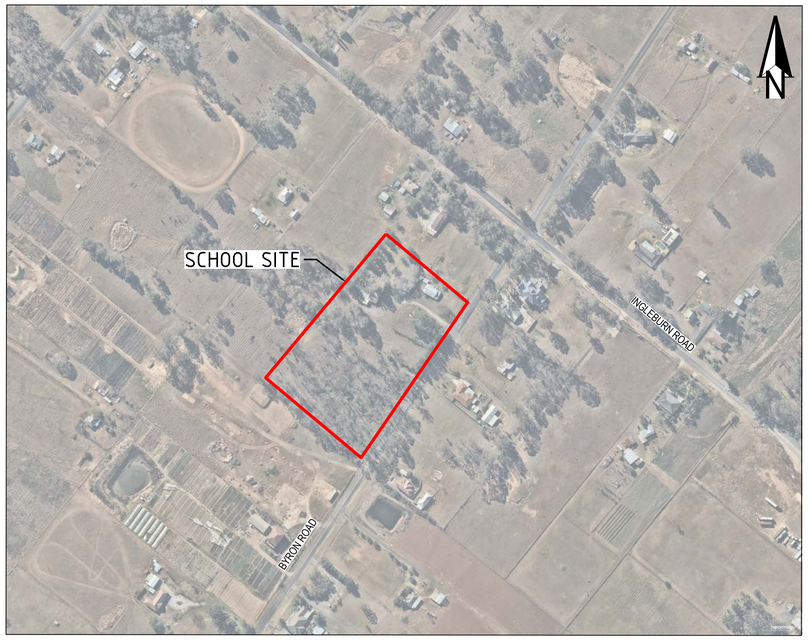
PROJECT: AMITY COLLEGE LEPPINGTON CAMPUS

PLANSET: CIVIL WORKS PLAN

CLIENT: AMITY COLLEGE



LOCALITY PLAN
NOT TO SCALE

LGA: CAMDEN COUNCIL

85 BYRON RD, LEPPINGTON, NSW 2171

LOT 1 & 2 DP 525996

DRAWINGS LIST		
DWG NO.	REV	DWG TITLE
GENERAL		
PS01-A000	G	COVER SHEET
PS01-A050	G	DEVELOPMENT OVERVIEW PLAN
CONSTRUCTION MANAGEMENT WORKS		
PS01-B100	G	STAGE 1 OVERVIEW PLAN
PS01-B300	G	SEDIMENT & EROSION CONTROL AND CLEARING PLAN (ULTIMATE DEVELOPMENT)
PS01-B301	F	SEDIMENT & EROSION CONTROL AND CLEARING PLAN (STAGE 1)
PS01-B305	B	SEDIMENT & EROSION CONTROL RUSLE CALCULATION
PS01-B310	C	SEDIMENT & EROSION CONTROL DETAILS SHEET 1
PS01-B311	B	SEDIMENT & EROSION CONTROL DETAILS SHEET 2
EARTHWORKS		
PS01-C100	G	EARTHWORKS GRADING PLAN (ULTIMATE DEVELOPMENT)
PS01-C101	D	EARTHWORKS GRADING PLAN (STAGE 1)
PS01-C500	F	BULK EARTHWORKS CUT-FILL PLAN (ULTIMATE DEVELOPMENT)
PS01-C501	D	BULK EARTHWORKS CUT-FILL PLAN (STAGE 1)
PS01-C600	E	EARTHWORKS SECTION (SHEET 1)
PS01-C601	C	EARTHWORKS SECTION (SHEET 2)
PS01-C602	C	EARTHWORKS SECTION (SHEET 3)
ROADWORKS		
PS01-D100	G	ROADWORKS PLAN (ULTIMATE DEVELOPMENT)
PS01-D101	D	ROADWORKS PLAN (STAGE 1)
PS01-D200	D	CONCEPT FUTURE BYRON ROAD (21-MRC01) LONGITUDINAL & TYPICAL SECTION
PS01-D201	E	ROAD 1 (21-MRC02) & ROAD 2 (21-MRC03) LONGITUDINAL & TYPICAL SECTION
PS01-D202	B	PRIMARY DROP-OFF (21-MSC01) LONGITUDINAL & TYPICAL SECTION
PS01-D300	E	ROADWORKS DETAILS PLAN
DRAINAGE WORKS		
PS01-E100	G	DRAINAGE PLAN (ULTIMATE DEVELOPMENT)
PS01-E101	D	DRAINAGE PLAN (STAGE 1)
PS01-E200	E	OSD AND DRAINAGE DETAILS
PS01-E300	E	DRAINAGE LONGITUDINAL SECTIONS (SHEET 1)
PS01-E301	E	DRAINAGE LONGITUDINAL SECTIONS (SHEET 2)
PS01-E302	E	DRAINAGE LONGITUDINAL SECTIONS (SHEET 3)
PS01-E303	D	DRAINAGE LONGITUDINAL SECTIONS (SHEET 4)
PS01-E304	E	DRAINAGE LONGITUDINAL SECTIONS (SHEET 5) & PIT SCHEDULE
PS01-E310	A	DRAINAGE LONGITUDINAL SECTIONS (SHEET 6) & PIT SCHEDULE
PS01-E600	F	PRE-DEVELOPMENT OSD CATCHMENT PLAN, MODEL LAYOUT AND RESULT
PS01-E610	F	POST-DEVELOPMENT OSD CATCHMENT PLAN, MODEL LAYOUT AND RESULT
PS01-E611	D	POST-DEVELOPMENT OSD CATCHMENT PLAN, MODEL LAYOUT AND RESULT (STAGE 1)
PS01-E700	F	PRE-DEVELOPMENT MUSIC CATCHMENT PLAN, MODEL LAYOUT AND RESULT
PS01-E710	F	POST-DEVELOPMENT MUSIC CATCHMENT PLAN, MODEL LAYOUT AND RESULT
PS01-E711	D	MUSIC CATCHMENT PLAN, MODEL LAYOUT AND RESULT (STAGE 1)
FINAL CIVIL WORKS		
PS01-G400	E	PAVEMENT PLAN AND DETAILS (ULTIMATE DEVELOPMENT)
PS01-G401	D	PAVEMENT PLAN AND DETAILS (STAGE 1)

GENERAL NOTES:

1 THIS PLAN IS FOR DEVELOPMENT APPLICATION PURPOSE AND NOT FOR CONSTRUCTION. DESIGN TO BE REVIEWED AND UPDATED FOR CONSTRUCTION CERTIFICATE.
2 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.
3 SURVEY INFORMATION SHOWN BASED ON SURVEY INFORMATION PROVIDED BY TOTAL SURVEYING SOLUTION SURVEYORS.
4 LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
5 FINAL SURFACE CONTOURS ARE BASED ON PROPOSED AND EXISTING SURFACE.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
G	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
F	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
E	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

SCALE

GRID: ---
DATUM: ---
PROJECT MANAGER: TH

CLIENT: AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

martens & Associates Pty Ltd
Consulting Engineers
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Geotechnical
Civil
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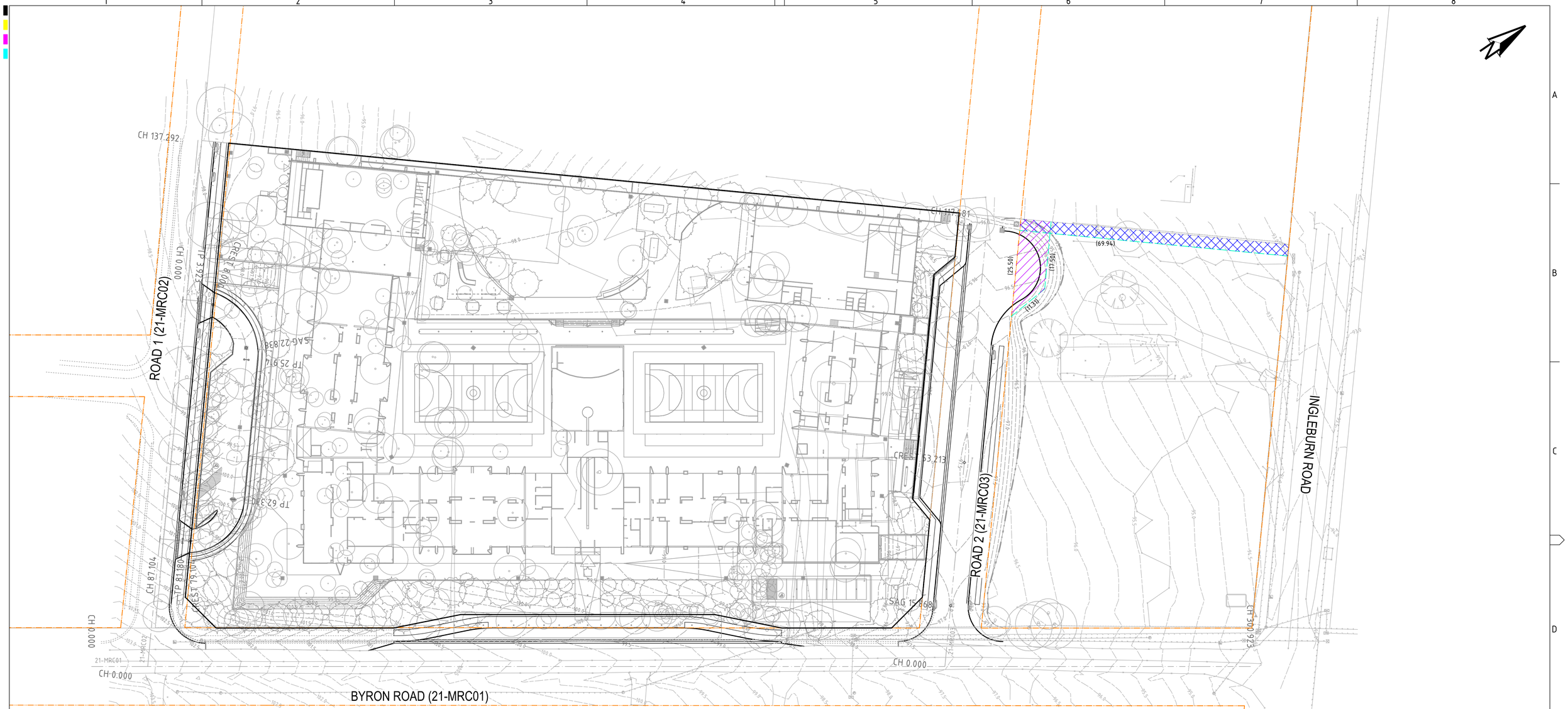
DRAWING TITLE: COVER SHEET

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-A000	G

DRAWING ID: P1806493-PS01-R09-A000

PRINTED ---- USER: GHOSTEFA

A1 / A3 LANDSCAPE (A1LC_v02.0.01)



KEY

- SITE BOUNDARY
- ILP BOUNDARY
- DRAINAGE EASEMENT (3m WIDE)
- TEMPORARY RIGHT OF ACCESS EASEMENT (VARIABLE WIDTH)

STATE SIGNIFICANT DEVELOPMENT APPLICATION

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G	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
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B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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All measurements in millimetres unless otherwise specified.

CLIENT
AMITY COLLEGE

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CIVIL WORKS PLAN

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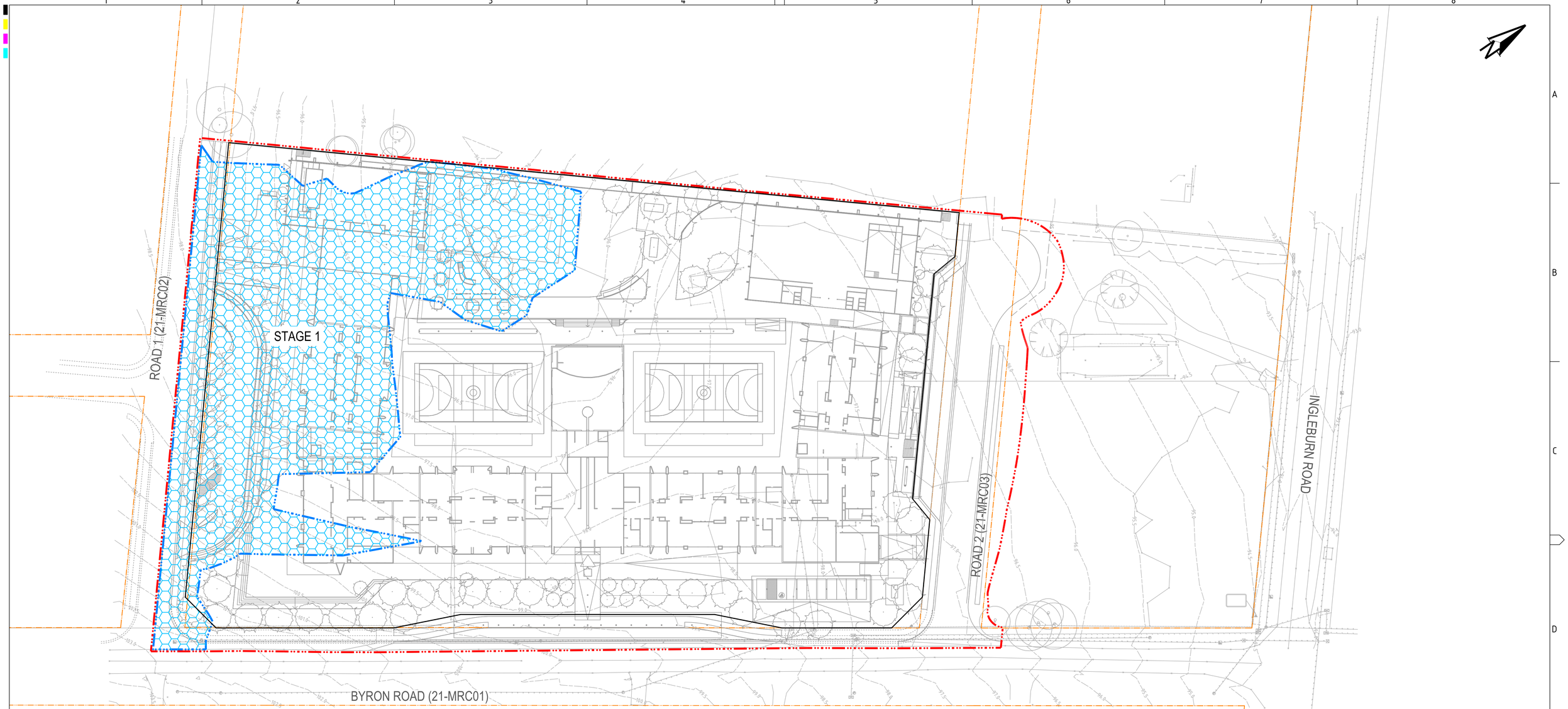
DRAWING TITLE
DEVELOPMENT OVERVIEW PLAN

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-A050	G

DRAWING ID: P1806493-PS01-R09-A050



KEY:

STAGE 1 EXTENT OF WORKS

ULTIMATE DEVELOPMENT EXTENT OF WORKS

SITE BOUNDARY

NOTE: REFER TO ARCHITECT PLANS FOR STAGING DETAILS.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

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B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CIVIL WORKS PLAN

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DRAWING TITLE
STAGE 1 OVERVIEW PLAN

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-B100	G

DRAWING ID: P1806493-PS01-R09-B100

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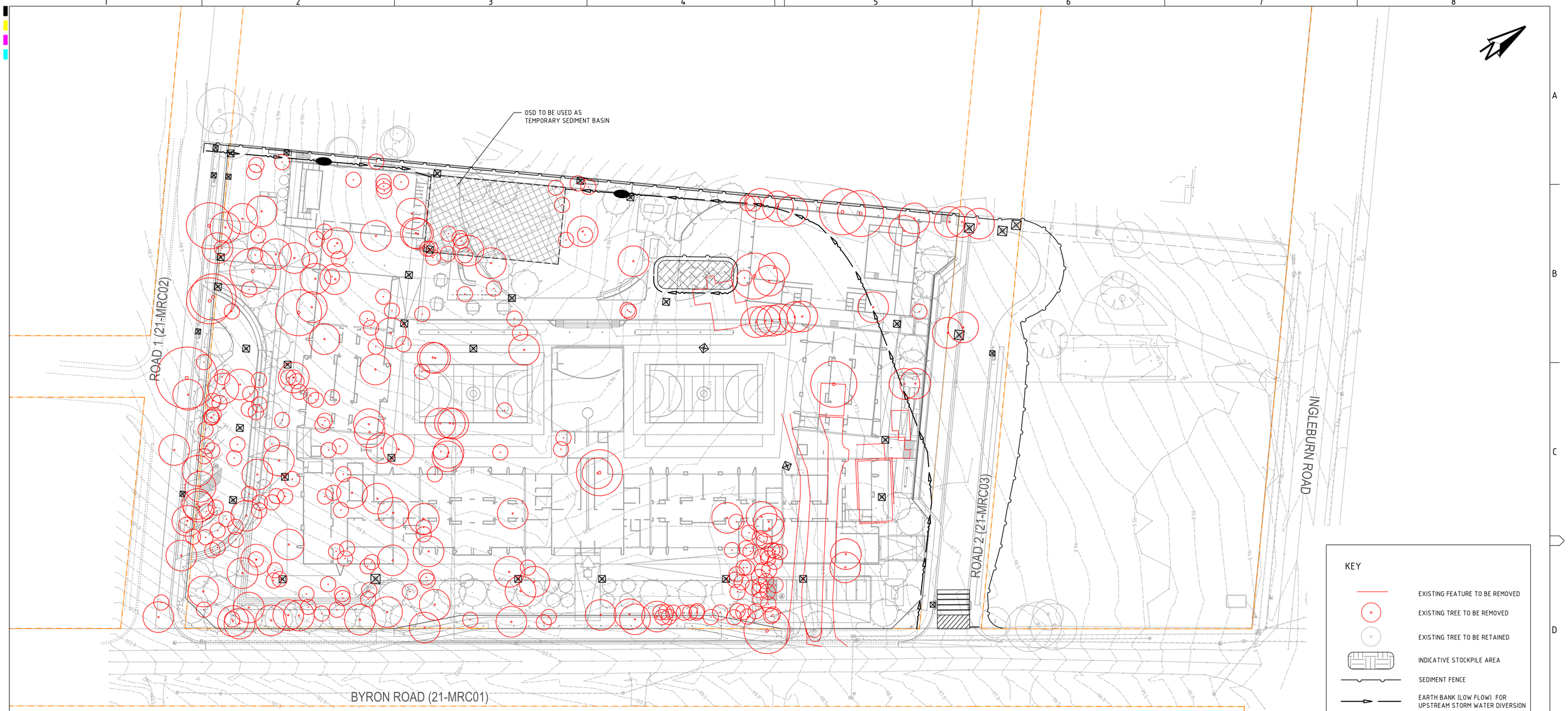

KEY

- EXISTING FEATURE TO BE REMOVED
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO BE RETAINED
- INDICATIVE STOCKPILE AREA
- SEDIMENT FENCE
- EARTH BANK (LOW FLOW) FOR UPSTREAM STORM WATER DIVERSION
- EARTH BANK (LOW FLOW) FOR SITE STORM WATER DIVERSION
- GEOTEXTILE/MESH AND GRAVEL FILTER
- TEMPORARY WATER WAY CROSSING
- STABILISED SITE ACCESS WITH SHAKER PAD / WHEEL WASH (SEE NOTES)
- LEVEL SPREADER
- ROCK CHECK DAM

NOTE:
- TO BE READ IN CONJUNCTION WITH SEDIMENT AND EROSION CONTROL DETAILS
- ALL EXCESS MATERIAL SHALL BE REMOVED FROM SITE.
- COUNCIL PERMISSION TO BE OBTAINED FROM REMOVAL OF TREES ON COUNCIL LAND.
- EROSION AND SEDIMENT CONTROLS 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.
- WHEEL WASH TO BE PROVIDED AT THE SITE ENTRY (BUILT IN SITU OR PORTABLE).
- TREE ROOT PROTECTION IS TO BE PROVIDED DURING CONSTRUCTION.
- WATER LEAVING THE SITE MUST MEET THE 50mg/L TSS LIMITS.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
G	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
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D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	ADDED DRAWING	17/04/2019	HS	HS	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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DRAWING TITLE
SEDIMENT & EROSION CONTROL AND CLEARING PLAN
(ULTIMATE DEVELOPMENT)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-B300	G

DRAWING ID: P1806493-PS01-R09-B300

PRINTED: --- USER: DMOSTAFA
A1 / A3 LANDSCAPE (A1LC_v02.0.01)

TEMPORARY STAGE 1 OSD BASIN BUND TO BE CONSTRUCTED PRIOR TO WORKS.

OSD TO BE USED AS TEMPORARY SEDIMENT BASIN. CONTAMINATION BELOW THE STAGE 1 TEMPORARY OSD BASIN TO BE DEALT WITH PRIOR TO CONSTRUCTION OF THE BASIN. OVER EXCAVATE THE BASIN BY 0.5M TO REMOVE/TREAT CONTAMINATION AND THEN LINE BASIN WITH 0.5M THICK CLEAN CLAY FILL LINER MATERIAL TO FORM THE TEMPORARY BASIN.

ROAD 1 (21-MRC02)

ROAD 2 (21-MRC03)

INGLEBURN ROAD

BYRON ROAD (21-MRC01)

KEY

- EXISTING FEATURE TO BE REMOVED
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO BE RETAINED
- INDICATIVE STOCKPILE AREA
- SEDIMENT FENCE
- EARTH BANK (LOW FLOW) FOR UPSTREAM STORM WATER DIVERSION
- EARTH BANK (LOW FLOW) FOR SITE STORM WATER DIVERSION
- GEOTEXTILE/MESH AND GRAVEL FILTER
- TEMPORARY WATER WAY CROSSING
- STABILISED SITE ACCESS WITH SHAKER PAD / WHEEL WASH (SEE NOTES)
- LEVEL SPREADER
- ROCK CHECK DAM

NOTE:
- TO BE READ IN CONJUNCTION WITH SEDIMENT AND EROSION CONTROL DETAILS
- ALL EXCESS MATERIAL SHALL BE REMOVED FROM SITE.
- COUNCIL PERMISSION TO BE OBTAINED FROM REMOVAL OF TREES ON COUNCIL LAND.
- EROSION AND SEDIMENT CONTROLS 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.
- WHEEL WASH TO BE PROVIDED AT THE SITE ENTRY (BUILT IN SITU OR PORTABLE).
- TREE ROOT PROTECTION IS TO BE PROVIDED DURING CONSTRUCTION.
- WATER LEAVING THE SITE MUST MEET THE 50mg/L TSS LIMITS.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

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C	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
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A	ADDED DRAWING	17/04/2019	HS	HS	CG/DG	

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT
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CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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DRAWING TITLE
SEDIMENT & EROSION CONTROL AND CLEARING PLAN (STAGE 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-B301	F

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A1 / A3 LANDSCAPE (A1LC_v02.0.01)
DRAWING ID: P1806493-PS01-R09-B301

Note: These "Detailed Calculation" spreadsheets relate only to high erosion hazard lands as identified in figure 4.6 or where the designer chooses to use the RUSLE to size sediment basins. The "Standard Calculation" spreadsheets should be used on low erosion hazard lands as identified by figure 4.6 and where the designer chooses not to run the RUSLE in calculations.

1. Site Data Sheet

Site Name: P1806493

Site Location: 63 Ingleburn Road & 85 Byron Road, Leppington, NSW

Precinct: N/A

Description of Site: Blacktown (bt) - Penrith Soil Landscaspe

Site area	Site						Remarks
	CAT 1	CAT 2					
Total catchment area (ha)	1.77	0.73					
Disturbed catchment area (ha)	1.77	0.73					
Soil analysis							
% sand (faction 0.02 to 2.00 mm	5	5					Soil texture should be assessed through mechanical dispersion only. Dispersing agents (e.g. Calgon) should not be used
% silt (fraction 0.002 to 0.02 mm)	30	30					
% clay (fraction finer than 0.002 mm)	65	65					
Dispersion percentage	15.0	15.0					E.g. enter 10 for dispersion of 10%
% of whole soil dispersible	12	12					See Section 6.3.3(e)
Soil Texture Group	D	D					See Section 6.3.3(c), (d) and (e)
Rainfall data							
Design rainfall depth (days)	6	6					See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)	75	75					See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event	21.84	21.84					See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm	9.7	9.7					See IFD chart for the site
RUSLE Factors							
Rainfall erosivity (*R*-factor)	2100	2100	0	0	0	0	Automatic calculation from above data
Soil erodibility (*K*-factor)	0.038	0.038					RUSLE data can be obtained from Appendixes A, B and C
Slope length (m)	140	130					
Slope gradient (%)	5.5	3					
Length/gradient (*LS*-factor)	1.84	0.81					
Erosion control practice (*P*-factor)	1.3	1.3					
Ground cover (*C*-factor)	1	1					
Calculations							
Soil loss (tha/yr)	191	84					
Soil Loss Class	2	1					See Section 4.4.2(b)
Soil loss (m^3/ha/yr)	147	65					
Soil loss (m^3/yr)	260	47					Noted Cat 2 does not require sedimentation basin due to Soil Loss per year < 150 m3/yr
Sediment basin storage volume, m^3	44	8					See Sections 6.3.4(j) and 6.3.5 (e)

2. Storm Flow Calculations

Peak flow is given by the Rational Formula:

$$Qy = 0.00278 \times C_{10} \times F_Y \times I_{y,\,tc} \times A$$

where:
- Q_y is peak flow rate (m^3/sec) of average recurrence interval (ARI) of "Y" years
- C_{10} is the runoff coefficient (dimensionless) for ARI of 10 years. Rural runoff coefficients are given in Volume 2, figure 5 of Pilgrim (1998), while urban runoff coefficients are given in Volume 1, Book VIII, figure 1.13 of Pilgrim (1998) and construction runoff coefficients are given in Appendix F
- F_y is a frequency factor for "Y" years. Rural values are given in Volume 1, Book IV, Table 1.1 of Pilgrim (1998) while urban coefficients are given in Volume 1, Book VIII, Table 1.6 of Pilgrim (1998)
- A is the catchment area in hectares (ha)
- $I_{y,\,tc}$ is the average rainfall intensity (mm/hr) for an ARI of "Y" years and a design duration of "tc" (minutes or hours)

Time of concentration (t_c) = $0.76 \times (A/100)^{0.38}$ hrs (Volume 1, Book IV of Pilgrim, 1998)

Note: For urban catchments the time of concentration should be determined by more precise calculations or reduced by a factor of 50 per cent.

Peak flow calculations, 1

Site	A (ha)	tc (mins)	Rainfall intensity, I, mm/hr						C_{10}
			1 yr,tc	5 yr,tc	10 yr,tc	20 yr,tc	50 yr,tc	100 yr,tc	
CAT 1	1.77	10	58.5	96.4	109	125.5	146	162.4	0.83

Peak flow calculations, 2

ARI (yrs)	Frequency factor (F_y)	Peak flows						Comment
		CAT 1 (m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m3/s)	
1 yr,tc	0.8	0.191						
5 yr,tc	0.95	0.374						
10 yr,tc	1	0.445						
20 yr,tc	1.05	0.538						
50 yr,tc	1.15	0.686						
100 yr,tc	1.2	0.796						

4. Volume of Sediment Basins, *Type D* and *Type F* Soils

Basin volume = settling zone volume + sediment storage zone volume

Settling Zone Volume

The settling zone volume for *Type F* and *Type D* soils is calculated to provide capacity to contain all runoff expected from up to the y-percentile rainfall event. The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle and can be determined by the following equation:

$$V = 10 \times C_v \times A \times R_{x\text{-day, y-\%ile}}\ (m^3)$$

where:

10 = a unit conversion factor

C_v = the volumetric runoff coefficient defined as that portion of rainfall that runs off as stormwater over the x-day period

$R_{x\text{-day, y-\%ile}}$ = is the x-day total rainfall depth (mm) that is not exceeded in y percent of rainfall events. (See Sections 6.3.4(d), (e), (f), (g) and (h)).

