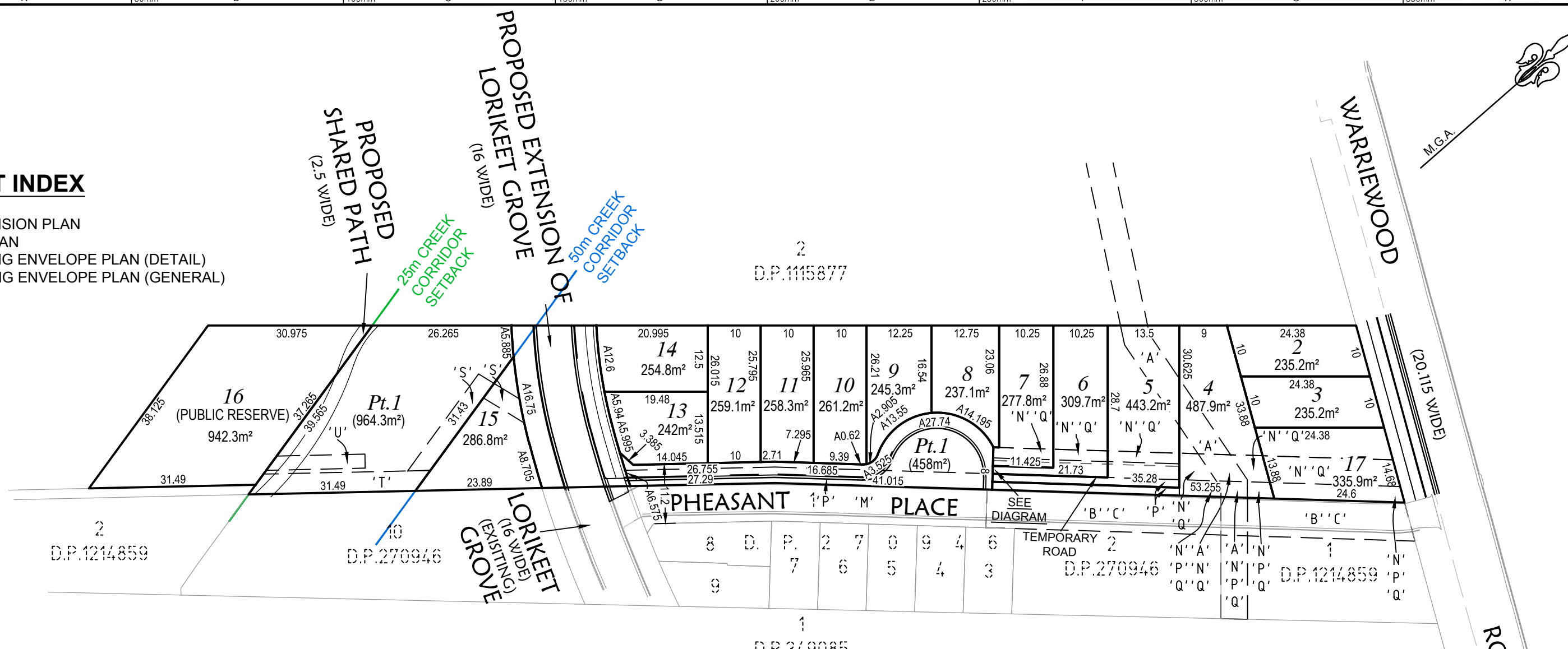


SHEET INDEX

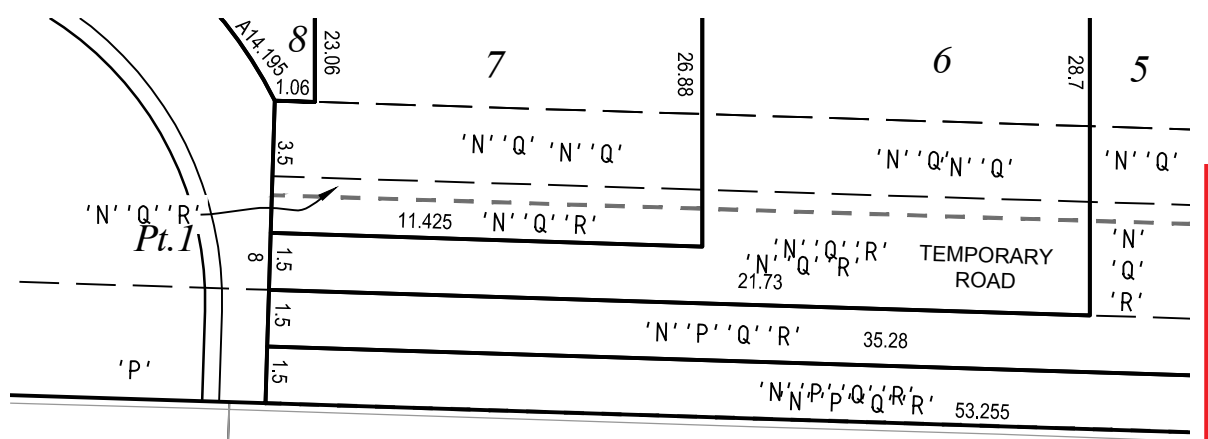
1. SUBDIVISION PLAN
2. SITE PLAN
3. BUILDING ENVELOPE PLAN (DETAIL)
4. BUILDING ENVELOPE PLAN (GENERAL)



- 'A' - EASEMENT FOR SEWAGE PURPOSES 5 WIDE VIDE 6771995
- 'B' - EASEMENT FOR ACCESS 7.2 WIDE VIDE D.P.1214859
- 'C' - EASEMENT FOR ACCESS 7.2 WIDE VIDE D.P.1214859
- 'M' - RIGHT OF ACCESS (WHOLE LOT) VIDE D.P.270946
- 'N' - PROPOSED RIGHT OF ACCESS 8 WIDE & VARIABLE (TEMPORARY)
- 'P' - PROPOSED EASEMENT TO DRAIN WATER 3 WIDE
- 'Q' - PROPOSED EASEMENT FOR SERVICES 8 WIDE (TEMPORARY)
- 'R' - PROPOSED RIGHT OF ACCESS 6.5 WIDE
- 'S' - PROPOSED EASEMENT TO DRAIN WATER 3.4 WIDE
- 'T' - PROPOSED EASEMENT TO DRAIN WATER 3.8 WIDE
- 'U' - PROPOSED EASEMENT TO DRAIN WATER 2.65 WIDE

NOTE:

LOT AREAS, DIMENSIONS & EASEMENTS ARE APPROXIMATE ONLY AND SUBJECT TO FINAL SURVEYS, REGULATORY APPROVALS & PLAN REGISTRATION AT NSW LRS



PHEASANT PLACE

DIAGRAM
SCALE 1:200



PLAN AFTER ACQUISITION OF LOT 3 D.P.942319



THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT
DA2019/0263

ISSUE FOR DA

AMEND. No.: 09 DATE: 24/06/2019 DETAILS: LOT LAYOUT AND BEP UPDATED (LOTS 2, 3 & 17)



DIAL 1100 BEFORE YOU DRINK



APPROVED COMPANY
AS/NZS 4801
OH&S
Management System



APPROVED COMPANY
ISO 14001
Environmental
Management System



APPROVED COMPANY
ISO 9001
Quality
Management System

Project: **LEGENDARY APARTMENTS**
 OVER PART LOT 3 D.P. 942319 & LOT 3 D.P. 1115877
 53A & 53B WARRIEWOOD ROAD, WARRIEWOOD
 Council Ref: **NORTHERN BEACHES**
 Datum: A.H.D. L.G.A. NORTHERN BEACHES

Principal: **LEGENDARY APARTMENTS**
 Scale: 1:500 Date: 15/01/2019 Council Ref: **NORTHERN BEACHES**
 Calcs: N.G. Drawn: S.E. Proj.Man: J.B. Client Ref:

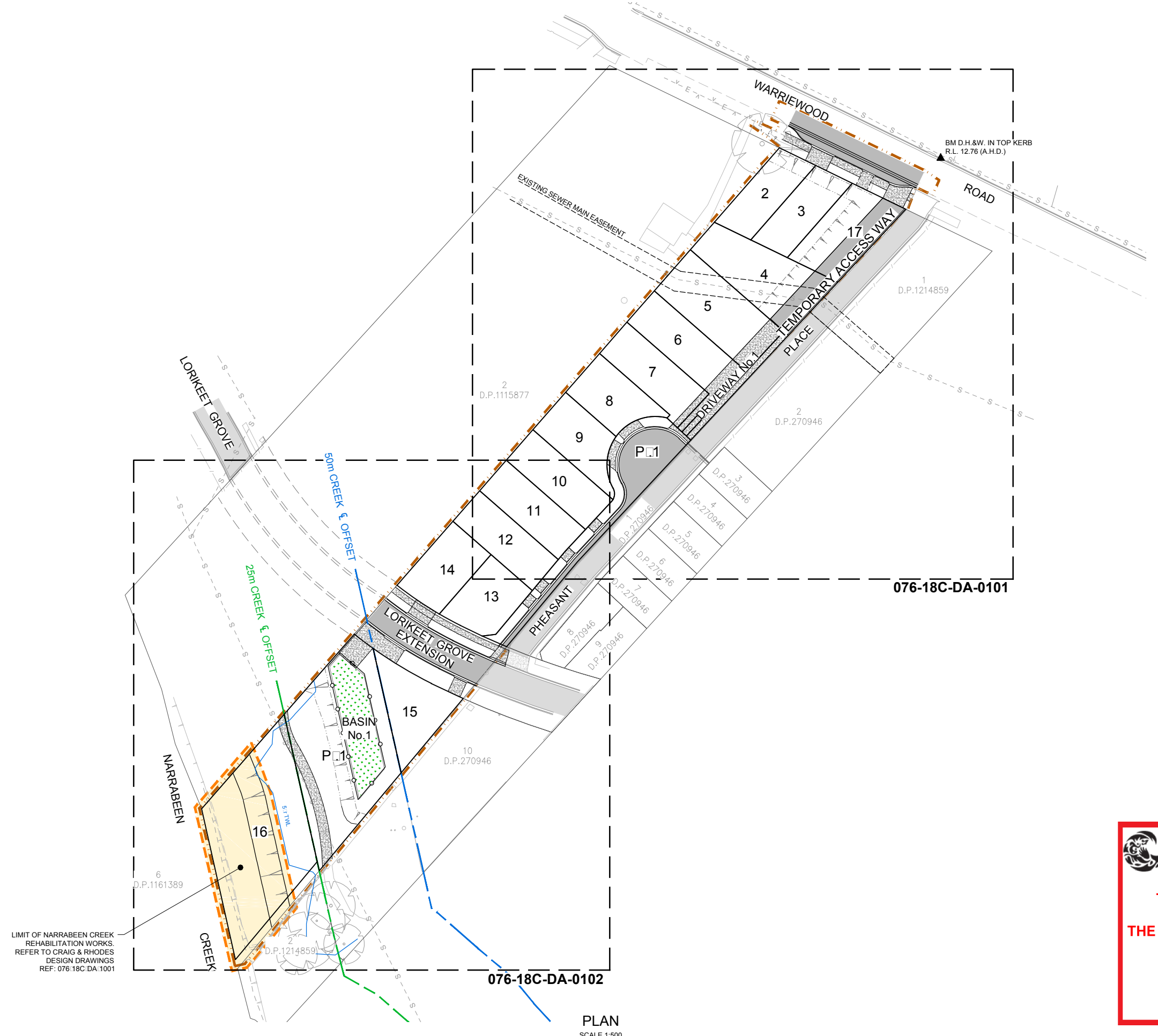


CRAIG & RHODES
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 Tel. 9869-1855
 reception@crhodes.com.au
 www.craigandrhodes.com.au
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Our Ref: **076-18**
 Dwg File Ref. [Rev] - Sheet Ref.

- 03 BEP



PLAN
SCALE 1:500

northern beaches council

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2019/0263



REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.
B	DRAFT	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS
A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS

APPROVED COMPANY
AS/NZS 4801
QH&S Management System

APPROVED COMPANY
ISO 14001
Environmental Management System

APPROVED COMPANY
ISO 9001
Quality Management Systems

DIAL 1199
FOR HELP

Authorised for issue by:
MINH. VU

Principal:
LEGENDWAY PTY. LTD.

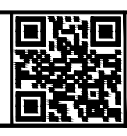
LGA:
NORTHERN BEACHES COUNCIL

Scale:
AS SHOWN

Datum:
AHD

Signature: _____

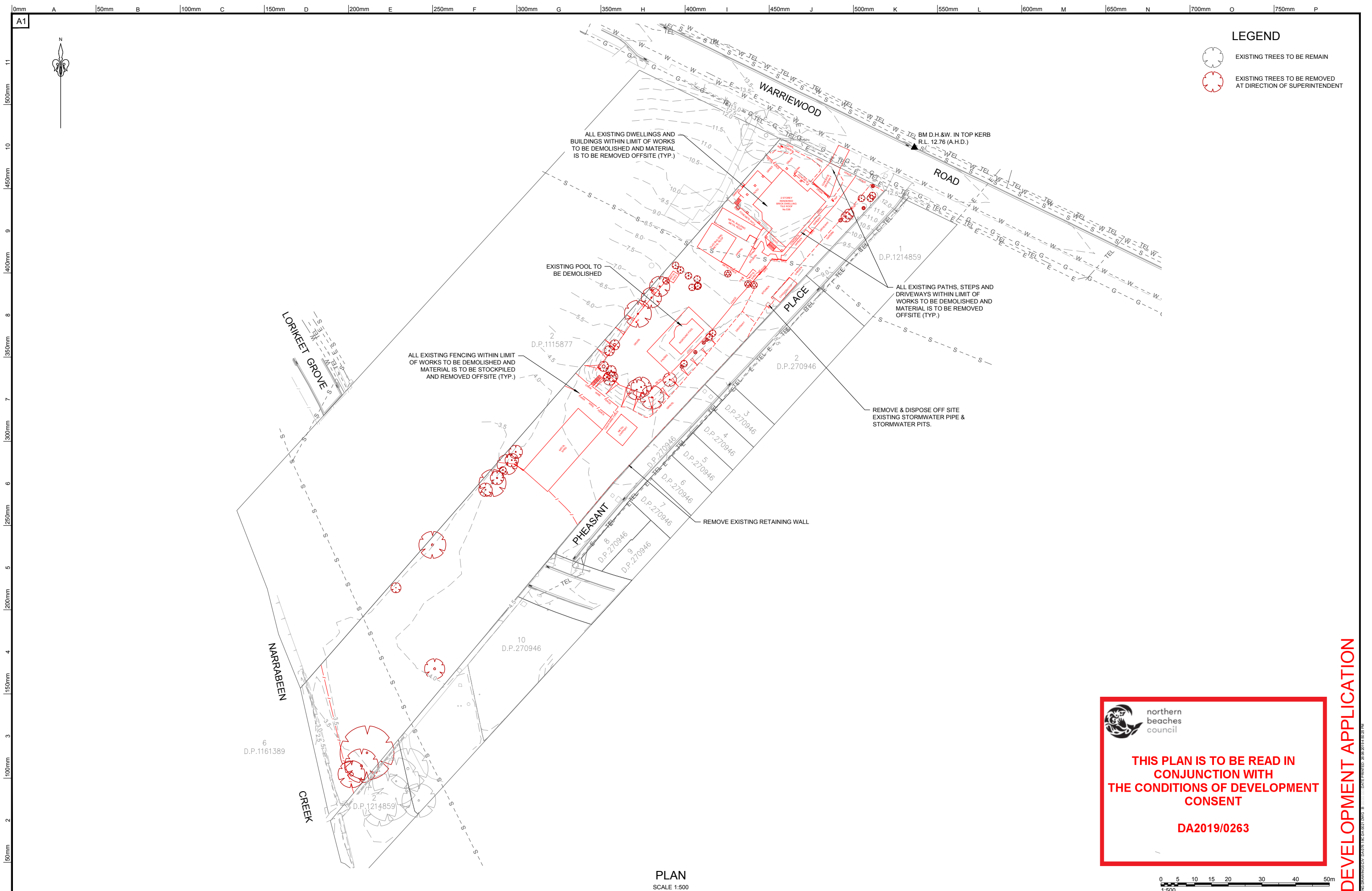
Project:
PROPOSED SUBDIVISION OF
LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319
CIVIL AND SUBDIVISION WORKS



ABN 77 050 209 991 ACN 050 209 991
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Rhodes, NSW, 2138
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Tel. 9669-1855
reception@craigandrhodes.com.au
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Drawing Title	Revision
KEY PLAN	B
C&R Ref. 076.18	Drawing Ref. 076.18C.DA.0003

DEVELOPMENT APPLICATION



LEGEND

- EXISTING TREES TO BE REMAIN
- EXISTING TREES TO BE REMOVED AT DIRECTION OF SUPERINTENDENT

northern beaches council

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2019/0263

PLAN
SCALE 1:500

REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.
B	DRAFT	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS
A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS

APPROVED COMPANY
ASINZS 4801
QH&S Management System

APPROVED COMPANY
ISO 14001
Environmental Management System

APPROVED COMPANY
ISO 9001
Quality Management Systems

DIAL 1199
FOR ALL ELECTRICAL FAULTS

Authorised for issue by:
MINH. VU

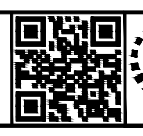
Principal:
LEGENDWAY PTY. LTD.

LGA:
NORTHERN BEACHES COUNCIL

Scale:
AS SHOWN

Datum:
AHD

Project:
PROPOSED SUBDIVISION OF
LOT 3, D.P. 1115877 AND PART LOT 3 D.P. 942319
CIVIL AND SUBDIVISION WORKS

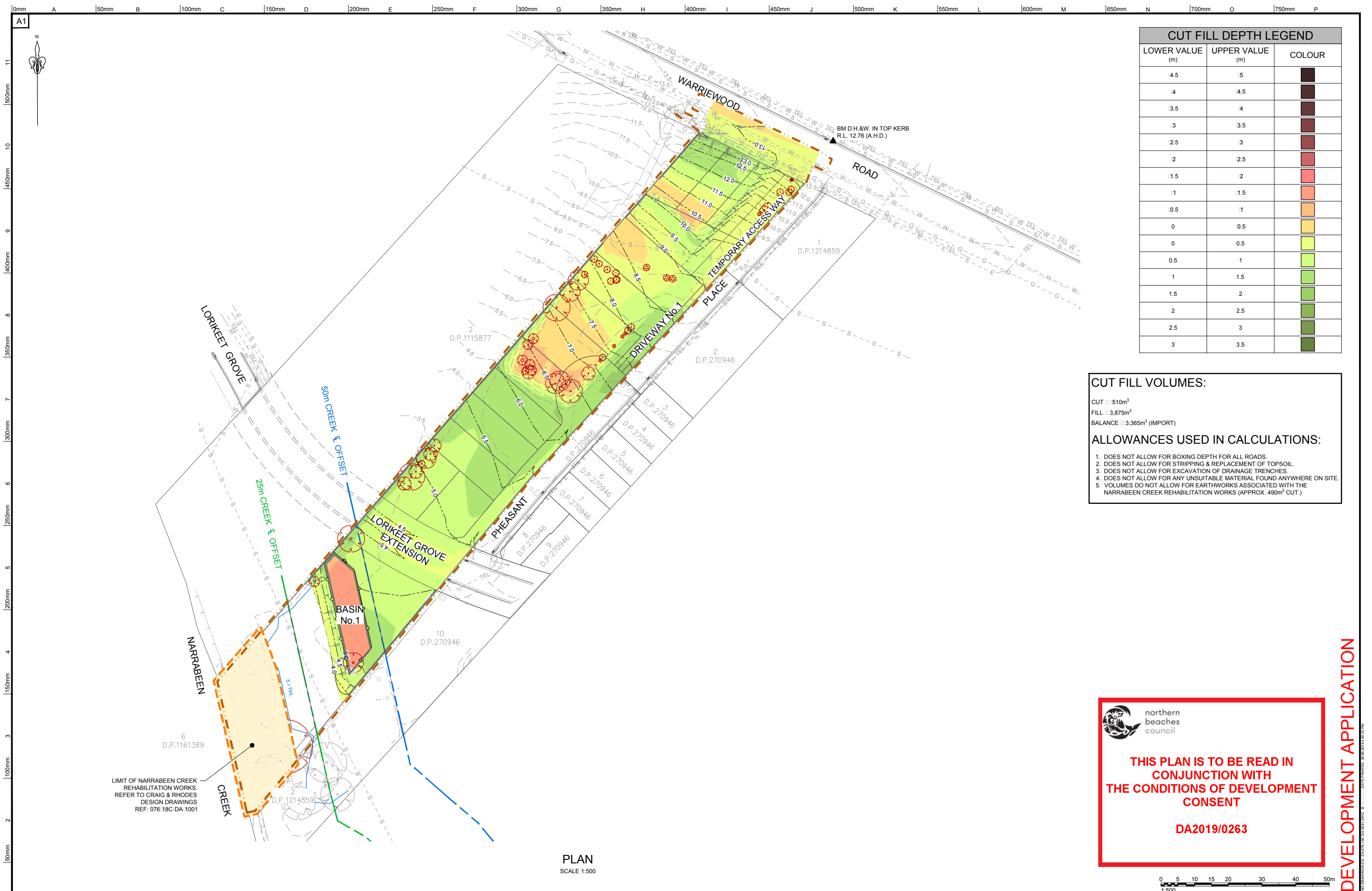


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Drawing Title
DEMOLITION PLAN

C&R Ref. 076.18
Drawing Ref. 076.18C.DA.0021
Revision B

DEVELOPMENT APPLICATION



CUT FILL DEPTH LEGEND		
LOWER VALUE (m)	UPPER VALUE (m)	COLOUR
4.5	5	Dark Brown
4	4.5	Dark Red
3.5	4	Red
3	3.5	Light Red
2.5	3	Orange
2	2.5	Light Orange
1.5	2	Yellow
1	1.5	Light Green
0.5	1	Green
0	0.5	Light Green
0	0.5	Yellow
0.5	1	Light Green
1	1.5	Green
1.5	2	Light Green
2	2.5	Green
2.5	3	Light Green
3	3.5	Green

CUT FILL VOLUMES:
 CUT 1510m³
 FILL 3,875m³
 BALANCE 3,365m³ (IMPORT)

ALLOWANCES USED IN CALCULATIONS:

1. DOES NOT ALLOW FOR BOXING DEPTH FOR ALL ROADS.
2. DOES NOT ALLOW FOR STRIPPING & REPLACEMENT OF TOPSOIL.
3. DOES NOT ALLOW FOR EXCAVATION OF DRAINAGE TRENCHES.
4. DOES NOT ALLOW FOR ANY UNSUITABLE MATERIAL FOUND ANYWHERE ON SITE.
5. VOLUMES DO NOT ALLOW FOR EARTHWORKS ASSOCIATED WITH THE NARRABEEN CREEK REHABILITATION WORKS (APPROX. 490m³ CUT.)

PLAN
SCALE 1:500

northern beaches council

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2019/0263



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APPROVED COMPANY
ASINZS 4801
QH&S Management System

APPROVED COMPANY
ISO 14001
Environmental Management System

APPROVED COMPANY
ISO 9001
Quality Management Systems

DIAL 1199
FOR ALL ELECTRICAL WORKS

Authorised for issue by: **MINH.VU**

Principal: **LEGENDWAY PTY. LTD.**

LGA: **NORTHERN BEACHES COUNCIL**

Scale: AS SHOWN Datum: AHD

Project: **PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 CIVIL AND SUBDIVISION WORKS**

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Drawing Title: **BULK EARTHWORKS PLAN**

C&R Ref: 076.18 Drawing Ref: 076.18C.DA.0051

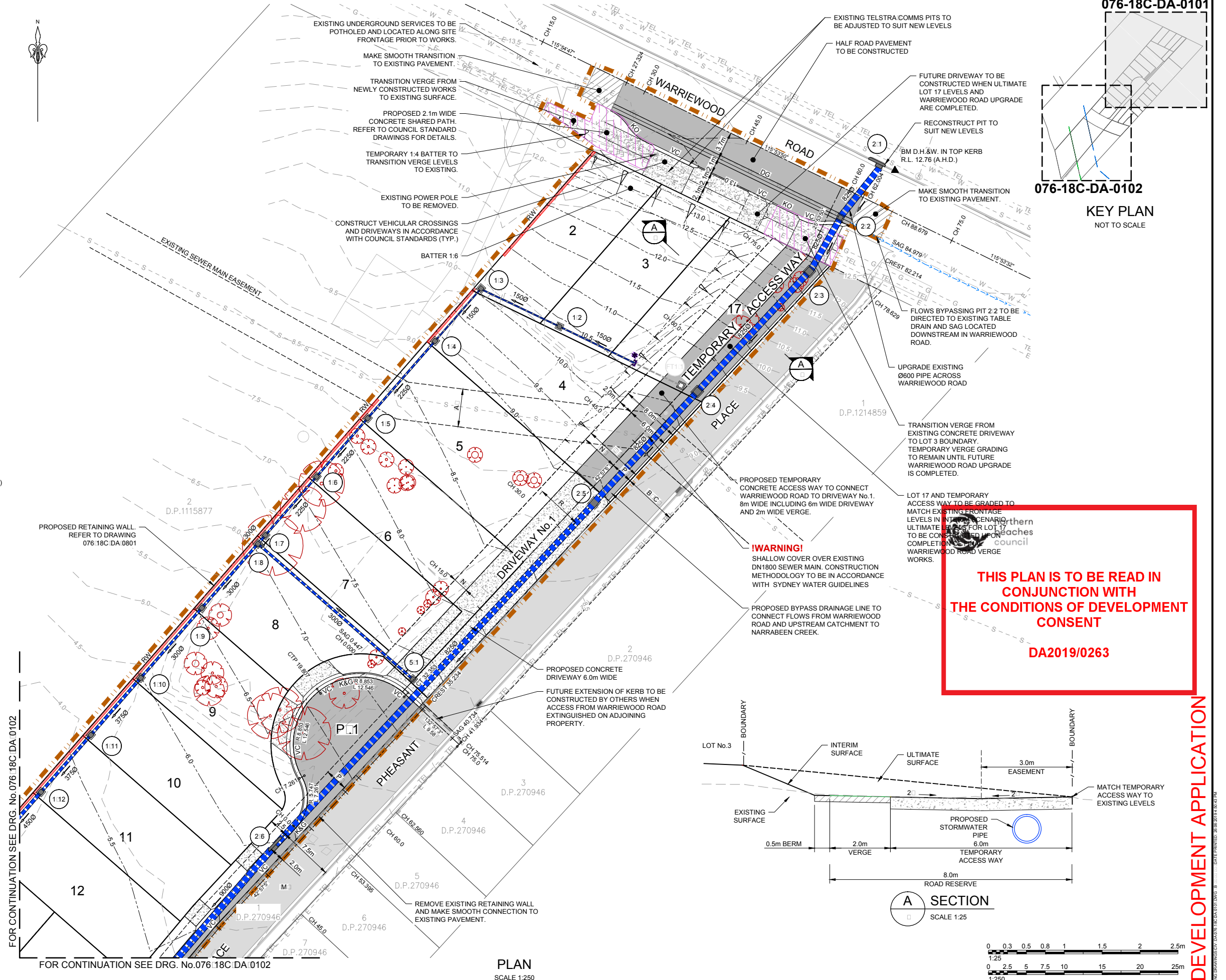
DEVELOPMENT APPLICATION

LEGEND

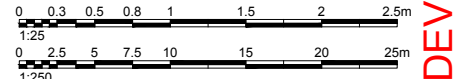
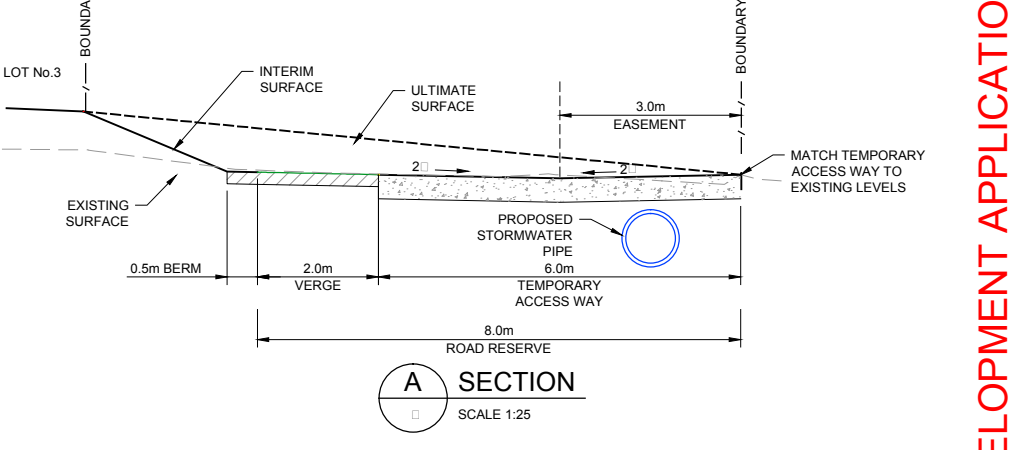
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- E-E --- EXISTING ELECTRICAL LINE
- W-W --- EXISTING WATER LINE
- TEL-TEL --- EXISTING TELECOMS LINE
- C-C --- EXISTING COMMUNICATION LINE
- G-G --- EXISTING GAS LINE
- S-S --- EXISTING SEWER LINE
- PROPOSED STORMWATER DRAINAGE LINE
- STUB, CAP AND BURY FOR FUTURE CONNECTION
- FUTURE STORMWATER DRAINAGE LINE
- EXISTING DRAINAGE LINE
- PROPOSED STORMWATER PITS
- FUTURE STORMWATER PITS
- EXISTING STORMWATER PITS
- CONCRETE HEADWALL OUTLET
- STACKED ROCK HEADWALL OUTLET
- 49.0--- DESIGN CONTOUR
- 49.0--- EXISTING CONTOUR
- CIVIL SITE BOUNDARY
- RETAINING WALL
- FLOW DIRECTION
- PIT LABEL (DRAINAGE LINE No. □ DRAINAGE PIT No.)
- EXISTING TREES TO BE REMAIN
- EXISTING TREES TO BE REMOVED AT DIRECTION OF SUPERINTENDENT
- EXISTING PAVEMENT(AC)
- PROPOSED PAVEMENT(AC)
- PROPOSED PAVEMENT(CONCRETE)
- TEMPORARY GRADING

NOTE:

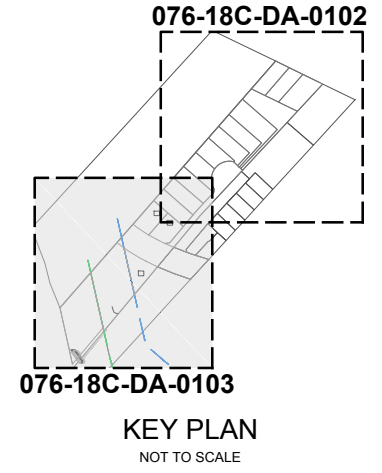
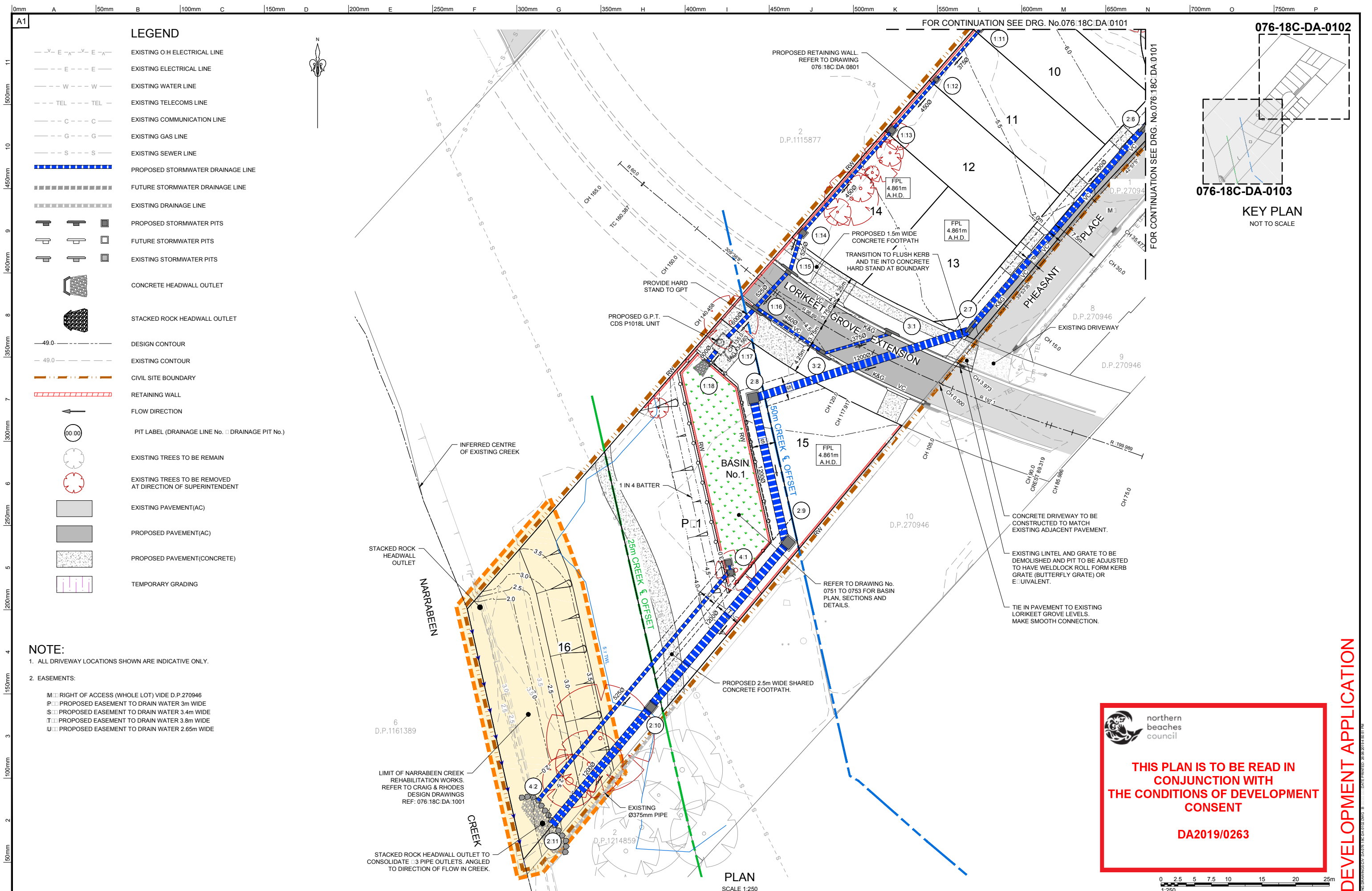
- ALL DRIVEWAY LOCATIONS SHOWN ARE INDICATIVE ONLY.
- EASEMENTS:
 - A: EASEMENT FOR SEWAGE PURPOSES 5m WIDE VIDE 6771995
 - B: EASEMENT FOR ACCESS 7.2m WIDE VIDE D.P.1214859
 - C: EASEMENT FOR ACCESS 7.2m WIDE VIDE D.P.1214859
 - M: RIGHT OF ACCESS (WHOLE LOT) VIDE D.P.270946
 - N: PROPOSED RIGHT OF ACCESS 8m WIDE & VARIABLE (TEMPORARY)
 - P: PROPOSED EASEMENT TO DRAIN WATER 3m WIDE
 - R: PROPOSED EASEMENT FOR SERVICES 8m WIDE (TEMPORARY)
 - S: PROPOSED RIGHT OF ACCESS 6.5m WIDE



THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT DA2019/0263



DEVELOPMENT APPLICATION



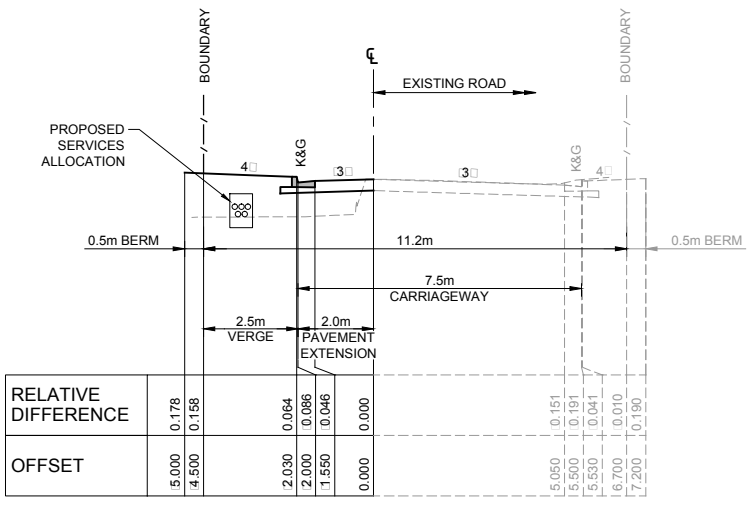
northern beaches council

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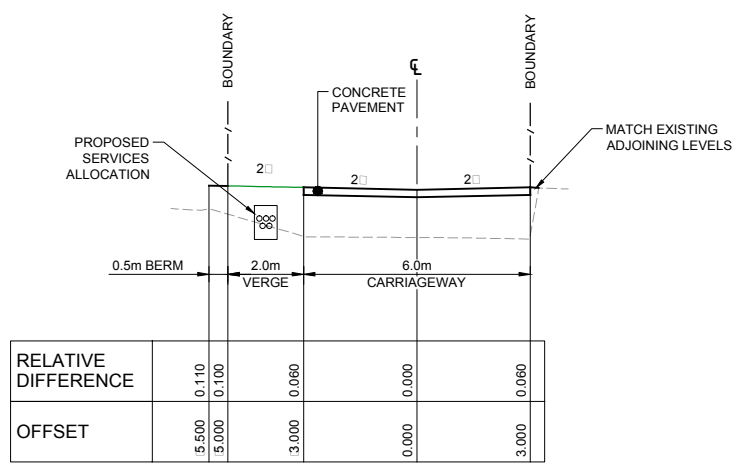
DA2019/0263

<table border="1"> <tr> <th>REV.</th> <th>DATE</th> <th>AMENDMENT DESCRIPTION</th> <th>DES.</th> <th>DRN.</th> </tr> <tr> <td>B</td> <td>DRAFT</td> <td>ISSUED FOR DEVELOPMENT APPLICATION</td> <td>AH</td> <td>KS</td> </tr> <tr> <td>A</td> <td>18.03.19</td> <td>ISSUED FOR DEVELOPMENT APPLICATION</td> <td>AH</td> <td>KS</td> </tr> </table>	REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.	B	DRAFT	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS	A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS	<table border="1"> <tr> <td>APPROVED COMPANY</td> <td>APPROVED COMPANY</td> <td>APPROVED COMPANY</td> </tr> <tr> <td>AS/NZS 4801</td> <td>ISO 14001</td> <td>ISO 9001</td> </tr> <tr> <td>QH&S Management System</td> <td>Environmental Management System</td> <td>Quality Management System</td> </tr> </table>	APPROVED COMPANY	APPROVED COMPANY	APPROVED COMPANY	AS/NZS 4801	ISO 14001	ISO 9001	QH&S Management System	Environmental Management System	Quality Management System	<p>Authorised for issue by: MINH. VU</p> <p>Principal: LEGENDWAY PTY. LTD.</p> <p>LGA: NORTHERN BEACHES COUNCIL</p> <p>Scale: AS SHOWN</p> <p>Datum: AHD</p>	<p>Project: PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 CIVIL AND SUBDIVISION WORKS</p>			<p>ABN 77 050 209 991 ACN 050 209 991 Suite 7.01, Level 7, 3 Rider Boulevard, Rhodes, NSW, 2138 PO Box 3220, Rhodes NSW 2138 Tel. 9669-1855 reception@craigandrhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes Pty Ltd</p>	<p>Drawing Title: ROAD AND DRAINAGE PLAN SHEET 2 OF 2</p> <p>C&R Ref: 076.18</p> <p>Drawing Ref: 076.18C.DA.0102</p> <p>Revision: B</p>
REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.																											
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APPROVED COMPANY	APPROVED COMPANY	APPROVED COMPANY																													
AS/NZS 4801	ISO 14001	ISO 9001																													
QH&S Management System	Environmental Management System	Quality Management System																													

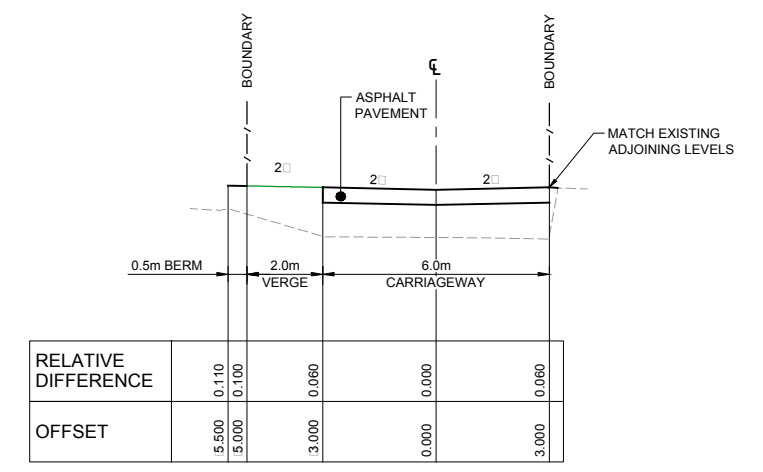
DEVELOPMENT APPLICATION



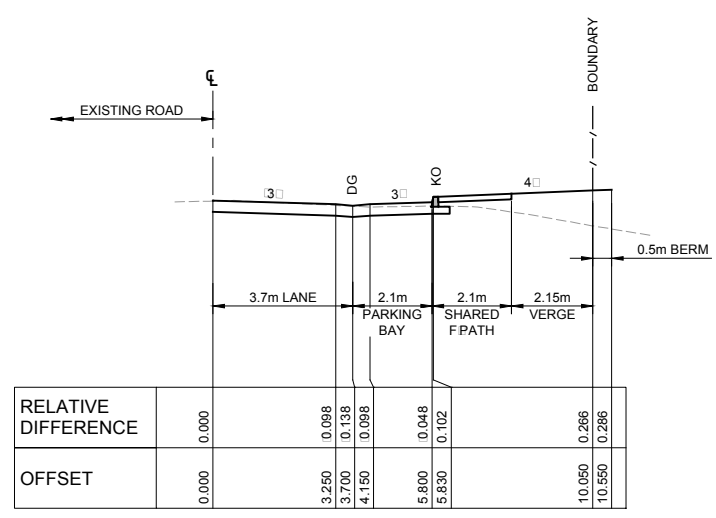
PHEASANT PLACE
SCALE 1:100



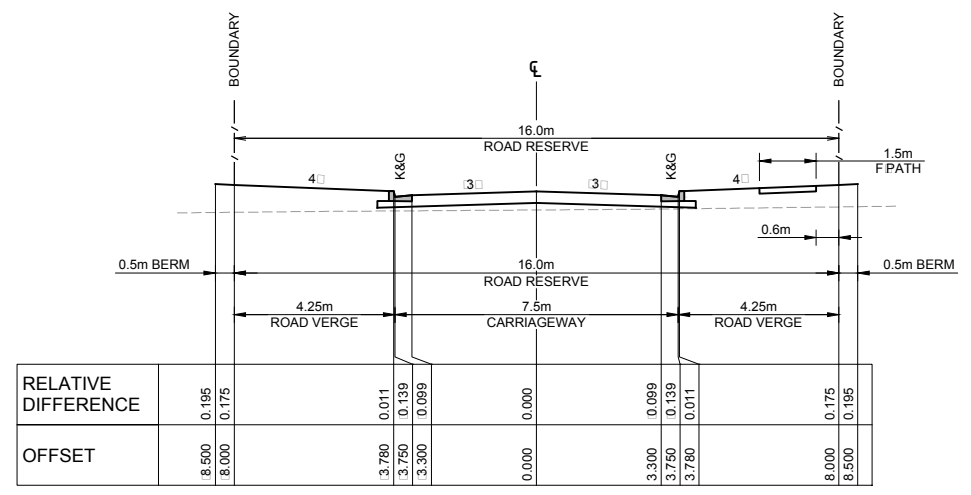
DRIVEWAY No.1
SCALE 1:100



TEMPORARY ACCESS WAY
SCALE 1:100



WARRIEWOOD ROAD
SCALE 1:100



LORIKEET GROVE
SCALE 1:100

northern beaches council

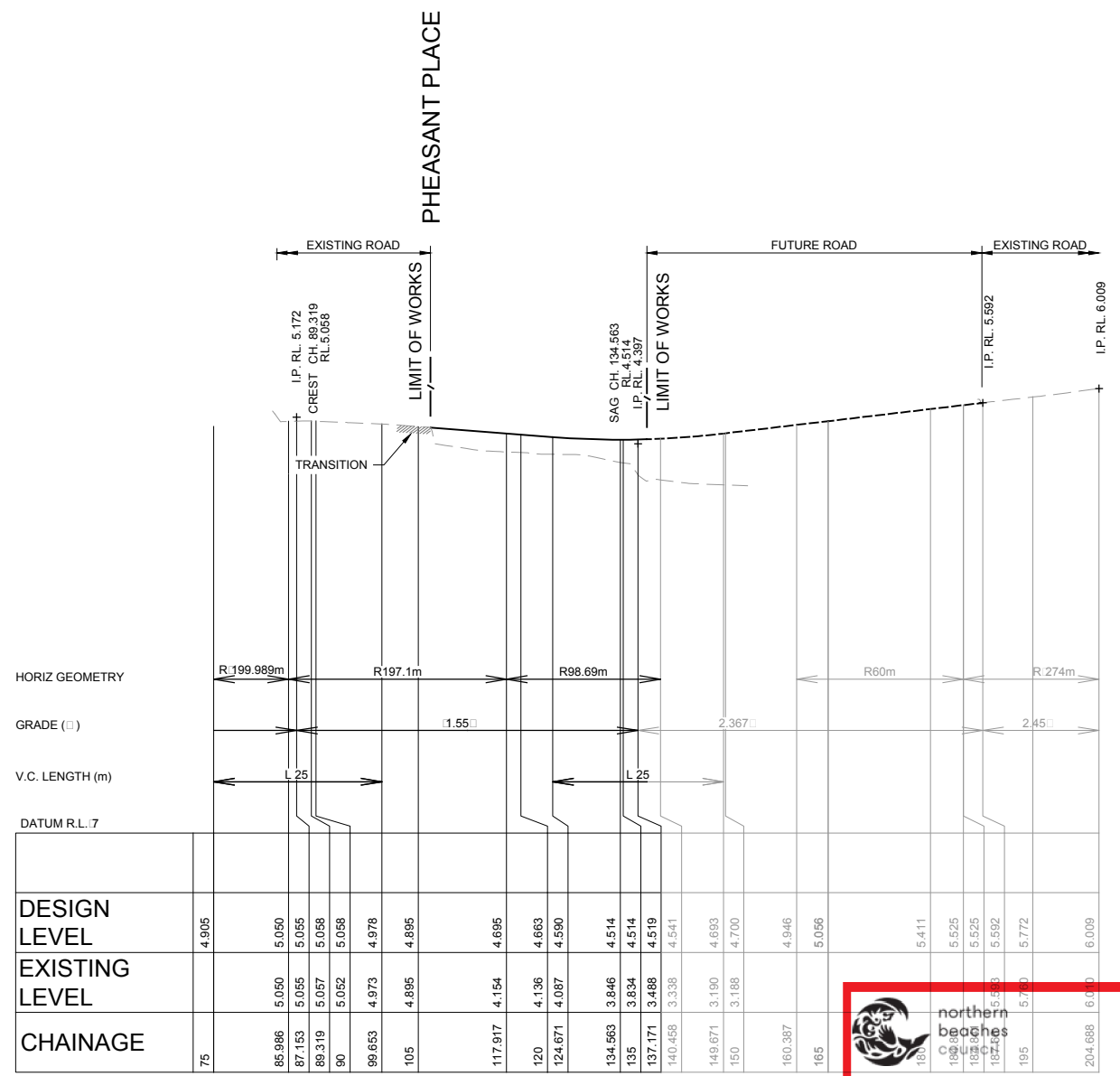
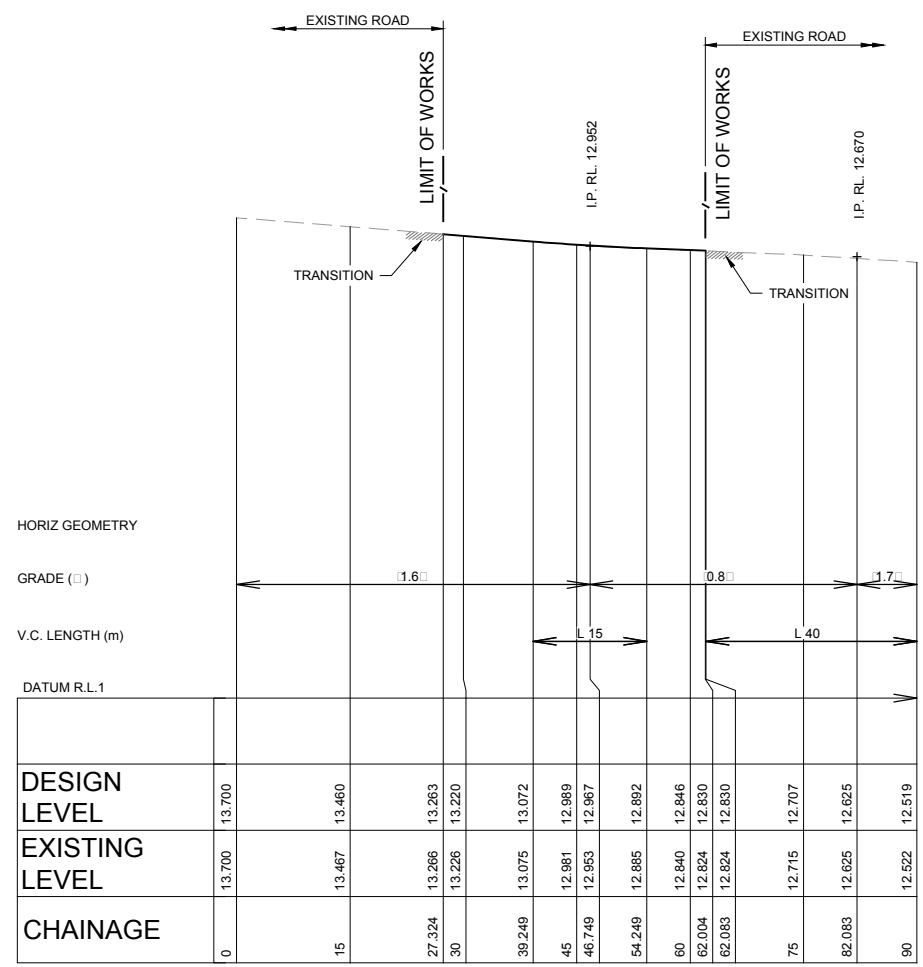
THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2019/0263

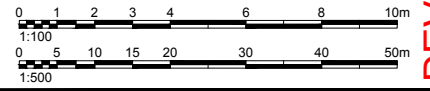


DEVELOPMENT APPLICATION

LEGEND
 ——— DESIGN SURFACE
 - - - - - FUTURE SURFACE
 - · - · - EXISTING SURFACE



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DA2019/0263



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A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS

APPROVED COMPANY
 AS/NZS 4801
 QMS

APPROVED COMPANY
 ISO 14001
 Environmental Management System
 QMS

APPROVED COMPANY
 ISO 9001
 Quality Management System
 QMS

DIAL 1199
 Before You Dig

Authorised for issue by: **MINH. VU**
 Signature: _____

Principal: **LEGENDWAY PTY. LTD.**
 LGA: **NORTHERN BEACHES COUNCIL**

Scale: AS SHOWN Datum: AHD

Project: **PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 CIVIL AND SUBDIVISION WORKS**

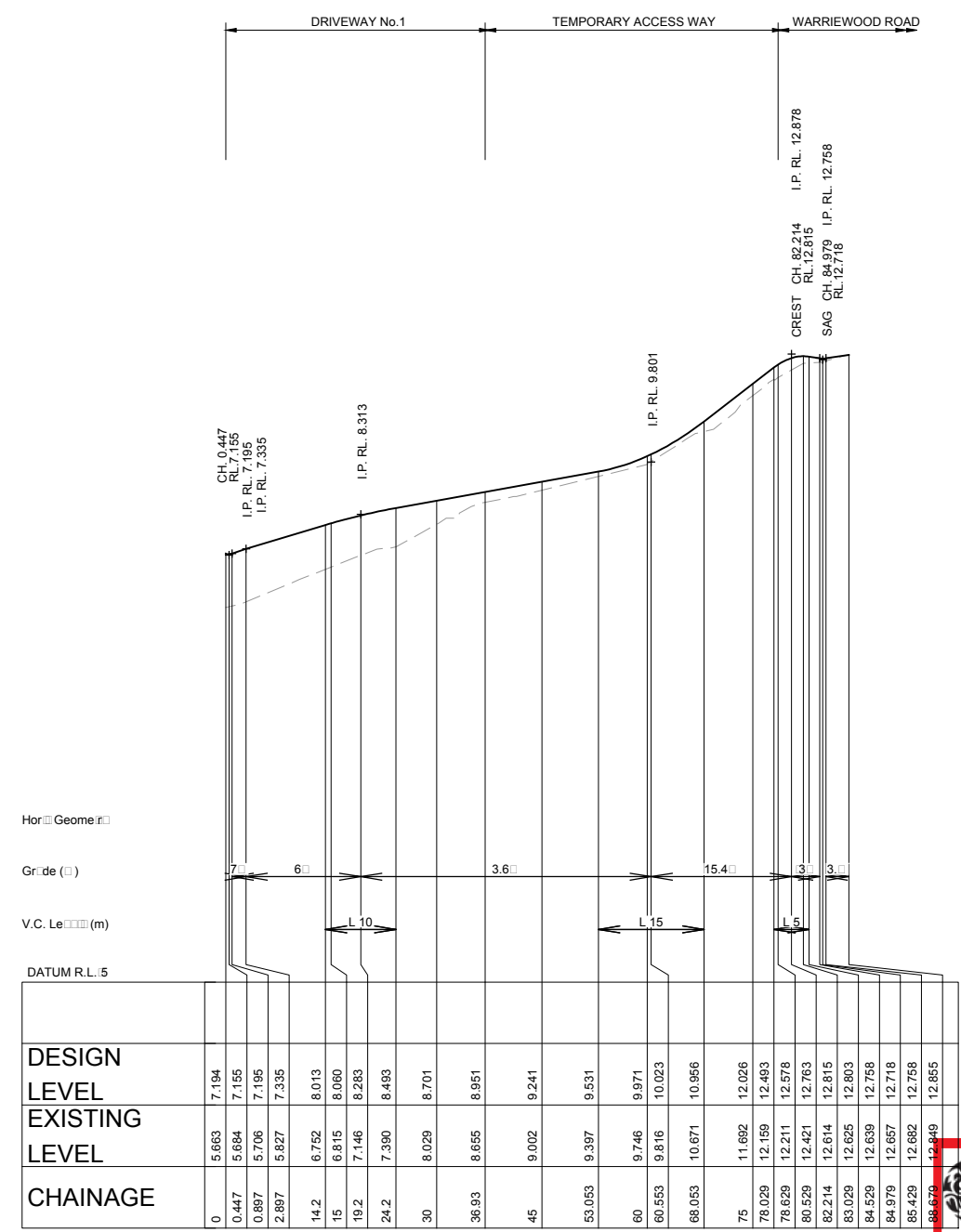
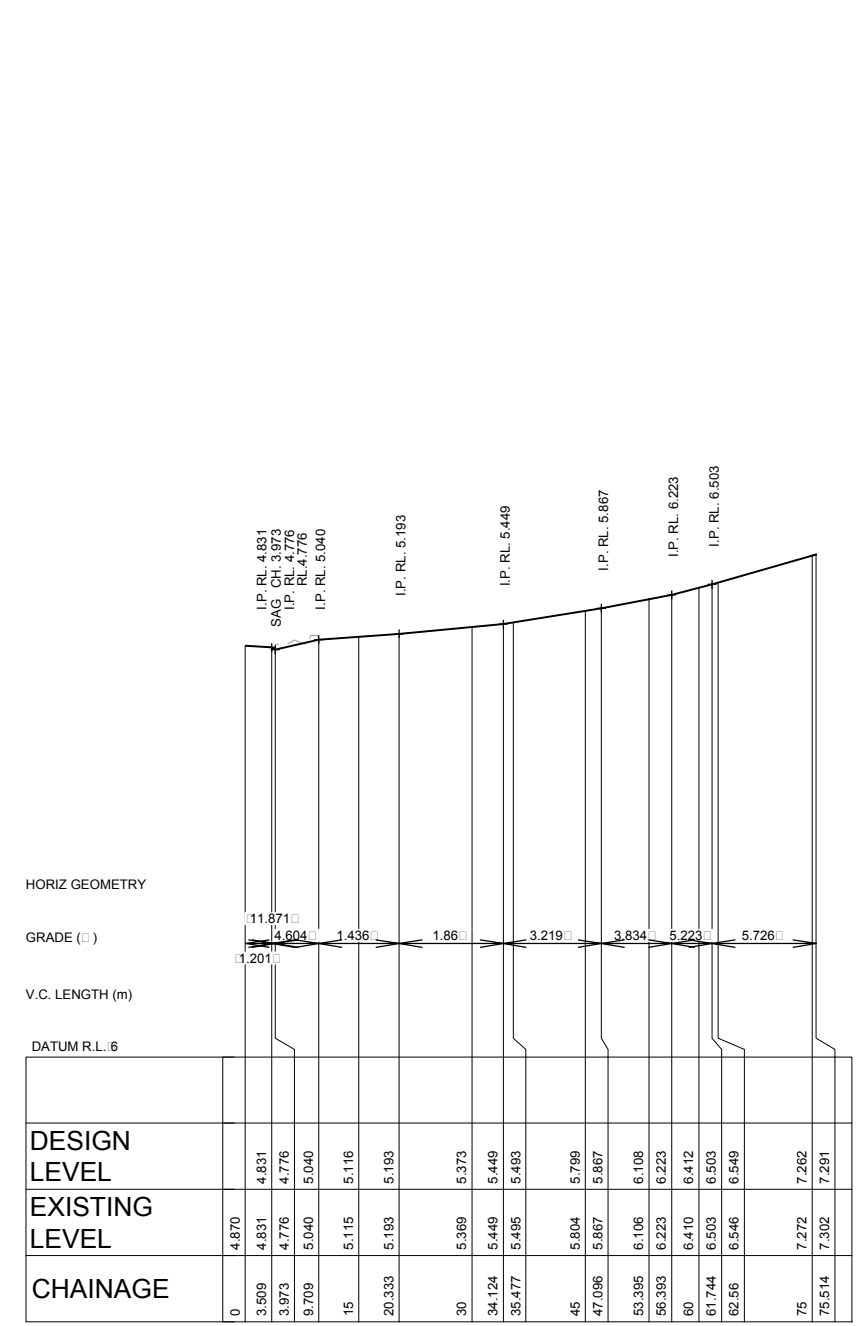
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 PO Box 3220, Rhodes NSW 2138
 Tel. 9669-1855
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Drawing Title: **ROAD LONGITUDINAL SECTION SHEET 1 OF 2**

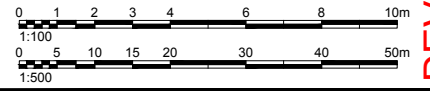
C&R Ref: **076.18** Drawing Ref: **076.18C.DA.0201** Revision: **B**

DEVELOPMENT APPLICATION

LEGEND
 ——— DESIGN SURFACE
 - - - - - FUTURE SURFACE
 - · - · - EXISTING SURFACE

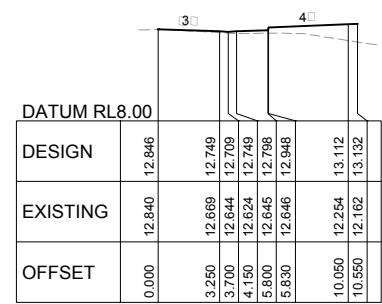


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DA2019/0263

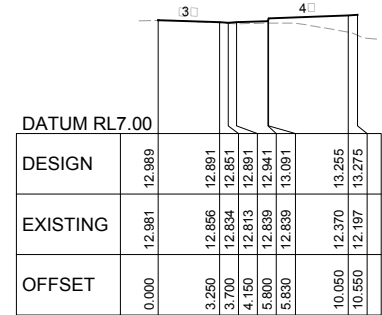


DEVELOPMENT APPLICATION

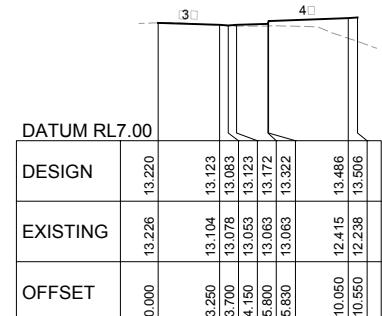
LEGEND
 _____ DESIGN SURFACE
 - - - - - FUTURE SURFACE
 - - - - - EXISTING SURFACE



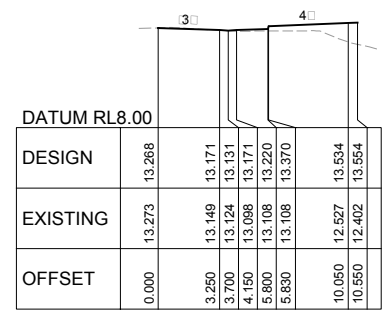
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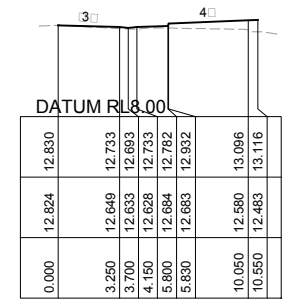
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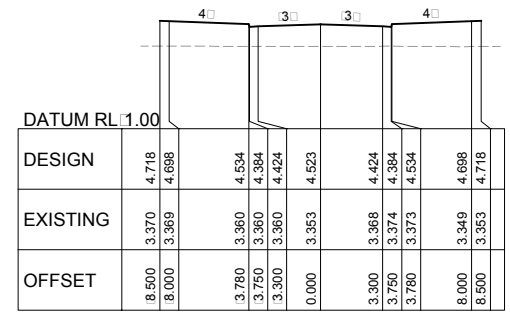
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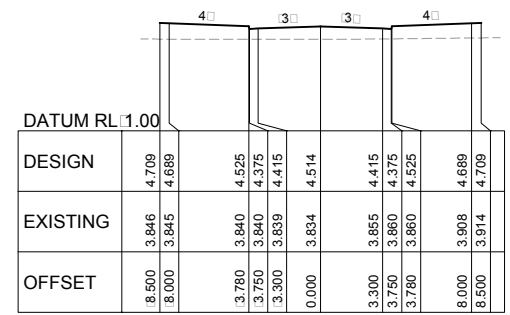
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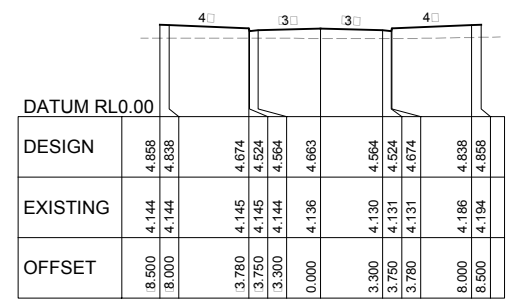
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CHAINAGE 138.000



CHAINAGE 135.000

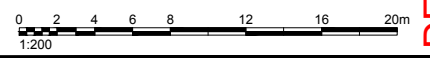


CHAINAGE 120.000

northern beaches council

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DA2019/0263



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A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS

APPROVED COMPANY
 AS/NZS 4801
 QMS

APPROVED COMPANY
 ISO 14001
 Environmental Management System
 QMS

APPROVED COMPANY
 ISO 9001
 Quality Management System
 QMS

DIAL 1198
 STOP THE TRUCK

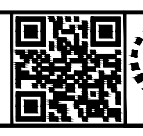
Authorised for issue by: **MINH. VU**

Principal: **LEGENDWAY PTY. LTD.**

LGA: **NORTHERN BEACHES COUNCIL**

Scale: **AS SHOWN** Datum: **AHD**

Project: **PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 CIVIL AND SUBDIVISION WORKS**



