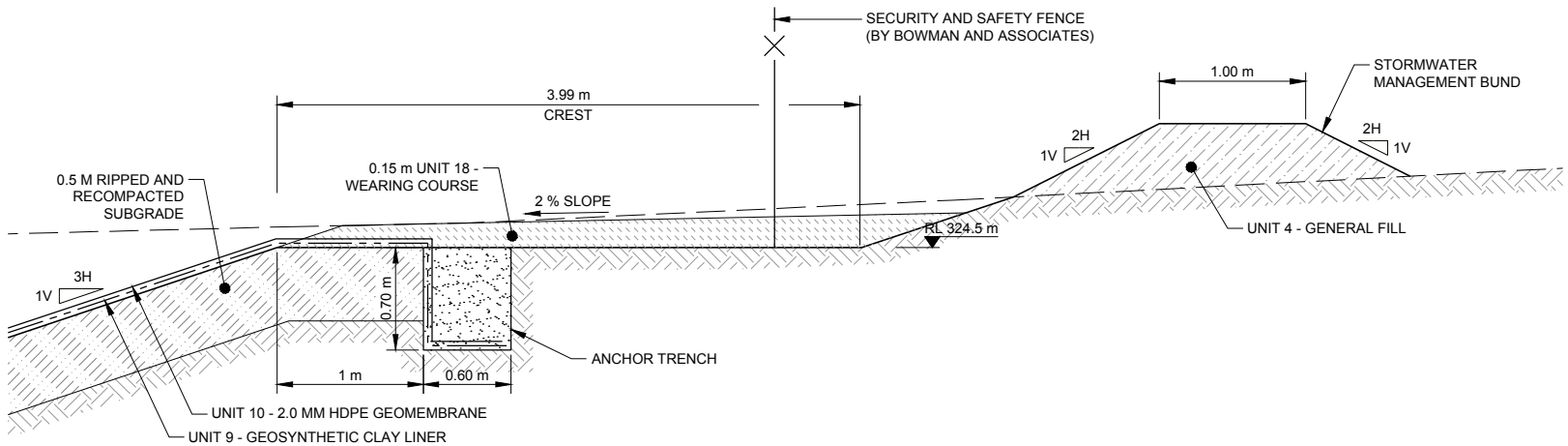


SCALE 1:50
O D226
LINER PROTECTION AREA SECTION

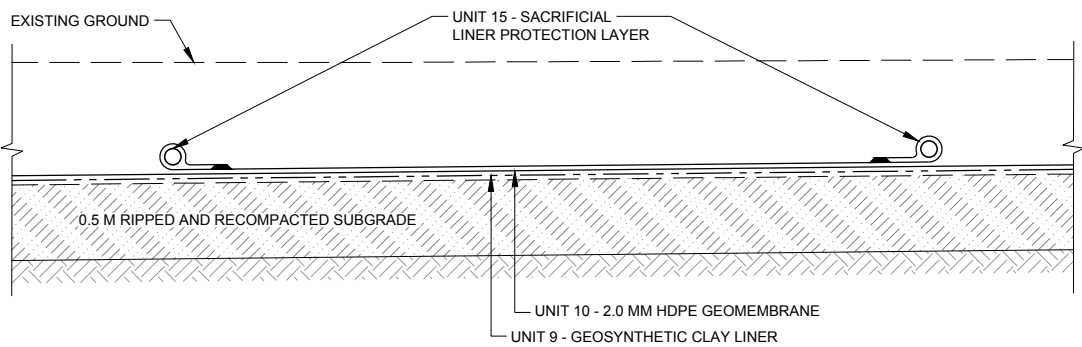


TYPICAL DRAINAGE PIPE BOOT DETAIL
SCALE 1:20

NOTE:
FOR PIPE FROM LEACHATE LOADING
PAD (REFER TO BOWMAN AND
ASSOCIATES DWG. ALLA- 027)

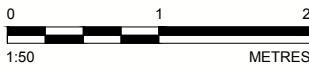
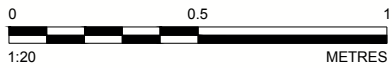


