

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 & Lot 272 on DP755701, Lot 96 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



0 5 10 15 20 25m
 Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	-

PRE DATE	AMENDMENT
C	02-06-20 KOALA GATE AND ESCAPE MECHANISM ADDED
B	16-08-19 CUT AND FILL AMENDED
A	29-01-19 PRIVATE CERTIFIER

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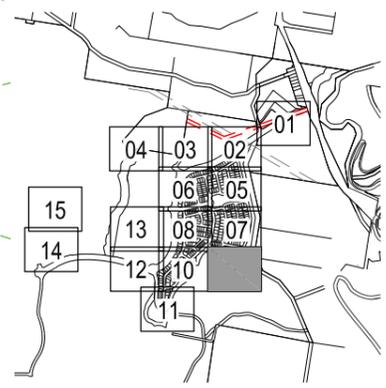
**BULK EARTHWORKS
 CUT FILL
 PLAN
 SHEET 9**

MORTONS
 urbansolutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

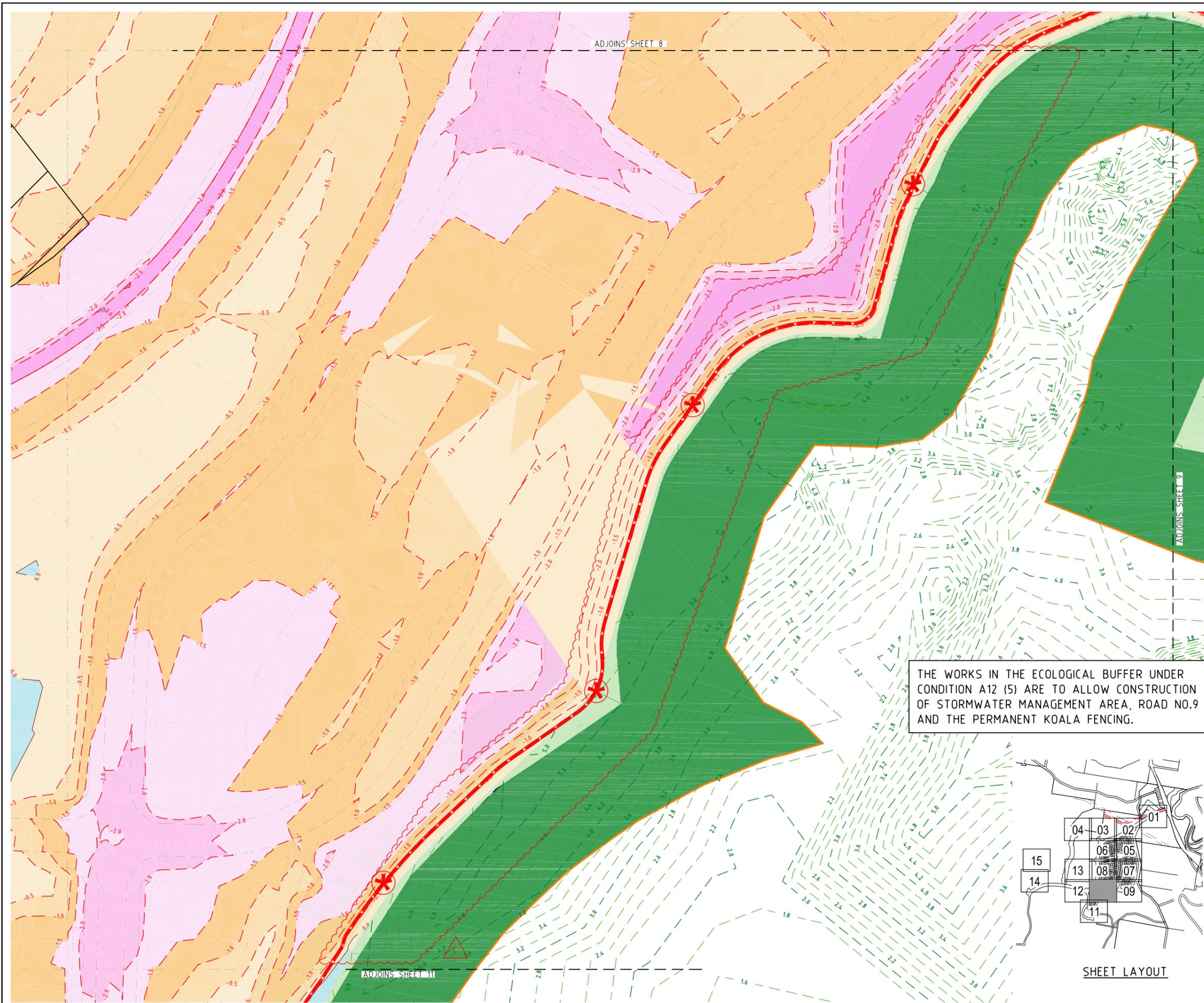
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 Southport QLD 4215

DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 27-11-18

DRAWING NUMBER
12301-BE1-048 AMEND.
C



SHEET LAYOUT



PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 & Lot 272 on DP755701, Lot 96 on DP755701
 & Lot 326 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



0 5 10 15 20 25m
 Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	-

PRE DATE	AMENDMENT
C 02-06-20	KOALA GATE AND ESCAPE MECHANISM ADDED
B 16-08-19	CUT AND FILL AMENDED
A 29-01-19	PRIVATE CERTIFIER

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**BULK EARTHWORKS
 CUT FILL
 PLAN
 SHEET 10**



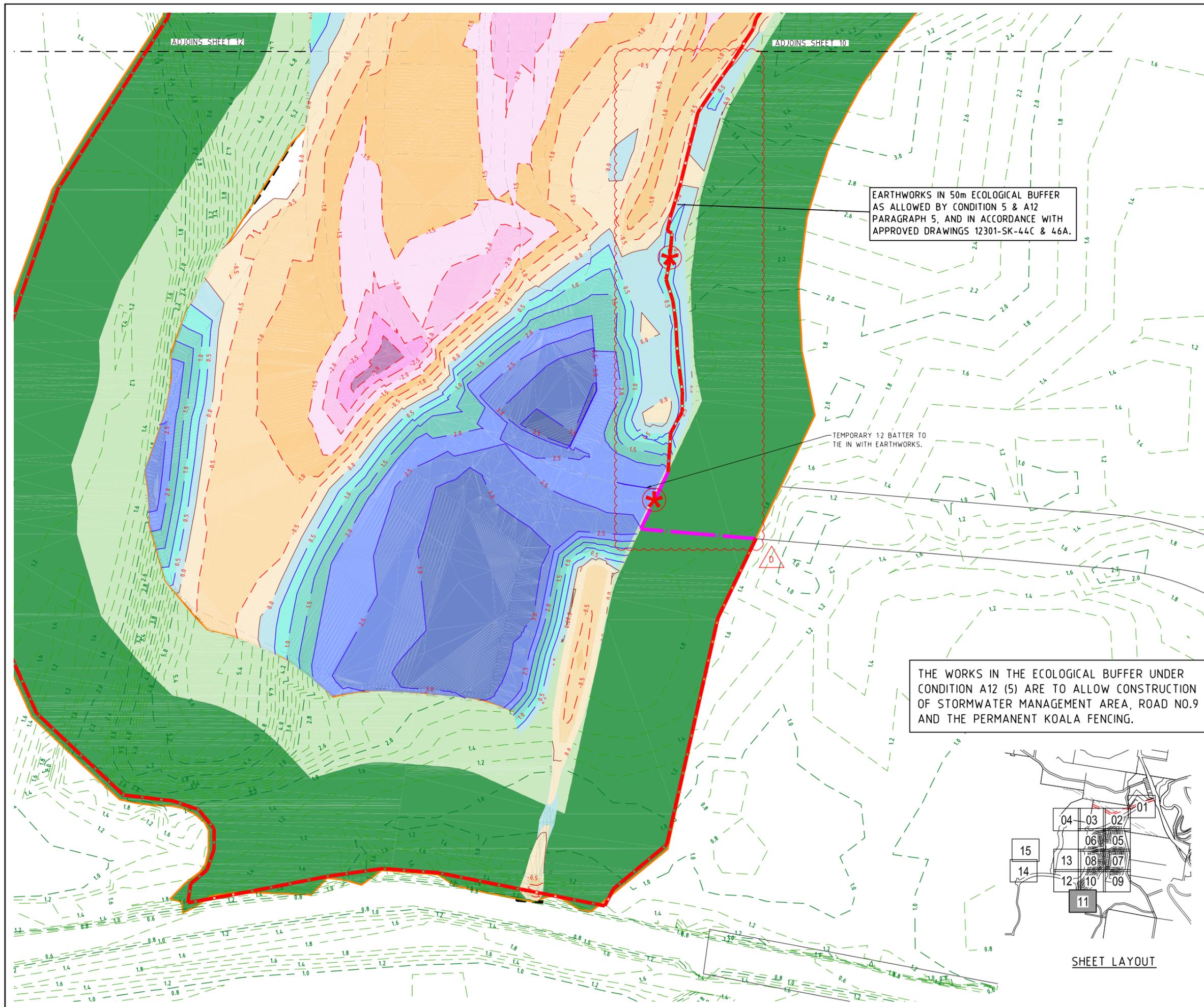
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DRAWING NUMBER	AMEND.
12301-BE1-049	C



PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 & Lot 272 on DP755701, Lot 96 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



0 5 10 15 20 25m
 Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

REV	DATE	DESCRIPTION
D	02-06-20	KOALA GATE AND ESCAPE MECHANISM ADDED
C	30-03-20	NOTE AND LIMIT OF WORK AMENDED
B	16-08-19	CUT AND FILL AMENDED
A	29-01-19	PRIVATE CERTIFIER

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DRAWING TITLE

**BULK EARTHWORKS
 CUT FILL
 PLAN
 SHEET 11**



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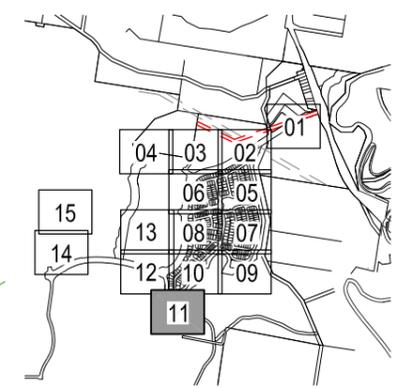
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Gold Coast Office
 Suite 9, 19 Short St
 Southport QLD 4215

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APPROVED RB	NER 2953710 DATE 27-11-18

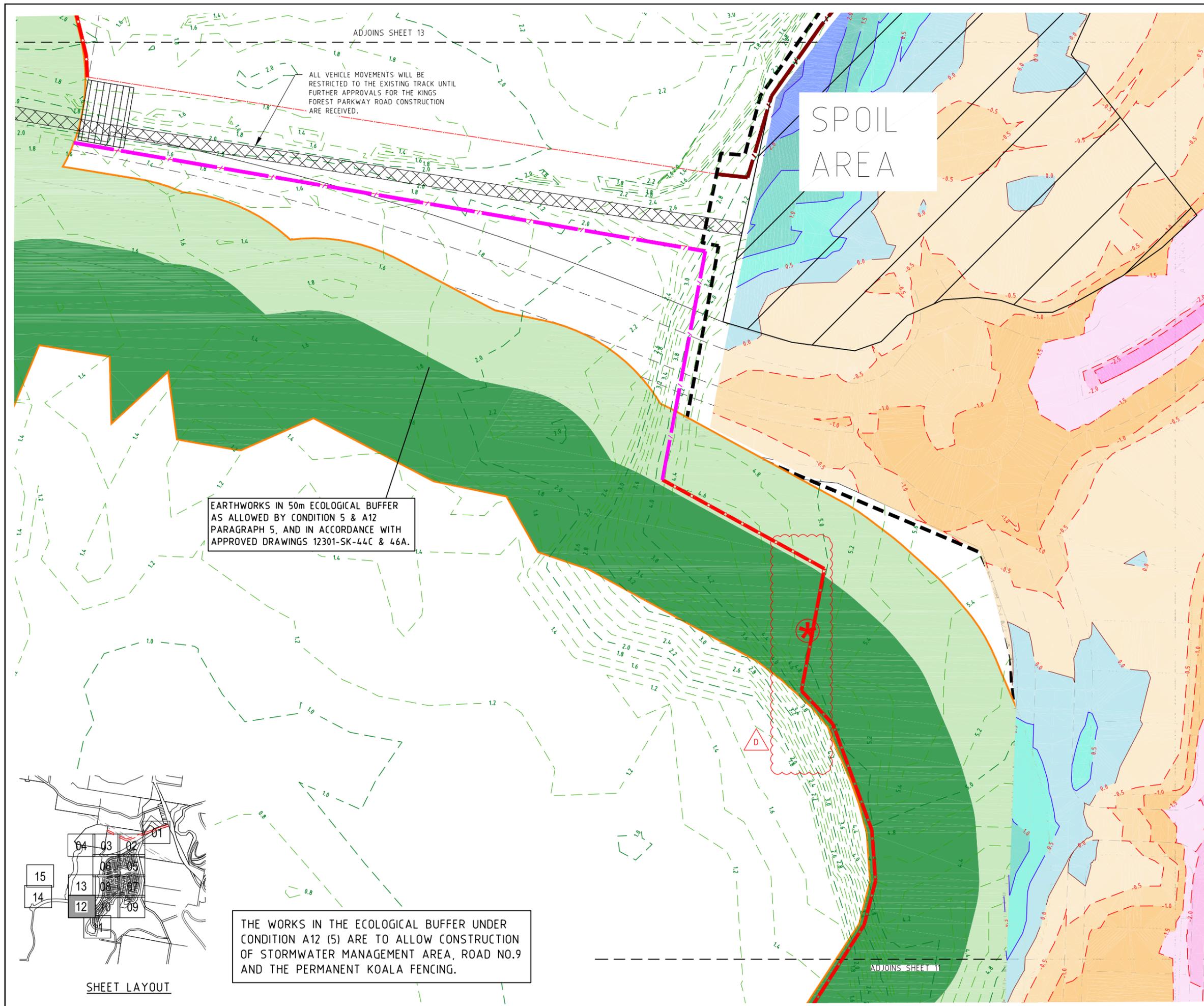
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12301-BE1-050

AMEND.
D



SHEET LAYOUT

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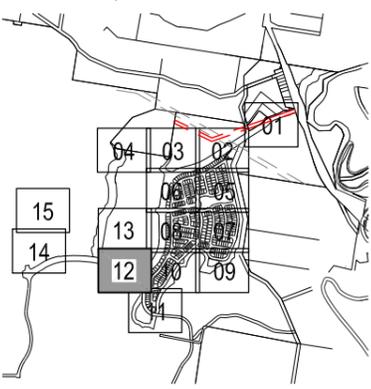
ADJOINS SHEET 13

ALL VEHICLE MOVEMENTS WILL BE RESTRICTED TO THE EXISTING TRACK UNTIL FURTHER APPROVALS FOR THE KINGS FOREST PARKWAY ROAD CONSTRUCTION ARE RECEIVED.

SPOIL AREA

EARTHWORKS IN 50m ECOLOGICAL BUFFER AS ALLOWED BY CONDITION 5 & A12 PARAGRAPH 5, AND IN ACCORDANCE WITH APPROVED DRAWINGS 12301-SK-44C & 46A.

THE WORKS IN THE ECOLOGICAL BUFFER UNDER CONDITION A12 (5) ARE TO ALLOW CONSTRUCTION OF STORMWATER MANAGEMENT AREA, ROAD NO.9 AND THE PERMANENT KOALA FENCING.



SHEET LAYOUT

PROJECT NAME
KINGS FOREST
 BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
 PARISH OF CUDGEN
 COUNTY OF ROUS

CLIENT
PROJECT 28 PTY LTD



0 5 10 15 20 25m
 Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

REV	DATE	DESCRIPTION
D	02-06-20	KOALA GATE AND ESCAPE MECHANISM ADDED
C	30-03-20	NOTE AND LIMIT OF WORKS AMENDED
B	16-08-19	CUT AND FILL AMENDED
A	29-01-19	PRIVATE CERTIFIER

PREPARED BY: [Signature]
 AMENDMENT: [Signature]

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DRAWING TITLE

**BULK EARTHWORKS
 CUT FILL
 PLAN
 SHEET 12**

MORTONS urban solutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

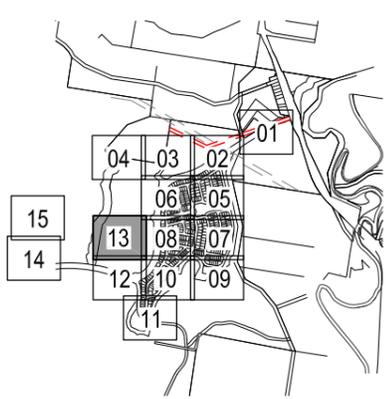
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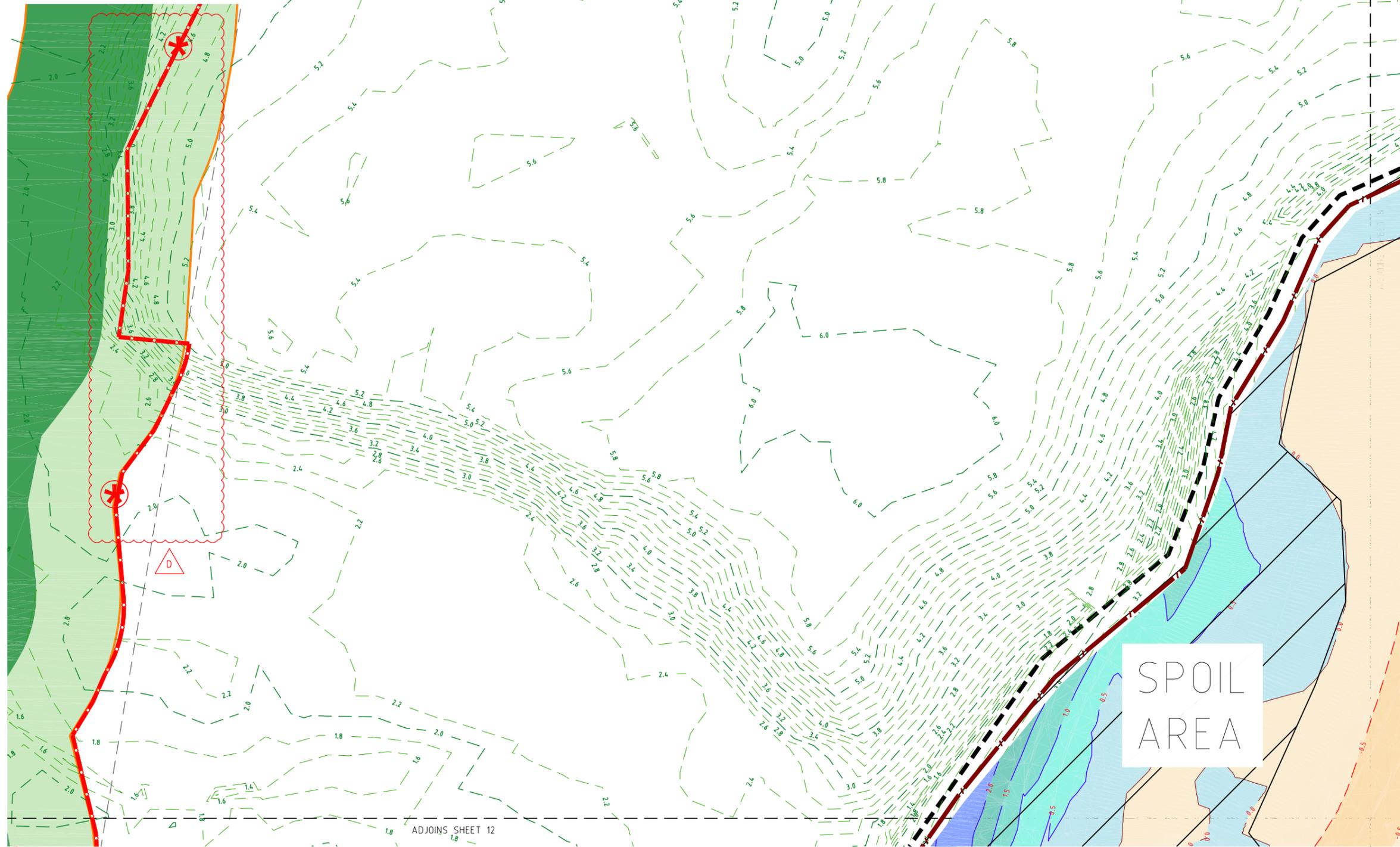
DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 27-11-18
DRAWING NUMBER 12301-BE1-051	
AMEND. D	

3/12/23 - lida developments Pty Ltd - kings forest bulk earthworks\BE1\Current\12301-BE1-040.dwg, 2/06/2020 5:22:34 PM, 1:2



SHEET LAYOUT

THE WORKS IN THE ECOLOGICAL BUFFER UNDER CONDITION A12 (5) ARE TO ALLOW CONSTRUCTION OF STORMWATER MANAGEMENT AREA, ROAD NO.9 AND THE PERMANENT KOALA FENCING.



SPOIL AREA

ADJOINS SHEET 12

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
& Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDDEN .
COUNTY OF ROUS .

CLIENT
**PROJECT 28
PTY LTD**



0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
D	02-06-20 KOALA GATE AND ESCAPE MECHANISM ADDED
C	30-03-20 LIMIT OF WORKS AMENDED
B	16-08-19 SPOIL AREA AMENDED
A	29-01-19 PRIVATE CERTIFIER

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DRAWING TITLE

BULK EARTHWORKS
CUT FILL
PLAN
SHEET 13

MORTONS
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Urban & Regional Planning
Civil Engineering
Project Coordination

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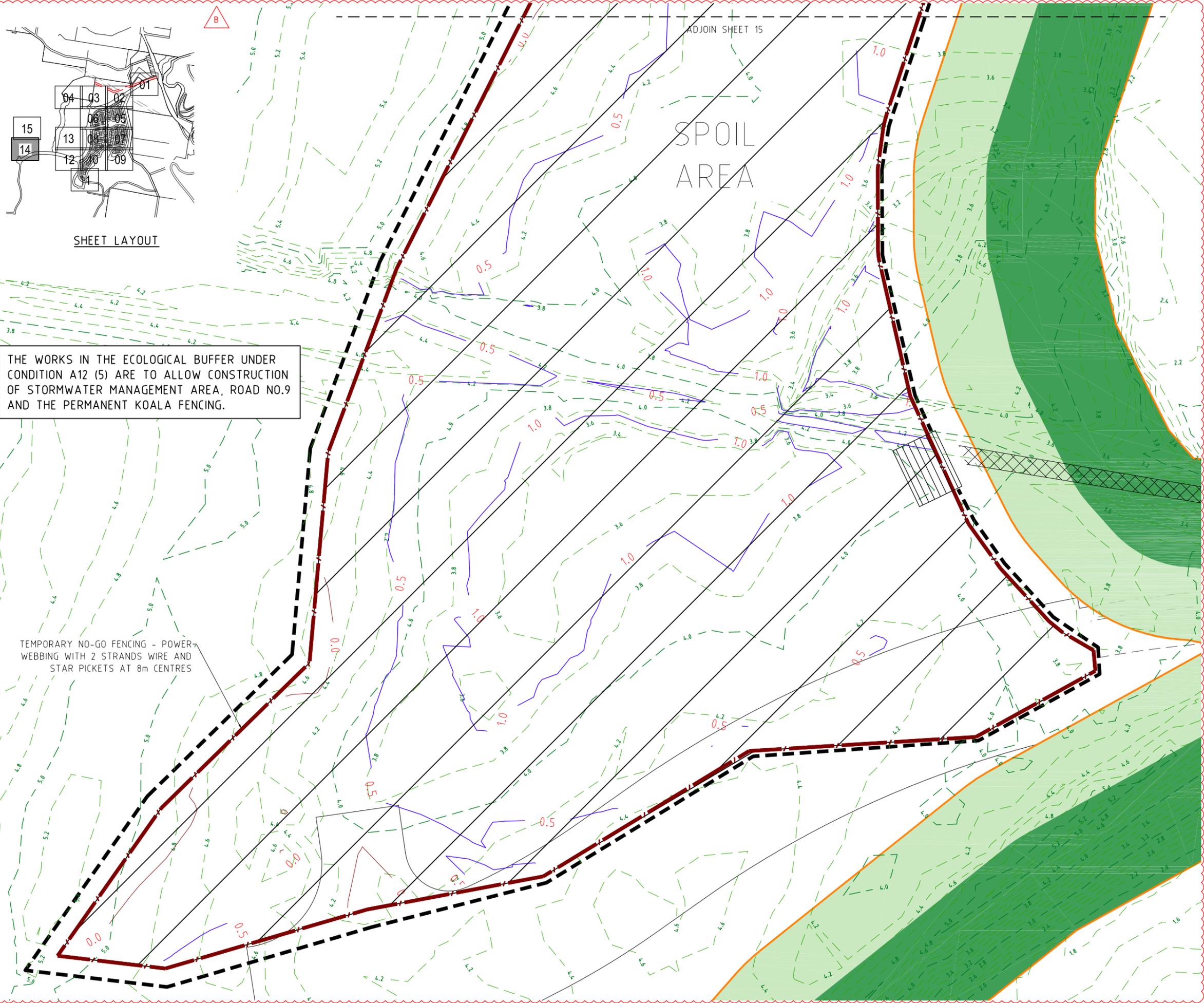
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Southport QLD 4215

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APPROVED [Signature]	NER 2953710
DRAWING NUMBER	DATE 27-11-18

12301-BE1-052

AMEND.
D



PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 Lot 272 on DP755701, Lot 96 on DP755701
 & Lot 326 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



0 5 10 15 20 25m
 Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

B	30-03-20	LIMIT OF WORKS AMENDED
A	09-10-19	PRIVATE CERTIFIER
PRE DATE		AMENDMENT

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**BULK EARTHWORKS
 CUT FILL
 PLAN
 SHEET 14**

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 urbansolutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

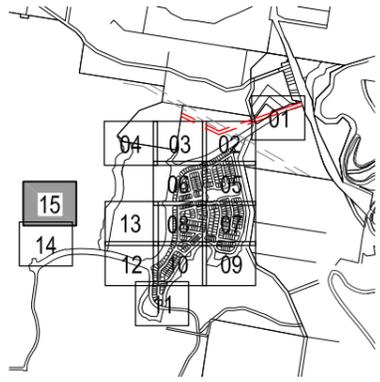
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DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 27-11-18
DRAWING NUMBER	AMEND.
13201-BE1-053	B

3/12/23 - lida developments Pty Ltd 01 - kings forest bulk earthworks\BE1\Current\13201-BE1-040.dwg, 2/06/2020 5:32:53 PM, 1:2



SHEET LAYOUT

THE WORKS IN THE ECOLOGICAL BUFFER UNDER CONDITION A12 (5) ARE TO ALLOW CONSTRUCTION OF STORMWATER MANAGEMENT AREA, ROAD NO.9 AND THE PERMANENT KOALA FENCING.

TEMPORARY NO-GO FENCING - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS AT 8m CENTRES

SPOIL AREA

ADJOIN SHEET 14

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDDEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	..

B	30-03-20	LIMIT OF WORKS AMENDED
A	09-10-19	PRIVATE CERTIFIER

PRE DATE AMENDMENT
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**BULK EARTHWORKS
CUT FILL
PLAN
SHEET 15**

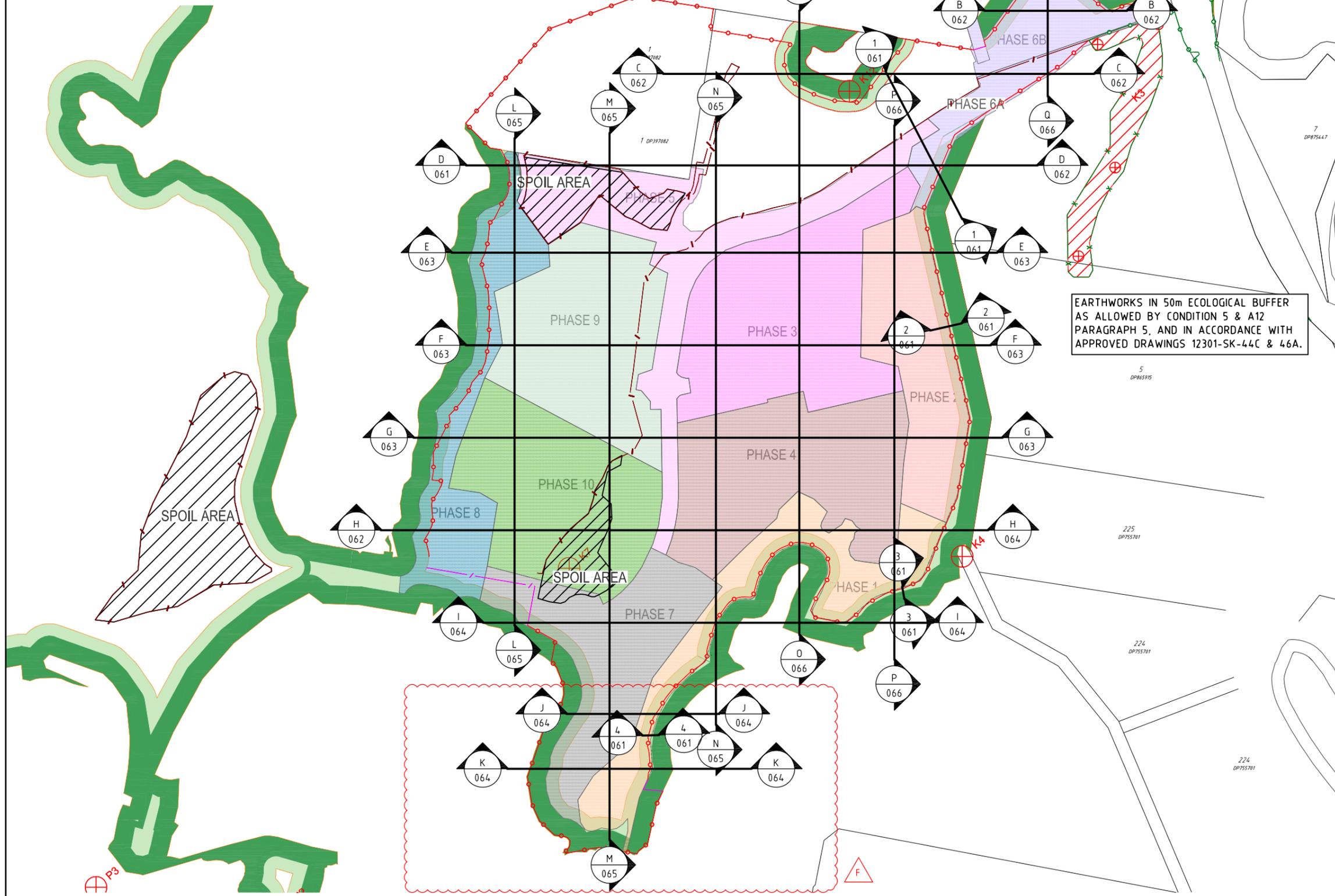


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DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 27-11-18
DRAWING NUMBER	
13201-BE1-054	AMEND. B

LEGEND

-  EXISTING PROPERTY LINE
-  EXISTING PERMANENT KOALA EXCLUSION FENCE
-  EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS AT 8m CENTERS.
-  EARTHWORKS PHASE BOUNDARY
-  PERMANENT KOALA EXCLUSION FENCE
-  TEMPORARY KOALA EXCLUSION FENCE
-  TEMPORARY CONSTRUCTION LIMIT FENCE
-  HERITAGE LOCATION
-  HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
-  SPOIL AREA
-  ECOLOGICAL BUFFER



EARTHWORKS IN 50m ECOLOGICAL BUFFER AS ALLOWED BY CONDITION 5 & A12 PARAGRAPH 5, AND IN ACCORDANCE WITH APPROVED DRAWINGS 12301-SK-44C & 46A.

