

143 INGLEBURN ROAD LEPPINGTON, NSW

PLAN OF SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130

DA ENGINEERING DRAWINGS REVISION E

GROUP DEVELOPMENT SERVICES PTY. LTD.
PROJECT MANAGERS - SURVEYORS - PLANNERS - ENGINEERS
 UNIT 2/1 CENTRAL AVENUE, THORNLEIGH NSW 2120

PO BOX 498, PENNANT HILLS NSW 1715
 Ph. (02) 9980-1000 Fax. (02) 9484-0355

www.dialbeforeyoudig.com.au



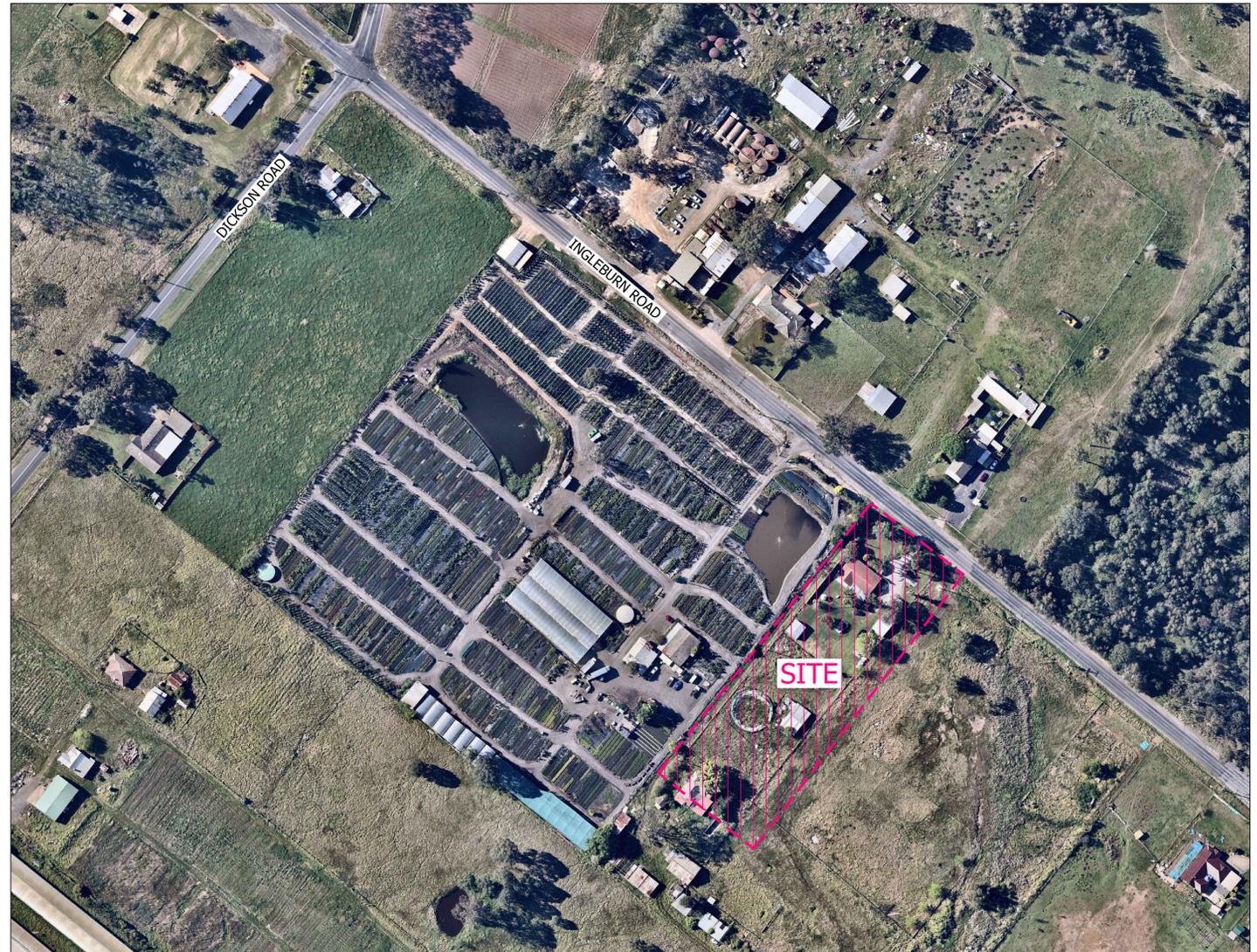
DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS	PROJECT	DRAWING NUMBER
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.	NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE AREA ARE SUBJECT TO FINAL SURVEY.	-	AHD	CAMDEN COUNCIL	-	GROUP DEVELOPMENT SERVICES PTY LTD PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000 Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.	143 INGLEBURN ROAD LEPPINGTON, NSW	001
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021									
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021									
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021									
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020									
						DESIGN	CHECKING	DA No.	DATE	COVER SHEET		
						M.D.	-	-	-	PROJECT REFERENCE: P00435 DATE OF ISSUE: 02/09/2021 REVISION No.: E SHEET SIZE: A1		
						DRAWN	CHECKING	CC No.	DATE			
						M.D.	-	-	-			

TABLE OF CONTENTS

SHEET DESCRIPTION

001	COVER SHEET
002	TABLE OF CONTENTS AND SITE LOCALITY PLAN
100	PLAN OF SUBDIVISION
200	ROAD LAYOUT PLAN
201	ROAD LONGITUDINAL SECTION
202	ROAD CROSS SECTIONS - SHEET 1
203	ROAD CROSS SECTIONS - SHEET 2
204	INGLEBURN ROAD LONGITUDINAL SECTION AND CROSS SECTIONS
205	KERB RETURNS - SHEET 1
206	KERB RETURNS - SHEET 2
207	INGLEBURN ROAD PLAN OF TRANSITION/TAPER AND VEHICLE TURNING MOVEMENTS
300	STORMWATER DRAINAGE PLAN
301	STORMWATER CATCHMENT PLAN
302	STORMWATER CALCULATIONS
303	STORMWATER LONGITUDINAL SECTIONS
304	ON-SITE DETENTION PLAN AND DETAILS
305	ON-SITE DETENTION SECTIONS - SHEET 1
306	ON-SITE DETENTION SECTIONS - SHEET 2
307	ON-SITE DETENTION SECTIONS - SHEET 3
400	BULK EARTHWORKS PLAN
401	BULK EARTHWORKS PLAN - FLOOD AREAS
500	PUBLIC DOMAIN PLAN
501	TREE PROTECTION AND PLANTING DETAILS
600	TREE REMOVAL PLAN
601	DEMOLITION PLAN
700	SOIL AND WATER MANAGEMENT PLAN
701	SOIL AND WATER MANAGEMENT DETAILS
800	EXISTING SURVEY PLAN



SITE LOCALITY PLAN

N.T.S.

SUBDIVISION OF
LOT 100 DP1260283 AND LOT 11 DP629130

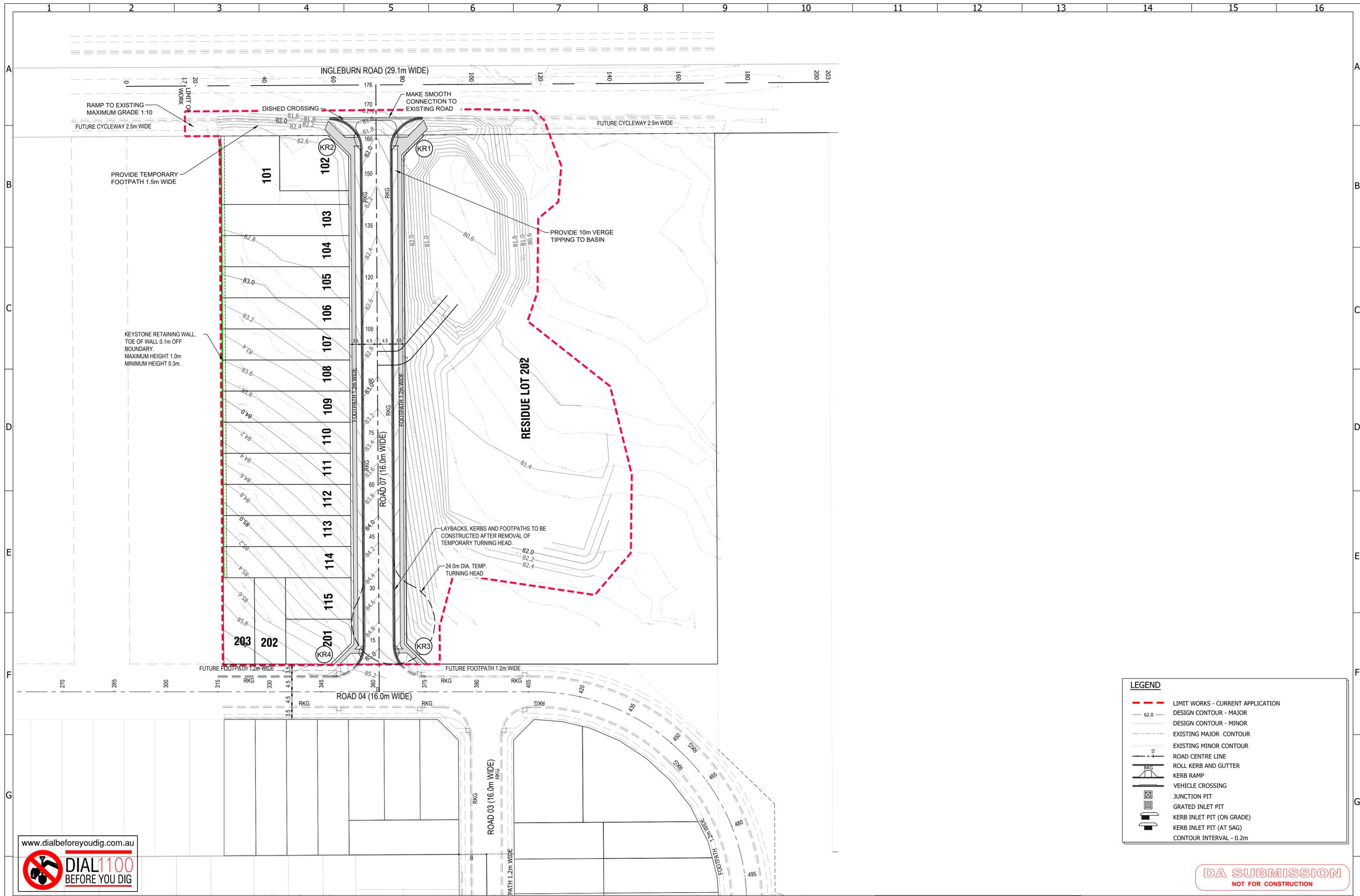
DATE: AUGUST 2021

www.dialbeforeyoudig.com.au

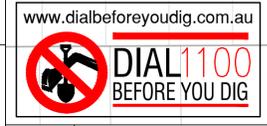


DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS	PROJECT	DRAWING NUMBER
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION	NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE ARE SUBJECT TO FINAL SURVEY.	-	AHD	CAMDEN COUNCIL	-	GROUP DEVELOPMENT SERVICES PTY LTD PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000 Email: info@gdsland.com.au www.gdsland.com.au Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.	143 INGLEBURN ROAD LEPPINGTON, NSW	002
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021									
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021									
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021									
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020									
PROJECT REFERENCE: P00435 DATE OF ISSUE: 02/09/2021 REVISION No.: E SHEET SIZE: A1												



LEGEND	
	LIMIT WORKS - CURRENT APPLICATION
	DESIGN CONTOUR - MAJOR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	ROAD CENTRE LINE
	ROLL KERB AND GUTTER
	KERB RAMP
	VEHICLE CROSSING
	JUNCTION PIT
	GRATED INLET PIT
	KERB INLET PIT (ON GRADE)
	KERB INLET PIT (AT SAG)
	CONTOUR INTERVAL - 0.2m

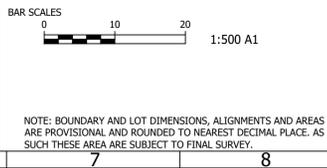


DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-



PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

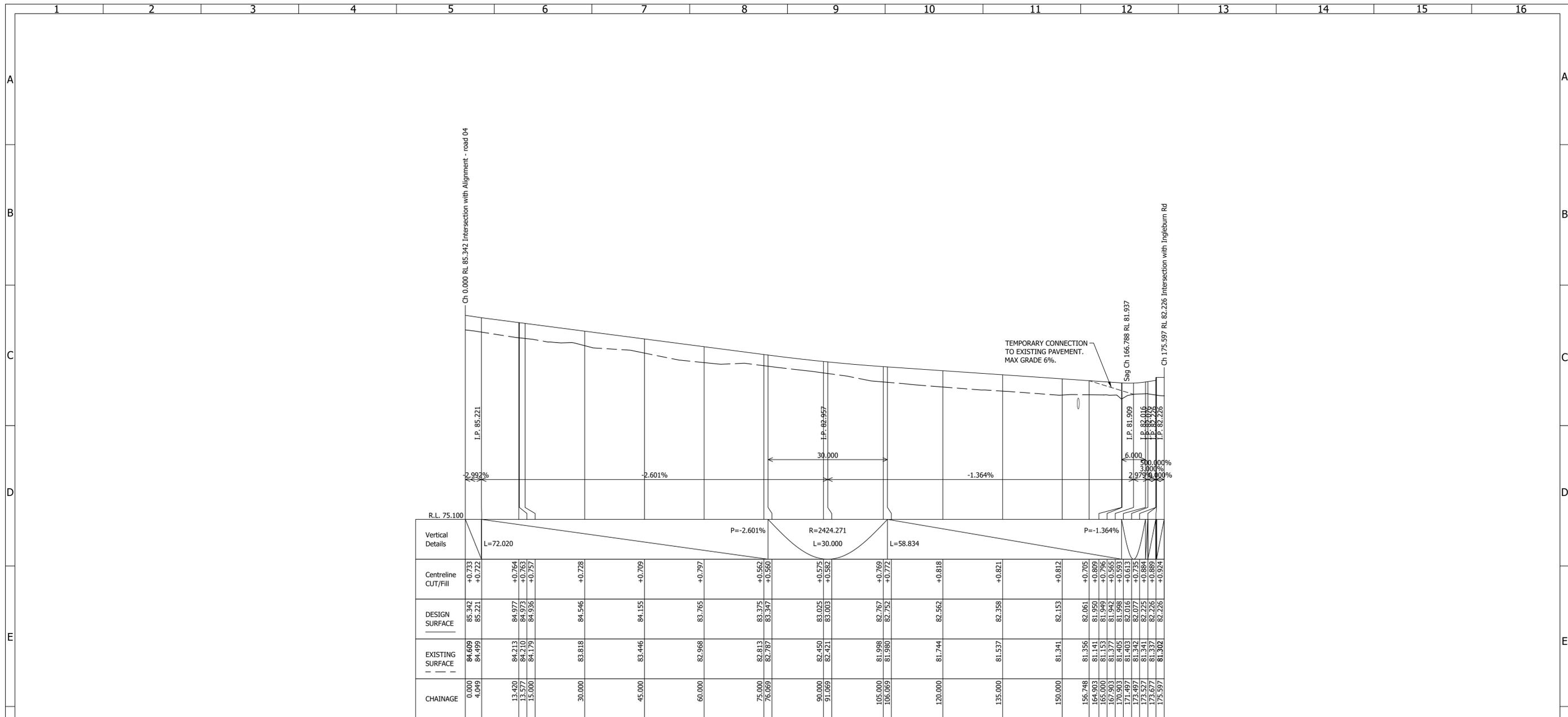
GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498,
Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT		DRAWING NUMBER	
143 INGLEBURN ROAD LEPPINGTON, NSW		200	
ROAD LAYOUT PLAN			
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
P00435	02/09/2021	E	A1



LONGITUDINAL SECTION
Road 07 Ch 0.000 to Ch 175.597
SCALES: HORIZONTAL 1:500 VERTICAL 1:100
Road 07

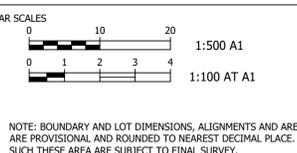


DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

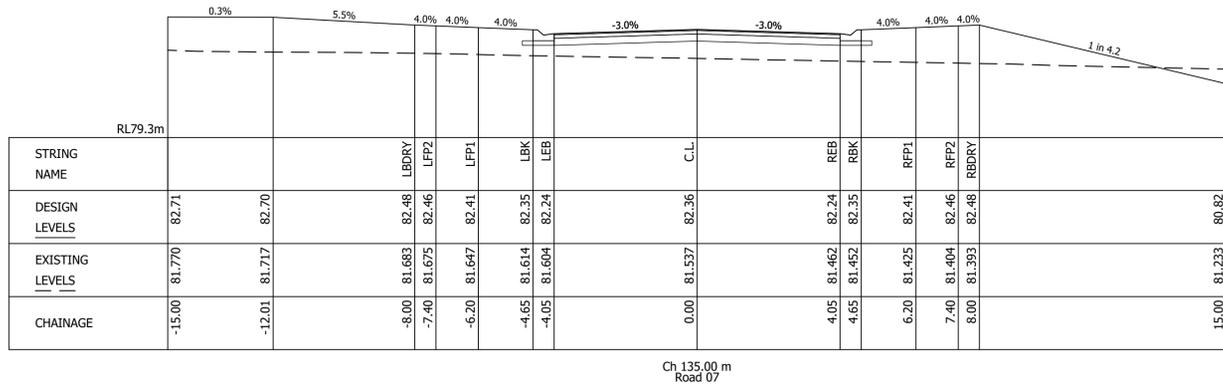
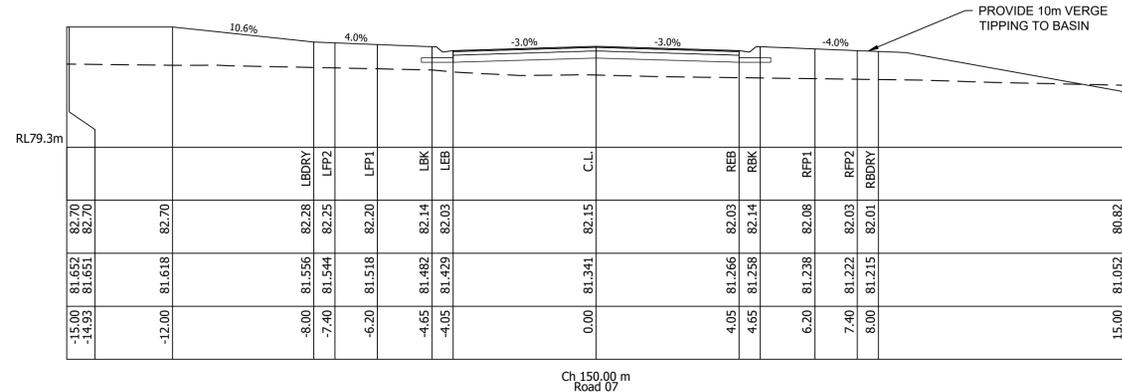
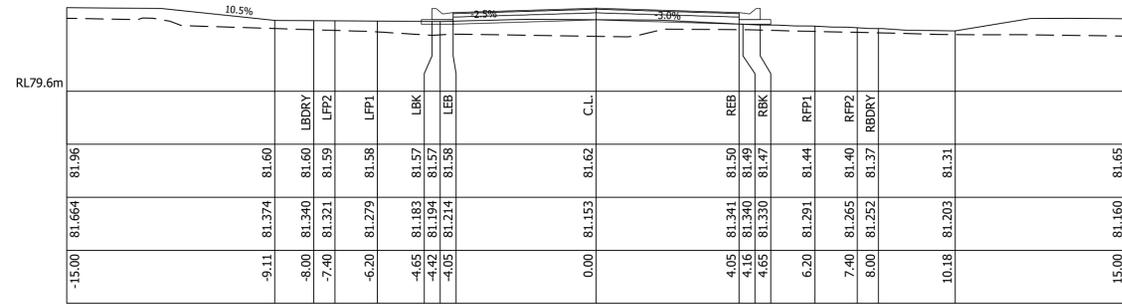
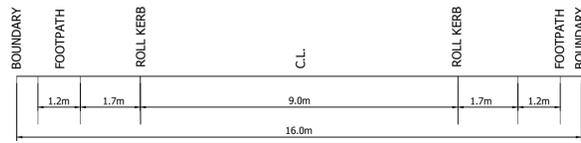
GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498, Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT		DRAWING NUMBER	
143 INGLEBURN ROAD LEPPINGTON, NSW		201	
ROAD LONGITUDINAL SECTION			
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
P00435	02/09/2021	E	A1



