

PROJECT: SAINTS PETER & PAUL ASSYRIAN PRIMARY SCHOOL

PLANSET: CIVIL WORKS PLAN - STAGE 01

CLIENT: ASSYRIAN SCHOOLS LTD.



LOCALITY PLAN
N.T.S.

NSW DEPARTMENT OF PLANNING AND ENVIRONMENT SSDA 9210
LGA: FAIRFIELD CITY COUNCIL
17 & 19 KOSOVICH PLACE, CECIL PARK, NSW
LOTS 2320 & 2321, DP 1223137

DRAWING LIST		
DWG NO	REV	TITLE
GENERAL		
PS04-A000	F	COVER SHEET
PS04-A050	E	ENGINEERING OVERVIEW PLAN
CONSTRUCTION MANAGEMENT WORKS		
PS04-B300	E	SEDIMENT & EROSION CONTROL PLAN
PS04-B310	E	SEDIMENT & EROSION CONTROL DETAILS
EARTHWORKS		
PS04-C100	E	EARTHWORKS GRADING PLAN
PS04-C200	E	EARTHWORKS SITE SECTIONS (SHEET 1)
PS04-C201	E	EARTHWORKS SITE SECTIONS (SHEET 2)
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ROADWORKS		
PS04-D100	E	ROADWORKS PLAN
PS04-D200	E	DRIVEWAY (21-MRL01) AND CARPARK AISLE (21-MRL02) LONGITUDINAL & TYPICAL SECTIONS
PS04-D201	E	CARPARK AISLE (21-MRL03) LONGITUDINAL & TYPICAL SECTIONS
DRAINAGE WORKS		
PS04-E100	E	DRAINAGE PLAN
PS04-E200	E	DRAINAGE DETAILS (SHEET 1)
PS04-E201	E	DRAINAGE DETAILS (SHEET 2)
PS04-E300	E	DRAINAGE LONGITUDINAL SECTIONS (SHEET 1)
PS04-E301	E	DRAINAGE LONGITUDINAL SECTIONS (SHEET 2)
PS04-E302	E	DRAINAGE PIT SCHEDULE
PS04-E600	E	OSD CATCHMENT PLAN, MODEL AND RESULTS
PS04-E700	E	WATER QUALITY CATCHMENT PLAN, MODEL AND RESULTS
FINAL CIVIL WORKS		
PS04-G400	E	CONCEPT PAVEMENT DESIGN
UTILITIES AND SERVICES		
PS04-H200	C	SITE PLAN - WASTEWATER MANAGEMENT
PS04-K100	D	SITE PLAN - 1 IN 20 YEAR ARI, 1 IN 100 YEAR ARI AND PMF FLOOD EXTENTS

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	MINOR AMENDMENTS	20/09/2018	CG	CG/EZ	DG	TH
E	AMENDED FROM CLIENT COMMENTS	20/09/2018	CG	CG/EZ	DG	TH
D	MINOR AMENDMENT	14/09/2018	GM	MD	MD	TH
C	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH
B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	LZ/GM/CG	CG/EZ	DG	TH

SCALE

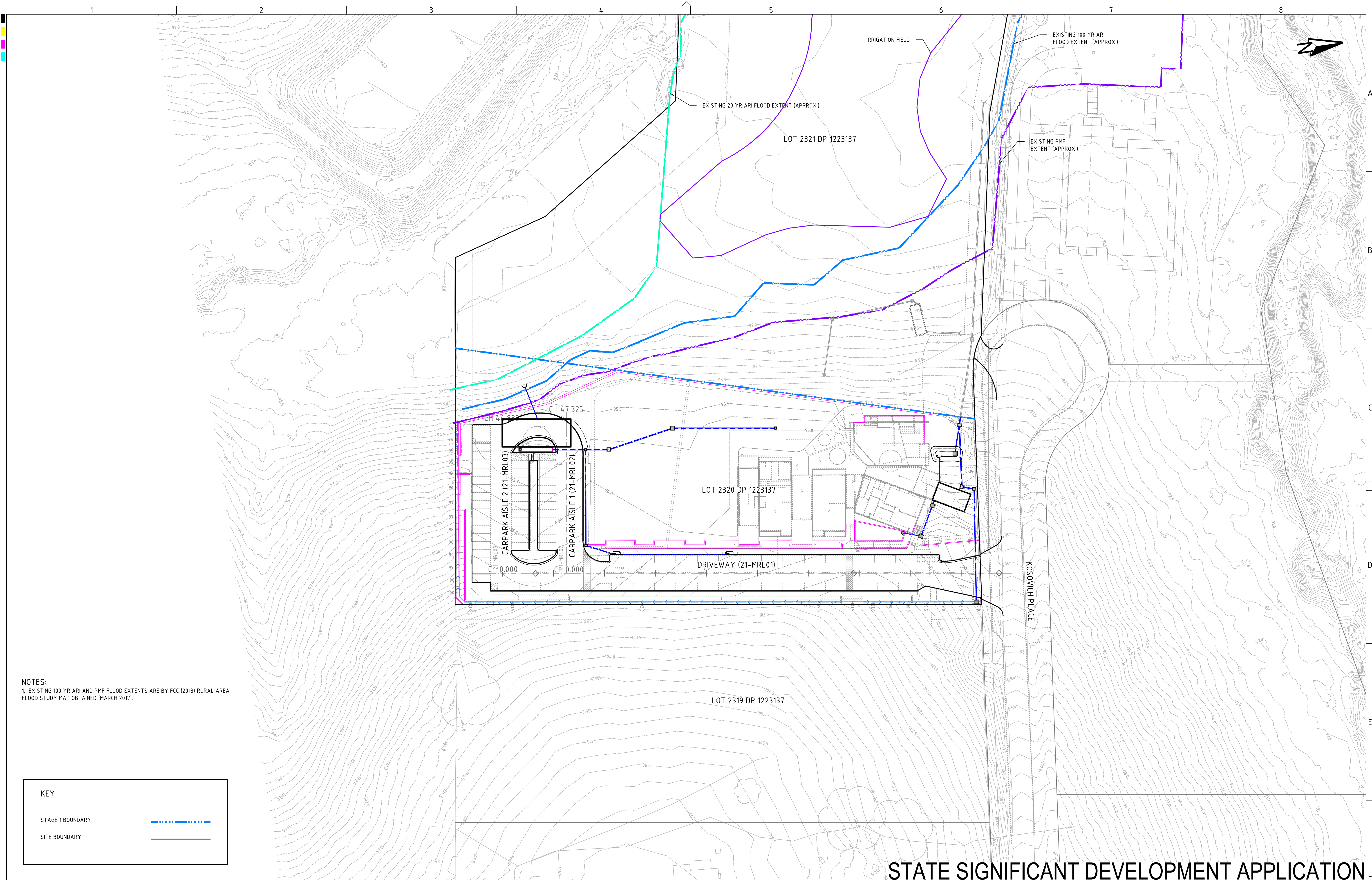
GRID	DATUM	PROJECT MANAGER
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ASSYRIAN SCHOOLS LTD.
PROJECT NAME/PLANSET TITLE ST PETER & PAUL ASSYRIAN PRI. SCHOOL CIVIL WORKS PLAN - STAGE 01 17 & 19 KOSOVICH PLACE, CECIL PARK, NSW LOTS 2302 & 2321, DP 1223167

 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				
COVER SHEET				
PROJECT NO. P1705798	PLANSET NO. PS04	RELEASE NO. R06	DRAWING NO. PS04-A000	REVISION F

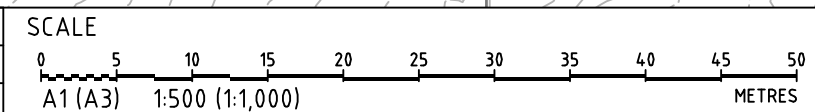
STATE SIGNIFICANT DEVELOPMENT APPLICATION



NOTES:
1. EXISTING 100 YR ARI AND PMF FLOOD EXTENTS ARE BY FCC (2013) RURAL AREA FLOOD STUDY MAP OBTAINED (MARCH 2017).

KEY	
STAGE 1 BOUNDARY	
SITE BOUNDARY	

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CIVIL WORKS PLAN - STAGE 01			
17 & 19 KOSOVICH PLACE, CECIL PARK, NSW			
LOTS 2302 & 2321, DP 1223167			



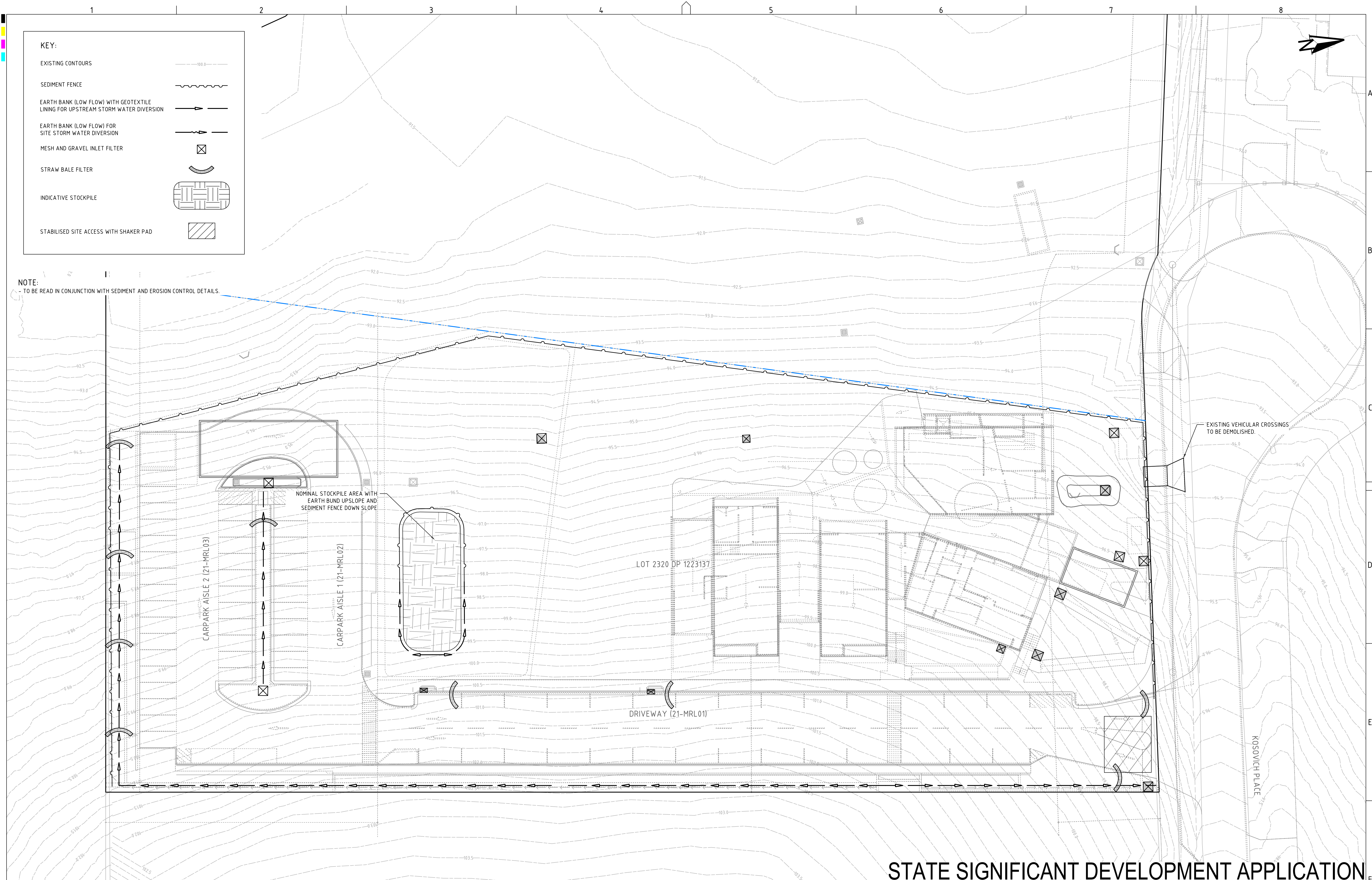
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DRAWING TITLE				
ENGINEERING OVERVIEW PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-A050	E

STATE SIGNIFICANT DEVELOPMENT APPLICATION

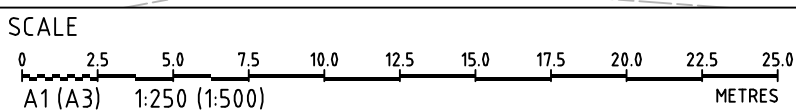
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- KEY:
- EXISTING CONTOURS
 - SEDIMENT FENCE
 - EARTH BANK (LOW FLOW) WITH GEOTEXTILE LINING FOR UPSTREAM STORM WATER DIVERSION
 - EARTH BANK (LOW FLOW) FOR SITE STORM WATER DIVERSION
 - MESH AND GRAVEL INLET FILTER
 - STRAW BALE FILTER
 - INDICATIVE STOCKPILE
 - STABILISED SITE ACCESS WITH SHAKER PAD

NOTE:
- TO BE READ IN CONJUNCTION WITH SEDIMENT AND EROSION CONTROL DETAILS.

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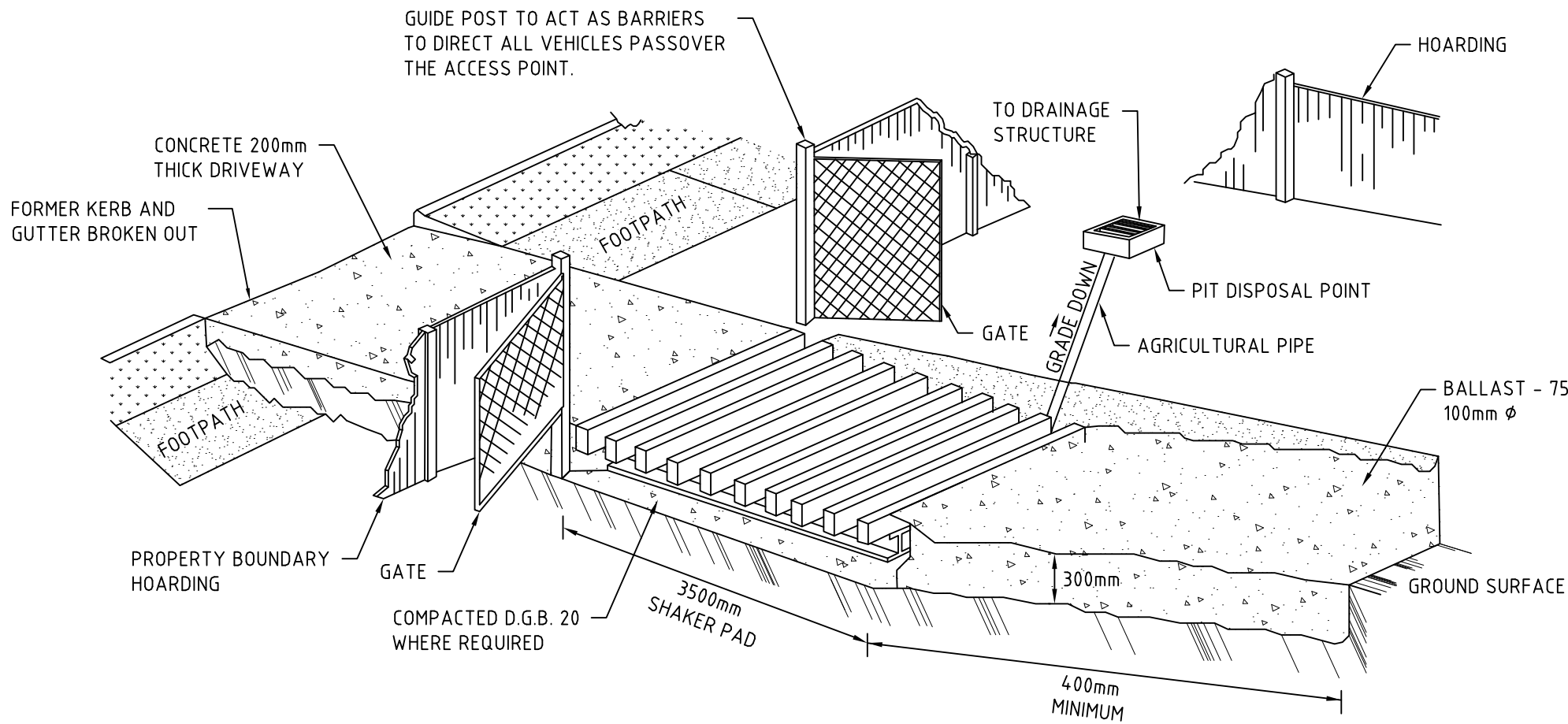
DRAWING TITLE				
SEDIMENT & EROSION CONTROL PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-B300	E

STABILISED ACCESS POINT

TYPE II SAP

THE TYPE II SAP DESIGN IS MORE DEFINED IN THAT IT REQUIRES AN AREA OF BALLAST WITHIN THE SITE COMBINED WITH A SHAKER PAD, ADJACENT THE SHAKER PAD AND IN THE PUBLIC WAY IS A TEMPORARY (CONCRETE) VEHICULAR CROSSING. (SEE DIAGRAM)

STABILISED ACCESS POINT – TYPE 2



IN BOTH TYPE I AND TYPE II SAP'S, THE TEMPORARY VEHICULAR CROSSING MUST: CONNECT TO AN EXISTING GUTTER LAYBACK (WHERE THE KERB AND GUTTER EXIST). IF A GUTTER LAYBACK DOES NOT EXIST THEN THE CONNECTION MUST BE MADE TO THE GUTTER BY REMOVING THE ADJACENT KERB SECTION ONLY. CONNECT TO A DISH CROSSING (WHERE KERB AND GUTTER DOES NOT EXIST). IF A DISH CROSSING DOES NOT EXIST, THEN IT MUST BE CONSTRUCTED IN ACCORDANCE WITH DETAILS CONTAINED IN COUNCIL'S ISSUED FOOTPATH CROSSING LEVELS.