A = total catchment area (ha)

Sediment Storage Zone Volume

In the detailed calculation on Soil Loss Classes 1 to 4 lands, the sediment storage zone can be taken as 50 percent of the settling zone capacity. Alternately designers can design the zone to store the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(ii)). However, on Soil Loss Classes 5, 6 and 7 lands, the zone must contain the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(iii).

Place an "X" in the box below to show the sediment storage zone design parameters used here:

	50% of settling zone capacity,
X	2 months soil loss calculated by RUSLE

Total Basin Volume

Site	C_v	$R_{x\text{-day, y-\%ile}}$	Total catchment area (ha)	Settling zone volume (m^3)	Sediment storage volume (m^3)	Total basin volume (m^3)
CAT 1	0.35	21.84	1.77	135.2888	44	179.2888

NOTE: SOURCED FROM LANDCOM BLUE BOOK.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
A	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT: AMITY COLLEGE

PROJECT NAME/PLANSET TITLE: AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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

DRAWING TITLE: SEDIMENT & EROSION CONTROL
RUSLE CALCULATION

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-B305	B

DRAWING ID: P1806493-PS01-R09-B305

PRINTED: --- USER: GMOSTOFA

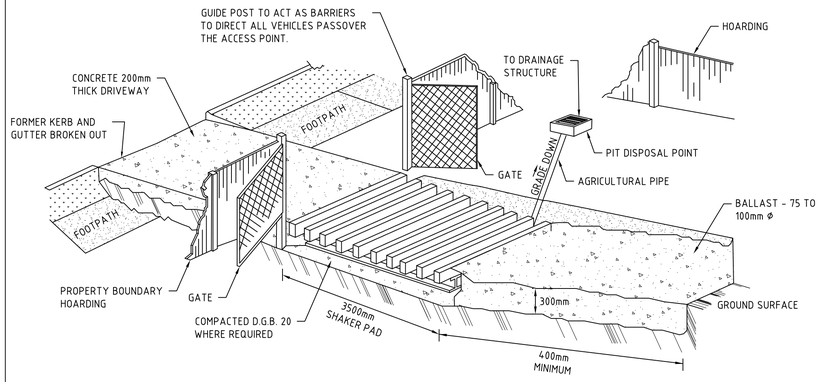
A1 / A3 LANDSCAPE (A1LC_v02.0.01)

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 ADJCENT 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.

WHEEL WASH (BUILT IN OR PORTABLE) TO BE PROVIDED AS PART OF STABILISED ACCESS POINT.

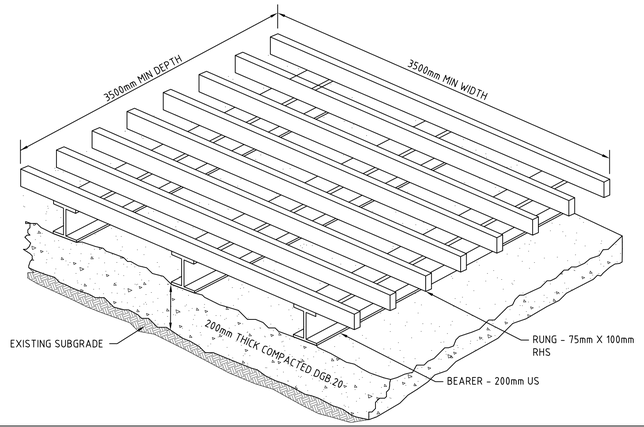
SHAKER PAD (CATTLE GRID)

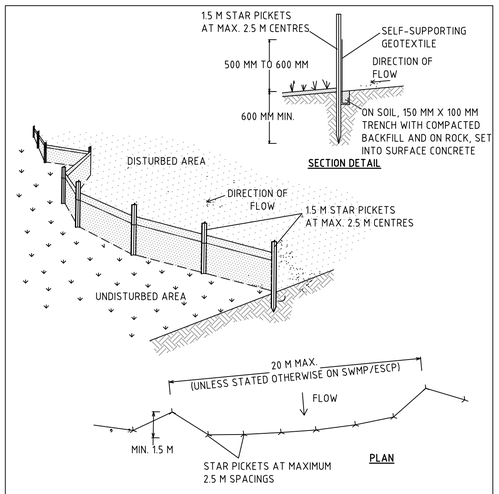
A CORRECTLY DESIGNED AND INSTALLED SHAKER PAD WILL ASSIST IN PREVENTING SEDIMENT TRANSFERE FROM A SITE. ANY STABILISED ACCESS POINT (SAP) CAN BE DESIGNED WITH A SHAKER PAD (COMPULSOPRY IN TYPE II SAP'S)

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 RELEVENT 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 MINIMUN 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 ROP 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.

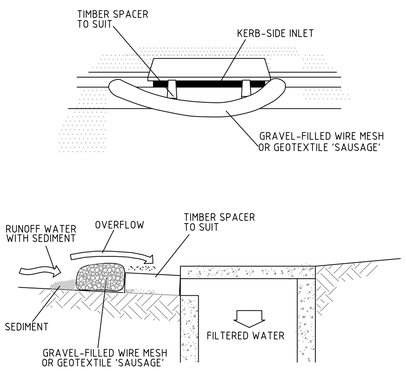




CONSTRUCTION NOTES

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION.THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, 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 DOWNSLOP 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.

SEDIMENT FENCE — SD 6-8

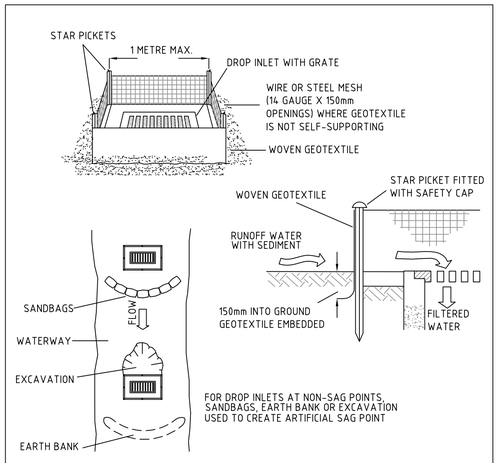


NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

CONSTRUCTION NOTES

1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH X 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100-mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

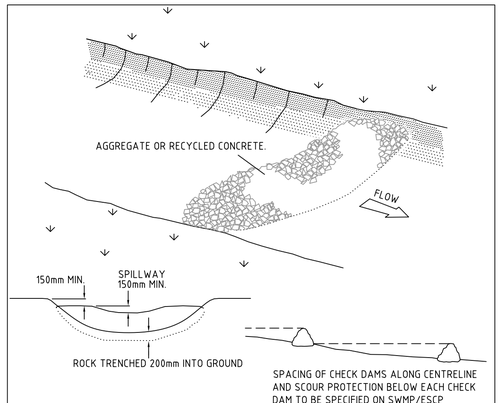
MESH AND GRAVEL INLET FILTER ☒ SD 6-11



CONSTRUCTION NOTES

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER ☒ SD 6-12



CONSTRUCTION NOTES

1. CHECK DAMS CAN BE BUILT WITH VARIOUS MATERIALS, INCLUDING ROCKS, LOGS, SANDBAGS AND STRAW BALES. THE MAINTENANCE PROGRAM SHOULD ENSURE THEIR INTEGRITY IS RETAINED, ESPECIALLY WHERE CONSTRUCTED WITH STRAW BALES. IN THE CASE OF BALES, THIS MIGHT REQUIRE THEIR REPLACEMENT EACH TWO TO FOUR MONTHS.
2. TRENCH THE CHECK DAM 200mm INTO THE GROUND ACROSS ITS WHOLE WIDTH. WHERE ROCK IS USED, FILL THE TRENCHES TO AT LEAST 100mm ABOVE THE GROUND SURFACE TO REDUCE THE RISK OF UNDERCUTTING.
3. NORMALLY, THEIR MAXIMUM HEIGHT SHOULD NOT EXCEED 600mm ABOVE THE GULLY FLOOR. THE CENTRE SHOULD ACT AS A SPILLWAY, BEING AT LEAST 150mm LOWER THAN THE OUTER EDGES.
4. SPACE THE DAMS SO THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE SPILLWAY OF THE NEXT DOWNSTREAM DAM.

ROCK CHECK DAM — SD 5-4

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
C	**AMENDED FORM REVISED ARCHITECTURAL PLANS**	**28/06/2019**	**GM**	**CG/EZ**	**TH**	**TH**
B	ADDED DRAWING	17/04/2019	HS	HS	CG/DG	
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

SCALE

GRID	DATUM	PROJECT MANAGER
---	---	TH

CLIENT: AMITY COLLEGE

PROJECT NAME/PLANSET TITLE: AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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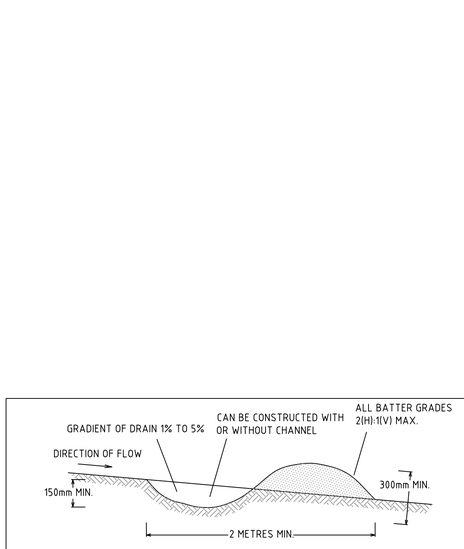
DRAWING TITLE: SEDIMENT & EROSION CONTROL DETAILS SHEET 1

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-B310	C

PRINTED: --- USER: GMOSTOFA
A1 / A3 LANDSCAPE (A1LC_v02.0.01)
DRAWING ID: P1806493-PS01-R09-B310

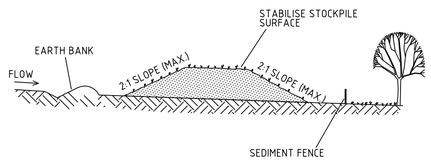


NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES.

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.

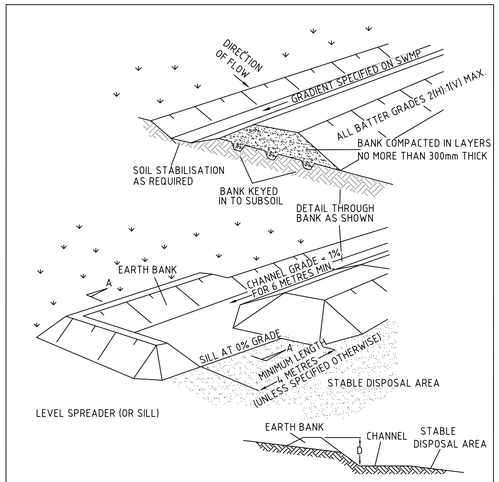
EARTH BANK (LOW FLOW) SD 5-5



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.

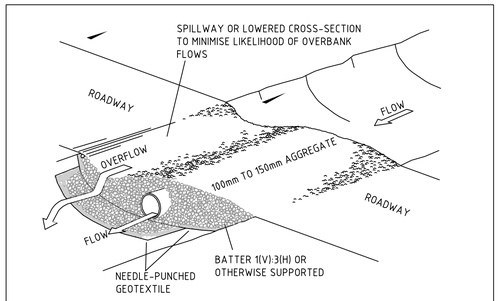
STOCKPILES SD 4-1



CONSTRUCTION NOTES

1. CONSTRUCT AT THE GRADIENT SPECIFIED ON THE ESCP OR SWMP, NORMALLY BETWEEN 1 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,AT THE DIMENSIONS SHOWN ON THE SWMP.
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION FOLLOWING TABLE 5.2 IN LANDCOM (2004).
7. WHERE DISCHARGING TO ERODIBLE LANDS, ENSURE THEY OUTLET THROUGH A PROPERLY CONSTRUCTED LEVEL SPREADER.
8. CONSTRUCT THE LEVEL SPREADER AT THE GRADIENT SPECIFIED ON THE ESCP OR SWMP, NORMALLY LESS THAN 1 PERCENT OR LEVEL.
9. WHERE POSSIBLE, ENSURE THEY DISCHARGE WATERS ONTO EITHER STABILISED OR UNDISTURBED DISPOSAL SITES WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED. APPROVAL MIGHT BE REQUIRED TO DISCHARGE INTO OTHER SUBCATCHMENTS.

LEVEL SPREADER SD 5-6



CONSTRUCTION NOTES

1. PROHIBIT ALL TRAFFIC UNTIL THE ACCESS WAY IS CONSTRUCTED.
2. STRIP ANY TOPSOIL AND PLACE A NEEDLE-PUNCHED TEXTILE OVER THE BASE OF THE CROSSING.
3. PLACE CLEAN, RIGID, NON POLLUTING AGGREGATE OR GRAVEL IN THE 100mm TO 150mm SIZE CLASS OVER THE FABRIC TO A MINIMUM DEPTH OF 200mm.
4. PROVIDE A 3-METRE WIDE CARRIAGEWAY WITH SUFFICIENT LENGTH OF CULVERT PIPE TO ALLOW LESS THAN A 3(H): 1 (V) SLOPE ON SIDE BATTERS.
5. INSTALL A LOWER SECTION TO ACT AS AN EMERGENCY SPILLWAY IN GREATER THAN DESIGN STORM EVENTS.
6. ENSURE THAT CULVERT OUTLETS EXTEND BEYOND THE TOE OF FILL EMBANKMENTS.

TEMPORARY WATERWAY CROSSING SD 5-1

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
A	ADDED DRAWING	17/04/2019	HS	HS	CG/DG	

SCALE

GRID | DATUM | PROJECT MANAGER: TH

CLIENT: AMITY COLLEGE

PROJECT NAME/PLANSET TITLE: AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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DRAWING TITLE: SEDIMENT & EROSION CONTROL DETAILS SHEET 2

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-B311	B

PRINTED: --- - USER: GMOSTOFA
A1 / A3 LANDSCAPE (A1LC_v02.0.01)
DRAWING ID: P1806493-PS01-R09-B311

TERRACED RETAINING WALL
ALONG NORTH-WESTERN BOUNDARY

RL 97.67
RL 98.00
RL 98.84
RL 98.50
RL 98.27
RL 99.17
RL 99.10
RL 99.24

ROAD 1 (21-MRC02)
ROAD 2 (21-MRC03)
INGLEBURN ROAD
BYRON ROAD (21-MRC01)

D PS01-C601
E PS01-C602
F PS01-C602
C PS01-C601
B PS01-C601
A PS01-C600

KEY

- EXISTING CONTOURS
- PROPOSED CONTOURS
- FUTURE CONTOURS
- EARTHWORKS HINGE
- INTERFACE
- EDGE OF RETAINING WALL
- LIMIT OF WORKS
- SITE BOUNDARY

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
G	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
F	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
E	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN

63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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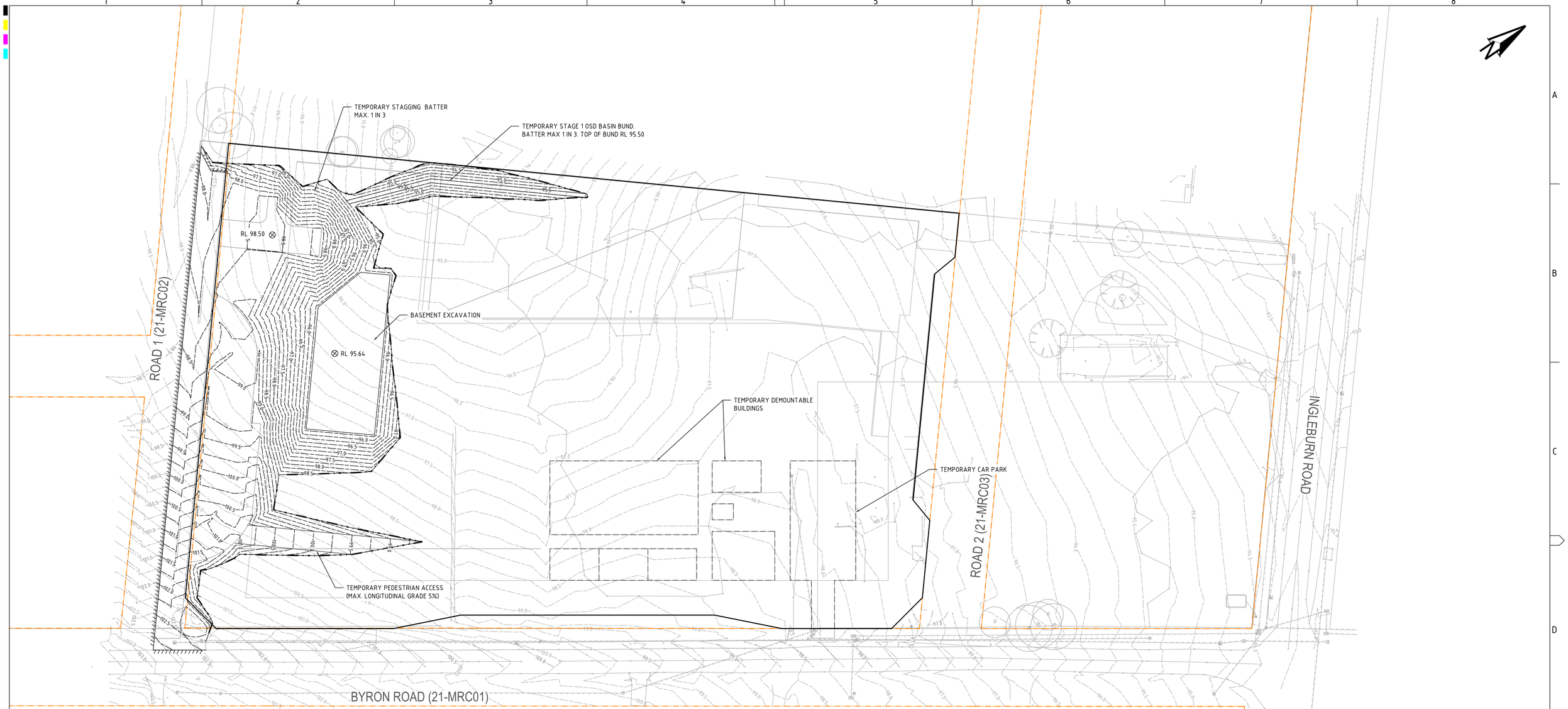
DRAWING TITLE
EARTHWORKS GRADING PLAN
(ULTIMATE DEVELOPMENT)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-C100	G

DRAWING ID: P1806493-PS01-R09-C100

PRINTED: ---- USER: GMOSTOFA

A1 / A3 LANDSCAPE (A1LC_v02.0.01)



KEY

- EXISTING CONTOURS
- PROPOSED CONTOURS
- FUTURE CONTOURS
- EARTHWORKS HINGE
- INTERFACE
- EDGE OF RETAINING WALL
- LIMIT OF WORKS
- SITE BOUNDARY

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
C	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
B	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
A	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
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CIVIL WORKS PLAN
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DRAWING TITLE
EARTHWORKS GRADING PLAN
(STAGE 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-C101	D

DRAWING ID: P1806493-PS01-R09-C101

PRINTED ---- USER: GMOSTOFA

A1 / A3 LANDSCAPE (A1LC_v02.0.01)


MAX. FILL 4.3m IN SPORTS FIELD
BASEMENT EXCAVATION EXTENT
OSD TANK EXCAVATION EXTENT. OSD EXCAVATED TO RL94.4 (IL 94.6 MINUS 200mm FLOOR SLAB).
NORTHERN LANDSCAPE AREA BOXING APPROXIMATELY 200mm BELOW DESIGN SURFACE LEVEL
BASEMENT BULK EXCAVATION TO RL95.64 (FFL95.84 MINUS 200mm FLOOR SLAB)
BASEMENT EXCAVATION EXTENT
ROAD PAVEMENT BOXING APPROXIMATELY 540mm BELOW DESIGN SURFACE LEVEL (PAVEMENT THICKNESS TO BE CONFIRMED AT DETAILED DESIGN STAGE)
ROAD PAVEMENT BOXING APPROXIMATELY 540mm BELOW DESIGN SURFACE LEVEL (PAVEMENT THICKNESS TO BE CONFIRMED AT DETAILED DESIGN STAGE)
MAX. CUT 4.2m IN BASEMENT
MAX. CUT 2.0m IN COURTYARD
MAIN BUILDING PAD BULK EXCAVATION TO RL99.04 (FFL99.24 MINUS 200mm FLOOR SLAB)
ROAD PAVEMENT BOXING APPROXIMATELY 540mm BELOW DESIGN SURFACE LEVEL (PAVEMENT THICKNESS TO BE CONFIRMED AT DETAILED DESIGN STAGE)
MAX. CUT 2.5m IN BASEMENT
BASEMENT BULK EXCAVATION TO RL95.64 (FFL95.84 MINUS 200mm FLOOR SLAB)

CUT-FILL DEPTH DESIGN TO EXISTING

LOWER THAN		-3.000	m	🟥
-3.000	to	-2.250	m	🟥
-2.250	to	-1.500	m	🟧
-1.500	to	-0.750	m	🟧
-0.750	to	-0.150	m	🟨
-0.150	to	0.150	m	⬜
0.150	to	0.750	m	🟩
0.750	to	1.500	m	🟩
1.500	to	2.250	m	🟦
2.250	to	3.000	m	🟦
HIGHER THAN		3.000	m	🟦

BULK EARTHWORKS SUMMARY

	CUT	FILL
EARTHWORKS VOLUME (m^3)	-7166	24111
EARTHWORKS BALANCE (m^3)	-	16945

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
E	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
D	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
C	MINOR AMENDMENT	04/07/2019	GM	CG/EZ	TH	TH
B	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
A	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	

PRINTED: ---- - USER: GMOSTOFA

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

DISCLAIMER & COPYRIGHT

CLIENT
AMITY COLLEGE

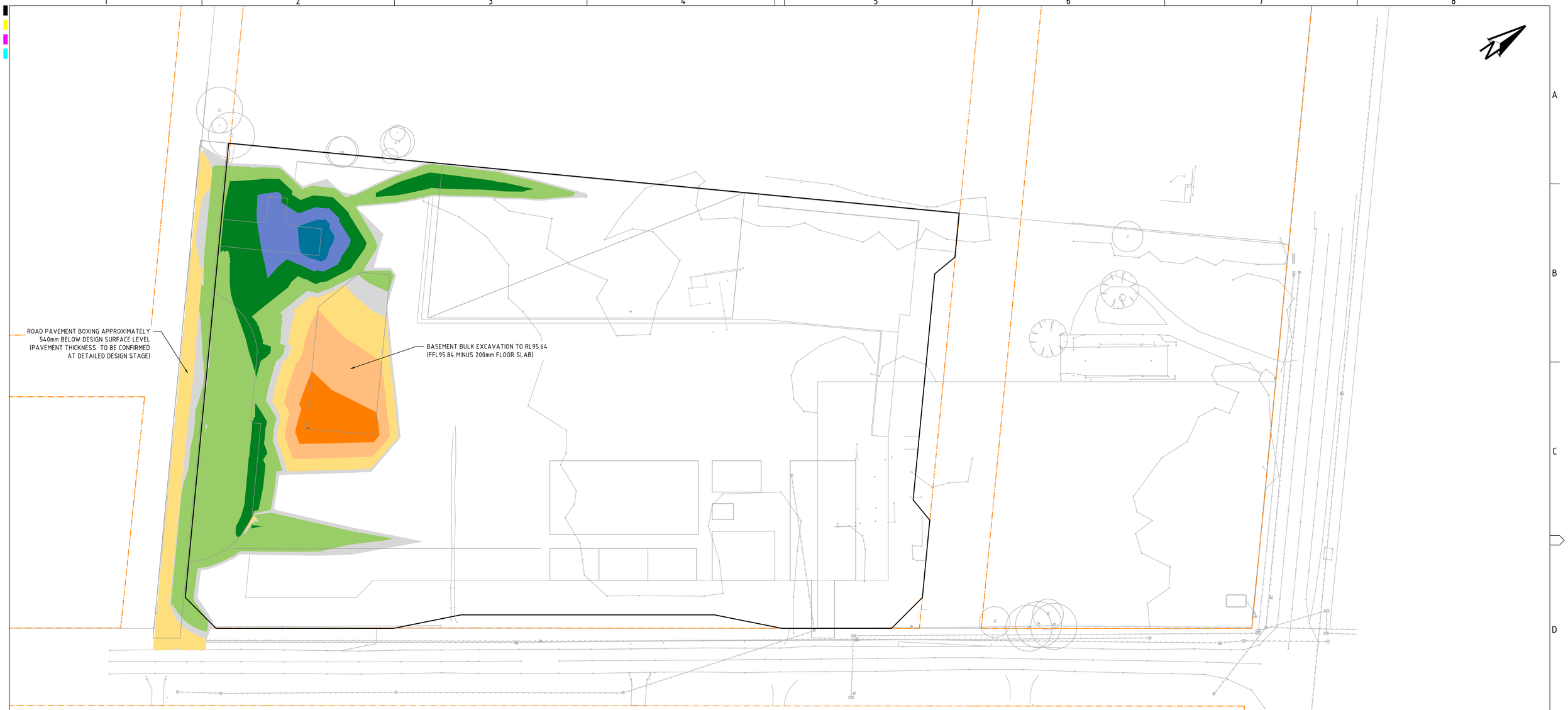
PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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
BULK EARTHWORKS CUT-FILL PLAN
(ULTIMATE DEVELOPMENT)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-C500	F

A1 / A3 LANDSCAPE (A1LC_v02.0.01)
DRAWING ID: P1806493-PS01-R09-C500



CUT-FILL DEPTH DESIGN TO EXISTING

LOWER THAN	-3.000	m		
-3.000	to	-2.250	m	
-2.250	to	-1.500	m	
-1.500	to	-0.750	m	
-0.750	to	-0.150	m	
-0.150	to	0.150	m	
0.150	to	0.750	m	
0.750	to	1.500	m	
1.500	to	2.250	m	
2.250	to	3.000	m	
HIGHER THAN	3.000	m		