TYPICAL EMBANKMENT CREST AND STORMWATER MANAGEMENT BUND
SCALE 1:50



TYPICAL SECTION THROUGH LINER PROTECTION AREA
SCALE 1:50

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CONSULTANT

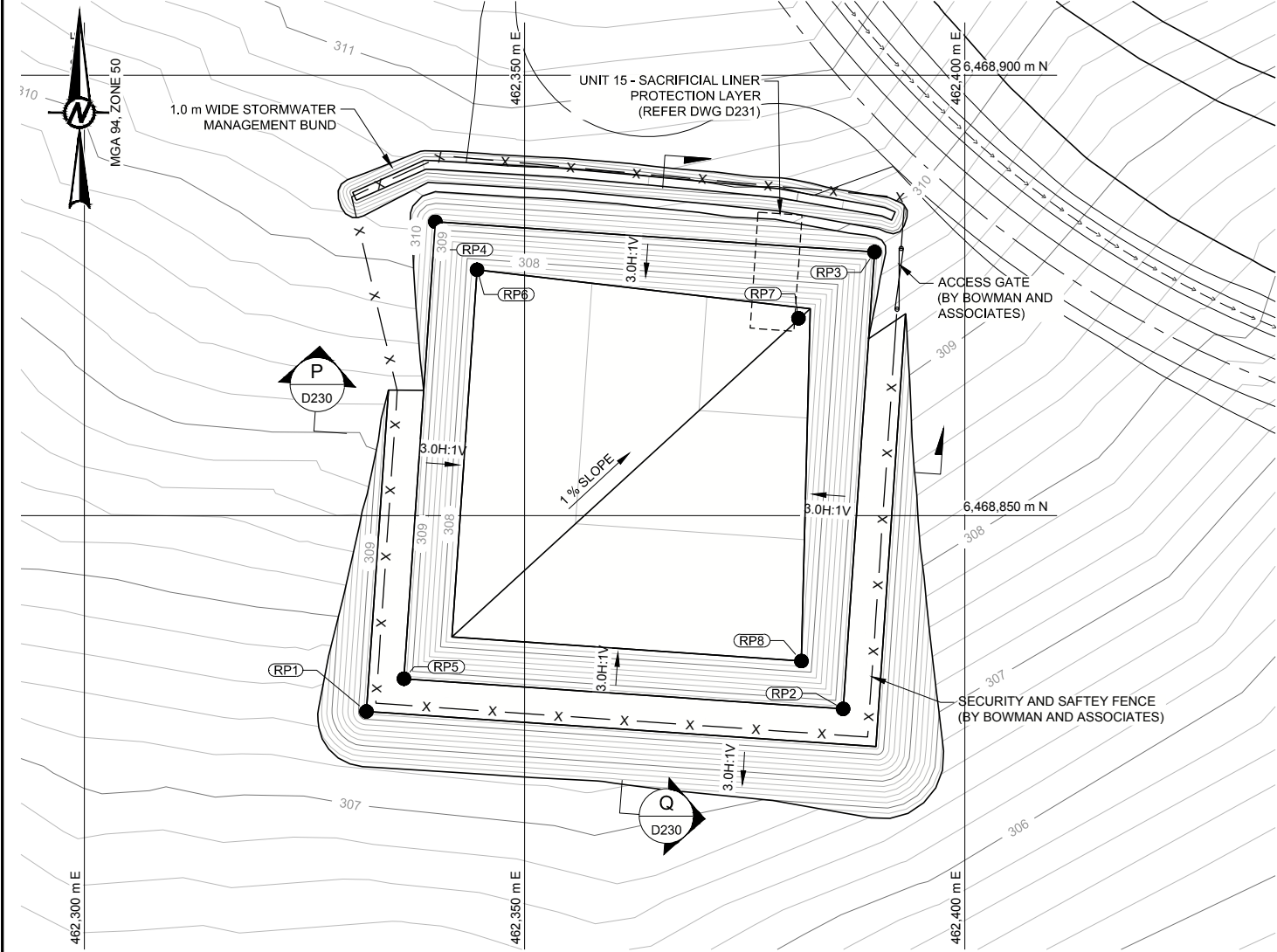


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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
LEACHATE POND DETAILS

PROJECT NO. 147645033
DOCUMENT NO. 016-R
REV. B
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FIGURE D227

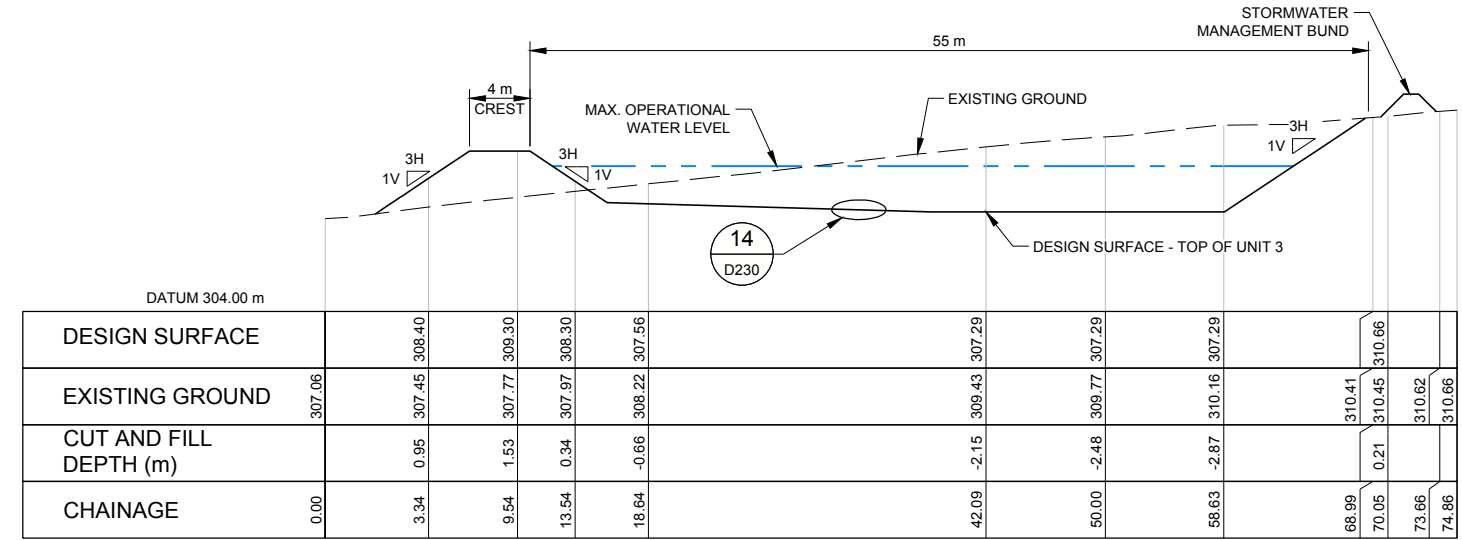


RETENTION POND LAYOUT PLAN
SCALE 1:750

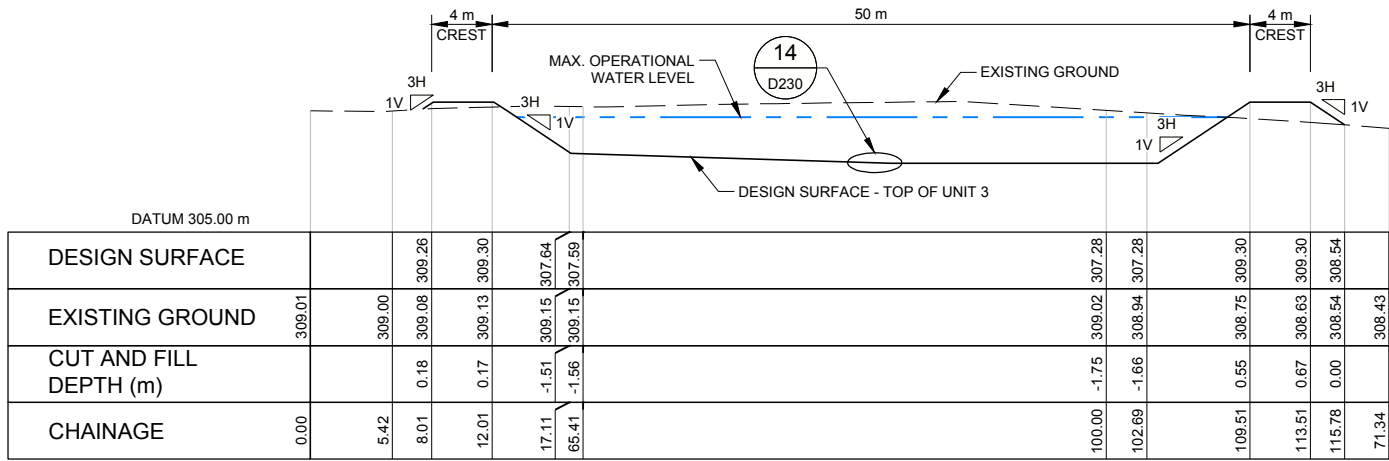
RETENTION POND SETOUT			
POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
RP1	462332.02	6468827.77	309.30
RP2	462386.17	6468828.05	309.30
RP3	462389.73	6468879.93	309.30
RP4	462339.85	6468883.36	309.30
RP5	462336.28	6468831.48	309.30
RP6	462344.59	6468877.91	307.60
RP7	462381.10	6468872.41	306.60
RP8	462381.43	6468833.49	307.60