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.

SHAKER PAD (CATTLE GRID)

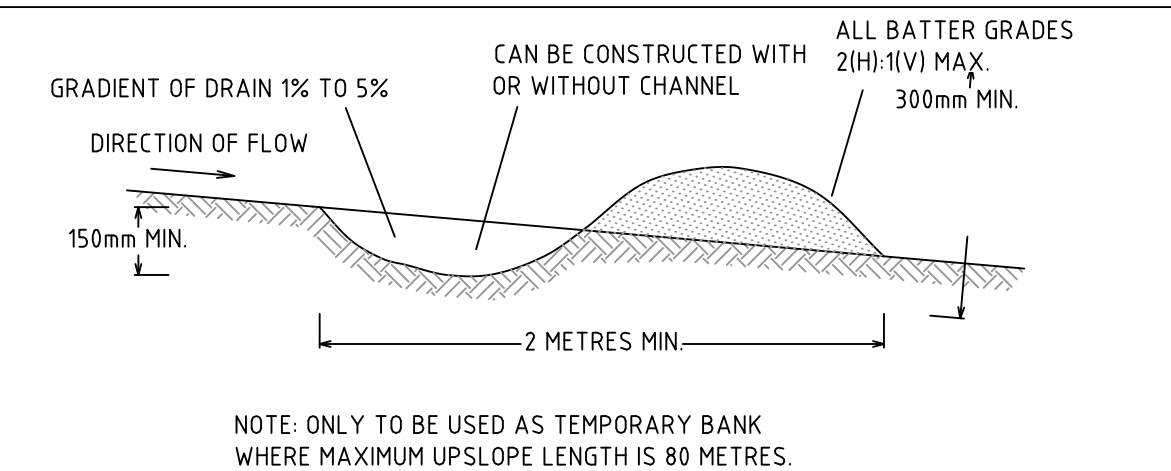
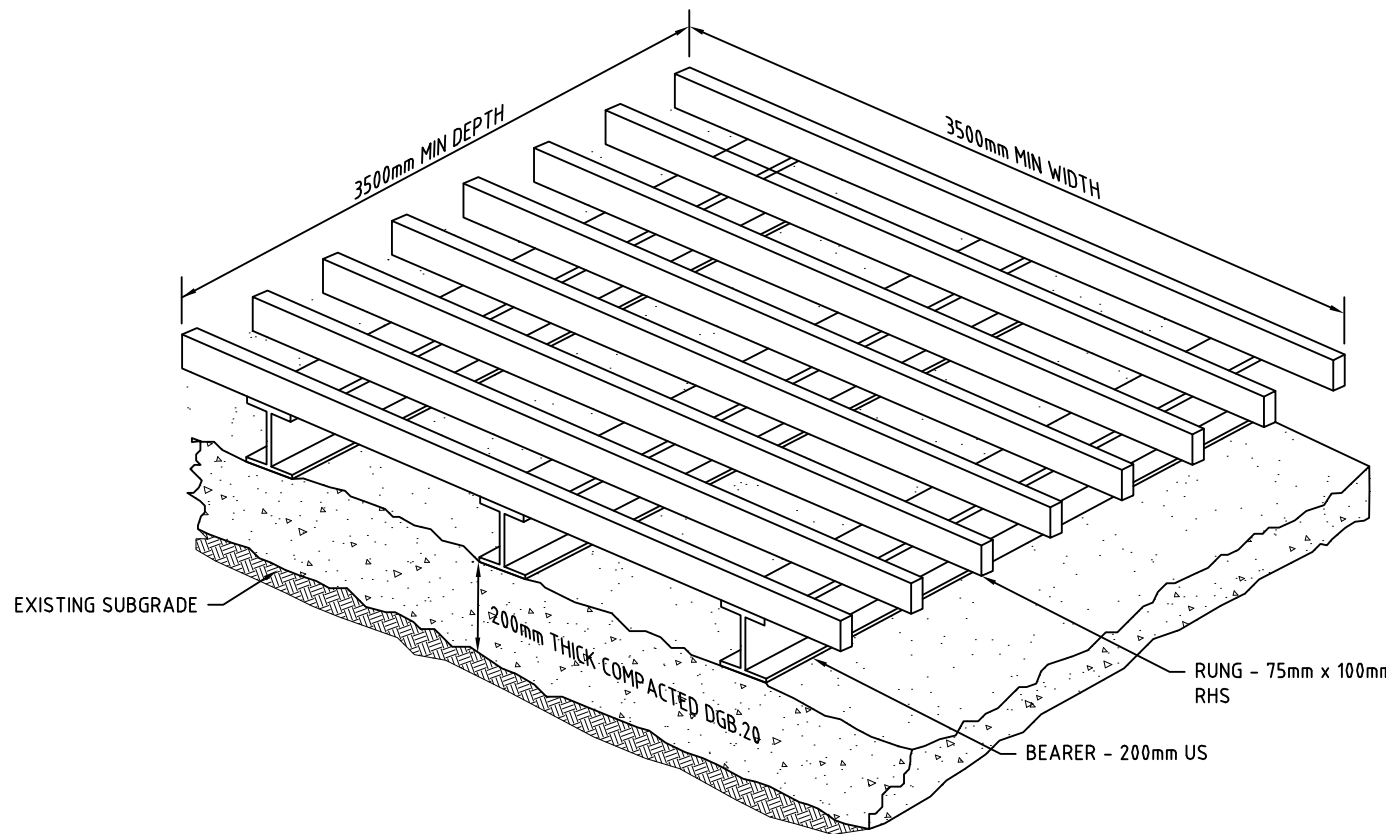
A CORRECTLY DESIGNED AND INSTALLED SHAKER PAD WILL ASSIST IN PREVENTING SEDIMENT TRANSFERE FROM A SITE. ANY STABILISED ACCESS POINT (SAP) CAN BE DESIGNED WITH A SHAKER PAD (COMPULSOPRY IN TYPE II SAP'S)

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 TYRES OF VEHICLES LEAVING THE SITE TRAVERSE THE DEVICE.

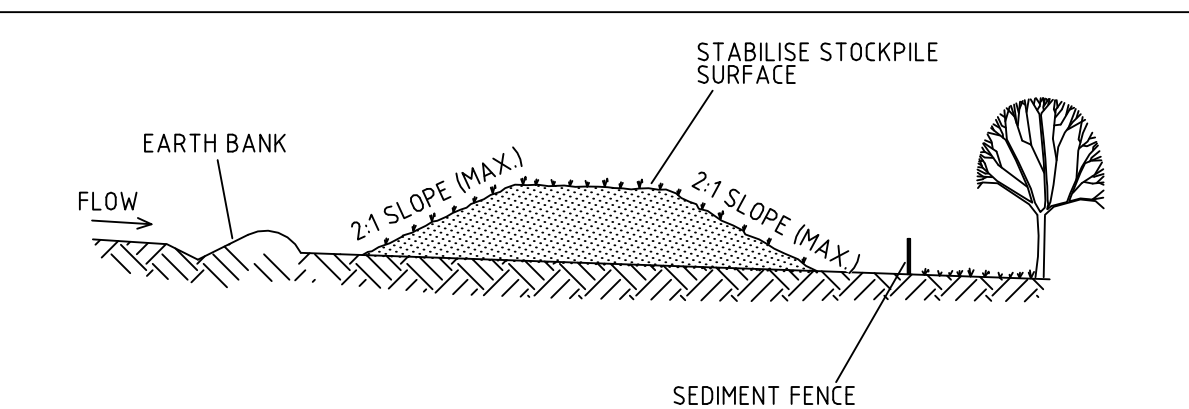


CONSTRUCTION NOTES

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

EARTH BANK (LOW FLOW)

SD 5-5



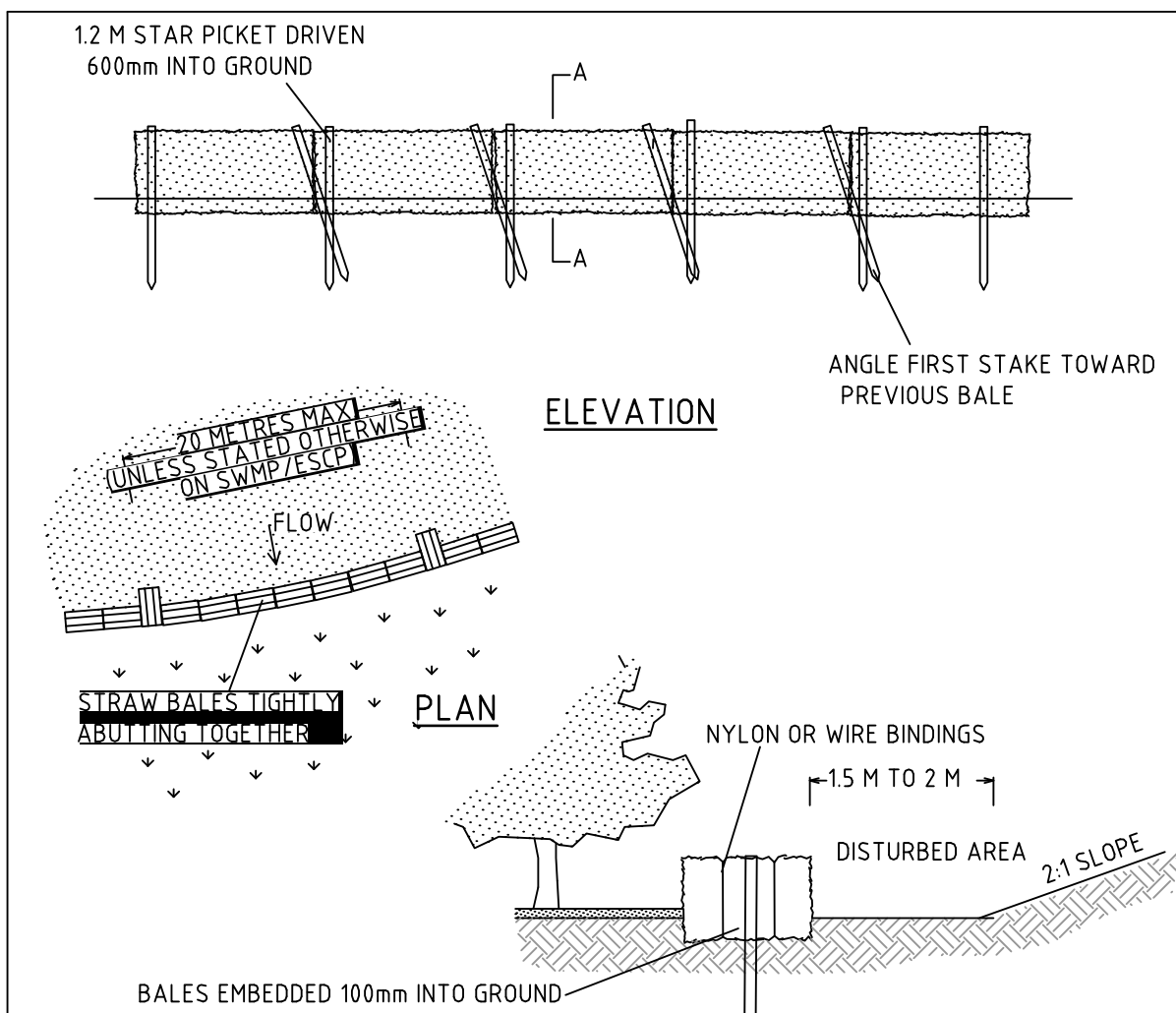
CONSTRUCTION NOTES

- PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
- CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
- WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
- 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.
- 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



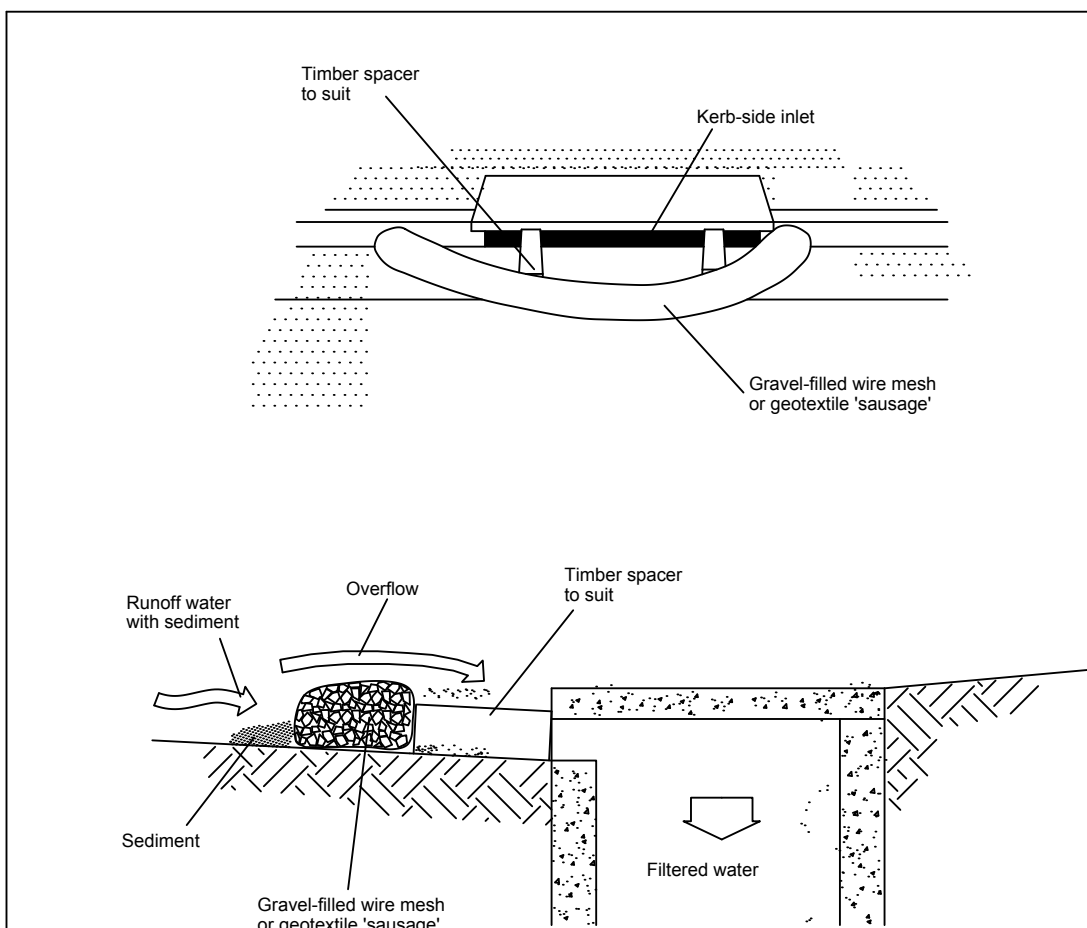
CONSTRUCTION NOTES

- CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
- PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
- 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 1.2 METRE STAR PICKETS OR STAKES. 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. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
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.

STRAW BALE FILTER



SD 6-7



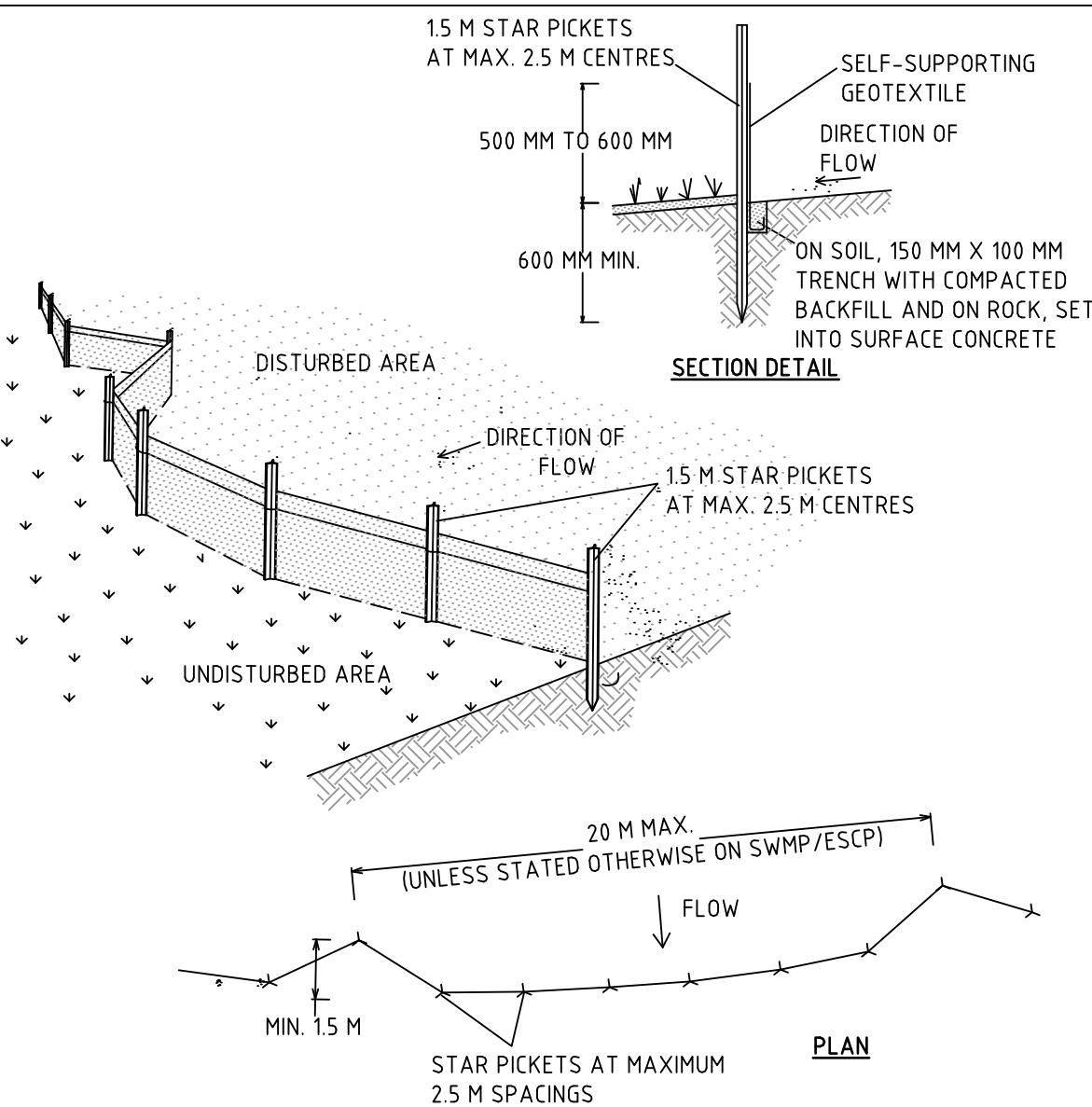
NOTE: This practice only to be used where specified in an approved SWMP/ESCP.

