

PROPOSED MANUFACTURED HOME ESTATE

LOT 1 on DP124173

550-578 RIVER STREET & BURNS POINT FERRY ROAD, WEST BALLINA

FOR

G E M L I F E P T Y L T D

INDEX OF DRAWINGS

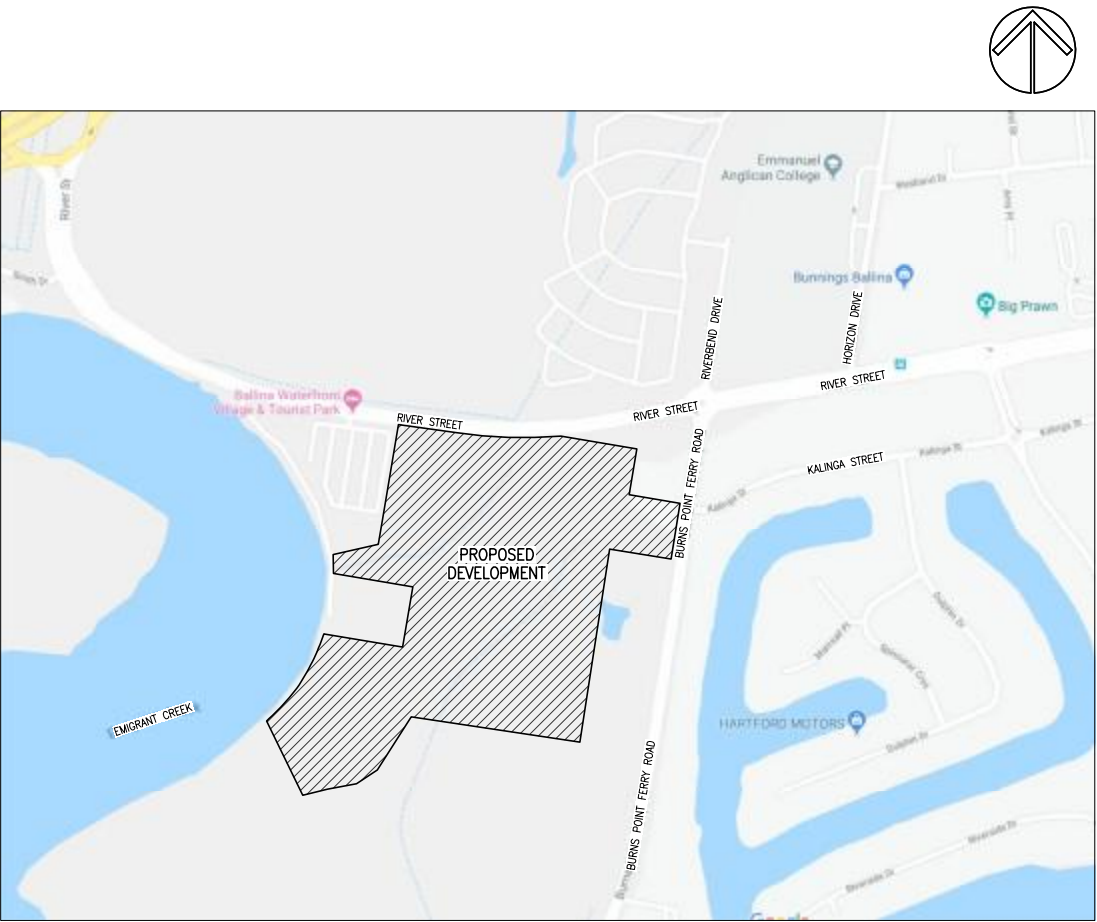
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LOCALITY PLAN
NOT TO SCALE

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SSM 64762
R.L. 1.267

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No.	DATE	REVISIONS
I	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
H	19.04.2021	BIORETENTION BASIN No.4 MOVED
G	31.03.2021	ISSUED FOR D.A. APPROVAL
B	24.07.2020	EXTERNAL ROADWORKS DRAWINGS ADDED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET PRELIMINARY ROAD No.1 LONG SECTION
PROJECT MANUFACTURED HOME ESTATE
LOCATION LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694952
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED G.J.S.
DRAWN G.J.S.
DATE DRAWN OCTOBER 2019
FILE NAME Pre_Cover.dwg

SHEET NUMBER
01 of 34
REVISION
I
PROJECT NUMBER
N19/009 PC

GENERAL NOTES

- G1 ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS & SPECIFICATIONS AND COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY.
- G2 UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- G3 THE LOCATION AND LEVEL OF ALL EXISTING SERVICES SHALL BE VERIFIED BEFORE CONSTRUCTION COMMENCES AND NOTWITHSTANDING THE INFORMATION SHOWN ON THE DRAWINGS, THE DESIGN OF CONSTRUCTION MAY BE ALTERED TO SUIT BY THE SUPERINTENDENT.
- G4 ALL CONNECTIONS TO EXISTING SEWERS AND WATER MAINS ARE TO BE CONSTRUCTED BY THE LOCAL AUTHORITY OR AN APPROVED CONTRACTOR. THE CONTRACTOR IS TO ALLOW IN HIS CONTRACT SUM FOR THE COST OF ANY PROPOSED CONNECTIONS.
- G5 ALL SEWERS ARE TO BE 150MM DIA. U.P.V.C. CLASS SN8 RUBBER RING JOINTED AND PROPERTY CONNECTIONS ARE TO BE 100MM DIA. U.P.V.C CLASS SN6 UNLESS NOTED OTHERWISE.
- G6 THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO VERIFIED FOLLOWING SUB-SOIL TESTS OF THE SUB-GRADE MATERIAL.
- G7 ALL ROOFWATER CONNECTIONS FROM KERB ADAPTERS ARE TO BE 100MM DIA CLASS SN10 AT A MIN GRADE OF 1.0% UNLESS SHOWN OTHERWISE. ROOFWATER CONNECTIONS FROM FIELD INLETS OR GULLY PITS ARE TO BE 150MM DIA CLASS SN8 AT A MIN GRADE OF 1.0% UNLESS NOTED OTHERWISE.
- G8 ALL U.P.V.C. STORMWATER DRAINAGE PIPES ARE TO BE CLASS SN8 AND ALL R.C. AND F.R.C. PIPES ARE TO BE CLASS 2 RUBBER RING JOINTED UP TO AND INCLUDING 600 DIA. PIPES OVER 600 DIA. ARE TO BE CLASS 2 AND ARE TO HAVE AN EXTERNAL RUBBER BAND JOINT GROUTED INTERNALLY.
- G9 WATER PIPES SHALL BE:
- P.V.C.-M WATER PIPES ARE TO BE SERIES 2 PN16 SN10 R.R.J.
- D.I.C.L. WATER PIPES ARE TO BE PN35 WITH ALL FITTINGS TO BE FUSION BONDED POLYMERIC COATED.
- PE WATER PIPES ARE TO BE PN16 SDR11 PE100. DN25 AND DN32 WATER SERVICES SHALL BE PE80B.
- G10 ALL "AS CONSTRUCTED" INFORMATION IS TO BE RECORDED AS REQUIRED BY THE LOCAL AUTHORITY AND SUBMITTED TO THE SUPERINTENDENT IMMEDIATELY AFTER COMPLETION OF THE WORKS.
- G11 ALL ALLOTMENTS ARE TO BE GRADED AT A MINIMUM GRADE OF 1 IN 150.

CONCRETE NOTES

- C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CONCRETE STRUCTURES CODE AND THE REFERENCED STANDARDS THEREIN.
- C2 THE CONCRETE STRENGTH GRADE AND THE COVER TO REINFORCEMENT FOR THE VARIOUS CONCRETE ELEMENTS SHALL BE AS LISTED BELOW:

ELEMENT	SURFACES IN CONTACT WITH GROUND		INTERIOR SURFACES		EXTERIOR SURFACES	
	STRENGTH GRADE	COVER	STRENGTH GRADE	COVER	STRENGTH GRADE	COVER
MANHOLES	N32	50				
FIELD INLET PITS	N32	50				
DRIVEWAY SLAB	N32	50				
KERB/CHANNEL	N32	-				

- C3 CONCRETE TO HAVE A MAXIMUM AGGREGATE SIZE OF 20mm WITH 80mm MAXIMUM SLUMP, A WATER/CEMENT RATIO OF NOT GREATER THAN 0.65 AND A MAXIMUM FINAL BASIC DRYING SHRINKAGE STRAIN OF 800 x 10⁻⁶ UNLESS APPROVED OTHERWISE.
- C4 NO ADDITIVES SHALL BE ADDED OF APPLIED TO THE CONCRETE MIX WITHOUT THE APPROVAL OF THE ENGINEER.
- C5 THE MAXIMUM PERMISSIBLE TRANSPORT TIME FOR CONCRETE BETWEEN BATCHING AND PLACEMENT ON SITE SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE.

AMBIENT AIR TEMPERATURE	MAX. BATCHING TO PLACEMENT TIME
10° - 24°C	120 MINUTES
25° - 27°C	90 MINUTES
28° - 30°C	60 MINUTES
31° - 33°C	45 MINUTES
34° - 36°C	30 MINUTES
37°C+	NO PLACEMENT OF CONCRETE UNLESS CHILLED WATER OR ICE IN MIX

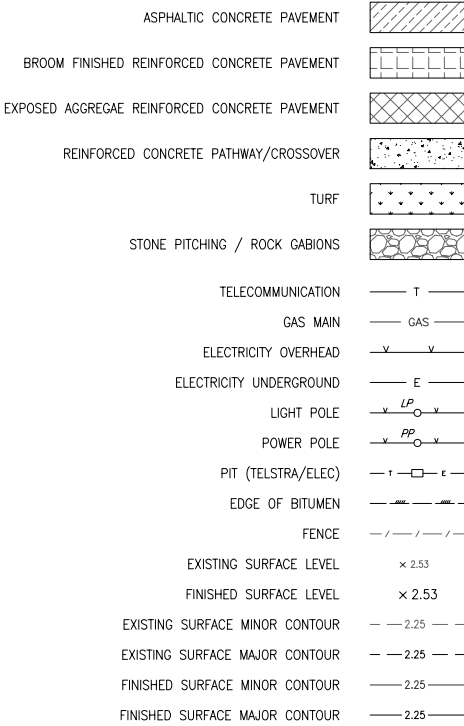
- C6 ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATORS SHALL NOT BE USED TO SPREAD CONCRETE.
- C7 ALL CONCRETE SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH AS1379 ADOPTING THE PROJECT ASSESSMENT METHOD FOR COMPRESSIVE STRENGTH AND SLUMP COMPLIANCE. THE RESULTS OF ALL TESTS SHALL BE PROMPTLY SUBMITTED TO THE ENGINEER FOR REVIEW.
- C8 WHEN THE AIR TEMPERATURE EXCEEDS 30°C, ALIPHATIC ALCOHOL SHALL BE APPLIED TO THE CONCRETE SURFACE OF SLABS IMMEDIATELY AFTER THE INITIAL SCREED AND AGAIN AFTER BULL FLOATING.
- C9 CURING OF ALL CONCRETE SURFACES SHALL COMMENCE IMMEDIATELY AFTER COMPLETING CONCRETE FINISHING AND SHALL CONTINUE FOR 7 DAYS. CONTRACTOR TO CONFIRM METHOD OF CURING WITH ENGINEER PRIOR TO USE.
- C10 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C11 BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.
- C12 NO HOLES, CHASES OR EMBEDDED ITEMS OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER. CONDUITS, PIPES ETC. SHALL NOT BE PLACED IN THE COVER THICKNESS OF THE CONCRETE.

- C13 WHERE SERVICE PIPES PENETRATE CONCRETE ELEMENTS, PROVISION SHOULD BE MADE TO ALLOW FOR MOVEMENT OF THE ELEMENT.
- C14 FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS3610 FORMWORK CODE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- C15 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION OR SCALE.
- C16 ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION ON PLASTIC BAR CHAIRS, GENERALLY AT NOT GREATER THAN 800mm CENTRES IN BOTH DIRECTIONS.
- C17 WELDING AND HEATING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT APPROVAL OF THE ENGINEER.
- C18 ALL STEEL REINFORCEMENT IN CONCRETE ELEMENTS SHALL BE INSPECTED BY THE ENGINEER AND PASSED PRIOR TO POURING OF ANY CONCRETE.
- C19 LAP REINFORCEMENT ONLY AT LOCATIONS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.
- C20 SLAB FABRIC SHALL BE LAPPED ONE FULL PANEL OF FABRIC PLUS 50mm SO THAT THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF THE SHEET BEING LAPPED BY 50mm.
- C21 BAR REINFORCEMENT SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING TABLE.

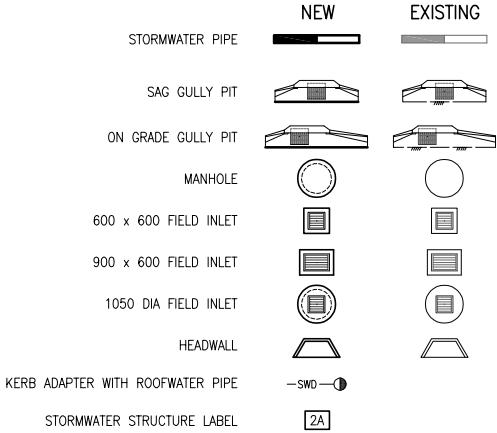
TYPICAL BAR REINFORCEMENT LAP LENGTHS		
BAR	LAP LENGTH UNO	HORIZONTAL BARS WITH GREATER THAN 300mm OF CONCRETE CAST BELOW THEM
N12	550	750
N16	800	1100
N20	1100	1400
N24	1250	1600
N28	1400	1800
N32	1600	2100
N36	2000	2500

WHERE LAPS ARE SHOWN ON THE DRAWINGS THE ABOVE LAP LENGTHS SHALL BE ADOPTED UNLESS NOTED OTHERWISE. WHERE BARS OF DIFFERENT DIAMETER ARE SHOWN LAPPED, ADOPT THE LAP LENGTH APPROPRIATE TO THE SMALLER DIAMETER BAR.

GENERAL

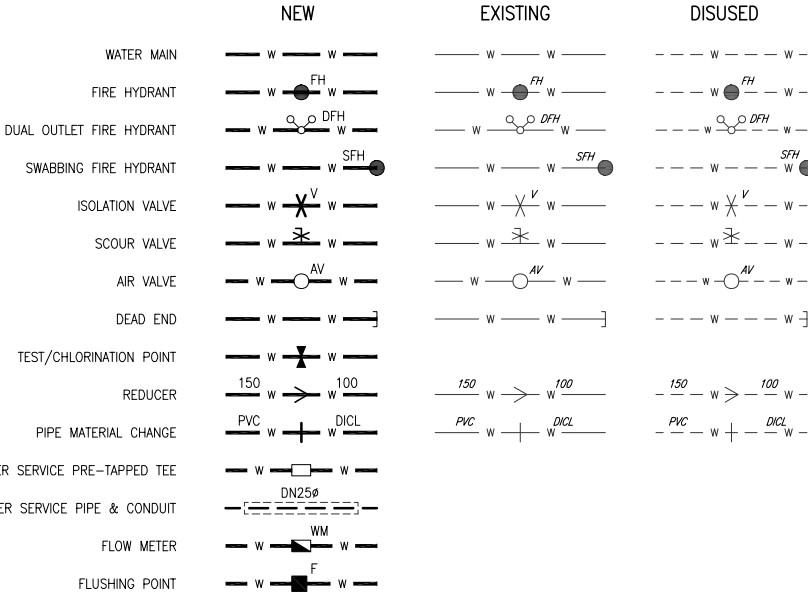


STORMWATER DRAINAGE

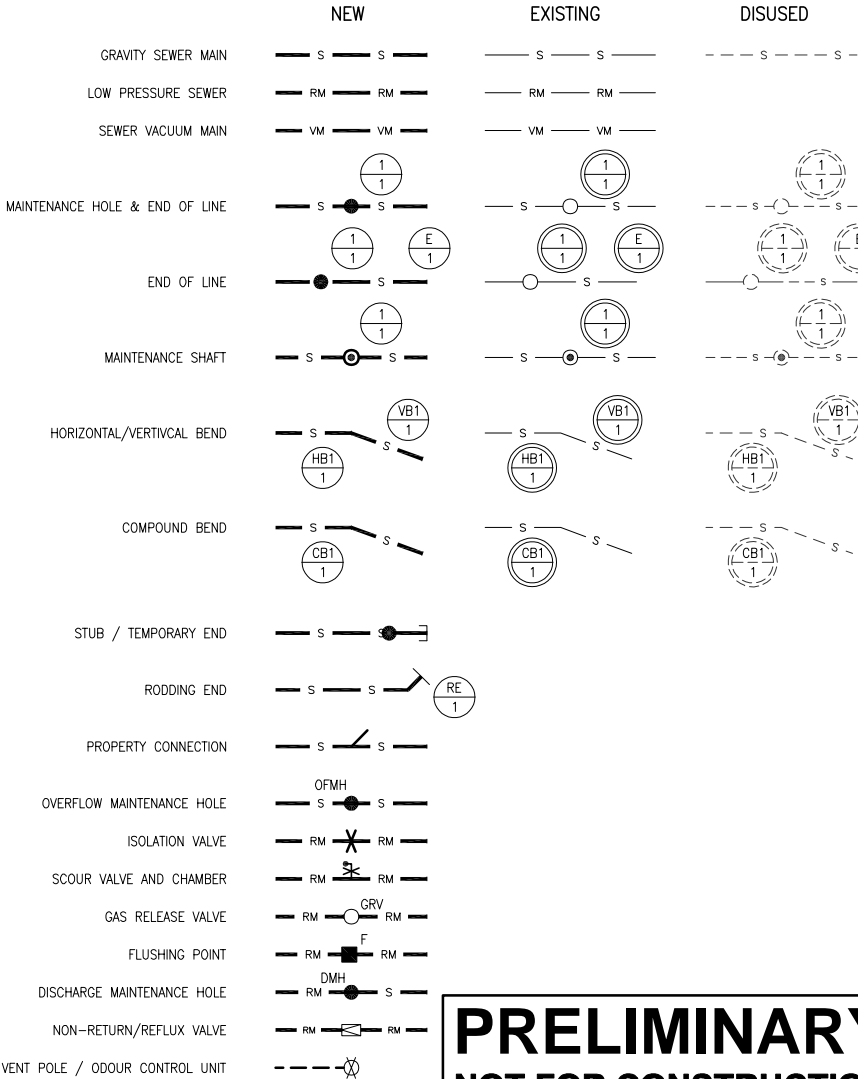


LEGEND

WATER



SEWERAGE



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G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