PROJECT NAME
KINGS FOREST
 BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
 PARISH OF CUDGEN
 COUNTY OF ROUS

CLIENT
PROJECT 28 PTY LTD



Scale: NTS

ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	..

REV	DATE	DESCRIPTION
F	03-06-20	SECTIONS AMENDED
E	05-03-20	LIMIT AND NOTE AMENDED
D	21-01-20	SPOIL AREA AND LEGEND ADDED
C	19-09-19	SPOIL AREA AMENDED
B	16-08-19	SECTIONS, SPOIL AREA AND LEGEND AMENDED
A	29-01-19	PRIVATE CERTIFIER

PREPARED BY: [Signature] DATE: [Date]
 AMENDMENT: [Number]

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BULK EARTHWORKS SECTIONS KEYPLAN AND DETAILS

MORTONS
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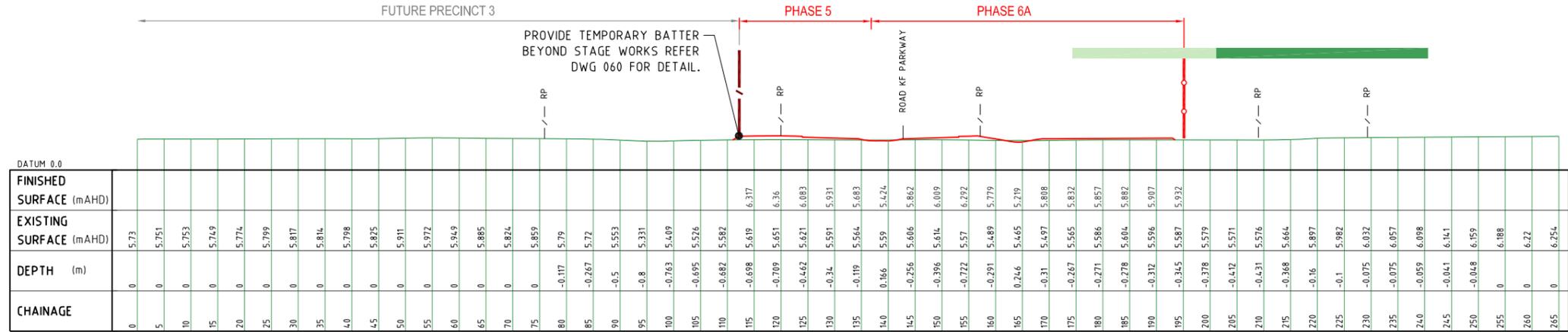
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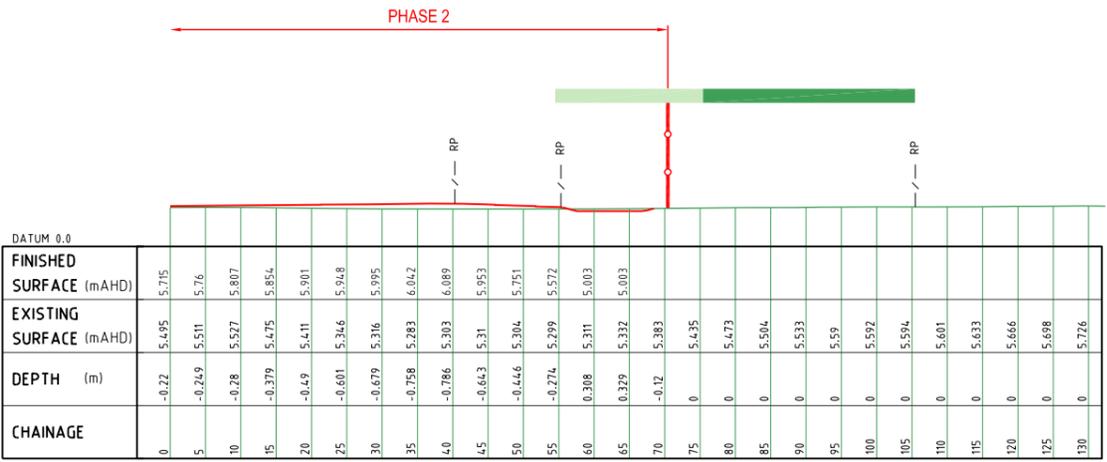
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APPROVED BY: [Signature]	NER 2953710 DATE 26-04-17

DRAWING NUMBER: **12301-BE1-060** AMENDMENT: **F**

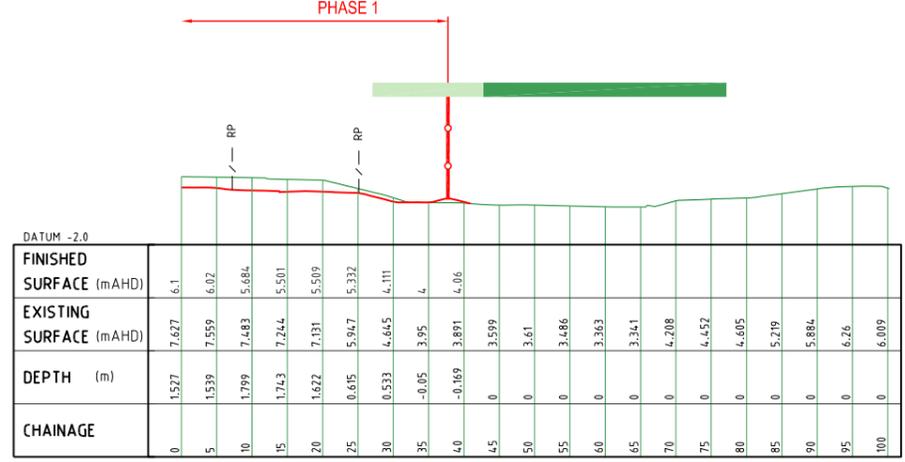
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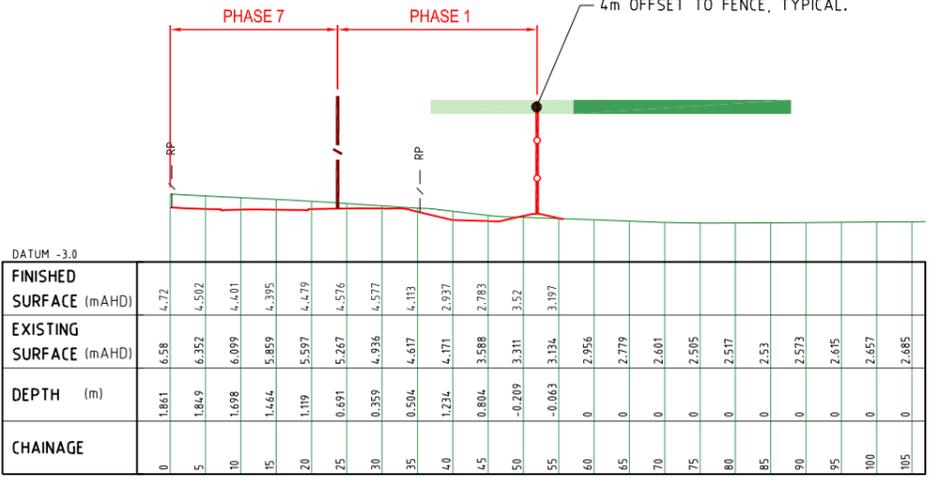
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Horizontal scale 1:1000
Vertical scale 1:1000



LONGITUDINAL SECTION 2
Horizontal scale 1:1000
Vertical scale 1:1000



LONGITUDINAL SECTION 3
Horizontal scale 1:1000
Vertical scale 1:1000



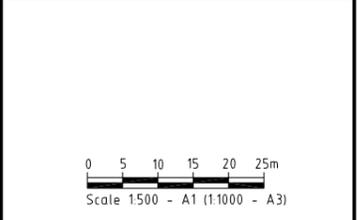
LONGITUDINAL SECTION 4
Horizontal scale 1:1000
Vertical scale 1:1000

EARTHWORKS IN 50m ECOLOGICAL BUFFER AS ALLOWED BY CONDITION 5 & A12 PARAGRAPH 5, AND IN ACCORDANCE WITH APPROVED DRAWINGS 12301-SK-44C & 46A.

- LEGEND**
- PERMANENT KOALA EXCLUSION FENCE
 - TEMPORARY CONSTRUCTION LIMIT FENCE
 - OUTER 20m ECOLOGICAL BUFFER
 - INNER 30m ECOLOGICAL BUFFER

PROJECT NAME
KINGS FOREST
BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

REV	DATE	DESCRIPTION
D	27-05-20	SECTIONS AND NOTES AMENDED
C	30-03-20	SECTION AND NOTE AMENDED
B	16-08-19	SECTIONS AMENDED
A	29-01-19	PRIVATE CERTIFIER

PREPARED BY: AMENDMENT
DATE: 27-05-20

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DRAWING TITLE

BULK EARTHWORKS SECTIONS SHEET 1



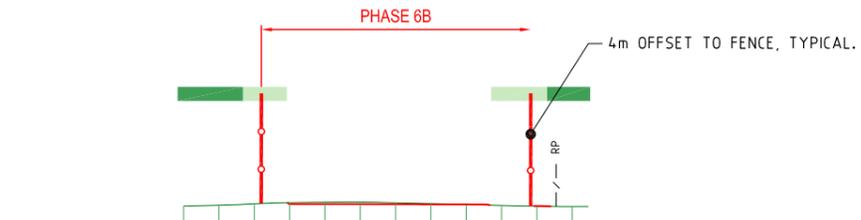
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Fax 07 5571 1088

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DESIGNED	DRAWN	CHECKED
RB	CAB	
APPROVED	DATE 29/5/20	DATE 26-04-17
DRAWING NUMBER	AMEND.	
12301-BE-1-061	D	

D

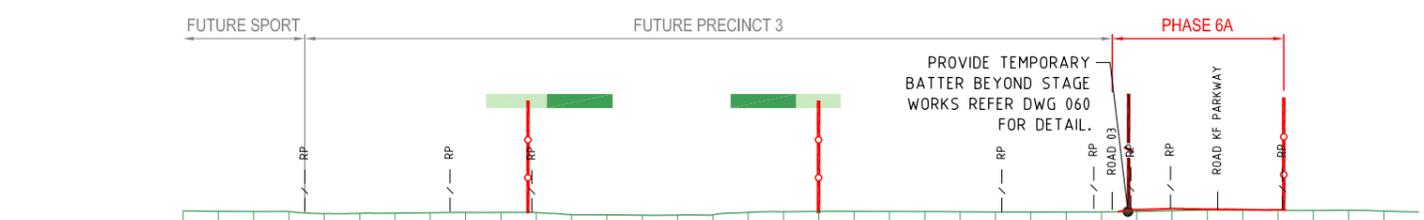


EARTHWORKS IN 50m ECOLOGICAL BUFFER AS ALLOWED BY CONDITION 5 & A12 PARAGRAPH 5, AND IN ACCORDANCE WITH APPROVED DRAWINGS 12301-SK-44C & 46A.

DATUM -15.0	
FINISHED SURFACE (mAHD)	
EXISTING SURFACE (mAHD)	
DEPTH (m)	
CHAINAGE	

LONGITUDINAL SECTION B

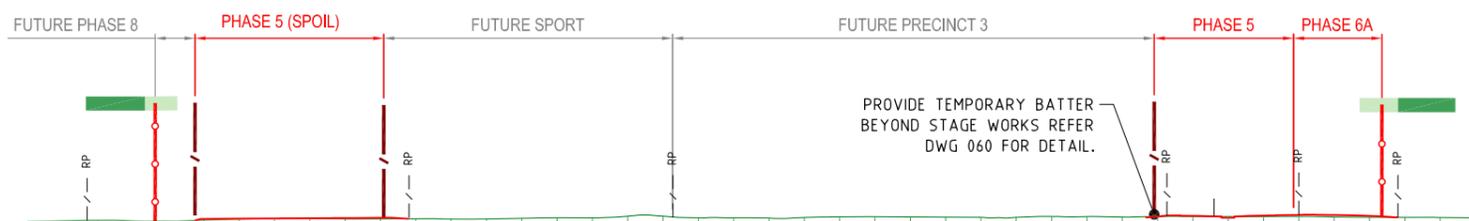
Horizontal scale 14:000
Vertical scale 14:000



DATUM -17.0	
FINISHED SURFACE (mAHD)	
EXISTING SURFACE (mAHD)	
DEPTH (m)	
CHAINAGE	

LONGITUDINAL SECTION C

Horizontal scale 14:000
Vertical scale 14:000



DATUM -18.0	
FINISHED SURFACE (mAHD)	
EXISTING SURFACE (mAHD)	
DEPTH (m)	
CHAINAGE	

LONGITUDINAL SECTION D

Horizontal scale 14:000
Vertical scale 14:000

- LEGEND**
- PERMANENT KOALA EXCLUSION FENCE
 - TEMPORARY CONSTRUCTION LIMIT FENCE
 - OUTER 20m ECOLOGICAL BUFFER
 - INNER 30m ECOLOGICAL BUFFER

PROJECT NAME
KINGS FOREST
BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
D 25-05-20	SECTIONS AMENDED
C 30-03-20	LIMIT, DESIGN AND NOTE AMENDED
B 16-08-19	SECTIONS AMENDED
A 29-01-19	PRIVATE CERTIFIER

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ASSOCIATED CONSULTANTS

DRAWING TITLE
BULK EARTHWORKS SECTIONS SHEET 2

Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
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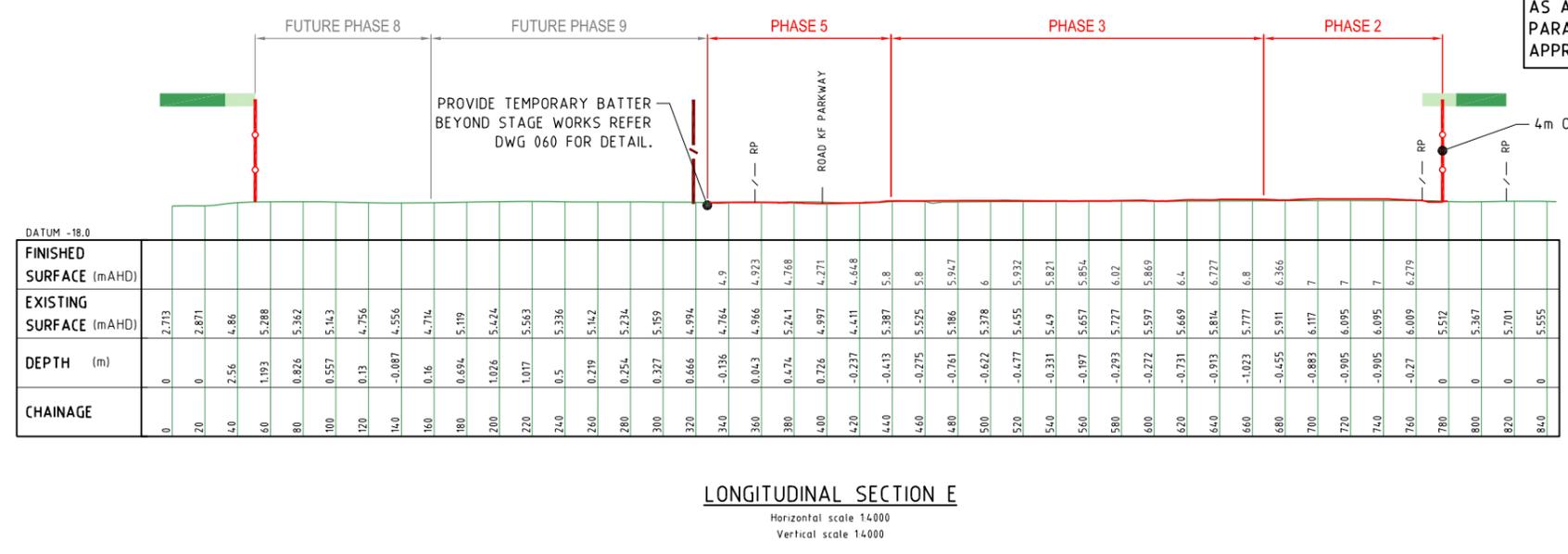
Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	CAB
APPROVED	<i>[Signature]</i>	NER 2953710	DATE 26-04-17
DRAWING NUMBER			AMEND.
12301-BE1-062			D

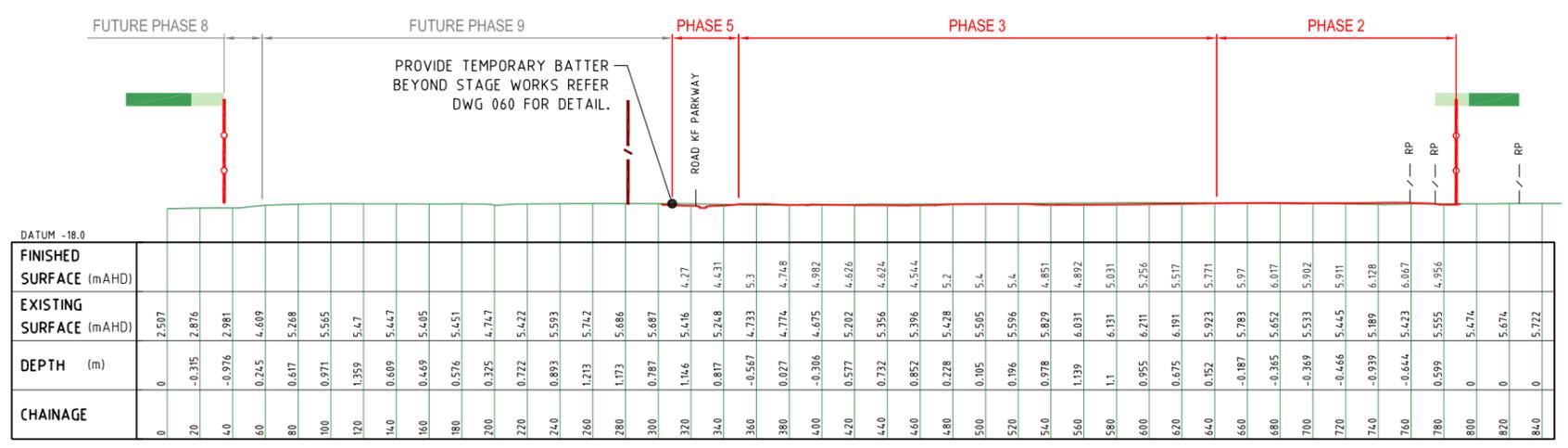
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EARTHWORKS IN 50m ECOLOGICAL BUFFER AS ALLOWED BY CONDITION 5 & A12 PARAGRAPH 5, AND IN ACCORDANCE WITH APPROVED DRAWINGS 12301-SK-44C & 46A.



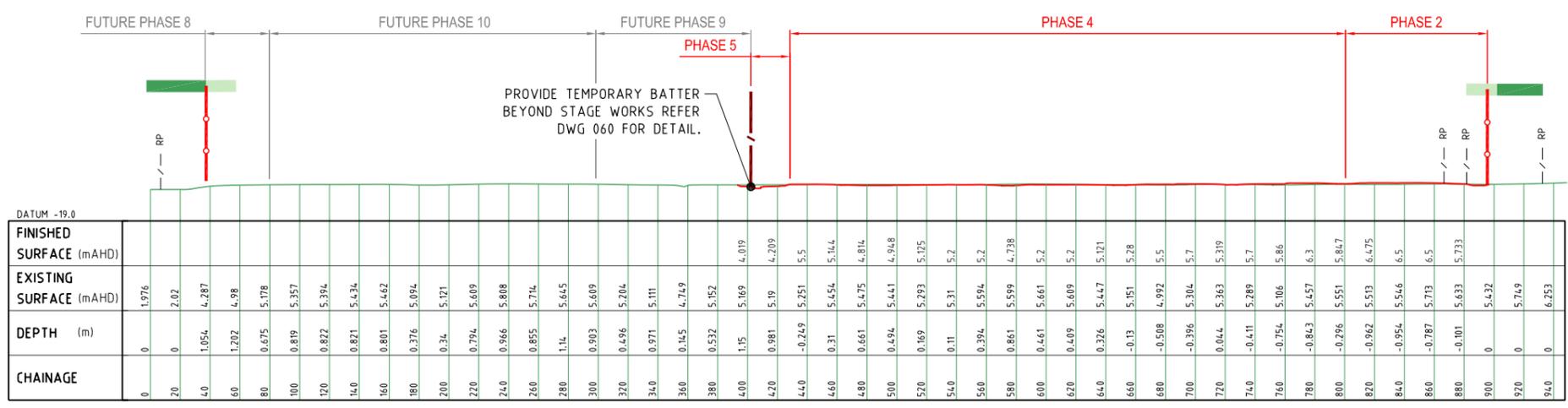
LONGITUDINAL SECTION E

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Vertical scale 1:4000



LONGITUDINAL SECTION F

Horizontal scale 1:4000
Vertical scale 1:4000



LONGITUDINAL SECTION G

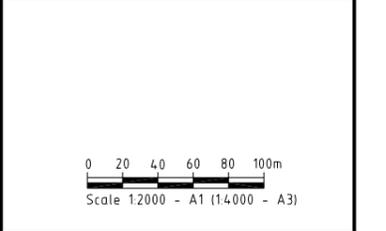
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LEGEND

- PERMANENT KOALA EXCLUSION FENCE
- TEMPORARY CONSTRUCTION LIMIT FENCE
- OUTER 20m ECOLOGICAL BUFFER
- INNER 30m ECOLOGICAL BUFFER

PROJECT NAME
KINGS FOREST
BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN
COUNTY OF ROUS

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

REV	DATE	DESCRIPTION
D	25-05-20	SECTIONS AND SCALE AMENDED
C	30-03-20	SECTIONS AND NOTE AMENDED
B	16-08-19	SECTIONS AMENDED
A	29-01-19	PRIVATE CERTIFIER

PREPARED BY: [Signature]
DATE: [Date]
AMENDMENT: [Number]

ASSOCIATED CONSULTANTS



DRAWING TITLE

BULK EARTHWORKS SECTIONS SHEET 3

MORTONS
urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

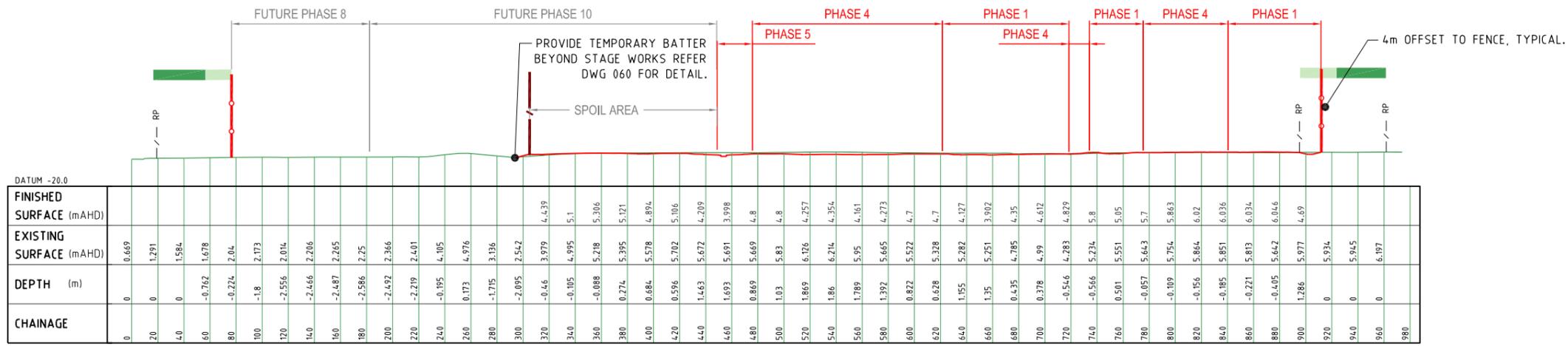
MUS Pty Ltd T/As:
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mortons@urbansolutions.net.au
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Suite 9, 19 Short St
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DESIGNED	BY	DRAWN	CAB
APPROVED	[Signature]	NER	2953710
DRAWING NUMBER			AMEND.
12301-BE1-063			D

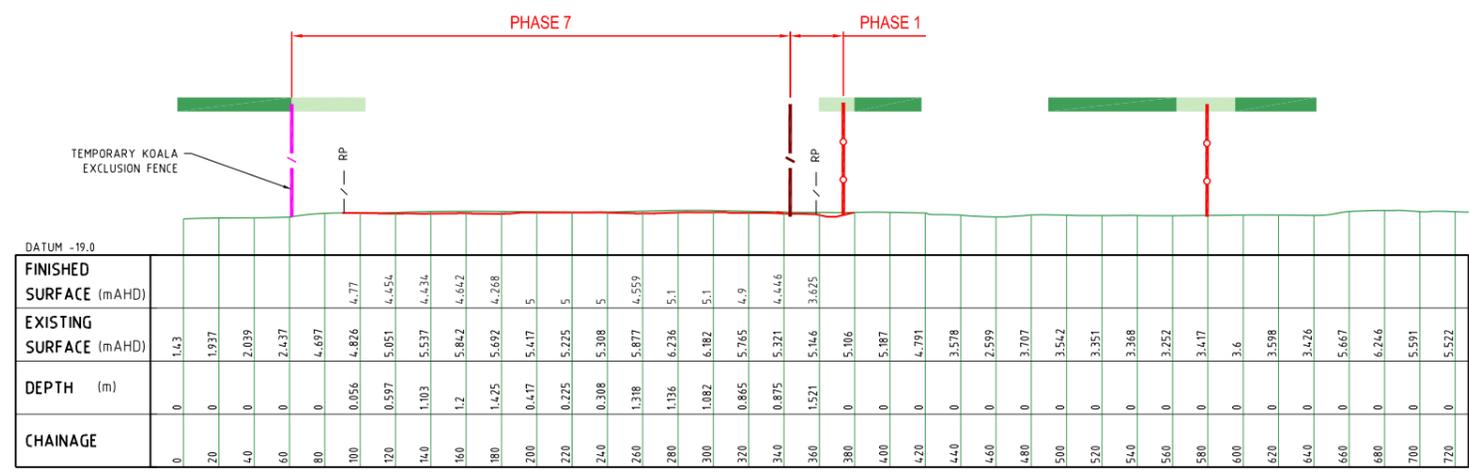
E



LONGITUDINAL SECTION H

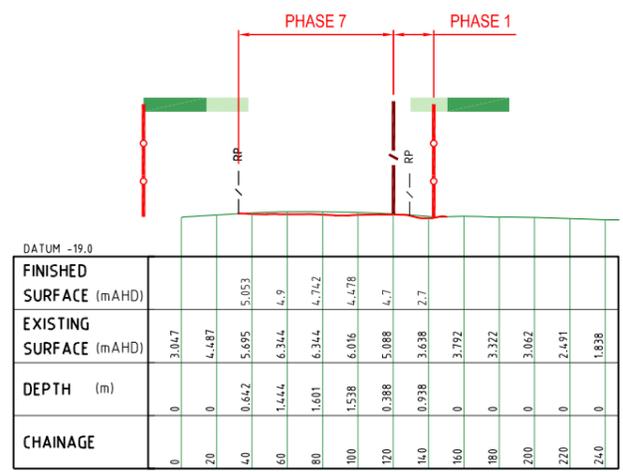
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EARTHWORKS IN 50m ECOLOGICAL BUFFER AS ALLOWED BY CONDITION 5 & A12 PARAGRAPH 5, AND IN ACCORDANCE WITH APPROVED DRAWINGS 12301-SK-44C & 46A.