Construction Notes

- Install filters to kerb inlets only at sag points.
- Fabricate a sleeve made from geotextile or wire mesh longer than the length of the inlet pit and fill it with 25 mm to 50 mm gravel.
- Form an elliptical cross-section about 150 mm high x 400 mm wide.
- Place the filter at the opening leaving at least a 100-mm space between it and the kerb inlet. Maintain the opening with spacer blocks.
- Form a seal with the kerb to prevent sediment bypassing the filter.
- Sandbags filled with gravel can substitute for the mesh or geotextile providing they are placed so that they firmly abut each other and sediment-laden waters cannot pass between.

MESH AND GRAVEL INLET FILTER

SD 6-11



CONSTRUCTION NOTES

- 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.
- CUT A 150-MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
- DRIVE 15 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.
- 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.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150-MM OVERLAP.
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE

SD 6-8

STATE SIGNIFICANT DEVELOPMENT APPLICATION

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C	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH	
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A	INITIAL RELEASE	5/09/2018	Z/GM/CG	CG/EZ	DG	TH	

A1 / A3 LANDSCAPE (A1LC_002.0.01)

GRID	DATUM	PROJECT MANAGER	CLIENT
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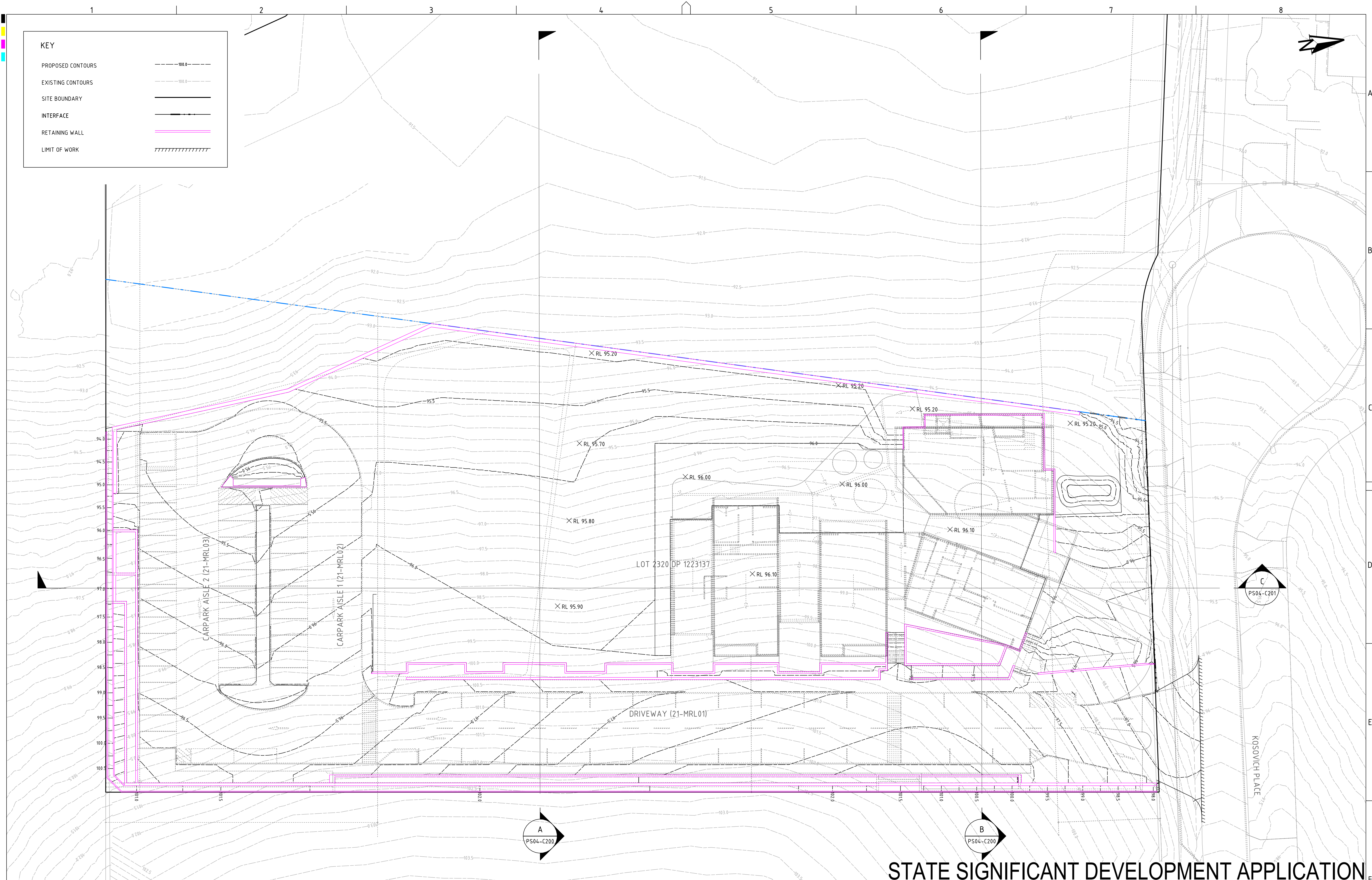
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DRAWING TITLE				
SEDIMENT & EROSION CONTROL DETAILS				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-B310	E

DRAWING ID: P1705798-PS04-R06-B310

1:1000 0 10 20 30 40 50 60 70 80 90 100



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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

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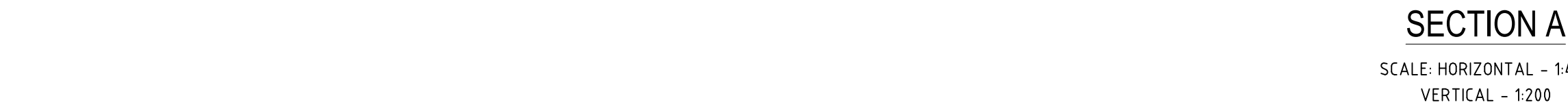
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DRAWING TITLE				
EARTHWORKS GRADING PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-C100	E



SCALE

0 2 4 6 8 10 12 14 16 18 20
A1 [A3] 1:200 (1:400) METRES

0 4 8 12 16 20 24 28 32 36 40
A1 [A3] 1:400 (1:800) METRES

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DRAWING TITLE				
EARTHWORKS SITE SECTIONS SHEET 1				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-C200	E

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DRAWING TITLE	EARTHWORKS SITE SECTIONS SHEET 1
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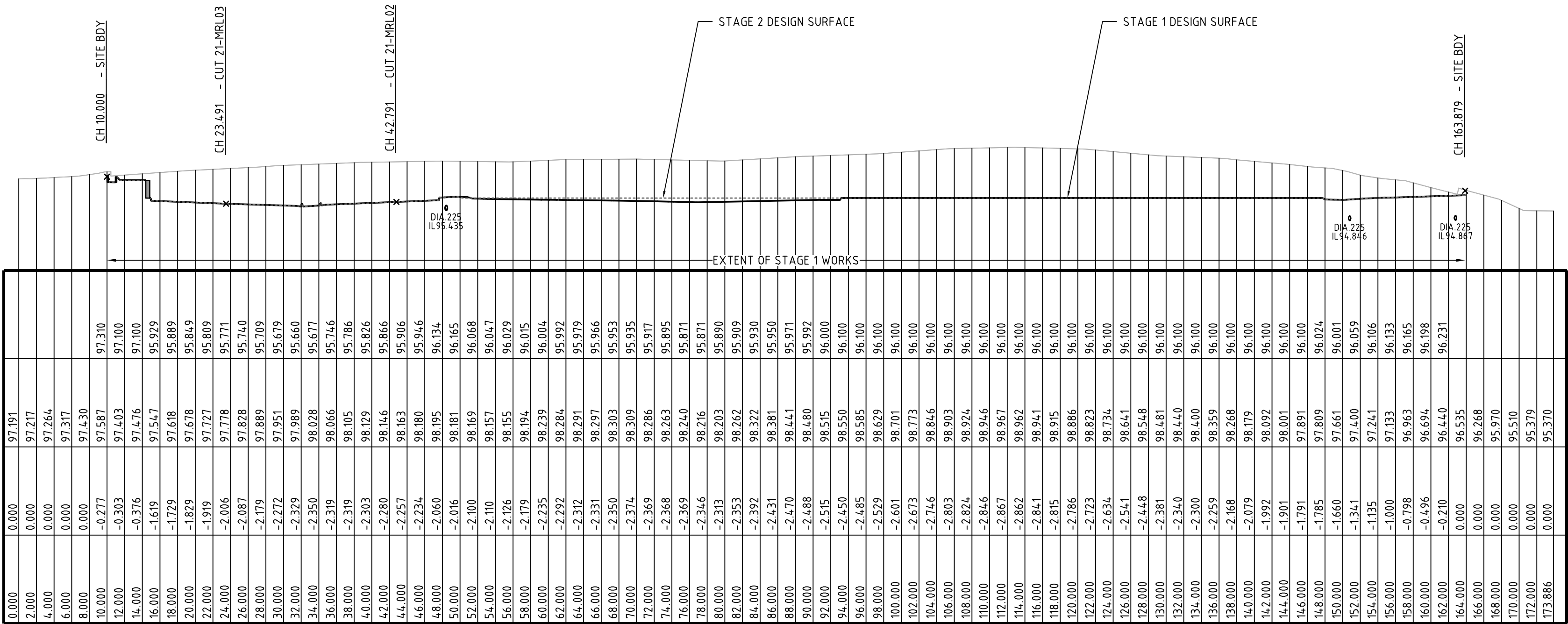
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DRAWING ID: P1705798-PS04-R06-C200

DATUM RL 92.000

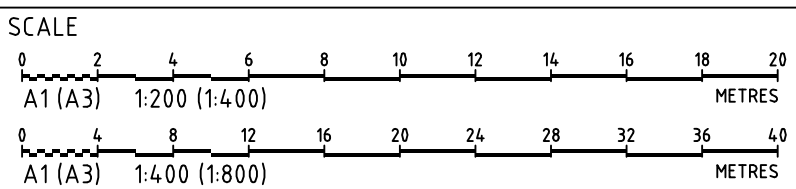
DESIGN SURFACE LEVELS
EXISTING SURFACE LEVELS
CUT / FILL DEPTH
CHAINAGE



SECTION C

SCALE: HORIZONTAL - 1:400
VERTICAL - 1:200


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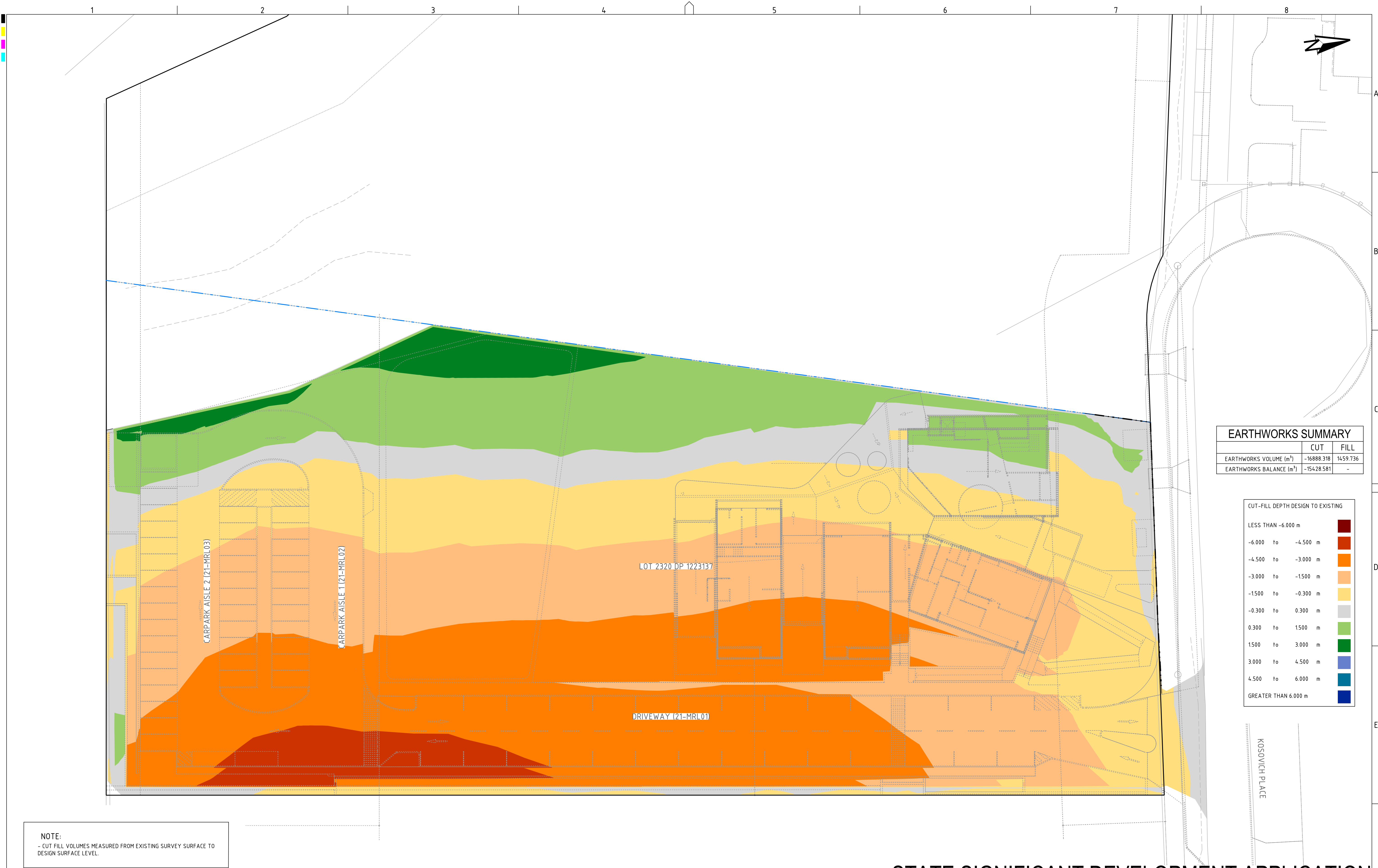
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DRAWING TITLE				
EARTHWORKS SITE SECTIONS SHEET 2				
PROJECT NO. P1705798	PLANSET NO. PS04	RELEASE NO. R06	DRAWING NO. PS04-C201	REVISION E

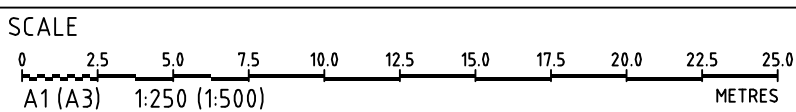


EARTHWORKS SUMMARY		
	CUT	FILL
EARTHWORKS VOLUME (m³)	-16888.318	1459.736
EARTHWORKS BALANCE (m³)	-15428.581	-

CUT-FILL DEPTH DESIGN TO EXISTING		
LESS THAN -6.000 m		
-6.000 to -4.500 m		
-4.500 to -3.000 m		
-3.000 to -1.500 m		
-1.500 to -0.300 m		
-0.300 to 0.300 m		
0.300 to 1.500 m		
1.500 to 3.000 m		
3.000 to 4.500 m		
4.500 to 6.000 m		
GREATER THAN 6.000 m		

NOTE:
- CUT FILL VOLUMES MEASURED FROM EXISTING SURVEY SURFACE TO DESIGN SURFACE LEVEL.

