Casuarina Beach Concept

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Issued under the Environmental Planning and Assessment Act 1979

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No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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Sheet No. 1 of 47

RPS

Casuarina Beach Concept

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RPS

Grand Parade

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Example Grand Parade Imagery

RPS

Density

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RPS

4

Built Form

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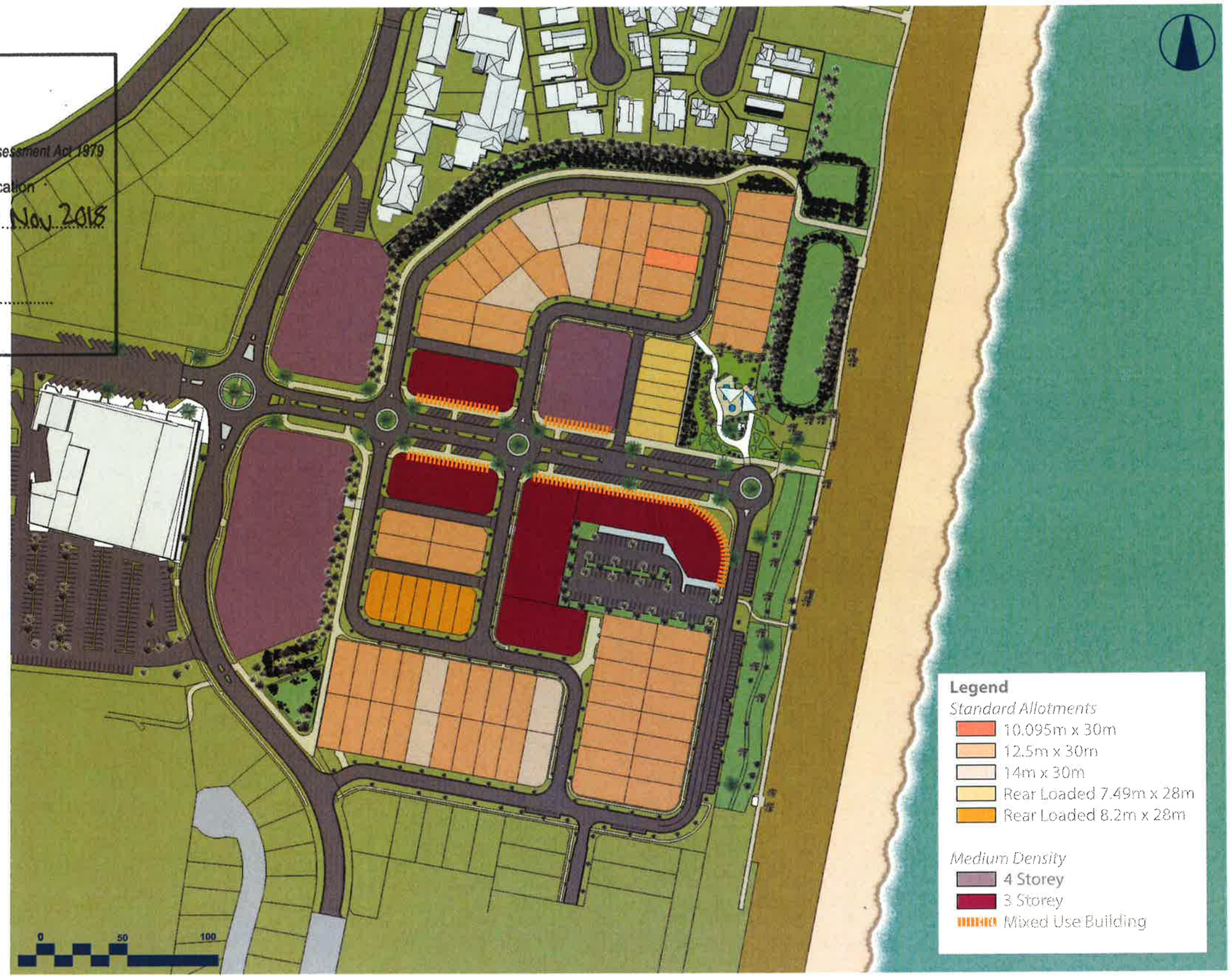
Sheet No. 5 of 47



RPS

5

Built Form

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Medium Density & Mixed Use

Standard Allotments Front Loaded

Standard Allotments Rear Loaded

RPS

Yield Estimate

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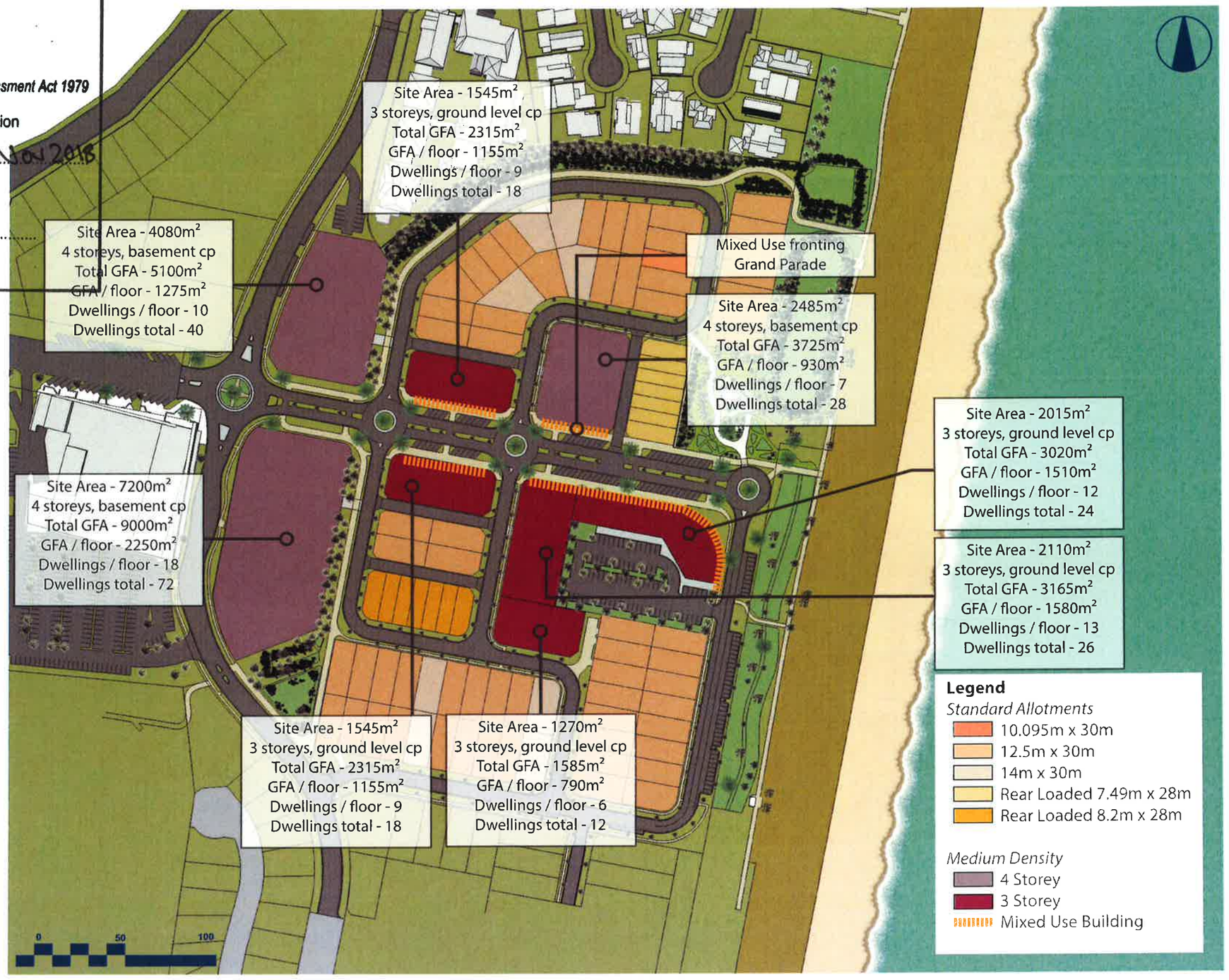

RPS

LANDSCAPE MASTERPLAN

1. Revegetation to edges of swale to integrate device into existing dune landscape
2. Primary street trees in informal groupings to local residential streets provide a relaxed intimate streetscape
3. Secondary feature trees located at the end of view lines strength wayfinding, create interest in the streetscape and increase amenity
4. Feature pavement to laneways breakup expanse of hardscape and create interest within the streetscape
5. Buffer to rear of existing properties includes planted mounds, informal shrub and groundcover planting to achieve privacy for residents
6. Feature tree avenue to entrance road strengthens way-finding, achieves shade to carparking and pedestrian pathways, provides amenity and creates a signature approach to the beach
7. Planting to multi-storey residential surrounds to soften the built form and integrate the property fence into the streetscape
8. Beachfront park reinforces beach access and frames views of the ocean
9. Trees proposed to carpark provide shade, reduce glare and enhance amenity
10. Secondary street trees in a formal arrangement along Blue Horizon Drive strengthen road hierarchy within the development while assisting in wayfinding strategy
11. Planting to infiltration basin and surrounds to integrated the device into the landscape
12. Shared pedestrian/cycle path connecting residents to the Tweed Shire Council shared pedestrian/cycle path

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6

NEIGHBOURHOOD PARK

The park provides a breakout space for residents and visitors. Located at a key juncture between the retail hub, entry road termination and main beach access this space is a key node in pedestrian movement and wayfinding.

The park forms a link between the town centre and the linear open space (7f zone) containing a shared walkway that forms a major north-south pedestrian/cycle network for the Tweed Coast.

The park incorporates a playground with formal play equipment and natural play elements such as mounding and balancing boulders. The playground is nestled into the landscape with landform and planting surrounds. Trees provide shade and amenity to the space. Mounding and planting have been proposed between the road and the play space to create a screen.

A shared 3.5m wide path has been incorporated along the edge of the park for pedestrians and cyclist to traverse from the town centre to the foreshore shared pedestrian and cycle path. Intimate gathering spaces have been created within the park for informal interactions between the communities. A kickabout space has also been defined with planting and mounding to diversify the parks usage.

Mounding and planting will combine to form a buffer and screen between public and private interfaces. A path to the north connects the cul-de-sac road to the park and foreshore.

The sweeping landscape form of planting beds and mounds reflects the natural swaths of the beach landscape. The planting pallet will draw its inspiration from the existing species found within the foreshore linear park.

1. 1.5m wide passage to access rear loaded terraces
2. Pump station screened with landscape
3. Park shelters (TSG standard Landmark 4x4m)
4. Seating with back rest and arm rest
5. Feature trees guide visitors to the beach
6. Iconic columnar trees form edge of main park space
7. Informal kick-about
8. Intimate gathering space
9. Feature pavement in road indicates to users they are entering a high pedestrian zone
10. Access to coastal foreshore
11. Landscape mounding creates interest, forms a vantage point, and reinforces the screening treatment between the public and private interface. Mounds to be at a height that does not impare passive surveillance or CPTED principals
12. Main feature tree at end of entrance road aids in wayfinding
13. Playground with formal play equipment and nature based play, turf mounding and play boulders
14. Shared pathway 1.8m wide
15. Vehicle access to Pump Station
16. Broken planting beds provide buffer between public and private interface while allowing connections into the park

0 50 100
Scale 1:750

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FORESHORE

The foreshore zone will be protected and enhanced to ensure the scenic and environmental values of the area are preserved. Links are made between the development and the existing shared pedestrian/cycle path to strengthen the community's connection with the environment and foster a stewardship over the land.

Endemic spices will be planted informaly along the interface between the development and the foreshore enhancing the current character of the area. These native species will also be filtered throughout the development creating a seamless landscape and strengthened identity.

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1. Existing shared pedestrian/cycle path
2. Existing beach access
3. Path nodes
4. Seating placed at required intervals
5. Infiltration basins
6. Endemic planted mounds using species from the Tweed Shire Council Landscape Guidelines Casuarina Beach -7(f) Zone.
7. Access path to park and town centre

10

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Sheet No. 11 of 47

LEGEND

- PROPOSED BOUNDARY
- STAGE 1D
- STAGE 1D (SWALE)

0 20 40 60 80 100

1cm = 20m

1:2000

NOTE
This preliminary layout has been completed in accordance with the instructions provided by Clarence Property.
In this respect preliminary desktop data has been used to form this layout. The final layout is subject to the completion of a detailed survey & engineering plans. Accordingly, the conclusions reached within this report may be modified by the author upon the completion of the final design plans & site inspection. Newton Denny Chapelle accepts no responsibility for any loss or damage suffered, however so arising, to any person or corporation who may use or rely on this report.

REV	DATE	AMENDMENT
B	22.07.16	BDY
C	17.08.17	BDY
D		
E		

SOURCE PLAN: N/A

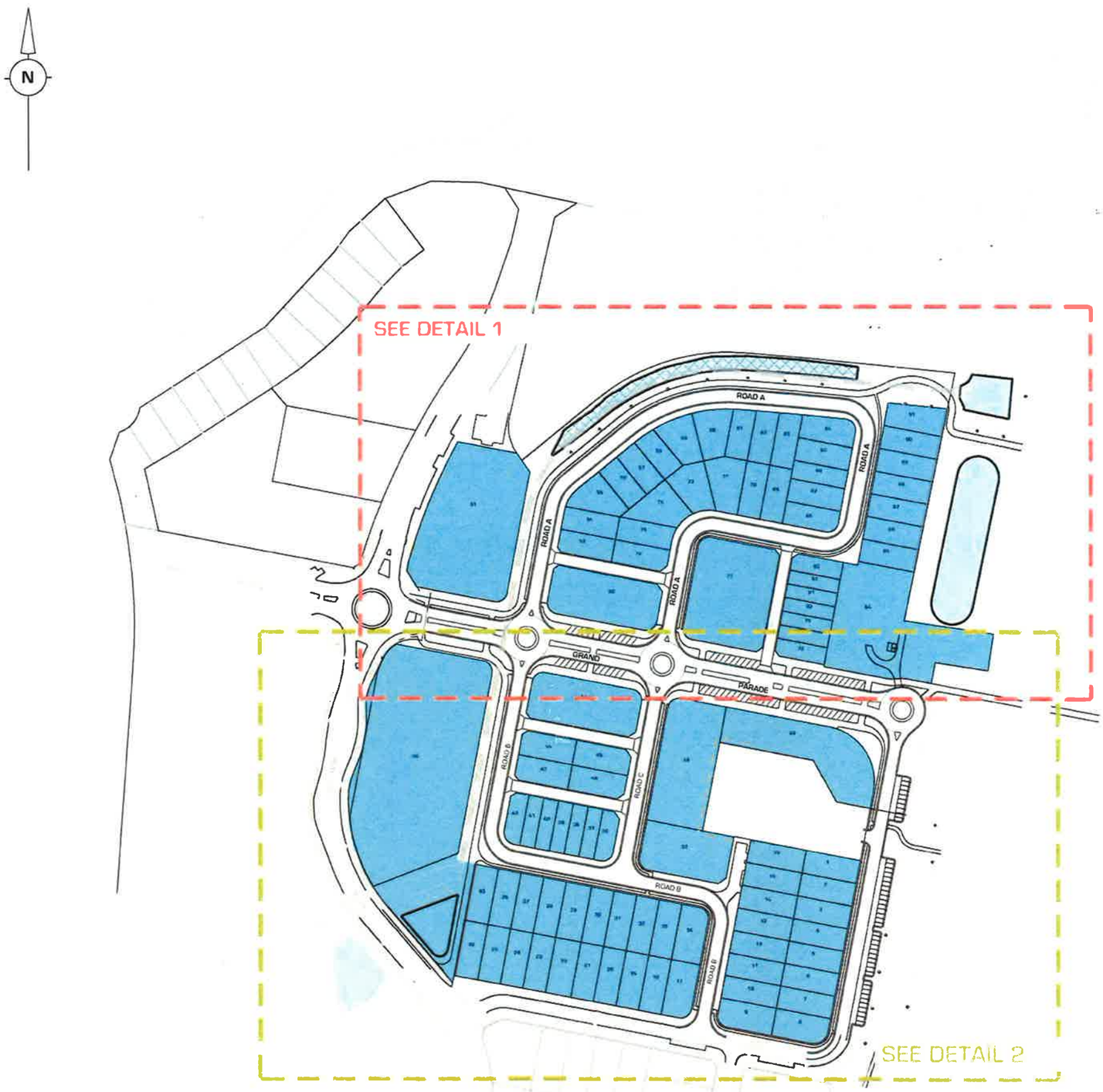
Newton Denny Chapelle
Surveyors Planners Engineers
Email: office@newtondennychapelle.com.au
LISMORE 31 Carrington St. Lismore 2480 PH: 6622 1011
CASINO 100 Barker St. Casino 2470 PH: 6662 5000
ABN: 86 220 045 469

P1 - SUBDIVISION LAYOUT PLAN STAGE 1D REV C

CLIENT: CLARENCE PROPERTY

LOCATION: CASUARINA TOWN CENTRE CASUARINA BEACH

DATE: 17.08.17 REF: 13/054
SCALE: 1 : 2000 @ A3 DRAWN: bk



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Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2018

in respect to MP 06_0258

Signed SB

Sheet No. 12 of 47

LEGEND

- PROPOSED BOUNDARY
- STAGE 1E

0 25 50 75 100 125

1cm = 25m
1:2500

NOTE
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REV	DATE	AMENDMENT
B	22.07.16	BDY
C	17.08.17	BDY
D		
E		

SOURCE PLAN: N/A

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Email: office@newtondennychapelle.com.au
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ABN: 86 220 045 469

P2 - SUBDIVISION LAYOUT PLAN STAGE 1E

REV C

CLIENT: CLARENCE PROPERTY

LOCATION: CASUARINA TOWN CENTRE
CASUARINA BEACH

DATE: 17.08.17 REF: 13/054
SCALE: 1 : 1500 @ A3 DRAWN: bk

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No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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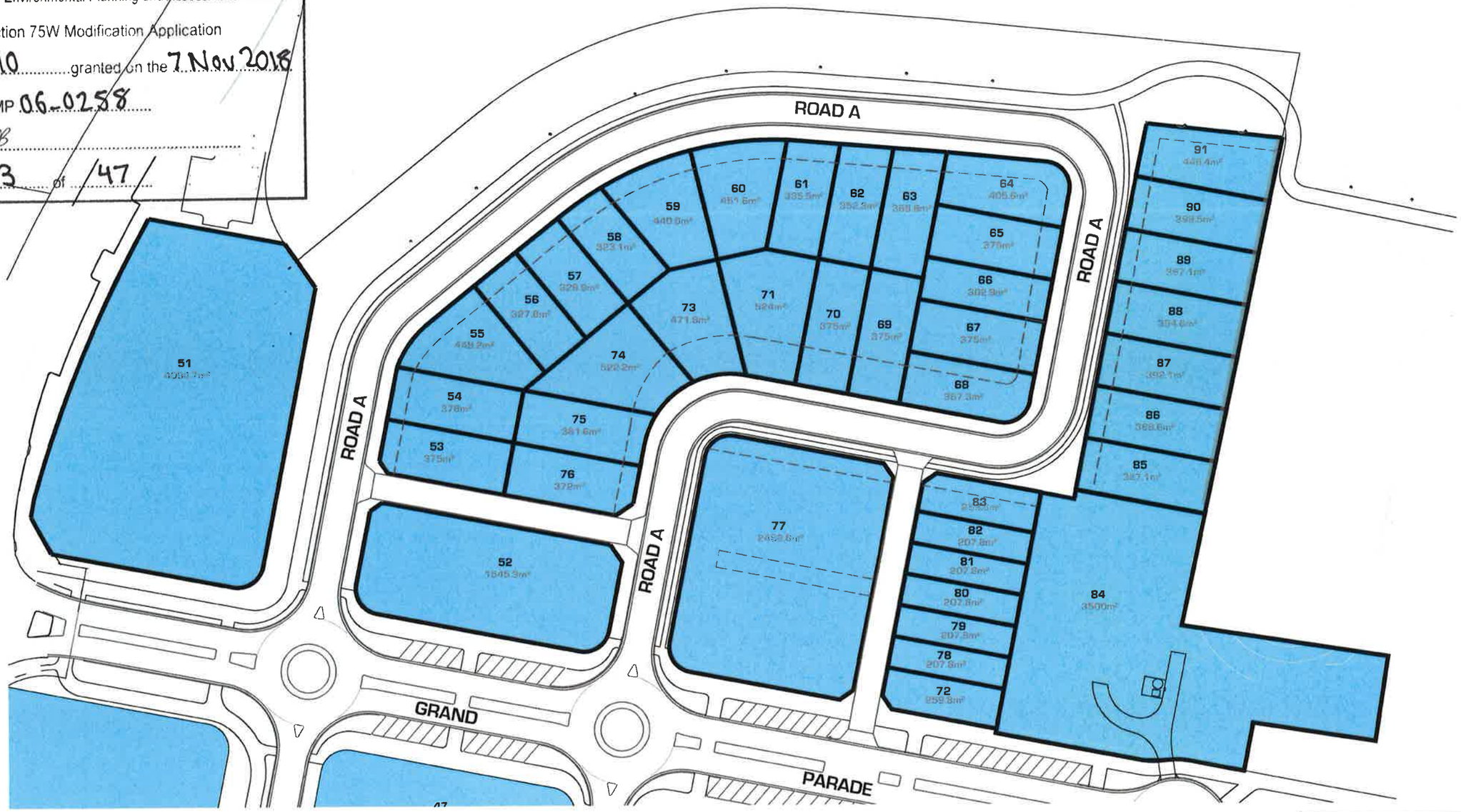

