

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



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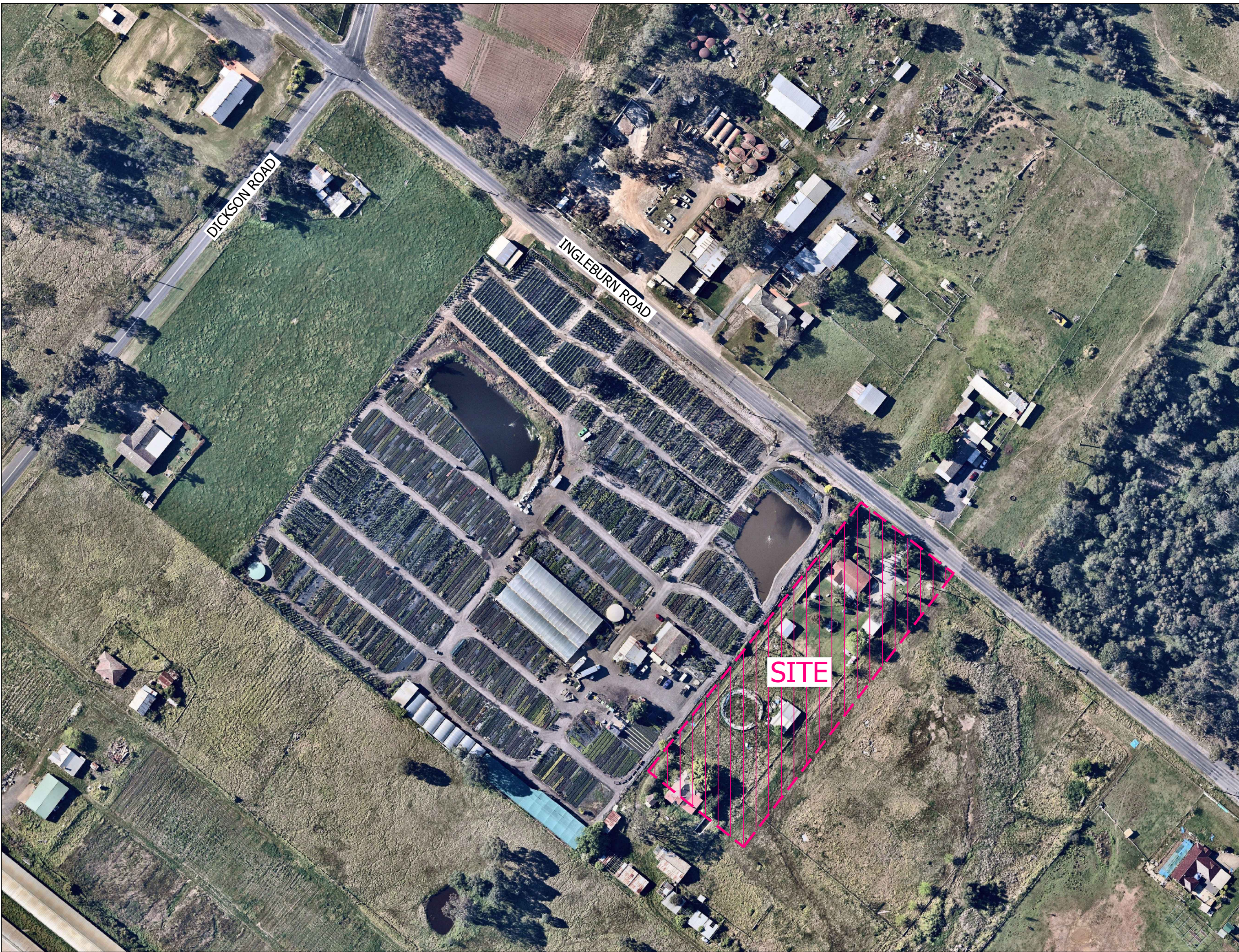
REVISION		DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS				PROJECT	DRAWING NUMBER			
E		AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021	SUBDIVISION OF LOT 100 DP1260283 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 AREA ARE SUBJECT TO FINAL SURVEY.	-	AHD	CAMDEN COUNCIL	-	<div>ABN: 86 064 110 809</div> <div> GROUP DEVELOPMENT SERVICES PTY LTD</div> <div>PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000</div> <div>Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au</div> <div>THIS DRAWING IS SUBJECT TO COPYRIGHT AND MUST NOT BE REPRODUCED BY WHOLE OR PART WITHOUT THE WRITTEN CONSENT OF GROUP DEVELOPMENT SERVICES PTY LTD. THIS PLAN MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED BY PRINCIPAL CERTIFYING AUTHORITY.</div>				143 INGLEBURN ROAD LEPPINGTON, NSW	001			
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	COVER SHEET								
C		RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021			M.D.	-	-	-	-	PROJECT REFERENCE				DATE OF ISSUE	REVISION No.	SHEET SIZE	
B		RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021			DRAWN	CHECKING	CC No.	DATE	-	P00435				02/09/2021	E	A1	
A		ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020			M.D.	-	-	-	-	11				12	13	14	15

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800	EXISTING SURVEY PLAN



SITE LOCALITY PLAN


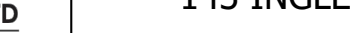
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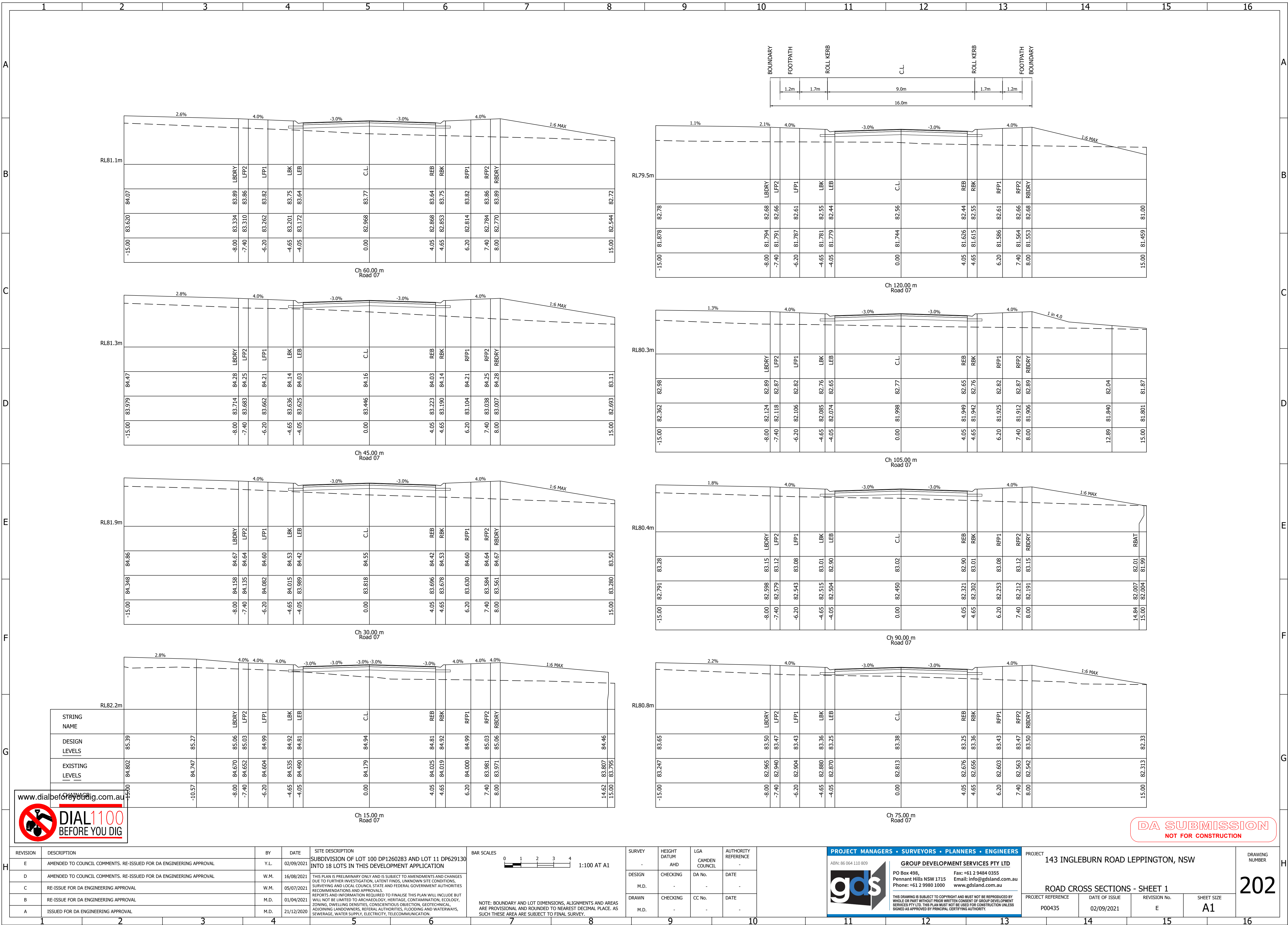
SUBDIVISION OF
LOT 100 DP1260283 AND LOT 11 DP629130

DATE: AUGUST 2021

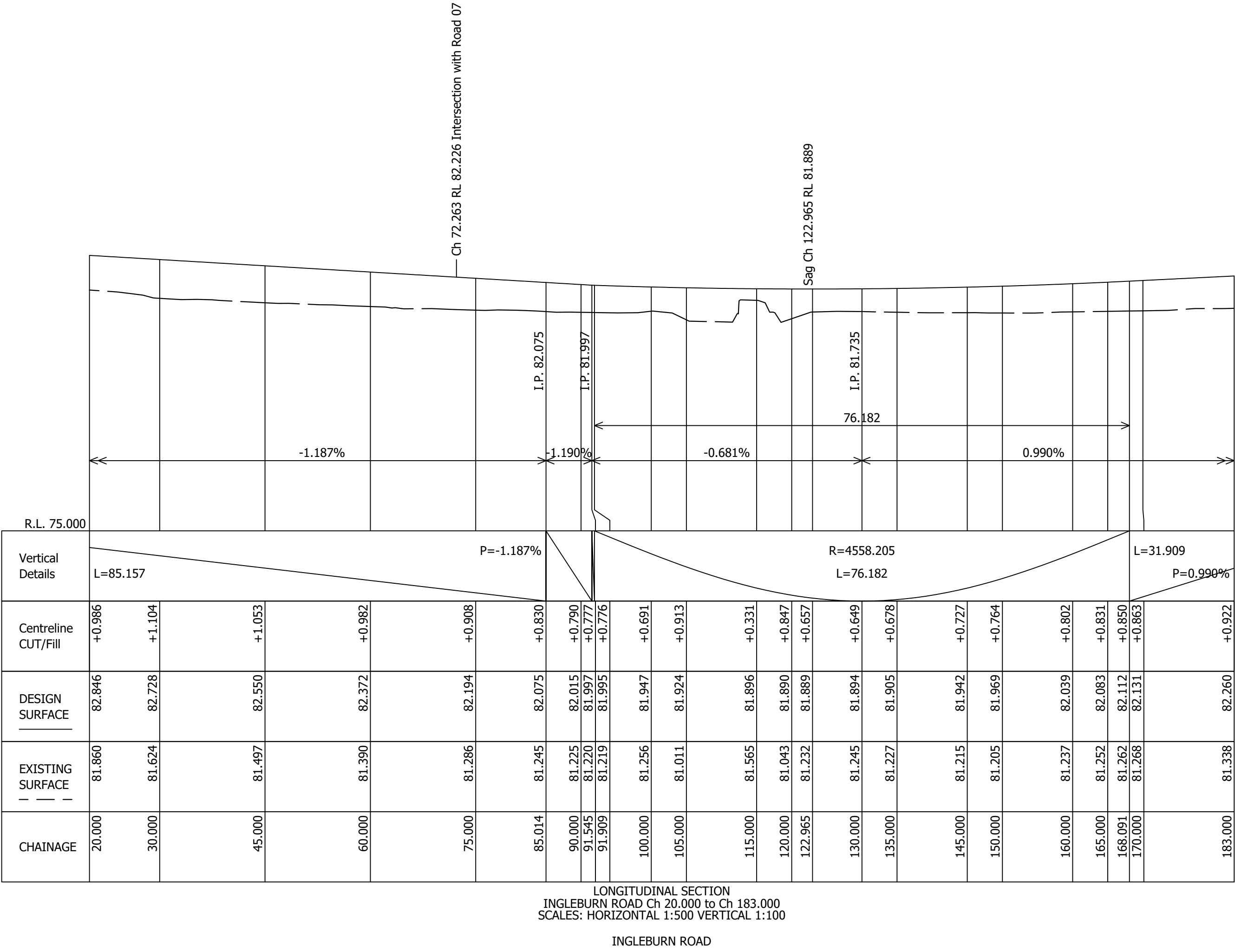
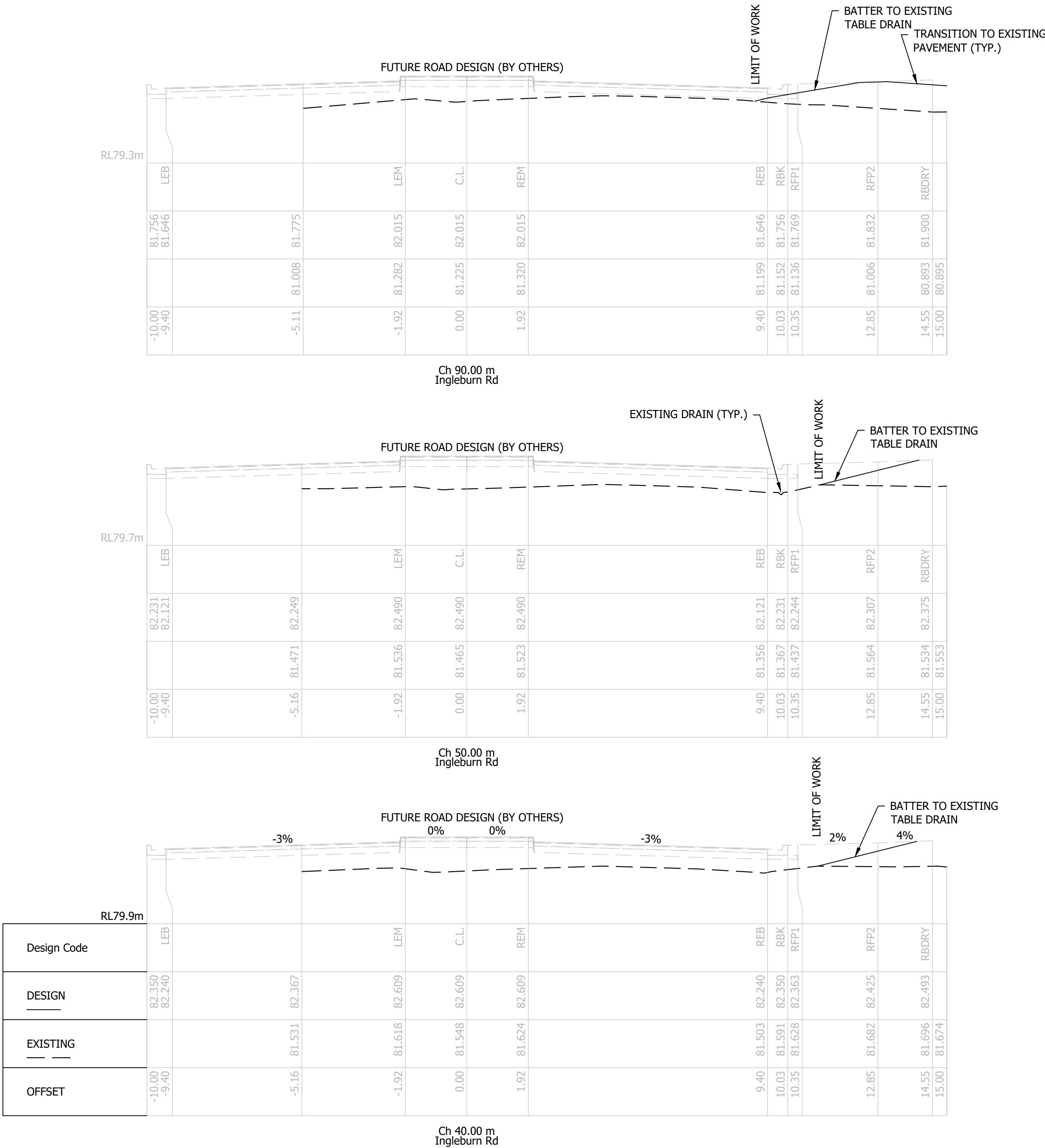


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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

