

PROJECT: MINARAH COLLEGE - CATHERINE FIELD

PLANSET: CIVIL WORKS PLAN

CLIENT: MINARAH COLLEGE



LOCALITY PLAN
NOT TO SCALE

CAMDEN COUNCIL

268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW
LOT 11 DP8333983 & LOT 12 DP8333784

DRAWING LIST		
DWG NO.	REV	DWG TITLE
GENERAL		
PS02-A000	C	COVER SHEET
PS02-A050	B	DEVELOPMENT OVERVIEW PLAN
CONSTRUCTION MANAGEMENT WORKS		
PS02-B300	B	SOIL AND WATER MANAGEMENT PLAN
PS02-B310	B	SOIL AND WATER MANAGEMENT DETAILS - SHEET 1
PS02-B311	A	SOIL AND WATER MANAGEMENT DETAILS - SHEET 2
PS02-B320	A	SOIL AND WATER MANAGEMENT DETAILS - RUSSLE CALCULATION
EARTHWORKS		
PS02-C100	B	EARTHWORKS GRADING PLAN - (ULTIMATE DEVELOPMENT)
PS02-C110	B	EARTHWORKS GRADING PLAN - (STAGE 1)
PS02-C500	C	EARTHWORKS CUT & FILL PLAN - (ULTIMATE DEVELOPMENT)
PS02-C510	C	EARTHWORKS CUT & FILL PLAN - (STAGE 1)
PS02-C600	B	EARTHWORKS SITE SECTION - SHEET 1
PS02-C601	B	EARTHWORKS SITE SECTION - SHEET 2
PS02-C602	B	EARTHWORKS SITE SECTION - SHEET 3
PS02-C603	B	EARTHWORKS SITE SECTION - SHEET 4
PS02-C604	B	EARTHWORKS SITE SECTION - SHEET 5
ROADWORK		
PS02-D100	B	ROADWORKS PLAN - (ULTIMATE DEVELOPMENT)
PS02-D110	B	ROADWORKS PLAN - (STAGE 1)
PS02-D200	B	LONGITUDINAL AND TYPICAL SECTION - SHEET 1
PS02-D201	B	LONGITUDINAL AND TYPICAL SECTION - SHEET 2
PS02-D202	B	LONGITUDINAL AND TYPICAL SECTION - SHEET 3
PS02-D203	B	LONGITUDINAL AND TYPICAL SECTION - SHEET 4
INTEGRATED WATER MANAGEMENT PLAN		
PS02-E100	B	DRAINAGE PLAN - (ULTIMATE DEVELOPMENT)
PS02-E110	B	DRAINAGE PLAN - (STAGE 1)
PS02-E200	B	DRAINAGE DETAILS - SHEET 1
PS02-E201	B	DRAINAGE DETAILS - SHEET 2
PS02-E600	B	ON SITE DETENTION CATCHMENT PLAN, MODELS & RESULTS - (ULTIMATE DEVELOPMENT)
PS02-E610	B	ON SITE DETENTION CATCHMENT PLAN, MODELS & RESULTS - (STAGE 1)
PS02-E700	B	WATER QUALITY CATCHMENT PLAN, MODEL & RESULTS - (ULTIMATE DEVELOPMENT)
PS02-E710	B	WATER QUALITY CATCHMENT PLAN, MODEL & RESULTS - (STAGE 1)
FINAL CIVIL WORKS		
PS02-G450	B	CONCEPT PAVEMENT PLAN - (ULTIMATE DEVELOPMENT)
PS02-G451	B	CONCEPT PAVEMENT PLAN - (STAGE 1)

- GENERAL NOTES:**
- THIS PLAN IS FOR DEVELOPMENT APPLICATION PURPOSE AND NOT FOR CONSTRUCTION. DESIGN TO BE REVIEWED AND UPDATED FOR CONSTRUCTION CERTIFICATE.
 - ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH, AND THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE RELEVANT AUSTRALIAN STANDARDS, COUNCIL SPECIFICATIONS, AND ALL PROJECT CONSULTANT'S PLANS AND REPORTS.
 - INTERNAL SURVEY INFORMATION AND EXTERNAL SITE BOUNDARY SHOWN BASED ON SURVEY INFORMATION PROVIDED BY C.M.S SURVEYORS 17/03/2021.
 - ARCHITECTURAL INFORMATION SHOWN BASED ON DESIGN BY TONKIN ZULAINKHA GREER ARCHITECTS 7/03/2022.
 - LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
 - FINAL SURFACE CONTOURS ARE BASED ON DESIGN AND EXISTING SURVEY AND LIDAR SURFACES.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

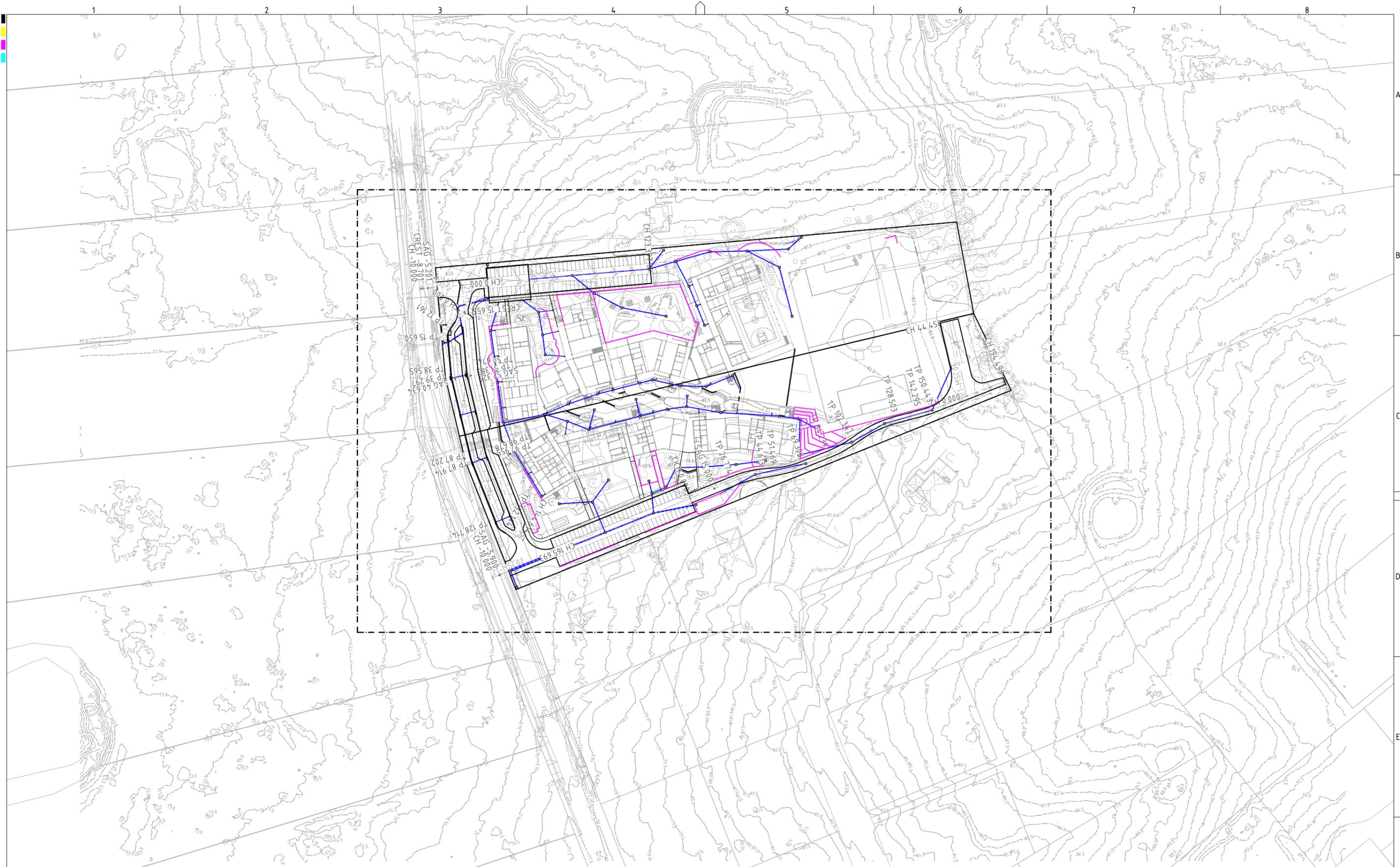
REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE
C	FURTHER EARTHWORKS DETAILS ADDED	19/05/2022	NN	RL/BN	CG/AVG	TH	
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH	
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH	

GRID	DATUM	PROJECT MANAGER	CLIENT
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PROJECT NAME/PLANSET TITLE MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN 268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW			

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DRAWING TITLE				
COVER SHEET				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-A000	C



STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
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SCALE
 0 10 20 30 40 50 60 70 80 90 100
 A1 (A3) 1:1,000 (1:2,000) METRES

GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	MINARAH COLLEGE
PROJECT NAME/PLANSET TITLE MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN 268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW			



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DRAWING TITLE				
DEVELOPMENT OVERVIEW PLAN				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-A050	B

TEMPORARY SEDIMENT BASIN
 TOTAL BASIN VOLUME: 465m³
 SEDIMENT STORAGE VOLUME: 65m³
 AREA: 493m²

CATCHMENT 2
 AREA: 0.30 ha

CATCHMENT 1
 AREA: 3.20 ha

NOTE:
 - TO BE READ IN CONJUNCTION WITH SEDIMENT & EROSION CONTROL DETAILS PS02-B310
 - ALL EXCESS MATERIALS TO BE REMOVED FROM SITE.
 - EROSION AND SEDIMENT EROSION CONTROLS TO BE IN PLACE AT ALL TIMES. CONTROLS TO BE INSPECTED, MAINTAINED AND REPLACED BY THE CONTRACTOR UNTIL WORKS ARE COMPLETED AND PERMANENT MEASURES HAVE BEEN ESTABLISHED.
 - WHEEL WASH TO BE PROVIDED AT SITE ENTRY.

KEY:

EXISTING CONTOURS	
CATCHMENT BOUNDARY	
SEDIMENT FENCE	
EARTH BANK (LOW FLOW) WITH GEOTEXTILE LINING FOR UPSTREAM STORM WATER DIVERSION	
EARTH BANK (LOW FLOW) FOR SITE STORM WATER DIVERSION	
GEOTEXTILE INLET FILTER	
ROCK CHECK DAM	
INDICATIVE STOCKPILE	
STABILISED SITE ACCESS WITH SHAKER PAD	
LEVEL SPREADER	

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SCALE

1:500 (1:1,000)

GRID MGA
 DATUM mAHD
 PROJECT MANAGER TH
 CLIENT MINARAH COLLEGE

PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
 268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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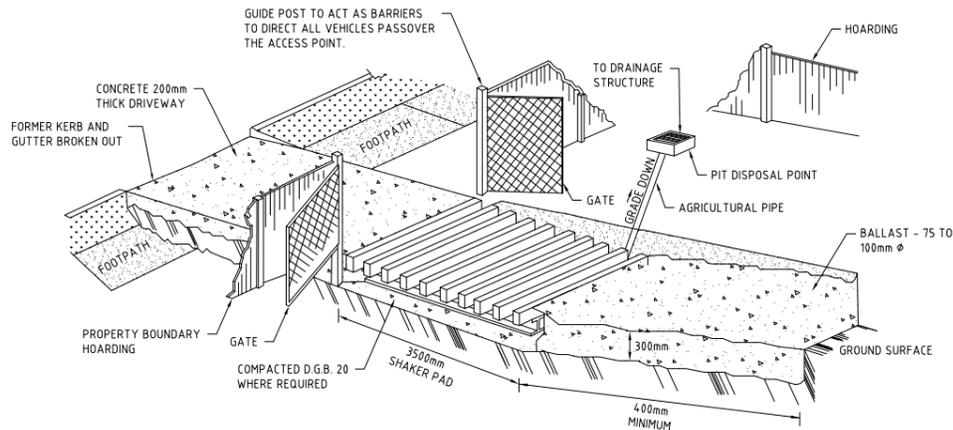
DRAWING TITLE SOIL AND WATER MANAGEMENT PLAN				
PROJECT NO. P2108320	PLANSET NO. PS02	RELEASE NO. R03	DRAWING NO. PS02-B300	REVISION B

STABILISED ACCESS POINT

TYPE II SAP

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

STABILISED ACCESS POINT - TYPE 2



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

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

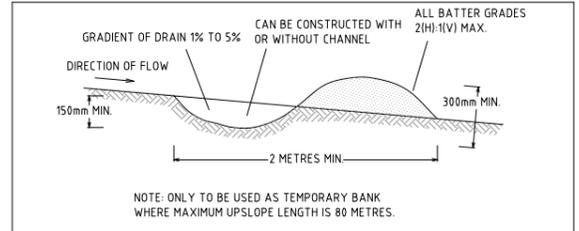
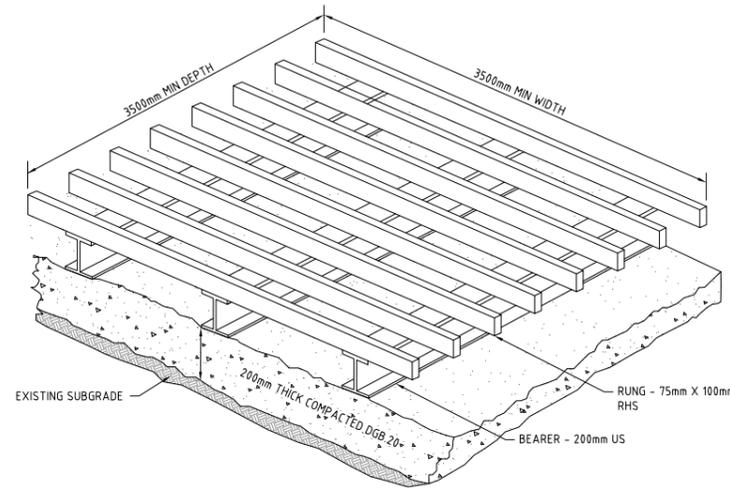
SHAKER PAD (CATTLE GRID)

A CORRECTLY DESIGNED AND INSTALLED SHAKER PAD WILL ASSIST IN PREVENTING SEDIMENT TRANSFER FROM A SITE. ANY STABILISED ACCESS POINT (SAP) CAN BE DESIGNED WITH A SHAKER PAD (COMPULSORY 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 PRACTISING STRUCTURAL ENGINEER. THE CERTIFIED DESIGN SHOULD BE SUBMITTED WITH THE RELEVANT APPLICATION.
- CAN BE CONSTRUCTED FROM ANY SUITABLE MATERIAL.
- MUST BE LOCATED ON A SUITABLY PREPARED AND COMPACTED SUB-GRADE/BASE MATERIAL.
- MUST BE SITUATED SUCH THAT THE RUNGS OF THE SHAKER PAD ARE LEVEL WITH THE ADJOINING NATURAL SURFACE.
- MUST BE A MINIMUM OF 3.5M IN LENGTH.
- MUST BE A MINIMUM OF 3.5M IN WIDTH.
- MUST HAVE CLEAR SPACING BETWEEN RUNGS OF 200 - 250mm.
- RUNGS MUST HAVE A MAXIMUM WIDTH (BEARING AREA) OF 75mm.
- MUST HAVE A MINIMUM CLEAR DEPTH OF 300mm IE FORM THE TOP OF THE RUNG TO THE FINISHED SUB-GRADE/BASE LEVEL

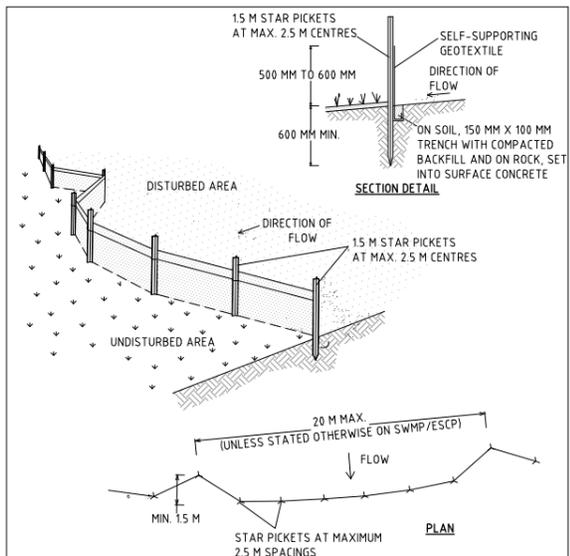
THE SHAKER PAD MUST BE PROVIDED WITH SUITABLE BARRIERS AT THE SIDES TO ENSURE THAT ALL TYERS OF VEHICLES LEAVING THE SITE TRAVERSE THE DEVICE.