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0 10 20 30 40 50

1cm = 10m
1:1000

LEGEND

- PROPOSED BOUNDARY
- EASEMENT FOR SEWER AND WATER
- STAGE 1E

REV	DATE	AMENDMENT
B	22.07.16	BDY
C	17.08.17	BDY
D		
E		

SOURCE PLAN: N/A

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CASINO 100 Barker St. Casino 2470 PH: 6662 5000
ABN: 86 220 045 469

P3 - SUBDIVISION LAYOUT PLAN
STAGE 1E - DETAIL 1

CLIENT: CLARENCE PROPERTY

LOCATION: CASUARINA TOWN CENTRE
CASUARINA BEACH

REV C

DATE: 17.08.17
SCALE: 1 : 1000 @ A3
REF: 13/054
DRAWN: bk

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No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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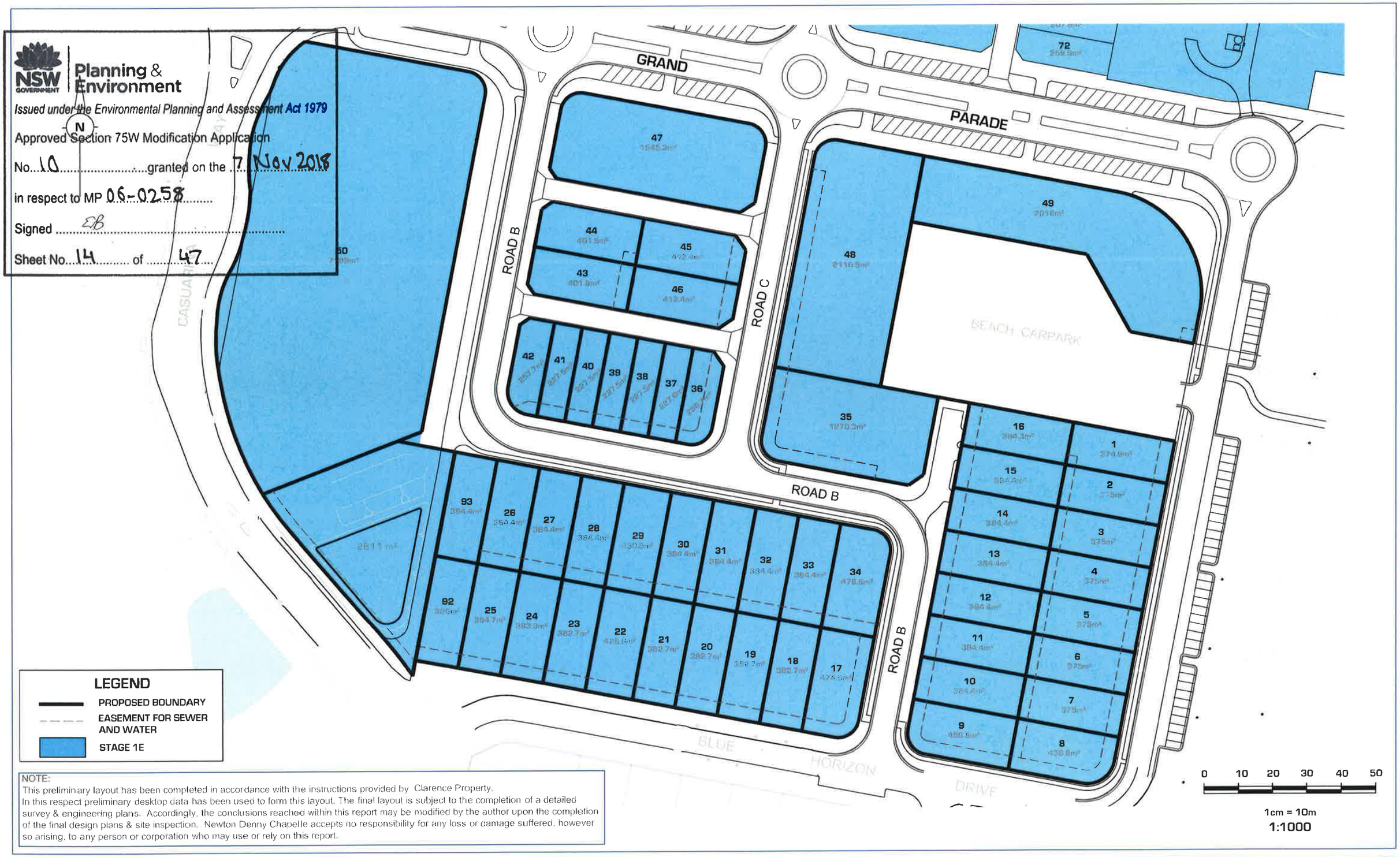
Sheet No. 14 of 47



LEGEND

- PROPOSED BOUNDARY
- EASEMENT FOR SEWER AND WATER
- STAGE 1E

NOTE:
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REV	DATE	AMENDMENT
B	22.07.16	BDY
C	17.08.17	BDY
D		
E		

SOURCE PLAN: N/A

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LISMORE 31 Carrington St. Lismore 2480 PH: 6622 1011
CASINO 100 Barker St. Casino 2470 PH: 6662 5000
ABN: 86 220 045 469

P4 - SUBDIVISION LAYOUT PLAN STAGE 1E - DETAIL 2

CLIENT: CLARENCE PROPERTY

LOCATION: CASUARINA TOWN CENTRE CASUARINA BEACH

REV C

DATE: 17.08.17 REF: 13/054
SCALE: 1 : 1000 @ A3 DRAWN: bk

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No. 10 granted on the 7 November 2018

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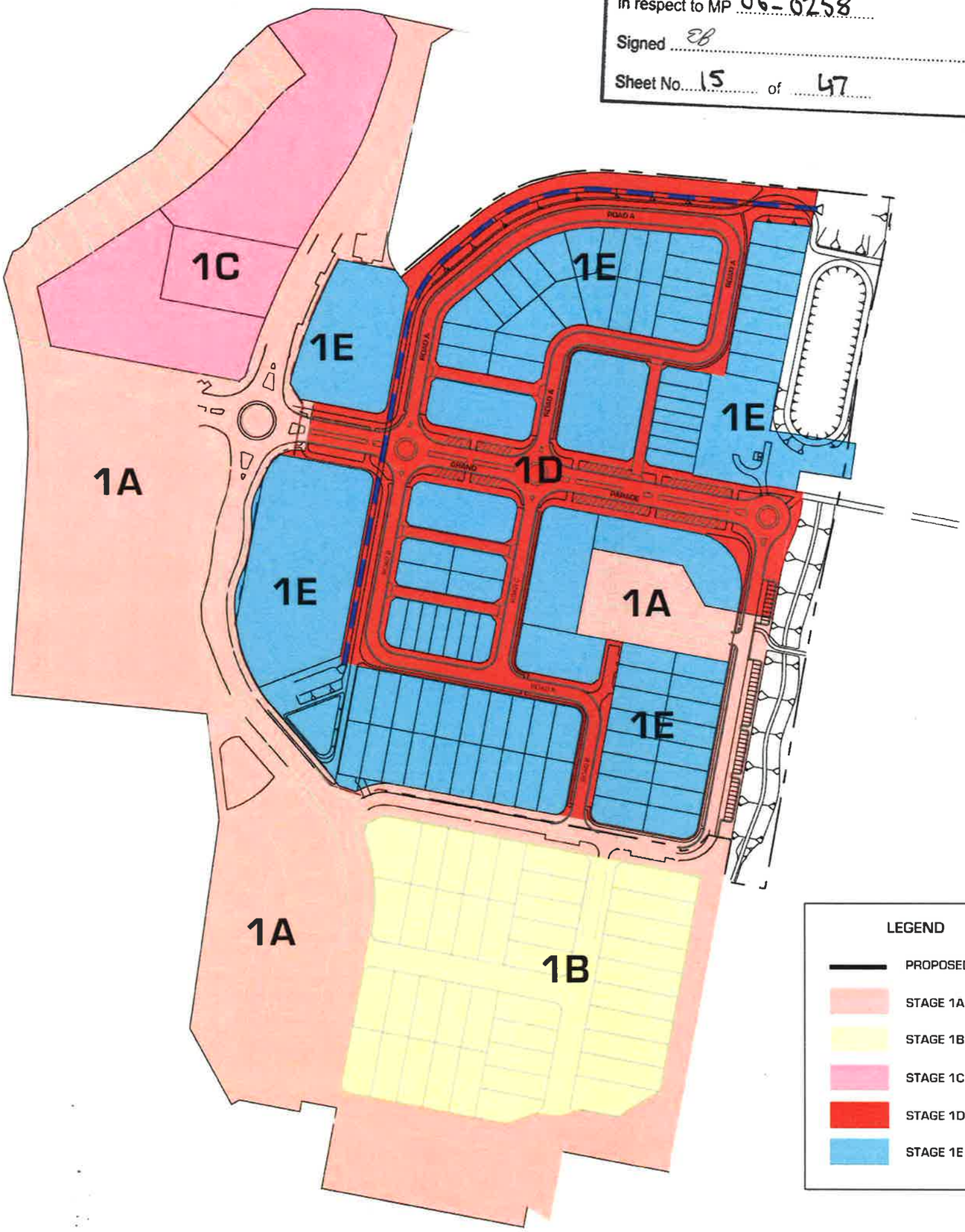

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REV	DATE	AMENDMENT
B	22.07.15	BDY
C	17.05.17	BDY
D		
E		

SOURCE PLAN: N/A

Newton Denny Chapelle
Surveyors Planners Engineers
Email: office@newtondennychapelle.com.au
LISMORE 31 Carrington St. Lismore 2480 PH: 6622 1011
CASINO 100 Barker St. Casino 2470 PH: 6662 5000
ABN: 86 220 045 469

P5 - SUBDIVISION STAGING PLAN

REV C

CLIENT: CLARENCE PROPERTY

LOCATION: CASUARINA TOWN CENTRE CASUARINA BEACH

DATE: 17.09.17 REF: 13/054

SCALE: 1 : 2500 @ A3 DRAWN: bk

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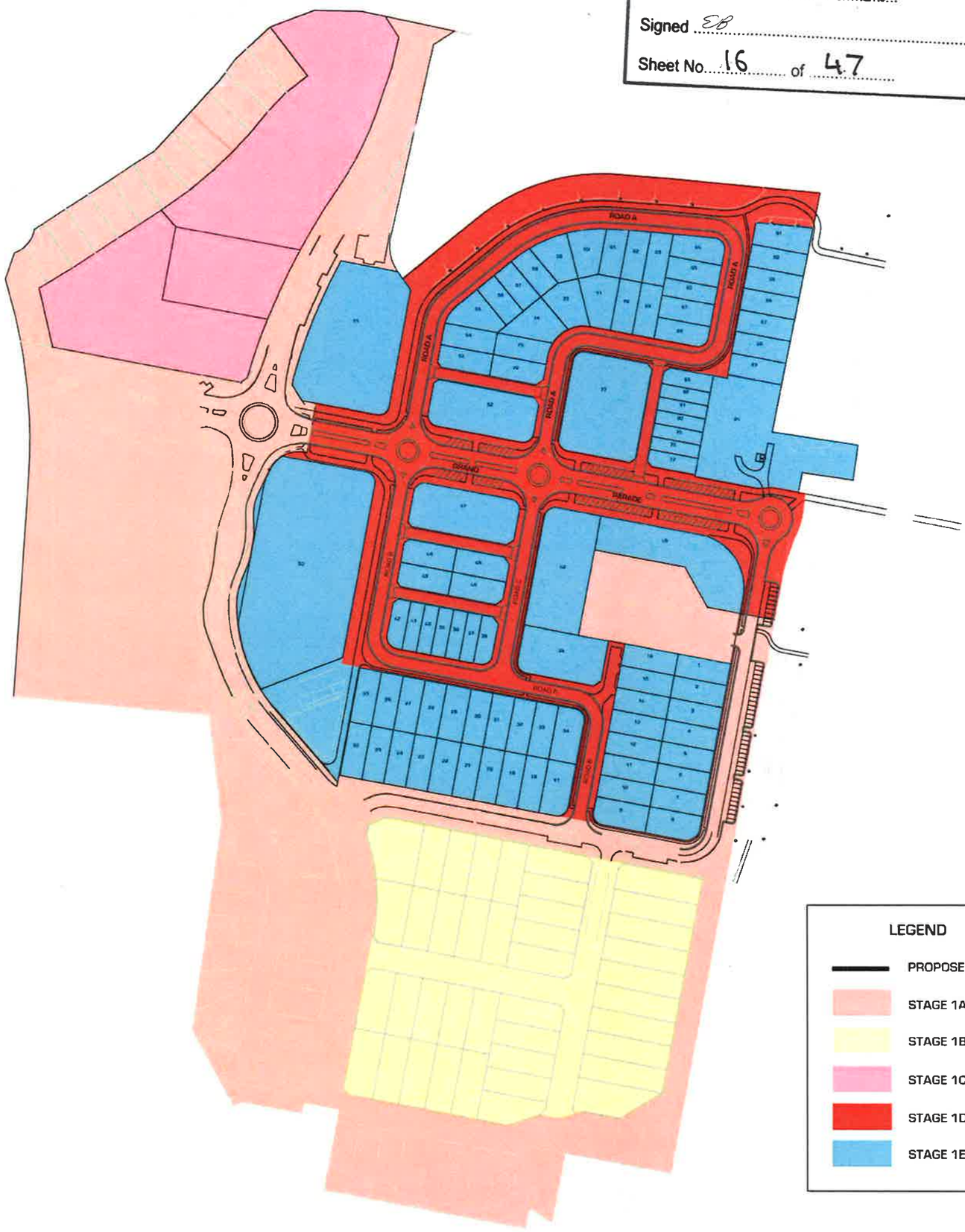

LEGEND

- PROPOSED BOUNDARY
- STAGE 1A
- STAGE 1B
- STAGE 1C
- STAGE 1D
- STAGE 1E

0 25 50 75 100 125

1cm = 25m
1:2500

NOTE
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REV	DATE	AMENDMENT
B	22.07.16	BDY
C	17.08.17	BDY
D		
E		

SOURCE PLAN: N/A

Newton Denny Chapelle
Surveyors Planners Engineers
Email: office@newtondennychapelle.com.au
LISMORE 31 Carrington St. Lismore 2480 PH: 6622 1011
CASINO 100 Barker St. Casino 2470 PH: 6662 5000
ABN: 86 220 045 469

P6 - DEVELOPMENT SEQUENCE PLAN

CLIENT: CLARENCE PROPERTY

LOCATION: CASUARINA TOWN CENTRE
CASUARINA BEACH

REV C

DATE: 17.08.17 REF: 13/054
SCALE: 1 : 2500 @ A3 DRAWN: DK

17

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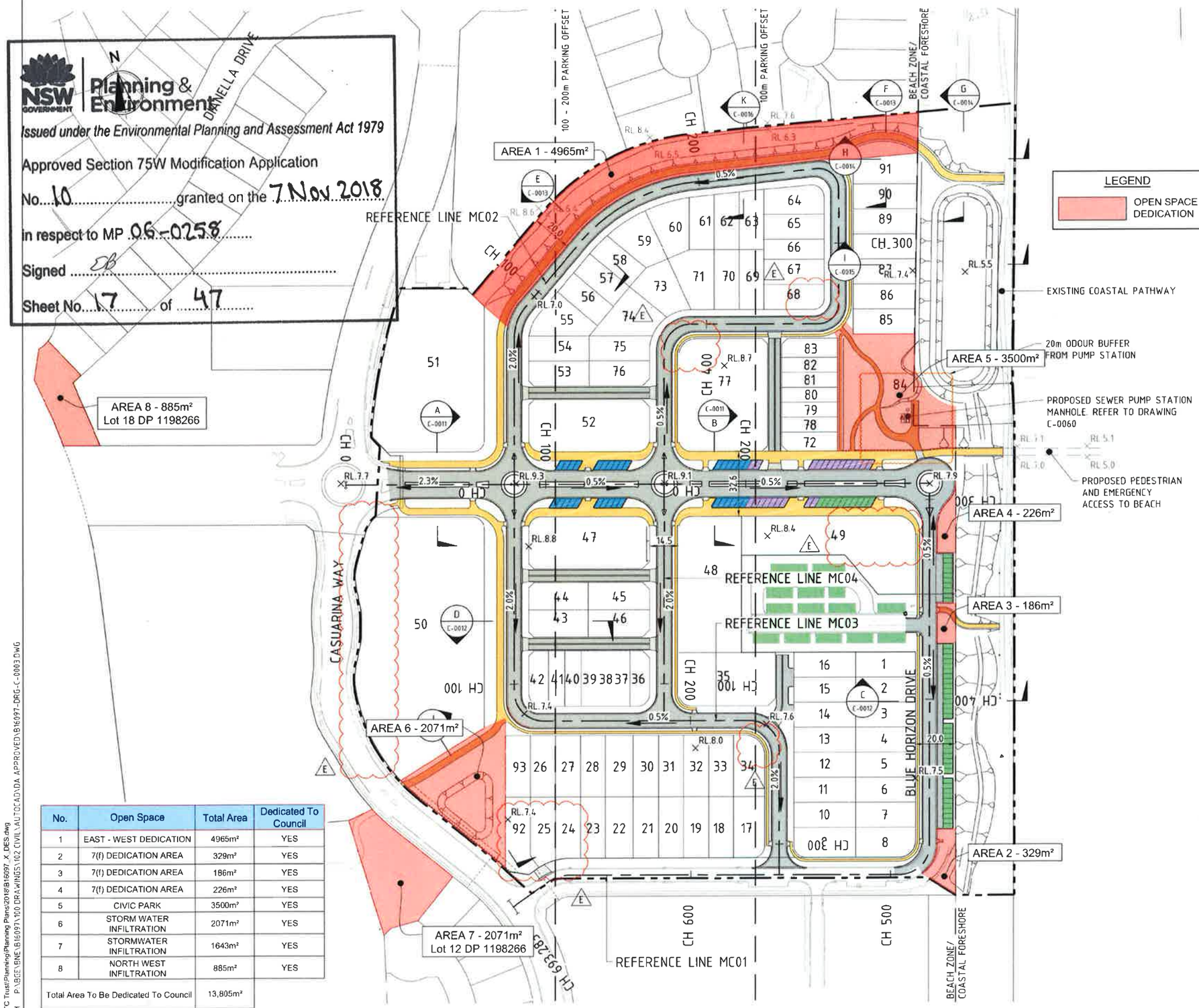

LEGEND

- DESIGN CONTROL LINE
- LIMIT OF WORKS BOUNDARY
- 2% PROPOSED ROAD GRADE
- RL 8.0 PROPOSED LEVEL
- EXISTING LEVEL
- PROPOSED ROAD
- PROPOSED PATH
- PARKING BAYS - 0m TO 100m (134 TOTAL)
  - 71 EXISTING BLUE HORIZON DRIVE
  - 8 TRESTLES AVENUE
  - 55 PROPOSED BAYS
- PARKING BAYS - 100m TO 200m (32 TOTAL)
- PARKING BAYS - ADDITIONAL (24 TOTAL)

No.	Open Space	Total Area	Dedicated To Council
1	EAST - WEST DEDICATION	4965m²	YES
2	7(f) DEDICATION AREA	329m²	YES
3	7(f) DEDICATION AREA	186m²	YES
4	7(f) DEDICATION AREA	226m²	YES
5	CIVIC PARK	3500m²	YES
6	STORM WATER INFILTRATION	2071m²	YES
7	STORMWATER INFILTRATION	1643m²	YES
8	NORTH WEST INFILTRATION	885m²	YES
Total Area To Be Dedicated To Council		13,805m²	

LOT AREA TABLE

LOT No.	AREA (m²)
1	374.9
2	375.0
3	375.0
4	375.0
5	375.0
6	375.0
7	375.0
8	438.8
9	456.5
10	384.4
11	384.4
12	384.4
13	384.4
14	384.4
15	384.4
16	384.3
17	474.5
18	382.7
19	382.7
20	382.7
21	382.7
22	428.6
23	382.7
24	385.4
25	410.5
26	384.4
27	384.4
28	384.4
29	430.5
30	384.4
31	384.4
32	384.4
33	384.4
34	461.5
35	1270.3
36	256.7
37	227.6
38	227.5
39	227.5
40	227.5
41	227.5
42	257.7
43	401.8
44	401.8
45	412.4
46	412.4
47	1545.3