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	MINOR AMENDMENTS	20/09/2018	CG	CG/EZ	DG	TH
D	AMENDED FROM CLIENT COMMENTS	20/09/2018	CG	CG/EZ	DG	TH
C	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH
B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	Z/GM/CG	CG/EZ	DG	TH



GRID
MGA
DATUM
mAHD
PROJECT MANAGER
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17 & 19 KOSOVICH PLACE, CECIL PARK, NSW
LOTS 2302 & 2321, DP 1223167

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DRAWING TITLE				
EARTHWORKS CUT-FILL PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-C500	E

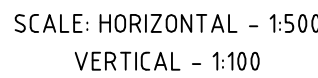
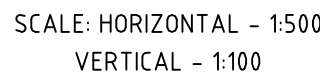
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A1 / A3 LANDSCAPE (A1L_C_02.0.01)

DRAWING ID: P1705798-PS04-R06-C500

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0.858	-0.906	97.796	96.890
15.000	-114.5	98.242	97.097
21.936	-154.4	98.988	97.444
30.000	-192.2	99.697	97.775
35.436	-214.7	100.064	97.917
44.436	-2.854	100.861	98.007
45.000	-2.878	100.884	98.006
48.936	-3.061	101.045	97.984
60.000	-3.597	101.470	97.873
75.000	-3.834	101.557	97.773
82.976	-3.757	101.401	97.644
86.976	-3.786	101.375	97.589
90.000	-3.820	101.34.7	97.527
90.976	-3.832	101.336	97.504
105.000	-4.216	101.369	97.153
120.000	-4.457	101.235	96.778
131.075	-4.588	101.090	96.501
135.000	-4.603	101.026	96.423
140.775	-4.439	100.819	96.380
150.000	-3.812	100.302	96.490
150.475	-3.772	100.273	96.501
159.024	-3.178	99.893	96.715

0.000	-4.589	101.089	96.500
15.000	-2.790	98.840	96.050
30.000	-1.433	97.033	95.600
45.000	0.220	94.930	95.150
47.325	0.481	94.599	95.080

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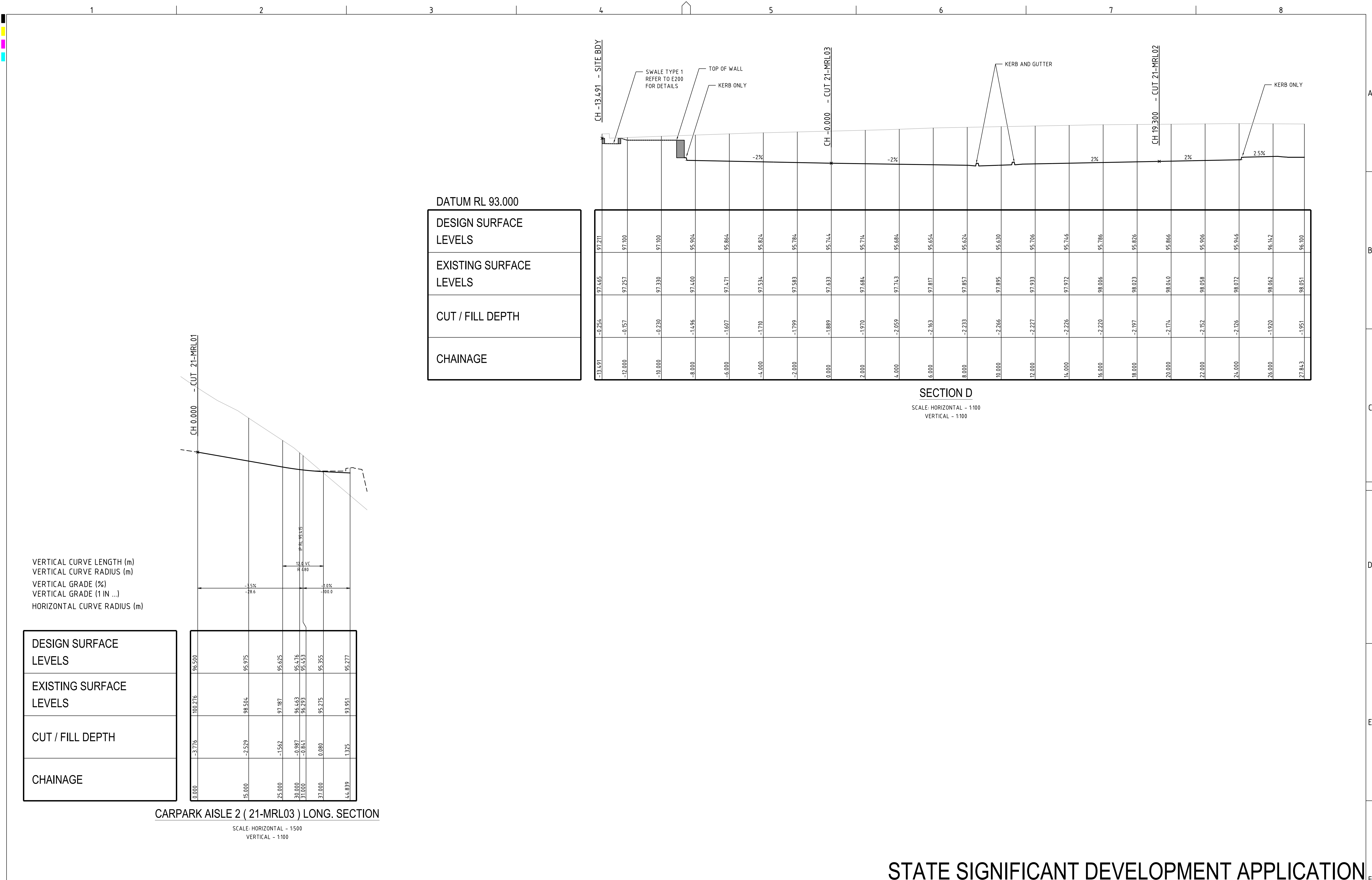
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DRAWING TITLE				
<p align="center"> DRIVEWAY (21-MRL01) AND CARPARK AISLE (21-MRL02) LONGITUDINAL & TYPICAL SECTIONS </p>				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-D200	E

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DRAWING ID: P1705798-PS04-R06-D20



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C	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH
B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	Z/GM/CG	CG/EZ	DG	TH

SCALE

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A1 (A3) 1:500 (1:1,000)

0 1 2 3 4 5 6 7 8 9 10

A1 (A3) 1:100 (1:200)

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DATUM

mAHD

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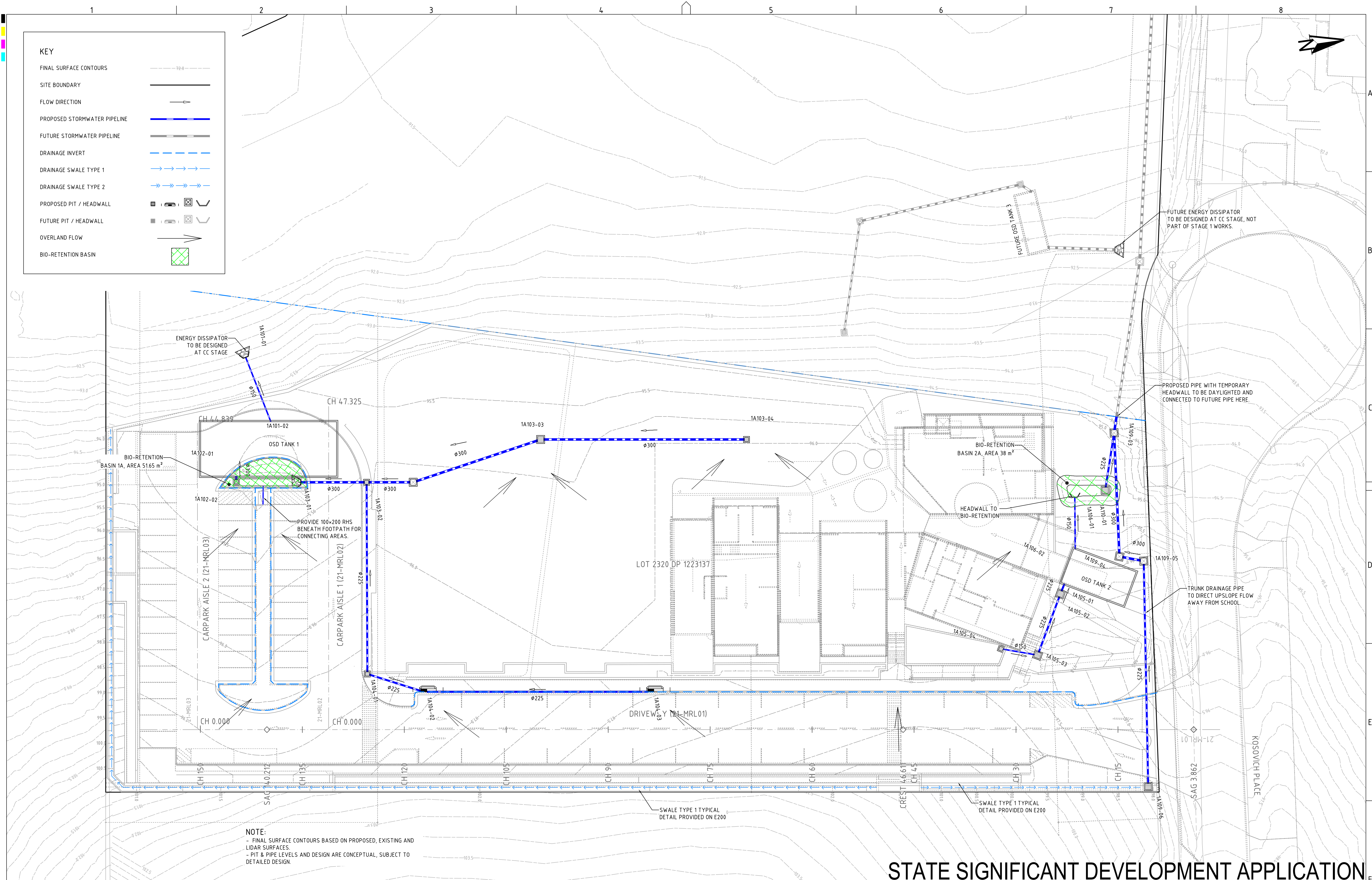
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DRAWING TITLE		CARPARK AISLE (21-MRL03)		LONGITUDINAL & TYPICAL SECTIONS	
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION	
P1705798	PS04	R06	PS04-D201	E	

STATE SIGNIFICANT DEVELOPMENT APPLICATION



KEY

FINAL SURFACE CONTOURS

72.0

SITE BOUNDARY

FLOW DIRECTION

PROPOSED STORMWATER PIPELINE

FUTURE STORMWATER PIPELINE

DRAINAGE INVERT

DRAINAGE SWALE TYPE 1

DRAINAGE SWALE TYPE 2

PROPOSED PIT / HEADWALL

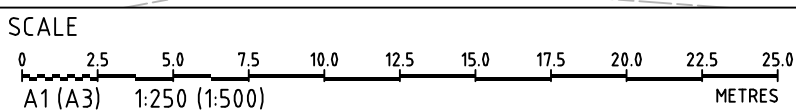
FUTURE PIT / HEADWALL

OVERLAND FLOW

BIO-RETENTION BASIN

NOTE:
- FINAL SURFACE CONTOURS BASED ON PROPOSED, EXISTING AND LIDAR SURFACES.
- PIT & PIPE LEVELS AND DESIGN ARE CONCEPTUAL, SUBJECT TO DETAILED DESIGN.

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	MINOR AMENDMENTS	20/09/2018	CG	CG/EZ	DG	TH
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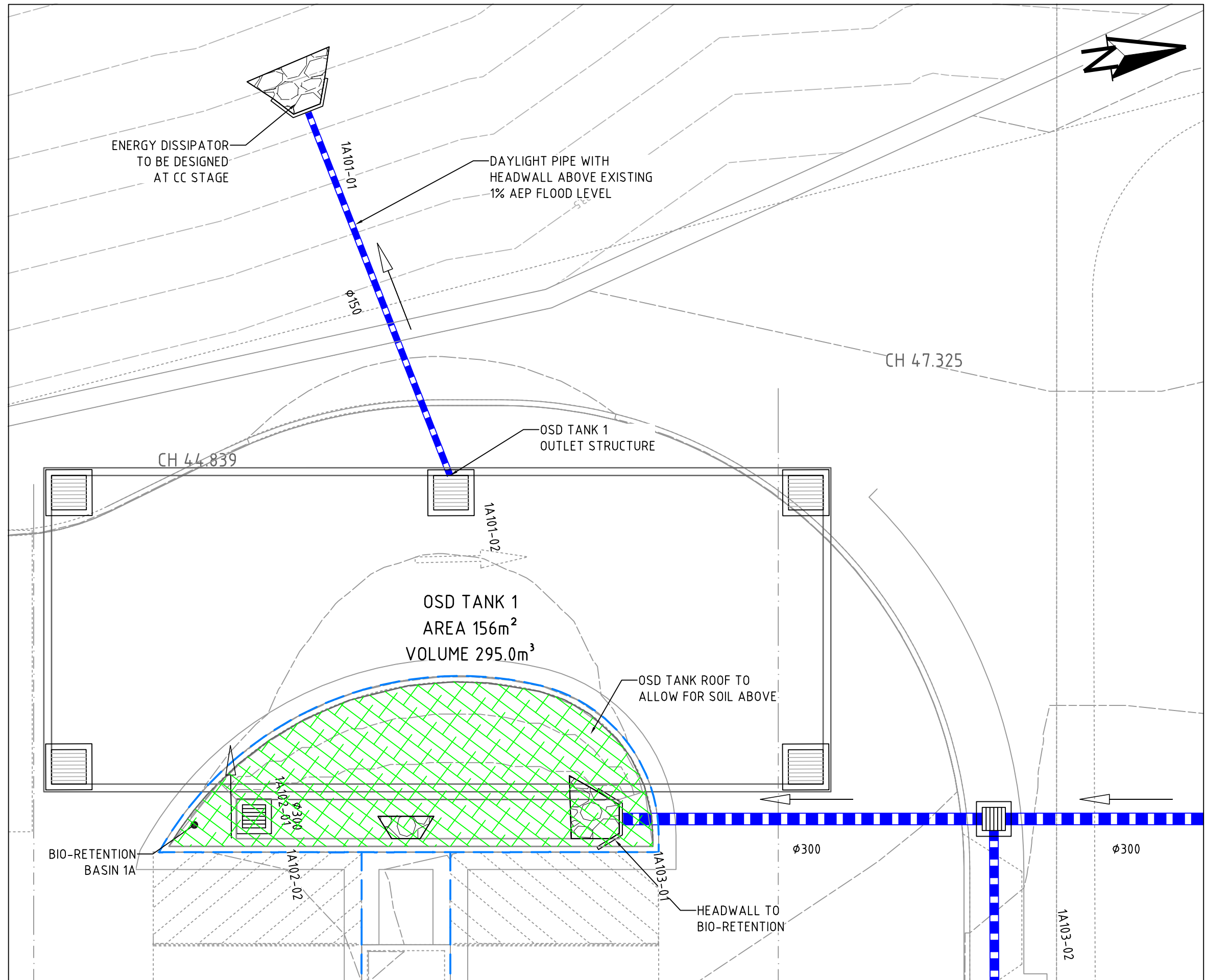
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DRAINAGE PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-E100	E