BULK EARTHWORKS SUMMARY

	CUT	FILL
EARTHWORKS VOLUME (m^3)	-1403	2462
EARTHWORKS BALANCE (m^3)	-	1061

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
C	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
B	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
A	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

martens & Associates Pty Ltd
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Civil
Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767
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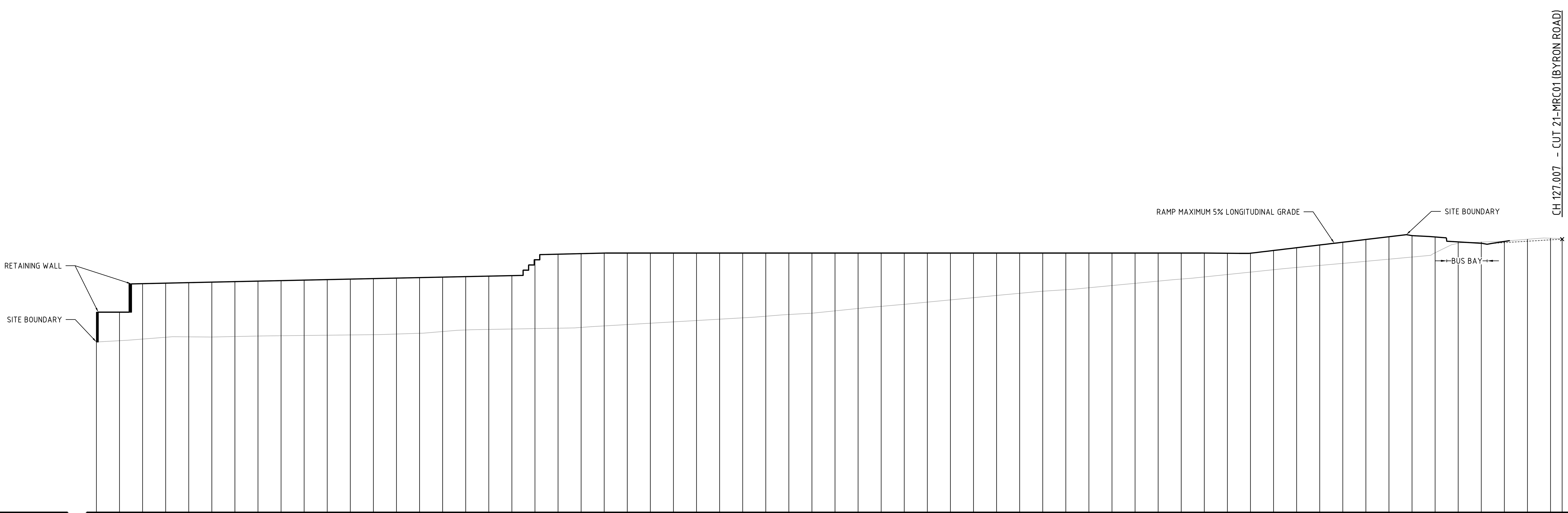
DRAWING TITLE
BULK EARTHWORKS CUT-FILL PLAN
(STAGE 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-C501	D

DRAWING ID: P1806493-PS01-R09-C501

PRINTED: --- USER: GMOSTOFA
A1 / A3 LANDSCAPE (A1LC_v02.0.01)



DATUM RL 88.000

CHAINAGE	DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH
0.000		95.386	0.000
2.000	96.675	95.441	1.234
4.000	97.912	95.512	2.400
6.000	97.934	95.591	2.344
8.000	97.957	95.608	2.349
10.000	97.979	95.601	2.378
12.000	98.001	95.622	2.379
14.000	98.022	95.643	2.380
16.000	98.044	95.656	2.388
18.000	98.066	95.668	2.398
20.000	98.088	95.679	2.409
22.000	98.110	95.690	2.420
24.000	98.132	95.702	2.430
26.000	98.153	95.730	2.424
28.000	98.175	95.763	2.412
30.000	98.196	95.838	2.358
32.000	98.218	95.906	2.311
34.000	98.239	95.930	2.309
36.000	98.260	95.947	2.313
38.000	98.921	95.965	2.956
40.000	99.189	95.983	3.207
42.000	99.213	96.017	3.197
44.000	99.238	96.082	3.156
46.000	99.240	96.140	3.100
48.000	99.240	96.199	3.041
50.000	99.240	96.257	2.983
52.000	99.240	96.315	2.925
54.000	99.240	96.373	2.867
56.000	99.240	96.432	2.808
58.000	99.240	96.501	2.739
60.000	99.240	96.576	2.664
62.000	99.240	96.633	2.607
64.000	99.240	96.734	2.506
66.000	99.240	96.837	2.403
68.000	99.240	96.929	2.311
70.000	99.240	97.017	2.223
72.000	99.240	97.112	2.128
74.000	99.240	97.209	2.031
76.000	99.240	97.305	1.935
78.000	99.240	97.402	1.838
80.000	99.240	97.495	1.745
82.000	99.240	97.586	1.654
84.000	99.240	97.650	1.590
86.000	99.240	97.735	1.505
88.000	99.240	97.831	1.409
90.000	99.240	97.927	1.313
92.000	99.240	98.022	1.218
94.000	99.240	98.112	1.128
96.000	99.239	98.204	1.035
98.000	99.230	98.308	0.922
100.000	99.232	98.413	0.819
102.000	99.351	98.517	0.834
104.000	99.470	98.615	0.855
106.000	99.589	98.703	0.886
108.000	99.708	98.791	0.917
110.000	99.827	98.881	0.946
112.000	99.945	98.973	0.972
114.000	99.993	99.066	0.928
116.000	99.936	99.252	0.684
118.000	99.722	99.660	0.062
120.000	99.662	99.714	-0.053
122.000	99.741	99.756	-0.015
124.000		99.836	0.000
126.000		99.880	0.000
127.007		99.862	0.000

SECTION A

SCALE: HORIZONTAL - 1:200
VERTICAL - 1:100

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	**AMENDED FORM CLIENT COMMENTS**	**11/07/2019**	**GM**	**CG/PD**	**CG/PD**	**TH**
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

PRINTED: ---- - USER: GMOSTOFA

A1 / A3 LANDSCAPE (A1LC__v02.0.01)

SCALE
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A1 (A3) 1:200 (1:400)
0 1 2 3 4 5 6 7 8 9 10 METRES
A1 (A3) 1:100 (1:200)

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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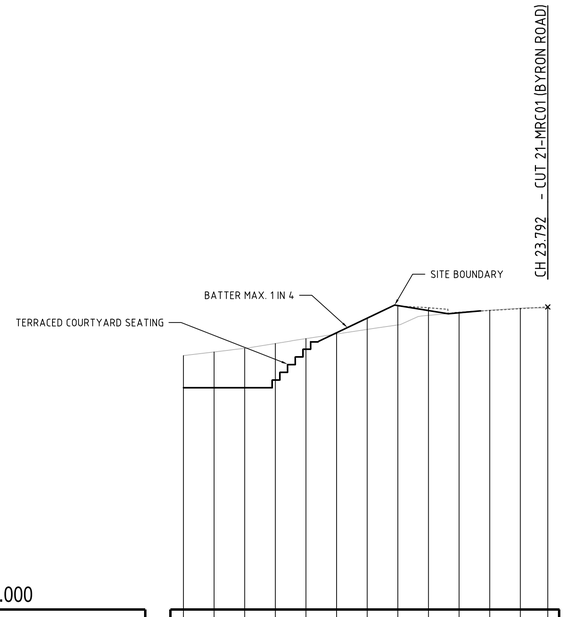
Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767
Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING TITLE
EARTHWORKS SECTION
(SHEET 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-C600	E

DRAWING ID: P1806493-PS01-R09-C600

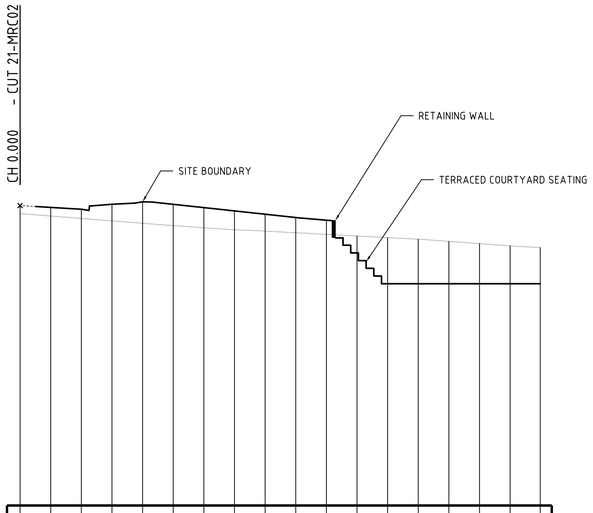


DATUM RL 92.000

DESIGN SURFACE LEVELS	99.240	99.240	99.240	99.340	100.340	101.033	101.510	101.920	101.758	101.685		
EXISTING SURFACE LEVELS	100.287	100.406	100.524	100.681	100.842	100.992	101.142	101.288	101.600	101.685	101.767	101.833	101.835
CUT / FILL DEPTH	-1.047	-1.166	-1.284	-1.341	-0.502	0.041	0.367	0.632	0.157	-0.001	0.000	0.000	-0.000
CHAINAGE	0.000	2.000	4.000	6.000	8.000	10.000	12.000	14.000	16.000	18.000	20.000	22.000	23.792

SECTION B

SCALE: HORIZONTAL - 1:200
VERTICAL - 1:100

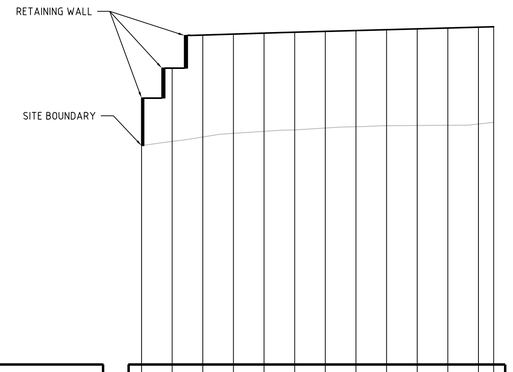


DATUM RL 92.000

DESIGN SURFACE LEVELS	101.729	101.670	101.832	101.912	101.831	101.723	101.615	101.507	101.400	101.312	100.040	99.240	99.240	99.240	99.240	99.240	99.240
EXISTING SURFACE LEVELS	101.527	101.448	101.370	101.291	101.212	101.136	101.067	100.999	100.956	100.902	100.849	100.796	100.743	100.691	100.621	100.548	100.475	100.421
CUT / FILL DEPTH	0.000	0.281	0.300	0.541	0.700	0.695	0.656	0.616	0.552	0.497	0.463	-0.756	-1.503	-1.451	-1.381	-1.308	-1.235	-1.181
CHAINAGE	0.000	2.000	4.000	6.000	8.000	10.000	12.000	14.000	16.000	18.000	20.000	22.000	24.000	26.000	28.000	30.000	32.000	33.966

SECTION C

SCALE: HORIZONTAL - 1:200
VERTICAL - 1:100



DATUM RL 87.000

DESIGN SURFACE LEVELS	94.145	96.675	97.752	97.784	97.816	97.846	97.873	97.901	97.928	97.955	97.983	98.010	98.024				
EXISTING SURFACE LEVELS	94.145	94.284	94.426	94.545	94.610	94.657	94.718	94.760	94.793	94.801	94.808	94.849	94.905				
CUT / FILL DEPTH	0.000	2.391	3.327	3.239	3.205	3.189	3.155	3.140	3.135	3.154	3.174	3.161	3.119				
CHAINAGE	0.000	2.000	4.000	6.000	8.000	10.000	12.000	14.000	16.000	18.000	20.000	22.000	22.993				

SECTION D

SCALE: HORIZONTAL - 1:200
VERTICAL - 1:100

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
C	**AMENDED FORM CLIENT COMMENTS**	**11/07/2019**	**GM**	**CG/PD**	**CG/PD**	**TH**
B	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
A	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	

SCALE
A1 (A3) 1:200 (1:400) METRES
A1 (A3) 1:100 (1:200) METRES

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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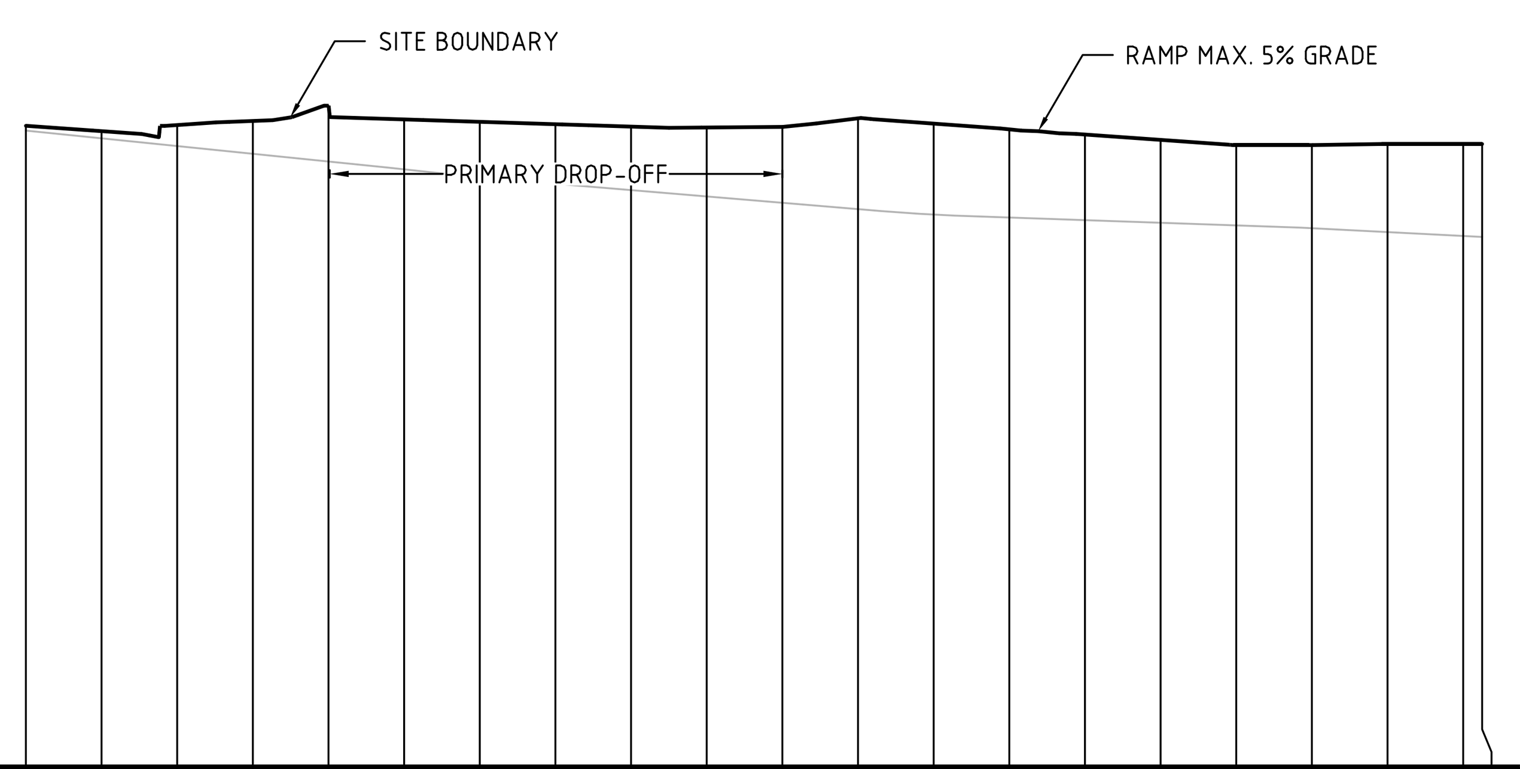
Civil
Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767
Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING TITLE
EARTHWORKS SECTION
(SHEET 2)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-C601	C

PRINTED: ---- - USER: GMOSTOFA
A1 / A3 LANDSCAPE (A1LC_v02.0.01)
DRAWING ID: P1806493-PS01-R09-C601

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8

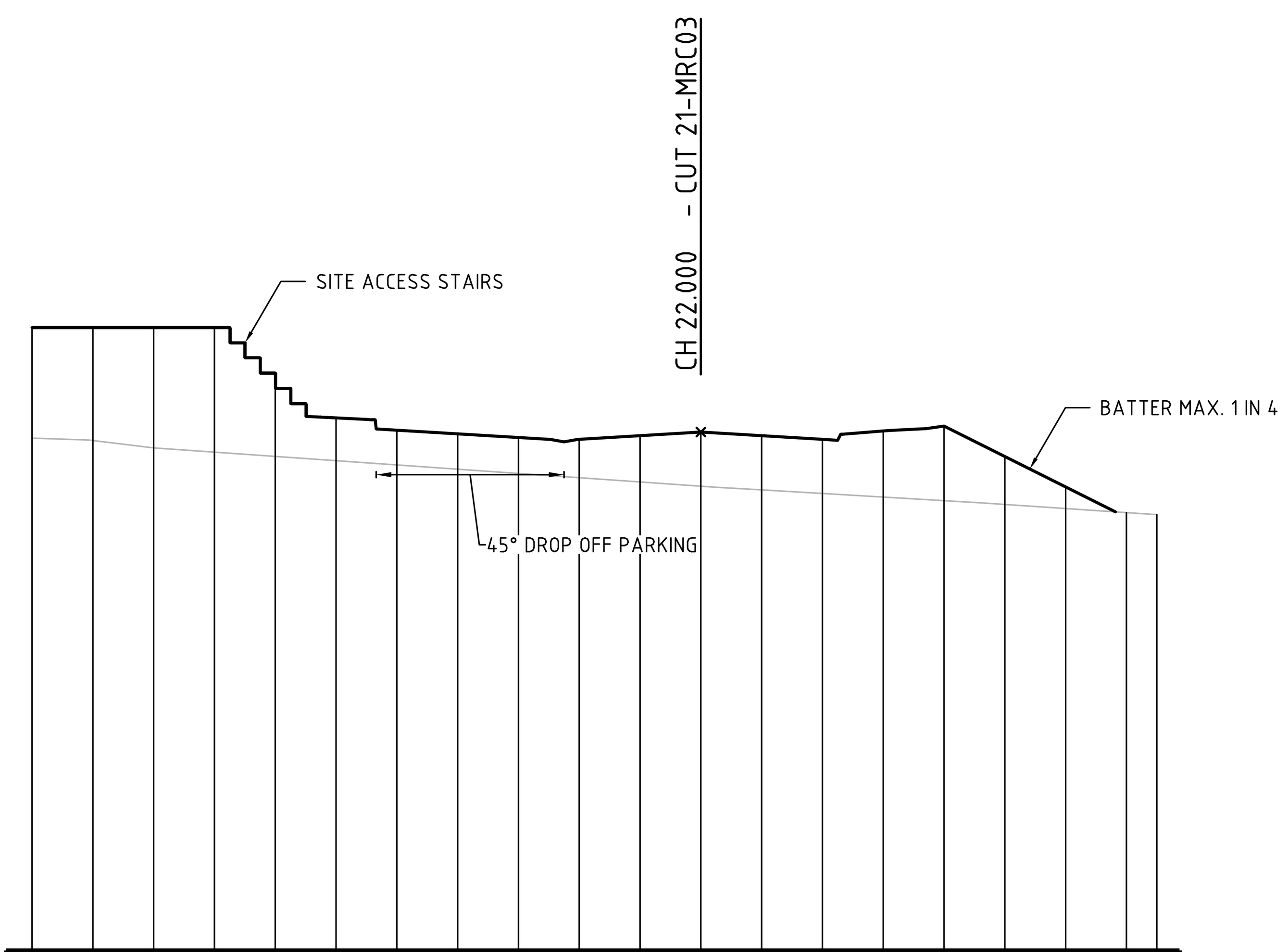


DATUM RL 91.000

DESIGN SURFACE LEVELS	99.481	99.410	99.491	99.545	99.746	99.565	99.533	99.502	99.470	99.458	99.467	99.580	99.510	99.434	99.365	99.295	99.225	99.226	99.240	99.240	99.240
EXISTING SURFACE LEVELS	99.417	99.315	99.213	99.111	99.009	98.905	98.798	98.714	98.631	98.547	98.463	98.379	98.308	98.268	98.233	98.199	98.164	98.127	98.075	98.024	98.011
CUT / FILL DEPTH	0.063	0.095	0.278	0.434	0.738	0.660	0.735	0.787	0.840	0.912	1.004	1.201	1.202	1.166	1.132	1.096	1.062	1.099	1.165	1.216	1.229
CHAINAGE	0.000	2.000	4.000	6.000	8.000	10.000	12.000	14.000	16.000	18.000	20.000	22.000	24.000	26.000	28.000	30.000	32.000	34.000	36.000	38.000	38.501

SECTION E

SCALE: HORIZONTAL - 1:200
VERTICAL - 1:100



DATUM RL 89.000

DESIGN SURFACE LEVELS	99.240	99.240	99.240	99.240	98.391	97.755	97.553	97.493	97.433	97.403	97.463	97.523	97.463	97.403	97.540	97.620	97.120	96.620		
EXISTING SURFACE LEVELS	97.422	97.383	97.262	97.192	97.122	97.052	96.982	96.912	96.842	96.772	96.702	96.632	96.572	96.513	96.454	96.394	96.332	96.265	96.198	96.165
CUT / FILL DEPTH	1.818	1.857	1.978	2.048	1.269	0.703	0.571	0.581	0.591	0.631	0.761	0.890	0.891	0.890	1.086	1.226	0.788	0.355	0.000	0.000
CHAINAGE	0.000	2.000	4.000	6.000	8.000	10.000	12.000	14.000	16.000	18.000	20.000	22.000	24.000	26.000	28.000	30.000	32.000	34.000	36.000	37.000

SECTION F

SCALE: HORIZONTAL - 1:200
VERTICAL - 1:100

A B C D E F

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
C	**AMENDED FORM CLIENT COMMENTS**	**11/07/2019**	**GM**	**CG/PD**	**CG/PD**	**TH**
B	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
A	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	

SCALE
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A1 (A3) 1:200 (1:400)
0 1 2 3 4 5 6 7 8 9 10 METRES
A1 (A3) 1:100 (1:200)

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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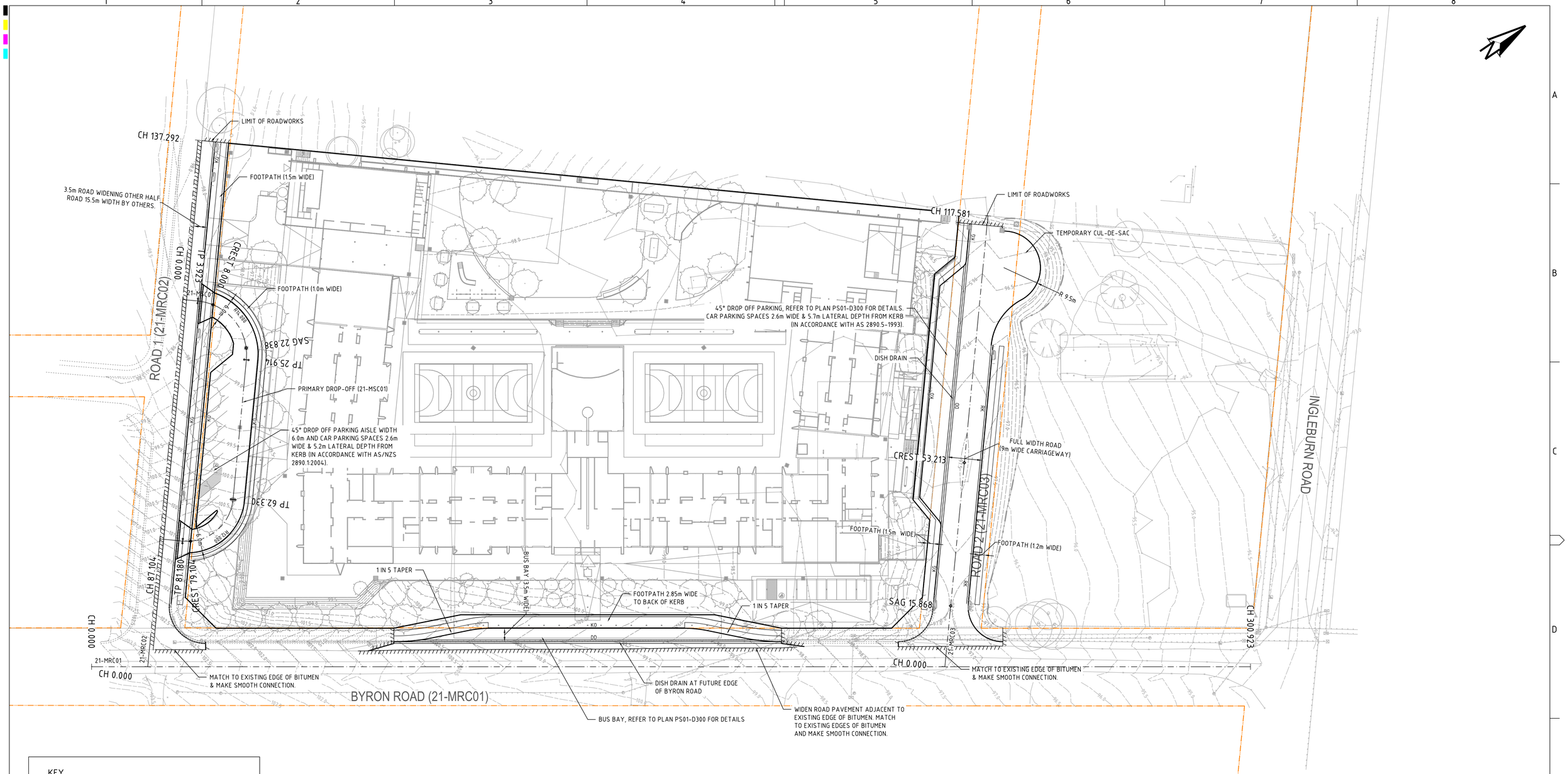
DRAWING TITLE
EARTHWORKS SECTION
(SHEET 3)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-C602	C



KEY

- FINAL SURFACE CONTOURS
- ROAD ALIGNMENT
- ROLLING KERB (RK)
- KERB & GUTTER (KG)
- KERB ONLY (KO)
- DISH DRAIN (DD)
- FOOTPATH
- LIMIT OF WORKS
- SITE BOUNDARY

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
G	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
F	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
E	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN

63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

martens & Associates Pty Ltd
Consulting Engineers
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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

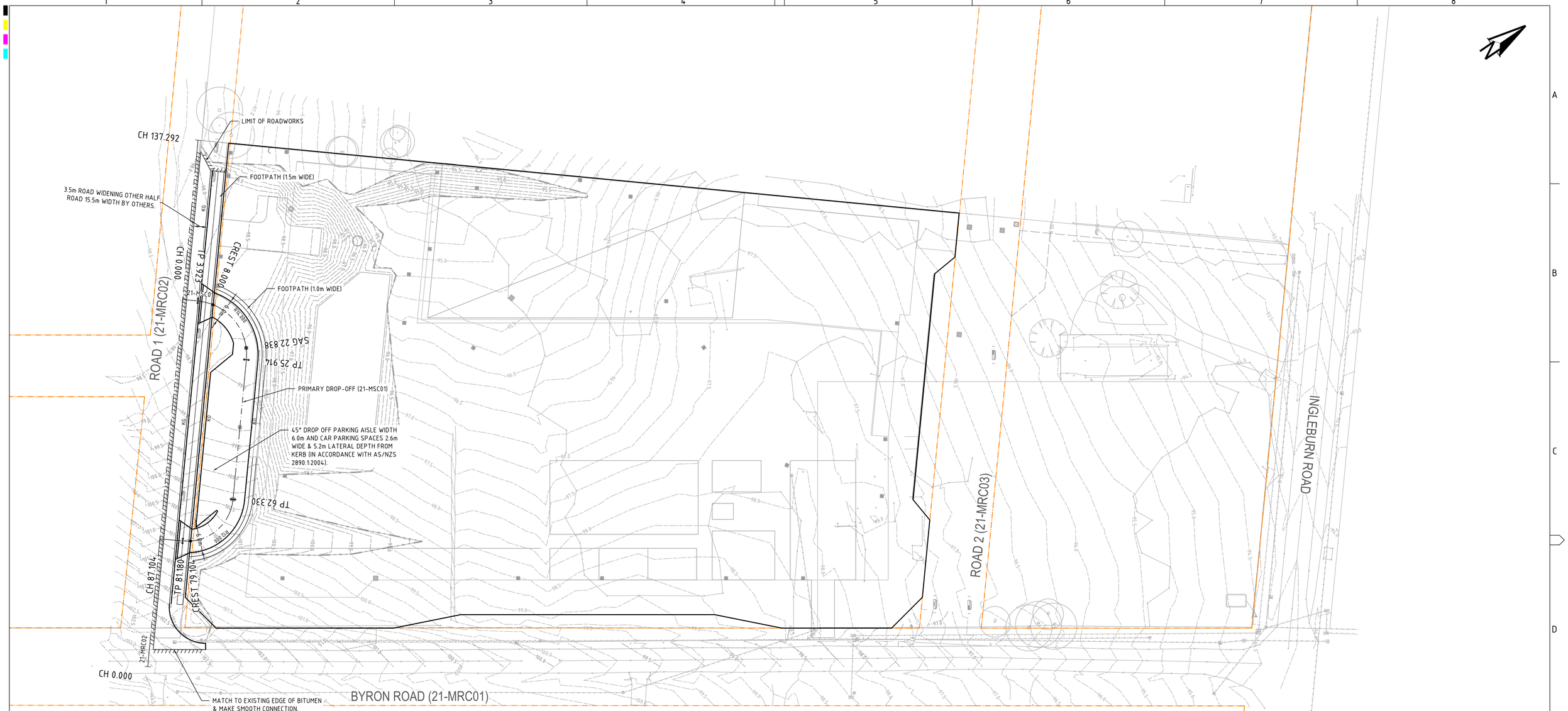
DRAWING TITLE
ROADWORKS PLAN
(ULTIMATE DEVELOPMENT)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-D100	G