CONSTRUCTION NOTES

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

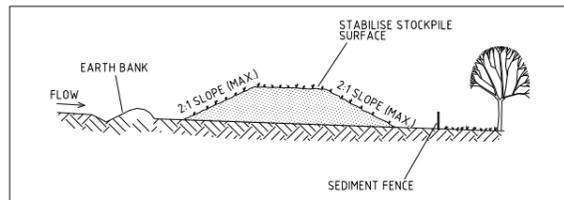
EARTH BANK (LOW FLOW) SD 5-5



CONSTRUCTION NOTES

- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
- CUT A 150-MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
- DRIVE 15 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
- FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150-MM OVERLAP.
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

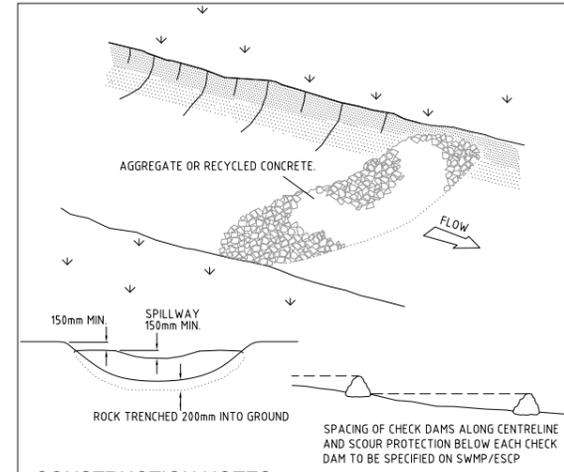
SEDIMENT FENCE SD 6-8



CONSTRUCTION NOTES

- PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
- CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
- WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
- WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
- CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

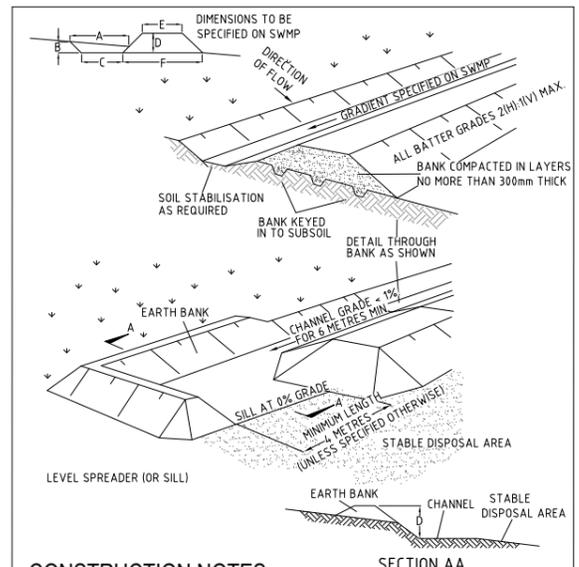
STOCKPILES SD 4-1



CONSTRUCTION NOTES

- 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.
- 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.
- 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.
- 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



CONSTRUCTION NOTES

- CONSTRUCT AT THE GRADIENT SPECIFIED ON THE ESCP OR SWMP, NORMALLY BETWEEN 1 AND 5 PERCENT.
- AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
- ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
- BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V-SHAPED AT THE DIMENSIONS SHOWN ON THE SWMP.
- ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
- COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION FOLLOWING TABLE 5.2 IN LANDCOM (2004).
- WHERE DISCHARGING TO ERODIBLE LANDS, ENSURE THEY OUTLET THROUGH A PROPERLY CONSTRUCTED LEVEL SPREADER.
- CONSTRUCT THE LEVEL SPREADER AT THE GRADIENT SPECIFIED ON THE ESCP OR SWMP, NORMALLY LESS THAN 1 PERCENT OR LEVEL.
- 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.

EARTH BANK (HIGH FLOWS) SD 5-6

STATE SIGNIFICANT DEVELOPMENT APPLICATION

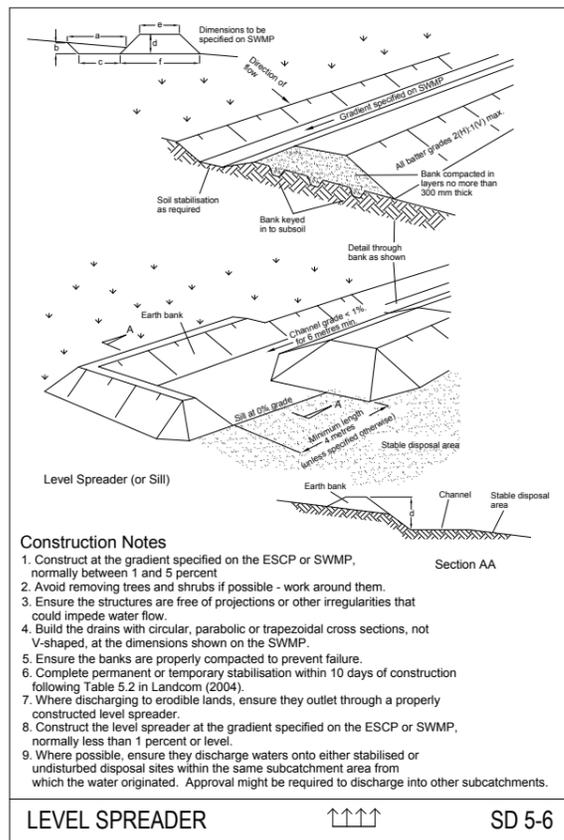
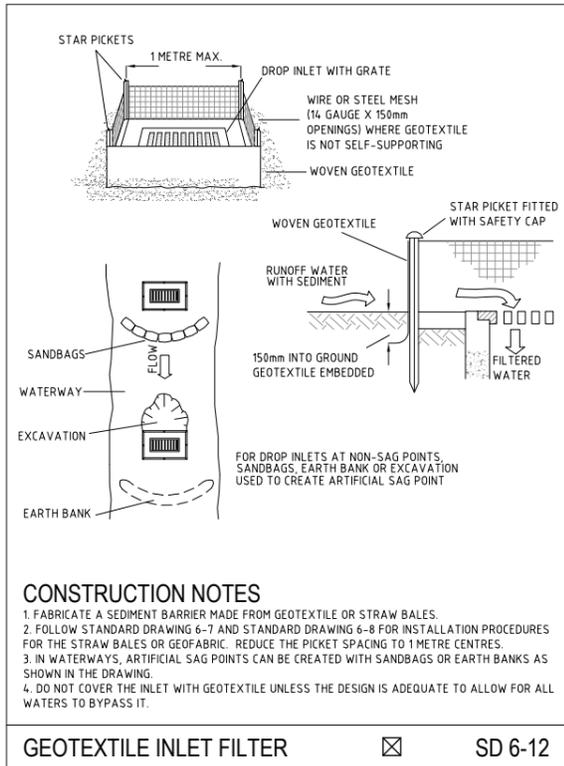
REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE
B	MINOR AMENDMENTS	14/04/2022	RK	RK	CG/AVG	TH	
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GRID	DATUM	PROJECT MANAGER	CLIENT
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DRAWING TITLE				
SOIL AND WATER MANAGEMENT DETAILS SHEET 1				
PROJECT NO.	PLANSSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-B310	B



STATE SIGNIFICANT DEVELOPMENT APPLICATION

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TH		TH	MINARAH COLLEGE

PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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DRAWING TITLE				
SOIL AND WATER MANAGEMENT DETAILS SHEET 2				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-B311	A

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: MINARAH COLLEGE
Site Location: 268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW
Precinct: CATHERINE FIELDS
Description of Site: MINARAH COLLEGE

Site area	Site				Remarks
	CAT 1	CAT 2			
Total catchment area (ha)	3.2	0.3			
Disturbed catchment area (ha)	1.6	0.3			

Soil analysis

	CAT 1	CAT 2			Remarks
% sand (fraction 0.02 to 2.00 mm)	10	10			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)	15	15			
% clay (fraction finer than 0.002 mm)	75	75			
Dispersion percentage	10.0	10.0			E.g. enter 10 for dispersion of 10%
% of whole soil dispersible	8.25	8.25			See Section 6.3.3(e)
Soil Texture Group	F	F			See Section 6.3.3(c), (d) and (e)

Rainfall data

	CAT 1	CAT 2			Remarks
Design rainfall depth (days)	5	5			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	25	25			See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm	8.54	8.54			See IFD chart for the site

RUSLE Factors

	CAT 1	CAT 2			Remarks
Rainfall erosivity (R-factor)	1700	1700			Automatic calculation from above data
Soil erodibility (K-factor)	0.07	0.07			
Slope length (m)	200	25			
Slope gradient (%)	5	3			RUSLE data can be obtained from Appendixes A, B and C
Length/gradient (LS-factor)	2	0.41			
Erosion control practice (P-factor)	1.3	1.3			
Ground cover (C-factor)	1	1			

Calculations

	CAT 1	CAT 2			Remarks
Soil loss (t/ha/yr)	309	63			
Soil Loss Class	3	1			See Section 4.4.2(b)
Soil loss (m ³ /ha/yr)	238	49			
Sediment basin storage volume, m ³	65	2			See Sections 6.3.4(i) and 6.3.5 (e)

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

$$\text{Basin volume} = \text{settling zone volume} + \text{sediment storage zone volume}$$

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:

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

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-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:

<input type="checkbox"/>	50% of settling zone capacity,
<input checked="" type="checkbox"/>	2 months soil loss calculated by RUSLE

Total Basin Volume

Site	C _v	R _{x-day, y-%ile}	Total catchment area (ha)	Settling zone volume (m ³)	Sediment storage volume (m ³)	Total basin volume (m ³)
CAT 1	0.50	25	3.2	400	65	465
CAT 2	0.50	25	0.3	37.5	2	39.5

NOTES:
 - SEDIMENT BASIN IS REQUIRED FOR CATCHMENT 1, AS TOTAL SOIL LOSS IS GREATER THAN 150m³/yr (238m³/ha/yr x 1.6ha = 380m³/yr > 150m³/yr).
 - SEDIMENT BASIN IS NOT REQUIRED FOR CATCHMENT 2, AS TOTAL SOIL LOSS IS LESS THAN 150m³/yr (49m³/ha/yr x 0.3ha = 14.7m³/yr < 150m³/yr).

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		TH	MINARAH COLLEGE
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PROJECT NAME/PLANSET TITLE MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN 268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW			

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DRAWING TITLE SOIL AND WATER MANAGEMENT DETAILS RUSLE CALCULATION				
PROJECT NO. P2108320	PLANSET NO. PS02	RELEASE NO. R03	DRAWING NO. PS02-B320	REVISION A

STATE SIGNIFICANT DEVELOPMENT APPLICATION



NOTE:
1 BATTERS TO BE MAXIMUM 1IN4 EXCEPT WHERE NOTED.

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

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

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

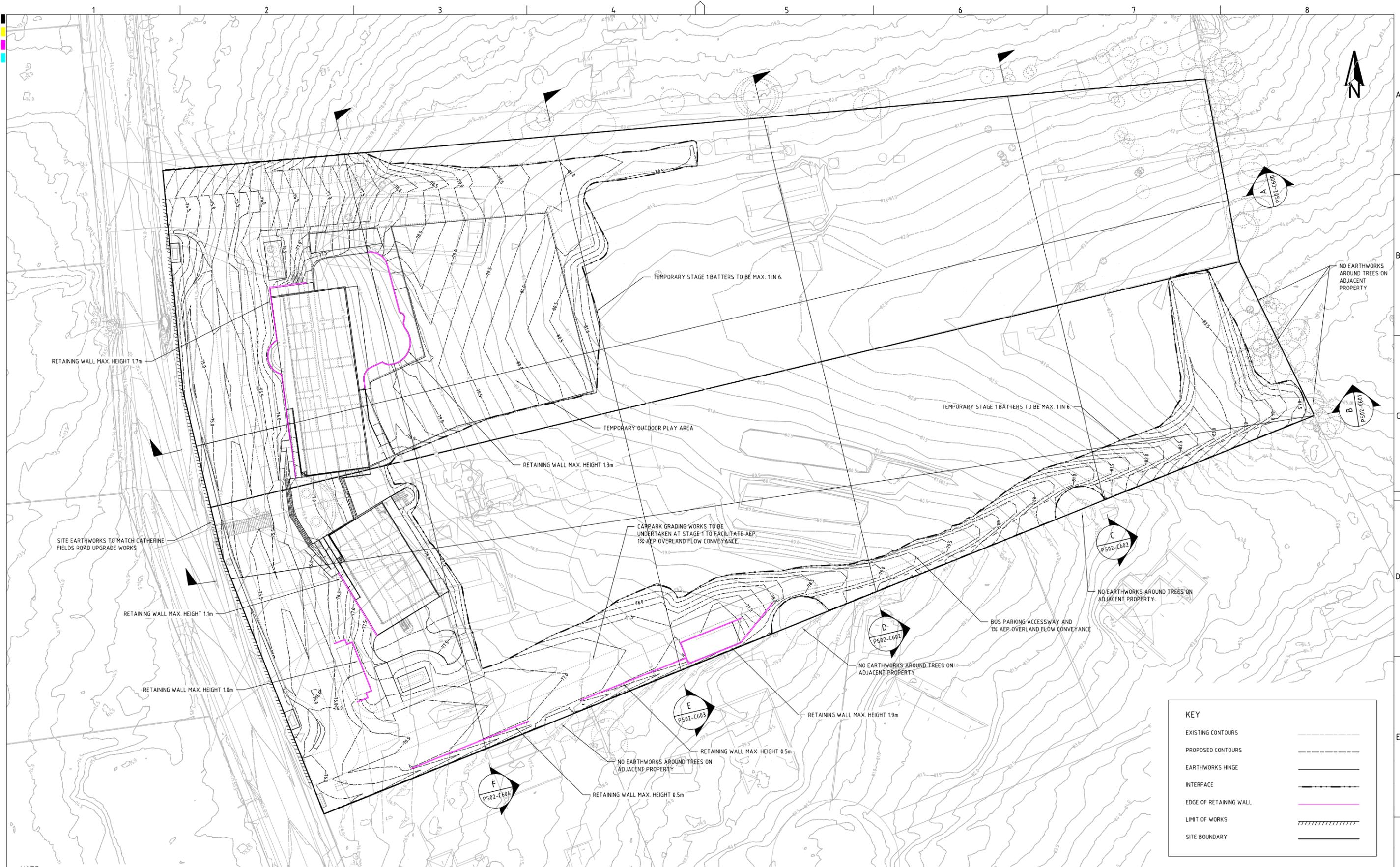
GRID	MGA	DATUM	mAHD	PROJECT MANAGER	TH	CLIENT	MINARAH COLLEGE
------	-----	-------	------	-----------------	----	--------	-----------------

DISCLAIMER & COPYRIGHT	PROJECT NAME/PLANSET TITLE
This plan must not be used for construction unless signed as approved by principal certifying authority.	MINARAH COLLEGE - CATHERINE FIELD
All measurements in millimetres unless otherwise specified.	CIVIL WORKS PLAN
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DRAWING TITLE				
EARTHWORKS GRADING PLAN (ULTIMATE DEVELOPMENT)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-C100	B



NOTE:
1. BATTERS TO BE MAXIMUM 1IN6 EXCEPT WHERE NOTED.

KEY	
EXISTING CONTOURS	-----
PROPOSED CONTOURS	- - - - -
EARTHWORKS HINGE	=====
INTERFACE	-----
EDGE OF RETAINING WALL	=====
LIMIT OF WORKS	///////
SITE BOUNDARY	-----

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	MINARAH COLLEGE

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PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN

268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

STATE SIGNIFICANT DEVELOPMENT APPLICATION

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DRAWING TITLE				
EARTHWORKS GRADING PLAN (STAGE 1)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-C110	B



	CUT	FILL
EARTHWORKS VOLUME	-12199	10736
BALANCE	-1463	-

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	
GRETATER THAN	3.000 m	

- NOTES:**
- CUT-FILL DEPTHS SHOWN FROM EXISTING SURFACE LEVELS (AS SURVEYED) TO FINISHED DESIGN SURFACE LEVELS.
 - EARTHWORKS VOLUMES MEASURED FROM EXISTING SURFACE LEVELS MINUS TOPSOIL STRIPPING (ASSUMED 0.3M DEPTH) TO BULK EARTHWORKS SURFACE LEVELS.
 - BULK EARTHWORKS SURFACE LEVELS MEASURED FROM FINISHED DESIGN SURFACE LEVELS MINUS 200MM FOR BUILDING SLABS, 150MM FOR PAVED & FOOTPATH AREAS, 500MM FOR CARPARK AREAS AND 300MM FOR LANDSCAPING & PLANTING AREAS.
 - BOXING DEPTHS ARE PRELIMINARY AND ARE TO BE CONFIRMED AT CONSTRUCTION CERTIFICATE STAGE.
 - ALL EARTHWORK MATERIAL ASSUMED TO BE RE-USED ON SITE, SUBJECT TO FURTHER LABORATORY TESTING (REFER TO GEOTECHNICAL ASSESSMENT REPORT FOR DETAILS, REF: P2108320.R04.V01, DATED MARCH 2022).
 - SITE WORKS EARTHWORKS VOLUMES BASED ON PRELIMINARY CALCULATIONS:
 - 117M³ OF EARTHWORKS TO BE IMPORTED FOR STAGE 1 WORKS.
 - 1463M³ OF EARTHWORKS TO BE REMOVED FROM SITE AT COMPLETION OF DEVELOPMENT (SUBJECT TO FURTHER STAGING WORKS).

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
C	FURTHER EARTHWORKS DETAILS ADDED	19/05/2022	NN	RL/BN	CG/AVG	TH
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

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

GRID
MGA

DATUM
mAHD

PROJECT MANAGER
TH

CLIENT
MINARAH COLLEGE

PROJECT NAME/PLANSSET TITLE
MINARAH COLLEGE - CATHERINE FIELD
CIVIL WORKS PLAN

268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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DRAWING TITLE EARTHWORKS CUT & FILL PLAN (ULTIMATE DEVELOPMENT)				
PROJECT NO. P2108320	PLANSSET NO. PS02	RELEASE NO. R03	DRAWING NO. PS02-C500	REVISION C



EARTHWORKS SUMMARY (m³)		
	CUT	FILL
EARTHWORKS VOLUME	-5252	5369
BALANCE	-	117

CUT-FILL DEPTH DESIGN TO EXISTING		
LOWER THAN	-3.000 m	Dark Red
-3.000 to	-2.250 m	Red
-2.250 to	-1.500 m	Orange
-1.500 to	-0.750 m	Light Orange
-0.750 to	-0.150 m	Yellow
-0.150 to	0.150 m	Light Green
0.150 to	0.750 m	Green
0.750 to	1.500 m	Dark Green
1.500 to	2.250 m	Blue-Green
2.250 to	3.000 m	Blue
GREATER THAN	3.000 m	Dark Blue

- NOTES:**
- CUT-FILL DEPTHS SHOWN FROM EXISTING SURFACE LEVELS (AS SURVEYED) TO FINISHED DESIGN SURFACE LEVELS.
 - EARTHWORKS VOLUMES MEASURED FROM EXISTING SURFACE LEVELS MINUS TOPSOIL STRIPPING (ASSUMED 0.3M DEPTH) TO BULK EARTHWORKS SURFACE LEVELS.
 - BULK EARTHWORKS SURFACE LEVELS MEASURED FROM FINISHED DESIGN SURFACE LEVELS MINUS 200MM FOR BUILDING SLABS, 150MM FOR PAVED & FOOTPATH AREAS, 500MM FOR CARPARK AREAS AND 300MM FOR LANDSCAPING & PLANTING AREAS.
 - BOXING DEPTHS ARE PRELIMINARY AND ARE TO BE CONFIRMED AT CONSTRUCTION CERTIFICATE STAGE.
 - ALL EARTHWORK MATERIAL ASSUMED TO BE RE-USED ON SITE, SUBJECT TO FURTHER LABORATORY TESTING (REFER TO GEOTECHNICAL ASSESSMENT REPORT FOR DETAILS, REF: P2108320JR04V01, DATED MARCH 2022).
 - SITE WORKS EARTHWORKS VOLUMES BASED ON PRELIMINARY CALCULATIONS:
 - 117M³ OF EARTHWORKS TO BE IMPORTED FOR STAGE 1 WORKS.
 - 1463M³ OF EARTHWORKS TO BE REMOVED FROM SITE AT COMPLETION OF DEVELOPMENT (SUBJECT TO FURTHER STAGING WORKS).