STRING NAME	DESIGN LEVELS	EXISTING LEVELS	CHAINAGE
	82.71	81.770	-15.00
	82.70	81.717	-12.01
LBDRY	82.48	81.683	-8.00
LFP2	82.46	81.675	-7.40
LFP1	82.41	81.647	-6.20
LBK	82.35	81.614	-4.65
LEB	82.24	81.604	-4.05
C.L.	82.36	81.537	0.00
REB	82.24	81.462	4.05
RBK	82.35	81.452	4.65
RFP1	82.41	81.425	6.20
RFP2	82.46	81.404	7.40
RBDRY	82.48	81.393	8.00
	80.82	81.233	15.00

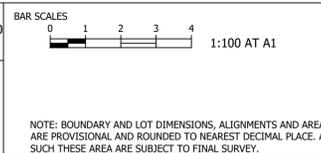


DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498, Pennant Hills NSW 1715
Phone: +61 2 9980 1000

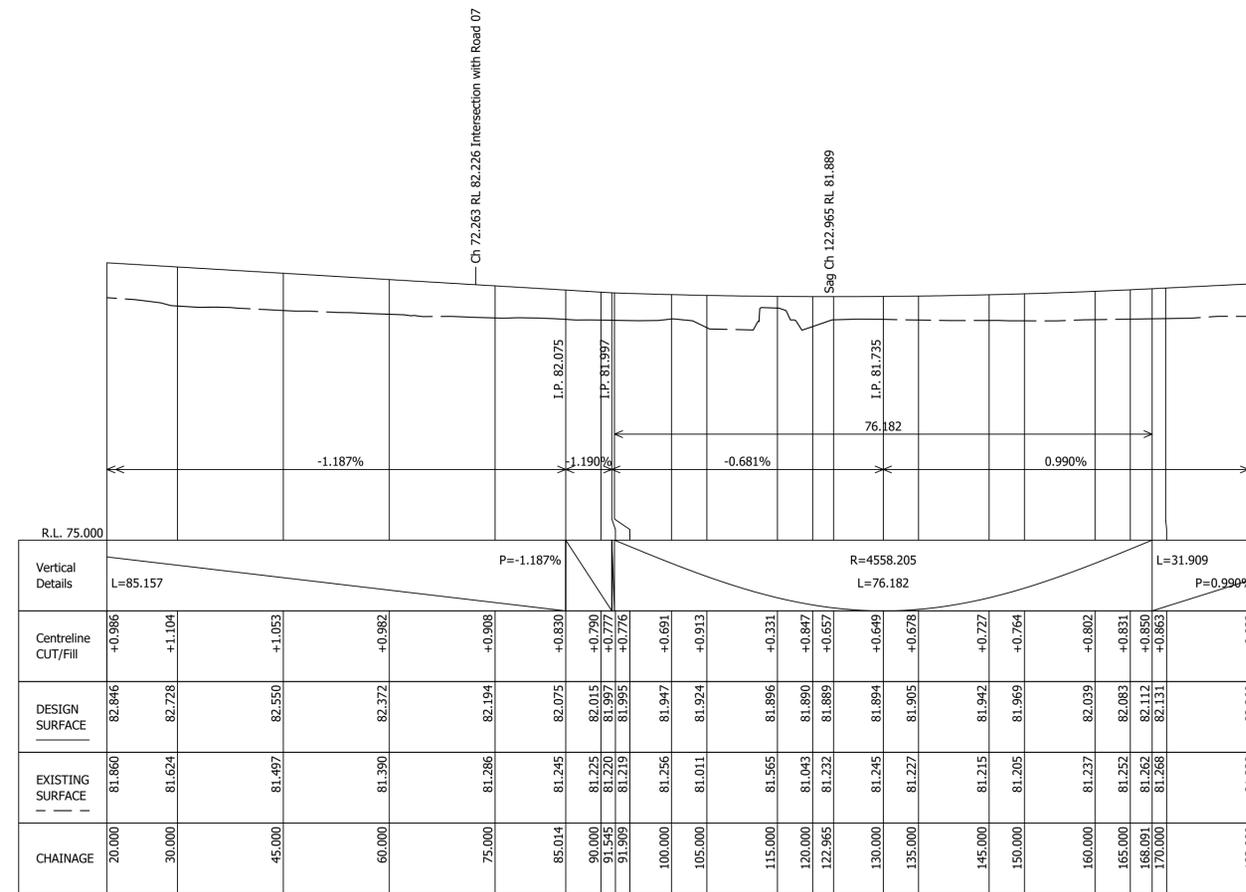
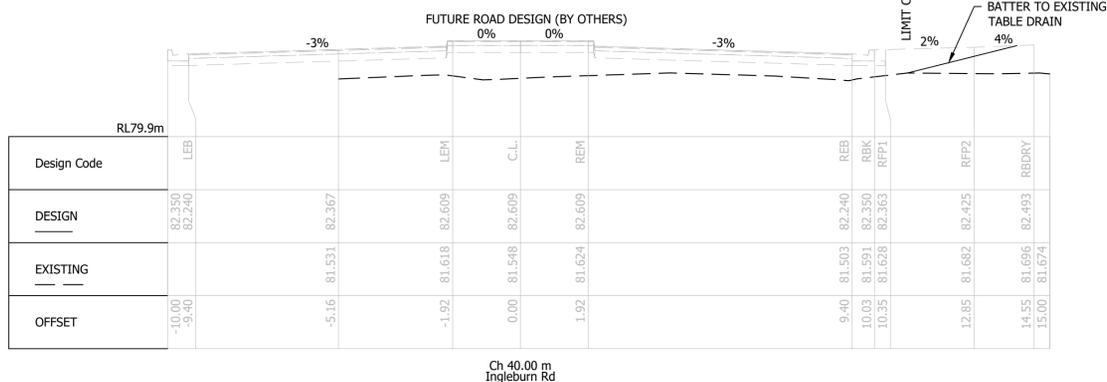
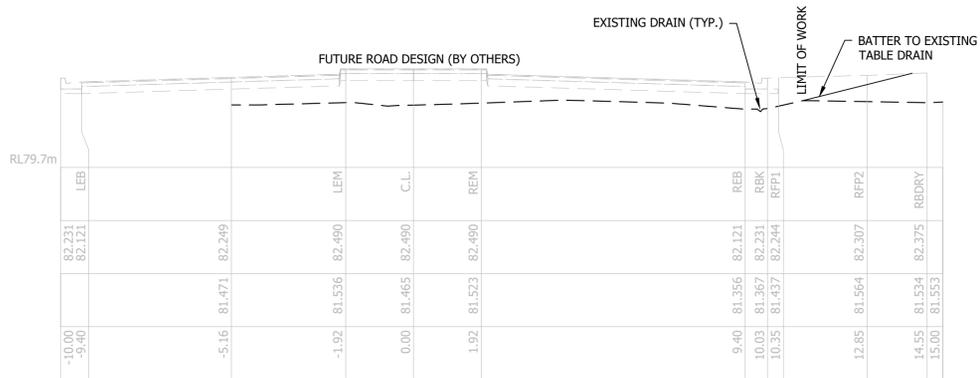
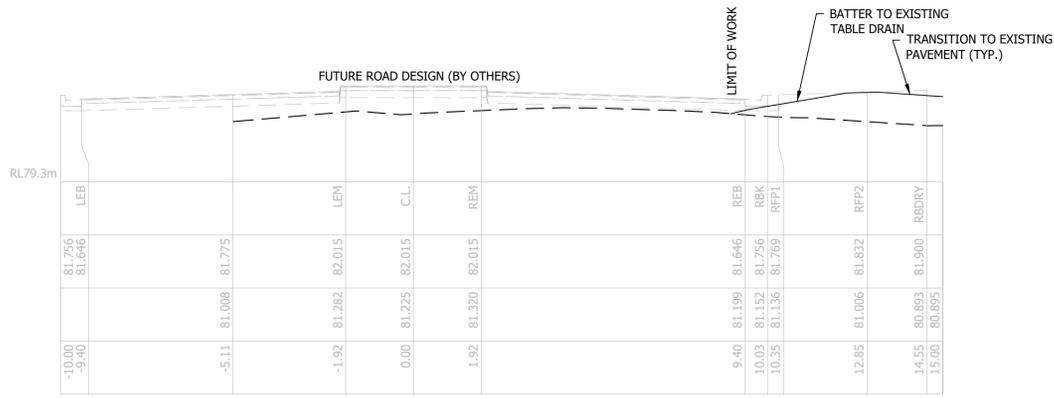
Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW			
ROAD CROSS SECTIONS - SHEET 2			
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
P00435	02/09/2021	E	A1

DRAWING NUMBER
203

FOR INFORMATION ONLY
FUTURE WORKS



www.dialbeforeyoudig.com.au

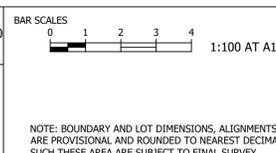


DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM AHD	LGA CAMDEN COUNCIL	AUTHORITY REFERENCE
-	-	-	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

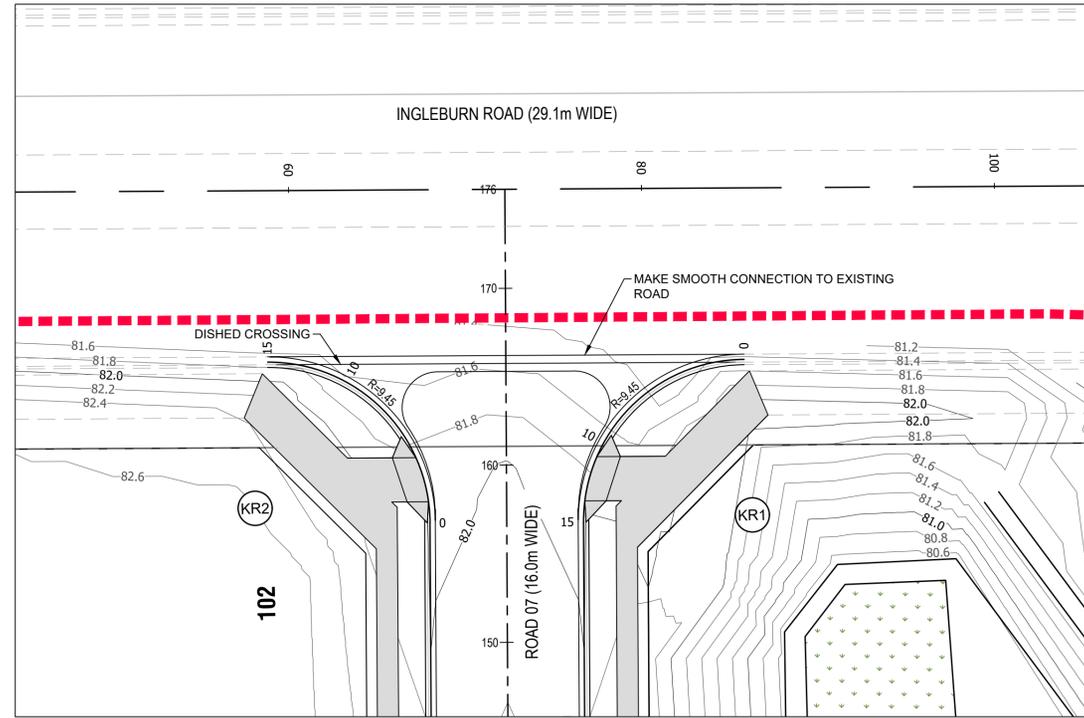
PO Box 498, Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT	143 INGLEBURN ROAD LEPPINGTON, NSW
PROJECT REFERENCE	P00435
DATE OF ISSUE	02/09/2021
REVISION No.	E
SHEET SIZE	A1

DRAWING NUMBER
204



FOR INFORMATION ONLY
FUTURE WORKS

KERB RETURNS KR1 & KR2
PLAN VIEW
SCALE 1:200

CHAINAGE	EXISTING SURFACE	DESIGN SURFACE	Centreline CUT/Fill
0.000	81.337	81.940	+0.603
0.162	81.338	81.937	+0.599
3.863	81.380	81.911	+0.531
5.000	81.380	81.912	+0.532
7.564	81.399	81.931	+0.532
7.840	81.401	81.934	+0.533
10.000	81.366	81.960	+0.594
14.137	81.532	82.009	+0.477
14.844	81.544	82.017	+0.473

LONGITUDINAL SECTION
KR2 Ch 0.000 to Ch 14.844
SCALES: HORIZONTAL 1:100 VERTICAL 1:100
KR2

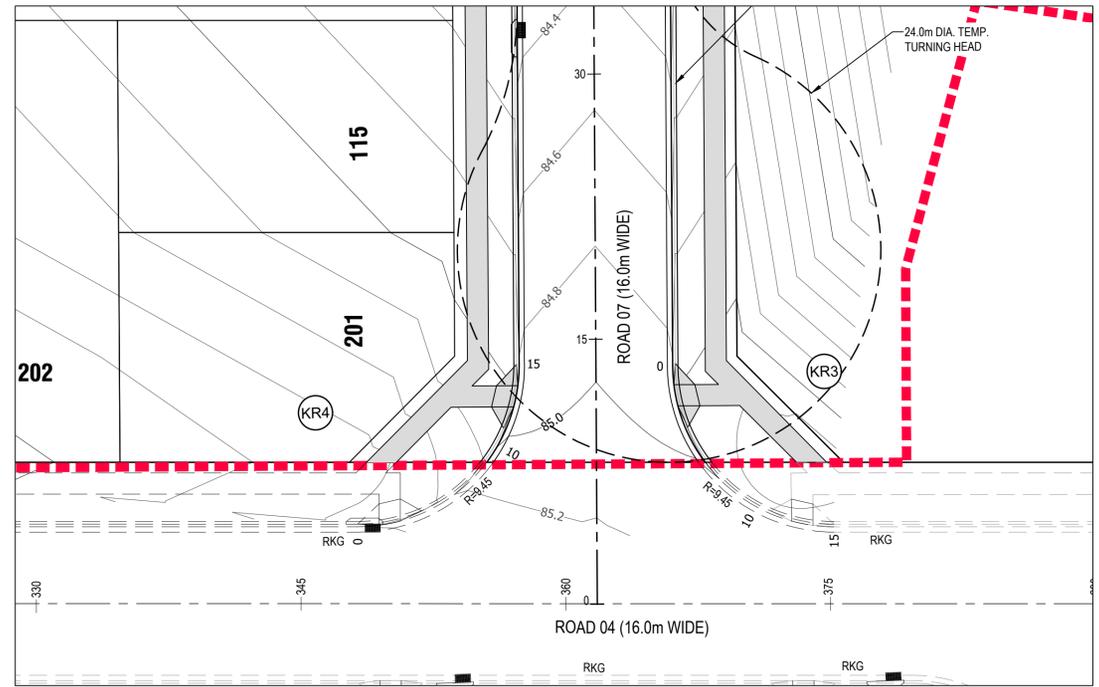
CHAINAGE	EXISTING SURFACE	DESIGN SURFACE	Centreline CUT/Fill
0.000	81.222	81.697	+0.475
3.711	81.213	81.748	+0.535
5.000	81.236	81.770	+0.534
7.005	81.265	81.807	+0.542
7.412	81.270	81.815	+0.545
7.452	81.271	81.815	+0.544
10.000	81.295	81.864	+0.569
11.133	81.317	81.883	+0.566
14.137	81.331	81.930	+0.599
14.834	81.323	81.940	+0.617
14.844	81.323	81.940	+0.617

LONGITUDINAL SECTION
KR1 Ch 0.000 to Ch 14.844
SCALES: HORIZONTAL 1:100 VERTICAL 1:100
KR1



DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	PROJECT MANAGERS	PROJECT	DRAWING NUMBER	
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.	0 5 10 1:200 AT A1	-	AHD	CAMDEN COUNCIL	-	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS ABN: 86 064 110 809	143 INGLEBURN ROAD LEPPINGTON, NSW	205	
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021		0 1 2 3 4 1:100 AT A1	DESIGN	-	-	DA No.	DATE	GROUP DEVELOPMENT SERVICES PTY LTD PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000 Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au		KERB RETURNS - SHEET 1
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021		NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE ARE SUBJECT TO FINAL SURVEY.	DRAWN	-	-	CC No.	DATE	THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.		PROJECT REFERENCE
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021										DATE OF ISSUE
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020										REVISION No.
											SHEET SIZE		
											A1		



KERB RETURNS KR3 & KR4
PLAN VIEW
 SCALE 1:200

R.L. 78.500		7.429		7.429	
-1.873%		-5.799%		-2.601%	
Centreline CUT/Fill	+0.419	+0.243	+0.186	+0.190	+0.191
DESIGN SURFACE	85.450	85.344	85.291	85.165	85.164
EXISTING SURFACE	85.031	85.101	85.105	84.975	84.973
CHAINAGE	0.000	3.725	5.000	7.439	7.459
				9.091	10.000
				11.174	14.189
				14.899	14.899
				14.899	14.899

LONGITUDINAL SECTION
 KR4 Ch 0.000 to Ch 14.899
 SCALES: HORIZONTAL 1:100 VERTICAL 1:100
 KR4

R.L. 78.000		7.375	
2.601%		-1.094%	
Centreline CUT/Fill	+0.796	+0.837	+0.928
DESIGN SURFACE	84.356	84.986	85.005
EXISTING SURFACE	84.060	84.149	84.155
CHAINAGE	0.000	5.000	5.734
			5.669
			9.556
			10.000
			13.243
			14.085
			14.789

LONGITUDINAL SECTION
 KR3 Ch 0.000 to Ch 14.789
 SCALES: HORIZONTAL 1:100 VERTICAL 1:100
 KR3

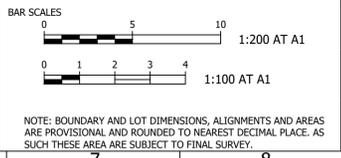


DA SUBMISSION
 NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
 SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

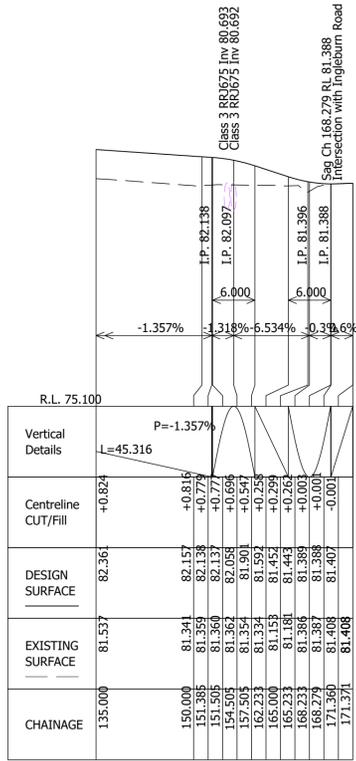
GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498,
 Pennant Hills NSW 1715
 Phone: +61 2 9980 1000