LOT AREA TABLE

LOT No.	AREA (m²)
48	2111.9
49	2219.3
50	7354.4
51	4084.7
52	1545.3
53	375.0
54	378.0
55	449.2
56	327.8
57	329.9
58	323.1
59	440.6
60	451.6
61	335.5
62	352.3
63	368.8
64	405.6
65	375.0
66	302.9
67	375.0
68	369.3
69	375.0
70	375.0
71	524.0
72	259.8
73	471.8
74	522.2
75	381.6
76	372.0
77	2481.0
78	207.8
79	207.8
80	207.8
81	207.8
82	207.8
83	259.6
84	3500
85	367.1
86	389.6
87	392.1
88	394.6
89	397.1
90	399.5
91	448.4
92	491.4
93	384.4

SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
E	01.02.18	LOT AREAS AMENDED	BK
D	03.08.17	ISSUED FOR DA APPROVAL	BK
C	08.06.17	ISSUED FOR DA APPROVAL	BK
B	25.05.17	ISSUED FOR DA APPROVAL	BK
A	09.05.17	ISSUED FOR DA APPROVAL	BK

CLARENCE PROPERTY

Brisbane *Office*—
74-76 Bowen St, Spring Hill QLD 4000
P / +61 7 3167 3300
E / info@bgeeng.com
bgeeng.com—

BG&E

CASUARINA BEACH

TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	DATE	SCALE
MGA94	AHD	1:1000

SITE LAYOUT PLAN

PROJECT No.	DRAWING No.	REV
B16097	C-0003	E

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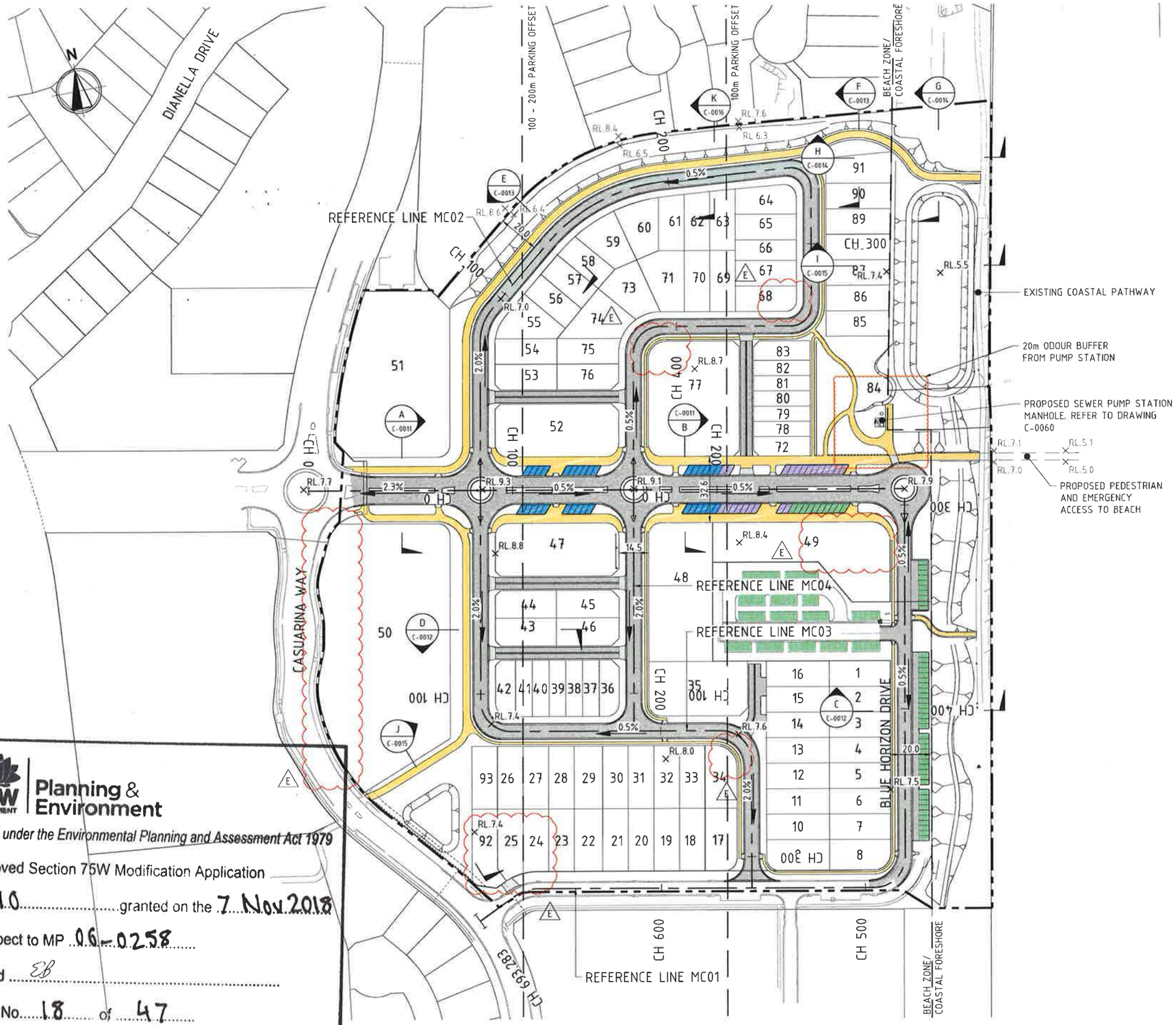

LEGEND

- DESIGN CONTROL LINE
- LIMIT OF WORKS BOUNDARY
- 2% — PROPOSED ROAD GRADE
- RL.8.0 — PROPOSED LEVEL
- EXISTING LEVEL
- PROPOSED ROAD
- PROPOSED PATH
- PARKING BAYS - 0m TO 100m (134 TOTAL)
  - 71 EXISTING BLUE HORIZON DRIVE
  - 8 TRESTLES AVENUE
  - 55 PROPOSED BAYS
- PARKING BAYS - 100m TO 200m (32 TOTAL)
- PARKING BAYS - ADDITIONAL (24 TOTAL)

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14	384.4
15	384.4
16	384.3
17	474.5
18	382.7
19	382.7
20	382.7
21	382.7
22	428.6
23	382.7
24	385.4
25	410.5
26	384.4
27	384.4
28	384.4
29	430.5
30	384.4
31	384.4
32	384.4
33	384.4
34	461.5
35	1270.3
36	256.7
37	227.6
38	227.5
39	227.5
40	227.5
41	227.5
42	257.7
43	401.8
44	401.8
45	412.4
46	412.4
47	1545.3

LOT AREA TABLE

LOT No.	AREA (m^2)
48	2111.9
49	2219.3
50	7354.4
51	4084.7
52	1545.3
53	375.0
54	378.0
55	449.2
56	327.8
57	329.9
58	323.1
59	440.6
60	451.6
61	335.5
62	352.3
63	368.8
64	405.6
65	375.0
66	302.9
67	375.0
68	369.3
69	375.0
70	375.0
71	524.0
72	259.8
73	471.8
74	522.2
75	381.6
76	372.0
77	2461.0
78	207.8
79	207.8
80	207.8
81	207.8
82	207.8
83	259.6
84	3500
85	387.1
86	389.6
87	392.1
88	394.6
89	397.1
90	399.5
91	448.4
92	491.4
93	384.4

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

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Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

Signed EB

Sheet No. 18 of 47

REV	DATE	DESCRIPTION	RVD
E	01.02.18	LOT AREAS AMENDED	B.K
D	09.08.17	ISSUED FOR DA APPROVAL	B.K
C	04.08.17	ISSUED FOR DA APPROVAL	B.K
B	25.05.17	ISSUED FOR DA APPROVAL	B.K
A	09.05.17	ISSUED FOR DA APPROVAL	B.K

REV	DATE	DESCRIPTION	RVD

CLARENCE PROPERTY

Brisbane *Office*—
74-76 Bowen St, Spring Hill QLD 4000
P / +61 7 3167 3300
E / info@bgeeng.com
bgeeng.com—

BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN: C.K | DESIGNED: B.J | CHECKED: M.W | APPROVED: B.K

DATUM: MGA94 | DRD: AHD | SCALE: 1:1000 A1 | PROJECT No: B16097 | DRAWING No: C-0003 | REV: E

TITLE: SITE LAYOUT PLAN

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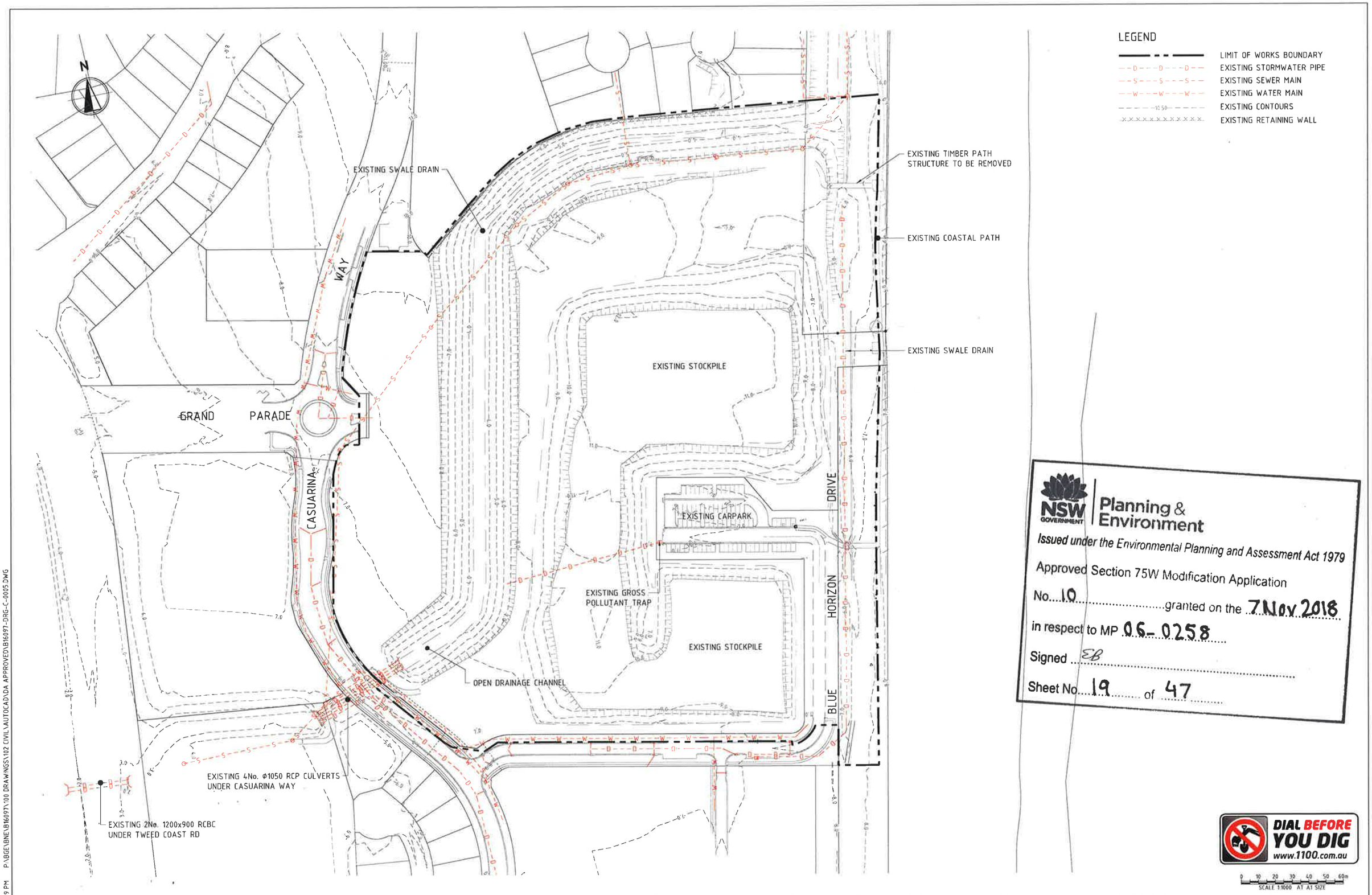
5/02/2018 4:38:23 PM

22



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No. 10 granted on the 7 Nov 2018

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Sheet No. 19 of 47

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REV	DATE	DESCRIPTION	BY
B	08.06.17	ISSUED FOR DA APPROVAL	BK
A	09.05.17	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	BY

CLIENT: CLARENCE PROPERTY

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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	GRID	SCALE	A1	A3
MGA94	AHD	1:1000		

TITLE: EXISTING FEATURES PLAN

PROJECT No.	DRAWING No.	REV
B16097	C-0005	B

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9/08/2017 5:31:19 PM P:\BGE\BNE\B16097\100 DRAWINGS\102 CIVIL\AUTOCAD\DA APPROVED\B16097-DRG-C-0005.DWG

LEGEND

- LIMIT OF WORKS BOUNDARY
- 550 PROPOSED CONTOURS
- PROPOSED RETAINING WALL
- EARTHWORKS CUT HATCH
- EARTHWORKS FILL HATCH

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No. 10 granted on the 7 Nov 2018

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Sheet No. 20 of 47

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
L	09.08.17	ISSUED FOR DA APPROVAL	BK
B	08.06.17	ISSUED FOR DA APPROVAL	BK
A	09.05.17	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	RVD

CLIENT: CLARENCE PROPERTY

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bgeeng.com—

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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	GRID	SCALE
MGA94	AHD	1:1000 AT A1

TITLE: BULK EARTHWORKS PLAN SHEET 1

PROJECT No: B16097
DRAWING No: C-0010
REV: C

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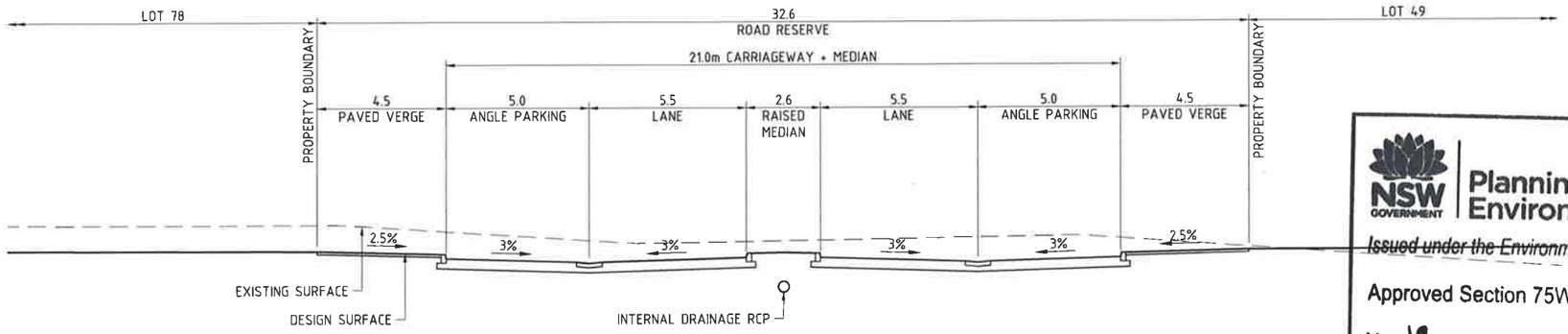
9/08/2017 5:13:47 PM P:\BGE\BNE\B16097\100 DRAWINGS\102 CIVIL\AUTOCAD\DA APPROVED\B16097-DRG-C-0010.DWG



TYPICAL SECTION B - GRAND PARADE

SCALE 1:100

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No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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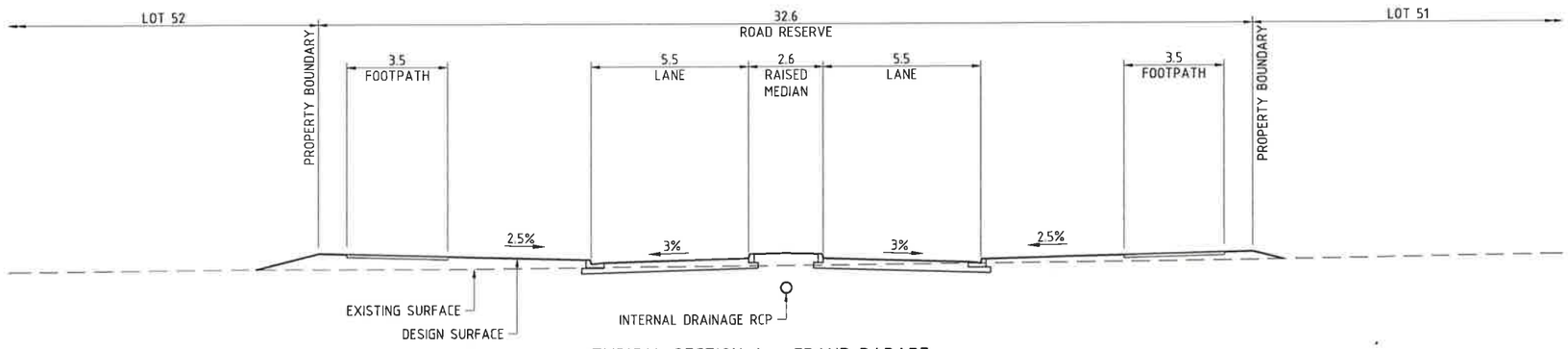
Sheet No. 21 of 47



TYPICAL SECTION A - GRAND PARADE

SCALE 1:100

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SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
A	09.05.13	ISSUED FOR DA APPROVAL	BK				

CLIENT: CLARENCE PROPERTY

Brisbane *Office*—
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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	ENGINEER	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	1:50 AT A1

TITLE: BULK EARTHWORKS SECTIONS SHEET 1

PROJECT No.	DRAWING No.	REV
B16097	C-0011	A

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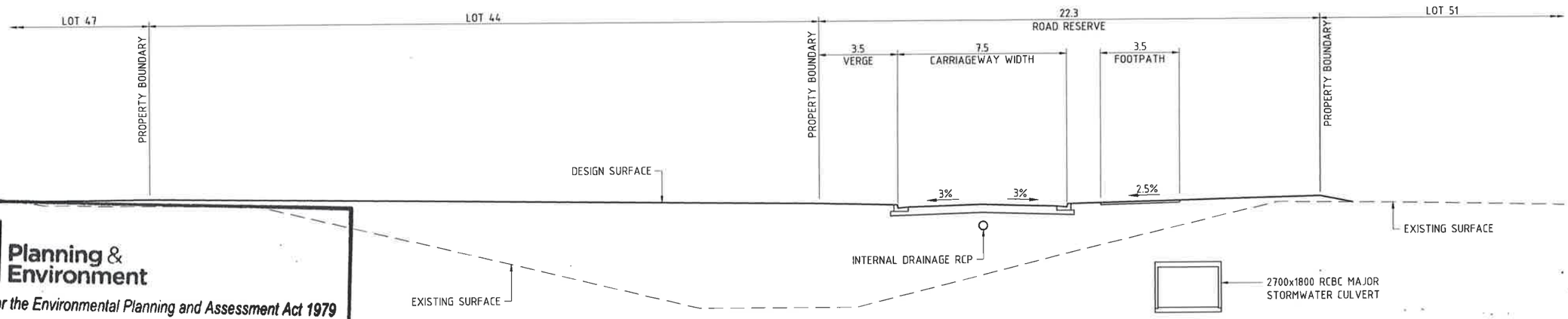

TYPICAL SECTION D

SCALE 1:100

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Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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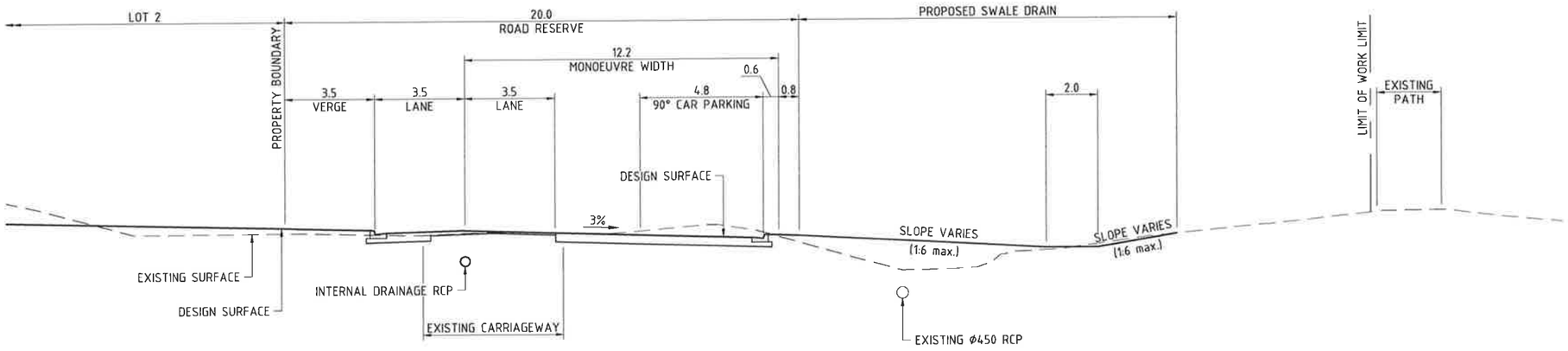
Sheet No. 22 of 47