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
C	FURTHER EARTHWORKS DETAILS ADDED	19/05/2022	NN	RL/BN	CG/AVG	TH
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

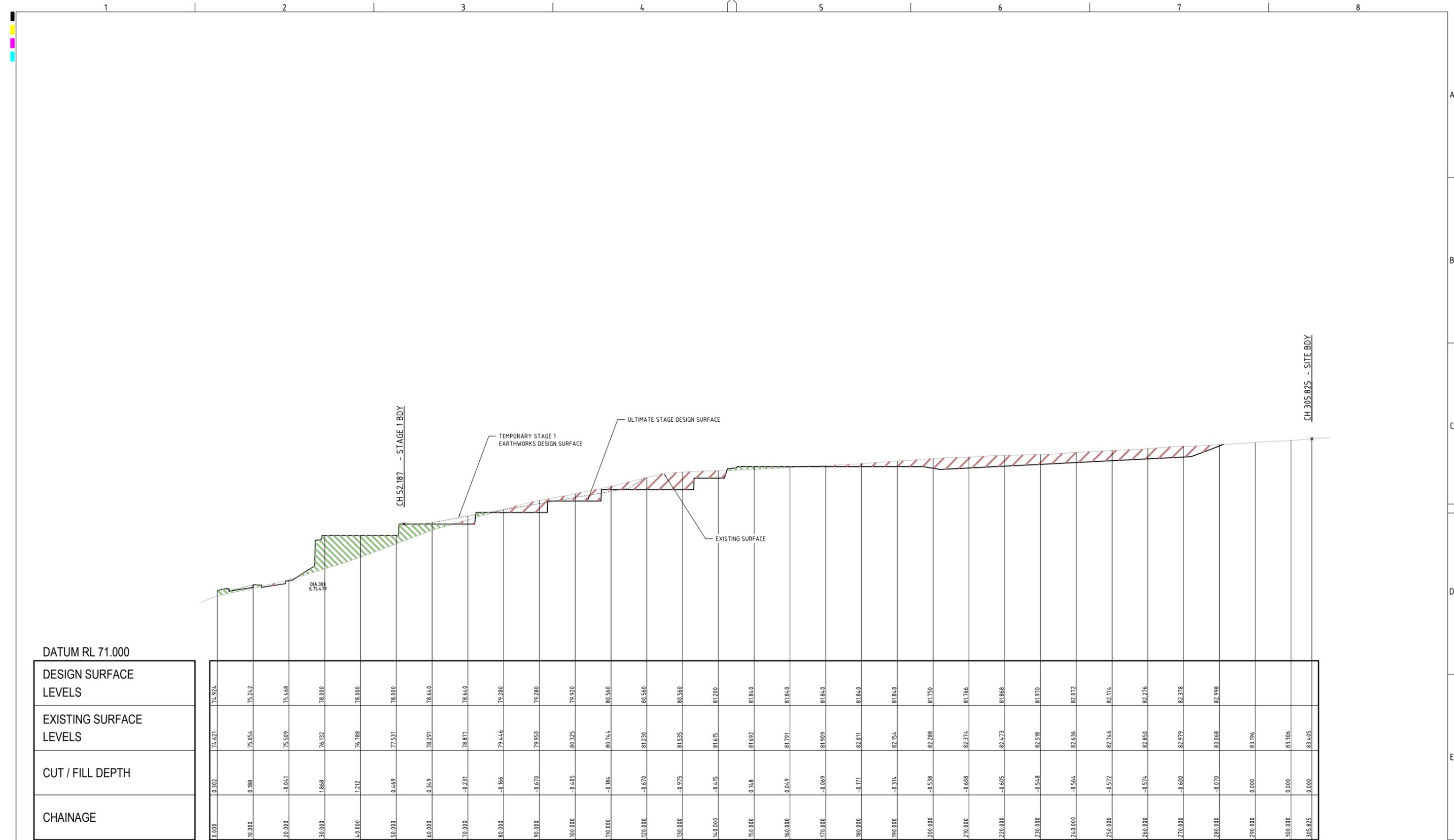
GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	MINARAH COLLEGE

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PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD
 CIVIL WORKS PLAN
 268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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DRAWING TITLE				
EARTHWORKS CUT & FILL PLAN (STAGE 1)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-C510	C



DATUM RL 71.000

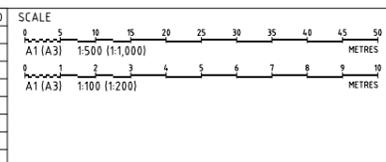
DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH	CHAINAGE
74.924	74.621	0.302	0.000
75.242	75.054	0.188	10.000
75.468	75.509	-0.041	20.000
78.000	76.132	1.868	30.000
78.000	76.788	1.212	40.000
78.000	77.531	0.469	50.000
78.640	78.291	0.349	60.000
78.640	78.871	-0.231	70.000
79.280	79.446	-0.166	80.000
79.280	79.950	-0.670	90.000
79.920	80.325	-0.405	100.000
80.560	80.744	-0.184	110.000
80.560	81.230	-0.670	120.000
80.560	81.535	-0.975	130.000
81.200	81.615	-0.415	140.000
81.840	81.692	0.148	150.000
81.840	81.791	0.049	160.000
81.840	81.909	-0.069	170.000
81.840	82.011	-0.171	180.000
81.840	82.154	-0.314	190.000
81.750	82.288	-0.538	200.000
81.766	82.374	-0.608	210.000
81.868	82.473	-0.605	220.000
81.970	82.518	-0.548	230.000
82.072	82.636	-0.564	240.000
82.174	82.746	-0.572	250.000
82.276	82.850	-0.574	260.000
82.378	82.979	-0.600	270.000
82.998	83.068	-0.070	280.000
	83.196	0.000	290.000
	83.306	0.000	300.000
	83.405	0.000	305.825

SECTION A

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

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

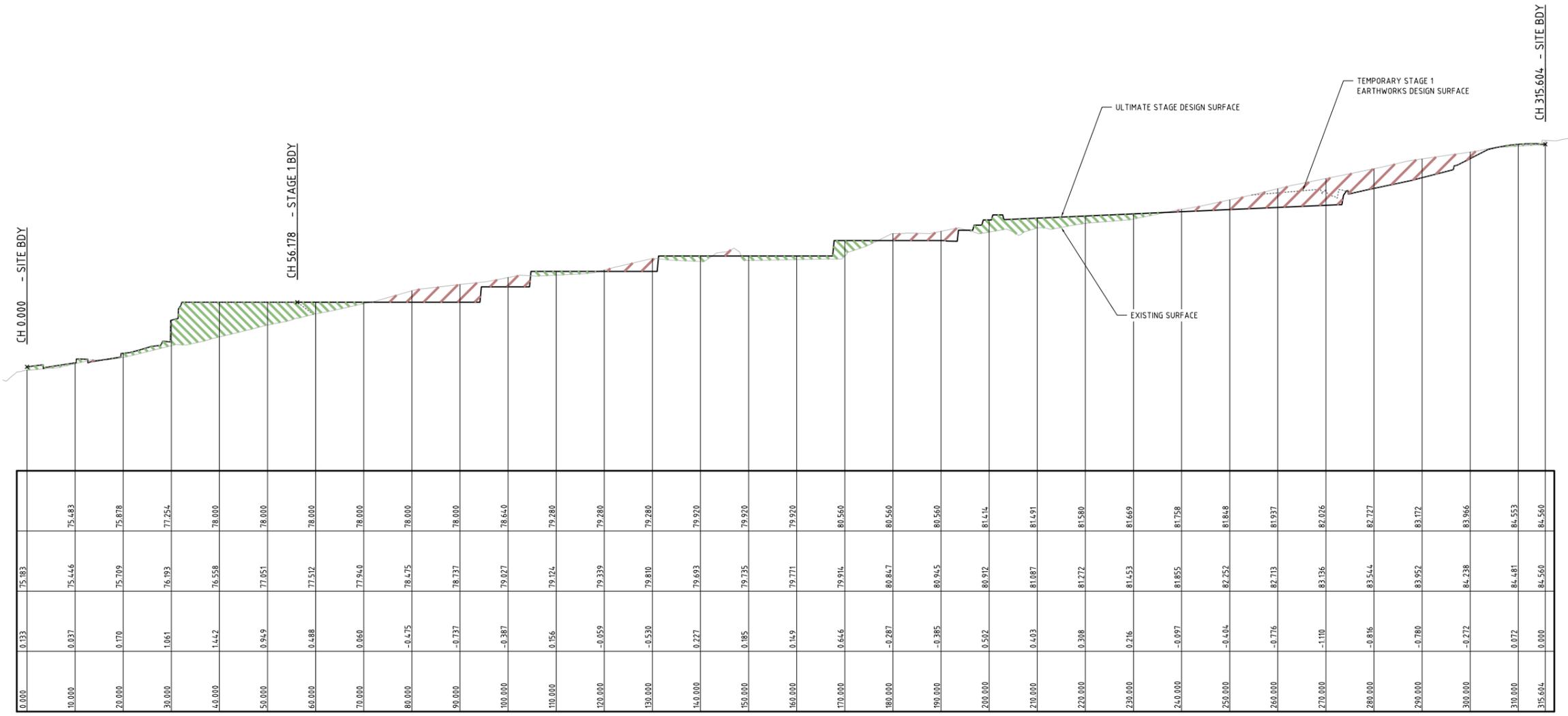


GRID: MGA
DATUM: mAHD
PROJECT MANAGER: TH
CLIENT: MINARAH COLLEGE
PROJECT NAME/PLANSSET TITLE: MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
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DRAWING TITLE: EARTHWORKS SITE SECTION SHEET 1
PROJECT NO.: P2108320
PLANSSET NO.: PS02
RELEASE NO.: R03
DRAWING NO.: PS02-C600
REVISION: B

PROJECT NO.	PLANSSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-C600	B

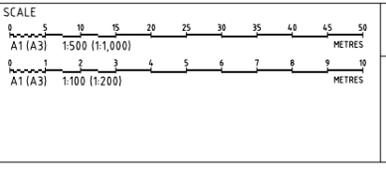


SECTION B
 SCALE: HORIZONTAL - 1:500
 VERTICAL - 1:100

CHAINAGE	DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH
0.000	75.183	75.183	0.133
10.000	75.446	75.446	0.037
20.000	75.678	75.709	0.170
30.000	77.254	76.193	1.061
40.000	78.000	76.558	1.442
50.000	78.000	77.051	0.949
60.000	78.000	77.512	0.488
70.000	78.000	77.940	0.060
80.000	78.000	78.475	-0.475
90.000	78.000	78.737	-0.737
100.000	78.640	79.027	-0.387
110.000	79.280	79.124	0.156
120.000	79.280	79.339	-0.059
130.000	79.280	79.810	-0.530
140.000	79.920	79.693	0.227
150.000	79.920	79.735	0.185
160.000	79.920	79.771	0.149
170.000	80.560	79.914	0.646
180.000	80.560	80.847	-0.287
190.000	80.560	80.945	-0.385
200.000	81.414	80.912	0.502
210.000	81.491	81.087	0.403
220.000	81.580	81.272	0.308
230.000	81.669	81.453	0.216
240.000	81.758	81.855	-0.097
250.000	81.848	82.252	-0.404
260.000	81.937	82.713	-0.776
270.000	82.026	83.136	-1.110
280.000	82.127	83.544	-0.816
290.000	83.172	83.952	-0.780
300.000	83.866	84.238	-0.272
310.000	84.553	84.481	0.072
315.604	84.560	84.560	0.000

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



GRID
MGA

DATUM
mAHD

PROJECT MANAGER
TH

CLIENT
MINARAH COLLEGE

PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD
CIVIL WORKS PLAN

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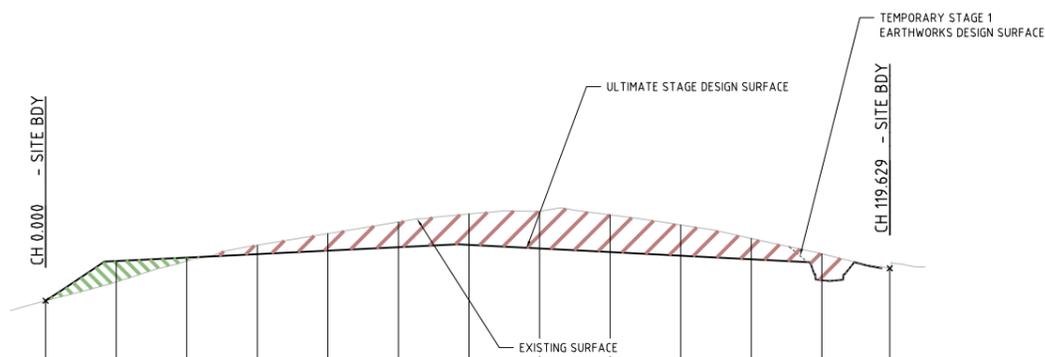
PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD
CIVIL WORKS PLAN

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DRAWING TITLE				
EARTHWORKS SITE SECTION SHEET 2				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-C601	B

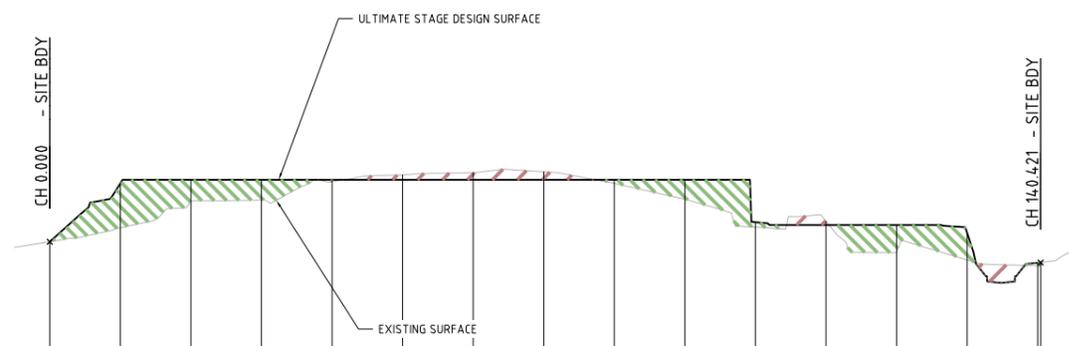


DATUM RL 77.000

DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH	CHAINAGE
80.728	80.728	0.000	0.000
81.852	81.261	0.591	10.000
81.950	81.855	0.096	20.000
82.048	82.303	-0.254	30.000
82.146	82.629	-0.482	40.000
82.244	82.959	-0.715	50.000
82.311	83.187	-0.877	60.000
82.399	83.258	-1.049	70.000
82.507	83.161	-1.054	80.000
82.605	82.875	-0.870	90.000
81.903	82.492	-0.589	100.000
81.309	82.060	-0.751	110.000
	81.647	0.000	119.629

SECTION C

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



DATUM RL 75.000

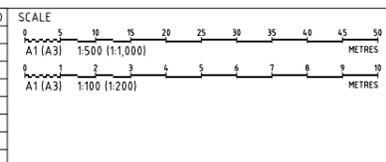
DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH	CHAINAGE
80.087	80.087	0.000	0.000
81.740	80.481	1.258	10.000
81.840	81.227	0.613	20.000
81.840	81.266	0.574	30.000
81.840	81.791	0.049	40.000
81.840	81.980	-0.140	50.000
81.840	82.042	-0.202	60.000
81.840	82.069	-0.229	70.000
81.840	81.743	0.097	80.000
81.840	81.290	0.550	90.000
80.640	80.501	0.140	100.000
80.560	80.666	-0.106	110.000
80.560	79.795	0.765	120.000
80.337	79.569	0.768	130.000
79.490	79.406	0.083	140.000
79.457	79.456	0.001	140.421

