

PROJECT: PROPOSED RESOURCE RECOVERY FACILITY

PLANSET: CONCEPT CIVIL WORKS

CLIENT: OUTLINE PLANNING CONSULTANTS



LOCALITY PLAN
NOT TO SCALE

LGA: GUNNEDAH SHIRE COUNCIL

16 TORRENS ROAD, GUNNEDAH, NSW
LOTS 1 AND 2 DP 1226992

DRAWING LIST		
DWG NO.	REV	DWG TITLE
GENERAL		
PS01-A000	N	COVER SHEET
PS01-A050	L	DEVELOPMENT OVERVIEW PLAN
PS01-A300	L	SITE PLAN
PS01-A310	F	UNLOADING AND PROCESSING SHED PLAN
PS01-A311	E	UNLOADING AND PROCESSING SHED ELEVATIONS AND SECTION
CONSTRUCTION MANAGEMENT WORKS		
PS01-B300	J	SEDIMENT, EROSION CONTROL & DEMOLITION PLAN
PS01-B310	A	SEDIMENT & EROSION CONTROL DETAILS
EARTHWORKS		
PS01-C100	H	EARTHWORKS GRADING PLAN
PS01-C500	H	EARTHWORKS CUT-FILL PLAN
PS01-C600	F	SITE SECTION A - PROCESSING SHED AND OPEN STORAGE BAYS
PS01-C601	F	SITE SECTION B - OPEN STORAGE BAYS AND FACILITY PADS
PS01-C602	F	SITE SECTION C - UNLOADING SHED, PROCESSING SHED AND TRUCK WASH DOWN AREA
DRAINAGE		
PS01-E100	J	DRAINAGE PLAN
PS01-E200	B	DRAINAGE DETAILS
PS01-E600	H	OSD CATCHMENT PLAN, MODEL LAYOUT & RESULT
PS01-E700	I	WATER QUALITY CATCHMENT PLAN, MODEL & RESULT
UTILITIES AND SERVICES		
PS01-F300	C	CONCEPT WATER MAIN & FIRE FIGHTING HYDRANT PLAN
STRUCTURE AND PAVEMENTS		
PS01-G400	H	PAVEMENT PLAN
PS01-GZ00	L	SWEPT PATH ANALYSIS PLAN - AV
PS01-GZ10	L	SWEPT PATH ANALYSIS PLAN - B DOUBLE
PS01-GZ20	F	SWEPT PATH ANALYSIS PLAN - HRV
PS01-GZ30	F	SWEPT PATH ANALYSIS PLAN - HRV
PS01-GZ40	F	SWEPT PATH ANALYSIS PLAN - B99
PS01-GZ50	E	SWEPT PATH ANALYSIS PLAN - B-TRIPLE (ROAD TRAIN)
GENERAL NOTES		
PS01-ZZ00	A	GENERAL LEGEND AND NOTES (SHEET 1)
PS01-ZZ01	A	GENERAL LEGEND AND NOTES (SHEET 2)
PS01-ZZ02	A	GENERAL LEGEND AND NOTES (SHEET 3)
PS01-ZZ03	A	GENERAL LEGEND AND NOTES (SHEET 4)

- GENERAL NOTES
- THIS PLAN IS FOR DEVELOPMENT APPLICATION PURPOSE AND NOT FOR CONSTRUCTION. DESIGN TO BE REVIEWED AND UPDATED FOR CONSTRUCTION CERTIFICATE.
 - ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH, AND THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE RELEVANT AUSTRALIAN STANDARDS, COUNCIL SPECIFICATIONS, AND ALL PROJECT CONSULTANT'S PLANS AND REPORTS.
 - INTERNAL SURVEY INFORMATION SHOWN BASED ON INFORMATION PROVIDED BY STEWART SURVEYS.
 - SITE BOUNDARY BASED ON INFORMATION PROVIDED BY STEWART SURVEYS.
 - LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
 - FINAL SURFACE CONTOURS ARE BASED ON PROPOSED, EXISTING AND LIDAR SURFACE.

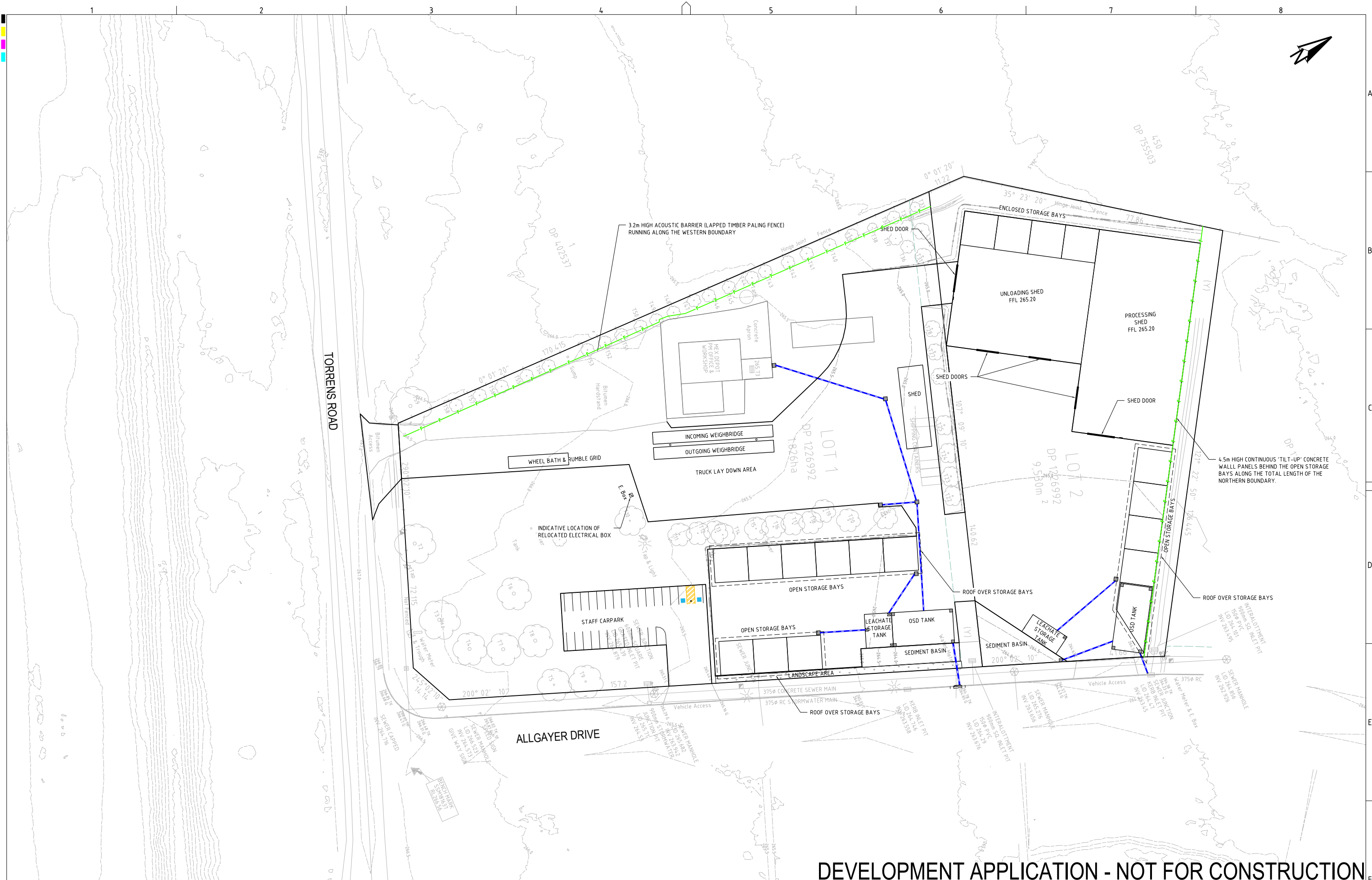
DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	martens & Associates Pty Ltd		Consulting Engineers		DRAWING TITLE				
N	MINOR AMENDMENTS	21/07/2022	NN	AVG	SL	TH				TH	OUTLINE PLANNING CONSULTANTS	RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS		Environment Water Geotechnical Civil		COVER SHEET				
M	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH														
L	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH						16 TORRENS ROAD, GUNNEDAH, NSW LOTS 1 AND 2 DP 1226992		Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: www.martens.com.au		PROJECT NO. PLANSET NO. RELEASE NO. DRAWING NO. REVISION				
K	MINOR AMENDMENTS	01/07/2022	NN	AVG	SL	TH														
J	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH						(C) Copyright Martens & Associates Pty Ltd				P1907434 PS01 R16 PS01-A000 N				
I	MINOR AMENDMENTS	10/12/2020	PB	AW/AVG	TH	TH														
H	MINOR AMENDMENTS	03/11/2020	LL	AW/AVG	SL	TH														
G	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH														

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USER: NINJA20

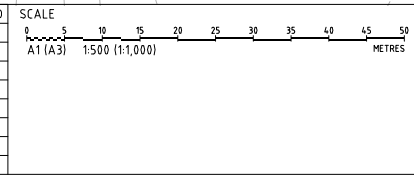
A17 A3 LANDSCAPE (A17C_022.01)

DRAWING ID: P1907434-PS01-R16-A000



DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
L	MINOR AMENDMENTS	21/07/2022	NN	AVG	SL	TH
K	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
J	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
I	MINOR AMENDMENTS	01/07/2022	NN	AVG	SL	TH
H	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH
G	MINOR AMENDMENTS	10/12/2020	PB	AW/AVG	TH	TH
F	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
E	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH



GRID
MGA

DATUM
mAHD

PROJECT MANAGER
TH

CLIENT
OUTLINE PLANNING CONSULTANTS

PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS

16 TORRENS ROAD, GUNNDAH, NSW
LOTS 1 AND 2 DP 1226992

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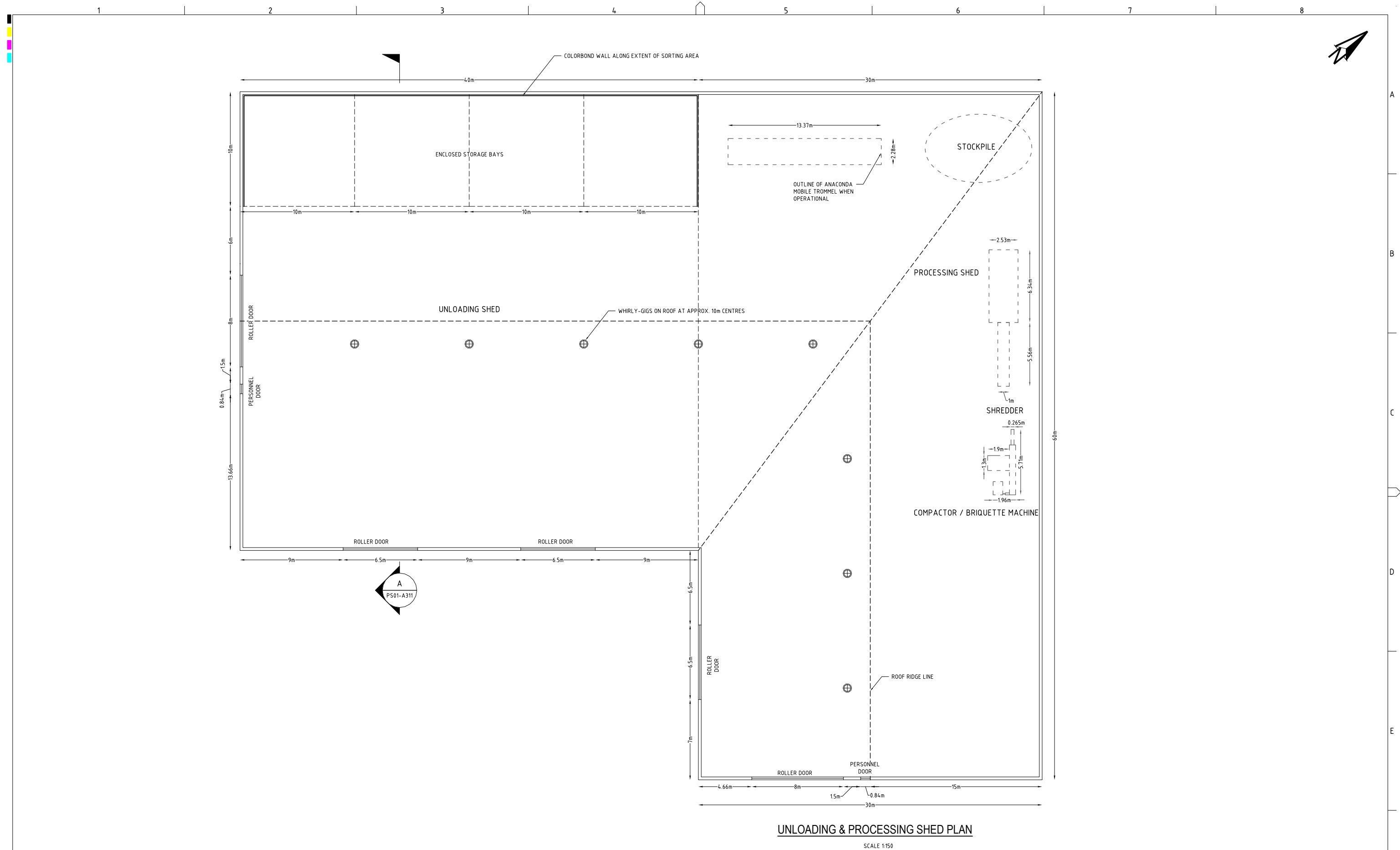
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Environment
Water
Geotechnical
Civil

Project No. P1907434
Planset No. PS01
Release No. R16
Drawing No. PS01-A050
Revision L

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-A050	L

DRAWING TITLE				
DEVELOPMENT OVERVIEW PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-A050	L

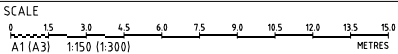


UNLOADING & PROCESSING SHED PLAN

SCALE 1:150

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

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F	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
E	MINOR AMENDMENTS	01/07/2022	NN	AVG	SL	TH
D	MINOR AMENDMENTS	09/07/2020	LL	AW/AVG	SL	TH
C	UPDATED AS PER CLIENT COMMENT	25/06/2020	GM	AW/AVG	SL	TH
B	UPDATED AS PER CLIENT COMMENT	12/06/2020	GM	AW	AW	TH
A	ADDED SHED DETAILS	05/06/2020	GM	AW	AW	TH



GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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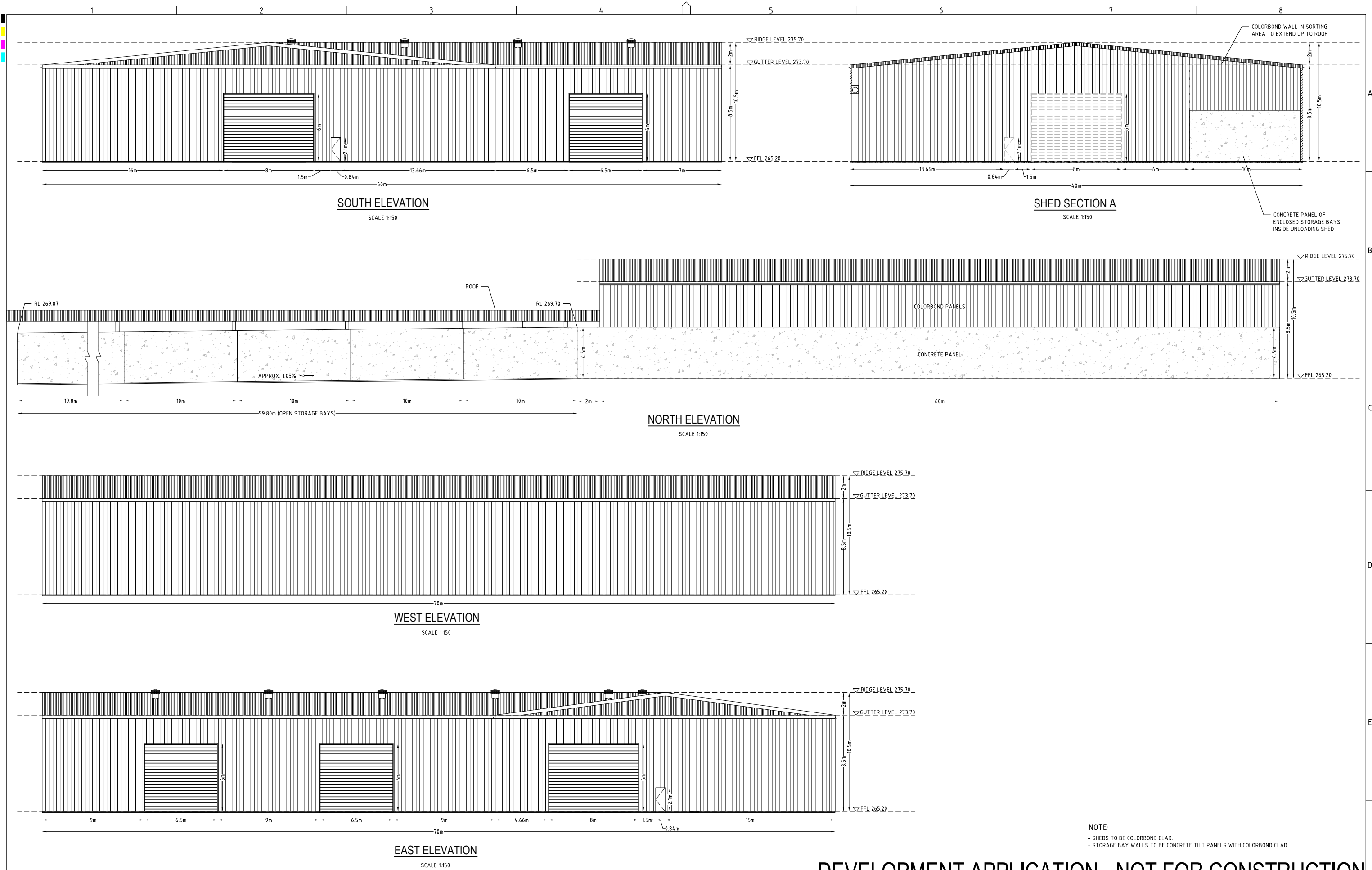
CLIENT
OUTLINE PLANNING CONSULTANTS
PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS
16 TORRENS ROAD, GUNDEDAH, NSW
LOTS 1 AND 2 DP 1226992

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DRAWING TITLE				
UNLOADING AND PROCESSING SHED PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-A310	F

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NOTE:
- SHEDS TO BE COLORBOND CLAD.
- STORAGE BAY WALLS TO BE CONCRETE TILT PANELS WITH COLORBOND CLAD

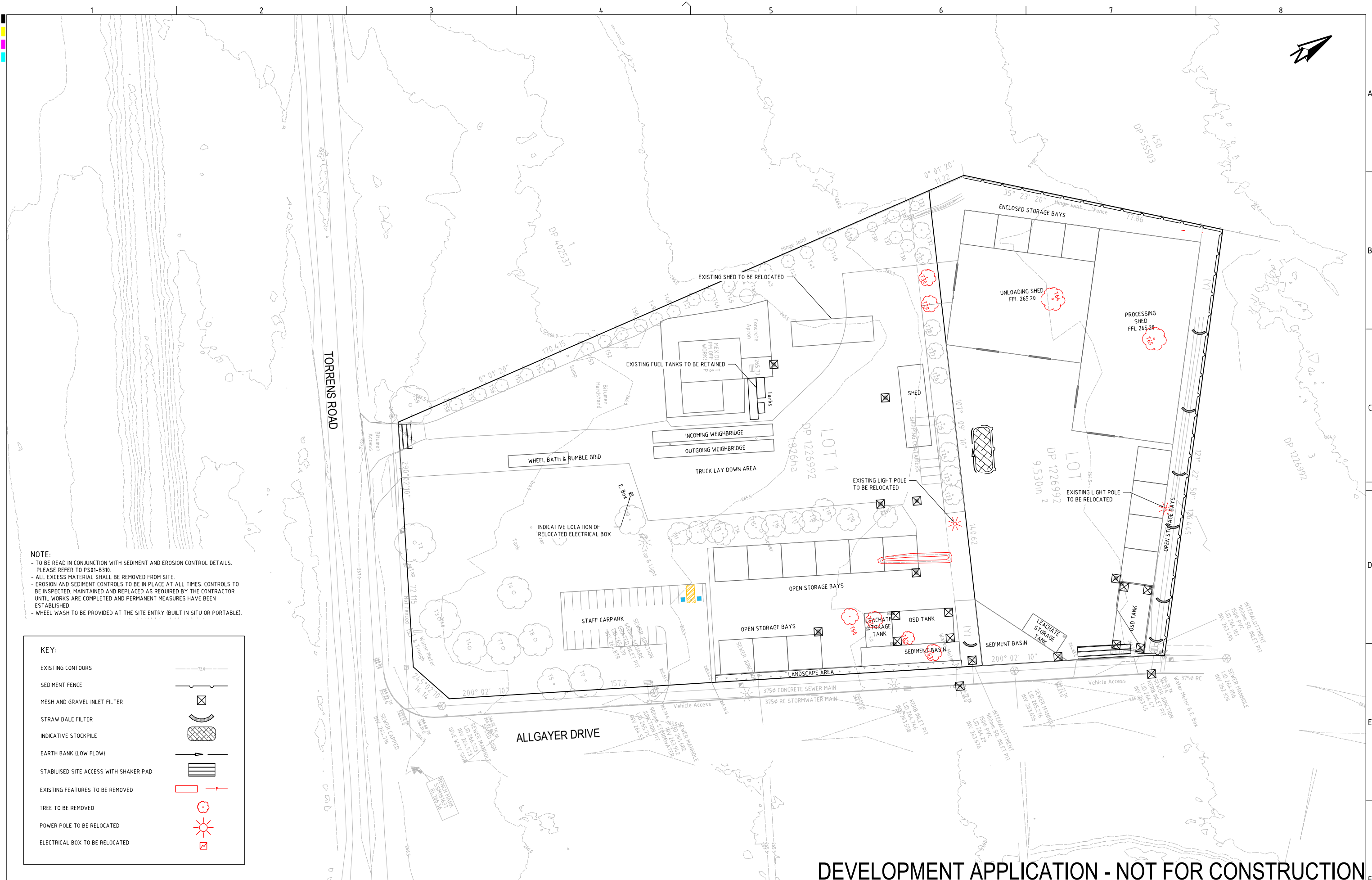
DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	martens & Associates Pty Ltd		Consulting Engineers Environment Water Geotechnical Civil		DRAWING TITLE UNLOADING AND PROCESSING SHED ELEVATIONS AND SECTION	
E	MINOR AMENDMENT	14/07/2020	RK	AW/AVG	SL	TH	SCALE 0 1.5 3.0 4.5 6.0 7.5 9.0 10.5 12.0 13.5 15.0 A1 (A3) 1:150 (1:300) METRES	MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS	PROJECT NAME/PLANSET TITLE RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS		Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: www.martens.com.au		DRAWING NO. PS01-A311	
D	MINOR AMENDMENTS	09/07/2020	LL	AW/AVG	SL	TH						16 TORRENS ROAD, GUNNEDAH, NSW LOTS 1 AND 2 DP 1226992				REVISION E	
C	UPDATED AS PER CLIENT COMMENT	25/06/2020	GM	AW/AVG	SL	TH								PROJECT NO. P1907434		PLANSET NO. PS01	
B	UPDATED AS PER CLIENT COMMENT	12/06/2020	GM	AW	AW	TH								RELEASE NO. R16			
A	ADDED SHED DETAILS	05/06/2020	GM	AW	AW	TH											

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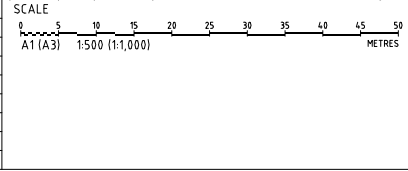
A1 / A3 LANDSCAPE (A1/LC_v02.0.0)

DRAWING ID: P1907434-PS01-R16-A311



DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
J	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
I	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
H	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH
G	MINOR AMENDMENTS	03/11/2020	LL	AW/AVG	SL	TH
F	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
E	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH
D	MINOR AMENDMENT	14/07/2020	RK	AW/AVG	SL	TH
C	MINOR AMENDMENTS	09/07/2020	LL	AW/AVG	SL	TH



GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS
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PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS
16 TORRENS ROAD, GUNNDAH, NSW
LOTS 1 AND 2 DP 1226992

Consulting Engineers

Environment
Water
Geotechnical
Civil

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DRAWING TITLE				
SEDIMENT, EROSION CONTROL & DEMOLITION PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-B300	J

TYPE II SAP

STABILISED ACCESS POINT - TYPE 2



- IT SHOULD BE NOTED THAT THESE TYPES OF SAPS ARE CONSIDERED TO BE APPLICABLE FOR THE MAJORITY OF ACTIVITIES HOWEVER SOME SITES MAY REQUIRE SPECIAL CONSIDERATION.