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CIVIL NOTES AND LEGEND
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMPLIFE PTY LTD


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For and on behalf of
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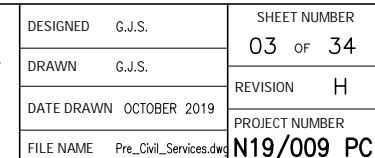
DESIGNED	G.J.S.	SHEET NUMBER
DRAWN	G.J.S.	02 OF 34
DATE DRAWN	OCTOBER 2019	REVISION
FILE NAME	Pre_Civil_Notes.dwg	H
		PROJECT NUMBER
		N19/009 PC

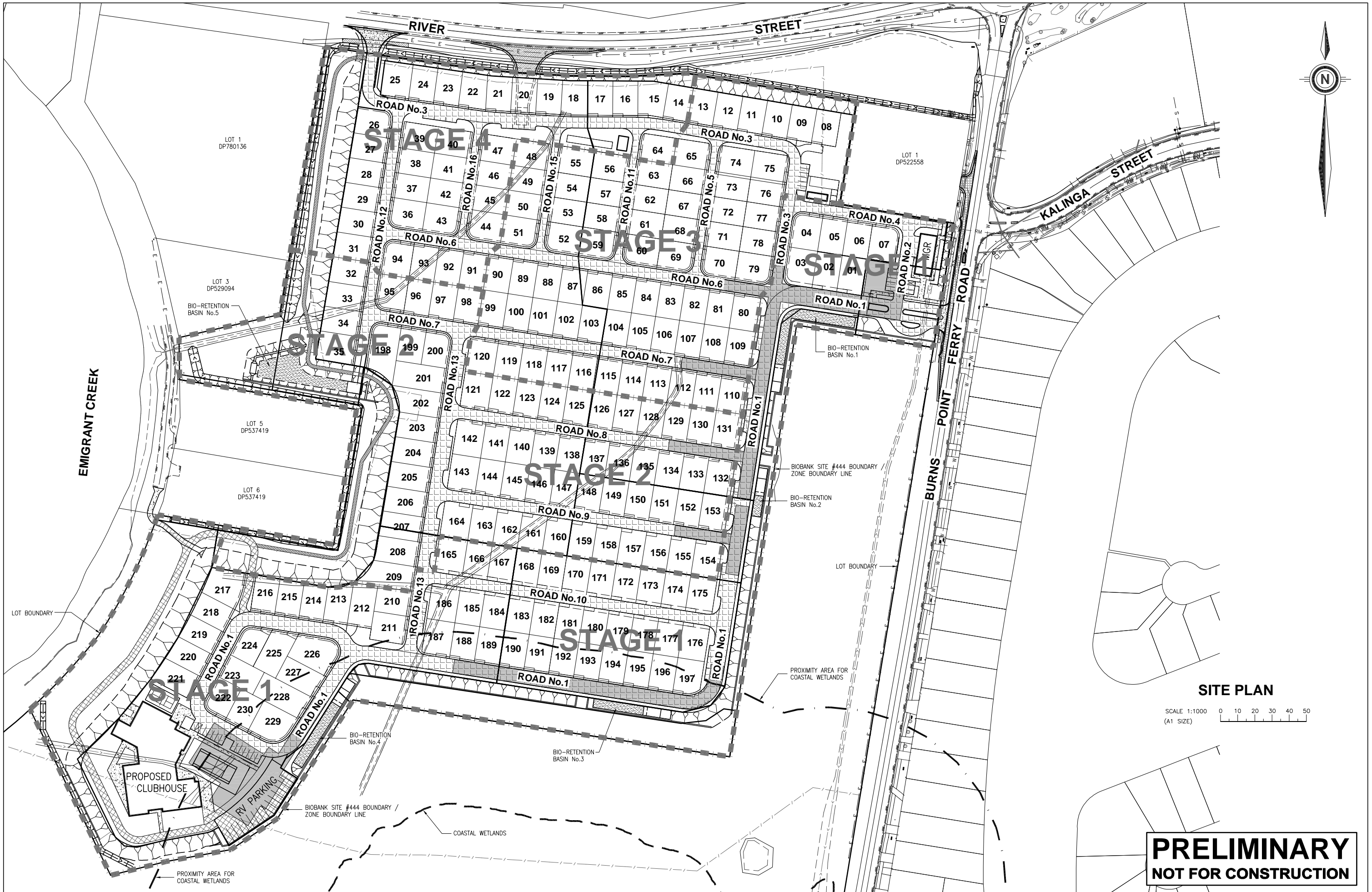


SCALE 1:50
(A1 SIZE)



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SITE PLAN

SCALE 1:1000
(A1 SIZE)

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No.	DATE	REVISIONS
L	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
K	07.12.2021	COASTAL WETLANDS BOUNDARY ADDED
J	02.06.2021	RETAINING WALL ALONG SOUTHERN BOY & BATTER AROUND CLUBHOUSE CHANGED
I	30.04.2021	RV ACCESS PATH AROUND CLUBHOUSE CHANGED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

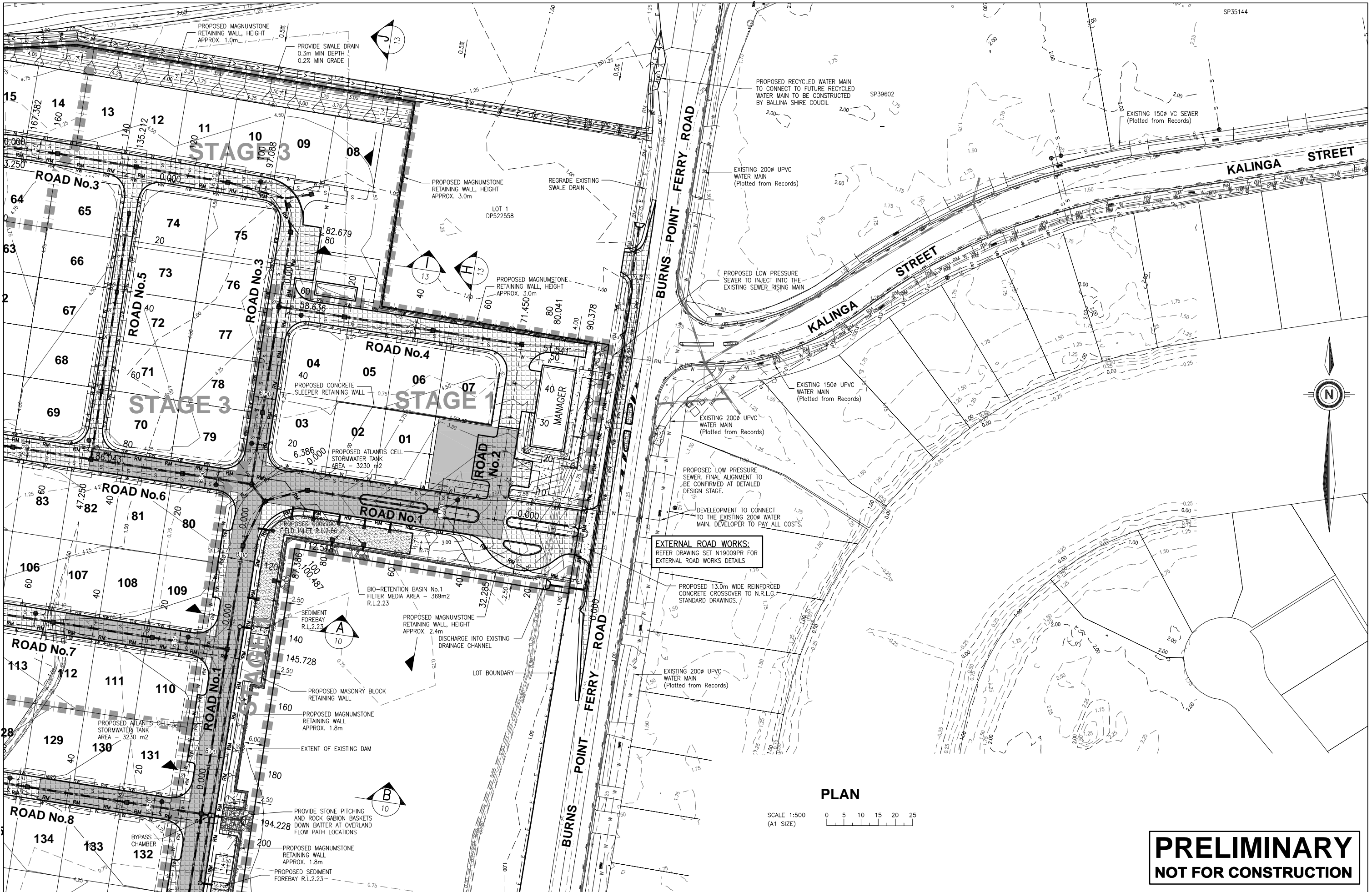
SHEET	SITE PLAN
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.
DRAWN	G.J.S.
DATE DRAWN	OCTOBER 2019
FILE NAME	Pre_Site.dwg

SHEET NUMBER	04 of 34
REVISION	L
PROJECT NUMBER	N19/009 PC



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No.	DATE	REVISIONS
K	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
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I	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
H	14.05.2021	BIORETENTION BASINS CHANGED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

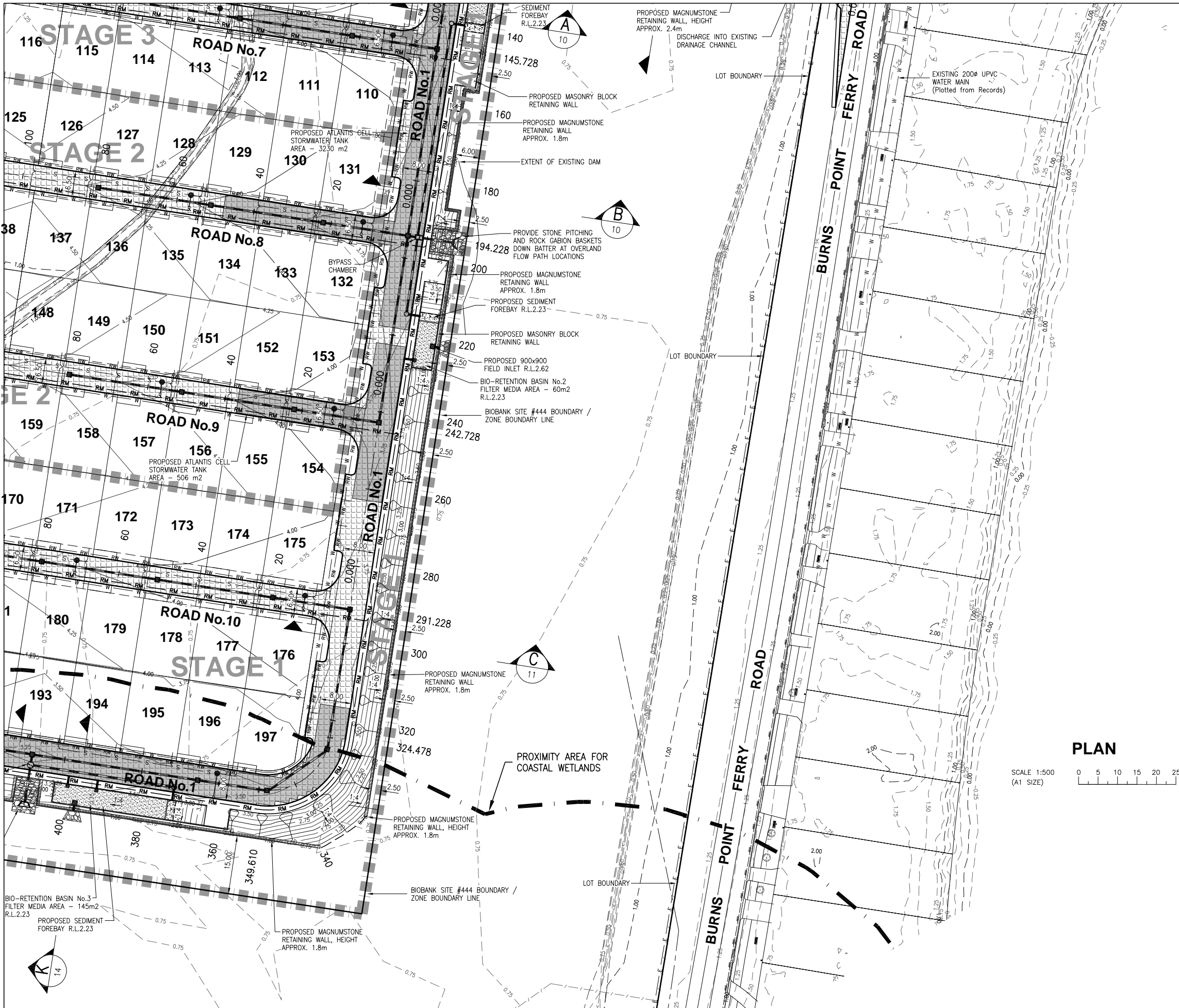
SHEET
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PRELIMINARY CIVIL WORKS PLAN 1 of 5
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED

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WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.	SHEET NUMBER	05 OF 34
DRAWN	G.J.S.	REVISION	K
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Prelim_Civilwks.dwg		



PLAN
SCALE 1:500
(A1 SIZE)

0 5 10 15 20 25

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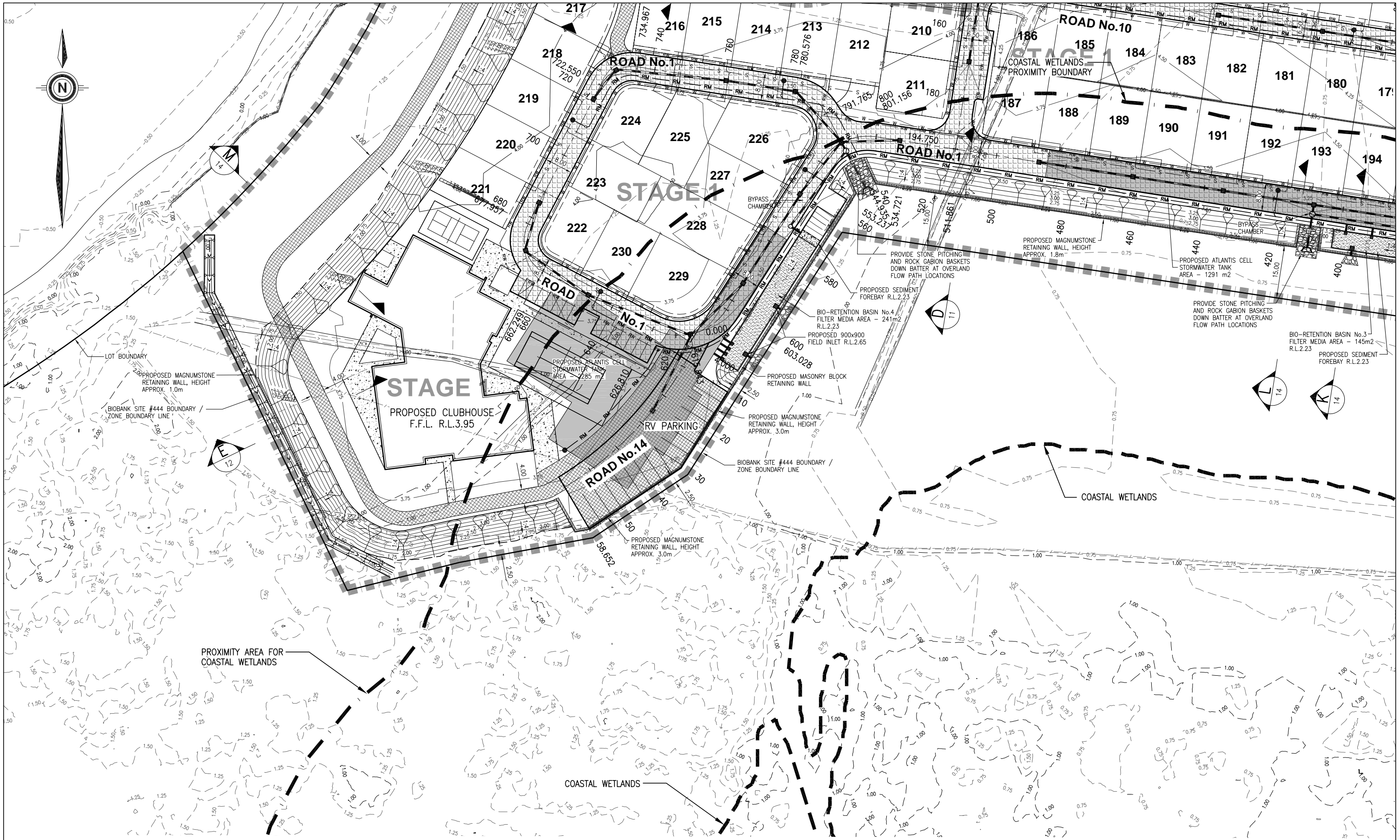
SHEET
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PRELIMINARY CIVIL WORKS PLAN 2 of 5
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
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DESIGNED	G.J.S.	SHEET NUMBER	06 OF 34
DRAWN	G.J.S.	REVISION	L
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Prelim_Civilwks.dwg		




PLAN

SCALE 1:500
(A1 SIZE)