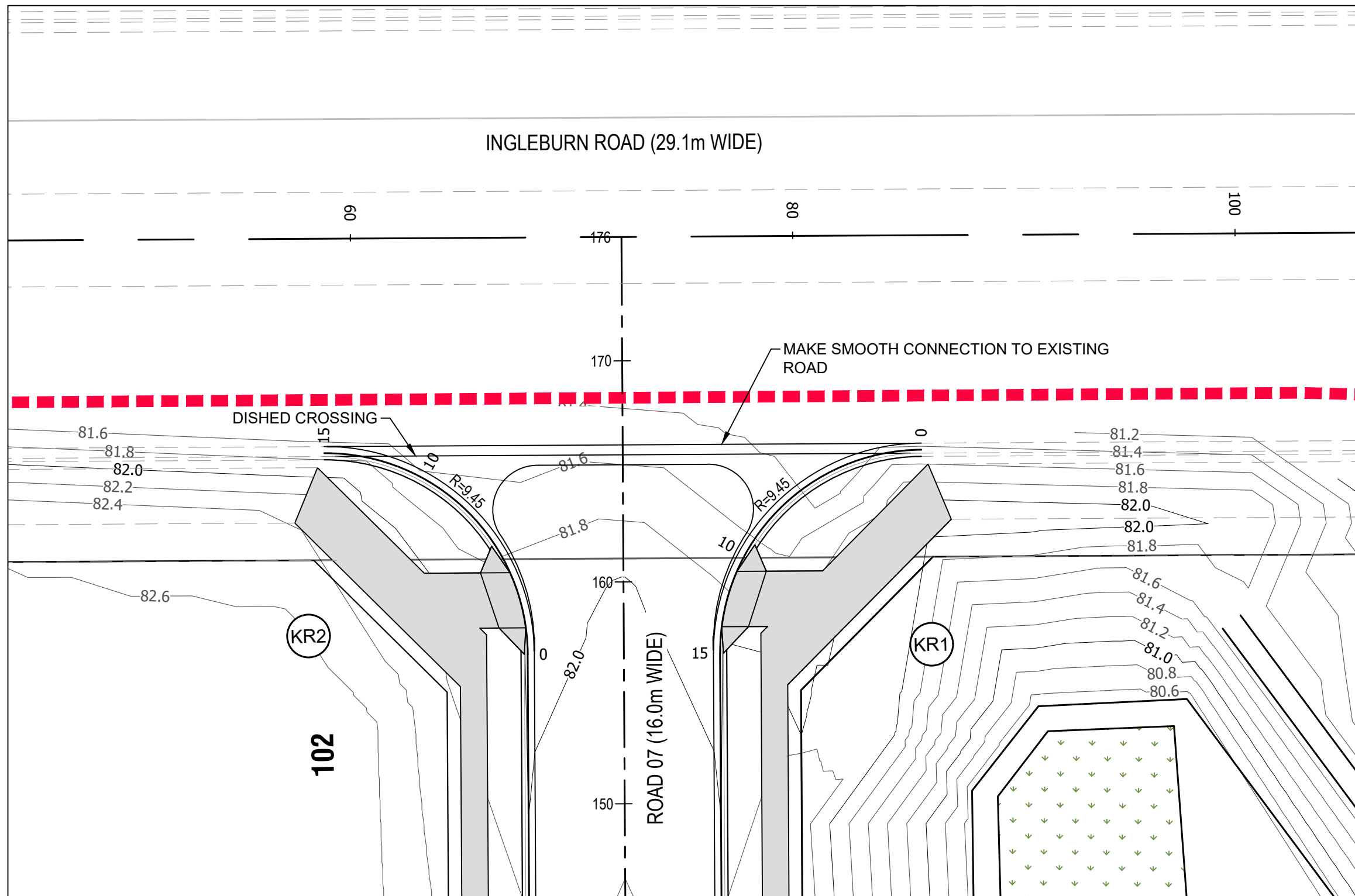


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FUTURE WORKS



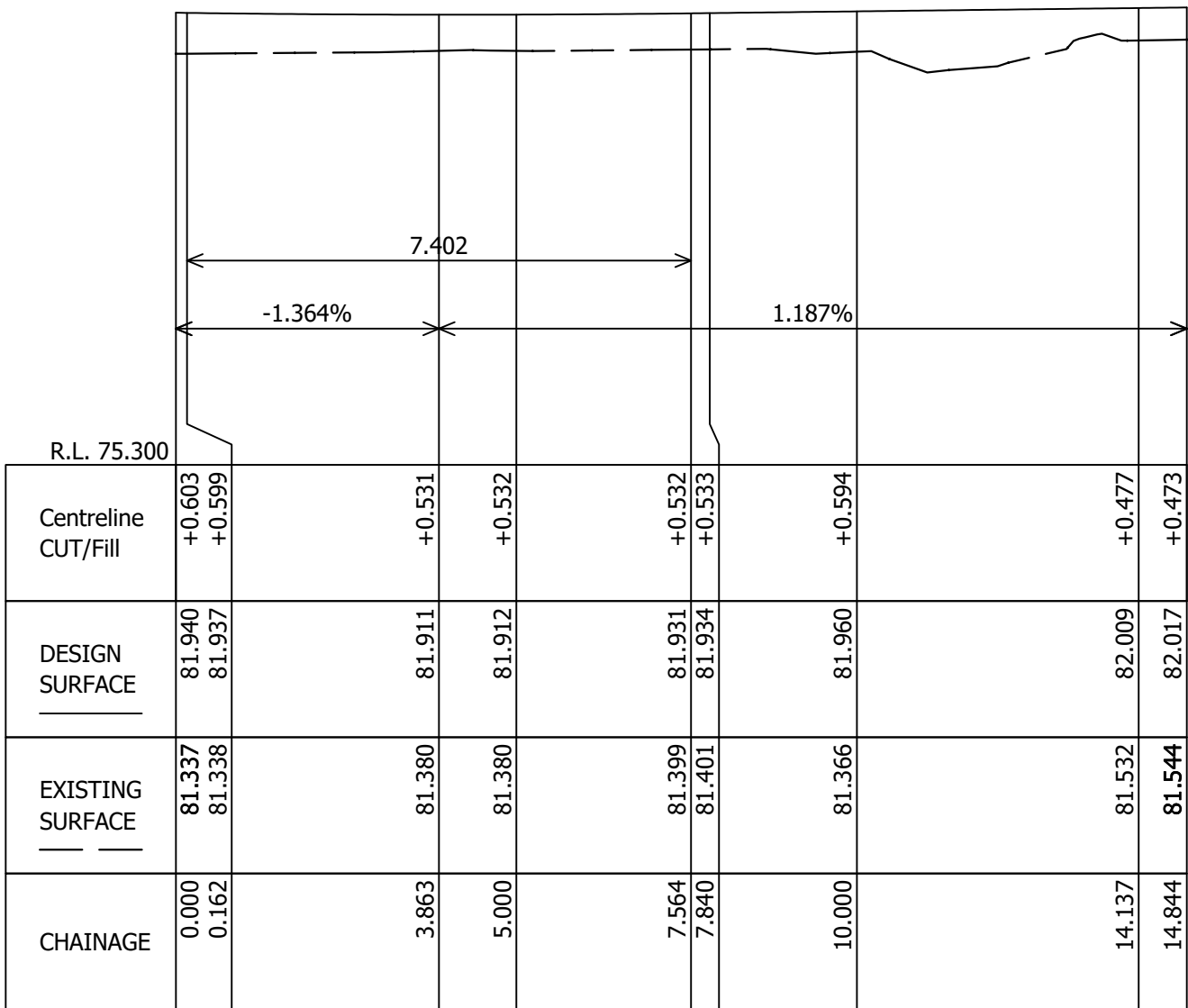
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											PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
											P00435	02/09/2021	E	A1

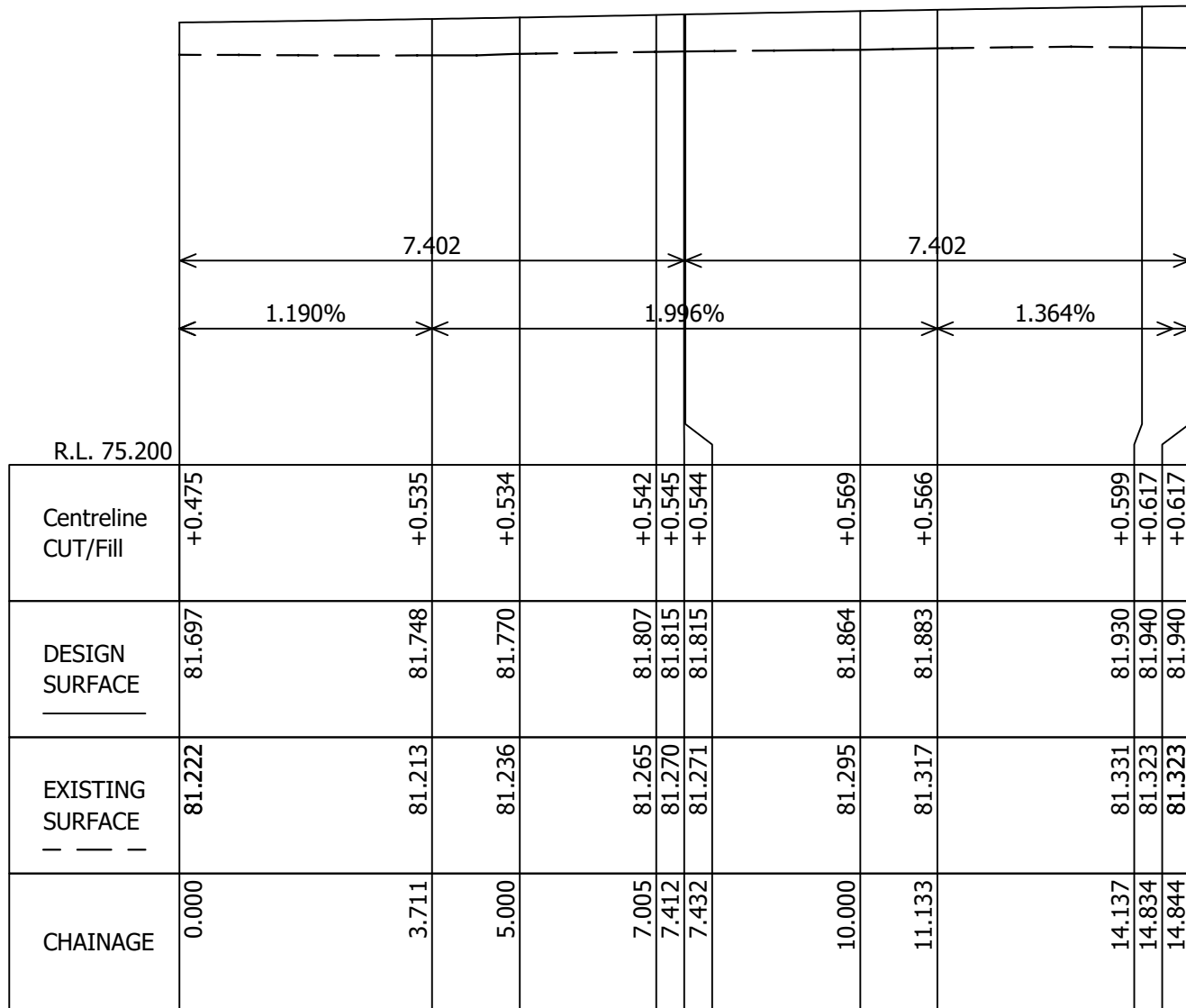


KERB RETURNS KR1 & KR2
PLAN VIEW
SCALE 1:200

FOR INFORMATION ONLY
FUTURE WORKS



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



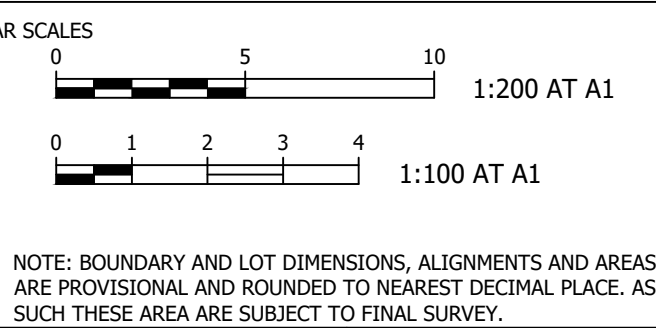
LONGITUDINAL SECTION
KR1 Ch 0.000 to Ch 14.844
SCALES: HORIZONTAL 1:100 VERTICAL 1:100
KR1



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-	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

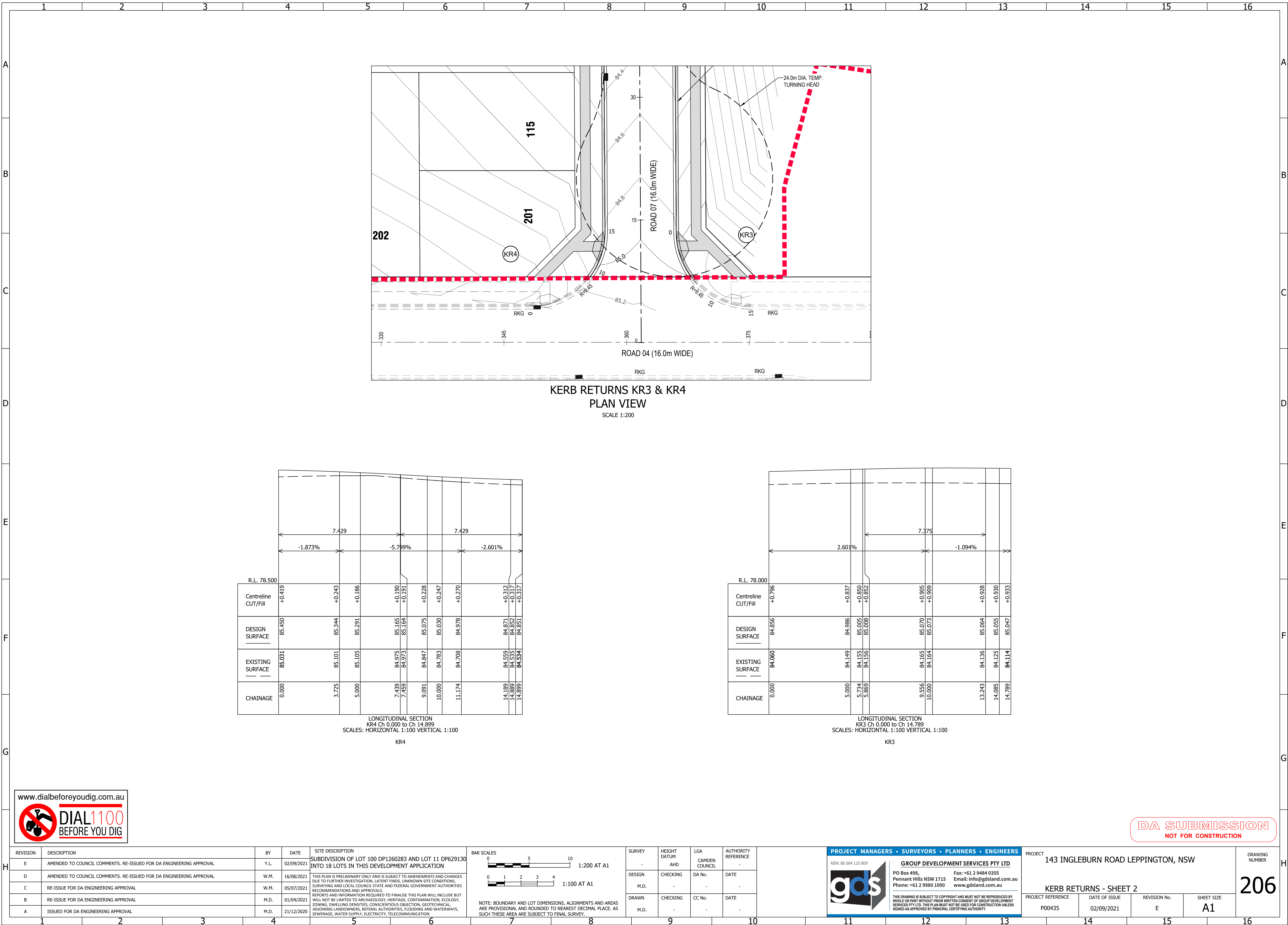
GROUP DEVELOPMENT SERVICES PTY LTD

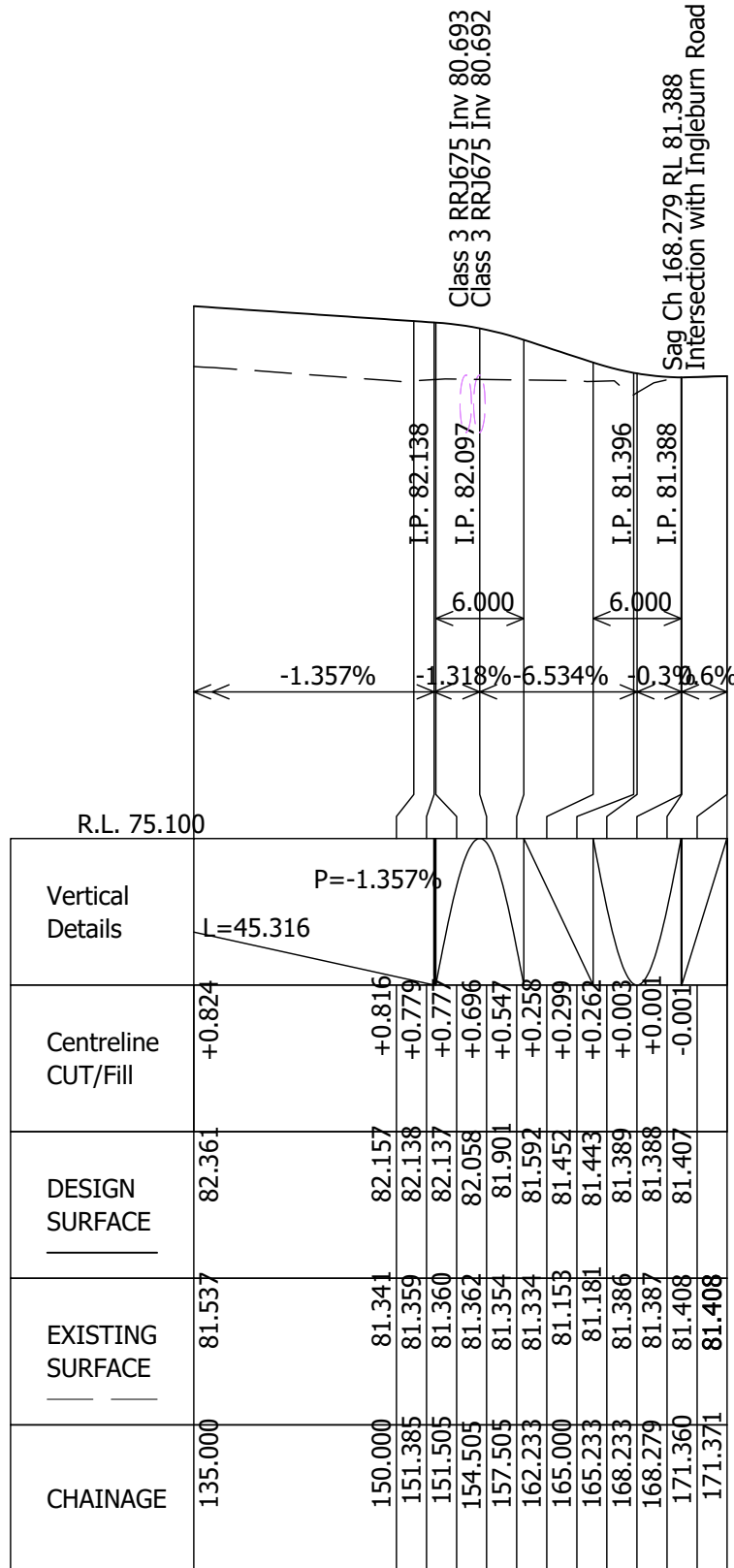
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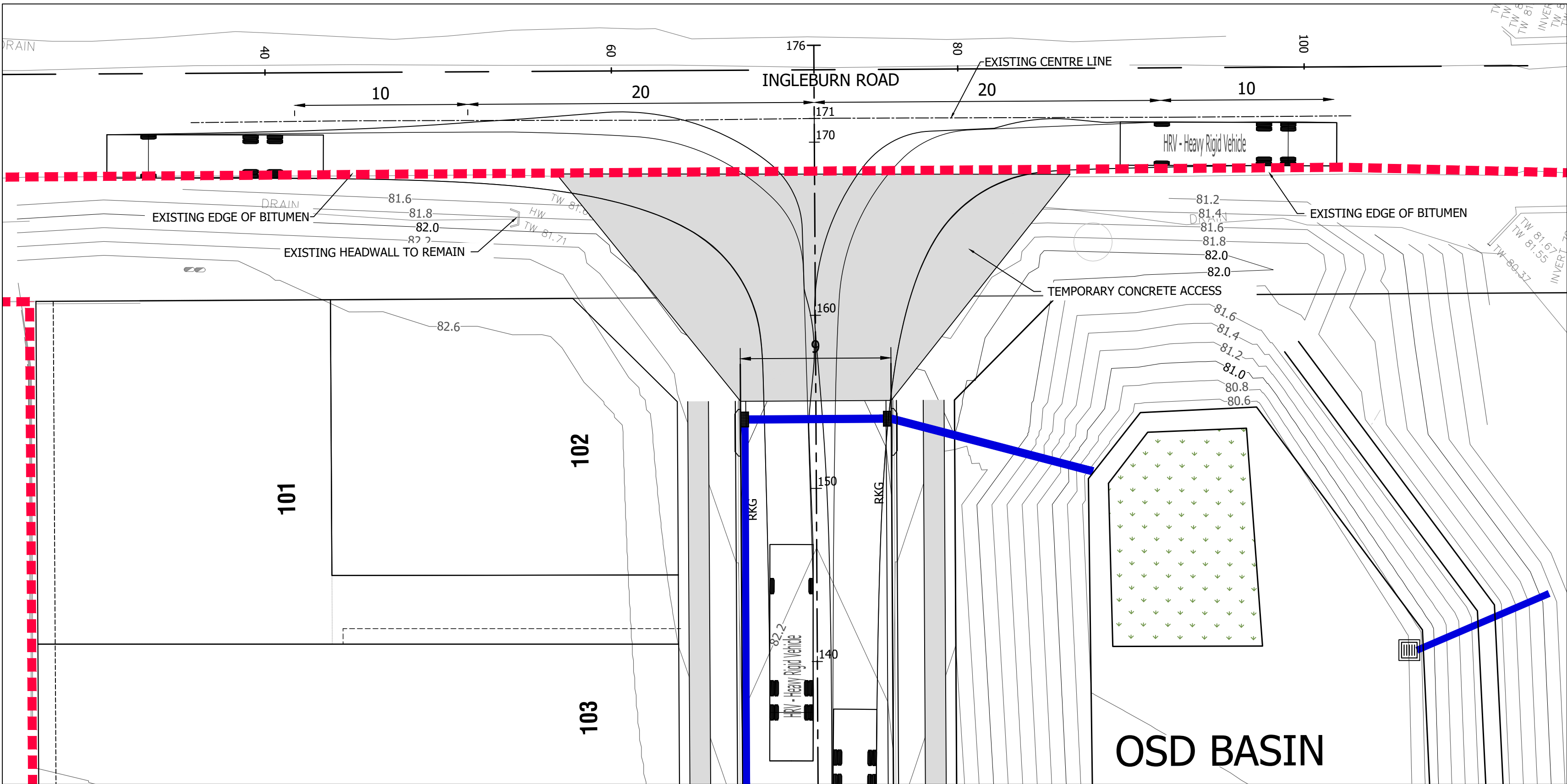
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PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW				DRAWING NUMBER 205
KERB RETURNS - SHEET 1				
PROJECT REFERENCE P00435	DATE OF ISSUE 02/09/2021	REVISION No. E	SHEET SIZE A1	