DRAWING ID: P1806493-PS01-R09-D100

PRINTED: ---- USER: GMOSTOFA

A1 / A3 LANDSCAPE (A1LC_v02.0.01)



KEY

- FINAL SURFACE CONTOURS
- ROAD ALIGNMENT
- ROLLING KERB (RK)
- KERB & GUTTER (KG)
- KERB ONLY (KO)
- DISH DRAIN (DD)
- FOOTPATH
- LIMIT OF WORKS
- SITE BOUNDARY

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
C	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
B	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
A	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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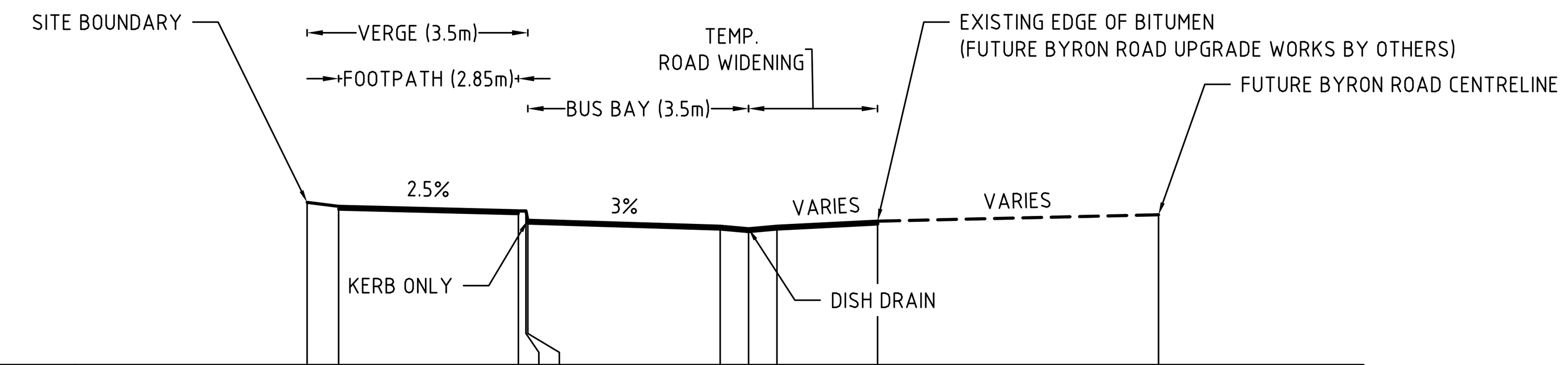
Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING TITLE
ROADWORKS PLAN
(STAGE 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-D101	D

DRAWING ID: P1806493-PS01-R09-D101

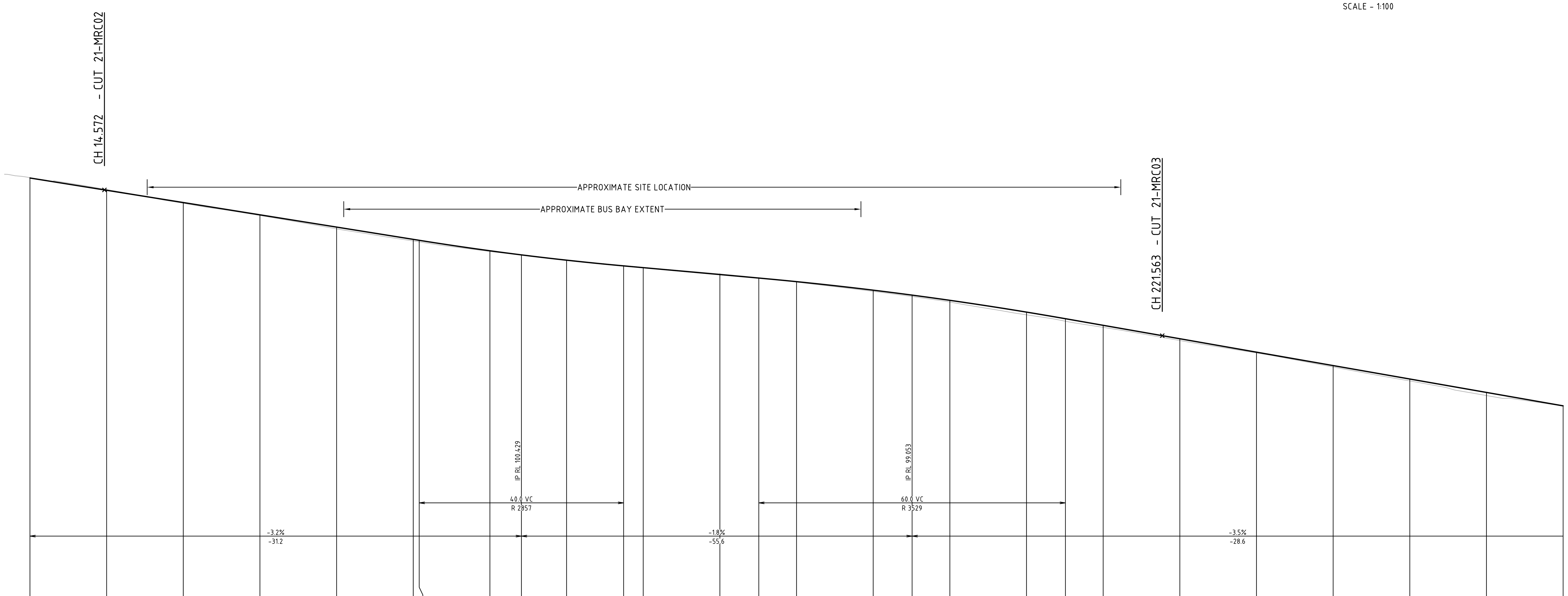
1 2 3 4 5 6 7 8



DESIGN LEVELS	0.197	0.134	0.063	0.063	-0.087	-0.181	-0.221	-0.181	VARIES	0.000
OFFSET	-13.500	-13.000	-10.150	-10.030	-10.000	-6.950	-6.500	-6.050	VARIES	0.000

BUS BAY TYPICAL CROSS SECTION (HALF ROAD)

SCALE - 1:100



VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
VERTICAL GRADE (%)
VERTICAL GRADE (1 IN ...)
HORIZONTAL CURVE RADIUS (m)

DATUM RL 87.000

DESIGN SURFACE LEVELS	103.506	103.026	102.546	102.066	101.586	101.106	101.069	100.660	100.499	100.292	100.069	100.000	99.730
EXISTING SURFACE LEVELS	103.519	103.056	102.517	102.041	101.518	101.044	101.008	100.632	100.493	100.305	100.078	100.004	99.754
CUT / FILL DEPTH	-0.013	-0.029	0.029	0.026	0.068	0.062	0.061	0.028	0.006	-0.014	-0.009	-0.004	-0.024
CHAINAGE	0.000	15.000	30.000	45.000	60.000	75.000	76.165	90.000	96.165	105.000	116.165	120.000	135.000

DESIGN SURFACE LEVELS	99.593	99.452	99.119	98.925	98.722	98.261	98.003	97.744	97.219	96.694	96.169	95.644	95.119	94.594
EXISTING SURFACE LEVELS	99.604	99.438	99.072	98.870	98.655	98.155	97.905	97.665	97.150	96.663	96.114	95.570	94.998	94.589
CUT / FILL DEPTH	-0.011	0.015	0.047	0.055	0.067	0.106	0.098	0.080	0.069	0.032	0.055	0.075	0.121	0.005
CHAINAGE	142.614	150.000	165.000	172.614	180.000	195.000	202.614	210.000	225.000	240.000	255.000	270.000	285.000	300.000

CONCEPT FUTURE BYRON ROAD (21-MRC01) LONG. SECTION (BY OTHERS)

SCALE: HORIZONTAL - 1:500
VERTICAL - 1:100

NOTE: FUTURE BYRON BAY ROAD UPGRADE DETAILS TO BE CONFIRMED AT CC STAGE.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	**AMENDED FORM REVISED ARCHITECTURAL PLANS**	**28/06/2019**	**GM**	**CG/EZ**	**TH**	**TH**
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

SCALE
A1 (A3) 1:500 (1:1,000) — 0 5 10 15 20 25 30 35 40 45 50 METRES
A1 (A3) 1:100 (1:200) — 0 1 2 3 4 5 6 7 8 9 10 METRES

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

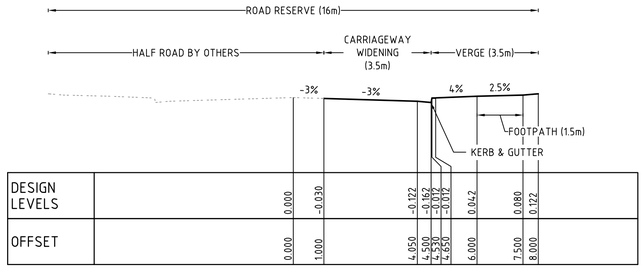
CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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

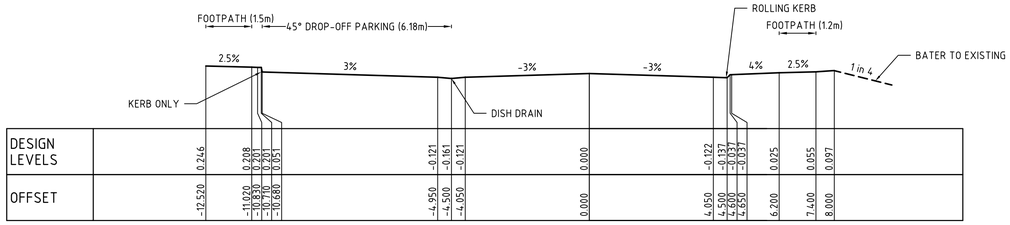
DRAWING TITLE
CONCEPT FUTURE BYRON ROAD (21-MRC01)
LONGITUDINAL & TYPICAL SECTION

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-D200	D



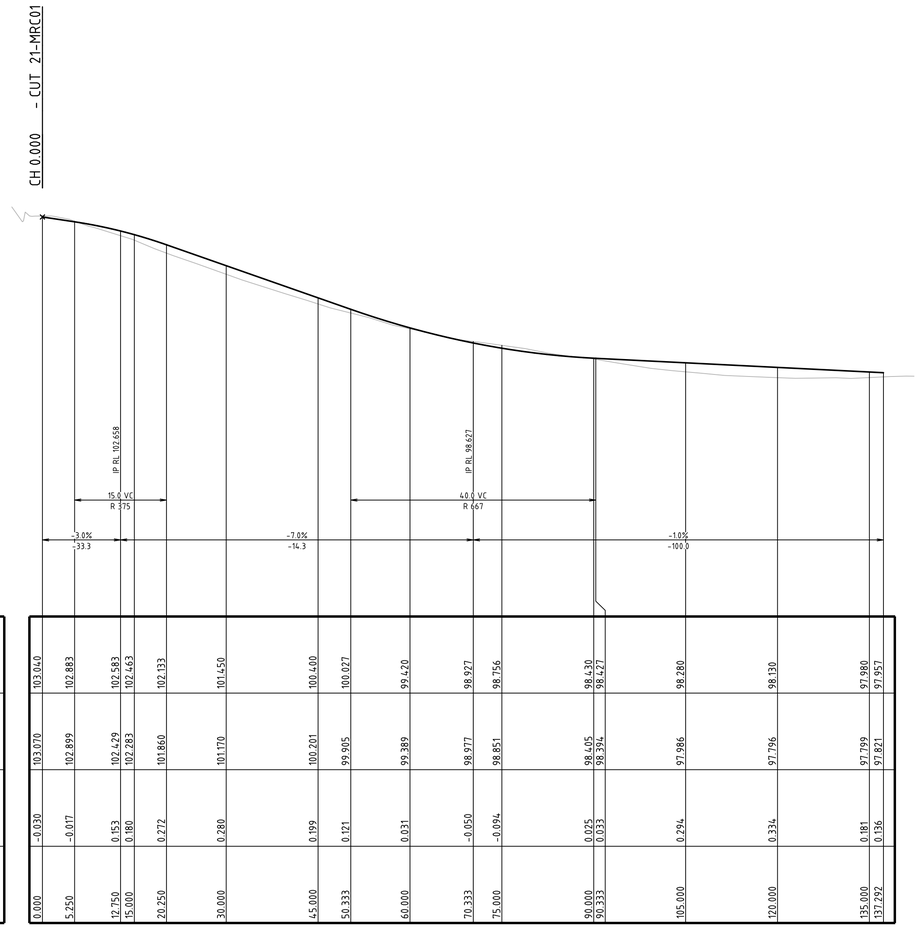
ROAD 1 (21-MRC02) TYPICAL CROSS SECTION (HALF ROAD)

SCALE - 1:100



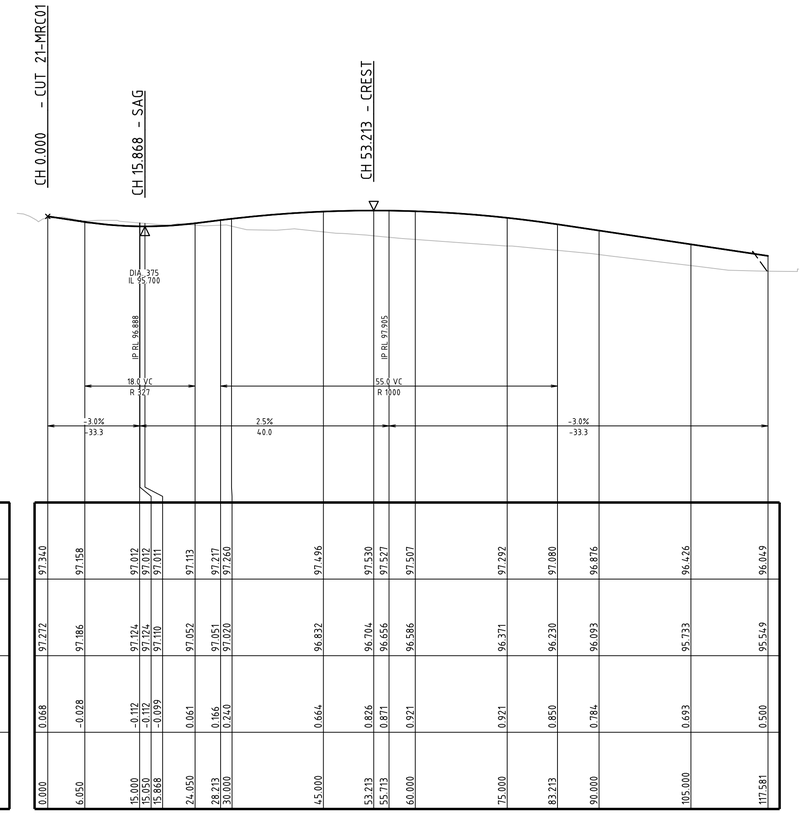
ROAD 2 (21-MRC03) TYPICAL CROSS SECTION

SCALE - 1:100



ROAD 1 (21-MRC02) LONG. SECTION

SCALE: HORIZONTAL - 1:500
VERTICAL - 1:100



ROAD 2 (21-MRC03) LONG. SECTION

SCALE: HORIZONTAL - 1:500
VERTICAL - 1:100

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	**AMENDED FORM CLIENT COMMENTS**	**11/07/2019**	**GM**	**CG/PD**	**CG/PD**	**TH**
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

SCALE
A1 (A3) 1:500 (1:1,000) METRES
A1 (A3) 1:100 (1:200) METRES

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

martens & Associates Pty Ltd
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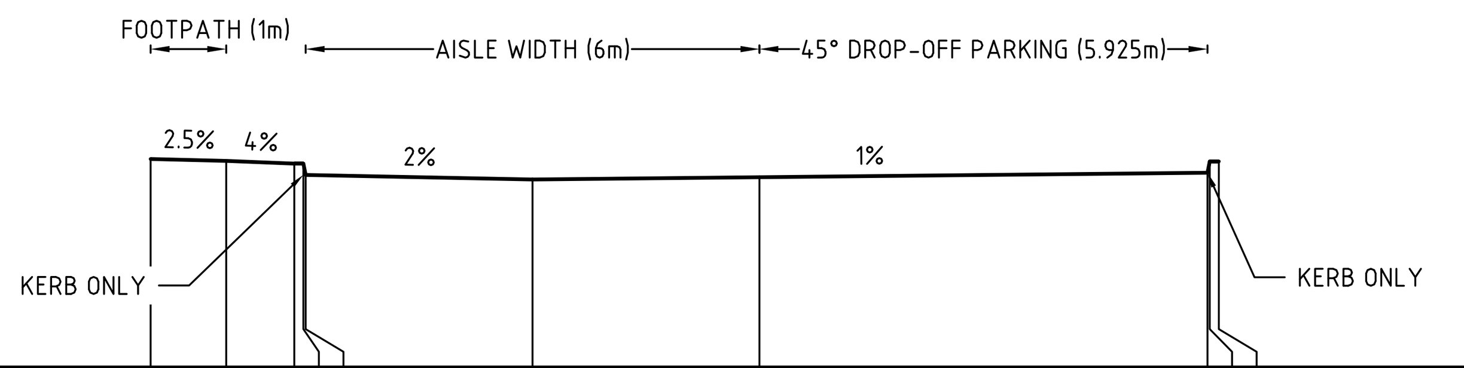
Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING TITLE
ROAD 1 (21-MRC02) & ROAD 2 (21-MRC03)
LONGITUDINAL & TYPICAL SECTION

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-D201	E

DRAWING ID: P1806493-PS01-R09-D201

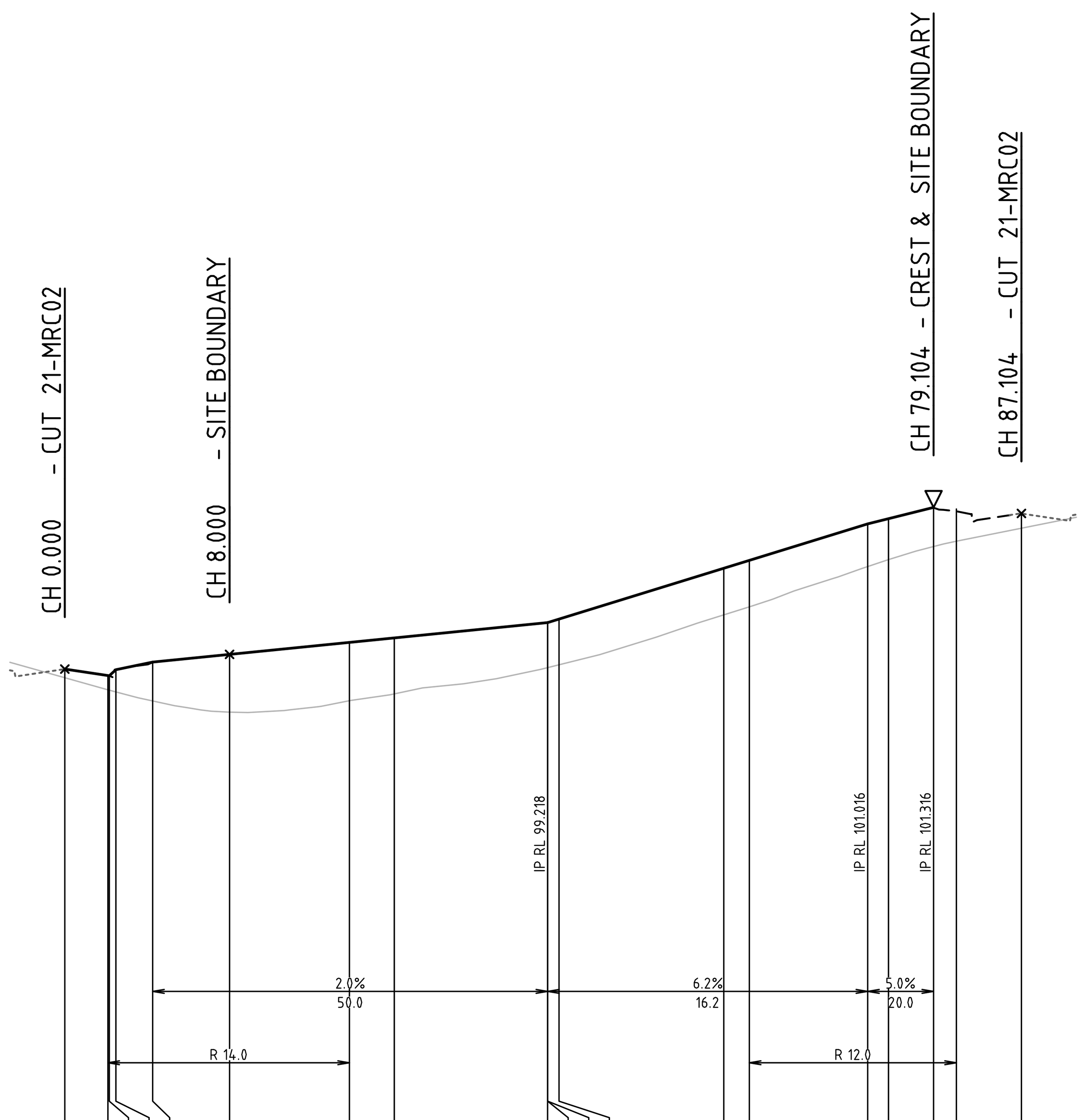
PRINTED: ---- USER: DMOTOFA
A1 / A3 LANDSCAPE (A1LC_v02.0.01)



OFFSET	DESIGN LEVELS
-5.050	0.246
-4.050	0.246
-3.150	0.210
-3.030	0.210
-3.000	0.060
0.000	0.000
3.000	0.030
8.925	0.089
8.955	0.239
9.075	0.239

PRIMARY DROP-OFF (21-MSC01) TYPICAL CROSS SECTION

SCALE - 1:100



VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
VERTICAL GRADE (%)
VERTICAL GRADE (1 IN ...)
HORIZONTAL CURVE RADIUS (m)

DATUM RL 90.000

CHAINAGE	DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH
0.000	98.371	98.213	0.158
3.923	98.253	97.993	0.260
4.050	98.249	97.986	0.264
4.650	98.359	97.953	0.407
8.000	98.498	97.786	0.712
15.000	98.638	97.580	1.058
25.914	98.857	97.795	1.062
30.000	98.938	97.919	1.019
43.958	99.218	98.397	0.821
43.963	99.218	98.397	0.820
43.968	99.218	98.398	0.820
45.000	99.282	98.449	0.833
60.000	100.207	99.358	0.849
62.330	100.351	99.505	0.846
73.104	101.016	100.240	0.776
75.000	101.111	100.365	0.745
79.104	101.316	100.606	0.709
81.180	101.287	100.700	0.587
87.104	101.206	100.937	0.269

PRIMARY DROP-OFF (21-MSC01) LONG. SECTION

SCALE: HORIZONTAL - 1:500
VERTICAL - 1:100

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	**AMENDED FORM REVISED ARCHITECTURAL PLANS**	**28/06/2019**	**GM**	**CG/EZ**	**TH**	**TH**
A	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	

SCALE
A1 (A3) 1:500 (1:1,000) METRES
A1 (A3) 1:100 (1:200) METRES

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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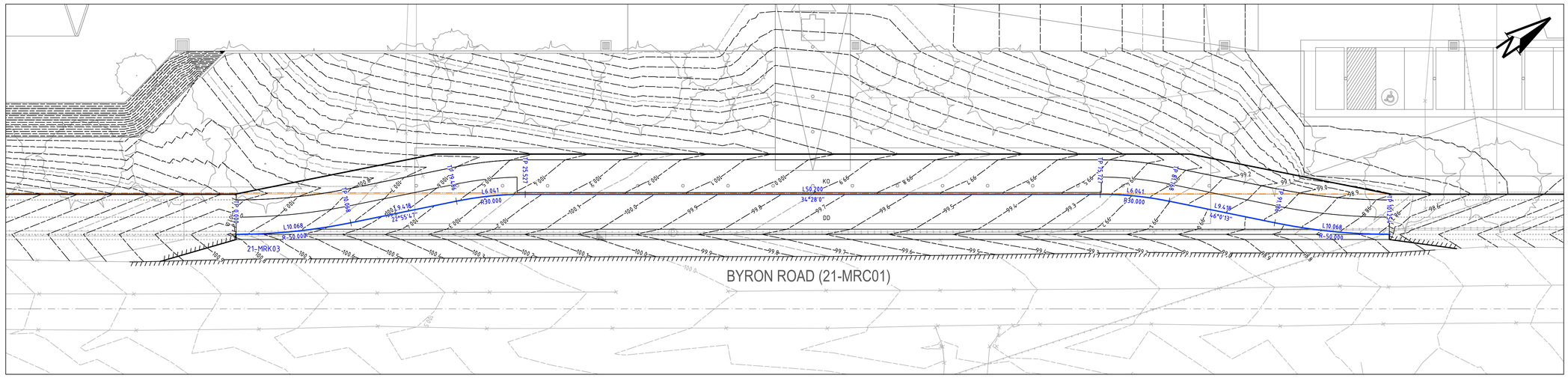
Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767
Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING TITLE
PRIMARY DROP-OFF (21-MSC01)
LONGITUDINAL & TYPICAL SECTION

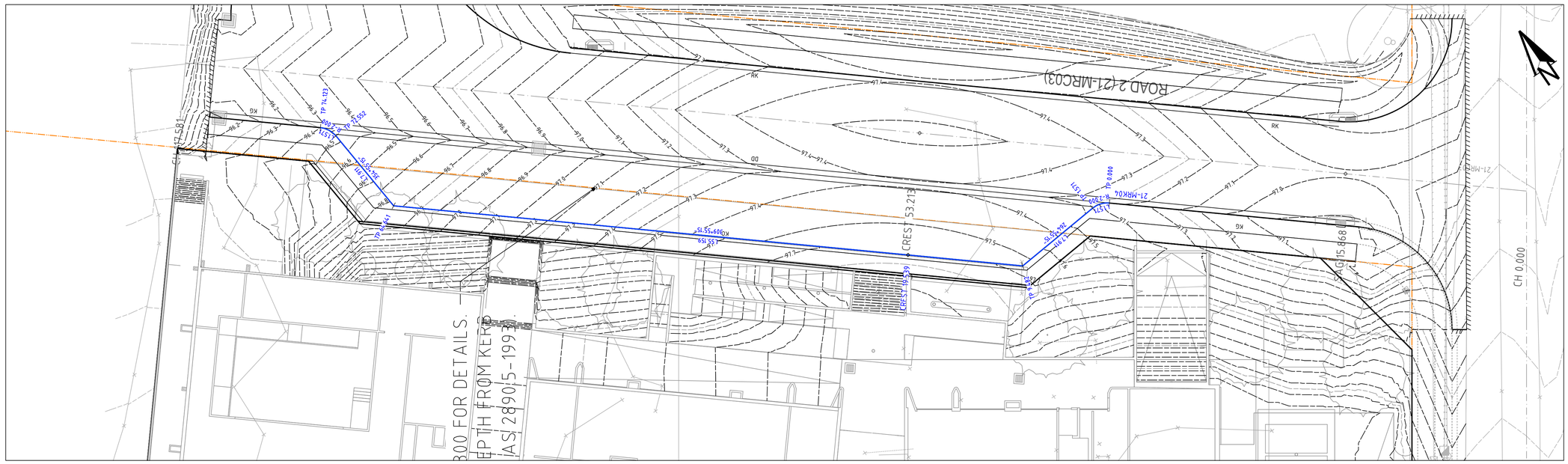
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-D202	B

DRAWING ID: P1806493-PS01-R09-D202
A1 / A3 LANDSCAPE (A1LC_v02.0.01)
PRINTED: ---- - USER: GMOSTOFA



BUS BAY DETAILS

SCALE 1:200



45° DROP OFF PARKING DETAILS

SCALE 1:200

KEY

- PROPOSED CONTOURS
- KERB ALIGNMENT
- LIMIT OF WORKS
- SITE BOUNDARY

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	**AMENDED FORM CLIENT COMMENTS**	**11/07/2019**	**GM**	**CG/PD**	**CG/PD**	**TH**
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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All measurements in millimetres unless otherwise specified.