0 5 10 15 20 25

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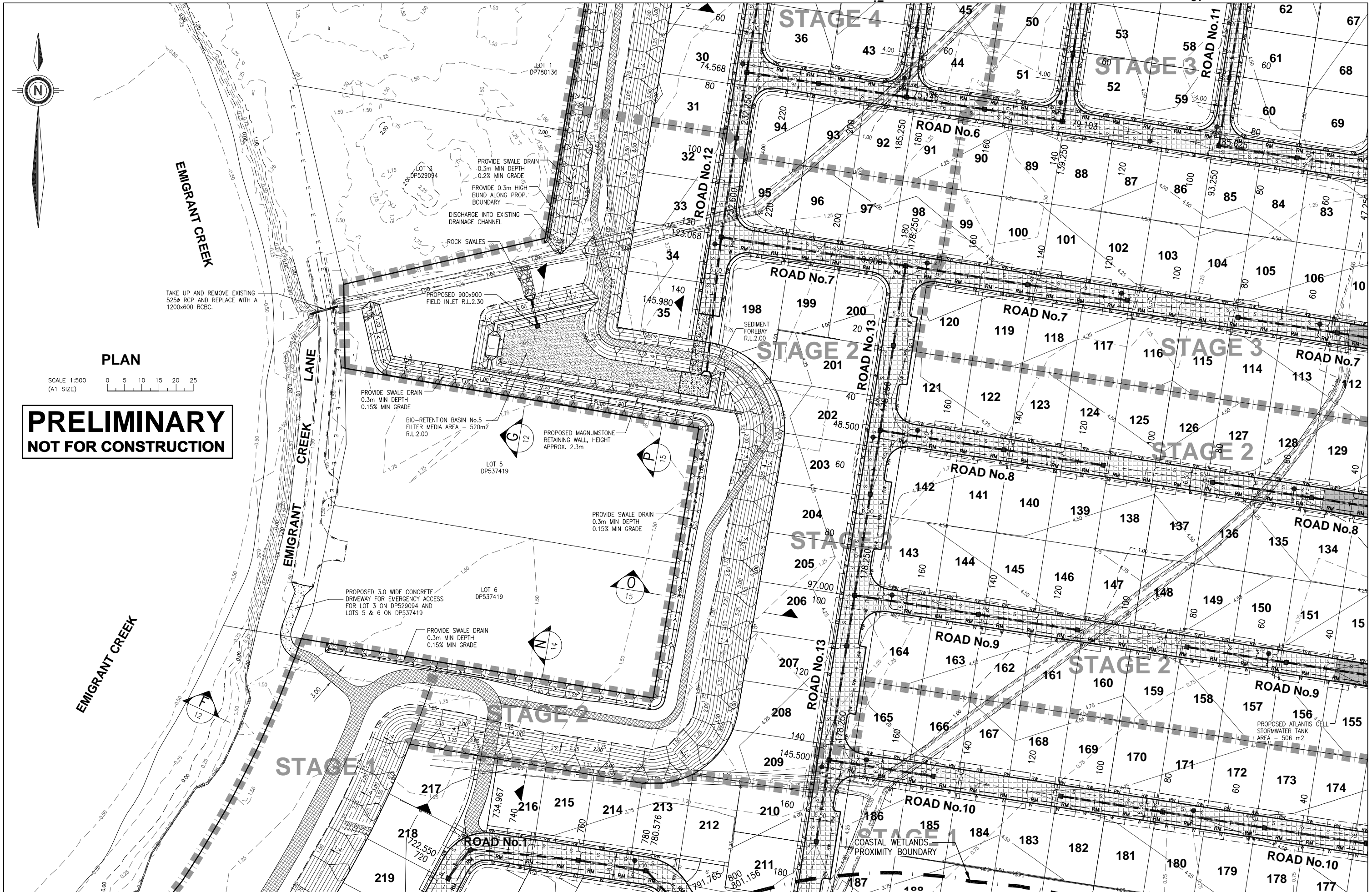
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SHEET
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PRELIMINARY CIVIL WORKS PLAN 3 of 5
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
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For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.	SHEET NUMBER	07 OF 34
DRAWN	G.J.S.	REVISION	M
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Prelim_Civilwks.dwg		



PRELIMINARY
NOT FOR CONSTRUCTION

WESTERA
PARTNERS
STRUCTURAL+CVIL+ENVIRONMENTAL ENGINEERS
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E nsw@westerapartners.com.au

SURVEYOR
KENNEDY SURVEYING
PHONE (02) 6686-5700

DATUM
A.H.D.
SSM 64762
R.L. 1.267

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No.	DATE	REVISIONS
J	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
I	12.07.2021	COASTAL WETLANDS BOUNDARY ADDED
H	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

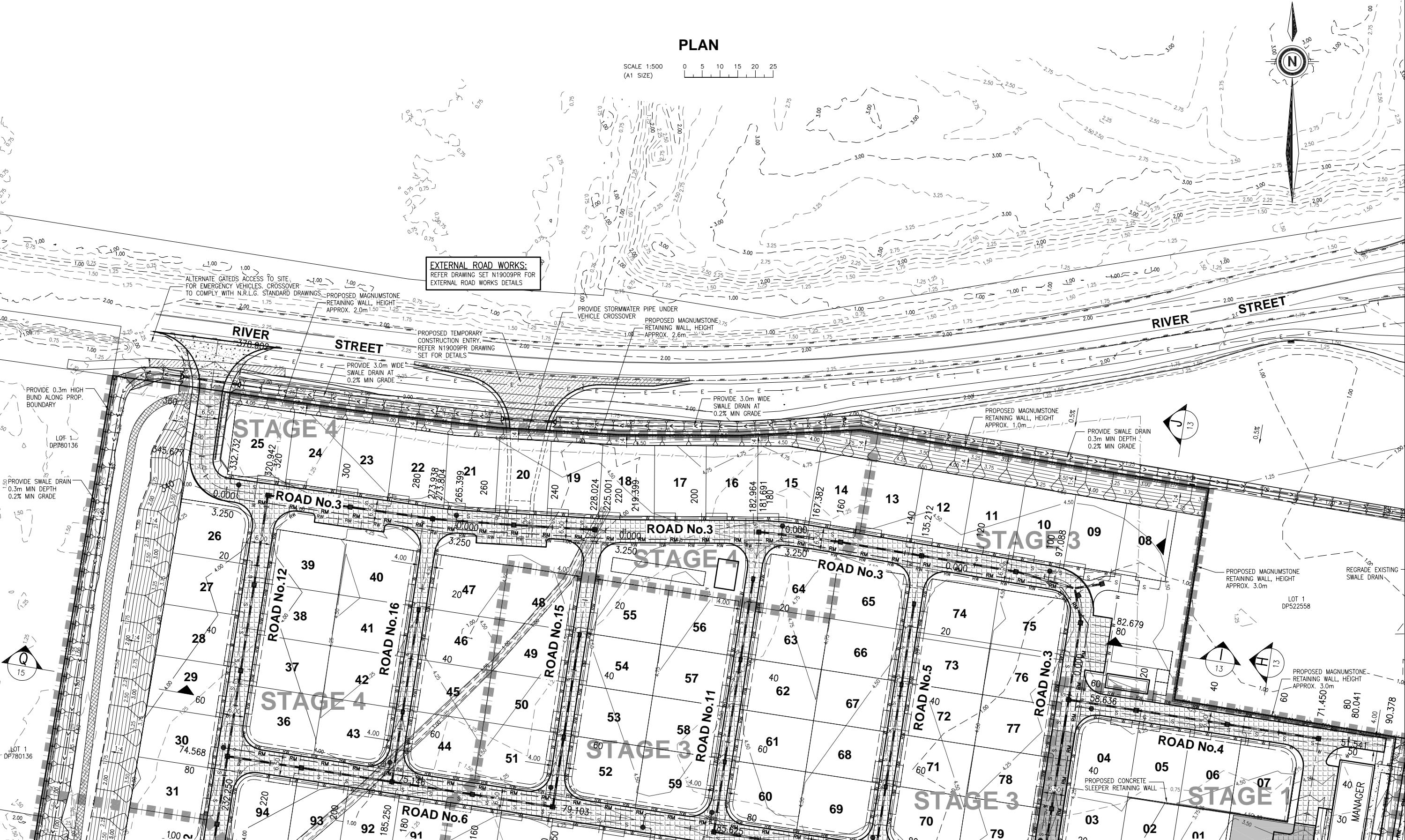
SHEET	PRELIMINARY CIVIL WORKS PLAN 4 of 5
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMPLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.	SHEET NUMBER	08 of 34
DRAWN	G.J.S.	REVISION	J
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Prelim_Civilwks.dwg		

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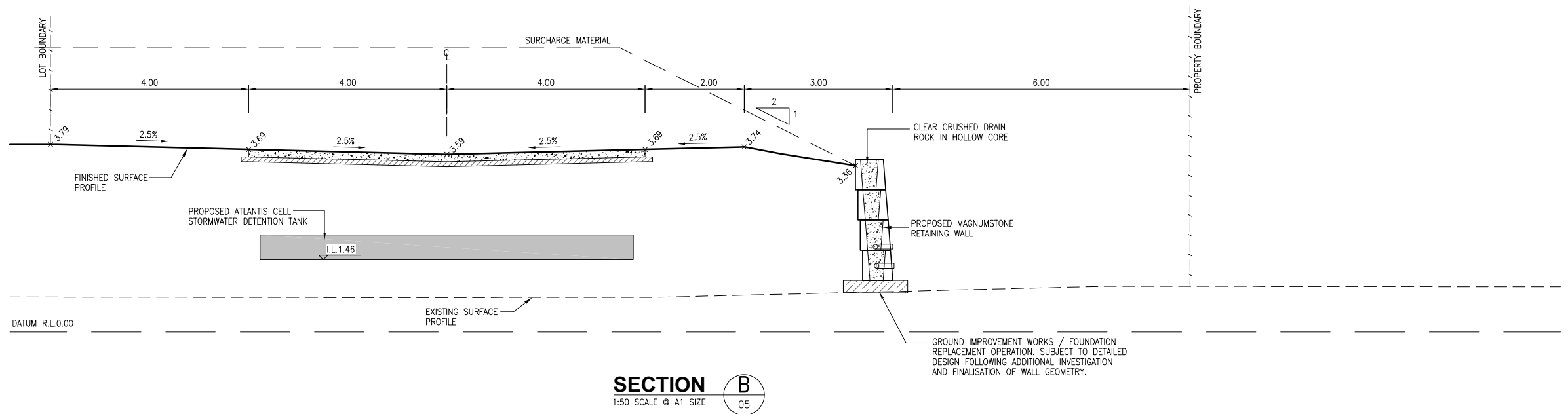
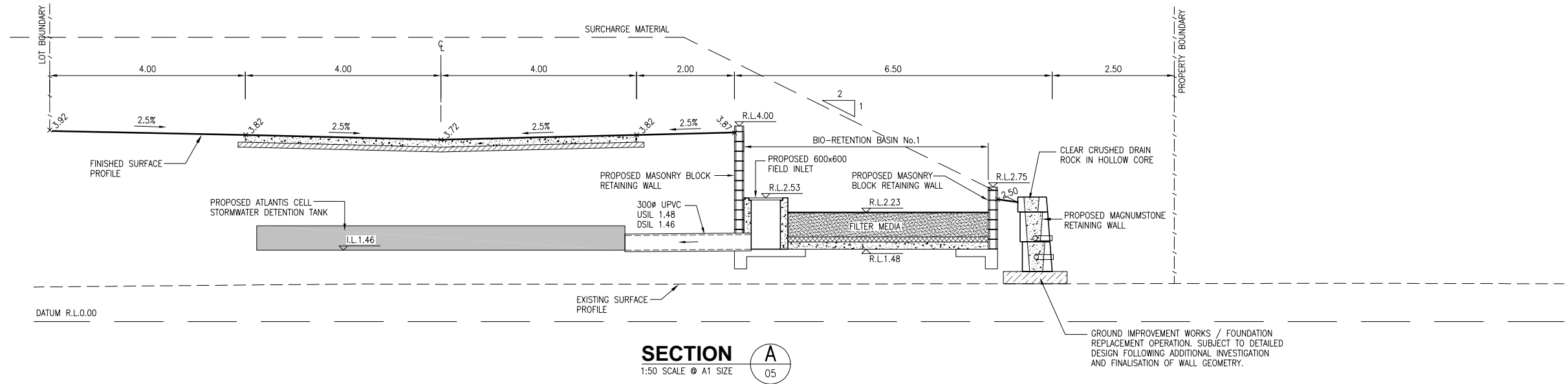
DATUM
A.H.D.
SSM 64762
R.L. 1.267

No.	DATE	REVISIONS
H	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
G	31.03.2021	ISSUED FOR D.A. APPROVAL
D	24.07.2020	EXTERNAL ROADWORKS ADDED
C	03.06.2020	RECYCLED WATER MAIN ADDED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET
PROJECT
LOCATION
CLIENT
PRELIMINARY CIVIL WORKS PLAN 5 of 5
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED
B. ARTHUR
RPEQ 4384, NER 694952
For and on behalf of
WESTERA PARTNERS PTY LTD.


DESIGNED G.J.S.
DRAWN G.J.S.
DATE DRAWN OCTOBER 2019
FILE NAME Prelim_Civilwks.dwg
SHEET NUMBER
09 of 34
REVISION H
PROJECT NUMBER
N19/009 PC

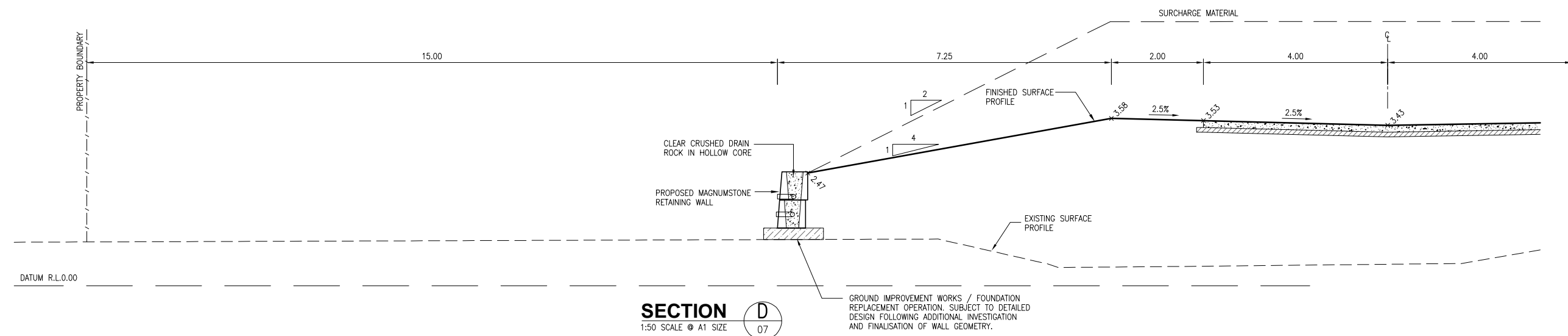
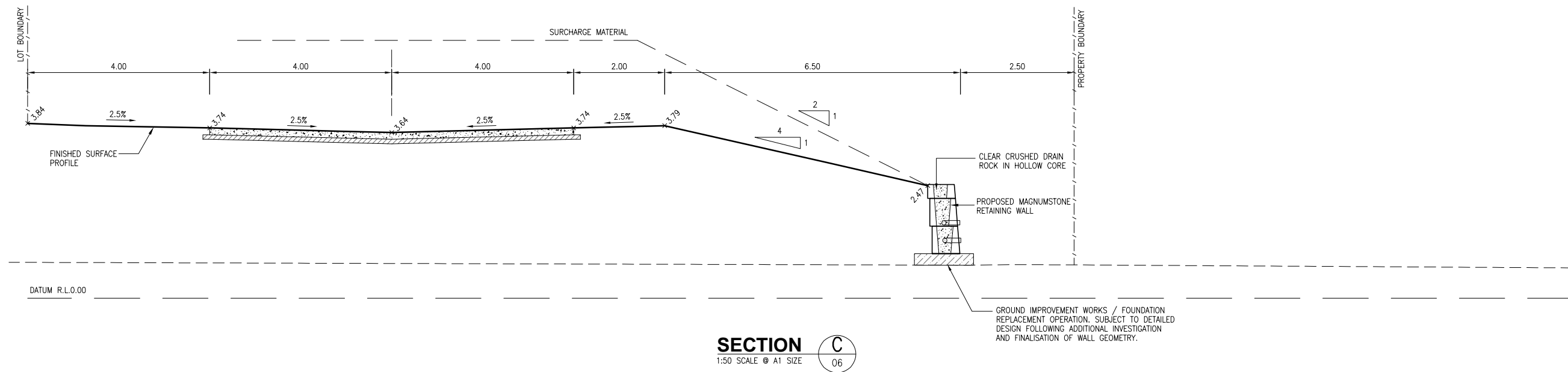


PRELIMINARY
NOT FOR CONSTRUCTION

No.	DATE	REVISIONS
J	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
I	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
H	14.05.2021	BIORETENTION BASINS CHANGED
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET	PRELIMINARY SECTIONS 1 of 6
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

APPROVED	DESIGNED G.J.S.	SHEET NUMBER
	DRAWN G.J.S.	10 of 34
B. ARTHUR RPEQ 4384, NER 694962 For and on behalf of WESTERA PARTNERS PTY. LTD.	DATE DRAWN OCTOBER 2019	REVISION J
	FILE NAME Pre_Sections.dwg	PROJECT NUMBER N19/009 PC