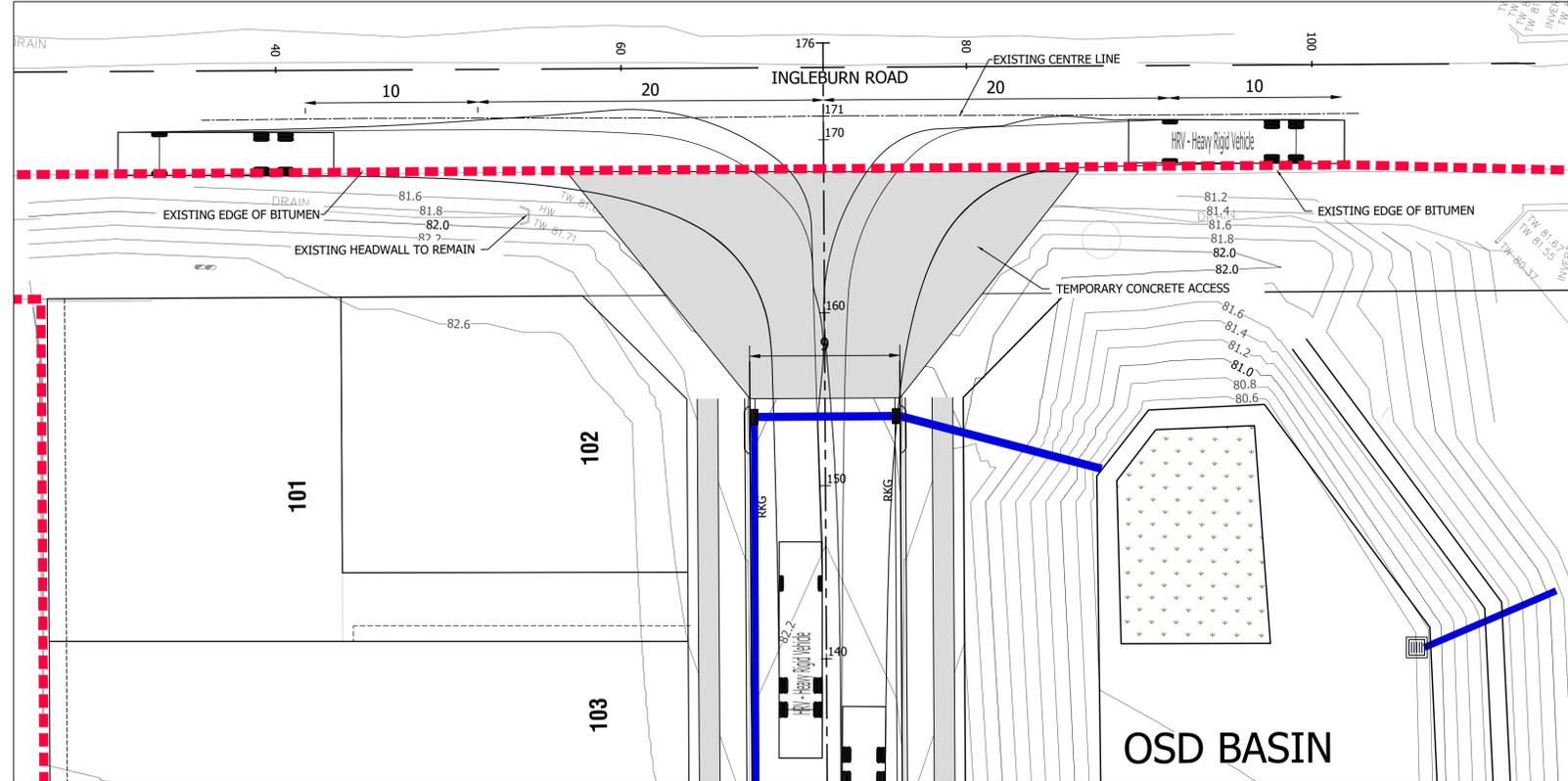
Fax: +61 2 9484 0355
 Email: info@gdsland.com.au
 www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT		DRAWING NUMBER	
143 INGLEBURN ROAD LEPPINGTON, NSW		206	
KERB RETURNS - SHEET 2		SHEET SIZE	
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	A1
P00435	02/09/2021	E	

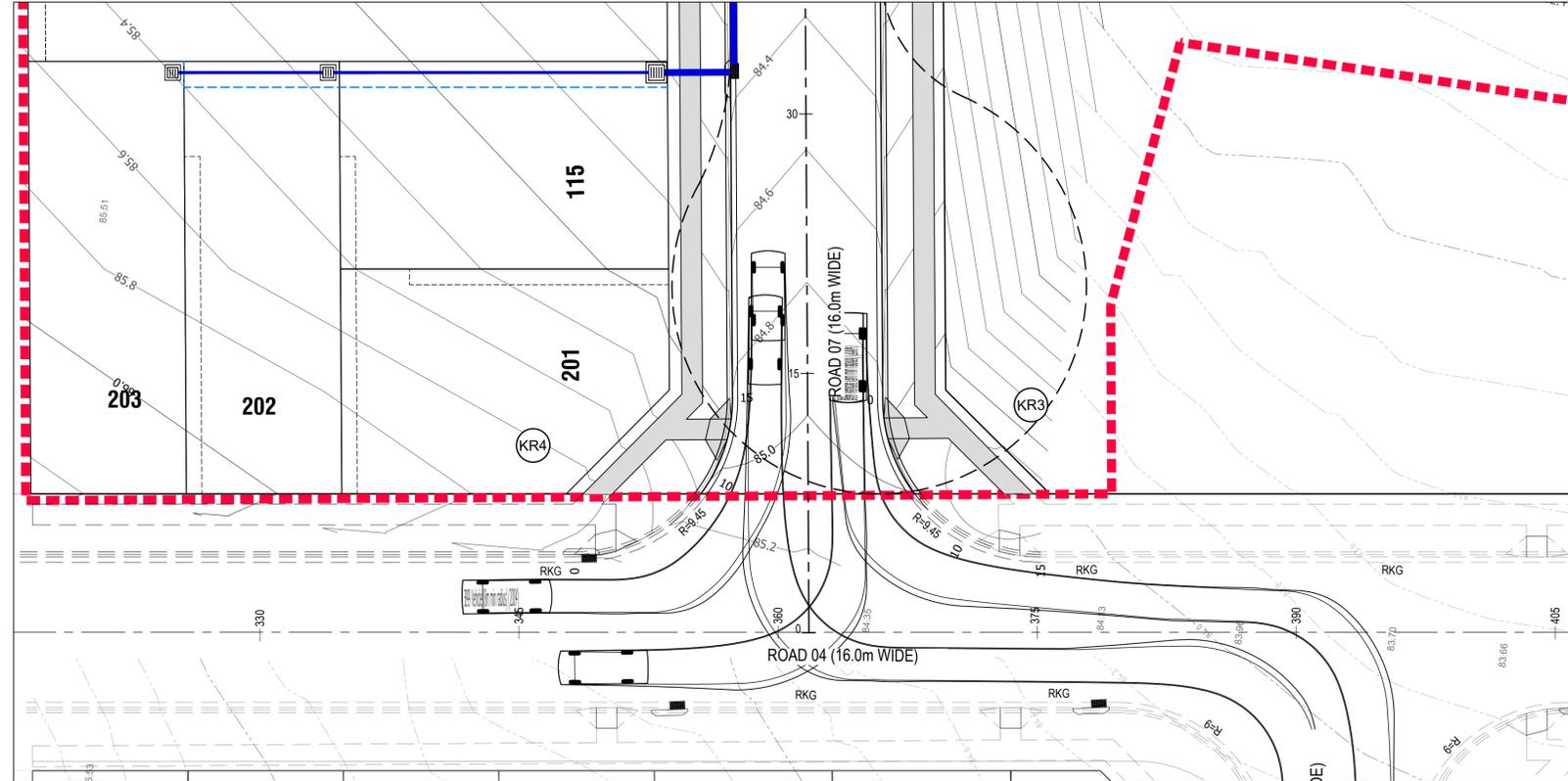


LONGITUDINAL SECTION
Ch 135.000 to Ch 171.371
SCALES: HORIZONTAL 1:500 VERTICAL 1:100
TAPER/TRANSITION FROM ROAD 07 TO INGLEBURN ROAD



INGLEBURN ROAD TAPER TRANSITION AND VEHICLE TURNING MOVEMENTS
PLAN VIEW
SCALE 1:200

NOTE:
TURNING MOVEMENTS ARE FOR A 12.5m
HEAVY RIGID VEHICLE.



ROAD 04 AND ROAD 07 TURNING MOVEMENTS
PLAN VIEW
SCALE 1:200

NOTE:
TURNING MOVEMENTS ARE FOR A B99 VEHICLE.

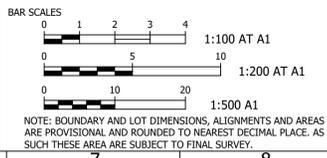


REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

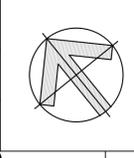
SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS.

REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DISTANCES, CONSENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-



PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

gds

GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498,
Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

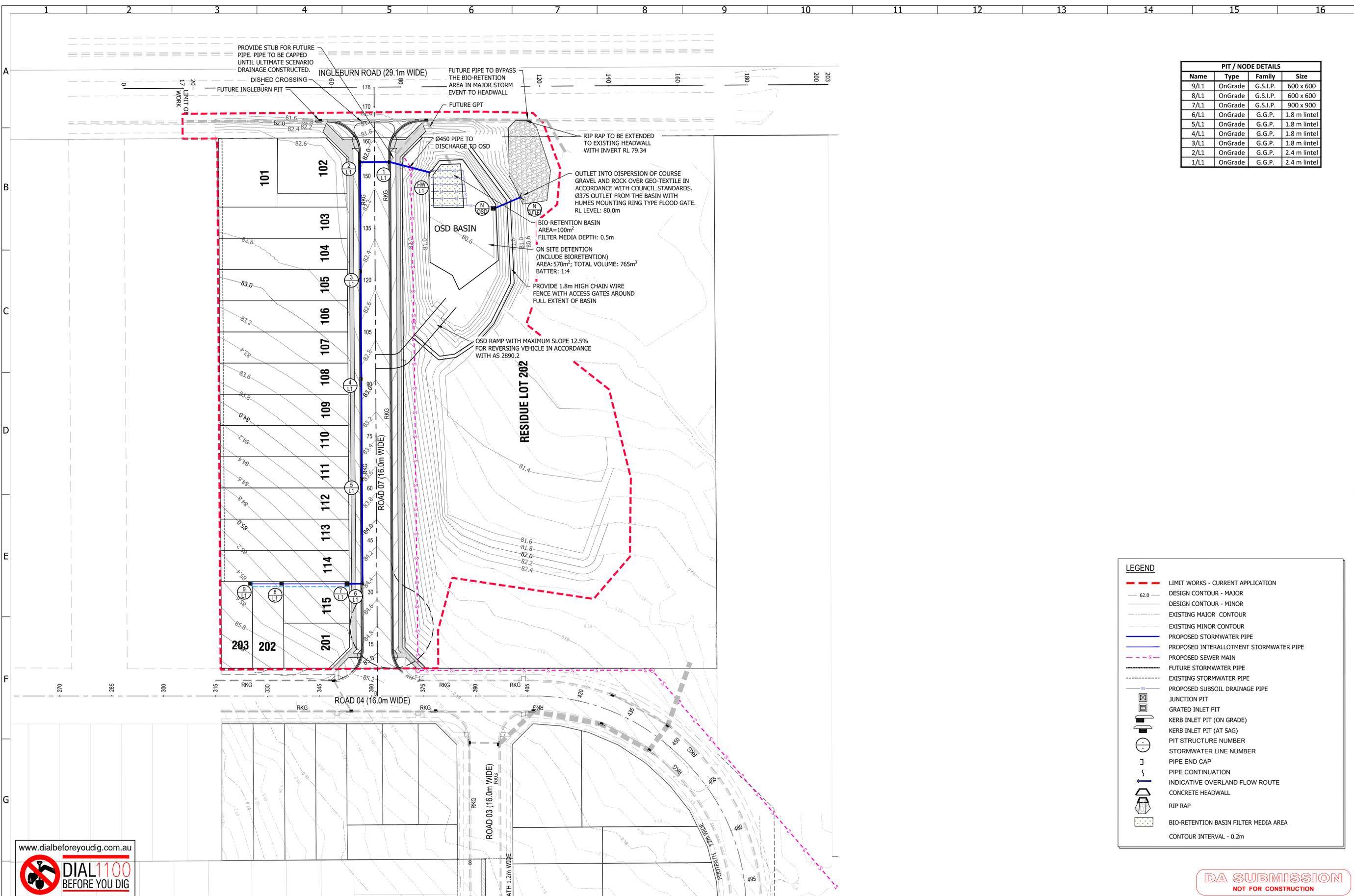
PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW			
INGLEBURN ROAD PLAN OF TRANSITION/TAPER AND VEHICLE TURNING MOVEMENTS			
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
P00435	02/09/2021	E	A1

DRAWING NUMBER
207

DA SUBMISSION
NOT FOR CONSTRUCTION

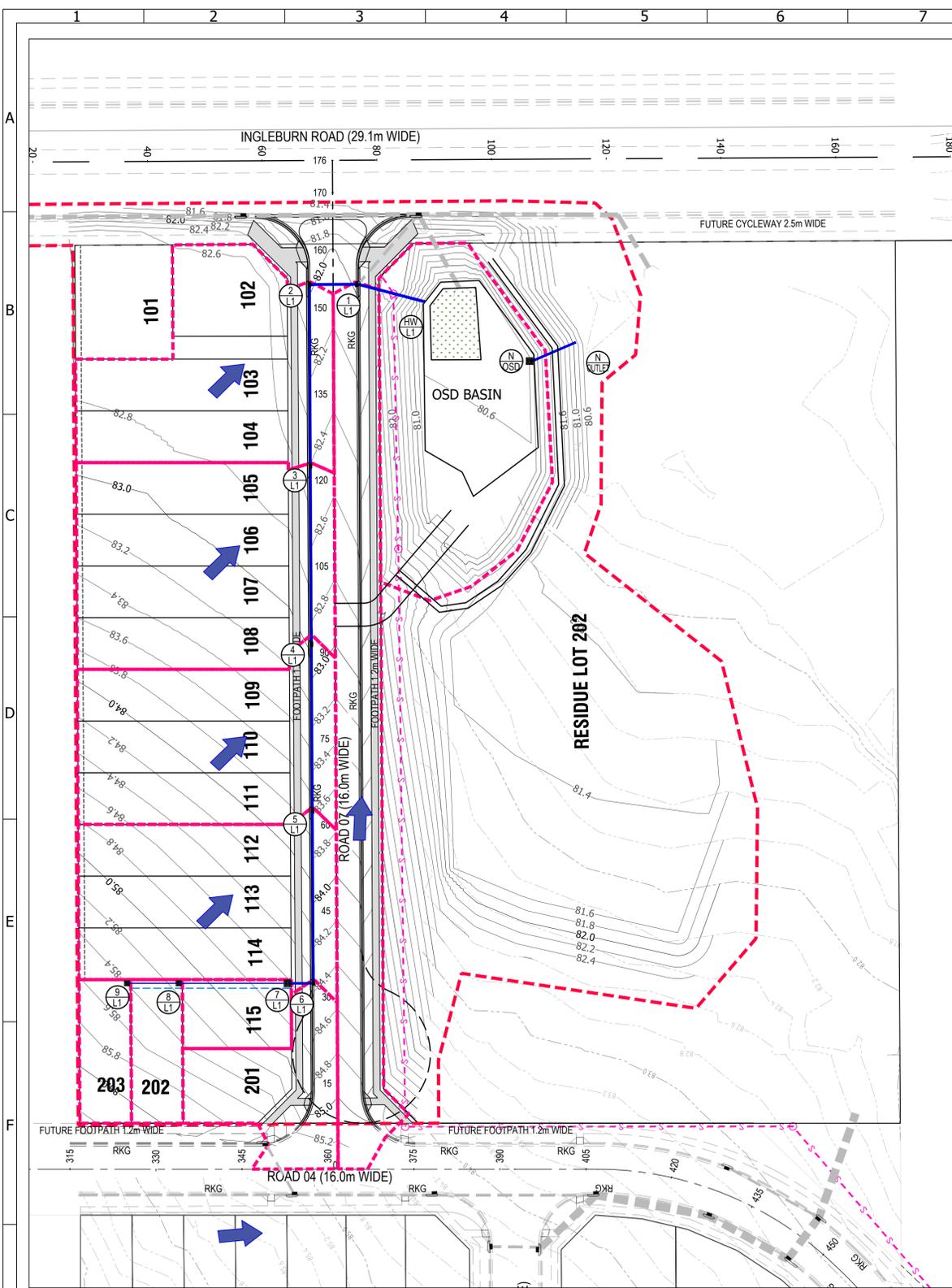
PIT / NODE DETAILS			
Name	Type	Family	Size
9/L1	OnGrade	G.S.I.P.	600 x 600
8/L1	OnGrade	G.S.I.P.	600 x 600
7/L1	OnGrade	G.S.I.P.	900 x 900
6/L1	OnGrade	G.G.P.	1.8 m lintel
5/L1	OnGrade	G.G.P.	1.8 m lintel
4/L1	OnGrade	G.G.P.	1.8 m lintel
3/L1	OnGrade	G.G.P.	1.8 m lintel
2/L1	OnGrade	G.G.P.	2.4 m lintel
1/L1	OnGrade	G.G.P.	2.4 m lintel

LEGEND	
	LIMIT WORKS - CURRENT APPLICATION
	DESIGN CONTOUR - MAJOR
	DESIGN CONTOUR - MINOR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED STORMWATER PIPE
	PROPOSED INTERALLOTMENT STORMWATER PIPE
	PROPOSED SEWER MAIN
	FUTURE STORMWATER PIPE
	EXISTING STORMWATER PIPE
	PROPOSED SUBSOIL DRAINAGE PIPE
	JUNCTION PIT
	GRATED INLET PIT
	KERB INLET PIT (ON GRADE)
	KERB INLET PIT (AT SAG)
	PIT STRUCTURE NUMBER
	STORMWATER LINE NUMBER
	PIPE END CAP
	PIPE CONTINUATION
	INDICATIVE OVERLAND FLOW ROUTE
	CONCRETE HEADWALL
	RIP RAP
	BIO-RETENTION BASIN FILTER MEDIA AREA
	CONTOUR INTERVAL - 0.2m

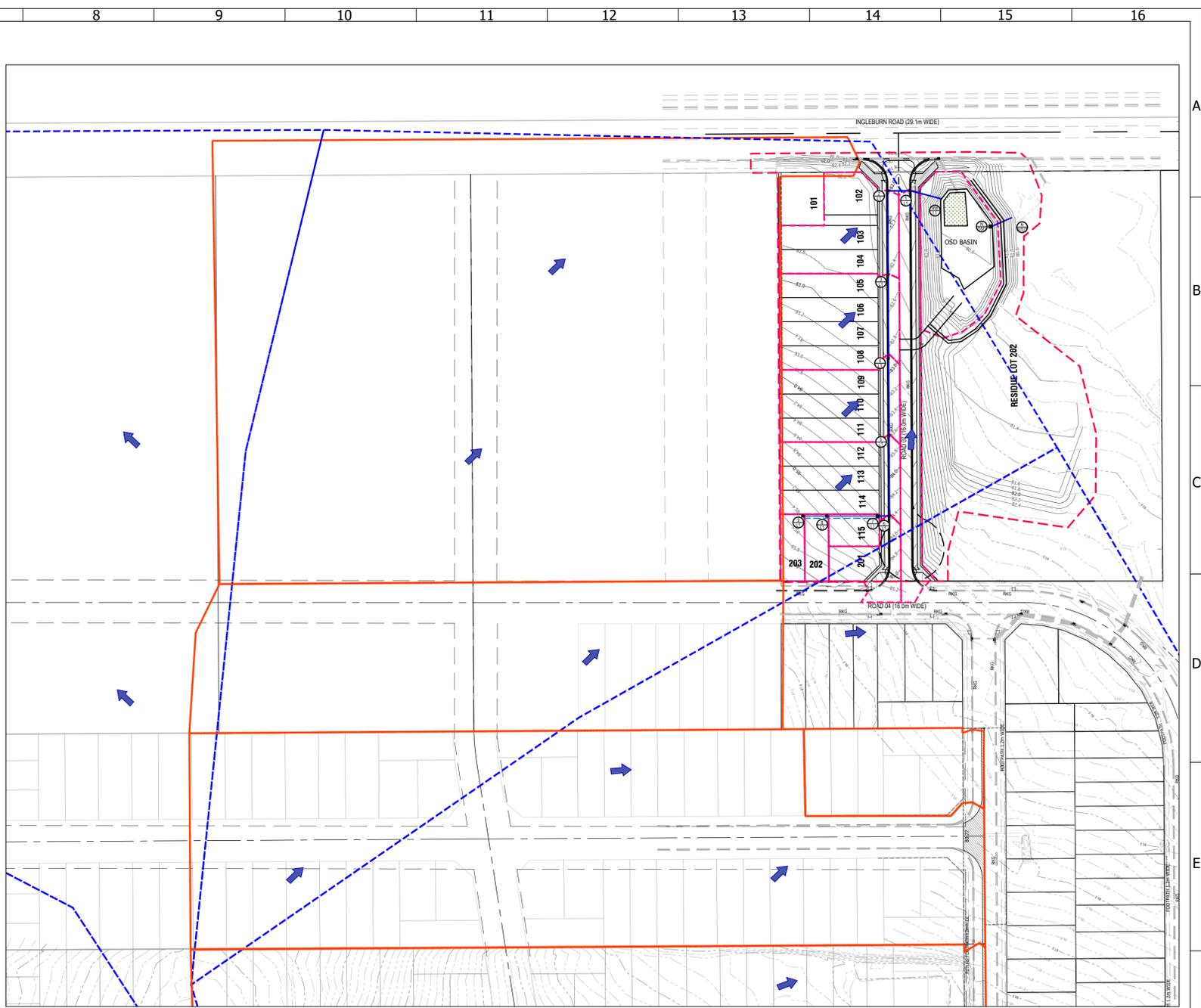


DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION E AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL D AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL C RE-ISSUE FOR DA ENGINEERING APPROVAL B RE-ISSUE FOR DA ENGINEERING APPROVAL A ISSUED FOR DA ENGINEERING APPROVAL		BY Y.L. W.M. W.M. M.D. M.D.		DATE 02/09/2021 16/08/2021 05/07/2021 01/04/2021 21/12/2020		SITE DESCRIPTION SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION		BAR SCALES 0 10 20 1:500 A1		NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE AREAS ARE SUBJECT TO FINAL SURVEY.		SURVEY DESIGN M.D. DRAWN M.D.		HEIGHT DATUM CHECKING M.D.		LGA CAMDEN COUNCIL		AUTHORITY REFERENCE DA No. CC No.		DATE		PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS GROUP DEVELOPMENT SERVICES PTY LTD PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000 Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au		PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW		DRAWING NUMBER 300	
STORMWATER DRAINAGE PLAN		PROJECT REFERENCE P00435		DATE OF ISSUE 02/09/2021		REVISION No. E		SHEET SIZE A1		PROJECT REFERENCE P00435		DATE OF ISSUE 02/09/2021		REVISION No. E		SHEET SIZE A1		PROJECT REFERENCE P00435		DATE OF ISSUE 02/09/2021		REVISION No. E		SHEET SIZE A1			