TYPICAL SECTION C - BLUE HORIZON DRIVE

SCALE 1:100

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SCALE 1:100 AT A1 SIZE

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REV	DATE	DESCRIPTION	BY
A	09.05.17	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	BY

CLIENT: CLARENCE PROPERTY

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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	GRID	SCALE
MGA94	AHD	1:50

TITLE: BULK EARTHWORKS SECTIONS SHEET 2

PROJECT No.	DRAWING No.	REV
B16097	C-0012	A

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No. 10 granted on the 7 Nov 2018

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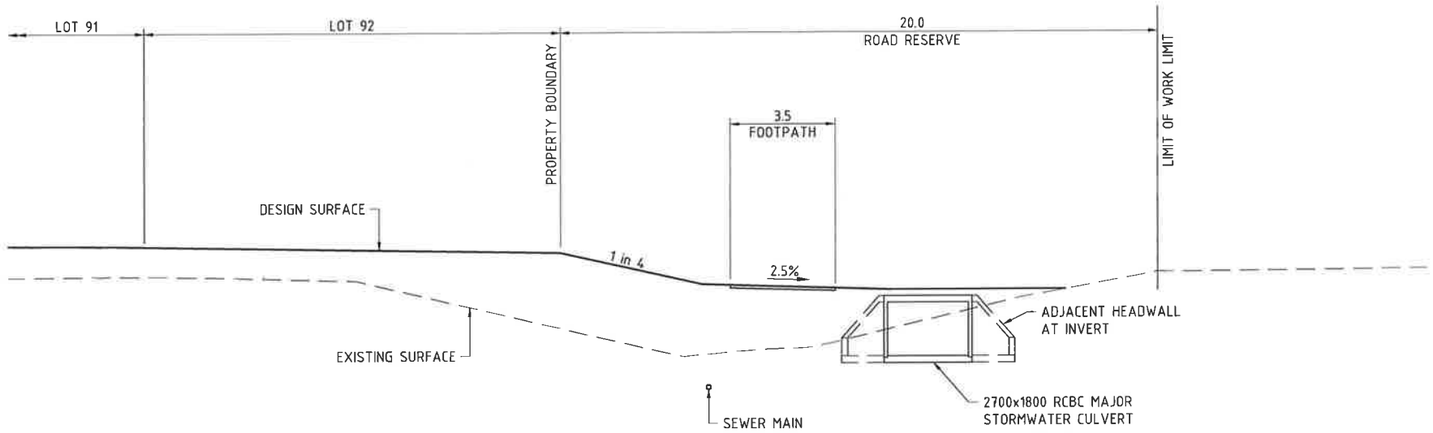
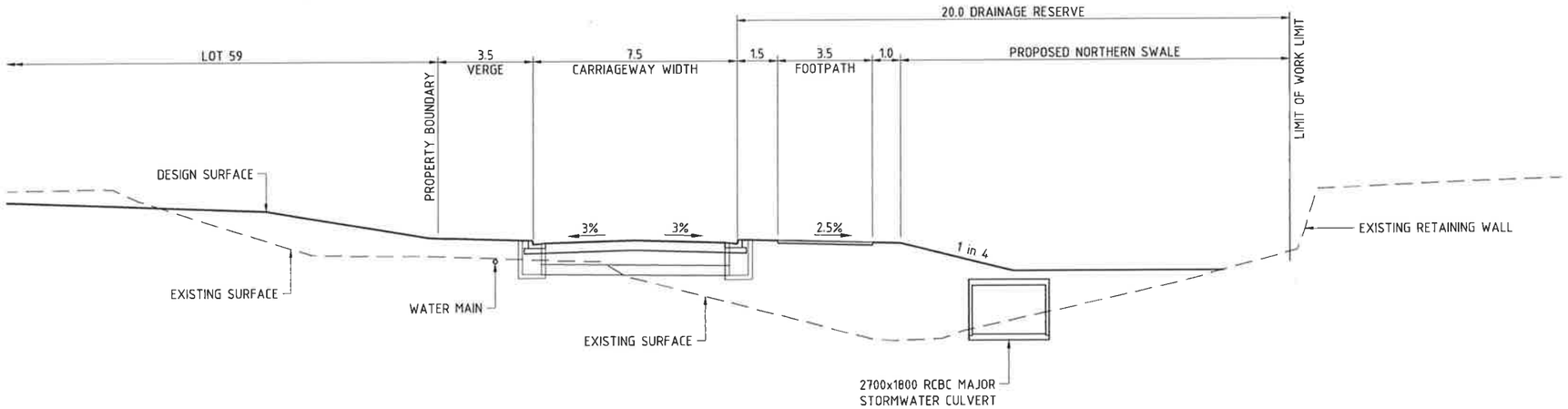
Sheet No. 23 of 27



TYPICAL SECTION F

SCALE 1:100



TYPICAL SECTION E - NORTHERN BOUNDARY DRAINAGE RESERVE

SCALE 1:100

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
A	09.05.17	ISSUED FOR DA APPROVAL	BK				

CLIENT: CLARENCE PROPERTY

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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	GRID	SCALE
MGA94	AHD	150

TITLE: BULK EARTHWORKS SECTIONS SHEET 3

PROJECT No	DRAWING No	REV
B16097	C-0013	A

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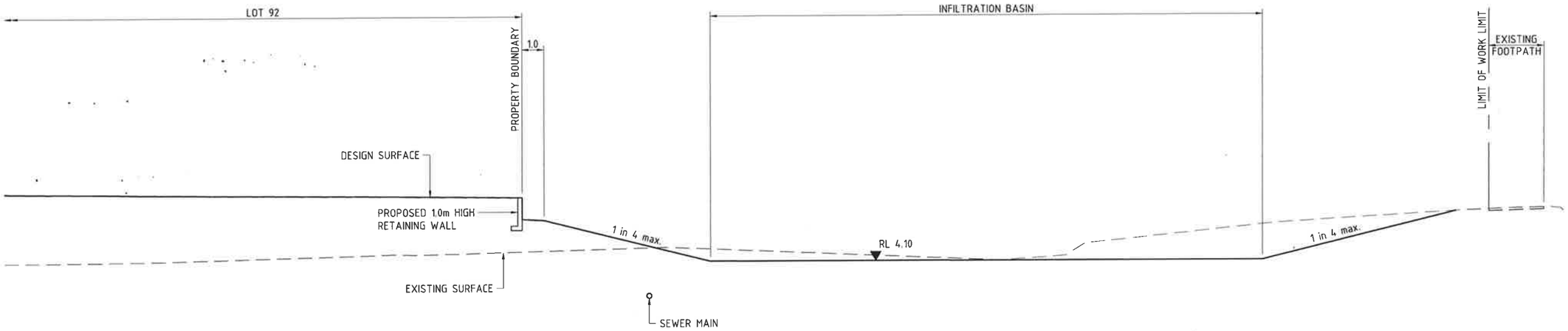
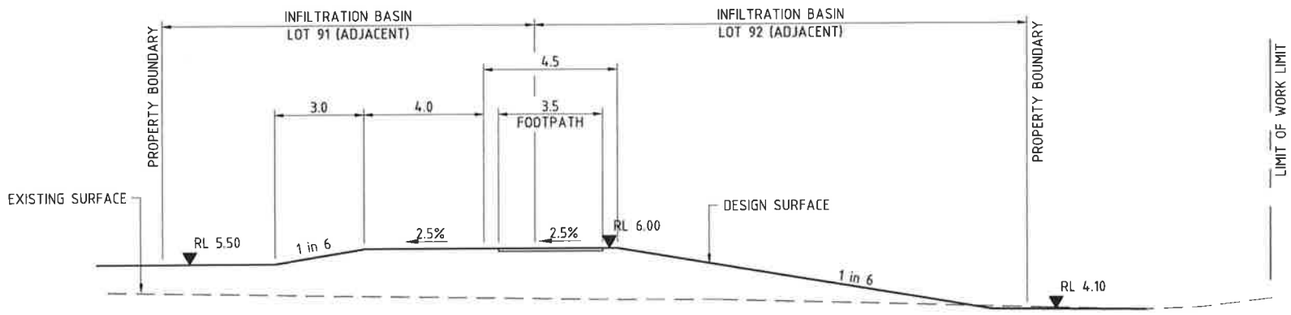
9/08/2017 5:16:50 PM P:\BGE\BNE\B16097\100 DRAWINGS\102 CIVIL\AUTOCAD\DA APPROVED\B16097-DRG-C-0011 TO C-0019.DWG

27



TYPICAL SECTION H - EASTERN INFILTRATION BASIN

SCALE 1:100



TYPICAL SECTION G

SCALE 1:100

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No. 10 granted on the 7 Nov 2018

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Sheet No. 24 of 47

SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	BY
B	28.06.17	ISSUED FOR DA APPROVAL	BK
A	09.05.17	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	RVD

CLIENT: CLARENCE PROPERTY

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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	1:50 A1 1:25

TITLE: BULK EARTHWORKS SECTIONS SHEET 4

PROJECT No.	DRAWING No.	REV
B16097	C-0014	B

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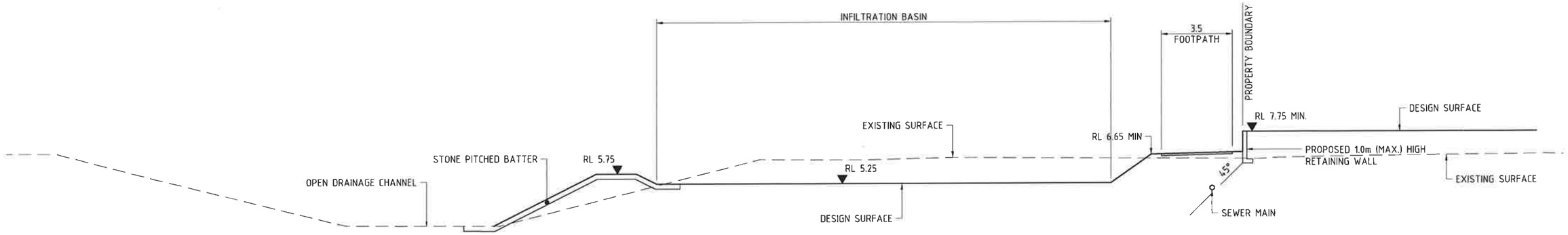
9/08/2017 5:11:00 PM P:\BGE\BNE\B16097\100 DRAWINGS\102 CIVIL\AUTOCAD\DA APPROVED\B16097-DRG-C-0011 TO C-0019.DWG



TYPICAL SECTION J

SCALE 1:100

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No. 10 granted on the 7 Nov 2018

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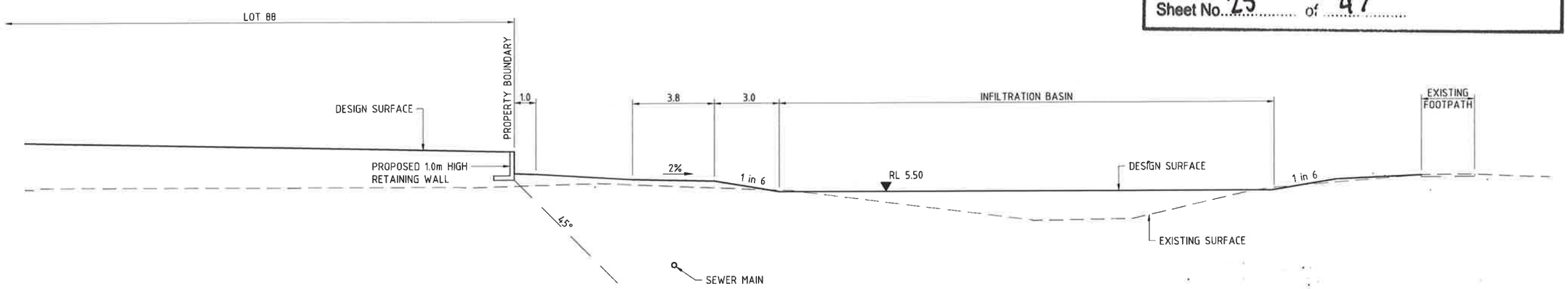
Sheet No. 25 of 47



TYPICAL SECTION I - EASTERN INFILTRATION BASIN

SCALE 1:100

SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
B	08.06.17	ISSUED FOR DA APPROVAL	BJK
A	09.05.17	ISSUED FOR DA APPROVAL	BJK

CLIENT: CLARENCE PROPERTY

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74-76 Bowen St, Spring Hill QLD 4000
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bgeeng.com—

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	1:50 (A1) 1:25 (A3)

TITLE: BULK EARTHWORKS SECTIONS SHEET 5

PROJECT No. B16097 | DRAWING No. C-0015 | REV B

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9/08/2017 5:17:10 PM P:\BGE\BNE\B16097\100 DRAWINGS\102 CIVIL\AUTOCAD\DA APPROVED\B16097-DRG-C-0011 TO C-0019.DWG

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No. 10 granted on the 7 Nov 2018

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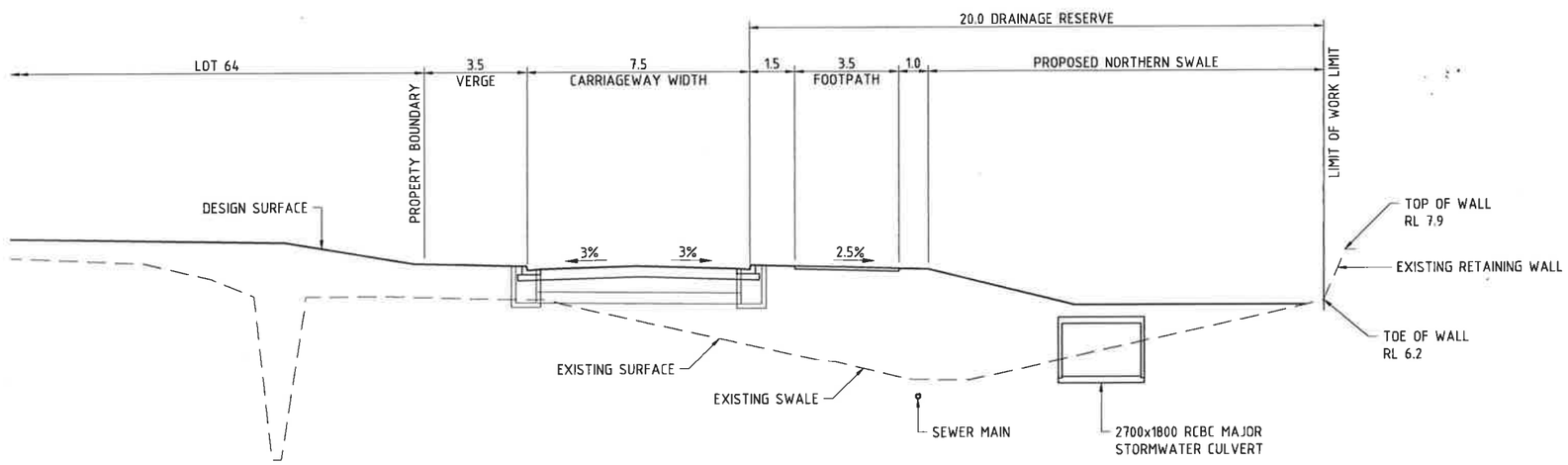

TYPICAL SECTION K - NORTHERN BOUNDARY DRAINAGE RESERVE

SCALE 1:100

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SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
A	09.05.18	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	RVD

EVENT: CLARENCE PROPERTY

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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA95	AHD	1:50 at A1 size

TITLE: BULK EARTHWORKS SECTIONS SHEET 6

PROJECT No	DRAWING No	REV
B16097	C-0016	A

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28/11/2018 9:51:00 AM P:\BGE\BNE\B16097\100 DRAWINGS\102 CIVIL\AUTOCAD\DA APPROVED\B16097-DRG-C-0011 TO C-0019.DWG

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No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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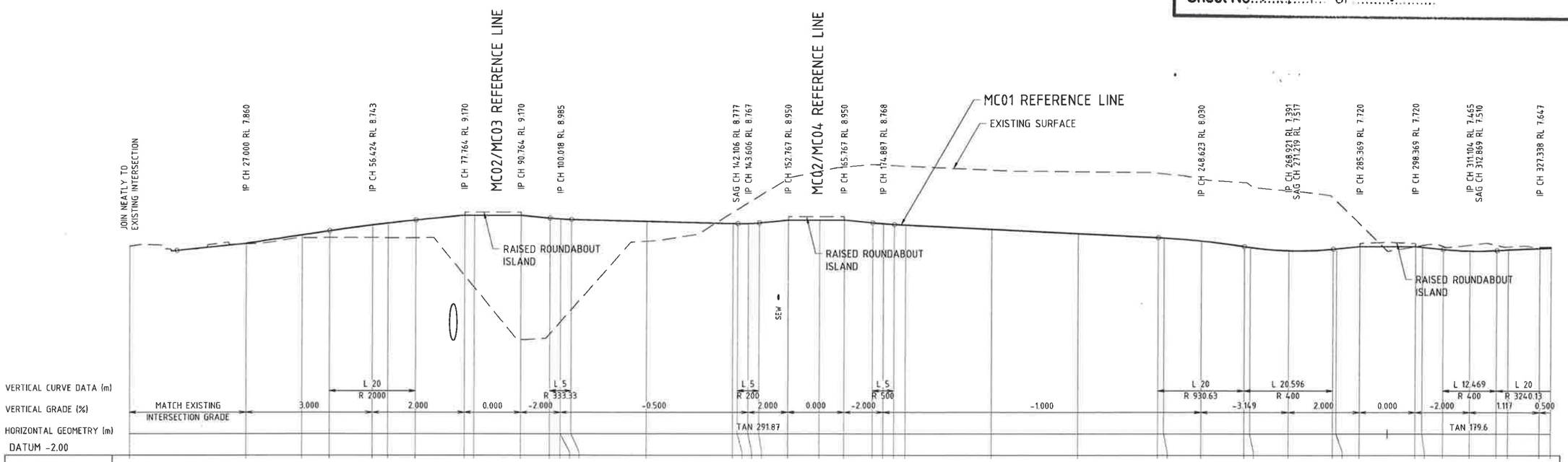

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40.000	-0.125	8.250	8.126
46.424	-0.314	8.443	8.129
56.424	-0.584	8.718	8.134
60.000	-0.676	8.804	8.128
66.424	-0.820	8.943	8.123
77.764	-2.802	9.170	6.368
80.000	-3.352	9.170	5.818
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97.518	-5.389	9.035	3.646
100.000	-4.784	8.994	4.211
100.018	-4.779	8.994	4.215
102.518	-4.189	8.972	4.784
120.000	-0.924	8.885	7.961
140.000	0.525	8.785	9.309
141.106	0.668	8.779	9.447
143.606	0.977	8.782	9.759
146.106	1.254	8.817	10.071
152.767	1.952	8.950	10.902
160.000	2.278	8.950	11.228
165.767	2.475	8.950	11.425
172.387	2.724	8.818	11.542
174.887	2.742	8.774	11.516
177.387	2.748	8.743	11.491
180.000	2.748	8.716	11.465
200.000	2.762	8.516	11.278
220.000	2.884	8.316	11.200
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279.219	2.377	7.597	9.974
280.000	2.209	7.613	9.822
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298.369	0.003	7.720	7.723
300.000	0.091	7.687	7.779
304.869	0.141	7.590	7.731
311.104	0.280	7.514	7.794
317.338	0.244	7.535	7.779
320.000	0.139	7.564	7.703
327.338	0.057	7.631	7.688
330.000	0.056	7.652	7.708

MC01 LONGITUDINAL SECTION (CON'T)

SCALE HORIZ 1:500 VERT. 1:100

SCALE 1:100 AT A1 SIZE

SCALE 1:500 AT A1 SIZE

REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
A	08.05.17	ISSUED FOR DA APPROVAL	B.K				

CLIENT: CLARENCE PROPERTY

Brisbane *Office*—
74-76 Bowen St, Spring Hill QLD 4000
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bgeeng.com—

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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM: MGA94 | GRID: AHD | SCALE: H 1:500, V 1:100 A1 | 1:20

TITLE: ROAD LONGITUDINAL SECTION MC01 SHEET 1

PROJECT No. B16097 | DRAWING No. C-0020 | REV A

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Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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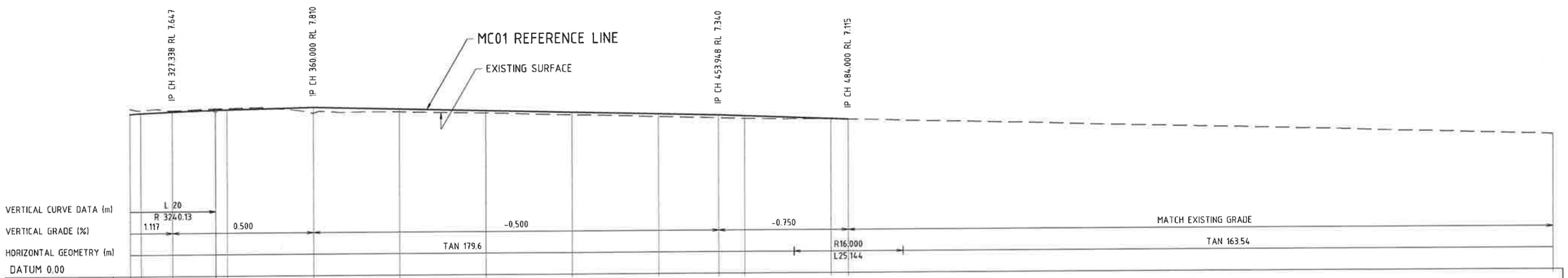
Sheet No. 28 of 47