PRELIMINARY
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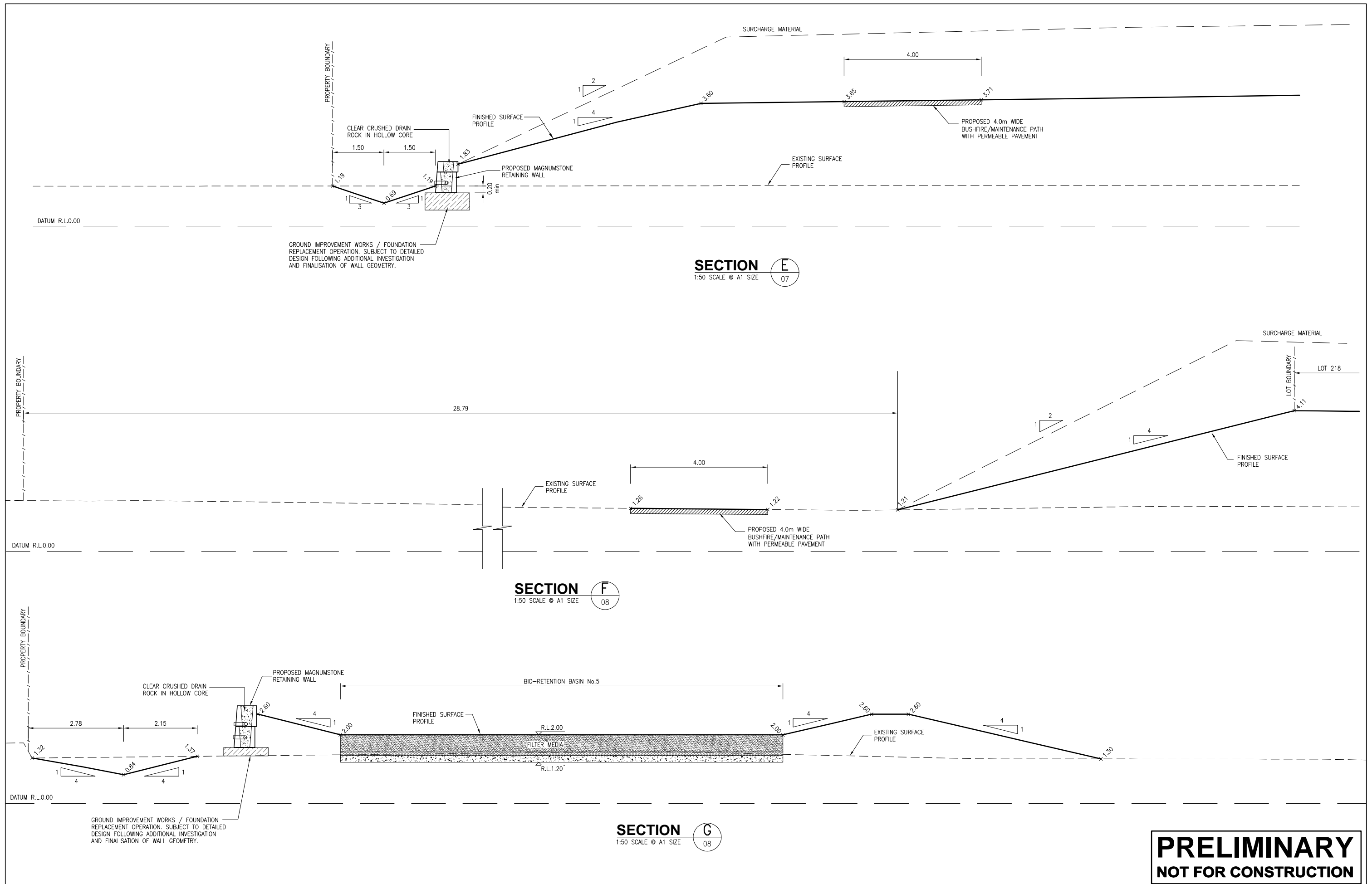
No.	DATE	REVISIONS
J	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
I	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
H	14.05.2021	BIORETENTION BASINS CHANGED
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET	PRELIMINARY SECTIONS 2 of 6
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY. LTD.

DESIGNED	G.J.S.	SHEET NUMBER	11 of 34
DRAWN	G.J.S.	REVISION	J
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Pre_Sections.dwg		



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SURVEYOR
KENNEDY SURVEYING
PHONE (02) 6686-5700

DATUM
A.H.D.
SSM 64762
R.L. 1.267

No.	DATE	REVISIONS
I	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
H	02.06.2021	RETAINING WALL ALONG SOUTHERN B'DY & BATTER AROUND CLUBHOUSE CHANGED
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

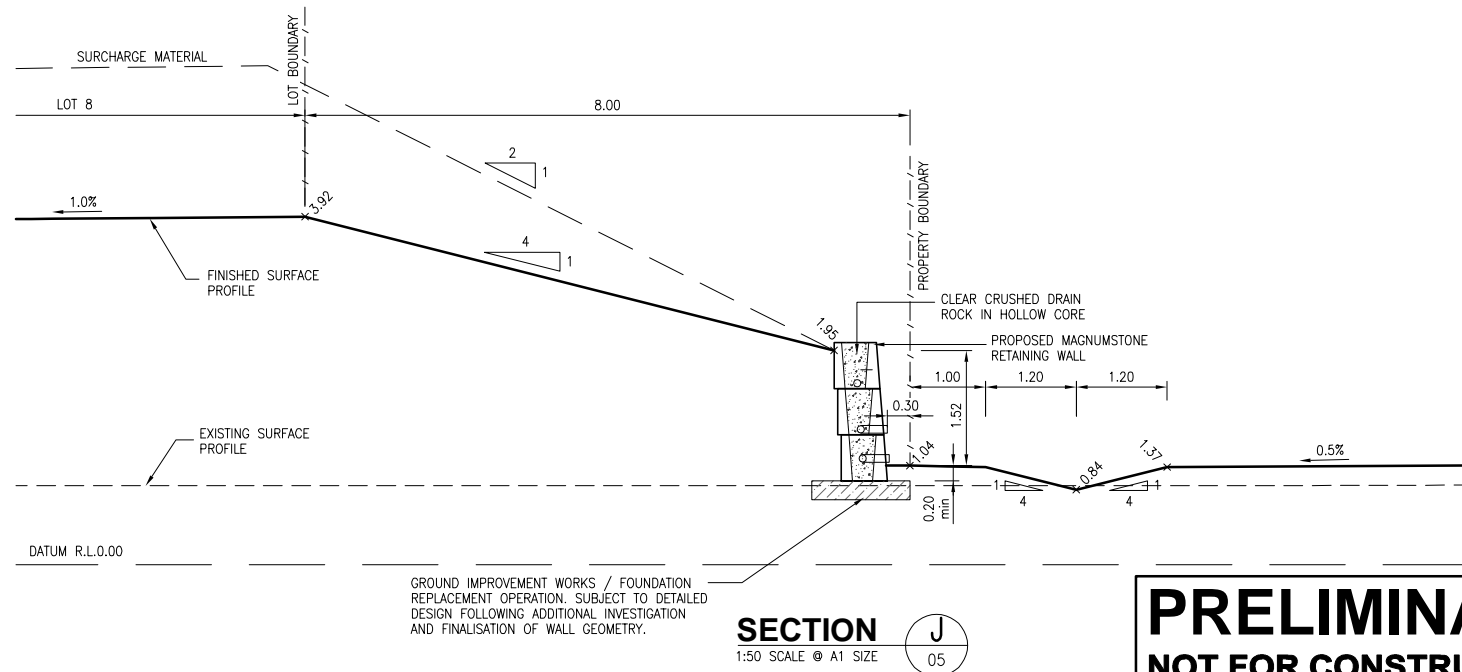
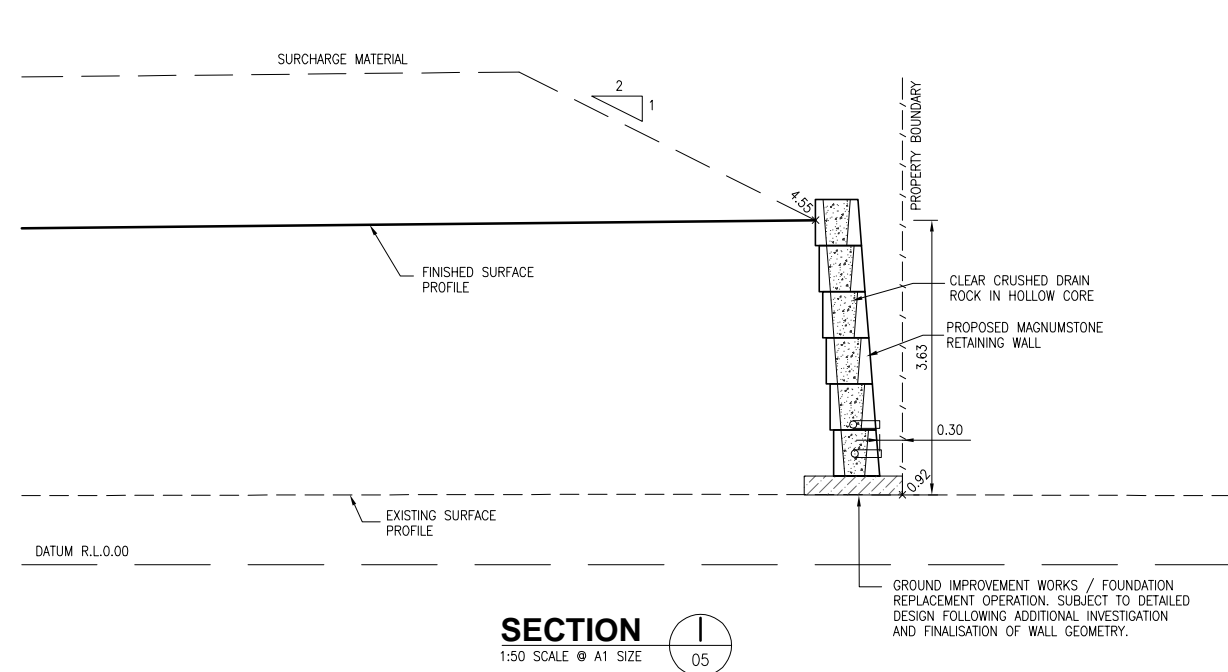
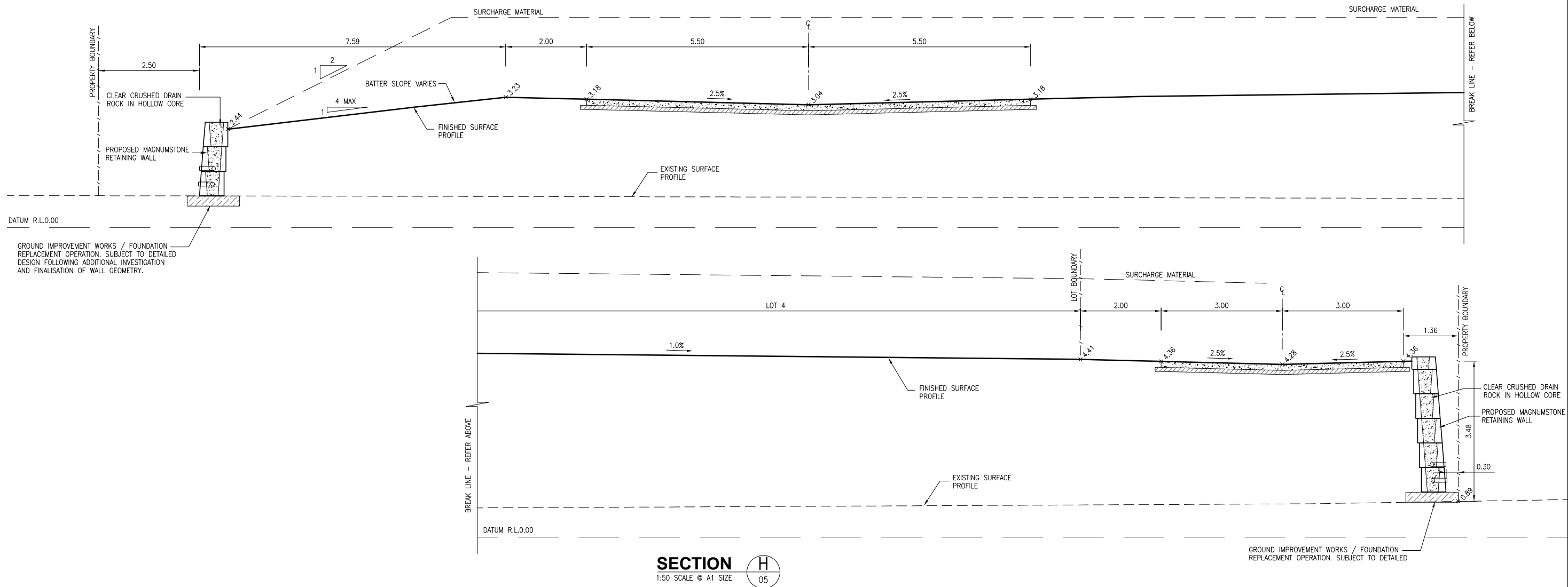
SHEET
PROJECT
LOCATION
CLIENT

PRELIMINARY SECTIONS 3 of 6
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.	SHEET NUMBER
DRAWN	G.J.S.	12 of 34
DATE DRAWN	OCTOBER 2019	REVISION
FILE NAME	Pre_Sections.dwg	I
		PROJECT NUMBER
		N19/009 PC



PRELIMINARY
NOT FOR CONSTRUCTION

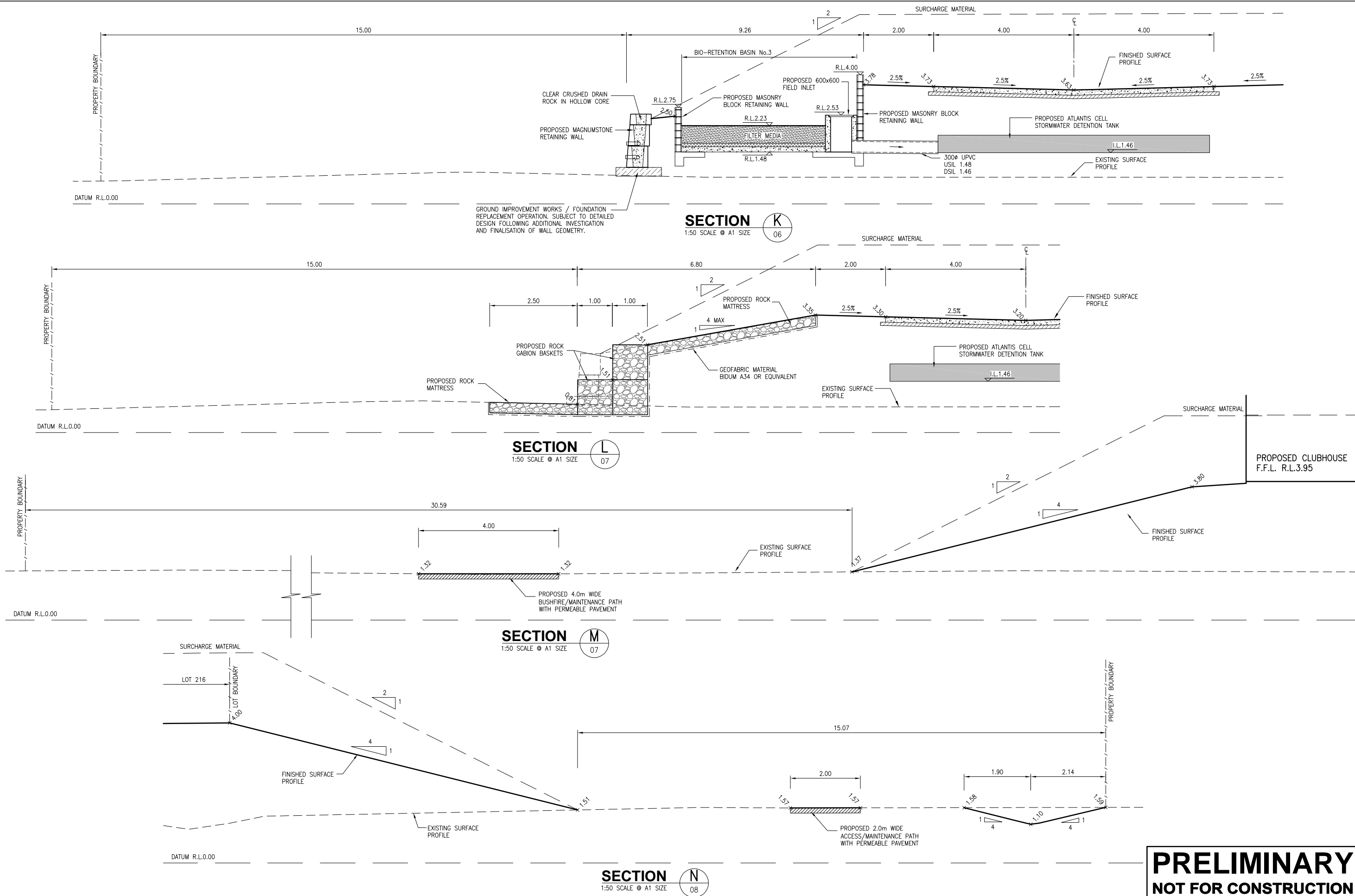
No.	DATE	REVISIONS
I	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
H	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET	PRELIMINARY SECTIONS 4 of 6
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.	SHEET NUMBER	13 of 34
DRAWN	G.J.S.	REVISION	I
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Pre_Sections.dwg		