SITE CATCHMENT PLAN
SCALE 1:500



OVERALL CATCHMENT PLAN
SCALE 1:1000

SUB-CATCHMENT DETAILS		
Name	Pit or Node	Total Area (ha)
C 9/L1	9/L1	0.0225
C 8/L1	8/L1	0.0225
C 7/L1	7/L1	0.0228
C 6/L1	6/L1	0.054
C 5/L1	5/L1	0.1239
C 4/L1	4/L1	0.124
C 3/L1	3/L1	0.158
C 2/L1	2/L1	0.1298
C 1/L1	1/L1	0.1243
C OSD	OSD	0.125

LEGEND	
	LIMIT WORKS - CURRENT APPLICATION
	DESIGN CONTOUR - MAJOR
	DESIGN CONTOUR - MINOR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	JUNCTION PIT
	GRATED INLET PIT
	KERB INLET PIT (ON GRADE)
	KERB INLET PIT (AT SAG)
	CATCHMENT BOUNDARY
	UPPER CATCHMENT BOUNDARY POST DEVELOPMENT
	COUNCIL REGIONAL BASIN CATCHMENT AREA
	CONTOUR INTERVAL - 0.5m

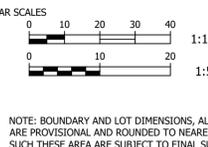
DA SUBMISSION
NOT FOR CONSTRUCTION



REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DRAINAGE DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498, Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT		DRAWING NUMBER	
143 INGLEBURN ROAD LEPPINGTON, NSW		301	
STORMWATER CATCHMENT PLAN		PROJECT REFERENCE	
P00435	DATE OF ISSUE	REVISION No.	SHEET SIZE
02/09/2021	E	A1	

ILSAX CALCULATION SUMMARY SHEET

DRAINS results prepared from Version 2020.061

Soil Type	User to enter	Entire Catchment Area	
		Paved	0.716 ha (39.4%)
AMC	User to enter	Supplementary	0 ha (0%)
		Grassed	1.097 ha (60.5%)
		Total Area	1.813 ha

LOCATION AND LAND-USE				TIME AND RUNOFF						INLET DESIGN					PIPE SYSTEM DESIGN							PIT RESULTS													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	31a	31b	32	33	34
Design AEP	Pit Name	Sub-Catchment Area (ha)	Land-Use	Percentage	Constant Flow Time (minutes)	Kinematic Wave Length (m)	Formula Slope (%)	or Friends Roughness	Total Time (minutes)	Peak Sub-Catchment Flowrate (m³/s)	Origin of Approach Flows	Overflows Flowrate (m³/s)	Approaching Pit Flow Width (m)	Depth x Velocity (m²/s)	Inlet Family	Inlet Size	Total Approach Flow (m³/s)	Bypass Flow (m³/s)	Overflow Leaving Pit Flow Width (m)	Depth x Velocity (m²/s)	Peak Flow in Pipe (m³/s)	Reach Length (m)	Pipe Slope (m)	Pipe Diameter (mm)	U/S Pipe Invert Level (m)	D/S Pipe Invert Level (m)	U/S HGL in Pipe (m)	D/S HGL in Pipe (m)	Pipe Flow Velocity (m/s)	Pressure Change Coeff. Ku	QUDM Chart No.	QUDM Chart Ratios	Water Surface Elevation (m)	Surface Level (m)	Free-board (m)
20%	9/L1	0.0225	Paved	80	0	25.407	3.94	0.011	1.24	0.007					G.S.I.P.	600 x 600	0.007	0	0	0	0.007	9	2.8	150	84.659	84.407	84.7	84.538	1.78	5.93	A1-4 (A2-3)	H/Do=0.0. Vo2/(2aDo)=0.05	84.77	85.409	0.64
1%	9/L1	0.0225	Grassed	20	0	8.323	3.52	0.06	1.82	0.014						0.014	0	0	0	0.014						84.72	84.654	2.02	3.27	A1-4 (A2-3)	H/Do=1.3. Vo2/(2aDo)=0.18	84.85	85.409	0.56	
20%	8/L1	0.0225	Paved	80	0	25.609	3.99	0.011	1.24	0.007	9/L1	0	0	0	G.S.I.P.	600 x 600	0.007	0	0	0	0.014	19	2.99	150	84.407	83.839	84.467	83.899	2.07	5.06	A1-4 (A2-3)	H/Do=0.0. Vo2/(2aDo)=0.18	84.54	85.157	0.62
1%	8/L1	0.0225	Grassed	20	0	8.992	3.53	0.06	1.89	0.014	9/L1	0	0	0			0.014	0	0	0	0.028						84.514	83.927	2.5	2.98	A1-4 (A2-3)	H/Do=0.0. Vo2/(2aDo)=0.73	84.65	85.157	0.5
20%	7/L1	0.0228	Paved	80	0	21.778	4.03	0.011	1.12	0.007	8/L1	0	0	0	G.S.I.P.	900 x 900	0.007	0	0	0	0.021	4.299	7.05	375	83.614	83.311	83.659	83.356	2.79	0	A1-5 (A2-4)	Du/Do=0.41. Qa/Qo=0.38. S/Do=1.0	83.66	84.624	0.96
1%	7/L1	0.0228	Grassed	20	0	10.786	3.6	0.06	2.11	0.014	8/L1	0	0	0			0.014	0	0	0	0.042						83.677	83.374	3.4	0	A1-5 (A2-4)	Du/Do=0.41. Qa/Qo=0.40. S/Do=1.0	83.68	84.624	0.95
20%	6/L1	0.054	Paved	80	0	32.215	3.35	0.011	1.5	0.016	7/L1	0	0	0	G.G.P.	1.8 m lintel	0.016	0	0.77	0.02	0.037	30.088	2.68	375	83.108	82.303	83.183	82.482	2.31	0.48	A1-18 (A2-28 & A2-29)	Du/Do=1.00. Qa/Qo=0.49. S/Do=0.3	83.22	84.321	1.1
1%	6/L1	0.054	Grassed	20	0	25.592	3.98	0.06	3.44	0.033	7/L1	0	0	0			0.033	0.004	1.2	0.04	0.07						83.212	82.872	2.78	0.31	A1-18 (A2-28 & A2-29)	Du/Do=1.00. Qa/Qo=0.49. S/Do=0.6	83.27	84.321	1.05
20%	5/L1	0.1239	Paved	80	0	50.105	4.07	0.011	1.85	0.037	6/L1	0.006	0.77	0.02	G.G.P.	1.8 m lintel	0.037	0.005	0.92	0.03	0.066	29.956	2.38	375	82.273	81.561	82.377	81.781	2.6	5.93	A1-4 (A2-3)	H/Do=0.0. Vo2/(2aDo)=0.05	82.48	83.538	1.06
1%	5/L1	0.1239	Grassed	20	0	29.843	3.01	0.06	4.1	0.076	6/L1	0.019	1.2	0.04			0.08	0.022	1.53	0.06	0.133						82.743	82.67	1.17	4.11	A1-4 (A2-3)	H/Do=0.7. Vo2/(2aDo)=0.17	82.87	83.538	0.67
20%	4/L1	0.124	Paved	80	0	50.685	3.93	0.011	1.88	0.037	5/L1	0.011	0.92	0.03	G.G.P.	1.8 m lintel	0.042	0.006	1.11	0.03	0.095	29.956	1.37	375	81.531	81.12	81.679	81.37	2.34	1.88	A1-5 (A2-4)	Du/Do=1.00. Qa/Qo=0.43. S/Do=1.2	81.78	82.796	1.02
1%	4/L1	0.124	Grassed	20	0	31.146	2.68	0.06	4.36	0.076	5/L1	0.036	1.53	0.06			0.098	0.029	1.9	0.06	0.192						82.424	82.258	1.69	1.34	A1-5 (A2-4)	Du/Do=1.00. Qa/Qo=0.49. S/Do=3.2	82.67	82.796	0.13
20%	3/L1	0.158	Paved	80	0	53.12	2.85	0.011	2.13	0.046	4/L1	0.013	1.11	0.03	G.G.P.	1.8 m lintel	0.052	0.01	1.42	0.03	0.13	31.579	1	375	81.09	80.774	81.281	81.053	2.28	1.79	A1-5 (A2-4)	Du/Do=1.00. Qa/Qo=0.40. S/Do=1.3	81.37	82.336	0.97
1%	3/L1	0.158	Grassed	20	0	32.488	2.35	0.06	4.65	0.096	4/L1	0.047	1.9	0.06			0.125	0.041	2.33	0.06	0.271						81.853	81.57	2.39	2.24	A1-4 (A2-3)	H/Do=1.7. Vo2/(2aDo)=0.71	82.26	82.336	0.08
20%	2/L1	0.1298	Paved	80	0	56.261	1.14	0.011	2.9	0.038	3/L1	0.016	1.42	0.03	G.G.P.	2.4 m lintel	0.048	0.005	4.47	0	0.162	8.7	1	450	80.736	80.649	80.934	80.929	2.38	1.44	H-O'L	Qa/Qo=0.11. S/Do=1.1	81.05	81.874	0.82
1%	2/L1	0.1298	Grassed	20	0	37.808	2.42	0.06	5.04	0.078	3/L1	0.055	2.33	0.06			0.119	0.029	6.51	0.01	0.358						81.57	81.57	2.19	1.56	H-O'L	Qa/Qo=0.18. S/Do=1.8	81.57	81.874	0.3
20%	1/L1	0.1243	Paved	80	0	150	2.07	0.011	4.37	0.04					G.G.P.	2.4 m lintel	0.04	0.003	0.49	0.02	0.194	4.698	1	450	80.619	80.572	80.929	80.929	1.66	0.68	A1-5 (A2-4)	Du/Do=1.06. Qa/Qo=0.07. S/Do=1.0	80.93	81.874	0.94
1%	1/L1	0.1243	Grassed	20	0	6	1.99	0.06	1.77	0.076							0.076	0.015	0.97	0.04	0.423						81.57	81.565	2.66	0.64	A1-5 (A2-4)	Du/Do=1.06. Qa/Qo=0.06. S/Do=1.2	81.57	81.874	0.3
20%	OSD	0.125	Paved	0	0	0.1	0.1	0.01	0.14	0.024							0.024	0	0	0															
1%	OSD	0.125	Grassed	100	0	46.538	5.86	0.06	4.77	0.067							0.067																		

NOTES

This sheet presents results from a pipe system model using ILSAX, the rational method, extended rational method (ERM), or initial loss - continuing loss (IL-CL) model implemented in the DRAINS program, (www.watercom.com.au) involving considerable calculations with multiple rainfall patterns, and complex hydraulic computations. Therefore, unlike older rational method calculation sheets, this sheet does not portray hand calculations. It presents the key model inputs and outputs of interest to reviewers.

Depending on inputs, the table may show results for a minor storm, a major storm, or both. There may be multiple rows for up to three overflow routes coming to a pit. You can edit headings or delete columns or rows.

The contents of each column are discussed below:

Column 1: Design annual exceedance probability (AEP); values for minor storms, major storms or both may be displayed. Numerical values are not available for the rational method, but users can enter these.

Column 2: Pit Name from DRAINS (The connecting sub-catchment, downstream pipe and overflow route are assumed to have similar names, so they do not need to be entered in the table.)

Column 3: Sub-Catchment Area (ha)

Column 4: Land-Use Type: paved, supplementary and grassed areas (in different rows) for ILSAX, impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the IL-CL model.

Column 5: Percentages of paved, supplementary and grassed areas (in different rows) for ILSAX, impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the IL-CL model.

Column 6: Constant flow times for the paved, supplementary and grassed areas (minutes) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the IL-CL model.

Column 7: Lengths of paved, supplementary and grassed area flow path segments (m) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the IL-CL model.

Column 8: Slopes of paved, supplementary and grassed area flow path segments (%) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the IL-CL model.

Column 9: Roughnesses of paved, supplementary and grassed area flow path segments (Manning's values) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the IL-CL model.

Column 10: Total flow times for the paved, supplementary and grassed areas (minutes) for ILSAX, or impervious and pervious areas for the rational method and ERM, or equivalent impervious areas (EIAs) and remaining areas for the IL-CL model. For the rational method, it is the total catchment time of concentration.

Column 11: Peak Sub-Catchment Flowrate (m³/s). For the rational method, the output indicates whether this is a full catchment or partial area estimate.

Column 12: Origin of Overflows, the names of any pits or nodes from which overflows come to the pit.

Column 13: Peak Overflows from upstream pits or nodes (m³/s), which may include flows from the sub-catchment through which they flow.

- not outputted for the rational method.)

Column 14: Approach Flow Width (m) - not outputted for the rational method.

Column 15: Approach Flow Depth x Velocity (m²/s) - not outputted for the rational method.

Column 16: Inlet Family, in the DRAINS classification.

Column 17: Inlet Size, in the DRAINS classification.

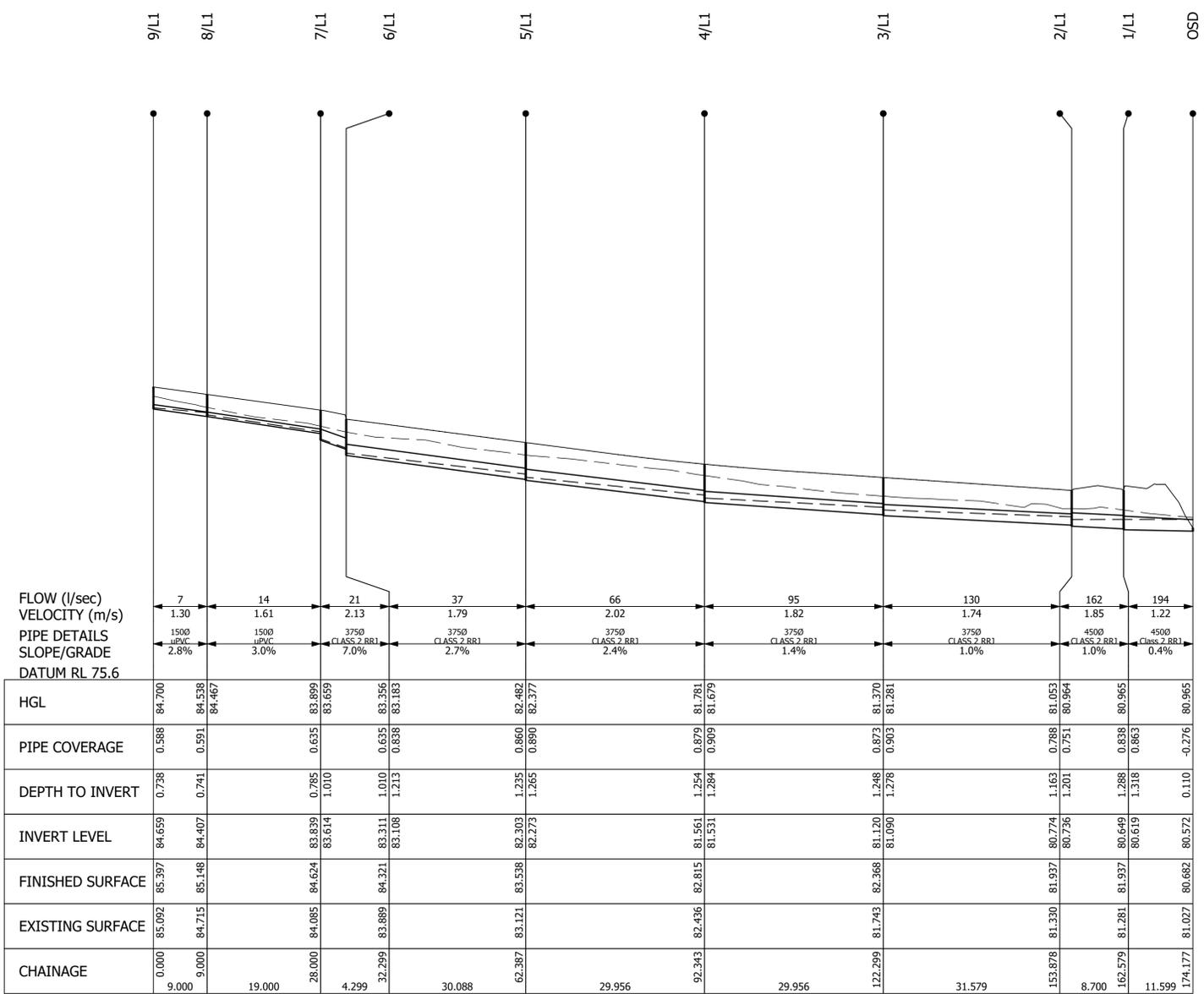
Column 18: Total Approach Flow (m³/s), local sub-catchment runoff plus overflows directed to the pit.