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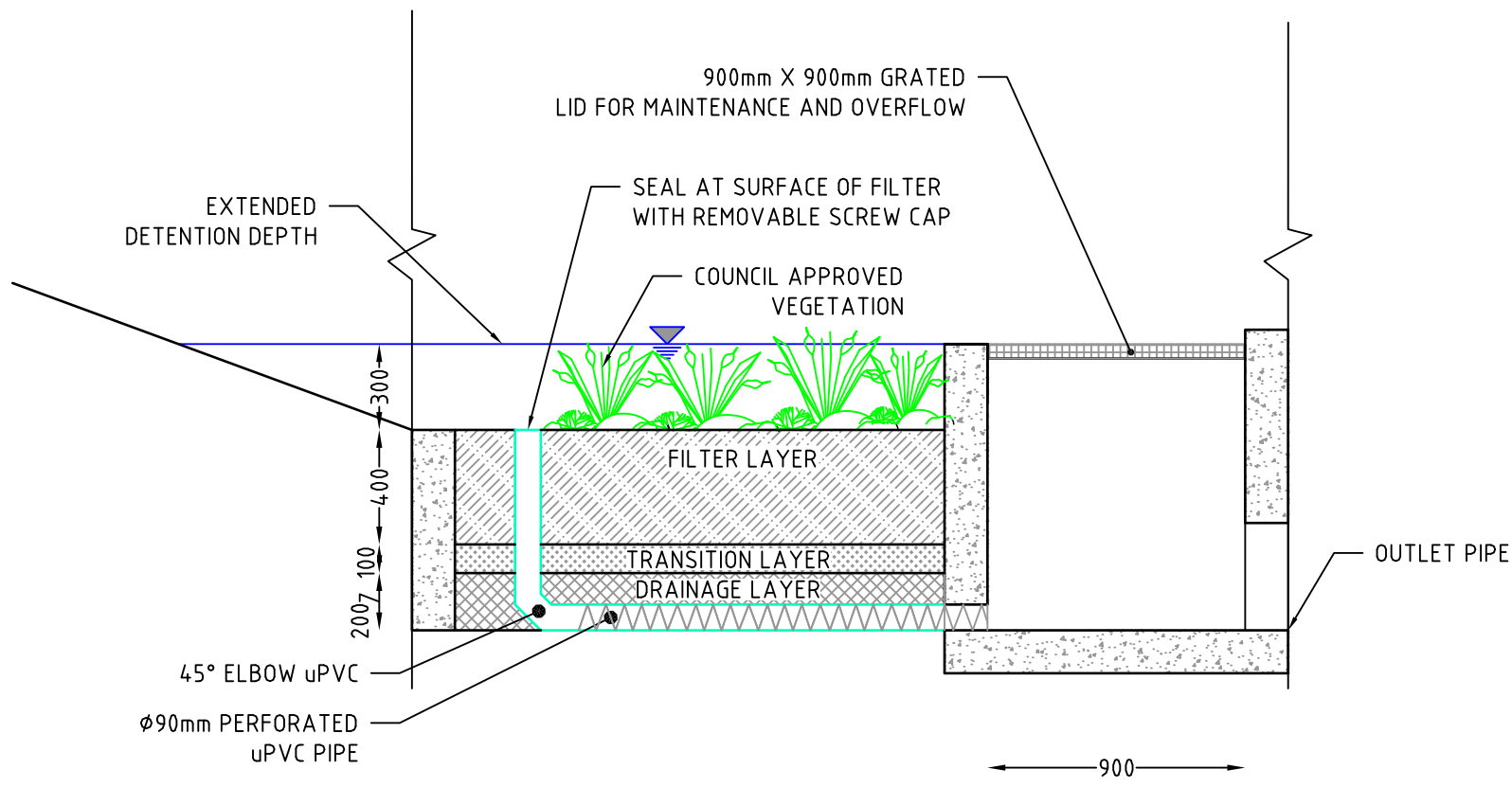
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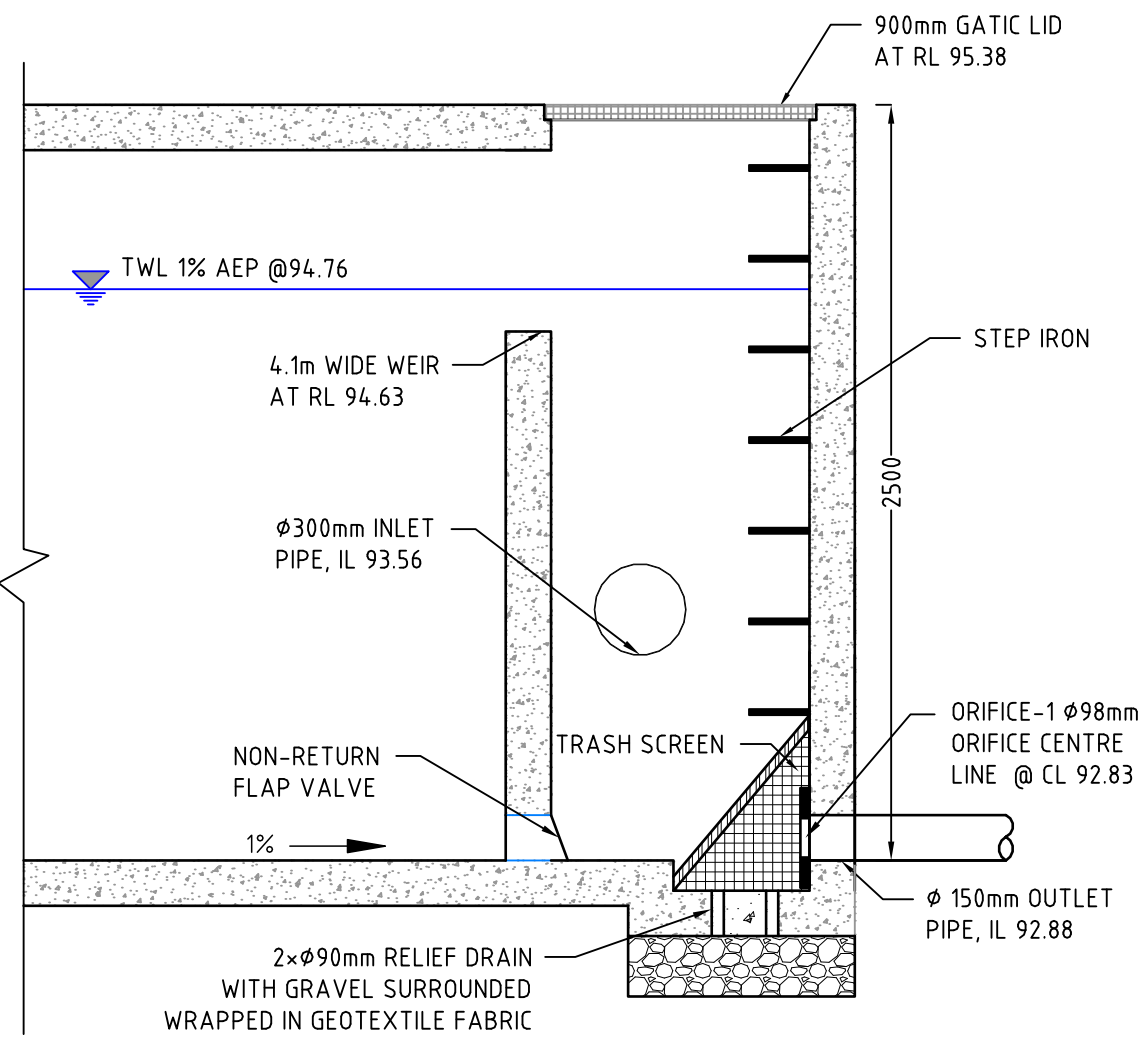
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OSD TANK 1 PLAN
SCALE: 1:100

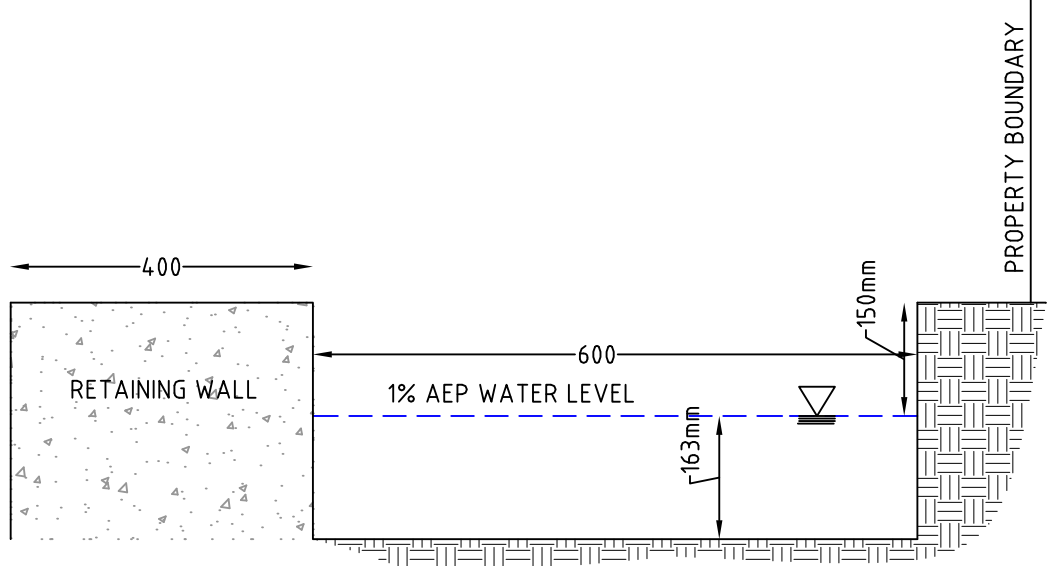


TYPICAL SECTION: BIORETENTION
SCALE: 1:25



OSD TANK 1 OUTLET STRUCTURE
SCALE: 1:25

NOTES:
- BIO-RETENTION SYSTEM DETAILS TO BE PROVIDED AT CC STAGE AND SHALL BE DESIGNED AS PER FAWB (2009) GUIDELINES.



TYPICAL SWALE TYPE 1
SCALE: 1:10

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
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C	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH
B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	Z/GM/CG	CG/EZ	DG	TH

SCALE	0	1	2	3	4	5	6	7	8	9	10
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A1 (A3)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
A1 (A3)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	

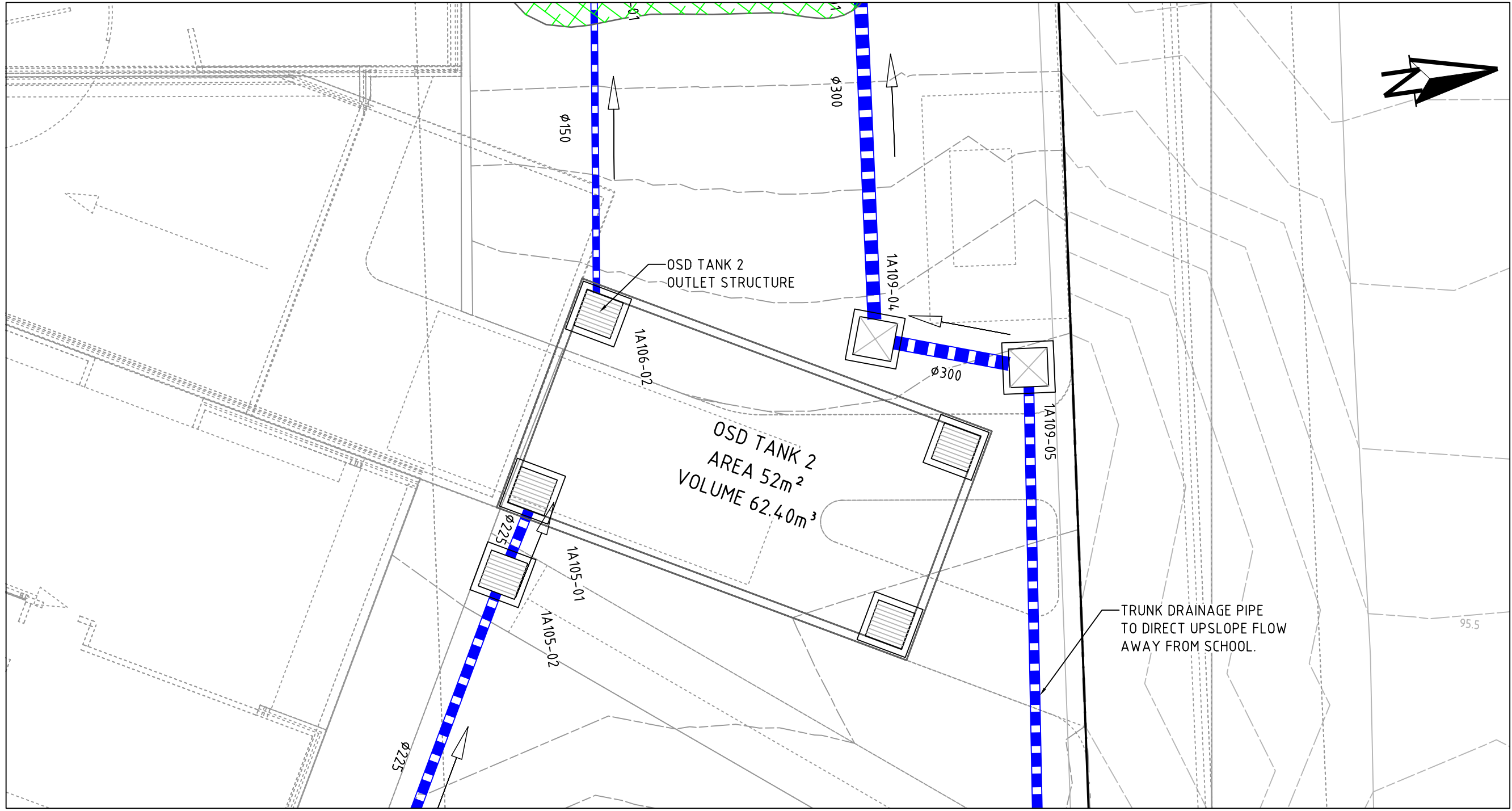
GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	ASSYRIAN SCHOOLS LTD.

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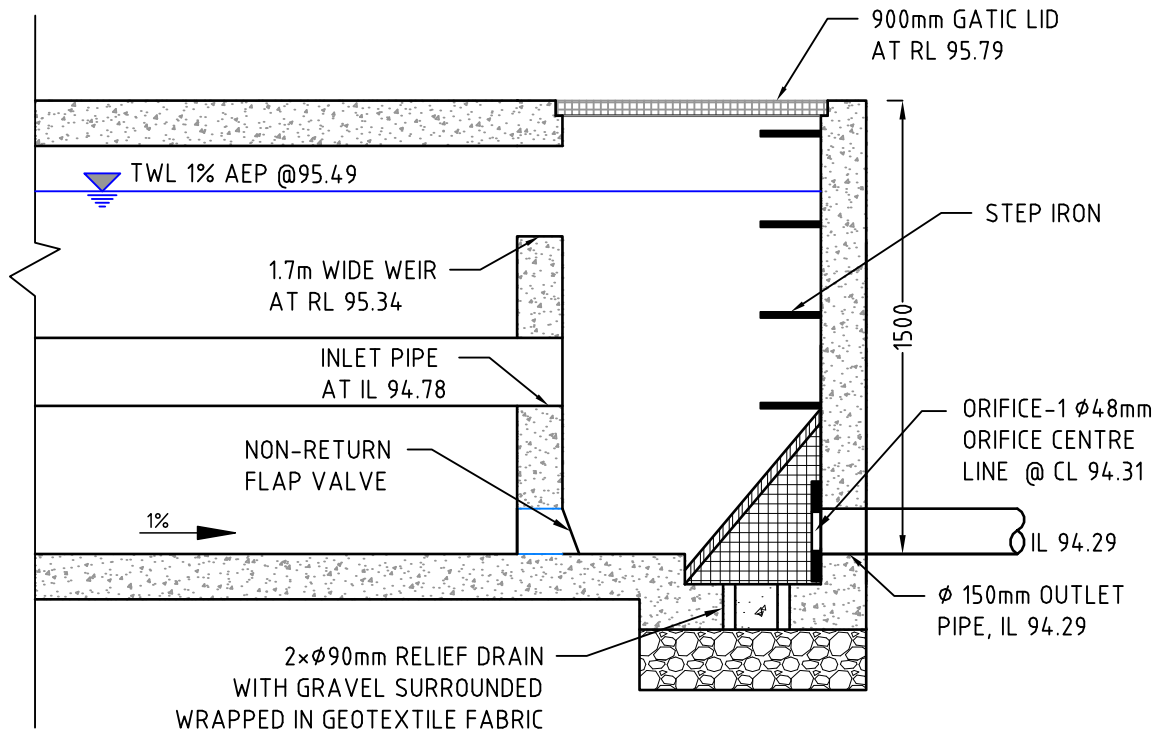
DRAWING TITLE	PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
DRAINAGE DETAILS (SHEET 1)	P1705798	PS04	R06	PS04-E200	E

STATE SIGNIFICANT DEVELOPMENT APPLICATION



OSD TANK 2 PLAN

SCALE 1:100

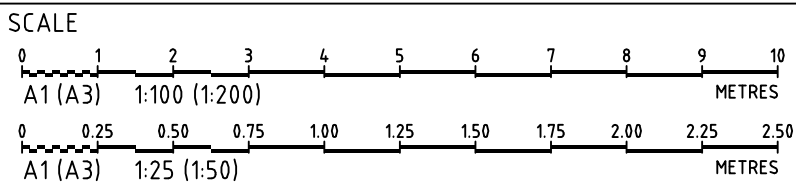


OSD TANK 2 OUTLET STRUCTURE

SCALE: 1:25

NOTES:
- BIO-RETENTION SYSTEM DETAILS TO BE PROVIDED AT CC STAGE AND SHALL BE DESIGNED AS PER FAWB (2009) GUIDELINES.