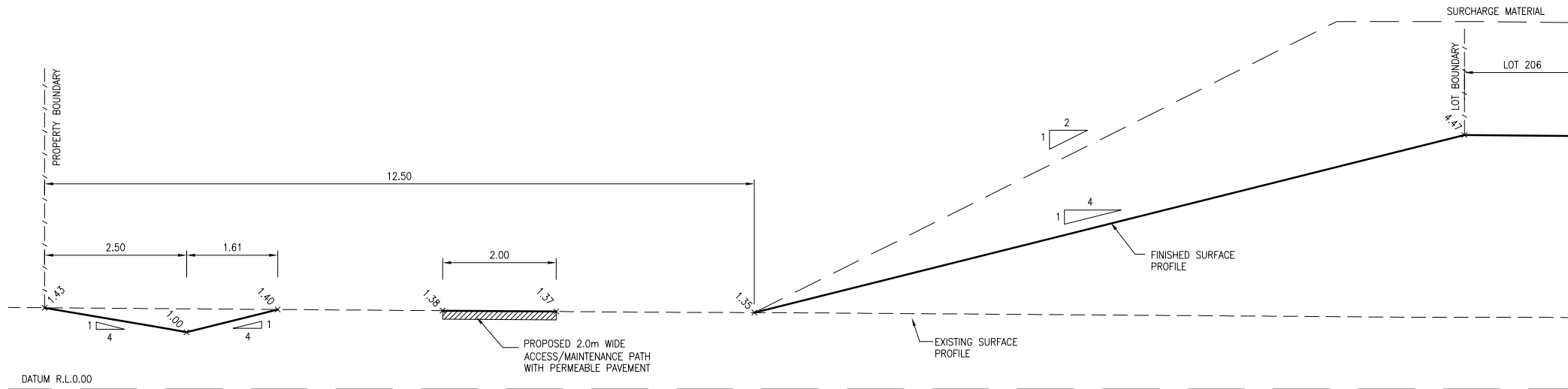
PRELIMINARY
NOT FOR CONSTRUCTION

No.	DATE	REVISIONS
L	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
K	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
J	14.05.2021	BIORETENTION BASINS CHANGED
I	30.04.2021	SECTION 'M' CHANGED - RV ACCESS PATH AROUND CLUBHOUSE MOVED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

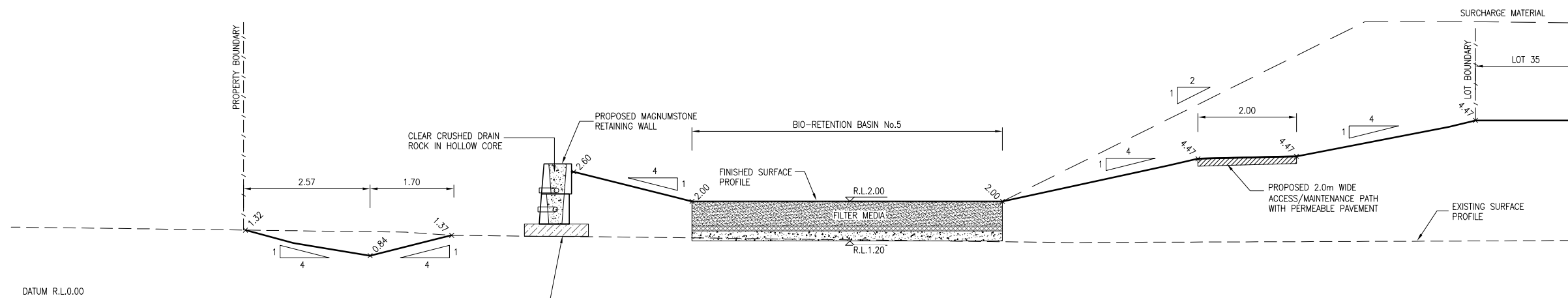
SHEET	PRELIMINARY SECTIONS 5 of 6
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

APPROVED	
B. ARTHUR RPEQ 4384, NER 694962 For and on behalf of WESTERA PARTNERS PTY LTD.	

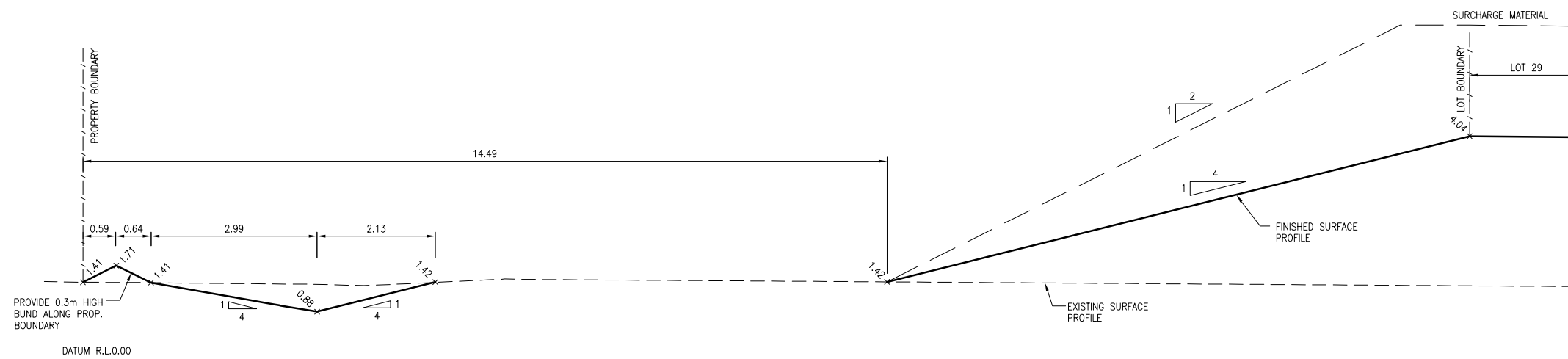
DESIGNED	G.J.S.	SHEET NUMBER	14 OF 34
DRAWN	G.J.S.	REVISION	L
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Pre_Sections.dwg		



SECTION 0
1:50 SCALE @ A1 SIZE



SECTION P
1:50 SCALE @ A1 SIZE




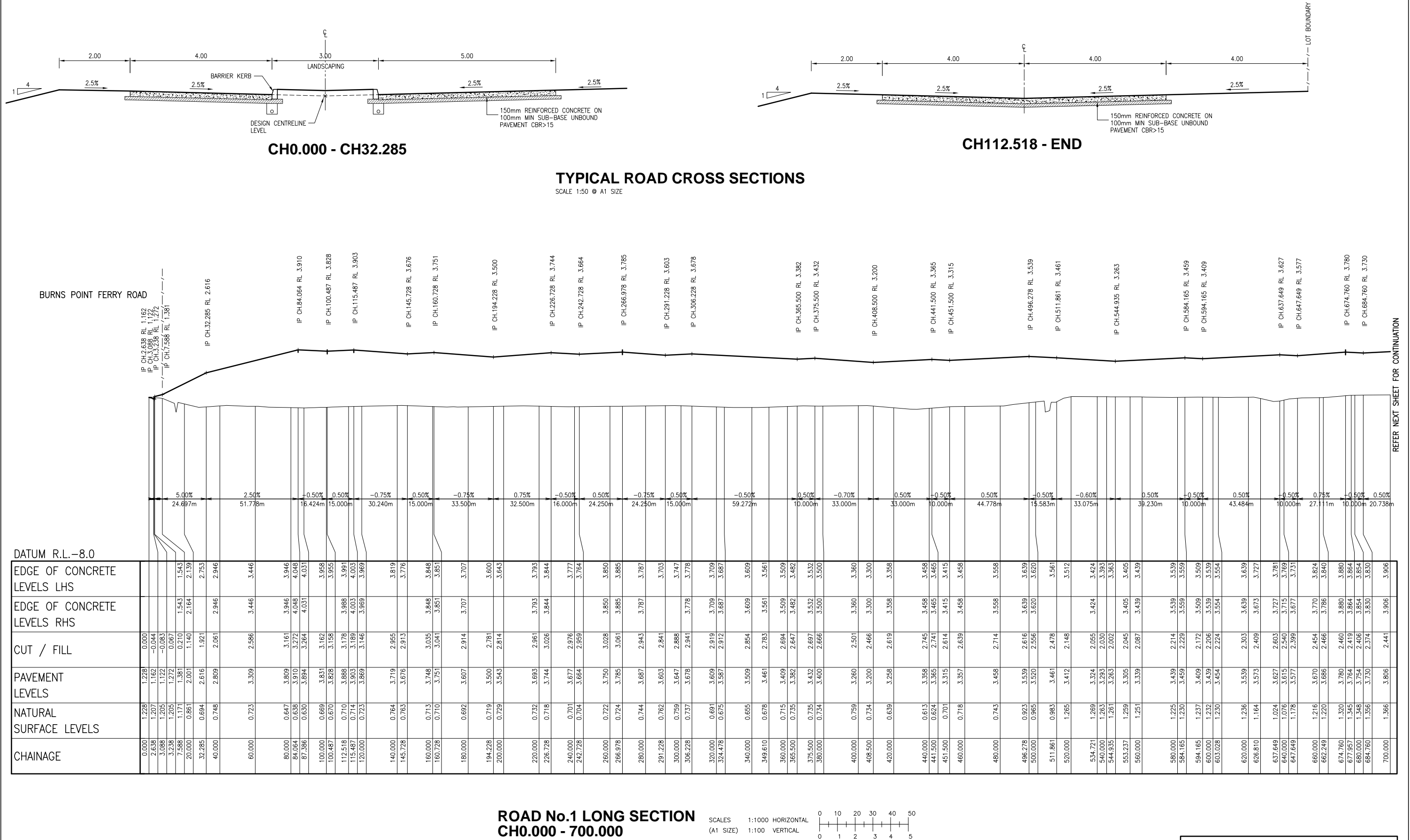
SECTION Q
1:50 SCALE @ A1 SIZE

PRELIMINARY
NOT FOR CONSTRUCTION

No.	DATE	REVISIONS
I	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
H	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET	PRELIMINARY SECTIONS 6 of 6
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

APPROVED	DESIGNED G.J.S.	SHEET NUMBER
	DRAWN G.J.S.	15 of 34
B. ARTHUR RPEQ 4384, NER 694962 For and on behalf of WESTERA PARTNERS PTY LTD.	DATE DRAWN OCTOBER 2019	REVISION I
	FILE NAME Pre_Sections.dwg	PROJECT NUMBER N19/009 PC



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E nsw@westerapartners.com.au

SURVEYOR
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PHONE (02) 6686-5700

DATUM
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SSM 64762
R.L. 1.267

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No.	DATE	REVISIONS
H	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET
PROJECT
LOCATION
CLIENT

PRELIMINARY ROAD No.1 (PART) LONG SECTION
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMPLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.	SHEET NUMBER
DRAWN	G.J.S.	16 OF 34
DATE DRAWN	OCTOBER 2019	REVISION H
FILE NAME	Pre_Rd_1sec.dwg	PROJECT NUMBER N19/009 PC

DATUM R.L.-8.0

EDGE OF CONCRETE LEVELS LHS	EDGE OF CONCRETE LEVELS RHS	CUT / FILL	PAVEMENT LEVELS	NATURAL SURFACE LEVELS	CHAINAGE
					700.000
					706.498
					720.000
					722.550
					734.967
					740.000
					801.156
					760.000
					780.000
					780.576
					789.156
					791.765
					800.000
					801.156

ROAD No.1
CH700.000 - 801.156

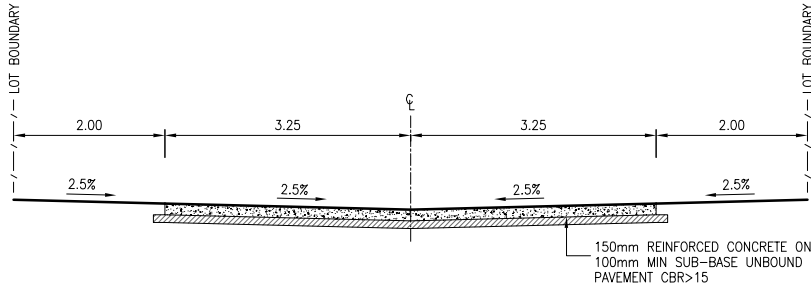
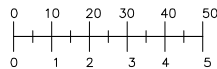
DATUM R.L.-7.0

EDGE OF CONCRETE LEVELS LHS	EDGE OF CONCRETE LEVELS RHS	CUT / FILL	PAVEMENT LEVELS	NATURAL SURFACE LEVELS	CHAINAGE
					0.000
					6.386
					17.500
					20.000
					27.500
					40.000
					48.636
					58.636
					60.000
					78.511
					80.000
					82.679
					88.511
					97.088
					100.000
					120.000
					125.212
					135.212
					140.000
					160.000
					167.382
					171.691
					180.000
					181.691
					182.964
					196.677
					200.000
					219.399
					220.000
					225.001
					228.024
					236.024
					240.000
					260.000
					265.399
					273.804
					273.938
					280.000
					283.938
					300.000
					320.000
					320.942
					332.732
					336.704
					340.000
					341.228
					345.677
					346.228
					354.424
					360.000
					361.174
					365.224
					367.924
					378.902

ROAD No.3

ROAD LONG SECTIONS

SCALES 1:1000 HORIZONTAL
(A1 SIZE) 1:100 VERTICAL



ROAD No.3
TYPICAL ROAD CROSS SECTION
SCALE 1:50 @ A1 SIZE

REFER PREVIOUS SHEET FOR CONTINUATION

IP CH.705.498 RL 3.834

IP CH.789.156 RL 3.416

TP CH.6.386 RL 3.892

IP CH.17.500 RL 4.003

IP CH.27.500 RL 3.953

IP CH.48.636 RL 4.112

IP CH.58.636 RL 4.062

IP CH.78.511 RL 4.211

IP CH.88.511 RL 4.161

IP CH.125.212 RL 4.344

IP CH.135.212 RL 4.294

IP CH.171.691 RL 4.477

IP CH.181.691 RL 4.427

IP CH.196.677 RL 4.502

IP CH.228.024 RL 4.229

IP CH.238.024 RL 4.279

IP CH.273.938 RL 4.099

IP CH.283.938 RL 4.149

IP CH.320.942 RL 3.858

TP CH.336.228 RL 3.935

CBCH CH.336.704 RL 3.936

IP CH.341.228 RL 3.960

TP CH.346.228 RL 3.460

TP CH.354.424 RL 2.640

IP CH.361.174 RL 1.965

SAG CH.365.224 RL 2.100

TP CH.367.924 RL 2.134

RIVER STREET

No.	DATE	REVISIONS
H	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
G	31.03.2021	ISSUED FOR D.A. APPROVAL
B	24.07.2020	RIVER STREET INTERSECTION LEVELS CHANGED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET
PROJECT
LOCATION
CLIENT

PRELIMINARY ROAD No.1 (CONT) & No.3 LONG SECTION
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMPLIFE PTY LTD

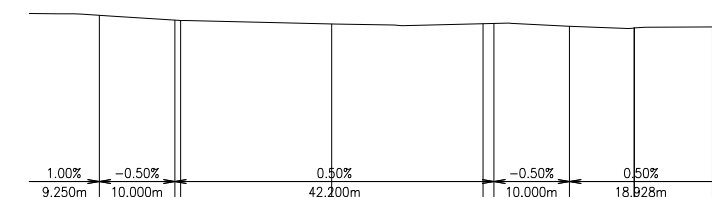
APPROVED

B. ARTHUR
RPEQ 4384, NER 694952
For and on behalf of
WESTERA PARTNERS PTY. LTD.

DESIGNED	G.J.S.	SHEET NUMBER	17 OF 34
DRAWN	G.J.S.	REVISION	H
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Pre_Rd_1sec.dwg		



ROAD No.2

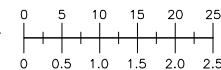


DATUM R.L.-3.0

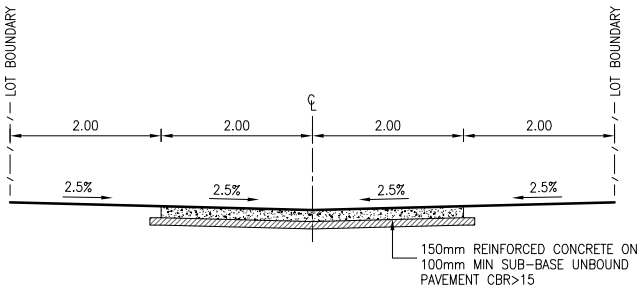
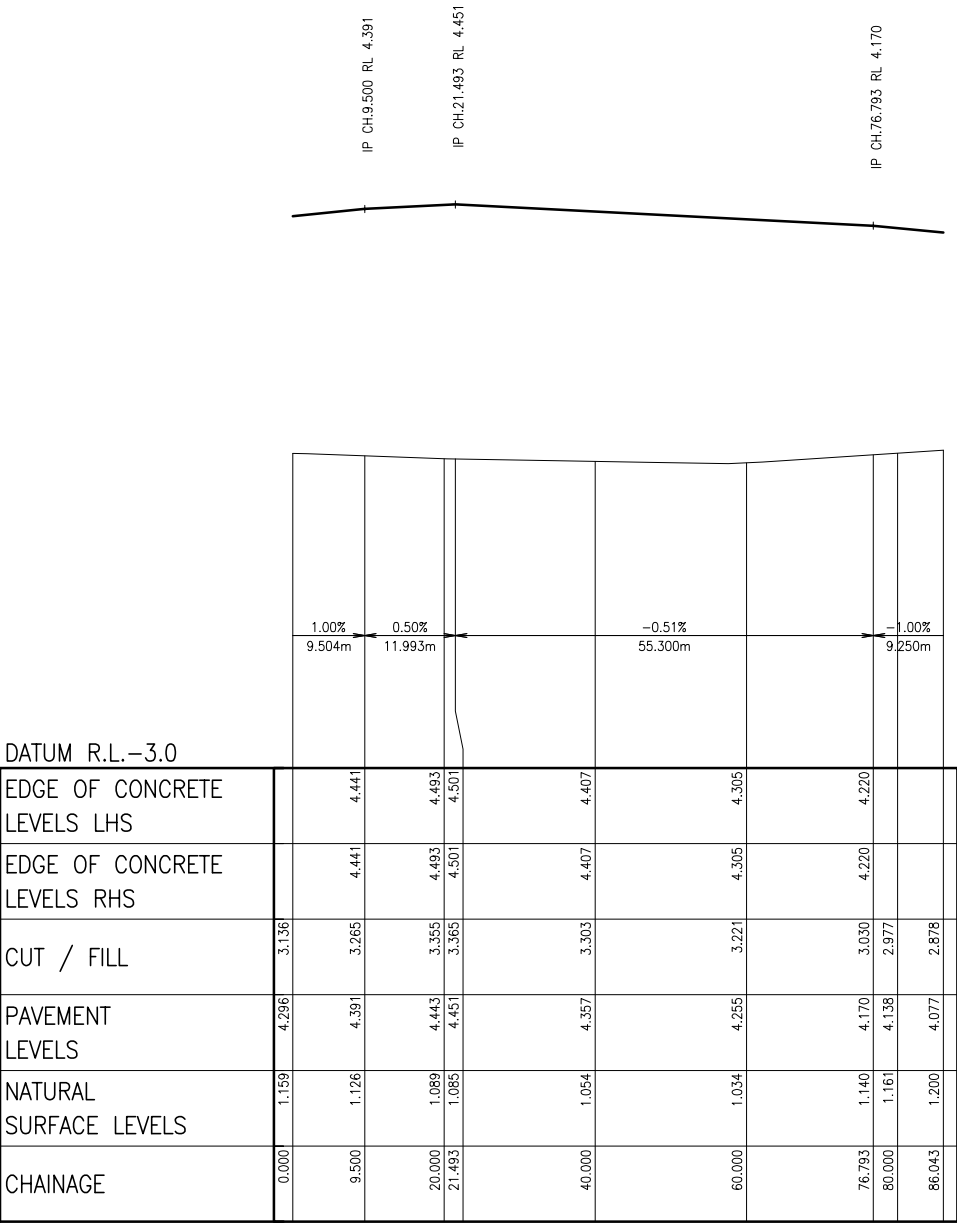
ROAD No.4

ROAD LONG SECTIONS

SCALES 1:500 HORIZONTAL
(A1 SIZE) 1:50 VERTICAL



PRELIMINARY
NOT FOR CONSTRUCTION

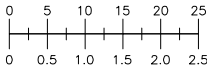


TYPICAL ROAD CROSS SECTION

SCALE 1:50 @ A1 SIZE

ROAD No.5 LONG SECTION

SCALES 1:500 HORIZONTAL
(A1 SIZE) 1:50 VERTICAL



PRELIMINARY

NOT FOR CONSTRUCTION

No.	DATE	REVISIONS
H	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET
PROJECT
LOCATION
CLIENT

PRELIMINARY ROAD No.5 LONG SECTION
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED

[Signature]

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY. LTD.