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CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN

63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

martens & Associates Pty Ltd
Consulting Engineers
Environment
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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
ROADWORKS DETAILS PLAN

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-D300	E

DRAWING ID: P1806493-PS01-R09-D300

PRINTED: ---- USER: GMOSTOFA

A1 / A3 LANDSCAPE (A1LC_v02.0.01)

FUTURE PIPE

TEMPORARY TAILOUT PIPE TO BE REMOVED WHEN REGIONAL BASIN ONLINE AND/OR CONNECTION TO FUTURE PIPE AVAILABLE.

BIORETENTION (AREA APPROX 13m²)

REFER TO PS01-E200 FOR DETAILS

1% AEP FLOOD EXTENT LINE. FLOODING ON THE SITE WILL BE REMOVED AS A RESULT OF SITE FILLING.

ENERGY DISSIPATOR, TO BE DETAILED AT CC STAGE.

TEMPORARY OSD TANK WITH WATER QUALITY DEVICES

BIORETENTION (AREA APPROX 7m²)

ENVIROPOD WITH DROPPED INSERT

ENVIROPOD WITH DROPPED INSERT

STAGE 1 TEMPORARY DRAINAGE TO BE REMOVED (LINE 1A701)

FUTURE PIPE

CAP AND SEAL PIPE FOR FUTURE CONNECTION

ENERGY DISSIPATOR, TO BE DETAILED AT CC STAGE.

TEMPORARY TAILOUT PIPE. TO BE REMOVED WHEN REGIONAL BASIN ONLINE AND/OR CONNECTION TO FUTURE PIPE AVAILABLE.

PIPE TO BE SLUNG THROUGH REAR OF BASEMENT CARPARK

PIPE TO BE SUNG THROUGH REAR OF BASEMENT CARPARK.

INVERT OF TEMPORARY TABLE DRAIN (UNTIL BYRON ROAD IS UPGRADED, BY OTHERS)

INVERT OF TEMPORARY TABLE DRAIN (UNTIL BYRON ROAD IS UPGRADED, BY OTHERS)

ROAD 1 (21-MRC02)

ROAD 2 (21-MRC03)

INGLEBURN ROAD

BYRON ROAD (21-MRC01)

CH 137.292

CH 87.104

CH 0.000

CH 147.581

CH 300.923

TP 81.180

TP 62.330

TP 39.225

CREST 19.104

SAG 15.668

CREST 53.213

NOTE

- CONCEPT DRAINAGE DESIGN ONLY. PIPE SIZES AND PIT LOCATIONS ARE SUBJECT TO DETAILED DESIGN AND ARE TO COMPLY WITH AS3500.3 AT A MINIMUM.
- 1% AEP FLOOD EXTENT EXTRACTED FROM FIGURE 2-3: FLOOD PRONE LAND IN CAMDEN GROWTH CENTRE PRECINCTS DCP SCHEDULE 5 LEPPINGTON PRIORITY PRECINCT 2015

KEY

- FINAL SURFACE CONTOURS
- STORMWATER PIPELINE
- FUTURE STORMWATER PIPELINE
- PROPOSED PIT
- PROPOSED PIT WITH DROPPED ENVIROPOD
- PROPOSED PIT WITH TYPICAL ENVIROPOD
- KERB INVERT
- TEMPOPARY TABLE DRAIN
- 1% AEP FLOOD LINE
- FLOW DIRECTION
- PIT NAME — 1A501-03
- SITE BOUNDARY

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
G	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
F	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
E	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

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

PRINTED: ---- USER: QMOSTOFA

A1 / A3 LANDSCAPE (A1LC_v02.0.01)

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN

63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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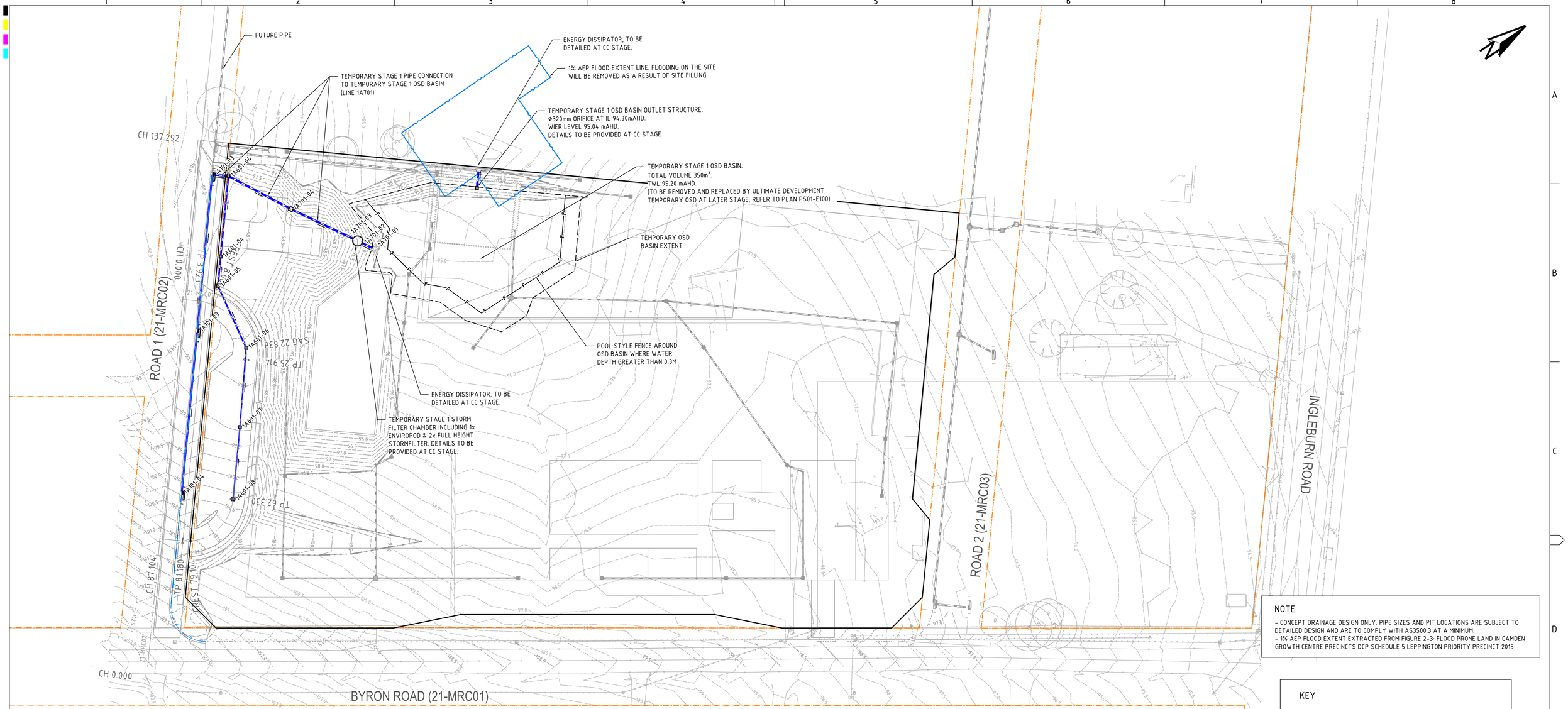
Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767
Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING TITLE
DRAINAGE PLAN
(ULTIMATE DEVELOPMENT)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E100	G

DRAWING ID: P1806493-PS01-R09-E100



NOTE

- CONCEPT DRAINAGE DESIGN ONLY. PIPE SIZES AND PIT LOCATIONS ARE SUBJECT TO DETAILED DESIGN AND ARE TO COMPLY WITH AS3500.3 AT A MINIMUM.
- 1% AEP FLOOD EXTENT EXTRACTED FROM FIGURE 2-3: FLOOD PRONE LAND IN CAMDEN GROWTH CENTRE PRECINCTS DCP SCHEDULE 5 LEPPINGTON PRIORITY PRECINCT 2015

KEY

- FINAL SURFACE CONTOURS
- STORMWATER PIPELINE
- FUTURE STORMWATER PIPELINE
- PROPOSED PIT
- PROPOSED PIT WITH DROPPED ENVIROPOD
- PROPOSED PIT WITH TYPICAL ENVIROPOD
- KERB INVERT
- TEMPOPARY TABLE DRAIN
- 1% AEP FLOOD LINE
- FLOW DIRECTION
- PIT NAME (1A501-03)
- SITE BOUNDARY

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
C	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
B	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
A	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT: AMITY COLLEGE

PROJECT NAME/PLANSET TITLE: AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

martens & Associates Pty Ltd
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Environment
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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

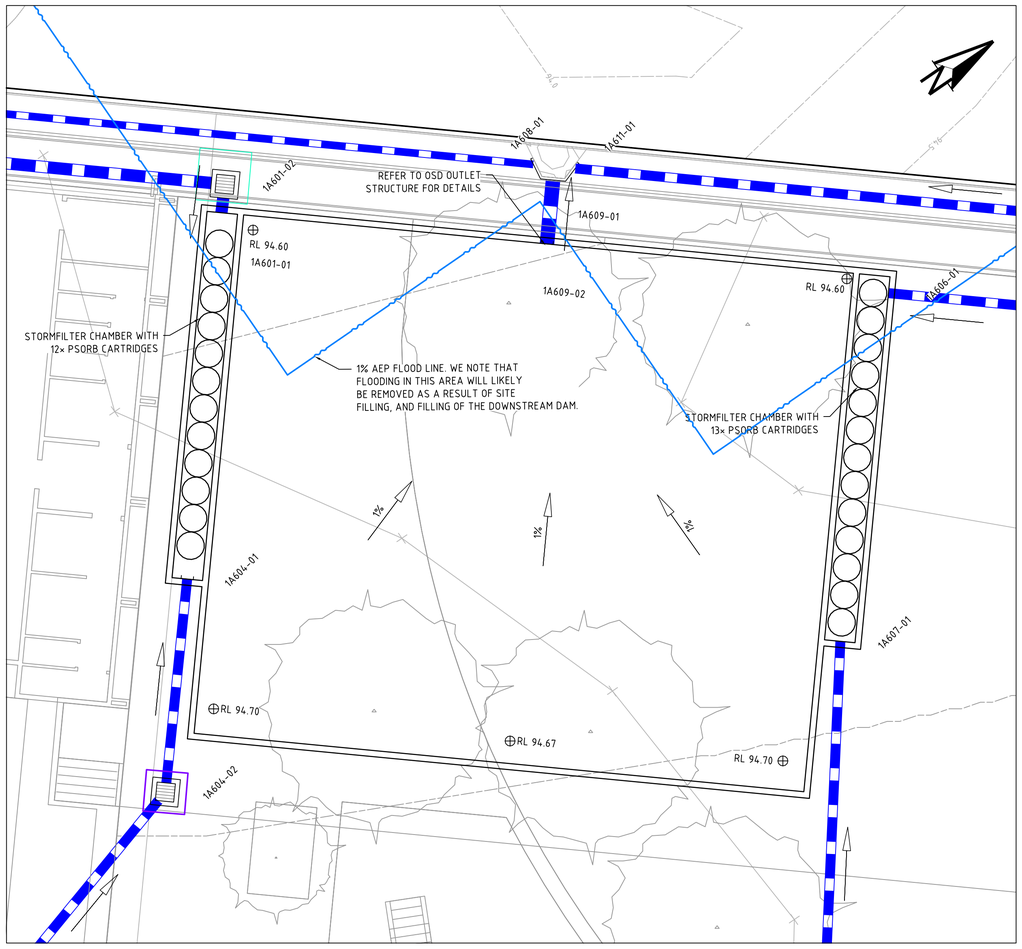
DRAWING TITLE: DRAINAGE PLAN (STAGE 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E101	D

DRAWING ID: P1806493-PS01-R09-E101

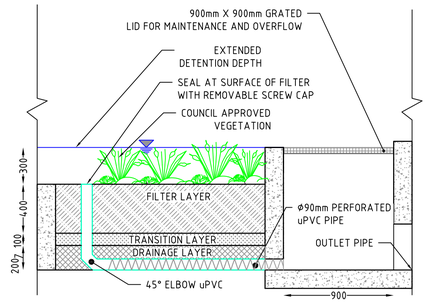
PRINTED: ---- - USER: GMOSTOFA

A1 / A3 LANDSCAPE (A1LC_v02.0.01)



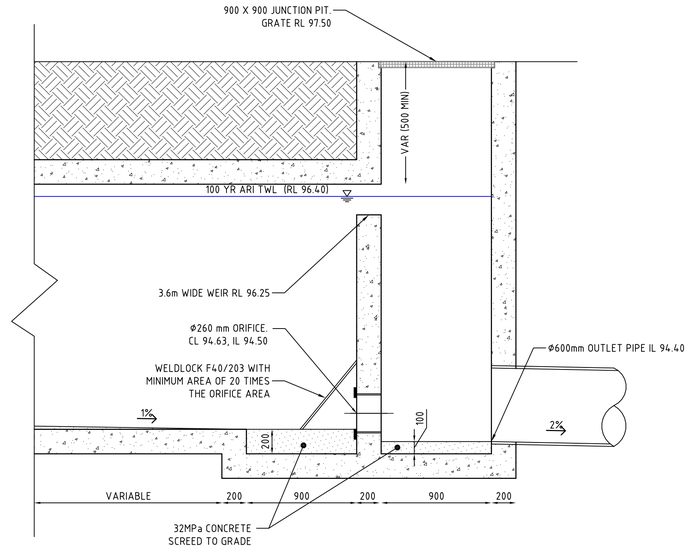
TEMPORARY OSD TANK PLAN

SCALE 1:100

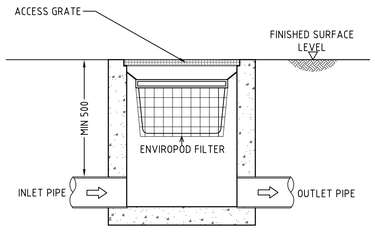


TYPICAL SECTION: BIORETENTION

SCALE: 1:25

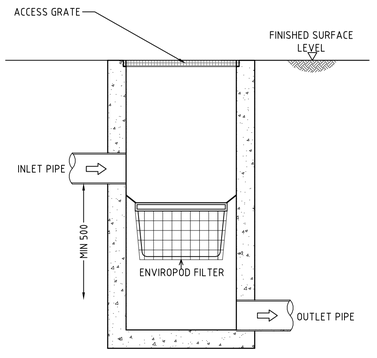


OSD OUTLET STRUCTURE



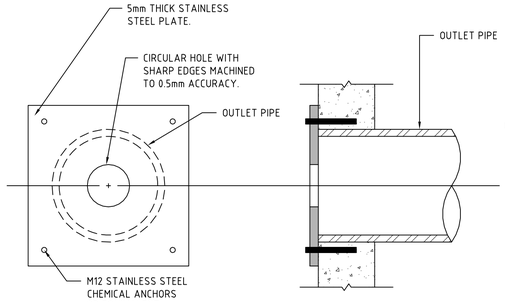
TYPICAL ENVIROPOD PIT INSERT 200 MICRON

SCALE: 1:25



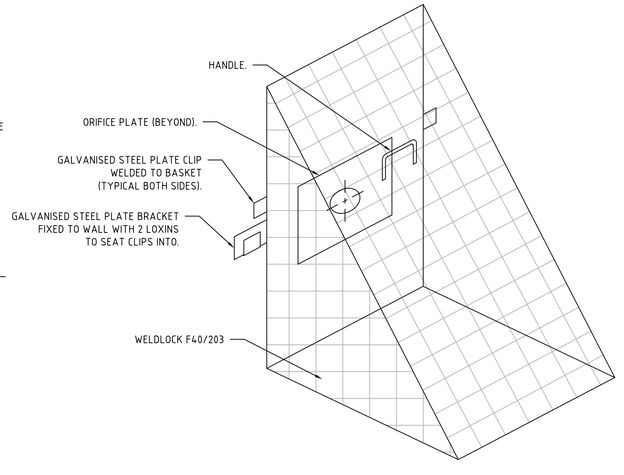
DROPPED ENVIROPOD PIT INSERT 200 MICRON

SCALE: 1:25



TYPICAL ORIFICE PLATE DETAIL

NOT TO SCALE

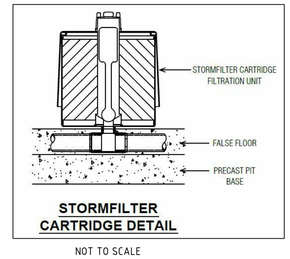


TRASH SCREEN DETAILS

NOT TO SCALE

CONFINED SPACE SIGN

NOT TO SCALE



NOT TO SCALE

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	**AMENDED FORM CLIENT COMMENTS**	**23/07/2019**	**CG/PD**	**CG/PD**	**TH**	**TH**
D	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
C	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
B	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
A	MINOR AMENDMENT	16/04/2019	GM	CG/DG		

SCALE
A1 (A3) 1:100 (1:200) 0 1 2 3 4 5 6 7 8 9 10 METRES
A1 (A3) 1:25 (1:50) 0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50 METRES

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT: AMITY COLLEGE

PROJECT NAME/PLANSET TITLE: AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

martens & Associates Pty Ltd
Consulting Engineers
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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: OSD AND DRAINAGE DETAILS

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E200	E

DRAWING ID: P1806493-PS01-R09-E200

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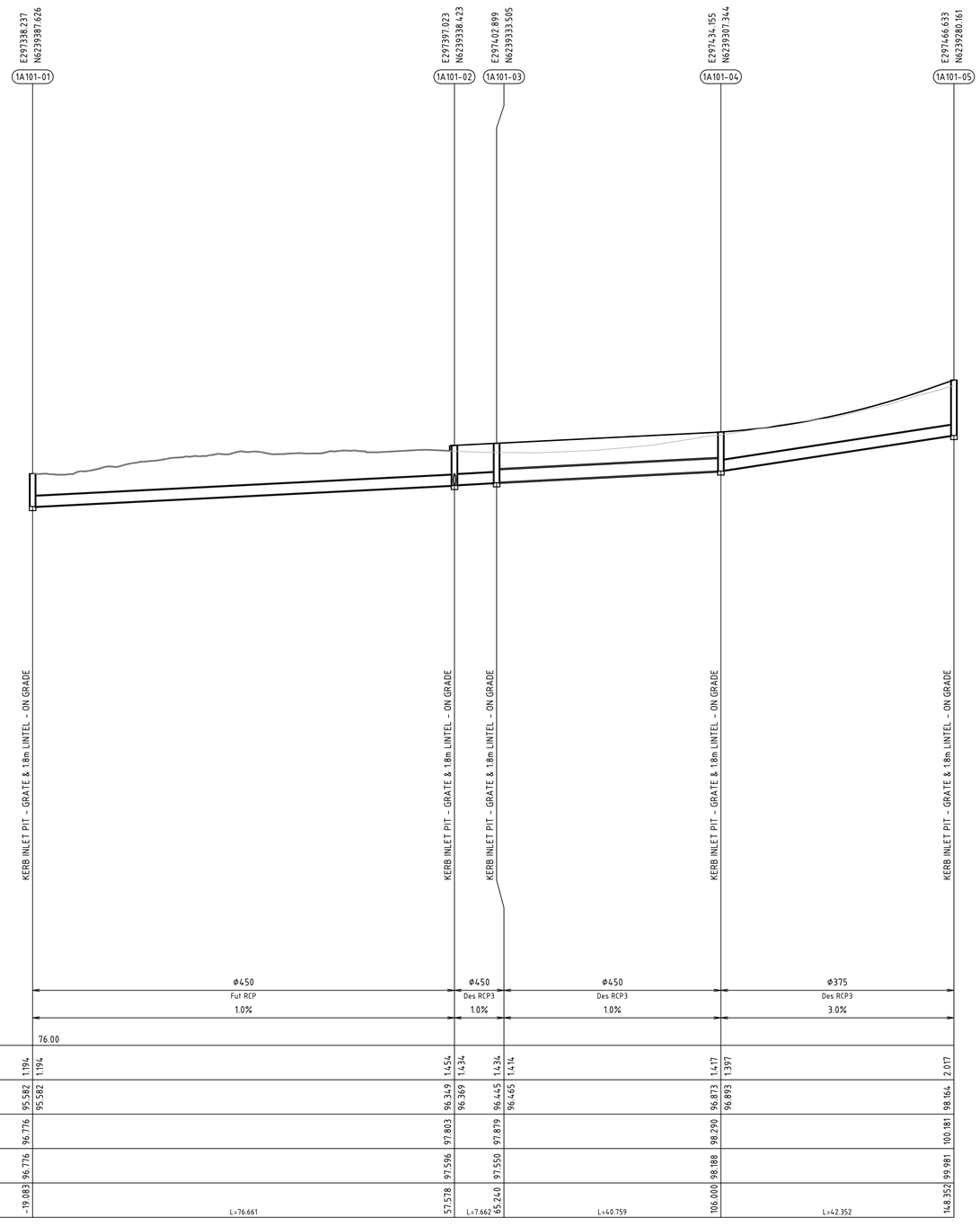
A1 / A3 LANDSCAPE (A1LC_v02.0.01)



NOTE:

CONCEPT DRAINAGE DESIGN ONLY. PIPE SIZES AND PIT LOCATIONS ARE SUBJECT TO DETAILED DESIGN AND ARE TO COMPLY WITH AS3500.3 AT A MINIMUM.

LINE 1A101

LINE 1A102

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	**AMENDED FORM CLIENT COMMENTS**	**11/07/2019**	**GM**	**CG/PD**	**CG/PD**	**TH**
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

SCALE

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

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT

AMITY COLLEGE

PROJECT NAME/PLANSET TITLE

AMITY COLLEGE LEPPINGTON CAMPUS

CIVIL WORKS PLAN

63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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DRAWING TITLE

DRAINAGE LONGITUDINAL SECTIONS (SHEET 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E300	E

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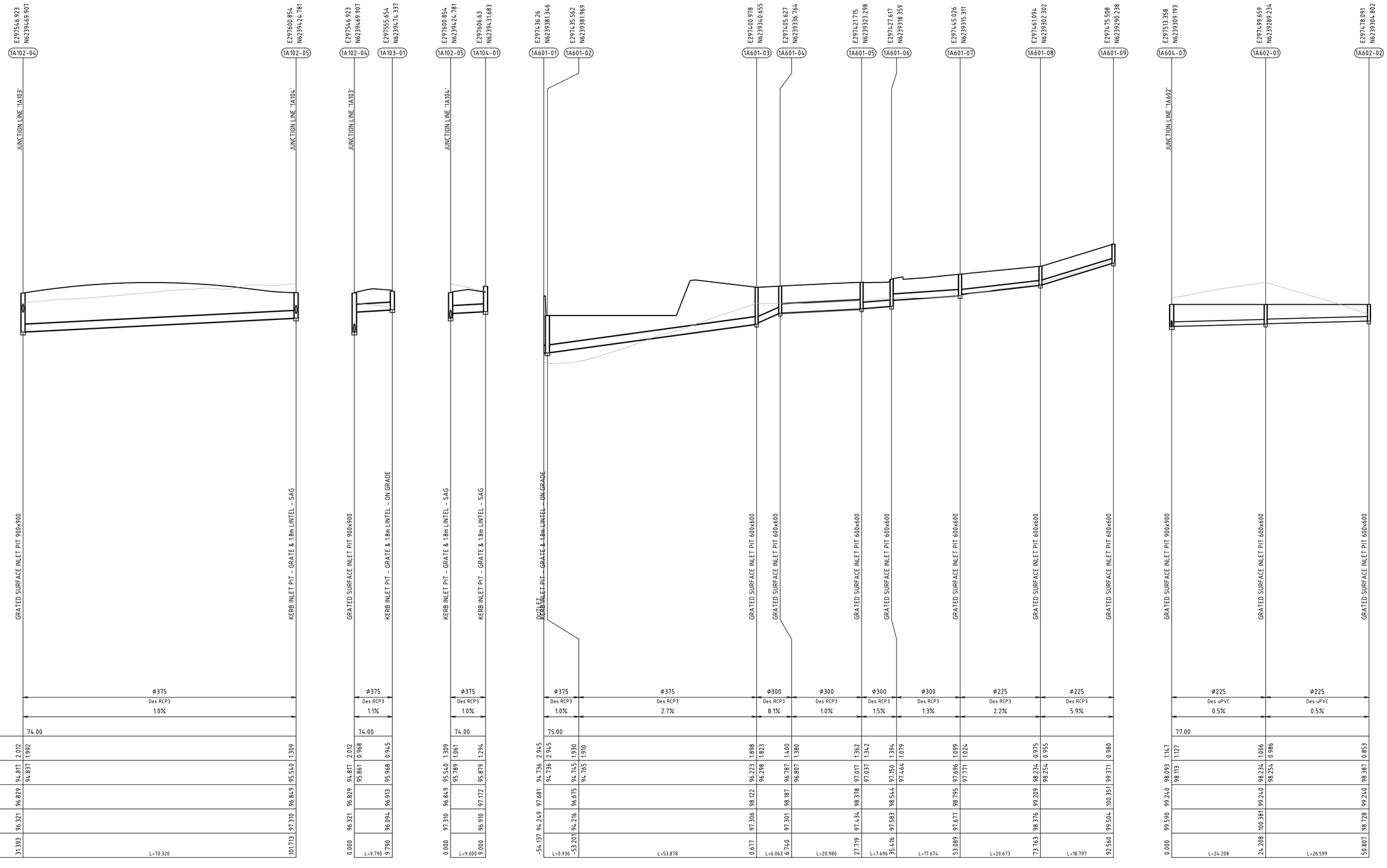
A1 / A3 LANDSCAPE (A1LC_v02.0.01)

DRAWING ID: P1806493-PS01-R09-E300



NOTE:

CONCEPT DRAINAGE DESIGN ONLY. PIPE SIZES AND PIT LOCATIONS ARE SUBJECT TO DETAILED DESIGN AND ARE TO COMPLY WITH AS3500.3 AT A MINIMUM.