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
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B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	LZ/GM/CG	CG/EZ	DG	TH



GRID	DATUM	PROJECT MANAGER
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17 & 19 KOSOVICH PLACE, CECIL PARK, NSW
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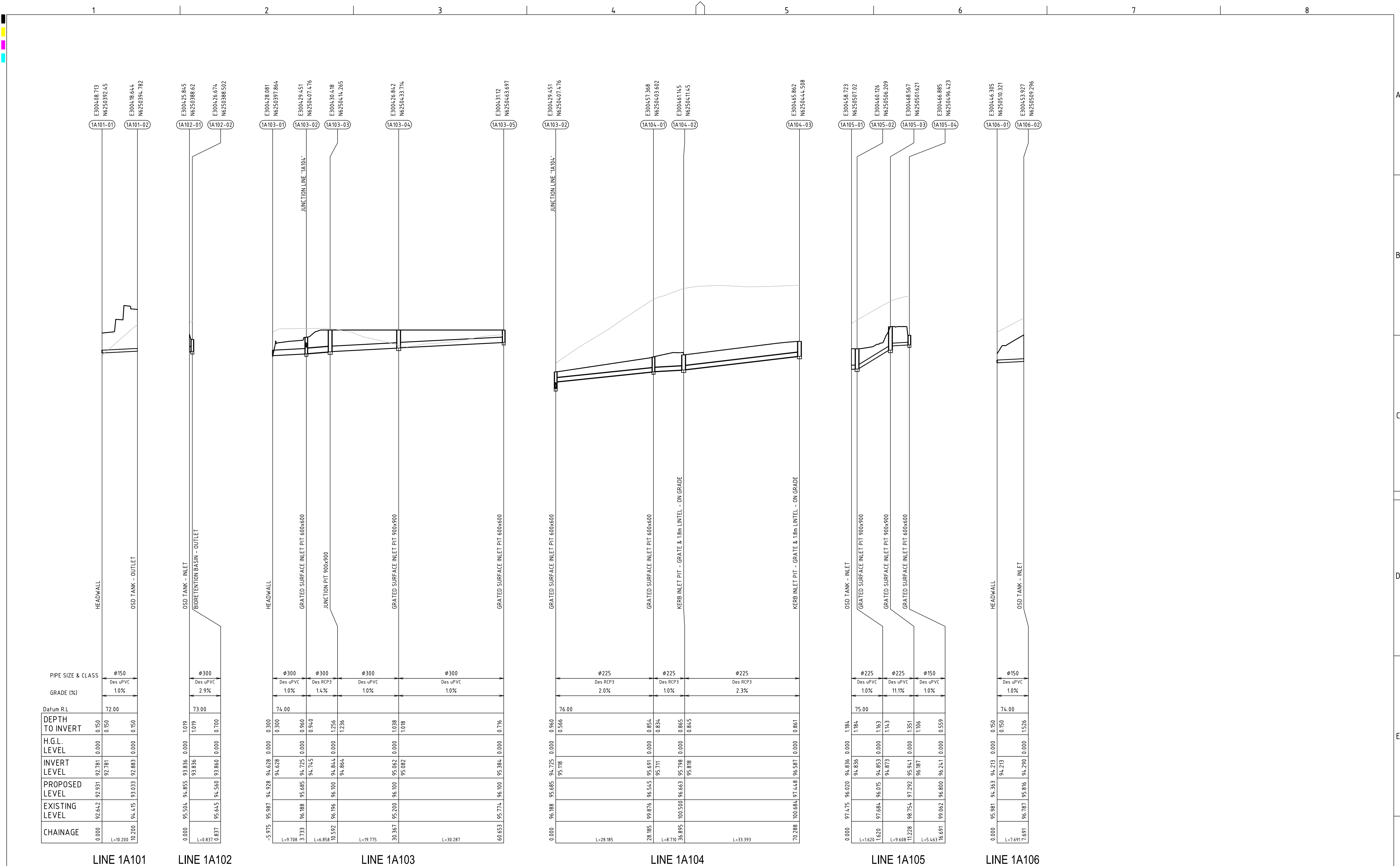


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DRAWING TITLE				
DRAINAGE DETAILS (SHEET 2)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-E201	E

STATE SIGNIFICANT DEVELOPMENT APPLICATION



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C	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH
B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	ZZ/GM/CG	CG/EZ	DG	TH

SCALE

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A1 (A3) 1:500 (1:1,000)

0 1 2 3 4 5 6 7 8 9 10

A1 (A3) 1:100 (1:200)

METRES

GRID	DATUM	PROJECT MANAGER	CLIENT
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CIVIL WORKS PLAN - STAGE 01

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LOTS 2302 & 2321, DP 1223167

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DRAWING TITLE				
DRAINAGE LONGITUDINAL SECTIONS (SHEET 1)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-E300	E

PRINTED: 20/09/2018

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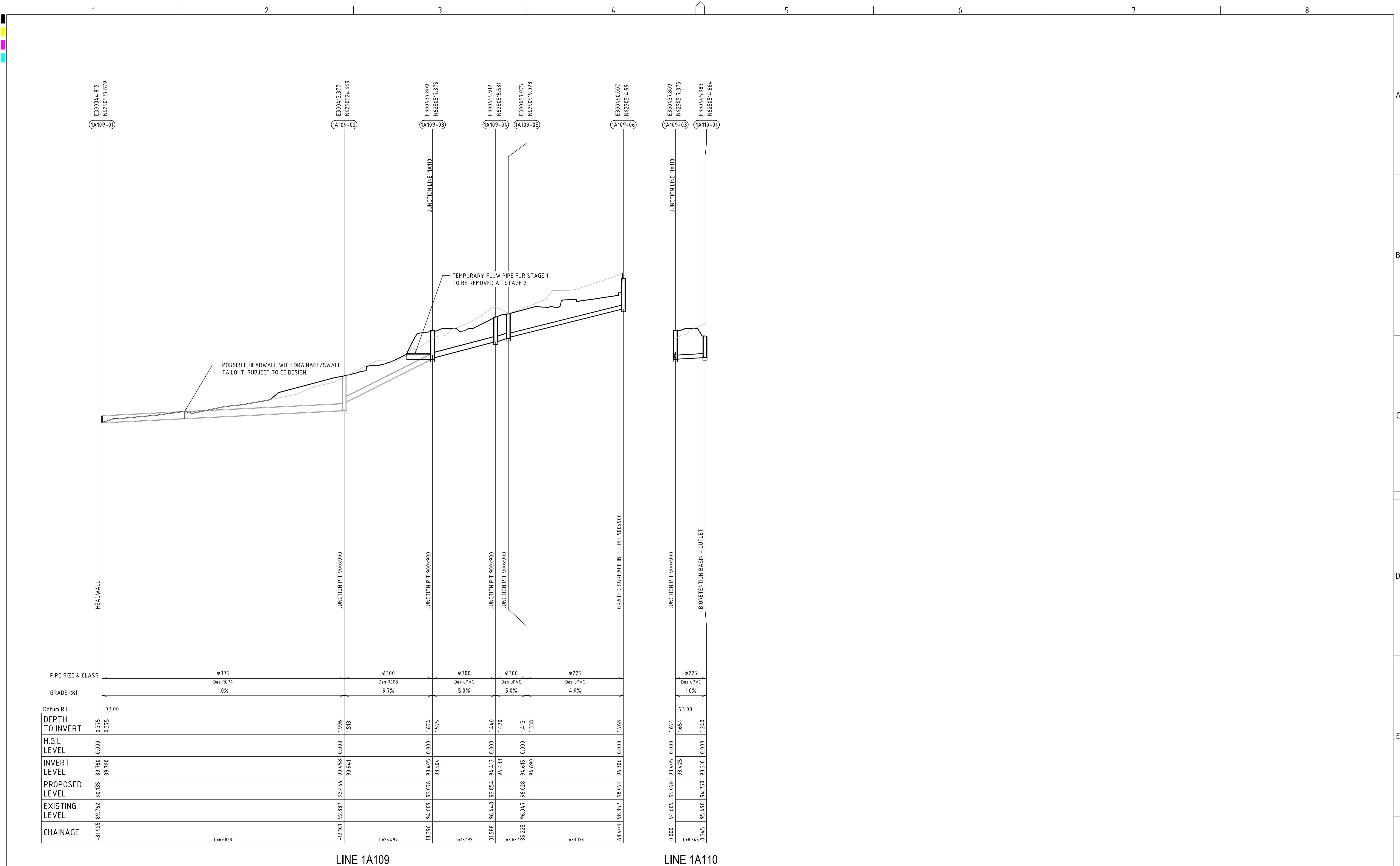
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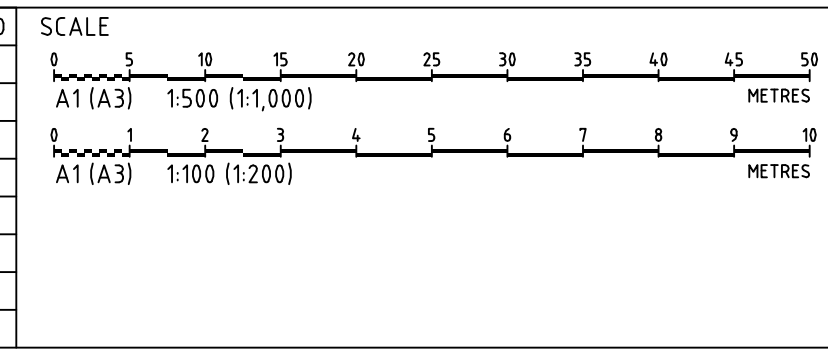
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METRES

STATE SIGNIFICANT DEVELOPMENT APPLICATION



REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPROV
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B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	LZ/GM/CG	CG/EZ	DG	TH



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PROJECT NO.
P1705798

PLANSET NO.
PS04

RELEASE NO.
R06

DRAWING NO.
PS04-E301

REVISION
E



PIT SCHEDULE												
Pit		INTERNAL				INLET		OUTLET		PIT		
Name	TYPE	EASTING	NORTHING	WD	LEN	DIA	INV LEV	DIA	INV LEV	SETOUT RL	DEPTH	REMARKS
1A101-02	OSD TANK - OUTLET	300418.644	6250394.782	0	0	-	-	150	92.883	93.033	0.15	
1A101-01	HEADWALL	300408.713	6250392.45	0	0	150	92.781	-	-	92.931	0.15	setout level to maximum pipe obvert
1A102-02	BIORETENTION BASIN - OUTLET	300426.674	6250388.502	0.6	0.6	-	-	300	93.86	94.56	0.7	
1A102-01	OSD TANK - INLET	300425.845	6250388.62	0	0	300	93.836	-	-	94.855	1.019	
1A103-05	GRATED SURFACE INLET PIT 600x600	300431.12	6250463.697	0.6	0.6	-	-	300	95.384	96.1	0.716	
1A103-04	GRATED SURFACE INLET PIT 900x900	300426.842	6250433.714	0.9	0.9	300	95.082	300	95.062	96.1	1.038	
1A103-03	JUNCTION PIT 900x900	300430.418	6250414.265	0.9	0.9	300	94.864	300	94.844	96.1	1.256	
1A103-02	GRATED SURFACE INLET PIT 600x600	300429.451	6250407.476	0.6	0.6	300	94.745	300	94.725	95.685	0.96	
1A103-01	HEADWALL	300428.081	6250397.864	0	0	300	94.628	-	-	94.928	0.3	setout level to maximum pipe obvert
1A104-03	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	300465.862	6250444.508	0.9	0.9	-	-	225	96.587	97.448	0.861	xy setout to setout string
1A104-02	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	300461.145	6250411.45	0.9	0.9	225	95.818	225	95.798	96.663	0.865	xy setout to setout string
1A104-01	GRATED SURFACE INLET PIT 600x600	300457.368	6250403.602	0.6	0.6	225	95.711	225	95.691	96.545	0.854	
1A103-02	GRATED SURFACE INLET PIT 600x600	300429.451	6250407.476	0.6	0.6	225	95.118	-	-	95.685	0.96	
1A105-04	GRATED SURFACE INLET PIT 600x600	300466.885	6250496.423	0.6	0.6	-	-	150	96.241	96.391	0.15	setout level to maximum pipe obvert
1A105-03	GRATED SURFACE INLET PIT 900x900	300468.567	6250501.621	0.9	0.9	150	96.187	225	95.941	97.292	1.351	
1A105-02	GRATED SURFACE INLET PIT 900x900	300460.126	6250506.209	0.9	0.9	225	94.873	225	94.853	96.015	1.163	
1A105-01	OSD TANK - INLET	300458.723	6250507.02	0	0	225	94.836	-	-	96.02	1.184	
1A106-02	OSD TANK - OUTLET	300453.927	6250509.296	0	0	-	-	150	94.29	95.816	1.526	
1A106-01	HEADWALL	300446.305	6250510.321	0	0	150	94.213	-	-	94.363	0.15	setout level to maximum pipe obvert
1A109-05	JUNCTION PIT 900x900	300457.075	6250519.028	0.9	0.9	225	94.69	300	94.615	96.028	1.413	
1A109-04	JUNCTION PIT 900x900	300455.912	6250515.581	0.9	0.9	300	94.433	300	94.413	95.854	1.44	
1A109-03	JUNCTION PIT 900x900	300437.809	6250517.375	0.9	0.9	300	93.504	300	93.405	95.078	1.674	
1A109-02	JUNCTION PIT 900x900	300413.377	6250524.669	0.9	0.9	300	90.941	375	90.458	92.454	1.996	
1A109-01	HEADWALL	300344.815	6250537.879	0	0	375	89.76	-	-	90.135	0.375	setout level to maximum pipe obvert
1A110-01	BIORETENTION BASIN - OUTLET	300445.983	6250514.884	0.9	0.9	-	-	225	93.51	94.75	1.24	
1A109-03	JUNCTION PIT 900x900	300437.809	6250517.375	0.9	0.9	225	93.425	-	-	95.078	1.674	
NOTE:												
1. XY SETOUT TO PIT CENTRE												
2. SETOUT LEVEL TO PIT COVER LEVEL												
3. SOME SETOUT XY OR Z LEVELS HAVE SPECIAL SETOUT DATA. SEE INDIVIDUAL MANHOLE REMARKS												

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	MINOR AMENDMENTS	20/09/2018	CG	CG/EZ	DG	TH
D	AMENDED FROM CLIENT COMMENTS	20/09/2018	CG	CG/EZ	DG	TH
C	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH
B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	LZ/GM/CG	CG/EZ	DG	TH

SCALE

GRID	DATUM	PROJECT MANAGER	CLIENT
---	---	TH	ASSYRIAN SCHOOLS LTD.
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PROJECT NAME/PLANSET TITLE
ST PETER & PAUL ASSYRIAN PRI. SCHOOL
CIVIL WORKS PLAN - STAGE 01
17 & 19 KOSOVICH PLACE, CECIL PARK, NSW
LOTS 2302 & 2321, DP 1223167

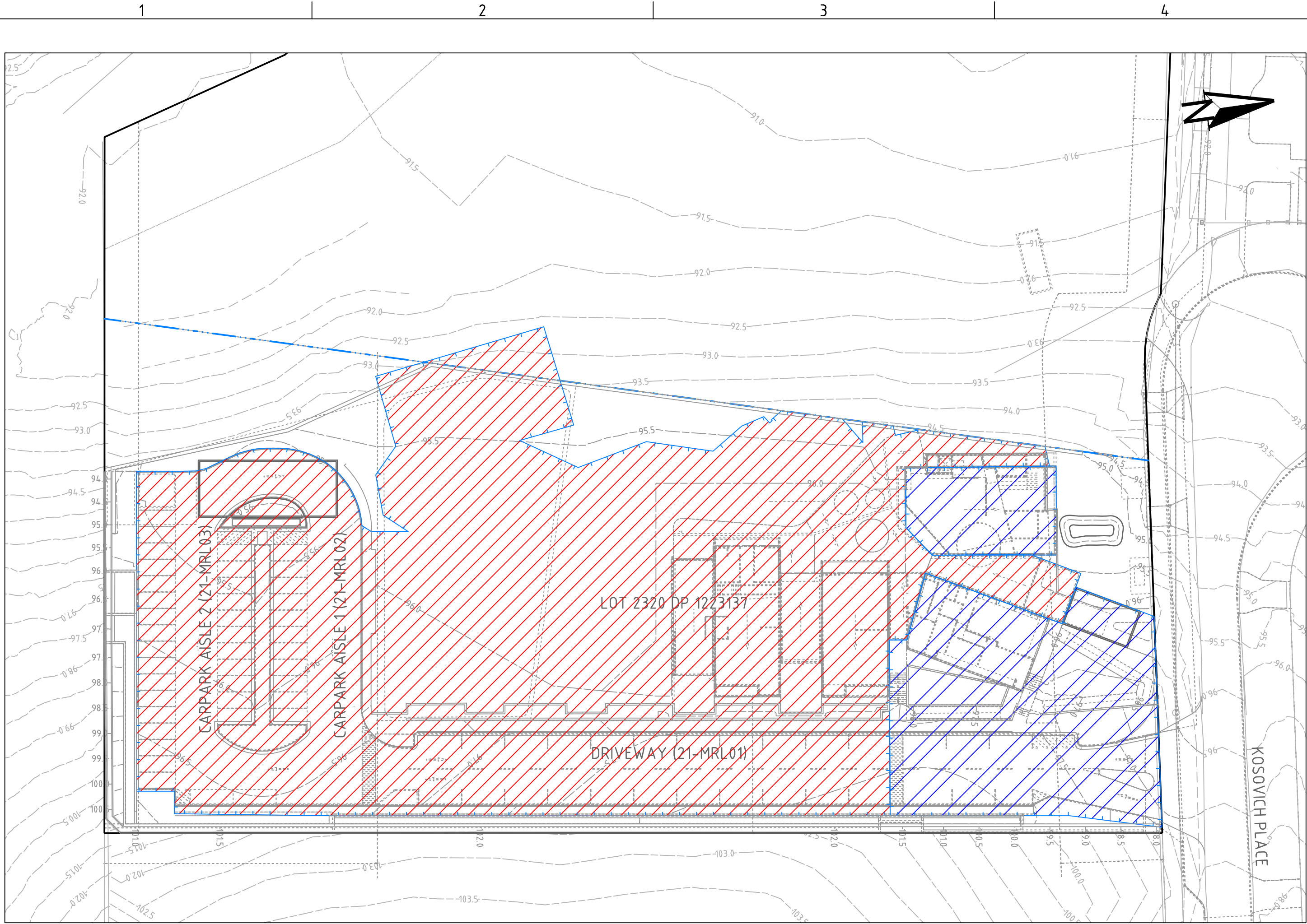


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DRAWING TITLE				
DRAINAGE PIT SCHEDULE				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-E302	E