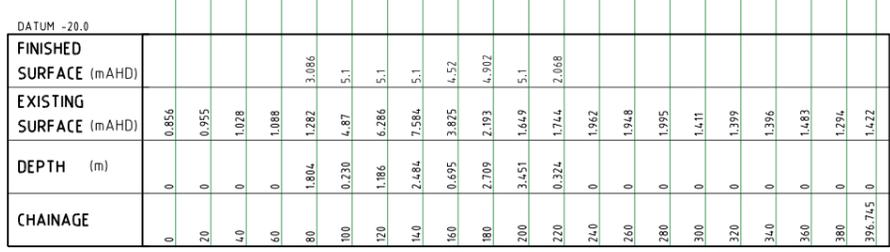
LONGITUDINAL SECTION I

Horizontal scale 14000
Vertical scale 14000



LONGITUDINAL SECTION J

Horizontal scale 14000
Vertical scale 14000



LONGITUDINAL SECTION K

Horizontal scale 12000
Vertical scale 12000

- LEGEND**
- PERMANENT KOALA EXCLUSION FENCE
 - TEMPORARY CONSTRUCTION LIMIT FENCE
 - TEMPORARY KOALA EXCLUSION FENCE
 - OUTER 20m ECOLOGICAL BUFFER
 - INNER 30m ECOLOGICAL BUFFER

PROJECT NAME
KINGS FOREST
BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN
COUNTY OF ROUS

CLIENT
PROJECT 28 PTY LTD

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

ISSUES	DATE	DESCRIPTION
E	27-05-20	SECTIONS AND SCALES AMENDED
D	30-03-20	SECTIONS AND NOTE AMENDED
C	19-09-19	FENCE ALIGNMENT AMENDED
B	16-08-19	SECTIONS AMENDED
A	29-01-19	PRIVATE CERTIFIER

PREPARED BY: [Signature]
DATE: [Date]
AMENDMENT: [Number]

ASSOCIATED CONSULTANTS



DRAWING TITLE

BULK EARTHWORKS SECTIONS SHEET 4



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Southport QLD 4215

DESIGNED	BY	DRAWN	CAB
APPROVED	[Signature]	NER	2953710
DRAWING NUMBER			AMEND.
12301-BE1-064			E

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
**PROJECT 28
PTY LTD**



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

REV	DATE	DESCRIPTION
D	27-05-20	SECTIONS AND SCALE AMENDED
C	05-03-20	SECTION AND NOTE AMENDED
B	16-08-19	SECTIONS AMENDED
A	29-01-19	PRIVATE CERTIFIER

PREPARED BY: AMENDMENT

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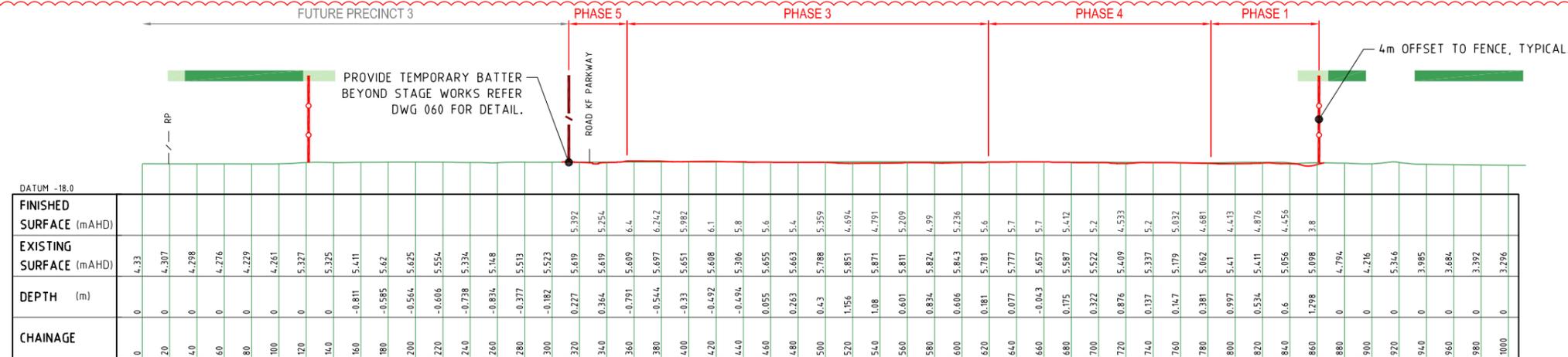
**BULK EARTHWORKS
SECTIONS
SHEET 6**



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Gold Coast Office: Suite 9, 19 Short St Southport QLD 4215

DESIGNED RB	DRAWN CAB
APPROVED [Signature]	NER 2953710 DATE 26-04-17
DRAWING NUMBER 12301-BE1-066	
AMEND. D	



LONGITUDINAL SECTION O

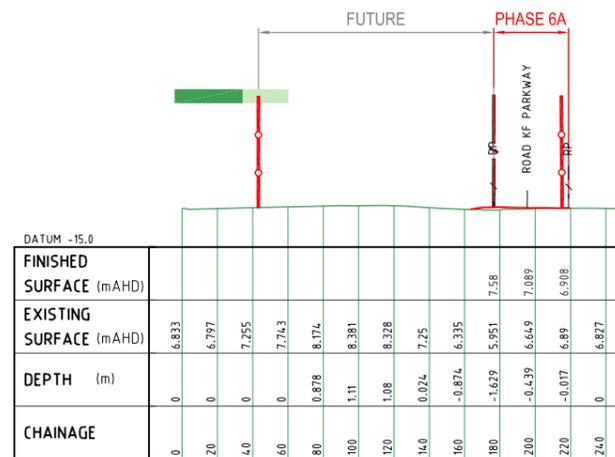
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Vertical scale 14000

EARTHWORKS IN 50m ECOLOGICAL BUFFER AS ALLOWED BY CONDITION 5 & A12 PARAGRAPH 5, AND IN ACCORDANCE WITH APPROVED DRAWINGS 12301-SK-44C & 46A.



LONGITUDINAL SECTION P

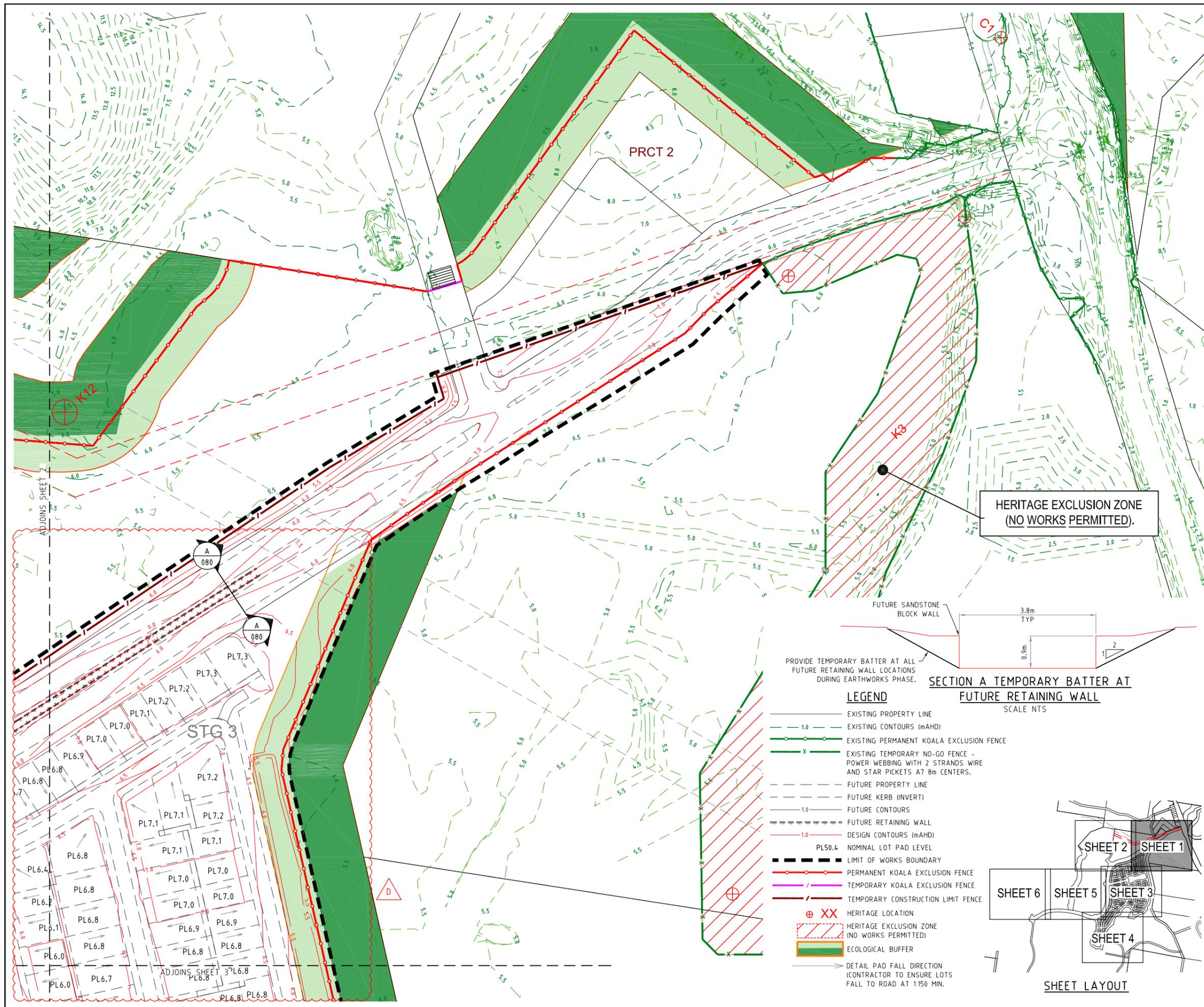
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LONGITUDINAL SECTION Q

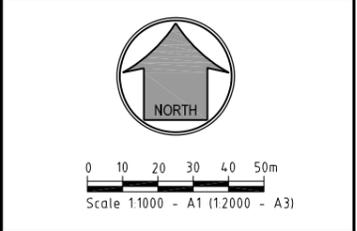
Horizontal scale 14000
Vertical scale 14000

- LEGEND**
- PERMANENT KOALA EXCLUSION FENCE
 - TEMPORARY CONSTRUCTION LIMIT FENCE
 - OUTER 20m ECOLOGICAL BUFFER
 - INNER 30m ECOLOGICAL BUFFER



PROJECT NAME
KINGS FOREST
 BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 Lot 272 on DP755701, Lot 96 on DP755701
 & Lot 326 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	-

REV	DATE	DESCRIPTION
D	30-02-20	PADS AMENDED
C	21-01-20	SHEET LAYOUT AMENDED
B	16-08-19	LEGEND AND NOTES AMENDED
A	29-01-19	PRIVATE CERTIFIER

PREPARED BY: [Signature]
 AMENDMENT: [Signature]

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ASSOCIATED CONSULTANTS

DRAWING TITLE
FINAL SURFACE PLAN SHEET 1

MORTONS urban solutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

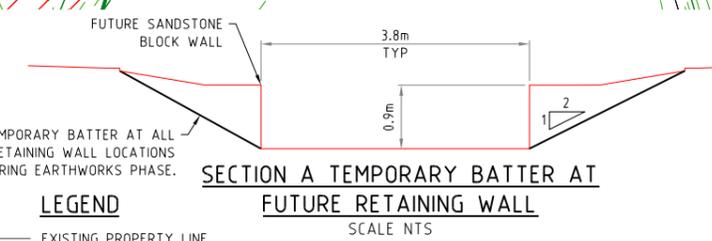
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 Tel 07 5571 1099
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 Southport QLD 4215

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 Southport QLD 4215

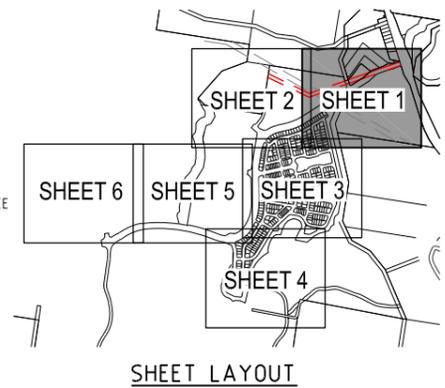
DESIGNED BY	DR	DRAWN BY	CB
APPROVED BY	PL	NER 2953710	DATE 27-11-18
DRAWING NUMBER		AMEND.	
12301-BE1-080		D	

HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED).

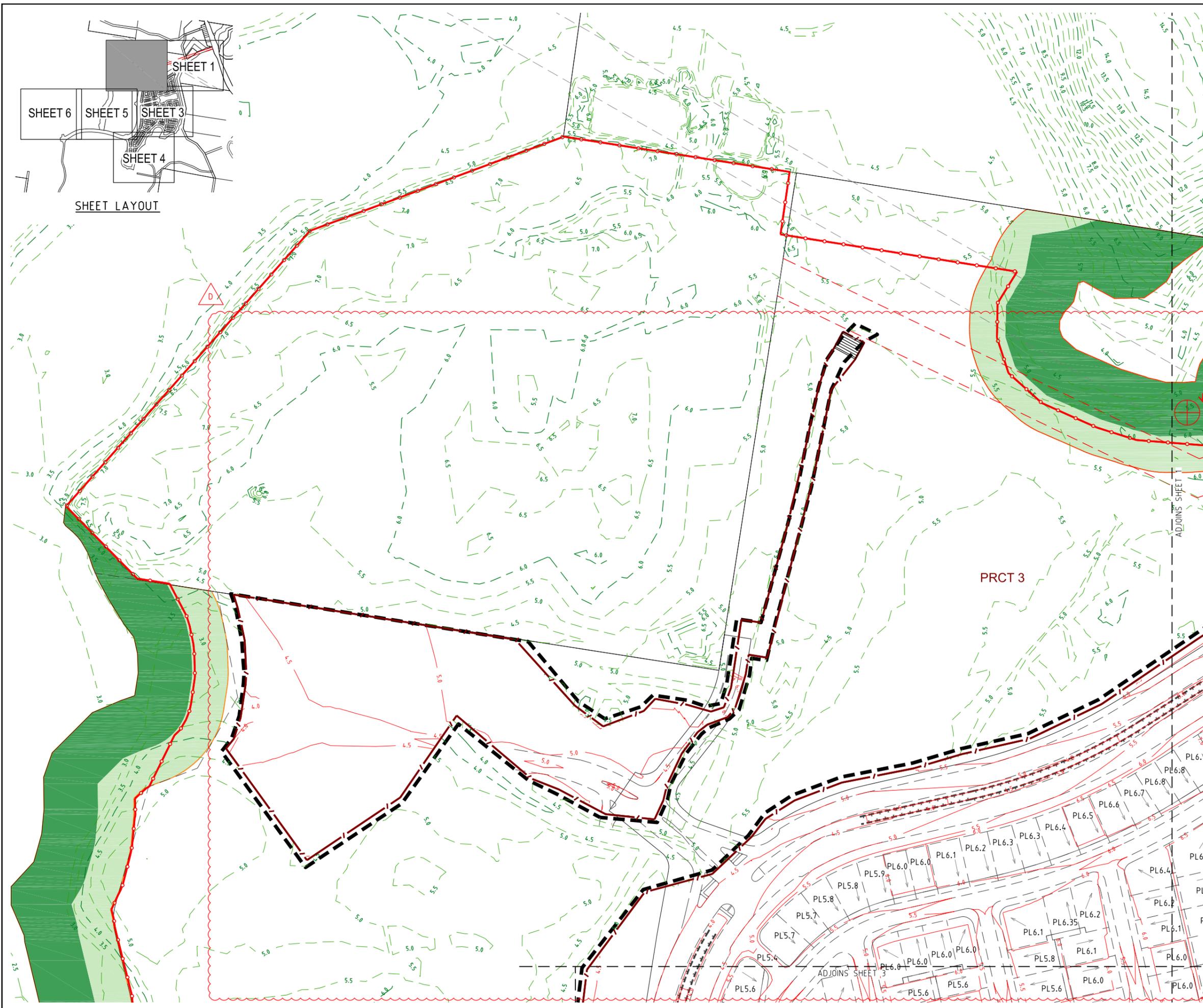


PROVIDE TEMPORARY BATTER AT ALL FUTURE RETAINING WALL LOCATIONS DURING EARTHWORKS PHASE.

- LEGEND**
- EXISTING PROPERTY LINE
 - - - 1.0 EXISTING CONTOURS (mAHD)
 - - - EXISTING PERMANENT KOALA EXCLUSION FENCE
 - X - EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS AT 8m CENTERS.
 - - - FUTURE PROPERTY LINE
 - - - FUTURE KERB (INVERT)
 - - - 1.0 FUTURE CONTOURS
 - - - FUTURE RETAINING WALL
 - - - 1.0 DESIGN CONTOURS (mAHD)
 - - - PL50.4 NOMINAL LOT PAD LEVEL
 - - - LIMIT OF WORKS BOUNDARY
 - - - PERMANENT KOALA EXCLUSION FENCE
 - - - TEMPORARY KOALA EXCLUSION FENCE
 - - - TEMPORARY CONSTRUCTION LIMIT FENCE
 - ⊕ XX HERITAGE LOCATION
 - - - HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
 - █ ECOLOGICAL BUFFER
 - DETAIL PAD FALL DIRECTION (CONTRACTOR TO ENSURE LOTS FALL TO ROAD AT 1:150 MIN.)

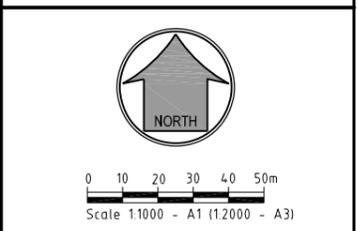


3/12/23 - lida developments Pty Ltd - kings forest/bulk earthworks/BE1/Current/12301-BE1-080.dwg, 20/06/2020 5:27:27 PM, 1:2



PROJECT NAME
KINGS FOREST
 BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 & Lot 272 on DP755701, Lot 96 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	-

PRE DATE	AMENDMENT
D	30-03-20 PADS AMENDED
C	05-03-20 CONTOURS AMENDED
B	21-01-20 SHEET LAYOUT AMENDED
A	29-01-19 PRIVATE CERTIFIER

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DRAWING TITLE

FINAL SURFACE PLAN SHEET 2

MORTONS urbansolutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

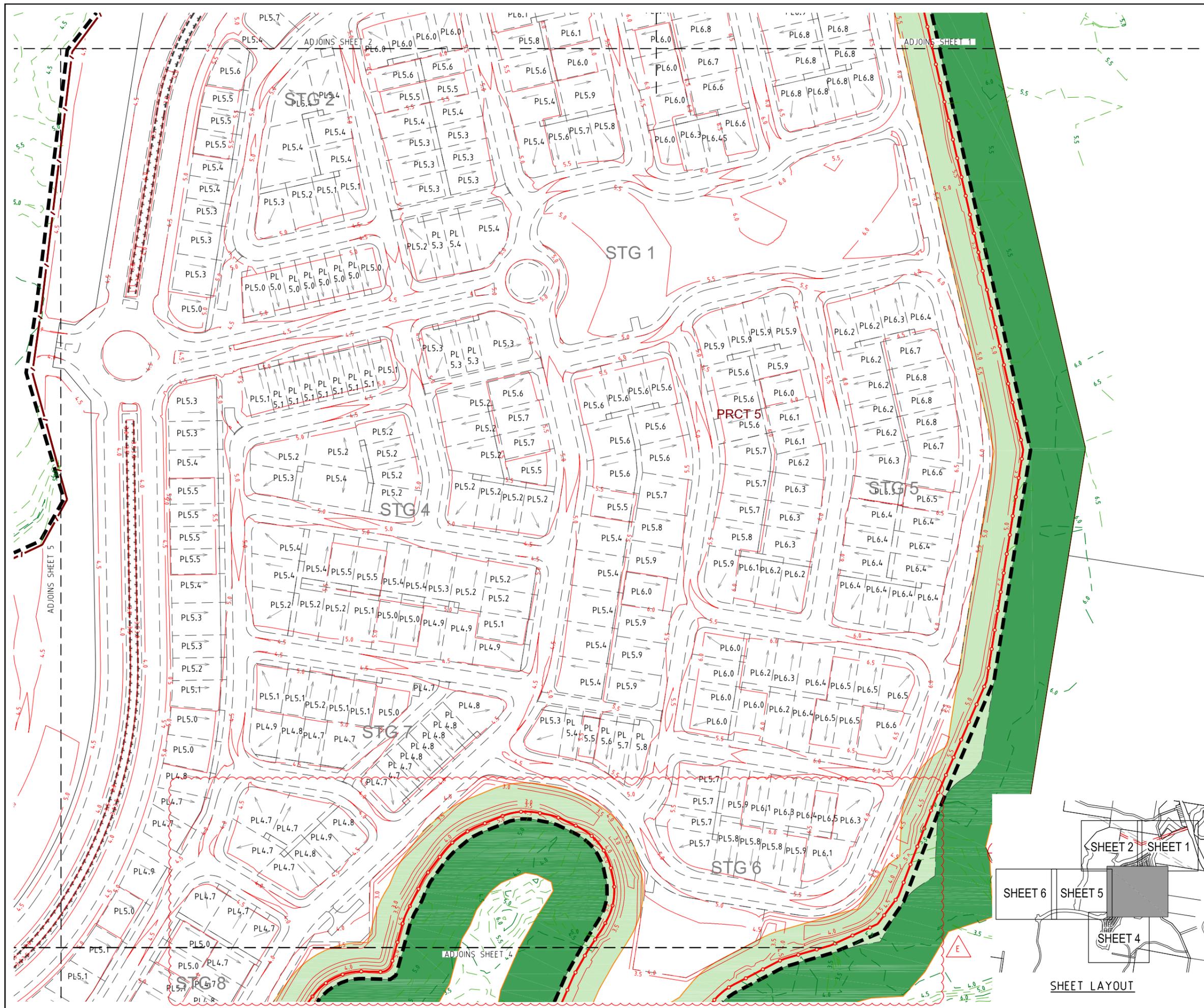
MUS Pty Ltd T/As:
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DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 27-11-18
DRAWING NUMBER	AMEND.
12301-BE1-081	D

3/12/23 - lida developments Pty Ltd 01 - kings forest/bk earthworks/BE1/Current/12301-BE1-081.dwg, 2006/2020 5:37:46 PM, 1:2



PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF COUGEN
COUNTY OF ROUS

CLIENT
**PROJECT 28
PTY LTD**



0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

E	02-06-20	FINAL SURFACE AMENDED
D	30-03-20	PADS AMENDED
C	21-01-20	SHEET LAYOUT AMENDED
B	16-08-19	FINAL SURFACE AMENDED
A	29-01-19	PRIVATE CERTIFIER

PRE DATE	AMENDMENT

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DRAWING TITLE

FINAL SURFACE
PLAN
SHEET 3

MORTONS
urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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Mortons-Urban Solutions
ABN 39 116 375 065
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Tel 07 5571 1099
Fax 07 5571 1088

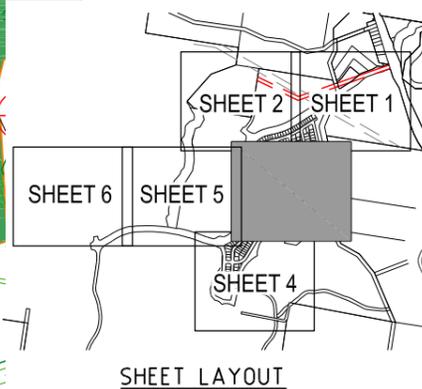
Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

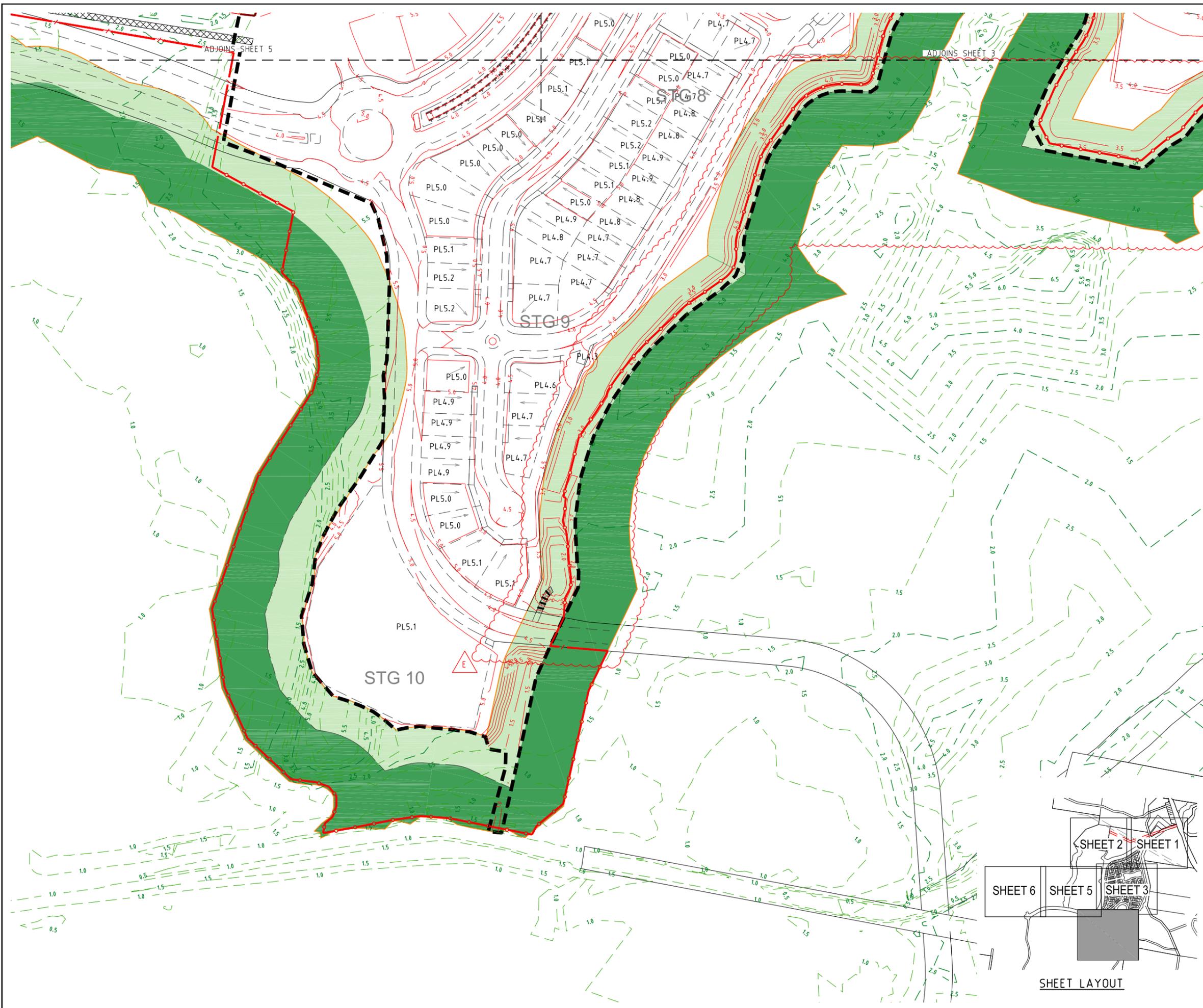
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APPROVED PL	NER 2953710
DATE 27-11-18	

DRAWING NUMBER
12301-BE1-082

AMEND.
E



3/12/23 - lida developments Pty Ltd 01 - kings forest/bk earthworks/BE1/Current/12301-BE1-082.dwg, 20/06/2020 5:38:02 PM, 1:2



PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 & Lot 272 on DP755701, Lot 96 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
**PROJECT 28
 PTY LTD**



0 10 20 30 40 50m
 Scale 1:1000 - A1 (1:2000 - A3)

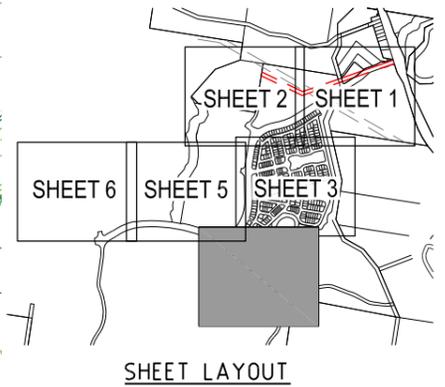
ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

E	02-06-20	FINAL SURFACE AMENDED
D	30-03-20	PADS AMENDED
C	21-01-20	SHEET LAYOUT AMENDED
B	16-08-19	FINAL SURFACE AMENDED
A	29-01-19	PRIVATE CERTIFIER