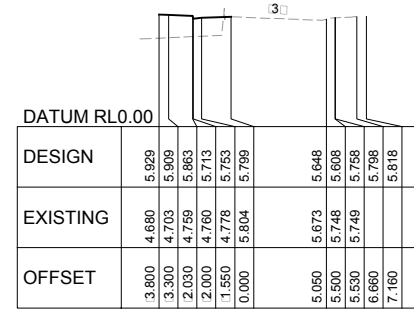
ABN 77 050 209 991 ACN 050 209 991
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 PO Box 3220, Rhodes NSW 2138
 Tel. 9669-1855
 reception@craigandrhodes.com.au
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Drawing Title: **ROAD CROSS SECTIONS SHEET 1 OF 2**

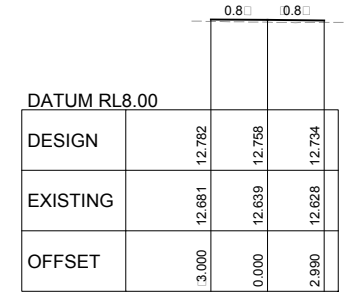
C&R Ref: **076.18** Drawing Ref: **076.18C.DA.0301** Revision: **B**

DEVELOPMENT APPLICATION

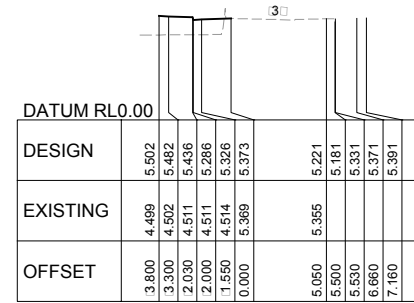
LEGEND
 _____ DESIGN SURFACE
 - - - - - FUTURE SURFACE
 - - - - - EXISTING SURFACE



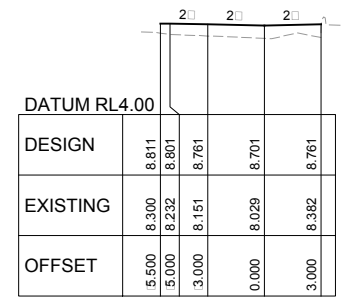
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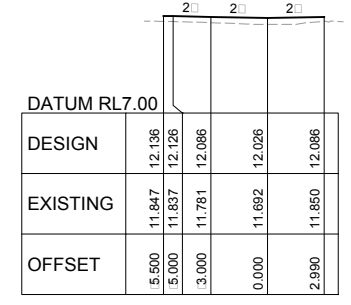
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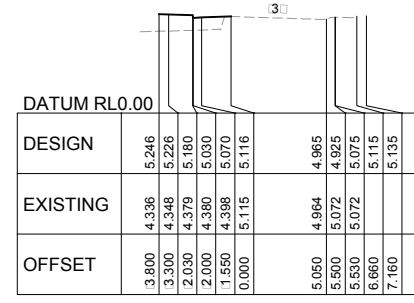
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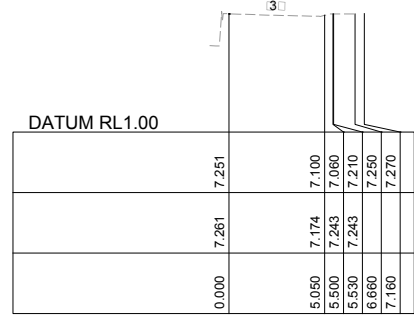
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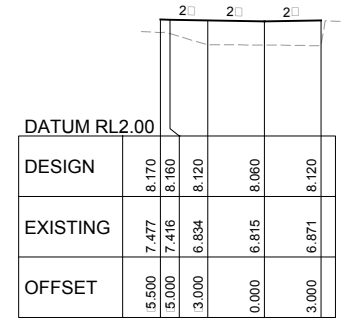
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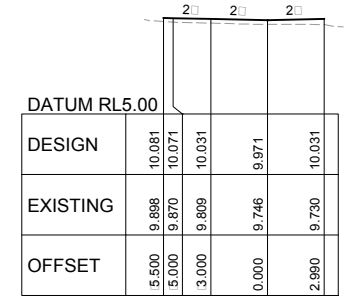
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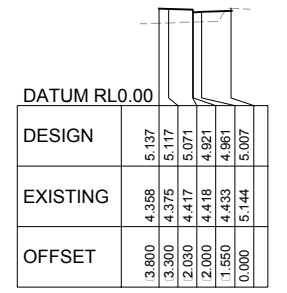
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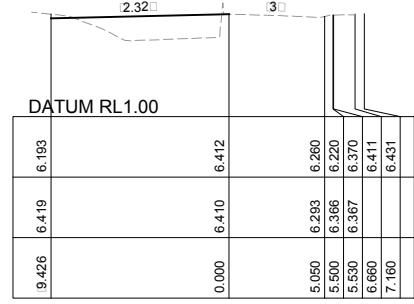
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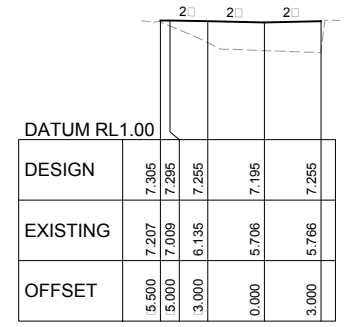
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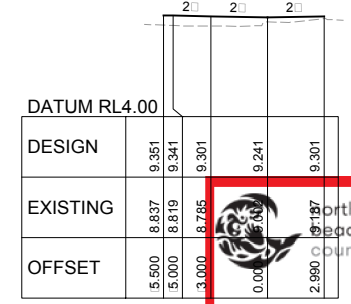
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CHAINAGE 60.000

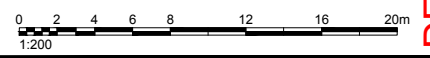


CHAINAGE 0.900



CHAINAGE 45.000

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT DA2019/0263



REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.
B	DRAFT	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS
A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS

APPROVED COMPANY
 ASINZS 4801
 QMS

APPROVED COMPANY
 ISO 14001
 Environmental Management System
 QMS

APPROVED COMPANY
 ISO 9001
 Quality Management Systems
 QMS

DIAL 1199
 Roadblock Free

Authorised for issue by: **MINH. VU**
 Signature: _____

Principal: **LEGENDWAY PTY. LTD.**
 LGA: **NORTHERN BEACHES COUNCIL**

Scale: AS SHOWN Datum: AHD

Project: **PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 CIVIL AND SUBDIVISION WORKS**

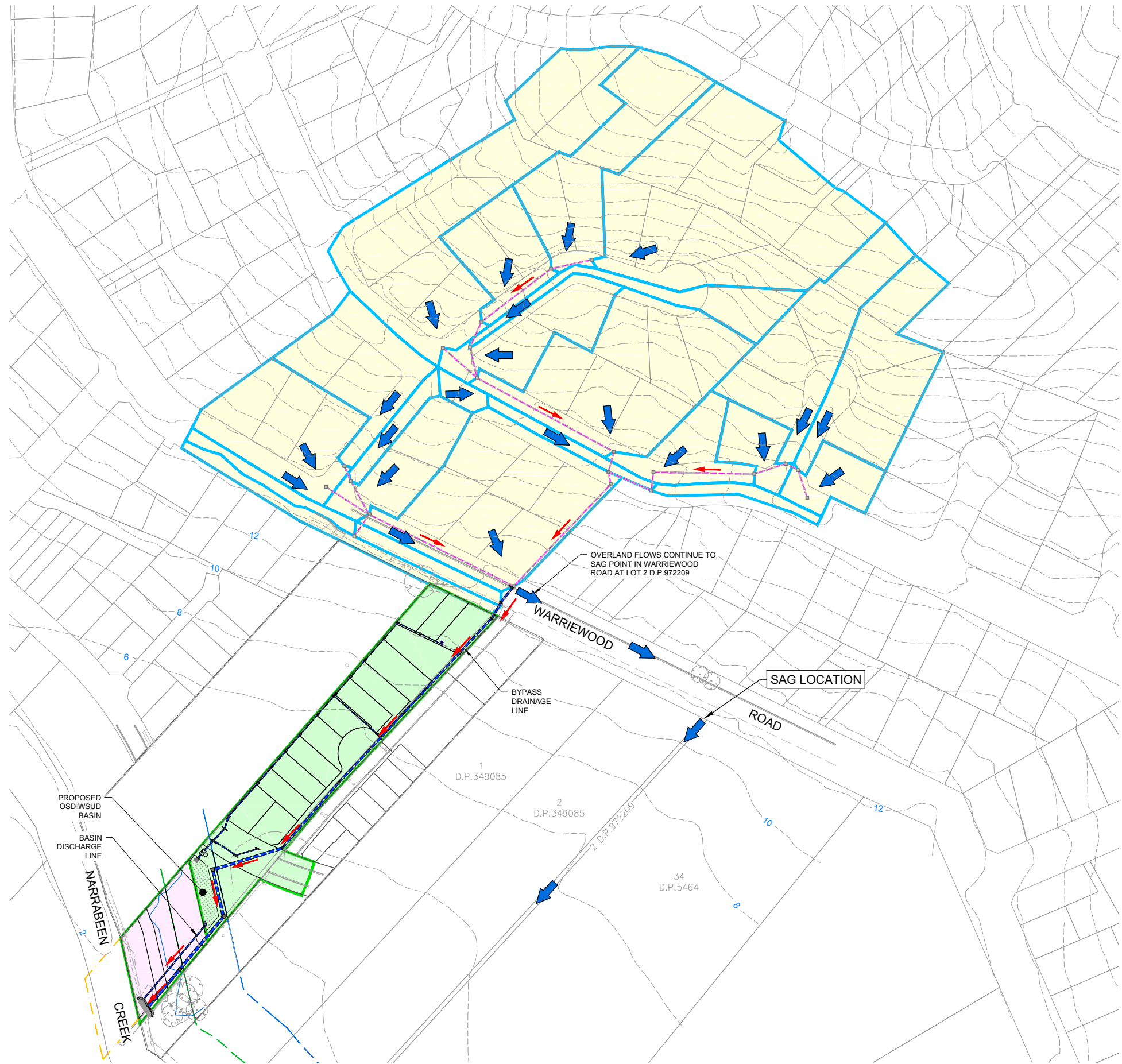


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Drawing Title: **ROAD CROSS SECTIONS SHEET 2 OF 2**

C&R Ref: 076.18 Drawing Ref: 076.18C.DA.0302 Revision: B

DEVELOPMENT APPLICATION



LEGEND

- STORMWATER DRAINAGE CATCHMENT BOUNDARY (INTERNAL)
- STORMWATER DRAINAGE CATCHMENT BOUNDARY (EXTERNAL)
- ← DIRECTION OF OVERLAND FLOW
- ← DIRECTION OF DRAINAGE PIPE SYSTEMS FLOW
- EXTERNAL CATCHMENT (FLOWS IN PIPED SYSTEM ARE CARRIED THROUGH THE SUBJECT SITE VIA THE BYPASS DRAINAGE LINE RUNNING ALONG EASTERN BOUNDARY. OVERLAND FLOWS BYPASS THE SUBJECT SITE AND ARE CONVEYED OVERLAND IN WARRIEWOOD ROAD). TOTAL CATCHMENT AREA □ 5.236HA
- INTERNAL CATCHMENT (DISCHARGE TO OSD WSUD BASIN) TOTAL CATCHMENT AREA □ 0.592HA
- INTERNAL CATCHMENT BYPASS (DISCHARGE DIRECT TO NARRABEEN CREEK) TOTAL CATCHMENT AREA □ 0.147HA
- PROPOSED STORMWATER DRAINAGE LINE
- - - EXISTING DRAINAGE LINE

PLAN
SCALE 1:1000



northern beaches council

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2019/0263



REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.
B	DRAFT	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS
A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS

APPROVED COMPANY

AS/NZS 4801
QH&S Management System

APPROVED COMPANY

ISO 14001
Environmental Management System

APPROVED COMPANY

ISO 9001
Quality Management Systems

DIAL 1100

FOR EMERGENCY SERVICES

Authorised for issue by: **MINH. VU**

Principal: **LEGENDWAY PTY. LTD.**

LGA: **NORTHERN BEACHES COUNCIL**

Scale: **AS SHOWN** Datum: **AHD**

Project: **PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 CIVIL AND SUBDIVISION WORKS**



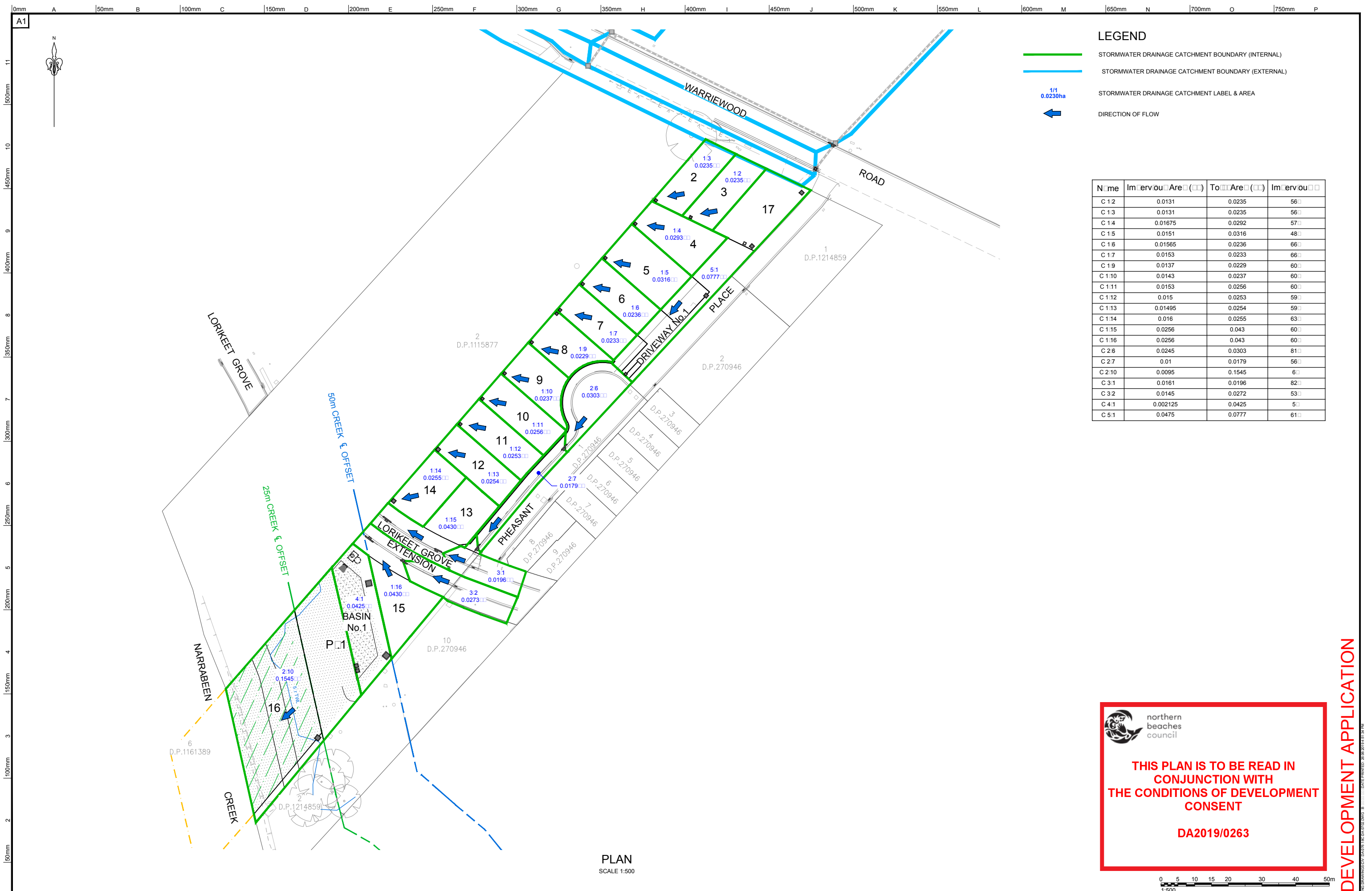
CRAIG & RHODES
TAKE THE LEAD

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PO Box 3220, Rhodes NSW 2138
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Drawing Title: **EXTERNAL CATCHMENT PLAN**

C&R Ref: **076.18** Drawing Ref: **076.18C.DA.0701** Revision: **B**

DEVELOPMENT APPLICATION



LEGEND

- STORMWATER DRAINAGE CATCHMENT BOUNDARY (INTERNAL)
- STORMWATER DRAINAGE CATCHMENT BOUNDARY (EXTERNAL)
- 1/1
0.0230ha
STORMWATER DRAINAGE CATCHMENT LABEL & AREA
- ← DIRECTION OF FLOW

Name	Imervou Area (□)	To Area (□)	Imervou □
C 12	0.0131	0.0235	56□
C 13	0.0131	0.0235	56□
C 14	0.01675	0.0292	57□
C 15	0.0151	0.0316	48□
C 16	0.01565	0.0236	66□
C 17	0.0153	0.0233	66□
C 19	0.0137	0.0229	60□
C 1.10	0.0143	0.0237	60□
C 1.11	0.0153	0.0256	60□
C 1.12	0.015	0.0253	59□
C 1.13	0.01495	0.0254	59□
C 1.14	0.016	0.0255	63□
C 1.15	0.0256	0.043	60□
C 1.16	0.0256	0.043	60□
C 2.6	0.0245	0.0303	81□
C 2.7	0.01	0.0179	56□
C 2.10	0.0095	0.1545	6□
C 3.1	0.0161	0.0196	82□
C 3.2	0.0145	0.0272	53□
C 4.1	0.002125	0.0425	5□
C 5.1	0.0475	0.0777	61□

PLAN
SCALE 1:500

northern beaches council

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2019/0263

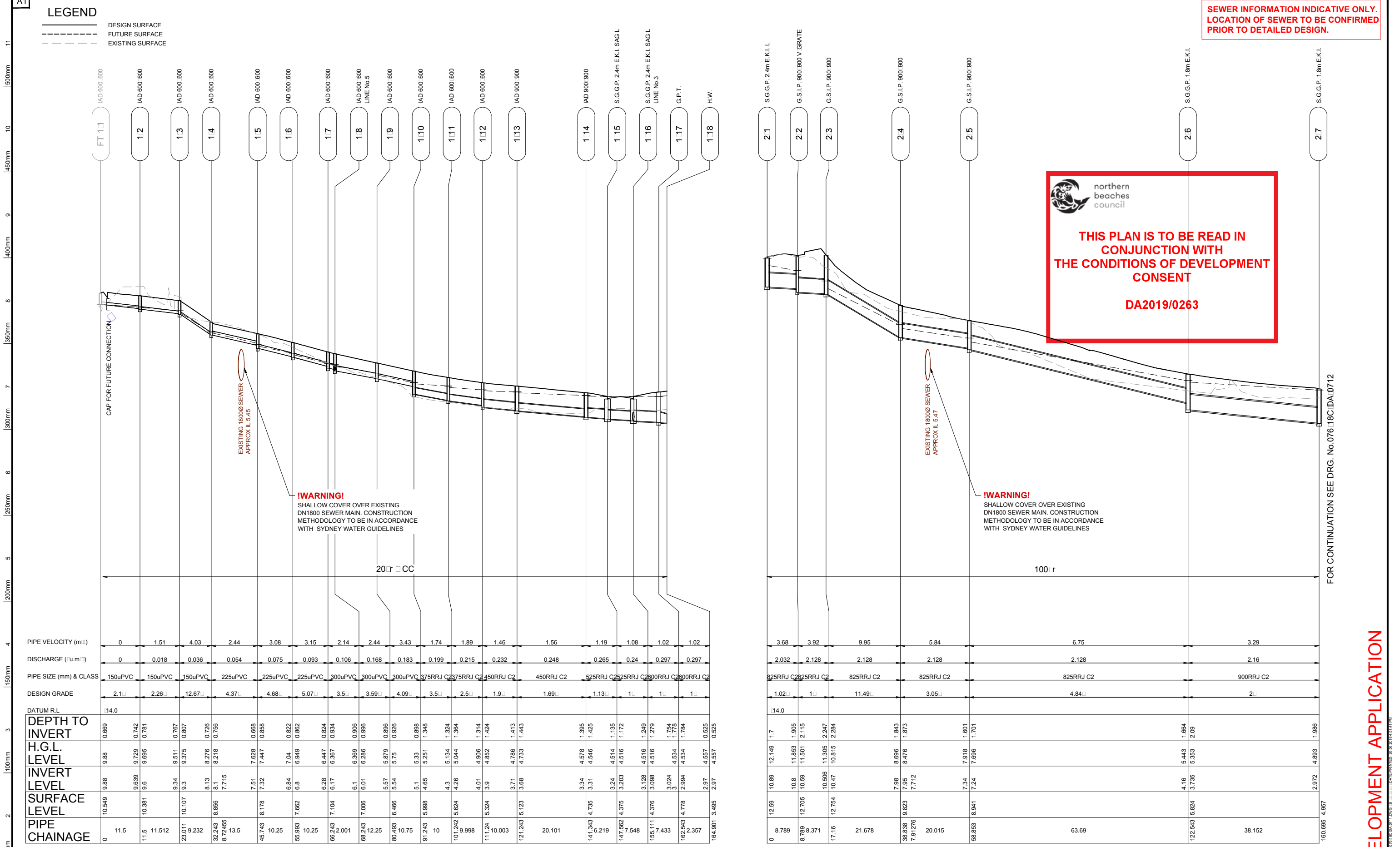


DEVELOPMENT APPLICATION

LEGEND
 ——— DESIGN SURFACE
 - - - - - FUTURE SURFACE
 - - - - - EXISTING SURFACE

SEWER INFORMATION INDICATIVE ONLY.
 LOCATION OF SEWER TO BE CONFIRMED
 PRIOR TO DETAILED DESIGN.

northern beaches council
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 DA2019/0263



!WARNING!
 SHALLOW COVER OVER EXISTING DN1800 SEWER MAIN. CONSTRUCTION METHODOLOGY TO BE IN ACCORDANCE WITH SYDNEY WATER GUIDELINES

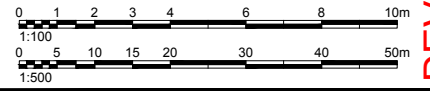
!WARNING!
 SHALLOW COVER OVER EXISTING DN1800 SEWER MAIN. CONSTRUCTION METHODOLOGY TO BE IN ACCORDANCE WITH SYDNEY WATER GUIDELINES

PIPE VELOCITY (m/s)	DISCHARGE (L/s)	PIPE SIZE (mm) & CLASS	DESIGN GRADE	DATUM R.L.	DEPTH TO INVERT	H.G.L. LEVEL	INVERT LEVEL	SURFACE LEVEL	PIPE CHAINAGE
0	0	150uPVC	2.1	14.0	0.669	9.88	9.88	10.549	0
1.51	0.018	150uPVC	2.26		0.742	9.729	9.639	10.381	11.5
4.03	0.036	150uPVC	12.67		0.781	9.695	9.6	10.107	23.011
2.44	0.054	225uPVC	4.37		0.767	9.511	9.34	10.107	29.232
3.08	0.075	225uPVC	4.68		0.756	8.276	8.1	8.856	32.243
3.15	0.093	225uPVC	5.07		0.756	8.218	7.715	8.72455	35.5
2.14	0.106	300uPVC	3.5		0.668	7.51	7.32	8.178	45.743
2.44	0.168	300uPVC	3.59		0.858	7.447	7.32	8.178	10.25
3.43	0.183	300uPVC	4.09		0.822	7.04	6.84	7.662	55.993
1.74	0.199	375RRJ C2	3.5		0.862	6.949	6.8	7.662	10.25
1.89	0.215	375RRJ C2	3.5		0.824	6.447	6.28	7.104	66.243
1.46	0.232	450RRJ C2	1.9		0.934	6.367	6.1	7.006	66.243
1.56	0.248	450RRJ C2	1.69		0.906	6.369	6.01	7.006	12.25
1.19	0.265	525RRJ C2	1.13		0.996	6.286	6.01	7.006	80.493
1.08	0.24	525RRJ C2	1		0.896	5.879	5.57	6.466	10.75
1.02	0.297	600RRJ C2	1		0.926	5.75	5.54	6.466	91.243
1.02	0.297	600RRJ C2	1		0.898	5.33	5.1	5.988	10
					1.348	5.251	4.3	5.134	101.242
					1.324	5.134	4.26	5.044	9.998
					1.364	5.044	4.26	5.044	111.24
					1.314	4.906	4.01	5.324	10.003
					1.424	4.852	3.9	4.852	121.243
					1.413	4.786	3.71	4.786	20.101
					1.443	4.733	3.68	4.733	141.343
					1.395	4.578	3.34	4.735	6.219
					1.425	4.546	3.31	4.735	147.562
					1.135	4.514	3.24	4.375	7.548
					1.172	4.516	3.203	4.375	155.111
					1.249	4.516	3.128	4.376	7.433
					1.279	4.516	3.098	4.376	162.543
					1.754	4.534	3.024	4.778	2.357
					1.784	4.534	2.994	4.778	164.901
					0.525	4.557	2.97	4.557	3.485
					0.525	4.557	2.97	4.557	4.957

LINE No.1

3.68	2.032	825RRJ C2	1.02	14.0	1.7	12.149	10.89	12.59	0
3.92	2.128	825RRJ C2	1		1.905	11.853	10.8	12.705	8.789
9.95	2.128	825RRJ C2	11.49		2.115	11.501	10.59	12.705	8.789
5.84	2.128	825RRJ C2	3.05		2.247	11.305	10.506	12.754	17.16
6.75	2.128	825RRJ C2	4.84		2.284	10.815	10.47	12.754	21.678
3.29	2.16	900RRJ C2	2		1.843	8.696	7.98	8.838	38.838
					1.873	8.476	7.95	9.823	7.91276
					1.601	7.918	7.34	8.941	20.015
					1.701	7.696	7.24	8.941	56.853
					1.664	5.443	4.16	5.824	122.543
					2.09	5.353	3.735	5.824	38.152
					1.986	4.893	2.972	4.957	160.895

LINE No.2



FOR CONTINUATION SEE DRG. No.076.18C.DA.0712

REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.
B	DRAFT	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS
A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS

APPROVED COMPANY
 AS/NZS 4801
 QMS

APPROVED COMPANY
 ISO 14001
 Environmental Management System
 QMS

APPROVED COMPANY
 ISO 9001
 Quality Management System
 QMS

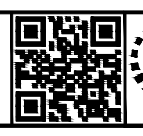
DIAL 119
 Before You Dig

Authorised for issue by: **MINH. VU**
 Signature: _____

Principal: **LEGENDWAY PTY. LTD.**
 LGA: **NORTHERN BEACHES COUNCIL**

Scale: AS SHOWN Datum: AHD

Project: **PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 CIVIL AND SUBDIVISION WORKS**



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 reception@crhodes.com.au
 www.craigandrhodes.com.au
 © Craig & Rhodes Pty Ltd

Drawing Title: **STORMWATER DRAINAGE LONGITUDINAL SECTION SHEET 1 OF 2**

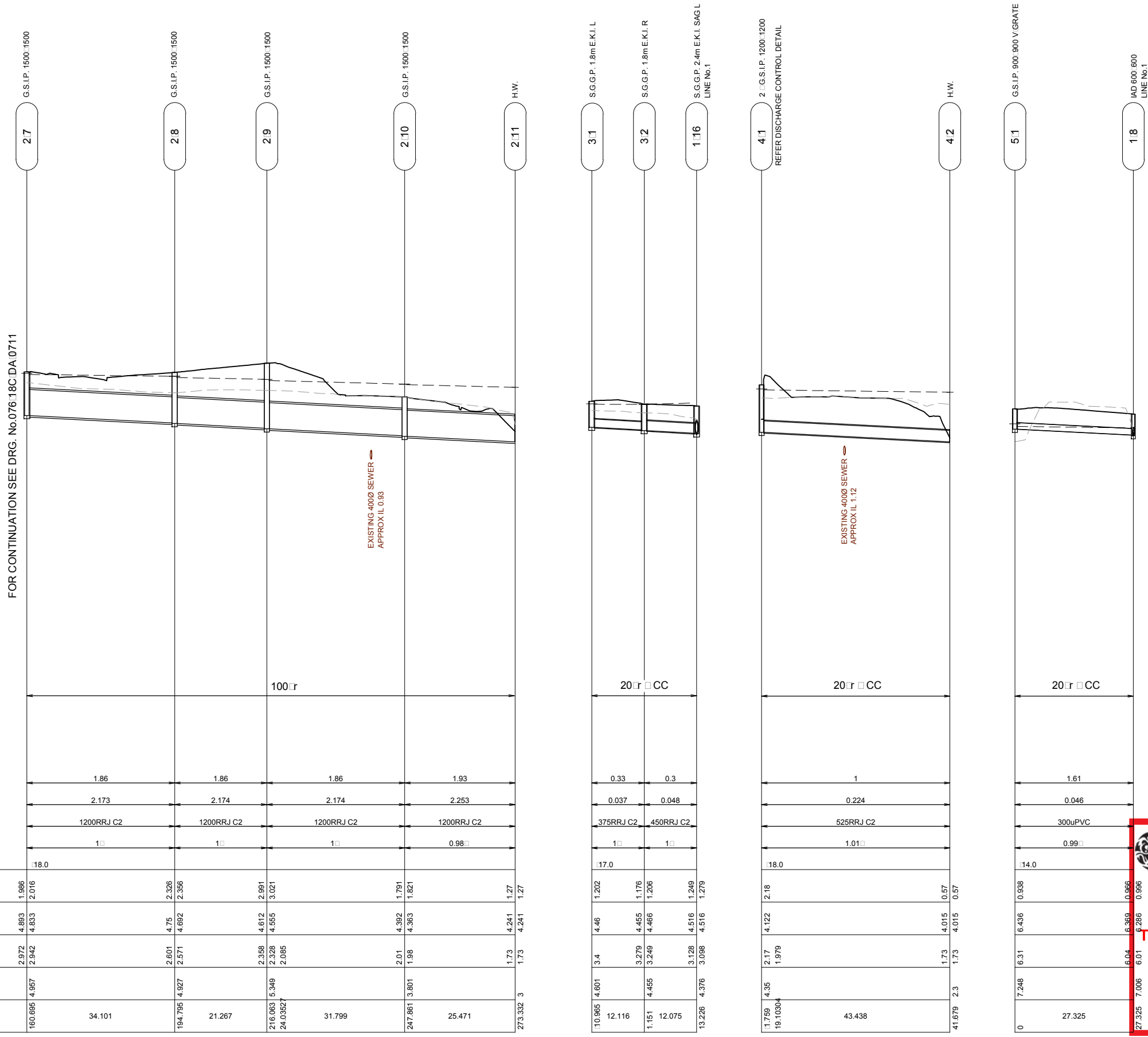
C&R Ref: **076.18** Drawing Ref: **076.18C.DA.0711** Revision: **B**

DEVELOPMENT APPLICATION

LEGEND
 ——— DESIGN SURFACE
 - - - - - FUTURE SURFACE
 - - - - - EXISTING SURFACE

**SEWER INFORMATION INDICATIVE ONLY.
 LOCATION OF SEWER TO BE CONFIRMED
 PRIOR TO DETAILED DESIGN.**

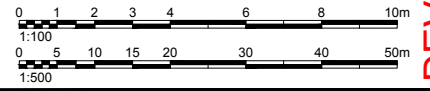
A1
11
10
9
8
7
6
5
4
3
2
1



	2.7	2.8	2.9	2.10	2.11	3.1	3.2	4.1	4.2	5.1	1.8
PIPE VELOCITY (m/s)		1.86	1.86	1.86	1.93	0.33	0.3	1		1.61	
DISCHARGE (L/s)		2.173	2.174	2.174	2.253	0.037	0.048	0.224		0.046	
PIPE SIZE (mm) & CLASS		1200RRJ C2	1200RRJ C2	1200RRJ C2	1200RRJ C2	375RRJ C2	450RRJ C2	525RRJ C2		300uPVC	
DESIGN GRADE		1.0	1.0	1.0	0.98	1.0	1.0	1.01		0.99	
DATUM R.L.		18.0				17.0		18.0		14.0	
DEPTH TO INVERT		1.986	2.016			1.202		2.18		0.938	
H.G.L. LEVEL		4.893	4.833			4.46		4.122		6.436	
INVERT LEVEL		2.912	2.817			3.4		2.17		6.31	
SURFACE LEVEL		4.957	4.927			4.601		4.35		7.248	
PIPE CHAINAGE	160.895	34.101	194.795	21.267	216.083	31.799	247.861	3.801	25.471	273.332	3