STATE SIGNIFICANT DEVELOPMENT APPLICATION



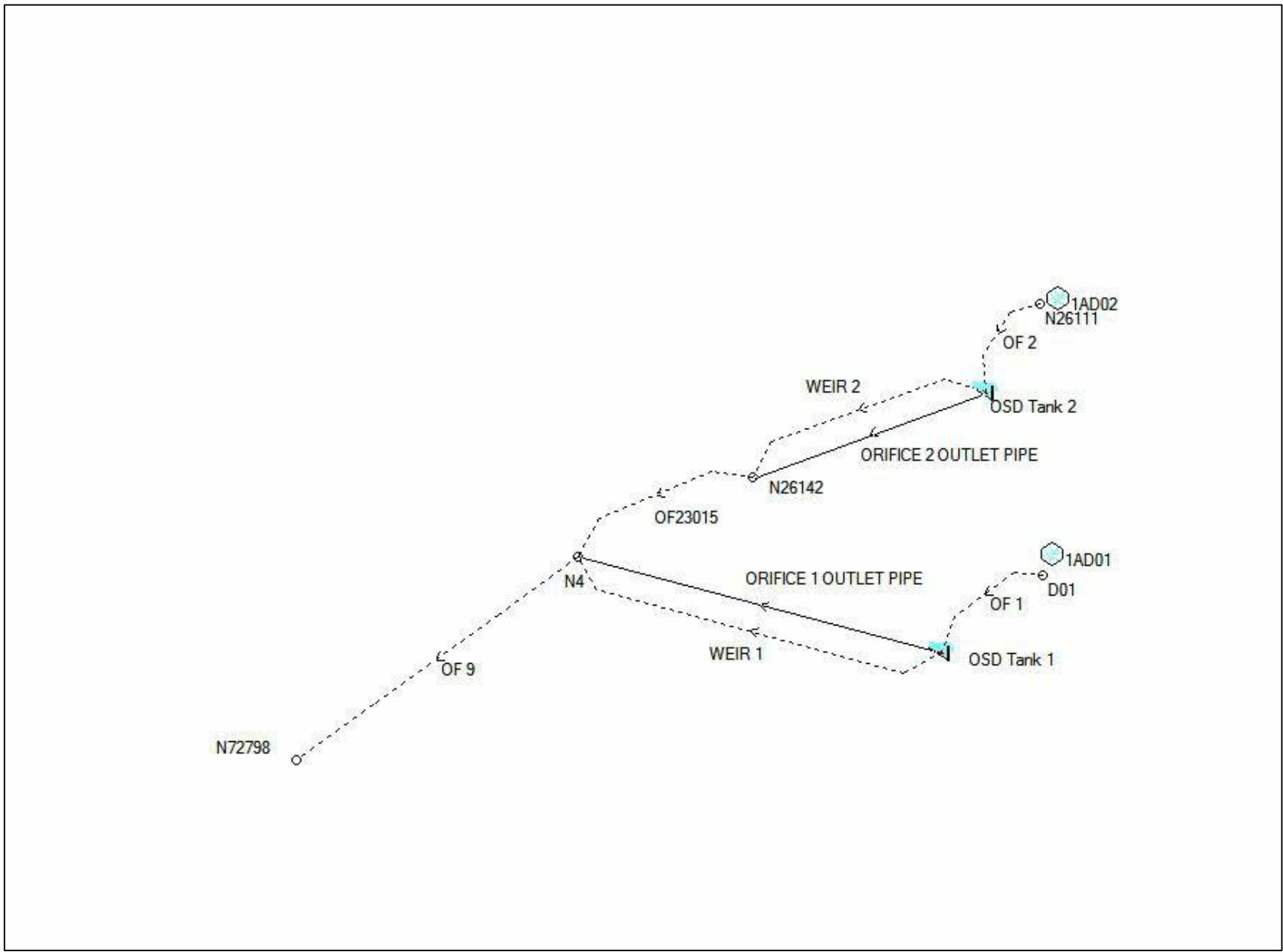
POST-DEVELOPMENT CATCHMENT PLAN

SCALE 1:500

DRAINS RESULTS			REQUIREMENT			
STORM EVENT (YEAR ARI)	CRITICAL STORM DURATION (HRS)	PEAK FLOW RATES (L/S)	PERMISSIBLE SITE DISCHARGE (L/S/HA)	SITE AREA TO OSD (HA)	PERMISSIBLE SITE DISCHARGE (L/S)	REFERENCE
5	1	62	78	0.808	63.02	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
100	1	63	78	0.808	63.02	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017

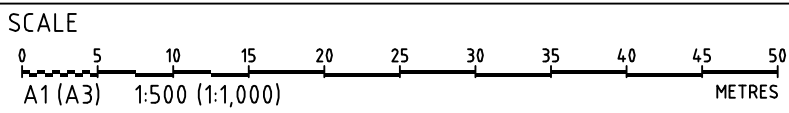
NOTE: OSD PROVIDED FOR DEVELOPED IMPERVIOUS AREA ONLY AND BASED ON TOTAL FUTURE AREA'S DRAINING TO OSD.

POST DEVELOPMENT CATCHMENT (P1705798DRN02V03)						
Key	DRAINS CAT.	DESCRIPTION	AREA (HA)	% PAVED	Tc PAVED (min)	Tc GRASS (min)
	1AD01	AREA TO OSD 1	0.657	95	5	12
	1AD02	AREA TO OSD 2	0.151	70	5	9
		SITE AREA	0.808	100	= % OF OVERALL AREA	
		TOTAL IMPERVIOUS AREA	0.730	90	= % OF OVERALL AREA	
		TOTAL PERVIOUS AREA	0.078	10	= % OF OVERALL AREA	



POST-DEVELOPMENT DRAINS MODEL LAYOUT

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	MINOR AMENDMENTS	20/09/2018	CG	CG/EZ	DG	TH
D	AMENDED FROM CLIENT COMMENTS	20/09/2018	CG	CG/EZ	DG	TH
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B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	Z/GM/CG	CG/EZ	DG	TH



GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	ASSYRIAN SCHOOLS LTD.

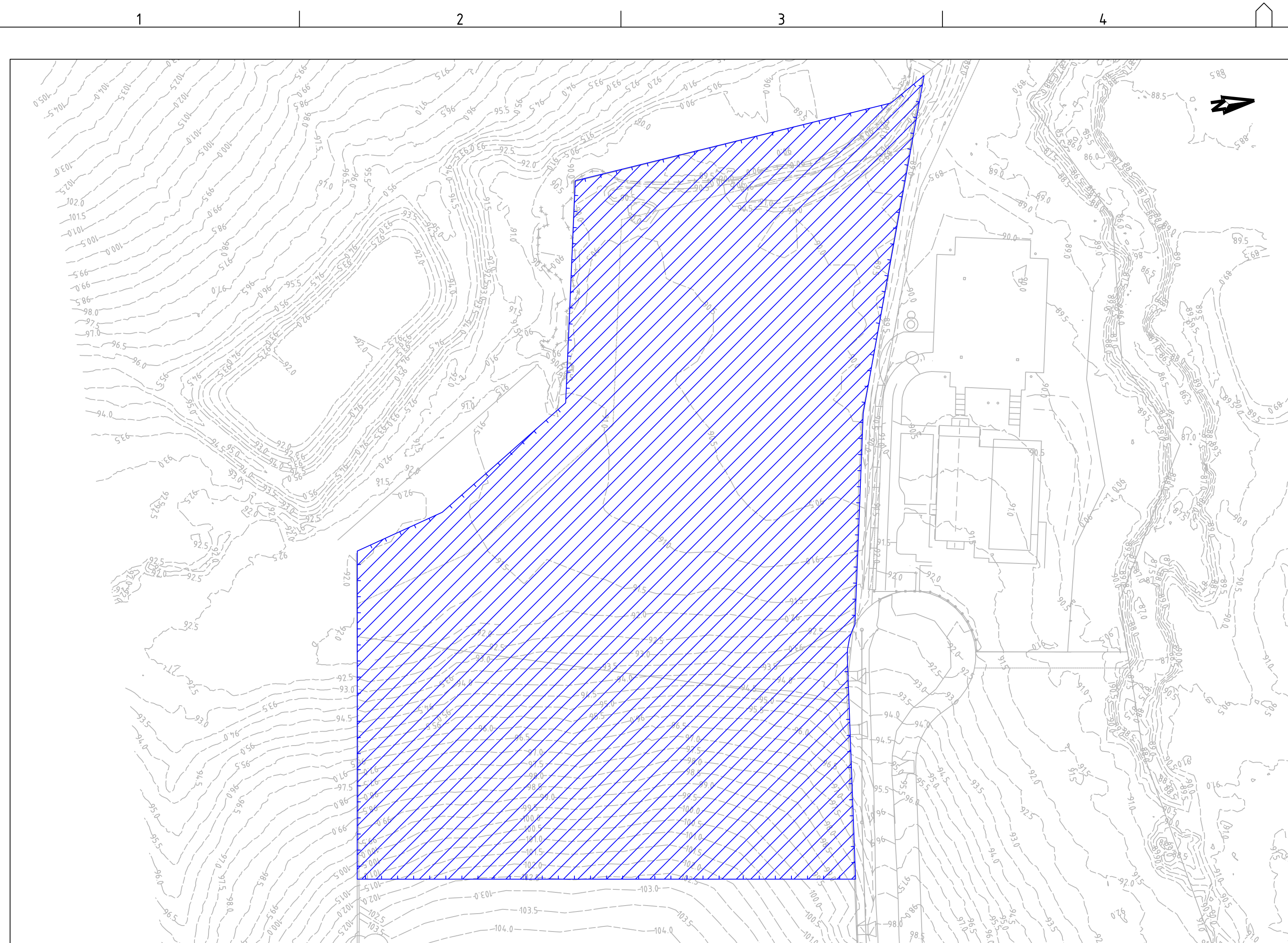
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ST PETER & PAUL ASSYRIAN PRI. SCHOOL CIVIL WORKS PLAN - STAGE 01 17 & 19 KOSOVICH PLACE, CECIL PARK, NSW LOTS 2302 & 2321, DP 1223167

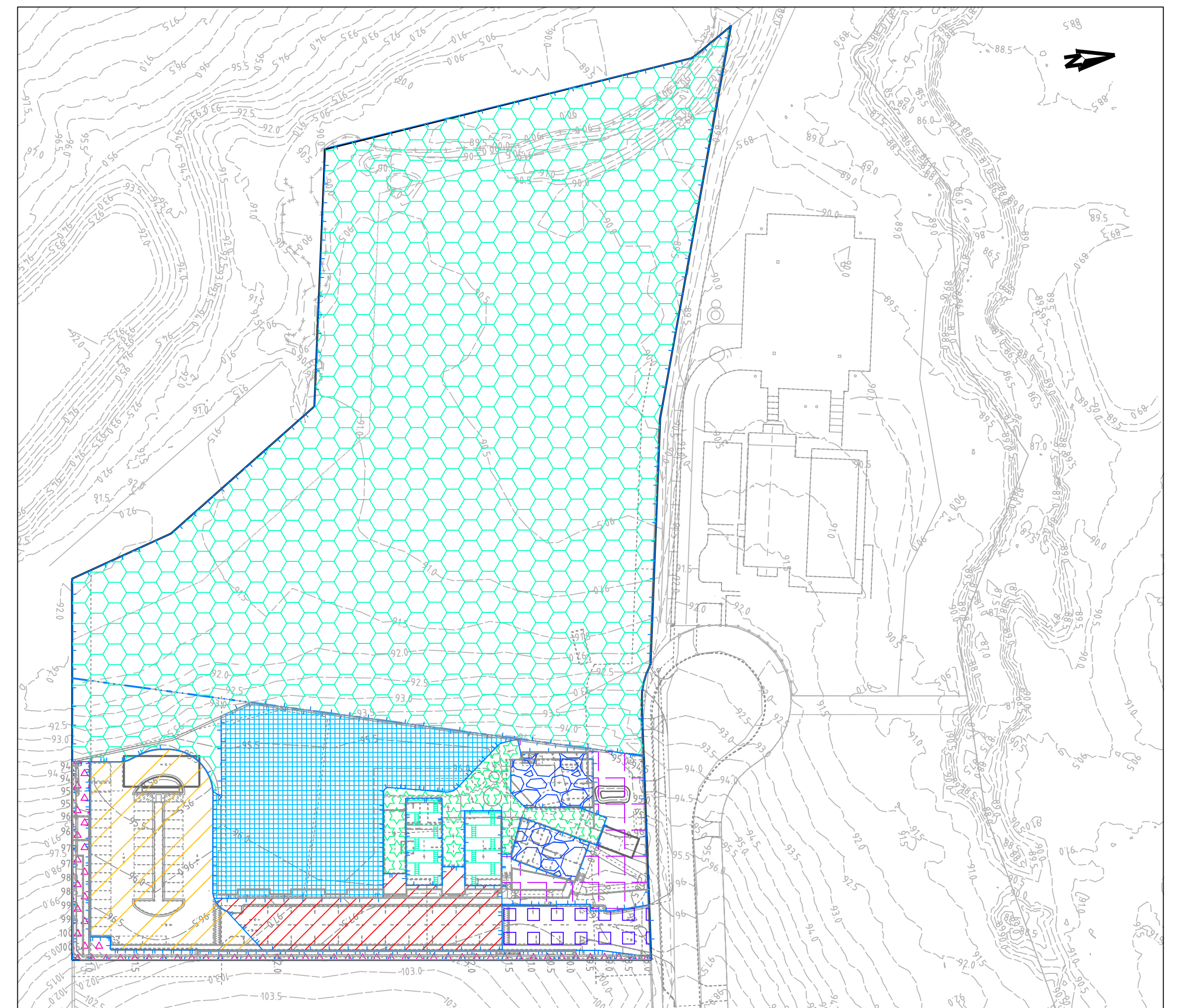
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DRAWING TITLE				
OSD CATCHMENT PLAN, MODEL AND RESULTS				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-E600	E

STATE SIGNIFICANT DEVELOPMENT APPLICATION



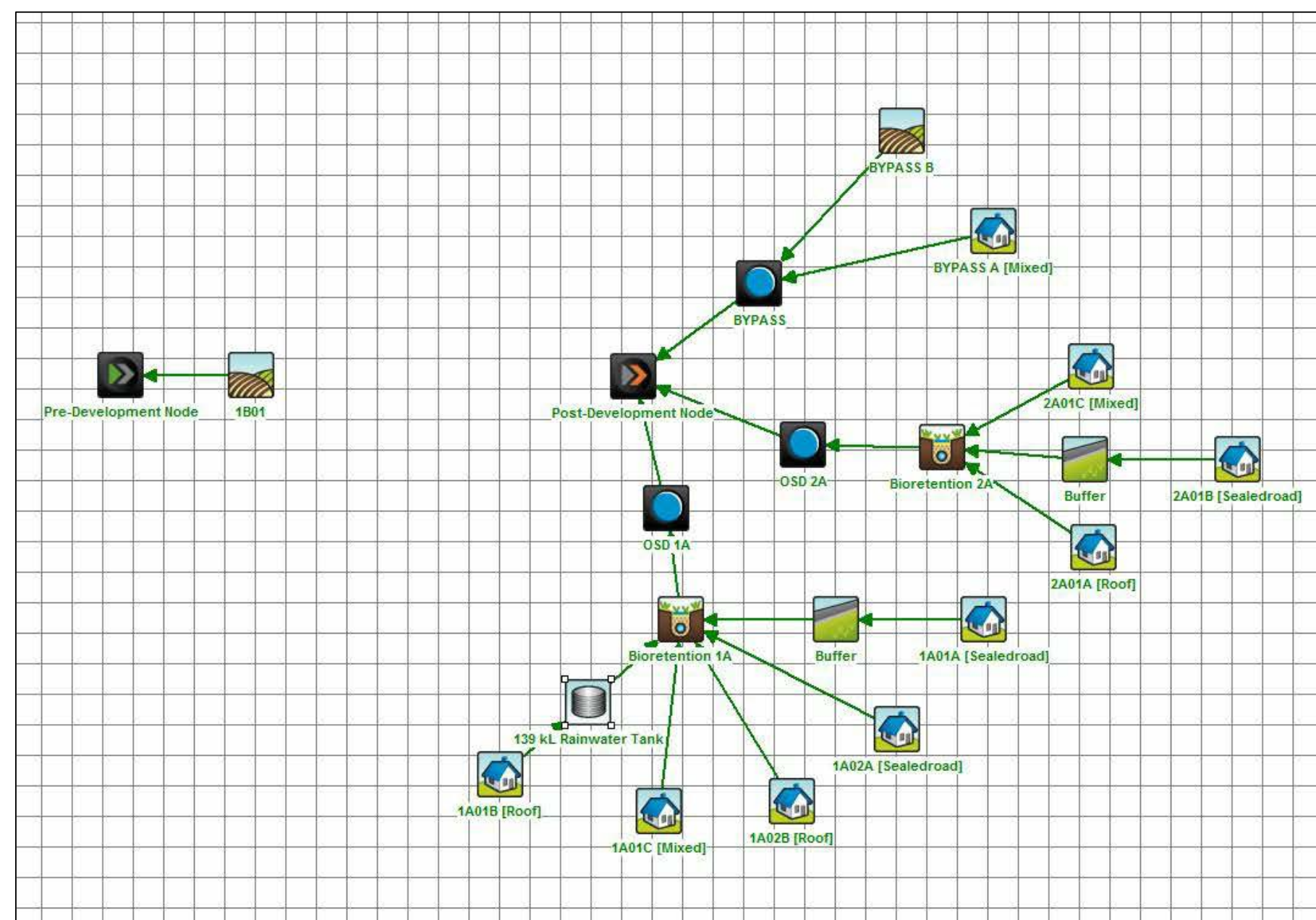
PRE-DEVELOPMENT WATER QUALITY CATCHMENTS PLAN








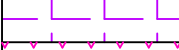




POST-DEVELOPMENT WATER QUALITY CATCHMENTS PLAN

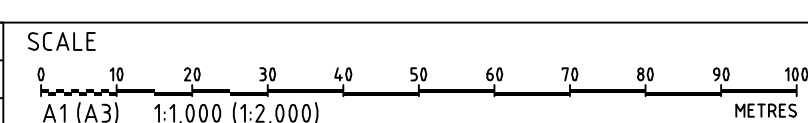
MUSIC CATCHMENTS (P1705798MUS01V02)					
PRE DEVELOPMENT					
KEY	DESCRIPTION	MUSIC NODE ID	AREA (ha)	IMPERVIOUS %	MUSIC NODE REFERENCE
	AGRICULTURAL	1B01	2.936	13	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
TOTAL SITE					
TOTAL - OVERALL				2.936	= 100 % OF OVERALL AREA
TOTAL - IMPERVIOUS				0.381	= 13 % OF OVERALL AREA
TOTAL - PERVIOUS				2.555	= 87 % OF OVERALL AREA
NOTES:					
1. AGRICULTURAL NODE IS USED TO MODEL THE PRE-DEVELOPMENT CONDITION IN ACCORDANCE WITH GSLLS NSW MUSIC MODELLING GUIDELINES 2015.					