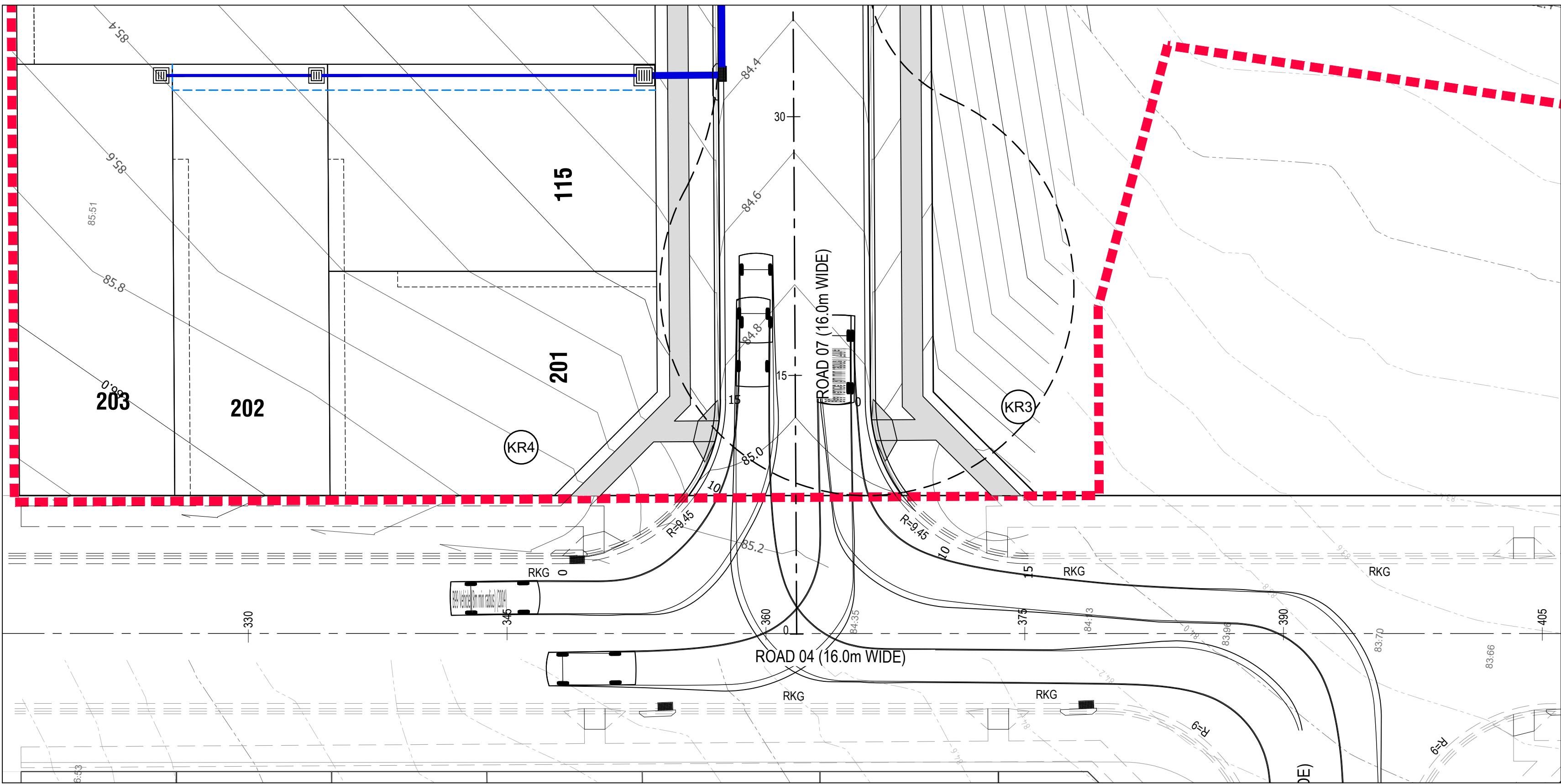




TAPER/TRANSITION FROM ROAD 07 TO INGLEBURN ROAD



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

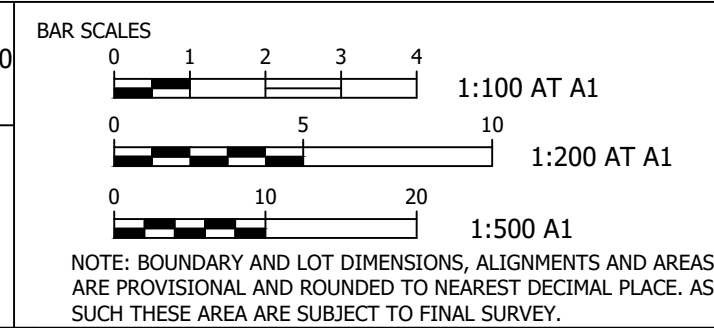


NOTE:
TURNING MOVEMENTS ARE FOR A B99 VEHICLE.



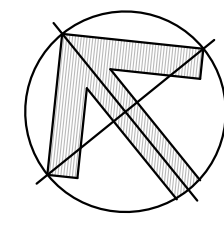
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M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-



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GROUP DEVELOPMENT SERVICES PTY LTD

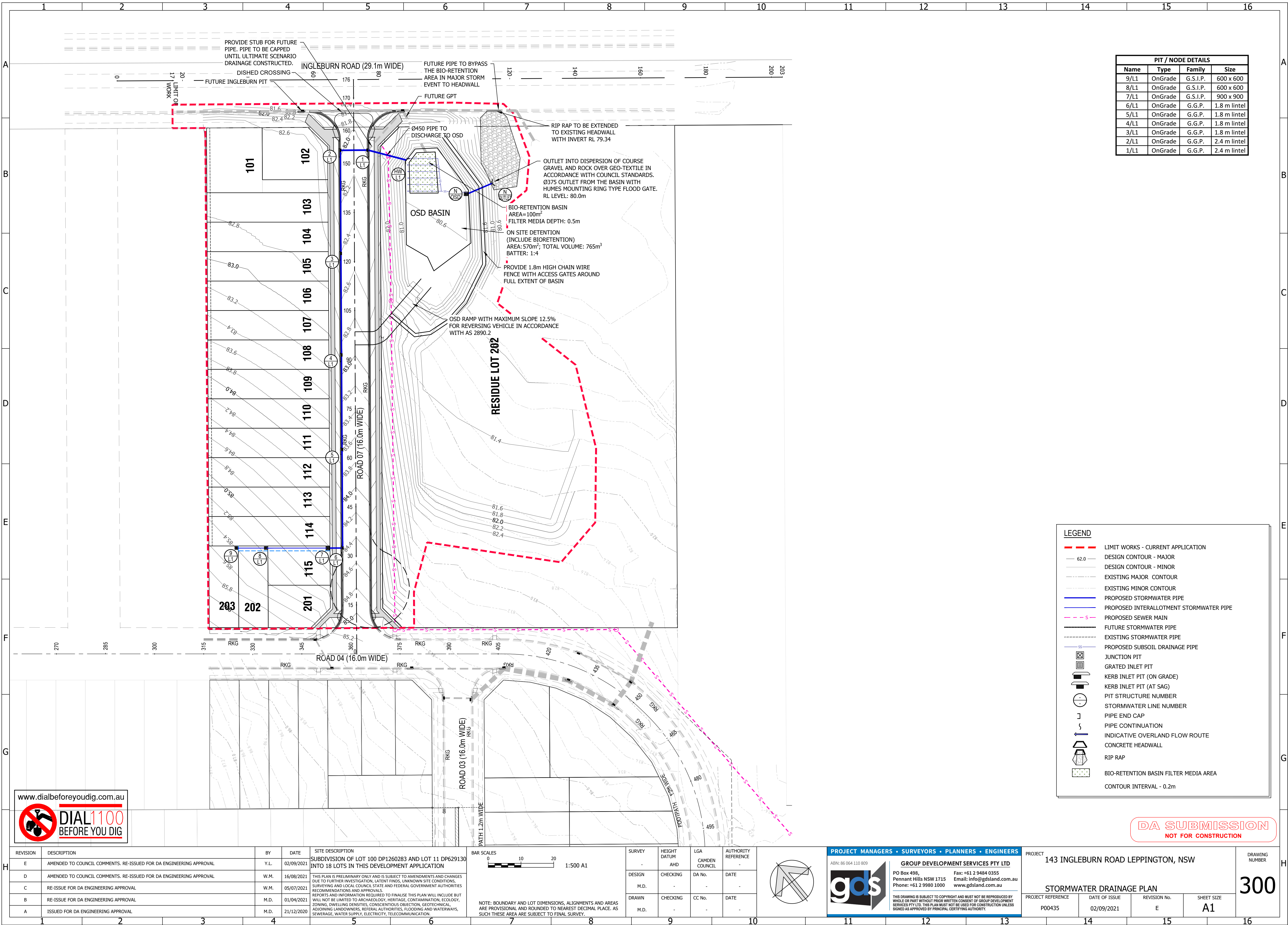
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PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW			
INGLEBURN ROAD PLAN OF TRANSITION/TAPER AND VEHICLE TURNING MOVEMENTS			
PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
P00435	02/09/2021	E	A1

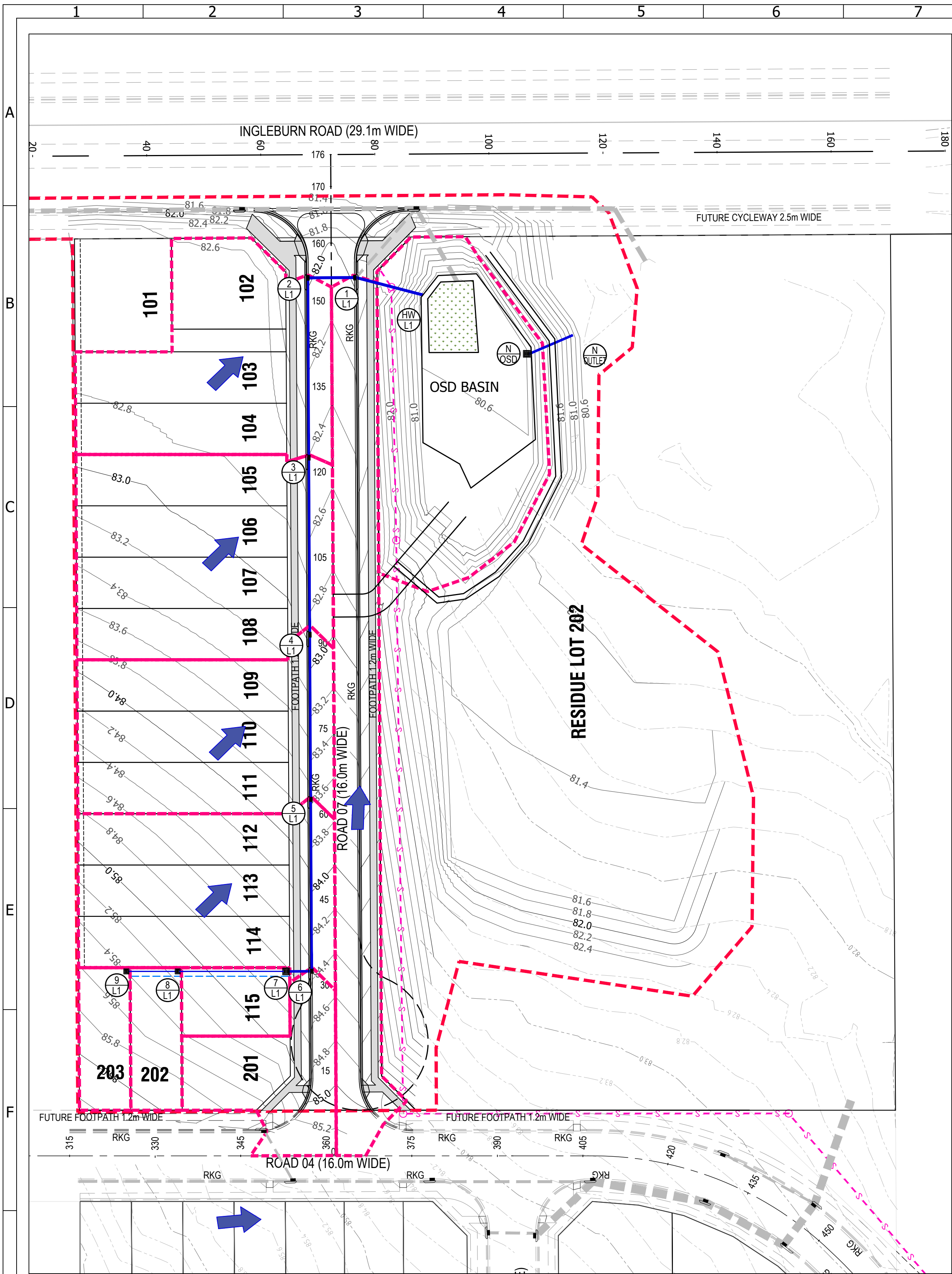
DRAWING NUMBER
207



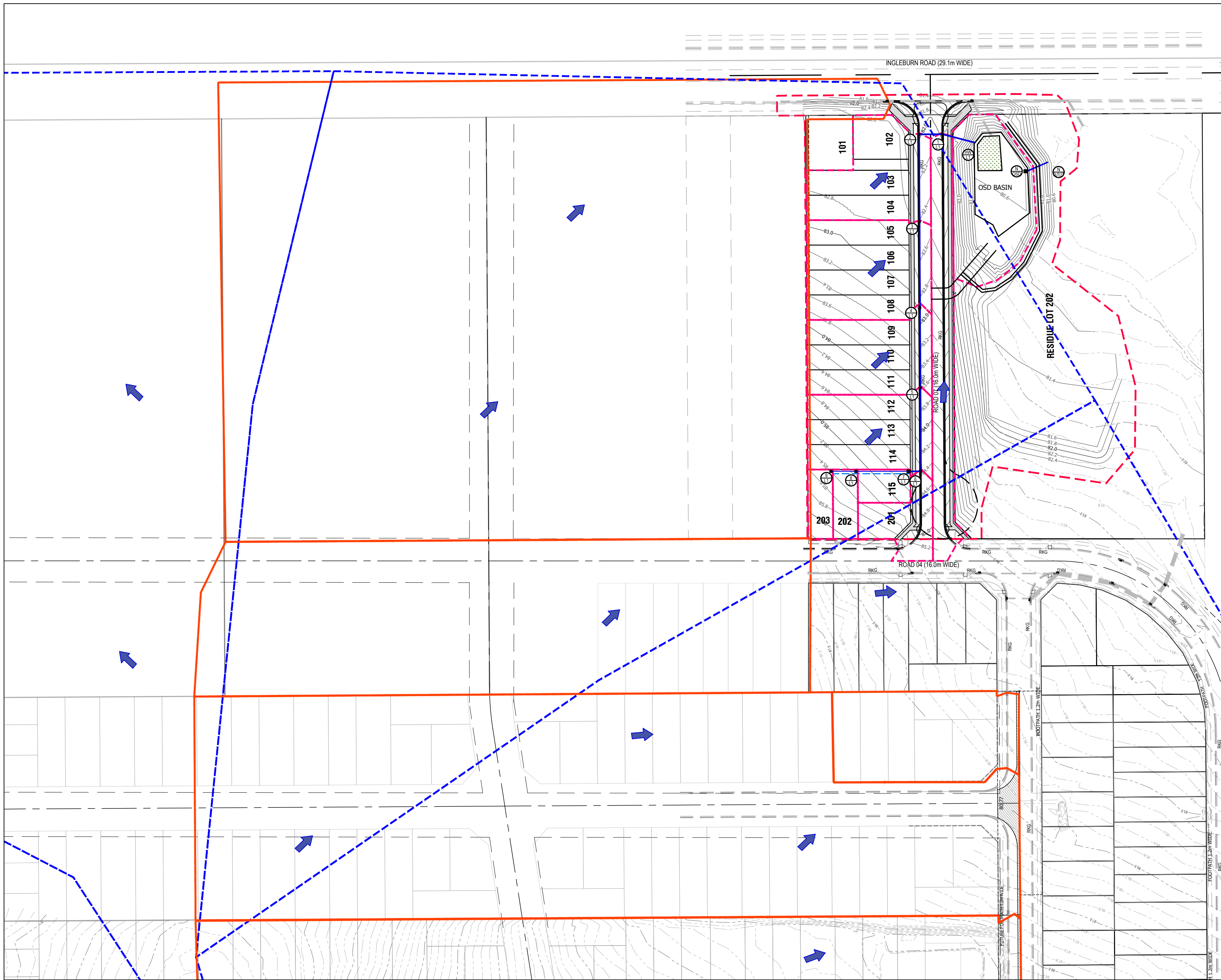
PIT / NODE DETAILS			
Name	Type	Family	Size
9/L1	OnGrade	G.S.I.P.	600 x 600
8/L1	OnGrade	G.S.I.P.	600 x 600
7/L1	OnGrade	G.S.I.P.	900 x 900
6/L1	OnGrade	G.G.P.	1.8 m lintel
5/L1	OnGrade	G.G.P.	1.8 m lintel
4/L1	OnGrade	G.G.P.	1.8 m lintel
3/L1	OnGrade	G.G.P.	1.8 m lintel
2/L1	OnGrade	G.G.P.	2.4 m lintel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