**THIS PLAN IS TO BE READ IN
 CONJUNCTION WITH
 THE CONDITIONS OF DEVELOPMENT
 CONSENT**

DA2019/0263



REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.
B	DRAFT	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS
A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS



Authorised for issue by: **MINH. VU**
 Signature: _____
 Principal: **LEGENDWAY PTY. LTD.**
 LGA: **NORTHERN BEACHES COUNCIL**
 Scale: AS SHOWN Datum: AHD

Project: **PROPOSED SUBDIVISION OF
 LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319
 CIVIL AND SUBDIVISION WORKS**



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 reception@craigandrhodes.com.au
 www.craigandrhodes.com.au
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Drawing Title: **STORMWATER DRAINAGE
 LONGITUDINAL SECTION
 SHEET 2 OF 2**
 Drawing Ref: **076.18 076.18C.DA.0712** Revision: **B**

DEVELOPMENT APPLICATION

LEGEND

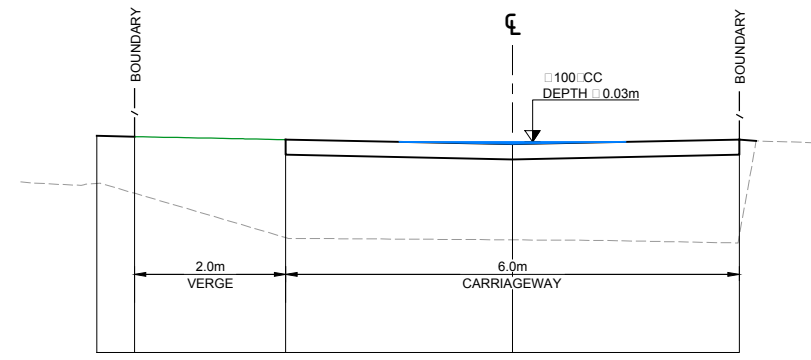
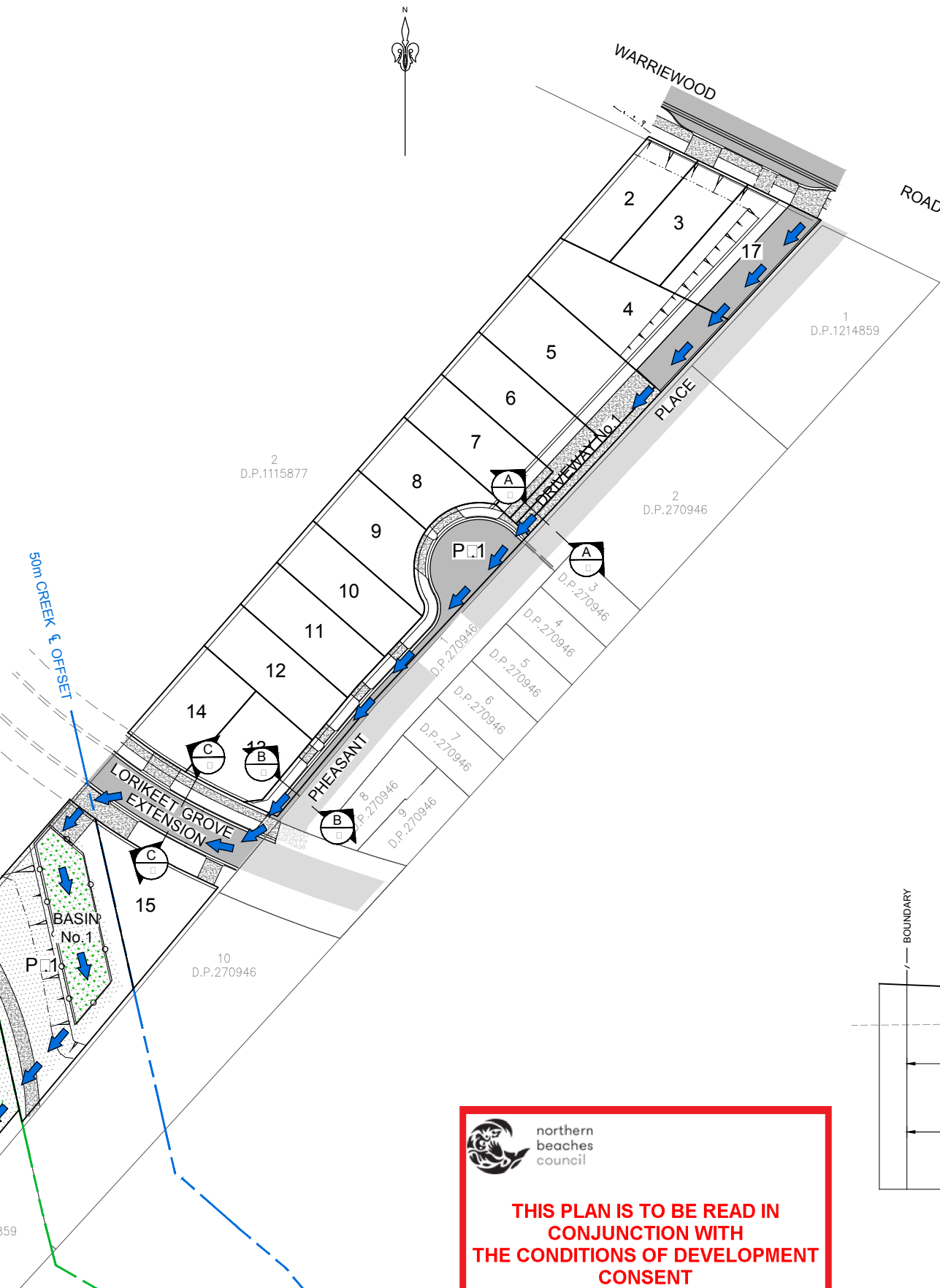
← OVERLAND FLOW PATH

Driveway No. 1		
Profile Capacity to 200mm depth - Q (m3/s)		1.989
Maximum Flow Q - 100yr + CC (m3/s)		0.060
Velocity (m/s)		1.32
Maximum Depth (m)		0.030
Maximum Flow Width (m)		3.02
Maximum D x V (m2/s)		0.040

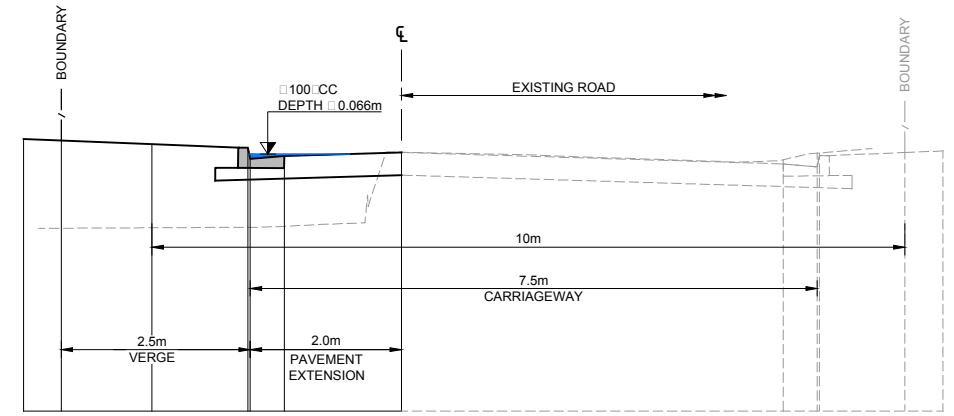
Pheasant Place		
Profile Capacity to 200mm depth - Q (m3/s)		0.520
Maximum Flow Q - 100yr + CC (m3/s)		0.038
Velocity (m/s)		1.14
Maximum Depth (m)		0.066
Maximum Flow Width (m)		1.35
Maximum D x V (m2/s)		0.080

Lorikeet Grove (SOUTH)		
Profile Capacity to 200mm depth - Q (m3/s)		1.062
Maximum Flow Q - 100yr + CC (m3/s)		0.203
Velocity (m/s)		1.36
Maximum Depth (m)		0.119
Maximum Flow Width (m)		3.09
Maximum D x V (m2/s)		0.16

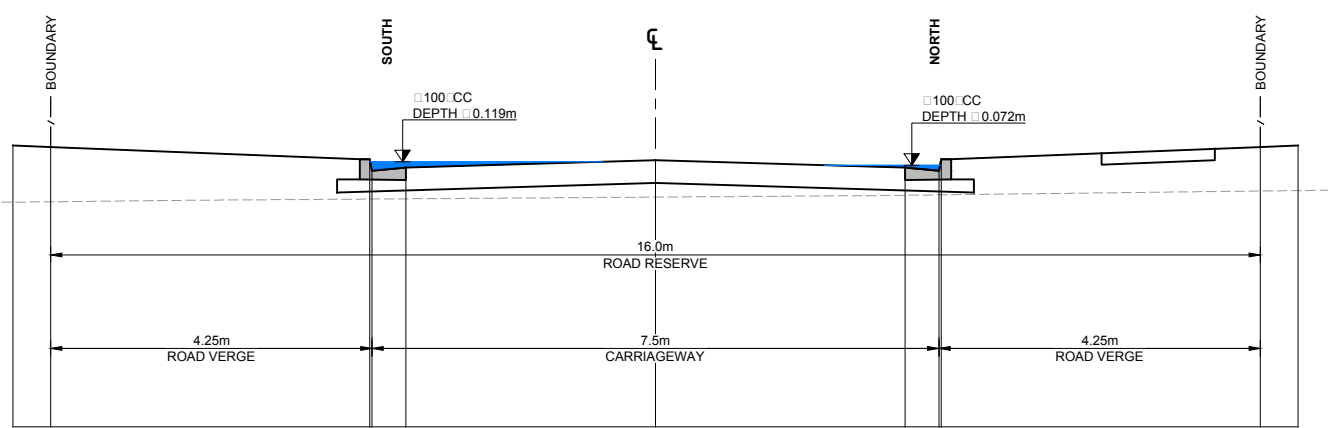
Lorikeet Grove (NORTH)		
Profile Capacity to 200mm depth - Q (m3/s)		1.062
Maximum Flow Q - 100yr + CC (m3/s)		0.041
Velocity (m/s)		1.00
Maximum Depth (m)		0.072
Maximum Flow Width (m)		1.52
Maximum D x V (m2/s)		0.07



A SECTION DRIVEWAY No. 1
SCALE: 1:50



B SECTION PHEASANT PLACE
SCALE: 1:50



C SECTION LORIKEET GROVE
SCALE: 1:50

northern beaches council

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2019/0263

REV	DATE	AMENDMENT DESCRIPTION	DES.	DRN.
A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS
B		ISSUED FOR DEVELOPMENT APPLICATION	AH	KS

APPROVED COMPANY
AS/NZS 4801
QH&S Management System
QMS

APPROVED COMPANY
ISO 14001
Environmental Management System
QMS

APPROVED COMPANY
ISO 9001
Quality Management Systems
QMS

DIAL 1199
FOR ALL YOUR CIVIL ENGINEERING NEEDS

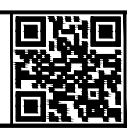
Authorised for issue by: **MINH. VU**

Principal: **LEGENDWAY PTY. LTD.**

LGA: **NORTHERN BEACHES COUNCIL**

Scale: **AS SHOWN** Datum: **AHD**

Project: **PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 CIVIL AND SUBDIVISION WORKS**



CRAIG & RHODES
TAKE THE LEAD

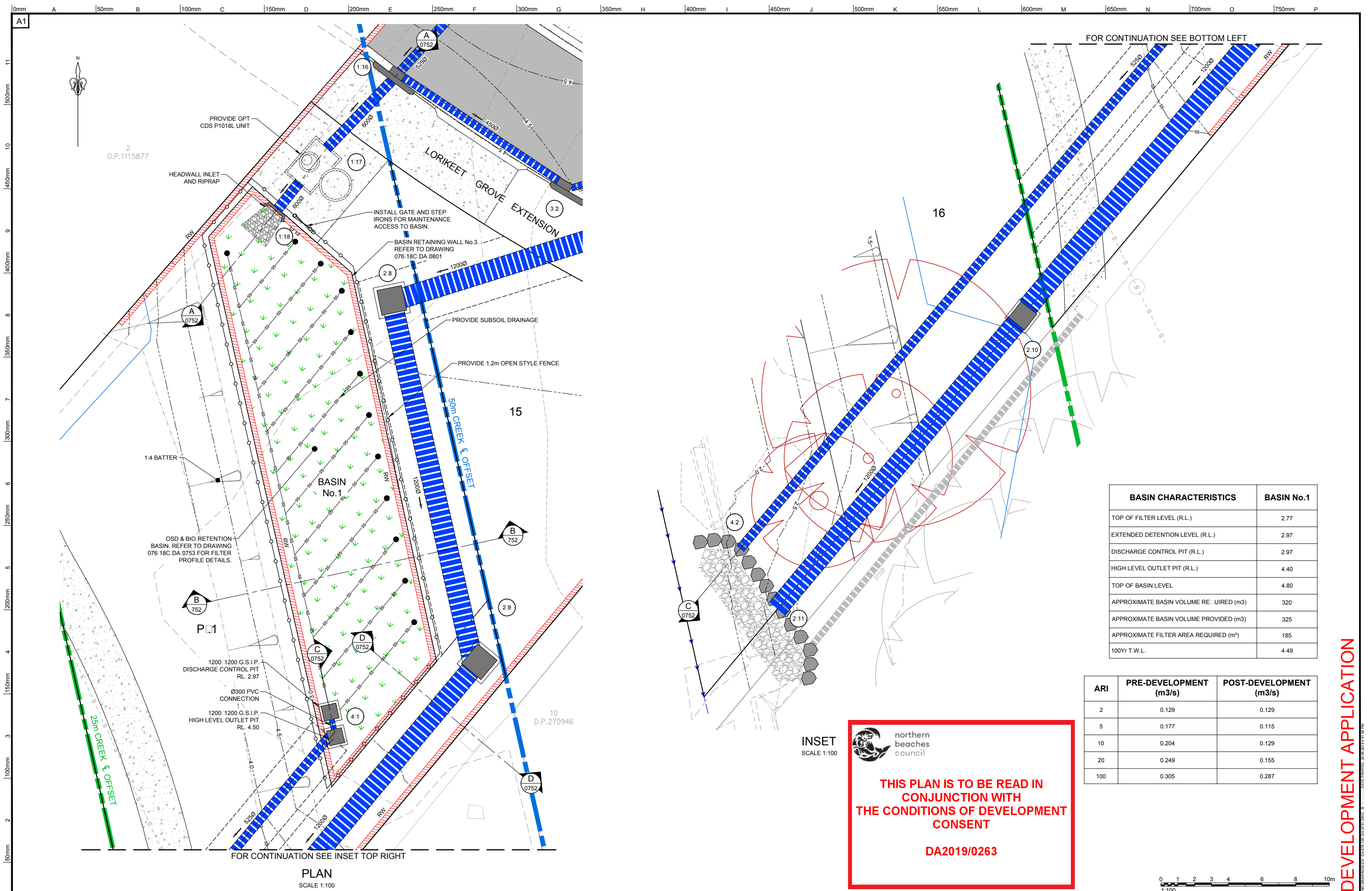
ABN 77 050 209 991 ACN 050 209 991
Suite 7.01, Level 7, 3 Rider Boulevard,
Rhodes, NSW, 2138
PO Box 3220, Rhodes NSW 2138
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Drawing title: **OVERLAND FLOW PATH ROAD CROSS SECTIONS**

C&R Ref: **076.18** Drawing Ref: **076.18C.DA.0721** Revision: **B**

DEVELOPMENT APPLICATION





BASIN CHARACTERISTICS	BASIN No.1
TOP OF FILTER LEVEL (R.L.)	2.77
EXTENDED DETENTION LEVEL (R.L.)	2.97
DISCHARGE CONTROL PIT (R.L.)	2.97
HIGH LEVEL OUTLET PIT (R.L.)	4.40
TOP OF BASIN LEVEL	4.80
APPROXIMATE BASIN VOLUME REQUIRED (m3)	320
APPROXIMATE BASIN VOLUME PROVIDED (m3)	325
APPROXIMATE FILTER AREA REQUIRED (m²)	185
100Yr T.W.L.	4.49



ARI	PRE-DEVELOPMENT (m3/s)	POST-DEVELOPMENT (m3/s)
2	0.129	0.129
5	0.177	0.115
10	0.204	0.129
20	0.249	0.155
100	0.305	0.287



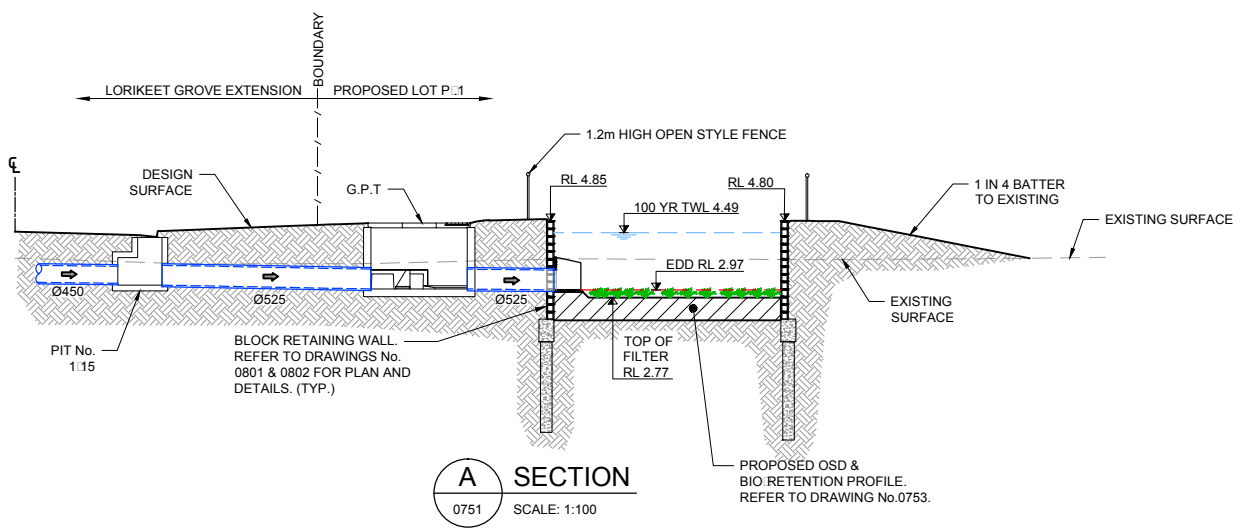
THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DA2019/0263

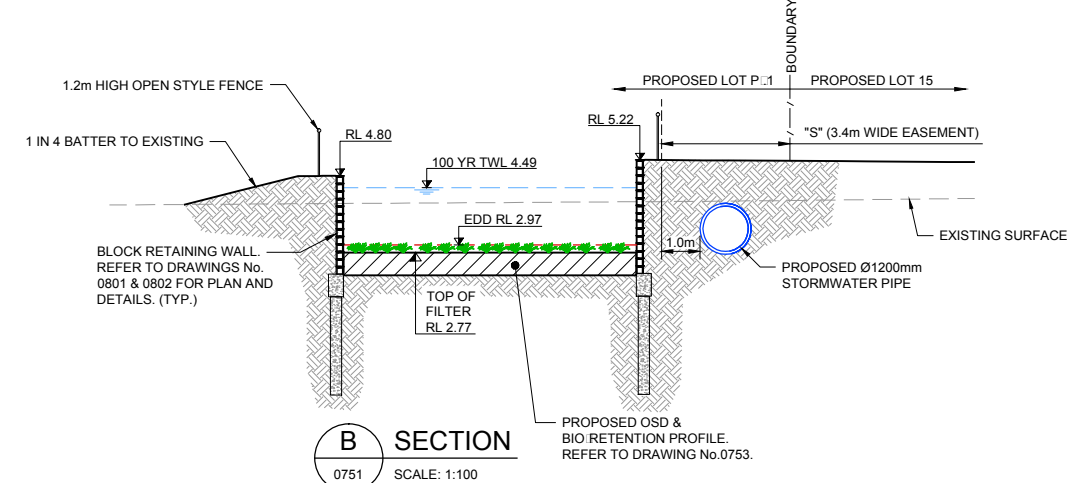
PLAN
 SCALE 1:100

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REV.	DATE	AMENDMENT DESCRIPTION																
B	DRAFT	ISSUED FOR DEVELOPMENT APPLICATION																
A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION																
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 CRAIG & RHODES TAKE THE LEAD			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> AR 77 050 209 991 ACN 050 209 991 Suite 7.01, Level 7, 3 Rider Boulevard, Rhodes, NSW, 2138 PO Box 3220, Rhodes NSW 2138 Tel. 9669-1855 reception@craigandrhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes Pty Ltd </td> <td style="width: 50%;"> Drawing Title: BASIN PLAN Drawing Ref: 076.18 076 18C DA 0751 Revision: B </td> </tr> </table>	AR 77 050 209 991 ACN 050 209 991 Suite 7.01, Level 7, 3 Rider Boulevard, Rhodes, NSW, 2138 PO Box 3220, Rhodes NSW 2138 Tel. 9669-1855 reception@craigandrhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes Pty Ltd	Drawing Title: BASIN PLAN Drawing Ref: 076.18 076 18C DA 0751 Revision: B													
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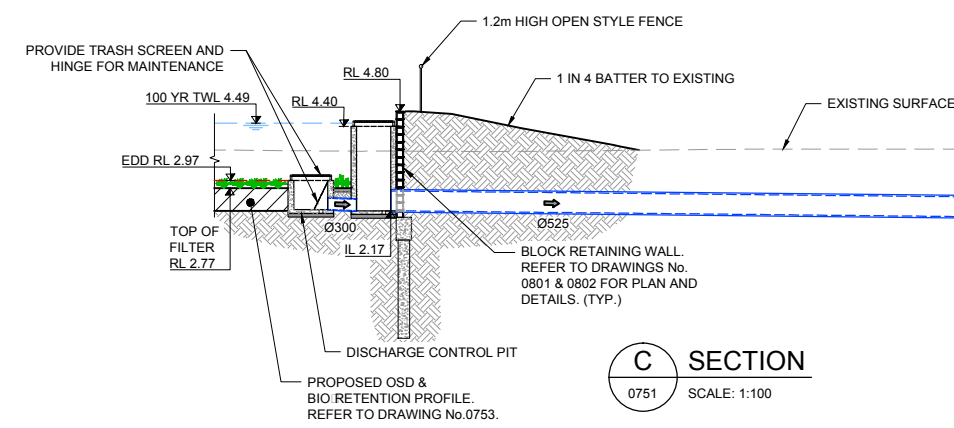
DEVELOPMENT APPLICATION



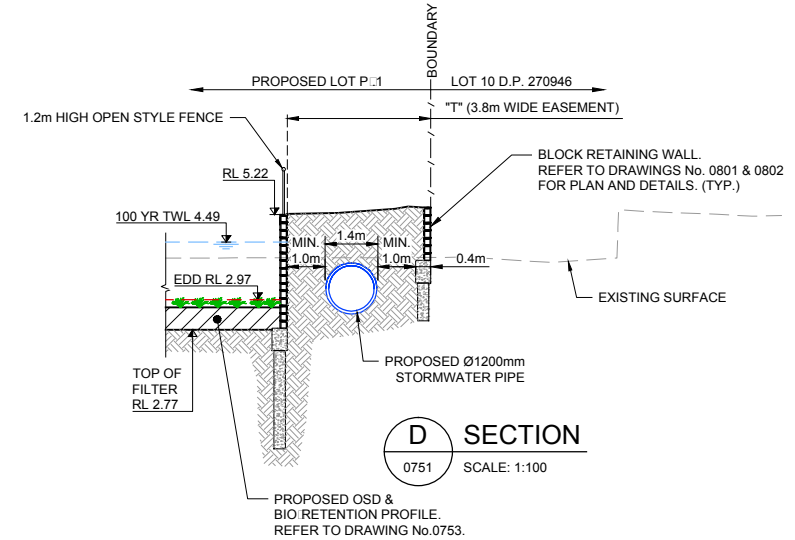
A SECTION
0751 SCALE: 1:100



B SECTION
0751 SCALE: 1:100



C SECTION
0751 SCALE: 1:100



D SECTION
0751 SCALE: 1:100

northern beaches council

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DA2019/0263

0 1 2 3 4 6 8 10m
1:100

APPROVED COMPANY	ASINZS 4801	OH&S Management System	APPROVED COMPANY	ISO 14001	Environmental Management System	APPROVED COMPANY	ISO 9001	Quality Management Systems	DIAL 1100
REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.					
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A	18.03.19	ISSUED FOR DEVELOPMENT APPLICATION	AH	KS					

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Principal: **LEGENDWAY PTY. LTD.**

LGA: **NORTHERN BEACHES COUNCIL**

Scale: **AS SHOWN** Datum: **AHD**

Project: **PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 CIVIL AND SUBDIVISION WORKS**

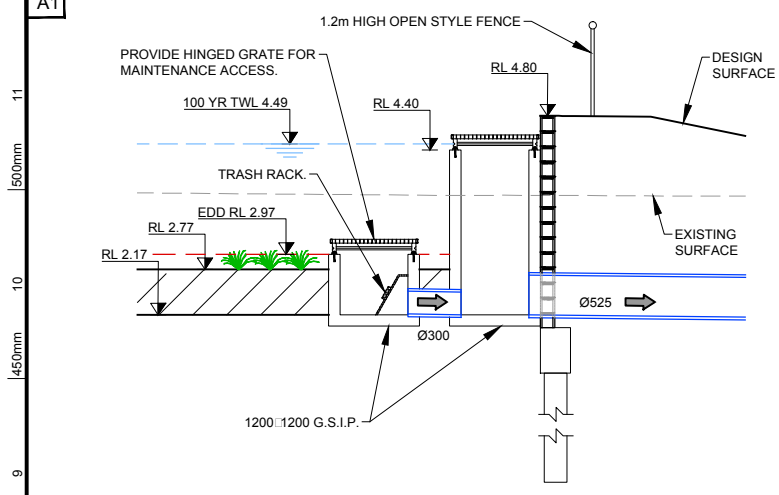


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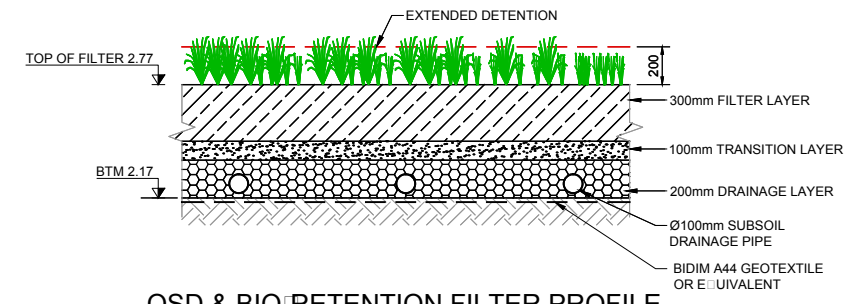
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C&R Ref: **076.18** Drawing Ref: **076.18C.DA.0752** Revision: **B**

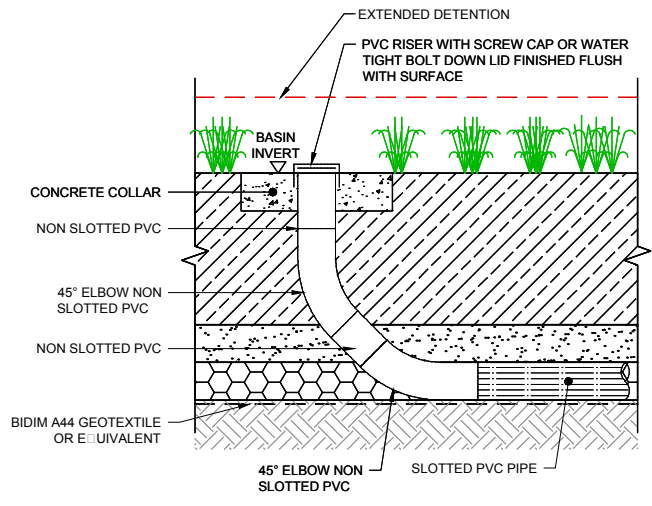
DEVELOPMENT APPLICATION



OSD & BIORETENTION BASIN OUTLET DETAIL
NOT TO SCALE



OSD & BIORETENTION FILTER PROFILE
(AFTER 80% OF UPSTREAM DWELLINGS CONSTRUCTED)
NOT TO SCALE



FLUSHING POINT DETAIL
NOT TO SCALE

BIORETENTION NOTES
A 100mm THICK COARSE SAND TRANSITION LAYER IS TO BE INSTALLED OVER THE GRAVEL DRAINAGE LAYER TO COMPLY WITH THE FOLLOWING PARTICLE SIZE DISTRIBUTION:

- 1.4mm 100% PASSING
- 1.0mm 80% PASSING
- 0.7mm 44% PASSING
- 0.5mm 8.5% PASSING

1. FILTER MEDIA IS TO BE FREE OF RUBBISH AND DELETERIOUS MATERIAL AND LIGHTLY COMPACTED ONLY (TO 90% STANDARD COMPACTION)
2. FILTER MEDIA SATURATED HYDRAULIC CONDUCTIVITY TO BE 180mm/hr. PERMEABILITY IS TO BE TESTED USING THE A.S.4419 (LATEST EDITION) (SOILS FOR LANDSCAPING AND GARDEN USE) METHODS (APPENDIX H)
3. FILTER MEDIA PARTICLE SIZE DISTRIBUTION IS TO BE AS FOLLOWS:
 - CLAY 2:4 (0.002 mm)
 - SILT 4:8 (0.002-0.05mm)
 - VERY FINE SAND 5:10 (0.05-0.1mm)
 - FINE SAND 10:30 (0.1-0.5mm)
 - MEDIUM SAND 40:70 (0.5-1.0mm)
 - COARSE SAND 7:10 (1.0-2.0mm)
 - FINE GRAVEL 1:3 (2.0-3.4mm)

THE COMBINED PERCENTAGE OF CLAY & SILT MAY NOT EXCEED 12% UNDER ANY CIRCUMSTANCES.

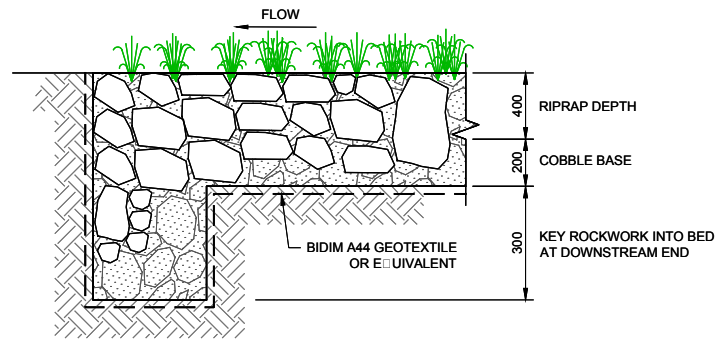
5. FILTER MEDIA IS TO COMPLY WITH A.S.4419 (LATEST EDITION), INCLUDING TESTING REQUIREMENTS AND THE FOLLOWING:
 - BULK DENSITY AS SPECIFIED FOR NATURAL SOILS AND SOIL BLENDS 1.7 t/m³
 - ORGANIC MATTER CONTENT BETWEEN 3 AND 10%
 - WETTABILITY AS SPECIFIED FOR NATURAL SOILS AND SOIL BLENDS 5 mm MIN d. 1.5 (7.5 (H 1:5 IN WATER)
 - ELECTRICAL CONDUCTIVITY (EC) AS SPECIFIED FOR NATURAL SOILS AND SOIL BLENDS 1.20 dS/m
 - PHOSPHOROUS 5 mg/m²
 - NITROGEN DRAWDOWN (NDI) AS SPECIFIED FOR NATURAL SOILS AND SOIL BLENDS 0.5 AND 150
 - TOXICITY AS SPECIFIED FOR NATURAL SOILS AND SOIL BLENDS
 - DISPERSIBILITY AS SPECIFIED FOR NATURAL SOILS AND SOIL BLENDS CATEGORY 1 OR 2
 - PERMEABILITY - SATURATED HYDRAULIC CONDUCTIVITY 80mm/hr ±20% AT 90% STANDARD COMPACTION
 - TEXTURE SANDY LOAM
 - LARGE PARTICLES AS SPECIFIED FOR NATURAL SOILS AND SOIL BLENDS
6. ESTABLISHMENT OF BIO RETENTION SYSTEM IN ACCORDANCE WITH CONSTRUCTION & ESTABLISHMENT GUIDELINES: SWALES, BIO RETENTION SYSTEMS & WETLANDS (WATER BY DESIGN 2010).
7. BASIN FILTER MEDIA TO BE CONSTRUCTED WHEN 80% OF DWELLINGS ARE CONSTRUCTED.