SECTION D

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

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

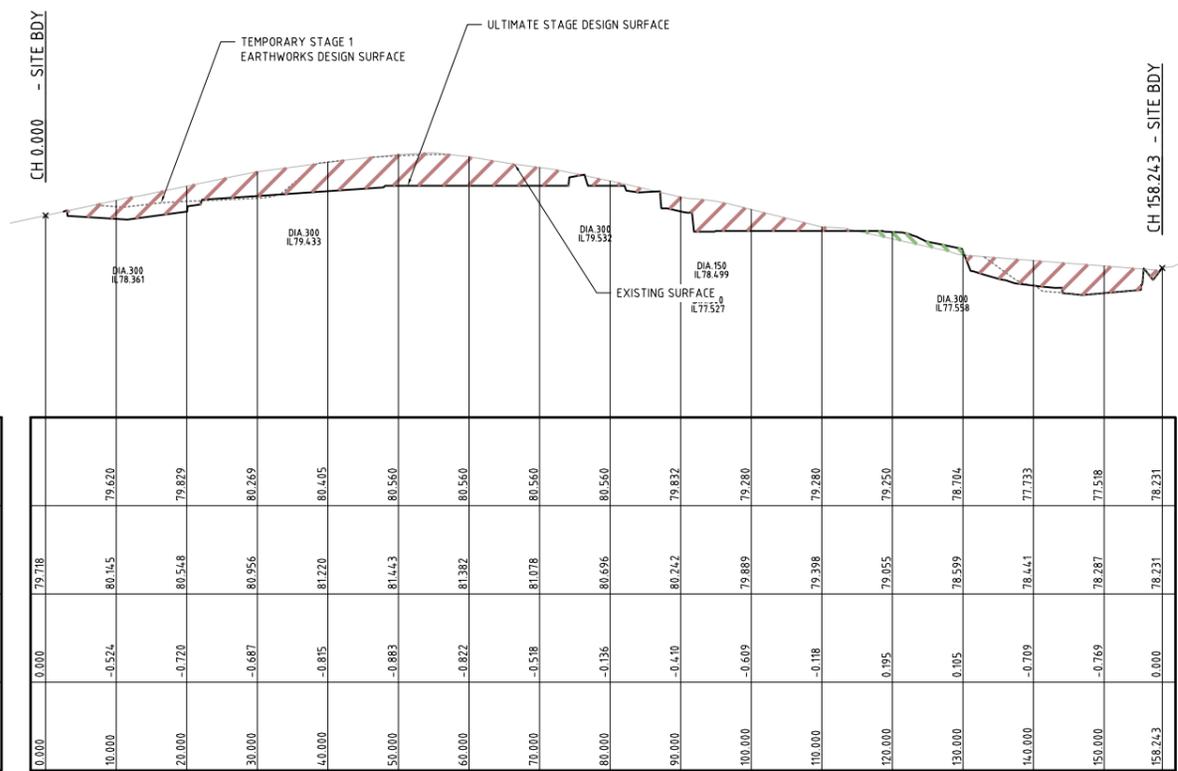


GRID
MGA
DATUM
mAHD
PROJECT MANAGER
TH
CLIENT
MINARAH COLLEGE
PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD
CIVIL WORKS PLAN
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DRAWING TITLE
EARTHWORKS SITE SECTION
SHEET 3
PROJECT NO. P2108320
PLANSET NO. PS02
RELEASE NO. R03
DRAWING NO. PS02-C602
REVISION B

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-C602	B



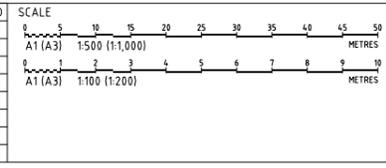
DATUM RL 74.000

DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH	CHAINAGE
79.620	79.718	0.000	0.000
79.829	80.145	-0.524	10.000
80.269	80.548	-0.720	20.000
80.405	80.956	-0.687	30.000
80.560	81.220	-0.815	40.000
80.560	81.443	-0.883	50.000
80.560	81.382	-0.822	60.000
80.560	81.078	-0.518	70.000
79.832	80.696	-0.136	80.000
79.280	80.242	-0.410	90.000
79.280	79.889	-0.609	100.000
79.250	79.398	-0.118	110.000
78.704	79.055	0.195	120.000
77.733	78.599	0.105	130.000
77.518	78.441	-0.709	140.000
78.231	78.287	-0.769	150.000
78.231	78.231	0.000	158.243

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

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



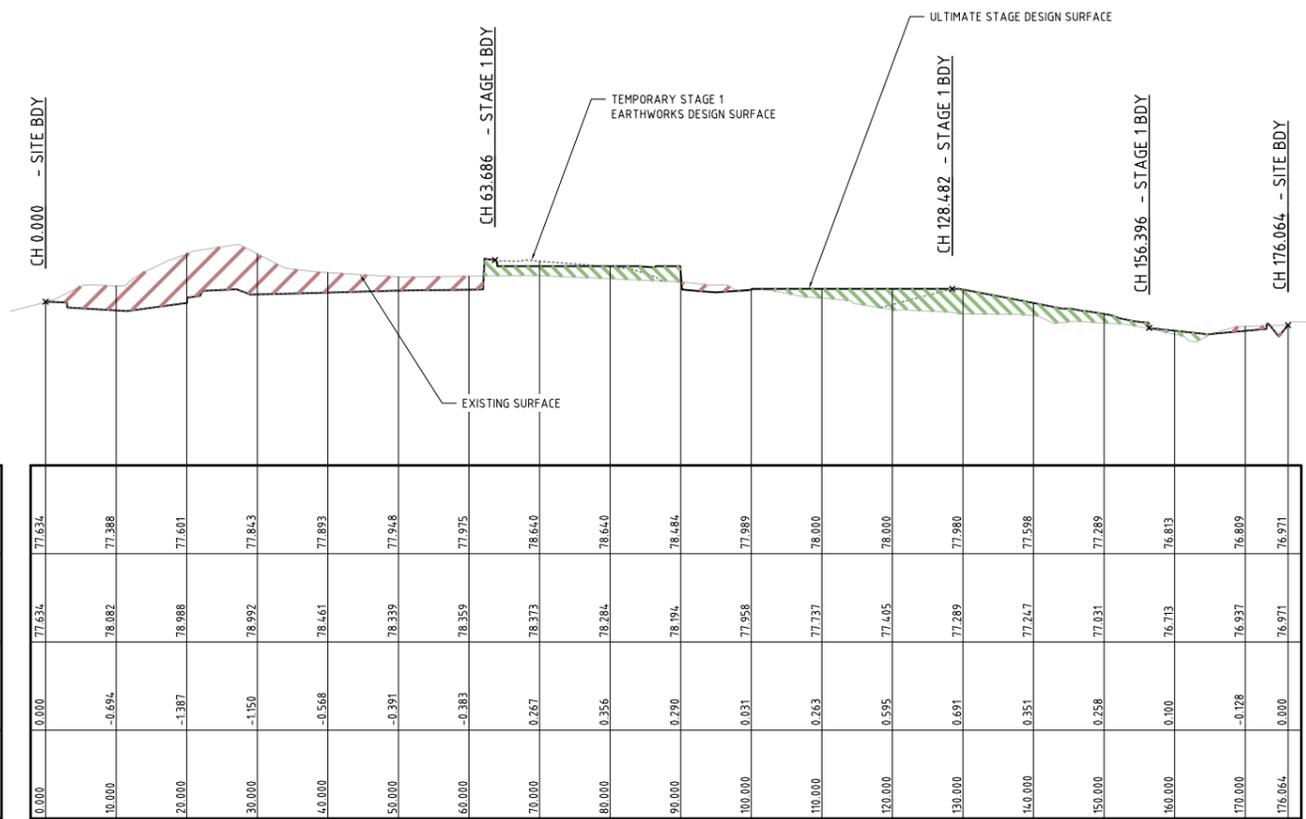
GRID
MGA
DATUM
mAHD
PROJECT MANAGER
TH
CLIENT
MINARAH COLLEGE

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PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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DRAWING TITLE EARTHWORKS SITE SECTION SHEET 4				
PROJECT NO. P2108320	PLANSET NO. PS02	RELEASE NO. R03	DRAWING NO. PS02-C603	REVISION B



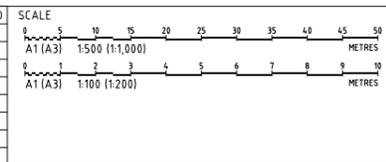
DATUM RL 73.000

CHAINAGE	EXISTING SURFACE LEVELS	DESIGN SURFACE LEVELS	CUT / FILL DEPTH
0.000	77.634	77.634	0.000
10.000	78.082	77.388	-0.694
20.000	78.988	77.601	-1.387
30.000	78.992	77.843	-1.150
40.000	78.461	77.893	-0.568
50.000	78.339	77.948	-0.391
60.000	78.359	77.975	-0.383
70.000	78.373	78.640	0.267
80.000	78.284	78.640	0.356
90.000	78.194	78.684	0.290
100.000	77.958	77.989	0.031
110.000	77.737	78.000	0.263
120.000	77.405	78.000	0.595
130.000	77.289	77.980	0.691
140.000	77.247	77.598	0.351
150.000	77.031	77.689	0.258
160.000	76.713	76.813	0.100
170.000	76.937	76.809	-0.128
176.064	76.971	76.971	0.000

SECTION F

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

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



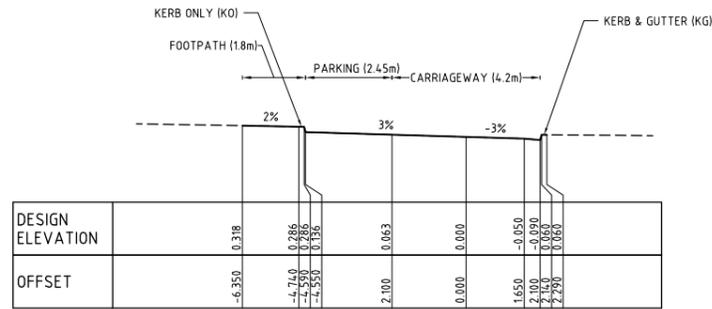
GRID
MGA
DATUM
mAHD
PROJECT MANAGER
TH
CLIENT
MINARAH COLLEGE
PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD
CIVIL WORKS PLAN
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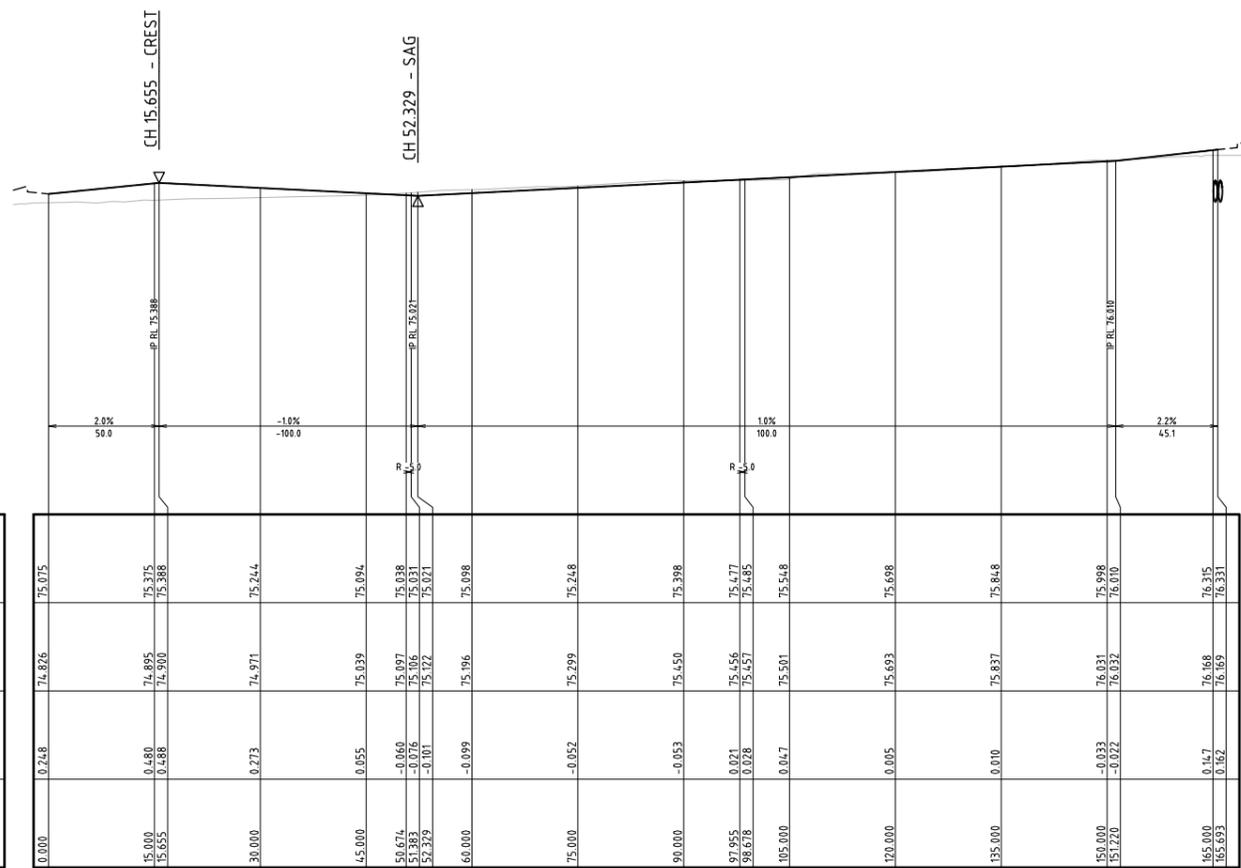


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DRAWING TITLE				
EARTHWORKS SITE SECTION SHEET 5				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-C604	B



KISS AND DROP ACCESSWAY 1 (21-MSC03) TYPICAL CROSS SECTION
SCALE 1:100



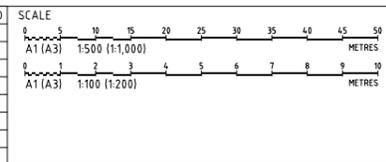
KISS AND DROP ACCESSWAY 1 (21-MSC03) LONG. SECTION
SCALE: HORIZONTAL - 1:500
VERTICAL - 1:100

VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
VERTICAL GRADE (%)
VERTICAL GRADE (1 IN ...)
HORIZONTAL CURVE RADIUS (m)
DATUM RL 66.000

DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH	CHAINAGE
75.075	74.876	0.218	0.000
75.375	74.895	0.480	15.000
75.388	74.900	0.488	30.000
75.644	74.971	0.273	45.000
75.694	75.039	0.055	50.674
75.698	75.097	-0.060	51.383
75.698	75.106	-0.076	52.329
75.698	75.122	-0.101	60.000
75.698	75.122	-0.099	75.000
75.698	75.122	-0.052	90.000
75.698	75.122	-0.053	97.955
75.698	75.122	0.021	98.678
75.698	75.122	0.028	105.000
75.698	75.122	0.047	120.000
75.698	75.122	0.005	135.000
75.698	75.122	0.010	150.000
75.698	75.122	-0.033	151.720
75.698	75.122	-0.022	165.000
75.698	75.122	0.117	165.633

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



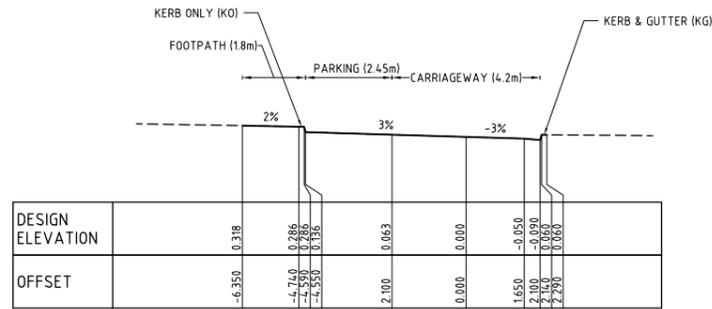
GRID MGA
DATUM mAHD
PROJECT MANAGER TH
CLIENT MINARAH COLLEGE
PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD
CIVIL WORKS PLAN
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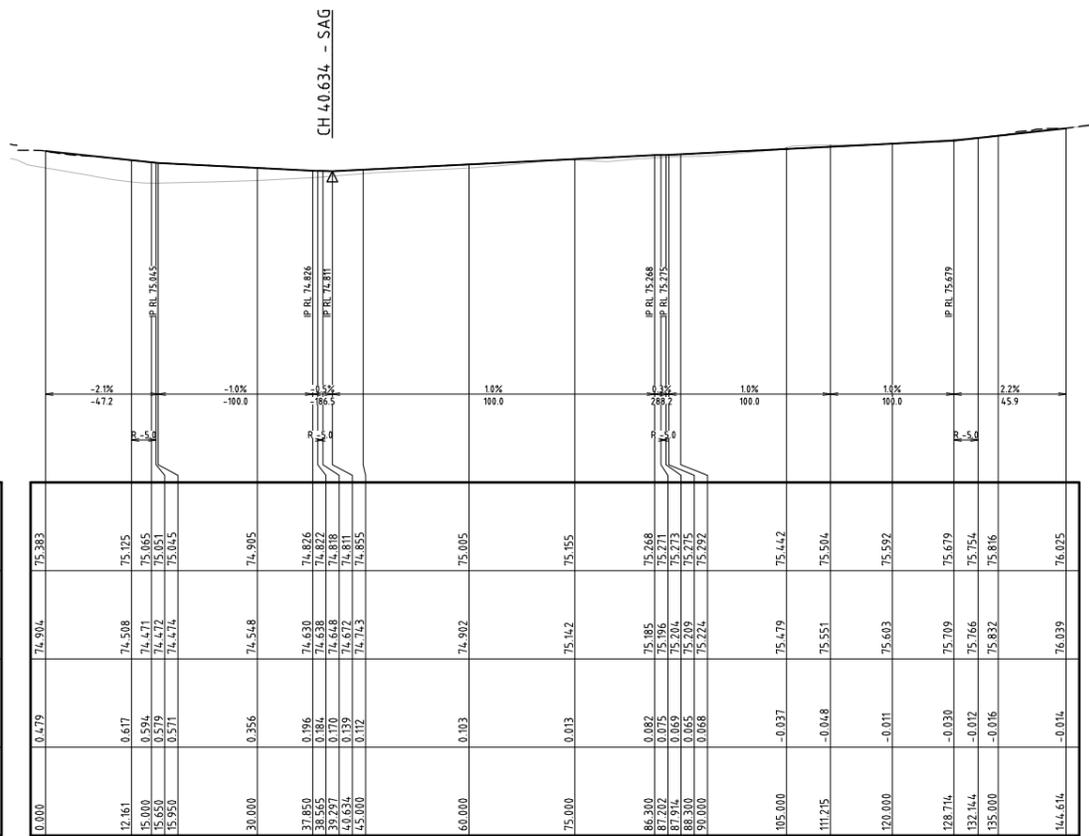