LINE 1A102 LINE 1A103 LINE 1A104 LINE 1A601 LINE 1A602

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	**AMENDED FORM CLIENT COMMENTS**	**11/07/2019**	**GM**	**CG/PD**	**CG/PD**	**TH**
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

SCALE

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

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT

AMITY COLLEGE

PROJECT NAME/PLANSET TITLE

AMITY COLLEGE LEPPINGTON CAMPUS

CIVIL WORKS PLAN

63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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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

DRAINAGE LONGITUDINAL SECTIONS (SHEET 2)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E301	E

DRAWING ID: P1806493-PS01-R09-E301

PRINTED: --- USER: GMOSTAFA

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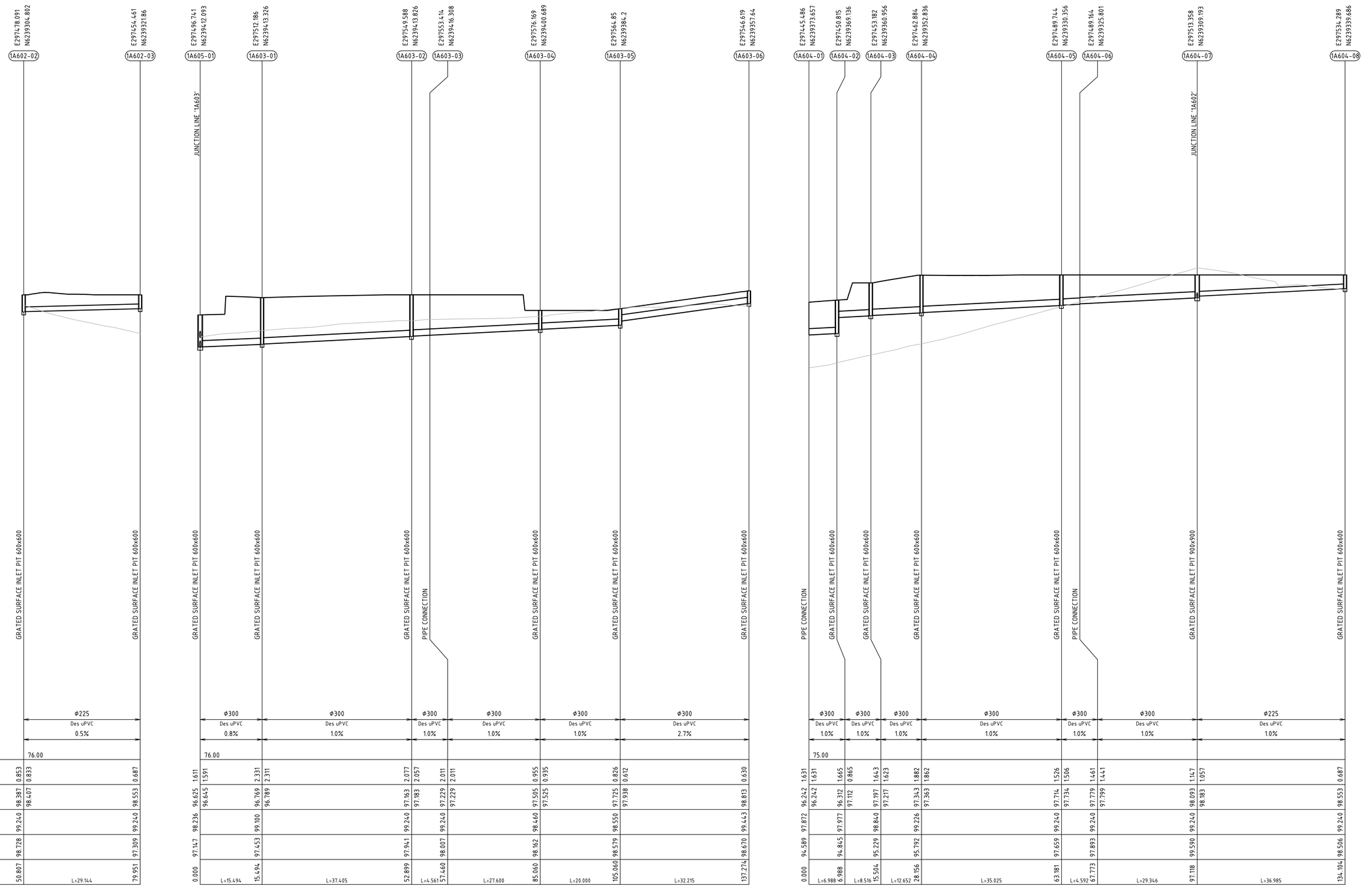

NOTE:

CONCEPT DRAINAGE DESIGN ONLY. PIPE SIZES AND PIT LOCATIONS ARE SUBJECT TO DETAILED DESIGN AND ARE TO COMPLY WITH AS3500.3 AT A MINIMUM.

LINE 1A602

LINE 1A603

LINE 1A604

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	**AMENDED FORM CLIENT COMMENTS**	**11/07/2019**	**GM**	**CG/PD**	**CG/PD**	**TH**
D	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
C	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
B	MINOR AMENDMENT	16/04/2019	GM	CG/DG		
A	INITIAL RELEASE	05/04/2019	GM	CG/DG	TH	

SCALE

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

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT

AMITY COLLEGE

PROJECT NAME/PLANSET TITLE

AMITY COLLEGE LEPPINGTON CAMPUS

CIVIL WORKS PLAN

63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171

LOT 1 & 2 DP 525996

martens & Associates Pty Ltd

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DRAWING TITLE

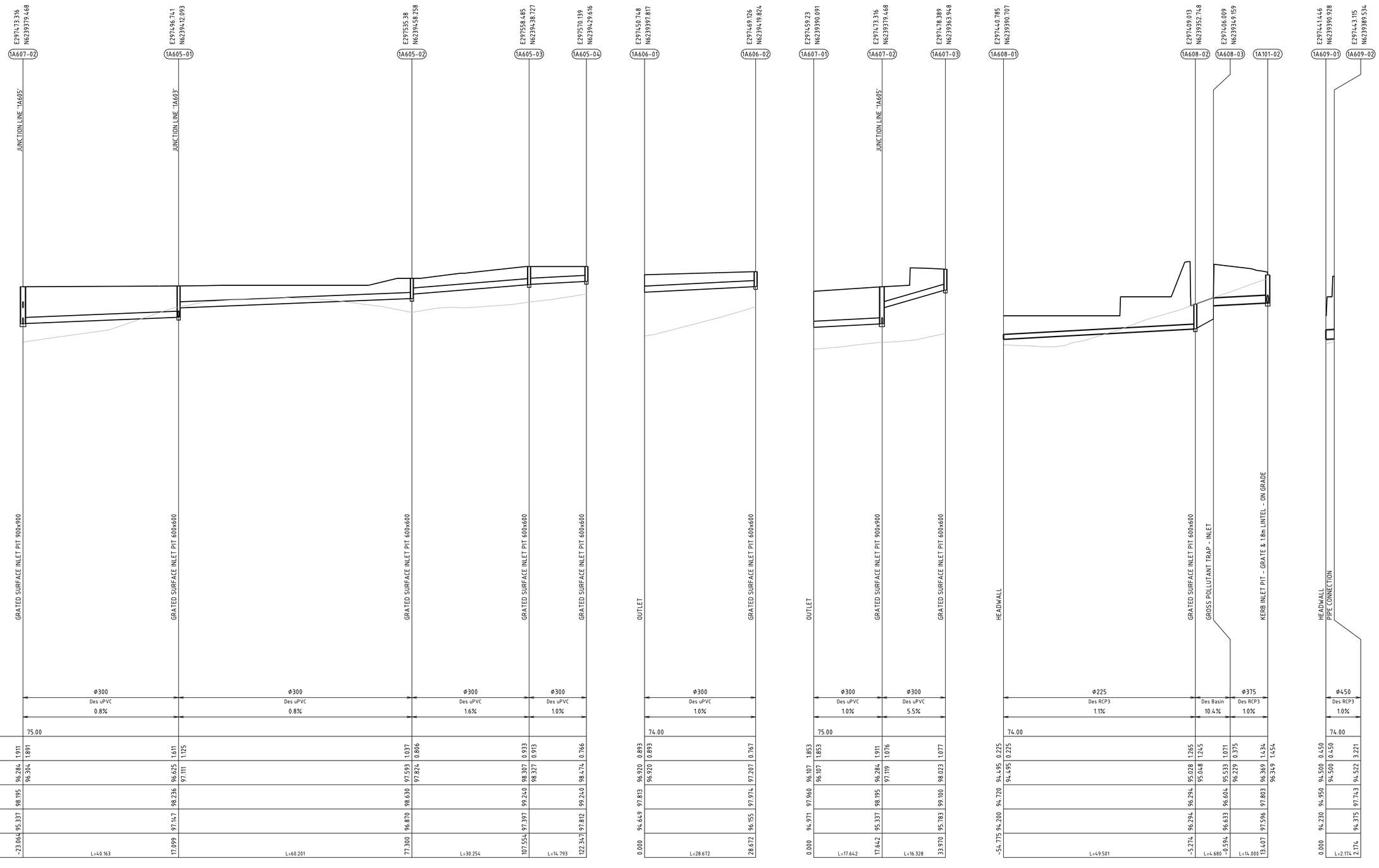
DRAINAGE LONGITUDINAL SECTIONS (SHEET 3)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E302	E

PRINTED: --- USER: DMOSTAFA

A1 / A3 LANDSCAPE (A1LC_v02.0.01)

DRAWING ID: P1806493-PS01-R09-E302



LINE 1A605 LINE 1A606 LINE 1A607 LINE 1A608 LINE 1A609

NOTE:

CONCEPT DRAINAGE DESIGN ONLY. PIPE SIZES AND PIT LOCATIONS ARE SUBJECT TO DETAILED DESIGN AND ARE TO COMPLY WITH AS3500.3 AT A MINIMUM.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	**AMENDED FORM CLIENT COMMENTS**	**11/07/2019**	**GM**	**CG/PD**	**CG/PD**	**TH**
C	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
B	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
A	MINOR AMENDMENT	16/04/2019	GM	CG/DG		

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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DRAWING TITLE
DRAINAGE LONGITUDINAL SECTIONS (SHEET 4)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E303	D

DRAWING ID: P1806493-PS01-R09-E303

PRINTED: --- USER: GMOSTAFA
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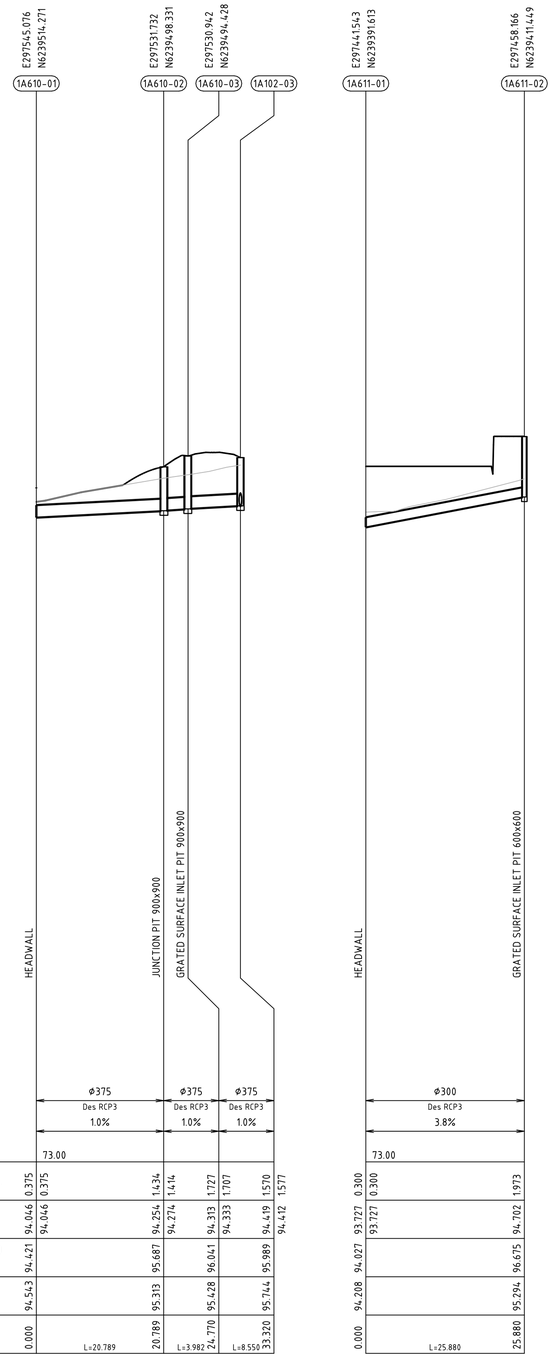

NOTE:

CONCEPT DRAINAGE DESIGN ONLY. PIPE SIZES AND PIT LOCATIONS ARE SUBJECT TO DETAILED DESIGN AND ARE TO COMPLY WITH AS3500.3 AT A MINIMUM.

PIT SCHEDULE

Pit

Name	TYPE	EASTING	NORTHING	INTERNAL WD	INTERNAL LEN	INLET DIA	INLET INV LEV	OUTLET DIA	OUTLET INV LEV	PIT SETOUT RL	PIT DEPTH	REMARKS
1A101-05	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	297466.633	6239280.161	0.9	0.9			375	98.164	100.181	2.017	xy setout to setout string
1A101-04	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	297434.155	6239307.344	0.9	0.9	375	96.893	450	96.873	98.29	1.417	xy setout to setout string
1A101-03	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	297402.899	6239333.505	0.9	0.9	450	96.465	375	96.445	97.879	1.434	xy setout to setout string
1A101-02	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	297397.023	6239338.423	0.9	0.9	375	96.369	375	96.349	97.803	1.454	xy setout to setout string
1A101-01	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	297338.237	6239387.626	0.9	0.9	375	95.582			95.957	0.375	xy setout to setout string, setout level to maximum pipe obvert
1A102-05	KERB INLET PIT - GRATE & 1.8m LINTEL - SAG	297600.854	6239424.781	0.9	0.9			375	95.54	96.849	1.309	xy setout to setout string
1A102-04	GRATED SURFACE INLET PIT 900x900	297546.923	6239469.907	0.9	0.9	375	94.837	375	94.817	96.829	2.012	
1A102-03	GRATED SURFACE INLET PIT 900x900	297525.455	6239487.871	0.9	0.9	375	94.432	375	94.412	95.989	1.577	
1A102-02	PIPE CONNECTION	297522.847	6239490.053	0	0	375	94.377	375	94.377	95.716	1.339	
1A102-01	PIPE CONNECTION	297461.492	6239541.392	0	0	375	92.31			93.959	1.649	
1A103-01	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	297555.654	6239474.337	0.9	0.9			375	95.968	96.913	0.945	xy setout to setout string
1A102-04	GRATED SURFACE INLET PIT 900x900	297546.923	6239469.907	0.9	0.9	375	95.861			96.829	2.012	
1A104-01	KERB INLET PIT - GRATE & 1.8m LINTEL - SAG	297606.63	6239431.683	0.9	0.9			375	95.879	97.172	1.294	xy setout to setout string
1A102-05	KERB INLET PIT - GRATE & 1.8m LINTEL - SAG	297600.854	6239424.781	0.9	0.9	375	95.789			96.849	1.309	xy setout to setout string
1A601-09	GRATED SURFACE INLET PIT 600x600	297475.508	6239290.238	0.6	0.6			225	99.371	100.351	0.98	
1A601-08	GRATED SURFACE INLET PIT 600x600	297461.094	6239302.302	0.6	0.6	225	98.254	225	98.234	99.209	0.975	
1A601-07	GRATED SURFACE INLET PIT 600x600	297445.026	6239315.311	0.6	0.6	225	97.771	300	97.696	98.795	1.099	
1A601-06	GRATED SURFACE INLET PIT 600x600	297427.617	6239318.359	0.6	0.6	300	97.464	300	97.15	98.544	1.394	
1A601-05	GRATED SURFACE INLET PIT 600x600	297421.715	6239323.298	0.6	0.6	300	97.037	450	97.017	98.378	1.362	
1A601-04	GRATED SURFACE INLET PIT 600x600	297405.627	6239336.764	0.6	0.6	450	96.807	300	96.787	98.187	1.4	
1A601-03	GRATED SURFACE INLET PIT 600x600	297400.978	6239340.655	0.6	0.6	300	96.298	375	96.223	98.122	1.898	
1A601-02	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	297435.562	6239381.969	0.9	0.9	375	94.765	375	94.745	96.675	1.93	xy setout to setout string
1A601-01	OUTLET	297436.26	6239381.346	0	0	375	94.736			97.681	2.945	
1A602-03	GRATED SURFACE INLET PIT 600x600	297454.461	6239321.86	0.6	0.6			225	98.553	99.24	0.687	
1A602-02	GRATED SURFACE INLET PIT 600x600	297478.091	6239304.802	0.6	0.6	225	98.407	225	98.387	99.24	0.853	
1A602-01	GRATED SURFACE INLET PIT 600x600	297499.659	6239289.234	0.6	0.6	225	98.254	225	98.234	99.24	1.006	
1A604-07	GRATED SURFACE INLET PIT 900x900	297513.358	6239309.193	0.9	0.9	225	98.113			99.24	1.147	
1A603-06	GRATED SURFACE INLET PIT 600x600	297546.619	6239357.64	0.6	0.6			300	98.813	99.443	0.63	
1A603-05	GRATED SURFACE INLET PIT 600x600	297564.85	6239384.2	0.6	0.6	300	97.938	300	97.725	98.55	0.826	
1A603-04	GRATED SURFACE INLET PIT 600x600	297576.169	6239400.689	0.6	0.6	300	97.525	300	97.505	98.46	0.955	
1A603-03	PIPE CONNECTION	297553.414	6239416.308	0	0	300	97.229	300	97.229	99.24	2.011	
1A603-02	GRATED SURFACE INLET PIT 600x600	297549.588	6239413.826	0.6	0.6	300	97.183	300	97.163	99.24	2.077	
1A603-01	GRATED SURFACE INLET PIT 600x600	297512.186	6239413.326	0.6	0.6	300	96.789	300	96.769	99.1	2.331	
1A605-01	GRATED SURFACE INLET PIT 600x600	297496.741	6239412.093	0.6	0.6	300	96.645			98.236	1.611	
1A604-08	GRATED SURFACE INLET PIT 600x600	297534.289	6239339.686	0.6	0.6			225	98.553	99.24	0.687	
1A604-07	GRATED SURFACE INLET PIT 900x900	297513.358	6239309.193	0.9	0.9	225	98.183	300	98.093	99.24	1.147	
1A604-06	PIPE CONNECTION	297489.164	6239325.801	0	0	300	97.799	300	97.779	99.24	1.461	
1A604-05	GRATED SURFACE INLET PIT 600x600	297489.744	6239330.356	0.6	0.6	300	97.734	300	97.714	99.24	1.526	
1A604-04	GRATED SURFACE INLET PIT 600x600	297462.884	6239352.836	0.6	0.6	300	97.363	300	97.343	99.226	1.882	
1A604-03	GRATED SURFACE INLET PIT 600x600	297453.182	6239360.956	0.6	0.6	300	97.217	300	97.197	98.84	1.643	
1A604-02	GRATED SURFACE INLET PIT 600x600	297450.815	6239369.136	0.6	0.6	300	97.112	300	96.312	97.977	1.665	
1A604-01	PIPE CONNECTION	297445.486	6239373.657	0	0	300	96.242			97.872	1.631	
1A605-04	GRATED SURFACE INLET PIT 600x600	297570.139	6239429.616	0.6	0.6			300	98.474	99.24	0.766	
1A605-03	GRATED SURFACE INLET PIT 600x600	297558.485	6239438.727	0.6	0.6	300	98.327	300	98.307	99.24	0.933	
1A605-02	GRATED SURFACE INLET PIT 600x600	297535.38	6239458.258	0.6	0.6	300	97.824	300	97.593	98.63	1.037	
1A605-01	GRATED SURFACE INLET PIT 600x600	297496.741	6239412.093	0.6	0.6	300	97.111	300	96.625	98.236	1.611	
1A607-02	GRATED SURFACE INLET PIT 900x900	297473.316	6239379.468	0.9	0.9	300	96.304			98.195	1.911	
1A606-02	GRATED SURFACE INLET PIT 600x600	297469.126	6239419.824	0.6	0.6			300	97.207	97.974	0.767	
1A606-01	OUTLET	297450.748	6239397.817	0	0	300	96.92			97.813	0.893	
1A607-03	GRATED SURFACE INLET PIT 600x600	297478.389	6239363.948	0.6	0.6			300	98.023	99.1	1.077	
1A607-02	GRATED SURFACE INLET PIT 900x900	297473.316	6239379.468	0.9	0.9	300	97.119	300	96.284	98.195	1.911	
1A607-01	OUTLET	297459.23	6239390.091	0	0	300	96.107			97.96	1.853	
1A101-02	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	297459.23	6239390.091	0.9	0.9			375	96.369	97.803	1.434	xy setout to setout string
1A608-03	GROSS POLLUTANT TRAP - INLET	297406.009	6239349.159	0	0	375	96.229	1	95.533	96.604	1.071	setout level to maximum pipe obvert
1A608-02	GRATED SURFACE INLET PIT 600x600	297409.013	6239352.748	0.6	0.6	1	95.048	225	95.028	96.294	1.265	
1A608-01	HEADWALL	297440.785	6239390.707	0	0	225	94.495			94.72	0.225	setout level to maximum pipe obvert
1A609-02	PIPE CONNECTION	297443.115	6239389.534	0	0			450	94.522	97.743	3.221	
1A609-01	HEADWALL	297441.446	6239390.928	0	0	450	94.5			94.95	0.45	setout level to maximum pipe obvert
1A102-03	GRATED SURFACE INLET PIT 900x900	297441.446	6239390.928	0.9	0.9			375	94.473	95.989	1.516	
1A610-03	GRATED SURFACE INLET PIT 900x900	297530.942	6239494.428	0.9	0.9	375	94.333	375	94.313	96.041	1.727	
1A610-02	JUNCTION PIT 900x900	297531.732	6239498.331	0.9	0.9	375	94.274	375	94.254	95.687	1.434	
1A610-01	HEADWALL	297545.076	6239514.271	0	0	375	94.046			94.421	0.375	setout level to maximum pipe obvert
1A611-02	GRATED SURFACE INLET PIT 600x600	297458.166	6239411.449	0.6	0.6			300	94.702	96.675	1.973	
1A611-01	HEADWALL	297441.543	6239391.613	0	0	300	93.727			94.027	0.3	setout level to maximum pipe obvert

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

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	**AMENDED FORM CLIENT COMMENTS**	**23/07/2019**	**CG/PD**	**CG/PD**	**TH**	**TH**
D	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
C	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
B	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
A	MINOR AMENDMENT	16/04/2019	GM	CG/DG		

SCALE

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

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT: AMITY COLLEGE

PROJECT NAME/PLANSET TITLE: AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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

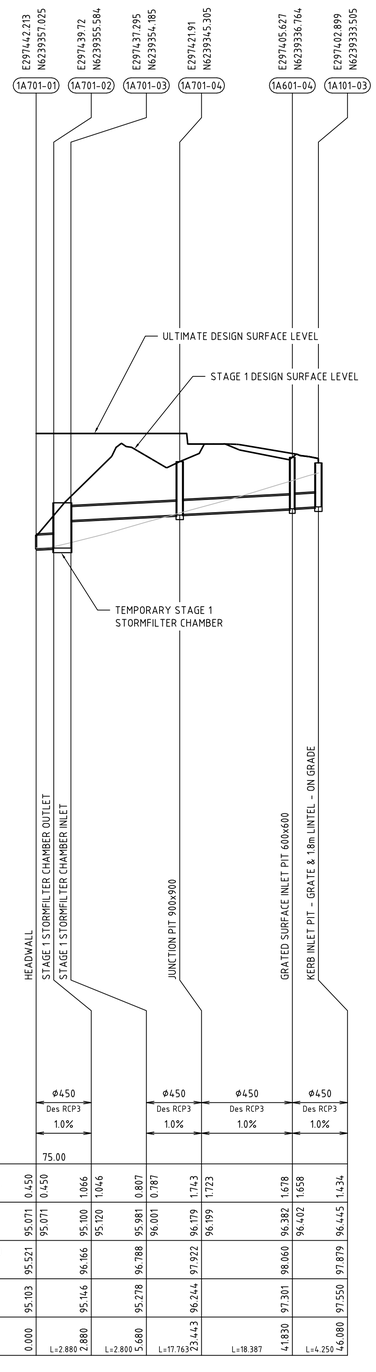
DRAWING TITLE: DRAINAGE LONGITUDINAL SECTIONS (SHEET 5) & PIT SCHEDULE

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E304	E

DRAWING ID: P1806493-PS01-R09-E304

PRINTED: ---- USER: QMOSTOFA

A1 / A3 LANDSCAPE (A1LC_v02.0.01)



NOTE:

LINE 1A701 (STAGE 1)

CONCEPT DRAINAGE DESIGN ONLY. PIPE SIZES AND PIT LOCATIONS ARE SUBJECT TO DETAILED DESIGN AND ARE TO COMPLY WITH AS3500.3 AT A MINIMUM.