DESIGNED G.J.S.

DRAWN G.J.S.

DATE DRAWN OCTOBER 2019

FILE NAME Pre_Rd_lsec.dwg

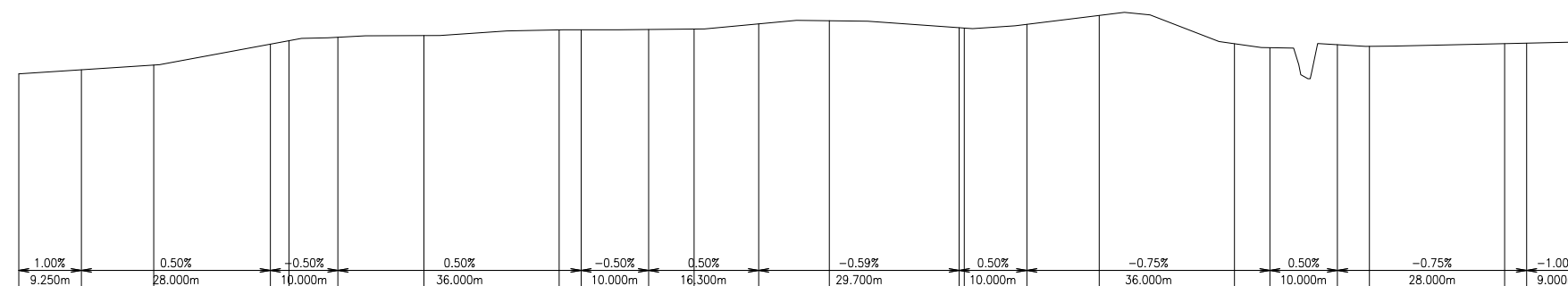
SHEET NUMBER

19 OF 34

REVISION H

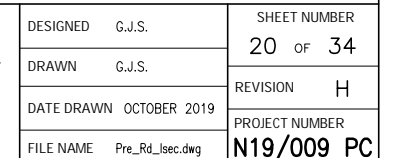
PROJECT NUMBER

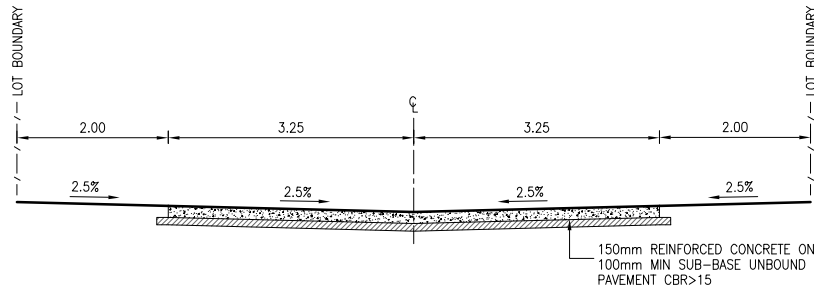
N19/009 PC



ROAD No.6 LONG SECTION

PRELIMINARY
NOT FOR CONSTRUCTION





TYPICAL ROAD CROSS SECTION

SCALE 1:50 @ A1 SIZE

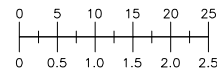


DATUM R.L. -4.0

EDGE OF CONCRETE LEVELS LHS			3.860		3.910		4.010		4.110		4.210		4.292		4.271		4.150		4.029		3.908				3.848		3.789		3.689		3.671		
EDGE OF CONCRETE LEVELS RHS			3.860		3.910		4.010		4.110		4.210		4.292		4.271		4.150		4.029		3.908				3.788		3.807		3.689		3.671		
CUT / FILL		2.915		3.094		3.155		3.174		2.979		2.951		2.945		2.909		2.723		2.530		2.346			2.192		2.201		2.461		2.437		2.323
PAVEMENT LEVELS		3.678		3.778		3.828		3.928		4.028		4.128		4.211		4.190		4.069		3.948		3.827			3.717		3.726		3.608		3.590		3.500
NATURAL SURFACE LEVELS		0.763		0.685		0.673		0.755		1.050		1.177		1.266		1.281		1.346		1.418		1.482			1.525		1.525		1.147		1.153		1.177
CHAINAGE		0.000		10.000		20.000		40.000		60.000		80.000		96.500		100.000		120.000		140.000		160.000			178.250		180.000		188.250		200.000		220.000

ROAD No.7 LONG SECTION

SCALES 1:500 HORIZONTAL
(A1 SIZE) 1:50 VERTICAL



PRELIMINARY
NOT FOR CONSTRUCTION

No.	DATE	REVISIONS
H	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

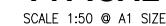
SHEET
PROJECT
LOCATION
CLIENT

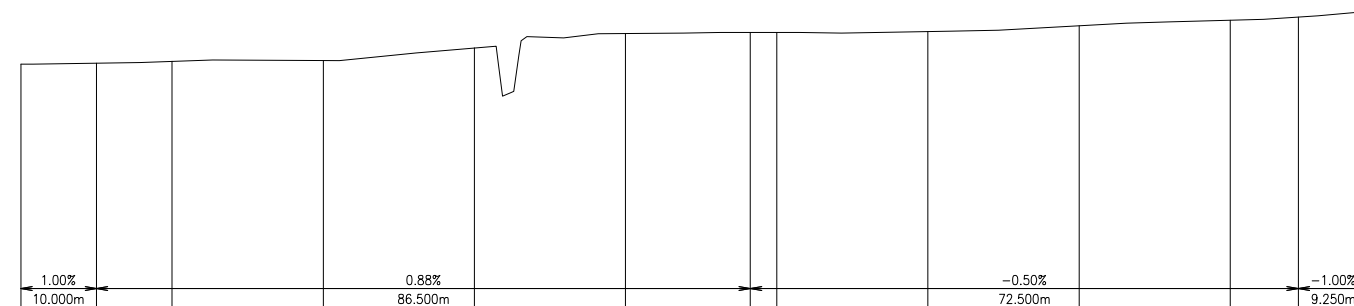
PRELIMINARY ROAD No.7 LONG SECTION
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY. LTD.

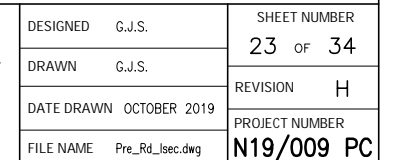
DESIGNED	G.J.S.	SHEET NUMBER
DRAWN	G.J.S.	21 OF 34
DATE DRAWN	OCTOBER 2019	REVISION
FILE NAME	Pre_Rd_lsec.dwg	H
		PROJECT NUMBER
		N19/009 PC

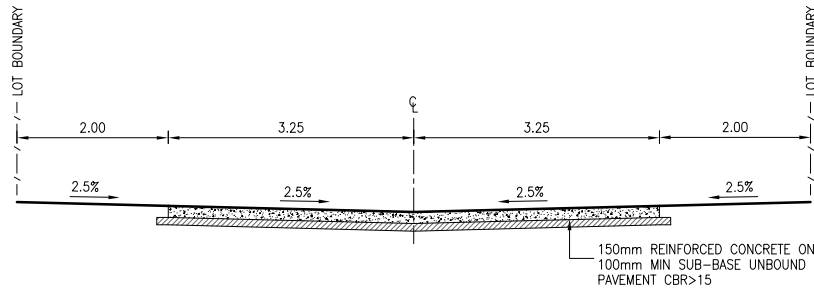




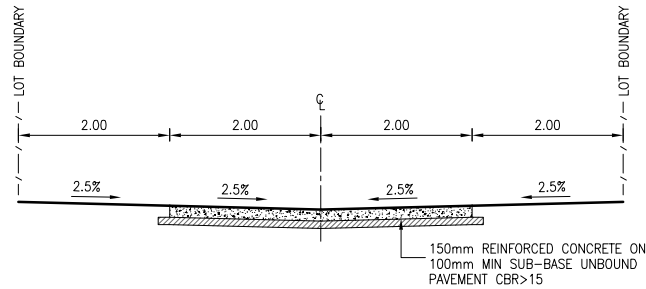
DATUM R.L. 4.5									
CHAINAGE	0.00	0.719	3.500	2.781					
NATURAL SURFACE LEVELS		0.731	3.600	2.869	3.681	3.681			
PAVEMENT LEVELS		0.754	3.688	2.934	3.769	3.769			
CUT / FILL									
EDGE OF CONCRETE LEVELS LHS									
EDGE OF CONCRETE LEVELS RHS									
	10.000								
	20.000								
	40.000								
	60.000								
	80.000								
	96.500								
	100.000								
	120.000								
	140.000								
	160.000								
	168.000								

PRELIMINARY
NOT FOR CONSTRUCTION

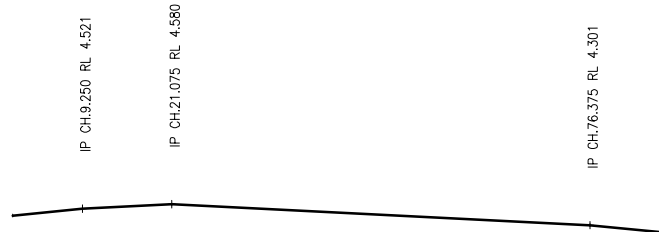




ROAD No.10
TYPICAL ROAD CROSS SECTION
SCALE 1:50 @ A1 SIZE



ROAD No.11
TYPICAL ROAD CROSS SECTION
SCALE 1:50 @ A1 SIZE



	1.00%	10.000m		0.50%	115.700m		-0.66%	43.300m		-1.00%	9.250m
EDGE OF CONCRETE LEVELS LHS		3.787	3.837	3.937	4.037	4.137	4.237	4.337	4.365	4.271	4.140
EDGE OF CONCRETE LEVELS RHS		3.787	3.837	3.937	4.037	4.137	4.237	4.337	4.365	4.271	4.140
CUT / FILL	2.843	2.917	2.984	3.120	3.217	3.303	3.412	3.489	3.493	3.340	2.649
PAVEMENT LEVELS	3.605	3.705	3.755	3.855	3.955	4.055	4.155	4.255	4.284	4.190	3.907
NATURAL SURFACE LEVELS	0.762	0.788	0.771	0.736	0.738	0.752	0.743	0.767	0.790	0.850	1.258
CHAINAGE	0.000	10.000	20.000	40.000	60.000	80.000	100.000	120.000	125.700	140.000	178.250

DATUM R.L. -4.0

ROAD No.10

	1.00%	9.250m	0.50%	11.825m		-0.50%	55.300m		-1.00%	9.250m
EDGE OF CONCRETE LEVELS LHS		4.571	4.624	4.630	4.535	4.434	4.351	4.351	4.351	4.351
EDGE OF CONCRETE LEVELS RHS		4.571	4.624	4.630	4.535	4.434	4.351	4.351	4.351	4.351
CUT / FILL	3.150	3.182	3.238	3.283	3.227	3.205	3.048	2.990	2.894	2.894
PAVEMENT LEVELS	4.428	4.461	4.521	4.574	4.485	4.384	4.301	4.265	4.209	4.209
NATURAL SURFACE LEVELS	1.279	1.279	1.283	1.291	1.298	1.179	1.254	1.276	1.315	1.315
CHAINAGE	0.000	9.250	20.000	21.075	40.000	60.000	76.375	80.000	85.625	85.625

DATUM R.L. -3.0

ROAD No.11

ROAD LONG SECTIONS

SCALES
(A1 SIZE)
1:500 HORIZONTAL
1:50 VERTICAL



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SUNSHINE COAST
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BRISBANE
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E brisbane@westerapartners.com.au

GOLD COAST
Level 3
17 Welch St, Southport
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E goldcoast@westerapartners.com.au

NORTHERN NSW
11 Salfrish Way, Kingscliff
T 02 6674 8047 | F 02 6674 8049
E nsw@westerapartners.com.au

SURVEYOR
KENNEDY SURVEYING
PHONE (02) 6686-5700

DATUM
A.H.D.
SSM 64762
R.L. 1.267

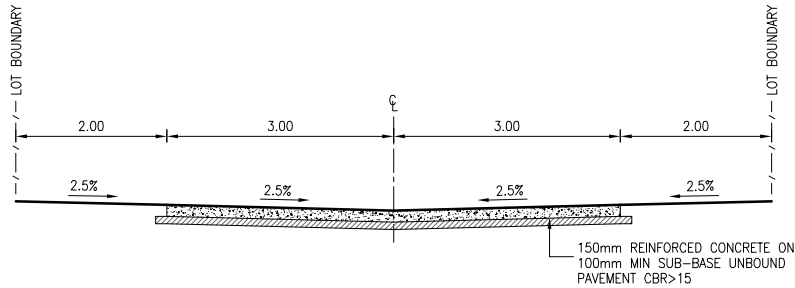
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A	25.10.2019	ISSUED FOR D.A. APPROVAL

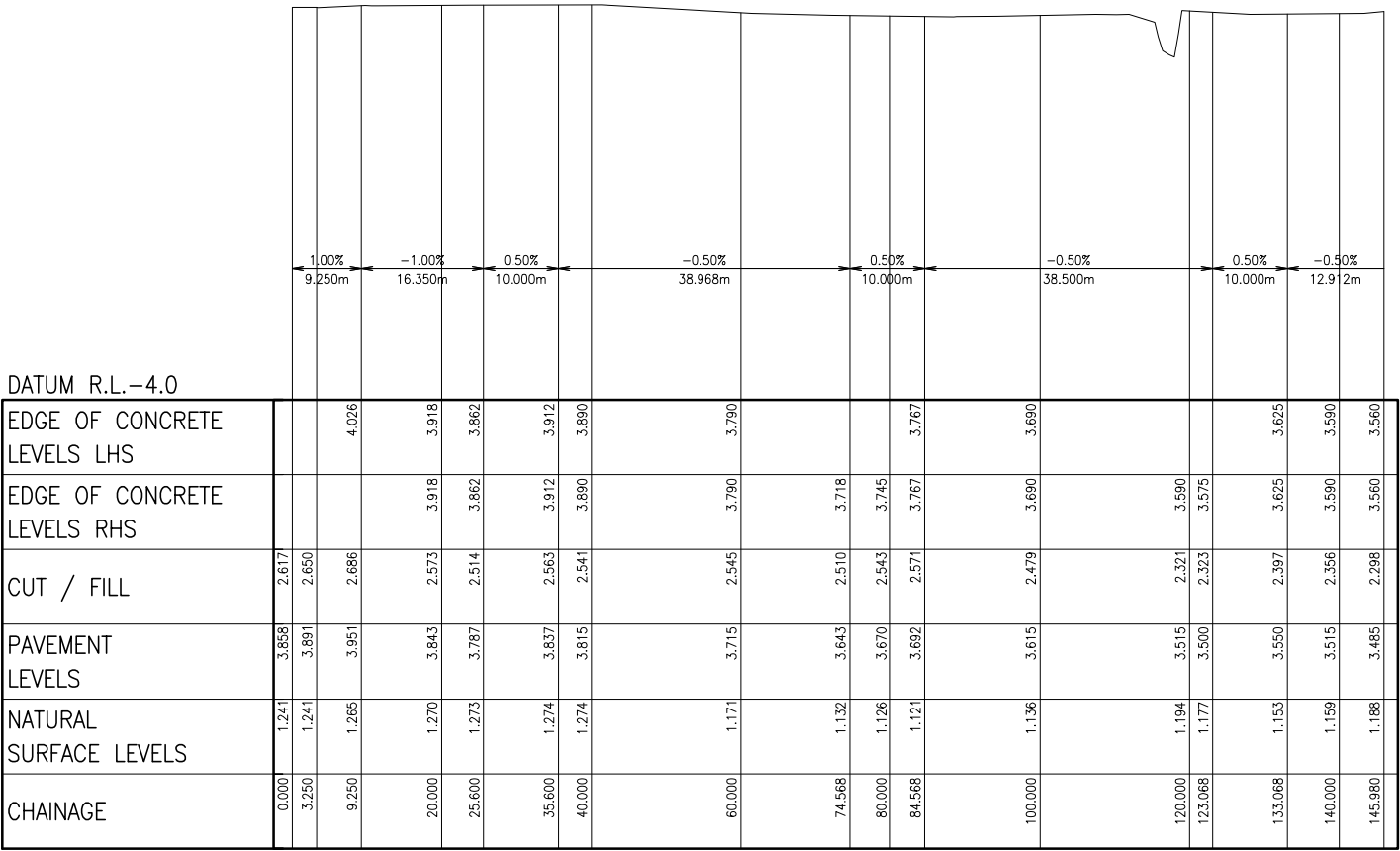
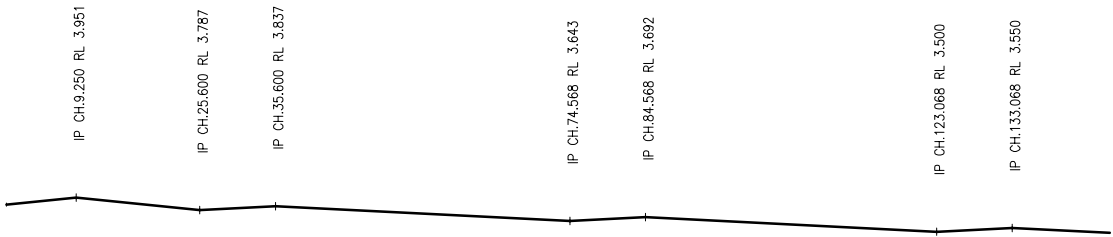
SHEET
PROJECT
LOCATION
CLIENT