MC01 LONGITUDINAL SECTION (CON'T)

SCALE HORIZ. 1:500 VERT. 1:100

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

0 5 10 15 20 25 30m
SCALE 1:500 AT A1 SIZE

REV	DATE	DESCRIPTION	BY/D
A	09.05.11	ISSUED FOR DA APPROVAL	B.K

REV	DATE	DESCRIPTION	BY/D

CLARENCE PROPERTY

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74-76 Bowen St, Spring Hill QLD 4000
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CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	H 1:500, V 1:100 A1

TITLE: ROAD LONGITUDINAL SECTION MC01 SHEET 2

PROJECT No. B16097 | DRAWING No. C-0021 | REV A

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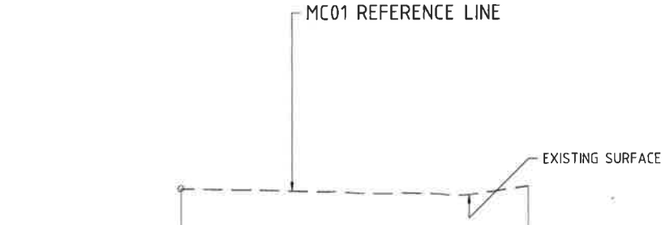

VERTICAL CURVE DATA (m)

VERTICAL GRADE (%)

HORIZONTAL GEOMETRY (m)

DATUM 1.00

CUT DEPTH (+VE) FILL DEPTH (-ve)	0.000	0.000
DESIGN SURFACE LEVEL	6.345	6.402
EXISTING SURFACE LEVEL	6.345	6.402
CHAINAGE	635.000	693.283

MC01 LONGITUDINAL SECTION (CON'T)

SCALE HORIZ 1:500 VERT 1:100

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Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2016

in respect to MP 06-0258

Signed EB

Sheet No. 29 of 47

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

0 5 10 15 20 25 30m
SCALE 1:500 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
A	09.05.17	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	RVD

CLIENT: CLARENCE PROPERTY

Brisbane Office—
74-76 Bowen St, Spring Hill QLD 4000
P / +61 7 3167 3300
E / info@bgeeng.com
bgeeng.com—

BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	GRID	SCALE
MGA94	AHD	H 1:500, V 1:100

TITLE: ROAD LONGITUDINAL SECTION MC01 SHEET 3

PROJECT No.	DRAWING No.	REV
B16097	C-0022	A

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9/08/2017 5:17:50 PM P:\BGE\BNE\B16097\100 DRAWINGS\102 CIVIL\AUTOCAD\DA APPROVED\B16097-DRG-C-0020 TO C-0029.DWG

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No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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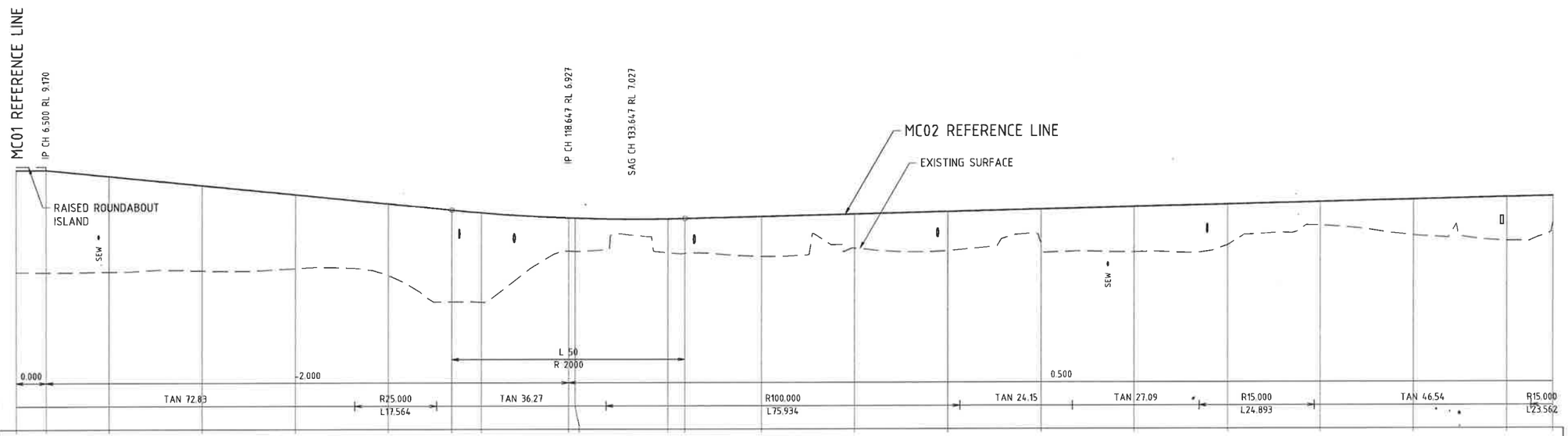
Sheet No. 30 of 47



CHAINAGE	CUT DEPTH (+VE) FILL DEPTH (-ve)	DESIGN SURFACE LEVEL	EXISTING SURFACE LEVEL
0.000	-4.400	9.170	4.769
6.500	-4.412	9.170	4.758
20.000	-4.117	8.900	4.782
40.000	-3.671	8.500	4.829
60.000	-3.177	8.100	4.922
80.000	-3.072	7.700	4.628
93.647	-3.946	7.427	3.480
100.000	-3.834	7.310	3.476
118.647	-1.426	7.083	5.657
120.000	-1.429	7.073	5.645
140.000	-1.468	7.037	5.569
143.647	-1.510	7.052	5.542
160.000	-1.720	7.134	5.414
180.000	-1.467	7.234	5.767
200.000	-1.689	7.334	5.645
220.000	-1.550	7.434	5.884
240.000	-1.957	7.534	5.577
260.000	-1.747	7.634	5.886
280.000	-1.019	7.734	6.714
300.000	-1.537	7.834	6.296
320.000	-1.873	7.934	6.060
330.000	-1.125	7.984	6.859

MC02 LONGITUDINAL SECTION (CON'T)

SCALE HORIZ 1:500 VERT. 1:100

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

0 5 10 15 20 25 30m
SCALE 1:500 AT A1 SIZE

REV	DATE	DESCRIPTION	BY
A	09.05.17	ISSUED FOR DA APPROVAL	B.K

REV	DATE	DESCRIPTION	BY

CLIENT: CLARENCE PROPERTY

Brisbane *Office*—
74-76 Bowen St, Spring Hill QLD 4000
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bgeeng.com—

BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	H 1:500, V 1:100

TITLE: ROAD LONGITUDINAL SECTION MC02 SHEET 1

PROJECT No. B16097 | DRAWING No. C-0023 | REV A

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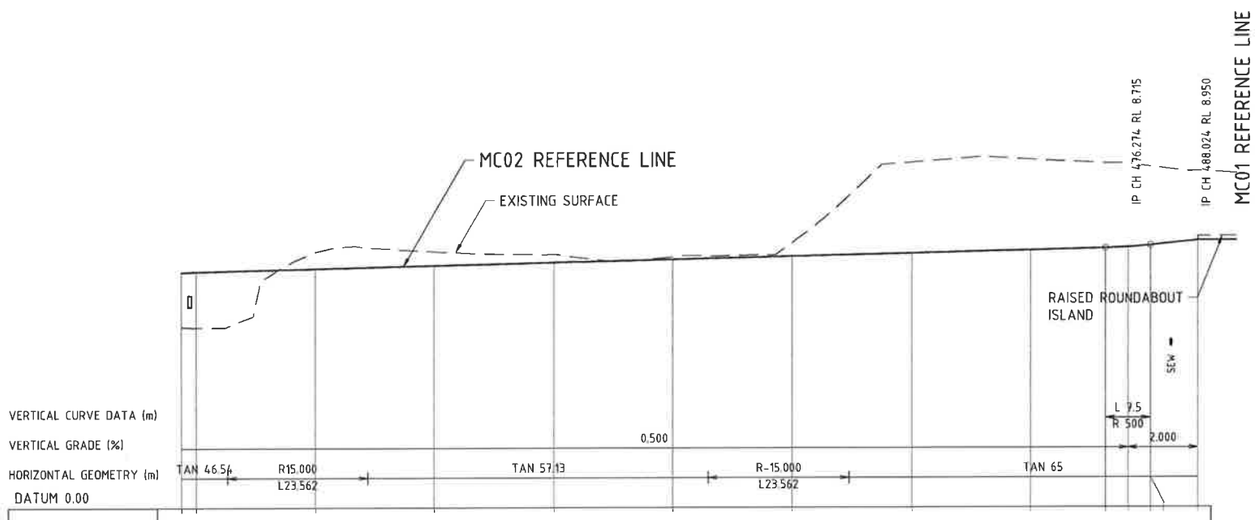

CUT DEPTH (+VE) / FILL DEPTH (-ve)	-1.830 / -1.873	0.555	0.476	0.267	0.088	0.445	3.057	3.054	2.859	2.818	2.637 / 2.636	2.327
DESIGN SURFACE LEVEL	7.921 / 7.934	8.034	8.134	8.234	8.334	8.434	8.534	8.634	8.696	8.729	8.790 / 8.790	8.950
EXISTING SURFACE LEVEL	6.091 / 6.060	8.589	8.610	8.500	8.421	8.878	11.590	11.688	11.555	11.547	11.426 / 11.426	11.277
CHAINAGE	317.500 / 320.000	340.000	360.000	380.000	400.000	420.000	440.000	460.000	472.524	476.274	480.000 / 480.024	488.024

MC02 LONGITUDINAL SECTION (CON'T)

SCALE HORIZ 1:500 VERT. 1:100

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No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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Sheet No. 31 of 47

SCALE 1:100 AT A1 SIZE

SCALE 1:500 AT A1 SIZE

REV	DATE	DESCRIPTION	BY
A	09.05.17	ISSUED FOR DA APPROVAL	B.K

REV	DATE	DESCRIPTION	BY

CLIENT: CLARENCE PROPERTY

Brisbane *Office*—
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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	ENGINEER	APPROVED
C.K	B.J	M.W	B.K

DATUM: MGA94 | GRID: AHD | SCALE: H 1:500, V 1:100 A1

TITLE: ROAD LONGITUDINAL SECTION MC02 SHEET 2

PROJECT No: B16097 | DRAWING No: C-0024 | REV: A

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No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

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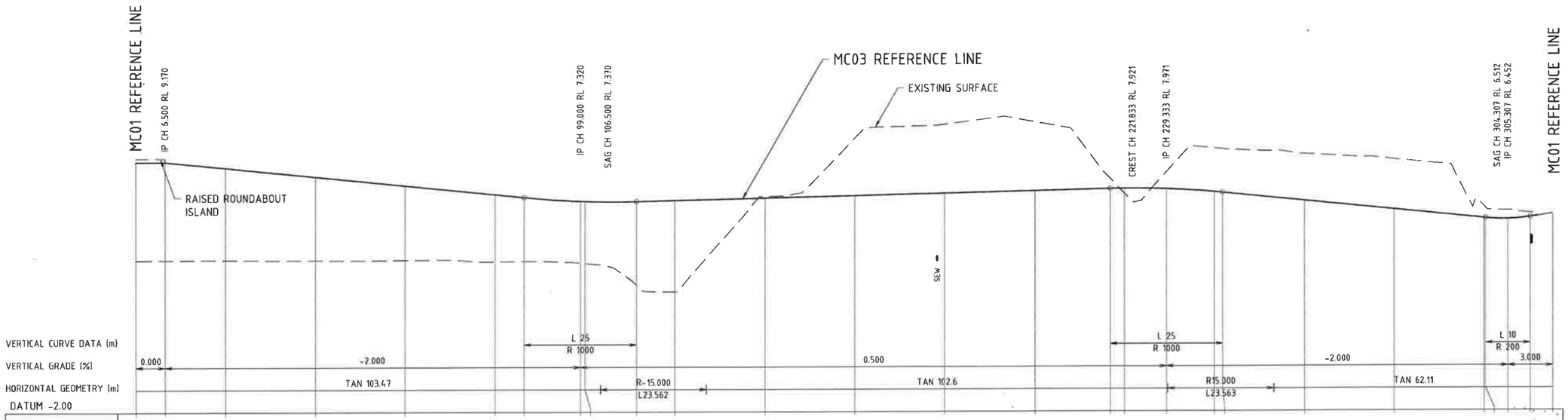
Sheet No. 32 of 47



CHAINAGE	CUT DEPTH (+VE) FILL DEPTH (-ve)	DESIGN SURFACE LEVEL	EXISTING SURFACE LEVEL
0.000	-4.400	9.170	4.769
6.500	-4.391	9.170	4.779
20.000	-4.113	8.900	4.787
40.000	-3.733	8.500	4.767
60.000	-3.327	8.100	4.772
80.000	-2.997	7.700	4.703
86.500	-2.853	7.570	4.717
99.000	-2.750	7.398	4.648
100.000	-2.760	7.391	4.631
111.500	-3.707	7.382	3.675
120.000	-4.078	7.425	3.347
140.000	0.069	7.525	7.594
160.000	2.565	7.625	10.190
180.000	3.070	7.725	10.795
200.000	3.075	7.825	10.900
216.833	0.444	7.909	8.353
220.000	-0.215	7.920	7.705
229.333	0.767	7.893	8.661
240.000	1.945	7.756	9.702
241.833	1.949	7.721	9.671
260.000	2.088	7.358	9.446
280.000	2.237	6.958	9.196
300.000	0.518	6.558	7.076
300.307	0.457	6.552	7.009
305.307	0.396	6.514	6.911
310.307	0.194	6.602	6.796
315.307	-0.000	6.752	6.752

MC03 LONGITUDINAL SECTION

SCALE HORIZ. 1:500 VERT. 1:100

SCALE 1:100 AT A1 SIZE

SCALE 1:500 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
A	09.05.17	ISSUED FOR DA APPROVAL	BK

CLIENT: CLARENCE PROPERTY

Brisbane *Office*—
74-76 Bowen St, Spring Hill QLD 4000
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bgeeng.com—

BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	CRD	SCALE
MGA94	AHD	H 1:500, V 1:100 (A1) (A3)

TITLE: ROAD LONGITUDINAL SECTION MC03 SHEET 1

PROJECT No. B16097 | DRAWING No. C-0025 | REV A

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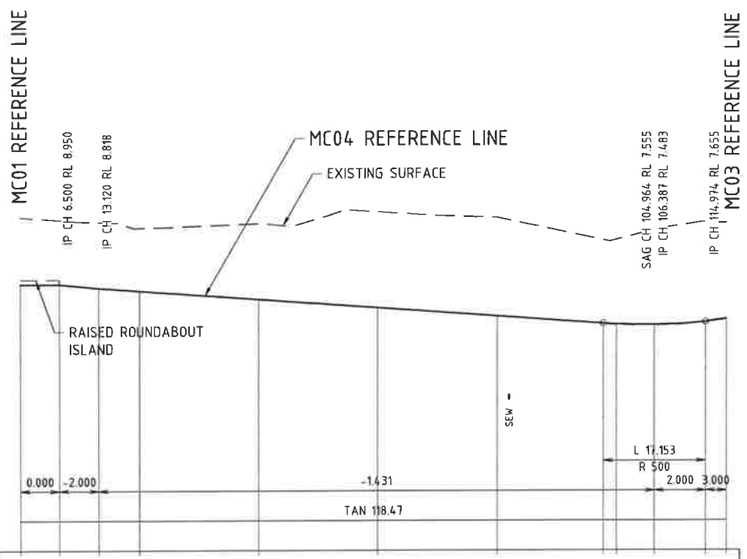

VERTICAL CURVE DATA (m)												
VERTICAL GRADE (%)	0.000	-2.000		-1.431						2.000	3.000	
HORIZONTAL GEOMETRY (m)				TAN 118.47								
DATUM 0.00												
CUT DEPTH (+VE) FILL DEPTH (-ve)	2.247	2.142	2.206	2.109	2.546	3.210	3.301	2.794	2.831	3.200	3.349	3.222
DESIGN SURFACE LEVEL	8.950	8.950	8.818	8.719	8.433	8.147	7.861	7.606	7.579	7.557	7.655	7.760
EXISTING SURFACE LEVEL	11.197	11.092	11.024	10.828	10.979	11.357	11.162	10.400	10.411	10.757	11.004	10.982
CHAINAGE	0.000	6.500	13.120	20.000	40.000	60.000	80.000	97.810	100.000	106.387	114.974	118.474

MC04 LONGITUDINAL SECTION

SCALE HORIZ. 1:500 VERT. 1:100

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Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

Signed SB

Sheet No. 33 of 47

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

0 5 10 15 20 25 30m
SCALE 1:500 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
A	20.03.13	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	RVD

CLIENT: CLARENCE PROPERTY

Brisbane *Office*—
74-76 Bowen St, Spring Hill QLD 4000
P / +61 7 3167 3300
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bgeeng.com—

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	GRID	SCALE		
MGA94	AHD	H 1:500, V 1:100	A1	A3

TITLE: ROAD LONGITUDINAL SECTION MC04 SHEET 1

PROJECT No.	DRAWING No.	REV
B16097	C-0026	A

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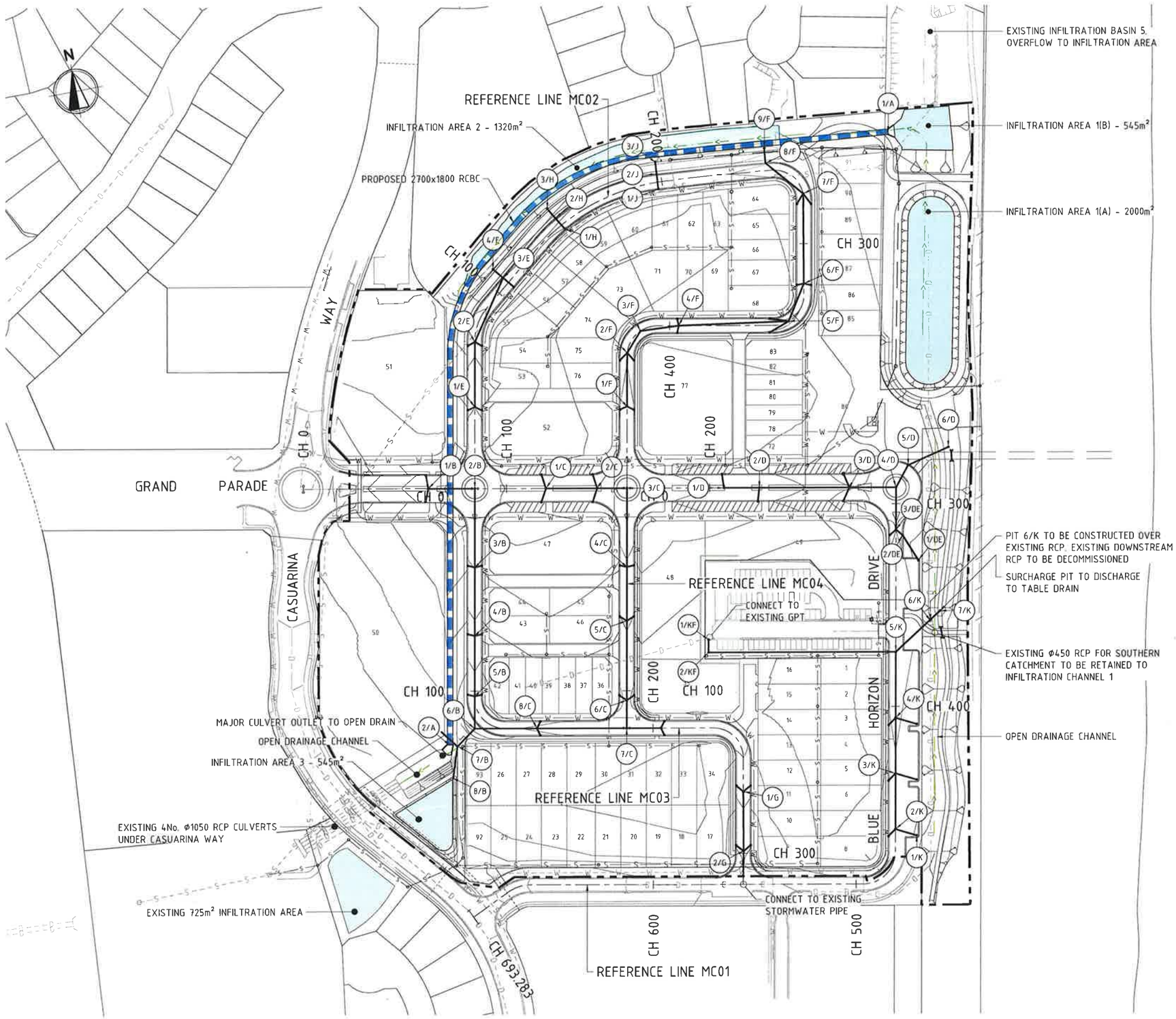

LEGEND

- DESIGN CONTROL LINE (CH 100)
- LIMIT OF WORKS BOUNDARY
- PROPOSED LIP OF KERB
- PROPOSED RETAINING WALL
- PROPOSED MINOR STORMWATER NETWORK
- PROPOSED MAJOR CULVERT AND HEADWALL
- PROPOSED DRAINAGE STRUCTURE (4/F)
- INFILTRATION AREA (5900m² TOTAL)
- PROPOSED SWALE DRAIN
- PROPOSED TRUNK SEWER ALIGNMENT (0.3m - 5.0m DEEP)
- PROPOSED SEWER ALIGNMENT (0m - 3.0m DEEP)
- PROPOSED WATER
- PROPOSED WATER CONNECTION
- PROPOSED CONTOURS
- EXISTING WATER
- EXISTING OVERHEAD POWER LINE
- EXISTING CONTOURS

NOTE

1. BIO-RETENTION IS TO BE PROTECTED FROM SEDIMENT INPUTS DURING HOUSING CONSTRUCTION. BIO-RETENTION TO BE HANDED OVER TO COUNCIL AFTER 90% HOUSING CONSTRUCTION IS COMPLETE.