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DRAWING TITLE				
ACCESSWAY LONGITUDINAL AND TYPICAL SECTIONS SHEET 2				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-D201	B



KISS AND DROP ACCESSWAY 2 (21-MSC04) TYPICAL CROSS SECTION
SCALE 1:100



KISS AND DROP ACCESSWAY 2 (21-MSC04) LONG SECTION
SCALE: HORIZONTAL - 1:500
VERTICAL - 1:100

VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
VERTICAL GRADE (%)
VERTICAL GRADE (1 IN ...)
HORIZONTAL CURVE RADIUS (m)
DATUM RL 66.000

DESIGN SURFACE LEVELS
75.383
75.125
75.065
75.051
75.045
74.905
74.826
74.822
74.818
74.811
74.855
75.005
75.155
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75.275
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75.442
75.504
75.592
75.679
75.754
75.816
76.025

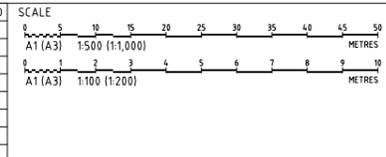
EXISTING SURFACE LEVELS
74.904
74.508
74.471
74.472
74.474
74.548
74.630
74.638
74.648
74.672
74.743
74.902
75.142
75.185
75.201
75.209
75.224
75.479
75.551
75.603
75.709
75.766
75.832
76.039

CUT / FILL DEPTH
0.479
0.617
0.594
0.579
0.571
0.356
0.196
0.184
0.170
0.139
0.112
0.103
0.013
0.082
0.069
0.065
0.068
-0.037
-0.048
-0.011
-0.030
-0.012
-0.016
-0.014

CHAINAGE
0.000
12.161
15.000
15.650
15.950
30.000
37.850
38.565
39.297
40.634
45.000
60.000
75.000
86.300
87.912
88.300
90.000
105.000
111.215
120.000
128.714
132.144
135.000
144.614

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

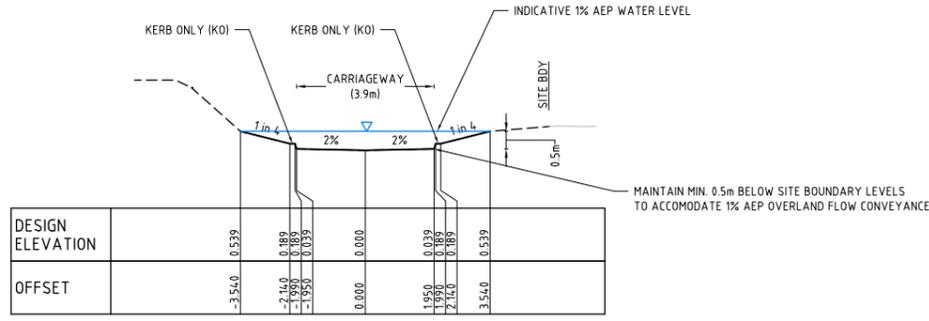


GRID MGA
DATUM mAHD
PROJECT MANAGER TH
CLIENT MINARAH COLLEGE
PROJECT NAME/PLANSET TITLE MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

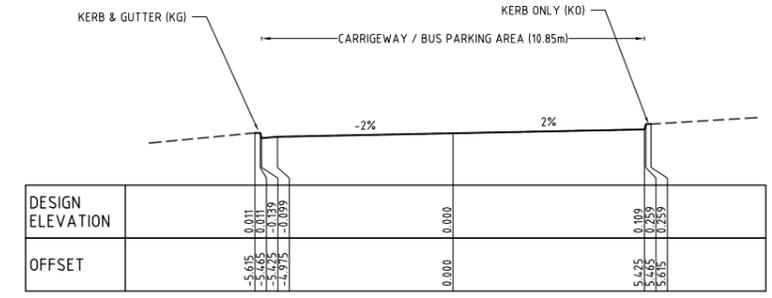
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DRAWING TITLE ACCESSWAY LONGITUDINAL AND TYPICAL SECTIONS SHEET 3				
PROJECT NO. P2108320	PLANSET NO. PS02	RELEASE NO. R03	DRAWING NO. PS02-D202	REVISION B



BUS PARKING ACCESSWAY 1 (21-MSC05) TYPICAL CROSS SECTION
SCALE 1:100



BUS PARKING ACCESSWAY 2 (21-MSC06) 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 70.000

CHAINAGE	DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH
0.000	77.467	78.337	-0.870
15.000	77.767	78.393	-1.226
22.000	77.664	78.553	-1.088
26.774	77.718	78.659	-0.881
30.000	77.989	78.735	-0.746
35.000	78.317	78.849	-0.532
44.613	78.548	79.026	-0.478
45.000	78.557	79.032	-0.475
51.469	78.713	79.193	-0.480
60.000	78.917	79.435	-0.517
69.308	79.141	79.706	-0.565
75.000	79.277	79.892	-0.614
84.239	79.499	80.094	-0.595
90.000	79.637	80.230	-0.592
92.588	79.700	80.331	-0.632
101.613	80.061	80.718	-0.658
102.347	80.090	80.748	-0.658
105.000	80.196	80.855	-0.659
120.000	80.796	81.487	-0.691
128.503	81.136	81.841	-0.705
129.842	81.190	81.907	-0.717
135.000	81.437	82.163	-0.726
142.295	81.787	82.554	-0.766
150.000	82.157	82.968	-0.811
150.443	82.179	82.989	-0.810
165.000	82.677	83.701	-0.824
180.000	83.597	84.270	-0.673
194.498	84.293	84.748	-0.454

BUS PARKING ACCESSWAY 1 (21-MSC05) LONG. SECTION

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

VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
VERTICAL GRADE (%)
VERTICAL GRADE (1 IN ...)
HORIZONTAL CURVE RADIUS (m)
DATUM RL 76.000

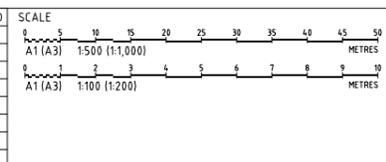
CHAINAGE	DESIGN SURFACE LEVELS	EXISTING SURFACE LEVELS	CUT / FILL DEPTH
0.000	83.170	83.970	-0.800
15.000	83.320	84.195	-0.875
30.000	83.470	84.088	-0.618
44.458	83.615	83.813	-0.198

BUS PARKING ACCESSWAY 2 (21-MSC06) LONG. SECTION

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

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



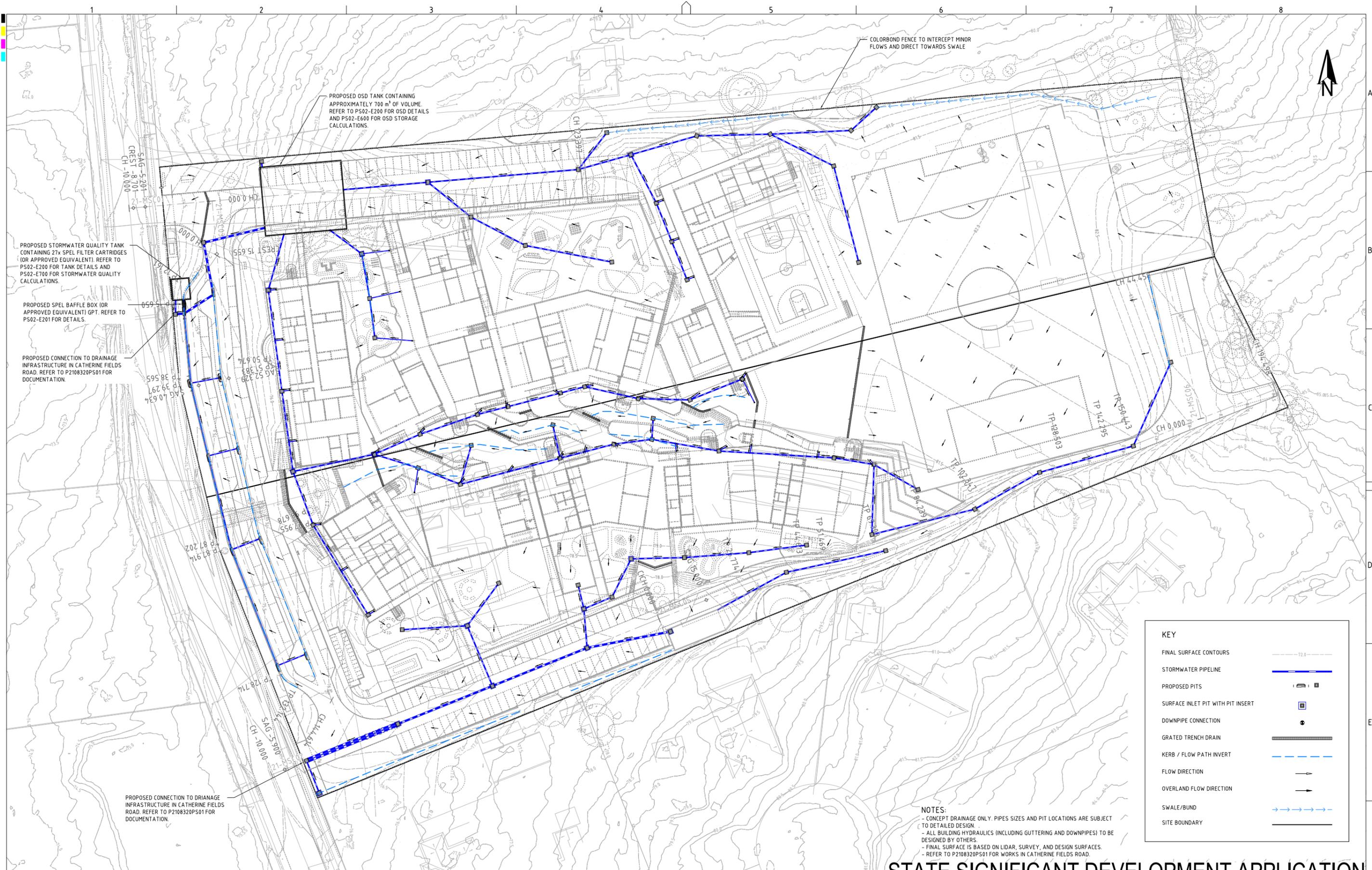
GRID
MGA
DATUM
mAHD
PROJECT MANAGER
TH
CLIENT
MINARAH COLLEGE
PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD
CIVIL WORKS PLAN
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DRAWING TITLE				
ACCESSWAY LONGITUDINAL AND TYPICAL SECTIONS SHEET 4				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-D203	B



PROPOSED OSD TANK CONTAINING APPROXIMATELY 700 m³ OF VOLUME. REFER TO PS02-E200 FOR OSD DETAILS AND PS02-E600 FOR OSD STORAGE CALCULATIONS.

PROPOSED STORMWATER QUALITY TANK CONTAINING 27x SPeL FILTER CARTRIDGES (OR APPROVED EQUIVALENT). REFER TO PS02-E200 FOR TANK DETAILS AND PS02-E700 FOR STORMWATER QUALITY CALCULATIONS.

PROPOSED SPeL BAFFLE BOX (OR APPROVED EQUIVALENT) GPT. REFER TO PS02-E201 FOR DETAILS.

PROPOSED CONNECTION TO DRAINAGE INFRASTRUCTURE IN CATHERINE FIELDS ROAD. REFER TO P2108320PS01 FOR DOCUMENTATION.

PROPOSED CONNECTION TO DRAINAGE INFRASTRUCTURE IN CATHERINE FIELDS ROAD. REFER TO P2108320PS01 FOR DOCUMENTATION.

COLORBOND FENCE TO INTERCEPT MINOR FLOWS AND DIRECT TOWARDS SWALE

KEY	
FINAL SURFACE CONTOURS	
STORMWATER PIPELINE	
PROPOSED PITS	
SURFACE INLET PIT WITH PIT INSERT	
DOWNPIPE CONNECTION	
GRATED TRENCH DRAIN	
KERB / FLOW PATH INVERT	
FLOW DIRECTION	
OVERLAND FLOW DIRECTION	
SWALE/BUND	
SITE BOUNDARY	

NOTES:
 - CONCEPT DRAINAGE ONLY. PIPES SIZES AND PIT LOCATIONS ARE SUBJECT TO DETAILED DESIGN.
 - ALL BUILDING HYDRAULICS (INCLUDING GUTTERING AND DOWNPIPES) TO BE DESIGNED BY OTHERS.
 - FINAL SURFACE IS BASED ON LIDAR, SURVEY, AND DESIGN SURFACES.
 - REFER TO P2108320PS01 FOR WORKS IN CATHERINE FIELDS ROAD.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

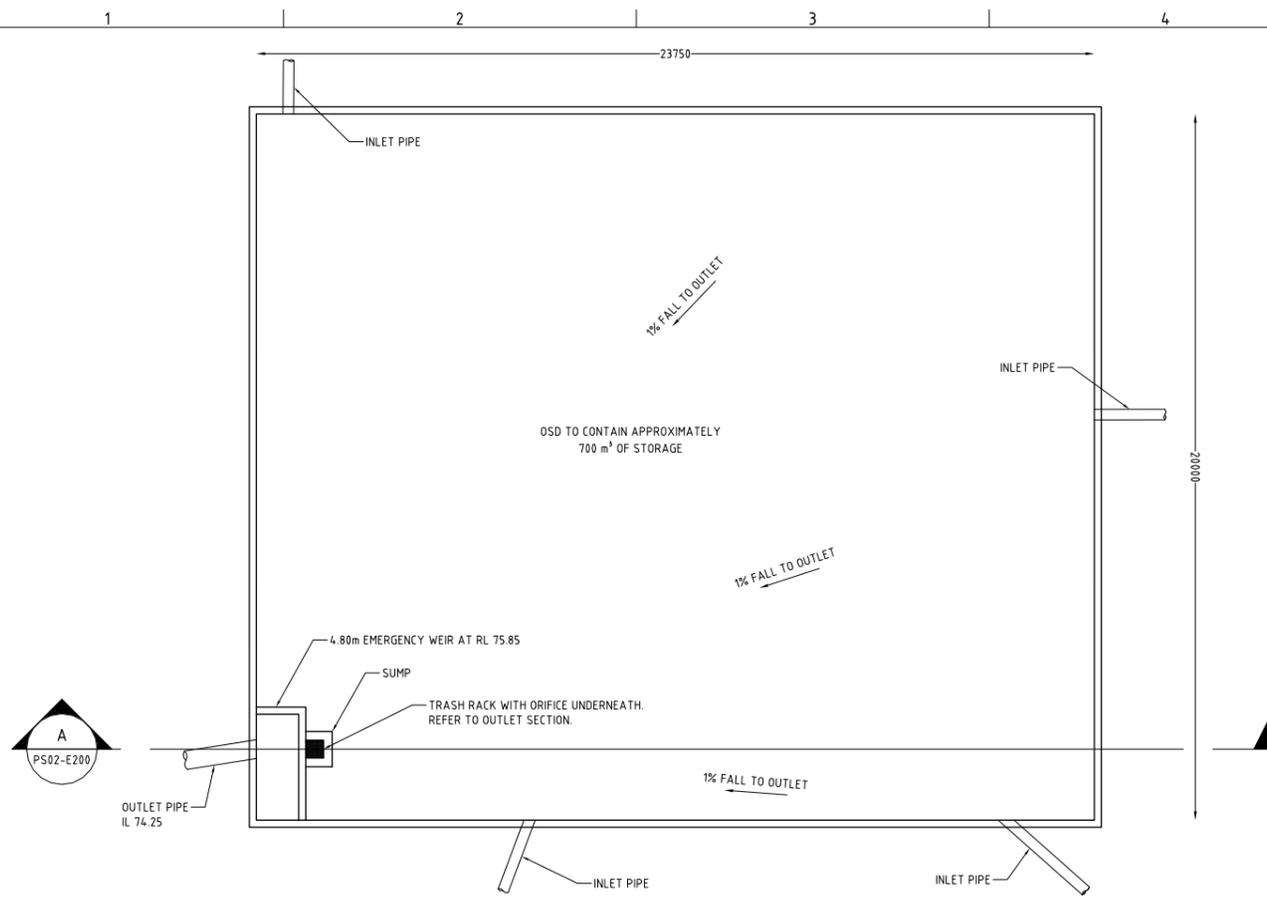
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GRID	MGA
DATUM	mAHD
PROJECT MANAGER	TH
CLIENT	MINARAH COLLEGE

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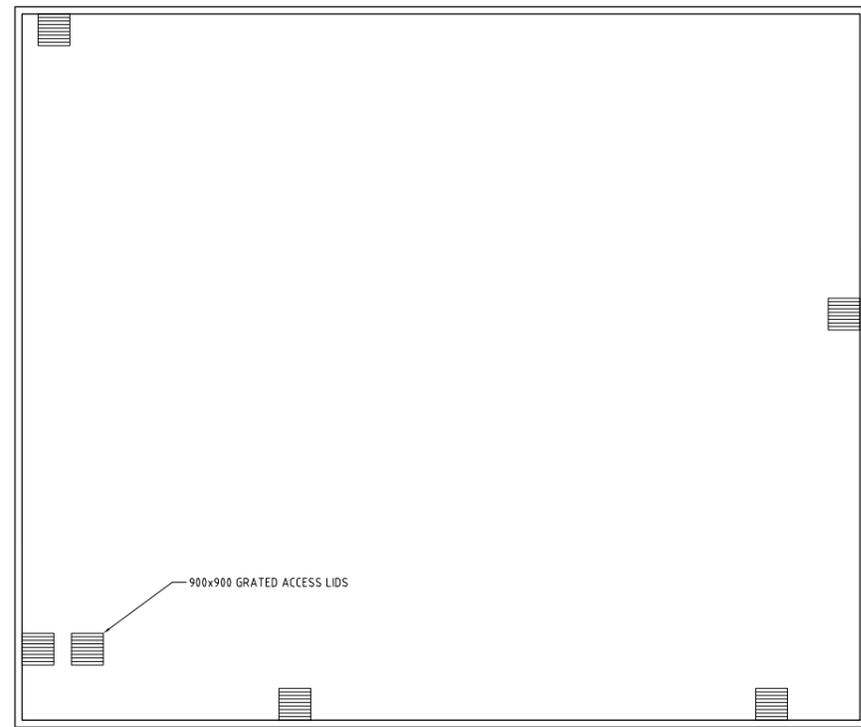
PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
 268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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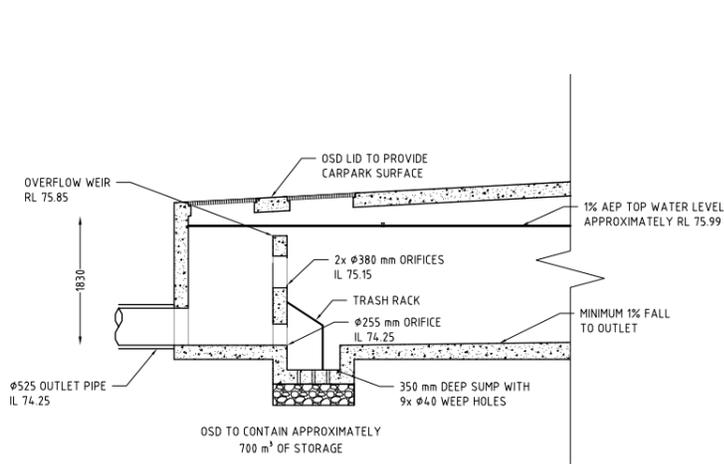
DRAWING TITLE				
DRAINAGE PLAN (ULTIMATE DEVELOPMENT)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-E100	B