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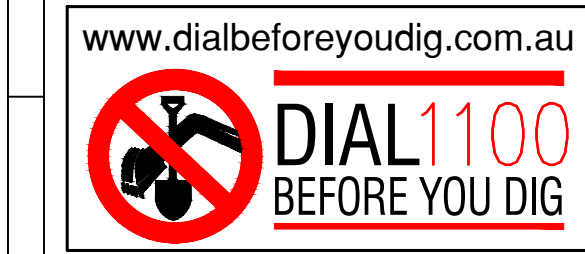
SITE CATCHMENT PLAN
SCALE 1:500



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

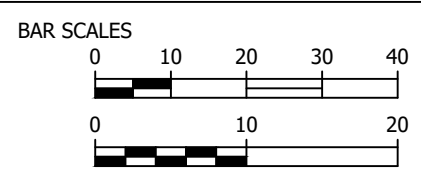
LEGEND	
	LIMIT WORKS - CURRENT APPLICATION
	DESIGN CONTOUR - MAJOR
	DESIGN CONTOUR - MINOR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	JUNCTION PIT
	GRATED INLET PIT
	KERB INLET PIT (ON GRADE)
	KERB INLET PIT (AT SAG)
	CATCHMENT BOUNDARY
	UPPER CATCHMENT BOUNDARY POST DEVELOPMENT
	COUNCIL REGIONAL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



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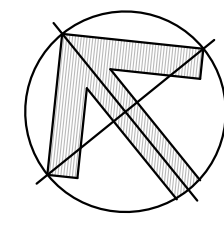
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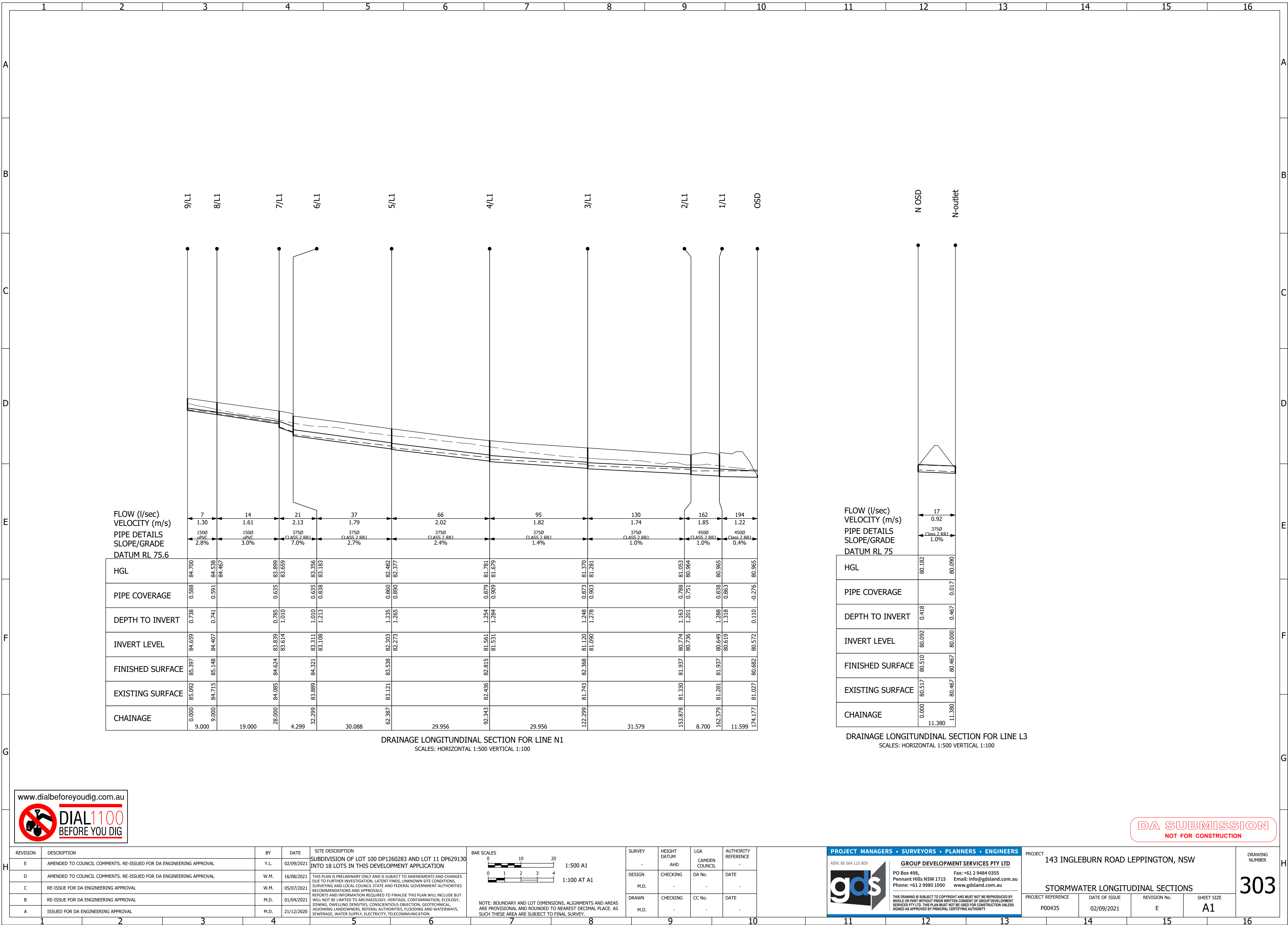
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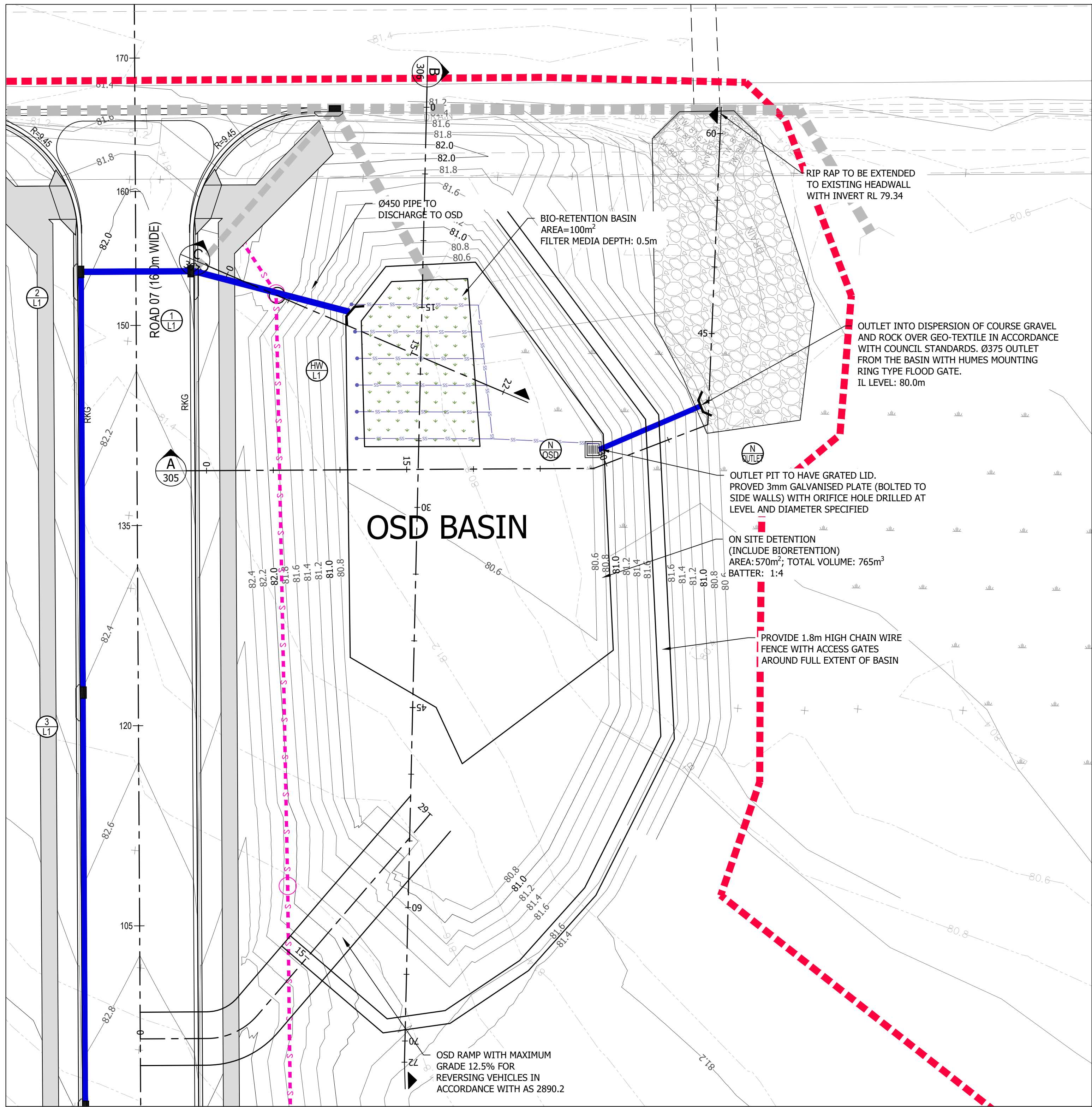
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PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW				DRAWING NUMBER 301
STORMWATER CATCHMENT PLAN				
PROJECT REFERENCE P00435	DATE OF ISSUE 02/09/2021	REVISION No. E	SHEET SIZE A1	





ONSITE DETENTION PLAN
SCALE 1:200

- NOTES:
- #150 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

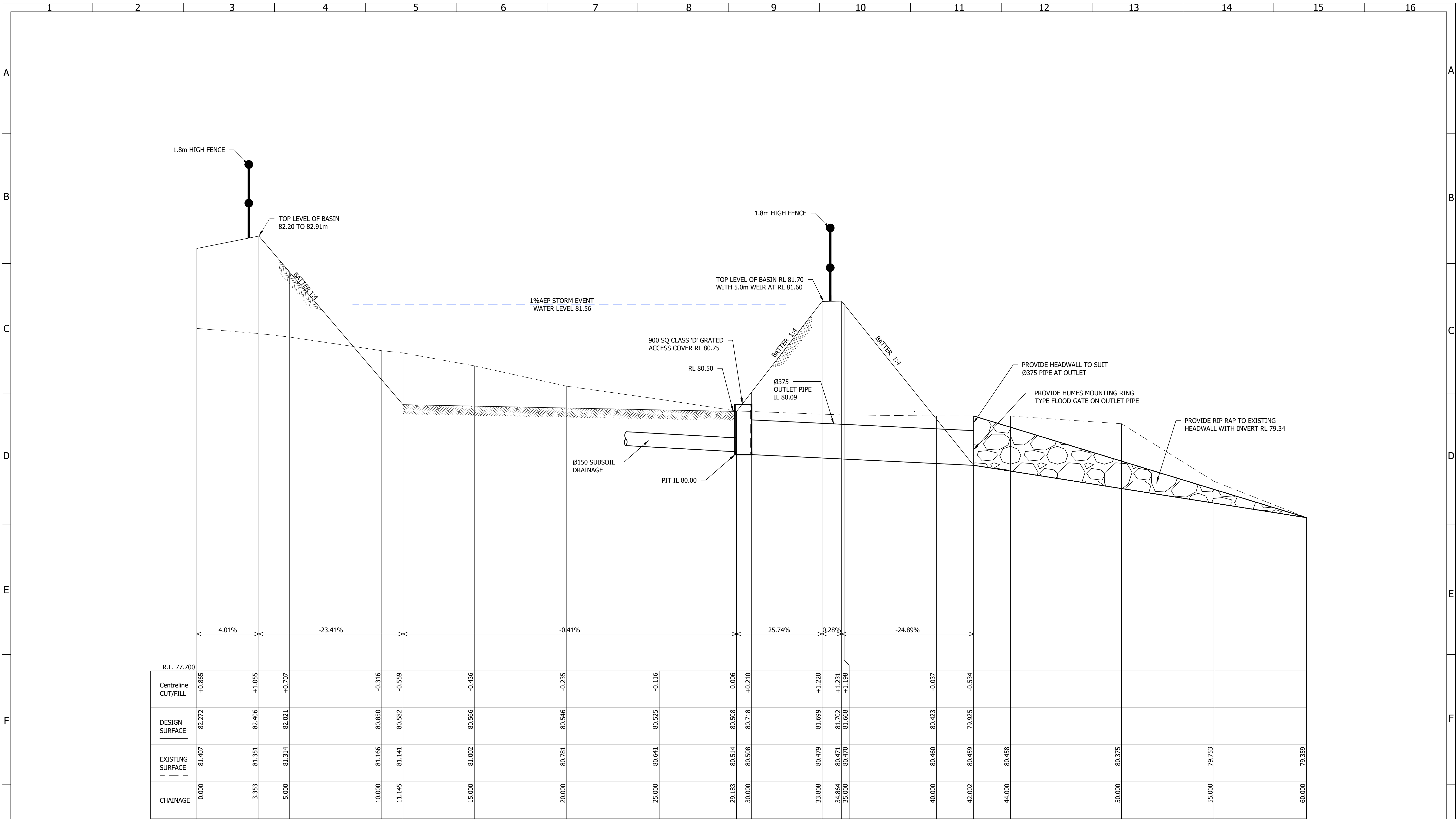
Max Water Level (m)						
Storm event	50% ARI	20% ARI	10% ARI	5% ARI	2% ARI	1% ARI
OSD (m)	80.87	80.96	81.06	81.12	81.22	81.56

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

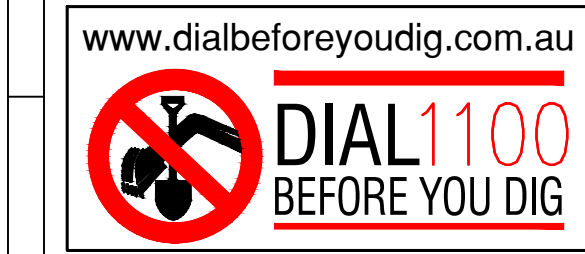
	Dia (mm)	IL Level (m)
OSD Outlet Pipe	375	80.09
OSD WIER (Pit 900 SQ)	-	80.75
OSD Emergency WIER	-	81.60
ORIFICE	125	80.1






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.		-	-	CAMDEN COUNCIL	-	 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	143 INGLEBURN ROAD LEPPINGTON, NSW	304	
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021			DESIGN	CHECKING	DA No.	DATE				
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021			M.D.	-	-	-				
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021			DRAWN	CHECKING	CC No.	DATE				
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020			M.D.	-	-	-				
										ONSITE DETENTION PLAN AND DETAILS			
										PROJECT REFERENCE	DATE OF ISSUE	REVISION No.	SHEET SIZE
										P00435	02/09/2021	E	A1

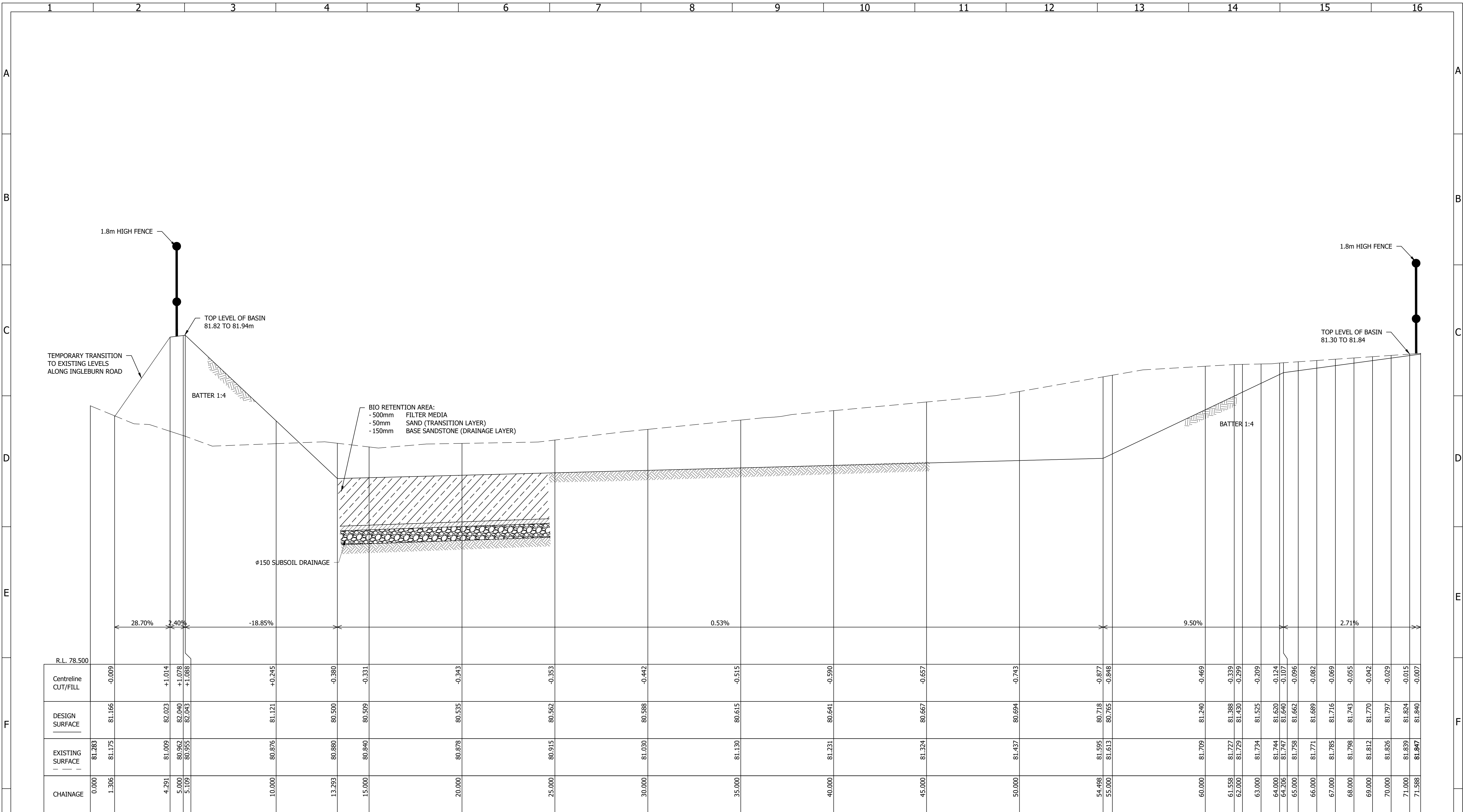


LONGITUDINAL SECTION
OSD Section A Ch 0.000 to Ch 60.000
SCALES: HORIZONTAL 1:100 VERTICAL 1:20
SECTION A
SCALE 1: 100H 304
1:20V