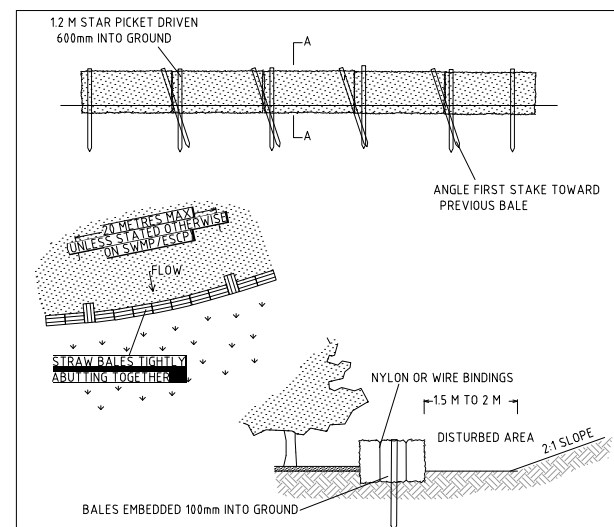
A CORRECTLY DESIGNED AND INSTALLED SHAKER PAD WILL ASSIST IN PREVENTING SEDIMENT TRANSFER FROM A SITE. ANY STABILISED ACCESS POINT (SAP) CAN BE DESIGNED WITH A SHAKER PAD (COMPULSOPRY IN TYPE II SAP'S)

SHAKER PADS CAN BE DESIGNED AND CONSTRUCTED TO ENABLE RE-USE ON FUTURE PROJECTS

THE SHAKER PAD:

- MUST BE DESIGNED AND CERTIFIED BY A PRACTICING STRUCTURAL ENGINEER. THE CERTIFIED DESIGN SHOULD BE SUBMITTED WITH THE RELEVANT APPLICATION.
- CAN BE CONSTRUCTED FROM ANY SUITABLE MATERIAL.
- MUST BE LOCATED ON A SUITABLY PREPARED AND COMPACTED SUB-GRADE/BASE MATERIAL.
- MUST BE SITUATED SUCH THAT THE RUNGS OF THE SHAKER PAD ARE LEVEL WITH THE ADJOINING NATURAL SURFACE.
- MUST BE A MINIMUM OF 3.5m IN LENGTH.
- MUST BE A MINIMUM OF 3.5m IN WIDTH.
- MUST HAVE CLEAR SPACING BETWEEN RUNGS OF 200 - 250mm.
- RUNGS MUST HAVE A MAXIMUM WIDTH (BEARING AREA) OF 75mm.
- MUST HAVE A MINIMUM CLEAR DEPTH OF 300mm IE FORM THE TOP OF THE RUNG TO THE FINISHED SUB-GRADE/BASE LEVEL.

THE SHAKER PAD MUST BE PROVIDED WITH SUITABLE BARRIERS AT THE SIDES TO ENSURE THAT ALL TYERS OF VEHICLES LEAVING THE SITE TRAVERSE THE DEVICE.



1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTAINS OF THE SITE. 2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY BUTTING. 3. STRAW BALE FILTERS ARE TO BE CONSTRUCTED IN A ROW TO BE SITED PARALLEL TO THE GROUND. 4. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE, 4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 12 METRE STAR PICKETS OR STAKES. 5. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. 6. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS. 7. 5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1 TO 2 METRES DOWNSLOPE FROM THE TOE. 6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

SD 6-7



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, usually 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 ground at 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 the trench over the base of the fabric and compact it thoroughly over the geotextile.

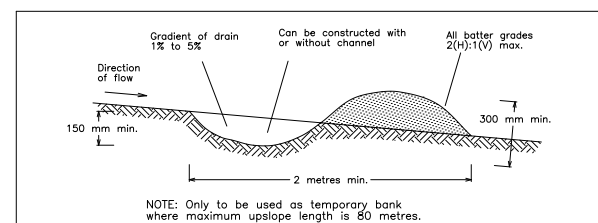
SD 6-8



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 geobarc. 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 the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

☒

SD 6-12

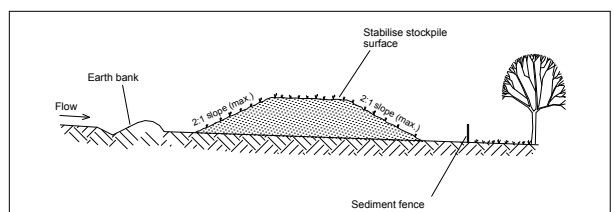


Construction Notes

1. Build with gradients between 1 percent and 5 percent.
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



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 metres 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 fences (Standard Drawing 6-8) 1 to 2 metres downslope.

STOCKPILES

SD 4-1

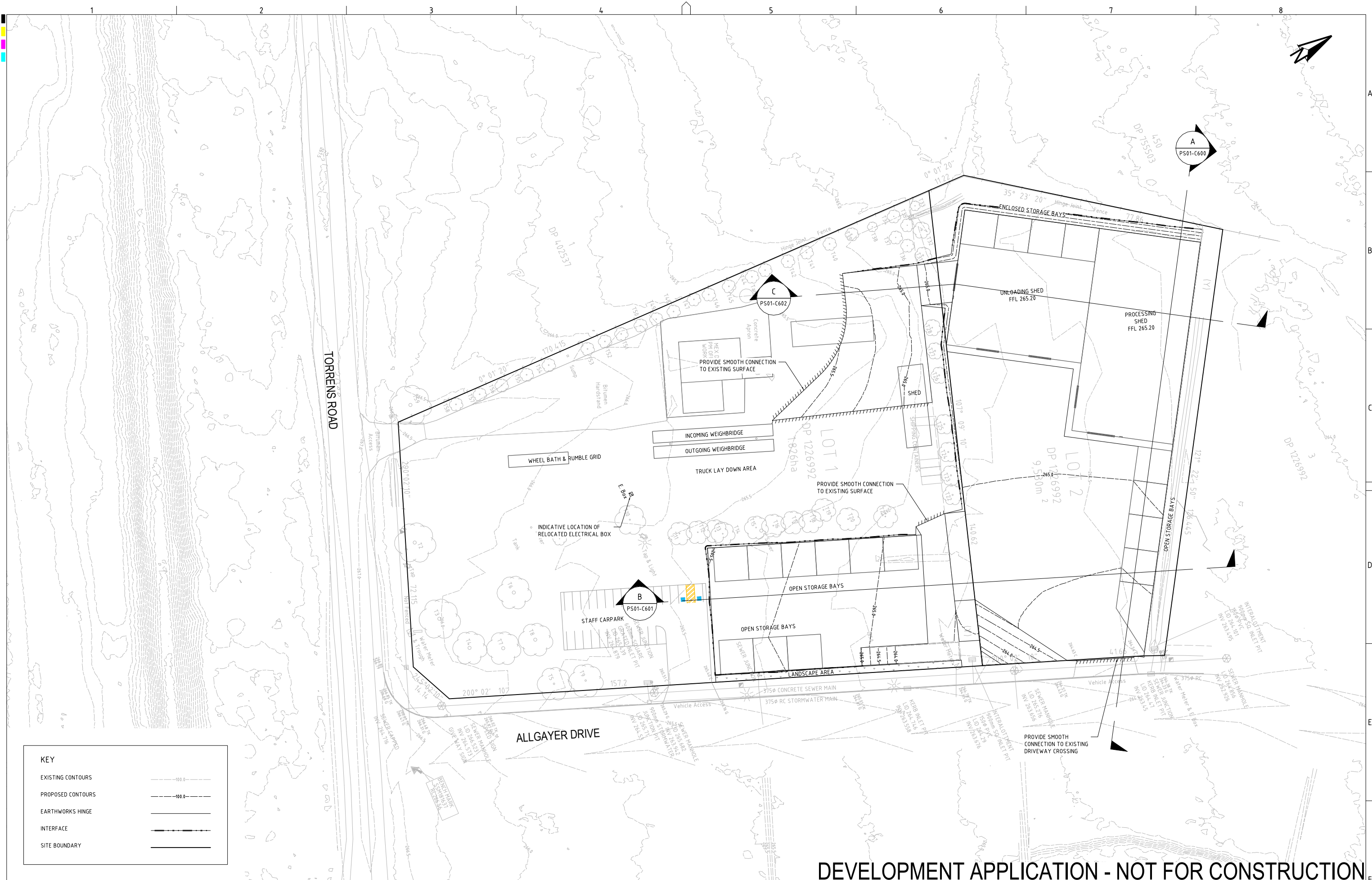
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GRID	DATUM	PROJECT MANAGER	CLIENT
TH			OUTLINE PLANNING CONSULTANTS
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DRAWING TITLE				
SEDIMENT & EROSION CONTROL DETAILS				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-B310	A



KEY

EXISTING CONTOURS

PROPOSED CONTOURS

EARTHWORKS HINGE

INTERFACE

SITE BOUNDARY

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	DRAWING TITLE
H	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH	0 5 10 15 20 25 30 35 40 45 50 METRES	MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS	EARTHWORKS GRADING PLAN
G	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH	A1 (A3) 1:500 (1:1,000)				PROJECT NAME/PLANSET TITLE	PROJECT NO. PLANSET NO. RELEASE NO. DRAWING NO. REVISION
F	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH					RESOURCE RECOVERY FACILITY	P1907434 PS01 R16 PS01-C100 H
E	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH					CONCEPT CIVIL WORKS	
D	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH					16 TORRENS ROAD, GUNNEDAH, NSW	
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B	UPDATED AS PER CLIENT COMMENT	25/06/2020	GM	AW/AVG	SL	TH						
A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH						

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DRAWING TITLE

EARTHWORKS GRADING PLAN

DRAWING ID: P1907434-PS01-R16-C100

PRINTED: 14/07/2022 10:52:10 AM

A1 / A3 LANDSCAPE (A1LC_02.0.01)



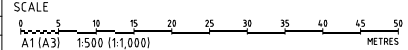
EARTHWORKS SUMMARY		
	CUT	FILL
EARTHWORKS VOLUME (m³)	371	4347
EARTHWORKS BALANCE (m³)	-	3976

NOTE:
- EARTHWORKS CUT/FILL ANALYSED FROM PROPOSED FINISH SURFACE TO EXISTING SURFACE BASED ON SURVEY.
- ROAD BOXING, PIPE TRENCHES, EXCAVATION, TOP SOIL STRIPPING, AND BULKING FACTOR ARE NOT CONSIDERED IN EARTHWORKS CALCULATIONS.

CUT-FILL DEPTH DESIGN TO EXISTING		
LOWER THAN	-1.000 m	
-1.000 to	-0.750 m	
-0.750 to	-0.500 m	
-0.500 to	-0.250 m	
-0.250 to	-0.050 m	
-0.050 to	0.050 m	
0.050 to	0.250 m	
0.250 to	0.500 m	
0.500 to	0.750 m	
0.750 to	1.000 m	
GREATER THAN	1.000 m	

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
H	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
G	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
F	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH
E	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
D	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH
C	MINOR AMENDMENT	14/07/2020	RK	AW/AVG	SL	TH
B	UPDATED AS PER CLIENT COMMENT	25/06/2020	GM	AW/AVG	SL	TH
A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH



GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS
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PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS
16 TORRENS ROAD, GUNNEDAH, NSW LOTS 1 AND 2 DP 1226992

martens
& Associates Pty Ltd

Consulting Engineers
Environment
Water
Geotechnical
Civil

Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767
Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING TITLE				
EARTHWORKS CUT-FILL PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-C500	H

PRINTED: 14/07/2022 10:00 AM

A1 / A3 LANDSCAPE (A1C_02.0.0)

DRAWING ID: P1907434-PS01-R16-C500

NOTE :

- STORAGE BAY WALLS TO BE CONCRETE TILT PANELS WITH COLORBOND CLAD.
- STOCKPILES TO BE IN ACCORDANCE WITH NSW GOVERNMENT "FIRE SAFETY IN WASTE FACILITIES".

DATUM RL 246.000

DESIGN SURFACE LEVELS
EXISTING SURFACE LEVELS
CUT / FILL DEPTH
CHAINAGE

0.000	264.168	
2.000	264.193	
4.000	264.224	
6.000	264.246	
8.000	264.329	
10.000	264.294	
12.000	264.308	264.551
14.000	264.239	265.051
16.000	264.169	265.200
18.000	264.131	265.200
20.000	264.111	265.200
22.000	264.141	265.200
24.000	264.179	265.200
26.000	264.209	265.200
28.000	264.212	265.200
30.000	264.215	265.200
32.000	264.219	265.200
34.000	264.222	265.200
36.000	264.225	265.200
38.000	264.228	265.200
40.000	264.230	265.200
42.000	264.232	265.200
44.000	264.234	265.200
46.000	264.236	265.200
48.000	264.237	265.200
50.000	264.243	265.200
52.000	264.255	265.200
54.000	264.267	265.200
56.000	264.280	265.200
58.000	264.292	265.200
60.000	264.305	265.200
62.000	264.318	265.200
64.000	264.330	265.200
66.000	264.333	265.200
68.000	264.338	265.200
70.000	264.350	265.200
72.000	264.363	265.200
74.000	264.375	265.200
76.000	264.388	265.158
78.000	264.397	265.126
80.000	264.400	265.106
82.000	264.402	265.086
84.000	264.404	265.066
86.000	264.406	265.046
88.000	264.407	265.025
90.000	264.419	265.005
92.000	264.435	264.985
94.000	264.446	264.965
96.000	264.448	264.945
98.000	264.450	264.925
100.000	264.453	264.905
102.000	264.455	264.885
104.000	264.457	264.865
106.000	264.459	264.845
108.000	264.466	264.825
110.000	264.472	264.805
112.000	264.475	264.784
114.000	264.479	264.764
116.000	264.482	264.744
118.000	264.485	264.724
120.000	264.489	264.704
122.000	264.493	264.684
124.000	264.484	264.664
126.000	264.475	264.644
128.000	264.477	264.627
130.000	264.483	264.610
132.000	264.489	264.593
134.000	264.495	264.576
136.000	264.512	264.561
138.000	264.538	264.546
140.000	264.497	
142.000	264.474	
144.000	264.310	
146.000	264.394	
148.000	264.455	
150.000	264.517	
152.000	264.506	
153.412	264.466	

SECTION A

SCALE: HORIZONTAL - 1:250
VERTICAL - 1:250

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	MINOR AMENDMENTS	01/07/2022	NN	AVG	SL	TH
E	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH
D	MINOR AMENDMENT	14/07/2020	RK	AW/AVG	SL	TH
C	MINOR AMENDMENTS	09/07/2020	LL	AW/AVG	SL	TH
B	UPDATED AS PER CLIENT COMMENT	25/06/2020	GM	AW/AVG	SL	TH
A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH

SCALE
0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 A1 (A3) 1:250 (1:500) METRES

GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS
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PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS 16 TORRENS ROAD, GUNNDAH, NSW LOTS 1 AND 2 DP 1226992

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--	---

DRAWING TITLE				
SITE SECTION A - PROCESSING SHED AND OPEN STORAGE BAYS				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-C600	F

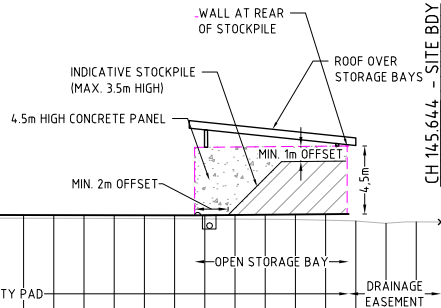
DRAWING ID: P1907434-PS01-R16-C600

NOTE :

- STORAGE BAY WALLS TO BE CONCRETE TILT PANELS WITH COLORBOND CLAD.
- STOCKPILES TO BE IN ACCORDANCE WITH NSW GOVERNMENT "FIRE SAFETY IN WASTE FACILITIES".

DATUM RL 246.000

DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH	CHAINAGE
	265.456		0.000
	265.423		2.000
	265.390		4.000
	265.357		6.000
	265.353	0.009	8.000
	265.355	0.090	10.000
	265.357	0.068	12.000
	265.359	0.046	14.000
	265.354	0.031	16.000
	265.335	0.030	18.000
	265.301	0.044	20.000
	265.285	0.041	22.000
	265.263	0.042	24.000
	265.242	0.044	26.000
	265.220	0.045	28.000
	265.198	0.047	30.000
	265.176	0.048	32.000
	265.155	0.050	34.000
	265.132	0.052	36.000
	265.101	0.064	38.000
	265.069	0.075	40.000
	265.038	0.087	42.000
	265.020	0.084	44.000
	264.986	0.103	46.000
	264.935	0.143	48.000
	264.925	0.143	50.000
	264.908	0.147	52.000
	264.891	0.144	54.000
	264.866	0.148	56.000
	264.882	0.112	58.000
	264.864	0.111	60.000
	264.846	0.109	62.000
	264.823	0.112	64.000
	264.810	0.105	66.000
	264.800	0.094	68.000
	264.791	0.083	70.000
	264.782	0.071	72.000
	264.784	0.046	74.000
	264.785	0.022	76.000
	264.787	-0.003	78.000
	264.715	-0.008	80.000
	264.764	0.038	82.000
	264.750	0.086	84.000
	264.719	0.146	86.000
	264.712	0.144	88.000
	264.698	0.149	90.000
	264.684	0.155	92.000
	264.666	0.164	94.000
	264.654	0.168	96.000
	264.646	0.167	98.000
	264.634	0.171	100.000
	264.621	0.176	102.000
	264.609	0.181	104.000
	264.597	0.185	106.000
	264.584	0.191	108.000
	264.572	0.199	110.000
	264.559	0.207	112.000
	264.550	0.212	114.000
	264.546	0.211	116.000
	264.542	0.211	118.000
	264.538	0.211	120.000
	264.534	0.211	122.000
	264.531	0.211	124.000
	264.522	0.217	126.000
	264.509	0.227	128.000
	264.497	0.242	130.000
	264.486	0.271	132.000
	264.475	0.300	134.000
	264.456	0.336	136.000
	264.442	0.398	138.000
	264.355		140.000
	264.207		142.000
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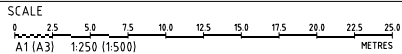


SECTION B

SCALE: HORIZONTAL - 1:250
VERTICAL - 1:250

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	MINOR AMENDMENTS	01/07/2022	NN	AVG	SL	TH
E	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH
D	MINOR AMENDMENT	14/07/2020	RK	AW/AVG	SL	TH
C	MINOR AMENDMENTS	09/07/2020	LL	AW/AVG	SL	TH
B	UPDATED AS PER CLIENT COMMENT	25/06/2020	GM	AW/AVG	SL	TH
A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH



GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS
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PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS
16 TORRENS ROAD, GUNNDAH, NSW LOTS 1 AND 2 DP 1226992



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DRAWING TITLE				
SITE SECTION B - OPEN STORAGE BAYS AND FACILITY PADS				
PROJECT NO. P1907434	PLANSET NO. PS01	RELEASE NO. R16	DRAWING NO. PS01-C601	REVISION F