PRE DATE AMENDMENT
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DRAWING TITLE
**FINAL SURFACE
 PLAN
 SHEET 4**



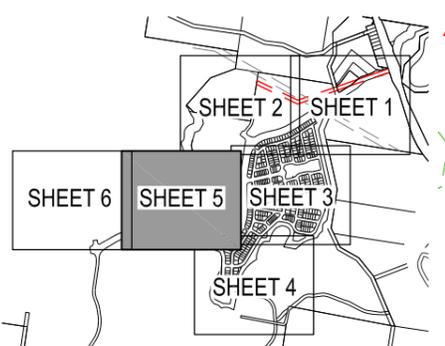
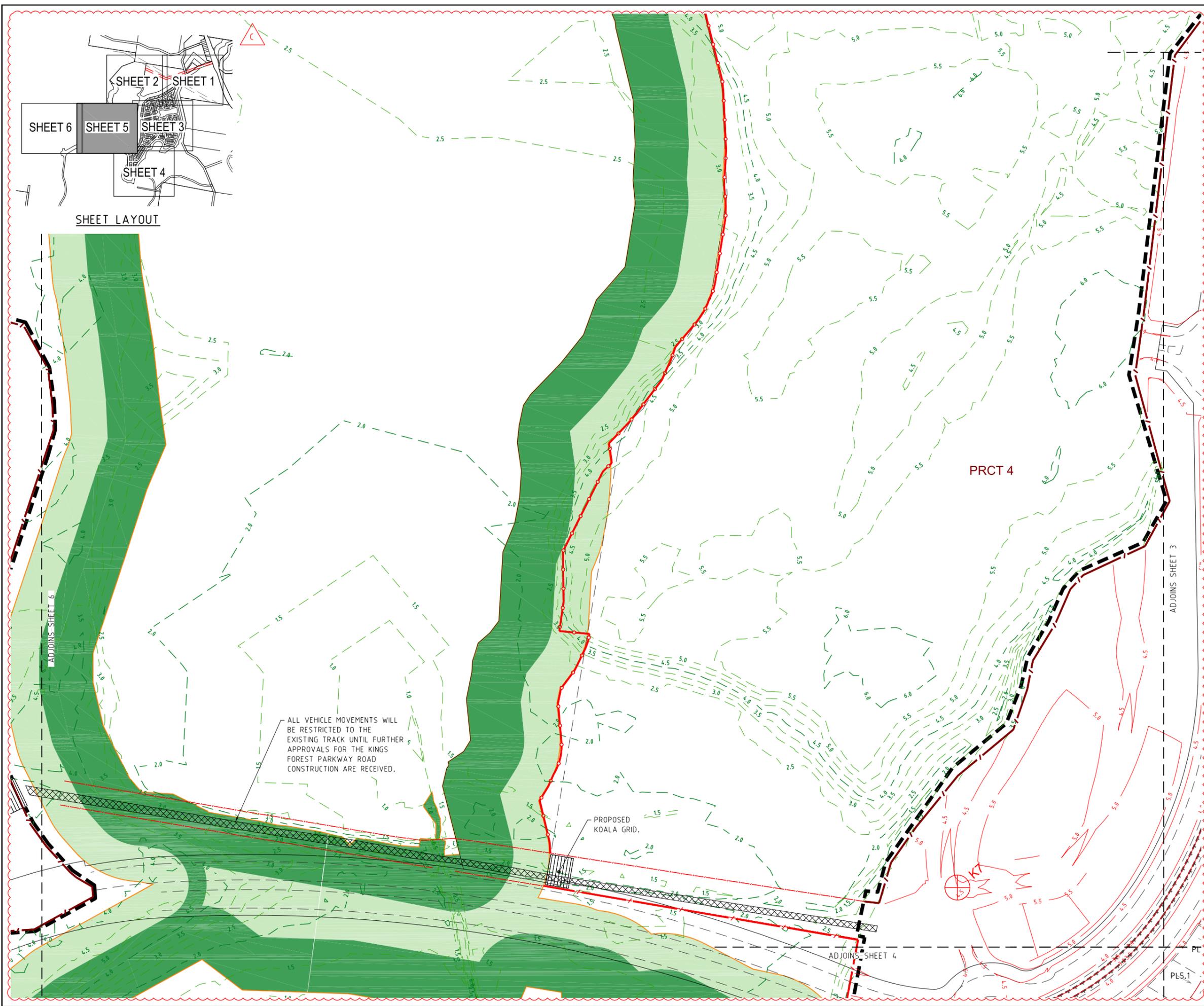
MORTONS
 urbansolutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

MUS Pty Ltd T/As: Postal Address
 Mortons-Urban Solutions PO Box 2484
 ABN 39 116 375 065 Southport QLD 4215

mortons@urbansolutions.net.au
 www.urbansolutions.net.au Gold Coast Office
 Tel 07 5571 1099 Suite 9, 19 Short St
 Fax 07 5571 1088 Southport QLD 4215

DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 27-11-18
DRAWING NUMBER	AMEND.
12301-BE1-083	E

y:\123 - lida developments Pty Ltd\01 - kings forest\bk earthworks\BE1\Current\12301-BE1-083.dwg, 20/06/2020 5:38:20 PM, 1:2



SHEET LAYOUT

PROJECT NAME
KINGS FOREST
 BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 & Lot 272 on DP755701, Lot 96 on DP755701
 & Lot 326 on DP755701
 PARISH OF CUDGEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28
PTY LTD



0 10 20 30 40 50m
 Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	-

PRE DATE	AMENDMENT
C	30-03-20 CONTOURS AND NOTES AMENDED
B	21-01-20 SHEET LAYOUT AMENDED
A	19-09-19 ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

DRAWING TITLE
FINAL SURFACE PLAN SHEET 5

MORTONS
 urban solutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

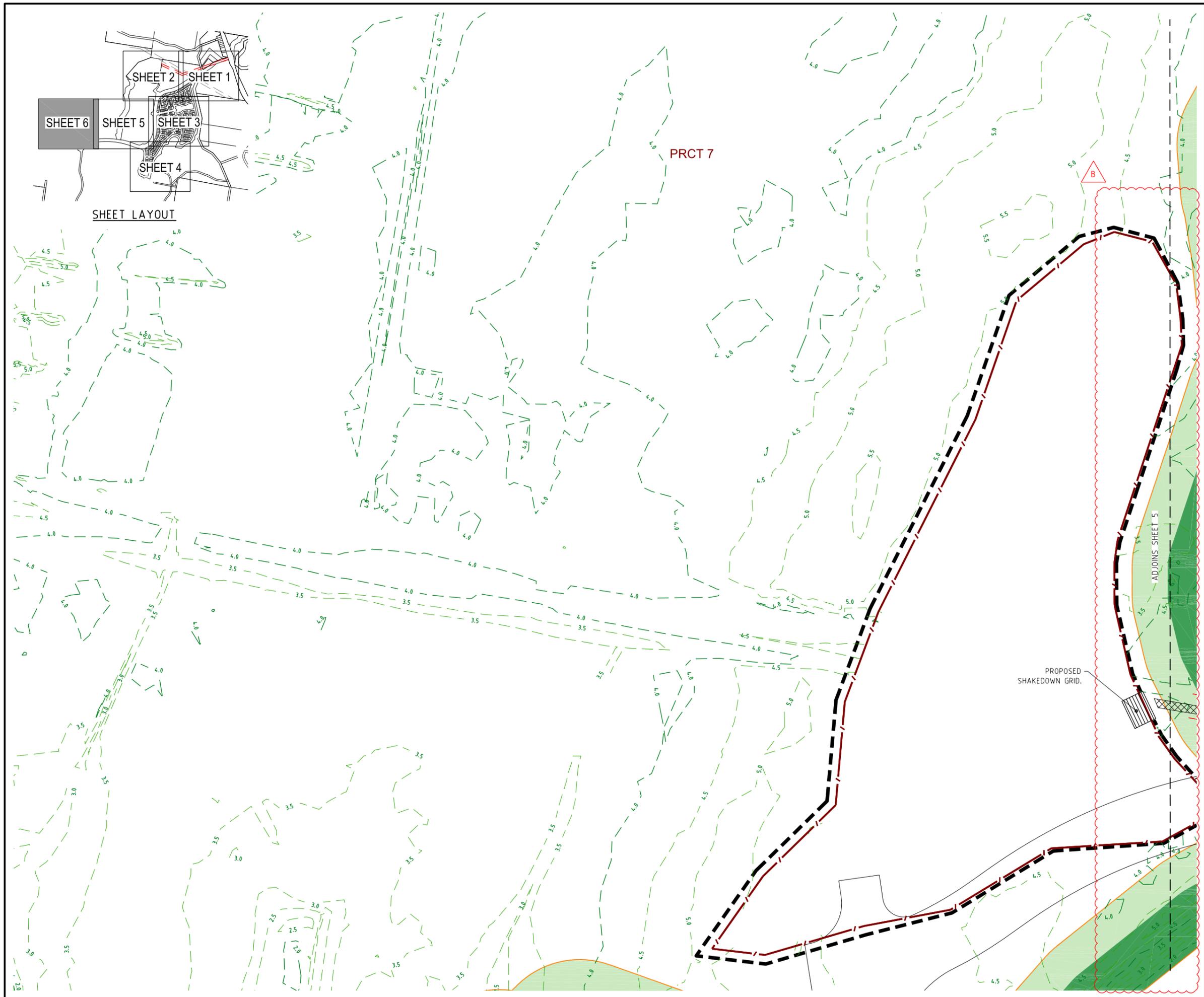
MUS Pty Ltd T/As:
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 Tel 07 5571 1099
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DESIGNED RB	DRAWN CB
APPROVED <i>[Signature]</i>	NER 2953710 DATE 27-11-18
DRAWING NUMBER 12301-BE1-084	AMEND. C

3/12/23 - lida developments Pty Ltd 01 - kings forestbuk earthworks\BE1\Current\12301-BE1-084.dwg, 2006/2020 5:38:27 PM, 1:2



PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 & Lot 272 on DP755701, Lot 96 on DP755701
 & Lot 326 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
**PROJECT 28
 PTY LTD**



0 10 20 30 40 50m
 Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
B 30-03-20	FENCE ALIGNMENT AMENDED
A 19-09-19	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS



DRAWING TITLE

FINAL SURFACE PLAN
 SHEET 6

MORTONS
 urbansolutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

MUS Pty Ltd T/As: Postal Address
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 Southport QLD 4215

DESIGNED RB	DRAWN CB
APPROVED <i>[Signature]</i>	NER 2953710 DATE 27-11-18
DRAWING NUMBER	AMEND.
12301-BE1-085	B

SEWER NOTES

VEGETATION PROTECTION

- A. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8 m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- B. TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- C. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

- A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
- B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
- C. IF ACID SULPHATE SOILS EXIST IN THE WORKS AREA, THE CONTRACTOR MUST PREPARE A RISK ASSESSMENT BASED ON THE PROJECT ACID SULPHATE MANAGEMENT PLAN PREPARED BY MESSRS GILBERT SUTHERLAND.
- D. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).

CREEK CROSSINGS

- A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- C. NO SOIL SHALL BE STOCKPILED WITHIN 5 m OF THE CREEK.

REHABILITATION

- A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

SAFETY

- A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL NEW SOUTH WALES LEGISLATION.

GENERAL

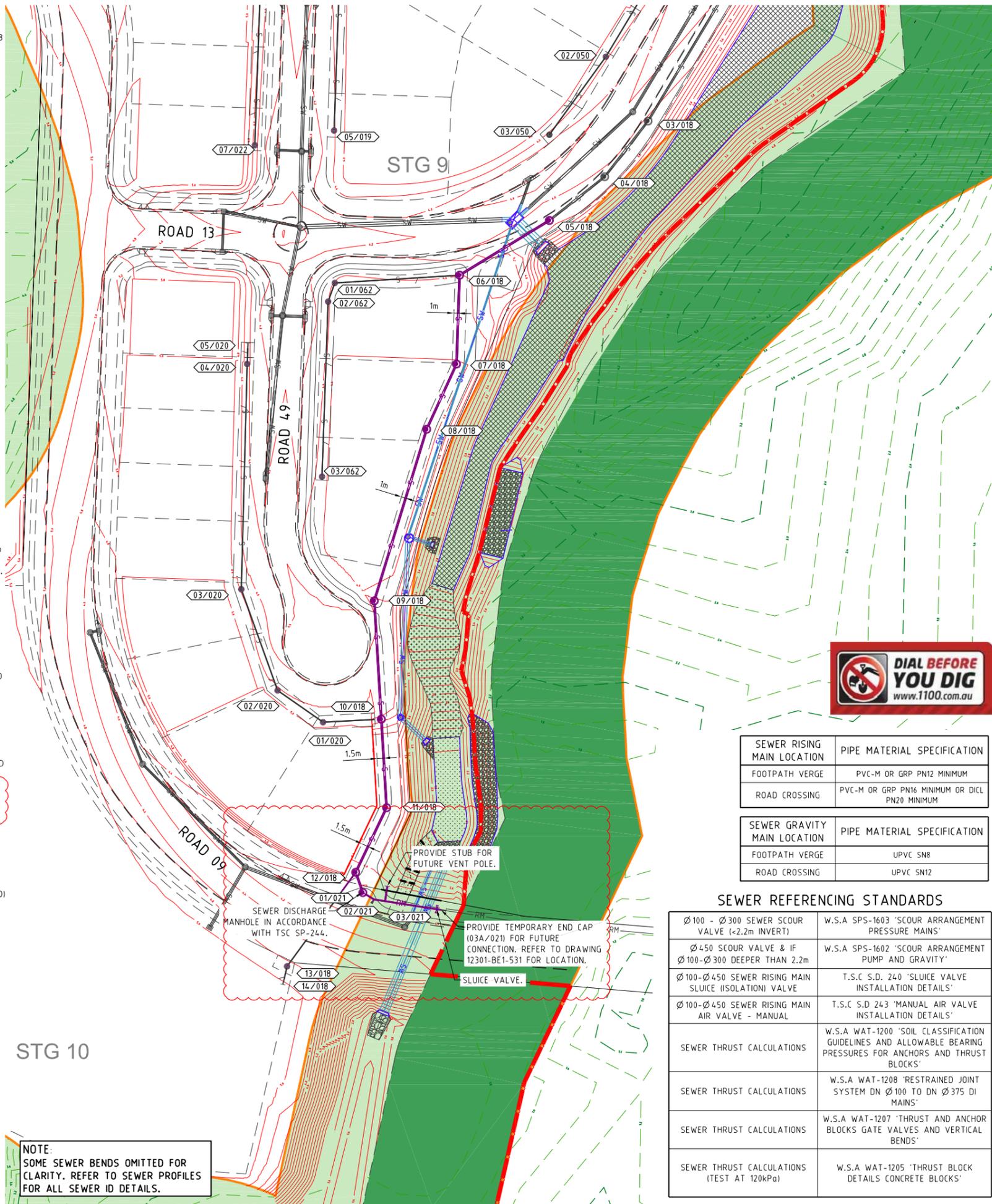
- 1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH SEWERAGE CODE OF AUSTRALIA WSA 02-2014, WSA 04-2005, WSA 07-2007 UNLESS OTHERWISE SPECIFIED IN TWEED SHIRE COUNCIL DEVELOPMENT DESIGN SPECIFICATION D12, OR CONSTRUCTION SPECIFICATION C402 OR OTHERWISE SPECIFIED IN TSC SUBDIVISION MANUAL.
- 2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- 3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY A REGISTERED ENGINEER OR OTHER CERTIFIED PROFESSIONAL ENGINEER, TO THE SATISFACTION OF TWEED SHIRE COUNCIL. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE COUNCIL SEWERAGE SYSTEM.
- 4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY DEVELOPER'S APPROVED CONTRACTOR UNDER THE SUPERVISION OF TWEED SHIRE COUNCIL'S AGENT AT THE DEVELOPER'S COST.
- 5. EACH ALLOTMENT SHALL BE SERVED BY A DN150 PVC PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN160 PE (OR DN150 PVC) PROPERTY CONNECTION SHALL BE PROVIDED.
- 6. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
- 7. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300 mm AND A MAXIMUM OF 750 mm.
- 8. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300 mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE TWEED SHIRE COUNCIL UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
- 9. WHERE SEWERS HAVE A GRADE OF 15 TO 29% OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TWEED SHIRE COUNCIL DEVELOPMENT CONSTRUCTION SPECIFICATION C402-23.
- 10. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
- 11. BENCH MARK AND LEVELS TO AHD.
- 12. EXISTING ALLOTMENTS REQUIRING A PROPERTY CONNECTION FROM EXISTING SEWERS SHALL BE PROVIDED BY TWEED SHIRE COUNCIL AT THE DEVELOPERS COST.

PROJECT SPECIFIC SEWER NOTES

- a. ALL SEWER MAIN TO BE AS PER SEWER PIPE SPECIFICATIONS TABLE.
- b. NOTWITHSTANDING THE NOTES ABOVE, ALL MATERIALS AND WORKS MUST BE IN ACCORDANCE WITH THE SERVICE PROVIDER'S APPROVAL CONDITIONS AND THE TWEED SHIRE COUNCIL DEVELOPMENT DESIGN AND CONSTRUCTION SPECIFICATIONS.
- c. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR SEWER RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT.
- d. WATER AND ELECTRICAL CROSSING LOCATIONS ARE INDICATIVE ONLY. REFER TO PLANS TO DETERMINE PRECISE CROSSING LOCATIONS. WHERE SERVICE INDICATES CLASH WITH SEWER, SEWER TO TAKE PRECEDENCE, SERVICE TO BE CONSTRUCTED OVER OR UNDER SEWER ACCORDING TO TSC INSPECTION OFFICER INSTRUCTIONS.
- e. CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF WORKS ON-SITE.
- f. MINIMUM 20MPa THRUST BLOCKS TO BE CONSTRUCTED AT ALL FLEXIBLE JOINTED BENDS IN ACCORDANCE WITH TWEED SHIRE COUNCIL SPECIFICATIONS C402.30 AND C271.
- g. CONTRACTOR TO PAY ALL FEES AND CHARGES ASSOCIATED WITH CONNECTIONS.
- h. MINIMUM CLEARANCE BETWEEN MAINS AND OTHER UNDERGROUND SERVICES AS OUTLINED IN WSA02-2014-2014 TABLE 5.4 SHALL BE ADHERED TO

LEGEND

	EXISTING SEWER		SEWER SCOUR VALVE (ø450)
	EXISTING RISING MAIN		SEWER ISOLATION/SLUICE VALVE (ALL SIZES)
	EXISTING KERB (INVERT)		SEWER BEND (ALL SIZES)
	EXISTING PROPERTY LINE		SEWER VERTICAL BEND (ALL SIZES)
	EXISTING CONTOURS		SEWER PUMP STATION
	FUTURE RISING MAIN		PROPOSED STORMWATER
	FUTURE KERB (INVERT)		MANHOLE
	FUTURE CONTOURS		HEADWALL
	PROPOSED KERB (INVERT)		SCOUR PROTECTION
	PROPOSED PROPERTY LINE		DRAINAGE PIT & LINE NO.
	DESIGN CONTOURS		EXISTING PERMANENT KOALA EXCLUSION FENCE
	PROPOSED SEWER MAIN		TEMPORARY KOALA EXCLUSION FENCE
	SITE PRECINCT		TEMPORARY CONSTRUCTION LIMIT FENCE
	LIMIT OF WORKS BOUNDARY		HERITAGE LOCATION
	SEWER PIT NO./LINE		ECOLOGICAL BUFFER
	SEWER SCOUR VALVE (ø300)		
	SEWER AIR VALVE (ø300)		



SEWER RISING MAIN LOCATION	PIPE MATERIAL SPECIFICATION
FOOTPATH VERGE	PVC-M OR GRP PN12 MINIMUM
ROAD CROSSING	PVC-M OR GRP PN16 MINIMUM OR DICL PN20 MINIMUM

SEWER GRAVITY MAIN LOCATION	PIPE MATERIAL SPECIFICATION
FOOTPATH VERGE	UPVC SN8
ROAD CROSSING	UPVC SN12

SEWER REFERENCING STANDARDS

ø 100 - ø 300 SEWER SCOUR VALVE (<2.2m INVERT)	W.S.A SPS-1603 'SCOUR ARRANGEMENT PRESSURE MAINS'
ø 450 SCOUR VALVE & IF ø 100-ø 300 DEEPER THAN 2.2m	W.S.A SPS-1602 'SCOUR ARRANGEMENT PUMP AND GRAVITY'
ø 100-ø 450 SEWER RISING MAIN SLUICE (ISOLATION) VALVE	T.S.C S.D. 240 'SLUICE VALVE INSTALLATION DETAILS'
ø 100-ø 450 SEWER RISING MAIN AIR VALVE - MANUAL	T.S.C S.D 243 'MANUAL AIR VALVE INSTALLATION DETAILS'
SEWER THRUST CALCULATIONS	W.S.A WAT-1200 'SOIL CLASSIFICATION GUIDELINES AND ALLOWABLE BEARING PRESSURES FOR ANCHORS AND THRUST BLOCKS'
SEWER THRUST CALCULATIONS	W.S.A WAT-1208 'RESTRAINED JOINT SYSTEM DN ø100 TO DN ø375 DI MAINS'
SEWER THRUST CALCULATIONS	W.S.A WAT-1207 'THRUST AND ANCHOR BLOCKS GATE VALVES AND VERTICAL BENDS'
SEWER THRUST CALCULATIONS (TEST AT 120kPa)	W.S.A WAT-1205 'THRUST BLOCK DETAILS CONCRETE BLOCKS'

NOTE:
SOME SEWER BENDS OMITTED FOR CLARITY. REFER TO SEWER PROFILES FOR ALL SEWER ID DETAILS.

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	-

PRE DATE	AMENDMENT
C	02-06-20 NOTES AMENDED
B	31-03-20 SEWER NOTES, STORMWATER AND FOOTPATH AMENDED
A	19-09-18 ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

DRAWING TITLE
SEWER RETICULATION PLAN

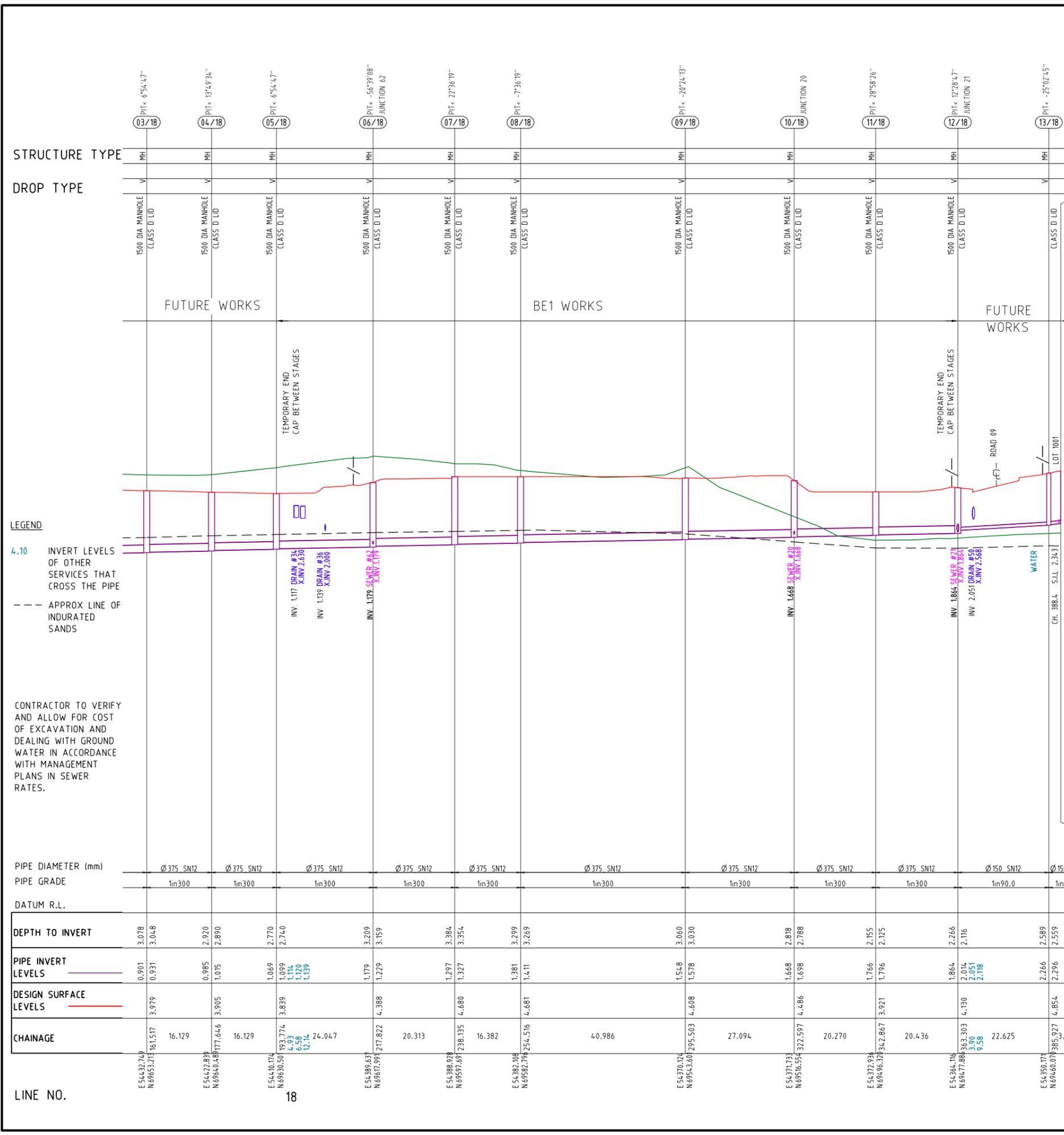
Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED	BY	DRAWN	CB
APPROVED	PL	NER	2953710
DATE	19-09-18		
DRAWING NUMBER	12301-BE1-500		
AMEND.	C		



SEWER STRUCTURE LIDS	
D	CLASS D TO AS 3996 - 2006
B	CLASS B TO AS 3996 - 2006
M	'M' PREFIX DESIGNATES BOLT DOWN LID

STRUCTURE DROPS	
V	STRAIGHT THROUGH SEWER REFER TO SEQ STD DWG SEQ-SEW-1303-1

* CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH REFER TYPICAL SECTIONS & DETAILS FOR BRIDGING STRUCTURE DETAILS

TRENCHSTOPS, BULKHEADS & CONCRETE ENCASUREMENTS TO BE INSTALLED IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 276

- NOTES**
- IF SHOWN, WATER AND ELECTRICAL CROSSING LOCATIONS ARE INDICATIVE ONLY. REFER TO PLANS TO DETERMINE CROSSING LOCATIONS. WHERE SERVICE INDICATES CLASH WITH SEWER, SEWER TO TAKE PRECEDENCE, SERVICE TO BE CONSTRUCTED OVER OR UNDER SEWER ACCORDING TO TCS INSPECTION OFFICER INSTRUCTION
 - EMBEDMENT TYPES ARE AS SPECIFIED ON THE TWEED SHIRE COUNCIL SD 261 AND IN THE DEVELOPMENT CONSTRUCTION SPECIFICATION C402.23.
-TYPE 'A' OUTSIDE OF ROADWAYS.
-TYPE 'C' UNDER ROADWAYS.
 - CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
 - ALL DIMENSIONS ARE IN MILLIMETRES.
 - DISCHARGE CHAMBERS TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 244.
 - INTERNAL CONCRETE SURFACES OF ALL CHAMBERS IN ACCORDANCE WITH S.D.244.01 SHALL BE COATED WITH SIKA SIKAGARD 62 OR FOSROC NITOMORTAR EL'S OR APPROVED EQUIVALENT. APPLICATION TO BE IN ACCORDANCE WITH PRODUCT SUPPLIER'S SPECIFICATIONS.
 - ANY CHAMBER WITHIN 100m DOWNSTREAM OF A RISING MAIN DISCHARGE CHAMBER TO BE PROTECTED IN A SIMILAR MANNER TO THE DISCHARGE CHAMBER (AS NOTED ABOVE).
 - BACKFILL IN VENT PIPE TRENCH SHALL BE COMPACTED TO AT LEAST THE SAME DENSITY AS THE SURROUNDING SOIL.
 - ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
 - MASS CONCRETE THRUST BLOCKS ARE TO BE PLACED AT BENDS & PIPE JUNCTIONS ON THE SEWER RISING MAIN. REFER TO DESIGN DRAWINGS FOR LOCATION & SIZES OF THRUST BLOCKS.
 - THE SEWER RISING MAIN IS TO BE GRADED UP HILL AS IT APPROACHES THE DISCHARGE MANHOLE.
 - THE DIAMETER OF THE PIPEWORK FROM THE MAINTENANCE HOLE TO THE VENT PIPE & WITHIN THE VENT PIPE SHOULD BE EQUAL TO OR LARGER THAN THE DIAMETER OF THE LARGEST MAIN IN THE MAINTENANCE HOLE. THE VENT PIPE STRUCTURE SHOULD BE CONSTRUCTED TO MATCH THE SIZE OF THE VENT PIPEWORK.
 - PRECAST MANHOLE SYSTEMS USING REINFORCED OR UNREINFORCED CONCRETE RUBBER RING JOINTED SEGMENTS IN ACCORDANCE WITH AS 4198 (HUMES, AMATEC, EJ OR EQUIVALENT ACCEPTED) MAY BE USED. THE STANDARD MANHOLE DIAMETER SHALL BE 1050mm WITH A STANDARD CLEAR OPENING DIAMETER OF 600mm MINIMUM. FOR MANHOLES DEEPER THAN 4m, THE STANDARD DIAMETER SHALL BE 1200mm, STANDARD CLEAR OPENING 600mm X 900mm MINIMUM.
 - ACCESS COVERS SHALL BE DUCTILE IRON HINGED WITH WATERTIGHT SEAL MANUFACTURED IN ACCORDANCE WITH AS 3996. MH ACCESS OPENINGS SHALL HAVE A MINIMUM CLEAR OPENING DIAMETER OF 600mm. WHERE APPROVED, CONCRETE ACCESS COVERS SHALL COMPLY WITH AS 4198 AND SHALL HAVE A MINIMUM CLEAR OPENING DIAMETER OF 600mm.
 - MAINTENANCE HOLE UNITS CAN BE EITHER PRE-CAST OR CAST-IN-SITU. BENCHING AND INVERT LEVELS SHALL BE DESIGNED TO SUIT THE INFLOW CONDITIONS AND SHALL BE DESIGNED IN ACCORDANCE WITH WSA 02-2014, 1, 7.6. (ALSO REFER TO S.D.278 FOR STANDARD MANHOLES).

LEGEND

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

--- APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.