Column 19: Bypass Flow (m³/s), the overflow occurring because of lack of inlet capacity or overflowing of the pipe system

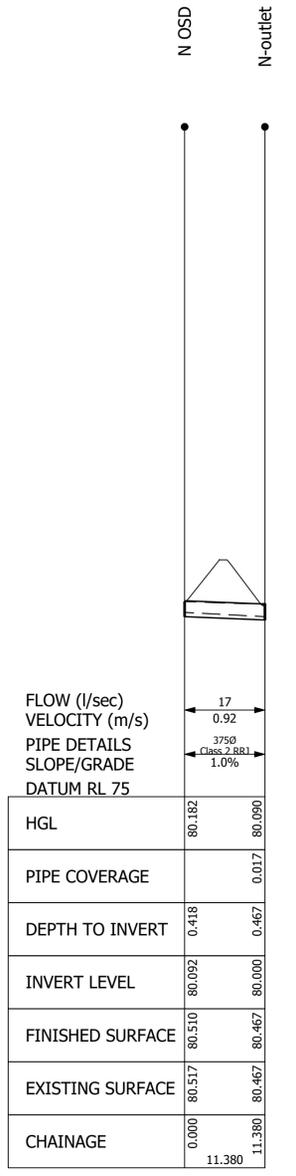


DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS	PROJECT	DRAWING NUMBER	
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION		-	AHD	CAMDEN COUNCIL	-	ABN: 86 064 110 809	143 INGLEBURN ROAD LEPPINGTON, NSW	302	
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021	THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.		DESIGN	CHECKING	DA No.	DATE	GROUP DEVELOPMENT SERVICES PTY LTD	PROJECT REFERENCE		
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021			M.D.	-	-	-	-	PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000	DATE OF ISSUE	
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021			DRAWN	CHECKING	CC No.	DATE		Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au	REVISION No.	
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020			M.D.	-	-	-		THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.	SHEET SIZE	
											P00435	A1	



DRAINAGE LONGITUDINAL SECTION FOR LINE N1
 SCALES: HORIZONTAL 1:500 VERTICAL 1:100



DRAINAGE LONGITUDINAL SECTION FOR LINE L3
 SCALES: HORIZONTAL 1:500 VERTICAL 1:100

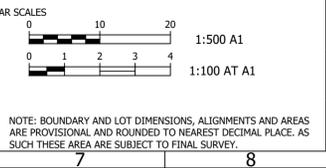


DA SUBMISSION
 NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
 SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE ARE SUBJECT TO FINAL SURVEY.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

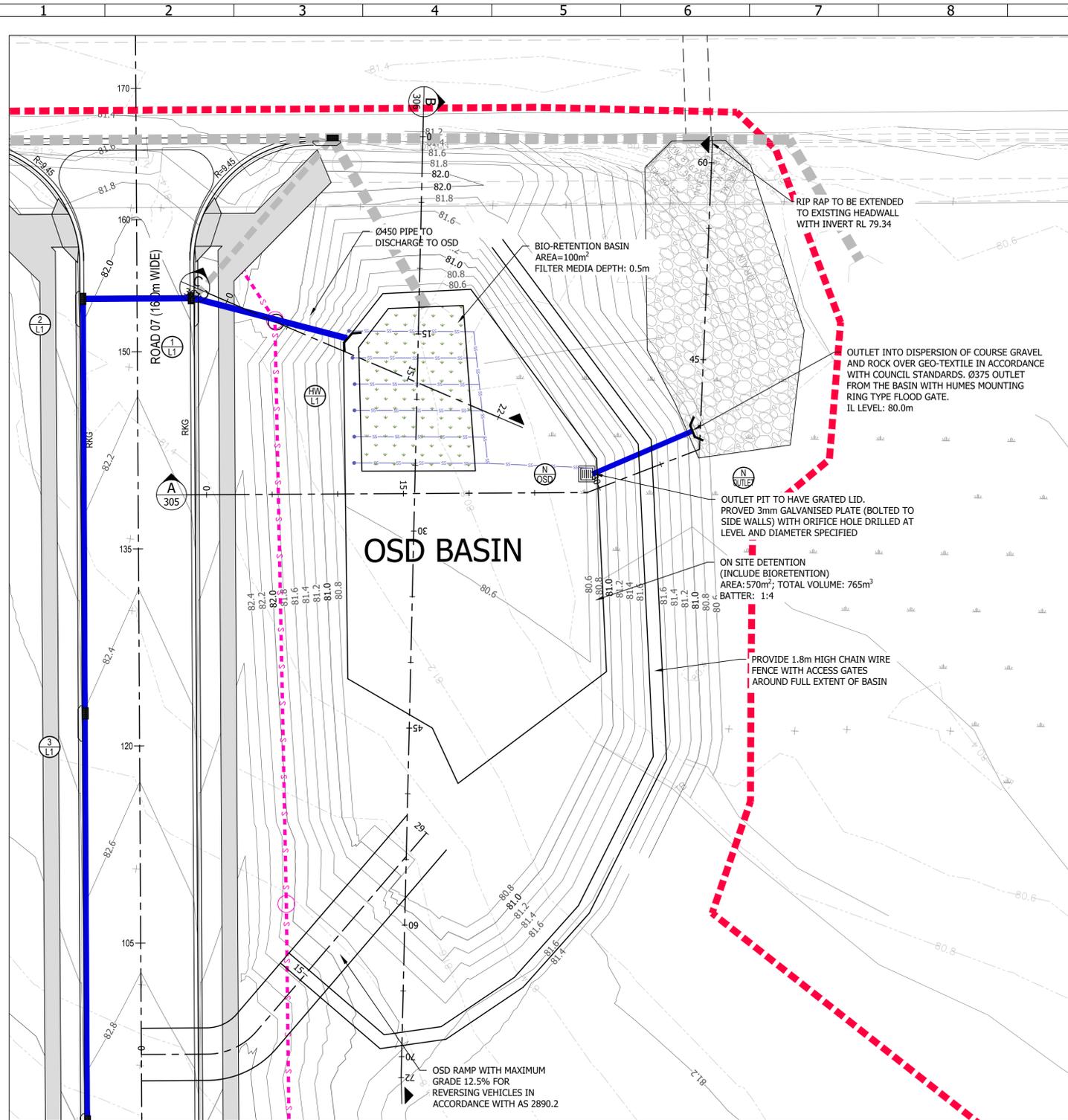
GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498, Pennant Hills NSW 1715
 Phone: +61 2 9980 1000
 Email: info@gdsland.com.au
 Fax: +61 2 9484 0355
 Website: www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT	143 INGLEBURN ROAD LEPPINGTON, NSW		
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
P00435	02/09/2021	E	A1

DRAWING NUMBER
303



ONSITE DETENTION PLAN
SCALE 1:200

- NOTES:**
- Ø150 SUBSOIL DRAINS TO BE LAID AT 2.0m c/c. FLUSHING POINTS TO BE PROVIDED
 - ERECT 1.8m HIGH MAN PROOF FENCE AROUND BASIN EXTERNALS WITH LOCKABLE GATE AND WARNING SIGNS
 - FLOODWAY WARNING SIGNS (A(BS)1145) TO BE PLACED ADJOINING FLOOD WAYS AND BASINS

Site discharge flow							
Storm event	Catchment (ha)	50% ARI	20% ARI	10% ARI	5% ARI	2% ARI	1% ARI
Pre-dev. Include upper catch(cu.m/s)	0.907	0.030	0.070	0.110	0.146	0.199	0.240
Post-dev. Include upper catch (cu.m/s)	0.907	0.025	0.027	0.029	0.029	0.031	0.00*
No OSD	0.907	0.129	0.194	0.260	0.317	0.358	0.383

* It is assumed there is no discharge flow at the 1% ARI storm event from the basin as the flood level is 81.6m. Providing a flap plate (one way valve) on the outlet of the basin to protect the basin

Max Volume						
Storm event	50% ARI	20% ARI	10% ARI	5% ARI	2% ARI	1% ARI
OSD (cu.m)	106.4	171.8	245.9	290.6	376.4	712.1

Max Water Level (m)						
Storm event	50% ARI	20% ARI	10% ARI	5% ARI	2% ARI	1% ARI
OSD (m)	80.87	80.96	81.06	81.12	81.22	81.56

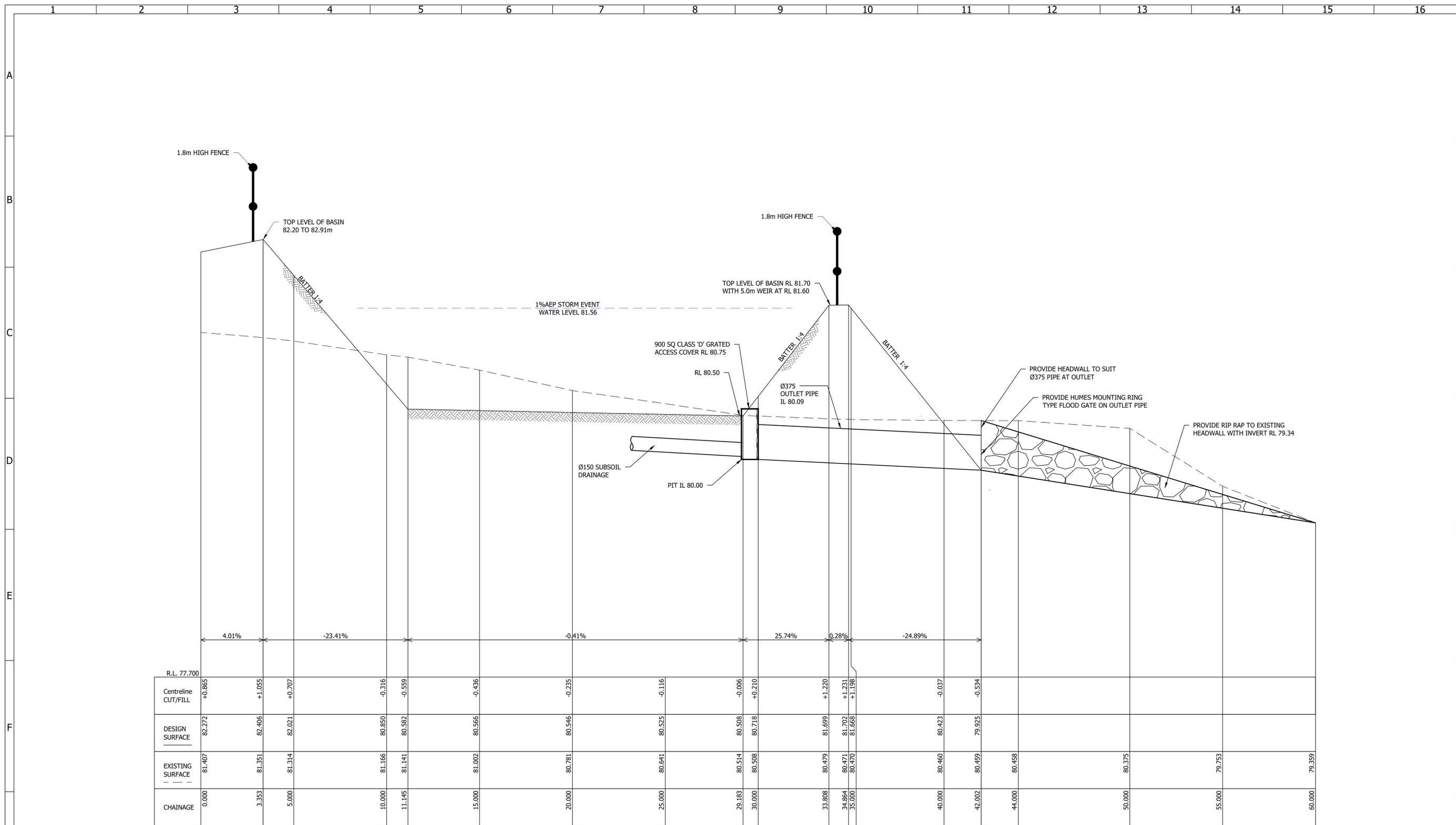
OSD Details	Level (m)	80.05	80.45	80.5	80.7	81	81.7
	Area (sq.m)	1	1	1	550	735	900
	Volume (cu.m)	765					

	Dia (mm)	IL Level (m)
OSD Outlet Pipe	375	80.09
OSD WIER (Pit 900 SQ)	-	80.75
OSD Emergency WIER	-	81.60
ORIFICE	125	80.1



DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	PROJECT MANAGERS	PROJECT	DRAWING NUMBER	
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION	0 5 10 1:200 AT A1	-	AHD	CAMDEN COUNCIL	-	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS ABN: 86 064 110 809 gds GROUP DEVELOPMENT SERVICES PTY LTD PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000 Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au	143 INGLEBURN ROAD LEPPINGTON, NSW	304	
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021										
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021										
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021										
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020										
				NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE ARE SUBJECT TO FINAL SURVEY.	SURVEY		DATE	DATE	DATE	PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
						DESIGN	CHECKING	DA No.	DATE	P00435	02/09/2021	E	A1
						DRAWN	CHECKING	CC No.	DATE				



CHAINAGE	0.000	3.353	5.000	10.000	11.145	15.000	20.000	25.000	29.183	30.000	33.808	34.864	35.000	40.000	42.002	44.000	50.000	55.000	60.000
EXISTING SURFACE	81.407	81.351	81.314	81.166	81.141	81.002	80.781	80.641	80.514	80.508	80.479	80.471	80.470	80.460	80.459	80.458	80.375	79.753	79.359
DESIGN SURFACE	82.272	82.406	82.021	80.850	80.582	80.566	80.546	80.525	80.508	80.718	81.699	81.702	81.668	80.423	79.925				
Centreline CUT/FILL	+0.865	+1.055	+0.707	-0.316	-0.559	-0.436	-0.235	-0.116	-0.006	+0.210	+1.220	+1.231	+1.198	-0.037	-0.534				
R.L. 77.700																			

LONGITUDINAL SECTION
 OSD Section A Ch 0.000 to Ch 60.000
 SCALES: HORIZONTAL 1:100 VERTICAL 1:20
SECTION A
 SCALE 1: 100H 304
 1:20V

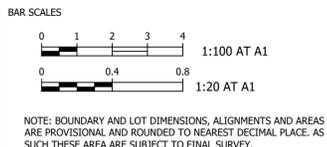


DA SUBMISSION
 NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
 SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

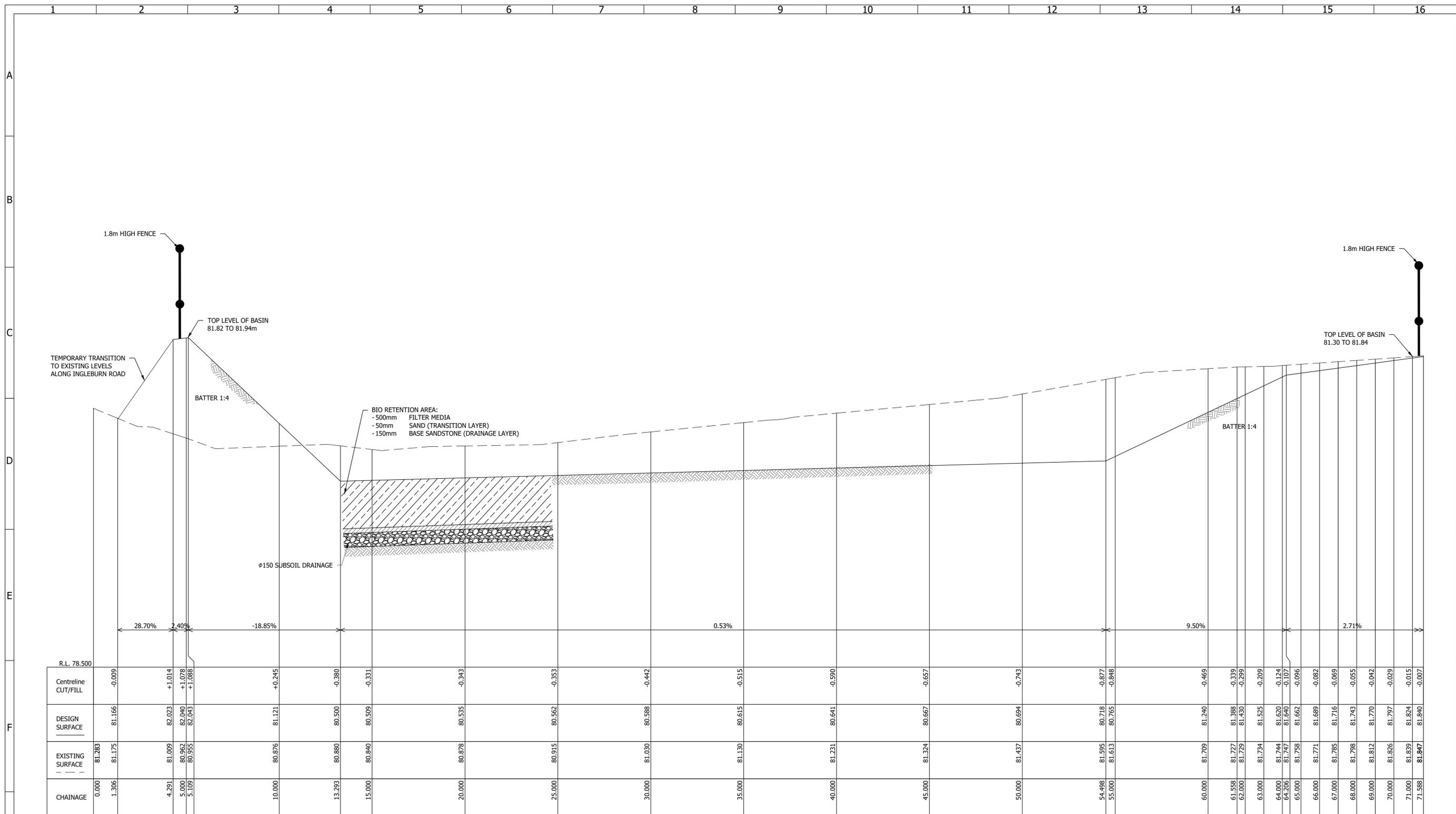
ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498, Pennant Hills NSW 1715
 Phone: +61 2 9980 1000
 Fax: +61 2 9484 0355
 Email: info@gdsland.com.au
 www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW		DRAWING NUMBER	
ONSITE DETENTION SECTIONS - SHEET 1		305	
PROJECT REFERENCE P00435	DATE OF ISSUE 02/09/2021	REVISION No. E	SHEET SIZE A1



LONGITUDINAL SECTION
 OSD Section B Ch 0.000 to Ch 71.588
 SCALES: HORIZONTAL 1:100 VERTICAL 1:20
SECTION B
 SCALE 1: 100H 304
 1:20V

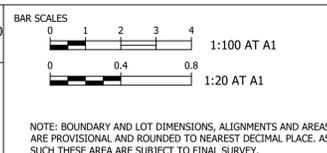


DA SUBMISSION
 NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
 SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

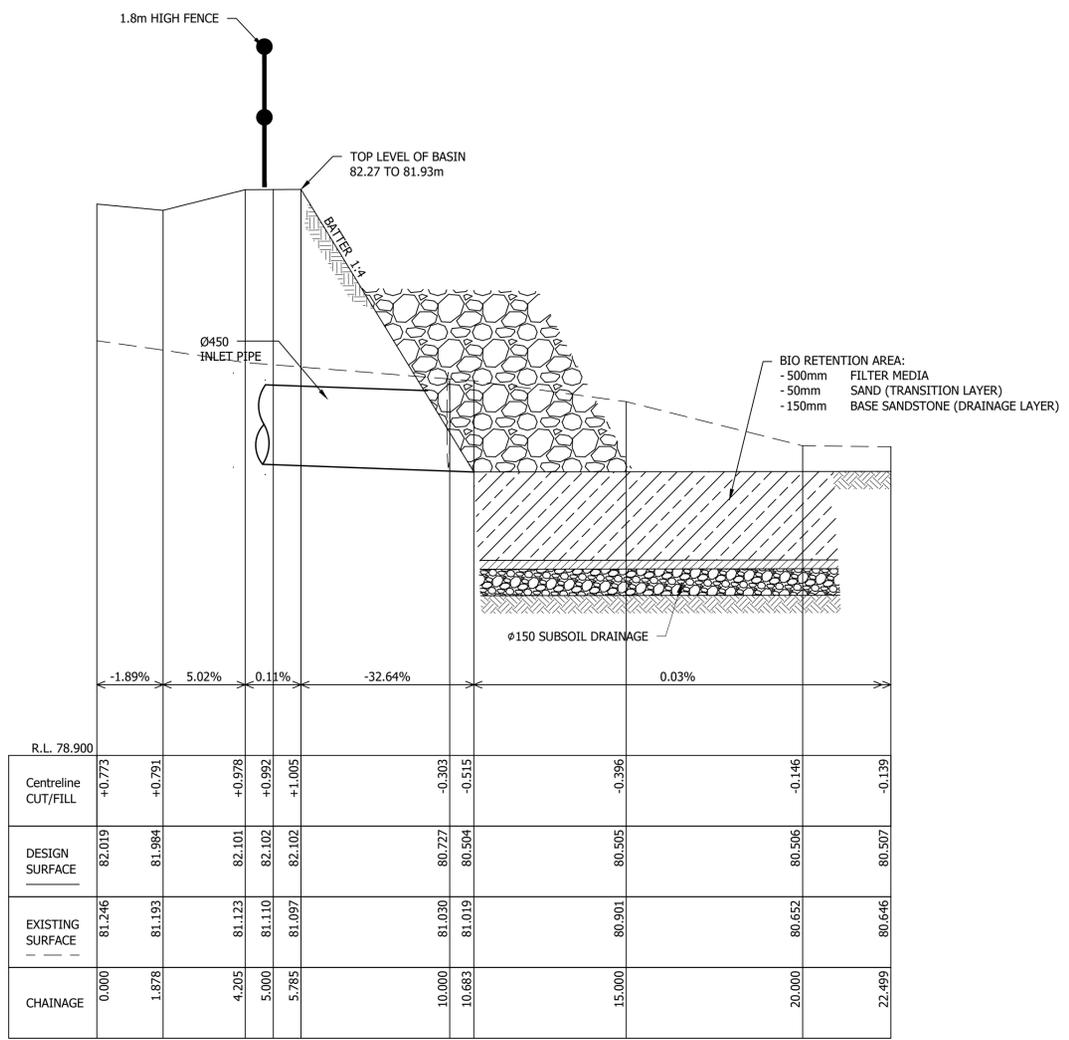
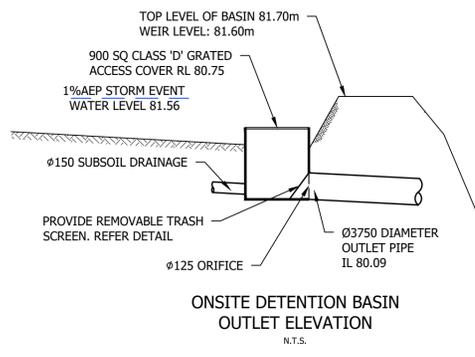
PO Box 498, Pennant Hills NSW 1715
 Phone: +61 2 9980 1000
 Fax: +61 2 9484 0355
 Email: info@gdsland.com.au
 www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