RETENTION POND STORAGE		
HEIGHT (m RL)	STORAGE (m³)	DESCRIPTION
309.30	3900	MAX HEIGHT OF POND
308.80	2690	0.5 m FREEBOARD
308.50	2025	
308.00	1030	
307.50	183	
307.20	0	LOWEST POINT IN POND

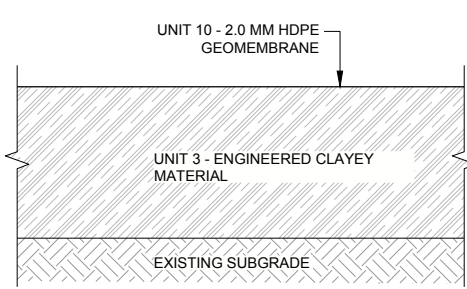
- REFERENCE:
- BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.
- NOTE
- REFER TO D001 FOR GENERAL NOTES.
 - INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.
 - FENCING DETAILS BY BOWMAN AND ASSOCIATES.



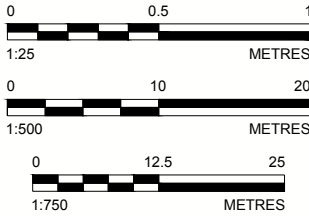
SCALE 1:500 Q RETENTION POND SECTION



HOR. SCALE 1:500
VERT. SCALE 1:250 P RETENTION POND SECTION



SCALE 1:25 14 LINER DETAIL

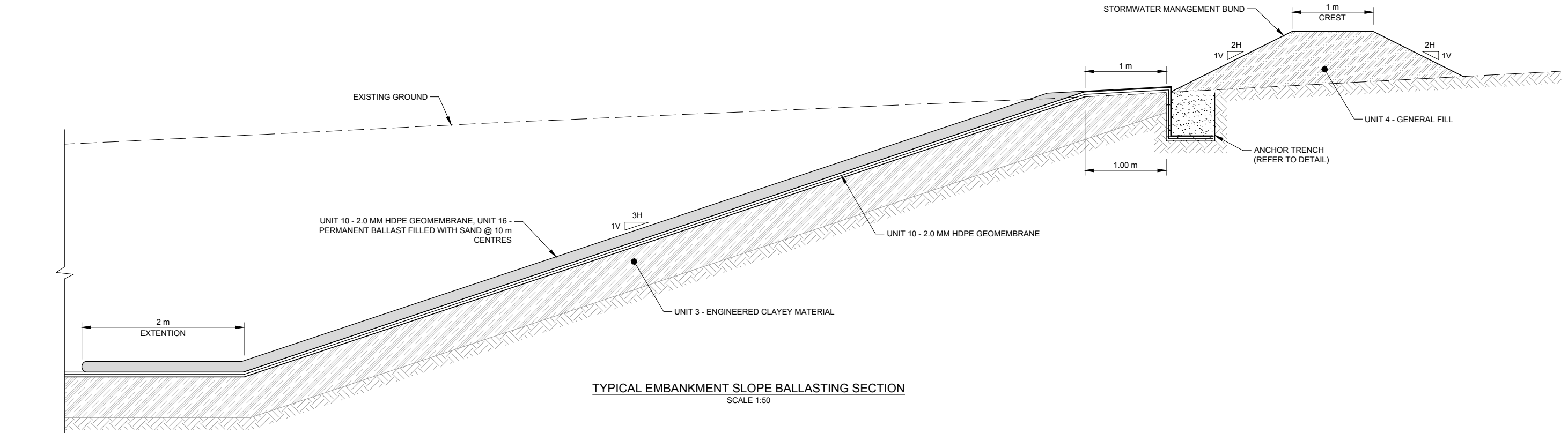


WORKS APPROVAL

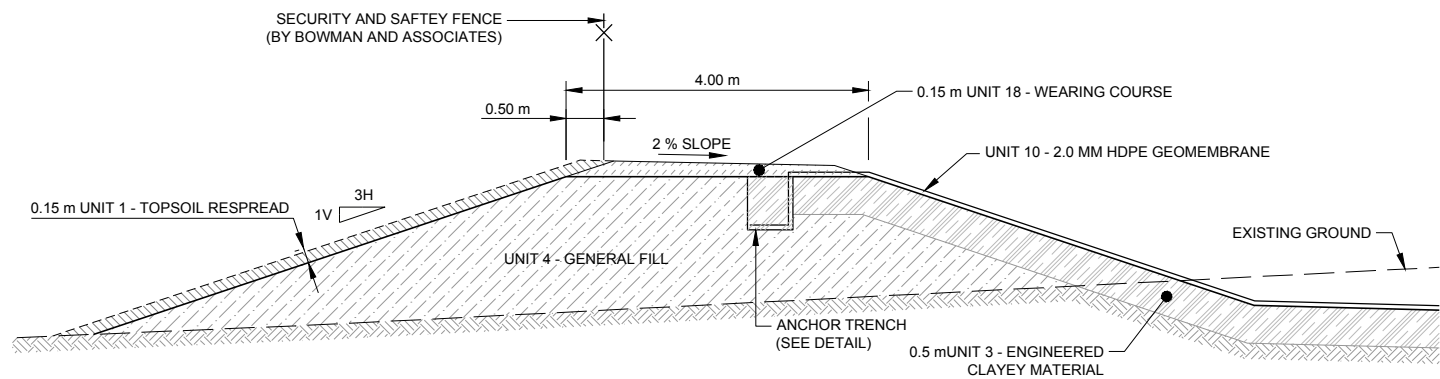
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A	2015-02-1	ISSUE FOR COMMENT	L.DUPREEZ	E.KING	L.DUPREEZ	-

CLIENT	SITA AUSTRALIA	PROJECT	ALLAWUNA FARM LANDFILL
CONSULTANT	GOLDER ASSOCIATES	TITLE	RETENTION POND PLAN AND SECTIONS
PERTH OFFICE LEVEL 3, HAVELOCK STREET WEST PERTH, WA 6055 AUSTRALIA [+61] (8) 9213 7600 www.golder.com	PROJECT NO. 147645033	DOCUMENT NO. 016-R	REV. B
22 of 27	FIGURE D230		