PIPE DIAMETER (mm)	PIPE GRADE	DATUM R.L.	DEPTH TO INVERT	PIPE INVERT LEVELS	DESIGN SURFACE LEVELS	CHAINAGE	LINE NO.
Ø375 SN12	1in300		3.078	0.901	3.979	E54432.710 N69552.151 16.157	18
Ø375 SN12	1in300		3.048	0.931	3.905	E54422.839 N69540.409 177.646	
Ø375 SN12	1in300		2.920	0.985	3.905	E54410.174 N69563.050	
Ø375 SN12	1in300		2.890	1.015	3.839	193.774 4.93 6.58 12.14 24.047	
Ø375 SN12	1in300		2.770	1.069	4.388	E54398.637 N69571.990 217.822	
Ø375 SN12	1in300		2.740	1.099	4.680	E54388.978 N69597.687 238.135	
Ø375 SN12	1in300		3.209	1.179	4.680	E54382.108 N69582.794 254.516	
Ø375 SN12	1in300		3.159	1.229	4.608	E54370.174 N6954.360 295.503	
Ø375 SN12	1in300		3.384	1.297	4.608	E54371.733 N6956.550 322.597	
Ø375 SN12	1in300		3.354	1.327	4.486	E54371.733 N6956.550 322.597	
Ø375 SN12	1in300		3.299	1.381	3.921	E54371.733 N6956.550 322.597	
Ø375 SN12	1in300		3.269	1.411	3.921	E54371.733 N6956.550 322.597	
Ø375 SN12	1in300		3.060	1.548	3.921	E54364.116 N6947.889 363.303	
Ø375 SN12	1in300		3.030	1.578	4.130	E54364.116 N6947.889 363.303	
Ø375 SN12	1in300		2.818	1.668	4.130	E54364.116 N6947.889 363.303	
Ø375 SN12	1in300		2.788	1.698	4.130	E54364.116 N6947.889 363.303	
Ø375 SN12	1in300		2.155	1.766	4.130	E54364.116 N6947.889 363.303	
Ø375 SN12	1in300		2.125	1.796	4.130	E54364.116 N6947.889 363.303	
Ø375 SN12	1in300		2.266	1.864	4.130	E54364.116 N6947.889 363.303	
Ø375 SN12	1in300		2.116	2.014	4.130	E54364.116 N6947.889 363.303	
Ø375 SN12	1in300		2.116	2.051	4.130	E54364.116 N6947.889 363.303	
Ø375 SN12	1in300		2.116	2.118	4.130	E54364.116 N6947.889 363.303	
Ø150 SN12	1in90.0		2.589	2.266	4.854	E54350.171 N6946.007 385.977	
Ø150 SN12	1in90.0		2.559	2.296	4.854	E54350.171 N6946.007 385.977	

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDDGEN
COUNTY OF ROUS

CLIENT
PROJECT 28 PTY LTD

ISSUES

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

SCALE

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

PRELIMINARY

DATE

AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND JWA Ecological Consultants

DRAWING TITLE

SEWER RETICULATION PROFILES SHEET 1

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED RB DRAWN CB

APPROVED [Signature] NER 2953710 DATE 19-09-18

DRAWING NUMBER
12301-BE1-530

AMEND.
C

Y:\123 - Ieta developments pty ltd\1 - kings forest\bulk earthworks\BE1\Current\12301-BE1-530.dwg, 3/06/2020 3:29:00 PM, 1:2

STRUCTURE TYPE

DROP TYPE

LEGEND

4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE

--- APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLANS IN SEWER RATES.

PIPE DIAMETER (mm)

PIPE GRADE

DATUM R.L.

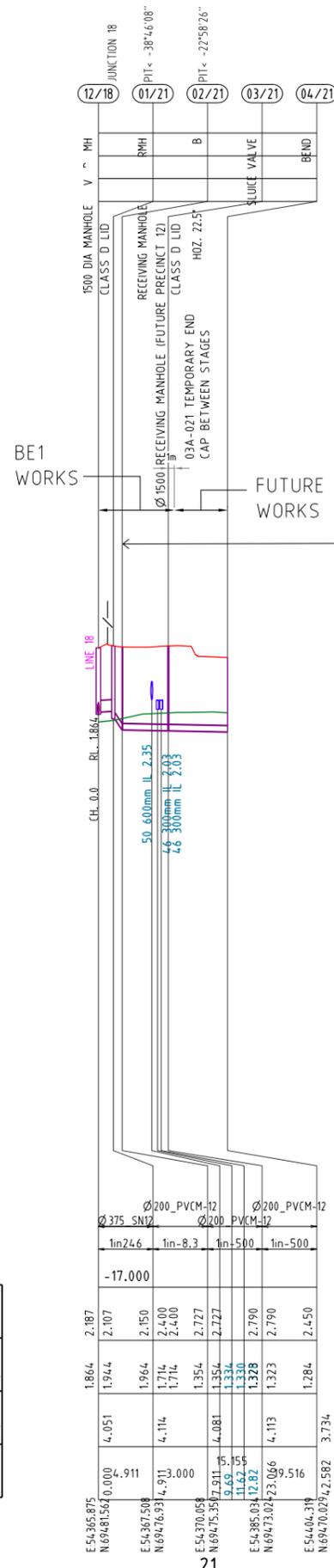
DEPTH TO INVERT

PIPE INVERT LEVELS

DESIGN SURFACE LEVELS

CHAINAGE

LINE NO.

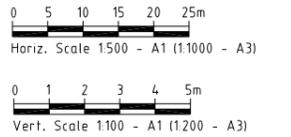


PROVIDE 200Ø SN8 PIPE AS STUB FOR FUTURE VENT LOCATION. TO BE DETERMINED AS PART OF FUTURE APPLICATION. DISCHARGE MANHOLE IN ACCORDANCE WITH TSC SD.244.

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
C	03-06-20 NOTES AND PROFILE AMENDED
B	30-03-20 SEWER PROFILE AMENDED
A	19-09-18 ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

DRAWING TITLE
SEWER RETICULATION PROFILES SHEET 2

MORTONS urban solutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As: Postal Address
Mortons-Urban Solutions PO Box 2484
ABN 39 116 375 065 Southport QLD 4215

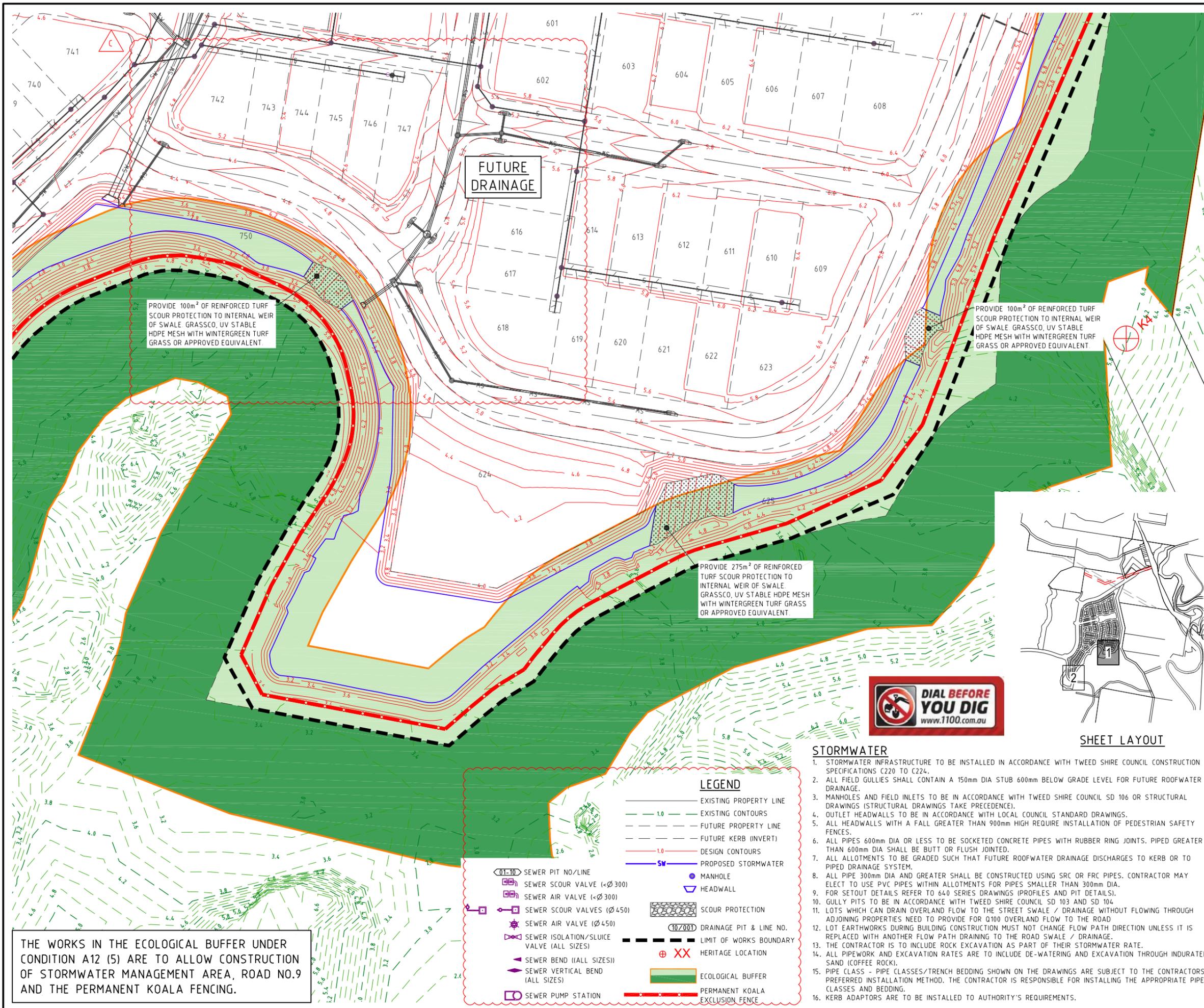
mortons@urbansolutions.net.au
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Tel 07 5571 1099
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Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 19-09-18

DRAWING NUMBER
12301-BE1-531

AMEND.
C



PROVIDE 100m² OF REINFORCED TURF SCOUR PROTECTION TO INTERNAL WEIR OF SWALE. GRASSCO, UV STABLE HDPE MESH WITH WINTERGREEN TURF GRASS OR APPROVED EQUIVALENT.

PROVIDE 100m² OF REINFORCED TURF SCOUR PROTECTION TO INTERNAL WEIR OF SWALE. GRASSCO, UV STABLE HDPE MESH WITH WINTERGREEN TURF GRASS OR APPROVED EQUIVALENT.

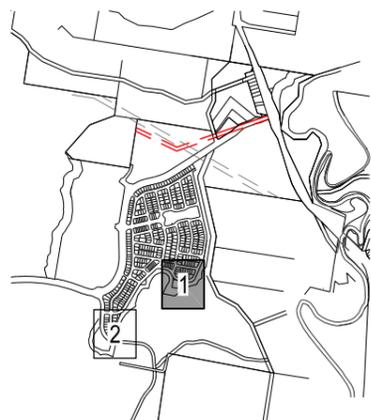
PROVIDE 275m² OF REINFORCED TURF SCOUR PROTECTION TO INTERNAL WEIR OF SWALE. GRASSCO, UV STABLE HDPE MESH WITH WINTERGREEN TURF GRASS OR APPROVED EQUIVALENT.

THE WORKS IN THE ECOLOGICAL BUFFER UNDER CONDITION A12 (5) ARE TO ALLOW CONSTRUCTION OF STORMWATER MANAGEMENT AREA, ROAD NO.9 AND THE PERMANENT KOALA FENCING.

LEGEND

- EXISTING PROPERTY LINE
- - - EXISTING CONTOURS
- - - FUTURE PROPERTY LINE
- - - FUTURE KERB (INVERT)
- - - DESIGN CONTOURS
- SW — PROPOSED STORMWATER
- MANHOLE
- ▽ HEADWALL
- SCOUR PROTECTION
- (10/001) DRAINAGE PIT & LINE NO.
- — — LIMIT OF WORKS BOUNDARY
- ⊕ XX HERITAGE LOCATION
- ECOLOGICAL BUFFER
- PERMANENT KOALA EXCLUSION FENCE

- 01-10 SEWER PIT NO./LINE
- SEWER SCOUR VALVE (<∅300)
- SEWER AIR VALVE (<∅300)
- SEWER SCOUR VALVE (∅450)
- SEWER AIR VALVE (∅450)
- SEWER ISOLATION/SLUICE VALVE (ALL SIZES)
- SEWER BEND ((ALL SIZES))
- SEWER VERTICAL BEND (ALL SIZES)
- SEWER PUMP STATION



SHEET LAYOUT

- STORMWATER**
- STORMWATER INFRASTRUCTURE TO BE INSTALLED IN ACCORDANCE WITH TWEED SHIRE COUNCIL CONSTRUCTION SPECIFICATIONS C220 TO C224.
 - ALL FIELD GULLIES SHALL CONTAIN A 150mm DIA STUB 600mm BELOW GRADE LEVEL FOR FUTURE ROOFWATER DRAINAGE.
 - MANHOLES AND FIELD INLETS TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 106 OR STRUCTURAL DRAWINGS (STRUCTURAL DRAWINGS TAKE PRECEDENCE).
 - OUTLET HEADWALLS TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARD DRAWINGS.
 - ALL HEADWALLS WITH A FALL GREATER THAN 900mm HIGH REQUIRE INSTALLATION OF PEDESTRIAN SAFETY FENCES.
 - ALL PIPES 600mm DIA OR LESS TO BE SOCKETED CONCRETE PIPES WITH RUBBER RING JOINTS. PIPED GREATER THAN 600mm DIA SHALL BE BUTT OR FLUSH JOINTED.
 - ALL ALLOTMENTS TO BE GRADED SUCH THAT FUTURE ROOFWATER DRAINAGE DISCHARGES TO KERB OR TO PIPED DRAINAGE SYSTEM.
 - ALL PIPE 300mm DIA AND GREATER SHALL BE CONSTRUCTED USING SRC OR FRC PIPES. CONTRACTOR MAY ELECT TO USE PVC PIPES WITHIN ALLOTMENTS FOR PIPES SMALLER THAN 300mm DIA.
 - FOR SETOUT DETAILS REFER TO 640 SERIES DRAWINGS (PROFILES AND PIT DETAILS).
 - GULLY PITS TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 103 AND SD 104.
 - LOTS WHICH CAN DRAIN OVERLAND FLOW TO THE STREET SWALE / DRAINAGE WITHOUT FLOWING THROUGH ADJOINING PROPERTIES NEED TO PROVIDE FOR Q100 OVERLAND FLOW TO THE ROAD.
 - LOT EARTHWORKS DURING BUILDING CONSTRUCTION MUST NOT CHANGE FLOW PATH DIRECTION UNLESS IT IS REPLACED WITH ANOTHER FLOW PATH DRAINING TO THE ROAD SWALE / DRAINAGE.
 - THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR STORMWATER RATE.
 - ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
 - PIPE CLASS - PIPE CLASSES/TRENCH BEDDING SHOWN ON THE DRAWINGS ARE SUBJECT TO THE CONTRACTORS PREFERRED INSTALLATION METHOD. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE APPROPRIATE PIPE CLASSES AND BEDDING.
 - KERB ADAPTORS ARE TO BE INSTALLED TO AUTHORITY'S REQUIREMENTS.

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDDEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	-

PRE DATE	AMENDMENT
C 30-03-20	LOTS AND LEGEND AMENDED
B 16-08-19	NOTES AMENDED
A 29-01-19	PRIVATE CERTIFIER

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND JWA Ecological Consultants

DRAWING TITLE

STORMWATER DRAINAGE PLAN SHEET 1

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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Mortons-Urban Solutions
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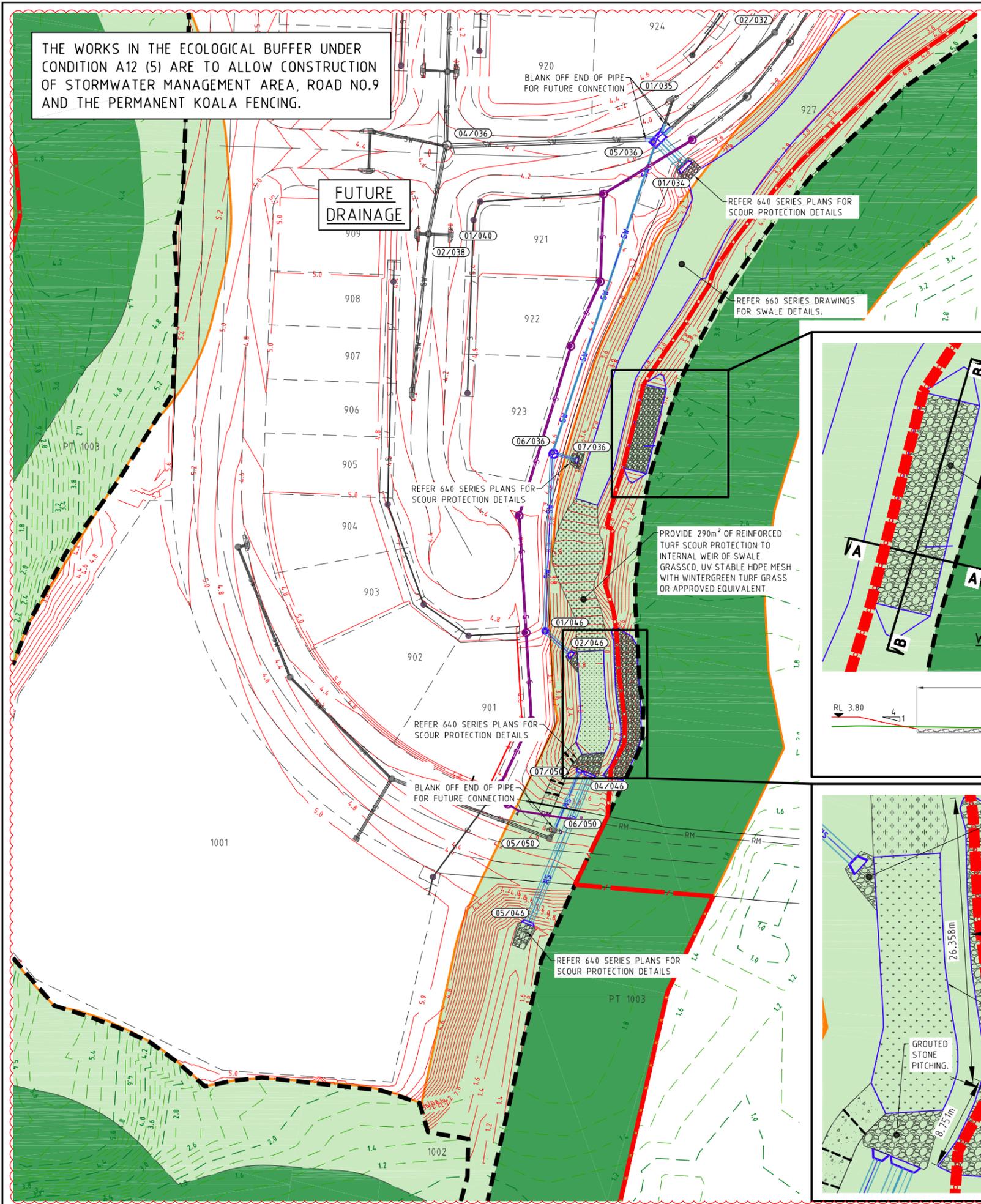
Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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APPROVED [Signature]	NER 2953710 DATE 27-11-18
DRAWING NUMBER 12301-BE1-601	AMEND. C

3/12/23 - lida developments Pty Ltd - kings forest/bulk earthworks/BE1-600.dwg - 20/06/2020 5:42:20 PM, 1:2

THE WORKS IN THE ECOLOGICAL BUFFER UNDER CONDITION A12 (5) ARE TO ALLOW CONSTRUCTION OF STORMWATER MANAGEMENT AREA, ROAD NO.9 AND THE PERMANENT KOALA FENCING.



FUTURE DRAINAGE

REFER 640 SERIES PLANS FOR SCOUR PROTECTION DETAILS

REFER 660 SERIES DRAWINGS FOR SWALE DETAILS.

REFER 640 SERIES PLANS FOR SCOUR PROTECTION DETAILS

REFER 640 SERIES PLANS FOR SCOUR PROTECTION DETAILS

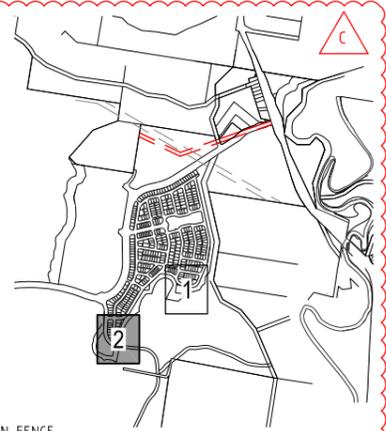
BLANK OFF END OF PIPE FOR FUTURE CONNECTION

REFER 640 SERIES PLANS FOR SCOUR PROTECTION DETAILS

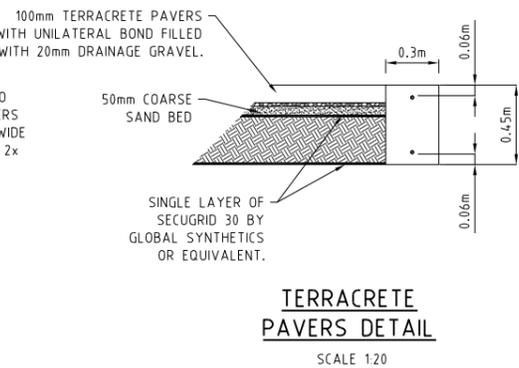
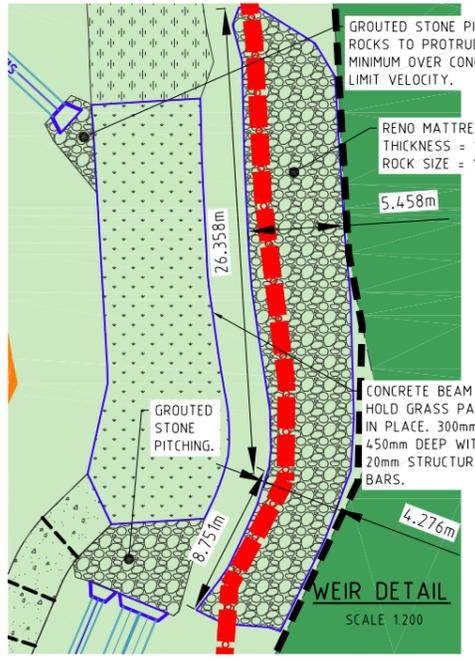
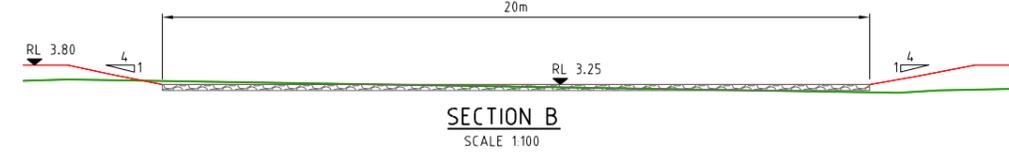
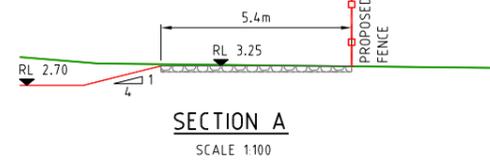
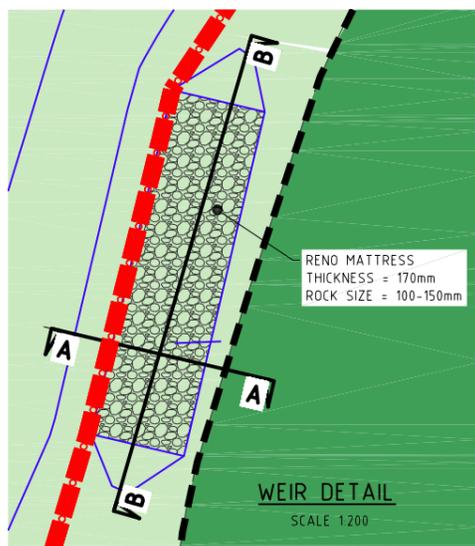
PROVIDE 290m² OF REINFORCED TURF SCOUR PROTECTION TO INTERNAL WEIR OF SWALE GRASSCO, UV STABLE HDPE MESH WITH WINTERGREEN TURF GRASS OR APPROVED EQUIVALENT

LEGEND

- EXISTING PROPERTY LINE
- 1.0 — EXISTING CONTOURS
- - - FUTURE PROPERTY LINE
- - - FUTURE KERB (INVERT)
- 1.0 — FUTURE CONTOURS
- 1.0 — DESIGN CONTOURS
- SW — PROPOSED STORMWATER
- MANHOLE
- ▽ HEADWALL
- ▨ SCOUR PROTECTION
- (10/00) DRAINAGE PIT & LINE NO.
- - - - - LIMIT OF WORKS BOUNDARY
- ▨ ECOLOGICAL BUFFER
- PERMANENT KOALA EXCLUSION FENCE
- TEMPORARY KOALA EXCLUSION FENCE
- TEMPORARY CONSTRUCTION LIMIT FENCE

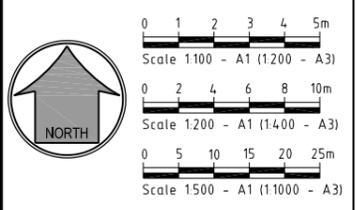


SHEET LAYOUT



PROJECT NAME
KINGS FOREST
BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
C 11-03-20	SCOUR AND NOTES AMENDED
B 16-08-19	LIMIT OF WORKS AMENDED
A 29-01-19	PRIVATE CERTIFIER

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ASSOCIATED CONSULTANTS

DRAWING TITLE
STORMWATER DRAINAGE PLAN SHEET 2

Urban & Regional Planning
Civil Engineering
Project Coordination

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Tel 07 5571 1099
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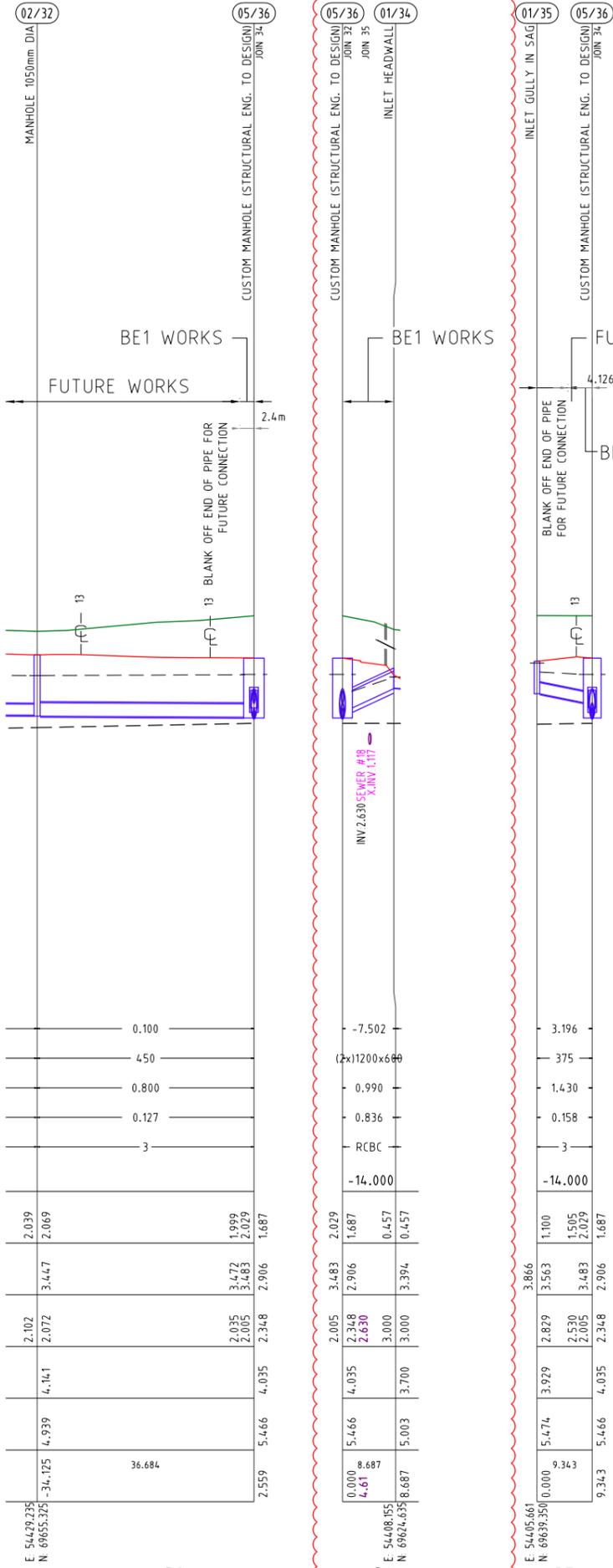
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DRAWING NUMBER 12301-BE1-602	AMEND. C

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STRUCTURE NAME

STRUCTURE DESCRIPTION

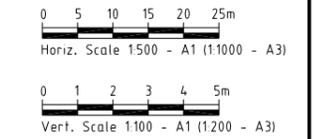


PIPE GRADE (%)	0.100	-7.502	3.196
PIPE DIAMETER (mm)	450	1200x600	375
VELOCITY (m/s)	0.800	0.990	1.430
PIPE FLOW (m ³ /s)	0.127	0.836	0.158
PIPE CLASS	3	RCBC	3
DATUM R.L.		-14.000	-14.000
DEPTH TO INVERT	2.039 2.069	2.029 1.687 0.457 0.457	1.100 1.505 2.029 1.687
HYDRAULIC GRADE LINE	3.447	3.483 2.906	3.866 3.563
PIPE INVERT LEVELS	2.102 2.072	2.005 2.348 2.348	2.829 2.530 2.005 2.348
DESIGN SURFACE LEVELS	4.741	4.035 3.700	3.929 4.035
EXISTING SURFACE LEVELS	4.939	5.466 5.003	5.474 5.466
CHAINAGE	36.684	0.000 8.687 4.6 8.687	0.000 9.343 9.343
DRAINAGE LINE			