PIT SCHEDULE

Pit

Name	TYPE	EASTING	NORTHING	INTERNAL WD	INTERNAL LEN	INLET DIA	INLET INV LEV	OUTLET DIA	OUTLET INV LEV	PIT SETOUT RL	PIT DEPTH	REMARKS
1A701-06	KERB INLET PIT - GRATE & 1.8m LINTEL - ON GRADE	297402.899	6239333.505	0.9	0.9			450	96.445	97.879	1.434	xy setout to setout string
1A701-05	GRATED SURFACE INLET PIT 600x600	297405.627	6239336.764	0.6	0.6	450	96.402	450	96.382	98.06	1.678	
1A701-04	JUNCTION PIT 900x900	297421.91	6239345.305	0.9	0.9	450	96.199	450	96.179	97.922	1.743	
1A701-03	STAGE 1 STORMFILTER CHAMBER INLET	297437.295	6239354.185	0	0	450	96.001	1	95.981	96.788	0.807	
1A701-02	STAGE 1 STORMFILTER CHAMBER OUTLET	297439.72	6239355.584	0	0	1	95.12	450	95.1	96.166	1.066	
1A701-01	HEADWALL	297442.213	6239357.025	0	0	450	95.071			95.521	0.45	setout level to maximum pipe obvert

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

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
A	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH

SCALE
A1 (A3) 1:500 (1:1,000) METRES
A1 (A3) 1:100 (1:200) METRES

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CIVIL WORKS PLAN
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LOT 1 & 2 DP 525996

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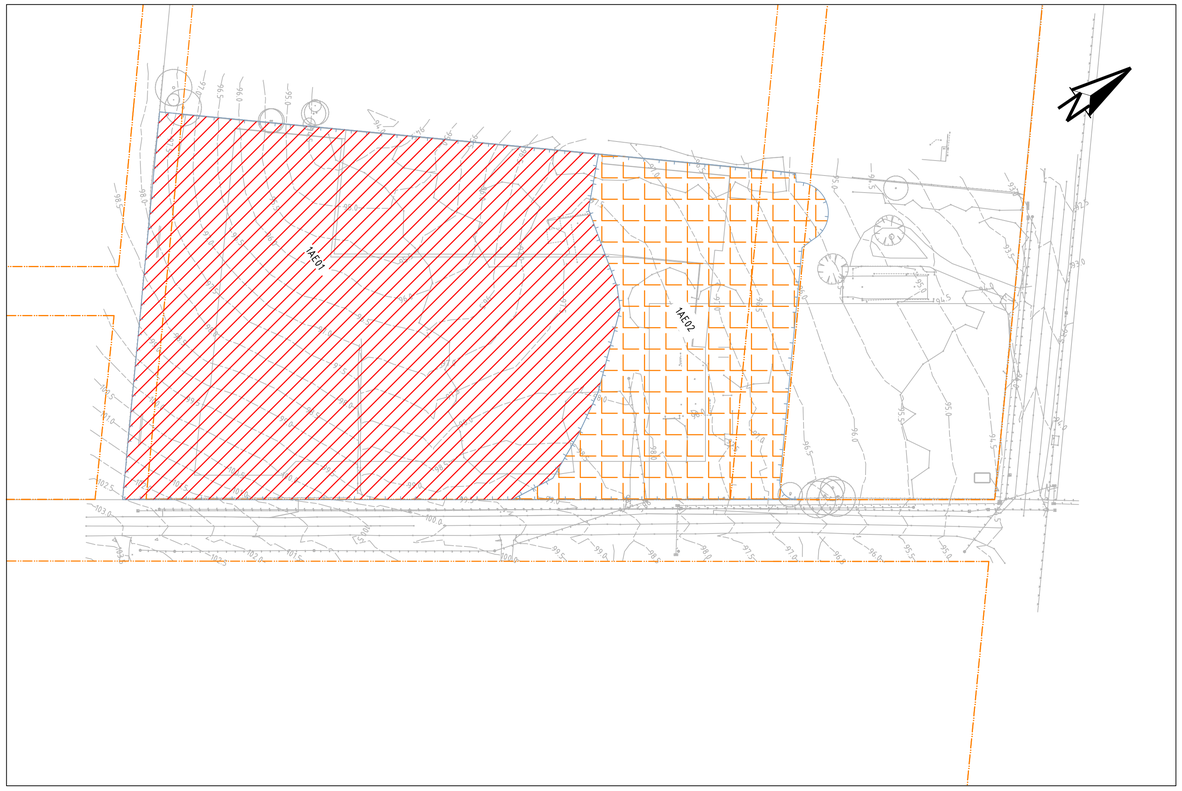
DRAWING TITLE
DRAINAGE LONGITUDINAL SECTIONS (SHEET 6)
& PIT SCHEDULE

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E310	A

DRAWING ID: P1806493-PS01-R09-E310

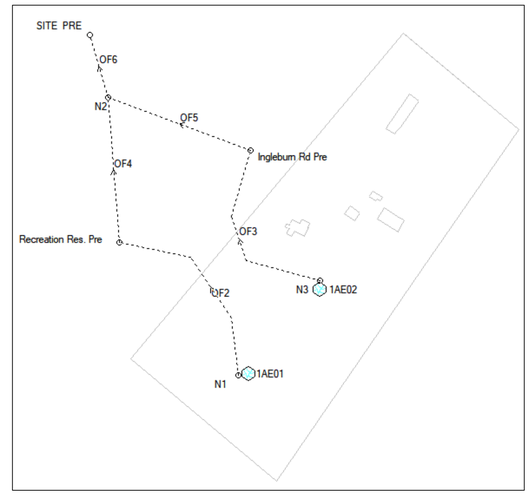
PRINTED: --- USER: DMOSTAFA
A1 / A3 LANDSCAPE (A1LC_v02.0.01)



PRE-DEVELOPMENT OSD CATCHMENT

SCALE 1: 1000

PRE DEVELOPMENT CATCHMENT (P1806493DRN01V06)					
KEY	Name	Total Area (ha)	Paved Area (%)	Paved Time (min)	Grass Time (min)
	1AE01	1.772	0	5	17
	1AE02	0.730	8	5	17
	TOTAL AREA	2.502	100	= % OF OVERALL AREA	
	TOTAL IMPERVIOUS AREA	0.058	2%	= % OF OVERALL AREA	
	TOTAL PERVIOUS AREA	2.444	98%	= % OF OVERALL AREA	



PRE-DEVELOPMENT DRAIN MODEL LAYOUT

NTS

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
E	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
D	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
C	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
B	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
A	MINOR AMENDMENT	16/04/2019	GM	CG/DG		

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CIVIL WORKS PLAN

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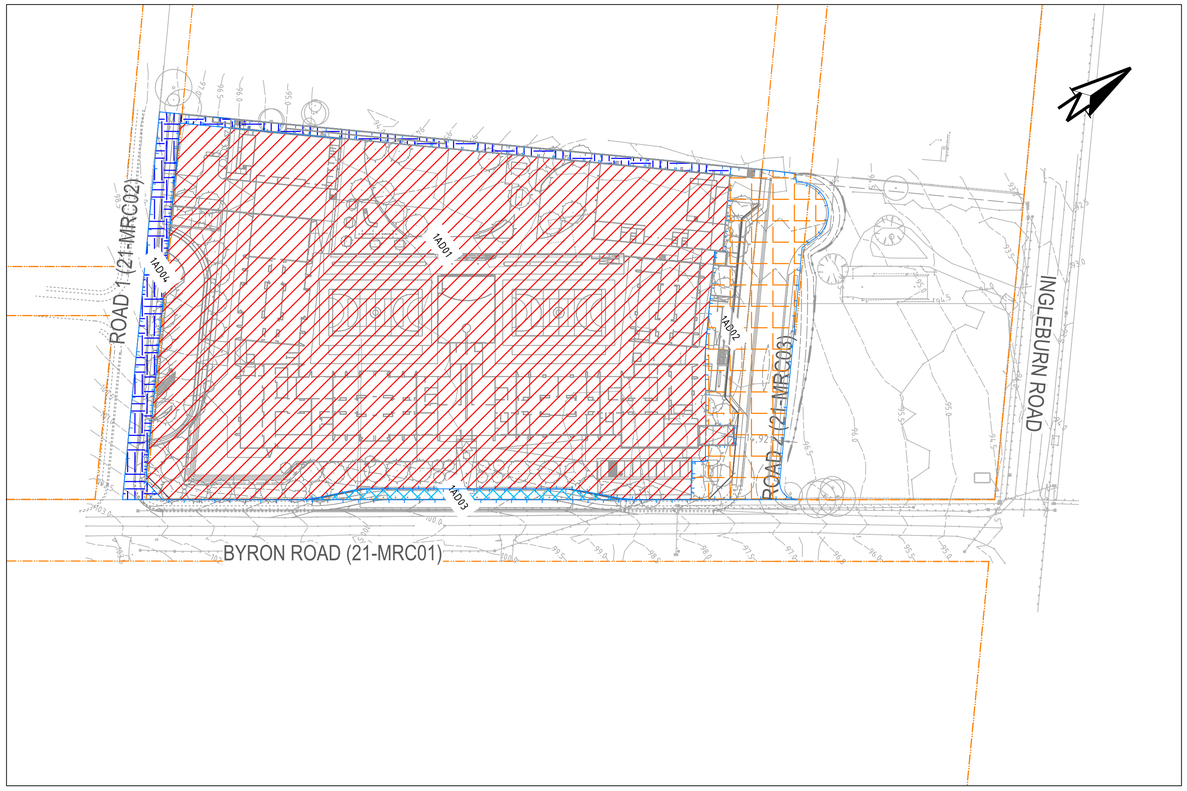
DRAWING TITLE
PRE-DEVELOPMENT OSD CATCHMENT
PLAN, MODEL LAYOUT AND RESULT

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E600	F

DRAWING ID: P1806493-PS01-R09-E600

PRINTED: --- USER: DMOSTAFA

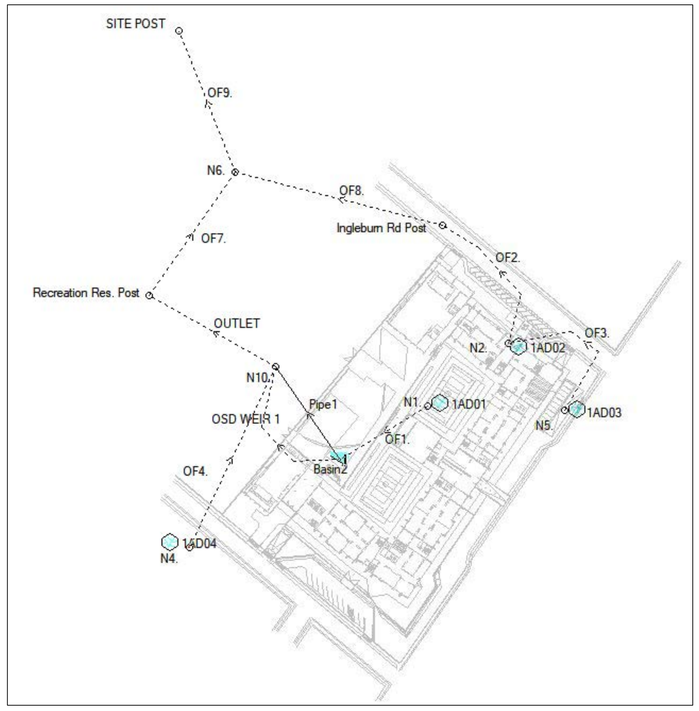
A1 / A3 LANDSCAPE (A1LC_v02.0.01)



POST-DEVELOPMENT OSD CATCHMENT PLAN

SCALE 1: 1000

POST DEVELOPMENT CATCHMENT (P1806493DRN01V06)					
KEY	Name	Total Area (ha)	Paved Area (%)	Paved Time (min)	Grass Time (min)
	1AD01	2.029	79	5	15
	1AD02	0.297	55	6	11
	1AD03	0.031	100	5	0
	1AD04	0.145	44	5	9
	TOTAL AREA	2.502	100	= % OF OVERALL AREA	
	TOTAL IMPERVIOUS AREA	1.881	75%	= % OF OVERALL AREA	
	TOTAL PERVIOUS AREA	0.621	25%	= % OF OVERALL AREA	



POST-DEVELOPMENT DRAIN MODEL LAYOUT

NTS

P1806493DRN01V06																		
	2 YR ARI			5 YR ARI			10 YR ARI			20 YR ARI			50 YR ARI			100 YR ARI		
	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference
Storm	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)
Peak	0.190	0.175	-0.015	0.334	0.221	-0.113	0.407	0.246	-0.161	0.512	0.277	-0.235	0.588	0.408	-0.180	0.685	0.657	-0.028

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
E	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
D	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
C	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
B	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
A	MINOR AMENDMENT	16/04/2019	GM	CG/DG		

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT: AMITY COLLEGE

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CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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DRAWING TITLE: POST-DEVELOPMENT OSD CATCHMENT PLAN, MODEL LAYOUT AND RESULT

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E610	F

DRAWING ID: P1806493-PS01-R09-E610

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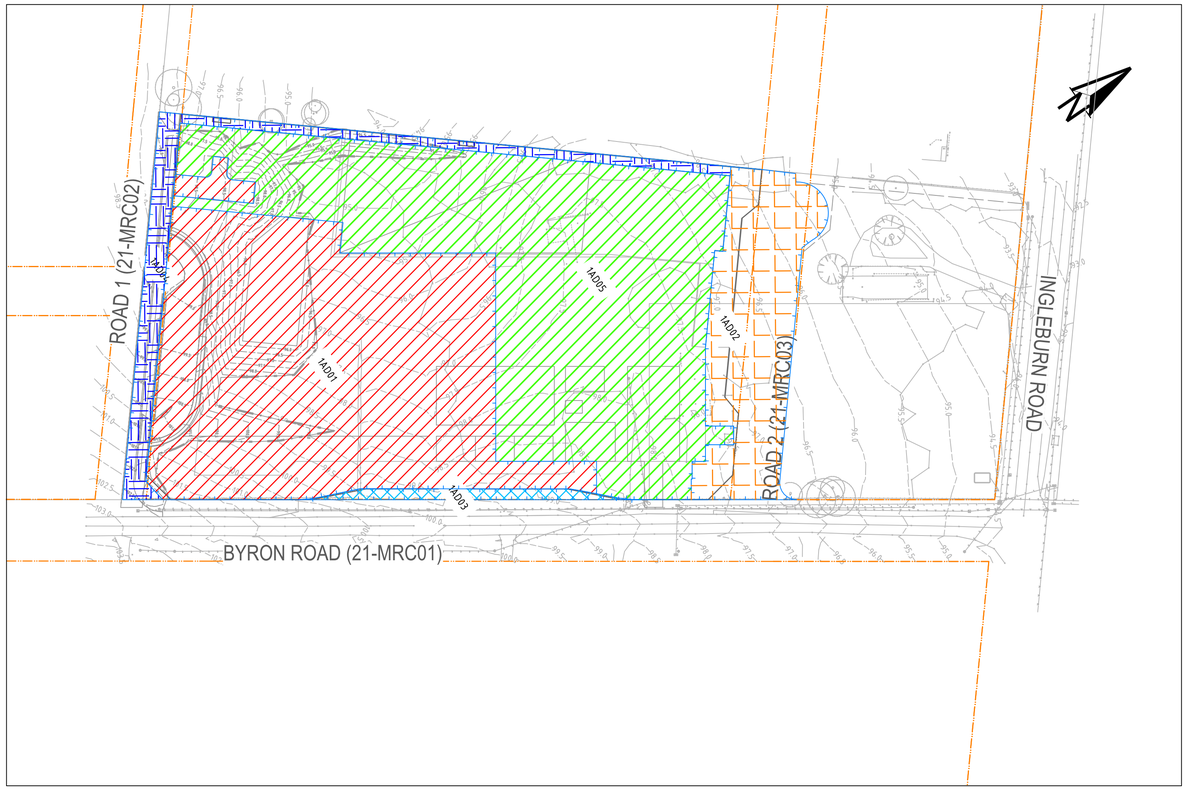
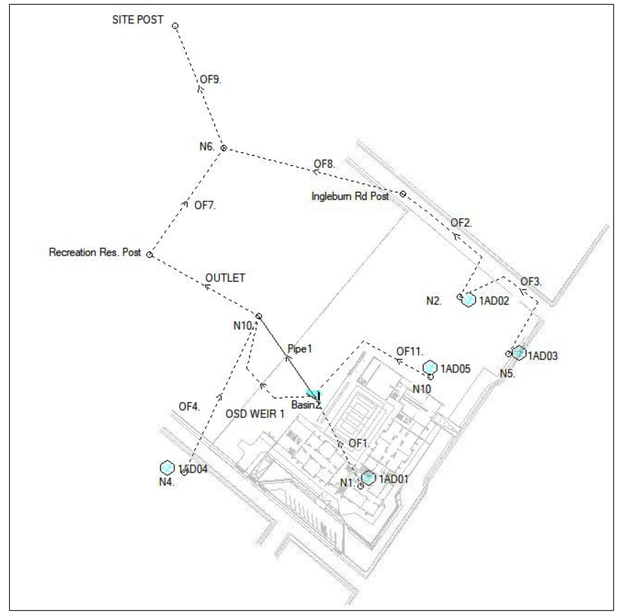
A1 / A3 LANDSCAPE (A1LC_v02.0.01)



STAGE 1 POST-DEVELOPMENT OSD CATCHMENT PLAN

SCALE 1: 1000

POST DEVELOPMENT CATCHMENT (P1806493DRN01V07)					
KEY	Name	Total Area (ha)	Paved Area (%)	Paved Time (min)	Grass Time (min)
	1AD01	0.995	100	5	15
	1AD02	0.297	0	6	11
	1AD03	0.031	0	5	0
	1AD04	0.145	44	5	9
	1AD05	1.034	0	5	9
	TOTAL AREA	2.502	100%	= % OF OVERALL AREA	
	TOTAL IMPERVIOUS AREA	1.059	42%	= % OF OVERALL AREA	
	TOTAL PERVIOUS AREA	1.443	58%	= % OF OVERALL AREA	



STAGE 1 POST-DEVELOPMENT DRAIN MODEL LAYOUT

NTS

P1806493DRN01V07																			
	2 YR ARI			5 YR ARI			10 YR ARI			20 YR ARI			50 YR ARI			100 YR ARI		
	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference	Pre Peak	Post Peak	Difference
Storm	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)	Flow (cu.m/s)	Flow (cu.m/s)	(cu.m/s)
Peak	0.19	0.175	-0.015	0.334	0.217	-0.117	0.512	0.239	-0.273	0.512	0.267	-0.245	0.588	0.42	-0.168	0.685	0.674	-0.011

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
C	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
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A	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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DRAWING TITLE
POST-DEVELOPMENT OSD CATCHMENT PLAN, MODEL LAYOUT AND RESULT (STAGE 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E611	D

DRAWING ID: P1806493-PS01-R09-E611

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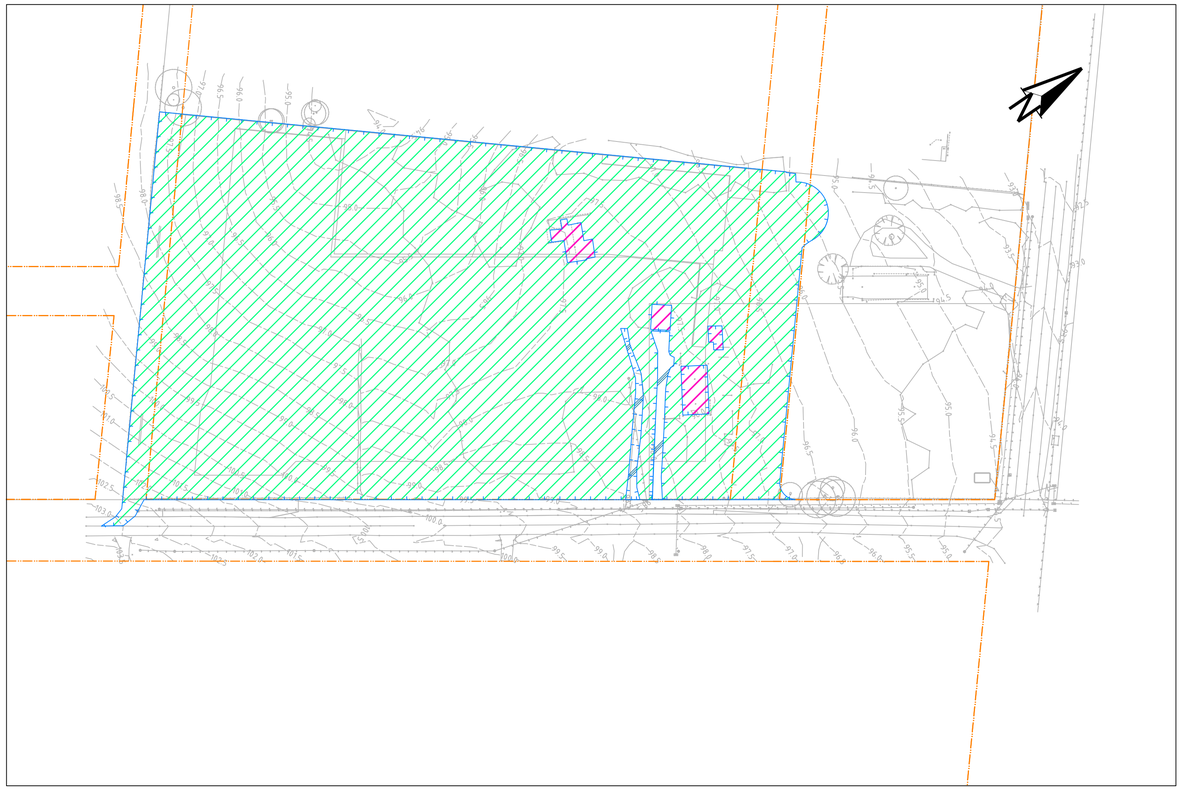
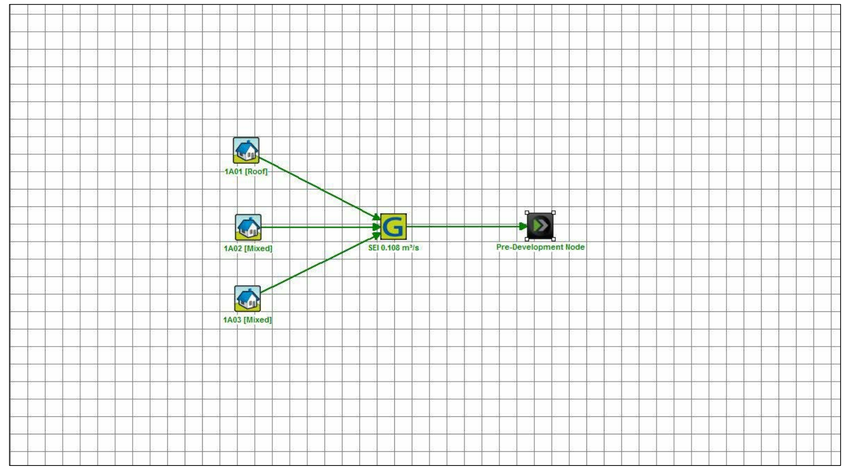
A1 / A3 LANDSCAPE (A1LC_v02.0.01)



PRE-DEVELOPMENT MUSIC CATCHMENT PLAN

SCALE 1: 1000

PRE DEVELOPMENT MUSIC CATCHMENTS (P1806493MUS01V03)					
KEY	DESCRIPTION	MUSIC NODE ID	AREA (ha)	IMPERVIOUS %	MUSIC NODE REFERENCE
	ROOF	1A01	0.034	100	NSW MUSIC MODELLING GUIDELINES 2015
	DRIVEWAY	1A02	0.033	100	NSW MUSIC MODELLING GUIDELINES 2015
	LANDSCAPE	1A03	2.441	0	NSW MUSIC MODELLING GUIDELINES 2015
	TOTAL SITE				
		TOTAL - OVERALL		2.507	= 100 % OF OVERALL AREA
		TOTAL - IMPERVIOUS		0.066	= 3 % OF OVERALL AREA
		TOTAL - PERVIOUS		2.441	= 97 % OF OVERALL AREA



PRE-DEVELOPMENT MUSIC MODEL LAYOUT

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
E	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
D	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	EZ	CG/PD	TH
C	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
B	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
A	MINOR AMENDMENT	16/04/2019	GM	EZ		

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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DRAWING TITLE
PRE-DEVELOPMENT MUSIC CATCHMENT PLAN, MODEL LAYOUT AND RESULT

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E700	F

DRAWING ID: P1806493-PS01-R09-E700

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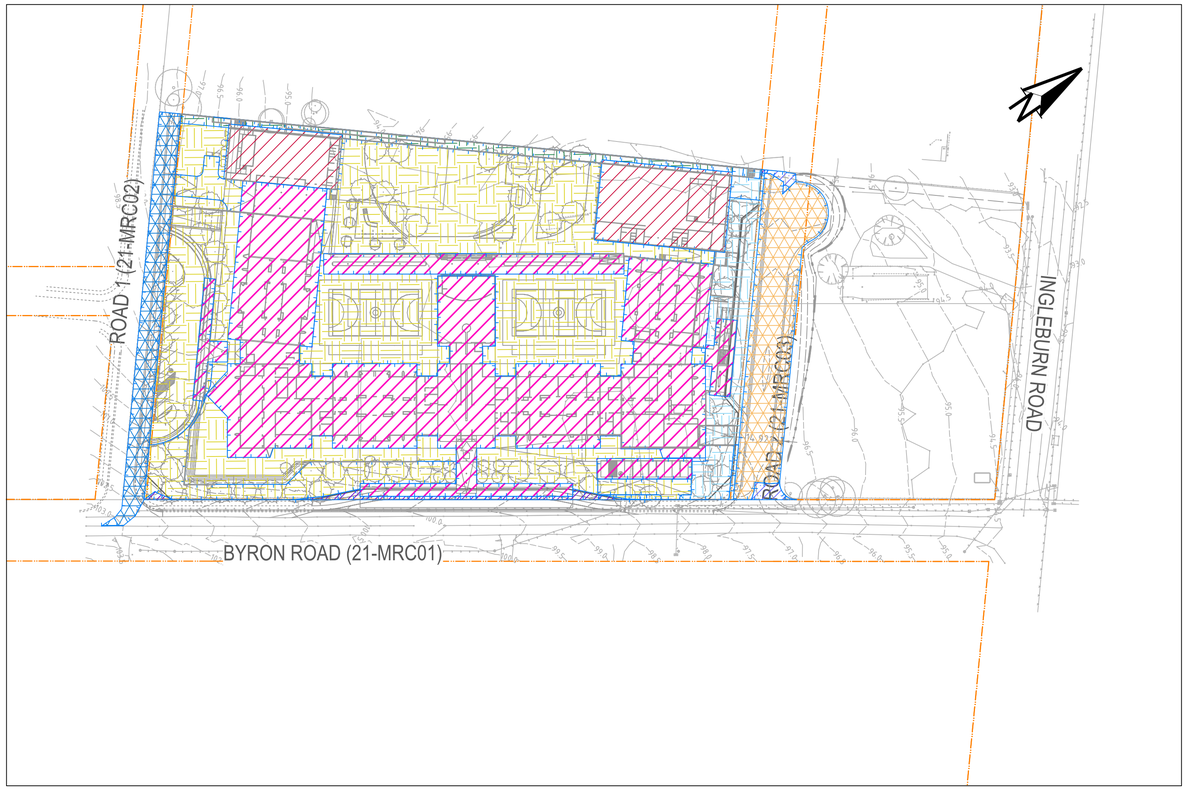
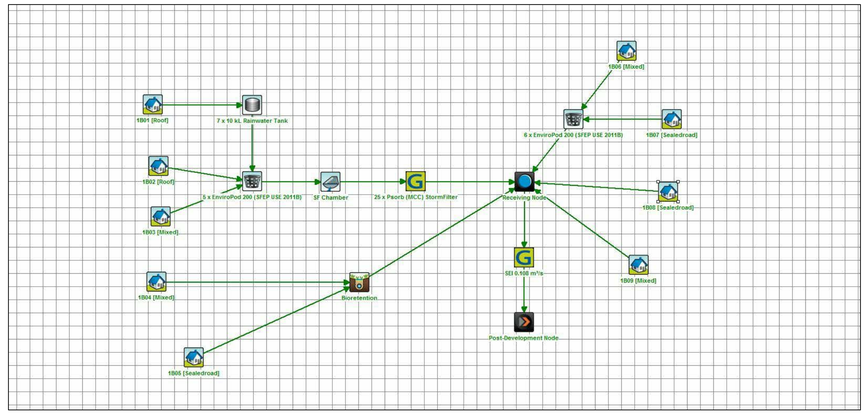
A1 / A3 LANDSCAPE (A1LC_v02.0.01)



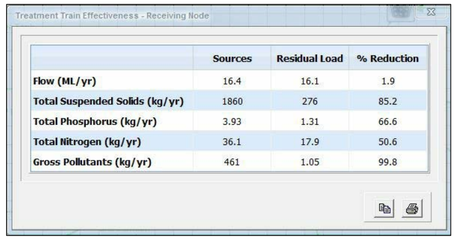
POST-DEVELOPMENT MUSIC CATCHMENT PLAN

SCALE 1: 1000

POST DEVELOPMENT MUSIC CATCHMENTS (P1806493MUS01V03)					
KEY	DESCRIPTION	MUSIC NODE ID	AREA (ha)	IMPERVIOUS %	MUSIC NODE REFERENCE
	ROOF TO RWT	1B01	0.179	100	NSW MUSIC MODELLING GUIDELINES 2015
	ROOF BYPASSING RWT	1B02	0.878	100	NSW MUSIC MODELLING GUIDELINES 2015
	GROUND TO 5 x ENNVIROPODS	1B03	1.013	65	NSW MUSIC MODELLING GUIDELINES 2015
	GROUND TO BIO	1B04	0.045	100	NSW MUSIC MODELLING GUIDELINES 2015
	SEALED ROAD TO BIO	1B05	0.094	50	NSW MUSIC MODELLING GUIDELINES 2015
	GROUND TO 6 x ENVIROPODS	1B06	0.117	40	NSW MUSIC MODELLING GUIDELINES 2015
	SEALED ROAD TO 6 x ENVIROPODS	1B07	0.158	50	NSW MUSIC MODELLING GUIDELINES 2015
	SEALED ROAD BYPASSING 6 x ENVIROPODS	1B08	0.008	50	NSW MUSIC MODELLING GUIDELINES 2015
	GROUND BYPASSING SF	1B09	0.015	0	NSW MUSIC MODELLING GUIDELINES 2015
	TOTAL SITE				
		TOTAL - OVERALL		2.507	= 100 % OF OVERALL AREA
		TOTAL - IMPERVIOUS		1.937	= 77 % OF OVERALL AREA
		TOTAL - PERVIOUS		0.570	= 23 % OF OVERALL AREA
NOTES:					
1. RAINWATER FROM CATCHMENT 1B01 WILL BE DIRECTED TO 7 X 10 kL RAINWATER TANK FOR REUSEs.					
2. INTERNAL REUSE RATE 1 kL/DAY.					
3. EXTERNAL REUSE RATE 450 kL/YEAR.					