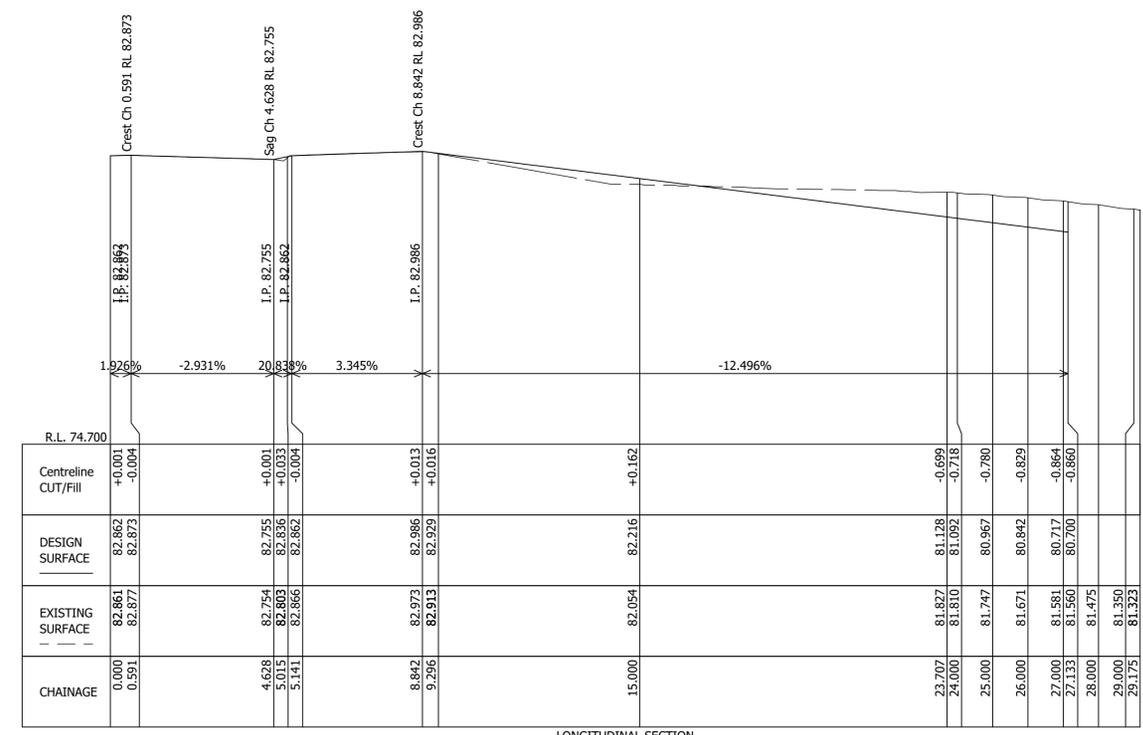
PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW		DRAWING NUMBER	
ONSITE DETENTION SECTIONS - SHEET 2		306	
PROJECT REFERENCE P00435	DATE OF ISSUE 02/09/2021	REVISION No. E	SHEET SIZE A1

NOTES:

- Ø150 SUBSOIL DRAINS TO BE LAID AT 2.0m c/c. PROVIDE FLUSHING POINTS ON UPSTREAM END.
- ERECT 1.8m HIGH MAN PROOF FENCE AROUND BASIN EXTERNALS WITH LOCKABLE GATE AND WARNING SIGNS
- FLOODWAY WARNING SIGNS (A(BS)1145) TO BE PLACED ADJOINING FLOOD WAYS AND BASINS
- BASIN RETAINING WALLS TO BE DESIGNED AND CERTIFIED BY A CPENGER STRUCTURAL ENGINEER AND DETAILS PROVIDED TO COUNCIL AND APPROVED PRIOR TO COMMENCEMENT OF CONSTRUCTION



LONGITUDINAL SECTION
OSD Section C Ch 0.000 to Ch 22.499
SCALES: HORIZONTAL 1:100 VERTICAL 1:20
SECTION C
SCALE 1: 100H 304
1:20V



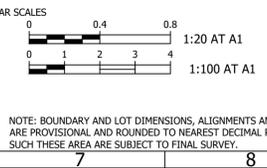
LONGITUDINAL SECTION
OSDDRIWAYWAY Ch 0.000 to Ch 29.175
SCALES: HORIZONTAL 1:100 VERTICAL 1:100



DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

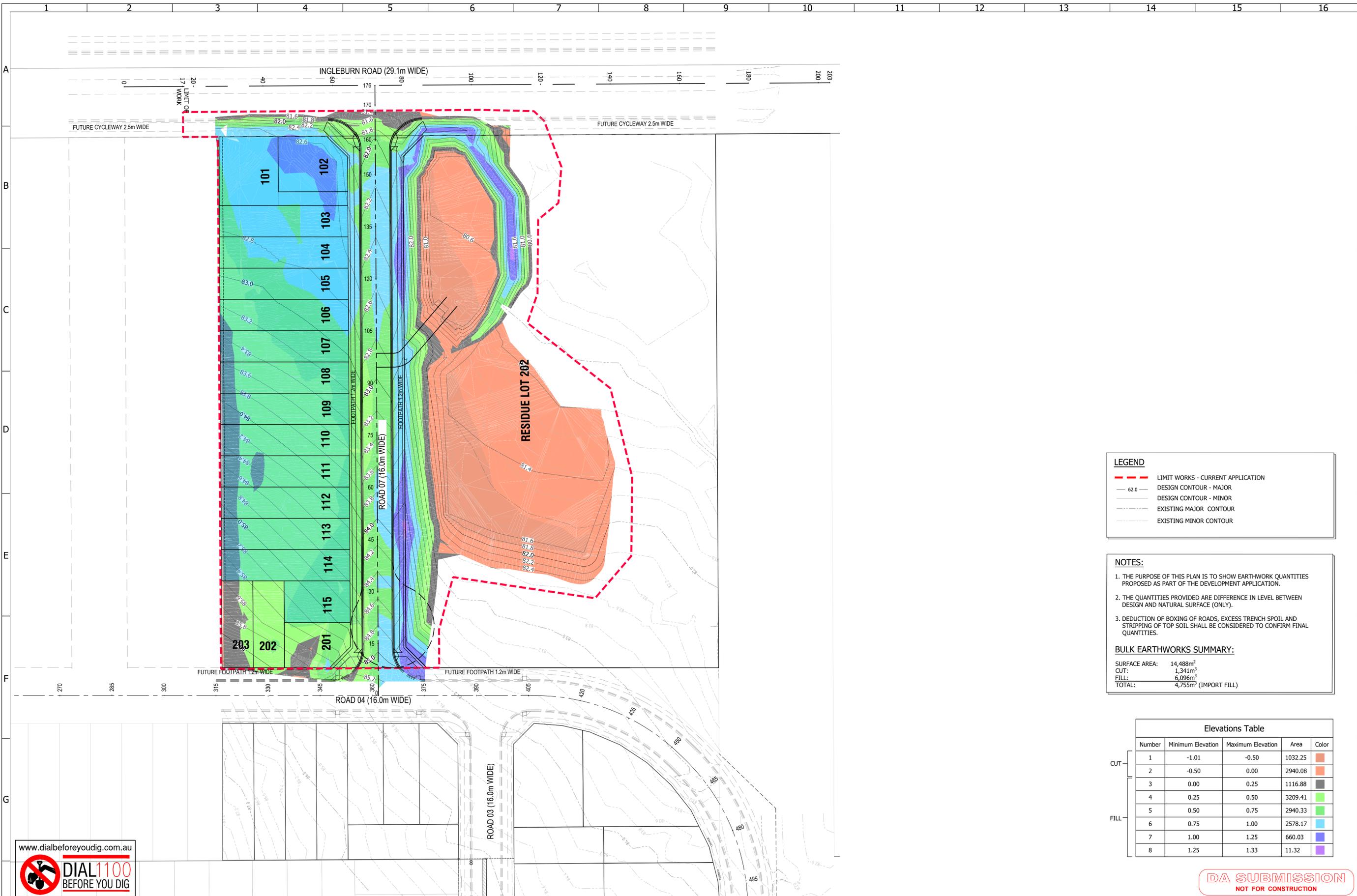
GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498, Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT	143 INGLEBURN ROAD LEPPINGTON, NSW			DRAWING NUMBER	307
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE		
P00435	02/09/2021	E	A1		



LEGEND

- - - LIMIT WORKS - CURRENT APPLICATION
- 62.0 DESIGN CONTOUR - MAJOR
- DESIGN CONTOUR - MINOR
- - - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR

NOTES:

- THE PURPOSE OF THIS PLAN IS TO SHOW EARTHWORK QUANTITIES PROPOSED AS PART OF THE DEVELOPMENT APPLICATION.
- THE QUANTITIES PROVIDED ARE DIFFERENCE IN LEVEL BETWEEN DESIGN AND NATURAL SURFACE (ONLY).
- DEDUCTION OF BOXING OF ROADS, EXCESS TRENCH SPOIL AND STRIPPING OF TOP SOIL SHALL BE CONSIDERED TO CONFIRM FINAL QUANTITIES.

BULK EARTHWORKS SUMMARY:

SURFACE AREA: 14,488m²
 CUT: 1,341m³
 FILL: 6,096m³
 TOTAL: 4,755m³ (IMPORT FILL)

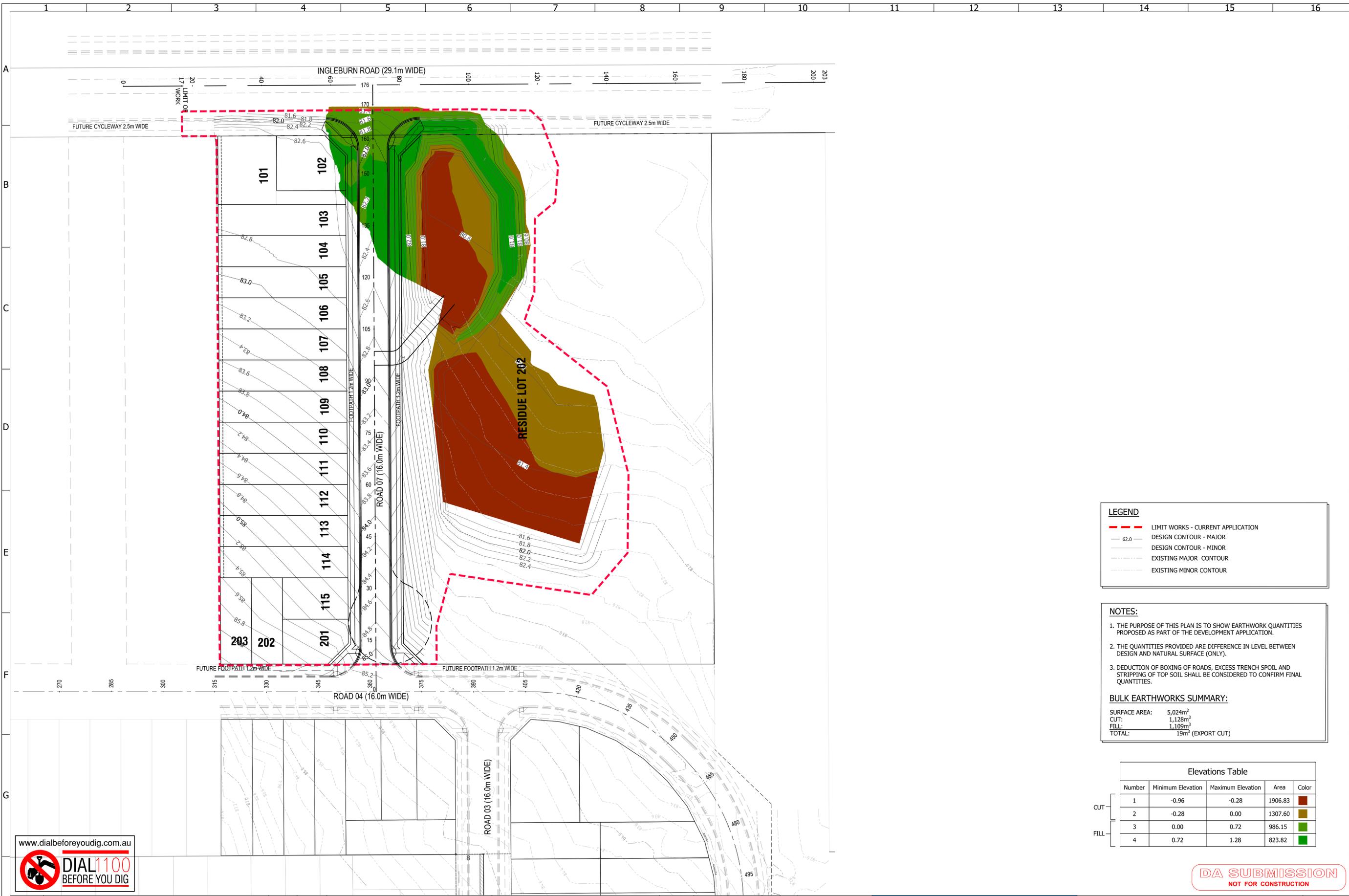
Elevations Table

Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-1.01	-0.50	1032.25	
2	-0.50	0.00	2940.08	
3	0.00	0.25	1116.88	
4	0.25	0.50	3209.41	
5	0.50	0.75	2940.33	
6	0.75	1.00	2578.17	
7	1.00	1.25	660.03	
8	1.25	1.33	11.32	



DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE		PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS GROUP DEVELOPMENT SERVICES PTY LTD <small>ABN: 86 064 110 809</small> 	PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW BULK EARTHWORKS PLAN	DRAWING NUMBER 400					
F	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION <small>THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.</small>	0	10	20	1:500 A1	DESIGN					CHECKING	AHD	DATE	DA No.	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	27/08/2021		DRAWN	CHECKING	CC No.	DATE	DA No.					DATE	DA No.	DATE	DA No.	DATE
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021		NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE AREA ARE SUBJECT TO FINAL SURVEY.	9	9	9	9					9	9	9	9	9
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021															
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021															



LEGEND

- - - LIMIT WORKS - CURRENT APPLICATION
- 62.0 DESIGN CONTOUR - MAJOR
- DESIGN CONTOUR - MINOR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

NOTES:

- THE PURPOSE OF THIS PLAN IS TO SHOW EARTHWORK QUANTITIES PROPOSED AS PART OF THE DEVELOPMENT APPLICATION.
- THE QUANTITIES PROVIDED ARE DIFFERENCE IN LEVEL BETWEEN DESIGN AND NATURAL SURFACE (ONLY).
- DEDUCTION OF BOXING OF ROADS, EXCESS TRENCH SPOIL AND STRIPPING OF TOP SOIL SHALL BE CONSIDERED TO CONFIRM FINAL QUANTITIES.

BULK EARTHWORKS SUMMARY:

SURFACE AREA: 5,024m²
 CUT: 1,128m²
 FILL: 1,109m²
 TOTAL: 19m² (EXPORT CUT)

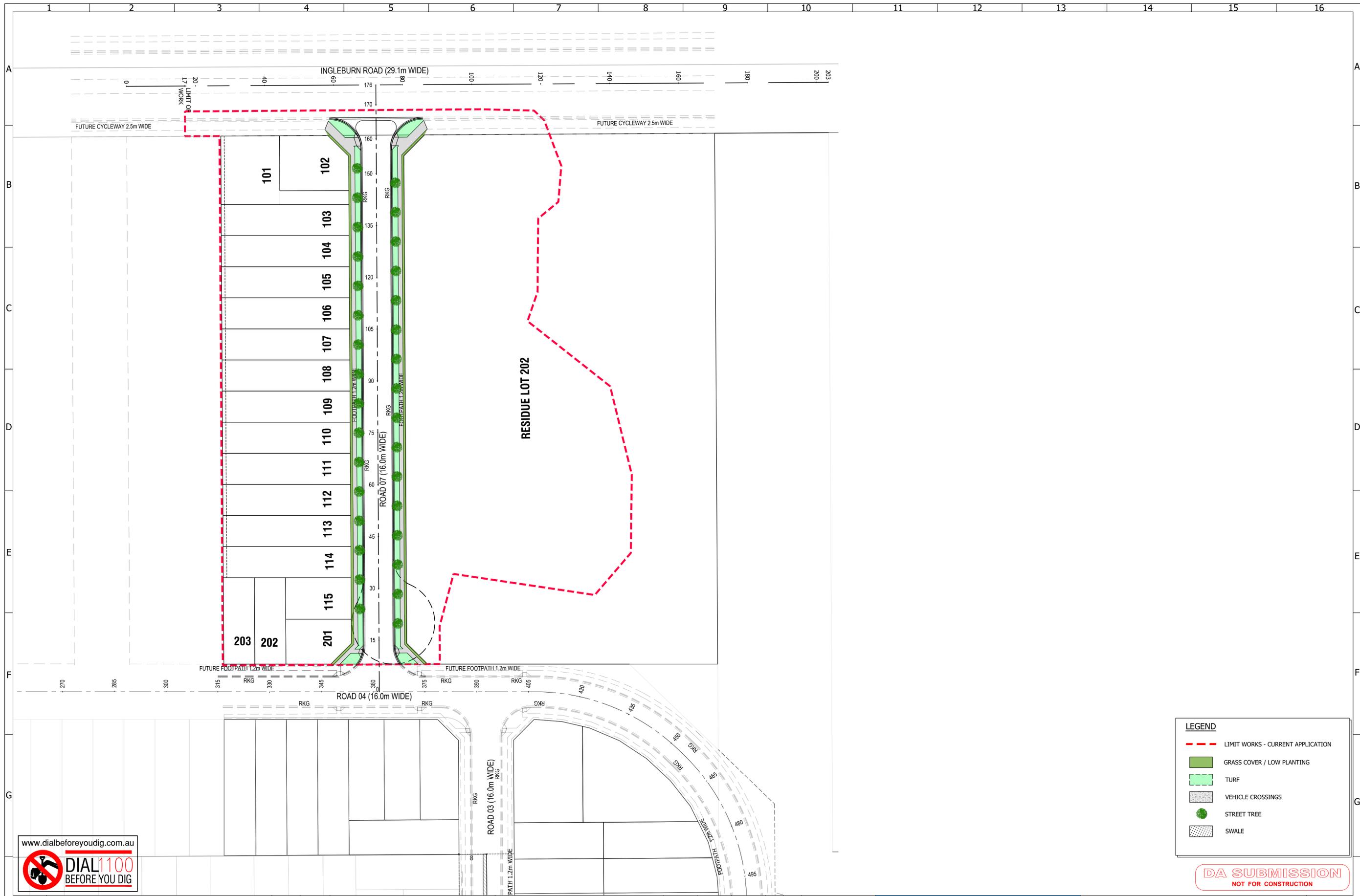
Elevations Table

Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-0.96	-0.28	1906.83	
2	-0.28	0.00	1307.60	
3	0.00	0.72	986.15	
4	0.72	1.28	823.82	