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
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Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
& Lot 272 on DP755701, Lot 96 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
B 18-09-19	PROFILE AMENDED
A 29-01-19	PRIVATE CERTIFIER

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ASSOCIATED CONSULTANTS

DRAWING TITLE
STORMWATER PROFILES SHEET 1

Urban & Regional Planning
Civil Engineering
Project Coordination

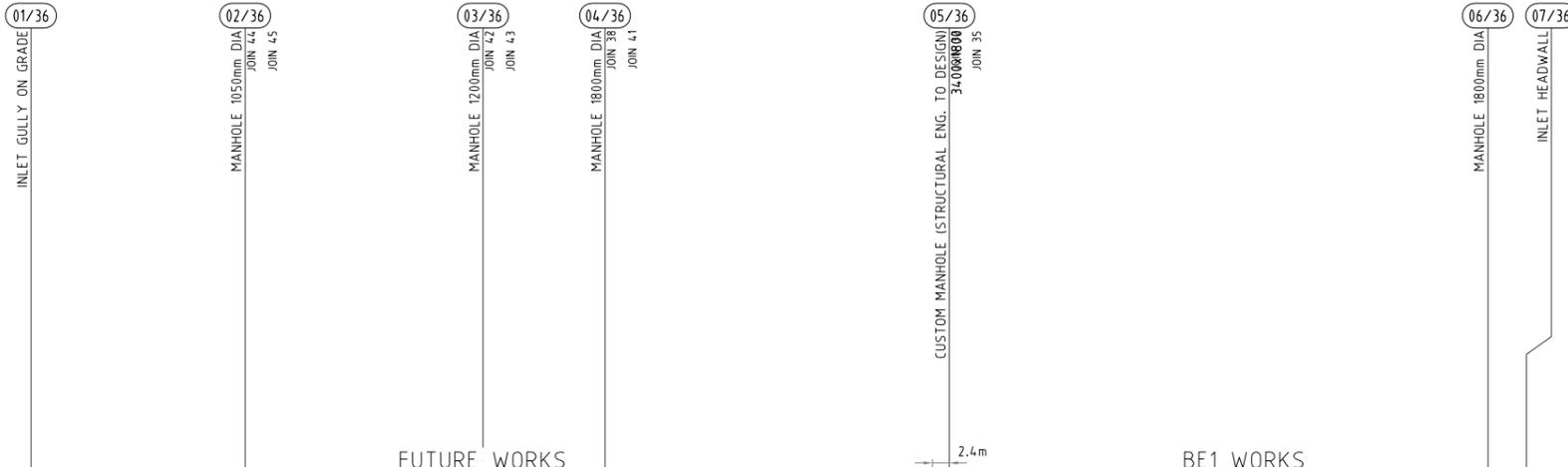
MUS Pty Ltd T/As: Postal Address
Mortons-Urban Solutions PO Box 2484
ABN 39 116 375 065 Southport QLD 4215

mortons@urbansolutions.net.au
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DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 27-11-18
DRAWING NUMBER	
12301-BE1-620	AMEND. B

STRUCTURE NAME

STRUCTURE DESCRIPTION

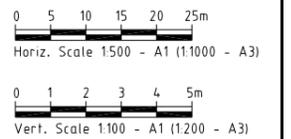


PIPE GRADE (%)	1.894	0.782	0.500	0.194	0.100	-5.472
PIPE DIAMETER (mm)	450	600	750	900	300	600x600
VELOCITY (m/s)	0.780	1.170	1.100	1.320	1.600	5.400
PIPE FLOW (m ³ /s)	0.079	0.283	0.484	0.839	0.110	-1.309
PIPE CLASS	3	3	3	3	3	3
DATUM R.L.	-14.000					
DEPTH TO INVERT	1.181	1.663	1.793 1.910	2.241	1.999	2.650 2.680
HYDRAULIC GRADE LINE	4.033 3.955	3.933 3.869	3.799 3.764	3.731 3.588	3.483 3.440	3.329 3.394
PIPE INVERT LEVELS	3.147	2.571 2.541	2.277 2.160	2.241 2.130	2.035 2.005 2.000	1.929 1.899 2.700
DESIGN SURFACE LEVELS	4.328	4.234	4.070	4.401	4.035	4.579 3.800
EXISTING SURFACE LEVELS	5.509	5.792	6.174	6.408	5.466	4.539 4.100
CHAINAGE	0.000 30.413	30.413 33.776	64.389 64.389	81.519 81.519	130.397 130.397	206.872 206.872
DRAINAGE LINE	E. 54358.514 N. 69710.294	E. 54353.685 N. 69680.123	E. 54353.506 N. 69646.368	E. 54353.145 N. 69629.044	E. 54401.992 N. 69630.757	E. 54377.833 N. 69556.998

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
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Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	--

PRE DATE	AMENDMENT
B 18-09-19	PROFILE AMENDED
A 29-01-19	PRIVATE CERTIFIER

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ASSOCIATED CONSULTANTS

DRAWING TITLE
STORMWATER PROFILES SHEET 2

MORTONS urban solutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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Fax 07 5571 1088 Southport QLD 4215

DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710
DATE 27-11-18	

DRAWING NUMBER
12301-BE1-621

AMEND.
B

STRUCTURE NAME

STRUCTURE DESCRIPTION

PIPE GRADE (%)

PIPE DIAMETER (mm)

VELOCITY (m/s)

PIPE FLOW (m³/s)

PIPE CLASS

DATUM R.L.

DEPTH TO INVERT

HYDRAULIC GRADE LINE

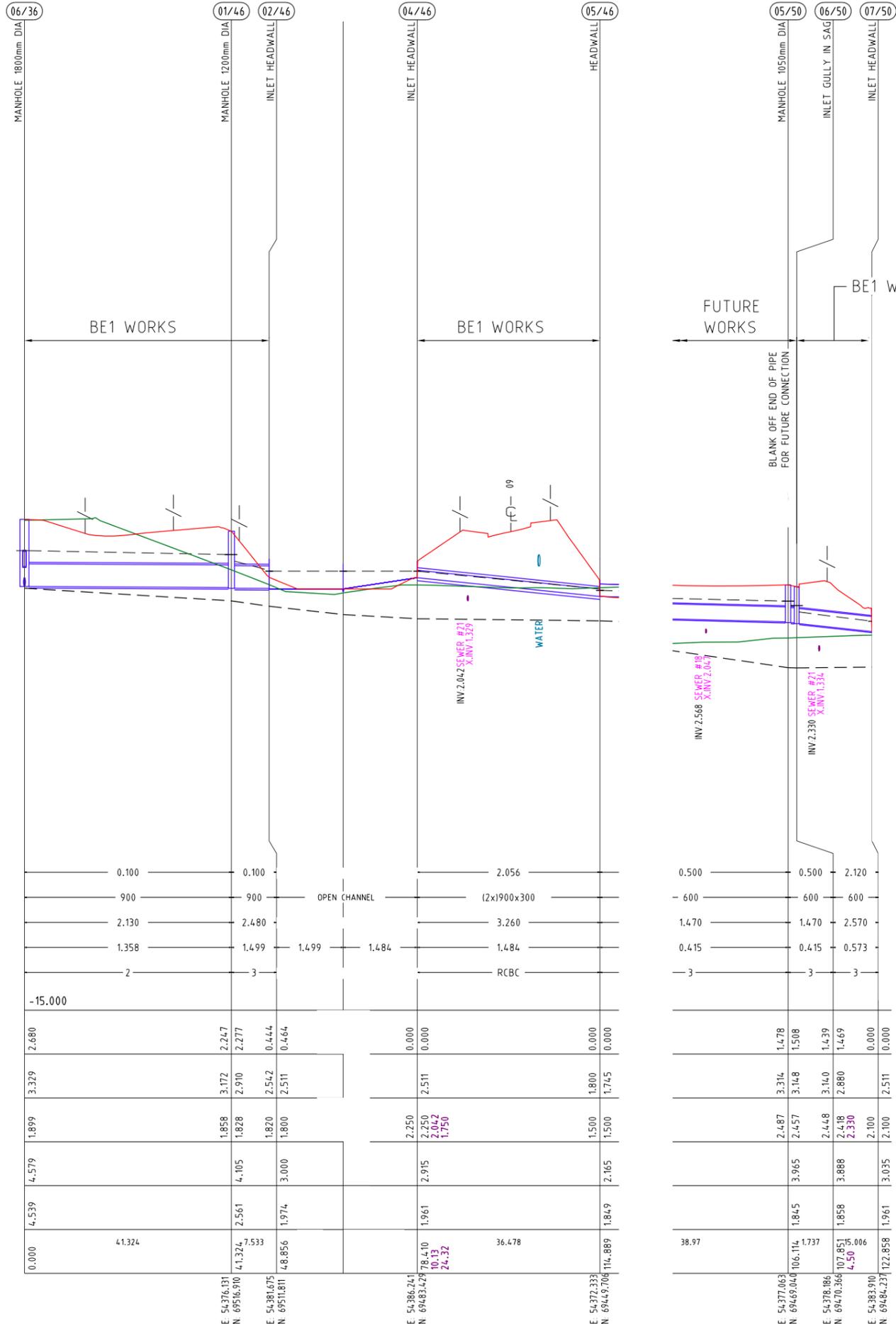
PIPE INVERT LEVELS

DESIGN SURFACE LEVELS

EXISTING SURFACE LEVELS

CHAINAGE

DRAINAGE LINE



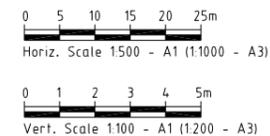
PROJECT NAME

KINGS FOREST

BECC - CONTRACT 1

REAL PROPERTY DESCRIPTION
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 Lot 1 on DP781633, Lot 40 on DP7482,
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 & Lot 326 on DP755701
 PARISH OF CUDGEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28
PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
29-01-19	PRIVATE CERTIFIER

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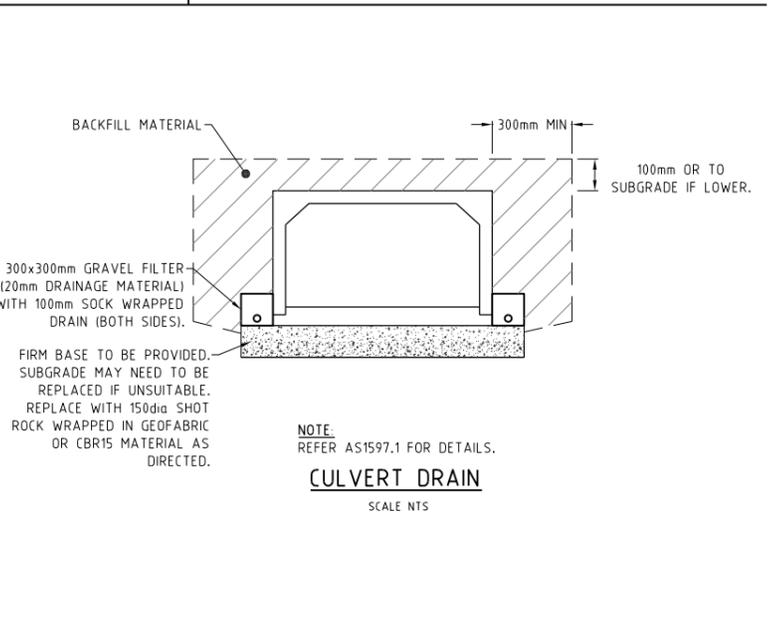
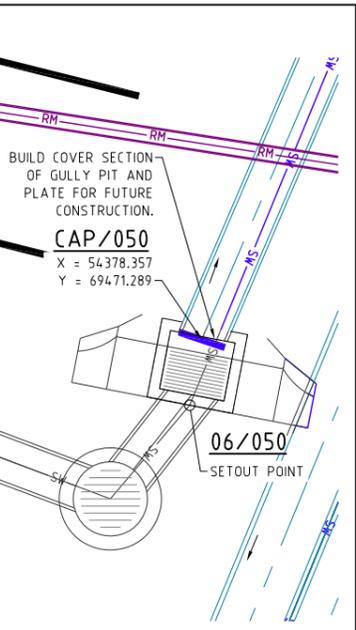
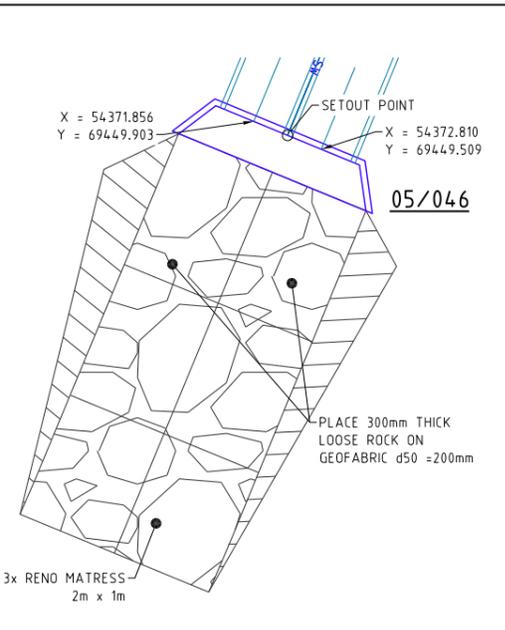
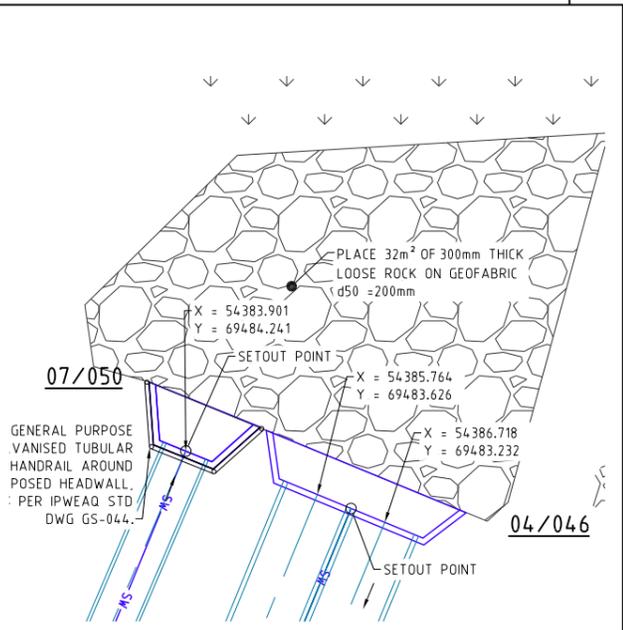
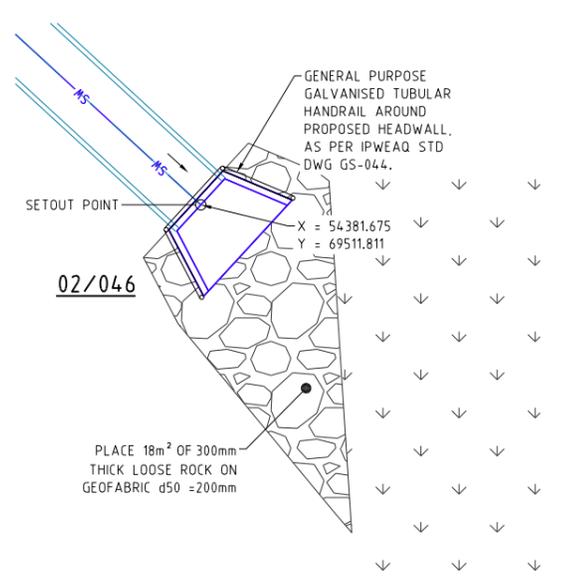
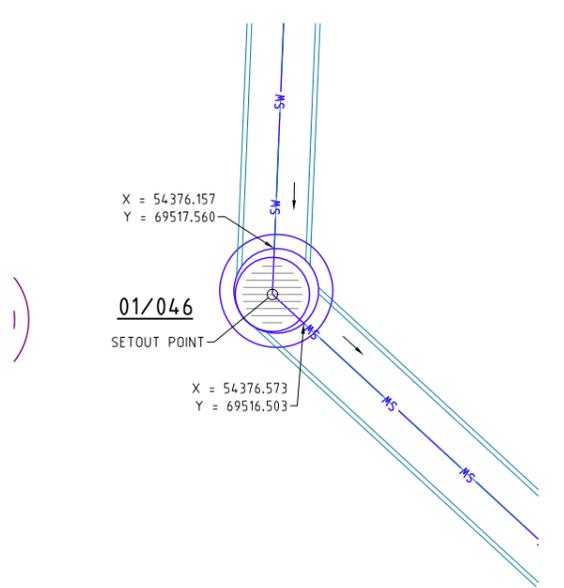
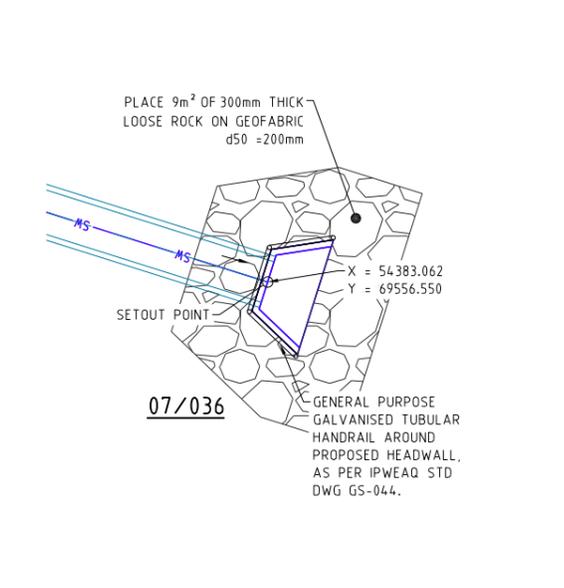
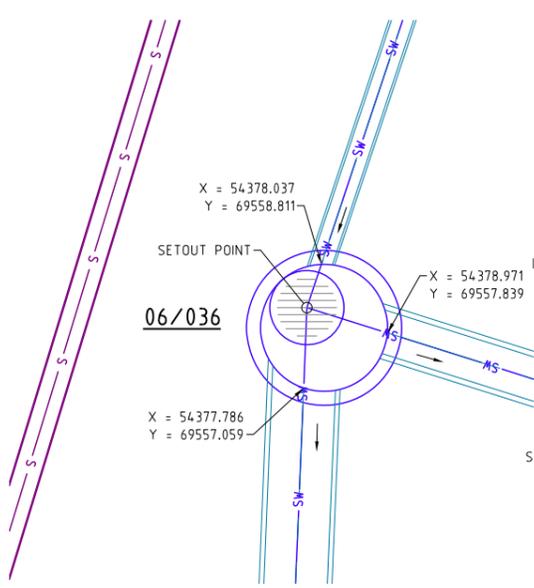
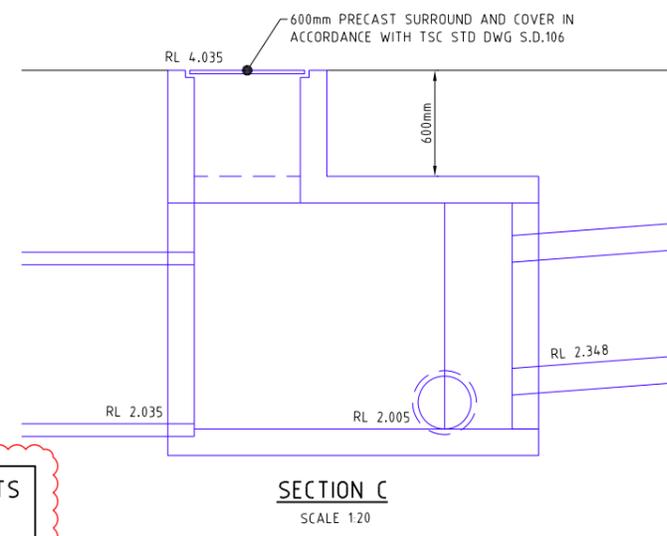
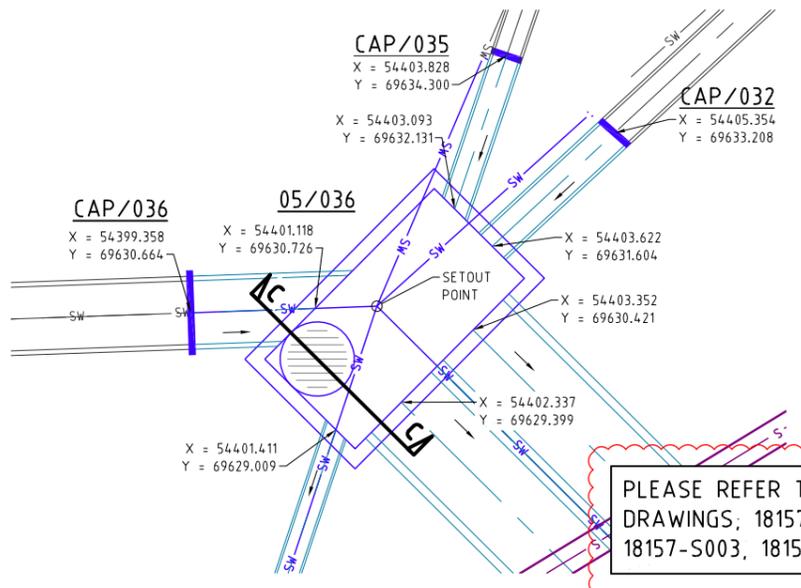
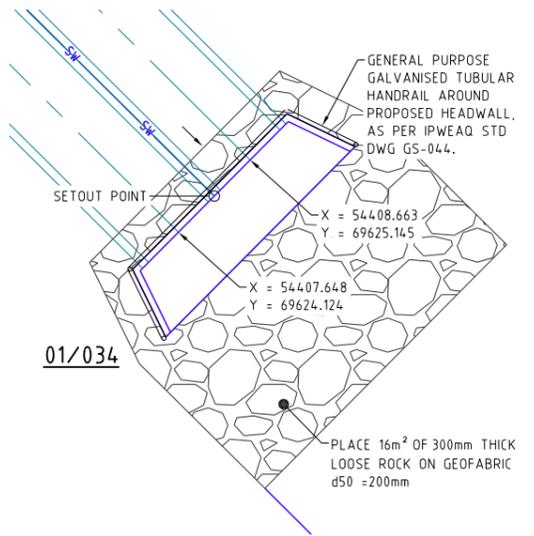
STORMWATER
 PROFILES
 SHEET 3



MUS Pty Ltd T/As: Postal Address
 Mortons-Urban Solutions PO Box 2484
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 mortons@urbansolutions.net.au
 www.urbansolutions.net.au Gold Coast Office
 Tel 07 5571 1099 Suite 9, 19 Short St
 Fax 07 5571 1088 Southport QLD 4215

DESIGNED RB DRAWN CB
 APPROVED [Signature] NER 2953710 DATE 27-11-18

DRAWING NUMBER
12301-BE1-622 AMEND.
A

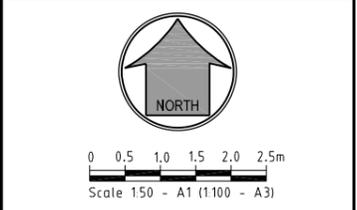


PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDDEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
C	29-08-19 NOTES AMENDED
B	16-08-19 STORMWATER DETAILS AMENDED
A	29-01-19 PRIVATE CERTIFIER

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND JWA Ecological Consultants

DRAWING TITLE

STORMWATER TYPICAL DETAILS AND PIT DETAILS SHEET 1 OF 2

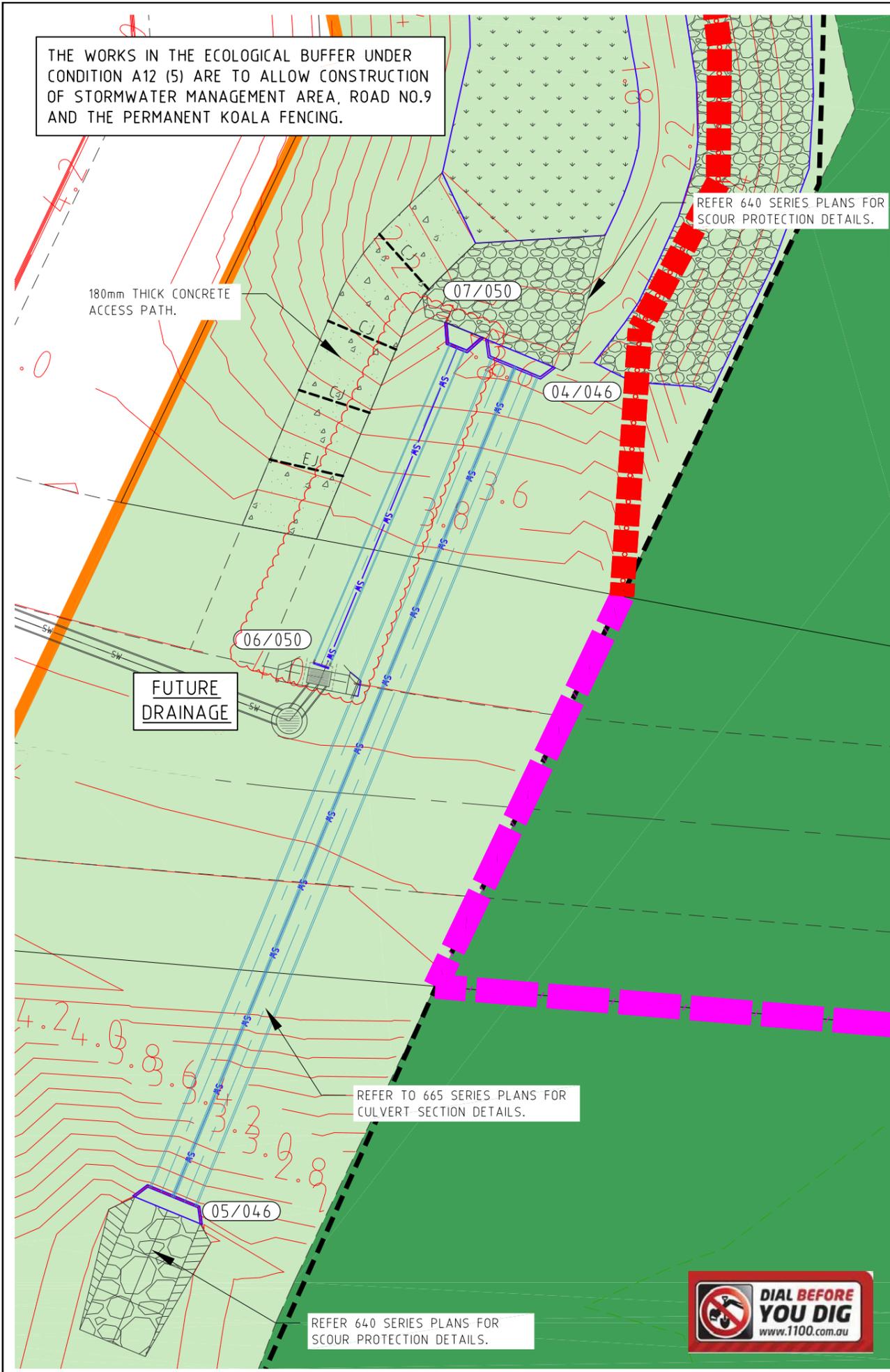
MORTONS urban solutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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Mortons-Urban Solutions
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mortons@urbansolutions.net.au
www.urbansolutions.net.au
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Fax 07 5571 1088

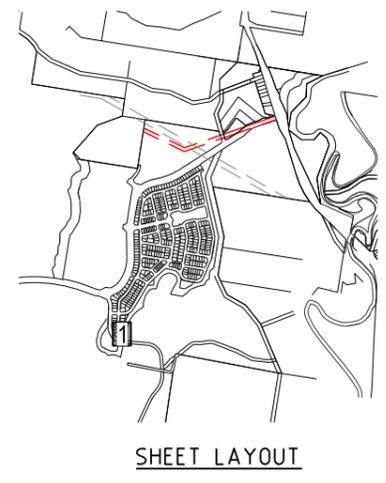
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PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	CB
APPROVED	NER	2953710	DATE 27-11-18
DRAWING NUMBER			AMEND.
12301-BE1-640			C



- LEGEND**
- EXISTING PROPERTY LINE
 - 1.0 — EXISTING CONTOURS
 - - - FUTURE PROPERTY LINE
 - - - FUTURE KERB (INVERT)
 - 1.0 — DESIGN CONTOURS
 - SW — PROPOSED STORMWATER
 - MANHOLE
 - ▽ HEADWALL
 - SCOUR PROTECTION
 - (10/001) DRAINAGE PIT & LINE NO.
 - - - LIMIT OF WORKS BOUNDARY
 - ⊕ XX HERITAGE LOCATION
 - ECOLOGICAL BUFFER
 - PERMANENT KOALA EXCLUSION FENCE
 - TEMPORARY KOALA EXCLUSION FENCE

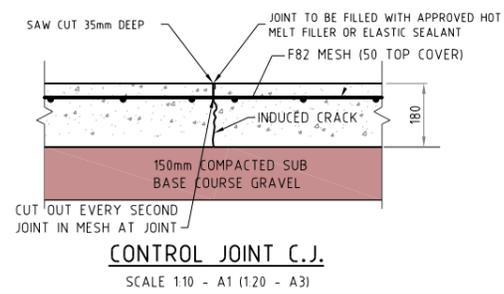
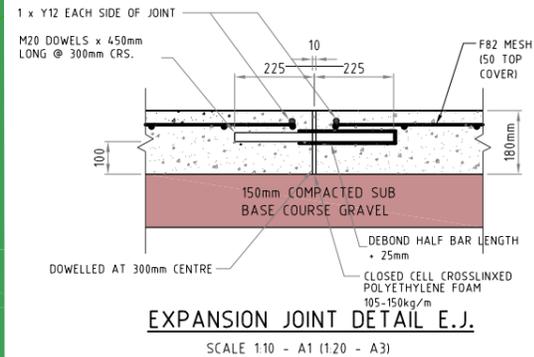