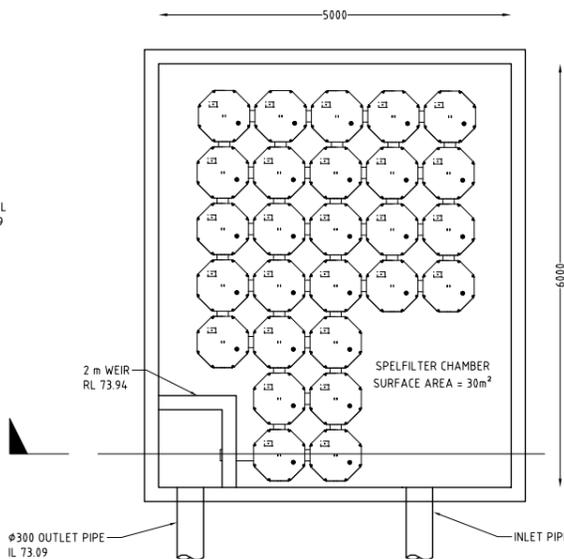
ON SITE DETENTION BASE PLAN
SCALE 1:100



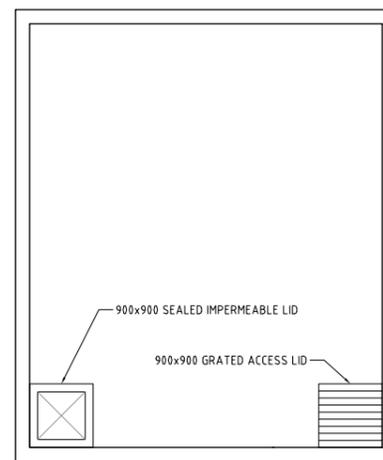
ON SITE DETENTION ROOF PLAN
SCALE 1:100



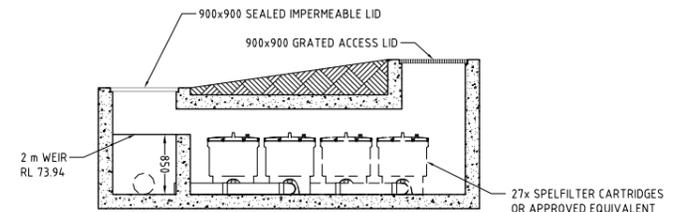
SECTION A: ON SITE DETENTION OUTLET
SCALE 1:50



SPELFILTER CHAMBER - BASE PLAN
SCALE 1:50



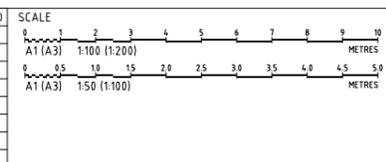
SPELFILTER CHAMBER - ROOF PLAN
SCALE 1:50



SECTION B: SPELFILTER CHAMBER
SCALE 1:50

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



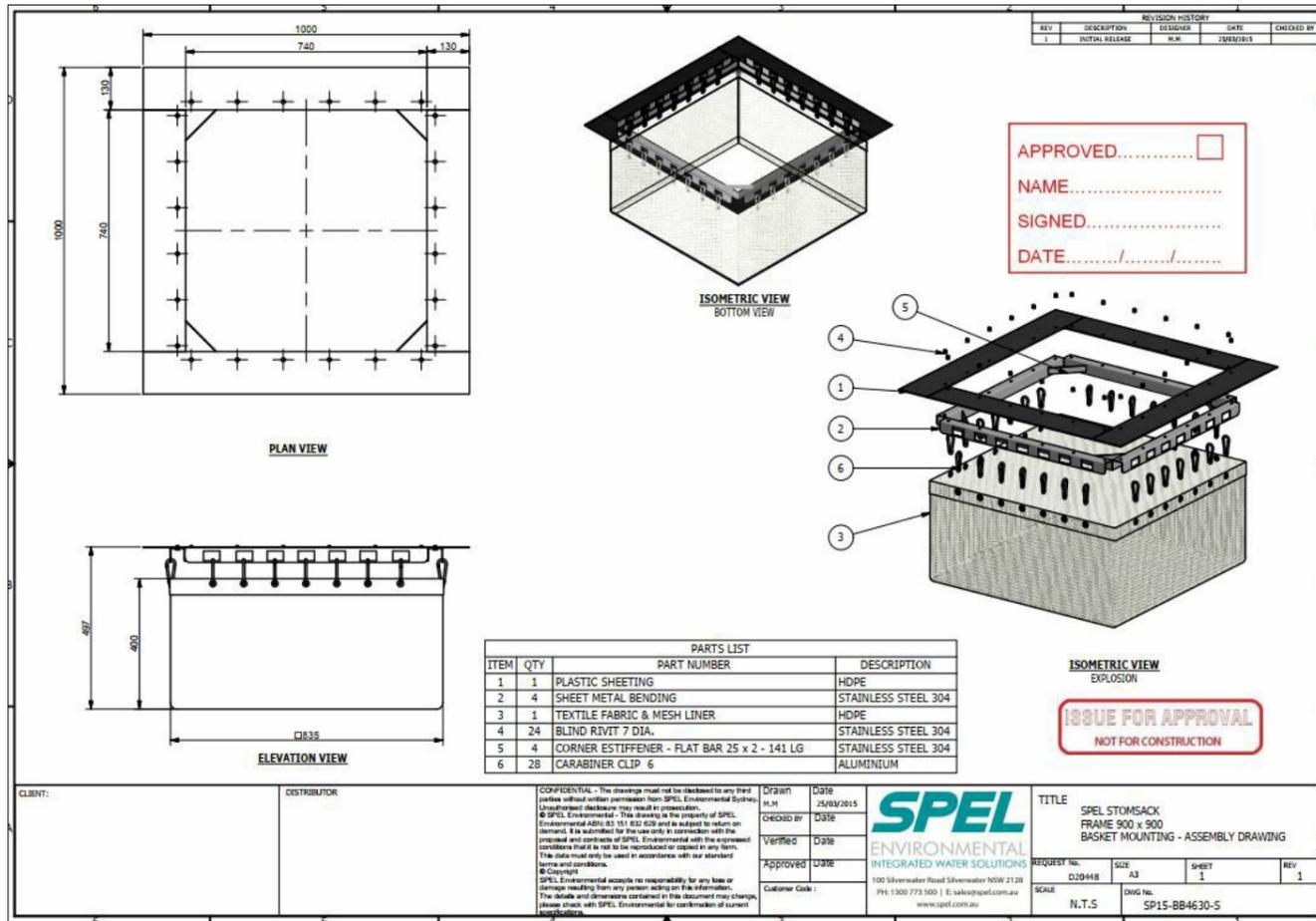
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GRID MGA
DATUM mAHD
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CLIENT MINARAH COLLEGE
PROJECT NAME/PLANSET TITLE MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

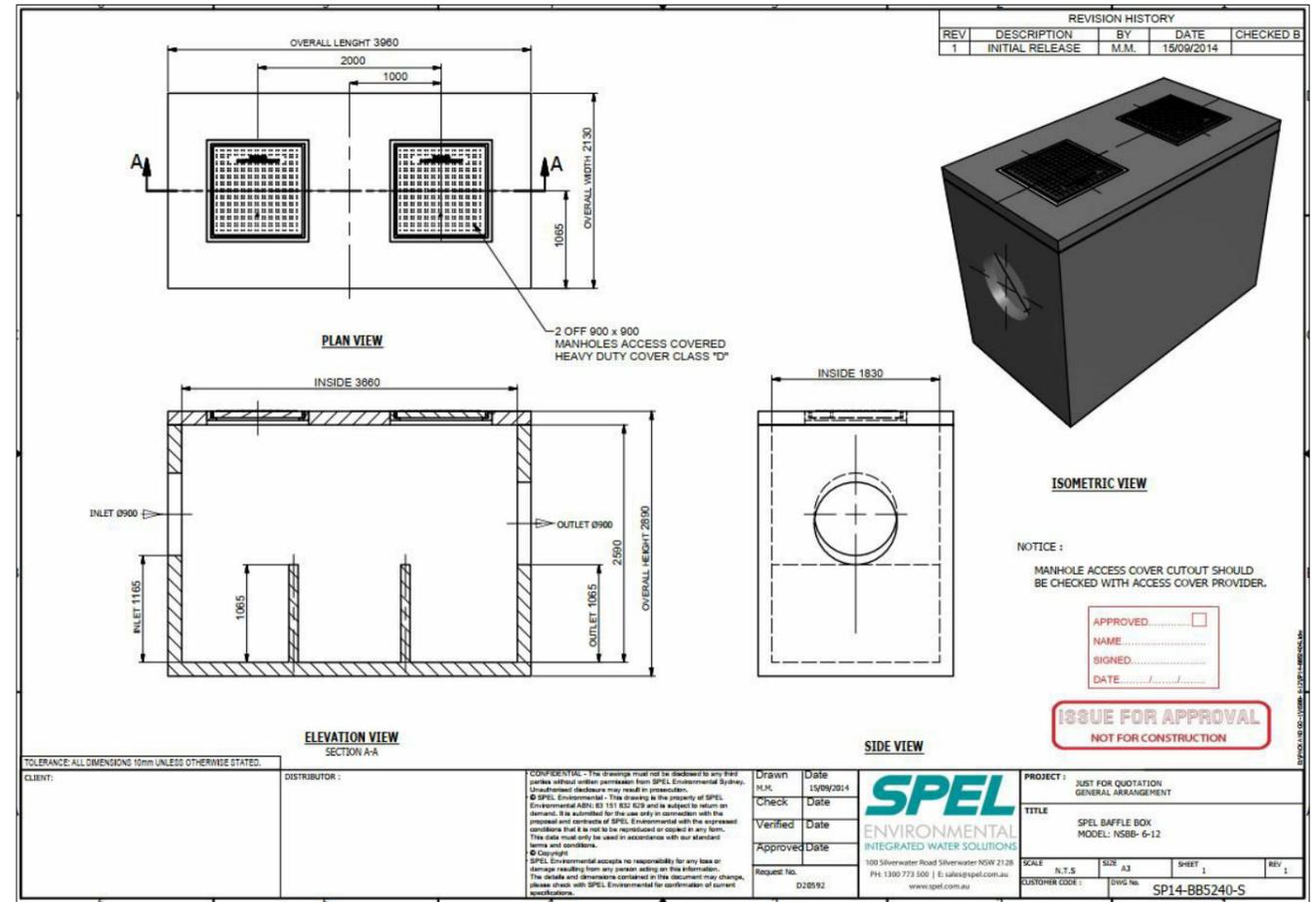


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DRAWING TITLE				
DRAINAGE DETAILS (SHEET 1)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-E200	B



SPEL STORMSACK DETAILS
NOT TO SCALE



SPEL BAFFLE BOX DETAILS
NOT TO SCALE

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH	
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH	

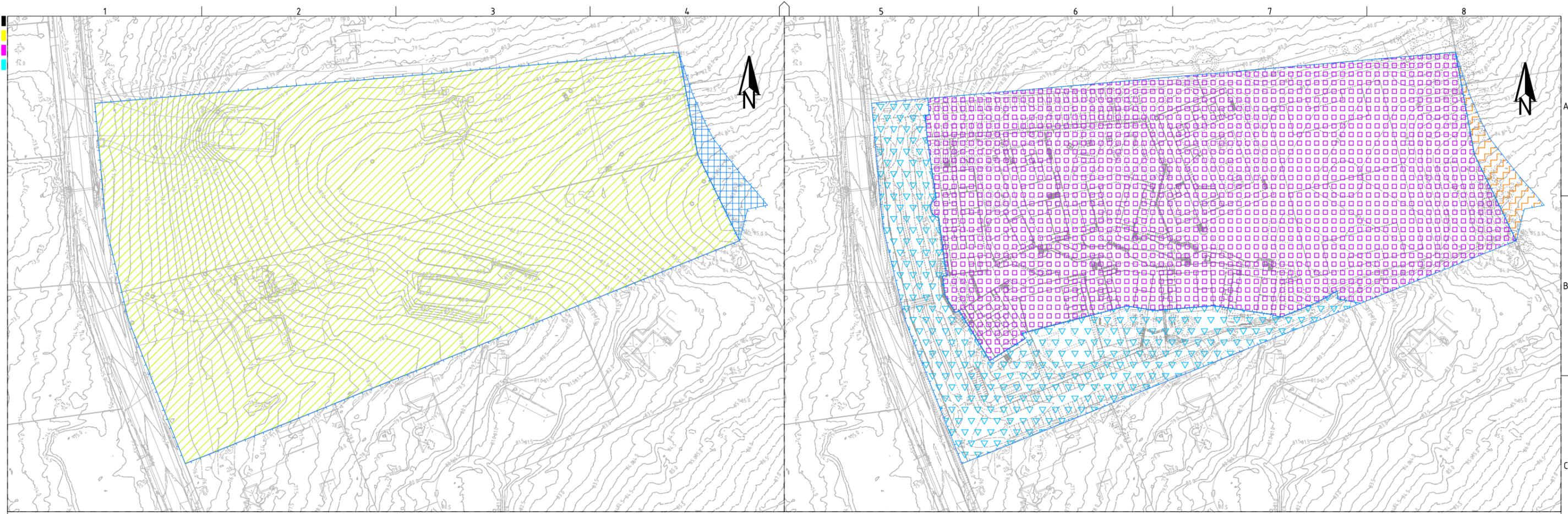
GRID	DATUM	PROJECT MANAGER	CLIENT
MGA	mAHD	TH	MINARAH COLLEGE

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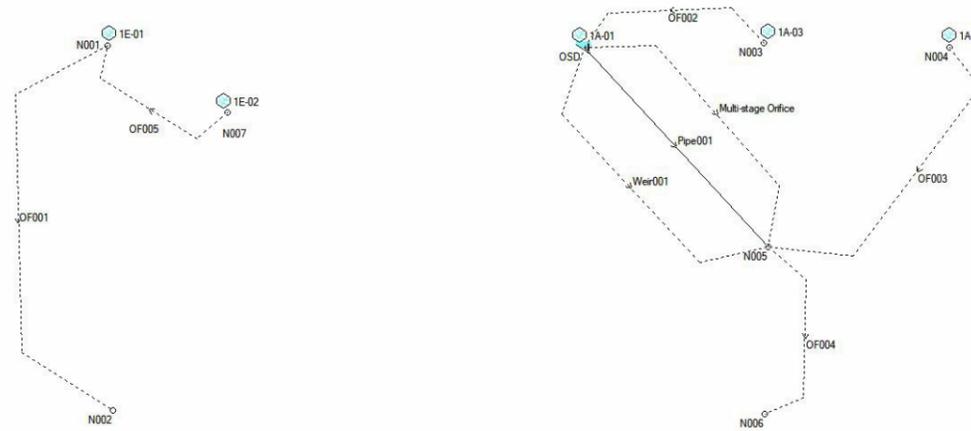
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DRAWING TITLE				
DRAINAGE DETAILS (SHEET 2)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-E201	B



PREDEVELOPMENT CATCHMENT PLAN
SCALE 1:1000

POSTDEVELOPMENT CATCHMENT PLAN
SCALE 1:1000



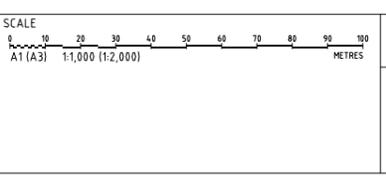
DRAINS MODELLING LAYOUT

KEY	DRAINS NODE	AREA (ha)	% PAVED
[Yellow diagonal hatching]	1E-01	4.50	7%
[Blue diagonal hatching]	1E-02	0.09	5%
	TOTAL AREA	4.59	= 100% OF TOTAL AREA
	TOTAL IMPERVIOUS AREA	0.32	= 7% OF TOTAL AREA
	TOTAL PERVIOUS AREA	4.27	= 93% OF TOTAL AREA

KEY	DRAINS NODE	AREA (ha)	% PAVED
[Purple square hatching]	1A-01	3.37	60%
[Blue triangle hatching]	1A-02	1.13	62%
[Orange triangle hatching]	1A-03	0.09	5%
	TOTAL AREA	4.59	= 100% OF TOTAL AREA
	TOTAL IMPERVIOUS AREA	2.73	= 59% OF TOTAL AREA
	TOTAL PERVIOUS AREA	1.86	= 41% OF TOTAL AREA