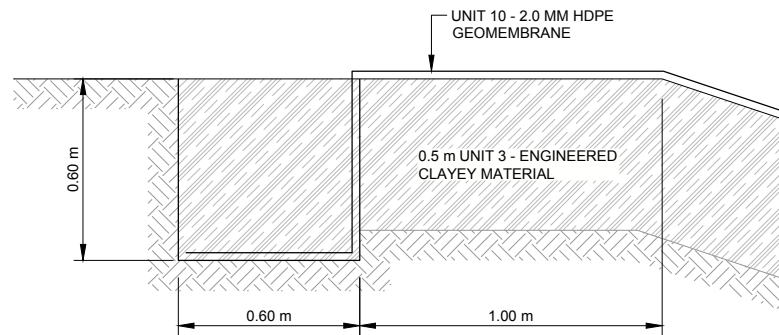
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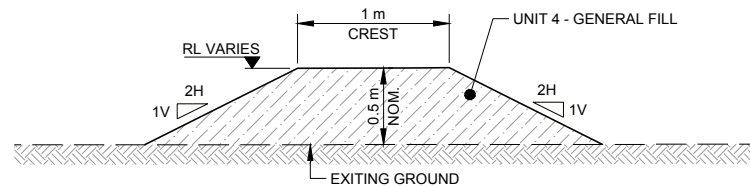
TYPICAL EMBANKMENT SLOPE BALLASTING SECTION
SCALE 1:50



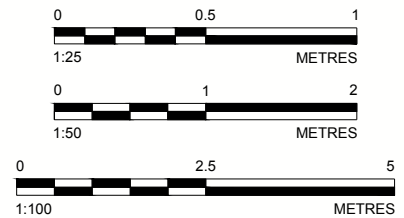
TYPICAL EMBANKMENT DETAIL
SCALE 1:100



TYPICAL CREST ANCHOR TRENCH DETAIL
SCALE 1:25



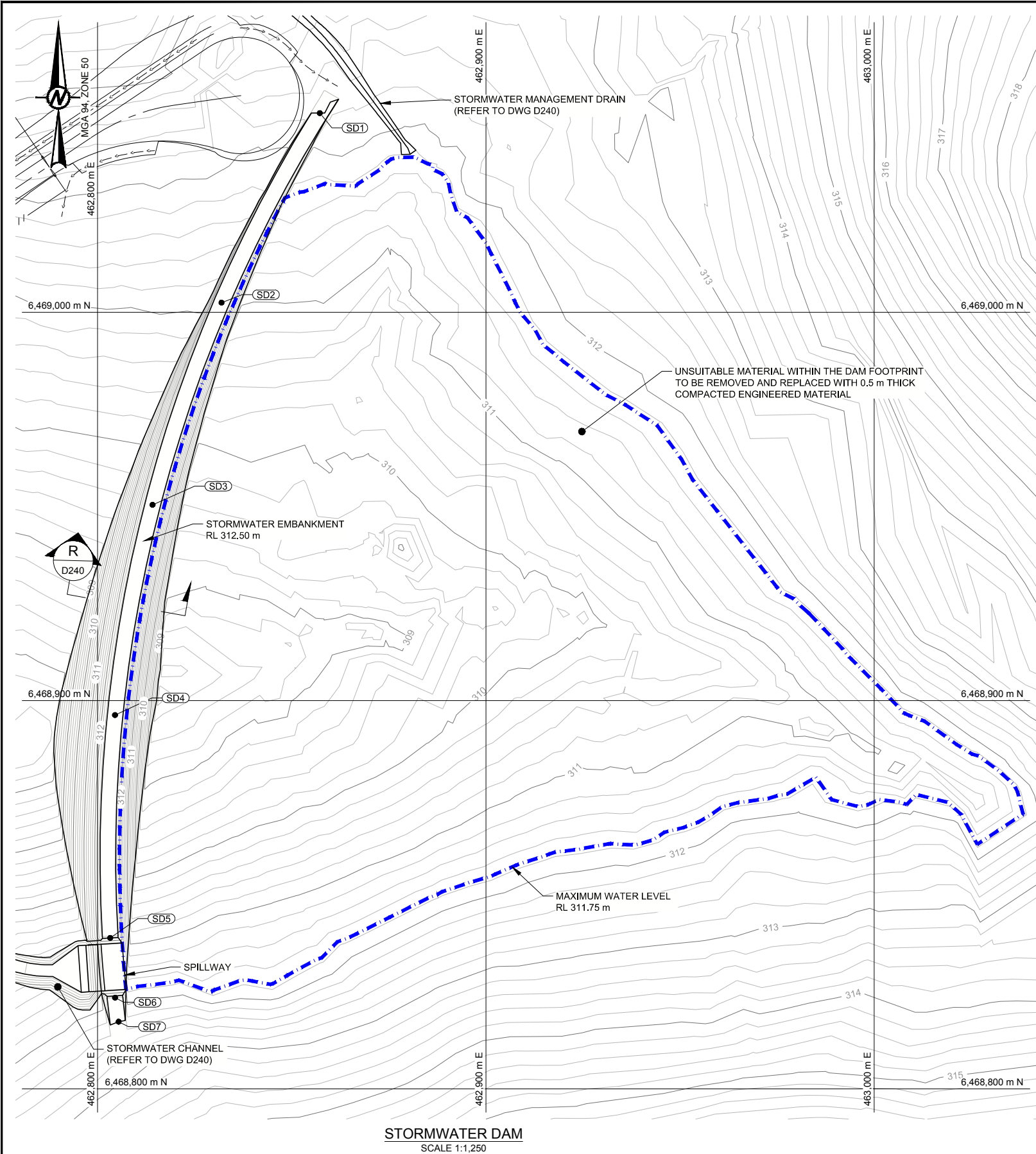
STORMWATER DIVERSION BUND
SCALE 1:50



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CLIENT SITA AUSTRALIA	PROJECT ALLAWUNA FARM LANDFILL
CONSULTANT 	TITLE RETENTION POND DETAILS
PERTH OFFICE LEVEL 3, HAVELOCK STREET WEST PERTH, WA 6055 AUSTRALIA [+61] (8) 9213 7600 www.golder.com	PROJECT NO. 147645033
	DOCUMENT NO. 016-R
	REV. B
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	FIGURE D231



LEACHATE POND SETOUT			
POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
LP1	462857.22	6469051.28	312.25
LP2	462831.91	6469002.46	312.25
LP3	462814.15	6468950.40	312.25
LP4	462804.48	6468896.26	312.25
LP5	462803.25	6468838.87	312.25
LP6	462804.48	6468823.48	312.25
LP7	462805.41	6468817.28	312.25