CONCRETE PAVEMENT DRIVEWAY:

1. CONCRETE MIX
THE CONCRETE SHALL HAVE A MINIMUM 28 DAY CHARACTERISTIC COMPRESSIVE STRENGTH AS SPECIFIED IN THE SCHEDULE OF CONCRETE PAVEMENTS TABLE, MAXIMUM WATER/CEMENT RATIO OF 0.45 AND A MINIMUM CEMENT CONTENT OF 300kg/m³.
2. SUBGRADE PREPARATION
THE SUBGRADE TO THE CONCRETE PAVEMENT AREAS SHALL BE PREPARED THE SAME AS CONVENTIONAL ROADS. REFER TO SCHEDULE OF CONCRETE PAVEMENTS TABLE.
3. TRAFFIC
TRAFFIC SHALL NOT BE ALLOWED ON THE FINISHED CONCRETE PAVEMENT FOR AT LEAST 14 DAYS AFTER COMPLETION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING MEASURES TO PREVENT UNAUTHORISED ACCESS.
4. JOINTS
ALL JOINTS SHALL BE LOCATED GENERALLY PERPENDICULAR TO THE CENTRELINE. ALL CONTROL JOINTS TO BE COMPLETED AS SOON AS CONCRETE HAS CURED SUFFICIENTLY SO AS NOT TO DAMAGE THE SLAB SURFACE. ALL JOINTS ARE TO BE INSTALLED AS DETAILED ON IPWEAQ STD DWG RS-065.
5. GENERAL
THE GRAVEL PAVEMENT SHALL BE NEATLY PROFILED AND TRIMMED TO ENSURE CONSTANT CONCRETE DEPTHS AND PROFILES. ACTUAL CONSTRUCTION REQUIREMENTS MAY VARY FROM THE DETAILS SHOWN AND THEREFORE ALL CONSTRUCTION DETAILS SHOULD BE VERIFIED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION COMMENCING. PROVIDE ABLEFLEX BETWEEN KERB AND DRIVEWAY.
6. COMPLIANCE STANDARDS
SLIP RESISTANCE OF SURFACE MATERIALS IN ACCORDANCE WITH AUSTRALIAN STANDARDS. AS/NZS 4586: 2013 SLIP RESISTANCE OF NEW PEDESTRIAN SURFACE MATERIALS. AS/NZS 4663: 2013 SLIP RESISTANCE MEASUREMENT OF EXISTING PEDESTRIAN SURFACES HB/A A 197: 1999 "AN INTRODUCTORY GUIDE TO THE SLIP RESISTANCE OF PEDESTRIAN SURFACE MATERIALS"

SCHEDULE OF CONCRETE PAVEMENTS					
FUNCTION	SURFACING	SUBBASE PREPARATION	THICKNESS 'T'	STRENGTH	REINFORCING
DRIVEWAY STORMWATER BASIN	HEAVY BROOM FINISH	100mm DBG20 (MIN CBR 15)	180mm	32 mPa	SL 82 MESH

NOTE: FOOTPATH JOINTING TO BE IN ACCORDANCE WITH IPWEAQ DRG RS-065 SUPERINTENDENT TO CONFIRM SUBGRADE PREPARATION

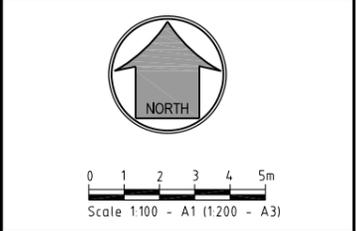


PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDDEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

REV	DATE	DESCRIPTION
B	16-08-19	STORMWATER AND TABLE AMENDED
A	29-01-19	PRIVATE CERTIFIER

PREPARED BY: [Signature]

AMENDMENT

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ASSOCIATED CONSULTANTS

LANDSURVY

GILBERT SUTHERLAND JWA Ecological Consultants

DRAWING TITLE

STORMWATER CULVERT & CONCRETE ACCESS PATH SHEET 1

MORTONS urban solutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	BY	DRAWN	BY
APPROVED	BY	NER 2953710	DATE 27-11-18
DRAWING NUMBER		AMEND.	
12301-BE1-650		B	

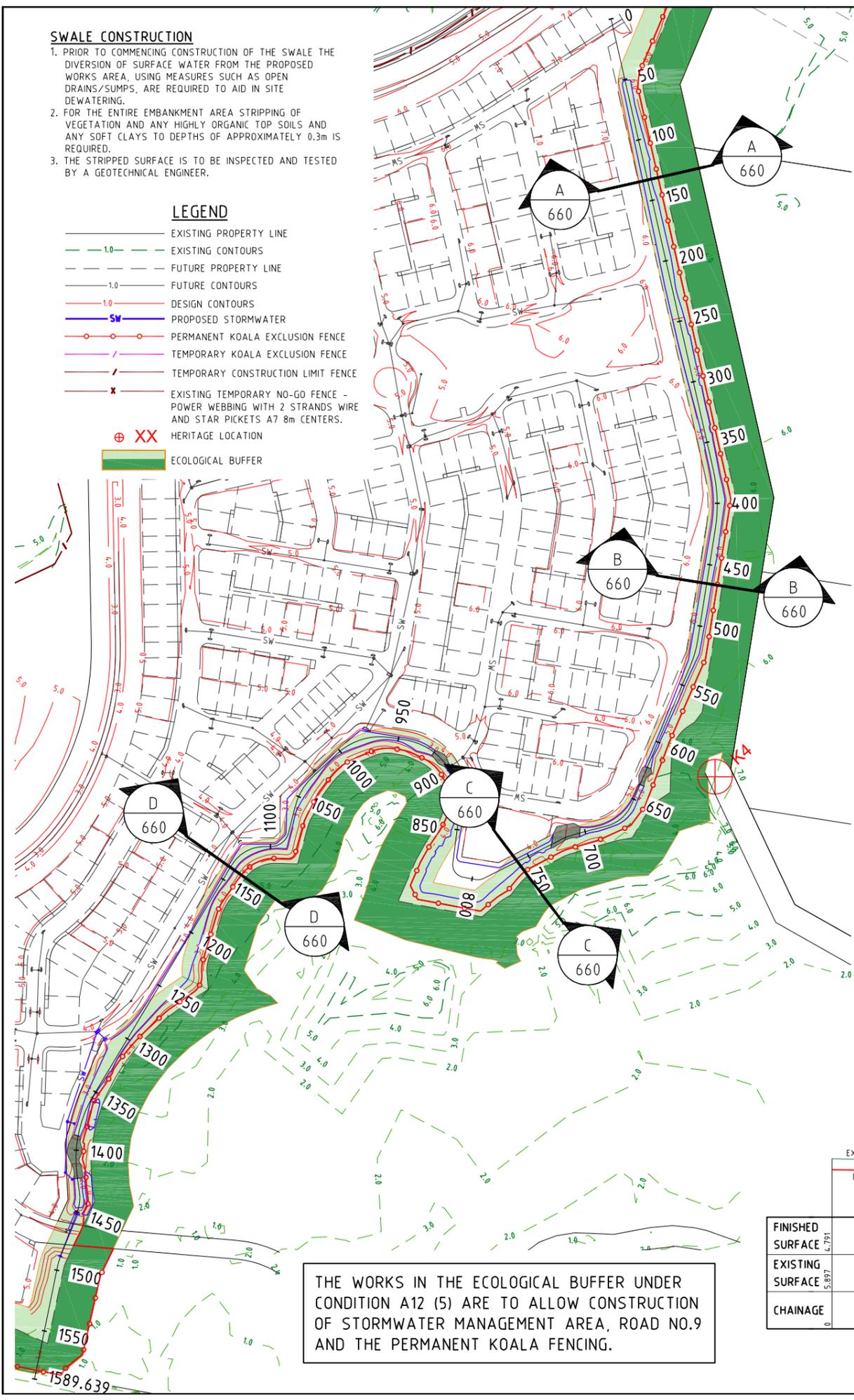


SWALE CONSTRUCTION

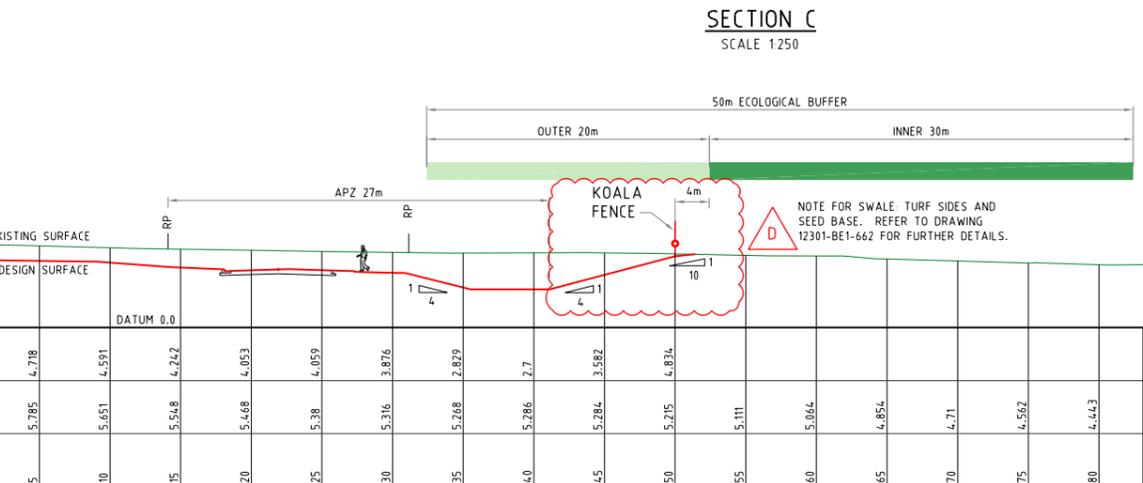
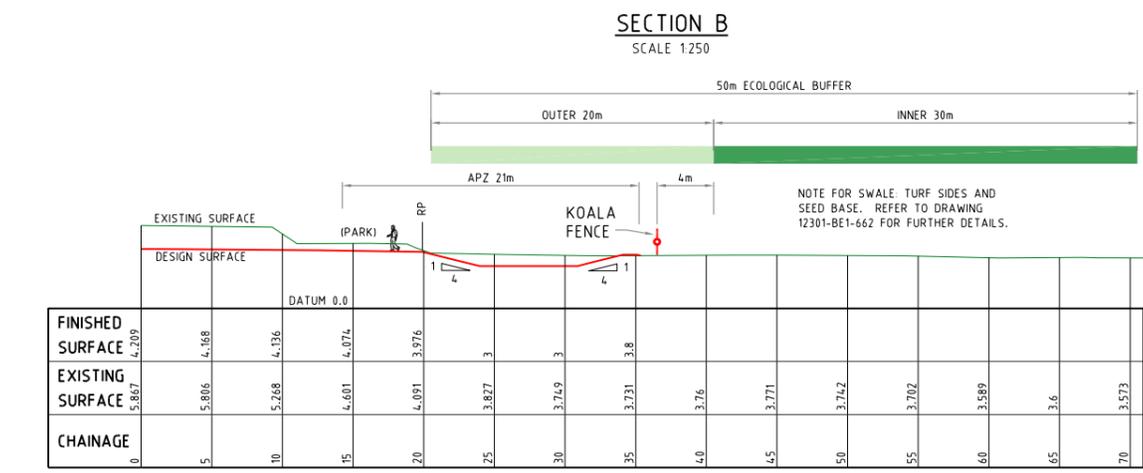
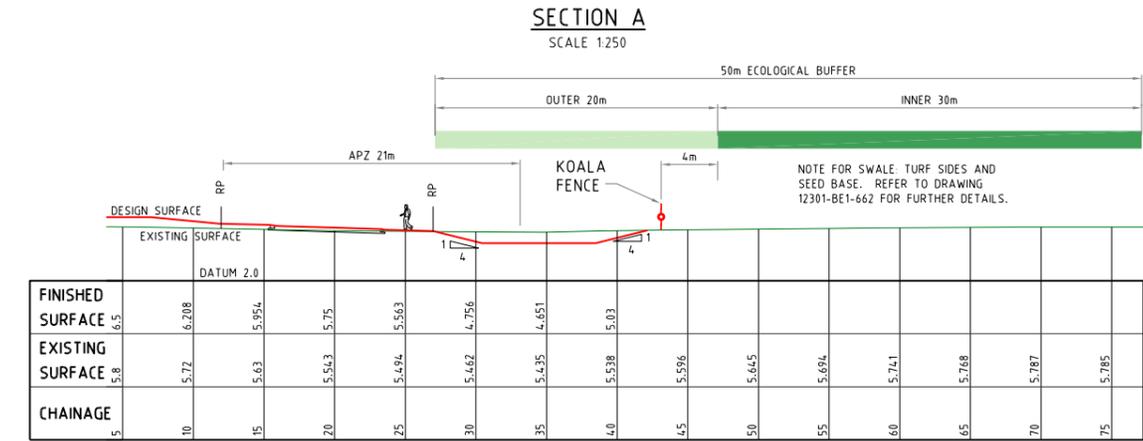
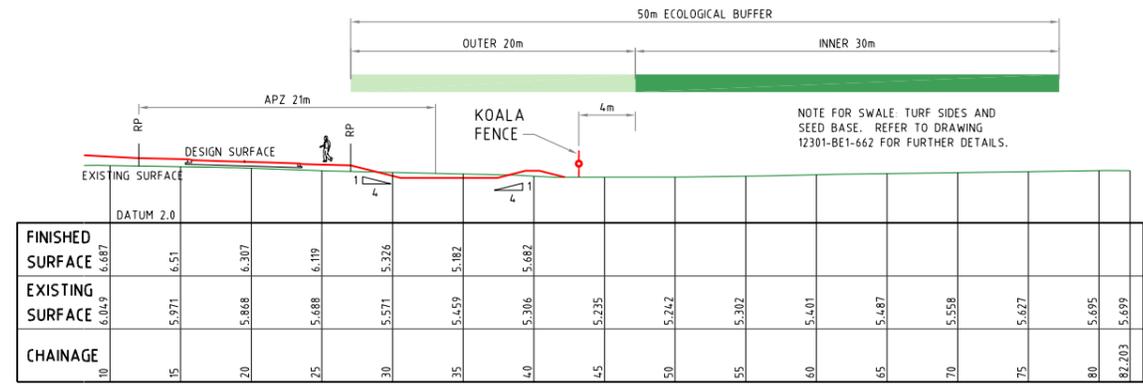
1. PRIOR TO COMMENCING CONSTRUCTION OF THE SWALE THE DIVERSION OF SURFACE WATER FROM THE PROPOSED WORKS AREA, USING MEASURES SUCH AS OPEN DRAINS/SUMPS, ARE REQUIRED TO AID IN SITE DEWATERING.
2. FOR THE ENTIRE EMBANKMENT AREA STRIPPING OF VEGETATION AND ANY HIGHLY ORGANIC TOP SOILS AND ANY SOFT CLAYS TO DEPTHS OF APPROXIMATELY 0.3m IS REQUIRED.
3. THE STRIPPED SURFACE IS TO BE INSPECTED AND TESTED BY A GEOTECHNICAL ENGINEER.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING CONTOURS
- FUTURE PROPERTY LINE
- FUTURE CONTOURS
- DESIGN CONTOURS
- PROPOSED STORMWATER
- PERMANENT KOALA EXCLUSION FENCE
- TEMPORARY KOALA EXCLUSION FENCE
- TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS AT 8m CENTERS.
- HERITAGE LOCATION
- ECOLOGICAL BUFFER

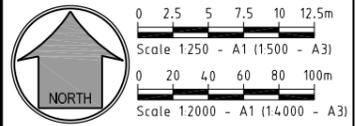


THE WORKS IN THE ECOLOGICAL BUFFER UNDER CONDITION A12 (5) ARE TO ALLOW CONSTRUCTION OF STORMWATER MANAGEMENT AREA, ROAD NO.9 AND THE PERMANENT KOALA FENCING.



PROJECT NAME
KINGS FOREST
BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN
COUNTY OF ROUS

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	

D	DATE	DESCRIPTION
D	02-06-20	GRADE AND NOTES AMENDED
C	30-03-20	NOTE AMENDED
B	16-08-19	SECTIONS AND DESIGN CONTOURS AMENDED
A	29-01-19	PRIVATE CERTIFIER

PREPARED BY: [Signature] AMENDMENT: [Signature]
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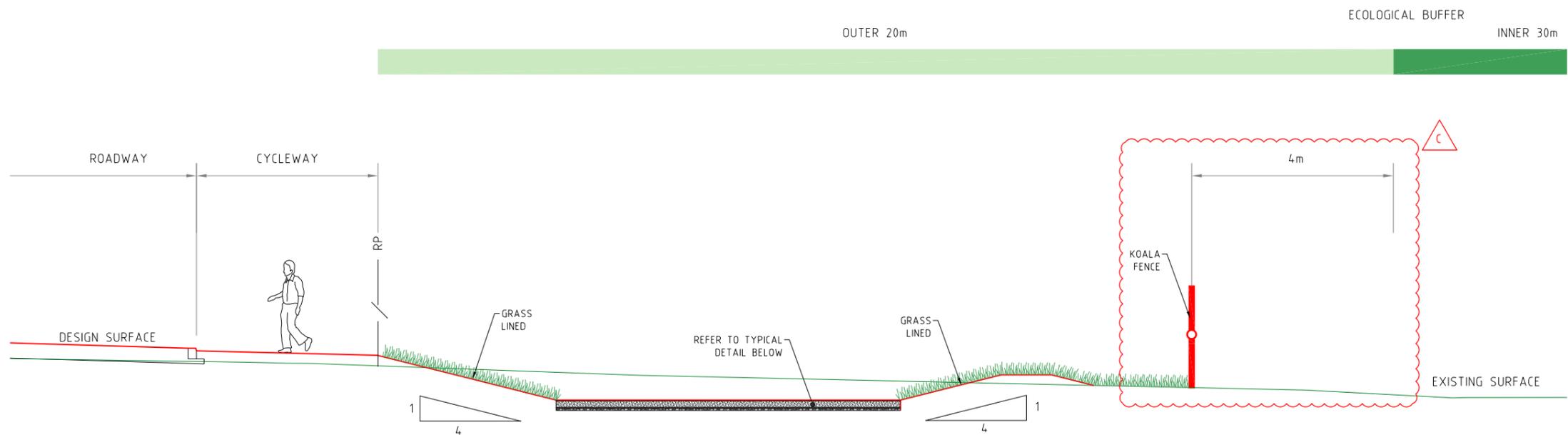
DRAWING TITLE
STORMWATER SWALE PLAN

MORTONS urban solutions
Urban & Regional Planning
Civil Engineering
Project Coordination

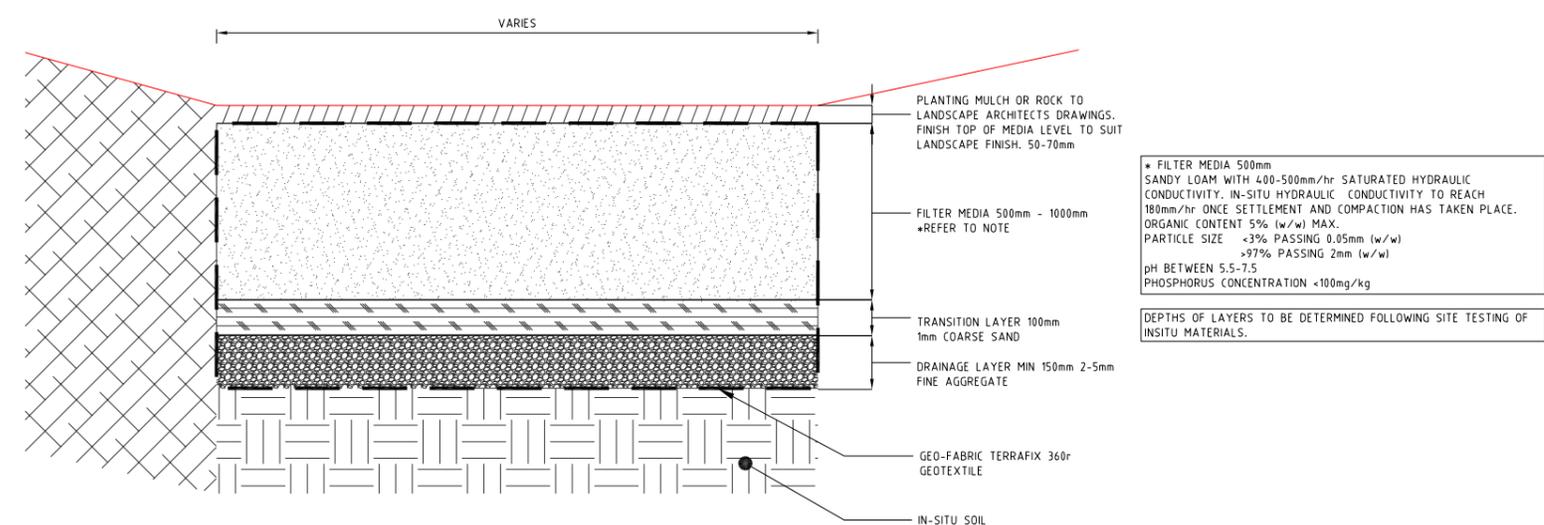
MUS Pty Ltd T/As
Mortons-Urban Solutions
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Fax 07 5571 1088

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Southport QLD 4215

DESIGNED BY	RB	DRAWN BY	CB
APPROVED BY	[Signature]	NER 2953710	DATE 27-11-18
DRAWING NUMBER	12301-BE1-660		
AMEND.	D		



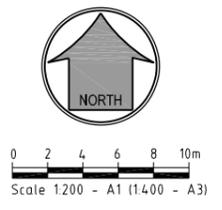
TYPICAL DETAIL OF SWALE
SCALE 1:200



TYPICAL DETAIL OF SWALE SECTION
SCALE 1:10

PROJECT NAME
KINGS FOREST
BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	..

PRE DATE	AMENDMENT
C	03-06-20 DIMENSION AMENDED
B	07-04-20 DETAILS AMENDED
A	16-08-19 PRIVATE CERTIFIER

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ASSOCIATED CONSULTANTS

DRAWING TITLE
STORMWATER SWALE TYPICAL DETAILS

MORTONS urban solutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As: Postal Address
Mortons-Urban Solutions PO Box 2484
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mortons@urbansolutions.net.au
www.urbansolutions.net.au Gold Coast Office
Tel 07 5571 1099 Suite 9, 19 Short St
Fax 07 5571 1088 Southport QLD 4215

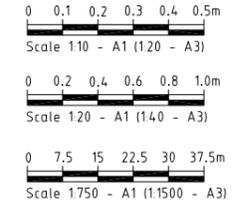
DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 27-11-18
DRAWING NUMBER	
12301-BE1-662	AMEND. C



PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
B	16-08-19 STORMWATER DETAILS AMENDED
A	29-01-19 PRIVATE CERTIFIER

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DRAWING TITLE
TYPICAL CULVERT SECTIONS

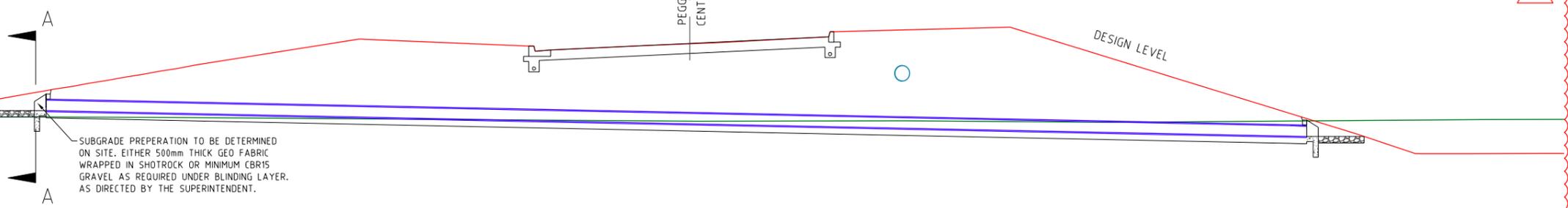
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urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED RB	DRAWN CB
APPROVED [Signature]	NER 2953710 DATE 27-11-18
DRAWING NUMBER 12301-BE1-665	
AMEND. B	

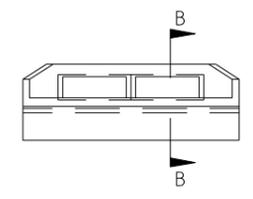
CONSTRUCT 2x300 RCBC INLET HEADWALL INCLUDING EXCAVATION TO ENSURE RUNOFF FLOWS INLET HEADWALL.



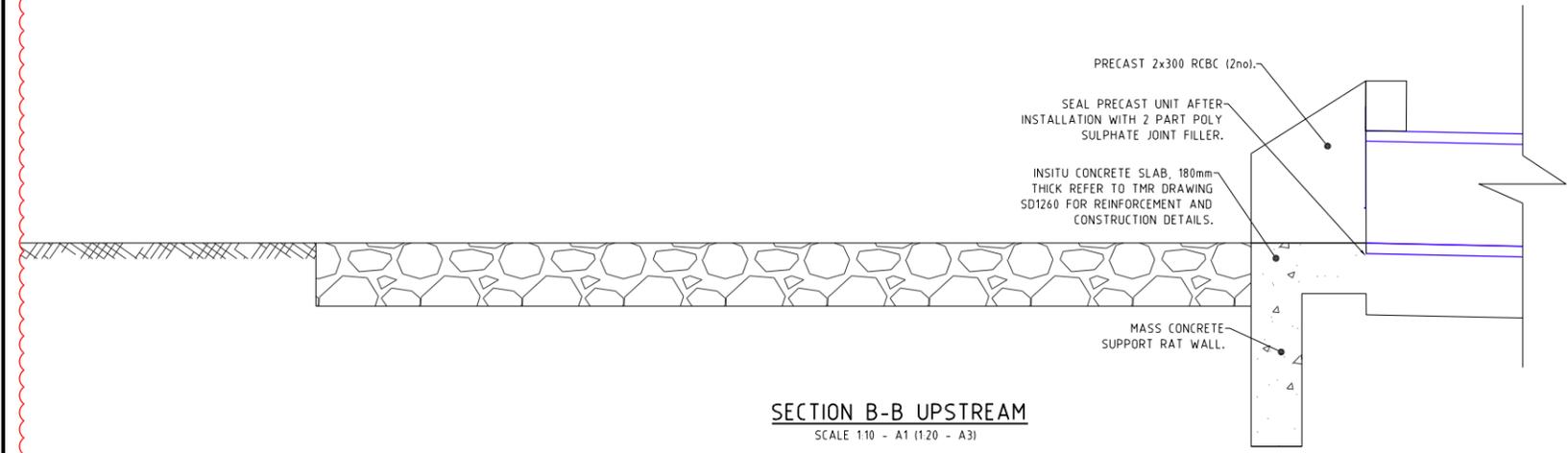
SUBGRADE PREPARATION TO BE DETERMINED ON SITE. EITHER 500mm THICK GEO FABRIC WRAPPED IN SHOTROCK OR MINIMUM CBR15 GRAVEL AS REQUIRED UNDER BLINDING LAYER. AS DIRECTED BY THE SUPERINTENDENT.