DA SUBMISSION
NOT FOR CONSTRUCTION

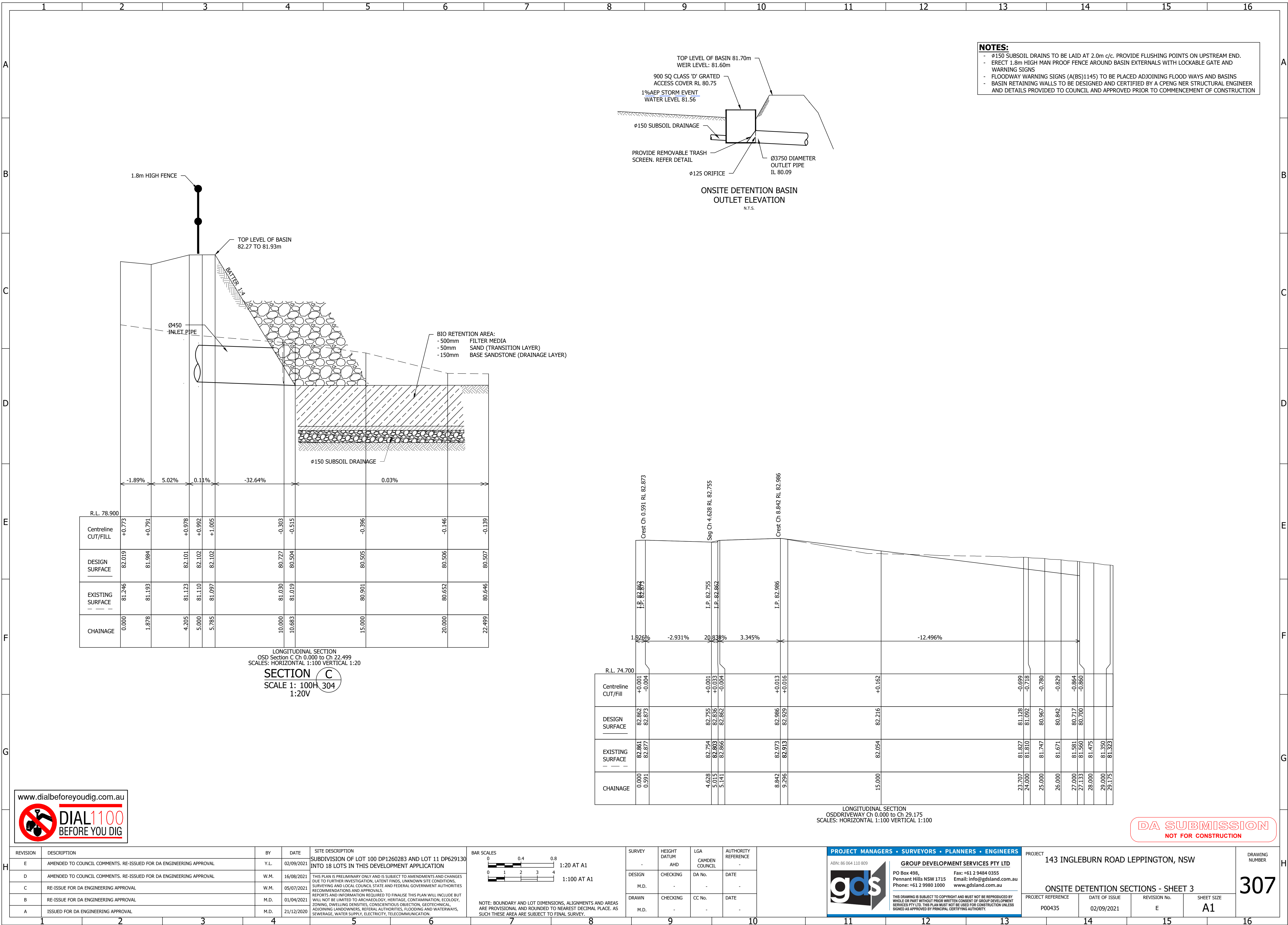
H	REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	<div>PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS</div> <div>ABN: 86 064 110 809</div> <div><div></div><div>GROUP DEVELOPMENT SERVICES PTY LTD</div><div>PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000</div><div>Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au</div><div><small>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.</small></div></div>	PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW	DRAWING NUMBER							
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	D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021		DESIGN	CHECKING	DA No.	DATE											
	C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021		M.D.	-	-	-											
	B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021		DRAWN	CHECKING	CC No.	DATE											
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					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

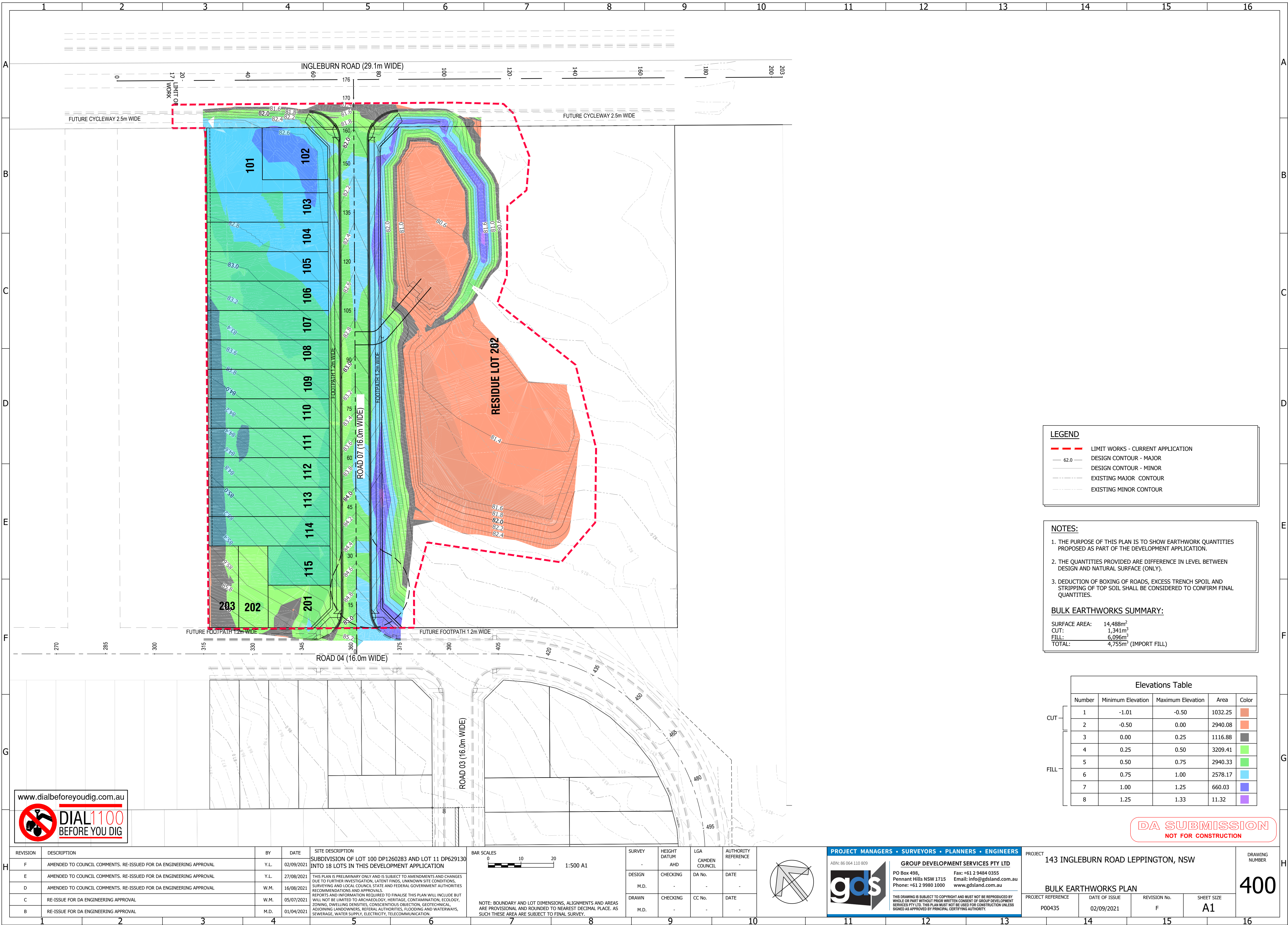


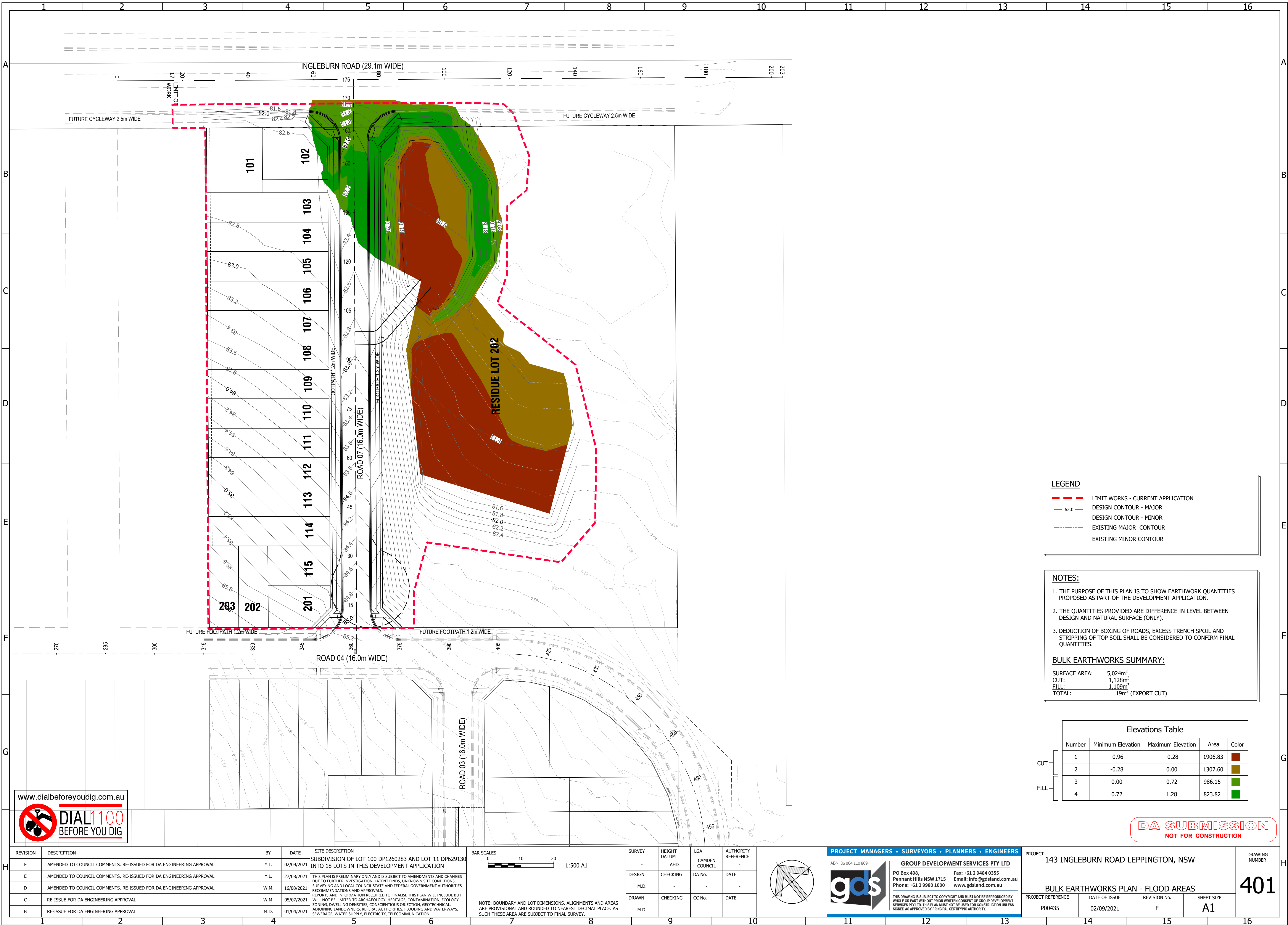
LONGITUDINAL SECTION
OSD Section B Ch 0.000 to Ch 71.588
SCALE: HORIZONTAL 1:100 VERTICAL 1:20
SECTION B
SCALE 1: 100H 304
1:20V



REVISION	DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS	PROJECT	DRAWING NUMBER
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D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021		0 0.4 0.8 1:20 AT A1	DESIGN	CHECKING	DA No.	DATE		ONSITE DETENTION SECTIONS - SHEET 2	
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021	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.		M.D.	-	-	-		PROJECT REFERENCE	
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021			DRAWN	CHECKING	CC No.	DATE		DATE OF ISSUE	
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020			M.D.	-	-	-		REVISION No.	
											SHEET SIZE	
											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:	5,024m ²
CUT:	1,128m ²
FILL:	1,109m ²
TOTAL:	19m ² (EXPORT CUT)

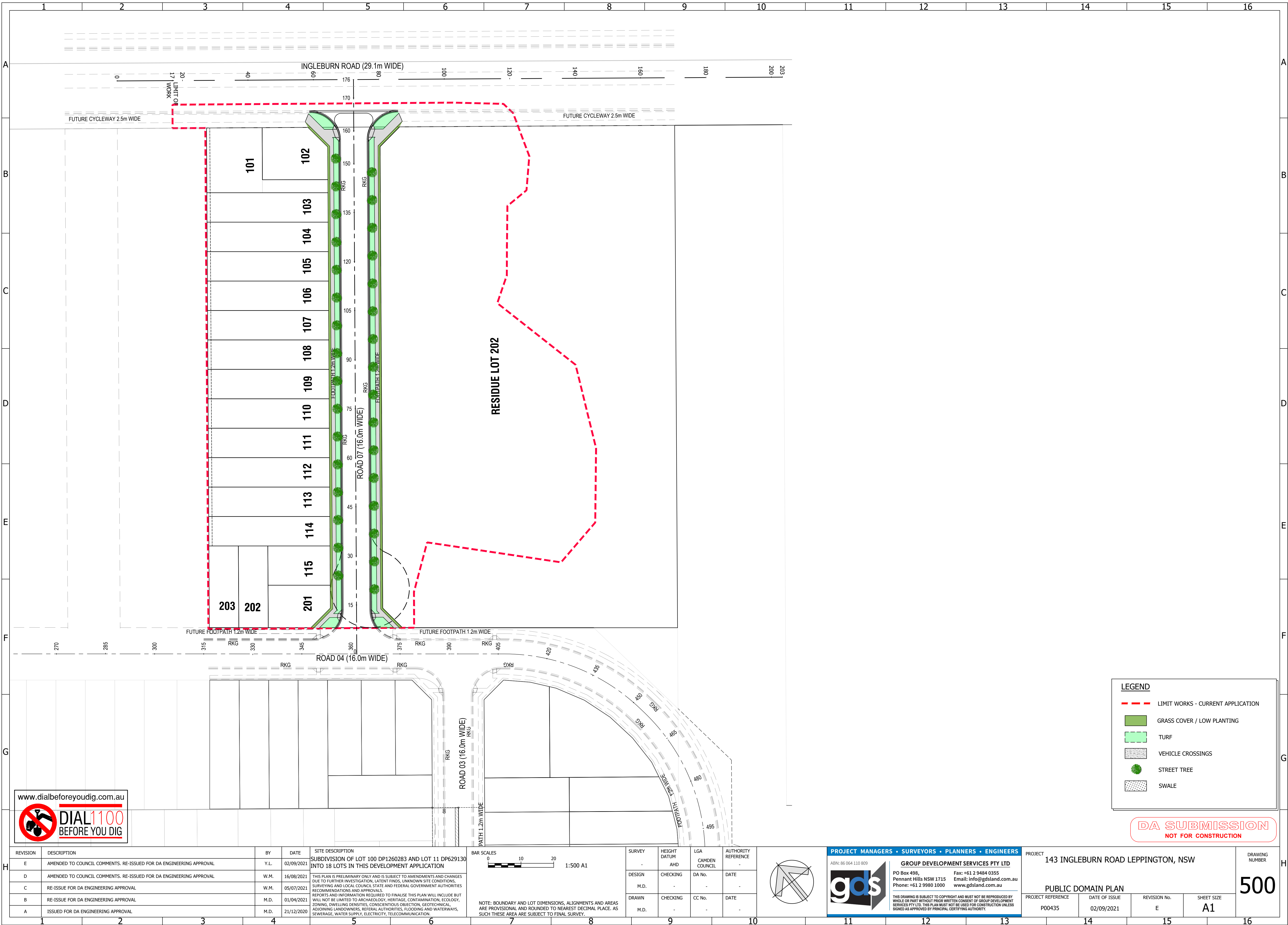
Elevations Table				
Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-0.96	-0.28	1906.83	
2	-0.28	0.00	1307.60	
3	0.00	0.72	986.15	
4	0.72	1.28	823.82	

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REVISION		DESCRIPTION	BY	DATE	SITE DESCRIPTION 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>	BAR SCALES 0 10 20 1:500 A1	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE		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 <small>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.</small>	PROJECT 143 INGLEBURN ROAD LEPPINGTON, NSW	DRAWING NUMBER 401			
F	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	02/09/2021				-	AHD	CAMDEN COUNCIL	-							
E	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	Y.L.	27/08/2021				DESIGN	CHECKING	DA No.	DATE							
D	AMENDED TO COUNCIL COMMENTS. RE-ISSUED FOR DA ENGINEERING APPROVAL	W.M.	16/08/2021				M.D.	-	-	-							
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021				DRAWN	CHECKING	CC No.	DATE							
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021				M.D.	-	-	-							
1		2	3	4	5		6	7	8	9	10	11	12	13	14	15	16

FILE LOCATION: G:_2 CURRENT PROJECTS\P00435 143 INGLEBURN RD, LEPPINGTON\4. ENGINEERING\4. DA ENGINEERING\P00435 - 143 INGLEBURN RD, LEPPINGTON DA ENG REV E.DWG -DWG NO: P401 BULK EARTHWORKS (2) -(Plot with GDS_Stnd.ctb)- PLOT DATE: 9/2/2021 12:57 PM



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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

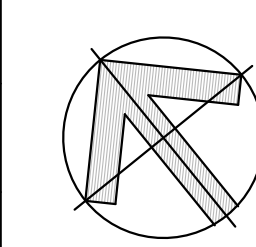
SITE DESCRIPTION
SUBDIVISION OF LOT 100 DP1260283 AND LOT 11 DP629130 INTO 18 LOTS IN THIS DEVELOPMENT APPLICATION

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.

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 AREA ARE SUBJECT TO FINAL SURVEY.