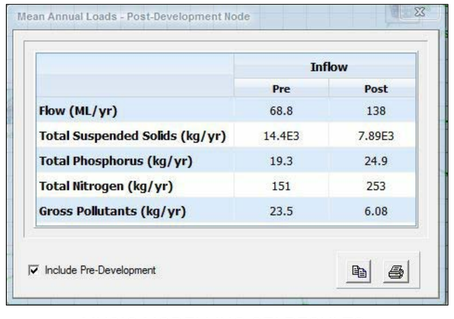


POST-DEVELOPMENT MUSIC MODEL LAYOUT



	Sources	Residual Load	% Reduction
Flow (ML/yr)	16.4	16.1	1.9
Total Suspended Solids (kg/yr)	1860	276	85.2
Total Phosphorus (kg/yr)	3.93	1.31	66.6
Total Nitrogen (kg/yr)	36.1	17.9	50.6
Gross Pollutants (kg/yr)	461	1.05	99.8

MUSIC MODELLING RESULTS



	Inflow	
	Pre	Post
Flow (ML/yr)	68.8	138
Total Suspended Solids (kg/yr)	14.4E3	7.89E3
Total Phosphorus (kg/yr)	19.3	24.9
Total Nitrogen (kg/yr)	151	253
Gross Pollutants (kg/yr)	23.5	6.08

MUSIC MODELLING SEI RESULTS

NOTE

1. WATER QUALITY TREATMENT TRAIN TO ACHIEVE TARGET REDUCTION LEVELS OF 85% TSS, 65% TP, 45% TN & 90% GP (CAMDEN COUNCIL, 2015).
2. PRE-DEVELOPMENT VS POST DEVELOPMENT SEI INDEX =138/68.8=2.01< 3.5.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
F	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
E	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
D	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	EZ	CG/PD	TH
C	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
B	MINOR AMENDMENT	08/05/2019	GM	CG/DG	CG/DG	
A	MINOR AMENDMENT	16/04/2019	GM	EZ		

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT: AMITY COLLEGE

PROJECT NAME/PLANSET TITLE: AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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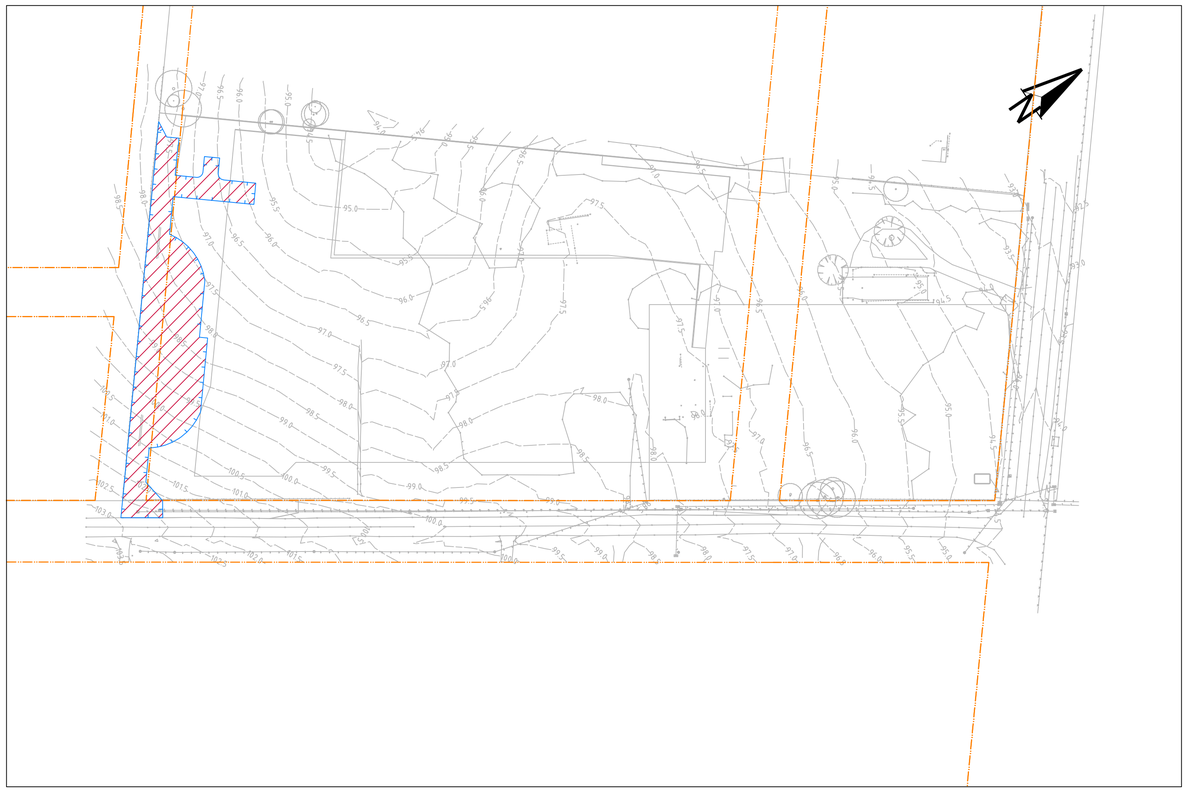
DRAWING TITLE: POST-DEVELOPMENT MUSIC CATCHMENT PLAN, MODEL LAYOUT AND RESULT

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E710	F

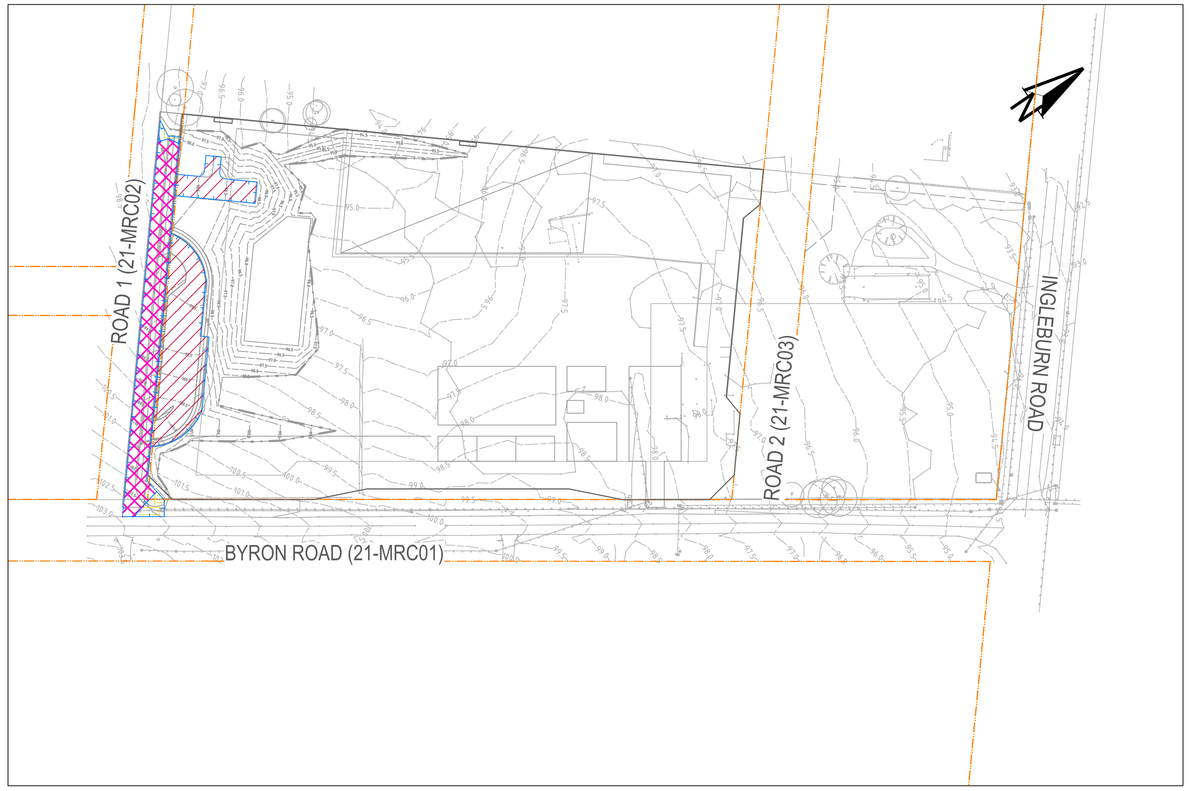
DRAWING ID: P1806493-PS01-R09-E710

A1 / A3 LANDSCAPE (A1LC_v02.0.01)



STAGE 1 PRE-DEVELOPMENT MUSIC CATCHMENT PLAN

SCALE 1: 1000



STAGE 1 POST-DEVELOPMENT MUSIC CATCHMENT PLAN

SCALE 1: 1000

PRE DEVELOPMENT MUSIC CATCHMENTS (P1806493MUS02V02)

KEY	DESCRIPTION	MUSIC NODE ID	AREA (ha)	IMPERVIOUS %	MUSIC NODE REFERENCE
	GROUND	1A01	0.204	0	NSW MUSIC MODELLING GUIDELINES 2015
	TOTAL SITE				
		TOTAL - OVERALL		0.204	= 100 % OF OVERALL AREA
		TOTAL - IMPERVIOUS		0	= 0 % OF OVERALL AREA
		TOTAL - PERVIOUS		0.204	= 100 % OF OVERALL AREA

POST DEVELOPMENT MUSIC CATCHMENTS (P1806493MUS02V01)

KEY	DESCRIPTION	MUSIC NODE ID	AREA (ha)	IMPERVIOUS %	MUSIC NODE REFERENCE
	GROUND TO FILTERS	1B01	0.111	90	NSW MUSIC MODELLING GUIDELINES 2015
	SEALED ROAD TO FILTERS	1B02	0.087	50	NSW MUSIC MODELLING GUIDELINES 2015
	SEALED ROAD BYPASS FILTERS	1B03	0.007	50	NSW MUSIC MODELLING GUIDELINES 2015
	TOTAL SITE				
		TOTAL - OVERALL		0.204	= 100 % OF OVERALL AREA
		TOTAL - IMPERVIOUS		0.103	= 50 % OF OVERALL AREA
		TOTAL - PERVIOUS		0.101	= 50 % OF OVERALL AREA

Treatment Train Effectiveness - Stage 1

	Sources	Residual Load	% Reduction
Flow (ML/yr)	1.21	1.21	0
Total Suspended Solids (kg/yr)	296	35.6	88
Total Phosphorus (kg/yr)	0.484	0.153	68.3
Total Nitrogen (kg/yr)	2.73	1.37	49.7
Gross Pollutants (kg/yr)	33.6	0.921	97.3

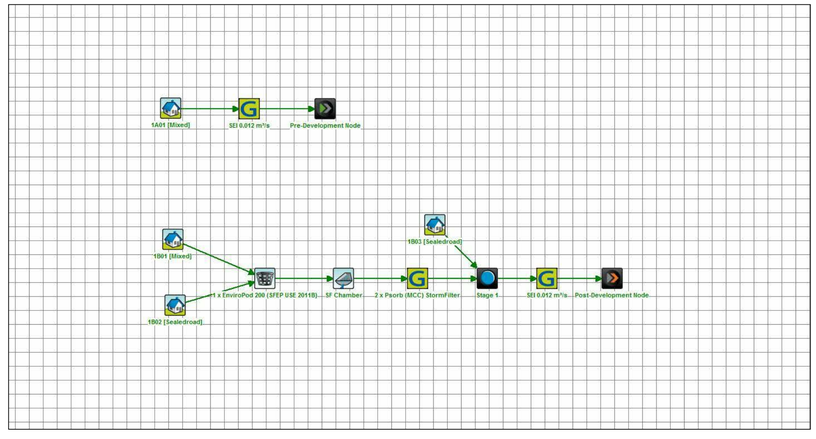
STAGE 1 MUSIC MODELLING RESULTS

Mean Annual Loads - Post-Development Node

	Inflow	
	Pre	Post
Flow (ML/yr)	0.463	0.928
Total Suspended Solids (kg/yr)	78.5	83.8
Total Phosphorus (kg/yr)	0.163	0.288
Total Nitrogen (kg/yr)	1.02	1.68
Gross Pollutants (kg/yr)	0.00	0.406

Include Pre-Development

STAGE 1 MUSIC MODELLING SEI RESULTS



STAGE 1 MUSIC MODEL LAYOUT

NOTE

1. WATER QUALITY TREATMENT TRAIN TO ACHIEVE TARGET REDUCTION LEVELS OF 85% TSS, 65% TP, 45% TN & 90% GP (CAMDEN COUNCIL, 2015).
2. PRE-DEVELOPMENT VS POST DEVELOPMENT SEI INDEX =0.928/0.463=2.00< 3.5.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	MINOR AMENDMENT	24/07/2019	GM	CG/PD	TH	TH
C	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
B	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	EZ	CG/PD	TH
A	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT: AMITY COLLEGE

PROJECT NAME/PLANSET TITLE: AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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

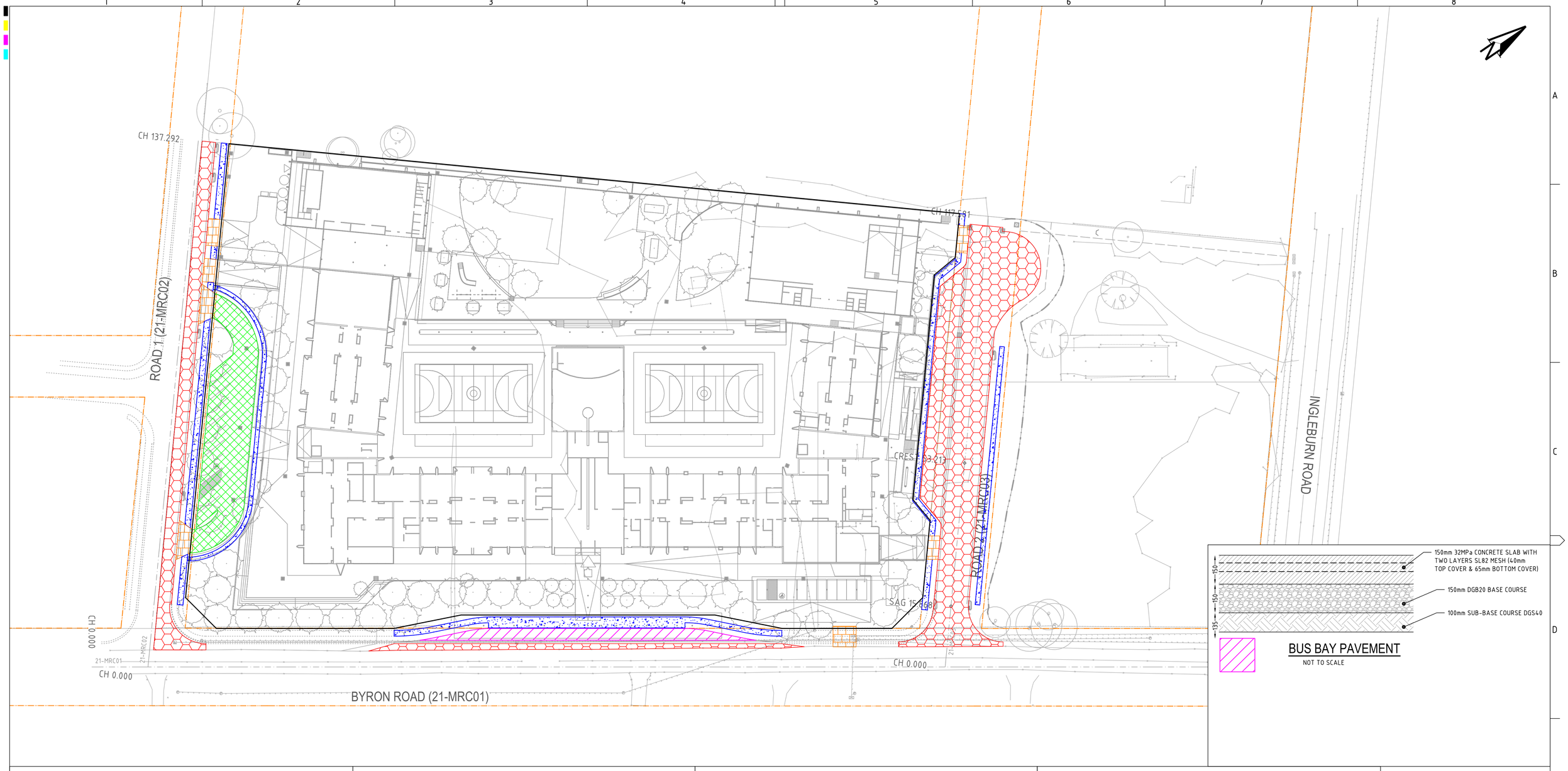
DRAWING TITLE: MUSIC CATCHMENT PLAN, MODEL LAYOUT AND RESULT (STAGE 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-E711	D

PRINTED: --- USER: OMOSTAFA

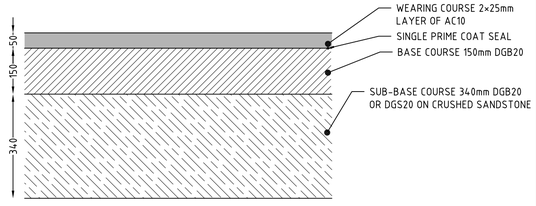
A1 / A3 LANDSCAPE (A1LC_v02.0.01)

DRAWING ID: P1806493-PS01-R09-E711



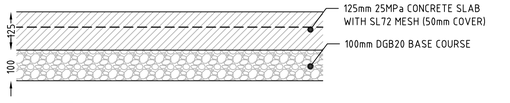
BUS BAY PAVEMENT

NOT TO SCALE



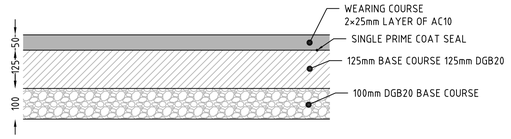
CONCEPT ROAD PAVEMENT DETAILS

NOT TO SCALE



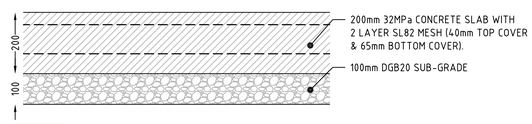
CONCRETE FOOTPATH PAVEMENT

NOT TO SCALE



CONCEPT INTERNAL DRIVEWAY PAVEMENT DETAILS

NOT TO SCALE



VEHICLE FOOTWAY CROSSING PAVEMENT DETAILS

NOT TO SCALE

NOTE:
- CONCEPT PAVEMENT DESIGN. FINAL DESIGN TO BE CONFIRMED AT CC STAGE.
- CONSTRUCT VEHICLE CROSSING AND DRIVEWAY ACCESS IN ACCORDANCE WITH COUNCIL'S STANDRAD DRAWINGS DW01

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
E	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
D	AMENDED FORM CLIENT COMMENTS	23/07/2019	CG/PD	CG/PD	TH	TH
C	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
B	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH
A	ADDED DRAWING	08/05/2019	GM	CG/DG	CG/DG	

PRINTED — USER: GMOSTAFA

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

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

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CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
AMITY COLLEGE LEPPINGTON CAMPUS
CIVIL WORKS PLAN
63 INGLEBURN RD & 85 BYRON RD, LEPPINGTON, NSW 2171
LOT 1 & 2 DP 525996

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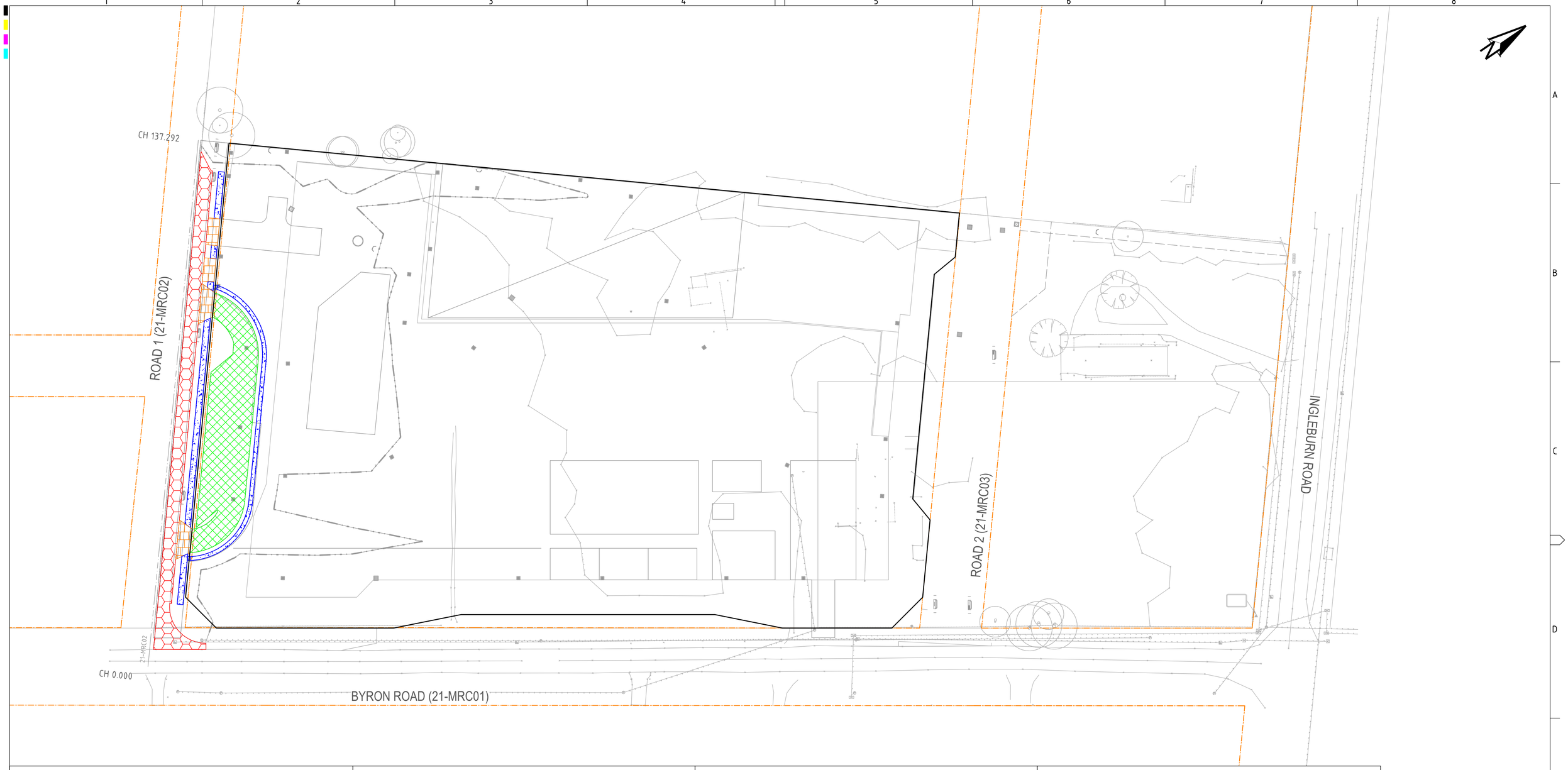
Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767
Email: mail@martens.com.au Internet: www.martens.com.au

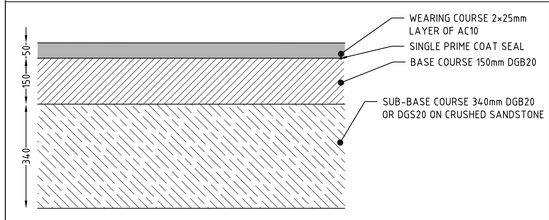
DRAWING TITLE
PAVEMENT PLAN AND DETAILS
(ULTIMATE DEVELOPMENT)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-G400	E

A1 / A3 LANDSCAPE (A1LC_v02.0.01)

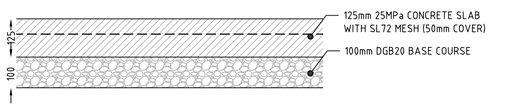
DRAWING ID: P1806493-PS01-R09-G400





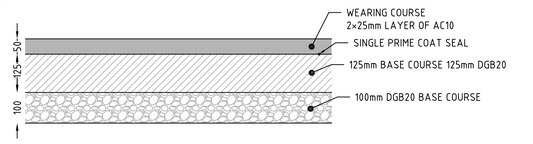
CONCEPT ROAD PAVEMENT DETAILS

NOT TO SCALE



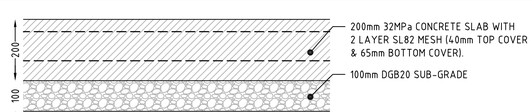
CONCRETE FOOTPATH PAVEMENT

NOT TO SCALE



CONCEPT INTERNAL DRIVEWAY PAVEMENT DETAILS

NOT TO SCALE



VEHICLE FOOTWAY CROSSING PAVEMENT DETAILS

NOT TO SCALE

NOTE:
- CONCEPT PAVEMENT DESIGN. FINAL DESIGN TO BE CONFIRMED AT CC STAGE.
- CONSTRUCT VEHICLE CROSSING AND DRIVEWAY ACCESS IN ACCORDANCE WITH COUNCIL'S STANDRAD DRAWINGS DW01

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
D	**MINOR AMENDMENT**	**24/07/2019**	**GM**	**CG/PD**	**TH**	**TH**
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B	AMENDED FORM CLIENT COMMENTS	11/07/2019	GM	CG/PD	CG/PD	TH
A	AMENDED FORM REVISED ARCHITECTURAL PLANS	28/06/2019	GM	CG/EZ	TH	TH

PRINTED ..... USER OMSTOPA

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

A1 / A3 LANDSCAPE (A1LC_v02.0.01)

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	TH

CLIENT
AMITY COLLEGE

PROJECT NAME/PLANSET TITLE
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CIVIL WORKS PLAN
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DRAWING TITLE
PAVEMENT PLAN AND DETAILS
(STAGE 1)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1806493	PS01	R09	PS01-G401	D

DRAWING ID: P1806493-PS01-R09-G401