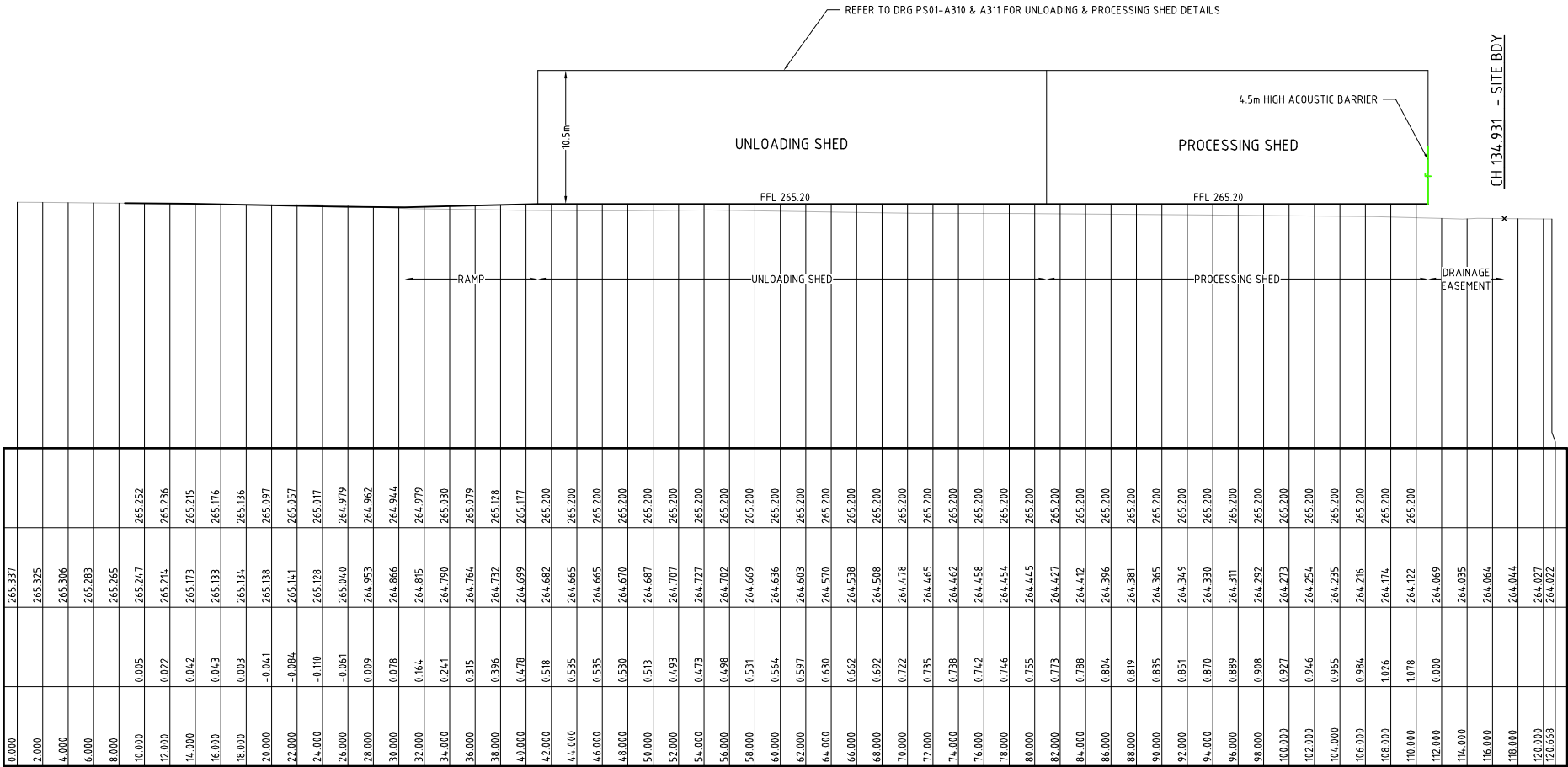
DRAWING ID: P1907434-PS01-R16-C601

NOTE :

- STORAGE BAY WALLS TO BE CONCRETE TILT PANELS WITH COLORBOND CLAD.
- STOCKPILES TO BE IN ACCORDANCE WITH NSW GOVERNMENT "FIRE SAFETY IN WASTE FACILITIES".

DATUM RL 246.000

DESIGN SURFACE LEVELS
EXISTING SURFACE LEVELS
CUT / FILL DEPTH
CHAINAGE

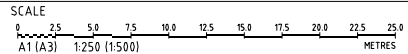


SECTION C

SCALE: HORIZONTAL - 1:250
VERTICAL - 1:250

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	MINOR AMENDMENTS	01/07/2022	NN	AVG	SL	TH
E	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
D	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH
C	MINOR AMENDMENT	14/07/2020	RK	AW/AVG	SL	TH
B	UPDATED AS PER CLIENT COMMENT	25/06/2020	GM	AW/AVG	SL	TH
A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH



GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS
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PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS 16 TORRENS ROAD, GUNNDAH, NSW LOTS 1 AND 2 DP 1226992



Consulting Engineers
Environment
Water
Geotechnical
Civil

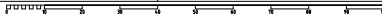
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Email: mail@martens.com.au Internet: www.martens.com.au

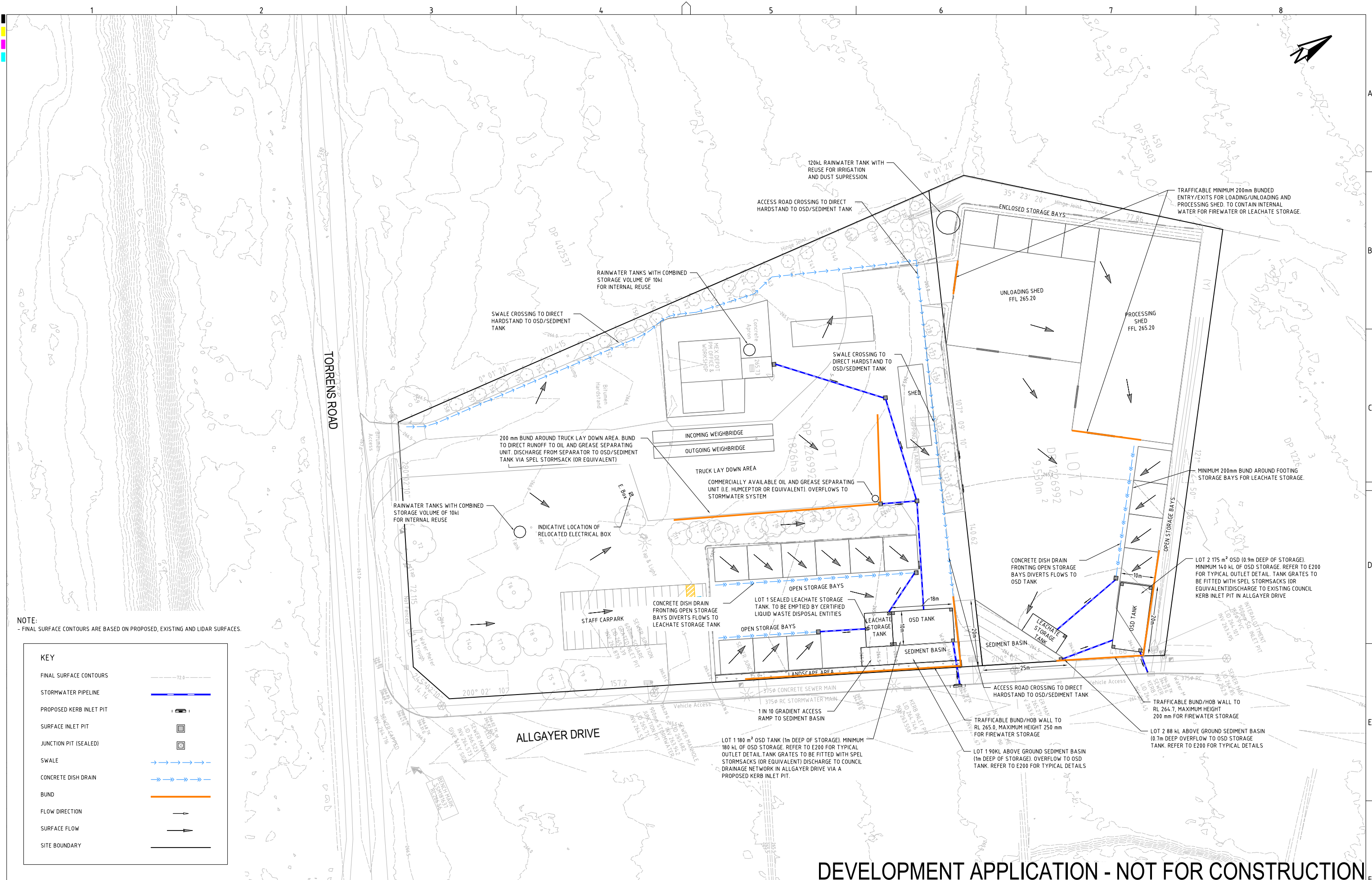
DRAWING TITLE				
SITE SECTION C - UNLOADING SHED, PROCESSING SHED AND TRUCK WASH DOWN AREA				
PROJECT NO. P1907434	PLANSET NO. PS01	RELEASE NO. R16	DRAWING NO. PS01-C602	REVISION F

PRINTED - USER: MWZAD

A1 / A3 LANDSCAPE (A1LC_02.0.0)

DRAWING ID: P1907434-PS01-R16-C602





NOTE:
- FINAL SURFACE CONTOURS ARE BASED ON PROPOSED, EXISTING AND LIDAR SURFACES.

KEY

FINAL SURFACE CONTOURS

STORMWATER PIPELINE

PROPOSED KERB INLET PIT

SURFACE INLET PIT

JUNCTION PIT (SEALED)

SWALE

CONCRETE DISH DRAIN

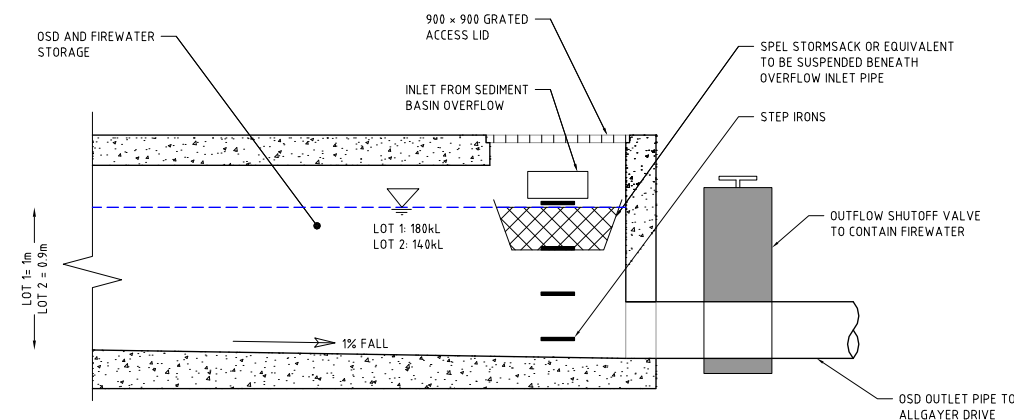
BUND

FLOW DIRECTION

SURFACE FLOW

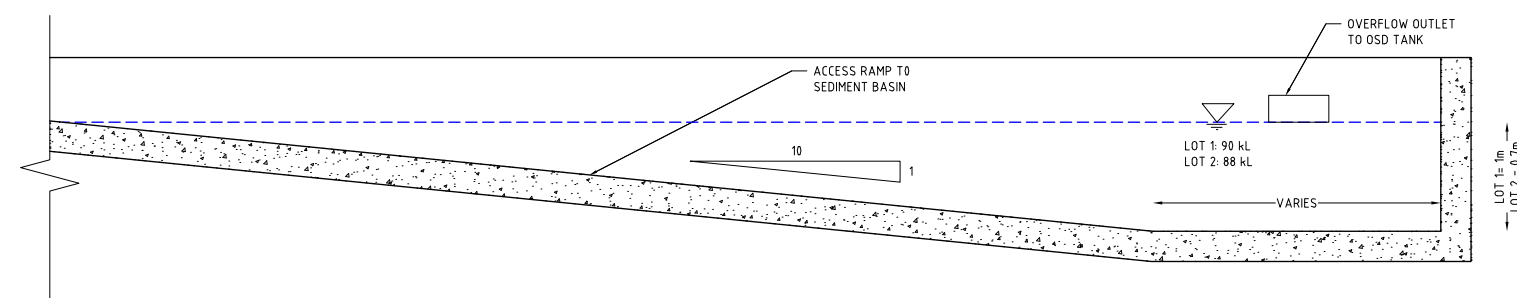
SITE BOUNDARY

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	DRAWING TITLE					
J	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH		MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS	 Consulting Engineers Environment Water Geotechnical Civil Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: www.martens.com.au					
I	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH		PROJECT NAME/PLANSET TITLE									
H	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH		RESOURCE RECOVERY FACILITY									
G	MINOR AMENDMENTS	03/11/2020	LL	AW/AVG	SL	TH		CONCEPT CIVIL WORKS									
F	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH		16 TORRENS ROAD, GUNNDAH, NSW LOTS 1 AND 2 DP 1226992									
E	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH											
D	MINOR AMENDMENT	14/07/2020	RK	AW/AVG	SL	TH											
C	MINOR AMENDMENTS	09/07/2020	LL	AW/AVG	SL	TH	DISCLAIMER & COPYRIGHT This plan must not be used for construction unless signed as approved by principal certifying authority. All measurements in millimetres unless otherwise specified. This drawing must not be reproduced in whole or part without prior written consent of Martens & Associates Pty Ltd. (C) Copyright Martens & Associates Pty Ltd										
A1 / A3 LANDSCAPE (A1/LC_02.6.00)							DRAWING ID: P1907434-PS01-R16-E100										



TYPICAL OSD TANK SECTION

SCALE: 1:25



TYPICAL SEDIMENT BASIN SECTION

SCALE: 1:25

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

[illegible]

SCALE

0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50

A1 (A3) 1:25 (1:50) METRES

GRID	DATUM	PROJECT MANAGER
		TH
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CLIENT	OUTLINE PLANNING CONSULTANTS
PROJECT NAME/PLANSET TITLE	RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS
	16 TORRENS ROAD, GUNNEDAH, NSW LOTS 1 AND 2 DP 1226992

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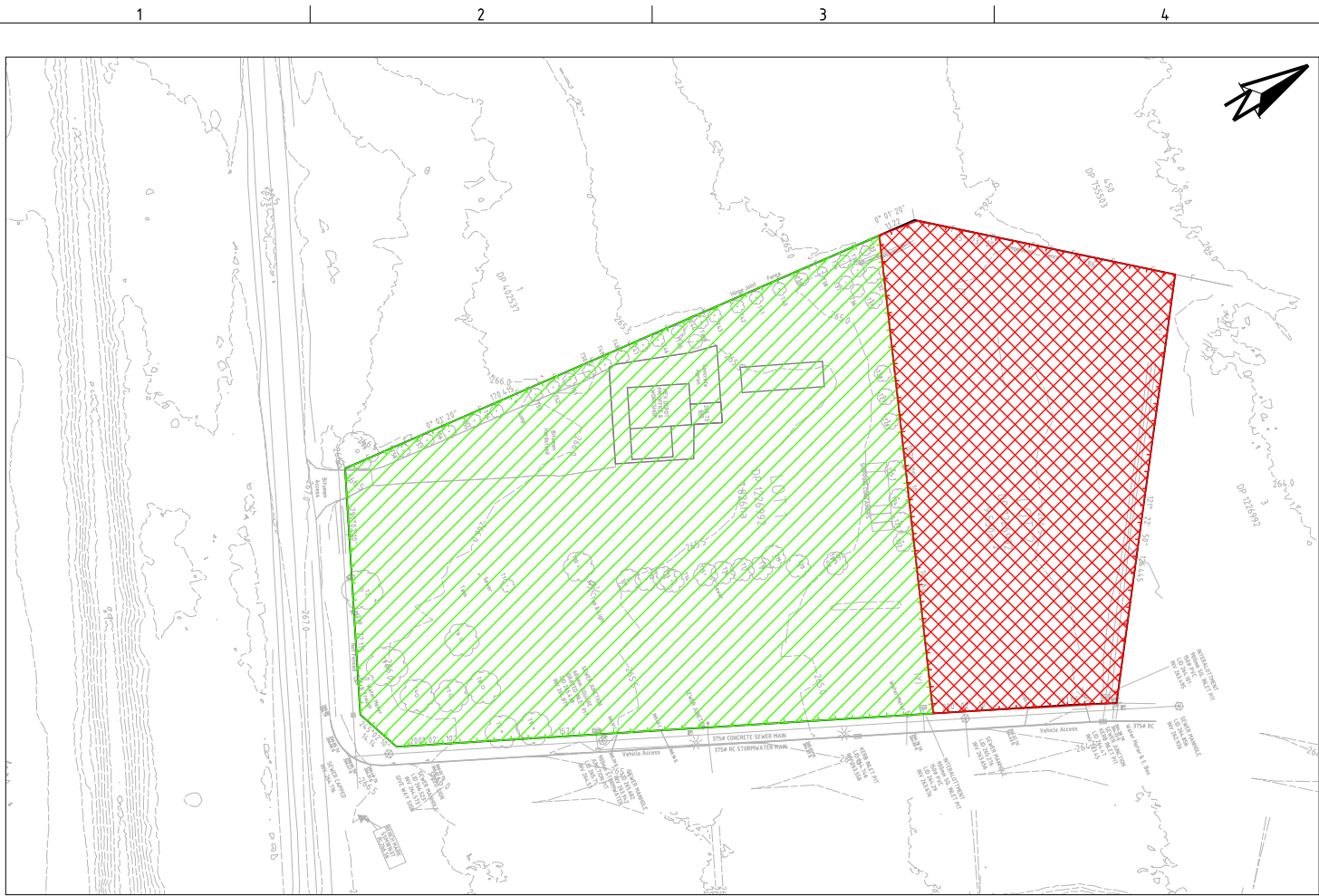
Consulting Engineers

Environment
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DRAWING TITLE				
DRAINAGE DETAILS				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-E200	B

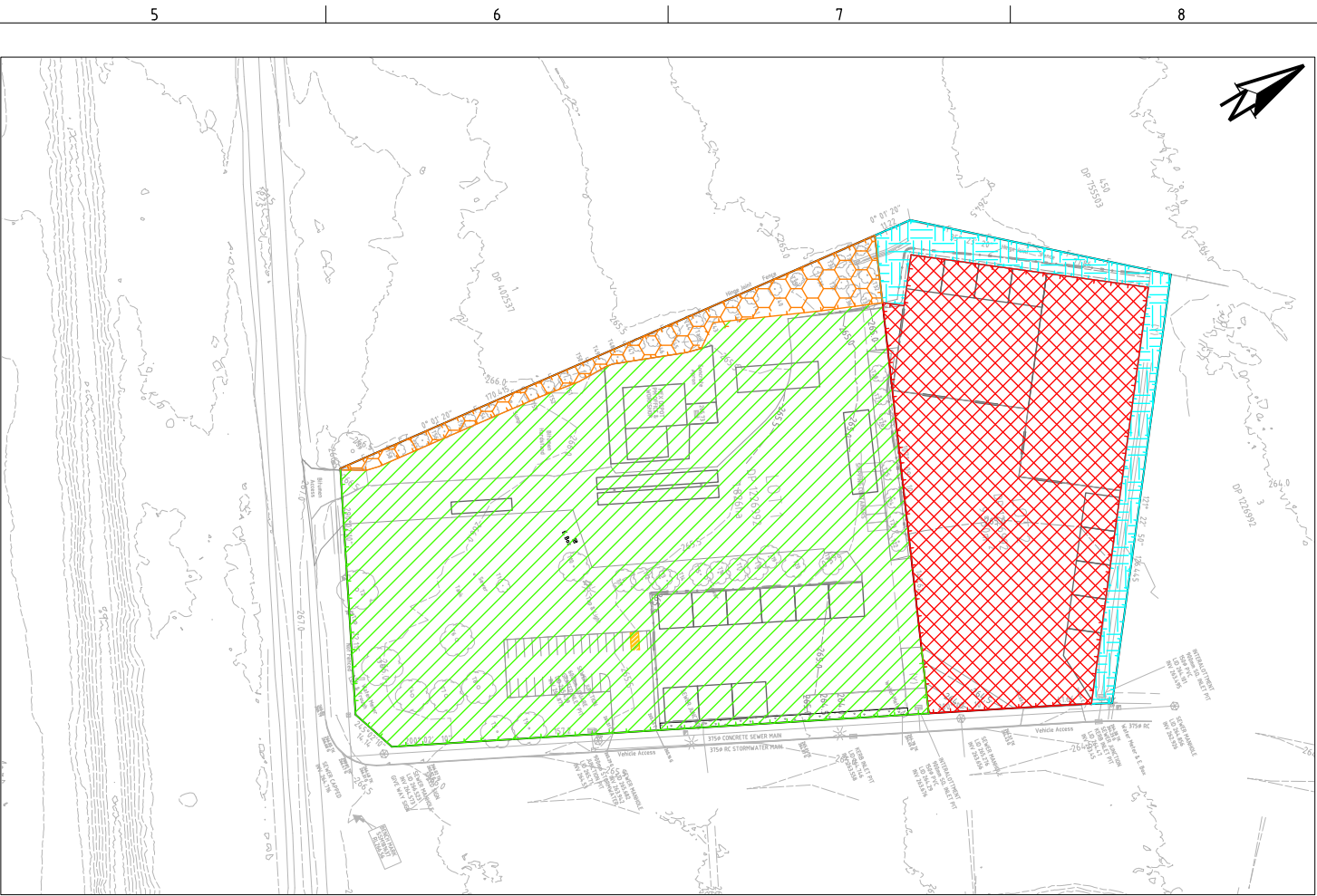
DRAWING ID: P1907434-PS01-R16-E200



PRE-DEVELOPMENT OSD CATCHMENT PLAN

SCALE 1:1000

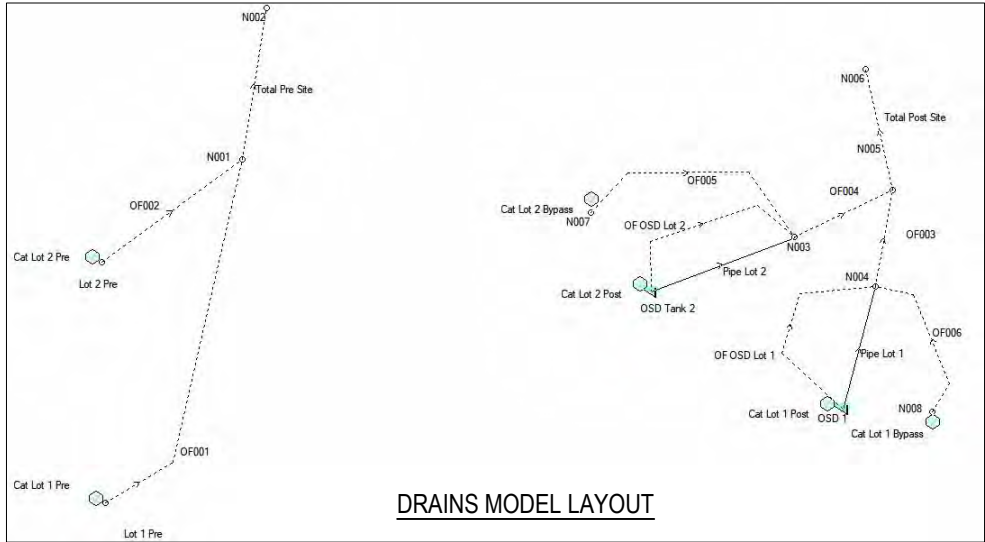
PRE-DEVELOPMENT OSD CATCHMENT DETAILS (P1907434DRN01V02)			
KEY	DRAINS NODE	AREA (ha)	% PAVED
	Cat Lot 1 Pre	1.83	0.57
	Cat Lot 2 Pre	0.95	0.81
TOTAL AREA		2.79	= 100% OF TOTAL AREA
TOTAL IMPERVIOUS AREA		1.82	= %65 OF TOTAL AREA
TOTAL PERVIOUS AREA		0.97	= %35 OF TOTAL AREA