PRELIMINARY ROAD No.10 & No.11 LONG SECTION
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED	DESIGNED G.J.S.	SHEET NUMBER
	DRAWN G.J.S.	24 OF 34
DATE DRAWN OCTOBER 2019	FILE NAME Pre_Rd_1sec.dwg	REVISION H
		PROJECT NUMBER N19/009 PC

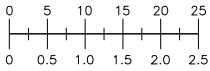


TYPICAL ROAD CROSS SECTION



ROAD No.12 LONG SECTION

SCALES
(A1 SIZE)
1:500 HORIZONTAL
1:50 VERTICAL



PRELIMINARY
NOT FOR CONSTRUCTION



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E sunshinecoast@westerapartners.com.au

BRISBANE
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E brisbane@westerapartners.com.au

GOLD COAST
Level 3
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E goldcoast@westerapartners.com.au

NORTHERN NSW
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E nsw@westerapartners.com.au

SURVEYOR
KENNEDY SURVEYING
PHONE (02) 6686-5700

DATUM
A.H.D.
SSM 64762
R.L. 1.267

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G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET
PROJECT
LOCATION
CLIENT

PRELIMINARY ROAD No.12 LONG SECTION
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY. LTD.

DESIGNED G.J.S.

DRAWN G.J.S.

DATE DRAWN OCTOBER 2019

FILE NAME Pre_Rd_lsec.dwg

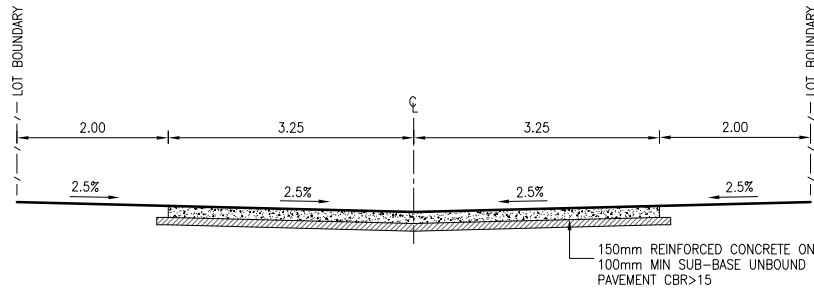
SHEET NUMBER

25 OF 34

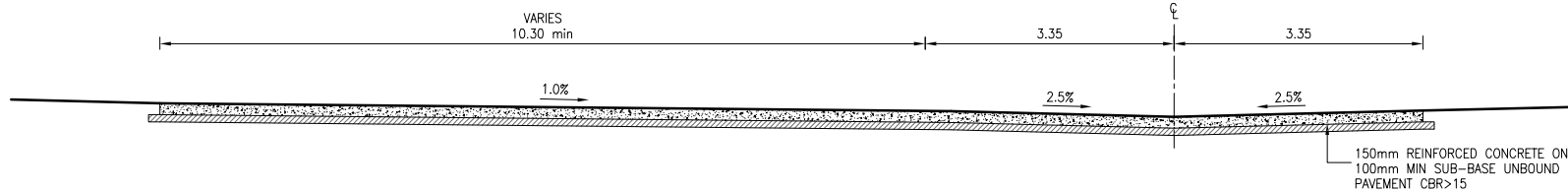
REVISION H

PROJECT NUMBER

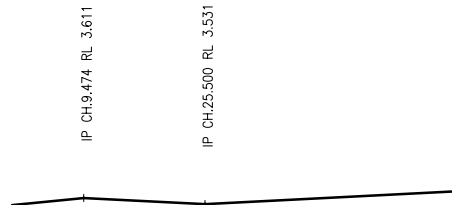
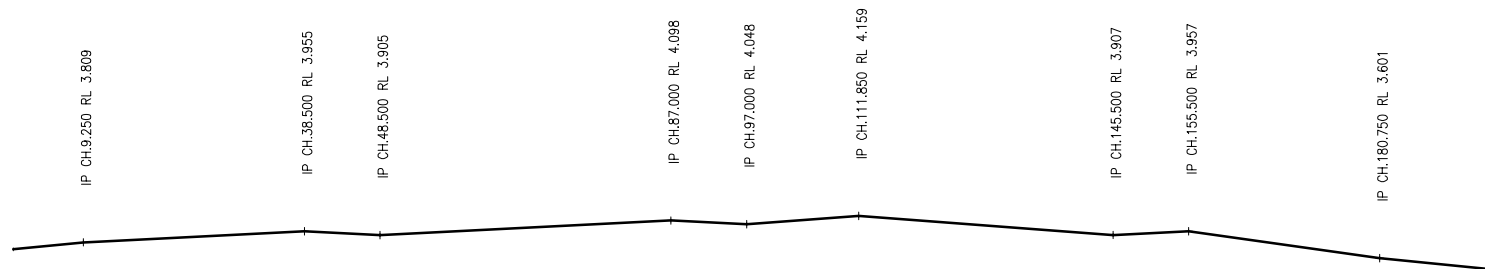
N19/009 PC



ROAD No.13
TYPICAL ROAD CROSS SECTION
SCALE 1:50 @ A1 SIZE



ROAD No.14
TYPICAL ROAD CROSS SECTION
SCALE 1:50 @ A1 SIZE



	1.00%	0.50%	-0.50%	0.50%	-0.50%	0.75%	-0.75%	0.50%	-1.41%	-1.00%
	9.250m	29.250m	10.000m	38.500m	10.000m	14.850m	33.650m	10.000m	25.250m	14.000m
EDGE OF CONCRETE LEVELS LHS		3.891	3.944	4.037		4.144	4.179	4.241	4.038	3.693
EDGE OF CONCRETE LEVELS RHS		3.891	3.944	4.037	4.029	3.987	4.044	4.144	4.038	3.693
CUT / FILL	2.192	2.312	2.398	2.502	2.499	2.490	2.596	2.806	2.758	2.401
PAVEMENT LEVELS	3.717	3.809	3.863	3.955	3.948	3.905	3.963	4.063	3.957	3.612
NATURAL SURFACE LEVELS	1.525	1.497	1.465	1.454	1.449	1.416	1.367	1.257	1.199	1.211
CHAINAGE	0.000	9.250	20.000	38.500	40.000	48.500	60.000	80.000	155.500	180.000

DATUM R.L.-4.0

EDGE OF CONCRETE LEVELS LHS		3.891	3.944	4.037		4.144	4.179	4.241	4.038	3.693
EDGE OF CONCRETE LEVELS RHS		3.891	3.944	4.037	4.029	3.987	4.044	4.144	4.038	3.693
CUT / FILL	2.192	2.312	2.398	2.502	2.499	2.490	2.596	2.806	2.758	2.401
PAVEMENT LEVELS	3.717	3.809	3.863	3.955	3.948	3.905	3.963	4.063	3.957	3.612
NATURAL SURFACE LEVELS	1.525	1.497	1.465	1.454	1.449	1.416	1.367	1.257	1.199	1.211
CHAINAGE	0.000	9.250	20.000	38.500	40.000	48.500	60.000	80.000	155.500	180.000

ROAD No.13

	1.00%	-0.50%	0.50%
	9.477m	16.026m	38.151m
EDGE OF CONCRETE LEVELS LHS		3.695	
EDGE OF CONCRETE LEVELS RHS		3.695	
CUT / FILL	2.284	2.326	2.398
PAVEMENT LEVELS	3.516	3.556	3.611
NATURAL SURFACE LEVELS	1.232	1.231	1.223
CHAINAGE	0.000	9.474	25.500

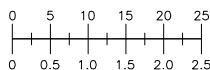
DATUM R.L.-3.0

EDGE OF CONCRETE LEVELS LHS		3.695	
EDGE OF CONCRETE LEVELS RHS		3.695	
CUT / FILL	2.284	2.326	2.398
PAVEMENT LEVELS	3.516	3.556	3.611
NATURAL SURFACE LEVELS	1.232	1.231	1.223
CHAINAGE	0.000	9.474	25.500

ROAD No.14

ROAD LONG SECTIONS

SCALES 1:500 HORIZONTAL
(A1 SIZE) 1:50 VERTICAL

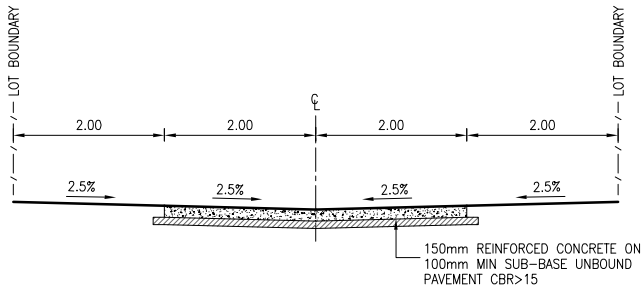


PRELIMINARY
NOT FOR CONSTRUCTION

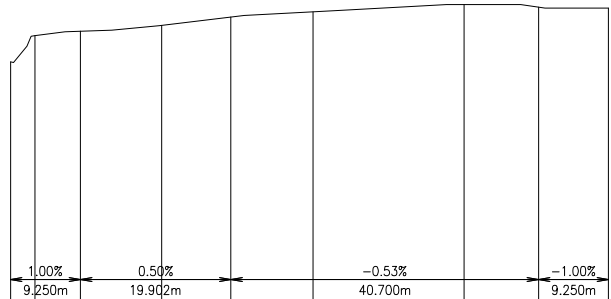
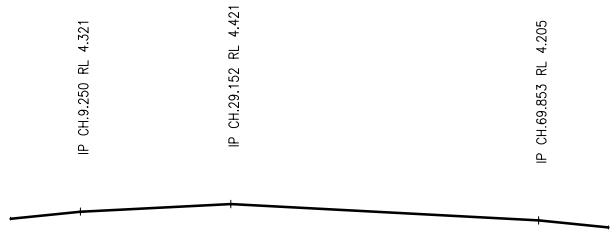
No.	DATE	REVISIONS
H	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET	PRELIMINARY ROAD No.13 & No.14 LONG SECTION
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

APPROVED	DESIGNED G.J.S.	SHEET NUMBER
	DRAWN G.J.S.	26 OF 34
	DATE DRAWN OCTOBER 2019	REVISION H
	FILE NAME Pre_Rd_1sec.dwg	PROJECT NUMBER N19/009 PC



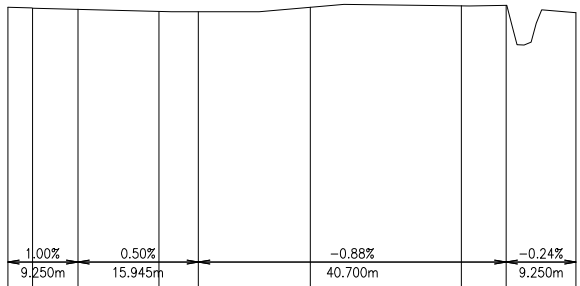
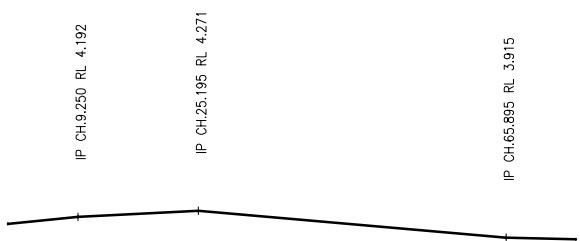
TYPICAL ROAD CROSS SECTION
SCALE 1:50 @ A1 SIZE



DATUM R.L. -4.0

EDGE OF CONCRETE LEVELS LHS				4.371		4.425		4.471		4.413		4.307		4.255	
EDGE OF CONCRETE LEVELS RHS					4.425	4.471		4.413		4.307		4.255			
CUT / FILL		3.598	3.284	3.288	3.264	3.199	3.074	2.869	2.852	2.772					
PAVEMENT LEVELS		4.229	4.261	4.321	4.375	4.421	4.363	4.257	4.205	4.113					
NATURAL SURFACE LEVELS	0.650	0.977	1.033	1.111	1.221	1.289	1.388	1.353	1.341						
CHAINAGE	0.000	3.250	9.250	20.000	29.152	40.000	60.000	69.853	79.103						

ROAD No.15



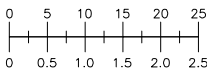
DATUM R.L. -4.0

EDGE OF CONCRETE LEVELS LHS				4.241		4.295		4.321		4.192		4.017		3.965	
EDGE OF CONCRETE LEVELS RHS					4.295	4.321		4.192		4.017		3.965			
CUT / FILL		2.983	3.025	3.101	3.184	3.214	3.024	2.850	2.774	2.848					
PAVEMENT LEVELS		4.099	4.132	4.192	4.245	4.271	4.142	3.967	3.915	3.893					
NATURAL SURFACE LEVELS	1.116	1.107	1.091	1.061	1.057	1.118	1.137	1.141	1.045						
CHAINAGE	0.000	3.250	9.250	20.000	25.195	40.000	60.000	65.895	75.146						

ROAD No.16

ROAD LONG SECTIONS

SCALES 1:500 HORIZONTAL
(A1 SIZE) 1:50 VERTICAL



PRELIMINARY
NOT FOR CONSTRUCTION



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E sunshinecoast@westera.com.au

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SURVEYOR
KENNEDY SURVEYING
PHONE (02) 6686-5700

DATUM
A.H.D.
SSM 64762
R.L. 1.267

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A	25.10.2019	ISSUED FOR D.A. APPROVAL

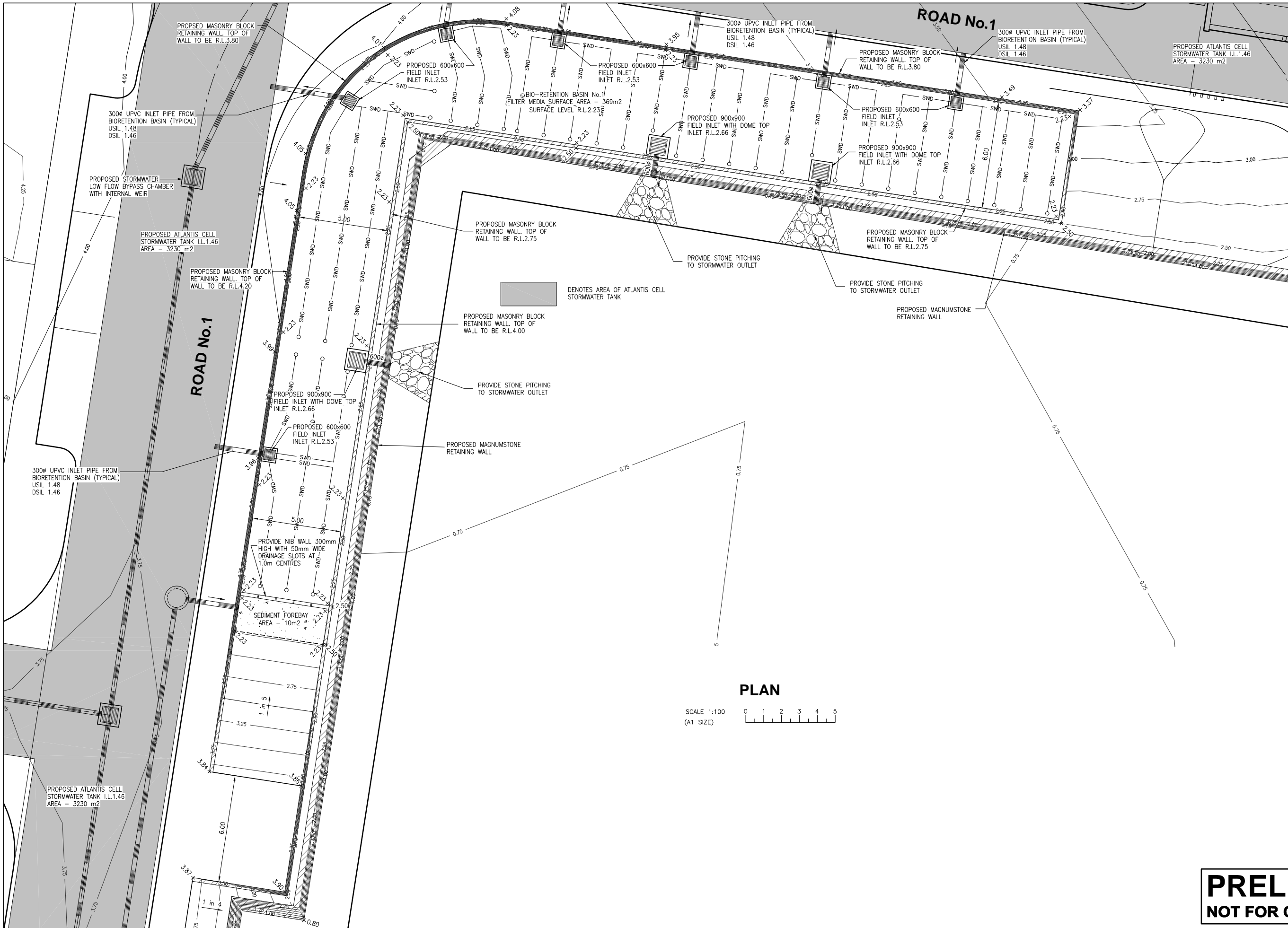
SHEET
PROJECT
LOCATION
CLIENT

PRELIMINARY ROAD No.15 & No.16 LONG SECTION
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED G.J.S.	SHEET NUMBER 27 OF 34
DRAWN G.J.S.	REVISION J
DATE DRAWN OCTOBER 2019	PROJECT NUMBER N19/009 PC
FILE NAME Pre_Rd_lsec.dwg	