Duration	0.5 EY			0.2 EY			10% AEP			5% AEP			2% AEP			1% AEP		
	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference
Peak Flow Rate (m ³ /s)	0.301	0.291	0.010	0.558	0.462	0.096	0.746	0.624	0.122	0.972	0.803	0.169	1.295	1.029	0.266	1.504	1.409	0.095

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



GRID: MGA, DATUM: mAHD, PROJECT MANAGER: TH, CLIENT: MINARAH COLLEGE

PROJECT NAME/PLANSET TITLE: MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN

268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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STATE SIGNIFICANT DEVELOPMENT APPLICATION

Consulting Engineers
Environment
Water
Geotechnical
Civil

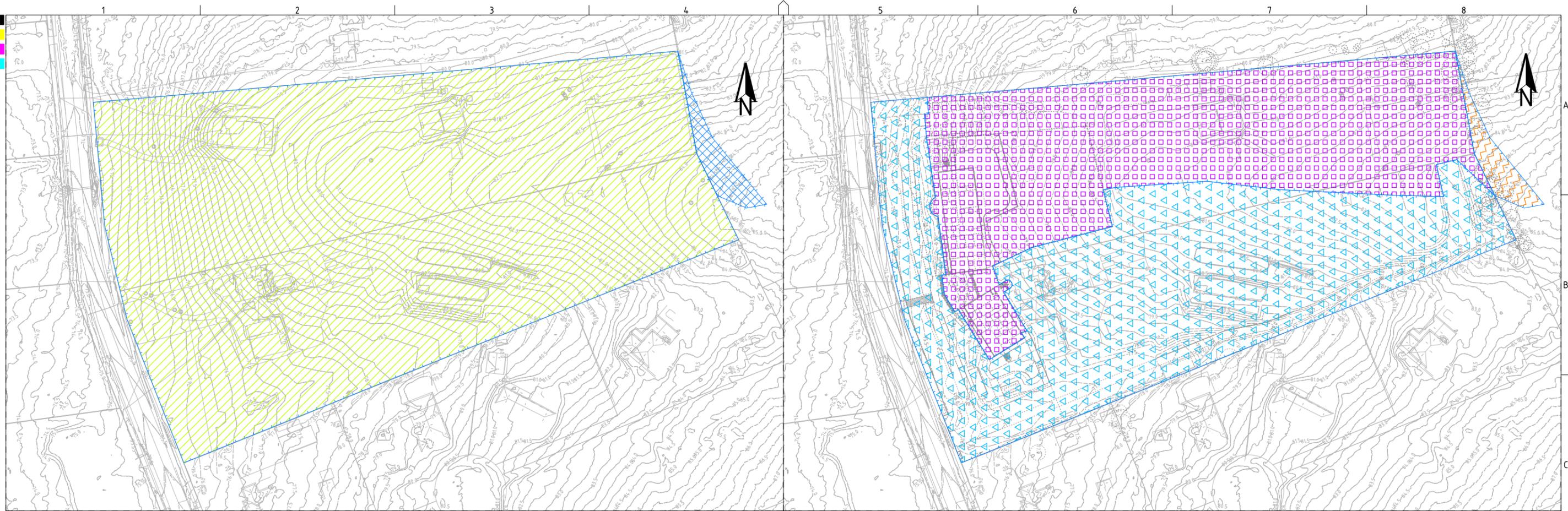
DRAWING TITLE

ON SITE DETENTION CATCHMENT PLAN, MODELS & RESULTS (ULTIMATE DEVELOPMENT)

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-E600	B

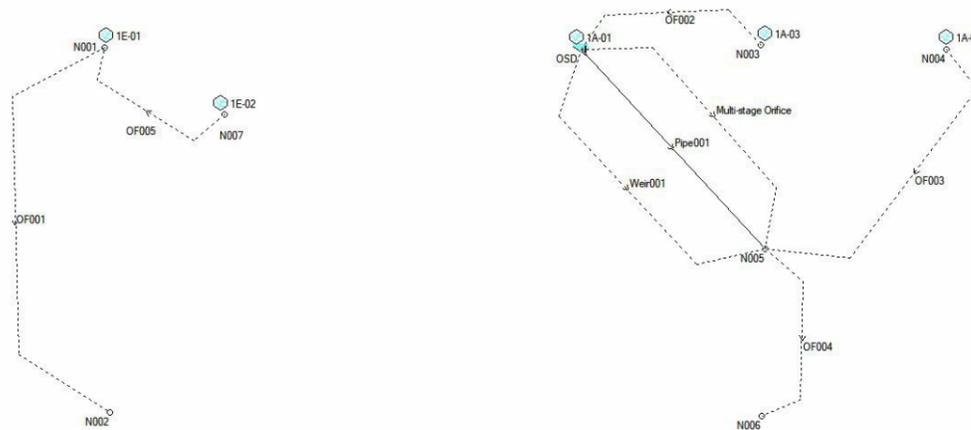
Suite 201, 20 George St. Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: www.martens.com.au

DRAWING ID: P2108320-PS02-R03-E600



PREDEVELOPMENT CATCHMENT PLAN
SCALE 1:1000

POSTDEVELOPMENT CATCHMENT PLAN - STAGE 1
SCALE 1:1000



DRAINS MODELLING LAYOUT

KEY	DRAINS NODE	AREA (ha)	% PAVED
	1E-01	4.50	7%
	1E-02	0.08	5%
	TOTAL AREA	4.58	= 100% OF TOTAL AREA
	TOTAL IMPERVIOUS AREA	0.32	= 7% OF TOTAL AREA
	TOTAL PERVIOUS AREA	4.26	= 93% OF TOTAL AREA

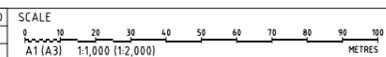
KEY	DRAINS NODE	AREA (ha)	% PAVED
	1A-01	2.03	27%
	1A-02	2.47	12%
	1A-03	0.08	5%
	TOTAL AREA	4.58	= 100% OF TOTAL AREA
	TOTAL IMPERVIOUS AREA	0.85	= 19% OF TOTAL AREA
	TOTAL PERVIOUS AREA	3.73	= 81% OF TOTAL AREA

MODEL NAME: P2108320DRN03V02 RESULTS TABLE - STAGE 1

	0.5 EY			0.2 EY			10% AEP			5% AEP			2% AEP			1% AEP		
	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference
Peak Flow Rate (m³/s)	0.301	0.247	0.054	0.556	0.401	0.155	0.744	0.528	0.216	0.97	0.668	0.302	1.292	0.820	0.472	1.500	1.014	0.486

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



GRID: MGA
DATUM: mAHD
PROJECT MANAGER: TH
CLIENT: MINARAH COLLEGE
PROJECT NAME/PLANSET TITLE: MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

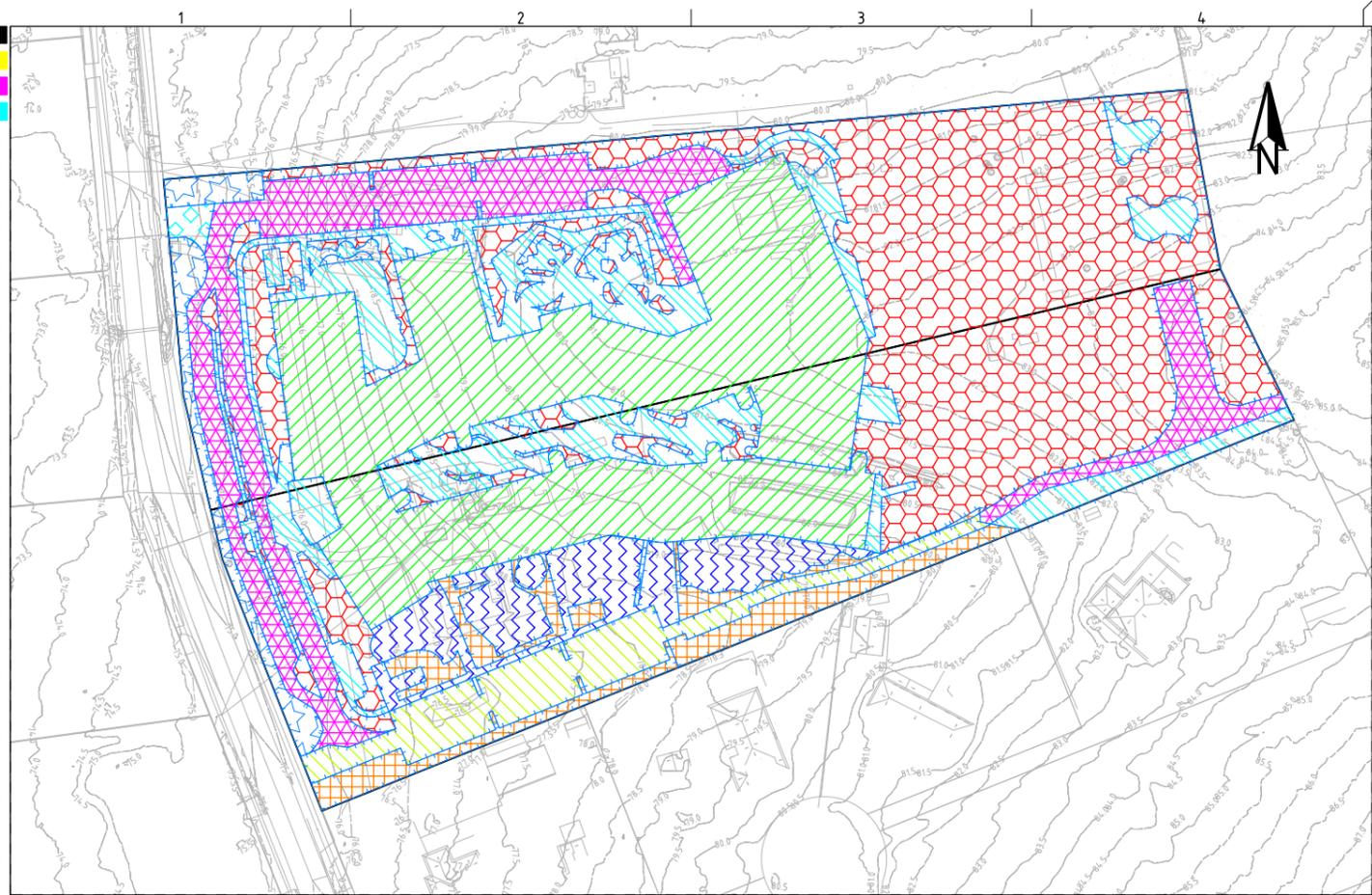
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PROJECT NAME/PLANSET TITLE: MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW



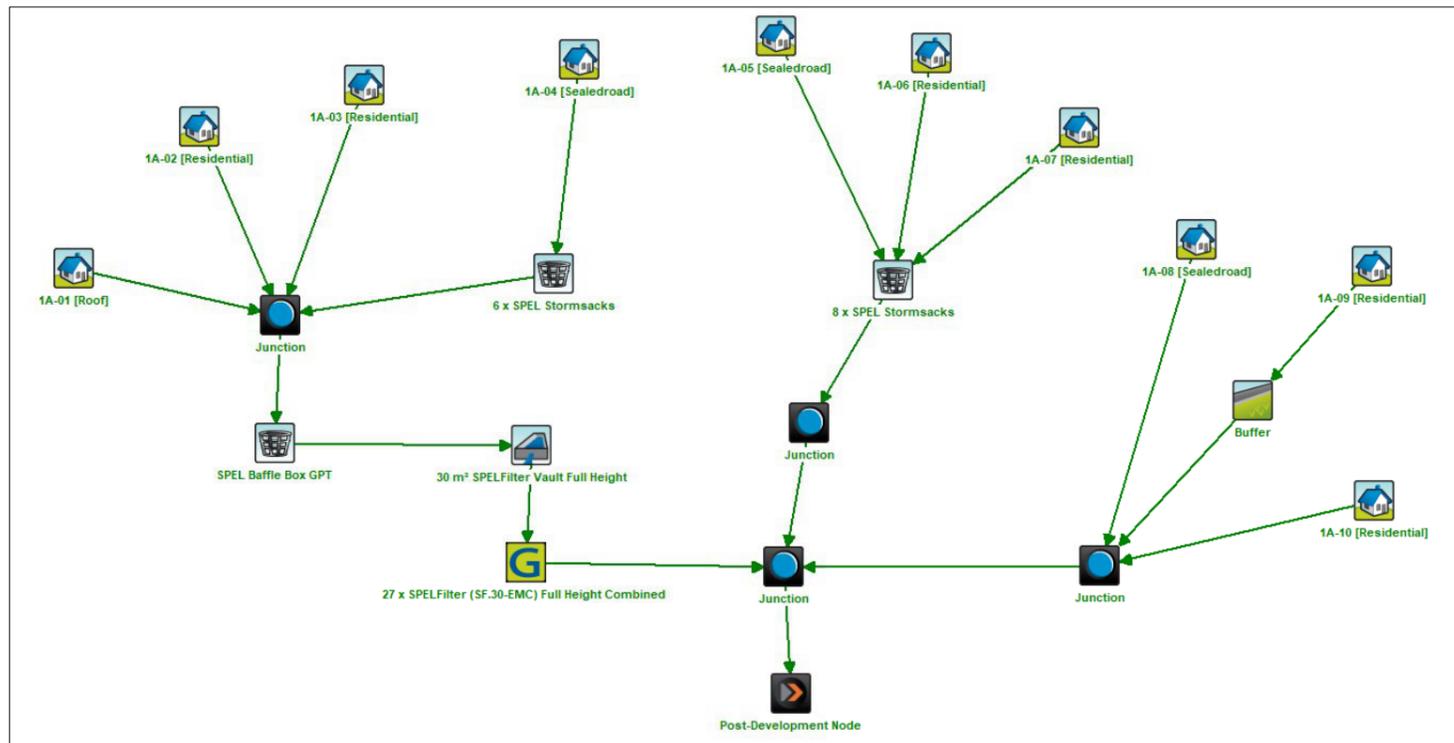
Consulting Engineers
Environment
Water
Geotechnical
Civil

DRAWING TITLE				
ON SITE DETENTION CATCHMENT PLAN, MODELS & RESULTS (STAGE 1)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-E610	B



MASTERPLAN MUSIC CATCHMENT DETAILS (P2108320MUS01V02)

KEY	MUSIC NODE	DESCRIPTION	AREA (ha)	% PAVED
	1A-01	ROOF	1.19	100%
	1A-02	IMPERVIOUS TO OSD	0.55	100%
	1A-03	PERVIOUS TO OSD	1.51	0%
	1A-04	ROAD TO OSD	0.50	100%
	1A-05	ROAD TO STORMFILTER CHAMBER	0.20	100%
	1A-06	IMPERVIOUS TO STORMFILTER CHAMBER	0.25	100%
	1A-07	PERVIOUS TO STORMFILTER CHAMBER	0.19	0%
	1A-08	ROAD BYPASS	0.01	100%
	1A-09	IMPERVIOUS BYPASS	0.001	100%
	1A-10	PERVIOUS BYPASS	0.09	0%
		TOTAL AREA	4.50	= 100% OF TOTAL AREA
		TOTAL IMPERVIOUS AREA	2.71	= 60% OF TOTAL AREA
		TOTAL PERVIOUS AREA	1.79	= 40% OF TOTAL AREA



P2108320MUS01V02 - MUSIC MODELLING LAYOUT

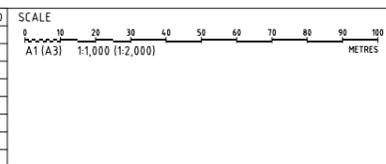
Treatment Train Effectiveness - Post-Development Node

	Sources	Residual Load	% Reduction
Flow (ML/yr)	23.2	23.2	0
Total Suspended Solids (kg/yr)	3680	543	85.3
Total Phosphorus (kg/yr)	6.91	2.41	65.1
Total Nitrogen (kg/yr)	51.5	26.9	47.8
Gross Pollutants (kg/yr)	533	1.99	99.6

P2108320MUS01V02 - MUSIC MODELLING RESULTS

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



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PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

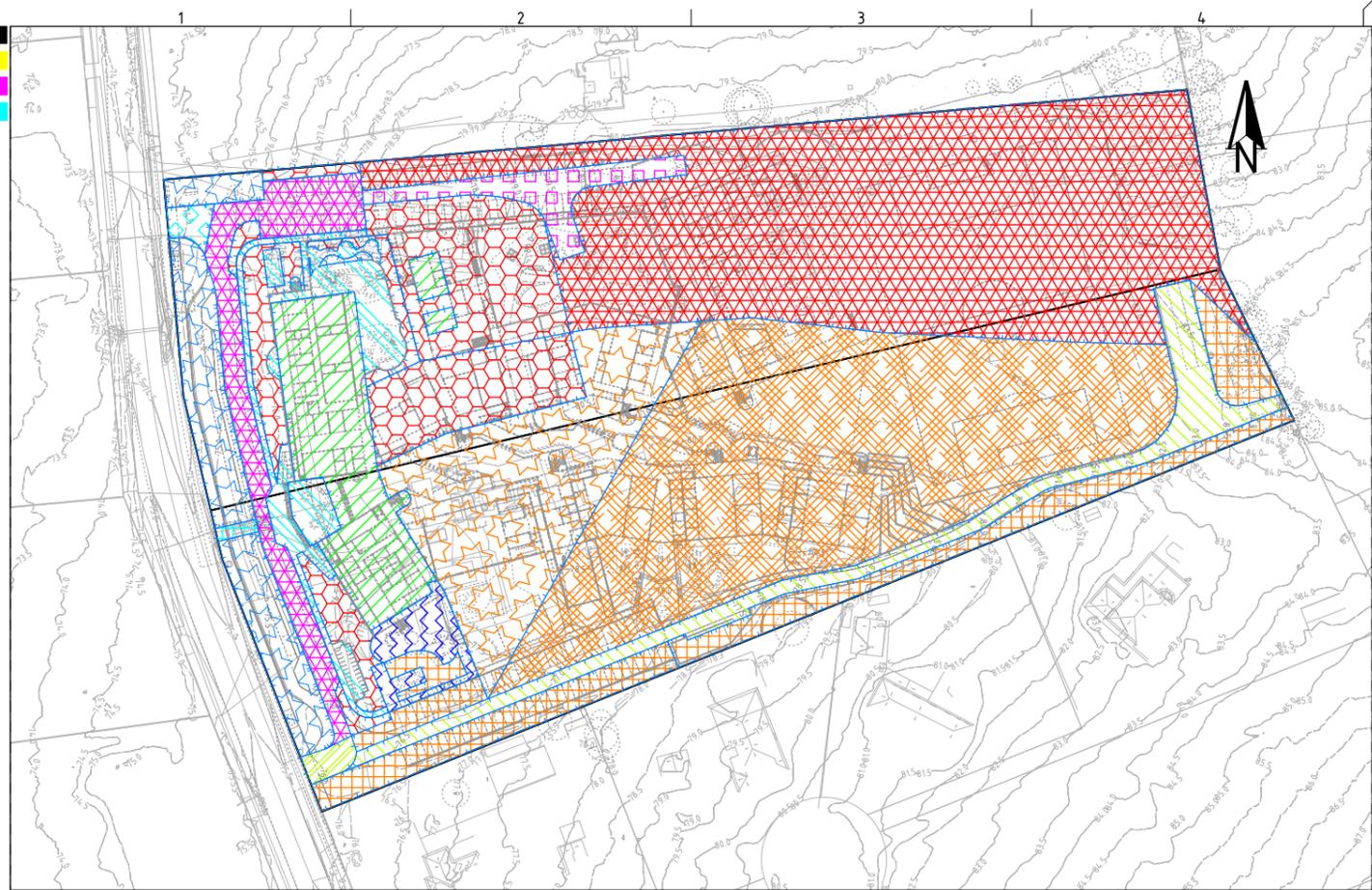
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DRAWING TITLE
WATER QUALITY CATCHMENT PLAN, MODEL & RESULTS (ULTIMATE DEVELOPMENT)