ROCK RIPRAP SPECIFICATIONS

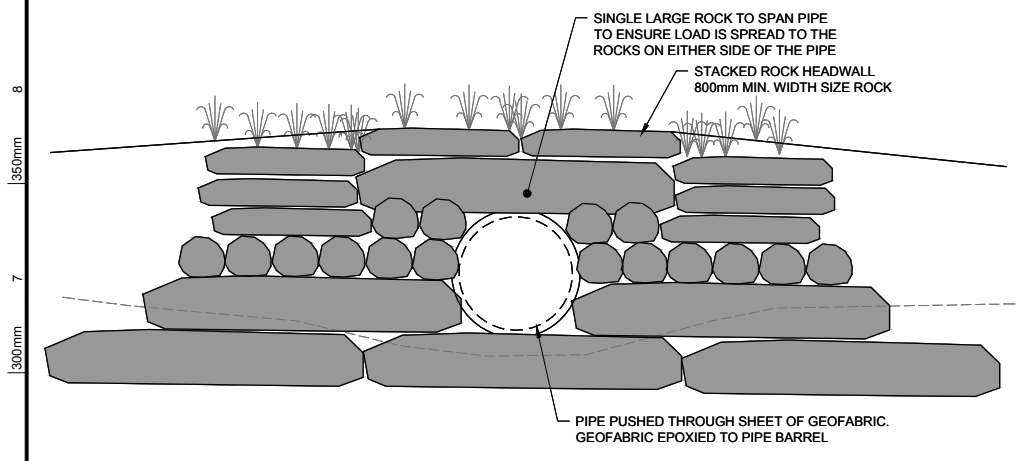
1. ALL RIPRAP MUST CONSIST OF ANGULAR RUN OF QUARRY DURABLE ROCK PLACED OVER A 200mm LAYER OF ANGULAR COBBLES D₅₀: 200mm MIXED WITH GRAVEL D₅₀: 10mm.
2. ALL ROCK IS TO BE A HARD DURABLE ROCK WITH A POINT INDEX LOAD 1:50 GREATER THAN 1.0MPa AS DETERMINED IN ACCORDANCE WITH AS4133.4.1:2007
3. RIPRAP IS TO BE PLACED BY HAND AND CROW BARRED INTO PLACE TO ENSURE FIT WITH MINIMUM VOIDS.
4. ALL ROCK AND COBBLES TO BE PACKED WITH TOPSOIL. GAPS IN RIPRAP TO BE PLANTED.
5. BASE OF RIPRAP TO BE LINED WITH GEOTEXTILE FABRIC (BIDIM A44)
6. ROCK SIZE D₉₀ 250mm, D_m 400mm

STACKED ROCK HEADWALLS

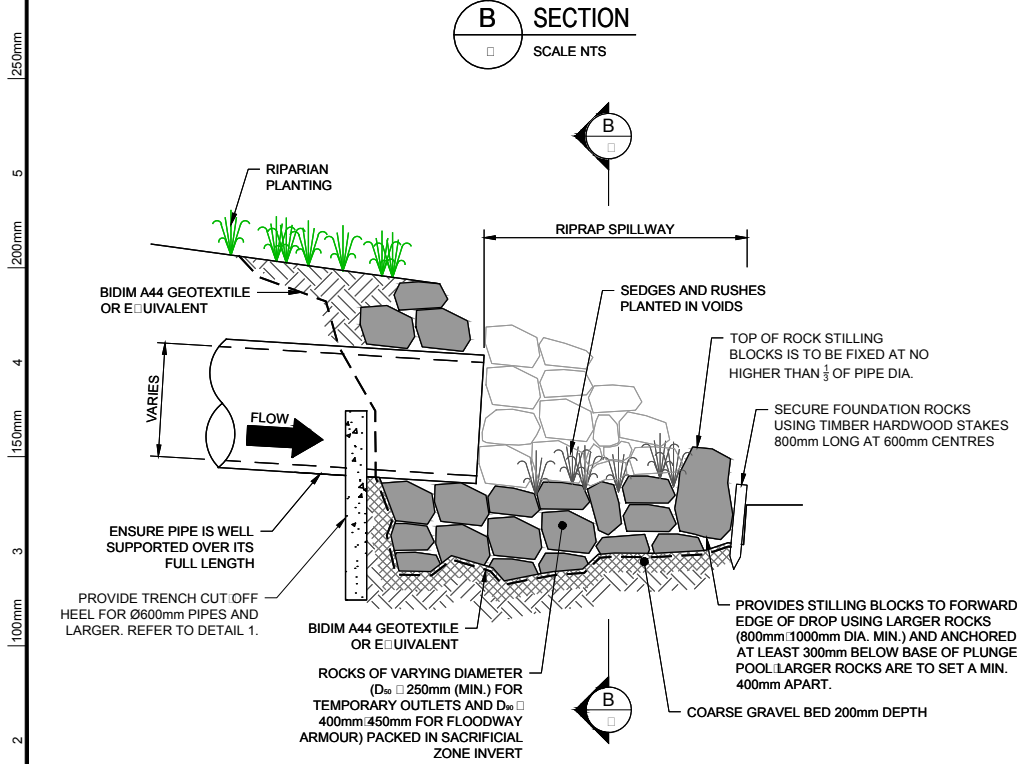
1. BACKFILL IS TO BE GRANULAR, FREE DRAINING AND COMPACTED TO 95% MAXIMUM DRY DENSITY.
2. FOUNDATION TO BE APPROVED FOR 200 kPa BEARING CAPACITY.
3. ROCK IS TO BE SOUND DURABLE BASALT OR OTHER MATERIAL APPROVED BY COUNCIL ENGINEER.
4. ROCKS SHALL BE PLACED IN SUCH A MANNER THAT THEY ARE STABLE AND INTERLOCKING AND LAID ROUGHLY COURSED AND BEDDED ON THEIR BROADEST BASE.
5. EACH ROCK SHALL BE:
 - ELONGATED TO ALLOW STACKING ON THE LONGEST AXIS.
 - ANGULAR IN SHAPE (PROMOTES INTERLOCKING)
 - FREE FROM OVERBURDEN, SPOIL, SHALE AND ORGANIC MATERIAL.
6. WALL CONSTRUCTION TO BE SUPERVISED BY A SUITABLY QUALIFIED PERSON.
7. AIR VOIDS SHALL NOT EXCEED 30% VOLUME.
8. THE TOP COURSE OF ROCKS ON EMBANKMENT AND ADJACENT TO PIPE SHALL BE MORTARED INTO POSITION.



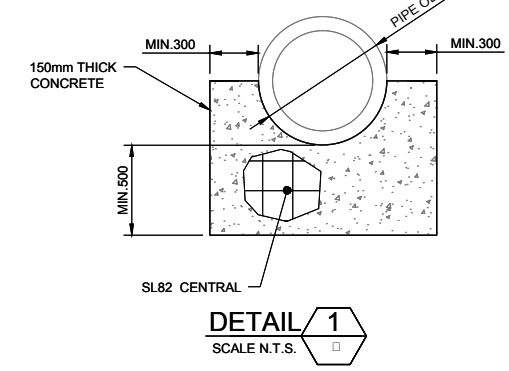
RIPRAP DETAIL
SCALE NTS



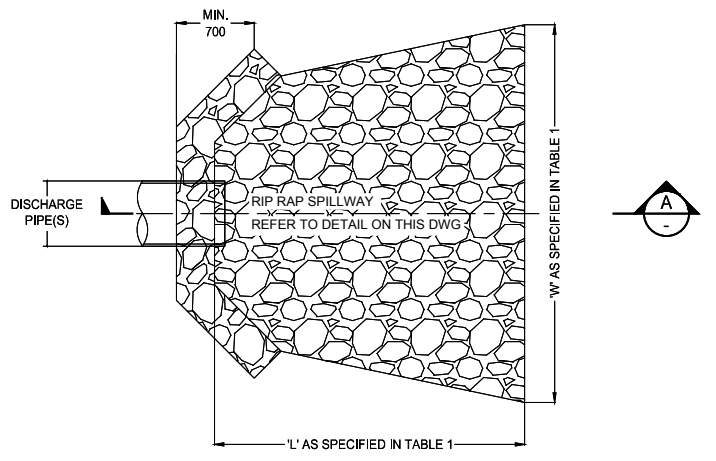
B SECTION
SCALE NTS



A SECTION
SCALE NTS



DETAIL 1
SCALE N.T.S.



TYPICAL HEADWALL TREATMENT

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

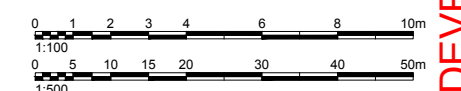
DA2019/0263

EARTHWORKS BASINS




1. THE CONTRACTOR SHALL PROVIDE PROPER FENCING, GUARDING & LIGHTING AND OBSERVATION OF ALL EARTHWORKS, TEMPORARY ROADWAYS, FOOTWAYS, GUARDS & FENCES AS MAY BE RENDERED NECESSARY FOR THE ACCOMMODATION AND PROTECTION OF PEDESTRIANS, VEHICLES, ANIMALS & THE PUBLIC
2. ALL EARTHWORKS SHALL BE CARRIED OUT IN THE LOCATIONS SHOWN AND TO THE LEVELS, WIDTHS AND BATTER SLOPES INDICATED ON THE DRAWINGS
3. EXCAVATED MATERIAL NOT MEETING THE SPECIFICATIONS FOR FILL MATERIAL SHALL BE DISPOSED OFF SITE IN AN APPROPRIATE MANNER
4. WHERE EARTHWORKS ARE REQUIRED IN THE VICINITY OF EXISTING SERVICES, THE CONTRACTOR SHALL SUPPORT ALL SERVICES DURING THE WORKS
5. THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, DO ALL THINGS NECESSARY TO DIVERT ANY WATER INTERFERING WITH THE PROCESS OF WORKS, KEEP THE EXCAVATIONS AND TRENCHES FREE FROM WATER WHILE THE WORKS ARE IN PROGRESS AND PREVENT ANY DAMAGE TO THE WORKS BY WATER DUE TO FLOODS OR OTHER CAUSES. THE CONTRACTOR SHALL HAVE PUMPING EQUIPMENT FOR KEEPING THE EXCAVATION OR TRENCHES CONSTANTLY DEWATERED DURING THE TIMES THE WORKS ARE IN PROGRESS. ANY WORK OR MATERIAL DAMAGED BY WATER SHALL BE MADE GOOD BY THE CONTRACTOR.
6. WHERE DIRECTED BY THE SUPERINTENDENT THE BOTTOM OF TRENCHES OR EXCAVATIONS SHALL BE COMPACTED PRIOR TO THE PLACING OF ANY BEDDING OR CONCRETE MATERIALS. SHOULD IN THE OPINION OF THE SUPERINTENDENT, THE FOUNDATION MATERIAL BE INCAPABLE OF EFFECTIVE COMPACTION, THE MATERIAL SHALL BE REMOVED AND REPLACED WITH APPROPRIATE MATERIAL
7. MATERIAL SHALL BE INSPECTED & APPROVED BY THE SUPERINTENDENT PRIOR TO USE. RELEVANT MATERIAL SPECIFICATION SHEETS ARE TO BE PROVIDED BY THE CONTRACTOR.
8. SUBSOIL DRAINAGE PIPES WITHIN THE BIORETENTION SYSTEM ARE TO BE SLOTTED 100mm uPVC CONSISTENT WITH AS/NZS 1254. JOINTS ARE TO BE SOLVENT CEMENT GLUED AND BENDS ARE TO BE 45° TO MINIMISE BLOCKAGE.

EXCAVATIONS BASINS

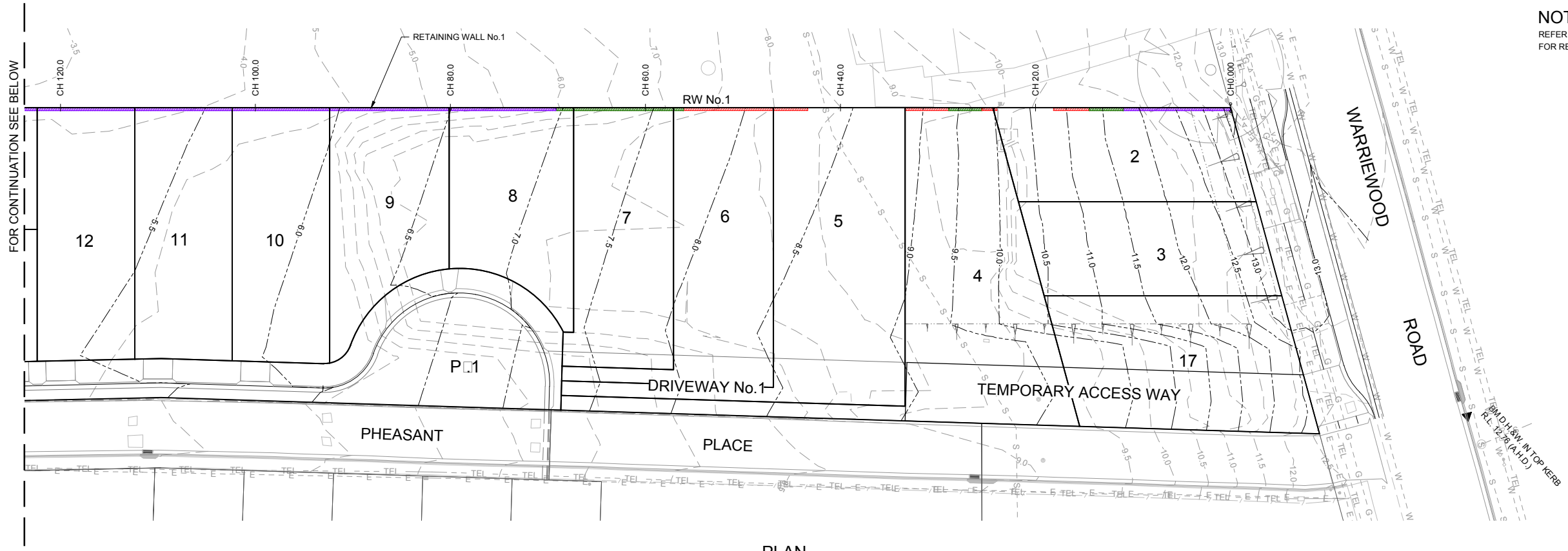
1. ALL TOPSOIL TO BE STRIPPED AND STOCKPILED FOR FUTURE USE. STRIPPED SURFACES ARE TO BE ROLLED AND INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO CONTINUING WORKS. DEPTH OF TOPSOIL STRIPPING TO BE BETWEEN 125mm AND 200mm (TO BE CONFIRMED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION)
2. WHERE ROCK IS EXPOSED DURING EXCAVATION, THE CONTRACTOR SHALL CEASE EXCAVATION AT THIS LOCATION AND CONTACT THE SUPERINTENDENT WHO WILL THEN ADVISE ON THE LEVEL TO WHICH THE EXCAVATION IS TAKEN.



DEVELOPMENT APPLICATION

LEGEND
 RETAINING WALL (0.0m-0.5m HEIGHT)
 RETAINING WALL (0.5m-1.0m HEIGHT)
 RETAINING WALL (1.0m-1.5m HEIGHT)

NOTE
 REFER TO DRAWING No.0802
 FOR RETAINING WALL DETAILS



PLAN
SCALE 1:250



PLAN
SCALE 1:250

northern beaches council
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 DA2019/0263

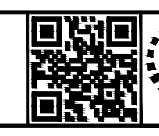
DEVELOPMENT APPLICATION

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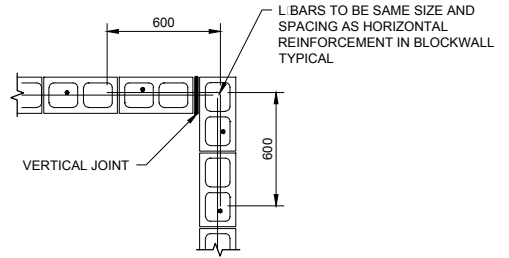
APPROVED COMPANY
 AS/NZS 4801
 QMS
 APPROVED COMPANY
 ISO 14001
 Environmental Management System
 QMS
 APPROVED COMPANY
 ISO 9001
 Quality Management System
 QMS
 DIAL 1199
 24 HOUR
 EMERGENCY SERVICE

Authorised for issue by:
MINH. VU
 Signature: _____
 Principal:
LEGENDWAY PTY. LTD.
 LGA:
NORTHERN BEACHES COUNCIL
 Scale:
AS SHOWN
 Datum:
AHD

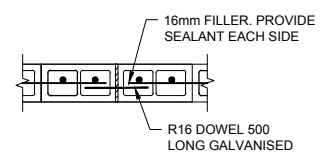
Project:
PROPOSED SUBDIVISION OF
LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319
CIVIL AND SUBDIVISION WORKS



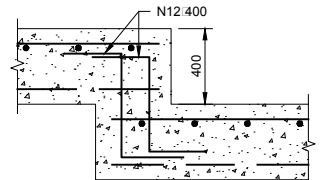
ABN 77 050 209 991 ACN 050 209 991
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 Drawing Title
RETAINING WALL PLAN
 C&R Ref. 076.18 Drawing Ref. 076.18C.DA.0801
 Revision B



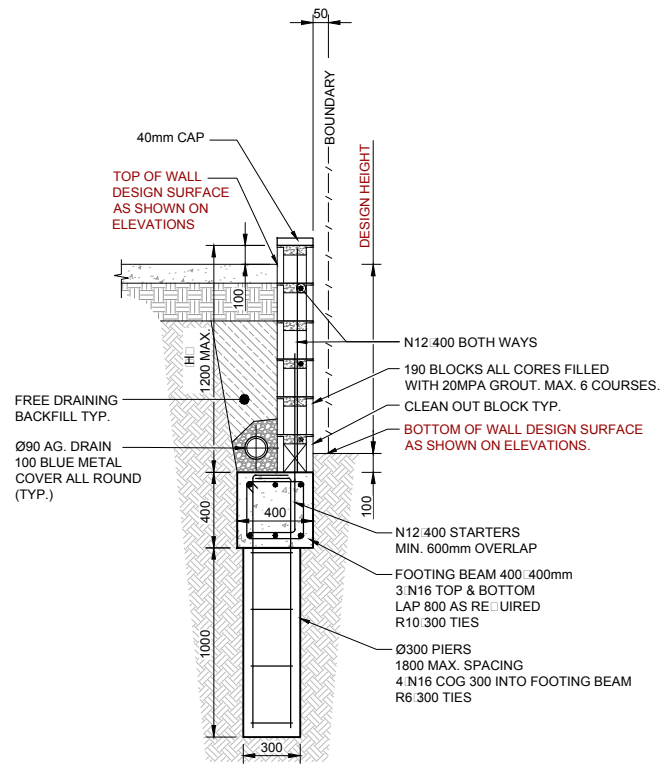
BLOCK RETAINING WALL CORNER DETAILS
SCALE 1:20



BLOCK WALL JOINT DETAILS
SCALE 1:20



STEPPED FOOTING DETAILS
SCALE 1:20



BLOCK RETAINING WALL TYPICAL
SCALE 1:20

northern beaches council

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DA2019/0263



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Signature: _____

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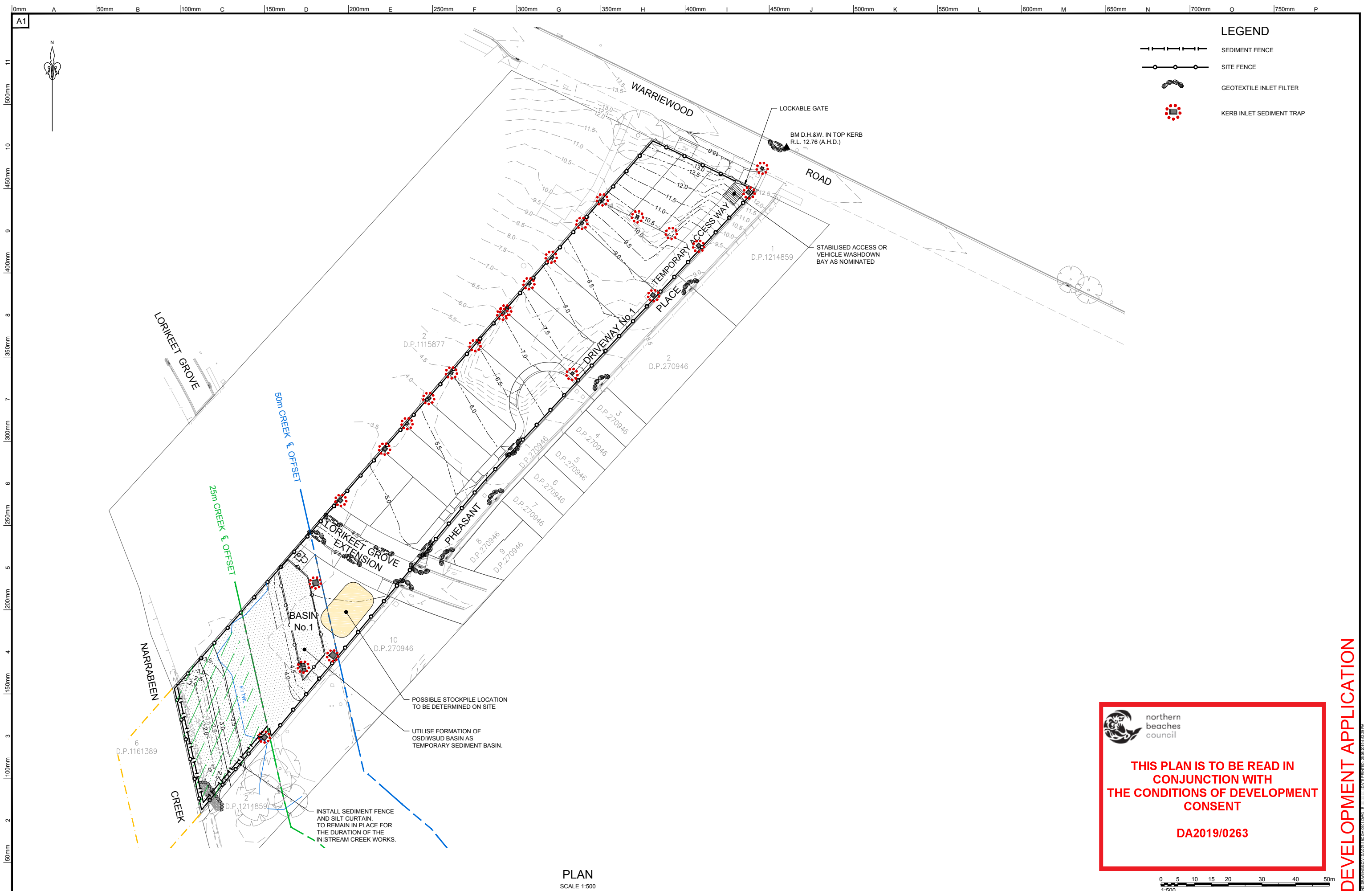
CRAIG & RHODES
TAKE THE LEAD

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Drawing Title: RETAINING WALL DETAILS


C&R Ref: 076.18 Drawing Ref: 076.18C.DA.0802 Revision: B

DEVELOPMENT APPLICATION



LEGEND

- SEDIMENT FENCE
- SITE FENCE
- GEOTEXTILE INLET FILTER
- KERB INLET SEDIMENT TRAP

 northern beaches council
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DA2019/0263



DEVELOPMENT APPLICATION

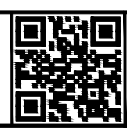
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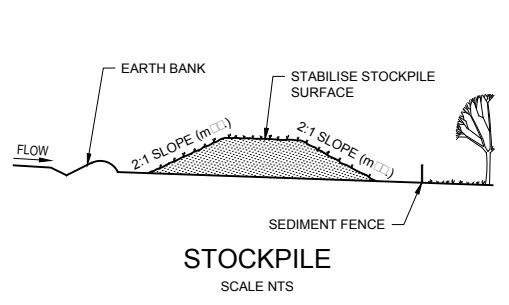

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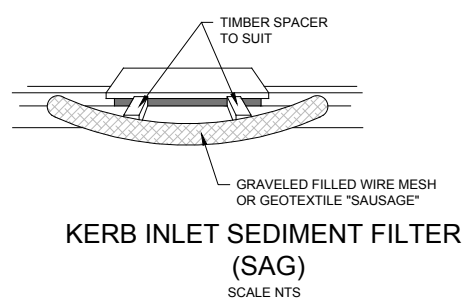
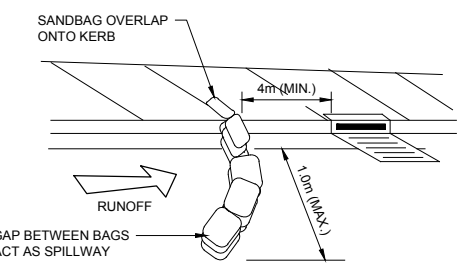


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Drawing Title	Revision
SEDIMENT AND EROSION CONTROL PLAN	B
C&R Ref: 076.18	Drawing Ref: 076.18C.DA.0901



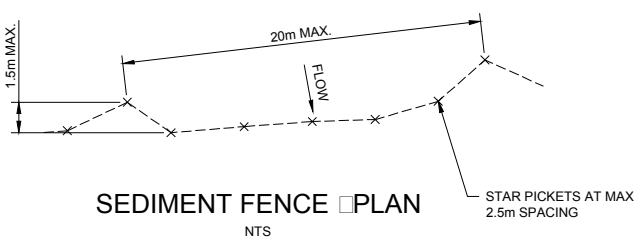
- ### STOCKPILE
1. MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95% STANDARD PROCTOR DENSITY.
 2. SELECT FILL FOLLOWING THE SWMP THAT IS FREE OF ROOTS, WOOD, ROCK LARGE STONE OR FOREIGN MATERIAL.
 3. SPREAD THE FILL IN 100mm TO 150mm LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE SWMP.



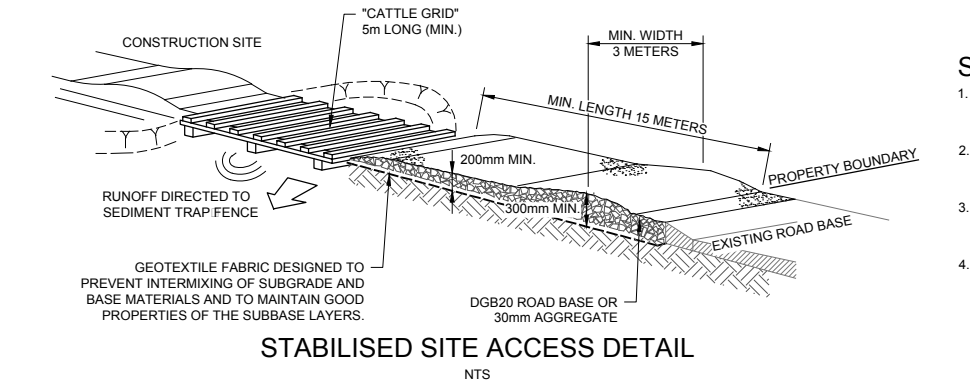
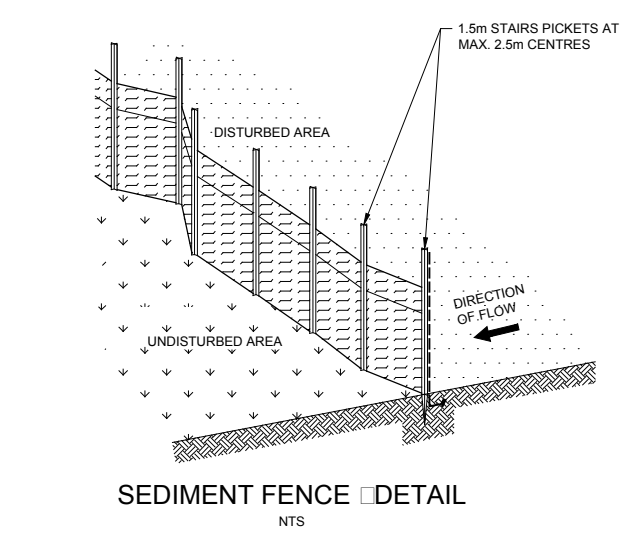
KERB INLET SEDIMENT FILTER (ON GRADE)
SCALE NTS

KERB INLET SEDIMENT FILTER (SAG)
SCALE NTS

- ### KERB INLET SEDIMENT FILTER
1. REFER TO APPROVED PLANS FOR LOCATION AND INSTALLATION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON SITE OFFICER FOR ASSISTANCE.
 2. ENSURE THAT THE INSTALLATION OF THE SEDIMENT TRAP WILL NOT CAUSE UNDESIRABLE SAFETY OR FLOODING ISSUES.
 3. INSTALL SEDIMENT TRAP IN ACCORDANCE WITH STANDARD DRAWING SUPPLIED WITH THE APPROVED PLAN, OR AS DIRECTED BY THE SITE SUPERVISOR.
 4. ENSURE THE SEDIMENT TRAP IS CONSTRUCTED UP-SLOPE OF AN ON-GRADE KERB INLET. THE SEDIMENT TRAP MUST NOT SURROUND THE KERB INLET UNLESS SPECIFICALLY DIRECTED BY THE SITE SUPERVISOR.
 5. ENSURE THE SEDIMENT TRAP FULLY ENCLOSES THE KERB INLET. USE APPROPRIATE SPACERS TO ENSURE THE SEDIMENT TRAP DOES NOT BLOCK THE SIDE-ENTRY INLET.
 6. TAKE ALL NECESSARY MEASURE TO MINIMISE THE SAFETY RISK CAUSED BY THE STRUCTURE

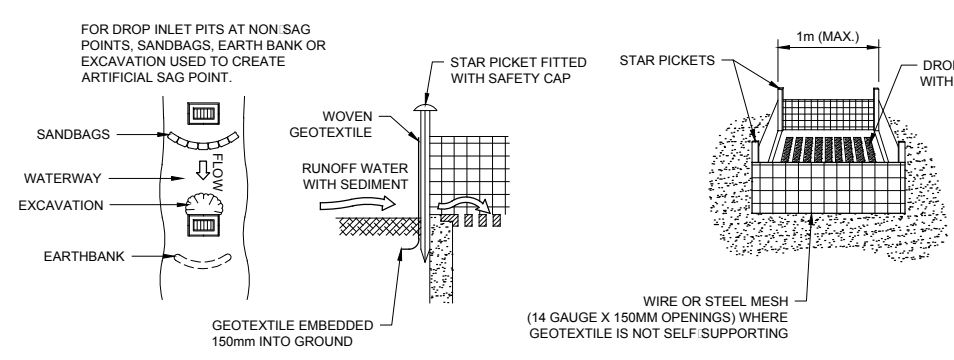


- ### SEDIMENT FENCE
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BE PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING. TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION, THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50% OF THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT.
 2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
 3. DRIVE 1.5 METER LONG STAR PICKETS INTO GROUND AT 2.5 METER INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
 4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS, ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES, OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
 5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
 6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



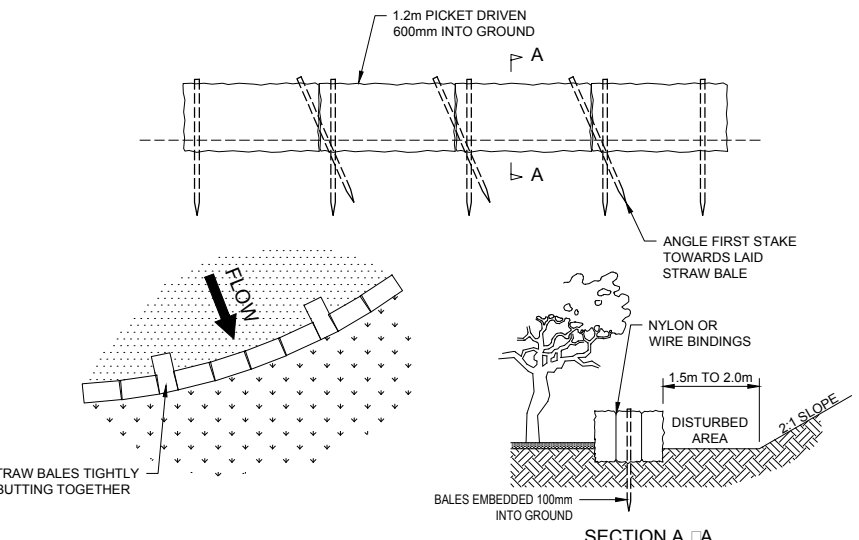
- ### STABILISED SITE ACCESS
1. COVER THE EXISTING SANDSTONE SUBGRADE AREA WITH NEEDLE PUNCHED GEOTEXTILE.
 2. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
 3. ENSURE THE STRUCTURE IS AT LEAST 15 METERS LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METERS WIDE.
 4. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT

STABILISED SITE ACCESS DETAIL
NTS



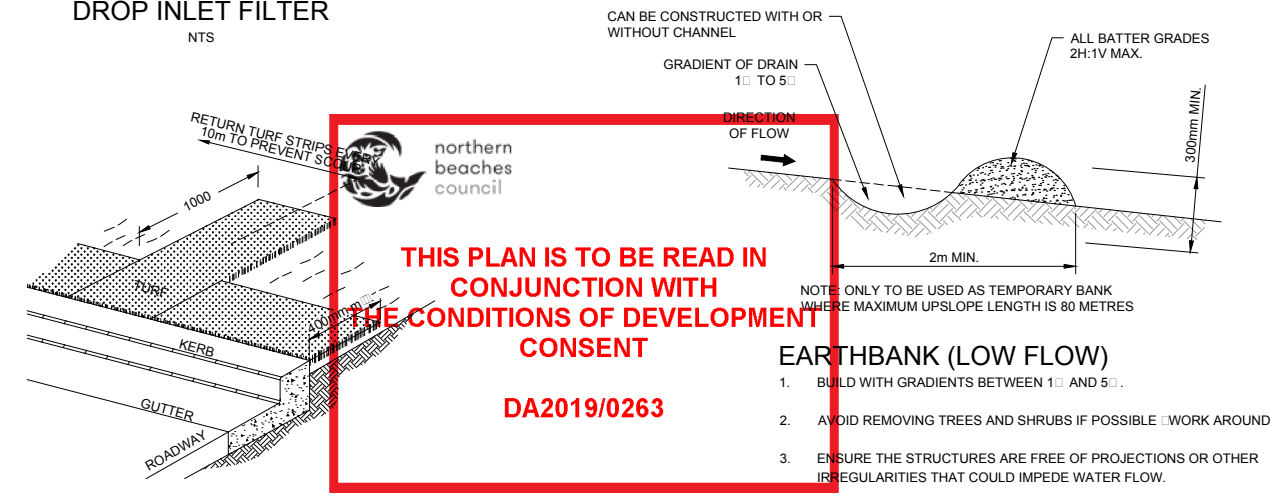
- ### DROP INLET FILTERS
1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OF STRAW BALES.
 2. FOLLOW STANDARD DRAWINGS OF STRAW BALE FILTERS AND SEDIMENT FENCES FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1m CENTRES.
 3. IN WATERWAYS, ARTIFICIAL SAG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

DROP INLET FILTER
NTS



- ### STRAW BALE FILTERS
1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DIAGRAM TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION.
 2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN THE BALES. THE STRAWS IN EACH BALE ARE TO BE ALIGNED PARALLEL TO THE GROUND.
 3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
 4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH 1.2m STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
 5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE BALES ARE PLACED 1m TO 2m DOWNSLOPE FROM THE TOE.
 6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED. THEY SHOULD BE REPLACED EACH TWO TO FOUR MONTHS.