LEGEND:

--- STORMWATER DAM EXTENTS (MAXIMUM WATER LEVEL)

--- EXISTING CONTOURS (1 m INTERVALS)

NOTE

1. REFER TO D001 FOR GENERAL NOTES.

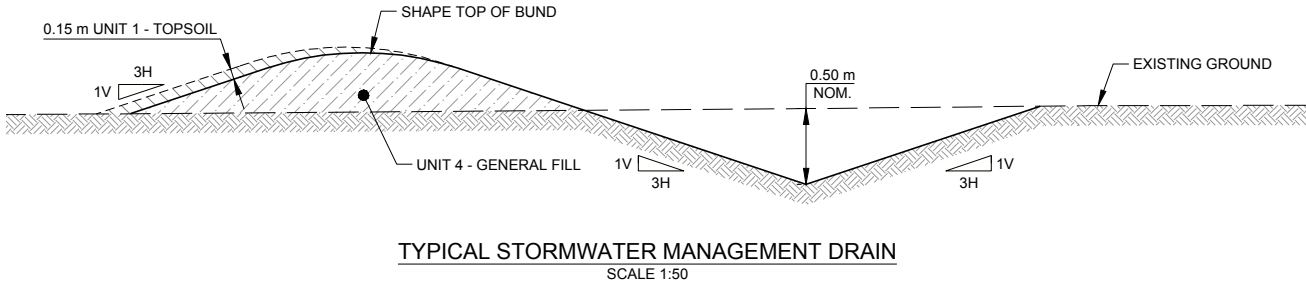
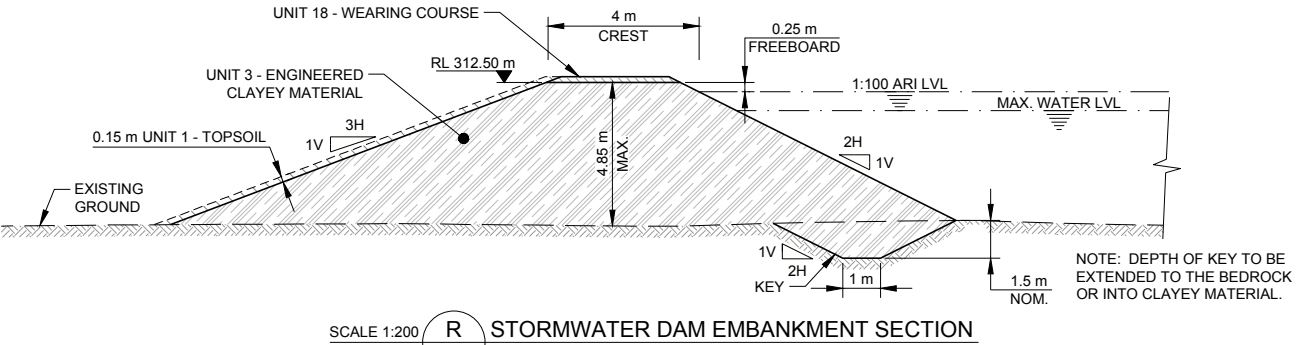
2. INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.

3. FENCING DETAILS BY BOWMAN AND ASSOCIATES.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.

STORMWATER DAM STORAGE		
HEIGHT (m RL)	STORAGE (m³)	DESCRIPTION
312.25	47630	MAX HEIGHT OF POND
311.75	33150	0.5 m FREEBOARD
311.00	16995	
310.00	4740	
309.00	400	
308.00	0	LOWEST POINT IN POND



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CLIENT
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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
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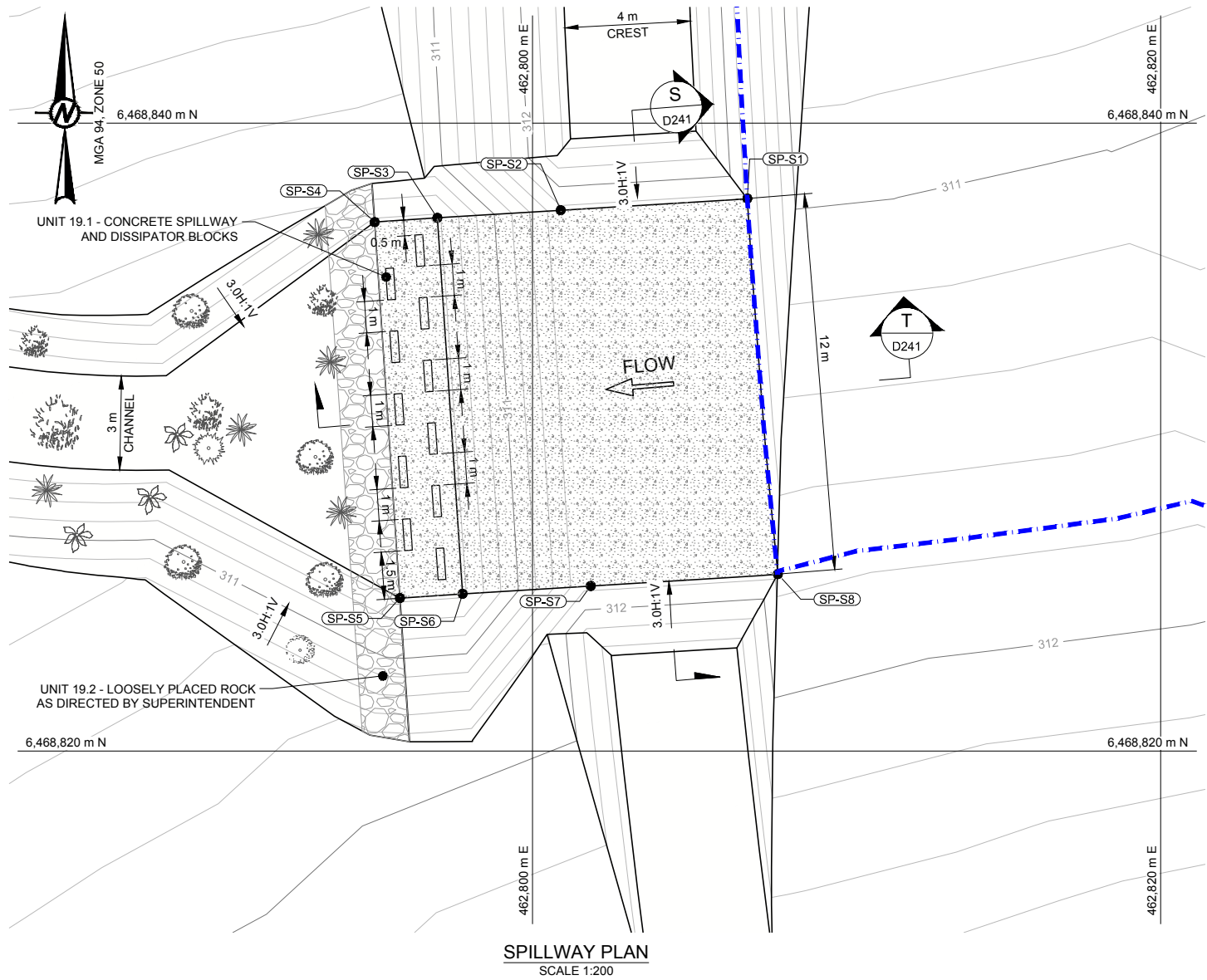
PROJECT NO.
147645033