POST-DEVELOPMENT OSD CATCHMENT PLAN

SCALE 1:1000

POST-DEVELOPMENT OSD CATCHMENT DETAILS (P1907434DRN01V02)			
KEY	DRAINS NODE	AREA (ha)	% PAVED
	Cat Lot 1 Post	1.71	70%
	Cat Lot 1 Bypass	0.12	0%
	Cat Lot 2 Post	0.8	100%
	Cat Lot 2 Bypass	0.15	0%
TOTAL AREA		2.79	= 100% OF TOTAL AREA
TOTAL IMPERVIOUS AREA		1.98	= %71 OF TOTAL AREA
TOTAL PERVIOUS AREA		0.8	= %29 OF TOTAL AREA



DRAINS MODEL LAYOUT

DRAINS RESULTS														
Lot 1 – P1907434DRN01V02														
0.2 EY			10% AEP			5% AEP			2% AEP			1% AEP		
Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference	Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference	Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference	Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference	Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference
0.347	0.221	-0.126	0.430	0.257	-0.173	0.526	0.303	-0.223	0.649	0.348	-0.301	0.752	0.360	-0.392
Lot 2 – P1907434DRN01V02														
0.2 EY			10% AEP			5% AEP			2% AEP			1% AEP		
Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference	Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference	Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference	Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference	Pre Peak Flow (m³/s)	Post Peak Flow (m³/s)	Difference
0.219	0.124	-0.095	0.262	0.140	-0.122	0.311	0.158	-0.153	0.383	0.202	-0.181	0.436	0.228	-0.208

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
H	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
G	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
F	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH
E	MINOR AMENDMENTS	03/11/2020	LL	AW/AVG	SL	TH
D	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
C	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH
B	UPDATED AS PER CLIENT COMMENT	25/06/2020	GM	AW/AVG	SL	TH
A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH

SCALE
0 10 20 30 40 50 60 70 80 90 100
A1 (A3) 1:1,000 (1:2,000) METRES

GRID
MGA
DATUM
mAHD
PROJECT MANAGER
TH
CLIENT
OUTLINE PLANNING CONSULTANTS
PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS
16 TORRENS ROAD, GUNNDAH, NSW
LOTS 1 AND 2 DP 1226992
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Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING TITLE				
OSD CATCHMENT PLAN, MODEL LAYOUT & RESULT				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-E600	H

DRAWING ID: P1907434-PS01-R16-E600



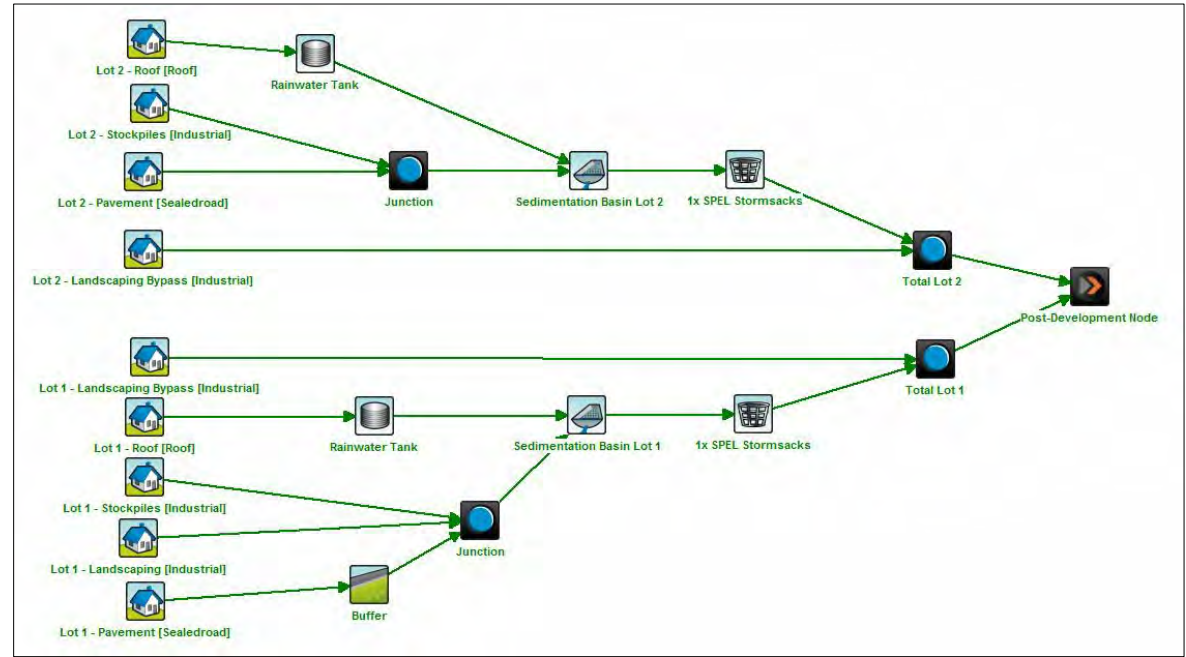
POST-DEVELOPMENT WATER QUALITY CATCHMENT PLAN

SCALE 1:1000

WATER QUALITY CATCHMENT DETAILS			
KEY	MUSIC NODE	AREA (ha)	% PAVED
	Lot 1 Roof	0.04	100%
	Lot 1 Pavement	1.08	100%
	Lot 1 Stockpiles	0.09	100%
	Lot 1 Landscaping	0.51	0%
	Lot 1 Landscaping Bypass	0.12	0%
	Lot 2 Roof	0.34	100%
	Lot 2 Pavement	0.38	100%
	Lot 2 Stockpiles	0.08	100%
	Lot 2 Landscaping Bypass	0.15	0%

Treatment Train Effectiveness - Total Lot 1			
	Sources	Residual Load	% Reduction
Flow (ML/yr)	6.33	6.21	1.8
Total Suspended Solids (kg/yr)	2020	245	87.9
Total Phosphorus (kg/yr)	3.42	1.03	70
Total Nitrogen (kg/yr)	15	8.03	46.6
Gross Pollutants (kg/yr)	176	0	100

MUSIC MODEL RESULT LOT 1



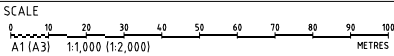
MUSIC MODEL LAYOUT (P1907434MUS01V03)

Treatment Train Effectiveness - Total Lot 2			
	Sources	Residual Load	% Reduction
Flow (ML/yr)	4.3	3.1	27.9
Total Suspended Solids (kg/yr)	760	103	86.4
Total Phosphorus (kg/yr)	1.49	0.45	69.8
Total Nitrogen (kg/yr)	9.76	3.66	62.5
Gross Pollutants (kg/yr)	125	0	100

MUSIC MODEL RESULT LOT 2

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
I	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
H	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
G	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH
F	MINOR AMENDMENTS	03/11/2020	LL	AW/AVG	SL	TH
E	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
D	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH
C	MINOR AMENDMENTS	09/07/2020	LL	AW/AVG	SL	TH
B	UPDATED AS PER CLIENT COMMENT	25/06/2020	GM	AW/AVG	SL	TH



GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS
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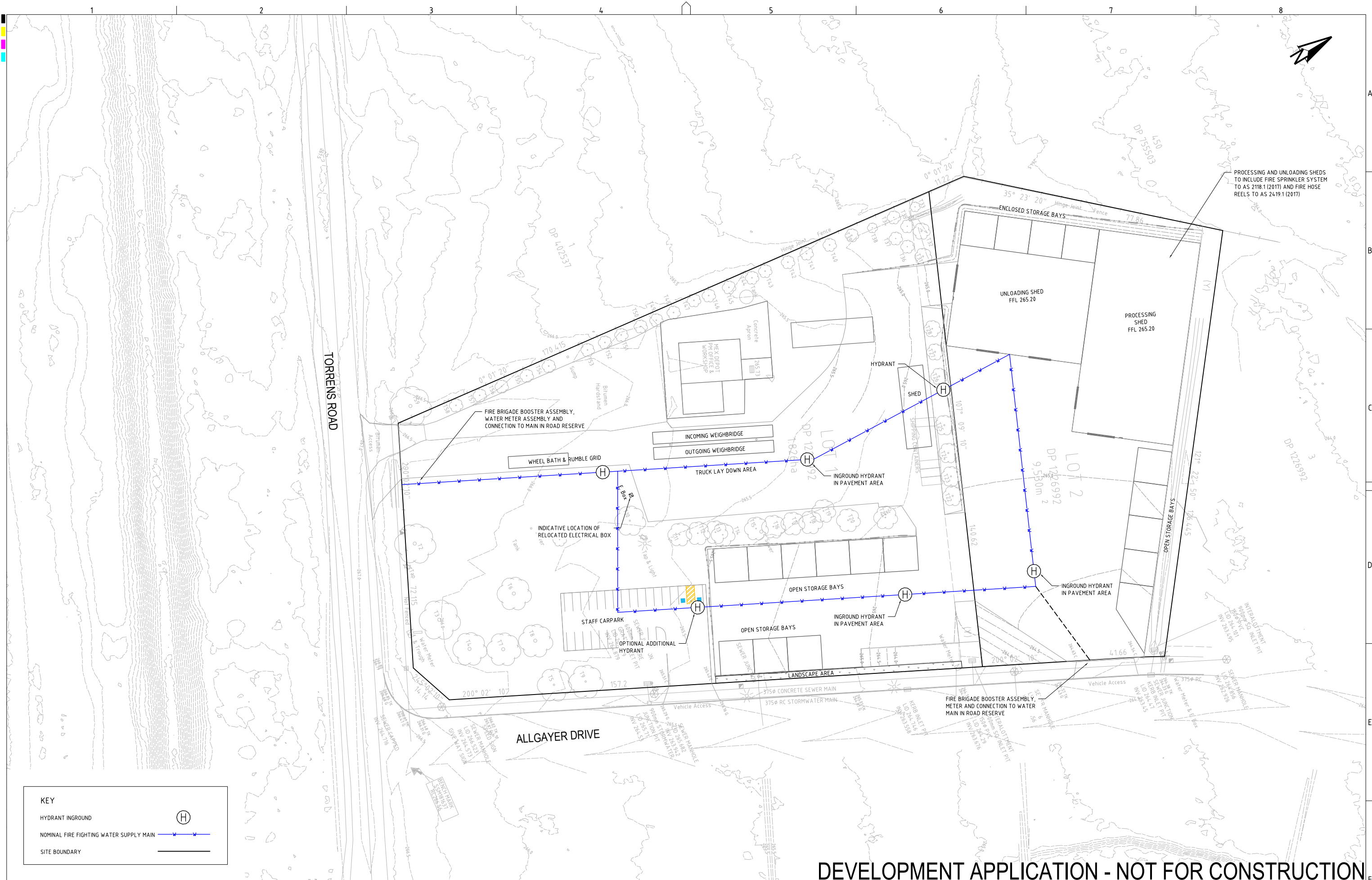
PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS
16 TORRENS ROAD, GUNNEDAH, NSW
LOTS 1 AND 2 DP 1226992



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DRAWING TITLE				
WATER QUALITY CATCHMENT PLAN, MODEL & RESULT				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-E700	I

DRAWING ID: P1907434-PS01-R16-E700



KEY

HYDRANT INGROUND

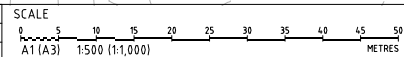
H

NOMINAL FIRE FIGHTING WATER SUPPLY MAIN

SITE BOUNDARY

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
C	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
B	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
A	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	JS	AW/AVG	SL	TH



GRID
MGA

DATUM
mAHD

PROJECT MANAGER
TH

CLIENT
OUTLINE PLANNING CONSULTANTS

PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS

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LOTS 1 AND 2 DP 1226992

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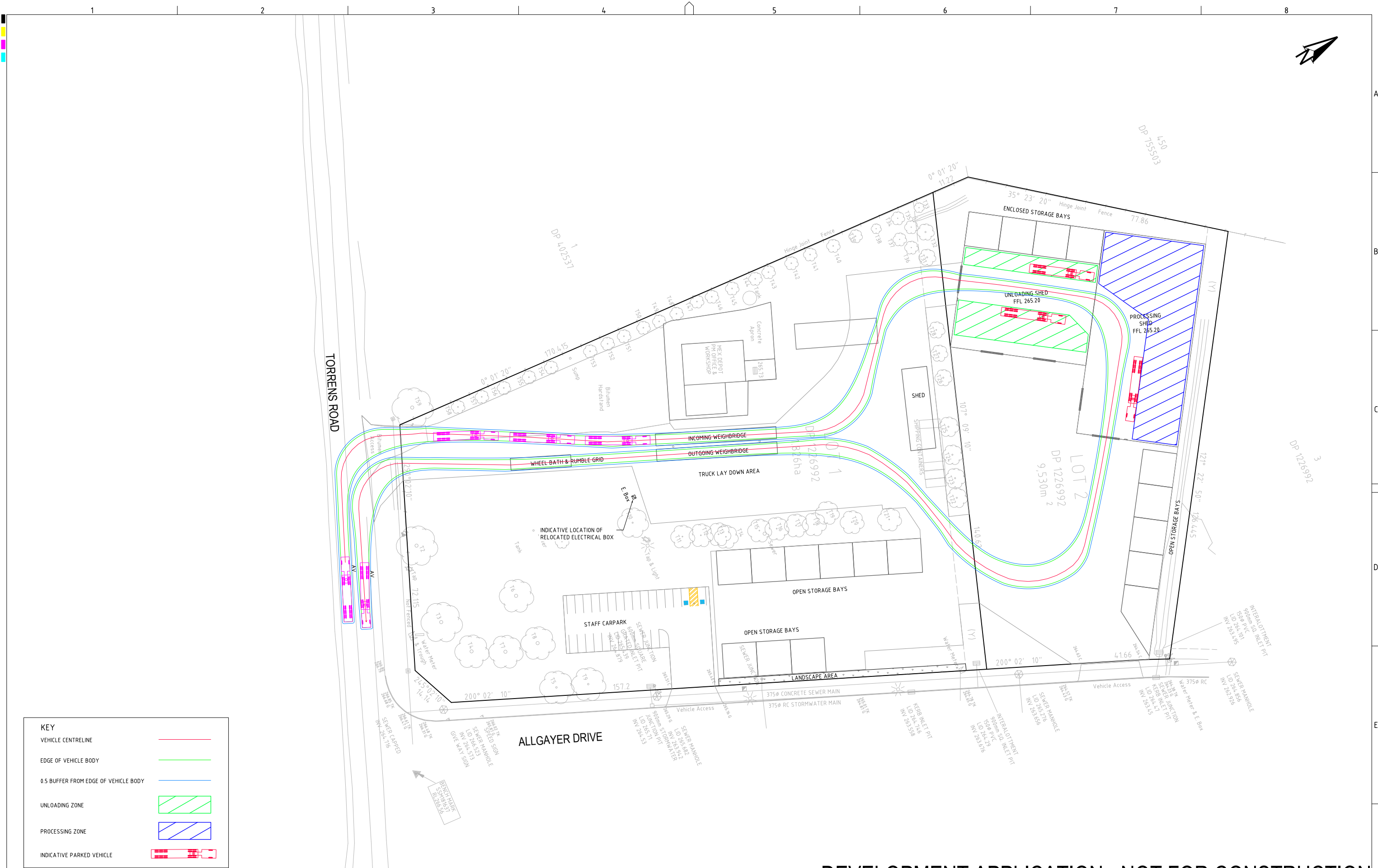
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Geotechnical
Civil

DRAWING TITLE				
CONCEPT WATER MAIN & FIRE FIGHTING HYDRANT PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-F300	C

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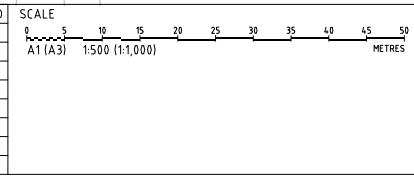
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DRAWING ID: P1907434-PS01-R16-F300



DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
L	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
K	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
J	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH
I	MINOR AMENDMENTS	10/12/2020	PB	AW/AVG	TH	TH
H	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
G	ADDITIONAL AND AMENDED SWEEP PATHS PROVIDED	25/08/2020	AW	AW	SL	TH
F	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH
E	MINOR AMENDMENT	14/07/2020	RK	AW/AVG	SL	TH



GRID
MGA

DATUM
mAHD

PROJECT MANAGER
TH

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OUTLINE PLANNING CONSULTANTS

PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS

16 TORRENS ROAD, GUNDEDAH, NSW
LOTS 1 AND 2 DP 1226992

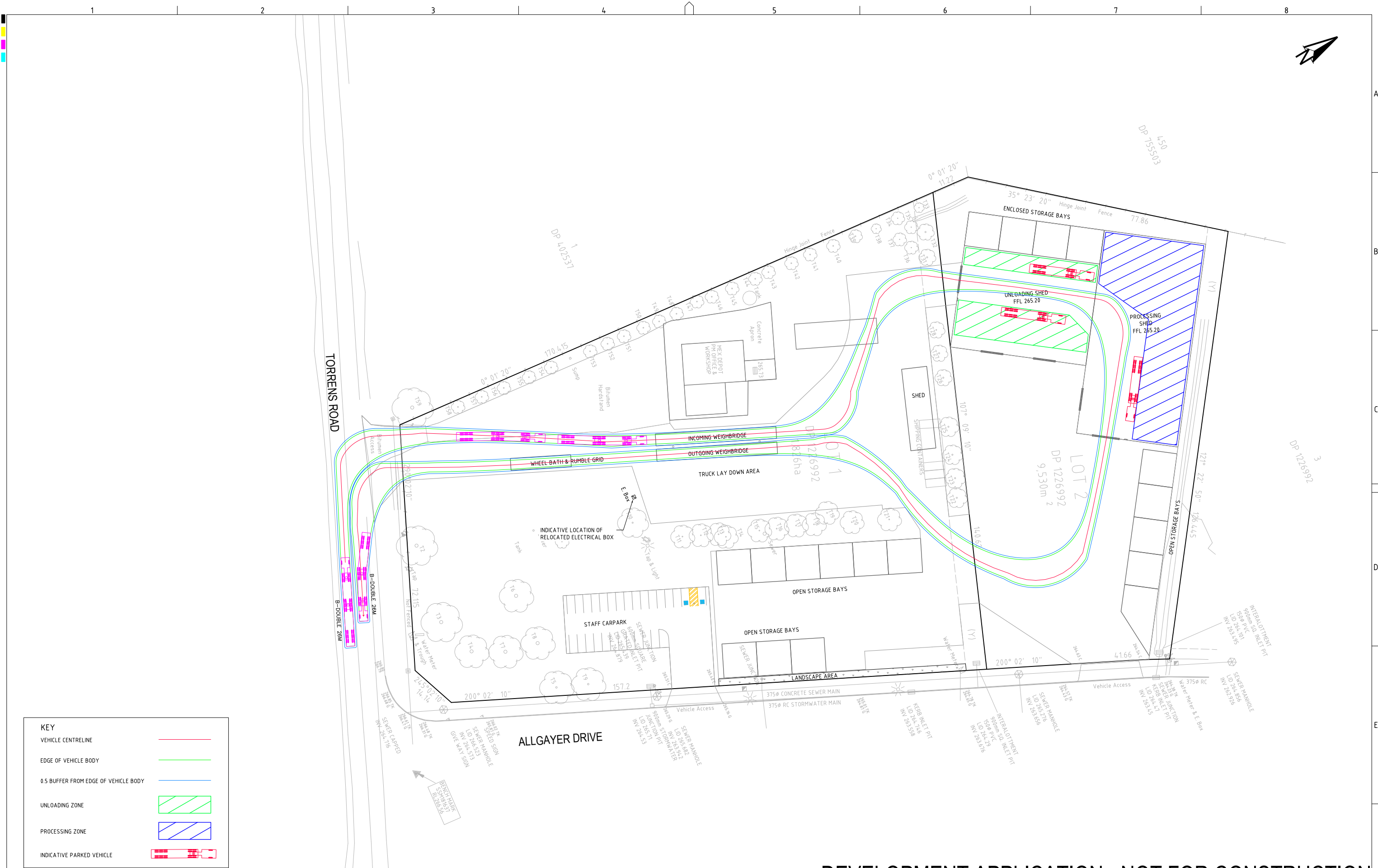
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DRAWING TITLE				
SWEEP PATH ANALYSIS PLAN - AV				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-GZ00	L



DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	CONSULTING ENGINEERS	DRAWING TITLE
L	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH	0 5 10 15 20 25 30 35 40 45 50 A1 (A3) 1:500 (1:1,000) METRES	MGA	mAHD	TH	OUTLINE PLANNING CONSULTANTS	Martens & Associates Pty Ltd	SWEPT PATH ANALYSIS PLAN - B DOUBLE
K	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH					PROJECT NAME/PLANSET TITLE	Environment Water Geotechnical Civil	
J	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH					RESOURCE RECOVERY FACILITY		
I	MINOR AMENDMENTS	10/12/2020	PB	AW/AVG	TH	TH					CONCEPT CIVIL WORKS		
H	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH					16 TORRENS ROAD, GUNDEDAH, NSW		
G	ADDITIONAL AND AMENDED SWEPT PATHS PROVIDED	25/08/2020	AW	AW	SL	TH					LOTS 1 AND 2 DP 1226992		
F	MINOR AMENDMENT	16/07/2020	RK	AW/AVG	SL	TH							
E	MINOR AMENDMENT	14/07/2020	RK	AW/AVG	SL	TH							

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PROJECT NO. P1907434

PLANSET NO. PS01

RELEASE NO. R16

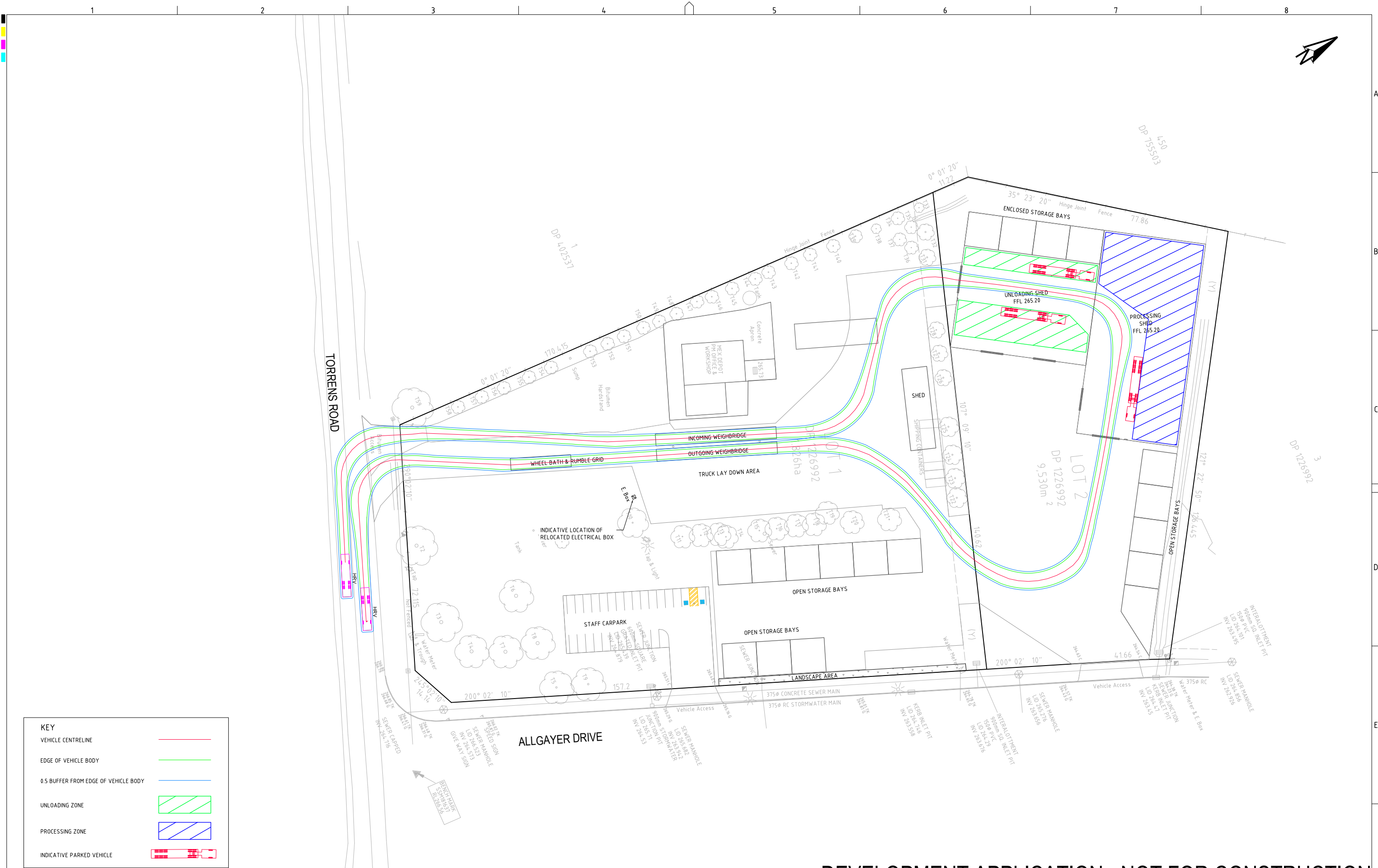
DRAWING NO. PS01-GZ10

REVISION L

PRINTED: 14/07/2022 10:00:00 AM

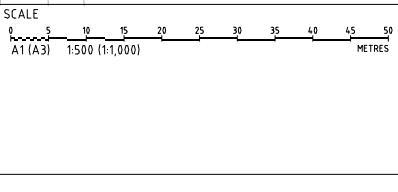
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DRAWING ID: P1907434-PS01-R16-GZ10



DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

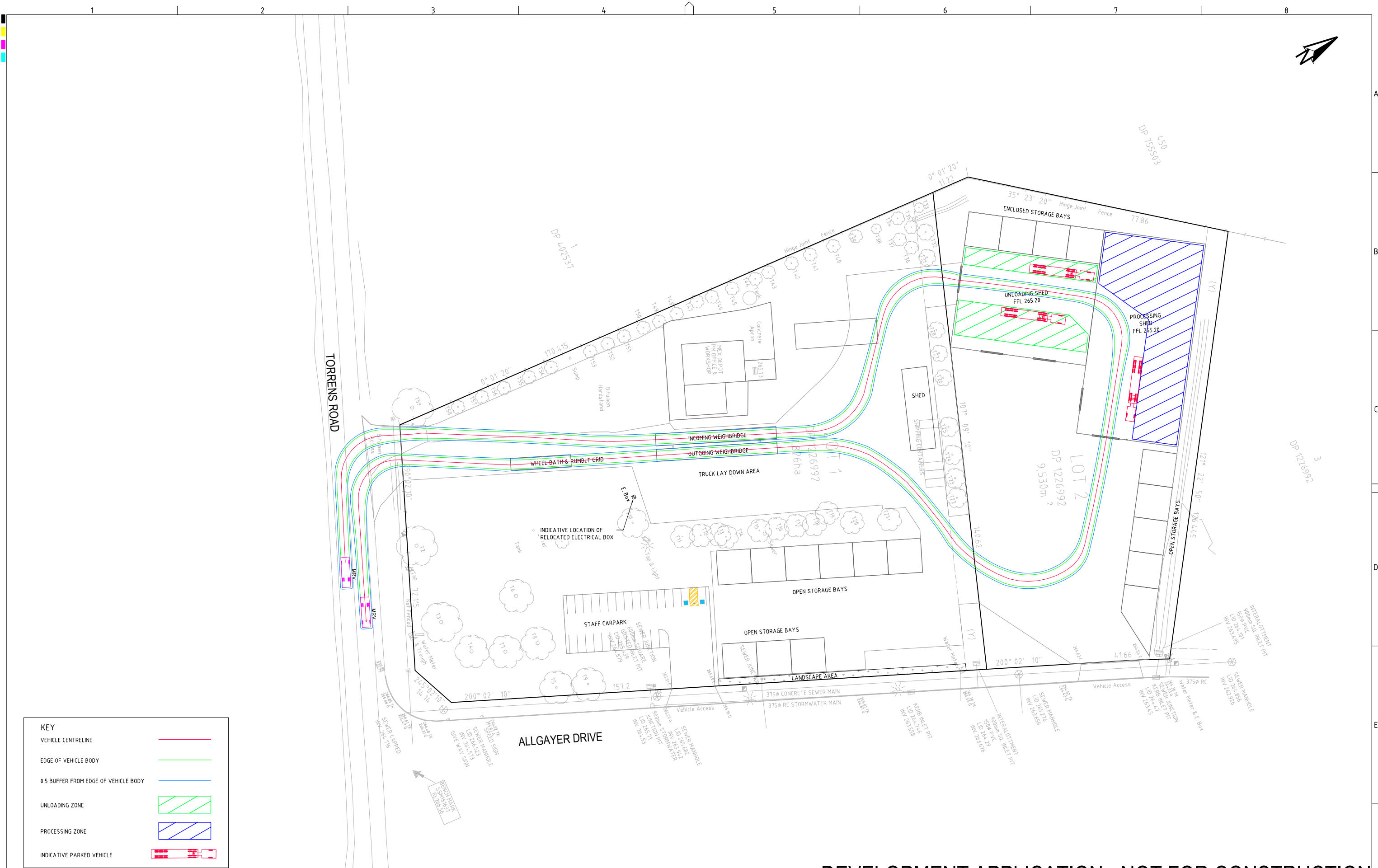
REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
E	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
D	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH
C	MINOR AMENDMENTS	10/12/2020	PB	AW/AVG	TH	TH
B	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
A	ADDITIONAL AND AMENDED SWEEP PATHS PROVIDED	25/08/2020	AW	AW	SL	TH



GRID
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PROJECT MANAGER
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CLIENT
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PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS
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LOTS 1 AND 2 DP 1226992
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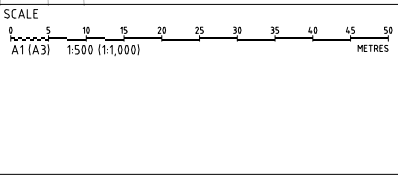
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DRAWING TITLE				
SWEEP PATH ANALYSIS PLAN - HRV				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-GZ20	F



DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
E	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
D	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH
C	MINOR AMENDMENTS	10/12/2020	PB	AW/AVG	TH	TH
B	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
A	ADDITIONAL AND AMENDED SWEEP PATHS PROVIDED	25/08/2020	AW	AW	SL	TH



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mAHD

PROJECT MANAGER
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CLIENT
OUTLINE PLANNING CONSULTANTS

PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS

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LOTS 1 AND 2 DP 1226992

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PROJECT NO.
P1907434

PLANSET NO.
PS01

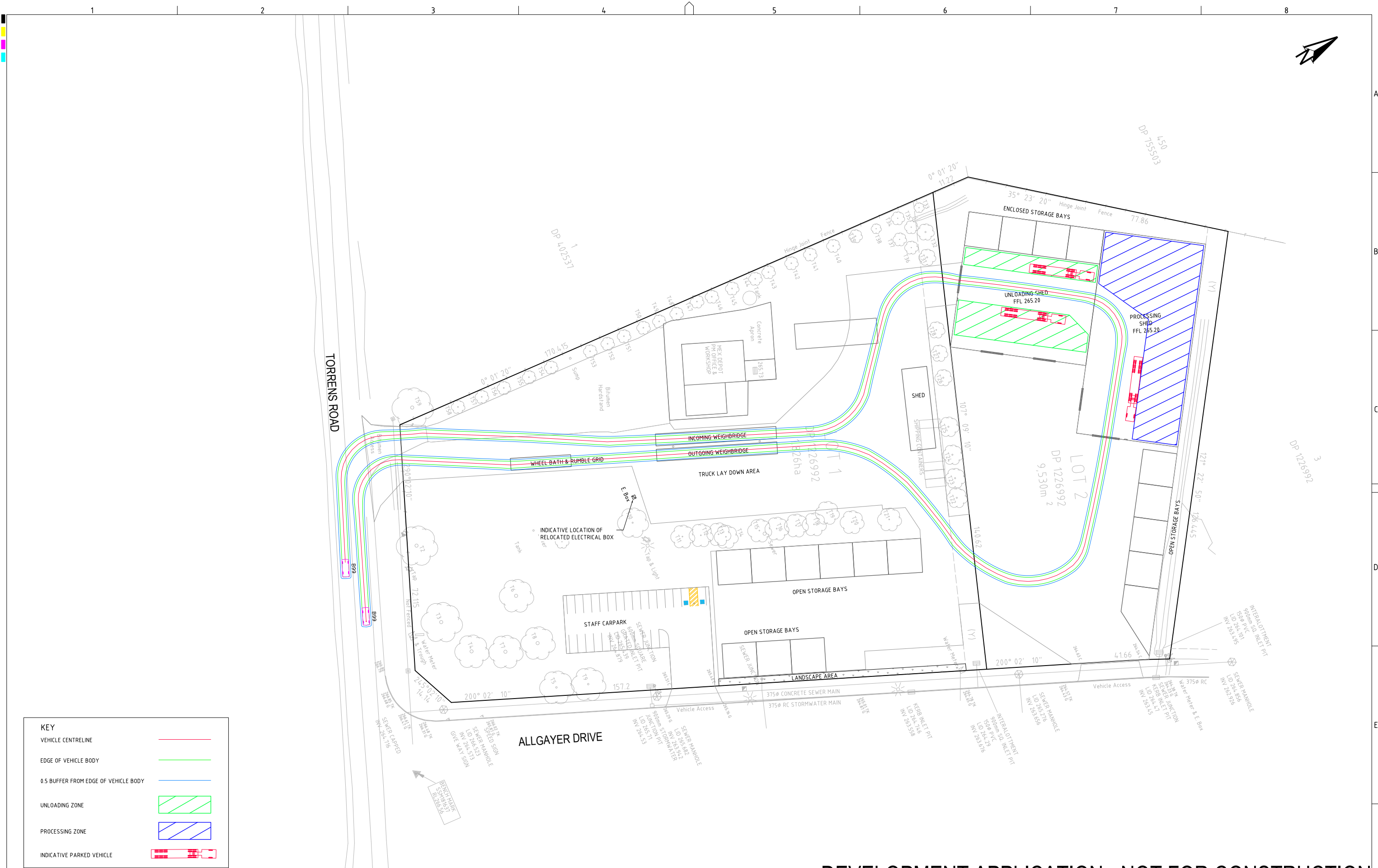
RELEASE NO.
R16

DRAWING NO.
PS01-GZ30

REVISION
F

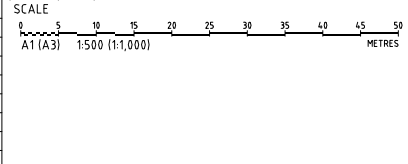
DRAWING TITLE
SWEPT PATH ANALYSIS PLAN - MRV

DRAWING ID: P1907434-PS01-R16-GZ30



DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
E	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH
D	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH
C	MINOR AMENDMENTS	10/12/2020	PB	AW/AVG	TH	TH
B	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH
A	ADDITIONAL AND AMENDED SWEEP PATHS PROVIDED	25/08/2020	AW	AW	SL	TH



GRID
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OUTLINE PLANNING CONSULTANTS

PROJECT NAME/PLANSET TITLE
RESOURCE RECOVERY FACILITY
CONCEPT CIVIL WORKS

16 TORRENS ROAD, GUNDEDAH, NSW
LOTS 1 AND 2 DP 1226992

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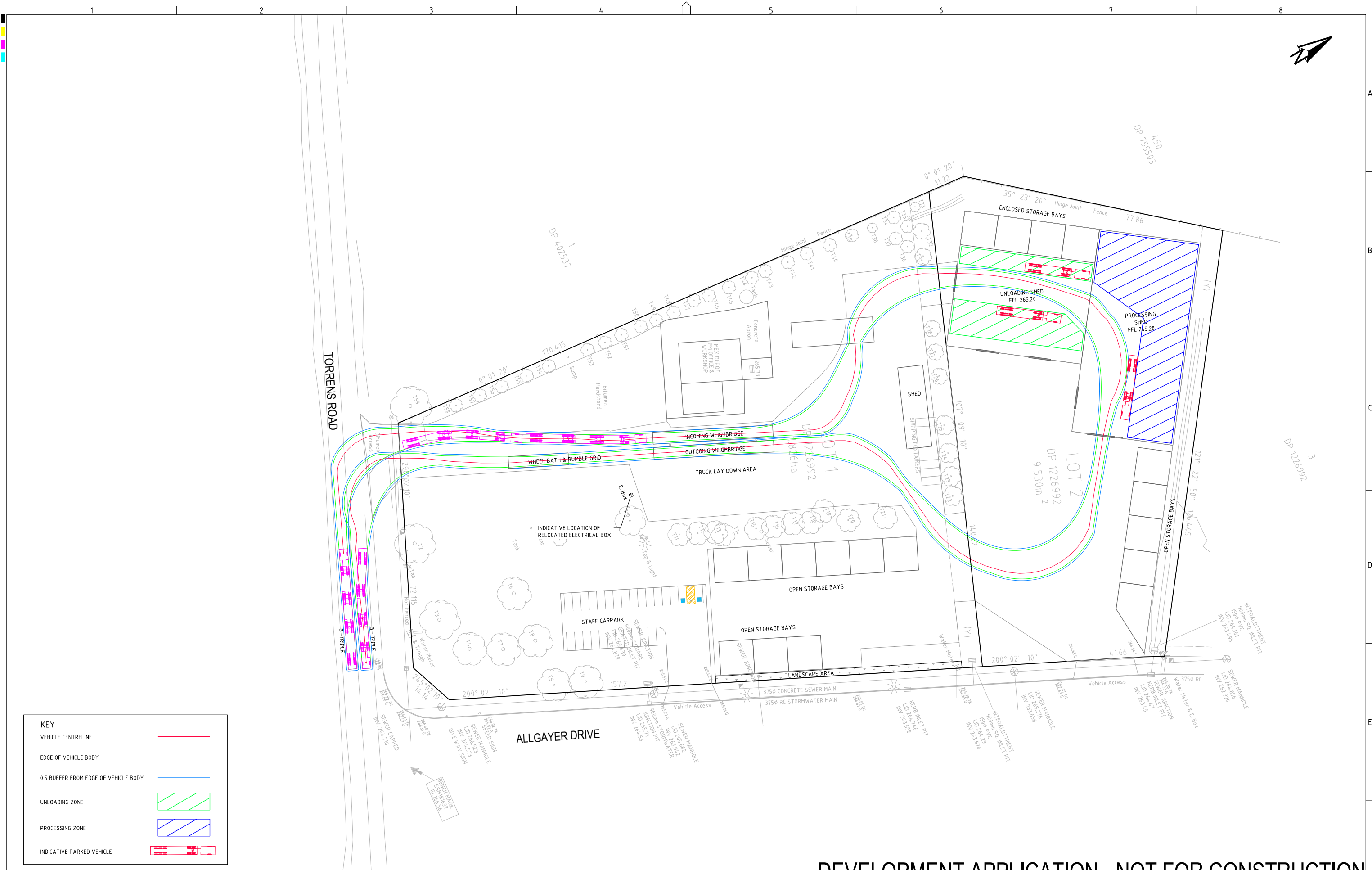
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DRAWING TITLE
SWEEP PATH ANALYSIS PLAN - B99

PROJECT NO. P1907434	PLANSET NO. PS01	RELEASE NO. R16	DRAWING NO. PS01-GZ40	REVISION F
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DRAWING ID: P1907434-PS01-R16-GZ40



DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE
E	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH	
D	MINOR AMENDMENTS	14/07/2022	NN	AVG	SL	TH	
C	UPDATED AS PER DPIE & EPA COMMENTS	01/04/2021	AW/JS	AW/AVG	SL	TH	
B	MINOR AMENDMENTS	10/12/2020	PB	AW/AVG	TH	TH	
A	UPDATED AS PER CLIENT COMMENT	21/10/2020	JS	AW/AVG	SL	TH	

GRID	DATUM	PROJECT MANAGER	CLIENT
TH			

OUTLINE PLANNING CONSULTANTS

RESOURCE RECOVERY FACILITY

CONCEPT CIVIL WORKS

16 TORRENS ROAD, GUNDEDAH, NSW
LOTS 1 AND 2 DP 1226992

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Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING TITLE				
SWEPT PATH ANALYSIS B-TRIPLE (ROAD TRAIN)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907434	PS01	R16	PS01-GZ50	E

GENERAL NOTES

- 1
- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH, AND THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE RELEVANT AUSTRALIAN STANDARDS, WSC COUNCIL SPECIFICATIONS, AND ALL PROJECT CONSULTANT'S PLANS AND REPORTS.
- 2
- SURVEY INFORMATION SHOWN AND DESIGN LEVELS BASED ON SURVEY INFORMATION PROVIDED BY S. MARK BOWLER & ASSOCIATES AND MATTHEW FREEBURN SURVEYORS.
- 3
- PRIOR TO COMMENCING ANY WORKS, THE CONTRACTOR SHALL CARRY OUT A 'DIAL BEFORE YOU DIG' FOR A SERVICES SEARCH. THE CONTRACTOR SHALL THEN ARRANGE FOR ALL SERVICES TO BE PHYSICALLY LOCATED, IDENTIFIED AND CLEARLY MARKED WITHIN THE WORKS AREA PRIOR TO THE COMMENCEMENT OF ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO SUCH SERVICES DURING THE COURSE OF THE WORKS. ANY SERVICE LOCATION SHOWN ON THE FOLLOWING DRAWINGS ARE INDICATIVE ONLY AND THE POSITION AND DEPTH INDICATED SHOULD NOT BE RELIED UPON.
- 4
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, SPECIFICATIONS AND WRITTEN INSTRUCTIONS THAT MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. THE CONTRACTOR SHALL ENSURE THAT THEY HAVE THE LATEST DRAWING REVISION PRIOR TO COMMENCING ANY WORKS.
- 5
- IF THE CONTRACTOR HAS ANY QUESTIONS, REQUIRES CLARIFICATION ON ANY ISSUE, OR FINDS ANY DISCREPANCIES WITHIN THESE DRAWINGS, THE CONTRACTOR SHALL ADVISE THE SUPERINTENDENT BEFORE PROCEEDING.
- 6
- ALL SET OUT DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE WORK COMMENCES. DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS. ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- 7
- LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
- 8
- ALL MATERIALS AND WORKMANSHIP USED SHALL BE IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS, BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES OR GEOTECHNICAL ENGINEER'S SPECIFICATIONS, EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATIONS. WHERE THE CONTRACTOR BELIEVES THAT NECESSARY DIMENSIONS ARE NOT SHOWN, REFER THE MATTER TO THE DESIGN CONSULTANT.
- 9
- CERTIFICATES ARE TO BE ISSUED ON COMPLETION CONFIRMING THAT THE WORKS COMPLY WITH THE CONSTRUCTION CERTIFICATE (IF ISSUED), ALL PLANS AND SPECIFICATIONS AND IN ACCORDANCE WITH THE REVIEW OF ENVIRONMENTAL FACTORS.
- 10
- DURING CONSTRUCTION, THE WORKS SITE SHALL BE MAINTAINED DAILY IN A SAFE AND STABLE CONDITION. PERIMETER SAFETY FENCING, TEMPORARY BRACING, BENCHING OF EXCAVATIONS AND BATTERS SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
- 11
- THE CONTRACTOR IS TO NOTIFY THE SUPERINTENDENT AND ENGINEER IF IT BECOMES EVIDENT THAT CONDITIONS ON SITE (INCLUDING ENCOUNTERING OF GROUNDWATER) HAVE POTENTIAL TO NEGATIVELY IMPACT ON THE INTENDED ENGINEERING DESIGN.
- 12
- ALL CONSTRUCTION WORK SHALL BE CARRIED OUT SO THAT AT ANY TIME THE AMENITY OF ADJOINING PROPERTIES ARE NOT COMPROMISED – I.E. DISCHARGE OF ADDITIONAL OR POLLUTED STORMWATER RUNOFF, ALL WEATHER ACCESS TO THE PROPERTY, NOISE, DUST, BUILDING WASTE ETC.
- 13
- THE CONTRACTOR SHALL PLACE CONDUITS WHERE REQUIRED BY THE RELEVANT UTILITY SERVICE AUTHORITIES AND SHALL UNDERTAKE ALL UTILITY ADJUSTMENTS AS DIRECTED NECESSARY FOR THE COMPLETION OF THE WORKS.
- 14
- THE CONTRACTOR SHALL MAINTAIN AND RESTORE ANY DAMAGE WHICH MAY HAVE BEEN CAUSED BY THE CONSTRUCTION OF THE 'WORKS' TO EXISTING ROAD SURFACES, ROADSIDE DRAINAGE OR UTILITY SERVICES.
- 15
- ALL DISTURBED AREAS OUTSIDE THE NOMINATED WORKS AREA SHALL BE REINSTATED BY THE CONTRACTOR TO THE DIRECTION OF THE SUPERINTENDENT.
- 16
- THE CONTRACTOR SHALL ENSURE THAT A SMOOTH CONNECTION IS MADE TO ALL EXISTING ENGINEERING WORKS AND NATURAL SURFACES.