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No. 10 granted on the Nov 7, 2018

in respect to MP 06_0258

Signed EB

Sheet No. 34 of 47

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
C	09.08.17	ISSUED FOR DA APPROVAL	B.K.
B	08.05.17	ISSUED FOR DA APPROVAL	B.K.
A	09.05.17	ISSUED FOR DA APPROVAL	B.K.

REV	DATE	DESCRIPTION	RVD

CLARENCE PROPERTY

Brisbane *Office*—
74-76 Bowen St, Spring Hill QLD 4000
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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	REVIEWED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	1:1000 A1

TITLE: STORMWATER LAYOUT PLAN SHEET 1

PROJECT No. B16097 | DRAWING No. C-0030 | REV C

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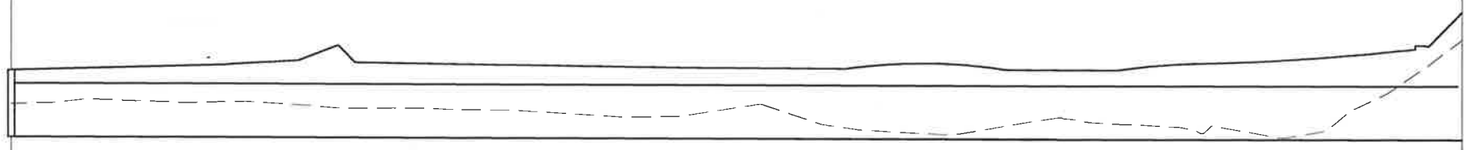
NOTE

1. PIPE SIZES TO BE DETERMINED DURING DETAILED DESIGN.

STRUCTURE NAME	1.A	
STRUCTURE DESCRIPTION	HEADWALL INLET	
PIPE SIZE (mm)		2700x1800 RCBC
PIPE CLASS		
PIPE GRADE (%)		0.1%
PIPE GRADE (1 in)		1 in 1000
DATUM (m)	-7.0	
PIPE FLOW (Cumecs)		
PIPE CAPACITY AT GRADE (Cumecs)		
WATER LEVEL IN STRUCTURE		
HYDRAULIC GRADE LEVEL		
DEPTH TO INVERT	2.251	4.053
INVERT LEVEL OF DRAIN	3.749	3.466
STRUCTURE SETOUT LEVEL	6.000	7.519
RUNNING CHAINAGE	0.000	243.204
STRUCTURE SETOUT	E 556307.803 N 6869894.893	E 556082.220 N 6869849.993
LINE	A	



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No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

Signed EB

Sheet No. 35 of 47

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	BY	RVD
A	09.05.17	ISSUED FOR DA APPROVAL	BK	

REV	DATE	DESCRIPTION	RVD

CLIENT: CLARENCE PROPERTY

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BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	GRID	SCALE	
MGA94	AHD	AS SHOWN	A1 A3

TITLE: STORMWATER LONGITUDINAL SECTIONS SHEET 1

PROJECT No.	DRAWING No.	REV
B16097	C-0035	A

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NOTE
1. PIPE SIZES TO BE DETERMINED DURING DETAILED DESIGN.

STRUCTURE NAME			2.A HEADWALL OUTLET
STRUCTURE DESCRIPTION			
		150mm IL 6.264	150mm IL 2.905
PIPE SIZE (mm)		2700x1800 RCBC	
PIPE CLASS			
PIPE GRADE (%)		0.1%	
PIPE GRADE (1 in)		1 in 1000	
DATUM (m)		-7.0	
PIPE FLOW (Cumecs)			
PIPE CAPACITY AT GRADE (Cumecs)			
WATER LEVEL IN STRUCTURE			
HYDRAULIC GRADE LEVEL			
DEPTH TO INVERT	4.053	4.073	1.650
INVERT LEVEL OF DRAIN	3.466	3.446	3.228
STRUCTURE SETOUT LEVEL	7.519		4.878
RUNNING CHAINAGE	243.204	218.404	461.609
STRUCTURE SETOUT	E 556082.220 N 6869849.993		E 556041.415 N 6869635.434
LINE		A	

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Approved Section 75W Modification Application

No. 16 granted on the 7 Nov 2018

in respect to MP 06-0258

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Sheet No. 36 of 47

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
A	09.05.17	ISSUED FOR DA APPROVAL	BK				

CLIENT: CLARENCE PROPERTY

Brisbane *Office*—
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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	GRID	SCALE
MGA94	AHD	AS SHOWN (A1)

TITLE: STORMWATER LONGITUDINAL SECTIONS SHEET 2

PROJECT No.	DRAWING No.	REV
B16097	C-0036	A

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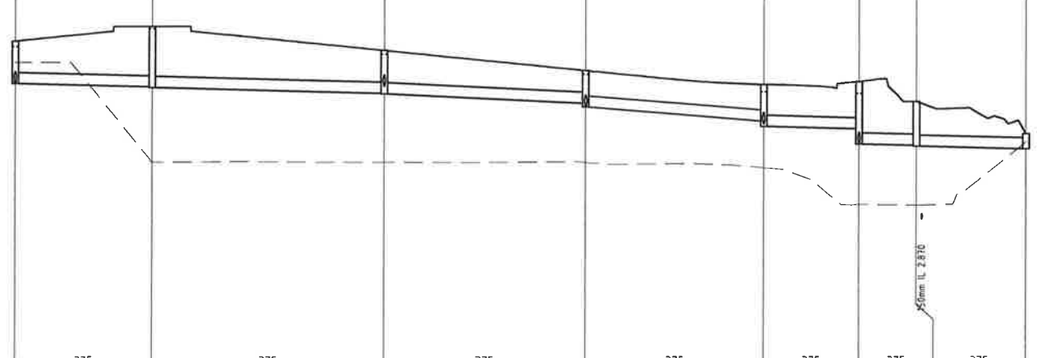
NOTE

1. PIPE SIZES TO BE DETERMINED DURING DETAILED DESIGN.



STRUCTURE NAME	1.B	2.B	3.B	4.B	5.B	6.B	7.B	8.B
STRUCTURE DESCRIPTION	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	SAG INLET	HEADWALL OUTLET
PIPE SIZE (mm)	375	375	375	375	375	375	375	
PIPE CLASS	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	
PIPE GRADE (%)	0.5%	0.5%	0.93%	1.58%	0.5%	0.5%	0.5%	
PIPE GRADE (1 in)	1 in 200	1 in 200	1 in 107.5	1 in 63.2	1 in 200	1 in 200	1 in 200	
DATUM (m)	-7.0							
PIPE FLOW (Cumecs)								
PIPE CAPACITY AT GRADE (Cumecs)								
WATER LEVEL IN STRUCTURE								
HYDRAULIC GRADE LEVEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPTH TO INVERT	1.420	2.019	2.039	1.436	1.456	1.094	1.218	1.222
INVERT LEVEL OF DRAIN	7.415	7.301	7.281	7.086	7.066	6.752	6.628	6.156
STRUCTURE SETOUT LEVEL	8.835	9.320	8.522	7.846	7.378	7.469	6.804	5.712
RUNNING CHAINAGE	0.000	22.923	38.891	33.804	29.845	15.934	9.602	18.416
STRUCTURE SETOUT	E 556051.556 N 6869762.639	E 556074.075 N 6869758.356	E 556066.809 N 6869720.556	E 556060.494 N 6869686.941	E 556054.916 N 6869657.622	E 556051.940 N 6869641.969	E 556044.093 N 6869636.436	E 556037.250 N 6869619.338
LINE	B							

STRUCTURE NAME	1.B	2.B	3.B	4.B	5.B	6.B	7.B	8.B
HYDRAULIC GRADE LEVEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEPTH TO INVERT	1.222	1.407	1.579	2.089	1.472	1.502		0.503
INVERT LEVEL OF DRAIN	5.156	5.970	5.891	5.380	5.332	5.302		5.210
STRUCTURE SETOUT LEVEL	7.378		7.469		6.804		5.712	
RUNNING CHAINAGE	125.463	15.934	141.396	9.602	150.998	18.416	169.414	
STRUCTURE SETOUT	E 556054.916 N 6869657.622		E 556051.940 N 6869641.969		E 556044.093 N 6869636.436		E 556037.250 N 6869619.338	
LINE								

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Approved Section 75W Modification Application

No. 1.0 granted on the 7 Nov, 2018

in respect to MP 06-0258

Signed EB

Sheet No. 37 of 47

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
B	08.06.17	ISSUED FOR DA APPROVAL	B.K
A	09.05.13	ISSUED FOR DA APPROVAL	B.K

REV	DATE	DESCRIPTION	RVD

CLARENCE PROPERTY

Brisbane *Office*—
74-76 Bowen St, Spring Hill QLD 4000
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bgeeng.com—

BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	ENGINEER	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE	PROJECT No.	DRAWING No.	REV
MGA94	AHD	AS SHOWN (A1) (A3)	B16097	C-0037	B

TITLE: STORMWATER LONGITUDINAL SECTIONS SHEET 3

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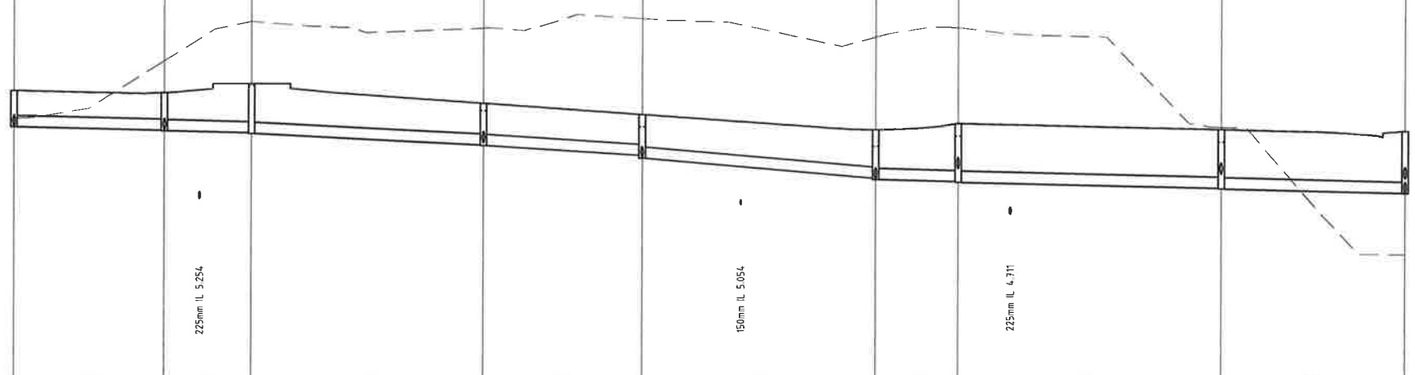
NOTE
1. PIPE SIZES TO BE DETERMINED DURING DETAILED DESIGN.



STRUCTURE NAME	1.C	2.C	3.C	4.C	5.C	6.C	7.C	8.C	6.B
STRUCTURE DESCRIPTION	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE
PIPE SIZE (mm)		375	375	375	375	375	375	375	375
PIPE CLASS		RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3
PIPE GRADE (%)		0.5%	0.5%	0.99%	1.24%	1.68%	0.5%	0.5%	0.5%
PIPE GRADE (1 in)		1 in 200	1 in 200	1 in 101.5	1 in 80.4	1 in 59.4	1 in 200	1 in 200	1 in 200
DATUM (m)	-6.0								
PIPE FLOW (Cumecs)									
PIPE CAPACITY AT GRADE (Cumecs)									
WATER LEVEL IN STRUCTURE									
HYDRAULIC GRADE LEVEL	0.000	0.000	0.000 0.000	0.000	0.000 0.000	0.000	0.000 0.000	0.000	0.000 0.000
DEPTH TO INVERT	1.210	1.260	1.280 1.642	1.662	1.394 1.414	1.364 1.468	1.614 1.674	1.948 1.968	1.958 1.968 1.988 2.072 2.089
INVERT LEVEL OF DRAIN	7.677	7.551	7.531 7.458	7.438	7.055 7.035	6.704 6.600	5.941 5.881	5.812 5.792	5.572 5.552 5.397 5.380
STRUCTURE SETOUT LEVEL	8.888	8.811	9.100		8.449	8.068	7.555	7.760	7.539 7.469
RUNNING CHAINAGE	0.000	25.183 25.183	14.657 39.840	38.888 78.728	26.593 105.321	39.169 144.490	13.821 158.311	44.108 202.419	30.892 233.311
STRUCTURE SETOUT	E 556108.617 N 6869751.792	E 556133.356 N 6869747.082	E 556147.754 N 6869744.341	E 556140.488 N 6869706.138	E 556135.520 N 6869680.013	E 556128.202 N 6869641.534	E 556125.619 N 6869627.956	E 556082.288 N 6869636.197	E 556051.940 N 6869641.969
LINE	C								

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Approved Section 75W Modification Application
No. 10 granted on the 7 Nov 2018
in respect to MP 06_0258
Signed DB
Sheet No. 38 of 47

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
B	09.08.17	ISSUED FOR DA APPROVAL	BK
A	09.05.17	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	RVD

CLIENT: CLARENCE PROPERTY

Brisbane *Office*—
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bgeeng.com—

BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
CK	BJ	MW	BK

DATUM	GRID	SCALE
MGA94	AHD	AS SHOWN

TITLE: STORMWATER LONGITUDINAL SECTIONS SHEET 4

PROJECT No.	DRAWING No.	REV
B16097	C-0038	B

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NOTE
1. PIPE SIZES TO BE DETERMINED DURING DETAILED DESIGN.

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No. 10 granted on the 7 Nov 2018
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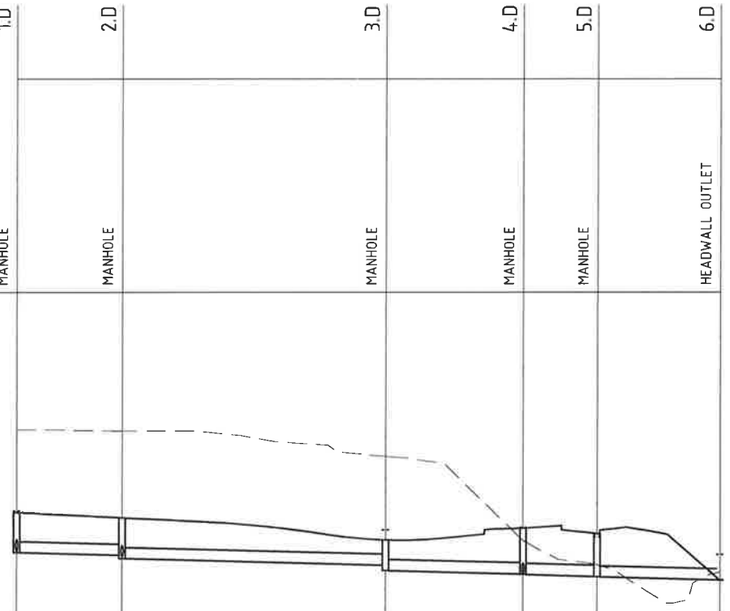
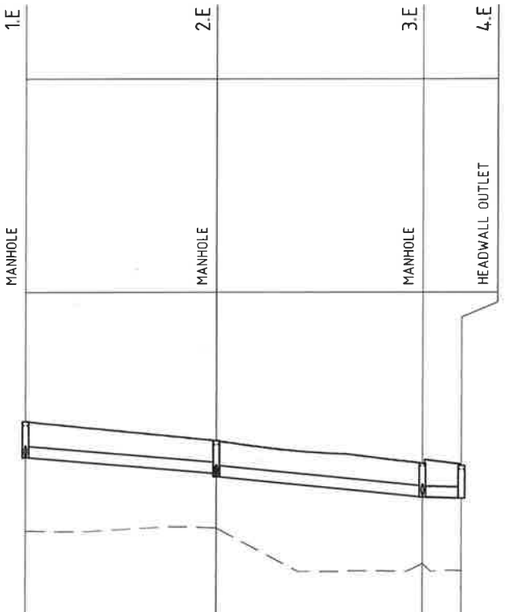
Signed
Sheet No. 39 of 47





STRUCTURE DESCRIPTION	1.D MANHOLE	2.D MANHOLE	3.D MANHOLE	4.D MANHOLE	5.D MANHOLE	6.D HEADWALL OUTLET
PIPE SIZE (mm)	375	375	375	375	375	
PIPE CLASS	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	
PIPE GRADE (%)	0.5%	0.97%	0.5%	0.5%	6.8%	
PIPE GRADE (1 in)	1 in 200	1 in 103.5	1 in 200	1 in 200	1 in 14.7	
DATUM (m)	-5.0					
PIPE FLOW (Cumecs)						
PIPE CAPACITY AT GRADE (Cumecs)						
WATER LEVEL IN STRUCTURE						
HYDRAULIC GRADE LEVEL						
DEPTH TO INVERT	1.346	1.258 1.371	0.846 1.025	1.536 1.556	1.420 1.440	-0.009
INVERT LEVEL OF DRAIN	7.100	7.012 6.900	6.679 6.500	6.385 6.365	6.302 6.282	6.180
STRUCTURE SETOUT LEVEL	8.446	8.271	7.525	7.921	7.722	6.171
RUNNING CHAINAGE	0.000	47.322 17.592	23.629 61.780	34.551 84.879	32.908 97.362	3.559 117.789
STRUCTURE SETOUT	E 556194.639 N 6869735.423	E 556241.128 N 6869726.584	E 556264.342 N 6869722.171	E 556270.969 N 6869688.261	E 556278.281 N 6869656.175	E 556281.777 N 6869655.511
LINE	D					

STRUCTURE DESCRIPTION	1.E MANHOLE	2.E MANHOLE	3.E MANHOLE	4.E HEADWALL OUTLET
PIPE SIZE (mm)	375	375	375	
PIPE CLASS	RCP CL3	RCP CL3	RCP CL3	
PIPE GRADE (%)	1.65%	1.94%	0.5%	
PIPE GRADE (1 in)	1 in 60.6	1 in 51.4	1 in 200	
DATUM (m)	-8.0			
PIPE FLOW (Cumecs)				
PIPE CAPACITY AT GRADE (Cumecs)				
WATER LEVEL IN STRUCTURE				
HYDRAULIC GRADE LEVEL				
DEPTH TO INVERT	1.205	1.094 1.203	1.113 1.133	1.091
INVERT LEVEL OF DRAIN	7.288	6.760 6.651	5.979 5.959	5.926
STRUCTURE SETOUT LEVEL	8.493	7.854	7.092	7.017
RUNNING CHAINAGE	0.000	31.958 31.958	34.582 66.540	6.537 73.076
STRUCTURE SETOUT	E 556081.609 N 6869797.971	E 556087.580 N 6869829.366	E 556107.260 N 6869857.808	E 556103.146 N 6869862.881
LINE	E			

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	BY
B	26.06.17	ISSUED FOR DA APPROVAL	B.K				
A	09.05.17	ISSUED FOR DA APPROVAL	B.K				

CLIENT: CLARENCE PROPERTY

Brisbane *Office*—
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bgeeng.com—
BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	AS SHOWN