STRAW BALE FILTERS
NTS



- ### KERBSIDE TURF STRIP
1. INSTALL A 400mm MINIMUM WIDE ROLL OF TURF ON THE FOOTPATH NEXT TO THE KERB AND AT THE SAME LEVEL AS THE TOP OF THE KERB.
 2. LAY 1.4m LONG TURF STRIPS NORMAL TO THE KERB EVERY 10m.
 3. REHABILITATE DISTURBED SOIL BEHIND THE TURF STRIP FOLLOWING THE ESCP SWMP.

- ### EARTH BANK (LOW FLOW)
1. BUILD WITH GRADIENTS BETWEEN 1:5 AND 5:1.
 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 BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
 6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT DA2019/0263



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DEVELOPMENT APPLICATION

Landscape Package

Contents	Drawing No.	Issue	Date
Coversheet, Imagery & Plant Schedule	CRA01-DA-100	D	26/06/2019
Landscape Plan of subdivision - Overall	CRA01-DA-101	D	26/06/2019
Landscape Plan of subdivision - 1 of 2	CRA01-DA-102	D	26/06/2019
Landscape Plan of subdivision - 2 of 2	CRA01-DA-103	D	26/06/2019

SITE LOCATION MAPS



1 Indicative Character Imagery

Native Trees, Shrubs & Grasses



Creekside Corridor Planting



2 Indicative Almost Native Plant Imagery

Abbrev	Botanical Name	Common Name	Mature Height (m)	Pot Size	Qty
Trees					
ANG flo	Angophora floribunda	Rough-Barked Apple	30	45L	6
BAN int	Banksia integrifolia	Coastal Banksia	8-10	45L	45
COR fic	Corymbia ficifolia	Red Flowering Gum	6	45L	10
ELA ret	Elaeocarpus reticulatus	Blueberry Ash	15	45L	12
EUC robusta	Eucalyptus robusta	Swamp Mahogany	25	45L	2
LIV aus	Livistona australis	Cabbage Tree Palm	20	45L	8
SYZ smi	Syzygium smithii	Lilly Pilly	8-10	45L	12
TRI lau	Tristaniopsis laurina	Water Gum	8	400L	5
Shrubs					
ALY hue	Alyogyne huegelia 'Monterey Bay'	Blue Hibiscus	2.5	200mm	
BAE lin	Baeckea linifolia	Flax Leaf Heath Myrtle	2	200mm	
COR alb	Correa alba	White Correa	1.5-2	200mm	
ERI myo	Eriostemon myoporoides	Long Leaf Waxflower	1.5-2	200mm	
HEL pet	Helichrysum petiolare	Licorice Plant	0.5	200mm	
MEL sty	Melaleuca stypheloides	Prickly Leafed Paperbark	7-12	200mm	
PIT tob	Pittosporum tobira 'Miss muffet'	Miss Muffet Tobira	1-2	200mm	
PLE arg	Plectranthus argentatus	Silver Spur Flower	1	200mm	
SYZ cas	Syzygium 'Cascade'	Cascade Lilly Pilly	2-3	200mm	
SYZ boo	Syzygium 'Boomer'	Lilly Pilly	1.5	200mm	
WES fru	Westringia 'smokie'	Coast Rosemary	1.5	200mm	
Accent					
DOR exc	Doryanthes excelsa	Gynea Lily	2-4	25L	
MAC com	Macrozamia communis	Burrawang	2-3	25L	
PTE umb	Pteris umbrosa	Jungle Fern	1	5L	
Grasses					
CAR app	Carex appressa	Tall Sedge	0.9	V/cell	
DIA cae	Dianella caerulea 'Breeze'	Blue Flax Lily	0.6-0.7	V/cell	
DIA tas	Dianella tasmanica 'Destiny'	Verigated Flax Lily	0.35	V/cell	
FAC nod	Facinia nodosa	Knobby Club Rush	0.8	V/cell	
JUN usi	Juncus usitatus	Common Rush	0.8	V/cell	
LOM hys	Lomandra hystrix	Fine Mat Rush	0.6	V/cell	
LOM lon	Lomandra longifolia	Mat Rush	1.0	V/cell	
LOM tan	Lomandra tanika	Fine Mat Rush	0.5	V/cell	
Groundcovers					
ASP nid	Asplenium nidus	Bird's Nest Fern	-	140mm	
CER tom	Cerastium tomentosum	Snow In Summer	0.2	140mm	
CHR max	Chrysanthemum maximum	Shasta Daisy	0.9	140mm	
EVO pil	Evolvulus pilosus	Blue Eyes	0.5	140mm	
GRE poo	Grevillea 'Pootinda Royal Mantle'	Creeping Grevillea	-	140mm	
HIB sca	Hibbertia scandens	Golden guinea vine	0.3	140mm	
MYO par	Myoporum parvifolium	Creeping Boobialla	-	V/cell	
PEL aus	Pelargonium australe	Coastal Geranium	-	140mm	
VIO hed	Viola hederacea	Native Violet	-	140mm	

Inner 25 Creekside corridor planting (Swamp Mahogany Forest species)

Abbrev	Botanical Name	Common Name	Mature Height (m)	Pot Size	Qty
Trees					
EUC robusta	Eucalyptus robusta	Swamp Mahogany	25	25L	4
CAS gla	Casuarina glauca	Casuarina	10	25L	5
LIV aus	Livistona australis	Cabbage Tree Palm	20	25L	12
MEL lin	Melaleuca linifolia	Narrow Leafed Paperbark	8	25L	14
Shrubs (2 PER 5m2 clumps of 3-5)					
ACA lon sub	Acacia longifolia subplongifolia	Golden Wattle	8	tube stock	2 / 5m2
DOD tri	Dodonaea triquetra	Large-leaf Hop-Bush	3	tube stock	2 / 5m2
HOM pop	Homalanthus populifolius	Bleeding Heart Tree	6	tube stock	2 / 5m2
Ferns, Grasses (3 PER m2) & Groundcovers (5 PER m2)					
COM cya	Commelina cyanea	Native Wandering Jew	0.3	V/cell	6 / m2
GAH cla	Gahnia clarkei	Saw Sedge	2	V/cell	4 / m2
HYD ped	Hydrocotyle peduncularis	Pennywort	0.1	V/cell	5 / m2
HYP mue	Hypolepis muelleri	Ground Fern	1	V/cell	4 / m2
PHR aus	Phragmites australis	Common Reed	6	V/cell	4 / m2
PTE esc	Peridium esculentum	Bracken Fern	1.5	V/cell	4 / m2
VIO hed	Viola hederacea	Native Violet	-	V/cell	6 / m2

3 Indicative Plant Schedule



NOTE: CREEK CORRIDOR INSTALLATION, MAINTENANCE, DEDICATION & TIMING

- Weed mapping & vegetation maintenance plan for creekline corridor to be undertaken prior to construction certificate.
- Rehabilitation works to begin minimum 6 months (excluding June, July, August) prior to dedication.
- Council dedication to coincide with registration of title.

- LEGEND**
- Existing Trees - To be Removed (include grubbing out stumps to 300mm and remediation of soil where applicable)
 - Existing Trees - To be Retained & Protected (as per Tree Protection Zone AS4907)
 - SHRUBS and GROUND COVERS
 - PROPOSED LIVISTONA AUSTRALIS
 - PROPOSED TREES
 - PROPERTY BOUNDARY**
 - LOT BOUNDARY**
 - CONCRETE FOOTPATH (REFER ENGINEER)
 - DECOMPOSED (DECO) GRANITE PATH
 - BIORETENTION BASIN PLANTING
 - STREETSIDE PLANTING
 - GROUNDCOVERS AND SHRUBS IN APZ
 - LAWN (BUFFALO)
 - SWAMP MAHOGANY REVEGETATION AREA (SMR1) Grasses & groundcover only.
 - SWAMP MAHOGANY REVEGETATION AREA (SMR2) Shrubs, ferns, grasses & groundcover.
 - CREEK BED
 - GARDEN EDGE
 - STORMWATER DRAINAGE

1 Site Plan

- Landscape Area (deep soil)
- Proposed hard surface
- Indicative Building Footprints



Scale 1:500 @ A1

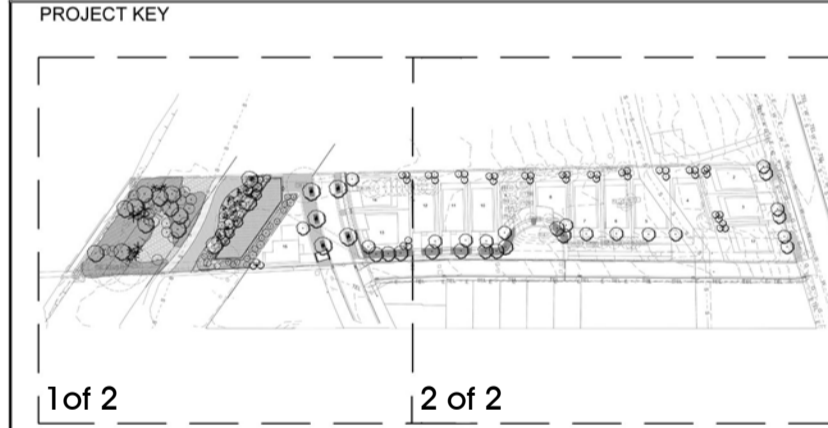
2 Site Coverage Plan

Lot 2 (235.2m2) Landscape Area: 100 m2 (43%)	Lot 6 (309.7m2) Landscape Area: 108 m2 (35%)	Lot 10 (261.2m2) Landscape Area: 106 m2 (41%)	Lot 14 (254m2) Landscape Area: 90 m2 (35%)	Lot 16 (Inner Creek) Landscape Area: 942.3 m2 (100%)
Lot 3 (235.2m2) Landscape Area: 100 m2 (43%)	Lot 7 (277.8m2) Landscape Area: 105 m2 (38%)	Lot 11 (258.3m2) Landscape Area: 106 m2 (41%)	Lot 15 (286m2) Landscape Area: 146 m2 (51%)	Pt.1 (Outer Creek) Landscape Area: 964.3 m2 (100%)
Lot 4 (487.9m2) Landscape Area: 207 m2 (42%)	Lot 8 (237.1m2) Landscape Area: 95 m2 (40%)	Lot 12 (259.1m2) Landscape Area: 106 m2 (41%)	Lot 17 (335.9m2) Landscape Area: 180 m2 (54%)	Roads & Verges (1010m2) Landscape Area: 320 m2
Lot 5 (443.2m2) Landscape Area: 217 m2 (48%)	Lot 9 (245.3m2) Landscape Area: 97 m2 (40%)	Lot 13 (241m2) Landscape Area: 102 m2 (42%)	Total Site Area: 7284m2	
				Total Landscape Area: 4095m2 (56%)

Scale 1:500 @ A1

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

 DA2019/0263



sym. studio has been commissioned to prepare a concept landscape plan for a residential subdivision at 53B Warriewood Road, Warriewood. This property is a part of the Warriewood Valley, situated west of Mona Vale Beach on the Northern Beaches of Sydney.

Warriewood Valley is transforming into a dynamic urban environment with new residential communities, parks, playgrounds, walkways, cycleways and creekline restoration. The existing landscape character is dominated by degraded pastureland grasses, bordered to the south by Narabeen Creek riparian corridor and an evolving residential streetscape to the north (Warriewood Road).

Significant canopy trees include Angophora, Corymbia, Eucalyptus, Livistonia & Casuarinas with a midstory of Pittosporum, Acmena & Banksia. Understory and ground covers include Lomandra & Dianella sp. The gently sloping topography provides opportunity to emphasise the influence of Narrabeen Creek and its historical function of enriching alluvial soils and the supply of fresh water for irrigation of productive agricultural lands. The landscape design a/ prioritises the rehabilitation of the inner 25.0M creek corridor and responds to the Warriewood Valley Masterplan outer 25.0M creek corridor which includes a 2.5M public access path/cycleway as well the integration of a bio-retention basin into the passive recreation usage of these areas along the riparian corridor.

The streetscape includes Lorikeet Drive and Warriewood Road. In keeping with the Warriewood Valley Masterplan street trees have been determined by neighbouring developments and therefore a continuation of these species and large pot sizes serve to provide instant impact at time of installation. Interallotment trees include 1 x medium sized tree (Elaeocarpus reticulatus) located in the front yard and 3x small trees in the back (banksia integrifolia) clumped together. Warriewood Road Frontages have 2x large canopy trees (Angophora floribunda) as per DCP requirements. Fauna friendly boundary fencing will facilitate small mammal movement through the community.

The landscape strategy looks to retain existing vegetation, restore local habitat and revegetate with endemic species. Landscape planting has been kept to predominantly native, with many endemic species which are adaptable and dependable in meeting the demands of a residential community.

The landscape design reinforces the local character achieved by retaining and enhancing a proportion of native vegetation and implementing a design approach that is sympathetic to the existing site character for the benefit of existing wildlife and new residents.

3 Statement of Environmental Effects

26/06/19	D	COUNCIL APPROVAL - DA	AD
25/06/19	C	COUNCIL APPROVAL - DA	AD
05/03/19	PT	COUNCIL APPROVAL - DA	AD
DATE	ISSUE	AMENDMENT	BY

PROJECT
53B & 53 WARRIEWOOD RD,
WARRIEWOOD, NSW

CLIENT
LEGENDWAY PTY LTD

LANDSCAPE ARCHITECT
sym. studio
Phone: 61 2 9411 2734
Studio 1, Po. Box 63
Mona Vale, NSW Australia
www.symstudio.com

DRAWING TITLE
LANDSCAPE PLAN (Sub Division)

APPROVED FOR RELEASE
AILA #1420

DATE	DRAWN	CHECKED
26/06/19	AD	CG

PROJECT No.	DRAWING No.	ISSUE
CRA01	CRA01 DA-101	D

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2.5M pedestrian/cycle path.
Location to be above 20 year flood level.
Stone retaining wall at toe of bank. Refer engineer

5 CAS gla 4 EUC rob
14 MEL lin 12 LIV aus

Revegetate area within 25m creek corridor (SMR2)

ACA lon DOD tri HOM pop
COM cya GAH cla HYD ped
HYP mue PHR aus PTE esc
VIO hed

Bioretention planting of indigenous water plants and reeds to filter and remove excess nutrients from stormwater before entering creek.
CAR app JUN kra

Revegetate area within 25m creek corridor (SMR1)

COM cya GAH cla HYD ped
HYP mue PHR aus PTE esc
VIO hed

Ground covers, shrubs, grasses and trees

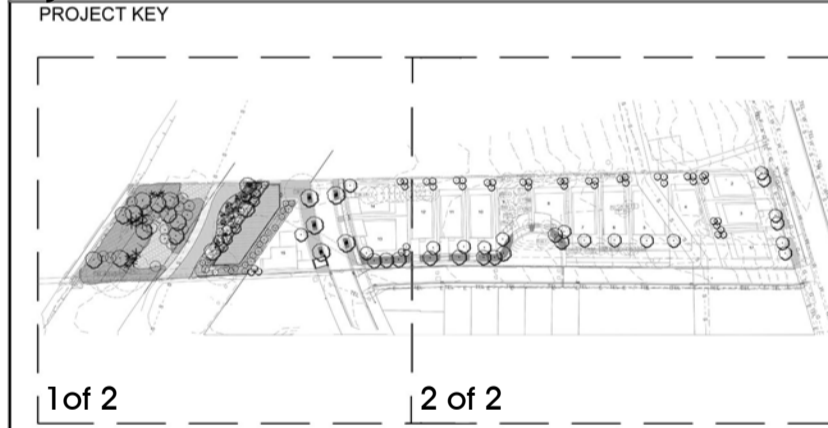
4 SYZ cas 4 ALY hue 12 SYZ smi
5 PIT tob 5 PLE arg 8 BAN int
10 COR alb 10 SYZ boo
9 ERI myo 9 WES fru
10 ASP nid 10 DIA tas
7 DOR exc 7 PTE umb
CER tom EVO pil
GRE poo PEL aus

Sandstone stormwater headwalls.
'Naturalised' boulder & planting placement. Refer civil engineer.

- LEGEND**
- Existing Trees - To be Removed (include grubbing out stumps to 300mm and remediation of soil where applicable)
 - Existing Trees - To be Retained & Protected (as per Tree Protection Zone AS4907)
 - SHRUBS and GROUND COVERS
 - PROPOSED LIVISTONA AUSTRALIS
 - PROPOSED TREES
 - PROPERTY BOUNDARY
 - LOT BOUNDARY
 - CONCRETE FOOTPATH (REFER ENGINEER)
 - DECOMPOSED (DECO) GRANITE PATH
 - BIORETENTION BASIN PLANTING
 - STREETSIDE PLANTING
 - GROUNDCOVERS AND SHRUBS IN APZ
 - LAWN (BUFFALO)
 - SWAMP MAHOGANY REVEGETATION AREA (SMR1) Grasses & groundcover only.
 - SWAMP MAHOGANY REVEGETATION AREA (SMR2) Shrubs, ferns, grasses & groundcover.
 - CREEK BED
 - GARDEN EDGE
 - STORMWATER DRAINAGE

JOINS SHEET T03

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT DA2019/0263



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25/06/19	C	COUNCIL APPROVAL - DA	AD
05/03/19	PT	COUNCIL APPROVAL - DA	AD
DATE	ISSUE	AMENDMENT	BY

PROJECT
**53B & 53 WARRIEWOOD RD,
WARRIEWOOD, NSW**

CLIENT
LEGENDWAY PTY LTD

LANDSCAPE ARCHITECT
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Phone: 61 2 9411 2734
Studio 1, Po. Box 63
Mona Vale, NSW Australia
www.symstudio.com

DRAWING TITLE
LANDSCAPE PLAN (Sub Division)

APPROVED FOR RELEASE
AILA #1420

DATE	DRAWN	CHECKED
26/06/19	AD	CG

PROJECT No.	DRAWING No.	ISSUE
CRA01	CRA01 DA-102	D

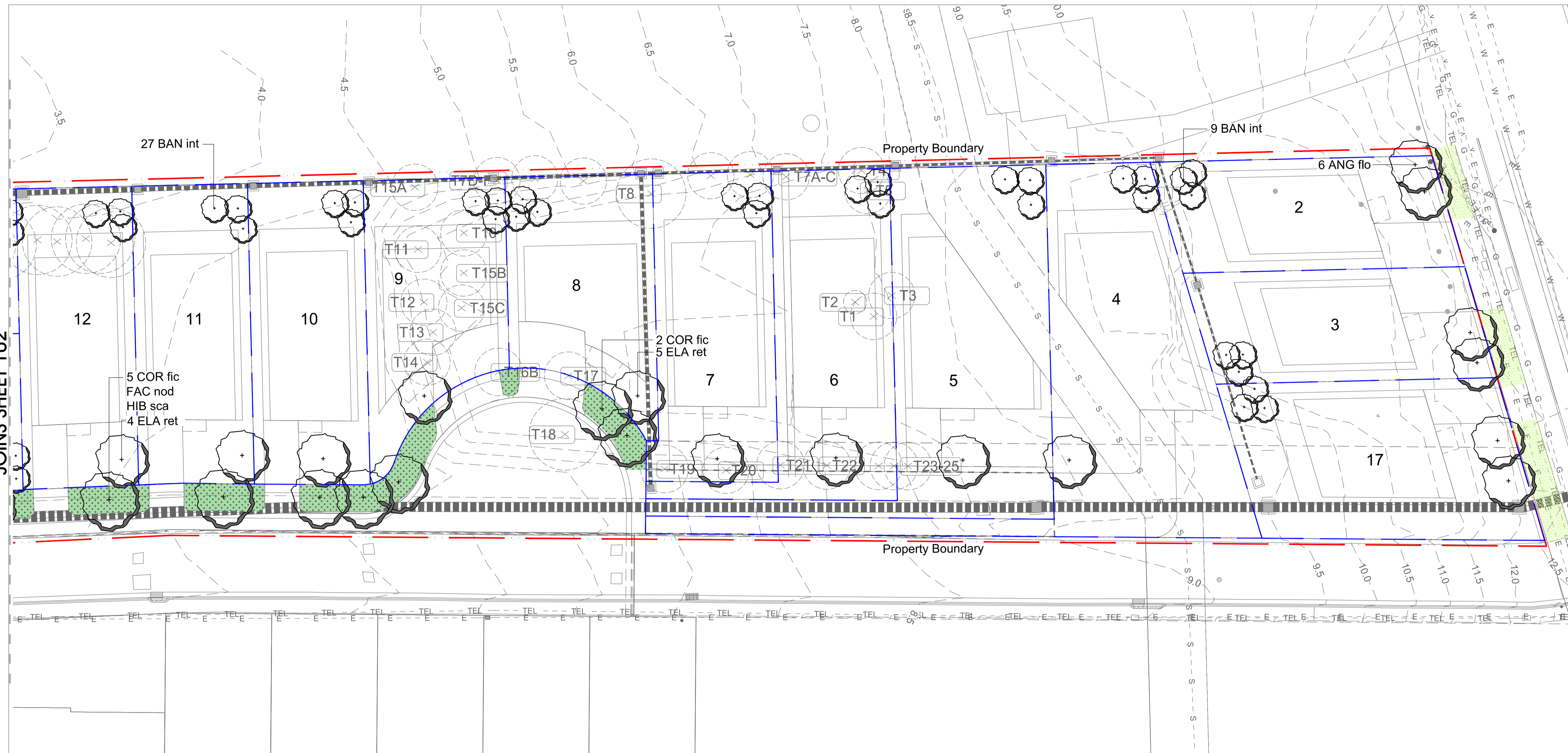
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1 Landscape Plan - 1 Of 2

General Note:
Services shown as diagrammatic. Adjust final location onsite during installation.

Scale 1:200 @ A1

JOINS SHEET T02

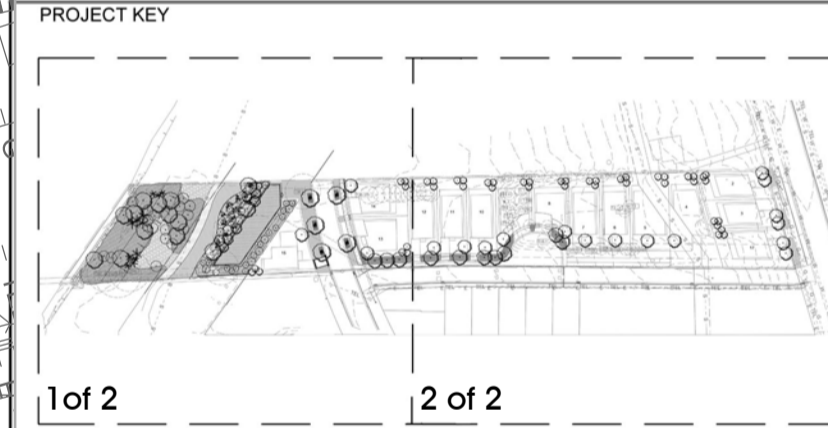


- LEGEND**
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 - PROPOSED TREES
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 - CREEK BED
 - GARDEN EDGE
 - STORMWATER DRAINAGE

northern beaches council

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DA2019/0263



26/06/19	D	COUNCIL APPROVAL - DA	AD
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05/03/19	P1	COUNCIL APPROVAL - DA	AD
DATE	ISSUE	AMENDMENT	BY

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WARRIEWOOD, NSW

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26/06/19	AD	CG

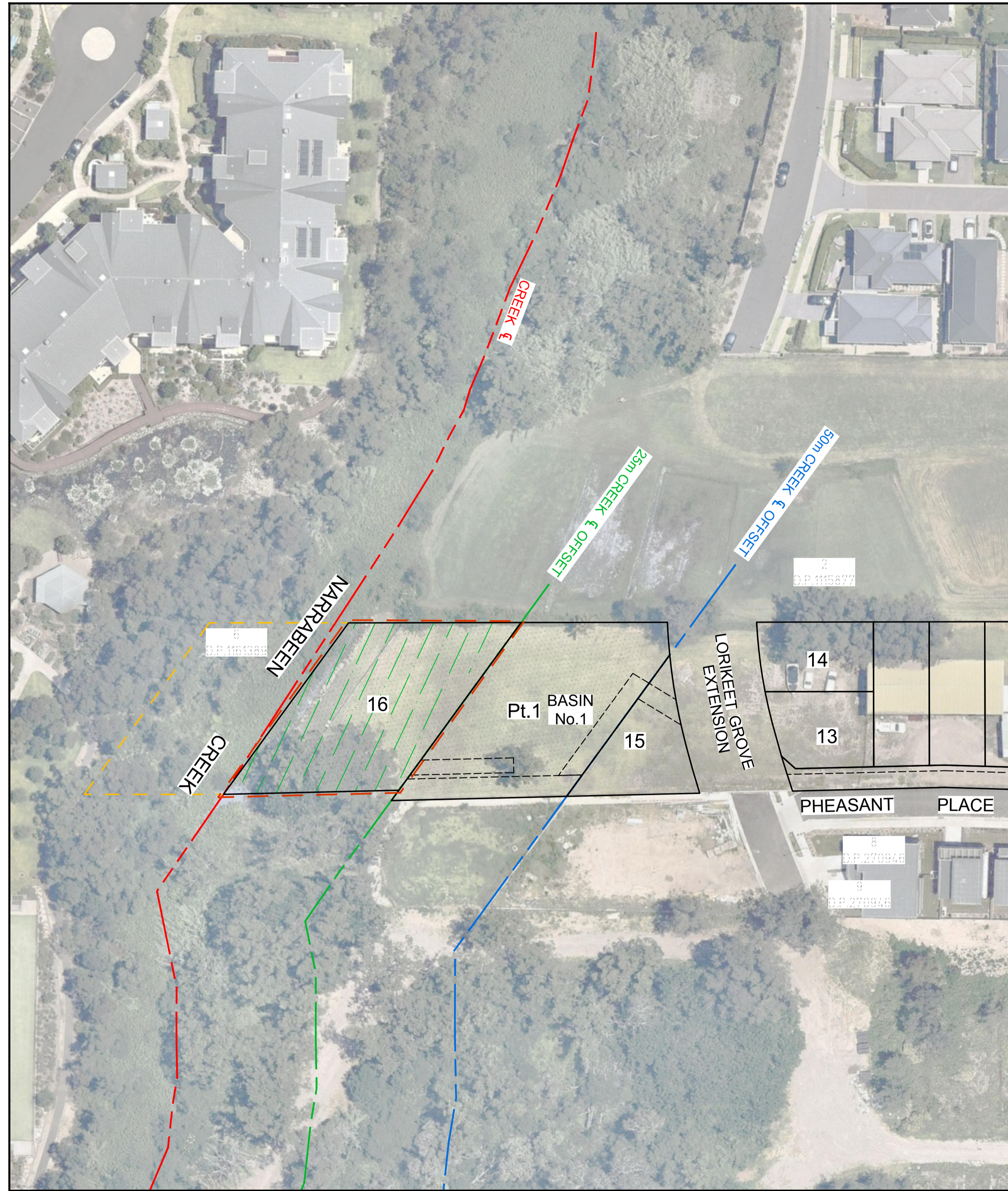
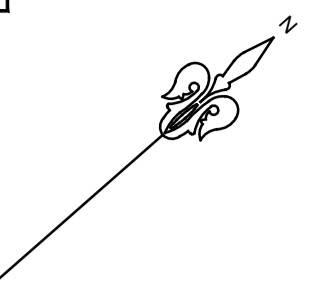
PROJECT No.	DRAWING No.	ISSUE
CRA01	CRA01 DA-103	D

2 Landscape Plan - 2 Of 2

General Note:
Services shown as diagrammatic. Adjust final location onsite during installation.