- 17
- EROSION AND SEDIMENT CONTROLS IN ACCORDANCE WITH APPROVED EROSION SEDIMENT CONTROL PLAN ARE TO BE IN PLACE AT ALL TIMES. CONTROLS TO BE INSPECTED, MAINTAINED AND REPLACED AS REQUIRED BY THE CONTRACTOR UNTIL WORKS ARE COMPLETED AND PERMANENT MEASURES HAVE BEEN ESTABLISHED.
- 18
- PROVISION IS TO BE MADE FOR MAINTAINING TRAFFIC FLOW IN PUBLIC ROADS AT ALL TIMES. TRAFFIC CONTROL MEASURES ARE TO BE IN ACCORDANCE WITH COUNCIL GUIDELINES AND ANY SPECIFIC APPROVED CONSTRUCTION TRAFFIC MANAGEMENT PLAN (CTMP) FOR THE WORKS.
- 19
- THE CONTRACTOR IS TO ENSURE THAT NO BUILDING MATERIALS, STOCKPILES OR FILL ENCROACHES UPON ADJACENT PROPERTY OR RETAINED TREES FOR THE DURATION OF THE WORKS.
- 20
- THE SUPERINTENDENT MUST BE NOTIFIED IMMEDIATELY, SHOULD THE PRESENCE OF ASBESTOS OR SOIL CONTAMINATION, BE IDENTIFIED DURING DEMOLITION OR CONSTRUCTION WORKS.
- 21
- A SUFFICIENT SUPPLY OF APPROPRIATE SPILL CONTROL EQUIPMENT MUST BE KEPT ON THE PREMISES AT ALL TIMES. MATERIALS USED IN THE CLEAN UP OF A SPILL MUST BE DISPOSED OF TO AN APPROPRIATELY LICENSED WASTE FACILITY.
- 22
- ALL ABOVE GROUND STORAGE'S OF HAZARDOUS MATERIALS, OILS, CHEMICALS OR FERTILISERS MUST BE BUNDED. THE BUND IS TO BE MADE FROM AN IMPERVIOUS MATERIAL AND MUST BE COVERED AND LARGE ENOUGH TO HOLD THE CONTENTS OF THE LARGEST CONTAINER PLUS 10%.
- 23
- THE COST OF REPAIRING ANY DAMAGE CAUSED TO COUNCIL'S ASSETS AS A RESULT OF CONSTRUCTION WORKS ASSOCIATED WITH THE APPROVED DEVELOPMENT IS TO BE MET IN FULL BY THE CONTRACTOR PRIOR TO THE ISSUE OF A CERTIFICATE OF PRACTICAL COMPLETION.
- 24
- TEMPORARY CLOSET ACCOMMODATION IS TO BE PROVIDED AT THE WORK SITE AT ALL TIMES AT THE RATE OF ONE CLOSET FOR EVERY 20 PERSONS AND BE LOCATED WHOLLY WITHIN THE BOUNDARIES OF THE PROPERTY. PERMANENT FACILITIES ARE TO BE PROVIDED IN ACCORDANCE WITH PART F2.1, F2.4 AND F 2.5 OF THE BUILDING CODE OF AUSTRALIA.
- 25
- PROJECT PLANS AND SPECIFICATION TO BE READ IN CONJUNCTION WITH ALL ADVICE REGARDING THE SITE.
- 26
- ANY VARIATIONS OR AMBIGUITY BETWEEN THIS SPECIFICATION, DESIGN DOCUMENTS, AUSTRALIAN STANDARDS AND OTHER RELEVANT DOCUMENTS SHALL BE REFERRED TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO PROCEEDING WITH WORKS.
- 27
- CONTRACTOR TO BE PROVIDED WITH A SINGLE 2D .DWG DESIGN FILE FOR CONSTRUCTION PURPOSES. PROVISION OF A DIGITAL SURFACE OR OTHER DIGITAL DATA SHOULD NOT BE ASSUMED BY THE CONTRACTOR.
- 28
- WAE PLANS ARE TO BE PROVIDED BY THE CONTRACTOR THAT CLEARLY DELINEATES ALL ITEMS REFERRED TO IN THE DEVELOPMENT CONSENT CONDITIONS.
- 29
- THE CONTRACTOR SHALL CONTACT COUNCIL IN WRITING A MINIMUM OF SEVEN (7) DAYS PRIOR TO COMMENCING WORK AND APPLY FOR A SECTION 138 CONSENT (SECTION 138 OF THE ROADS ACT FOR APPROVAL TO WORK ON A PUBLIC ROAD) AND INCLUDE COPIES OF CURRENT PUBLIC LIABILITY INSURANCE FOR A VALUE OF \$20,000,000 AND PAYMENT OF THE CURRENT FEE. REFERENCES FOR PREVIOUS WORK EXPERIENCE MAY BE REQUESTED BY COUNCIL.

QUALITY ASSURANCE & OCCUPATIONAL HEALTH & SAFETY

- 1
- THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN A QUALITY ASSURANCE SYSTEM WHICH COMPLIES WITH THE REQUIREMENTS OF A.S. 9001 (2000) AND AUS-SPEC COC & COS. THE QUALITY SYSTEM SHALL BE SUCH THAT RECORDS ARE KEPT OF ALL ASPECTS AND STAGES OF THE WORK.
- 2
- THE RECORDS FOR EACH CONSTRUCTION TASK SHALL BE STAGED AND ITEMISED TO THE SATISFACTION OF THE SUPERINTENDENT. THE PRO-FORMERS SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO ANY WORK BEING COMMENCED.
- 3
- DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN ACCURATE AND UP TO DATE RECORDS (SUCH AS GOODS RECEIVED / REJECTED / RETURNED, ALL 'ISSUED NOTICES' / INSTRUCTIONS / CERTIFICATES', RETAIN ALL DRAWING REVISIONS, REPORTS, MARKED UP DRAWINGS OF EITHER AMENDMENTS OR 'WAE'); AND SHALL MAKE SUCH RECORDS AVAILABLE TO THE SUPERINTENDENT IF REQUESTED. FAILURE TO MAINTAIN THE APPROPRIATE RECORDS MAY RESULT IN THE

CONTRACTOR RE-INSPECTING COMPLETED WORKS IF INSTRUCTED BY THE SUPERINTENDENT.

- 4
- AT COMPLETION OF EACH STAGE OF WORKS, THE CONTRACTOR SHALL CERTIFY THAT THOSE WORKS HAVE BEEN UNDERTAKEN AND COMPLETED IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, AND INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT.
- 5
- THE CONTRACTOR SHALL OBTAIN AND KEEP ON SITE AT ALL RELEVANT MATERIAL SAFETY DATA SHEETS (MSDS) THAT ARE APPLICABLE FOR MATERIALS BEING USED ON THE SITE. ALL TRANSPORTATION, STORAGE, USE OF, AND DISPOSAL OF THESE MATERIALS SHALL BE IN ACCORDANCE WITH MSDS. THE LOCATION OF THESE MSDS SHALL BE MADE KNOWN TO ALL PERSONS DURING THE SITE INDUCTION AND ARE TO BE ACCESSIBLE AT ALL TIMES TO ALL SITE PERSONNEL.
- 6
- ATTENTION IS DRAWN TO THE WORK HEALTH AND SAFETY (WHS) ACT 2011 (NSW) AND ITS REGULATIONS, WHICH REQUIRES THAT EMPLOYERS ENSURE THE HEALTH, SAFETY AND WELFARE OF ALL PERSONS WORKING ON OR VISITING THE SITE.
- 7
- ANY REFERENCES TO THE OH&S ACT, OHS REGULATIONS, AND OHS IN THESE SPECIFICATIONS SHALL MEAN THE OCCUPATIONAL HEALTH AND SAFETY ACT 2000, OR THE WORK HEALTH AND SAFETY ACT (WHS) 2011 FROM THE TIME OF ITS ENACTMENT, OR ANY COMPARABLE REGULATION UNDER THE WORK HEALTH AND SAFETY ACT 2011.
- 8
- THE CONTRACTOR SHALL AT ALL TIMES EXERCISE ALL NECESSARY AND REASONABLE SAFETY PRECAUTIONS APPROPRIATE TO ENSURE THE SAFETY OF ALL PERSONS ON THE WORK SITE OR IN THE VICINITY OF THE WORKS.
- 9
- THE CONTRACTOR SHALL IMPLEMENT A WHS SYSTEM AND MAINTAIN ALL THE REQUIREMENTS OF THE RELEVANT WHS ACT, SUCH AS LOG BOOKS RECORDING OF: PERSONNEL INDUCTIONS, PERSONNEL SIGN-IN AND SIGN-OUT, INJURIES ETC, AND FIRST AID STATIONS AND TOOL BOX MEETINGS ETC.
- 10
- THE CONTRACTOR SHALL PROVIDE A SECURE PERIMETER FENCE AROUND THE SITE TO EXCLUDE THE PUBLIC, PLUS SAFETY FENCING AROUND EXCAVATIONS WITHIN THE SITE, AND ANY OTHER FENCING THAT IS REQUIRED TO ENSURE THE SAFETY OF SITE PERSONNEL / VISITOR PEDESTRIANS, ANIMALS AND VEHICLES.
- 11
- THE LAND AND ADJOINING AREAS ARE TO BE KEPT IN A CLEAN AND TIDY CONDITION AT ALL TIMES. LITTER AND RUBBISH SHALL BE PLACED IN CONTAINERS AND REMOVED FROM THE SITE. A WASTE STORAGE CONTAINER IS TO BE PROVIDED AT THE COMMENCEMENT OF THE BUILDING WORK.
- 12
- THE WORK SITE IS TO BE KEPT LIT BETWEEN SUNSET AND SUNRISE IF IT IS LIKELY TO BE A SOURCE OF DANGER TO PERSONS USING A PUBLIC PLACE OR UPON INSTRUCTION BY THE SUPERINTENDENT TO ENHANCE THE SAFETY AND SECURITY OF THE AREA IN WHICH THE WORK IS LOCATED.
- 13
- ANY HOARDING, FENCE OR AWNING IS TO BE REMOVED WHEN NO LONGER REQUIRED.

EXISTING SERVICES

- 1
- PRIOR TO COMMENCING ANY WORKS, THE CONTRACTOR SHALL CARRY OUT A 'DIAL BEFORE YOU DIG' FOR A SERVICES SEARCH. THE CONTRACTOR SHALL THEN ARRANGE FOR ALL SERVICES TO BE PHYSICALLY LOCATED, IDENTIFIED AND CLEARLY MARKED WITHIN THE WORKS AREA PRIOR TO THE COMMENCEMENT OF ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO SUCH SERVICES DURING THE COURSE OF THE WORKS.
- 2
- ANY SERVICE LOCATION SHOWN ON THE DESIGN PLANS ARE INDICATIVE ONLY AND THE POSITION AND DEPTH INDICATED SHOULD NOT BE RELIED UPON.
- 3
- ALL CARE IS TO BE EXERCISED WHEN EXCAVATING NEAR EXISTING UTILITY SERVICES. MANUAL EXCAVATION PARALLEL TO THE SERVICE IS RECOMMENDED AND MECHANICAL DIGGING IS NOT TO BE CARRIED OUT OVER OR NEAR ANY ELECTRICAL / TELECOMMUNICATIONS CABLES OR GAS PIPES. EXCAVATIONS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH THE REQUIREMENTS OF THE NSW WORK COVER CODE OF EXCAVATION 2000.
- 4
- DURING THE EXECUTION OF WORKS, THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITY SERVICES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED TO THE EXISTING SERVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE RELEVANT UTILITY

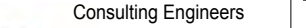
SERVICE PROVIDER, AT NO COST TO THE PRINCIPAL OR OTHER PROPERTY OWNER.

- 5
- WHERE IT IS NECESSARY TO REMOVE, DIVERT OR CUT INTO ANY EXISTING UTILITY SERVICE, AND ON COMPLETION OF THE NEW 'WORKS, THE CONTRACTOR SHALL GIVE AT LEAST THREE (3) DAYS NOTICE OF THE REQUIREMENTS TO THE SUPERINTENDENT. WHO WILL ADVISE WHAT ARRANGEMENTS SHOULD BE MADE FOR THE ALTERATION OF SUCH EXISTING WORKS.
- 6
- PRIOR TO THE COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL OBTAIN THE SUPERINTENDENT'S APPROVAL OF THE PROGRAMME FOR THE RELOCATION / CONSTRUCTION OF TEMPORARY SERVICES.
- 7
- ALL NEW OR EXCAVATED EXISTING UTILITY SERVICES THAT CROSS EXISTING AND FUTURE ROADS/PAVEMENTS SHALL HAVE APPROPRIATE WARNING TAPES AND/OR WIRES PLACED IN ACCORDANCE WITH THE RELEVANT STANDARDS AND THEN BE BACKFILLED WITH DGB20 MATERIAL TO SUBGRADE LEVEL AND COMPACTED TO 98% STANDARD DENSITY RATIO, SUBJECT TO PRIOR APPROVAL FROM THE RELEVANT AUTHORITY.
- 8
- ON COMPLETION OF SERVICES INSTALLATION, ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, INCLUDING NATURE STRIPS, FOOTPATHS, CONCRETE AND GRAVEL AREAS, KERBS AND ROAD PAVEMENTS.
- 9
- THE CONTRACTOR SHALL ALLOW FOR THE EXCAVATION, CAPPING OFF AND REMOVAL IF REQUIRED OF ALL EXISTING SERVICES IN AREAS AFFECTED BY THE WORKS WITHIN THE CONTRACT AREA AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT. ALL SERVICES WORKS ARE TO BE COMPLETED TO REGULATORY AUTHORITY STANDARDS AND APPROVAL.
- 10
- THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES AS REQUIRED TO MAINTAIN THAT SERVICE TO ANY PROPERTY OR BUILDING IN OPERATION DURING THE CONSTRUCTION WORKS, TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. WHEN ALL NEW WORKS / DIVERSIONS ARE COMPLETED, COMMISSIONED AND INSPECTED, THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY UTILITY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
- 11
- INTERRUPTION TO EXISTING UTILITY SERVICES SHALL BE CARRIED OUT SO AS NOT TO CAUSE ANY INCONVENIENCE OR DAMAGE TO ADJACENT PROPERTIES. THE CONTRACTOR IS RESPONSIBLE FOR GAINING PERMISSION OF THE SUPERINTENDENT FOR TIME OF INTERRUPTION.
- 12
- THE CONTRACTOR SHALL MAINTAIN THE EXISTING STORMWATER DRAINAGE FLOWS THROUGH THE SITE AT ALL TIMES, AND MAKE DUE ALLOWANCE FOR ALL SUCH FLOWS AT ALL TIMES.
- 13
- THE CONTRACTOR SHALL ENSURE THAT APPROPRIATE UTILITY SERVICES ABOVE GROUND MARKERS ARE PLACED IN ACCORDANCE WITH SERVICE PROVIDER AND COUNCIL SPECIFICATIONS.
- 14
- ALL NEW AND REPLACEMENT UTILITY SERVICES SHALL BE LAID AT THE DEPTH AND POSITION WITHIN THE SERVICES TRENCH IN ACCORDANCE WITH RELEVANT AUTHORITY REQUIREMENTS AND SPECIFICATIONS OR AS DIRECTED IN THE DETAILED DRAWINGS.
- 15
- SERVICES TRENCHES TO BE GRADED AT A MINIMUM OF 1% TO EITHER SUBSOIL OR STORMWATER DRAINAGE LINES.
- 16
- THE CONTRACTOR SHALL ENSURE THAT ALL LOCATED AND NEW UTILITY SERVICES WITHIN AND OUTSIDE THE SITE ARE SURVEYED BY A DULY QUALIFIED SURVEYOR AS PART OF THE 'WORK AS EXECUTED' RECORDS.

CONSTRUCTION MATERIALS

- 1
- MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS, COUNCIL SPECIFICATIONS AND WITH THE BY-LAWS AND ORDINANCE REQUIREMENTS OF THE RELEVANT BUILDING AUTHORITY, EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATIONS.
- 2
- SUFFICIENT NOTICE SHALL BE GIVEN BY THE CONTRACTOR TO THE SUPERINTENDENT TO ENABLE MATERIALS THAT ARE TO BE BROUGHT ON SITE TO BE EXAMINED AND TESTED AS REQUIRED. ALL MATERIALS ARE TO BE STACKED IN A SUITABLE MANNER TO FACILITATE EXAMINATION.

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPR'D	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	 Consulting Engineers Environment Water Geotechnical Civil Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: www.martens.com.au	DRAWING TITLE GENERAL LEGEND AND NOTES (SHEET 1)			
A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH				TH	OUTLINE PLANNING CONSULTANTS					
											PROJECT NAME/PLANSET TITLE RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS 16 TORRENS ROAD, GUNNEDAH, NSW LOTS 1 AND 2 DP 1226992					
A1 / A3 LANDSCAPE (A/LC_v02.0.0)																

- 13 ALL CONSTRUCTED BATTERS SHALL BE FREE OF LOOSE MATERIAL AND SHALL BE NEATLY TRIMMED AND ROLLED TO SEAL THE SURFACE BY THE CONTRACTOR PRIOR TO THE GRANTING OF PRACTICAL COMPLETION (AND PRIOR TO THE PLACEMENT OF ANY TOPSOIL / GROWING MEDIUMS OR ANY REVEGETATION WORKS BY OTHERS).
- 14 ALL FILL BATTERS SHALL BE CONSTRUCTED BY OVER PLACEMENT OF ENGINEERED FILL AND TRIMMING BACK TO THE FINAL DESIGN PROFILE AS REQUIRED. NO ALLOWANCE HAS BEEN MADE FOR THE OVER PLACEMENT OF FILL MATERIAL IN CALCULATING THE EARTHWORKS QUANTITIES / VOLUMES REQUIRED TO COMPLETE THE WORKS.
- 15 PROJECT PLANS AND SPECIFICATION TO BE READ IN CONJUNCTION WITH ALL GEOTECHNICAL ENGINEERING ADVICE REGARDING THE SITE. WHERE INCONSISTENCIES ARE IDENTIFIED THEY ARE TO BE BROUGHT TO THE ATTENTION OF THE PROJECT SUPERINTENDENT PRIOR TO PROCEEDING WITH WORKS.