TITLE: STORMWATER LONGITUDINAL SECTIONS SHEET 5

PROJECT No.	DRAWING No.	REV
B16097	C-0039	B

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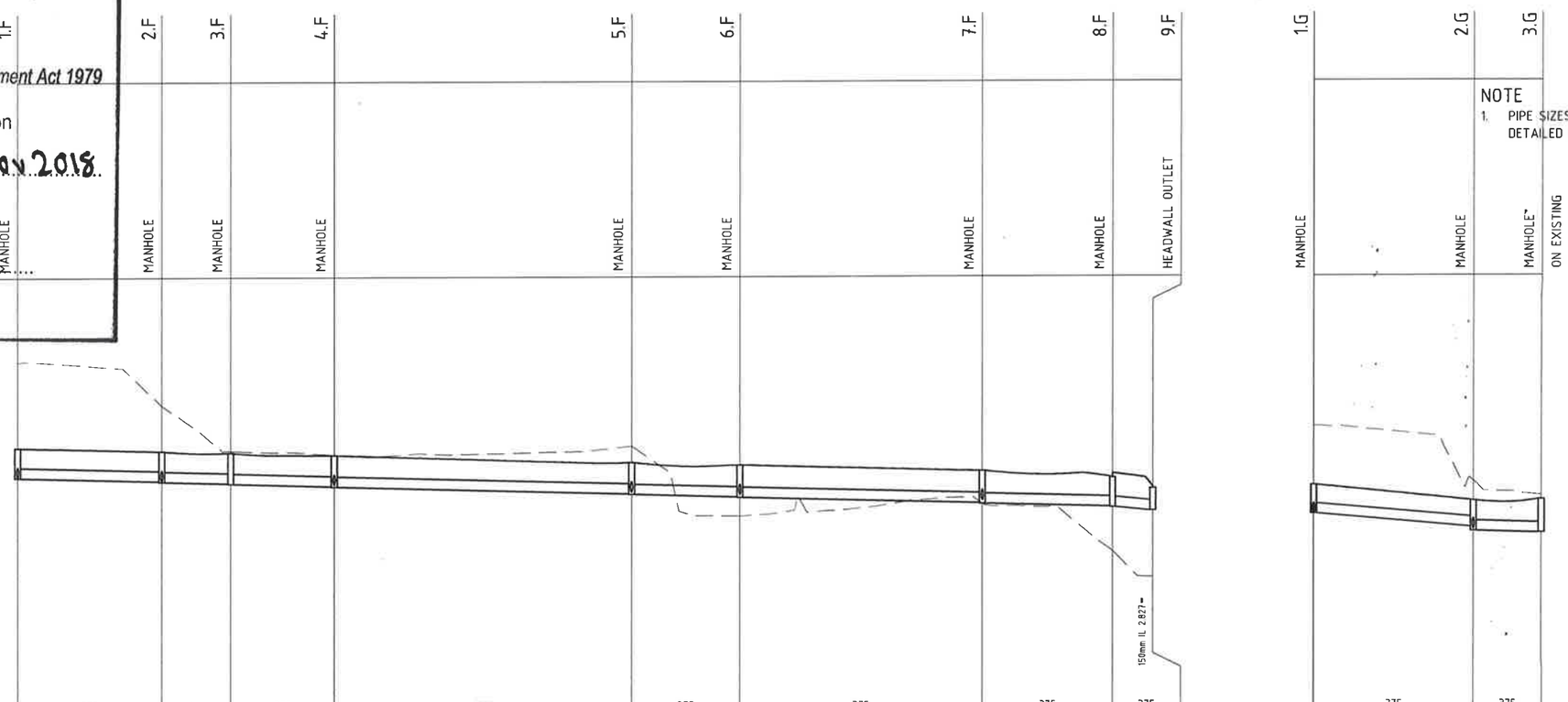
Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

Signed STRUCTURE DESCRIPTION EB

Sheet No. 40 47



NOTE
1. PIPE SIZES TO BE DETERMINED DURING DETAILED DESIGN.

PIPE SIZE (mm)		375		375		375		375		375		375		375		375		375		375		375		
PIPE CLASS		RCP CL3		RCP CL3		RCP CL3		RCP CL3		RCP CL3		RCP CL3		RCP CL3		RCP CL3		RCP CL3		RCP CL3		RCP CL3		
PIPE GRADE (%)		0.5%		0.5%		0.5%		0.5%		0.5%		0.5%		0.5%		0.5%		1.69%		0.5%		1.61%		
PIPE GRADE (1 in)		1 in 200		1 in 200		1 in 200		1 in 200		1 in 200		1 in 200		1 in 200		1 in 200		1 in 59.2		1 in 200		1 in 62.2		
DATUM (m)		-6.0																-6.0						
PIPE FLOW (Cumecs)																								
PIPE CAPACITY AT GRADE (Cumecs)																								
WATER LEVEL IN STRUCTURE																								
HYDRAULIC GRADE LEVEL																								
DEPTH TO INVERT		1.096		1.096	1.116	1.114	1.134	1.133	1.153			1.151	1.171	1.165	1.185			1.184	1.204	1.067	1.087		0.812		1.059		0.964	1.113		1.220
INVERT LEVEL OF DRAIN		7.506		7.375	7.355	7.292	7.272	7.177	7.157			6.885	6.865	6.765	6.745			6.524	6.504	6.384	6.364		6.246		6.108		5.612	5.463		5.401
STRUCTURE SETOUT LEVEL	8.603			8.471		8.406		8.309				8.036		7.930				7.708		7.451		7.058		7.167		6.576		6.622	
RUNNING CHAINAGE	0.000		26.363	26.363	12.611	38.974	18.933	57.907		54.394		112.301		132.184		44.382		176.566	23.839	200.405	7.370	207.775		0.000		29.321	29.321	12.388	41.709	
STRUCTURE SETOUT	E 556155.288 N 6869783.958			E 556160.308 N 6869809.839		E 556168.760 N 6869819.198		E 556187.666 N 6869818.187				E 556241.453 N 6869810.087		E 556252.134 N 6869826.858				E 556260.042 N 6869876.529		E 556244.723 N 6869868.795		E 556245.453 N 6869896.128		E 556176.337 N 6869586.370			E 556171.004 N 6869557.538		E 556168.542 N 6869545.398	
LINE		F																						G						

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	BY
B	09.05.17	ISSUED FOR DA APPROVAL	B.K
A	09.05.11	ISSUED FOR DA APPROVAL	B.K

REV	DATE	DESCRIPTION	BY

CLIENT: CLARENCE PROPERTY

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bgeeng.com—

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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	AS SHOWN (A1) (A3)

TITLE: STORMWATER LONGITUDINAL SECTIONS SHEET 6

PROJECT No.	DRAWING No.	REV
B16097	C-0040	B

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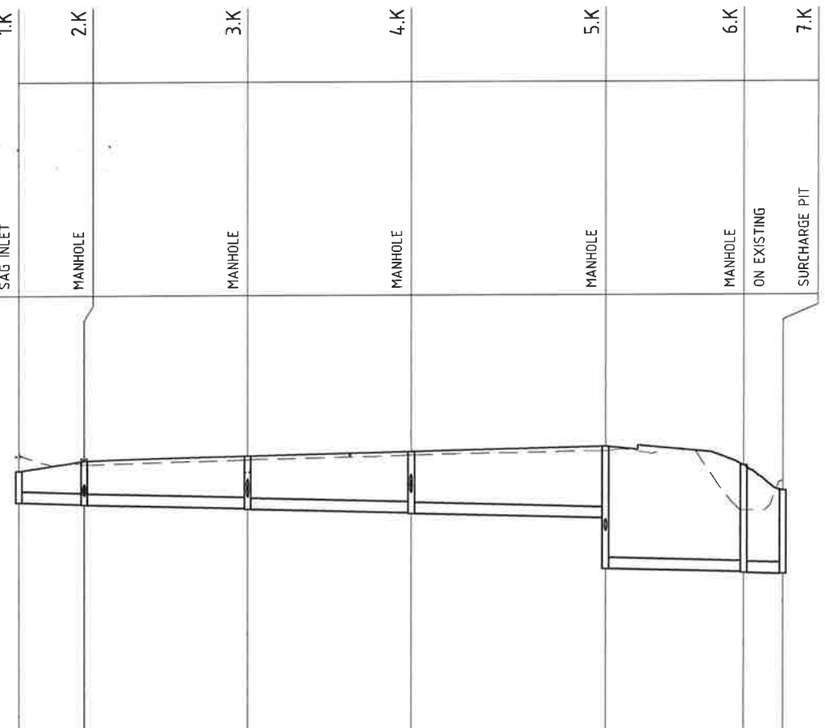
NOTE
1. PIPE SIZES TO BE DETERMINED DURING DETAILED DESIGN.



STRUCTURE DESCRIPTION	1.K SAG INLET	2.K MANHOLE	3.K MANHOLE	4.K MANHOLE	5.K MANHOLE	6.K MANHOLE	7.K ON EXISTING SURCHARGE PIT
PIPE SIZE (mm)	375	375	375	375	375	375	
PIPE CLASS	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	
PIPE GRADE (%)	0.5%	0.5%	0.5%	0.5%	0.52%	0.5%	
PIPE GRADE (1 in)	1 in 200	1 in 200	1 in 200	1 in 200	1 in 191.4	1 in 200	
DATUM (m)	-8.0						
PIPE FLOW (Cumecs)							
PIPE CAPACITY AT GRADE (Cumecs)							
WATER LEVEL IN STRUCTURE							
HYDRAULIC GRADE LEVEL							
DEPTH TO INVERT	1.052	1.446 1.466	1.356 1.776	2.050 2.070	2.396 4.104	3.588 3.608	2.795
INVERT LEVEL OF DRAIN	5.900	5.845 5.825	5.688 5.668	5.531 5.511	5.348 3.641	3.520 3.500	3.467
STRUCTURE SETOUT LEVEL	6.952	7.291	7.445	7.582	7.745	7.108	6.262
RUNNING CHAINAGE	0.000	10.971 10.971	27.400 38.371	27.400 65.771	32.577 98.348	23.065 121.413	6.635 128.048
STRUCTURE SETOUT	E 556256.295 N 6869548.969	E 556246.511 N 6869553.933	E 556251.632 N 6869580.850	E 556256.754 N 6869607.767	E 556262.842 N 6869639.771	E 556282.489 N 6869651.854	E 556287.975 N 6869655.586
LINE	K						

	1.KF EXISTING GPT	2.KF MANHOLE	5.K MANHOLE
PIPE SIZE (mm)	375	375	
PIPE CLASS	RCP CL3	RCP CL3	
PIPE GRADE (%)	0.5%	0.5%	
PIPE GRADE (1 in)	1 in 200	1 in 200	
DATUM (m)	-7.0		
PIPE FLOW (Cumecs)			
PIPE CAPACITY AT GRADE (Cumecs)			
WATER LEVEL IN STRUCTURE			
HYDRAULIC GRADE LEVEL			
DEPTH TO INVERT	2.249	2.191 2.211	2.817 4.104
INVERT LEVEL OF DRAIN	5.440	5.409 5.389	4.927 3.641
STRUCTURE SETOUT LEVEL	7.689	7.600	7.745
RUNNING CHAINAGE	0.000	6.233 6.233	92.277 98.511
STRUCTURE SETOUT	E 556173.356 N 6869663.140	E 556172.191 N 6869657.017	E 556262.842 N 6869639.771

150mm IL 6.127

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Issued under the Environmental Planning and Assessment Act 1979
Approved Section 75W Modification
No. 10 granted on the 7 Nov 2018
in respect to MP 06_0258
Signed EB
Sheet No. 41 of 47

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
B	08.06.17	ISSUED FOR DA APPROVAL	BK
A	09.05.17	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	RVD

CLIENT: CLARENCE PROPERTY

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bgeeng.com—

BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	AS SHOWN (A1) (1:10)

TITLE: STORMWATER LONGITUDINAL SECTIONS SHEET 7

PROJECT No.	DRAWING No.	REV
B16097	C-0041	B

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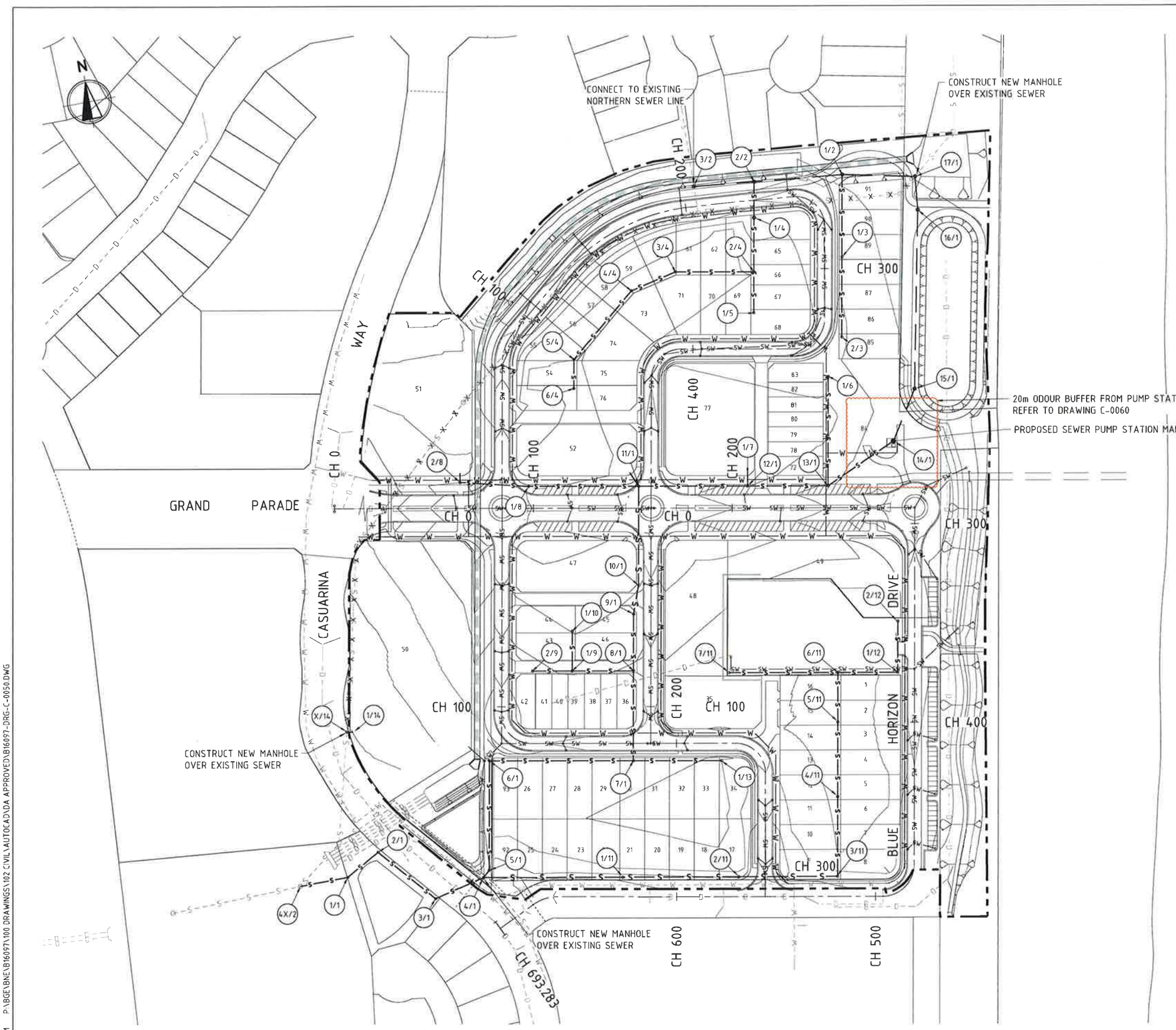

LEGEND

- DESIGN CONTROL LINE (CH 100)
- LIMIT OF WORKS BOUNDARY
- PROPOSED LIP OF KERB
- PROPOSED RETAINING WALL
- PROPOSED TRUNK SEWER ALIGNMENT (3.0 - 5.0m DEEP)
- PROPOSED SEWER ALIGNMENT (0 - 3.0m DEEP)
- PROPOSED SEWER STRUCTURE (4/F)
- PROPOSED WATER RETICULATION ALIGNMENT
- PROPOSED INTERNAL STORMWATER
- PROPOSED CULVERT AND HEADWALL
- PROPOSED CONTOUR
- EXISTING WATER
- EXISTING TRUNK SEWER ALIGNMENT
- EXISTING TRUNK SEWER TO BE REMOVED
- EXISTING CONTOURS

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Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

Signed EB

Sheet No. 42 of 47

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	AVD
C	09.08.17	ISSUED FOR DA APPROVAL	BK
B	08.06.17	ISSUED FOR DA APPROVAL	BK
A	09.05.17	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	AVD

CLIENT: CLARENCE PROPERTY

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BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM: MGA94 | GRID: AHD | SCALE: 1:1000 A1 | 1:NN

TITLE: SERVICES PLAN SHEET 1

PROJECT No: B16097 | DRAWING No: C-0050 | REV: C

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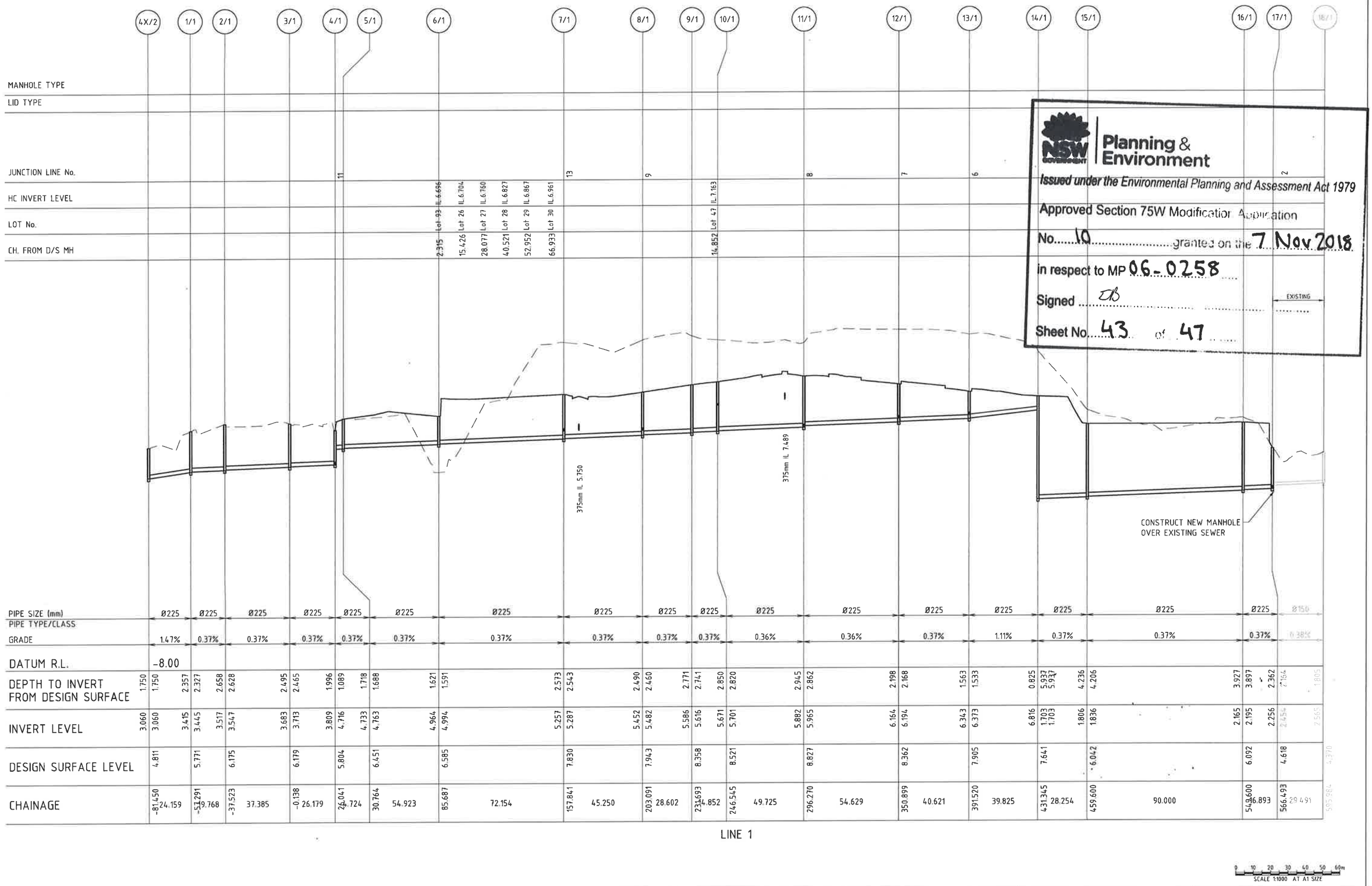
in respect to MP 06_0258

Signed DB

Sheet No. 43 of 47



0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
E	09.08.17	ISSUED FOR DA APPROVAL	BK
B	09.06.17	ISSUED FOR DA APPROVAL	BK
A	09.05.17	ISSUED FOR DA APPROVAL	BK

REV	DATE	DESCRIPTION	RVD

CLIENT: CLARENCE PROPERTY

Brisbane Office—
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P / +61 7 3167 3300
E / info@bgeeng.com
bgeeng.com—