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



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ABN: 86 064 110 809

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

4.5.2 Trunk and branch protection

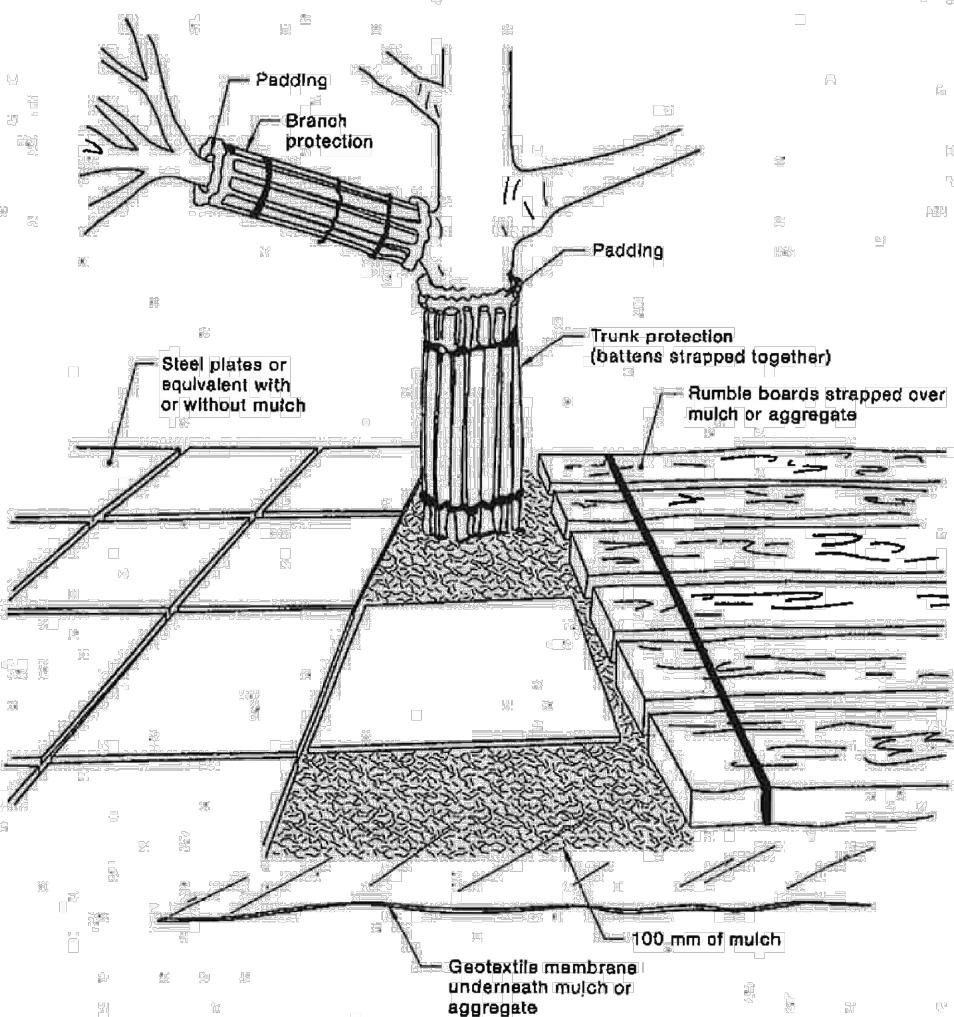
Where necessary, install protection to the trunk and branches of trees as shown in Figure 4. The materials and positioning of protection are to be specified by the project arborist. A minimum height of 2 m is recommended.

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.

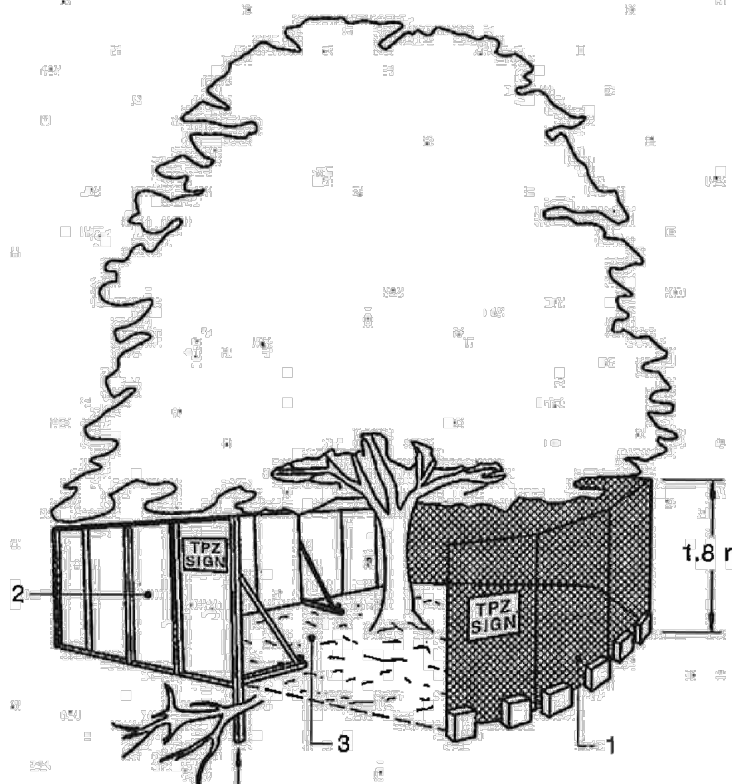
FIGURE 4 EXAMPLES OF TRUNK, BRANCH AND GROUND PROTECTION

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

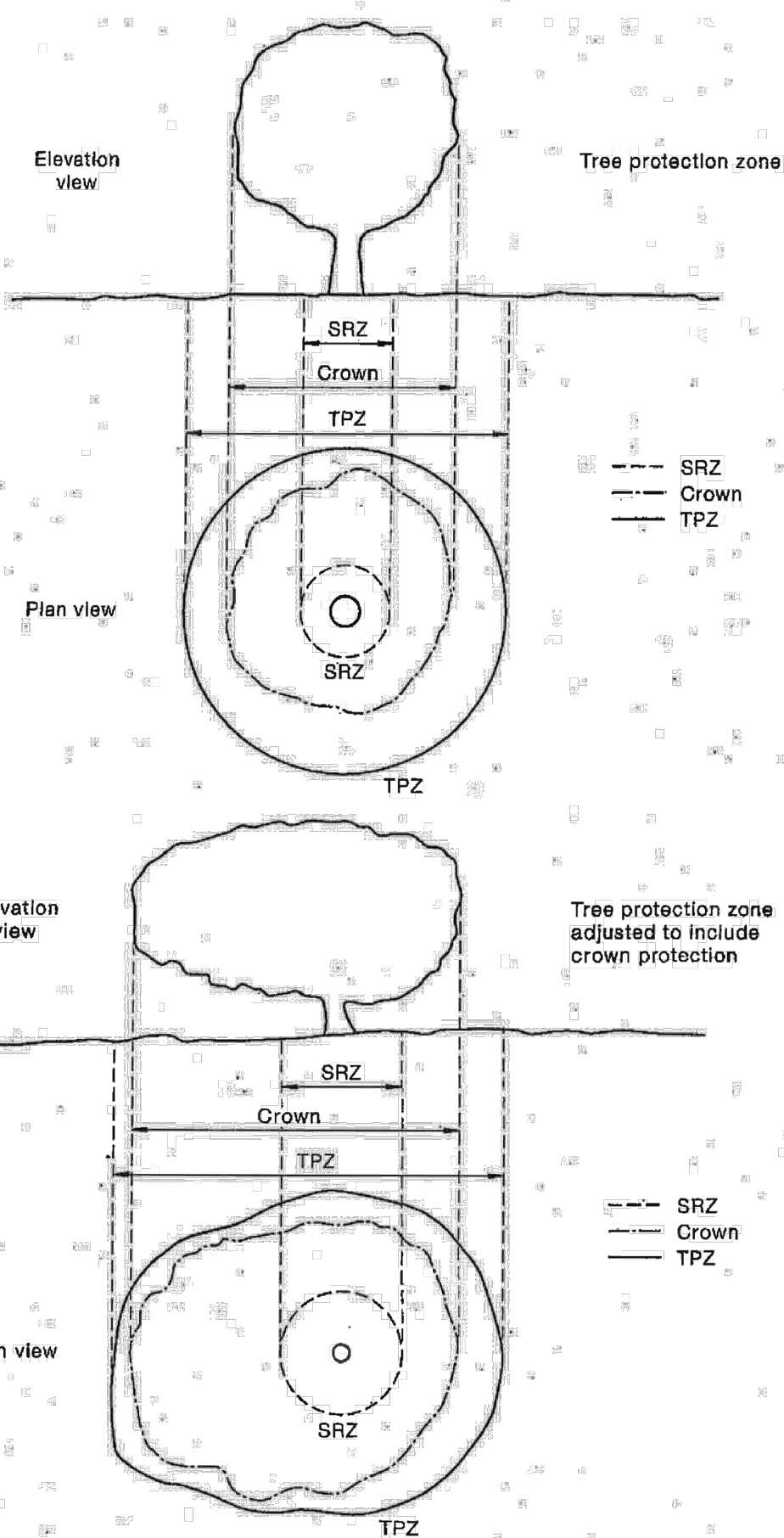
Signs identifying the TPZ should be placed around the edge of the TPZ and be visible from within the development site (refer Figure 3). The lettering on the sign should comply with AS 1319. Appendix C provides an example of a suitable TPZ sign.



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

ADJACENT CONCRETE FOOTPATH. TIMBER EDGE REQUIRED WHEN NO FOOTPATH ADJACENT

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

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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

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BAR SCALES

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DESIGN	CHECKING	DA No.	DATE
M.D.	-	-	-
DRAWN	CHECKING	CC No.	DATE
M.D.	-	-	-

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ABN: 86 064 110 909

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PROJECT

143 INGLEBURN ROAD LEPPINGTON, NSW

PROJECT REFERENCE

DATE OF ISSUE

REVISION No.

SHEET SIZE

P00435

02/09/2021

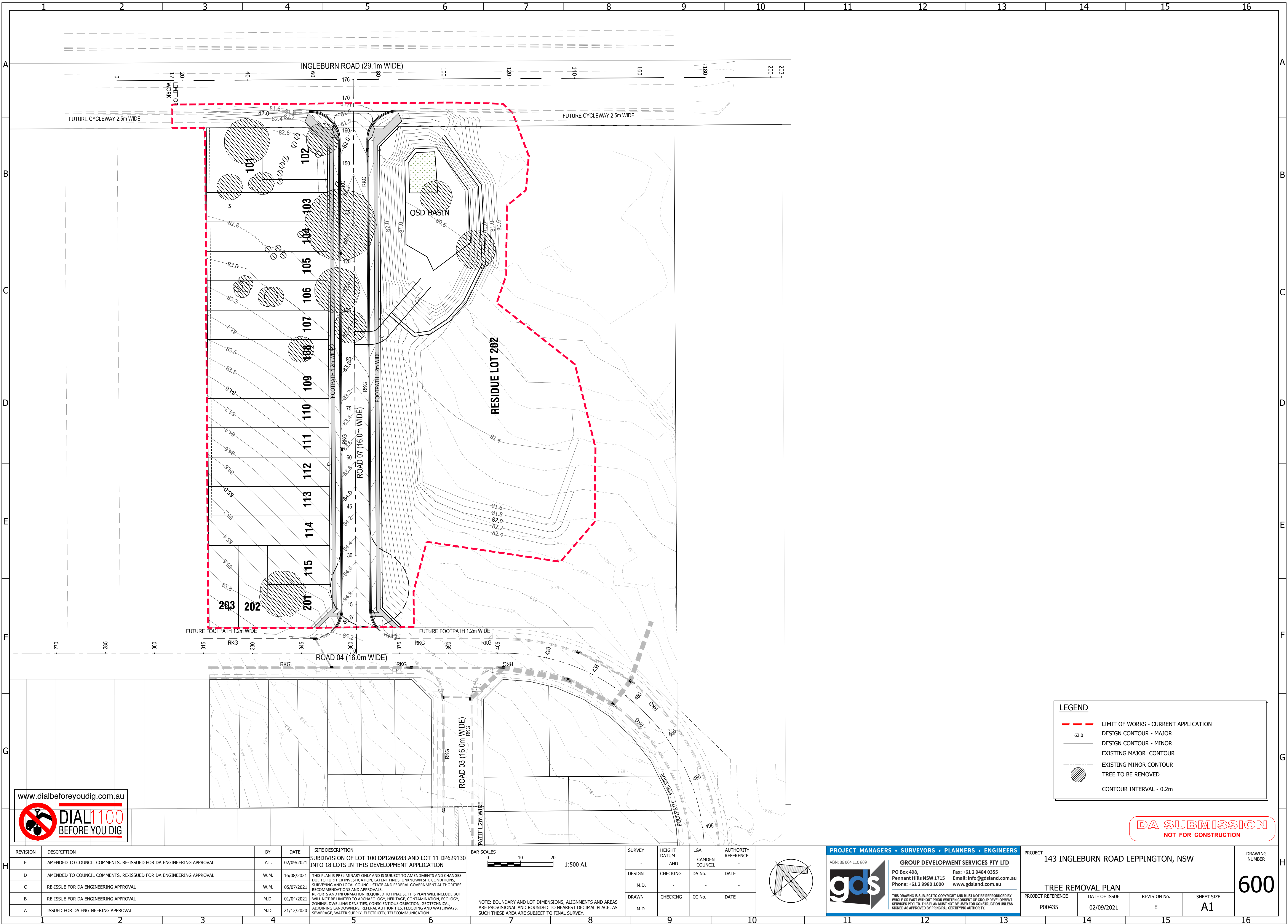
E

A1

TREE PROTECTION AND PLANTING DETAILS



DRAWING NUMBER

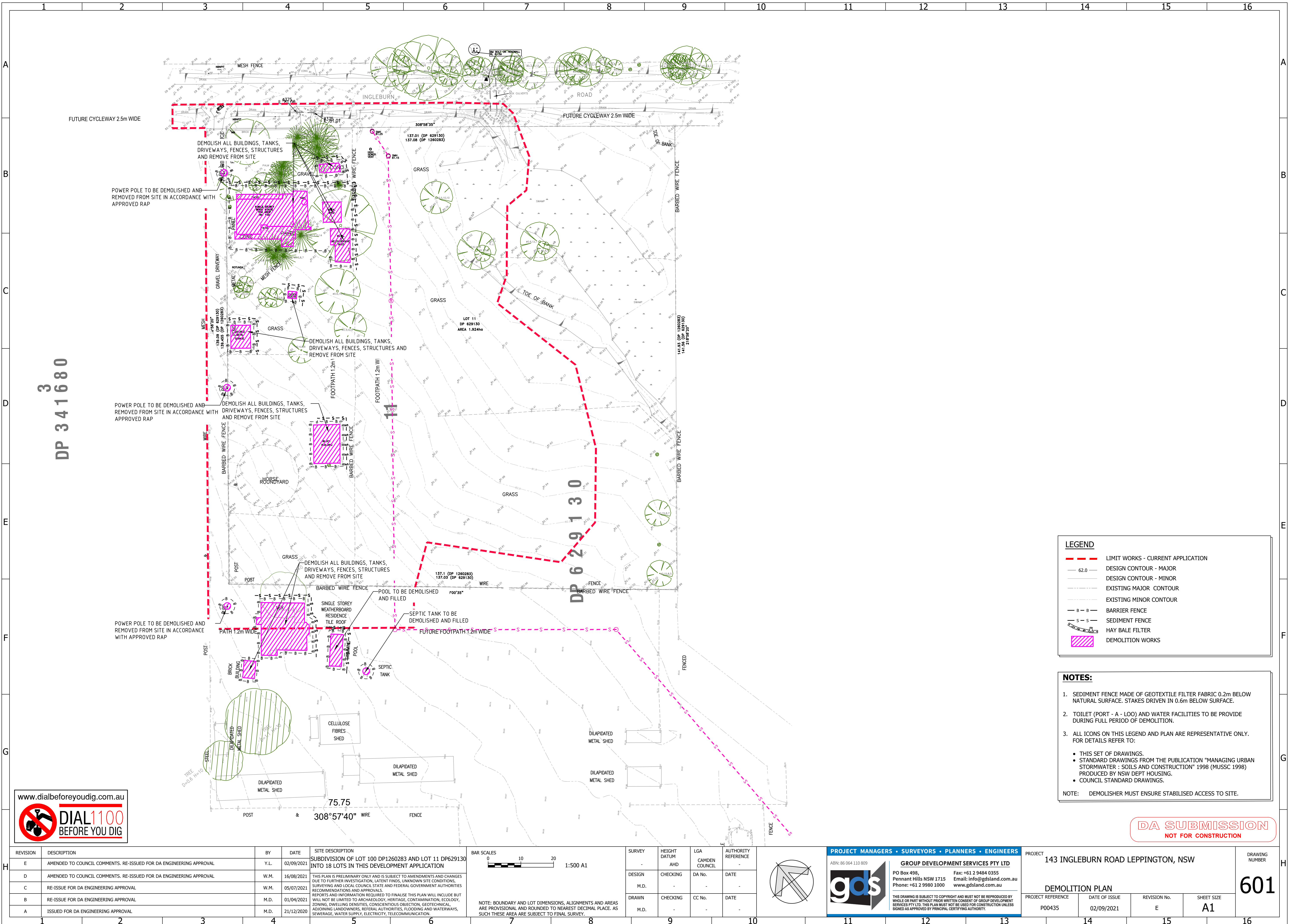
501

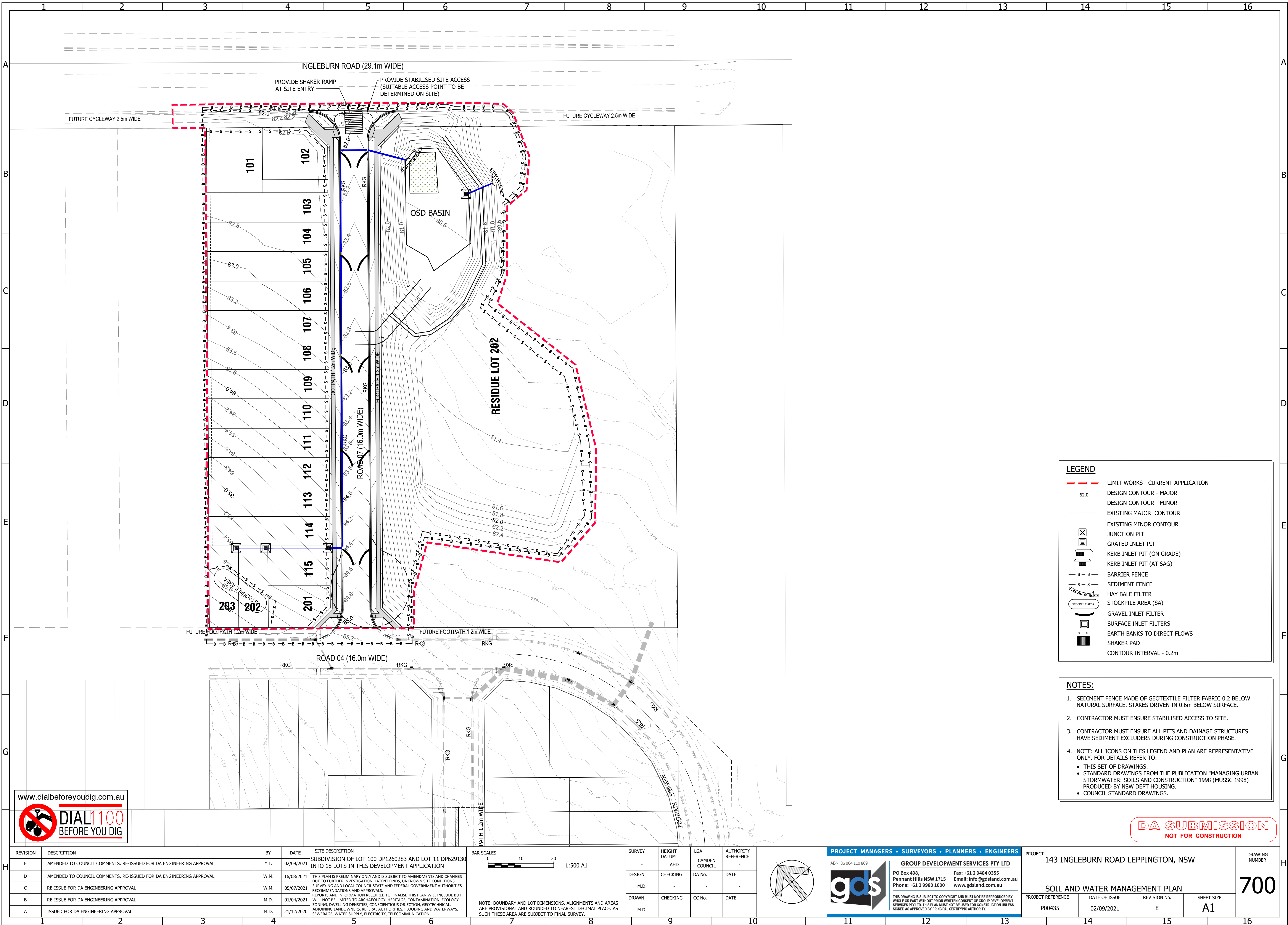


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DIAL1100
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REVISION		DESCRIPTION	BY	DATE	SITE DESCRIPTION	BAR SCALES	SURVEY	HEIGHT DATUM	LGA	AUTHORITY REFERENCE	<div>PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS</div> <div>ABN: 86 064 110 809</div> <div><div></div><div><div>GROUP DEVELOPMENT SERVICES PTY LTD</div><div>PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000</div><div>Fax: +61 2 9484 0355 Email: info@gdsland.com.au www.gdsland.com.au</div></div></div> <div></div> <td>PROJECT</td> <td colspan="4">143 INGLEBURN ROAD LEPPINGTON, NSW</td> <td>DRAWING NUMBER</td>	PROJECT	143 INGLEBURN ROAD LEPPINGTON, NSW				DRAWING NUMBER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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GENERAL NOTES:

1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH OTHER ENGINEERING PLANS AND ANY WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
2. 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.
3. ALL SUBCONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWN SLOPE AREAS.
4. 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.
5. 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.
6. 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.
8. WHERE THE AREA TO BE DISTURB CONTAINS TREES TO REMAIN, AN ARBORIST CONSULTANT SHOULD PROVIDE ADVICE ON PROCEDURES AND MEASURES TO BE PLACED.
9. TEMPORARY REHABILITATION SHALL BE UNDERTAKEN WITHIN 14 WORKING DAYS BEFORE EITHER WORKS CONTINUE OR PERMANENT REHABILITATION IS UNDERTAKEN.
10. 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.
11. 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:

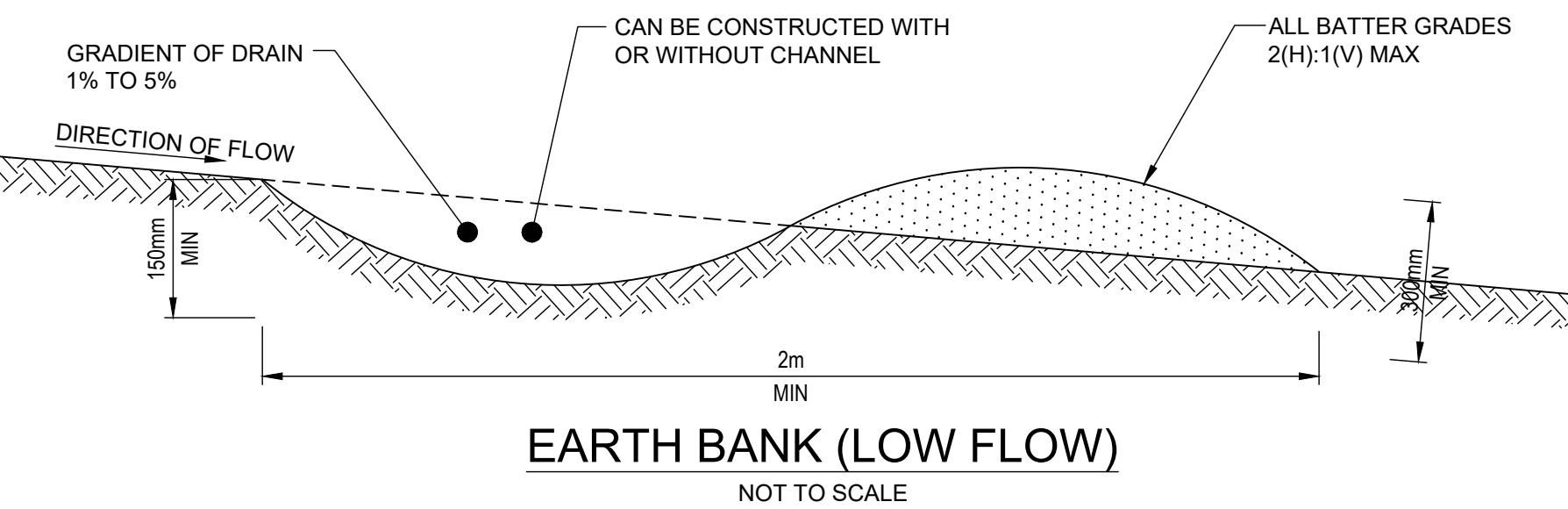
STOCKPILES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT
4. 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
5. 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

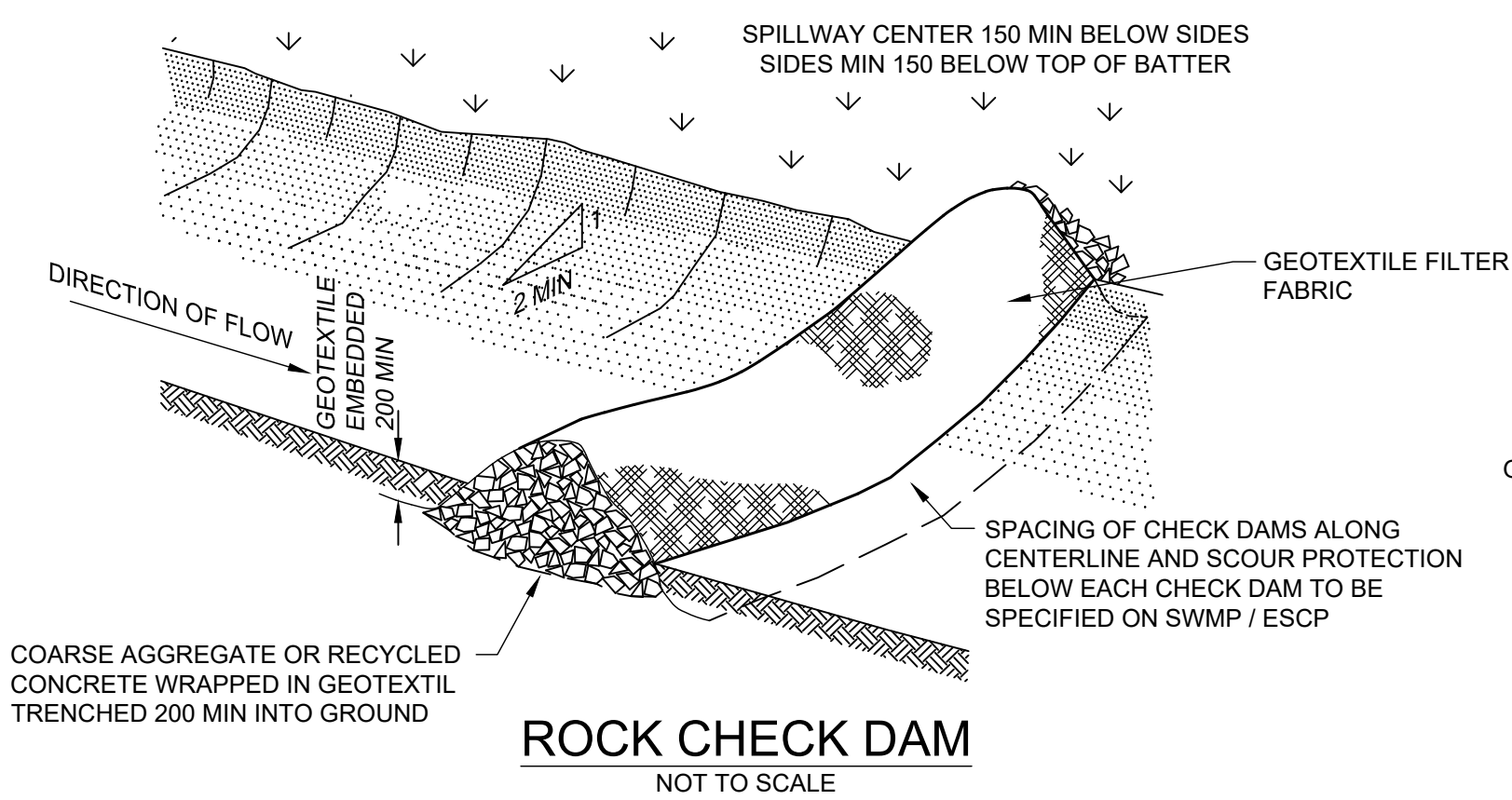
EARTH BANK:

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

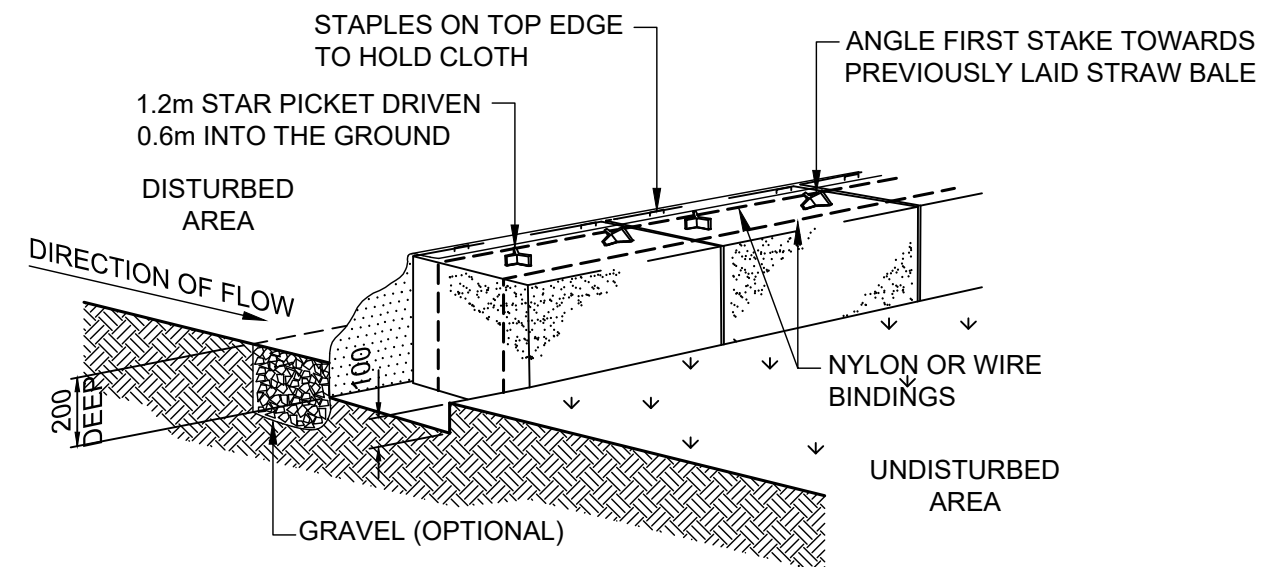
NOTE:
ONLY TO BE USED AS TEMPORARY BANK
WHERE MAXIMUM UPSLOPE LENGTH IS 80m



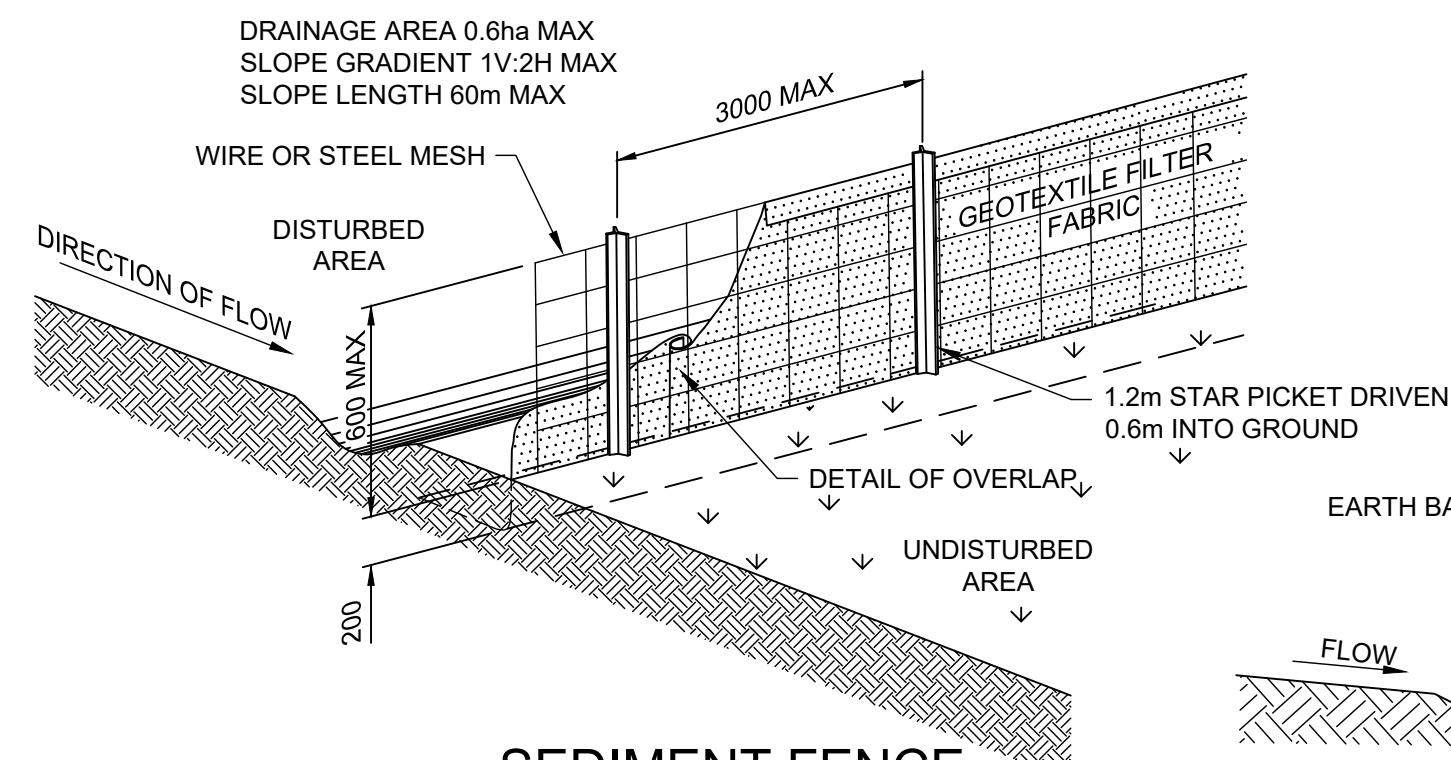
EARTH BANK (LOW FLOW)
NOT TO SCALE



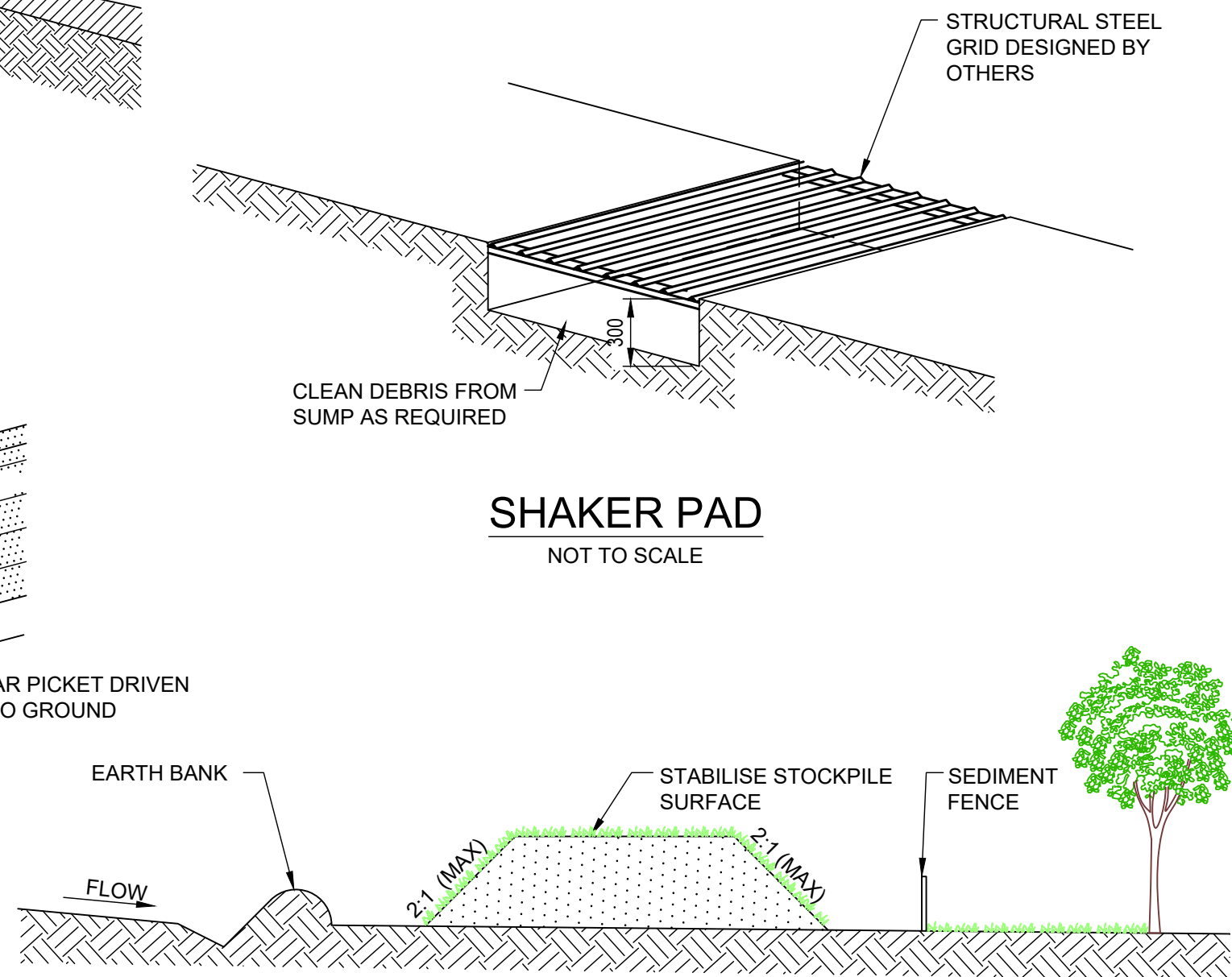
ROCK CHECK DAM
NOT TO SCALE



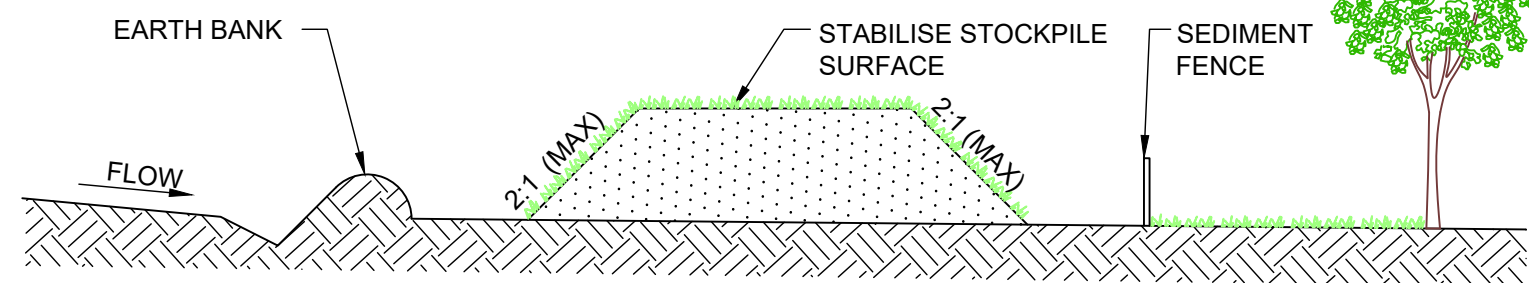
**SEDIMENT FENCE
(GEOTEXTILE FILTER FABRIC & STRAW BALE)**
NOT TO SCALE



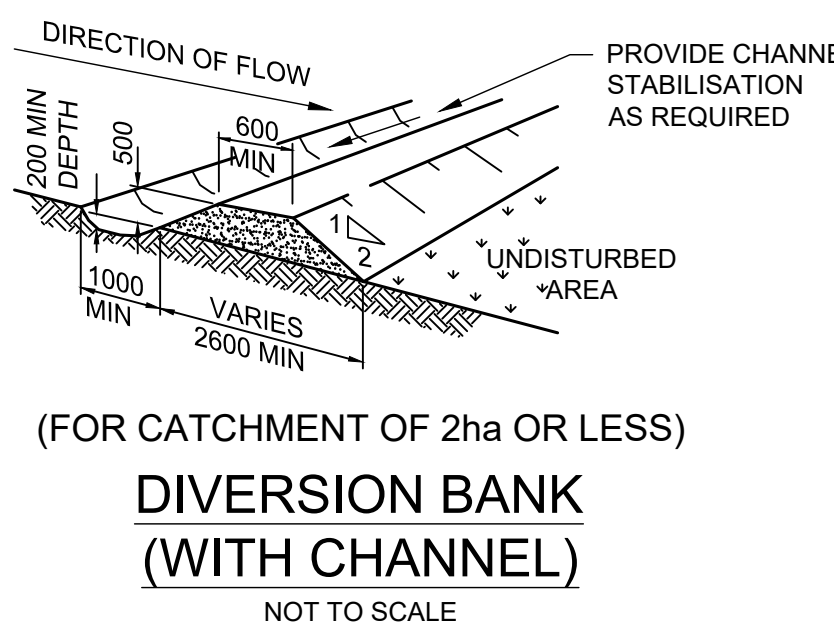
**SEDIMENT FENCE
(GEOTEXTILE FILTER FABRIC)**
NOT TO SCALE



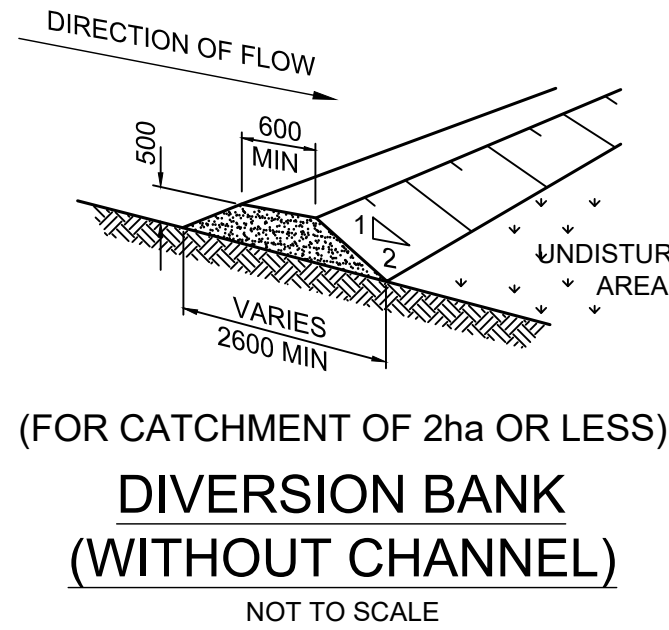
SHAKER PAD
NOT TO SCALE



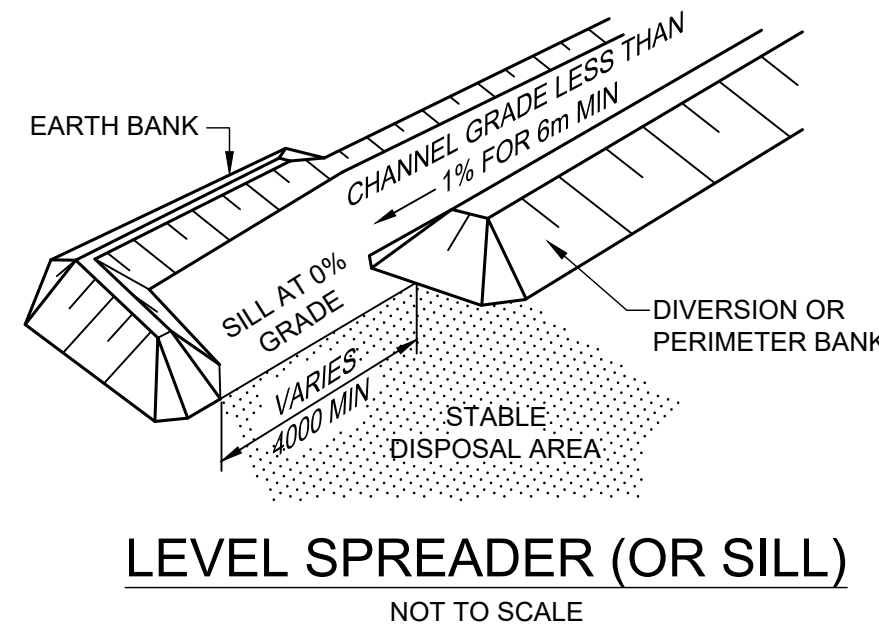
STOCKPILES
NOT TO SCALE



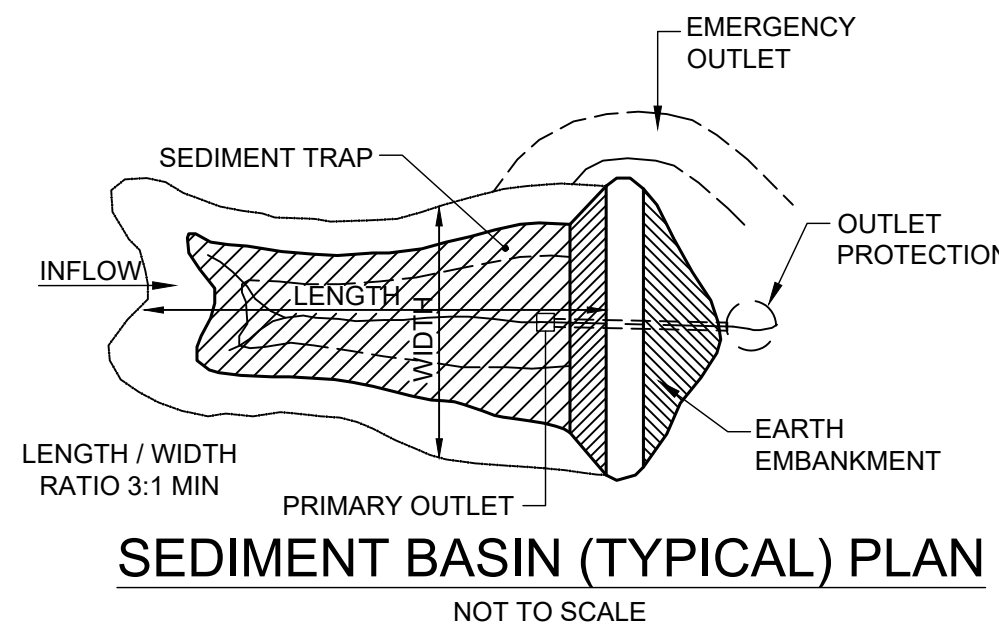
**DIVERSION BANK
(WITH CHANNEL)**
NOT TO SCALE



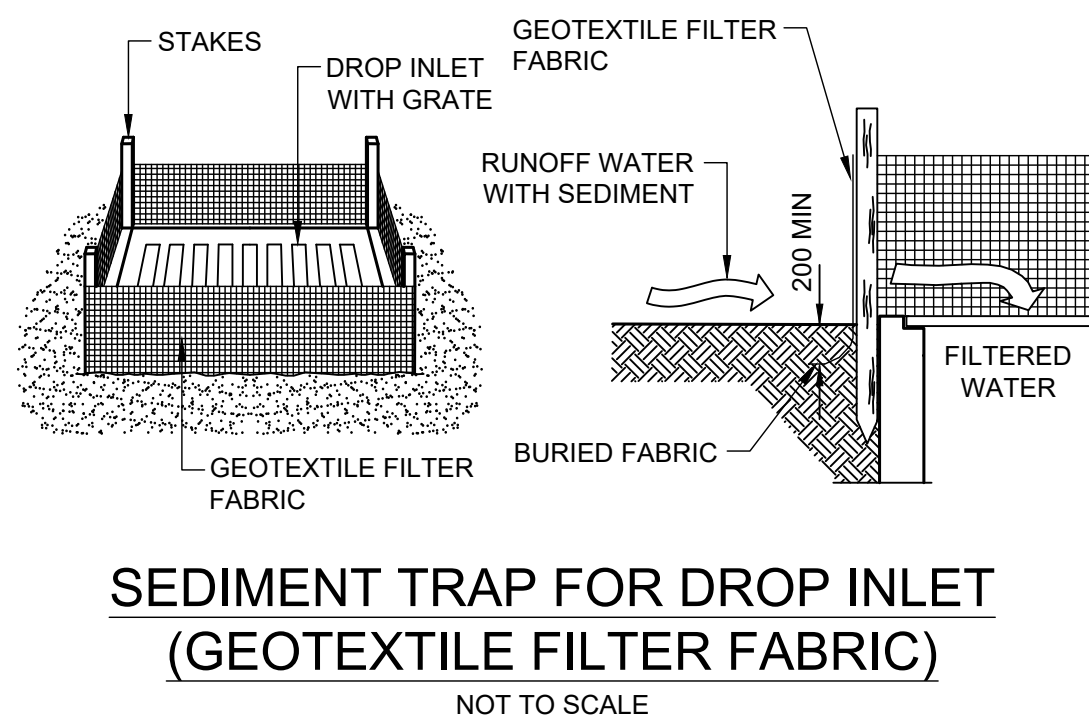
**DIVERSION BANK
(WITHOUT CHANNEL)**
NOT TO SCALE



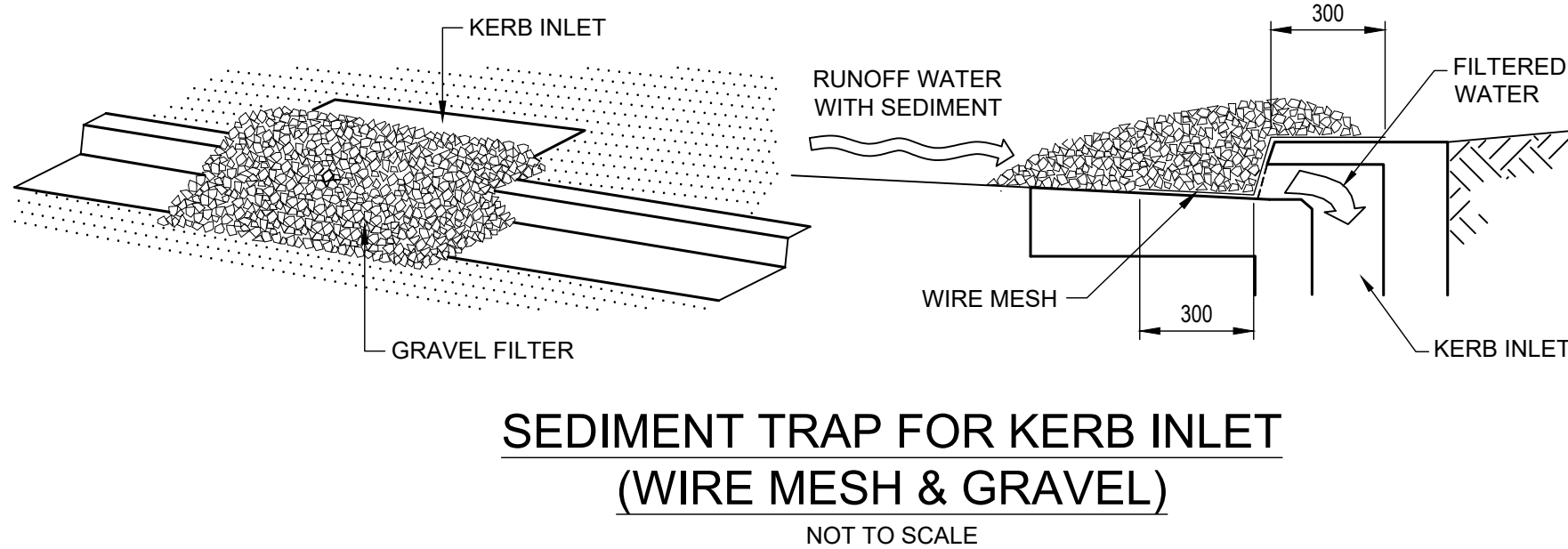
LEVEL SPREADER (OR SILL)
NOT TO SCALE



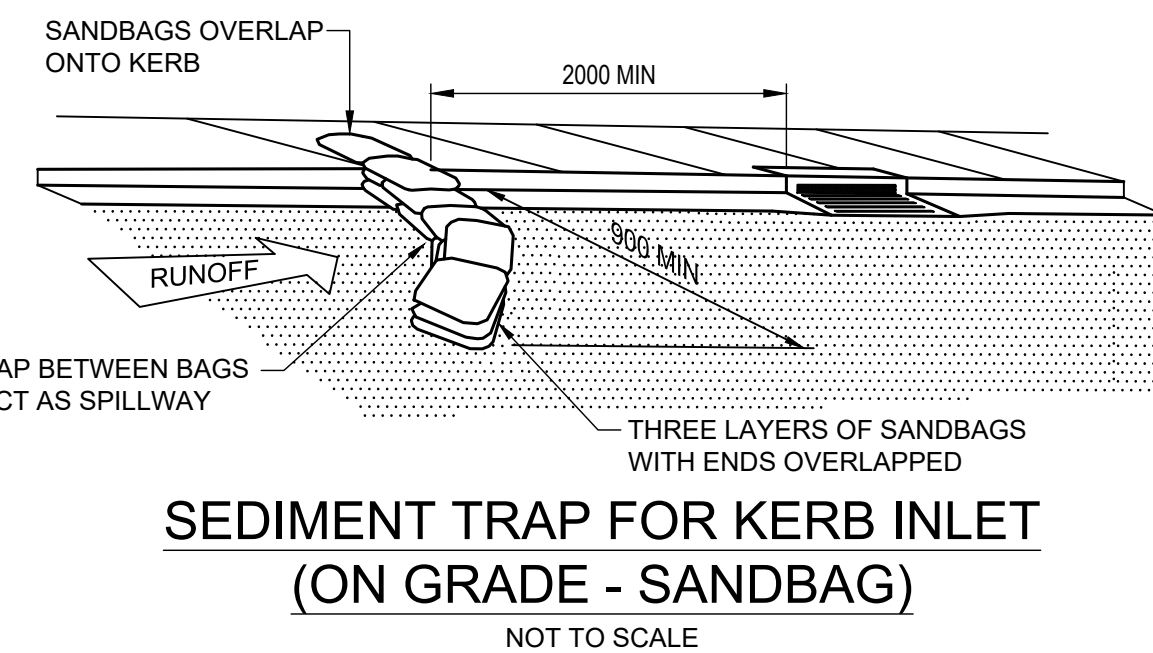
SEDIMENT BASIN (TYPICAL) PLAN
NOT TO SCALE



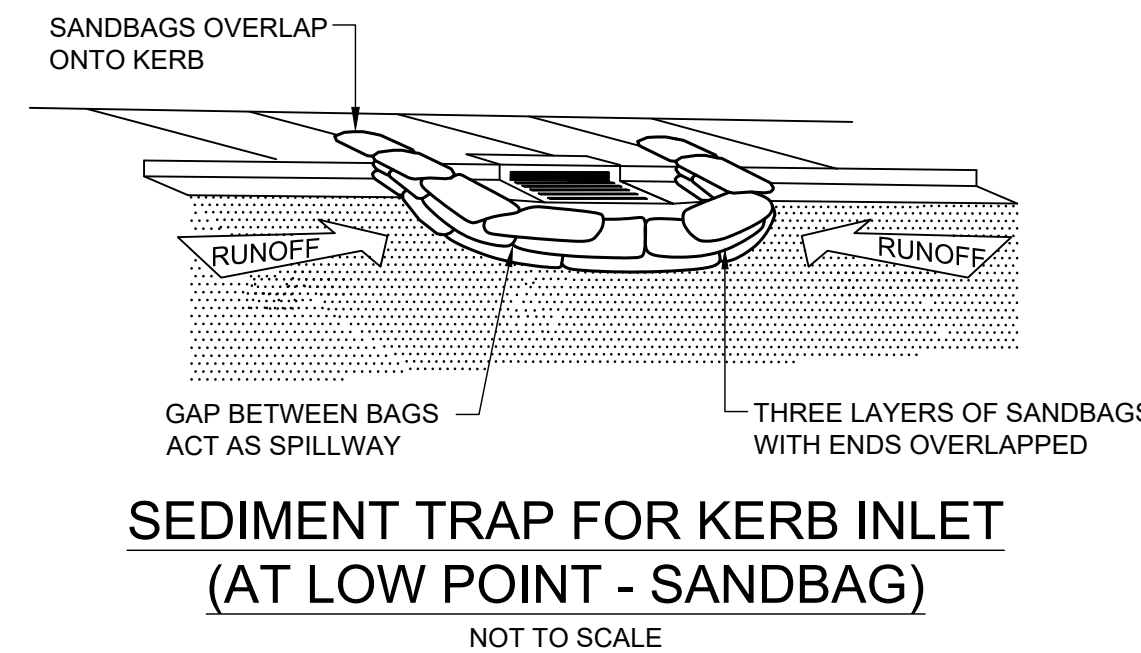
**SEDIMENT TRAP FOR DROP INLET
(GEOTEXTILE FILTER FABRIC)**
NOT TO SCALE



**SEDIMENT TRAP FOR KERB INLET
(WIRE MESH & GRAVEL)**
NOT TO SCALE



**SEDIMENT TRAP FOR KERB INLET
(ON GRADE - SANDBAG)**
NOT TO SCALE



**SEDIMENT TRAP FOR KERB INLET
(AT LOW POINT - SANDBAG)**
NOT TO SCALE

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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	-	PROJECT MANAGERS • SURVEYORS • PLANNERS • ENGINEERS	143 INGLEBURN ROAD LEPPINGTON, NSW	701
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.	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.	DESIGN	CHECKING	DA No.	DATE	gds ABN: 86 064 110 909 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.	SOIL AND WATER MANAGEMENT DETAILS	P00435
C	RE-ISSUE FOR DA ENGINEERING APPROVAL	W.M.	05/07/2021			M.D.	-	-	-			
B	RE-ISSUE FOR DA ENGINEERING APPROVAL	M.D.	01/04/2021			DRAWN	CHECKING	CC No.	DATE			
A	ISSUED FOR DA ENGINEERING APPROVAL	M.D.	21/12/2020			M.D.	-	-	-			
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