Scale 1:200 @ A1

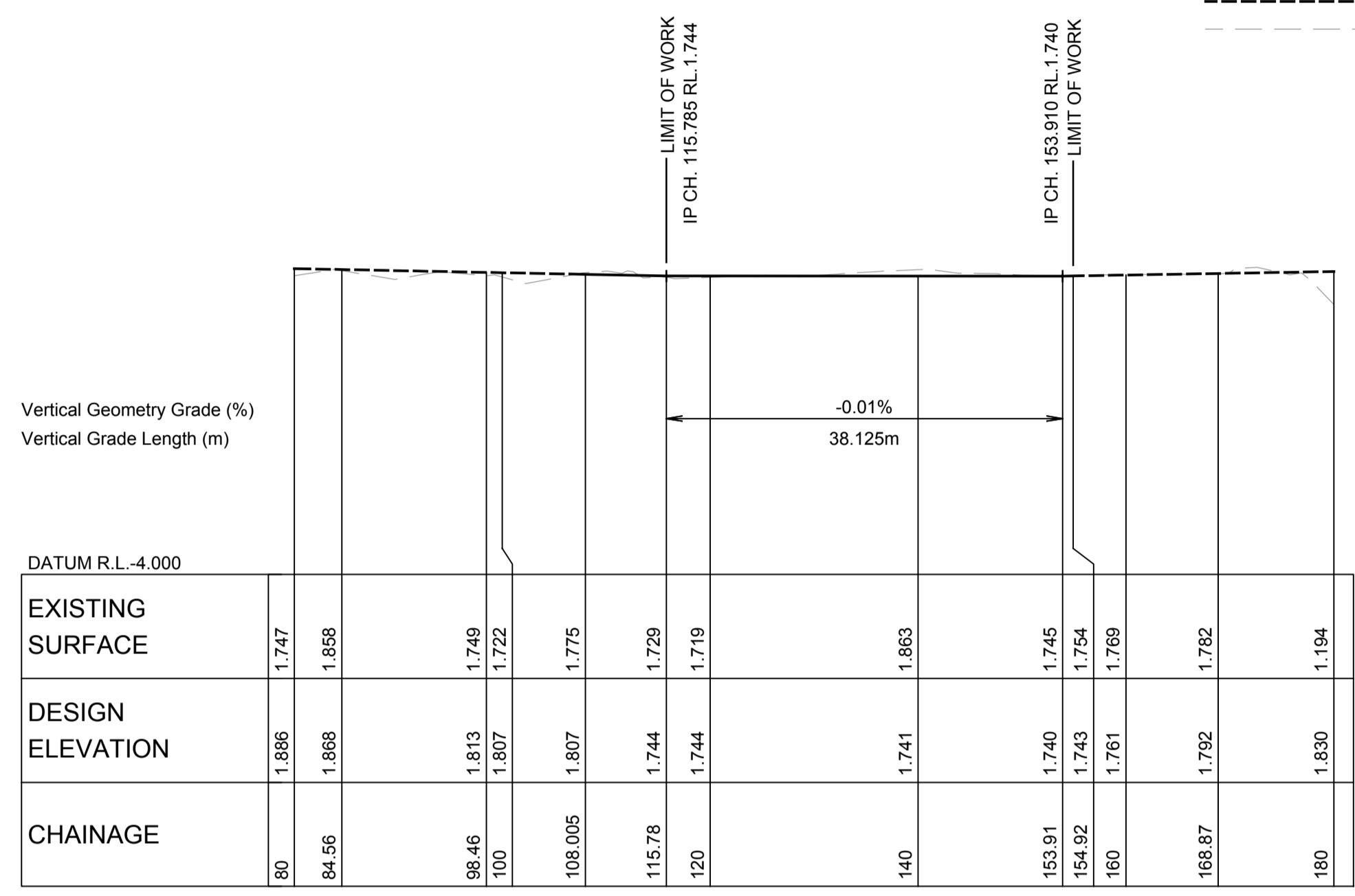
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PLAN
SCALE 1:500

LEGEND

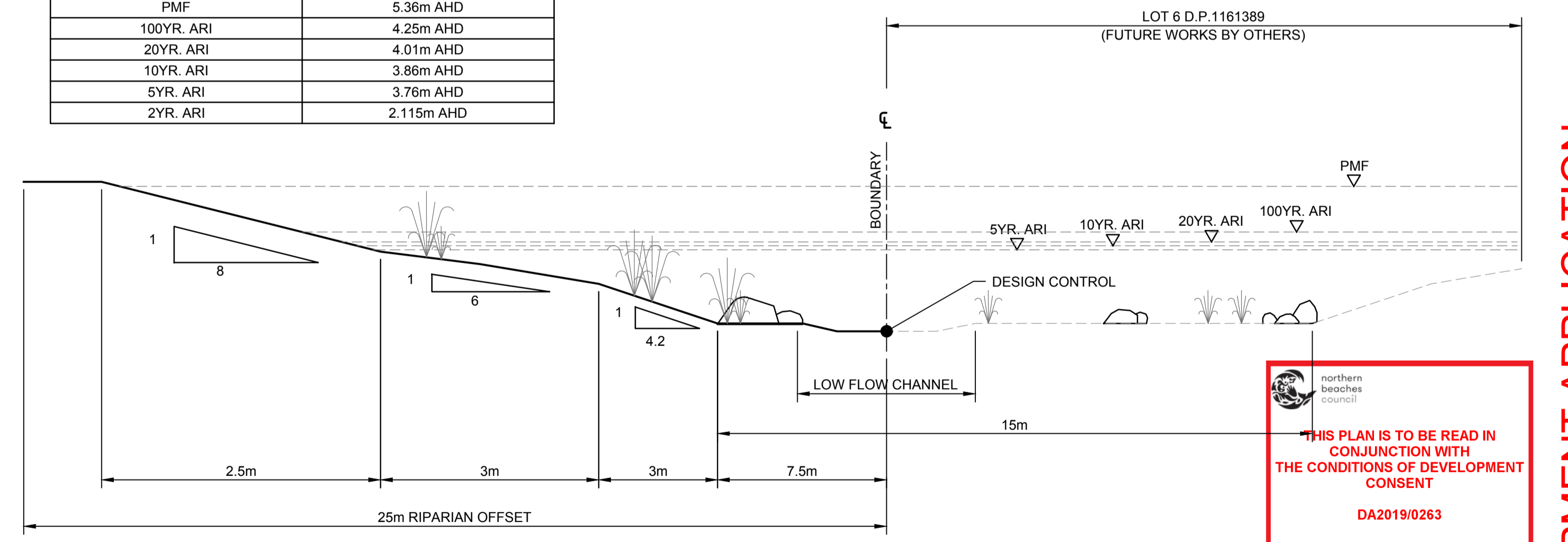
- PROPOSED 50m RIPARIAN CORRIDOR
- PROPOSED 25m RIPARIAN CORRIDOR
- LIMIT OF WORKS
- FUTURE WORKS BY OTHERS
- 25m CREEK OFFSET
- 50m CREEK OFFSET
- DESIGN SURFACE
- FUTURE SURFACE
- EXISTING SURFACE



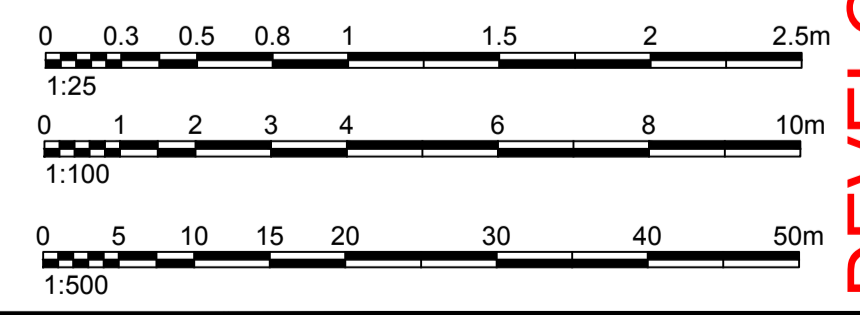
NARRABEEN CREEK - LONGITUDINAL SECTION

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

FLOOD LEVELS CENTRE OF SITE	
PMF	5.36m AHD
100YR. ARI	4.25m AHD
20YR. ARI	4.01m AHD
10YR. ARI	3.86m AHD
5YR. ARI	3.76m AHD
2YR. ARI	2.115m AHD



TYPICAL CREEK REHABILITATION SECTION
NOT TO SCALE

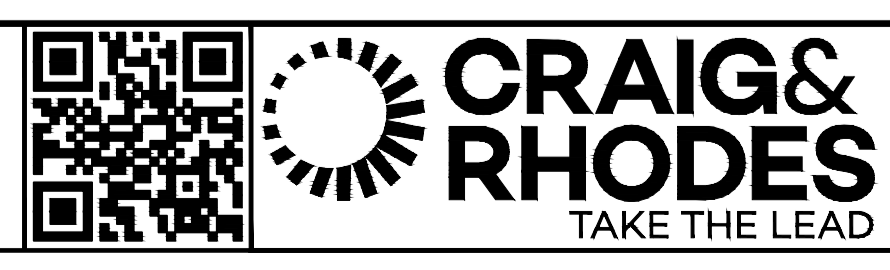


THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT
 DA2019/0263

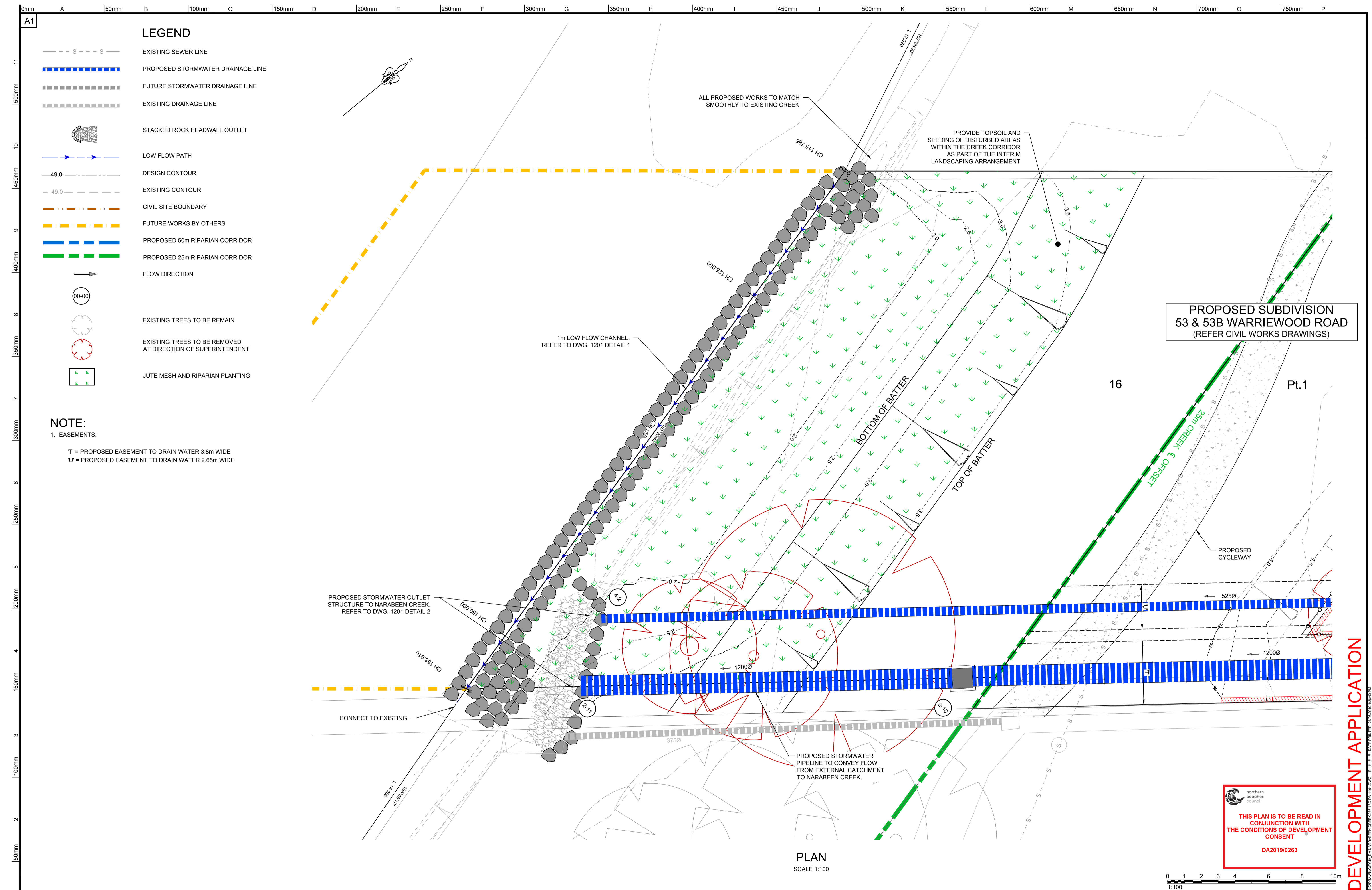
Authorised for issue by:	Principal:	Project:
Signature: _____	LEGENDWAY PTY. LTD.	PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 NARRABEEN CREEK REHABILITATION WORKS
LGA: NORTHERN BEACHES COUNCIL	Scale: AS SHOWN	Datum: AHD

	Drawing Title: KEY PLAN, TYPICAL CROSS SECTION AND LONGITUDINAL SECTION Drawing Ref: 076-18 Revision: B
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ABN 77 050 209 991 ACN 050 209 991
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Tel: 9669-1855
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DEVELOPMENT APPLICATION



0mm A | 50mm B | 100mm C | 150mm D | 200mm E | 250mm F | 300mm G | 350mm H | 400mm I | 450mm J | 500mm K | 550mm L | 600mm M | 650mm N | 700mm O | 750mm P

A1 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

500mm | 450mm | 400mm | 350mm | 300mm | 250mm | 200mm | 150mm | 100mm | 50mm

LEGEND

- S --- S --- EXISTING SEWER LINE
- ===== PROPOSED STORMWATER DRAINAGE LINE
- FUTURE STORMWATER DRAINAGE LINE
- EXISTING DRAINAGE LINE
- █ STACKED ROCK HEADWALL OUTLET
- LOW FLOW PATH
- 49.0- -49.0- DESIGN CONTOUR
- 49.0- -49.0- EXISTING CONTOUR
- CIVIL SITE BOUNDARY
- FUTURE WORKS BY OTHERS
- PROPOSED 50m RIPARIAN CORRIDOR
- PROPOSED 25m RIPARIAN CORRIDOR
- FLOW DIRECTION
- ○ ○ ○ EXISTING TREES TO BE REMAIN
- ○ ○ ○ EXISTING TREES TO BE REMOVED AT DIRECTION OF SUPERINTENDENT
- JUTE MESH AND RIPARIAN PLANTING

NOTE:
 1. EASEMENTS:
 'T' = PROPOSED EASEMENT TO DRAIN WATER 3.8m WIDE
 'U' = PROPOSED EASEMENT TO DRAIN WATER 2.65m WIDE

PROPOSED SUBDIVISION
53 & 53B WARRIWOOD ROAD
 (REFER CIVIL WORKS DRAWINGS)

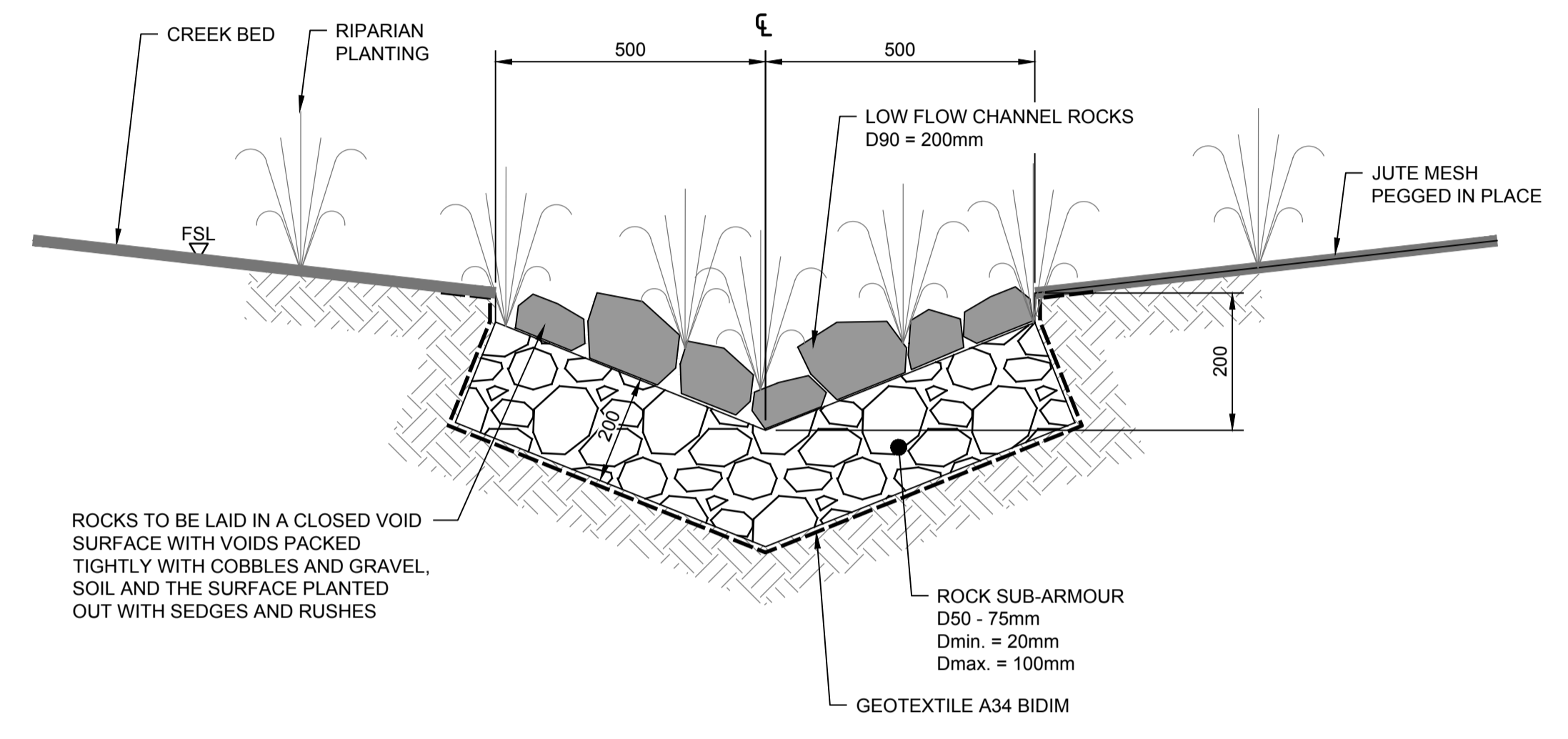
northern beaches council
 THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT
 DA2019/0263

DEVELOPMENT APPLICATION

<table border="1"> <tr> <td>REV.</td> <td>DATE</td> <td>AMENDMENT DESCRIPTION</td> <td>DES.</td> <td>DRN.</td> </tr> <tr> <td>B</td> <td>26.06.19</td> <td>ISSUED FOR DEVELOPMENT APPLICATION</td> <td>A.H.</td> <td>K.S.</td> </tr> <tr> <td>A</td> <td>14.03.19</td> <td>ISSUED FOR DEVELOPMENT APPLICATION</td> <td>D.Y.</td> <td>D.Yoo.</td> </tr> </table>		REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.	B	26.06.19	ISSUED FOR DEVELOPMENT APPLICATION	A.H.	K.S.	A	14.03.19	ISSUED FOR DEVELOPMENT APPLICATION	D.Y.	D.Yoo.	<table border="1"> <tr> <td>APPROVED COMPANY</td> <td>APPROVED COMPANY</td> <td>APPROVED COMPANY</td> <td>DIAL 1100 BEFORE YOU DIG</td> </tr> </table>		APPROVED COMPANY	APPROVED COMPANY	APPROVED COMPANY	DIAL 1100 BEFORE YOU DIG	Authorised for issue by: _____ Signature: _____		Principal: LEGENDWAY PTY. LTD. L.G.A. NORTHERN BEACHES COUNCIL Scale: AS SHOWN		Datum: AHD		Project: PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 NARRABEEN CREEK REHABILITATION WORKS						ABN 77 050 209 991 ACN 050 209 991 Suite 7.01, Level 7, 3 Rider Boulevard, Rhodes NSW, 2138 PO Box 3220, Rhodes NSW 2138 Tel. 9669-1855 reception@craigandrhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes Pty Ltd		Drawing Title: GENERAL ARRANGEMENT PLAN C&R Ref: 076-18		Drawing Ref: 076-18C-DA-1101		Revision B	
REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.																																						
B	26.06.19	ISSUED FOR DEVELOPMENT APPLICATION	A.H.	K.S.																																						
A	14.03.19	ISSUED FOR DEVELOPMENT APPLICATION	D.Y.	D.Yoo.																																						
APPROVED COMPANY	APPROVED COMPANY	APPROVED COMPANY	DIAL 1100 BEFORE YOU DIG																																							

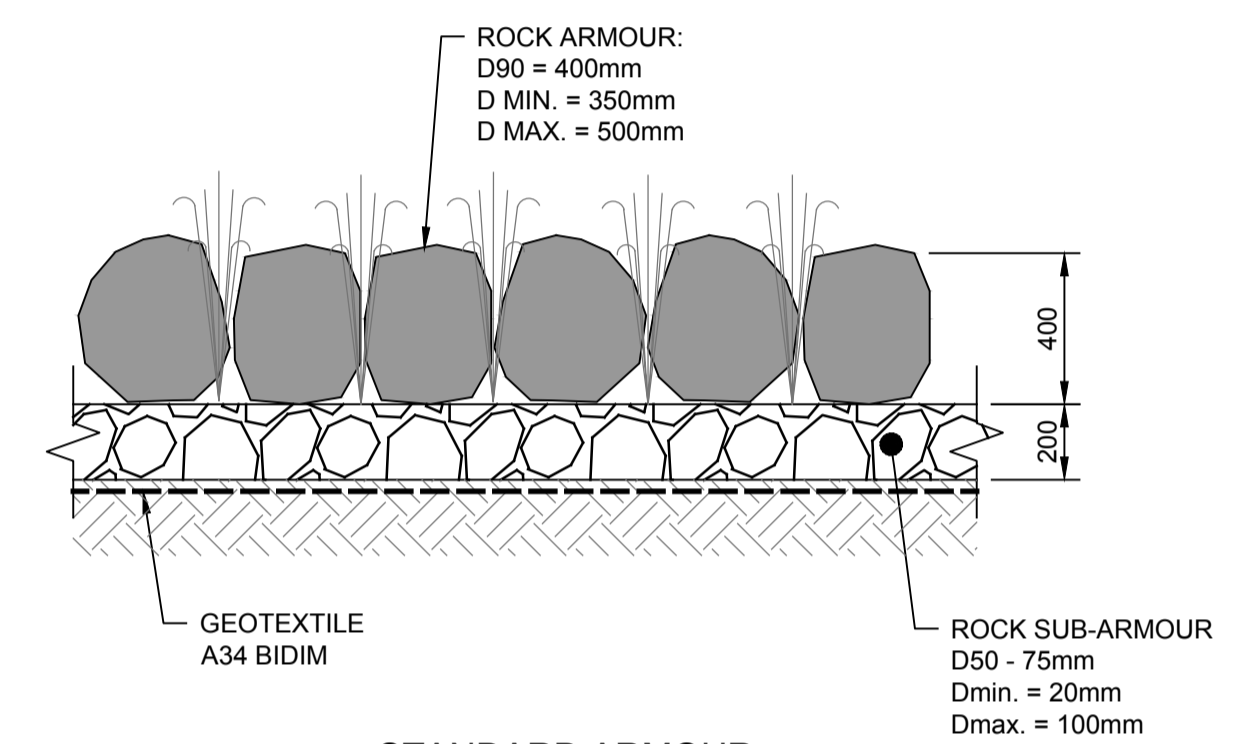
0 1 2 3 4 6 8 10m
 1:100

NOTE
 STORMWATER OUTLETS TO BE ORIENTATED IN THE DIRECTION OF NATURAL FLOW OF THE RECEIVING WATER COURSE AND NOT OBSTRUCTING FLOW FROM UPSTREAM.
 OUTLETS TO BE INSTALLED IN ACCORDANCE WITH NSW OFFICE OF WATER REQUIREMENTS

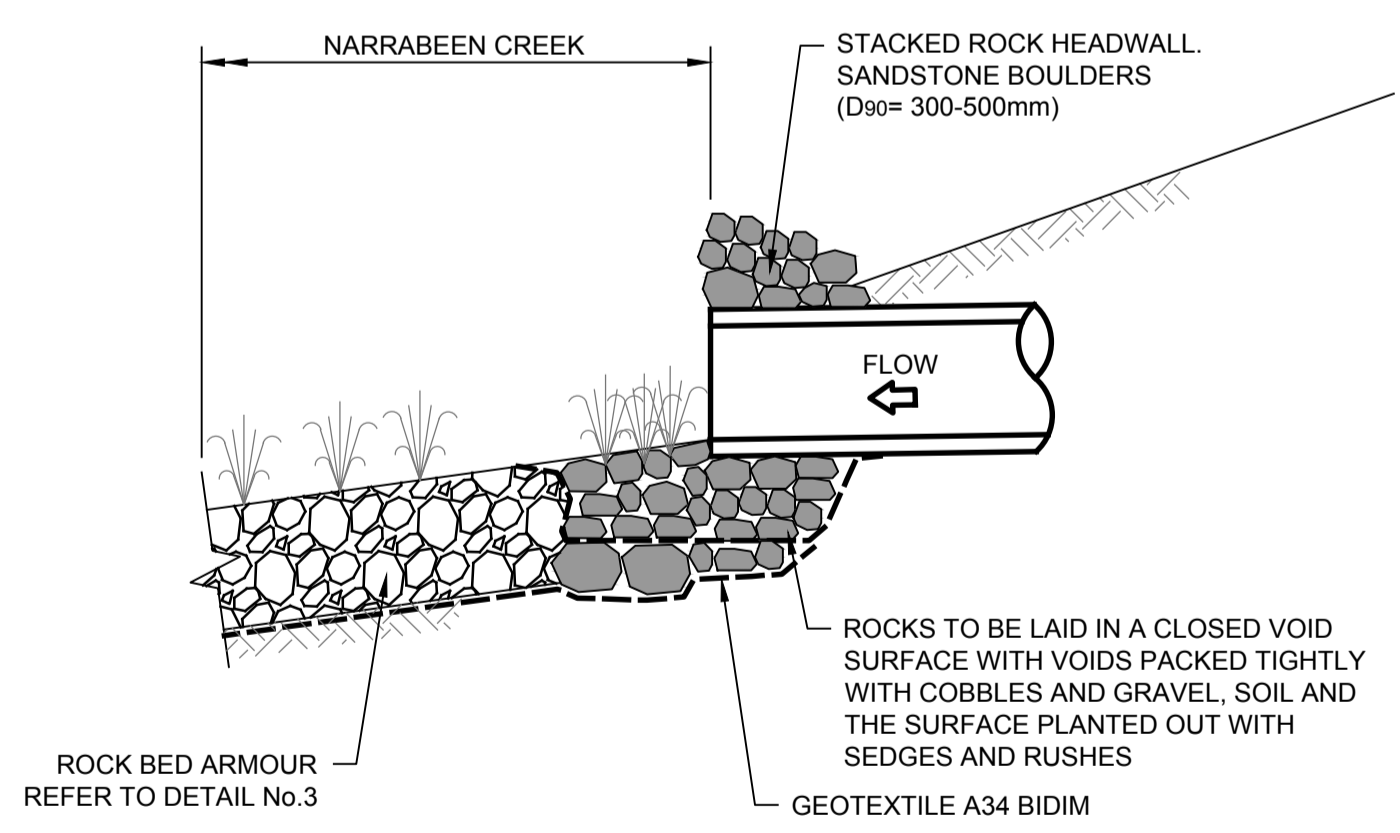


ROCKS TO BE LAID IN A CLOSED VOID SURFACE WITH VOIDS PACKED TIGHTLY WITH COBBLES AND GRAVEL, SOIL AND THE SURFACE PLANTED OUT WITH SEDGES AND RUSHES

LOW FLOW CHANNEL
 DETAIL 1
 SCALE 1:10

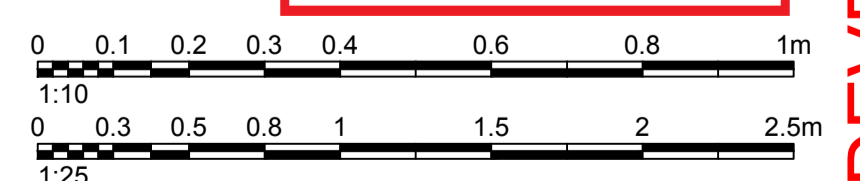


STANDARD ARMOUR
 DETAIL 3
 NTS



STORMWATER OUTLET
 DETAIL 2
 SCALE 1:25

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 DA2019/0263



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Authorised for issue by: _____
 Signature: _____
 Principal: LEGENDWAY PTY. LTD.
 L.G.A. NORTHERN BEACHES COUNCIL
 Scale: AS SHOWN Datum: AHD

Project: PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 NARRABEEN CREEK REHABILITATION WORKS

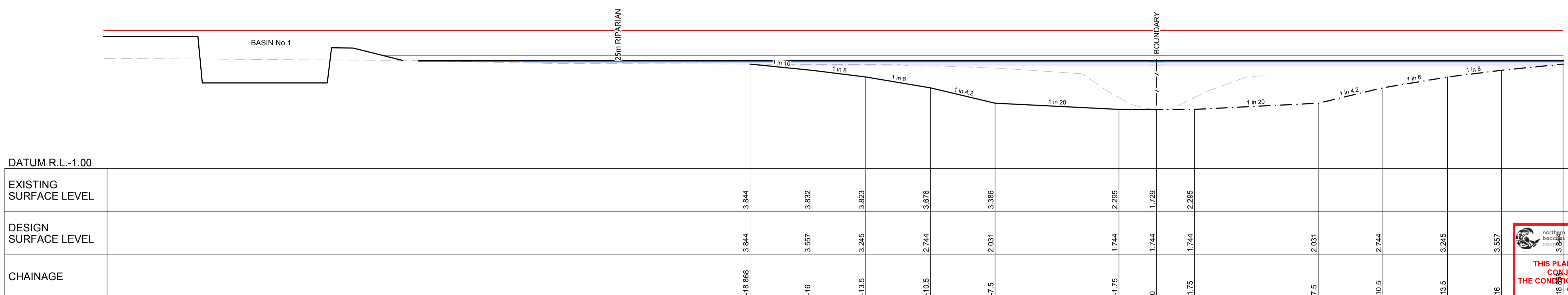
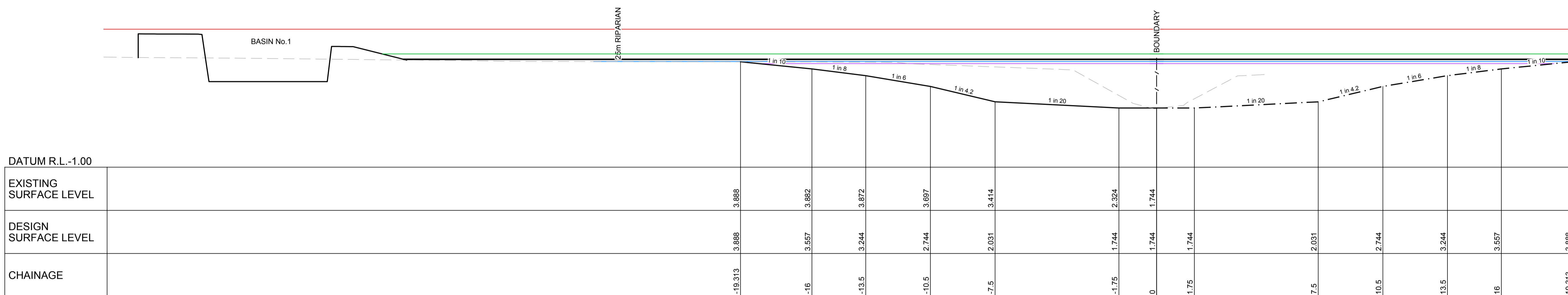
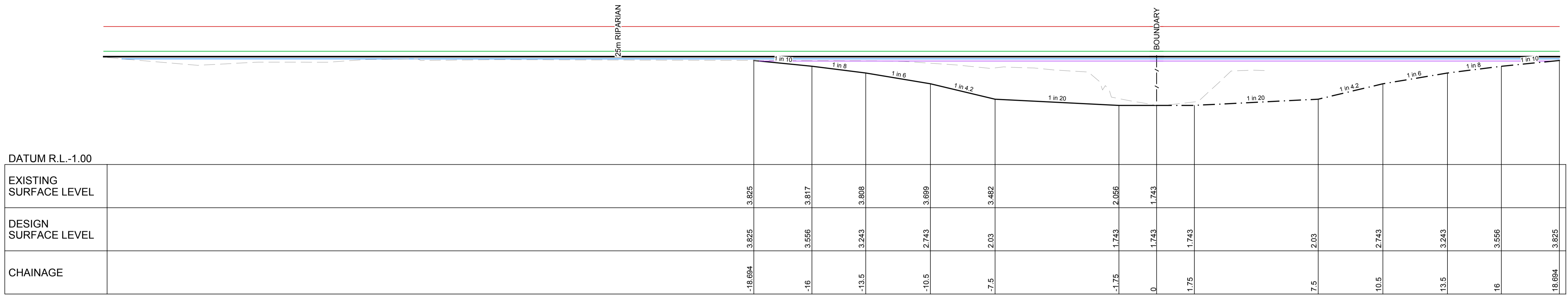