DA SUBMISSION
NOT FOR CONSTRUCTION

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REVISION</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>F</td> <td>AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL</td> <td>Y.L.</td> <td>02/09/2021</td> </tr> <tr> <td>E</td> <td>AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL</td> <td>Y.L.</td> <td>27/08/2021</td> </tr> <tr> <td>D</td> <td>AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL</td> <td>W.M.</td> <td>16/08/2021</td> </tr> <tr> <td>C</td> <td>RE-ISSUE FOR DA ENGINEERING APPROVAL</td> <td>W.M.</td> <td>05/07/2021</td> </tr> <tr> <td>B</td> <td>RE-ISSUE FOR DA ENGINEERING APPROVAL</td> <td>M.D.</td> <td>01/04/2021</td> </tr> </tbody> </table>	REVISION	DESCRIPTION	BY	DATE	F	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	27/08/2021	D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021	C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021	B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021	<p>SITE DESCRIPTION SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION</p> <p><small>THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.</small></p>	<p>BAR SCALES</p> <p>0 10 20 1:500 A1</p> <p><small>NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE ARE SUBJECT TO FINAL SURVEY.</small></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SURVEY</th> <th>HEIGHT DATUM AHD</th> <th>LGA CAMDEN COUNCIL</th> <th>AUTHORITY REFERENCE</th> </tr> </thead> <tbody> <tr> <td>DESIGN</td> <td>CHECKING</td> <td>DA No.</td> <td>DATE</td> </tr> <tr> <td>M.D.</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>DRAWN</td> <td>CHECKING</td> <td>CC No.</td> <td>DATE</td> </tr> <tr> <td>M.D.</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	SURVEY	HEIGHT DATUM AHD	LGA CAMDEN COUNCIL	AUTHORITY REFERENCE	DESIGN	CHECKING	DA No.	DATE	M.D.	-	-	-	DRAWN	CHECKING	CC No.	DATE	M.D.	-	-	-	<p>PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS</p> <p>ABN: 86 064 110 809</p> <p>GROUP DEVELOPMENT SERVICES PTY LTD</p> <p>PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000</p> <p>Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au</p>	<p>PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW</p> <p>BULK EARTHWORKS PLAN - FLOOD AREAS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>PROJECT REFERENCE</th> <th>DATE OF ISSUE</th> <th>REVISION No.</th> <th>SHEET SIZE</th> </tr> <tr> <td>P00435</td> <td>02/09/2021</td> <td>F</td> <td>A1</td> </tr> </table>	PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE	P00435	02/09/2021	F	A1	<p>DRAWING NUMBER</p> <p style="font-size: 2em; font-weight: bold;">401</p>
REVISION	DESCRIPTION	BY	DATE																																																							
F	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021																																																							
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	27/08/2021																																																							
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021																																																							
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021																																																							
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021																																																							
SURVEY	HEIGHT DATUM AHD	LGA CAMDEN COUNCIL	AUTHORITY REFERENCE																																																							
DESIGN	CHECKING	DA No.	DATE																																																							
M.D.	-	-	-																																																							
DRAWN	CHECKING	CC No.	DATE																																																							
M.D.	-	-	-																																																							
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE																																																							
P00435	02/09/2021	F	A1																																																							



LEGEND	
	LIMIT WORKS - CURRENT APPLICATION
	GRASS COVER / LOW PLANTING
	TURF
	VEHICLE CROSSINGS
	STREET TREE
	SWALE

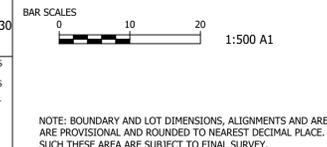
DA SUBMISSION
NOT FOR CONSTRUCTION



REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498, Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

PROJECT		DRAWING NUMBER	
143 INGLEBURN ROAD LEPPINGTON, NSW		500	
PUBLIC DOMAIN PLAN			
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
P00435	02/09/2021	E	A1

4.5.2 Trunk and branch protection

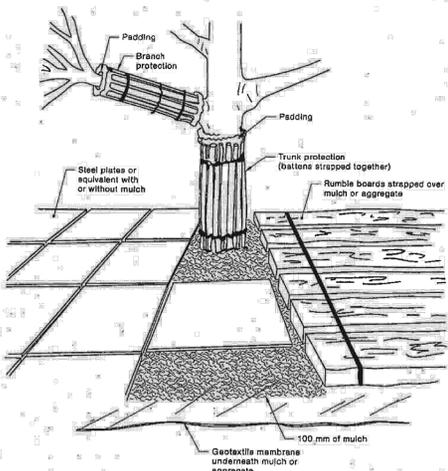
Where necessary, install protection to the trunk and branches of trees as shown in Figure 4. The materials and positioning of protection are to be specified by the project arborist. A minimum height of 2 m is recommended.

Do not attach temporary powerlines, stays, guys and the like to the tree. Do not drive nails into the trunks or branches.

4.5.3 Ground protection

If temporary access for machinery is required within the TPZ ground protection measures will be required. The purpose of ground protection is to prevent root damage and soil compaction within the TPZ. Measures may include a permeable membrane such as geotextile fabric beneath a layer of mulch or crushed rock below rumble boards as per Figure 4.

These measures may be applied to root zones beyond the TPZ.



NOTES:

- 1 For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.
- 2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

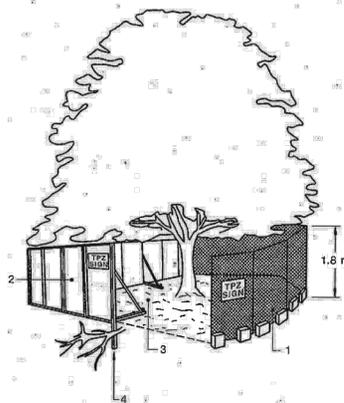
FIGURE 4 EXAMPLES OF TRUNK, BRANCH AND GROUND PROTECTION

Existing perimeter fencing and other structures may be suitable as part of the protective fencing.

Figure 3 indicates an example of protective fencing.

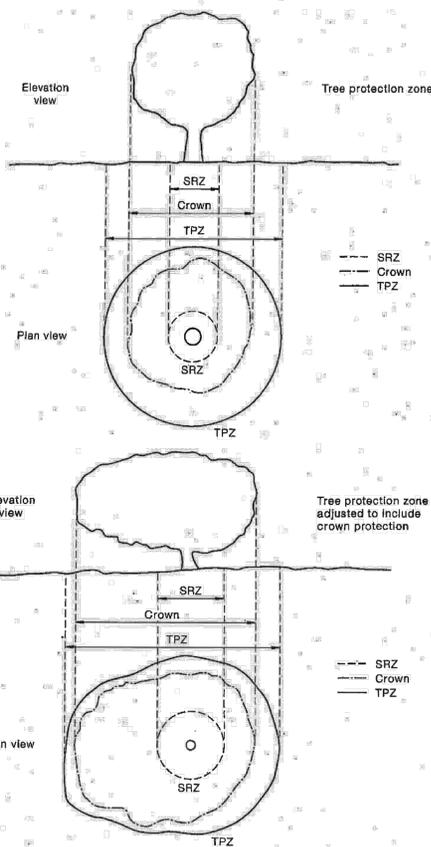
4.4 SIGNS

Signs identifying the TPZ should be placed around the edge of the TPZ and be visible from within the development site (refer Figure 3). The lettering on the sign should comply with AS 1319. Appendix C provides an example of a suitable TPZ sign.



- LEGEND:**
- 1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
 - 2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
 - 3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
 - 4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

FIGURE 3 PROTECTIVE FENCING



NOTE: Refer to Clause 3.2 for calculation of TPZ.

FIGURE 2 INDICATIVE TREE PROTECTION ZONE

lands Australia

www.standard

100 x 38mm TREATED PINE OR EQUIVALENT RAIL

GALVANISED BOLTS TO FIX RAIL TO POSTS

100 x 100mm TREATED PINE OR EQUIVALENT POSTS

2 HARDWOOD STAKES AND HESSIAN TIES TIED IN FIGURE 8 AND STAPLED TO STAKES TO SUPPORT TREE

MIN. 75 LITRE POT SIZE TREE PLANTING

75mm DEPTH OF PINE FLAKE MULCH OR EQUIVALENT PLACED CLEAR OF PLANT STEM TO FINISH FLUSH WITH ADJACENT SURFACE

KERB AND GUTTER

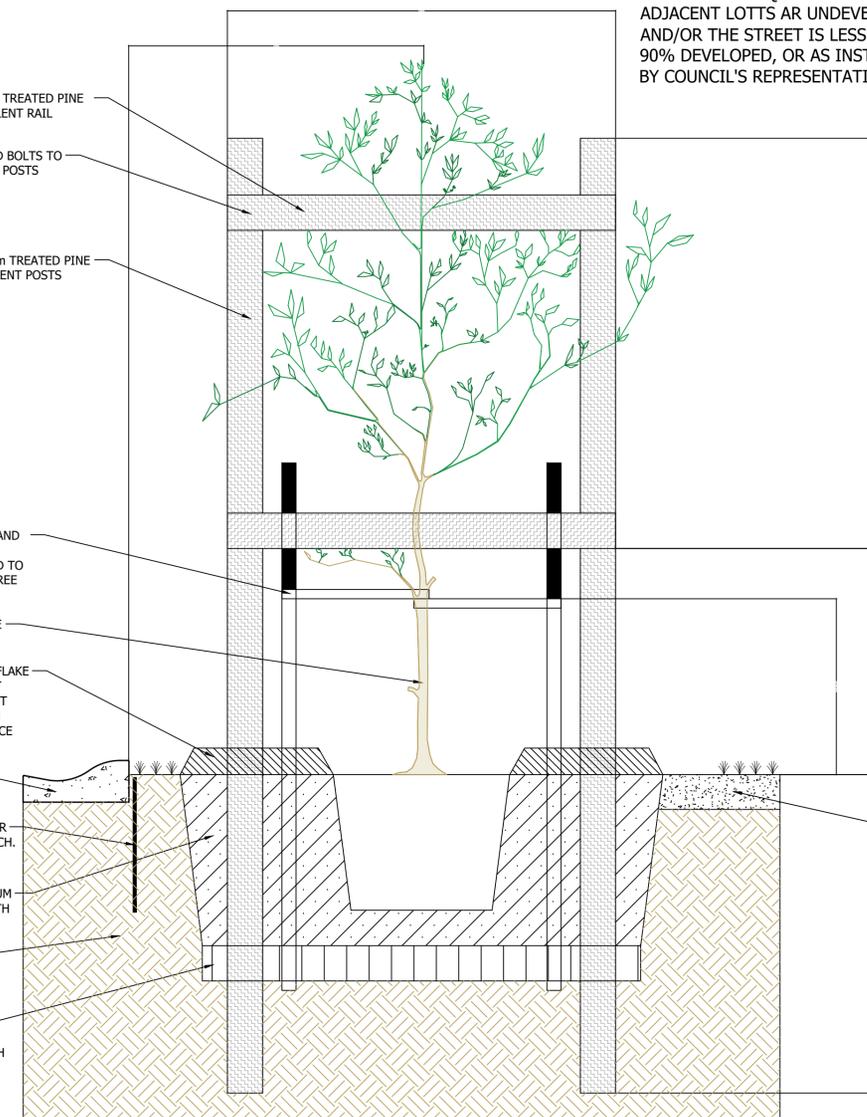
ROOT CONTROL BARRIER TO KERB SIDE OF TRENCH. 600mm DEEP, 2m LONG

PLANTING HOLE MINIMUM 1.5 TIMES POT SIZE WITH TOPSOIL MIX

EXISTING SUBGRADE

BREAK UP BASE OF PLANTING HOLE MINIMUM 100mm DEPTH

NOTE:
TREE GUARD REQUIRED WHERE ADJACENT LOTS ARE UNDEVELOPED AND/OR THE STREET IS LESS THAN 90% DEVELOPED, OR AS INSTRUCTED BY COUNCIL'S REPRESENTATIVE.



TYPICAL TREE PLANTING DETAIL (2 STAKES)
(REFER HILLS SHIRE COUNCIL STANDARD DRAWING SD50)
N.T.S.

www.dialbeforeyoudig.com.au



DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM AHD	LGA CAMDEN COUNCIL	AUTHORITY REFERENCE	PROJECT	DRAWING NUMBER		
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION	NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE AREAS ARE SUBJECT TO FINAL SURVEY.	-	-	-	-	143 INGLEBURN ROAD LEPPINGTON, NSW	501		
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021										
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021										
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021										
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020										
				THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSCIENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.		DESIGN	CHECKING	DA No.	DATE	PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
						DRAWN	CHECKING	CC No.	DATE	P00435	02/09/2021	E	A1

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

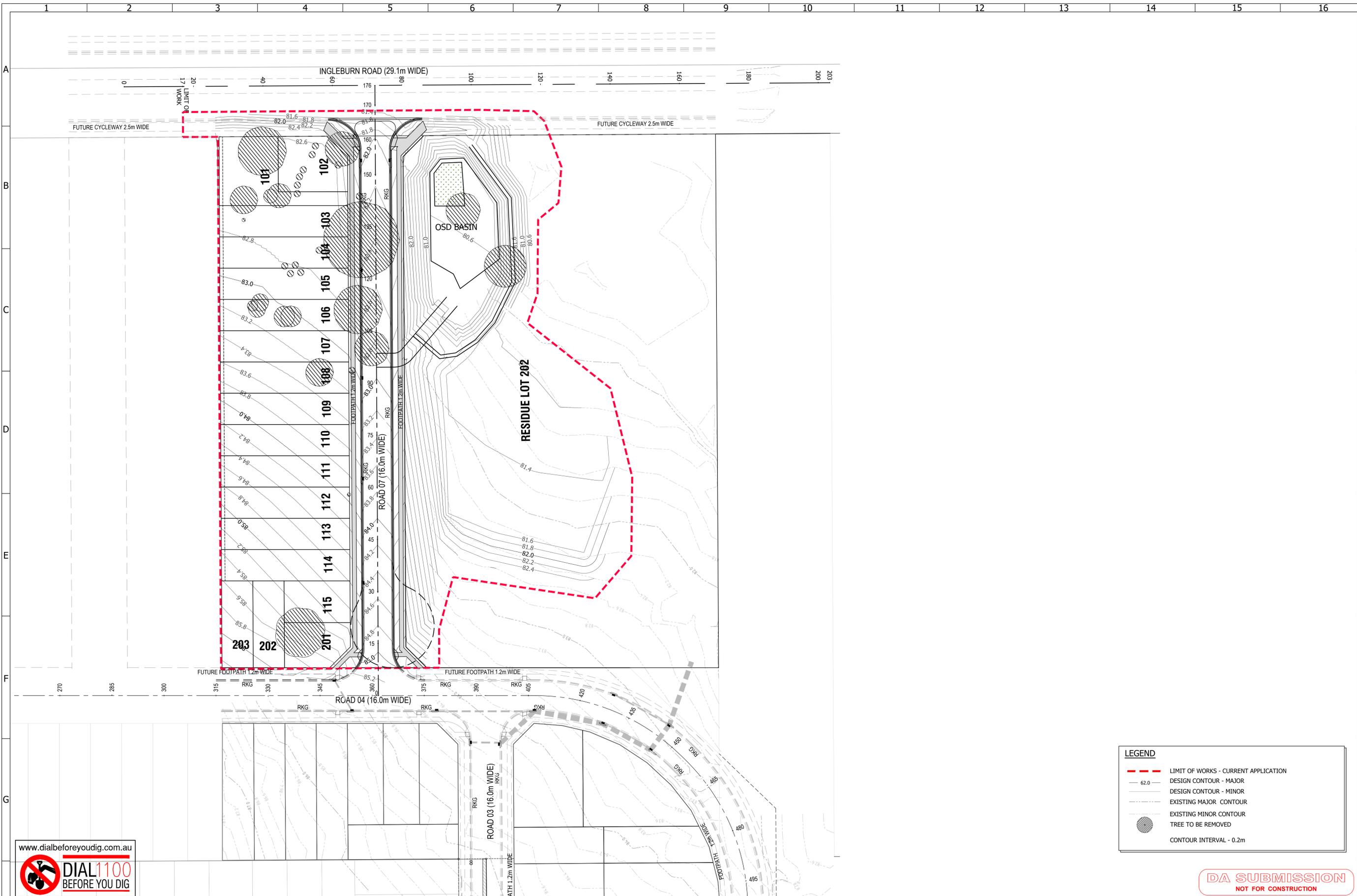
ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498, Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.



LEGEND	
	LIMIT OF WORKS - CURRENT APPLICATION
	DESIGN CONTOUR - MAJOR
	DESIGN CONTOUR - MINOR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	TREE TO BE REMOVED
	CONTOUR INTERVAL - 0.2m

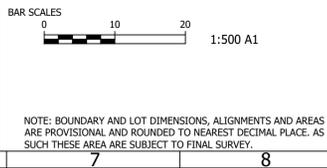


DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
-	AHD	CAMDEN COUNCIL	-
DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-



PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498, Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT	143 INGLEBURN ROAD LEPPINGTON, NSW			DRAWING NUMBER	600
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE		
P00435	02/09/2021	E	A1		

3
DP 341680



LEGEND

	LIMIT WORKS - CURRENT APPLICATION
	DESIGN CONTOUR - MAJOR
	DESIGN CONTOUR - MINOR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	BARRIER FENCE
	SEDIMENT FENCE
	HAY BALE FILTER
	DEMOLITION WORKS

- NOTES:**
- SEDIMENT FENCE MADE OF GEOTEXTILE FILTER FABRIC 0.2m BELOW NATURAL SURFACE. STAKES DRIVEN IN 0.6m BELOW SURFACE.
 - TOILET (PORT - A - LOO) AND WATER FACILITIES TO BE PROVIDED DURING FULL PERIOD OF DEMOLITION.
 - ALL ICONS ON THIS LEGEND AND PLAN ARE REPRESENTATIVE ONLY. FOR DETAILS REFER TO:
 - THIS SET OF DRAWINGS.
 - STANDARD DRAWINGS FROM THE PUBLICATION "MANAGING URBAN STORMWATER : SOILS AND CONSTRUCTION" 1998 (MUSCC 1998)
 - PRODUCED BY NSW DEPT HOUSING.
 - COUNCIL STANDARD DRAWINGS.
- NOTE: DEMOLISHER MUST ENSURE STABILISED ACCESS TO SITE.

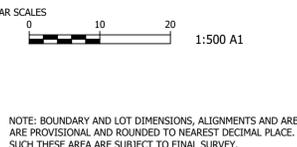
DA SUBMISSION
NOT FOR CONSTRUCTION



REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.



SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
DESIGN	CHECKING	CAMDEN COUNCIL	DA No.
DRAWN	CHECKING	CC No.	DATE

PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

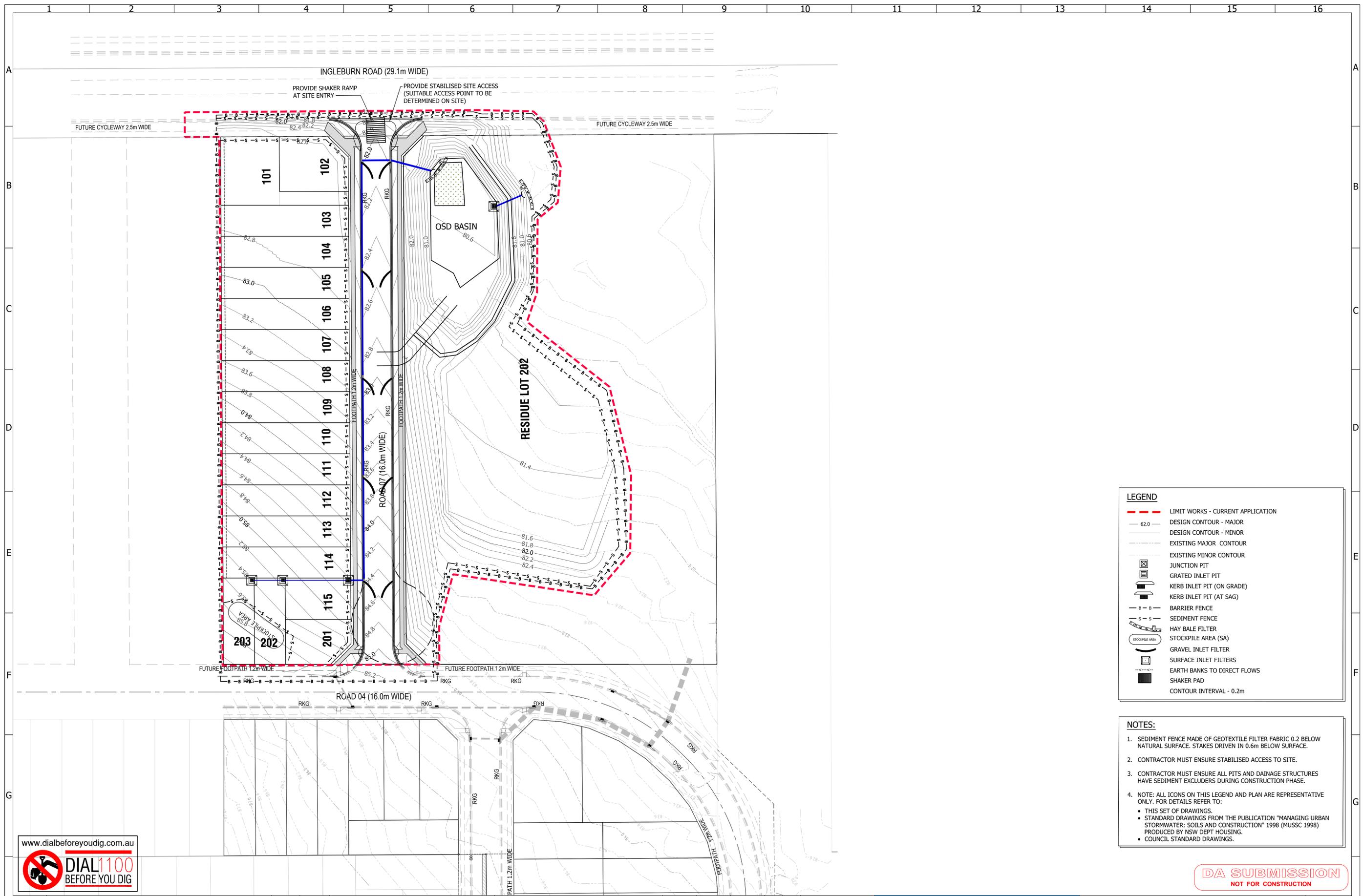
PO Box 498, Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW			
DEMOLITION PLAN			
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
P00435	02/09/2021	E	A1

DRAWING NUMBER
601

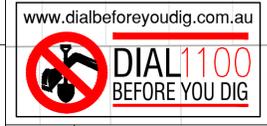


LEGEND

- LIMIT WORKS - CURRENT APPLICATION
- 62.0 --- DESIGN CONTOUR - MAJOR
- 62.0 --- DESIGN CONTOUR - MINOR
- 62.0 --- EXISTING MAJOR CONTOUR
- 62.0 --- EXISTING MINOR CONTOUR
- JUNCTION PIT
- GRATED INLET PIT
- KERB INLET PIT (ON GRADE)
- KERB INLET PIT (AT SAG)
- BARRIER FENCE
- SEDIMENT FENCE
- HAY BALE FILTER
- STOCKPILE AREA (SA)
- GRAVEL INLET FILTER
- SURFACE INLET FILTERS
- EARTH BANKS TO DIRECT FLOWS
- SHAKER PAD
- 0.2m --- CONTOUR INTERVAL - 0.2m

NOTES:

- SEDIMENT FENCE MADE OF GEOTEXTILE FILTER FABRIC 0.2 BELOW NATURAL SURFACE. STAKES DRIVEN IN 0.6m BELOW SURFACE.
- CONTRACTOR MUST ENSURE STABILISED ACCESS TO SITE.
- CONTRACTOR MUST ENSURE ALL PITS AND DRAINAGE STRUCTURES HAVE SEDIMENT EXCLUDERS DURING CONSTRUCTION PHASE.
- NOTE: ALL ICONS ON THIS LEGEND AND PLAN ARE REPRESENTATIVE ONLY. FOR DETAILS REFER TO:
 - THIS SET OF DRAWINGS.
 - STANDARD DRAWINGS FROM THE PUBLICATION "MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION" 1998 (MUSCC 1998) PRODUCED BY NSW DEPT HOUSING.
 - COUNCIL STANDARD DRAWINGS.



DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020

SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO AMENDMENTS AND CHANGES DUE TO FURTHER INVESTIGATION, LATENT FINDS, UNKNOWN SITE CONDITIONS, SURVEYING AND LOCAL COUNCIL STATE AND FEDERAL GOVERNMENT AUTHORITIES RECOMMENDATIONS AND APPROVALS. REPORTS AND INFORMATION REQUIRED TO FINALISE THIS PLAN WILL INCLUDE BUT WILL NOT BE LIMITED TO ARCHAEOLOGY, HERITAGE, CONTAMINATION, ECOLOGY, ZONING, DWELLING DENSITIES, CONSENTIOUS OBJECTION, GEOTECHNICAL ADJOINING LANDOWNERS, REFERRAL AUTHORITIES, FLOODING AND WATERWAYS, SEWERAGE, WATER SUPPLY, ELECTRICITY, TELECOMMUNICATION.

BAR SCALES

1:500 A1

NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE ARE SUBJECT TO FINAL SURVEY.

SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE
DESIGN	CHECKING	CAMDEN COUNCIL	DATE
M.D.	-	DA No.	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-



PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS

ABN: 86 064 110 809

GROUP DEVELOPMENT SERVICES PTY LTD

PO Box 498,
Pennant Hills NSW 1715
Phone: +61 2 9980 1000

Fax: +61 2 9484 0355
Email: info@gdsland.com.au
www.gdsland.com.au

THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.

PROJECT	143 INGLEBURN ROAD LEPPINGTON, NSW			DRAWING NUMBER	700
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE		
P00435	02/09/2021	E	A1		

GENERAL NOTES:

- THIS PLAN IS TO BE READ IN CONJUNCTION WITH OTHER ENGINEERING PLANS AND ANY WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
- THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO DISTURBANCE OF THE RELATED CATCHMENT AREA AND TO THE STANDARD OF 'MANAGING URBAN STORMWATER, SOIL & CONSTRUCTION' & COUNCIL SPECIFICATIONS.
- ALL SUBCONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWN SLOPE AREAS.
- LAND DISTURBANCE SHALL BE LIMITED TO THAT NECESSARY FOR IMPLEMENTATION OF THE PLANS OF WORKS. BUFFER ZONES AND LAND NOT TO BE DISTURBED SHALL BE CLEARLY MARKED WITH BARRIER FENCE. 'SILT' FENCE FOR STRAW BALE SEDIMENT TRAPS SHALL BE PLACED AT REGULAR INTERVALS IMMEDIATELY DOWNSLOPE OF ALL UNPROTECTED DISTURBED LANDS.
- THE LOCATION OF 'SILT' FENCES, BARRIER FENCES, SEDIMENT TRAPS AND OTHER DEVICES ARE INDICATIVE ONLY AND FINAL LOCATIONS ARE TO BE DECIDED ON SITE. VARIATIONS WILL BE PERMITTED TO BEST SUIT THE CIRCUMSTANCES. CONTRACTOR TO PREPARE DETAILED CONSTRUCTION SEDIMENT AND EROSION CONTROL PLAN.
- ALL SOIL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED FOLLOWING EACH STORM EVENT AND ANY NECESSARY MAINTENANCE WORK SHALL BE UNDERTAKEN TO ENSURE THEIR CONTINUED PROPER OPERATION. SEDIMENT SHALL BE REMOVED FROM THE SOIL EROSION & SEDIMENT CONTROL STRUCTURES WHEN NO MORE THAN 40% CAPACITY HAS BEEN REACHED. THESE STRUCTURES SHALL CONTINUE IN PROPER OPERATION UNTIL ALL DEVELOPMENT ACTIVITIES HAS BEEN COMPLETED AND THE SITE FULLY ESTABLISHED.
- WHERE THE AREA TO BE DISTURB CONTAINS TREES TO REMAIN, AN ARBORIST CONSULTANT SHOULD PROVIDE ADVICE ON PROCEDURES AND MEASURES TO BE PLACED.
- TEMPORARY REHABILITATION SHALL BE UNDERTAKEN WITHIN 14 WORKING DAYS BEFORE EITHER WORKS CONTINUE OR PERMANENT REHABILITATION IS UNDERTAKEN.
- ALL OF THE SOIL STORAGE, REVEGETATION AND SEDIMENT AND EROSION CONTROL MANAGEMENT DEVICES/MEASURES SHALL BE IMPLEMENTED TO NSW ENVIRONMENT PROTECTION AUTHORITY (EPA) AND DEPARTMENT OF LAND AND WATER REQUIREMENTS.
- ALL SEDIMENT AND EROSION CONTROL MANAGEMENT MEASURES/DEVICES SHOWN ON THE PLANS SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION, AND MAINTAINED DURING AND AFTER.

CONSTRUCTION NOTES:

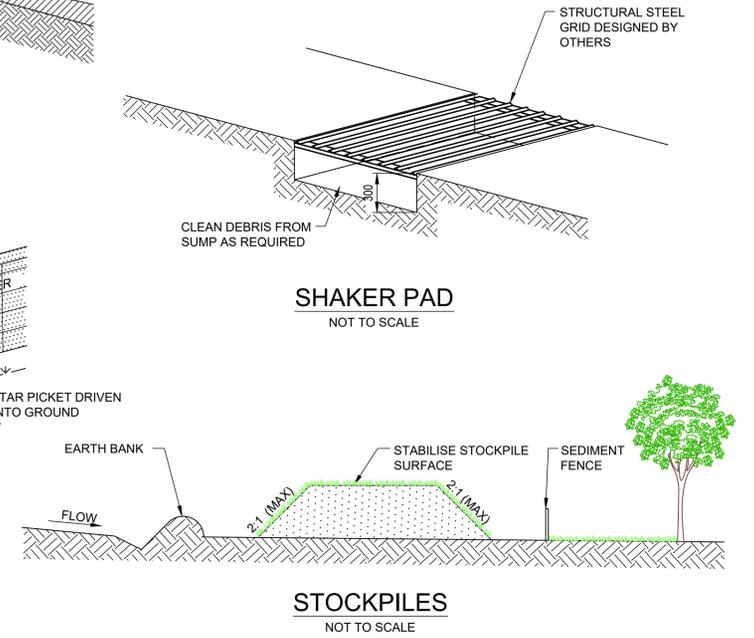
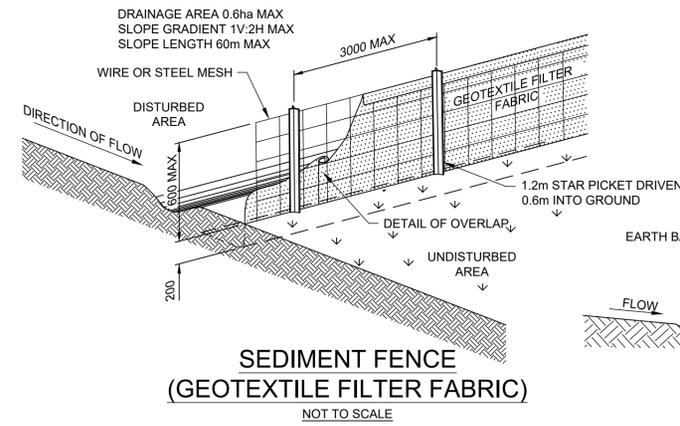
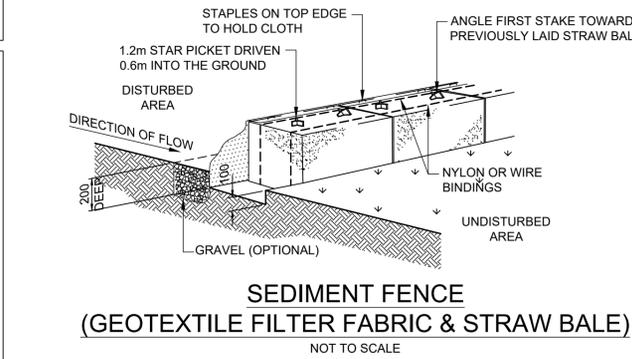
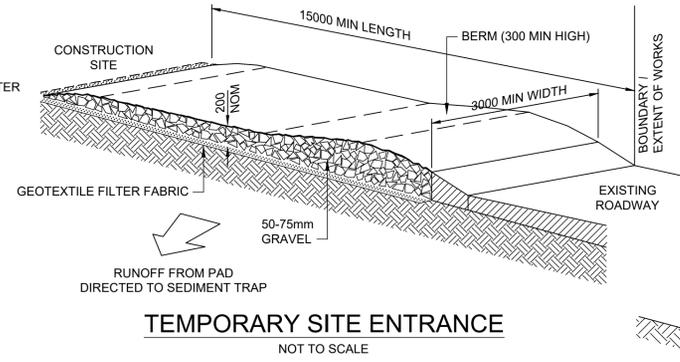
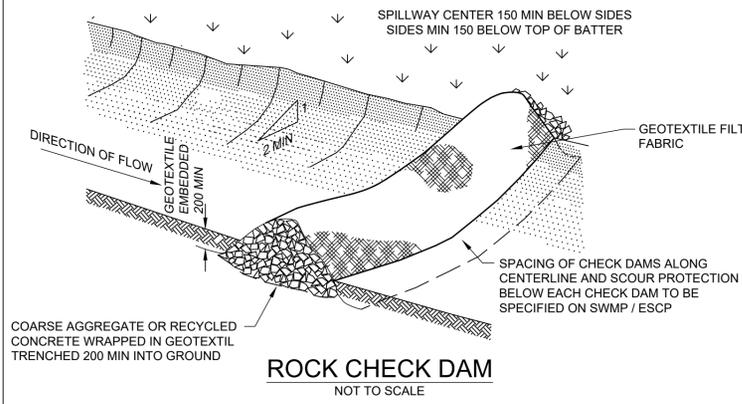
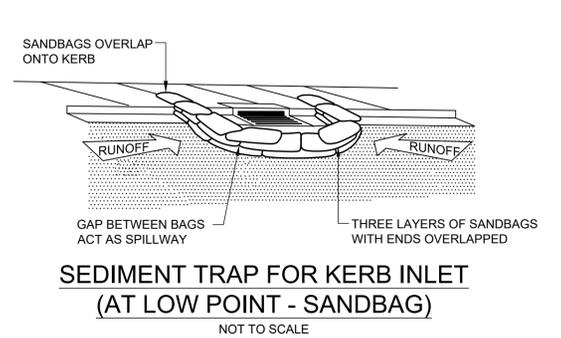
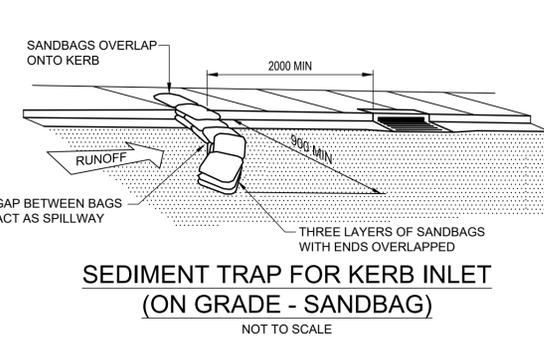
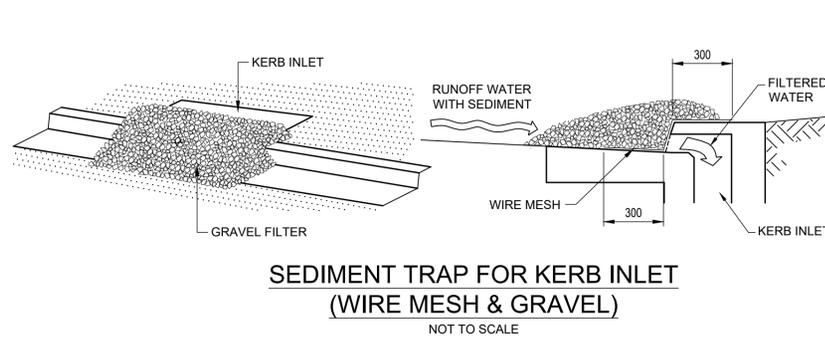
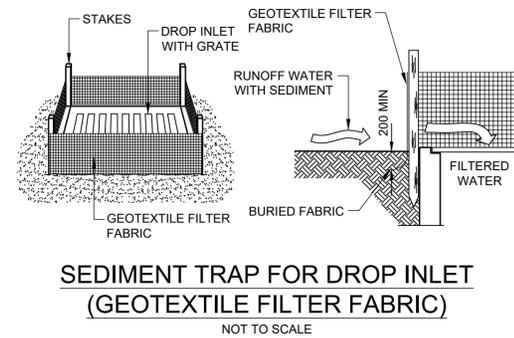
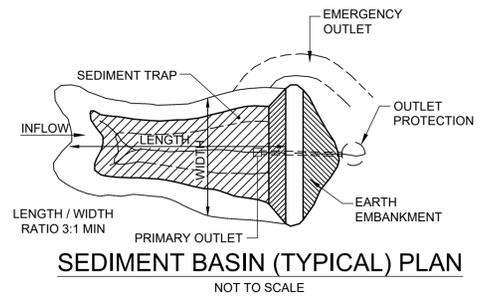
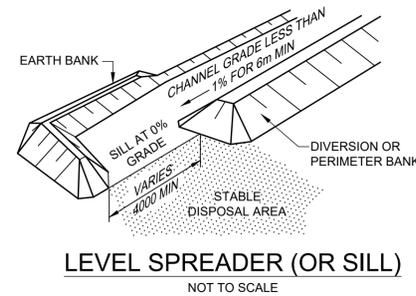
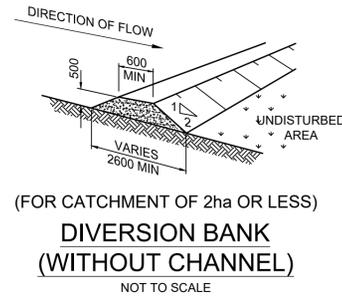
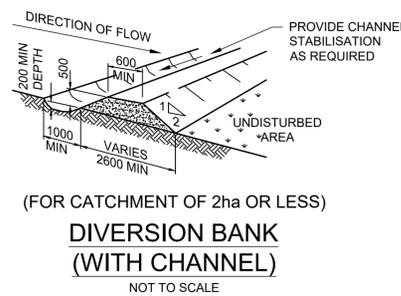
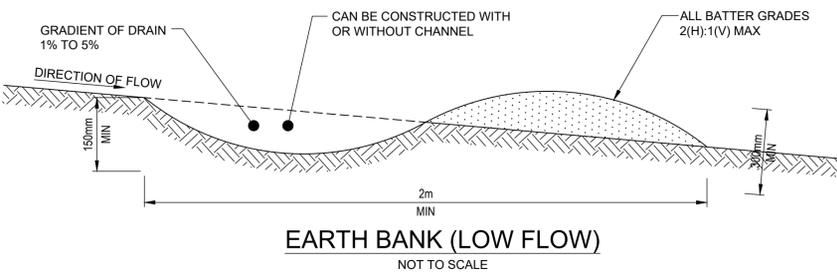
STOCKPILES:

- 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 2m IN HEIGHT
- WHERE THERE 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) 1m TO 2m DOWNSLOPE

EARTH BANK:

- BUILD WITH GRADIENTS BETWEEN 1% AND 5%
- 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

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



MAINTENANCE:

- THE TEMPORARY ACCESS SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY.
- THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL GRAVEL AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.



DA SUBMISSION
NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS	PROJECT	DRAWING NUMBER
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION	NOTE: BOUNDARY AND LOT DIMENSIONS, ALIGNMENTS AND AREAS ARE PROVISIONAL AND ROUNDED TO NEAREST DECIMAL PLACE. AS SUCH THESE ARE SUBJECT TO FINAL SURVEY.	-	AHD	CAMDEN COUNCIL	-	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS ABN: 86 064 110 809 GROUP DEVELOPMENT SERVICES PTY LTD PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000 Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT PRIOR WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.	143 INGLEBURN ROAD LEPPINGTON, NSW	701
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021									
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021									
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021									
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020									
				SOIL AND WATER MANAGEMENT DETAILS	PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE				
				P00435	02/09/2021	E	A1					