DOCUMENT NO.
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FIGURE
D240



STORMWATER DAM SPILLWAY			
POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
SP-S1	462806.84	6468837.60	0.00
SP-S2	462800.90	6468837.22	311.75
SP-S3	462796.97	6468836.98	310.36
SP-S4	462794.97	6468836.85	310.36
SP-S5	462795.78	6468824.87	310.36
SP-S6	462797.77	6468825.01	310.36
SP-S7	462801.86	6468825.26	311.75
SP-S8	462807.81	6468825.63	311.75

LEGEND:

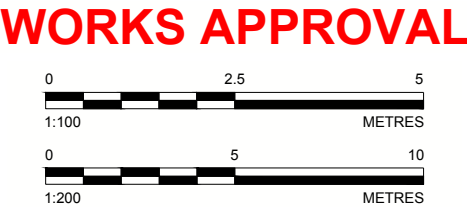
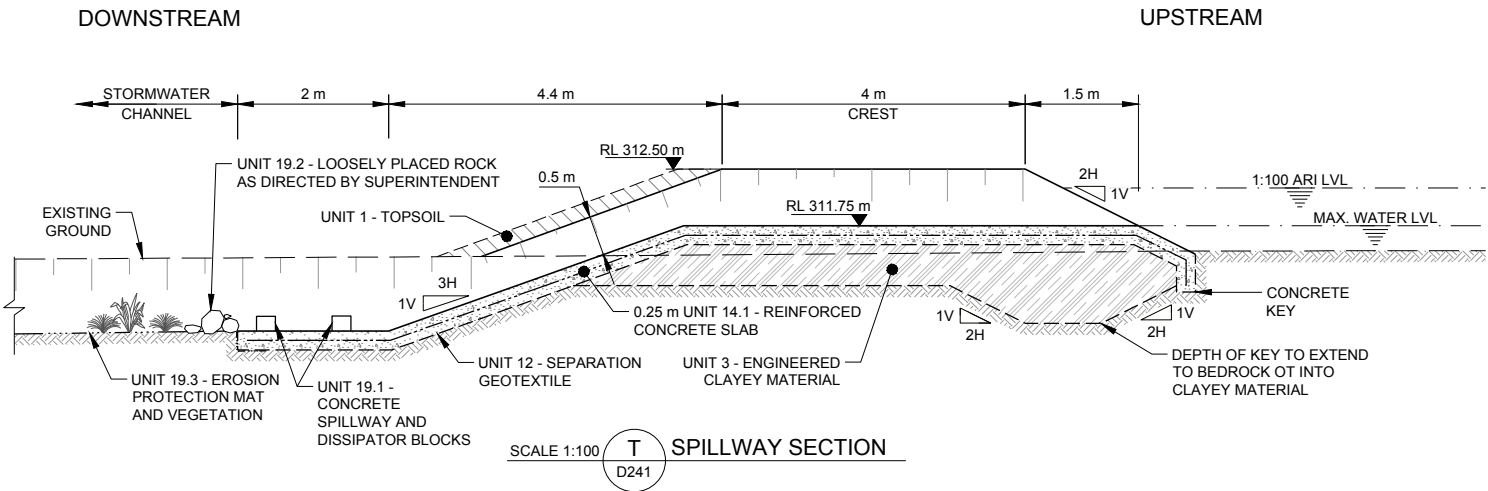
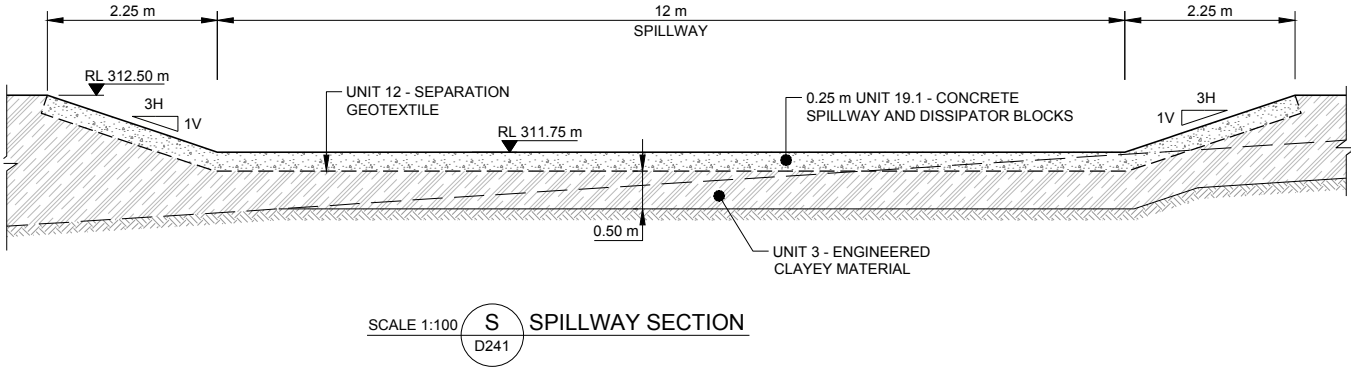
- STORMWATER DAM EXTENTS
- EXISTING CONTOURS (1 m INTERVALS)

NOTE

- REFER TO D001 FOR GENERAL NOTES.
- INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.
- STORMWATER EMBANKMENT DETAILS REFER TO DWG D040.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.