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE
MGA94	AHD	AS SHOWN A1

TITLE: SEWERAGE RETICULATION LONGITUDINAL SECTIONS SHEET 1

PROJECT No. B16097 | DRAWING No. C-0055 | REV C

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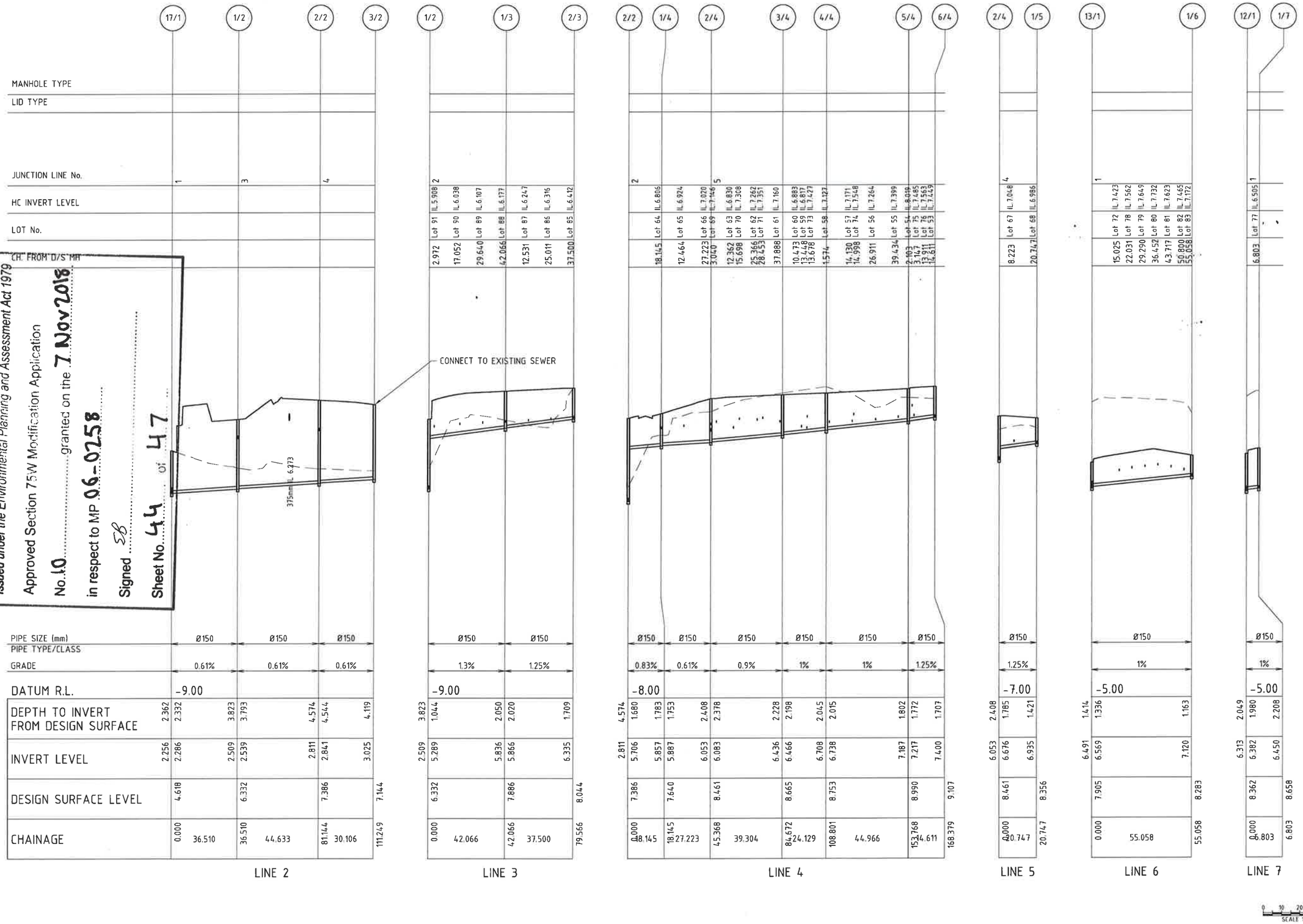

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Approved Section 75W Modification Application
No. 10 granted on the 7 Nov 2018
in respect to MP 06-0258
Signed SB
Sheet No. 44 of 47

REV	DATE	DESCRIPTION	RVD	REV	DATE	DESCRIPTION	RVD
B	08.06.17	ISSUED FOR DA APPROVAL	B.K				
A	09.05.17	ISSUED FOR DA APPROVAL	B.K				

CLIENT: CLARENCE PROPERTY

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BG&E

PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM: MGA94 | GRID: AHD | SCALE: AS SHOWN (A1) (A3)

TITLE: SEWERAGE RETICULATION LONGITUDINAL SECTIONS SHEET 2

PROJECT No. B16097 | DRAWING No. C-0056 | REV B

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SCALE 1:1000 A1 A1 SIZE

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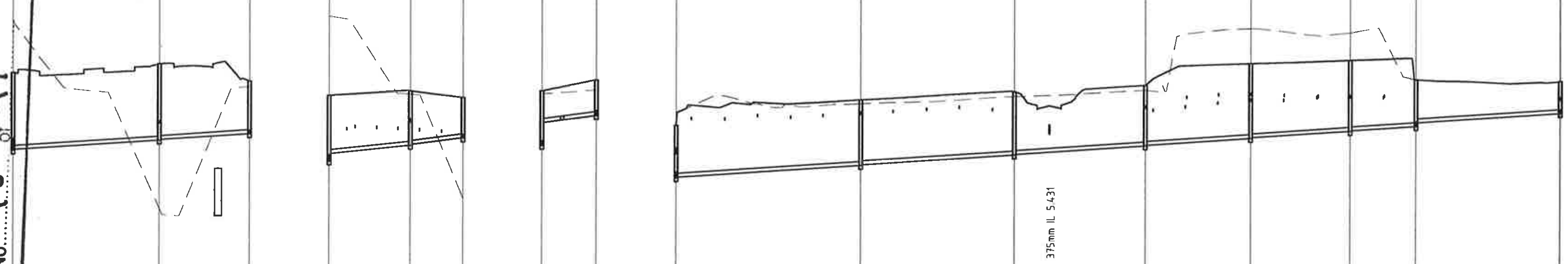

LINE 8

	11/1		1/8		2/8
CHAINAGE	0.000	55.500	55.500	34.309	89.809
DESIGN SURFACE LEVEL	8.827		9.141		8.484
INVERT LEVEL	5.882 / 5.912		6.251 / 6.281		6.490
DEPTH TO INVERT FROM DESIGN SURFACE	2.945 / 2.915		2.891 / 2.861		1.994
DATUM R.L.	-7.00				
GRADE		0.61%		0.61%	
PIPE TYPE/CLASS					
PIPE SIZE (mm)		Ø150		Ø150	
CH. FROM D/S			55.500		34.309
LOT No.			Lot 52		Lot 51
HC INVERT LEVEL			IL 6.888		IL 6.527
JUNCTION LINE No.	1				
LID TYPE					
MANHOLE TYPE					

LINE 9

	8/1		1/9		2/9
CHAINAGE	0.000	30.751	30.751	19.999	50.750
DESIGN SURFACE LEVEL	7.943		8.113		7.859
INVERT LEVEL	5.452 / 5.743		6.050 / 6.080		6.330
DEPTH TO INVERT FROM DESIGN SURFACE	2.490 / 2.200		2.063 / 2.033		1.529
DATUM R.L.	-7.00				
GRADE		1%		1.25%	
PIPE SIZE (mm)		Ø150		Ø150	
CH. FROM D/S	6.624 / 9.766	18.013 / 26.025	3.536	11.878	19.999
LOT No.	Lot 36 / Lot 37	Lot 38 / Lot 39	Lot 40	Lot 41	Lot 42
HC INVERT LEVEL	IL 6.622 / IL 6.705	IL 6.672 / IL 6.637	IL 6.587	IL 6.529	IL 6.380
JUNCTION LINE No.	1		10		

LINE 10

	1/9		1/10
CHAINAGE	0.000	20.612	20.612
DESIGN SURFACE LEVEL	8.113		8.526
INVERT LEVEL	6.050 / 6.917		7.175
DEPTH TO INVERT FROM DESIGN SURFACE	2.063 / 1.196		1.351
DATUM R.L.	-7.00		
GRADE		1.25%	
PIPE SIZE (mm)		Ø150	
CH. FROM D/S	7.051 / 8.247		20.612
LOT No.	Lot 46 / Lot 43		Lot 45
HC INVERT LEVEL	IL 7.030 / IL 7.031		IL 7.226
JUNCTION LINE No.	9		

LINE 11

	4/1		1/11		2/11		3/11		4/11		5/11		6/11		7/11
CHAINAGE	0.000	70.010	70.010	58.192	128.201	49.750	177.951	39.999	217.950	37.500	255.450	24.998	280.448	54.815	335.262
DESIGN SURFACE LEVEL	5.804		6.749		7.045		7.277		8.089		8.206		7.468		7.391
INVERT LEVEL	3.809 / 3.839		4.266 / 4.296		4.651 / 4.681		4.984 / 5.014		5.258 / 5.288		5.517 / 5.547		5.700 / 5.846		6.180
DEPTH TO INVERT FROM DESIGN SURFACE	1.996 / 1.966		2.483 / 2.453		2.394 / 2.364		2.293 / 2.263		2.831 / 2.801		2.689 / 2.659		1.768 / 1.622		1.211
DATUM R.L.	-8.00														
GRADE		0.61%		0.61%		0.61%		0.61%		0.61%		0.61%		0.61%	
PIPE SIZE (mm)		Ø150		Ø150		Ø150		Ø150		Ø150		Ø150		Ø150	
JUNCTION LINE No.	1												12		

CH. FROM D/S	LOT No.	HC INVERT LEVEL
5.821	Lot 92	IL 6.011
18.545	Lot 25	IL 5.989
31.078	Lot 24	IL 6.111
43.624	Lot 23	IL 6.054
55.859	Lot 22	IL 6.118
70.010	Lot 21	IL 6.199
12.275	Lot 20	IL 6.263
25.006	Lot 19	IL 6.341
37.401	Lot 18	IL 6.415
49.947	Lot 17	IL 6.329
49.750	Lot 8	IL 6.401
2.986	Lot 9	IL 6.287
15.135	Lot 10	IL 6.412
15.645	Lot 7	IL 6.770
27.472	Lot 11	IL 6.555
27.782	Lot 6	IL 6.872
39.999	Lot 12	IL 6.886
	Lot 5	IL 6.884
12.411	Lot 13	IL 6.640
12.727	Lot 4	IL 6.838
25.007	Lot 14	IL 6.746
25.405	Lot 3	IL 6.792
37.500	Lot 15	IL 6.788
	Lot 2	IL 6.765
12.425	Lot 16	IL 6.738
12.840	Lot 1	IL 6.794
54.815	Lot 358	IL 6.883

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Issued under the Environmental Planning and Assessment Act 1979
Approved Section 75W Modification Application
No. 10 granted on the 7 Nov 2018
in respect to MP 06-0258
Signed EB
Sheet No. 45 of 47

SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
A	08.05.11	ISSUED FOR DA APPROVAL	BK
B	08.06.11	ISSUED FOR DA APPROVAL	BK

CLIENT: CLARENCE PROPERTY

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PROJECT: CASUARINA BEACH
TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

STATUS: ISSUED FOR APPROVAL
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DRAWN: CK | DESIGNED: BJ | CHECKED: MW | APPROVED: BK
DATUM: MGA94 | GRID: AHD | SCALE: AS SHOWN

TITLE: SEWERAGE RETICULATION
LONGITUDINAL SECTIONS
SHEET 3

PROJECT No: B16097 | DRAWING No: C-0057 | REV: B

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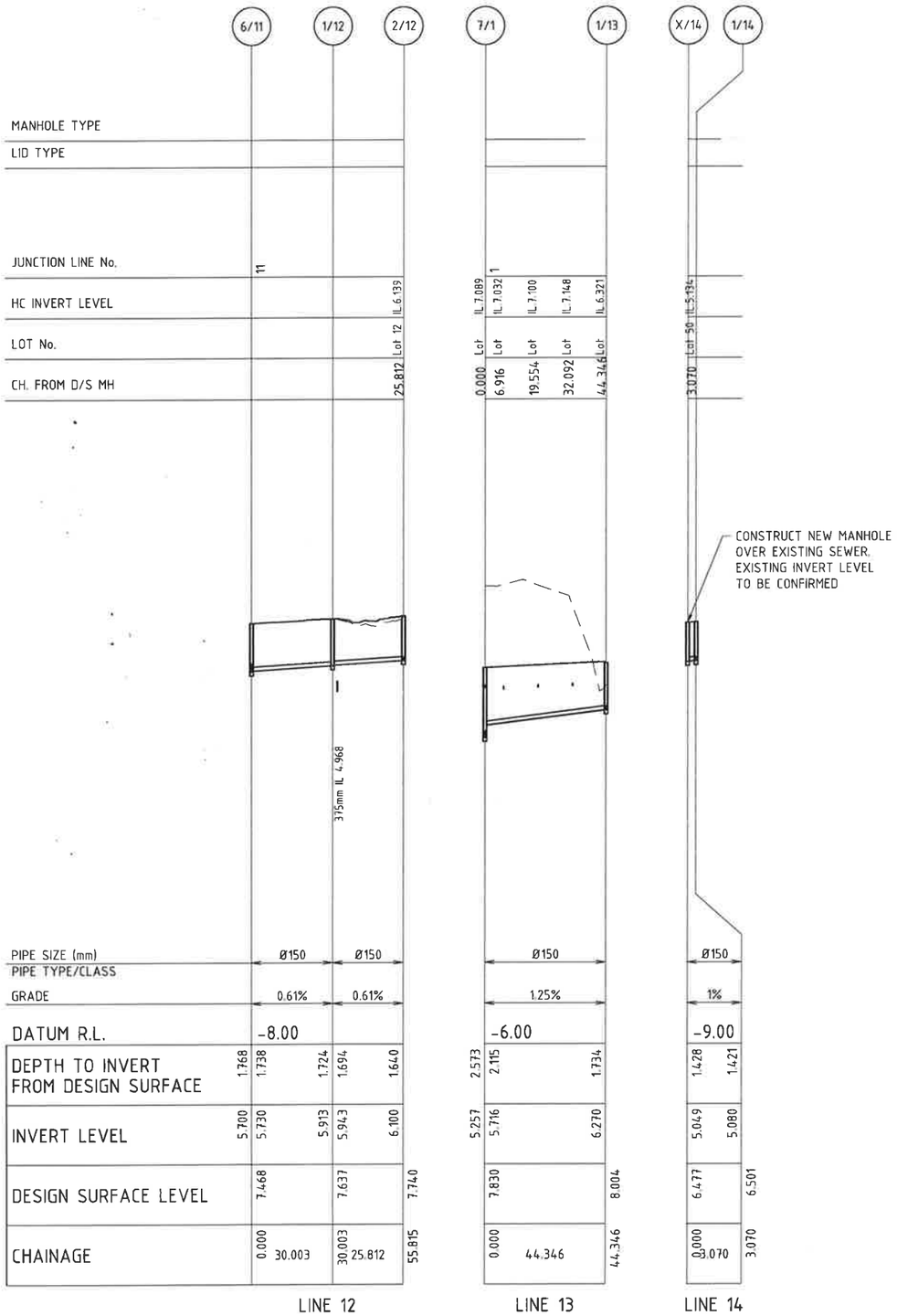

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Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

Signed EB

Sheet No. 46 of 47

0 10 20 30 40 50 60m
SCALE 1:1000 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
B	08.06.17	ISSUED FOR DA APPROVAL	B.K
A	09.05.17	ISSUED FOR DA APPROVAL	B.K

REV	DATE	DESCRIPTION	RVD

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TOWN CENTRE - STAGE 2
CASUARINA WAY, NSW 2487

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DRAWN	DESIGNED	CHECKED	APPROVED
C.K	B.J	M.W	B.K

DATUM	GRID	SCALE	PROJECT No.	DRAWING No.	REV
MGA94	AHD	AS SHOWN (A1 SIZE)	B16097	C-0058	B

TITLE: SEWERAGE RETICULATION LONGITUDINAL SECTIONS SHEET 4

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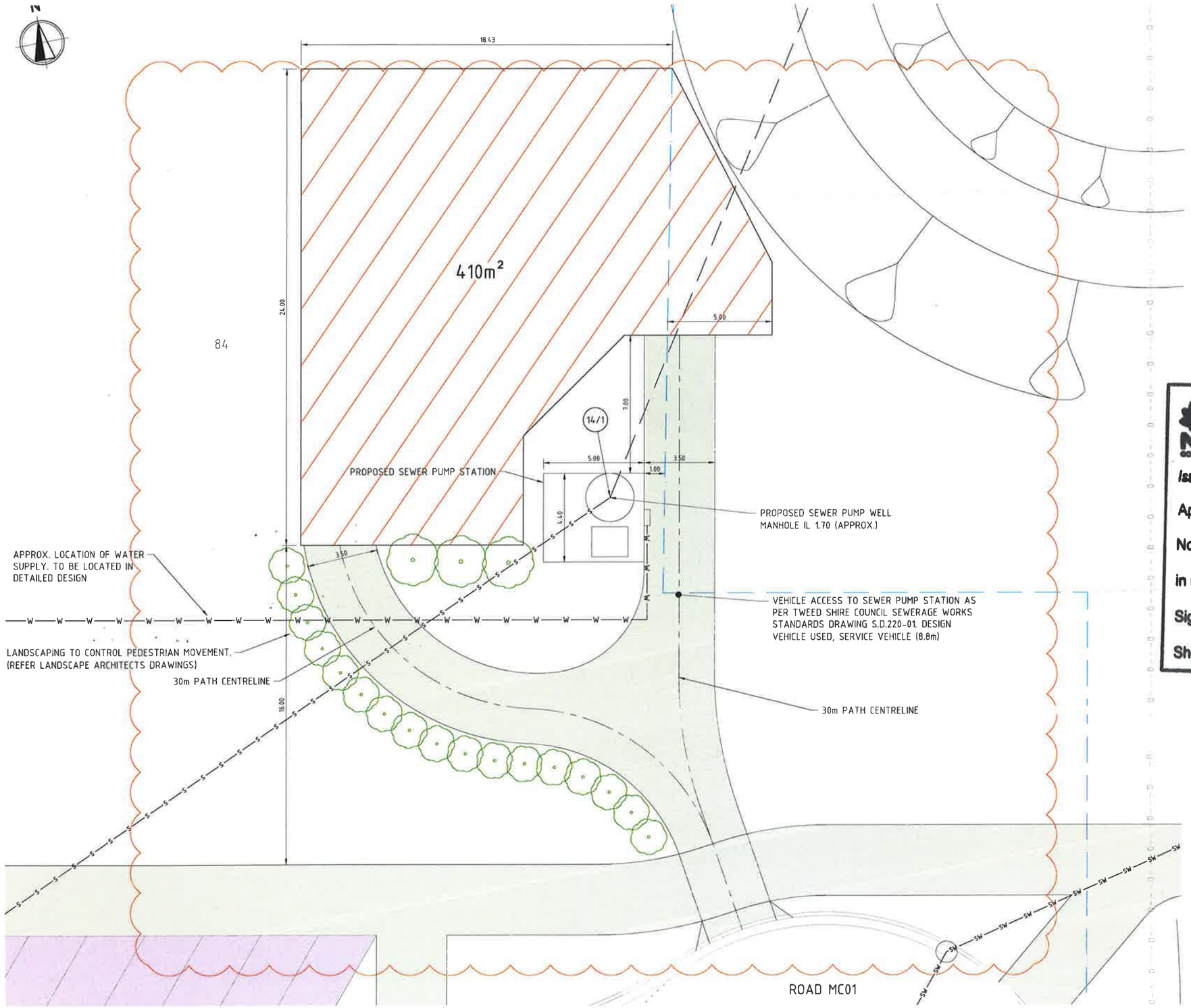

LEGEND

- PROPOSED LIP OF KERB
- PROPOSED TRUNK SEWER ALIGNMENT (3.0 - 5.0m DEEP)
- PROPOSED SEWER ALIGNMENT (0 - 3.0m DEEP)
- 4/F PROPOSED SEWER STRUCTURE
- PROPOSED WATER RETICULATION ALIGNMENT
- PROPOSED INTERNAL STORMWATER
- PROPOSED ELECTRICAL
- COASTAL FORESHORE BOUNDARY
- EXTENT OF AREA ALLOWABLE FOR PLAYGROUND EQUIPMENT

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Approved Section 75W Modification Application

No. 10 granted on the 7 Nov 2018

in respect to MP 06-0258

Signed SB

Sheet No. 47 of 47

SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
B	09.08.13	ISSUED FOR DA APPROVAL	BK
A	08.04.13	ISSUED FOR DA APPROVAL	BK

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DRAWN	DESIGNED	CHECKED	APPROVED
SS	AK	MW	BK

DATUM	GRID	SCALE
MGA94	AHD	1:100

TITLE: SEWER PUMP STATION LAYOUT

PROJECT No.	DRAWING No.	REV
B16097	C-0060	B

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