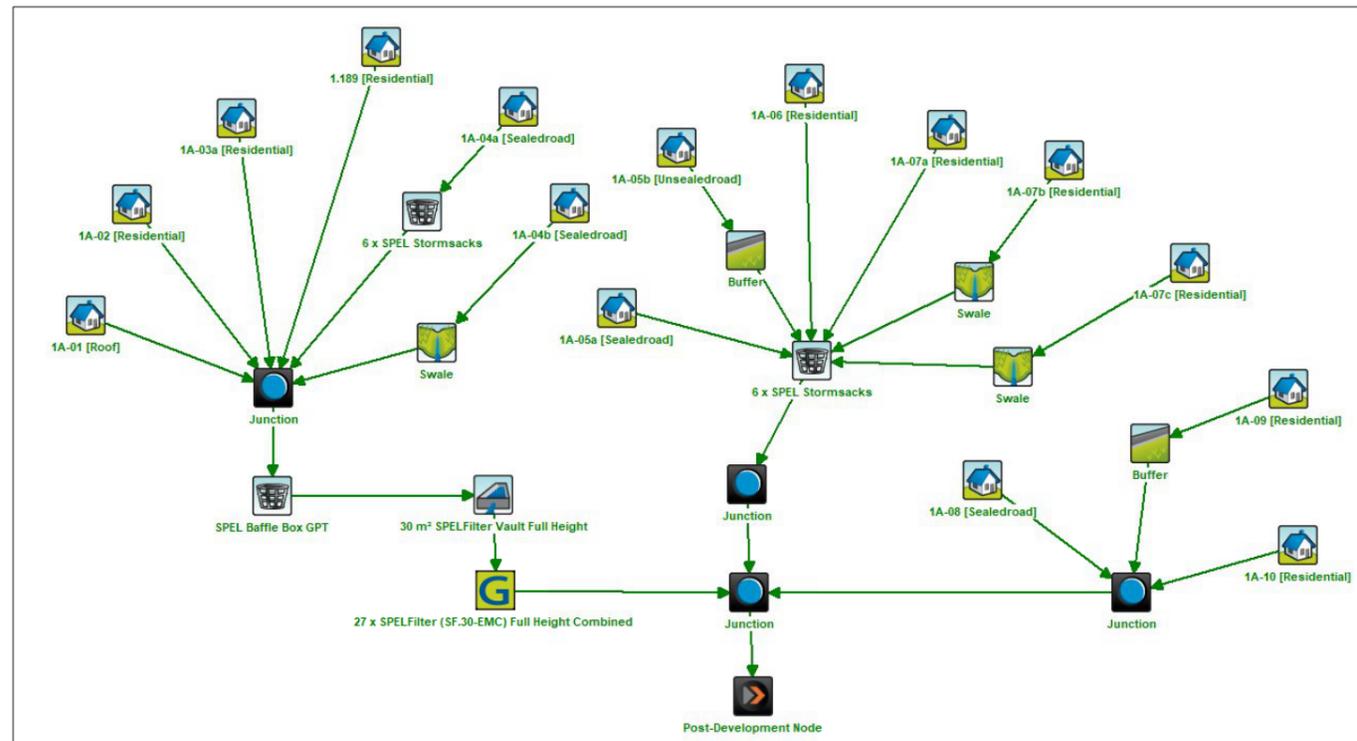
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-E700	B

DRAWING ID: P2108320-PS02-R03-E700



STAGE 1 MUSIC CATCHMENT DETAILS (P2108320MUS02V02)

KEY	MUSIC NODE	DESCRIPTION	AREA (ha)	% PAVED
	1A-01	ROOF	0.24	100%
	1A-02	IMPERVIOUS TO OSD	0.15	100%
	1A-03	PERVIOUS TO OSD	0.46	0%
	1A-03b	PERVIOUS TO SWALE AND OSD	1.20	0%
	1A-04	ROAD TO OSD	0.16	100%
	1A-04b	ROAD TO SWALE AND OSD	0.07	100%
	1A-05	ROAD TO STORMFILTER CHAMBER	0.01	100%
	1A-05b	UNSEALED ROAD TO STORMFILTER CHAMBER	0.18	100%
	1A-06	IMPERVIOUS TO STORMFILTER CHAMBER	0.05	100%
	1A-07	PERVIOUS TO STORMFILTER CHAMBER	0.29	0%
	1A-07b	PERVIOUS TO SWALE AND STORMFILTER CHAMBER	0.40	0%
	1A-07c	PERVIOUS TO SWALE AND STORMFILTER CHAMBER	1.05	0%
	1A-08	ROAD BYPASS	0.01	100%
	1A-09	IMPERVIOUS BYPASS	0.005	100%
	1A-10	PERVIOUS BYPASS	0.21	0%
		TOTAL AREA	4.50	= 100% OF TOTAL AREA
		TOTAL IMPERVIOUS AREA	0.88	= 20% OF TOTAL AREA
		TOTAL PERVIOUS AREA	3.61	= 80% OF TOTAL AREA



P2108320MUS02V02 - MUSIC MODELLING LAYOUT

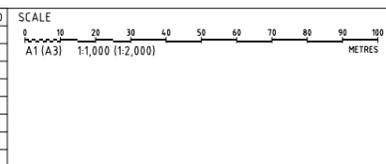
Treatment Train Effectiveness - Post-Development Node

	Sources	Residual Load	% Reduction
Flow (ML/yr)	14.3	14.3	0
Total Suspended Solids (kg/yr)	3900	463	88.1
Total Phosphorus (kg/yr)	4.79	1.55	67.7
Total Nitrogen (kg/yr)	31.9	16.1	49.4
Gross Pollutants (kg/yr)	168	3.46	97.9

P2108320MUS02V02 - MUSIC MODELLING RESULTS

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH



GRID
MGA

DATUM
mAHD

PROJECT MANAGER
TH

CLIENT
MINARAH COLLEGE

PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD
CIVIL WORKS PLAN

268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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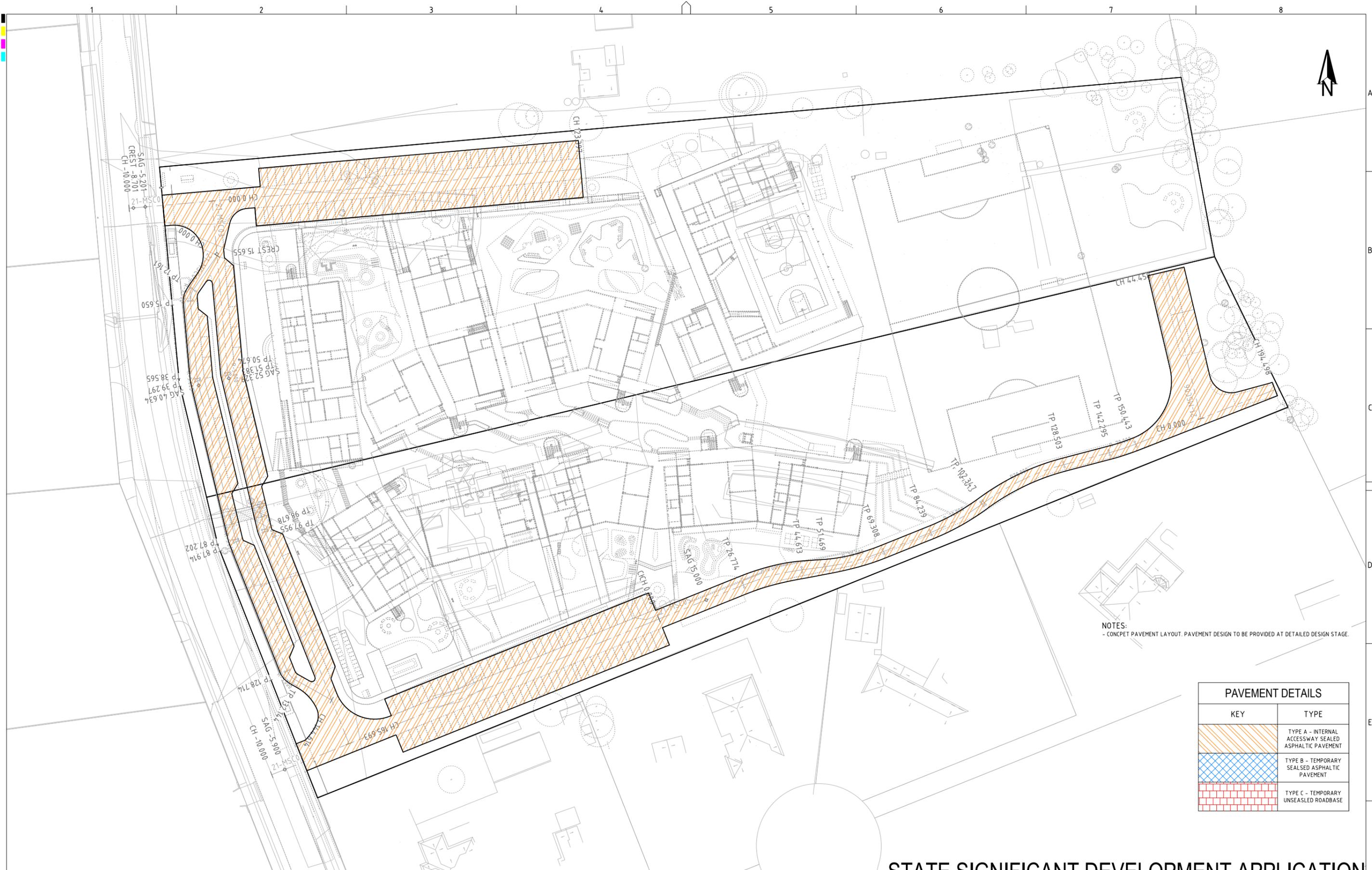
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DRAWING TITLE
WATER QUALITY CATCHMENT PLAN, MODEL & RESULTS
(STAGE 1)

PROJECT NO. P2108320	PLANSET NO. PS02	RELEASE NO. R03	DRAWING NO. PS02-E710	REVISION B
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PRINTED: ... USER: NINZ40
A1 / A3 LANDSCAPE (A1L_C_02.0.01)
DRAWING ID: P2108320-PS02-R03-E710



NOTES:
- CONCEPT PAVEMENT LAYOUT. PAVEMENT DESIGN TO BE PROVIDED AT DETAILED DESIGN STAGE.

PAVEMENT DETAILS	
KEY	TYPE
	TYPE A - INTERNAL ACCESSWAY SEALED ASPHALTIC PAVEMENT
	TYPE B - TEMPORARY SEALED ASPHALTIC PAVEMENT
	TYPE C - TEMPORARY UNSEALED ROADBASE

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

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

GRID MGA DATUM mAHD PROJECT MANAGER TH CLIENT MINARAH COLLEGE

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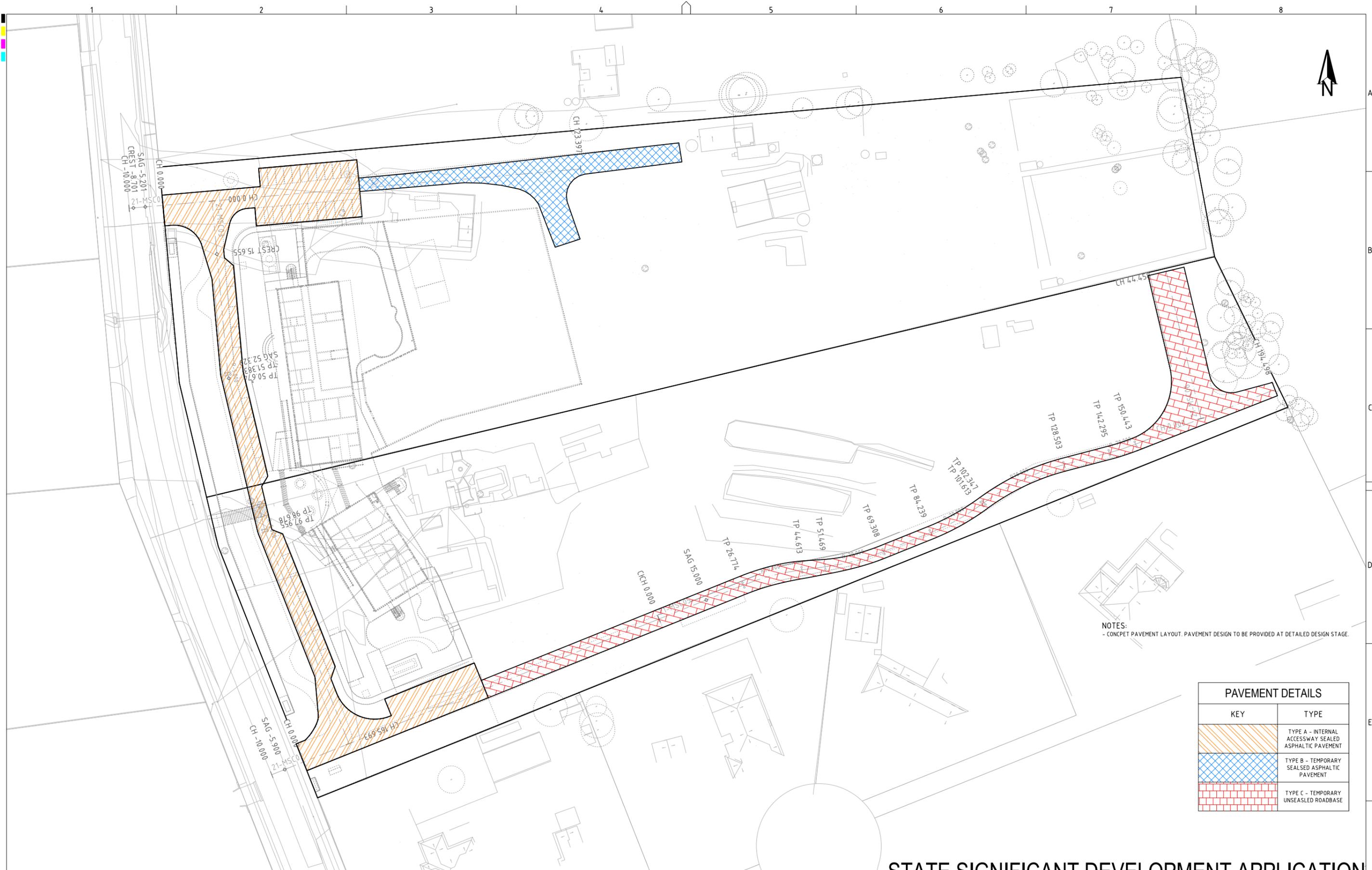
PROJECT NAME/PLANSET TITLE
MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN

268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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DRAWING TITLE CONCEPT PAVEMENT PLAN (ULTIMATE DEVELOPMENT)				
PROJECT NO. P2108320	PLANSET NO. PS02	RELEASE NO. R03	DRAWING NO. PS02-G450	REVISION B



NOTES:
- CONCEPT PAVEMENT LAYOUT. PAVEMENT DESIGN TO BE PROVIDED AT DETAILED DESIGN STAGE.

PAVEMENT DETAILS	
KEY	TYPE
	TYPE A - INTERNAL ACCESSWAY SEALED ASPHALTIC PAVEMENT
	TYPE B - TEMPORARY SEALED ASPHALTIC PAVEMENT
	TYPE C - TEMPORARY UNSEALED ROADBASE

STATE SIGNIFICANT DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	MINOR AMENDMENTS	14/04/2022	NN/JS	RL/BN	CG/AVG	TH
A	INITIAL RELEASE	17/03/2022	JS/NN	RL/BN	CG/AVG	TH

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

GRID	MGA	DATUM	mAHD	PROJECT MANAGER	TH
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CLIENT	MINARAH COLLEGE
PROJECT NAME/PLANSET TITLE	MINARAH COLLEGE - CATHERINE FIELD CIVIL WORKS PLAN
	268 & 278 CATHERINE FIELDS ROAD, CATHERINE FIELDS, NSW

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DRAWING TITLE				
CONCEPT PAVEMENT PLAN (STAGE 1)				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P2108320	PS02	R03	PS02-G451	B