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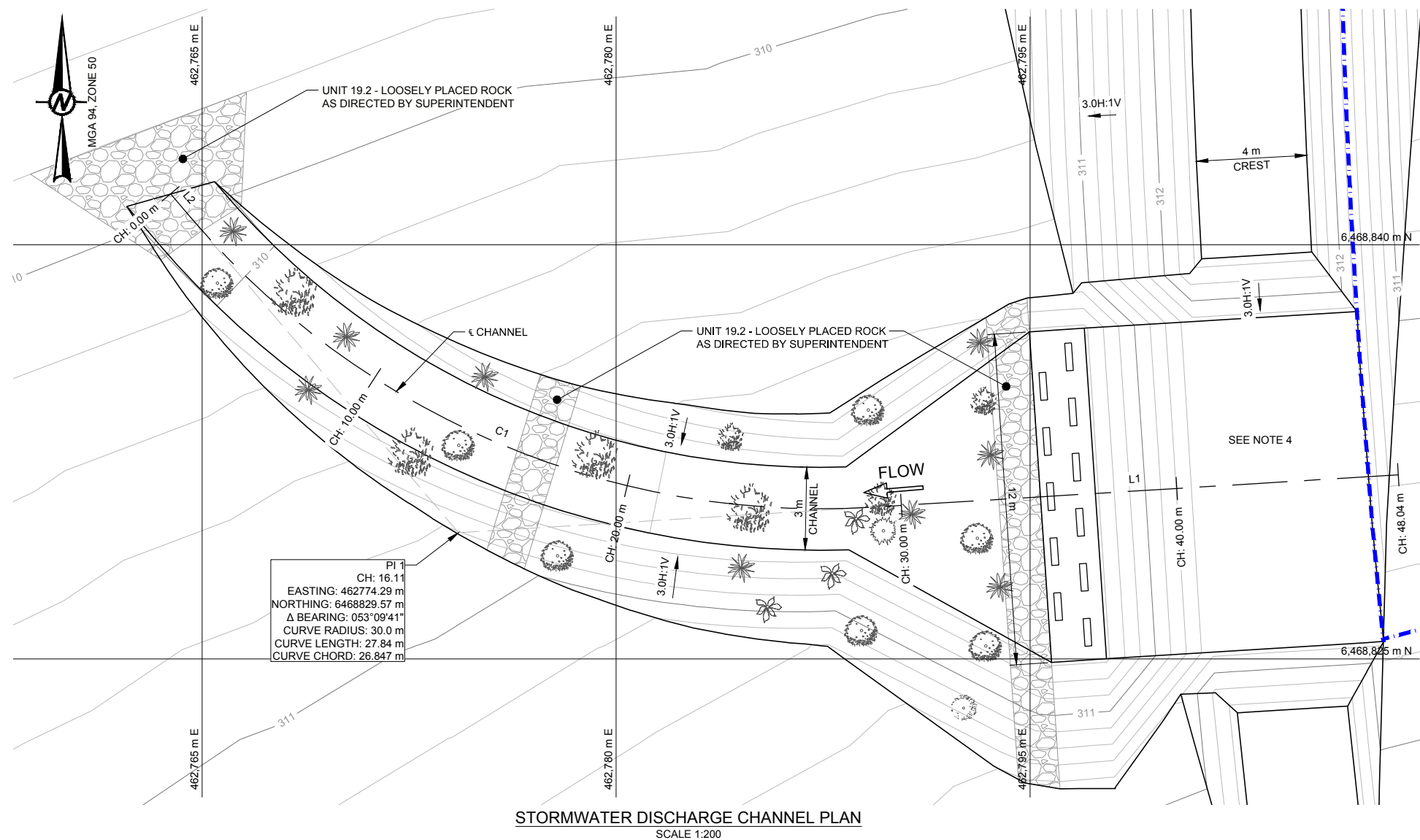
PROJECT
ALLAWUNA FARM LANDFILL