EXCAVATION

- 1 THE EXCAVATION SHALL BE CARRIED OUT IN THE LOCATIONS SHOWN AND
TO THE LEVELS, WIDTHS AND BATTER SLOPES INDICATED ON THE
DRAWINGS.
- 2 EXCAVATED MATERIAL NOT MEETING THE SPECIFICATION FOR FILL
MATERIAL AND CLASSIFIED AS UNSUITABLE FOR RE-USE AS TOPSOIL OR IN
LANDSCAPING SHALL BE BURIED ONSITE IN AN APPROPRIATE MANNER AND
AS DIRECTED BY THE SUPERINTENDENT.
- 3 ALL EXCAVATED MATERIAL REMOVED FROM THE SITE MUST BE CLASSIFIED
IN ACCORDANCE WITH NSW DECC (2009) ENVIRONMENTAL GUIDELINES:
ASSESSMENT, CLASSIFICATION AND MANAGEMENT OF LIQUID AND NON-
LIQUID WASTES PRIOR TO DISPOSAL.
- 4 WHERE EXCAVATION WORK IS REQUIRED IN THE VICINITY OF EXISTING
UTILITY SERVICES, THE CONTRACTOR SHALL SUPPORT ALL SUCH UTILITY
SERVICES DURING THE WORKS. ON COMPLETION OF EXCAVATION WORKS
SUCH UTILITY SERVICES SHALL BE BACK FILLED IN SUCH A MANNER AS TO
RETAIN THE UTILITY SERVICE IN ITS ORIGINAL GRADE AND POSITION TO THE
SATISFACTION OF THE SUPERINTENDENT AND UTILITY SERVICE PROVIDER.
- 5 WHERE EXCAVATED MATERIAL IS TO BE USED FOR FILLING, THE MATERIAL
SHALL BE INSPECTED AND APPROVED BY THE SUPERINTENDENT PRIOR TO
USE.
- 6 WHERE ROCK IS EXPOSED DURING EXCAVATION, THE CONTRACTOR SHALL
CEASE EXCAVATION AT THIS LOCALITY AND CONTACT THE
SUPERINTENDENT WHO WILL THEN DEPENDING ON THE NATURE OF THE
CONSTRUCTION, ADVISE ON THE LEVEL TO WHICH THE EXCAVATION IS
TAKEN.
- 7 THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MAINTENANCE
OF ANY EXCAVATIONS AND IS LIABLE FOR ANY DAMAGE WHICH MAY BE
CAUSED TO ANY WATER / SEWER PIPE / STORMWATER, PUBLIC UTILITY
SERVICE OR STRUCTURES, CAUSED BY THE COLLAPSE OF THE
EXCAVATION.
- 8 WHERE DIRECTED BY THE SUPERINTENDENT THE BOTTOM OF TRENCHES
OR EXCAVATIONS SHALL BE COMPACTED PRIOR TO PLACING OF ANY
PAVEMENT SUB-BASE, BEDDING OR CONCRETE MATERIALS. SHOULD THE
FOUNDATION MATERIAL, IN THE OPINION OF THE SUPERINTENDENT, BE
INCAPABLE OF EFFECTIVE COMPACTION, SUCH MATERIAL SHALL BE
REMOVED AND REPLACED WITH APPROPRIATE MATERIAL.
- 9 STRIPPED PAVEMENT SUBGRADES MUST BE PROOF ROLLED (PRIOR TO THE
ADDITION OF SUITABLE FILL) BY A MINIMUM 12 TONNE MASS SMOOTH DRUM
ROLLER WITHOUT VIBRATION UNDER THE SUPERVISION OF THE
GEOTECHNICAL INSPECTION AND TESTING AUTHORITY (GITA) AND/OR
GEOTECHNICAL ENGINEER.
- 10 ROAD SUBGRADE IN ROCK IS TO BE RIPPED, SCARIFIED, SPREAD AND
COMPACTED TO A MINIMUM DEPTH OF 300MM BELOW THE FINISHED
SUBGRADE LEVEL.
- 11 IF APPROVED BY THE SUPERINTENDENT EXCAVATED MATERIAL MAY BE
USED FOR BACKFILL OVER PIPES PROVIDED IT COMPLIES WITH RELEVANT
BUILDING AND CONSTRUCTION CODES AND SPECIFICATIONS. THIS
MATERIAL SHALL REMAIN THE PROPERTY OF THE PRINCIPAL AND ANY
EXCESS SHALL BE SPOILED OR USED FOR FILLING WITHIN THE SITE AS
DIRECTED BY THE SUPERINTENDENT.
- 12 ALL EXCAVATIONS MUST BE PROPERLY GUARDED AND PROTECTED TO
PREVENT THEM FROM BEING DANGEROUS TO LIFE OR PROPERTY.

- FILL**

- ## SUBGRADE PREPARATION

- 1 EXPOSED SUBGRADE EXHIBITING SHRINKAGE CRACKING TO BE WATERED
AND ROLLED UNTIL NO SHRINKAGE CRACKS ARE EVIDENT.
- 2 SUBGRADE TO BE ROLLED WITH AT LEAST EIGHT PASSES OF 12 TONNE
STATIC SMOOTH DRUM ROLLER.
- 3 FINAL PASS OF ROLLER TO BE UNDER SUPERVISION OF GEOTECHNICAL
ENGINEER FOR THE DETECTION OF ANY HEAVING OR SOFT SPOTS.
- 4 WHERE HEAVING OR SOFT SPOTS ARE IDENTIFIED REFER TO THE
GEOTECHNICAL ENGINEER FOR ADVICE.
- 5 TYPICALLY HEAVING AREAS SHOULD BE LOCALLY REMOVED TO A STABLE
BASE AND REPLACED WITH ENGINEERED FILL TO THIS SPECIFICATION.

- ## EDGE COMPACTION

1. OUTER EDGE OF FILL LAYERS TO EXTEND A HORIZONTAL DISTANCE AT LEAST 1.0 M BEYOND THE DESIGN GEOMETRY.
2. ROLLER MUST EXTEND OVER THE EDGE OF EACH PLACED LAYER IN ORDER TO SEAL THE BATTER SURFACE.
3. ON COMPLETION OF FILLING, EXCESS UNDER-COMPACTED EDGE FILL TO BE TRIMMED BACK TO DESIGN GEOMETRY.

SERVICE TRENCHES

- 1 BACKFILLING OF SERVICE TRENCHES IS TO BE COMPLETED TO THE
PROJECT ENGINEERING FILL SPECIFICATION EXCEPT AS AMENDED
BELOW:
2 BACKFILL IS TO BE PLACED IN MAXIMUM 100 MM LOOSE LAYERS.
3 BACKFILL TO CONTAIN NO MATERIAL > 40 MM.
4 COMPACTION TO UTILISE TRENCH ROLLER OR A PAD FOOT ROLLER ON
ATTACHMENT FITTED TO EXCAVATOR.
5 COMPACTION TESTING TO BE COMPLETED TO PROJECT SPECIFICATION.

COMPACTION TESTING

- 1 DENSITY TESTING IS TO BE UNDERTAKEN TO CONFIRM COMPACTION. LEVEL ONE (1) TESTING IS TO BE CARRIED OUT FOR ANY FILLING OPERATIONS CARRIED OUT IN ACCORDANCE WITH THE DEVELOPMENT CONSENT.
- 2 ANY FILLING SHALL BE TESTED TO ESTABLISH THE FIELD DRY DENSITY EVERY 300MM RISE IN VERTICAL HEIGHT.
- 3 STE FILL – THE MINIMUM COMPACTION REQUIREMENT IS 95% STANDARD COMPACTION. TEST SITES SHALL BE LOCATED RANDOMLY ACROSS THE FILL SITE WITH ONE (1) TEST PER 500M² (MIN ONE (1) TEST PER 300MM LAYER). THIS EXCLUDES PAVEMENTS AND STRUCTURAL FILL UNDER AND AROUND STRUCTURES.
- 4 TRENCH BACKFILL – TESTING AT RATE OF AT LEAST 1 TEST PER TWO LAYER PER 40 LINEAR METRES OF TRENCH.

GITA REPORTING

- 1 A FORTNIGHTLY REPORT IS TO BE PREPARED BY THE GITA AND SUBMITTED TO THE GEOTECHNICAL ENGINEER FOR REVIEW.
- 2 REPORT IS TO DETAIL DAILY SITE REPORTS; NATA ENDORSED TESTING RESULTS AND COMPLETED LOT REPORTS SHOWING TESTING LOCATIONS.
- 3 FINAL LEVEL 1 SUPERVISION REPORT TO BE REVIEWED BY THE GEOTECHNICAL ENGINEER TO CONFIRM CONFORMITY TO PROJECT SPECIFICATION.
- 4 ANY NON-CONFORMANCE TO THE PROJECT SPECIFICATIONS OR PLANS TO BE RECTIFIED BY THE CONTRACTOR AT THEIR SOLE COST TO THE DIRECTION AND SATISFACTION OF THE ENGINEER AND THE SUPERINTENDENT.

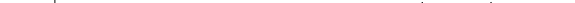
PAVEMENTS – GENERAL

- 1 PAVEMENT MATERIAL TYPES AND LAYER THICKNESSES SHALL BE AS SHOWN IN THE DESIGN DRAWINGS AND COMPLY WITH THE REQUIREMENTS OF COUNCIL'S ROADWORKS DESIGN AND CONSTRUCTION SPECIFICATION.
- 2 THE CONTRACTOR SHALL SUBMIT DETAILS OF ALL CONSTITUENTS OF THE PROPOSED BASE AND SUBBASE MATERIALS, INCLUDING SOURCE OF SUPPLY AND THE PROPOSED TYPE AND PROPORTION OF ANY BINDER, TO THE SUPERINTENDENT, SUPPORTED WITH TEST RESULTS FROM A NATA REGISTERED LABORATORY CONFIRMING THAT THE CONSTITUENTS COMPLY WITH COUNCIL REQUIREMENTS.

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A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH				TH	OUTLINE PLANNING CONSULTANTS	 Consulting Engineers Environment Water Geotechnical Civil	GENERAL LEGEND AND NOTES (SHEET 2)			
											PROJECT NAME/PLANSET TITLE					
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											16 TORRENS ROAD, GUINDEDAH, NSW LOTS 1 AND 2 DP 1226992					
											Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: www.martens.com.au	PROJECT NO. P19074.34	PLANSET NO. PS01	RELEASE NO. R16	DRAWING NO. PS01-ZZ01	REVISION A
A1 / A3 LANDSCAPE (A/LC v02.0.01)												DRAWING ID: P19074.34-PS01-R16-ZZ01				

	1	2	3	4	5	6	7	8
	3	THE CONTRACTOR MUST RECEIVE THE SUPERINTENDENT'S WRITTEN AUTHORITY TO PROCEED PRIOR TO DELIVERY OF PAVEMENT MATERIALS TO SITE.		PIPE PRIOR TO ACCESS BY 15TONNE EXCAVATOR AND COMPACTION WHEEL. 550MM FOR 10 TONNE VIBRATORY SMOOTH DRUM ROLLER.	3	ALL UTILITY WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, SERVICE PROVIDER REQUIREMENTS AND COUNCIL SPECIFICATIONS.	2	ALL TRAFFIC IS TO BE EXCLUDED FROM NEWLY RE-VEGETATED AREAS BY THE ERECTION OF SUITABLE TEMPORARY BARRIER FENCING.
	4	FIELD DENSITY TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS1289.5.3.1, OR, WITH THE SUPERINTENDENT'S CONCURRENCE, WITH A NUCLEAR DENSITY METER IN ACCORDANCE WITH RELEVANT STANDARDS.	19	THE CONTRACTOR IS TO UNDERTAKE ALL PAVEMENT SEALING WORKS IN ACCORDANCE WITH THE PAVEMENT DESIGN WITHIN THE CIVIL WORKS ENGINEERING PLANS AND COUNCIL'S SPECIFICATION FOR ROADWORKS.	4	CONTRACTOR TO ENSURE THAT RELEVANT AGREEMENTS AND ARRANGEMENTS ARE IN PLACE BETWEEN REQUIRED AGENCIES AND SERVICE PROVIDERS (E.G. TELSTRA, AUSGRID, COUNCIL) FOR ALL WORKS.	3	SITE SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL THE VEGETATION IS ESTABLISHED OR OTHERWISE DIRECTED BY THE SUPERINTENDENT OR ENGINEER.
	5	TESTING OF THE SUBGRADE SHALL BE PERFORMED BY PROOF-ROLLING, UTILISING A MINIMUM 12 TONNE STATIC MASS SMOOTH DRUM ROLLER WITHOUT VIBRATION, UNDER THE SUPERVISION OF COUNCIL. ADEQUATE COMPACTION IS INDICATED BY NO VISIBLE DEFLECTION (WITH THE HUMAN EYE) DURING EACH PASS OF THE ROLLER. SUBGRADE PROOF-ROLLING SHALL BE SUPPLEMENTED BY COMPACTIVE TESTING AS PER AS 3798.		PAVEMENT - ACCEPTANCE OF COMPACTED LAYERS	5	CONTRACTOR SHALL ENSURE THAT APPROPRIATE UTILITY SERVICES ABOVE GROUND MARKERS AND BELOW GROUND PROTECTION / IDENTIFICATION MEASURES ARE PLACED IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, SERVICE PROVIDER REQUIREMENTS AND COUNCIL SPECIFICATIONS.	4	THE CONTRACTOR IS RESPONSIBLE FOR THE REVEGETATED AREAS FOR THE PERIOD SPECIFIED IN THE CONTRACT.
	6	PAVEMENT MATERIAL SHALL NOT BE SPREAD UPON AN UNDERLYING SUBGRADE OR PAVEMENT LAYER THAT HAS NOT RECEIVED THE APPROPRIATE COMPACTION CERTIFICATION.	1	ACCEPTANCE OF WORK, WITH RESPECT TO COMPACTION, SHALL BE BASED ON DENSITY TESTING OF THE WORK IN 'LOTS' WITH A LOT DEFINED AS: - COVERING A SINGLE LAYER OF WORK CONSTRUCTED UNDER UNIFORM CONDITIONS IN A CONTINUOUS OPERATION; - FOR UNBOUND MATERIALS MAY BE EQUAL TO A DAYS OUTPUT USING THE SAME MATERIAL.	6	BASE OF SERVICES TRENCHES TO BE GRADED AT A MINIMUM OF 1% TO EITHER SUBSOIL OR STORMWATER DRAINAGE LINES.		TREES
	7	UNBOUND MATERIALS SHALL NOT BE SPREAD UPON AN UNDERLYING PAVEMENT LAYER WHICH HAS A MOISTURE CONTENT EXCEEDING 90%, THE LABORATORY OPTIMUM MOISTURE CONTENT OR WHICH HAS BECOME RUTTED OR MIXED WITH FOREIGN MATTER. THE UNDERLYING LAYER SHALL BE CORRECTED TO COMPLY BEFORE SPREADING THE NEXT LAYER OF PAVEMENT.	2	THE SUPERINTENDENT SHALL ASSESS COMPACTION OF EACH LOT BASED ON RANDOM SAMPLING OF TEST LOCATIONS FOR IN-SITU DRY DENSITY TESTING.	7	CONTRACTOR SHALL ENSURE THAT ALL LOCATED AND NEW UTILITY SERVICES WITHIN AND OUTSIDE THE SITE ARE SURVEYED BY A DULY QUALIFIED SURVEYOR AS PART OF THE 'WORK AS EXECUTED' RECORDS.	1	ALL TREE PROTECTION REQUIREMENTS IF OUTLINED IN A PROJECT BIODIVERSITY AND CONSERVATION MANAGEMENT PLAN (BCMP) OR VEGETATION MANAGEMENT PLAN (VMP) ARE TO BE COMPLIED WITH ALONG WITH THE REQUIREMENTS OF THE PROJECT REF.
	8	THE COST OF CORRECTING AN UNDERLYING LAYER TO COMPLY SHALL BE BORNE BY THE CONTRACTOR.	3	THE CONTRACTOR SHALL ARRANGE FOR TESTING TO ASSESS COMPACTION ON THE BASIS OF 10 TESTS PER 5000 SQ.M WITH A MINIMUM OF 6 TESTS PER LOT, AND PRESENT THE RESULTS TO THE SUPERINTENDENT FOR APPROVAL.		STORMWATER	2	A TREE RETENTION PLAN IS TO BE KEPT ON SITE INDICATING TREES TO BE RETAINED AND AREAS LEFT UNDISTURBED THAT ARE TO BE CORDONED OFF FROM CONSTRUCTION WORKS.
	9	EACH LAYER OF MATERIAL SHALL BE DEPOSITED AND SPREAD IN A CONCURRENT OPERATION AND, AFTER COMPACTION, THE FINISHED SURFACE LEVELS OF THE BASE AND SUBBASE COURSES SHALL BE WITHIN THE PERMITTED TOLERANCES STATED IN COUNCILS SPECIFICATION WITHOUT SUBSEQUENT ADDITION OF MATERIAL. THE THICKNESS OF EACH COMPACTED LAYER SHALL BE NEITHER LESS THAN 100MM NOR MORE THAN 150MM FOR ALL PAVEMENT LAYER TYPES, UNLESS APPROVED BY THE SUPERINTENDENT.	4	THE COSTS OF ALL TESTING FOR COMPACTION ASSESSMENT SHALL BE BORNE BY THE CONTRACTOR.	1	STORMWATER TO BE IN ACCORDANCE WITH COUNCIL REQUIREMENTS AND THE LATEST VERSION OF THE FOLLOWING APPLICABLE STANDARDS: A AS/NZS 3500 (ALL PARTS) B AS/NZS 2566.1 C AS/NZS 2566.2 D AS/NZS 5065 E AS1597.1 OR AS1597.2 F AS 4139 G AS 3725 H AS/NZS 1254 I AS/NZS 2032	3	PRIOR TO WORK COMMENCING, TREE PROTECTION FENCING MUST BE ERECTED AROUND THE TREES THAT ARE TO BE RETAINED AT A 3M SETBACK. THE TREE FENCING MUST BE CONSTRUCTED OF 1.8 METRE CYCLONE CHAINMESH FENCE. THE TREE PROTECTION FENCING MUST BE MAINTAINED IN GOOD WORKING ORDER UNTIL THE COMPLETION OF ALL BUILDING OR DEVELOPMENT WORKS. A STATEMENT OF COMPLIANCE FROM A QUALIFIED TREE SURGEON OR ENVIRONMENTAL CONSULTANT SHALL BE SUBMITTED TO THE PCA PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE. PENALTIES APPLY FOR NON-COMPLIANCE.
	10	WHEN SPREAD FOR COMPACTION PROCESS THE MOISTURE CONTENT OF THE BASE OR SUBBASE MATERIALS SHALL BE IN THE RANGE OF 60-90% OF LABORATORY OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AS1289.5.2.	5	ACCEPTABLE COMPACTION PERFORMANCE STANDARDS ARE SUMMARISED AS FOLLOWS: - BASE AND SUBBASE MIN 98 % MODIFIED COMPACTIVE EFFORT. REFER TO COUNCILS SPECIFICATION FOR ROADWORK & DRAINAGE ASSOCIATED WITH SUBDIVISION OR OTHER DEVELOPMENT. - SUBGRADE TO BE 100 % STANDARD COMPACTIVE EFFORT. - FILL TO BE 95 % STANDARD COMPACTIVE EFFORT.	2	ALL PIPES TO BE SPIGOT AND SOCKET, RUBBER RING JOINTED WITH MINIMUM GRADE OF SN4. CULVERTS TO BE IN ACCORDANCE WITH COUNCIL SPECIFICATIONS.	4	TO PREVENT DAMAGE TO TREE ROOTS, EXCAVATION (FOR SERVICES AND OTHER WORKS), CHANGE OF SOIL LEVEL (CUT OR FILL), PARKING (VEHICLES OR PLANT), OR PLACEMENT OF BUILDING MATERIALS (INCLUDING DISPOSAL OF CEMENT SLURRY AND WASTE WATER) WITHIN THE SPECIFIED TREE PROTECTION SETBACKS, AND WITHIN 3M OF ALL OTHER TREES TO BE RETAINED ONSITE, IS STRICTLY FORBIDDEN. NO TREE ROOTS LOCATED WITHIN THE SPECIFIED TREE SETBACK/S, SHALL BE SEVERED OR INJURED IN THE PROCESS OF ANY SITE WORKS DURING THE CONSTRUCTION OR LANDSCAPING PHASES OF THE APPROVED PROJECT. THE APPLICANT SHALL ENSURE THAT ALL UNDERGROUND SERVICES (I.E. WATER, DRAINAGE, GAS, AND SEWER) SHALL NOT BE LAID WITHIN 3M OF ANY TREE LOCATED ON THE PROPERTY PROTECTED UNDER COUNCIL'S TREE PRESERVATION ORDER OR LISTED FOR PROTECTION IN THE APPROVED PROJECT BCMP/VMP.
	11	EACH LAYER OF THE BASE AND SUBBASE COURSES SHALL BE UNIFORMLY COMPACTED OVER ITS ENTIRE AREA AND DEPTH TO SATISFY THE REQUIREMENT OF RELATIVE COMPACTION SET OUT IN COUNCILS ROADWORKS SPECIFICATION.		PAVEMENT - PROPERTY ENTRANCE	3	PIPELINES AND DRAINAGE LINES IN ROADS AND TRAFFICABLE AREAS MUST BE BACKFILLED WITH APPROVED GRANULAR MATERIAL UNLESS OTHERWISE APPROVED BY COUNCIL/ENGINEER.		SIGNAGE & LINE MARKING
	12	WATERING AND COMPACTION PLANT SHALL NOT BE ALLOWED TO STAND ON THE PAVEMENT BEING COMPACTED.	3	CONCRETE SLAB SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING THICKNESS: FOR MORE THAN TWO DEWELLINGS, COMMERCIAL AND LIGHT INDUSTRIAL 32MPA CONCRETE, 150MM THICK + 1 LAYER OF F72 FABRIC ON 150MM DGB20 SUB-BASE.	4	THREE (3) METRES OF SUBSOIL DRAINAGE WRAPPED IN GEOTEXTILE STOCKING MUST BE PROVIDED TO ALL DOWNSTREAM PITS & HEADWALLS	1	ON-SITE SIGNAGE IS REQUIRED TO CLEARLY IDENTIFY THE PCA AND THE PRINCIPAL CONTRACTOR (THE COORDINATOR OF THE BUILDING WORK) PURSUANT TO THE ENVIRONMENTAL PLANNING AND ASSESSMENT AMENDMENT (QUALITY OF CONSTRUCTION).
	13	ON SECTIONS OF PAVEMENT WITH ONE-WAY CROSSFALL, COMPACTION SHALL BEGIN AT THE LOW SIDE OF THE PAVEMENT AND PROGRESS TO THE HIGH SIDE. ON CROWNED SECTIONS, COMPACTION SHALL BEGIN AT THE SIDES AND PROGRESS TOWARDS THE CROWN. EACH PASS OF THE ROLLERS SHALL BE PARALLEL WITH THE ROADWAY CENTRELINE AND UNIFORMLY OVERLAP EACH PRECEDING PASS. THE OUTER METRE OF BOTH SIDES OF THE PAVEMENT SHALL RECEIVE AT LEAST TWO MORE PASSES BY THE COMPACTION PLANT THAN THE REMAINDER OF THE PAVEMENT.	4	REINFORCING SHALL HAVE APPROXIMATELY 40MM TOP COVER AND SHOULD BE SUPPORTED DURING CONSTRUCTION BY BAR CHAIRS AT 1 METER CENTRES. THE REINFORMENT SHOULD NOT BE CONTINUOUS THROUGH A CONTROL JOINT.	5	ALL PITS MUST BE BENCHED AND STREAMLINED. PROVIDE SL72 REINFORCEMENT AND GALVANISED STEP IRONS IN ALL PITS OVER 1.2-METRES DEEP AS MEASURED FROM THE TOP OF GRATE TO THE PIT INVERT.	2	ALL SIGNAGE REQUIREMENTS AS SPECIFIED IN THE CTMP ARE TO BE IMPLEMENTED PRIOR TO AND DURING CONSTRUCTION WORKS.
	14	AT LOCATIONS WHERE IT WOULD BE IMPRACTICABLE TO USE SELF PROPELLED COMPACTION PLANT, COMPACTION SHALL BE ACHIEVED BY HAND-OPERATED PLANT APPROVED BY THE SUPERINTENDENT.	5	A 150MM THICK COMPACTED, GRANULAR SUB-BASE SHALL BE PROVIDED FOR ALL COMMERCIAL FOOTWAY CROSSINGS. A 50MM THICK COMPACTED, GRANULAR SUB-BASE SHALL BE PROVIDED UNDER ALL OTHER CONCRETE FOOTWAY CROSSINGS.	6	CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 32MPA AT 28-DAYS UNLESS OTHERWISE APPROVED BY COUNCIL ENGINEER.	3	WHERE TEMPORARY SIGNS ARE TO BE REUSED THEY ARE TO BE WASHED AND CLEANED WHERE REQUIRED.
	15	IF ANY UNSTABLE AREAS DEVELOP DURING ROLLING, THE UNSTABLE MATERIAL SHALL BE REJECTED AND REMOVED FOR THE FULL DEPTH OF THE LAYER, DISPOSED OF AND REPLACED WITH FRESH MATERIAL. THIS OPERATION WILL BE AT THE COST OF THE CONTRACTOR.	6	MASTIC JOINTS 5MM THICK ARE TO BE PROVIDED AT THE PROPOERTY BOUNDARY AND AT THE REAR OF THE GUTTER CROSSING (LAYBACK). DUMMY JOINTS SHALL BE PROVIDED AT EITHER SIDE OF THE FOOTWAY WHERE APPLICABLE.	7	ADEQUATE PROVISION IS TO BE MADE TO PREVENT SCOURING AND SEDIMENTATION FOR ALL DRAINAGE WORKS IN ACCORDANCE WITH COUNCIL'S REQUIREMENTS.	4	ALL EXISTING SIGNS WHICH ARE DAMAGED AND NON LEGIBLE ARE TO BE REPLACED.
	16	THE PLACEMENT OF SUBSEQUENT LAYERS SHALL NOT BE ALLOWED UNTIL THE REQUISITE TESTING HAS BEEN COMPLETED AND THE TEST RESULTS FOR EACH LAYER HAVE BEEN ACCEPTED BY THE SUPERINTENDENT.	7	CONCRETE CROSSOVERS SHOULD USUALLY HAVE A BROOM FINISH UNLESS IT HAS A GRADIENT STEEPER THAN 1 (VERTICAL) TO 5 (HORIZONTAL) WHEN IT SHOULD BE FINISHED WITH A WOODEN FLOAT. THE FINISH IS TO BE A UNIFORM, NON-SLIP SURFACE. ALL EDGES ARE TO BE ROUNDED WITH A 5MM EDGING TOOL.	8	CATCH DRAINS MUST BE CONSTRUCTED AS REQUIRED BY THE APPROVED PLANS OR PCA.	5	PERMANENT ROAD SIGNPOSTING AND LINE MARKING SHALL CONFORM TO AS1742.2 'TRAFFIC CONTROL DEVICES FOR GENERAL USE'. RAISED RETRO-REFLECTIVE PAVEMENT MARKERS TO CONFORM TO AS1906 'RETRO-REFLECTIVE MATERIALS AND DEVICES FOR ROAD TRAFFIC CONTROL PURPOSES'. ALL APRONS AND KERB FACES ON ISLANDS TO BE DELINEATED BY REFLECTIVE WHITE MARKING. INSTALLATION TO BE IN ACCORDANCE WITH PLAN APPROVED BY LOCAL TRAFFIC COMMITTEE AND TO COUNCIL SPECIFICATIONS.
	17	ANY UNBOUND MATERIAL IN A LAYER THAT HAS ATTAINED THE SPECIFIED RELATIVE COMPACTION BUT SUBSEQUENTLY BECOMES WETTED UP SHALL BE DRIED OUT AND, IF NECESSARY, UNIFORMLY RECOMPACTED AND TRIMMED TO MEET THE SPECIFIED DENSITY REQUIREMENTS AND LEVEL TOLERANCES.	8	ANY DAMAGED, DEFACED OR OTHERWISE UNSATISFACTORY SECTION SHALL BE REMOVED AND REPLACED.	9	SOIL AND WATER MANAGEMENT PLANS ARE TO BE FOLLOWED FOR ALL DISTURBED SITES AND ADHERED TO AT ALL TIMES DURING THE CONSTRUCTION AND MAINTENANCE PERIODS.	6	CONTRACTOR TO INSTALL STREET SIGNS TO COUNCIL STANDARD.
	18	COVER/LIVE LOADING REQUIREMENTS IN ACCORDANCE WITH AS/NZS 3725:2007. MINIMUM 500MM COMPACTED FILL REQUIRED OVER CLASS 3		UTILITIES	10	REFER TO COUNCIL'S STANDARD DRAWING WSC.D5.6 AND WSC.D5.11 FOR CONSTRUCTION DETAIL.		
						REVEGETATION OF DISTURBED AREAS		
						1 ALL EARTHWORK AREAS ARE TO BE REINSTATED BY THE CONTRACTOR TO THE DIRECTION AND SATISFACTION OF THE SUPERINTENDENT. AS A MINIMUM, ALL AREAS EXCLUDING PAVEMENT AND ROCK LINED AREAS OR OTHER AREAS NOMINATED FOR SPECIFIC LANDSCAPING ARE TO BE FINISHED WITH 150 MM THICK LAYER OF SITE SOURCED (OR APPROVED EXTERNAL SUPPLY TOPSOIL) AND SPRAY GRASSED OR TURFED ASAP FOLLOWING COMPLETION OF WORKS IN ANY ONE AREA.		