DESIGN LIFE	DESIGN LIFE
MINIMUM EXPOSE CLASSIFICATION	B2 TO AS 5100
MINIMUM CONCRETE CLASS	S40/20
MINIMUM COVER TO REINFORCEMENT UNO	55 COVER TO AS 5100

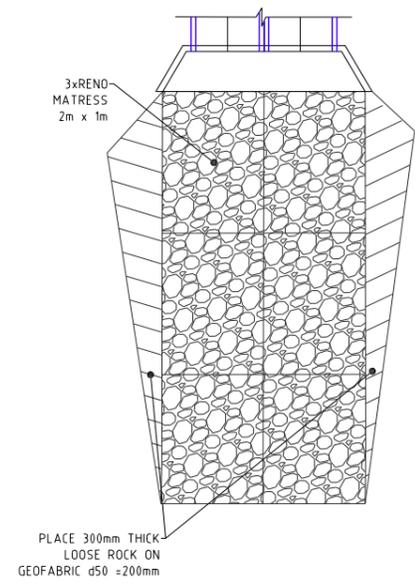
CULVERT SECTION
SCALE 1:750 - A1 (1:1500 - A3)



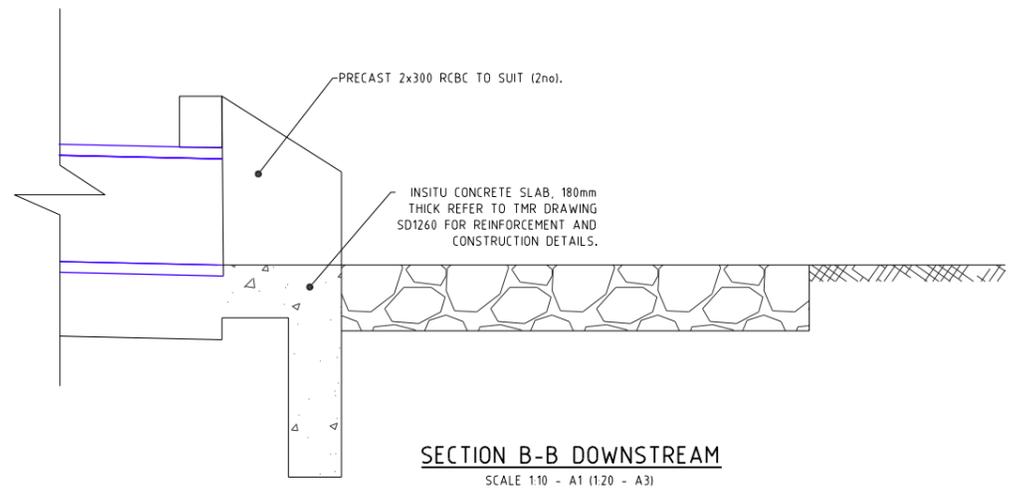
SECTION A-A
SCALE 1:10 - A1 (1:20 - A3)



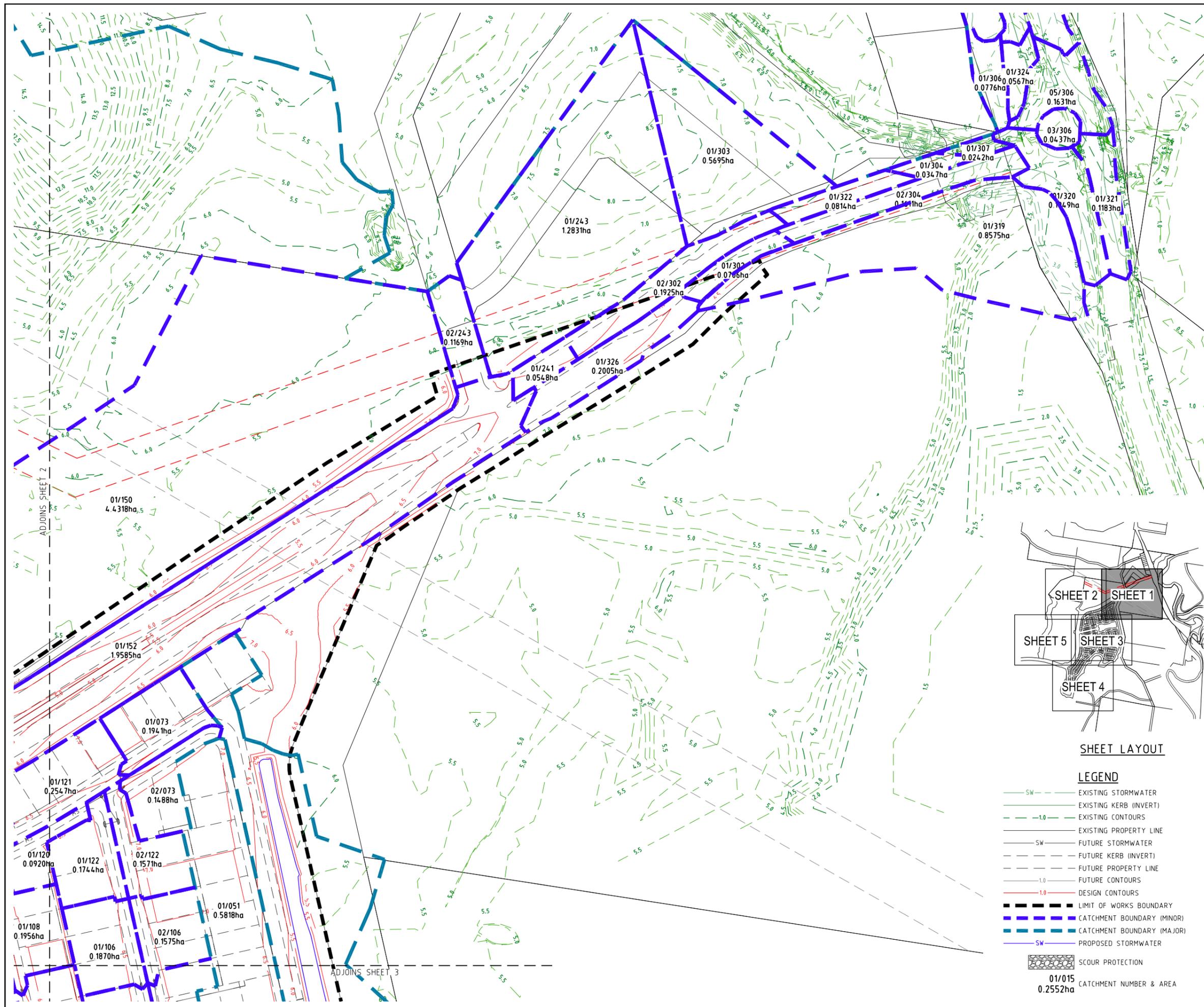
SECTION B-B UPSTREAM
SCALE 1:10 - A1 (1:20 - A3)



PLACE 300mm THICK LOOSE ROCK ON GEOFABRIC d50 =200mm

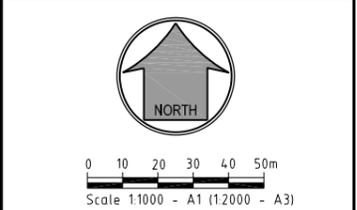


SECTION B-B DOWNSTREAM
SCALE 1:10 - A1 (1:20 - A3)



PROJECT NAME
KINGS FOREST
 BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 & Lot 272 on DP755701, Lot 96 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

PRE DATE	AMENDMENT
B 05-03-20	SHEET LAYOUT AMENDED
A 29-01-19	PRIVATE CERTIFIER

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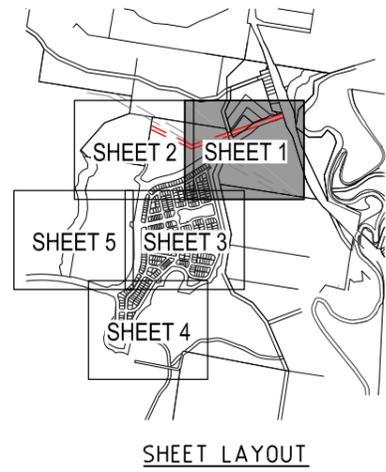
DRAWING TITLE
STORMWATER CATCHMENT PLAN SHEET 1

MORTONS
 urbansolutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

MUS Pty Ltd T/As: Postal Address
 Mortons-Urban Solutions PO Box 2484
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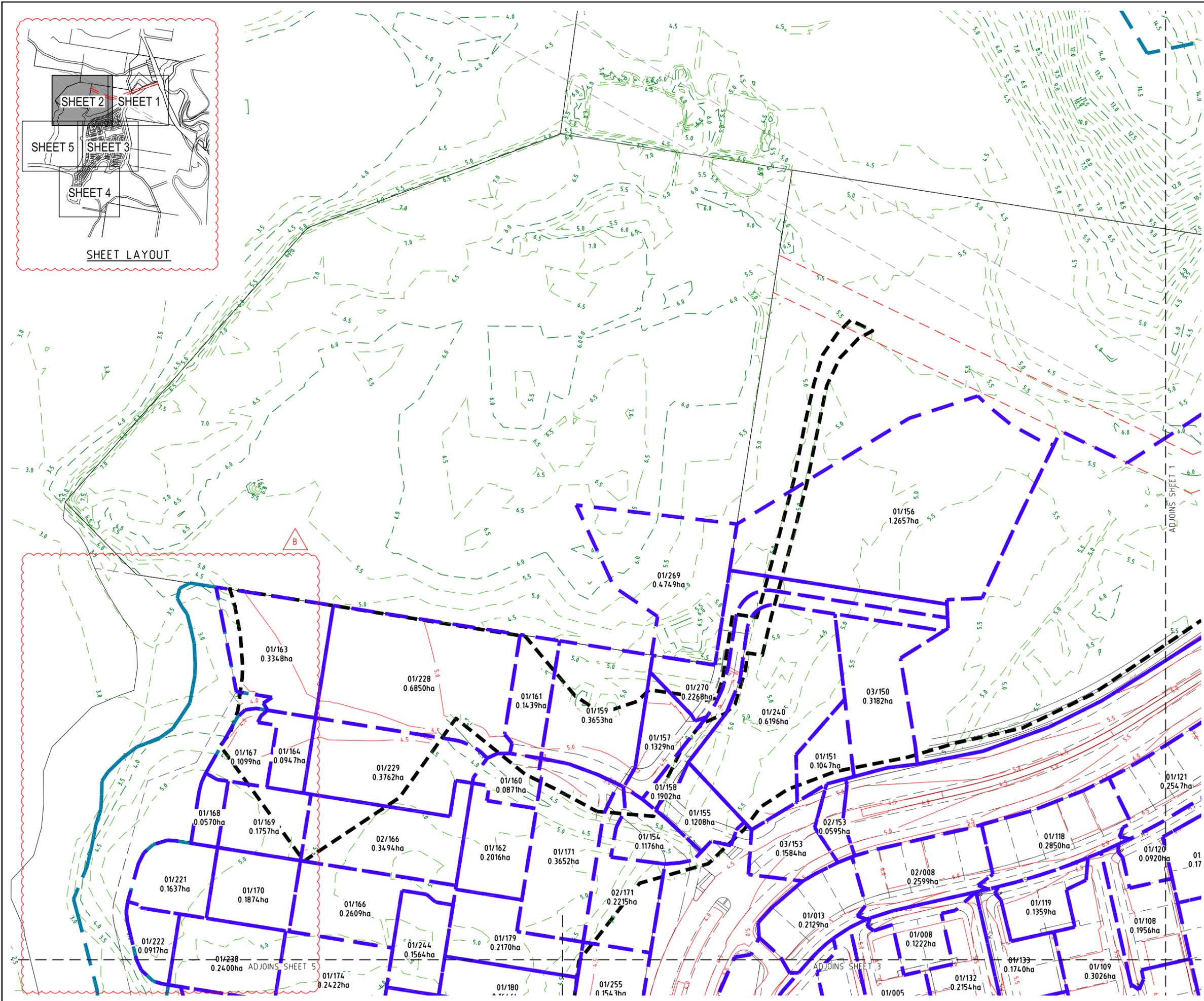
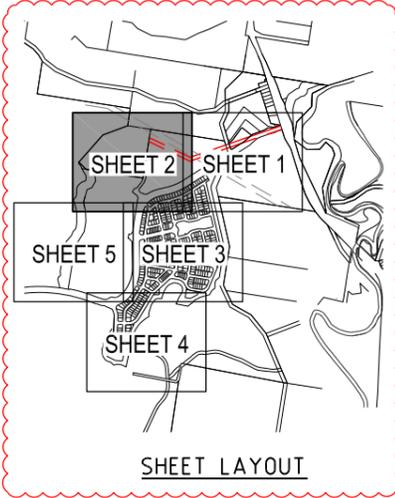
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DESIGNED RB	DRAWN CAB
APPROVED [Signature]	NER 2953710 DATE 26-04-17
DRAWING NUMBER 12301-BE1-670	
AMEND. B	



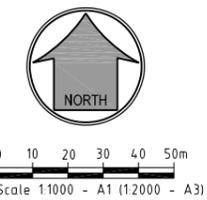
- LEGEND**
- SW — EXISTING STORMWATER
 - EXISTING KERB (INVERT)
 - - - 1.0 - - - EXISTING CONTOURS
 - - - EXISTING PROPERTY LINE
 - SW — FUTURE STORMWATER
 - - - FUTURE KERB (INVERT)
 - - - FUTURE PROPERTY LINE
 - - - 1.0 - - - FUTURE CONTOURS
 - - - 1.0 - - - DESIGN CONTOURS
 - - - - - LIMIT OF WORKS BOUNDARY
 - - - - - CATCHMENT BOUNDARY (MINOR)
 - - - - - CATCHMENT BOUNDARY (MAJOR)
 - - - - - SW - - - PROPOSED STORMWATER
 - [Pattern] SCOUR PROTECTION
 - 01/015 CATCHMENT NUMBER & AREA

3/12/23 - lida developments Pty Ltd 01 - kings forestbuk earthworks\BE1\Current\12301-BE1-670.dwg, 20/06/2020 5:00:16 PM, 1:2



PROJECT NAME
KINGS FOREST
 BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 Lot 272 on DP755701, Lot 96 on DP755701
 & Lot 326 on DP755701
 PARISH OF CUDDEN .
 COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



ISSUES	DATE
TENDER	13-11-19
COUNCIL	XX-XX-XX
CONSTRUCTION	

B	05-03-20	CONTOURS, LIMITS AND SHEET LAYOUT AMENDED
A	29-01-19	PRIVATE CERTIFIER
PRE DATE	AMENDMENT	

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DRAWING TITLE

STORMWATER CATCHMENT PLAN SHEET 2

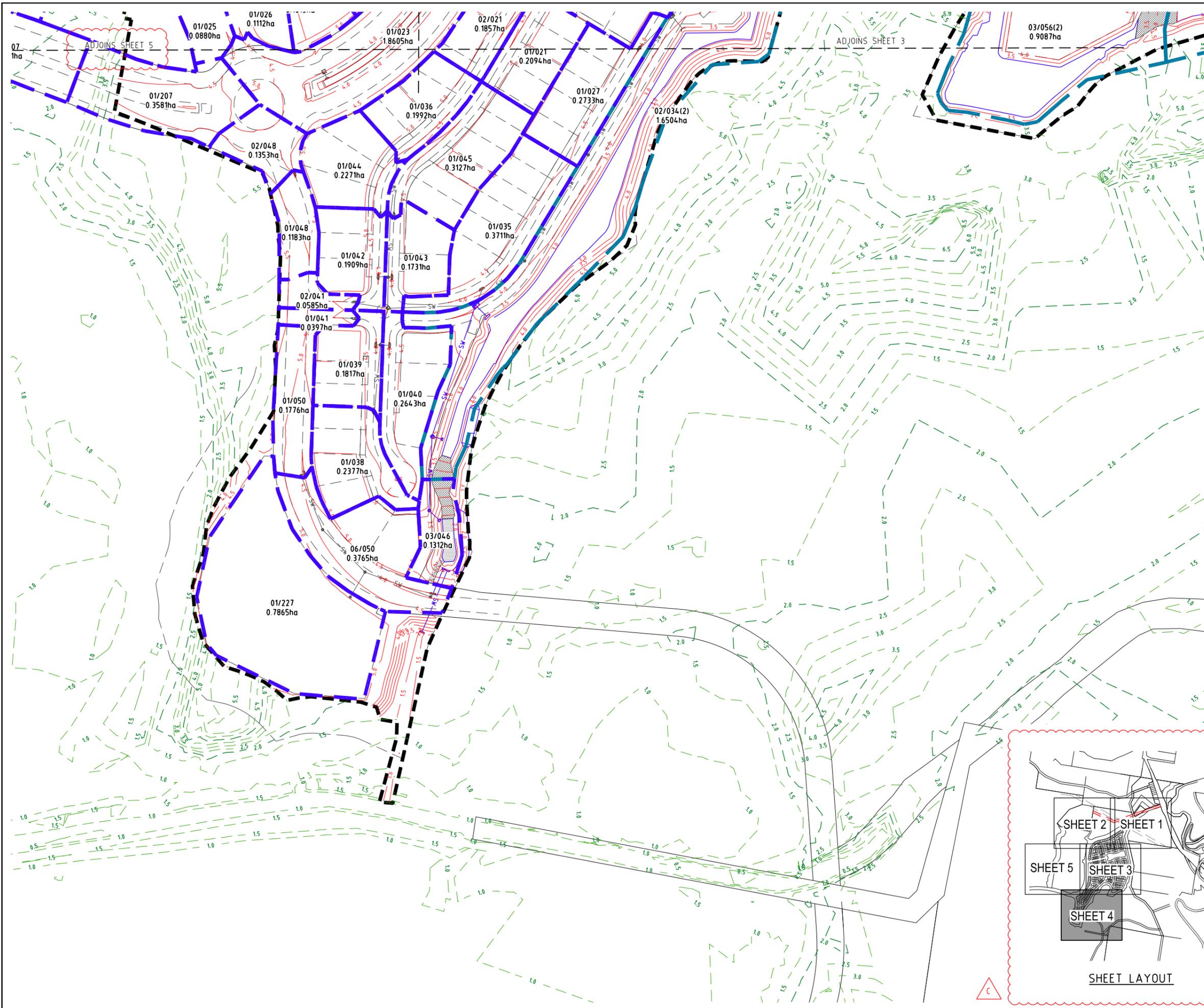
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 Civil Engineering
 Project Coordination

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DESIGNED	RB	DRAWN	CAB
APPROVED	PL	NER	2953710
DRAWING NUMBER			AMEND.
12301-BE1-671			B

3/12/23 - lida developments Pty Ltd 01 - kings forest/bk earthworks/BE1/Current/12301-BE1-671.dwg, 20/06/2020 5:00:34 PM, 1:2



PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
 REAL PROPERTY DESCRIPTION
 Lot 7 on DP875447, Part of Lot 6 on DP875446,
 Lot 1 on DP781633, Lot 40 on DP7482,
 Lot 2 on DP819015, Lot 1 on DP129737,
 Lot 37A on DP13727, Lot 38A on DP13727,
 Lot 38B on DP13727, Lot 1 on DP706497,
 Lot 76 on DP755701, Lot 323 on DP755701,
 Lot 272 on DP755701, Lot 96 on DP755701
 & Lot 326 on DP755701
 PARISH OF CUDGEN .
 COUNTY OF ROUS .

CLIENT
**PROJECT 28
 PTY LTD**



0 10 20 30 40 50m
 Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

C	05-03-20	SHEET LAYOUT AMENDED
B	16-08-19	LIMIT OF WORKS AMENDED
A	29-01-19	PRIVATE CERTIFIER

PRE DATE AMENDMENT
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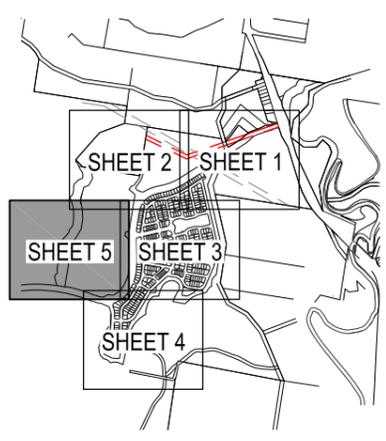
DRAWING TITLE
**STORMWATER
 CATCHMENT PLAN
 SHEET 4**

MORTONS
 urban solutions
 Urban & Regional Planning
 Civil Engineering
 Project Coordination

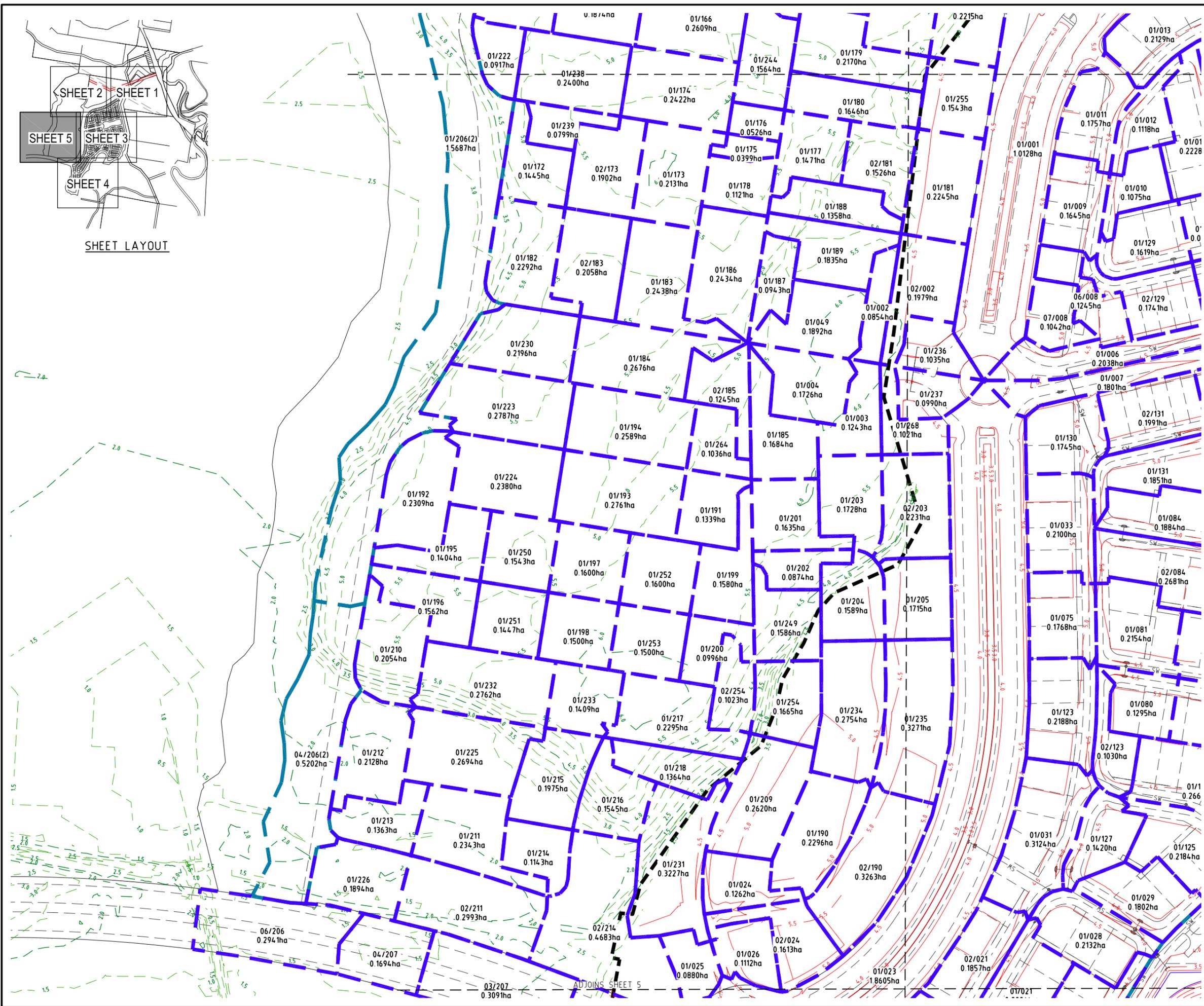
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APPROVED [Signature]	NER 2953710 DATE 26-04-17
DRAWING NUMBER	AMEND.
12301-BE1-673	C

Y:\123 - lida developments\RY\12301 - kings forest\lida\work\12301-BE1-673.dwg, 2006/20/05/01:13 PM, 1:2



SHEET LAYOUT



PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1
REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD



0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	-

A	29-01-19	PRIVATE CERTIFIER
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PRE DATE	AMENDMENT

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DRAWING TITLE

STORMWATER CATCHMENT PLAN
SHEET 5



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DESIGNED	BY	DRAWN	CAB
APPROVED	NER	2953710	DATE 26-04-17
DRAWING NUMBER			AMEND.
12301-BE1-674			A

3/12/23 - lida developments Pty Ltd/01 - kings forest/bulk earthworks/BE1/Current/12301-BE1-674.dwg, 2006/2020 5:51:33 PM, 1:2

0.01 ARI (Q100) Major FLOW - 12D DYNAMIC DRAINAGE RESULTS

* REFER TO IFD TABLE FOR MAXIMUM INTENSITY DURING STORM

NOTE: NEGATIVE FLOW VALUES INDICATE REVERSE FLOWS		CATCHMENT AREA			RAINFALL VOLUME*			RAINFALL Coef.			CATCHMENT FLOW			APPROACH FLOW			FLOW AT PIT			PIT			HGL			PIPE				HEADLOSSES				CAPACITY		VELOCITY		NODE
FROM	TO	A1 HA	A2 HA	A3 HA	CRITICAL STORM	INTENSITY MMHR	10 YR	CURRENT Storm	A1 HA	A2 HA	A3 HA	CRITICAL ARI MIN.	GRADE %	L/S	WIDTH	DxV	L/S	L/S	DxV	NODE	GRADE %	GRATE RL	PIT RL	U/S RL	DIS RL	GRADE %	FLOW M3/S	COEFFICIENT Ku	Kw	Ku	Kw	RATIO	M/S	NODE				
01/032	02/032											60	0				0				4.399	3.74	3.74	3.69	3.69	0.07	-0.10	0.2	0.2	0.0	0.0	-1.07	0.8	01/032				
02/032	05/036											60	0				0				4.141	3.69	3.69	3.64	3.64	0.16	0.14	1.8	2.7	0.1	0.0	1.6	0.91	02/032				
05/036												60	0				0				4.035													05/036				
01/033	02/033			0.210	60	102.9	0.819	0.896	0.139			60	139	2.15	0.04	108	30	0.04	01/130		4.818	4.61	4.43	4.38	4.37	0.11	8.8	8.4	0.3	0.2	0.31	1.4	01/033					
02/033	06/005											60	0				0				4.817	4.38	4.30	4.19	4.21	0.21	0.38	1.6	1.5	0.2	0.1	0.57	1.24	02/033				
06/005												60	0				0				4.191													06/005				
05/036	01/034											60	0				0				4.035	3.64	3.62	3.61	3.61	0.08	1.07	1.7	1.5	0.6	0.0	0.1	1	05/036				
01/034	02/034											60	2.1				0				2.125	3.700	3.61	3.61	3.61	0.00	1.07	0.0	0.0	0.0	0.0	0	0	01/034				
02/034	03/034		1.650									60	0	1154		1154						3.800	3.61	3.61	3.61	0.00	7.44	0.0	0.0	0.0	0.0	0	0	02/034				
03/034	04/034											60	0				0					3.800	3.61	3.61	3.61	4.35	7.44	0.0	0.0	0.0	0.0	0	0	03/034				
04/034	05/034											60	0				0					3.800	3.37	3.37	3.22	4.77	7.44	0.0	0.0	0.0	0.0	0.05	3.72	04/034				
05/034	06/034											60	0				0					4.000	3.22	3.22	3.02	4.86	6.81	0.0	0.0	0.0	0.0	0.07	1.96	05/034				
06/034												60	0				0					3.900	3.02											06/034				
01/035	05/036			0.371	60	102.9	0.819	0.896	0.246			60	292	4.05	0.04	194	68	0.06	02/034		3.929	4.07	3.78	3.64	3.64	1.55	0.19	3.2	2.5	0.3	0.4	0.61	1.74	01/035				
05/036												60	0				0					4.035													05/036			
01/036	02/036			0.199	60	102.9	0.819	0.896	0.132			60	132	1.92	0.04	104	26	0.03	01/044		4.328	4.29	4.20	4.16	4.16	0.12	0.10	9.5	4.3	0.1	0.1	0.26	0.76	01/036				
02/036	03/036											60	0				0					4.234	4.16	4.09	4.00	4.00	0.25	0.33	1.5	1.3	0.1	0.1	0.6	1.16	02/036			
03/036	04/036											60	0				0					4.070	4.00	3.95	3.92	3.92	0.23	0.56	0.6	0.6	0.0	0.0	0.72	1.28	03/036			
04/036	05/036											60	0				0					4.401	3.92	3.74	3.64	3.64	0.21	0.98	1.6	1.8	0.2	0.2	1.22	1.53	04/036			
05/036	06/036											60	0				0					4.035	3.64	3.60	3.68	3.68	-0.10	0.11	2.0	1.7	0.1	0.2	3.54	1.59	05/036			
06/036	07/036											60	1.1				0					1.121	4.579	3.68	3.68	3.61	1.20	-1.87	0.0	0.0	0.0	0.0	-1.02	5.55	06/036			
07/036	02/034											60	1.2				0					1.167	3.800	3.61	3.61	3.61	0.00	-1.87	0.0	0.0	0.0	0.0	0	0	07/036			
02/034												60	0				0					3.800													02/034			
02/034	01/037			1.650								60	0	1154		1154						3.800	3.61	3.61	2.50	39.91	0.03	0.0	0.0	0.0	0.0	2.35	4.15	02/034				
01/037												60	0				0					2.700	2.50												01/037			
06/036	01/046											60	1.1				0					1.121	4.579	3.68	3.68	3.24	1.06	1.86	0.0	0.0	0.0	0.0	3.24	2.92	06/036			
01/046	02/046											60	10.3				0					10.252	4.105	3.24	2.75	2.61	1.90	1.86	1.1	1.1	0.5	0.5	3.25	2.99	01/046			
02/046	03/046											60	0				0					3.000	2.59	2.59	2.59	2.59	0.00	1.86	0.0	0.0	0.0	0.0	0	0	02/046			
03/046	04/046			0.131	60	102.9	0.819	0.896	0.087			60	87			87						2.800	2.59	2.59	2.59	2.59	0.00	1.41	0.0	0.0	0.0	0.0	0	0	03/046			
04/046	05/046											60	0				0					2.800	2.59	2.59	1.80	2.17	1.41	0.0	0.0	0.0	1.1	2.98	04/046					
05/046	06/046											60	0				0					2.500	1.74	1.74	1.24	0.62	1.39	0.0	0.0	0.0	0.0	0.25	1.83	05/046				
06/046												60	0				0					1.500	1.24												06/046			
03/046	01/047			0.131	60	102.9	0.819	0.896	0.087			60	87			87						2.800	2.59	2.59	1.80	39.09	0.03	0.0	0.0	0.0	0.0	2.22	4.11	03/046				
01/047												60	0				0					1.800	1.60												01/047			
05/050	06/050											60	0				0					3.965	3.59	3.33	3.31	0.81	0.56	1.4	1.5	0.3	0.3	1.29	1.98	05/050				
06/050	07/050			0.377	60	102.9	0.819	0.896	0.249			60	276	3.39	0.00	221	0	0.00	05/034		3.888	3.31	2.90	2.59	2.16	0.77	1.2	1.1	0.4	0.4	0.84	2.86	06/050					
07/050	03/046											60	0				0					2.800	2.59	2.59	2.59	0.00	0.77	0.0	0.0	0.0	0.0	0	0	07/050				
03/046												60	0				0					2.800													03/046			

PROJECT NAME
KINGS FOREST

BECC - CONTRACT 1

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
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& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

ISSUES	DATE
TENDER	13-11-19
COUNCIL	*****
CONSTRUCTION	--

A	PRE DATE	AMENDMENT
	29-01-19	PRIVATE CERTIFIER

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DRAWING TITLE
STORMWATER CALCULATION TABLES MAJOR STORM EVENT



Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED	RB	DRAWN	CAB
APPROVED	<i>[Signature]</i>	NER 2953710	DATE 26-04-17
DRAWING NUMBER		AMEND.	
12301-BE1-681		A	