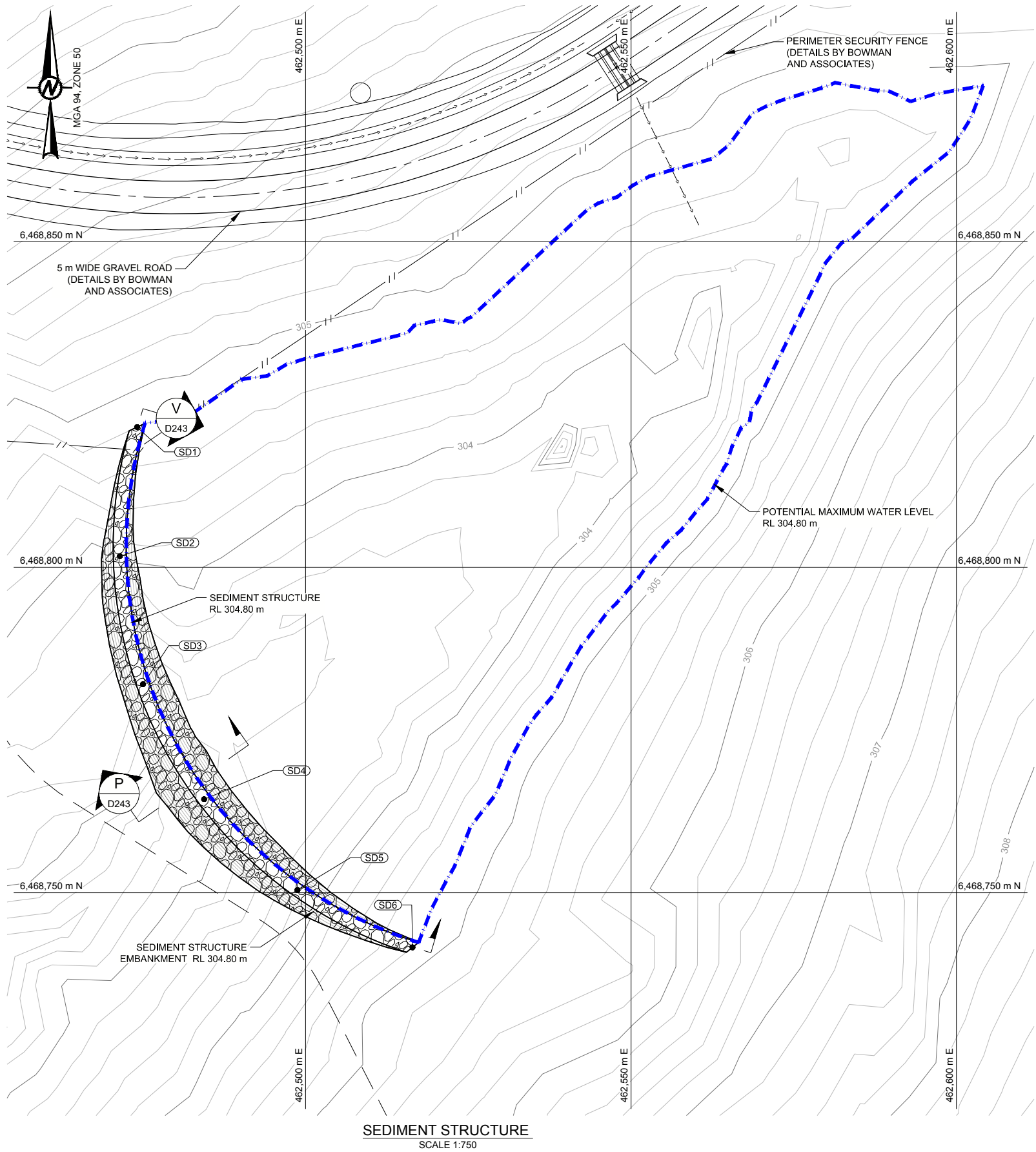
TITLE
**STORMWATER DAM SPILLWAY
PLAN AND SECTIONS**

PROJECT NO. 147645033	DOCUMENT NO. 016-R	REV. B	25 of 27	FIGURE D241
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Path: \\p11-15-f1622\JOBS-MINING\Jobs\147645033 - SITA Allawuna Farm Landfill\Review\Yok1\Technical\DWG\Drawings\Works Approval\J File Name: 147645033-001-R.D041.dwg

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3





SEDIMENT STRUCTURE SETOUT			
POINT No.	EASTING (m)	NORTHING (m)	ELEVATION (RL)
LP1	462474.09	6468821.53	304.80
LP2	462471.44	6468801.70	304.80
LP3	462474.99	6468782.02	304.80
LP4	462484.39	6468764.37	304.80
LP5	462498.73	6468750.43	304.80
LP6	462516.42	6468741.62	304.80

SEDIMENT STRUCTURE STORAGE		
HEIGHT (m RL)	STORAGE (m³)	DESCRIPTION
304.80	5055	MAX HEIGHT OF STRUCTURE
304.50	3129	
304.00	1840	
303.50	70	
303.00	0	LOWEST POINT IN POND

LEGEND:

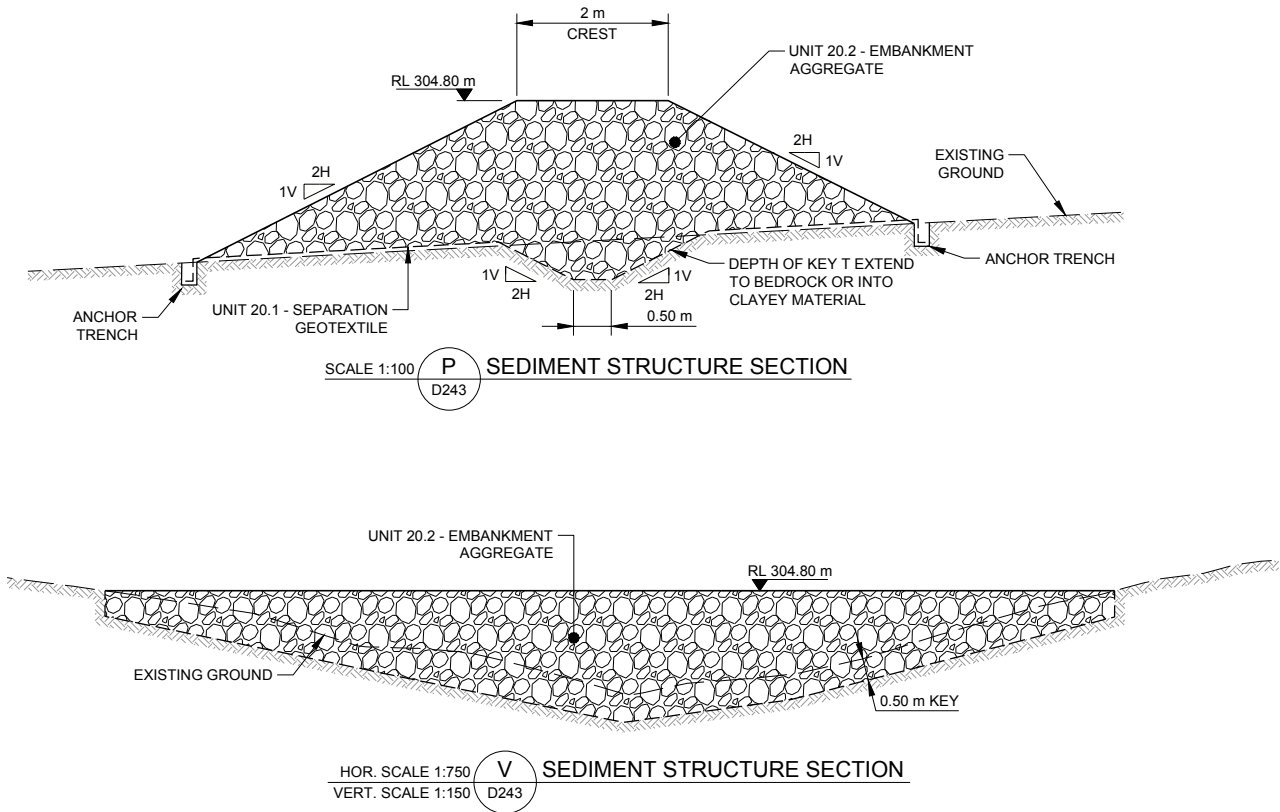
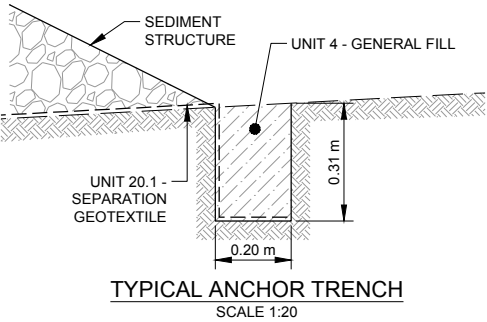
- SEDIMENT STRUCTURE EXTENTS (MAXIMUM WATER LEVEL)
- EXISTING CONTOURS (1 m INTERVALS)

NOTE

- REFER TO D001 FOR GENERAL NOTES.
- INFRASTRUCTURE DETAILS BY BOWMAN AND ASSOCIATES.
- FENCING DETAILS BY BOWMAN AND ASSOCIATES.

REFERENCE:

BASE SURVEY SHOWN FROM BOWMAN AND ASSOCIATES PTY LTD
DRG. FILE ALLA_Survey Feature.dwg, DATED 09 SEPTEMBER 2014.



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PROJECT
ALLAWUNA FARM LANDFILL

TITLE
SEDIMENT MANAGEMENT STRUCTURE
PLAN AND SECTIONS

PROJECT NO.
147645033

DOCUMENT NO.
016-R

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FIGURE
D243