MUSIC MODELLING RESULTS (P1705798MUS01V02)			
PARAMETER	PRE-DEVELOPMENT	POST-DEVELOPMENT	% CHANGE
Total Suspended Solids (kg/yr)	94.8	818	-13.71%
Total Phosphorus (kg/yr)	3.95	3.45	-12.66%
Total Nitrogen (kg/yr)	21.1	20.7	-1.90%



MUSIC CATCHMENTS (P1705798MUS01V02)					
POST DEVELOPMENT					
KEY	DESCRIPTION	MUSIC NODE ID	AREA (ha)	IMPERVIOUS %	MUSIC NODE REFERENCE
	ROAD TO BIO 1A	1A01A	0.114	91	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
	ROAD TO BIO 1A	1A02A	0.177	92	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
	ROOF TO RWT	1A01B	0.067	100	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
	ROOF BYPASSING RWT	1A02B	0.043	100	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
	GROUND TO BIO 1A	1A01C	0.268	44	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
	ROOF TO BIO 2A	2A01A	0.053	100	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
	ROAD TO BIO 2A	2A01B	0.048	100	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
	GROUND TO BIO 2A	2A01C	0.088	9	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
	GROUND BYPASSING	BYPASS A	0.065	0	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
	GROUND BYPASSING	BYPASS B	2.015	14	FAIRFIELD CITY COUNCIL STORMWATER MANAGEMENT POLICY 2017
TOTAL SITE					
TOTAL - OVERALL				2.938	≈ 100 % OF OVERALL AREA
TOTAL - IMPERVIOUS				0.878	≈ 30 % OF OVERALL AREA
TOTAL - PERVIOUS				2.058	≈ 70 % OF OVERALL AREA
NOTES:					
1. RAINWATER FROM 665M2 ROOF AREAS WILL BE DIRECTED TO A 139 KL RAINWATER TANK FOR REUSE.					
2. NO WATER QUALITY TREATMENT OBJECTIVES REQUIRED BY FAIRFIELD CITY COUNCIL. PRE VS POST APPROACH FOR SITE.					

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPROVED
E	MINOR AMENDMENTS	20/09/2018	CG	CG/EZ	DG	TH
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B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	LZ/GM/CG	CG/EZ	DG	TH



GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH
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DRAWING TITLE				
WATER QUALITY CATCHMENT PLAN, MODEL AND RESULTS				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-E700	E

NOTE:
- PAVEMENT DESIGN TO BE CONFIRMED AT DETAILED DESIGN.

PAVEMENT DETAILS			
KEY	ROAD TYPE	LAYER	THICKNESS (mm)
	RURAL RESIDENTIAL LOCAL ROAD (CBR= 3.0)	THIN BITUMINOUS SURFACING (AC10)	45
		BASE (DGB20)	150
		SUB-BASE (DGS40)	315
		TOTAL PAVEMENT THICKNESS	510

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
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C	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH
B	AMENDED DESIGN BASED ON ARCHITECTURE	05/09/2018	GM	DG/CG/EZ	DG	TH
A	INITIAL RELEASE	5/09/2018	ZZ/GM/CG	CG/EZ	DG	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	ASSYRIAN SCHOOLS LTD.
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PROJECT NAME/PLANSET TITLE
ST PETER & PAUL ASSYRIAN PRI. SCHOOL CIVIL WORKS PLAN - STAGE 01 17 & 19 KOSOVICH PLACE, CECIL PARK, NSW LOTS 2302 & 2321, DP 1223167

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	PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.
	P1705798	PS04	R06	PS04-G400

DRAWING TITLE				
CONCEPT PAVEMENT DESIGN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-G400	E

NOTE:
MASTERPLAN LAYOUT SHOWN FOR INFORMATION PURPOSE ONLY.

INDICATIVE LOCATIONS OF STAGE 1 PUMP-OUT TANK
(TO BE CONVERTED TO FLOW BALANCE AND TREATMENT
TANK AT ULTIMATE DESIGN) 9 M DIAMETER TREATMENT AND FLOW
BALANCING TANK AND 9 M DIAMETER WET WEATHER STORAGE TANK
(ULTIMATE DESIGN) ABOVE 100 YEAR ARI FLOOD EXTENTS (DIMENSIONS
AND POSITION TO BE CONFIRMED AT CONSTRUCTION CERTIFICATE STAGE)

KEY

APPROXIMATE EXTENTS OF 1 IN 20 YEAR ARI FLOOD

APPROXIMATE EXTENTS OF 1 IN 100 YEAR ARI FLOOD

APPROXIMATE EXTENTS OF PMF

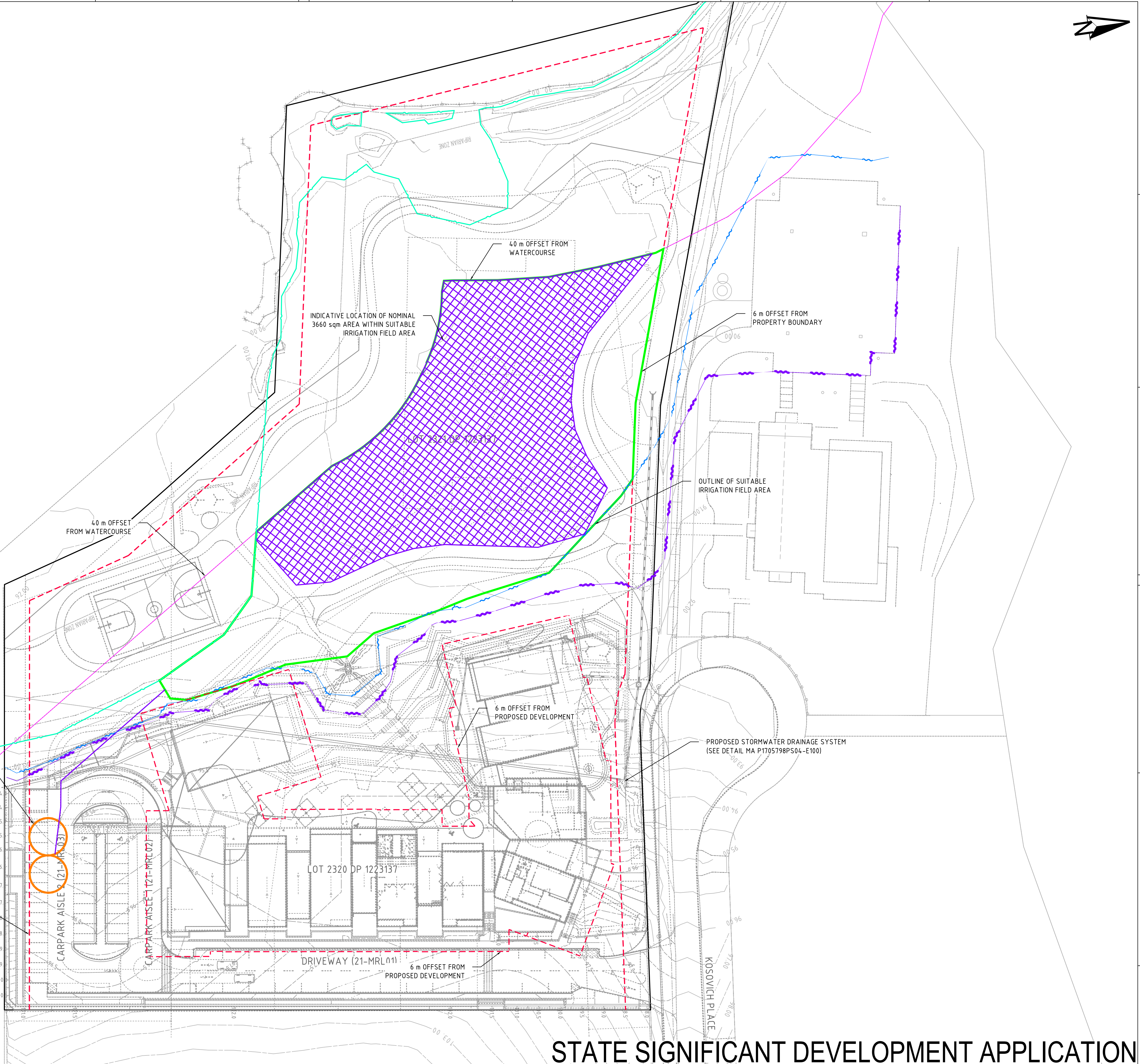
40m OFFSET FROM WATERCOURSE

6m OFFSET FROM SITE BOUNDARY AND BUILDINGS

AREA SUITABLE FOR SUB-SURFACE IRRIGATION

NOMINAL 3660 sqm AREA

6 m OFFSET FROM
PROPERTY BOUNDARY



REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
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B	AMENDED FROM CLIENT COMMENTS	20/09/2018	CG	CG/EZ	DG	TH
A	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH

SCALE
0 5 10 15 20 25 30 35 40 45 50
A1 (A3) 1:500 (1:1,000) METRES

GRID	DATUM	PROJECT MANAGER	CLIENT
TH			ASSYRIAN SCHOOLS LTD.
PROJECT NAME/PLANSET TITLE			
ST PETER & PAUL ASSYRIAN PRI. SCHOOL			
CIVIL WORKS PLAN - STAGE 01			
17 & 19 KOSOVICH PLACE, CECIL PARK, NSW			
LOTS 2302 & 2321, DP 1223167			

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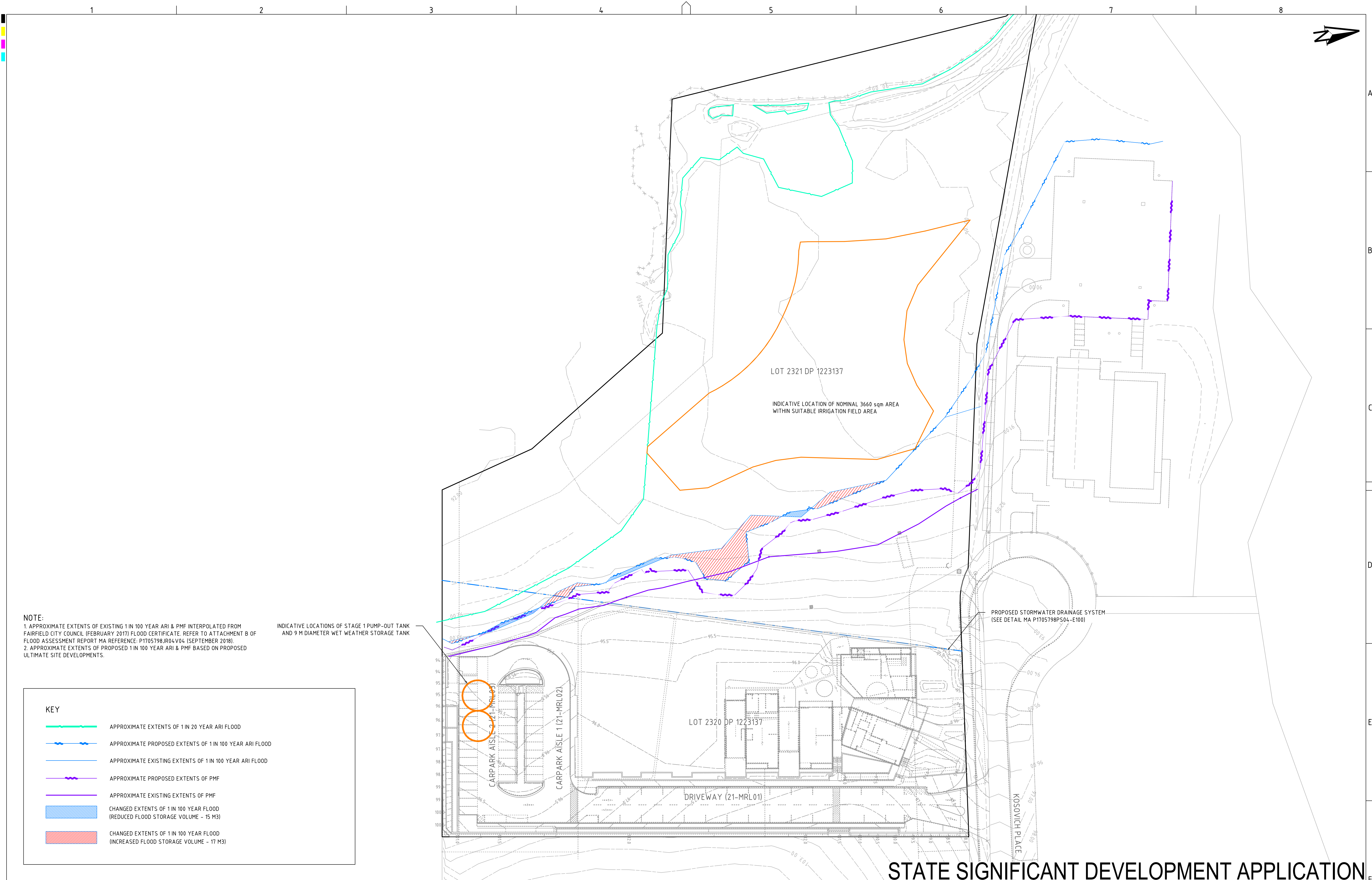


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DRAWING TITLE				
SITE PLAN - WASTEWATER MANAGEMENT				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-H200	C

DRAWING ID: P1705798-PS04-R06-H200



NOTE:
1. APPROXIMATE EXTENTS OF EXISTING 1 IN 100 YEAR ARI & PMF INTERPOLATED FROM FAIRFIELD CITY COUNCIL (FEBRUARY 2017) FLOOD CERTIFICATE. REFER TO ATTACHMENT B OF FLOOD ASSESSMENT REPORT MA REFERENCE: P1705798JR04V04 (SEPTEMBER 2018).
2. APPROXIMATE EXTENTS OF PROPOSED 1 IN 100 YEAR ARI & PMF BASED ON PROPOSED ULTIMATE SITE DEVELOPMENTS.

INDICATIVE LOCATIONS OF STAGE 1 PUMP-OUT TANK AND 9 M DIAMETER WET WEATHER STORAGE TANK

PROPOSED STORMWATER DRAINAGE SYSTEM (SEE DETAIL MA P1705798PS04-E100)

KEY

- APPROXIMATE EXTENTS OF 1 IN 20 YEAR ARI FLOOD
- APPROXIMATE PROPOSED EXTENTS OF 1 IN 100 YEAR ARI FLOOD
- APPROXIMATE EXISTING EXTENTS OF 1 IN 100 YEAR ARI FLOOD
- APPROXIMATE PROPOSED EXTENTS OF PMF
- APPROXIMATE EXISTING EXTENTS OF PMF
- CHANGED EXTENTS OF 1 IN 100 YEAR FLOOD (REDUCED FLOOD STORAGE VOLUME - 15 M3)
- CHANGED EXTENTS OF 1 IN 100 YEAR FLOOD (INCREASED FLOOD STORAGE VOLUME - 17 M3)

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	MINOR AMENDMENTS	20/09/2018	CG	CG/EZ	DG	TH
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B	MINOR AMENDMENT	14/09/2018	GM	MD	MD	TH
A	MINOR AMENDMENT	11/09/2018	GM	DG/CG/EZ	DG	TH

SCALE
0 5 10 15 20 25 30 35 40 45 50
A1 (A3) 1:500 (1:1,000) METRES

GRID
DATUM
PROJECT MANAGER
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PROJECT NAME/PLANSET TITLE
ST PETER & PAUL ASSYRIAN PRI. SCHOOL
CIVIL WORKS PLAN - STAGE 01
17 & 19 KOSOVICH PLACE, CECIL PARK, NSW
LOTS 2302 & 2321, DP 1223167

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DRAWING TITLE				
SITE PLAN - 1 IN 20 YEAR ARI, 1 IN 100 YEAR ARI AND PMF FLOOD EXTENTS				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1705798	PS04	R06	PS04-K100	D

PRINTED: 11/09/2018 11:00:00 AM

A1 / A3 LANDSCAPE (A1L_C_02.0.01)

DRAWING ID: P1705798-PS04-R06-K100

0 5 10 15 20 25 30 35 40 45 50

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