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 Drawing Title: TYPICAL DETAILS
 Drawing Ref: 076-18 076-18C-DA-1201
 Revision: B

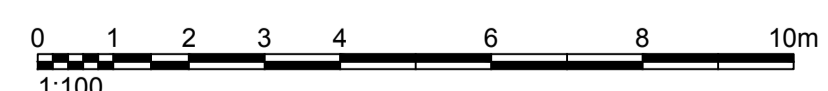
DEVELOPMENT APPLICATION

LEGEND

- INTERIM DESIGN SURFACE
- FUTURE DESIGN SURFACE
- EXISTING SURFACE
- TWL 5Yr A.R.I.
- TWL 10Yr A.R.I.
- TWL 20Yr A.R.I.
- TWL 100Yr A.R.I.
- TWL PMF



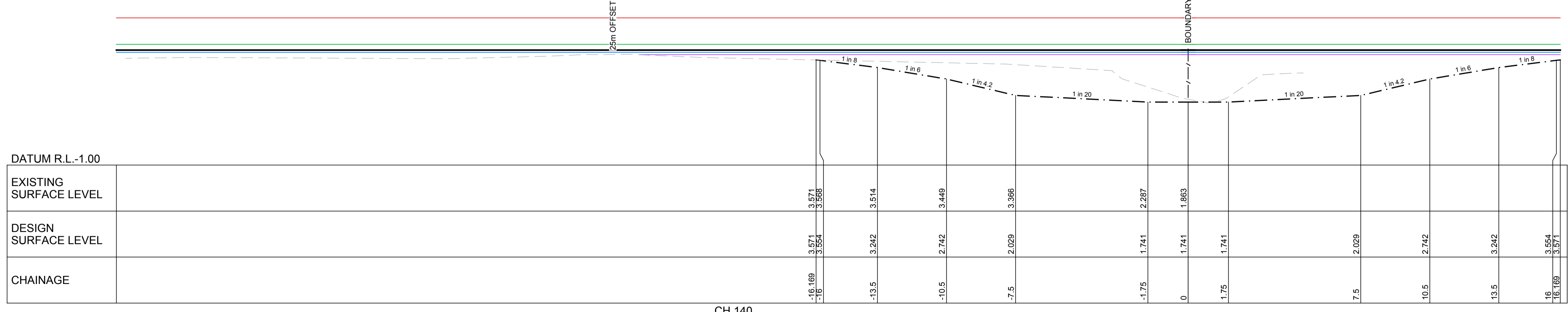
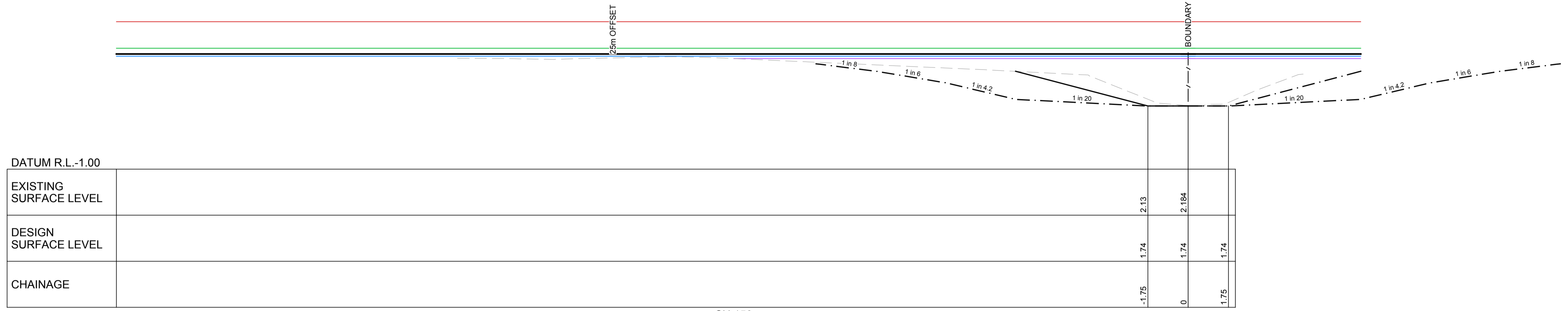
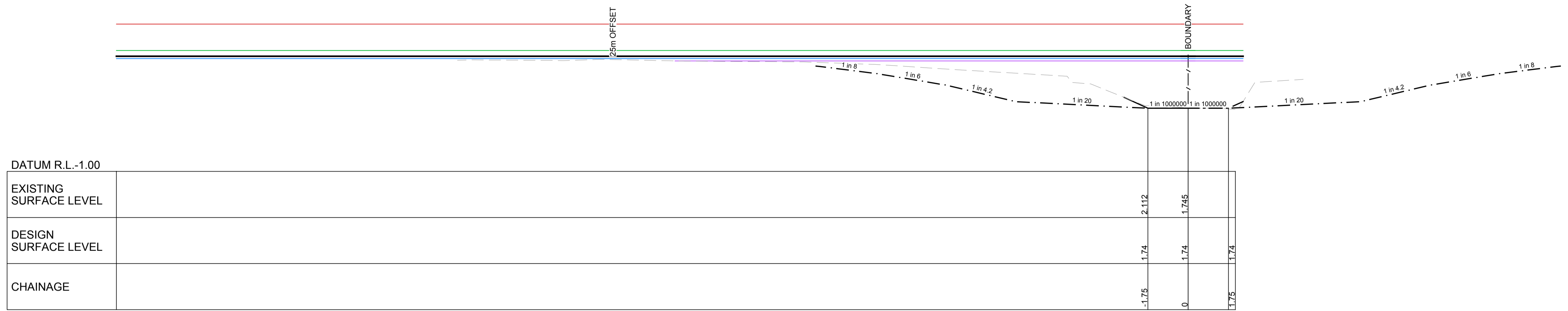
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DA2019/0263



<p>26.06.19 ISSUED FOR DEVELOPMENT APPLICATION A.H. K.S.</p> <p>14.03.19 ISSUED FOR DEVELOPMENT APPLICATION D.Y. D.Yoo.</p> <p>REV. DATE AMENDMENT DESCRIPTION DES. DRN.</p>		<p>Authorised for issue by: _____</p> <p>Signature: _____</p>	<p>Principal: LEGENDWAY PTY. LTD.</p> <p>L.G.A. NORTHERN BEACHES COUNCIL</p> <p>Scale: AS SHOWN Datum: AHD</p>	<p>Project: PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 NARRABEEN CREEK REHABILITATION WORKS</p>			<p>ABN 77 050 209 991 ACN 050 209 991 Suite 7.01, Level 7, 3 Rider Boulevard, Rhodes, NSW, 2138 PO Box 3220, Rhodes NSW 2138 Tel. 9669-1855 reception@craigandrhodes.com.au www.craigandrhodes.com.au © Craig & Rhodes Pty Ltd</p>	<p>Drawing Title: NARRABEEN CREEK CROSS SECTIONS SHEET 1 OF 2</p> <p>C&R Ref: 076-18 Drawing Ref: 076-18C-DA-1301</p>	<p>Revision B</p>
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DEVELOPMENT APPLICATION

LEGEND	
	TWL 5Yr A.R.I.
	TWL 10Yr A.R.I.
	TWL 20Yr A.R.I.
	TWL 100Yr A.R.I.
	TWL PMF
	INTERIM DESIGN SURFACE
	FUTURE DESIGN SURFACE
	EXISTING SURFACE



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DEVELOPMENT APPLICATION

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SEDIMENT AND EROSION CONTROL

- 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 STANDARDS OF 'MANAGING URBAN STORMWATER, SOILS & CONSTRUCTION' & PITTWATER 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 LANDS NOT TO BE DISTURBED SHALL BE CLEARLY MARKED WITH BARRIER FENCES. "SILT" FENCES OR 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 FOR APPROVAL BY THE SUPERINTENDENT.
- ALL SOIL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED BY THE CONTRACTOR FOLLOWING EACH STORM EVENT AND ANY NECESSARY MAINTENANCE WORK SHALL BE UNDERTAKEN TO ENSURE THEIR CONTINUED PROPER OPERATION. SEDIMENT SHALL BE REMOVED FROM THE 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 HAVE BEEN COMPLETED AND THE SITE FULLY STABILISED.
- TEMPORARY REHABILITATION SHALL BE UNDERTAKEN WITHIN 14 WORKING DAYS ON DISTURBED AREAS WHERE WORKS HAVE STOPPED AND SOILS ARE EXPECTED TO REMAIN EXPOSED FOR MORE THAN 14 DAYS BEFORE EITHER WORKS CONTINUE OR PERMANENT REHABILITATION IS UNDERTAKEN.
- AT LEAST WEEKLY, THE CONTRACTOR WILL INSPECT THE SITE, PROVIDING PARTICULAR ATTENTION TO THE FOLLOWING MATTERS :
 - ENSURE DRAINS OPERATE EFFECTIVELY AND INITIATE REPAIR AS REQUIRED.
 - REMOVE SPILLED SAND (OR OTHER MATERIALS) FROM HAZARD AREAS, INCLUDING LANDS.
 - REMOVE TRAPPED SEDIMENT WHENEVER LESS THAN DESIGN CAPACITY REMAINS
 - ENSURE REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND INITIATE UPGRADING OR REPAIR AS APPROPRIATE
 - CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS, i.e. MAKE ONGOING CHANGES TO THE PLAN.
 - MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES IN A FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS REHABILITATED.
 - REMOVE TEMPORARY SOIL CONSERVATION STRUCTURES AS A LAST ACTIVITY IN THE REHABILITATION PROGRAM
- THE CONTRACTOR WILL KEEP A LOG BOOK, MAKING ENTRIES AT LEAST WEEKLY AND IMMEDIATELY PRIOR TO FORECAST RAINFALL AND/OR SITE CLOSURE. RECORD:
 - THE VOLUME OF ANY RAINFALL EVENTS;
 - THE CONDITION OF ANY SOIL AND WATER MANAGEMENT WORKS;
 - APPLICATIONS OF FLOCCULATING AGENTS TO SEDIMENT RETENTION SYSTEMS;
 - VOLUMES OF WATER DISCHARGED FROM SEDIMENT RETENTION SYSTEMS; AND
 - REMEDIAL WORKS.

THE BOOK WILL BE KEPT ON-SITE AND MADE AVAILABLE TO ANY AUTHORISED PERSON ON REQUEST. IT WILL BE GIVEN TO THE PROJECT MANAGER AT THE CONCLUSION OF WORKS. COPIES OF MONTHLY ENTRIES ARE TO BE PROVIDED WITH PROGRESS CLAIMS.
- DO NOT TAINT CLEAN CATCHMENT WATER WITH SILT FROM THE WORKS.
- FACILITIES AND/OR EQUIPMENT MUST BE PROVIDED FOR THE APPLICATION OF WATER TO DISTURBED AREAS TO MINIMISE THE GENERATION OF AIRBORNE DUST FROM ANY AREA DISTURBED BY CONSTRUCTION ACTIVITIES. DUST CONTROL MEASURES SHALL BE IMPLEMENTED CONTINUOUSLY DURING CONSTRUCTION WORKS TO THE SATISFACTION OF THE SUPERINTENDENT AND COUNCIL.
- MATERIAL REMOVED FROM SEDIMENT CONTROL STRUCTURES MUST BE DISPOSED OF IN A WAY THAT DOES NOT POLLUTE WATERS OR BUSHLAND AND DISPOSED OF TO AN APPROVED DUMP SITE.
- RUNOFF FROM VEHICLE OR CONSTRUCTION PLANT MAINTENANCE AND CLEANING AREAS SHALL BE COLLECTED AND DISPOSED OF IN A MANNER THAT DOES NOT POLLUTE.
- CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT.

15. ALL POSITIONS SHOWN ARE APPROXIMATE AND ARE BEST DETERMINED ON SITE IN CONJUNCTION WITH THE SUPERINTENDENT.

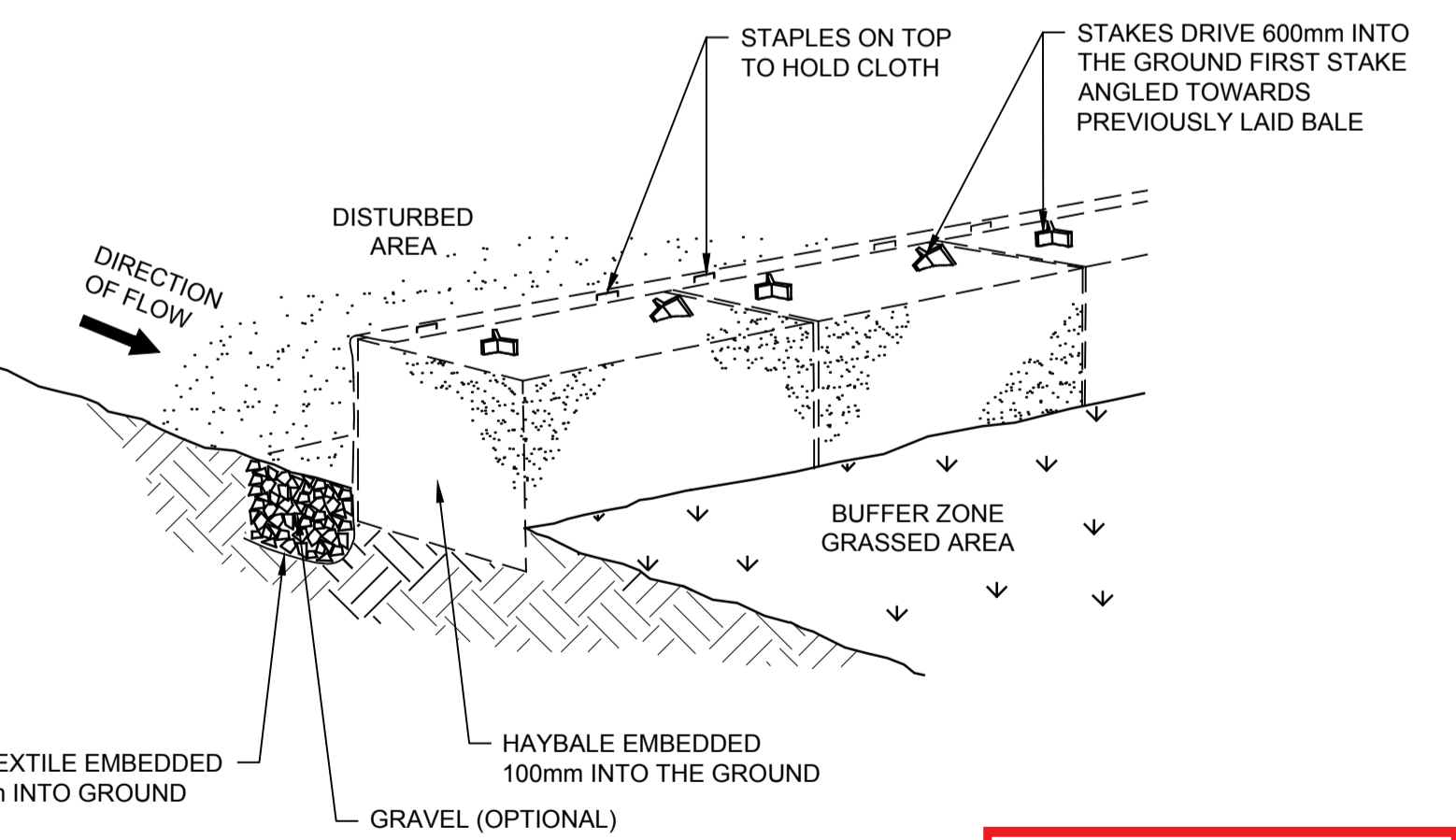
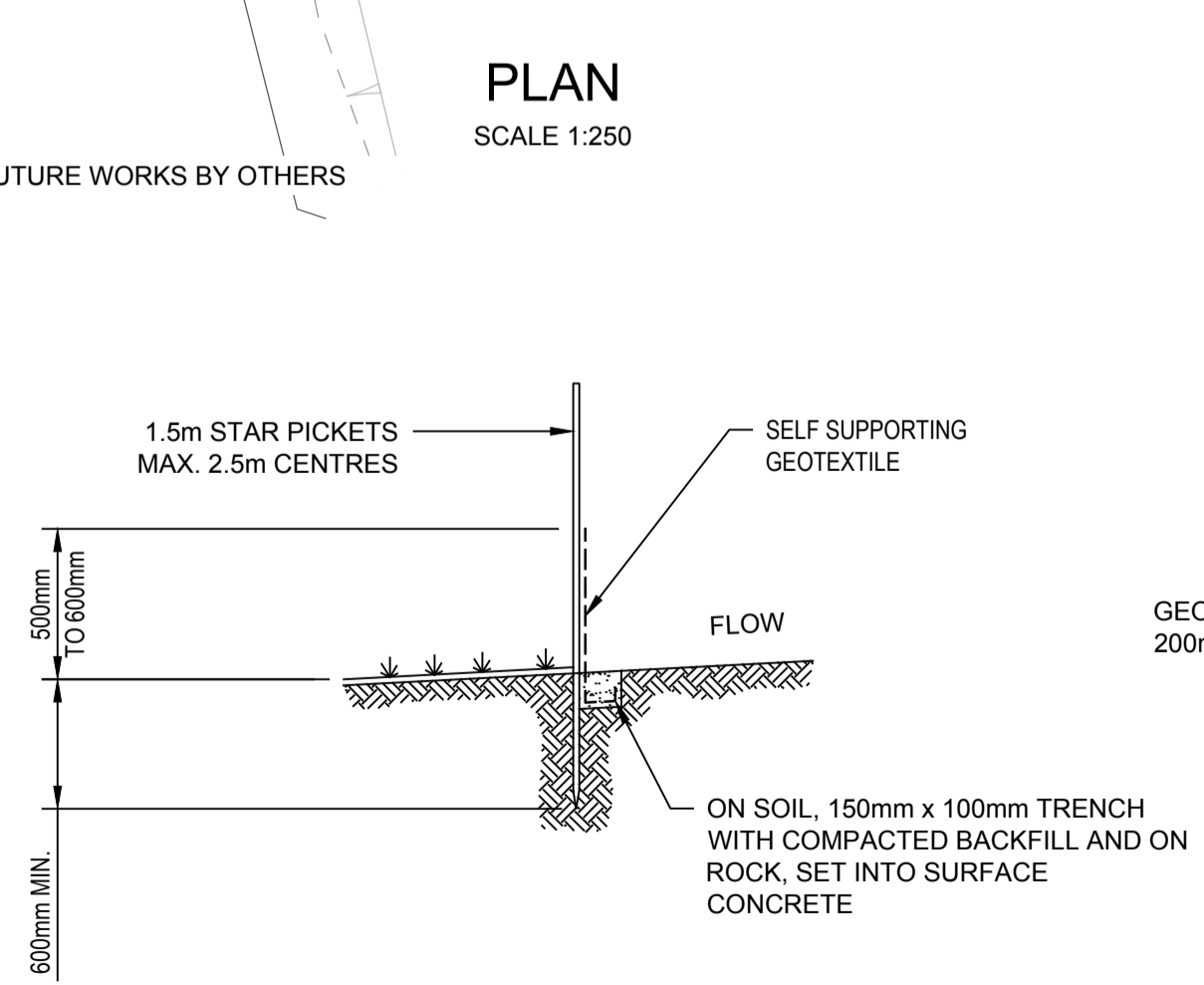
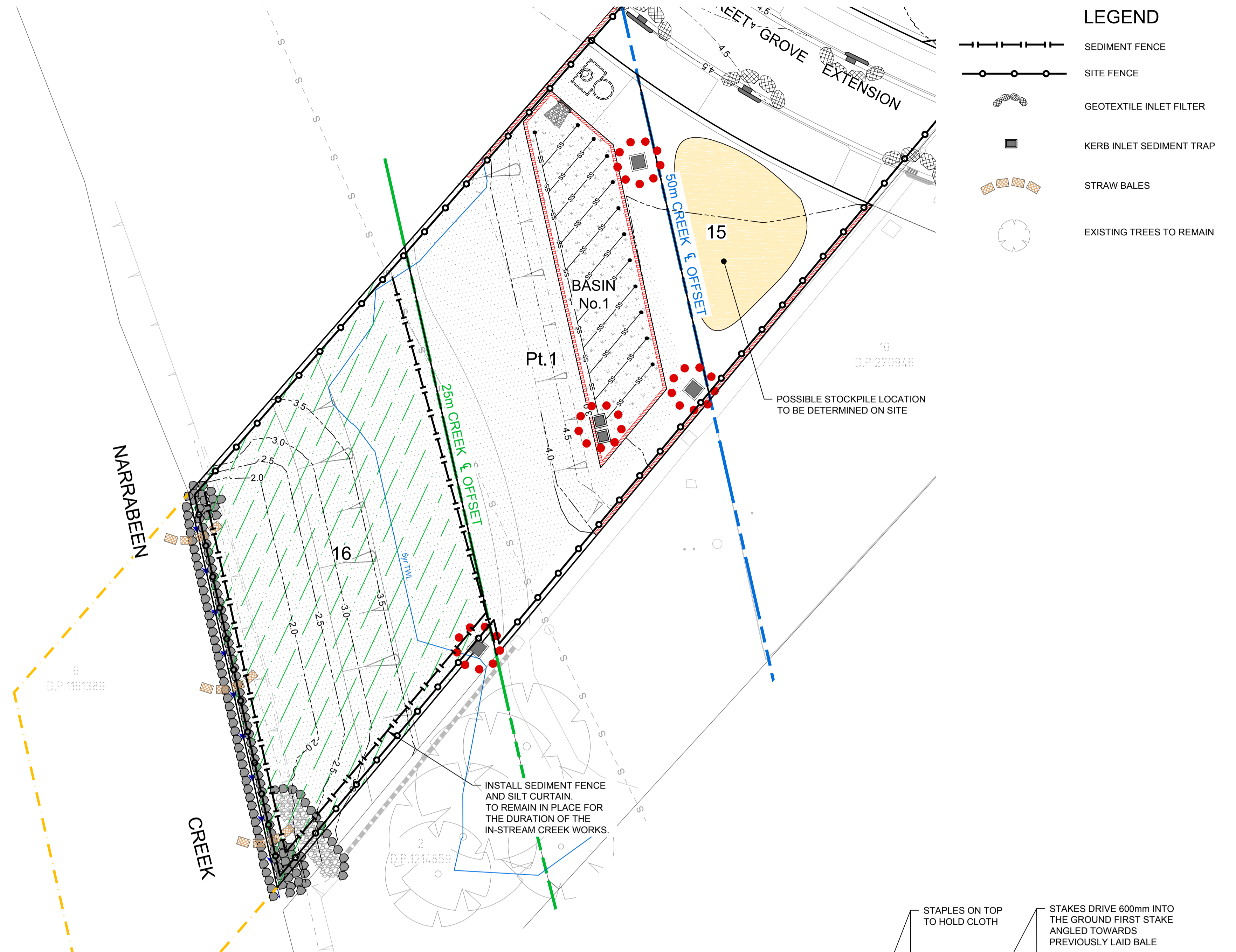
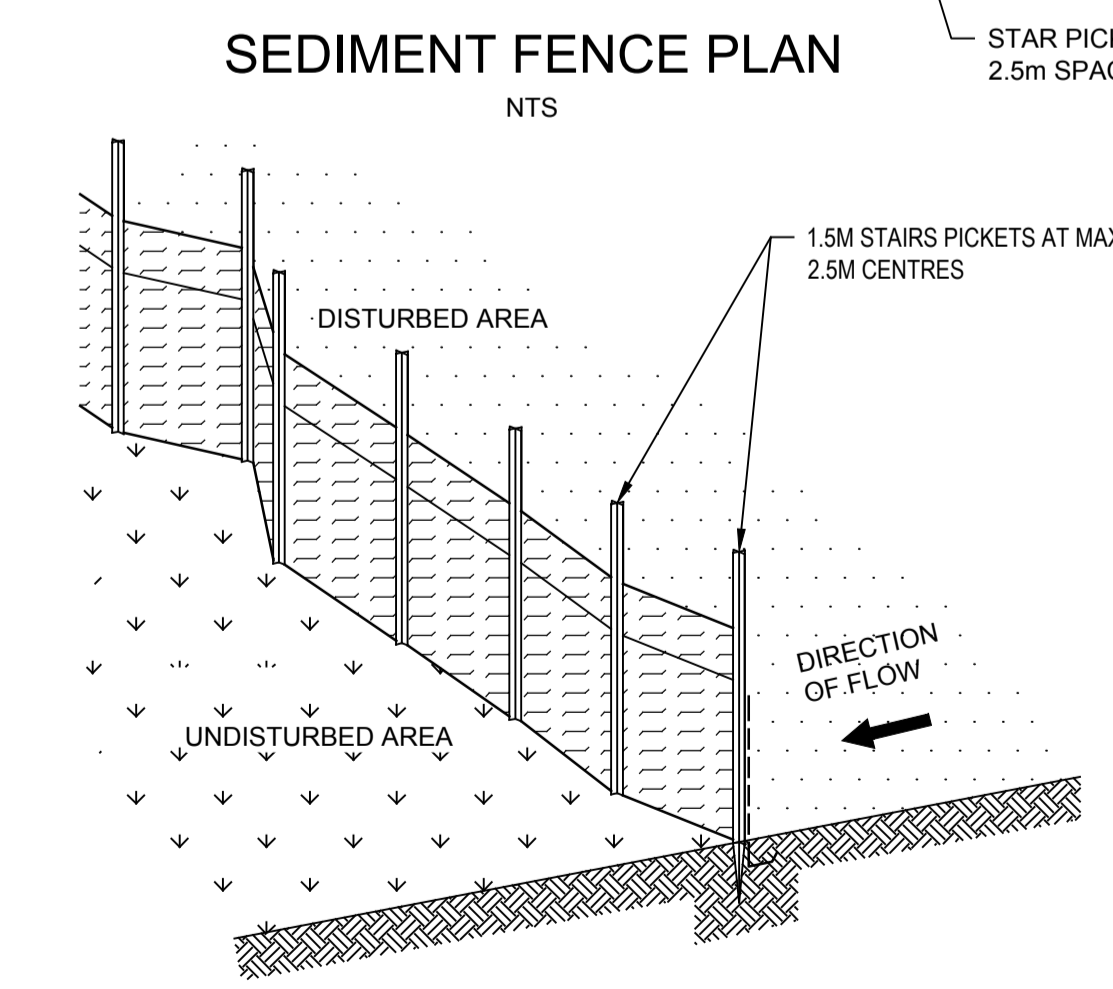
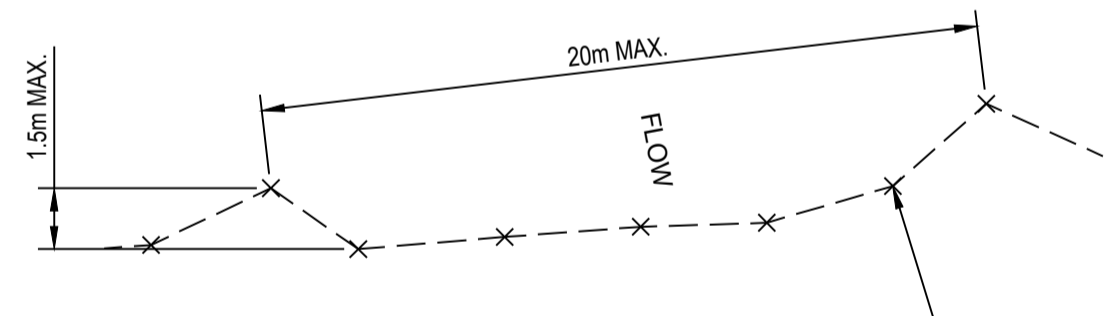
16. DUST SCREENS ARE TO BE ERECTED AROUND THE PERIMETER OF THE WORK SITE DURING LAND CLEARING, EXCAVATIONS & CONSTRUCTIONS AS DIRECTED BY THE SITE SUPERVISOR.

SEDIMENT FENCE

- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BE PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING, TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 litres/sec IN THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT.
- CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
- DRIVE 1.5 METER LONG STAR PICKETS INTO GROUND AT 2.5 METER INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
- FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS, ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES, OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

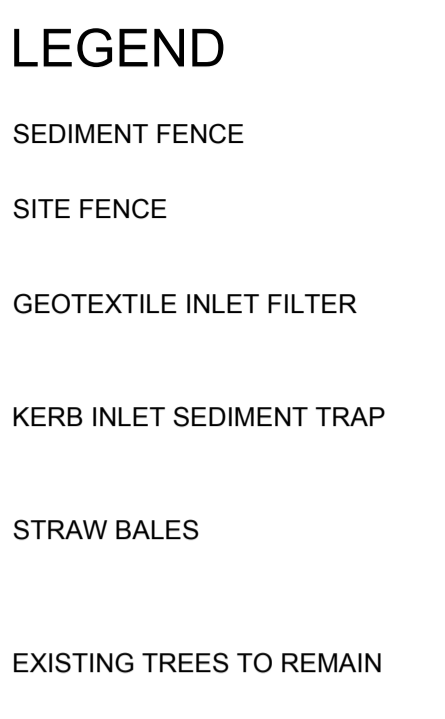
STRAW BALE FILTERS

- CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DIAGRAM TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION.
- PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN THE BALES. THE STRAWS IN EACH BALE ARE TO BE ALIGNED PARALLEL TO THE GROUND.
- ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
- EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH 1.2m STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
- WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE BALES ARE PLACED 1m TO 2m DOWNSLOPE FROM THE TOE.
- ESTABLISH A MAINTENANCE PROGRAM THE ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.



THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT DA2019/0263

0 2.5 5 7.5 10 15 20 25m
1:250



REV.	DATE	AMENDMENT DESCRIPTION	DES.	DRN.
B	26.06.19	ISSUED FOR DEVELOPMENT APPLICATION	A.H.	K.S.
A	14.03.19	ISSUED FOR DEVELOPMENT APPLICATION	D.Y.	D.Yoo.

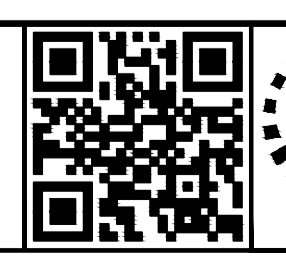


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Signature: _____

Principal: LEGENDWAY PTY. LTD.
L.G.A. NORTHERN BEACHES COUNCIL

Scale: AS SHOWN
Datum: AHD

Project: PROPOSED SUBDIVISION OF LOT 3, D.P.1115877 AND PART LOT 3 D.P.942319 NARRABEEN CREEK REHABILITATION WORKS



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DEVELOPMENT APPLICATION