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	 Consulting Engineers Environment Water Geotechnical Civil Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: www.martens.com.au	DRAWING TITLE			
A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH				TH	OUTLINE PLANNING CONSULTANTS		GENERAL LEGEND AND NOTES (SHEET 3)			
								DISCLAIMER & COPYRIGHT This plan must not be used for construction unless signed as approved by principal certifying authority. All measurements in millimetres unless otherwise specified. This drawing must not be reproduced in whole or part without prior written consent of Martens & Associates Pty Ltd. (C) Copyright Martens & Associates Pty Ltd			PROJECT NAME/PLANSET TITLE RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS 16 TORRENS ROAD, GUNNEDAH, NSW LOTS 1 AND 2 DP 1226992					
A1 / A3 LANDSCAPE (A3LC_v02.0.0)												DRAWING ID: P1907434-PS01-R16-ZZ02 				

SOIL AND WATER MANAGEMENT (SEDIMENT AND EROSION CONTROL PLAN)

- 1
- TEMPORARY SEDIMENTATION AND EROSION CONTROLS (SEC) ARE TO BE CONSTRUCTED PRIOR TO COMMENCEMENT OF ANY WORK TO ELIMINATE THE DISCHARGE OF SEDIMENT FROM THE SITE. THE CONTROLS ARE TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF LANDCOM'S "MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION", VOLUME 1, 4TH EDITION, MARCH 2004, (THE BLUE BOOK).
- 2
- THE CONTRACTOR IS TO INFORM ALL SUBCONTRACTORS OF THEIR RESPONSIBILITIES IN RELATION TO SEC.
- 3
- THE CONTRACTOR SHALL REGULARLY MAINTAIN SEC DEVICES AND REMOVE ACCUMULATED SILT FROM SUCH DEVICES BEFORE NO MORE THAN 60% OF THEIR SEDIMENT STORAGE CAPACITY IS LOST. ALL THE SILT REMOVED SHALL BE DISPOSED OF AS DIRECTED BY THE SUPERINTENDENT.
- 4
- NO SILT IS TO BE PLACED OUTSIDE THE LIMIT OF WORKS. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE AT LEAST UNTIL ALL DISTURBED AREAS ARE REVEGETATED AND FURTHER AS MAY BE DIRECTED BY THE SUPERINTENDENT OR ENGINEER.
- 5
- AREAS OF SITE DISTURBANCE ARE TO BE MINIMISED AT ANY ONE TIME WITH DEVELOPMENT STAGED SUCH THAT A NEW AREA IS NOT TO COMMENCE UNTIL THE PREVIOUS DISTURBED AREA IS FULLY STABILISED.
- 6
- ALL WORKS MUST BE PERFORMED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.
- 7
- THE CONTRACTOR SHALL PROTECT OVERLAND FLOW PATHS, DRAINS, ADJOINING LAND AND DOWNSTREAM WATER QUALITY FROM SEDIMENTATION. ACCORDINGLY, SEDIMENT AND EROSION CONTROL MEASURES MUST BE IMPLEMENTED PRIOR TO EXCAVATION, AND MAINTAINED DURING CONSTRUCTION.
- 8
- ACCESS TO AND EXIT FROM THE SITE SHALL BE RESTRICTED TO ONE DESIGNATED APPROVED AREA. INCLUDE ADEQUATE MEASURES TO REMOVE SOIL FROM VEHICLES LEAVING THE SITE SO AS TO MAINTAIN PUBLIC ROADS IN A CLEAN CONDITION.
- 9
- VEGETATION NOT DIRECTLY AFFECTED BY THE PROPOSAL MUST BE PROTECTED BY A 'NO GO' BOUNDARY TO FACILITATE THE FILTRATION AND COLLECTION OF RUNOFF POLLUTION EMANATING FROM THE WORKS. CONTRACTOR TO ENSURE THAT NO SPOIL OR FILL ENCROACHES UPON ADJACENT BUSHLAND FOR THE DURATION OF THE WORKS.
- 10
- ALL DISTURBED AREAS ARE TO BE STABILISED BY TURFING, MULCHING, PAVING OR OTHERWISE SUITABLY STABILISED WITHIN 30 DAYS OF COMPLETION.
- 11
- DISTURBED AREAS OUTSIDE THE SPECIFIED WORKS AREAS SHALL BE REHABILITATED/REINSTATED BY THE CONTRACTOR USING APPROVED METHODS OF EROSION MITIGATION SUCH AS MULCHING WITH INDIGENOUS PLANT SPECIES OR OTHER SUITABLE APPROVED STABILISING PROCESSES WITHIN SEVEN DAYS AS DIRECTED BY THE SUPERINTENDENT.
- 12
- TOPSOIL IS TO BE LIGHTLY ROLLED TO AVOID EROSION.
- 13
- THE FOLLOWING SEDIMENT CONTROL MEASURES ARE REQUIRED TO BE PROVIDED IN CONJUNCTION WITH THE ATTACHED SEDIMENT AND EROSION CONTROL PLAN.

- B
- ALL RUNOFF AND EROSION CONTROLS ARE TO BE INSTALLED BEFORE ANY WORKS ARE CARRIED OUT AT THE SITE.
- C
- ALL CONTAMINATED SURFACE WATERS AND DEBRIS FROM THE SITE MUST BE SCREENED, COLLECTED AND POLLUTANTS CAPTURED WITHIN THE SITE.
- D
- STORMWATER INLETS AND DRAINS RECEIVING STORMWATER MUST BE PROTECTED AT ALL TIMES DURING WORK ON SITE.
- E
- MOVEMENT OF WATER MUST BE CONTROLLED BY DIVERTING UPSLOPE CLEAN SURFACE RUNOFF (VIA DIVERSION DRAINS AND SEDIMENT FENCING) AROUND THE DISTURBED AREAS.
- F
- CONTAMINATION OF SURFACE WATERS ON DOWNSLOPE LANDS MUST BE MITIGATED BY INSTALLING SEDIMENT CONTROL FENCES DOWNSLOPE OF THE DISTURBED AREAS TO CAPTURE SEDIMENT AND DEBRIS ESCAPING FROM THE SITE.

- G
- GEOFABRIC SEDIMENT FENCING MUST BE INSTALLED PARALLEL TO THE PROPOSED WORKS OR ALONG THE NATURAL CONTOURS OF THE SITE.
- H
- SEDIMENT FENCING MUST BE SECURED BY POST (WHERE METAL STAR PICKETS ARE USED, PLASTIC SAFETY CAPS SHALL BE USED) AT TWO-METRE INTERVALS WITH THE GEOTEXTILE FABRIC EMBEDDED 200MM INTO SOIL. ONE METRE RETURNS MUST BE INSTALLED AT TWENTY-METRE INTERVALS ALONG THE SEDIMENT FENCING.
- I
- STOCKPILES OF TOPSOIL, SAND, AGGREGATE, SPOIL OR OTHER MATERIAL SHALL BE STORED CLEAR OF ANY DRAINAGE PATH OR EASEMENT, NATURAL WATERCOURSE, FOOTPATH, KERB OR ROAD SURFACE AND SHALL HAVE MEASURES IN PLACE TO THE SATISFACTION OF THE SUPERINTENDENT ACTING REASONABLY, TO PREVENT THE MOVEMENT OF SUCH MATERIAL OFF SITE.
- J
- DRIVEWAY ACCESS PATHS MUST BE STABILISED WITH NEEDLE-PUNCHED GEOTEXTILE COVERED BY A MINIMUM 150MM THICK LAYER OF COARSE GRAVEL, AGGREGATE, OR RECYCLED CRUSHED CONCRETE.
- K
- SEDIMENT TRAPS ARE TO BE INSTALLED DOWNSLOPE OF THE SITE TO FACILITATE THE CAPTURE OF SEDIMENT.
- L
- STREET SWEEPING MUST BE UNDERTAKEN AS REQUIRED DURING AND AFTER EXCAVATION AND CONSTRUCTION UNTIL THE SITE IS FULLY ESTABLISHED.
- M
- THE CONTRACTOR SHALL MAINTAIN DUST CONTROL UNTIL FINAL COMPLETION OF WORKS.
- N
- DURING WINDY WEATHER, LARGE, DISTURBED, UNPROTECTED AREAS SHALL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
- O
- EROSION AND SEDIMENT CONTROL MEASURES MUST BE MAINTAINED IN GOOD WORKING ORDER, AND BE REPAIRED OR REPLACED THROUGHOUT THE COURSE OF WORKS ON SITE.
- P
- THE CONTRACTOR'S RESPONSIBILITY IS TO ENSURE ALL NECESSARY MEASURES ARE TAKEN SO AS TO PROTECT ALL DISTURBED AREA. ALL ADDITIONAL COSTS ARE TO BE REFLECTED IN THE CONTRACT PRICE EVEN IF SUCH MEASURES ARE NOT INDICATED ON THE SEDIMENT AND EROSION CONTROL PLAN.
- Q
- THE CONTRACTOR MUST COMMENCE REHABILITATION IMMEDIATELY FOLLOWING ANY SITE DISTURBANCE INCLUDING REGRADING, FORMATION AND REVEGETATION WORKS.
- R
- THE CONTRACTOR SHALL REGULARLY WATER REVEGETATED AREAS UNTIL EFFECTIVE COVER HAS PROPERLY ESTABLISHED AND VEGETATION IS GROWING VIGOROUSLY. MAINTENANCE IS TO CONTINUE UNTIL ALL VEGETATION IS WELL ESTABLISHED AND INDEPENDENT OF FURTHER WATER APPLICATIONS.
- S
- KIKUYU NOT TO BE USED FOR TURFING OF ANY DISTURBED AREA.

GEOTEXTILES

- 1
- GEOTEXTILES SHALL BE NON-WOVEN, NEEDLE PUNCHED, CONTINUOUS FILAMENT AND POLYESTER.
- 2
- ALL GEOTEXTILE USED ARE TO COMPLY WITH AS 3706.
- 3
- GEOTEXTILES WITH THE FOLLOWING MINIMUM PROPERTIES TO RTA R63 SHALL BE USED WHERE SPECIFIED WITHIN THE PLANS:-

CLASS	GRAB TENSILE STRENGTH (N) Q	TRAPEZOIDAL TEAR STRENGTH (N) Q	CBR BURST STRENGTH (N)	G RATING (-) Q	PORE SIZE (UM) MEAN	FLOW RATE (L/M ² /S) MEAN
A	500	180	1720	900	≤ 120	>50
B	700	250	2250	1350	≤ 120	>50
C	900	350	3200	2000	≤ 120	>50
D	1200	450	4400	3000	≤ 120	>50
E	1600	650	6400	4500	≤ 120	>50

- 4
- GEOTEXTILE MUST BE DELIVERED TO THE SITE AT LEAST 14 DAYS PRIOR TO COMMENCEMENT OF INSTALLATION.
- 5
- CONTRACTOR TO PROVIDE A CERTIFICATE OF COMPLIANCE THAT THE GEOTEXTILE COMPLIES WITH TEST RESULTS REPORTED ON NATA ENDORSED TEST DOCUMENTS; THE CERTIFICATE MUST NOT BE MORE THAN 12 MONTHS OLD.
- 6
- AT ALL JOINS GEOTEXTILES ARE TO BE LAPPED BY NOT LESS THAN 300 MM OR GREATER IF SPECIFIED BY MANUFACTURER. WHERE UNDERLYING MATERIAL IS < CBR 2 LAP IS TO BE INCREASED AS SPECIFIED BY ENGINEER OR SUPPLIER.
- 7
- WHERE INITIAL LAYER OVER GEOTEXTILE HAS D50<150 MM THE INITIAL LAYER OF PLACED LOOSE MATERIAL IS TO BE A MINIMUM OF 300 MM OR 3 TIMES THE D50 (WHICHEVER THE GREATER).
- 8
- WHERE INITIAL LAYER OVER GEOTEXTILE HAS D50>150 MM THE INITIAL LAYER OF PLACED LOOSE MATERIAL IS TO BE A MINIMUM OF 500 MM OR 2 TIMES THE D50 (WHICHEVER THE GREATER).
- 9
- PLANT AND EQUIPMENT ARE NOT TO TRAVERSE PLACED GEOTEXTILE WITHOUT SUPERINTENDENTS PERMISSION UNTIL FIRST LAYER OF COVER MATERIAL IS PLACED.

PRE-COMMENCEMENT BRIEFING

- 1
- A PRE-CONSTRUCTION MEETING IS TO BE HELD BETWEEN PROJECT ENGINEERS, THE SUPERINTENDENT AND CONTRACTOR SO ALL PARTIES INVOLVED UNDERSTAND EARTHWORK REQUIREMENTS AND POTENTIAL DIFFICULTIES.
- 2
- LINES OF COMMUNICATION ARE TO BE CLEARLY DEFINED AT THIS MEETING.

HERITAGE

- 1
- SHOULD ANY POTENTIAL ARCHAEOLOGICAL DEPOSIT LIKELY TO CONTAIN ABORIGINAL ARTEFACTS BE IDENTIFIED DURING THE PLANNING OR HISTORICAL ASSESSMENT STAGE, APPLICATION SHALL BE MADE BY A SUITABLY QUALIFIED ARCHAEOLOGIST TO THE NATIONAL PARKS AND WILDLIFE SERVICE (NPWS) FOR AN EXCAVATION PERMIT FOR ABORIGINAL RELICS.
- 2
- THE APPLICANT SHALL COMPLY WITH THE CONDITIONS AND REQUIREMENTS OF ANY EXCAVATION PERMIT REQUIRED, AND ARE TO ENSURE THAT ALLOWANCE FOR COMPLIANCE WITH THESE CONDITIONS AND REQUIREMENTS INTO THE DEVELOPMENT PROGRAM.
- 3
- SHOULD ANY HISTORICAL RELICS BE UNEXPECTEDLY DISCOVERED IN ANY AREAS OF THE SITE, THEN ALL EXCAVATION OR DISTURBANCE TO THE AREA IS TO STOP IMMEDIATELY AND THE HERITAGE COUNCIL OF NSW SHOULD BE INFORMED IN ACCORDANCE WITH SECTION 146 OF THE HERITAGE ACT 1977.
- 4
- SHOULD ANY ABORIGINAL RELICS BE UNEXPECTEDLY DISCOVERED IN ANY AREAS OF THE SITE, THEN ALL EXCAVATION OR DISTURBANCE TO THE AREA IS TO STOP IMMEDIATELY AND THE NATIONAL PARK AND WILDLIFE SERVICE (NPWS) SHOULD BE INFORMED IN ACCORDANCE WITH SECTION 91 OF THE NATIONAL PARK AND HERITAGE ACT, 1974.
- 5
- IN THE UNLIKELY EVENT THAT SKELETAL REMAINS ARE IDENTIFIED, WORK MUST CEASE IMMEDIATELY IN THE VICINITY OF THE REMAINS AND THE AREA CORDONED OFF. THE PROPONENT WILL NEED TO CONTACT THE NSW POLICE CORONER TO DETERMINE IF THE MATERIAL IS OF ABORIGINAL ORIGIN. IF DETERMINED TO BE ABORIGINAL, THE PROPONENT MUST CONTACT THE OEH ENVIROLINE 131555, A SUITABLY QUALIFIED ARCHAEOLOGIST AND REPRESENTATIVES OF THE LOCAL REGISTERED ABORIGINAL PARTIES TO DETERMINE AN ACTION PLAN FOR THE MANAGEMENT OF SKELETAL REMAINS, FORMULATE MANAGEMENT RECOMMENDATIONS AND TO ASCERTAIN WHEN WORK CAN RECOMMENCE.

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	martens & Associates Pty Ltd Consulting Engineers Environment Water Geotechnical Civil Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8787 Email: mail@martens.com.au Internet: www.martens.com.au	DRAWING TITLE			
A	INITIAL RELEASE	28/05/2020	GM	AW/AVG	SL	TH				TH	OUTLINE PLANNING CONSULTANTS		PROJECT NAME/PLANSET TITLE RESOURCE RECOVERY FACILITY CONCEPT CIVIL WORKS 16 TORRENS ROAD, GUNNEDAH, NSW LOTS 1 AND 2 DP 1226992	GENERAL LEGEND AND NOTES (SHEET 4)		
								DISCLAIMER & COPYRIGHT This plan must not be used for construction unless signed as approved by principal certifying authority. All measurements in millimetres unless otherwise specified. This drawing must not be reproduced in whole or part without prior written consent of Martens & Associates Pty Ltd. (C) Copyright Martens & Associates Pty Ltd								
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								REVISION A								

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