PLAN

SCALE 1:100
(A1 SIZE)



PRELIMINARY
NOT FOR CONSTRUCTION



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SURVEYOR
KENNEDY SURVEYING
PHONE (02) 6686-5700

DATUM
A.H.D.
SSM 64762
R.L. 1.267

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED. IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS

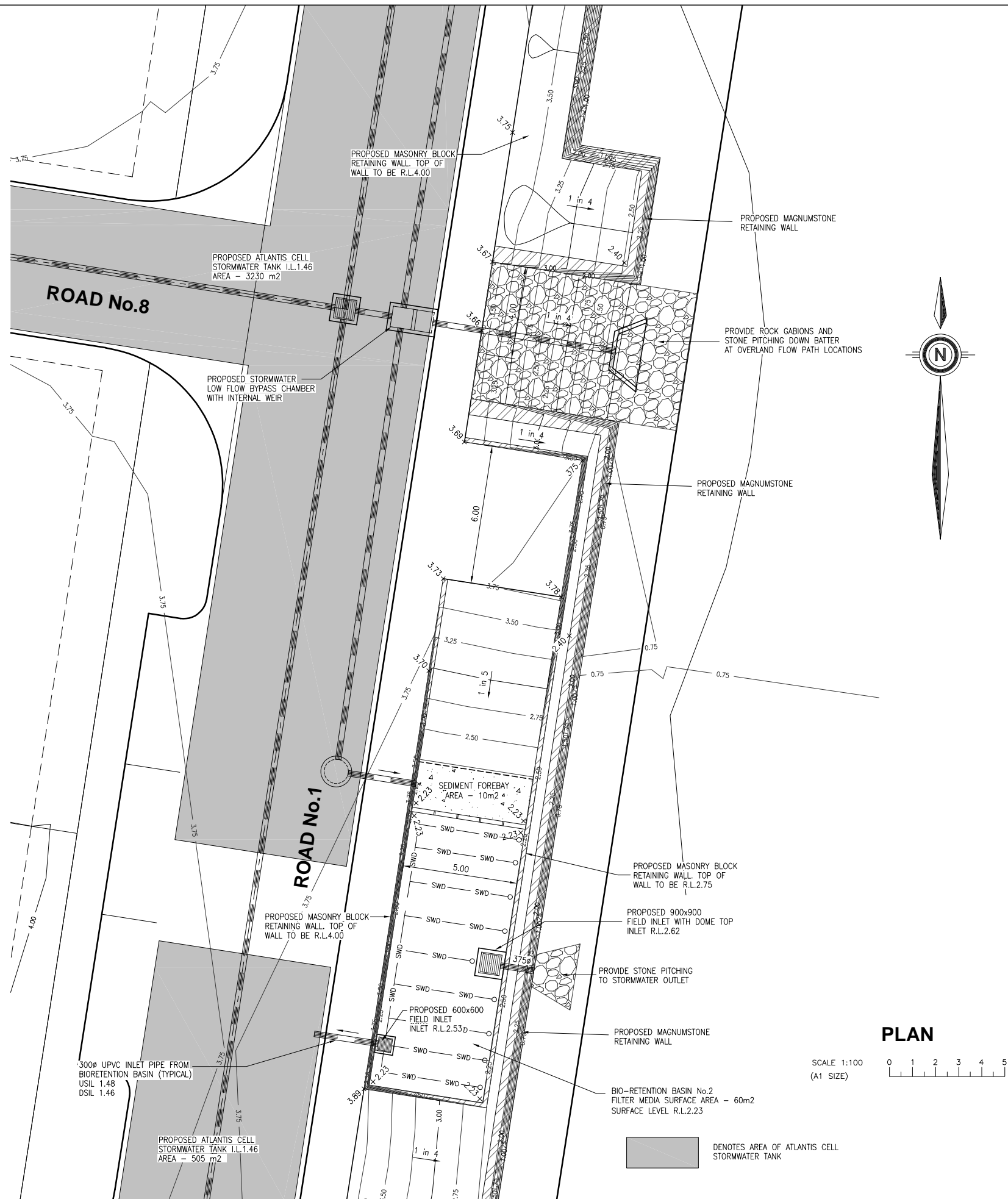
No.	DATE	REVISIONS
K	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
I	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
H	14.05.2021	BIORETENTION BASINS CHANGED
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET	BIO-RETENTION BASIN No.1 DETAILS
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.	SHEET NUMBER	28 OF 34
DRAWN	G.J.S.	REVISION	K
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Pre_Bio_Basin.dwg		



PLAN

SCALE 1:100
(A1 SIZE)

PRELIMINARY
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DATUM
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SSM 64762
R.L. 1.267

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No.	DATE	REVISIONS
K	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
J	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
I	14.05.2021	BIORETENTION BASINS CHANGED
H	19.04.2021	BIORETENTION BASIN No.3 DETAILS ADDED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET
PROJECT
LOCATION
CLIENT

BIO-RETENTION BASIN No.2 DETAILS
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

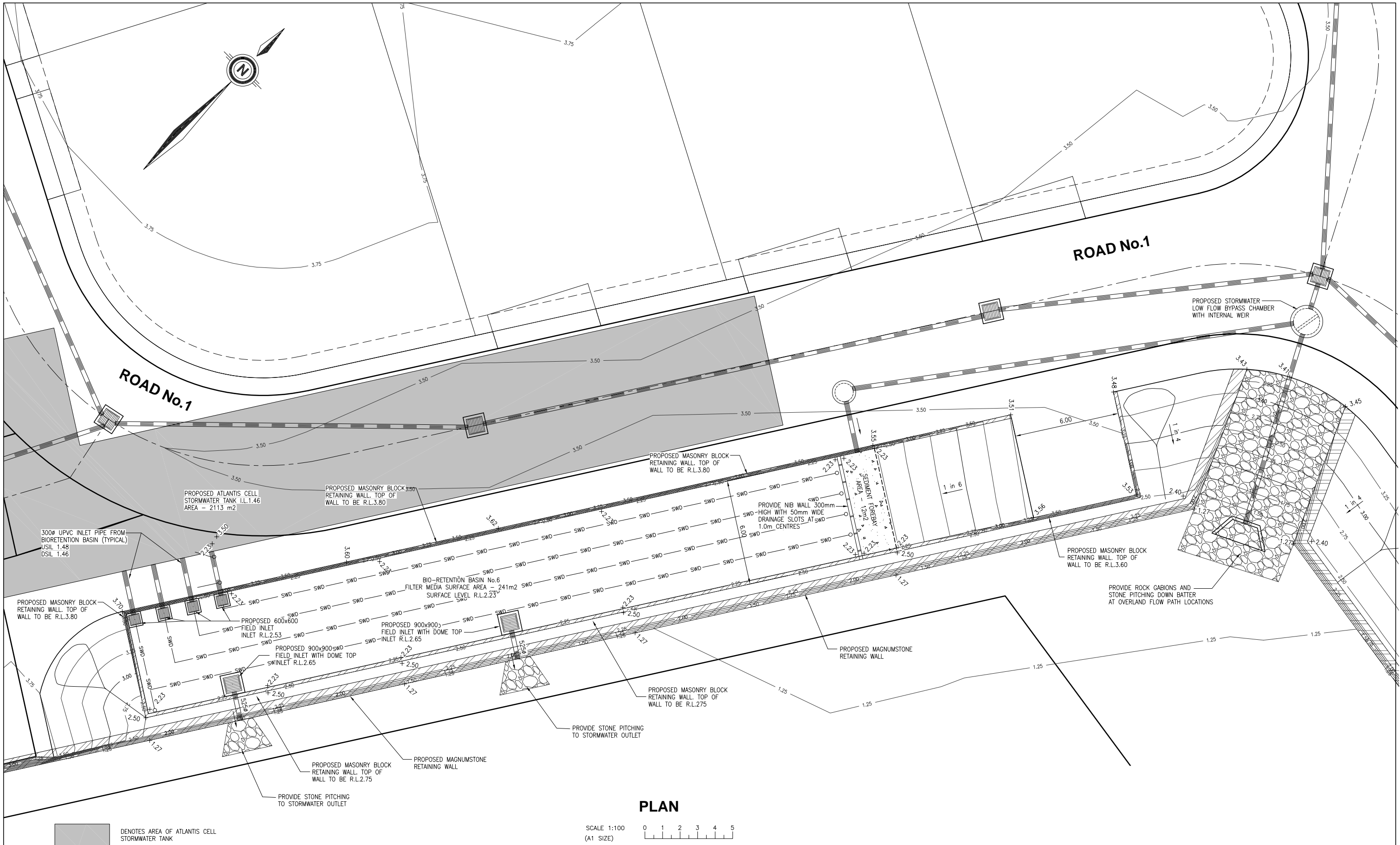
APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED G.J.S.
DRAWN G.J.S.
DATE DRAWN OCTOBER 2019
FILE NAME Pre_Bio_Basin.dwg

SHEET NUMBER
29 OF 34
REVISION K
PROJECT NUMBER
N19/009 PC





PLAN

SCALE 1:100
(A1 SIZE)

PRELIMINARY
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No.	DATE	REVISIONS
J	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
I	02.06.2021	RETAINING WALL ALONG SOUTHERN BDY & BATTER AROUND CLUBHOUSE CHANGED
H	14.05.2021	BIORETENTION BASINS CHANGED
G	31.03.2021	ISSUED FOR D.A. APPROVAL
A	25.10.2019	ISSUED FOR D.A. APPROVAL

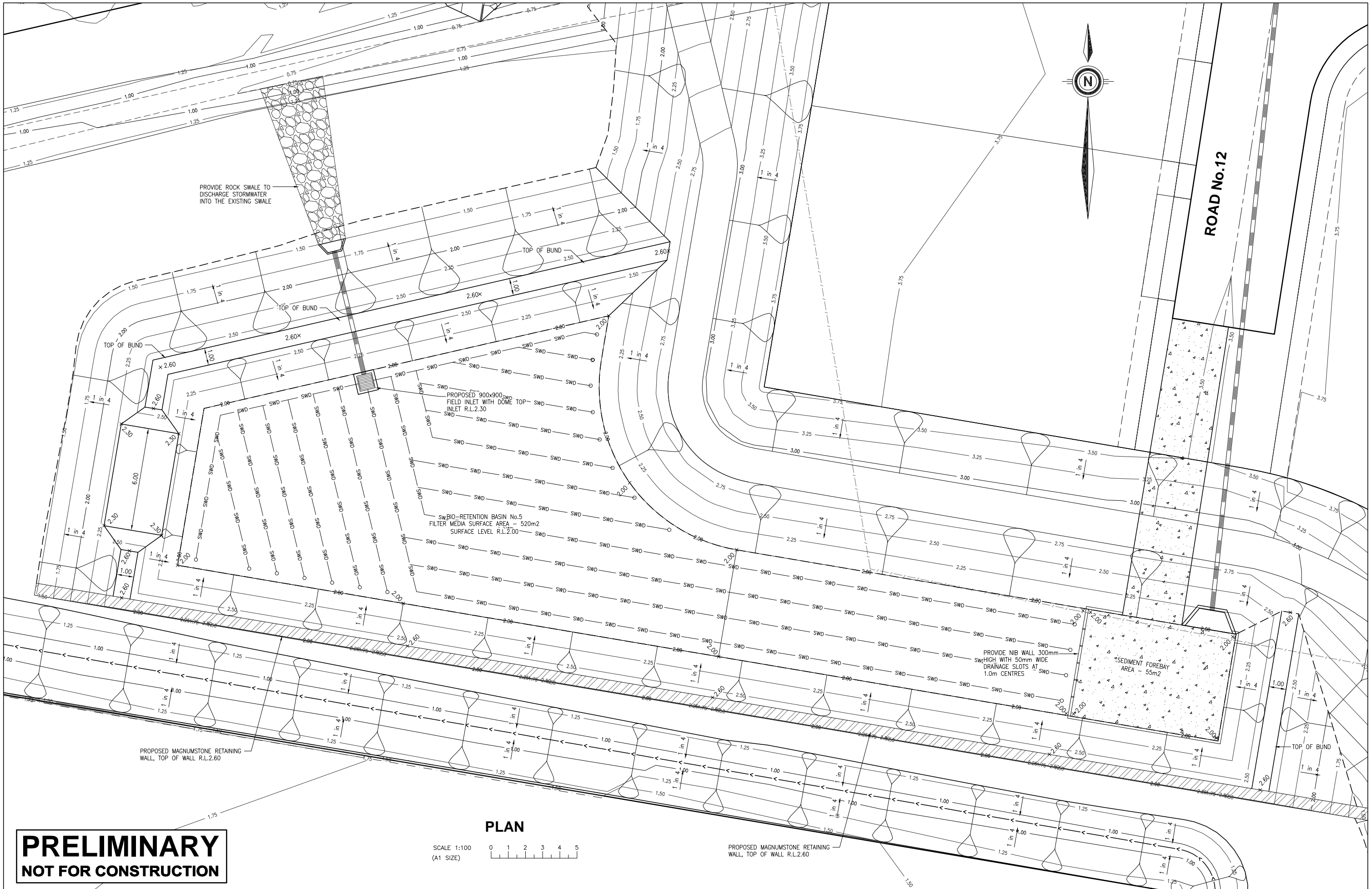
SHEET
PROJECT
LOCATION
CLIENT

BIO-RETENTION BASIN No.4 DETAILS
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.	SHEET NUMBER	31 OF 34
DRAWN	G.J.S.	REVISION	J
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Pre_Bio_Basin.dwg		



PRELIMINARY
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DATUM
A.H.D.
SSM 64762
R.L. 1.267

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No.	DATE	REVISIONS
H	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
G	31.03.2021	ISSUED FOR D.A. APPROVAL
C	28.10.2020	STONE PITCHING TO MANGROVE CHANNEL REMOVED, ROCK SWALES ADDED
B	30.10.2019	STONE PITCHING TO MANGROVE CHANNEL CHANGED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

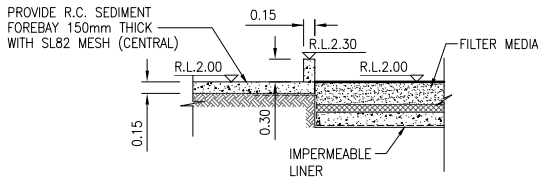
SHEET
PROJECT
LOCATION
CLIENT

BIO-RETENTION BASIN No.5 DETAILS
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694952
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.	SHEET NUMBER
DRAWN	G.J.S.	32 OF 34
DATE DRAWN	OCTOBER 2019	REVISION
FILE NAME	Pre_Bio_Basin.dwg	H
		PROJECT NUMBER
		N19/009 PC



SEDIMENT FOREBAY SECTION

SCALE 1:50

NOTES

- PLEASE ASK IF THERE ARE ANY DOUBTS REGARDING DETAILS SUPPLIED ON THIS DRAWING.
- GENERAL CONSTRUCTION AND PROCUREMENT CONSIDERATIONS SHALL COMPLY WITH THE LATEST VERSION OF THE HEALTHY WATERWAYS GUIDELINE FOR CONSTRUCTION AND ESTABLISHMENT OF VEGETATED STORMWATER MANAGEMENT SYSTEMS. WHERE CONFLICT EXISTS BETWEEN THE GUIDELINE AND THE SPECIFICATIONS ON THIS DRAWING THE SPECIFICATIONS ON THIS DRAWING SHALL BE FOLLOWED.
- THE HYDRAULIC CONDUCTIVITY OF POTENTIAL FILTER MEDIA SHOULD BE MEASURED USING THE ASTM F1815-06 METHOD. TESTING SHOULD BE UNDERTAKEN AT LEAST
 - ONE MONTH FOLLOWING COMMENCEMENT OF OPERATION
 - IN THE SECOND YEAR OF OPERATIONTESTING SHOULD BE CHECKED AT A MINIMUM OF THREE POINTS WITHIN THE SYSTEM.

- THE FOLLOWING PARTICLE SIZE DISTRIBUTION FOR FILTER MEDIA IS A GUIDE FOR SELECTING AN APPROPRIATE MATERIAL

CLAY & SILT	< 3%	(<0.05mm)
VERY FINE SAND	5-30%	(<0.05 - 0.15mm)
FINE SAND	10-30%	(<0.15 - 0.25mm)
MEDIUM TO COARSE SAND	40-60%	(<0.25 - 1.0mm)
COARSE SAND	7-10%	(<1.0 - 2.0mm)
FINE GRAVEL	< 3%	(<2.0 - 3.4mm)

THE FILTER MEDIA SHOULD BE WELL GRADED ie, IT SHOULD HAVE ALL PARTICLE SIZE RANGES PRESENT FROM THE 0.075mm TO THE 4.75mm. THERE SHOULD BE NO GAP IN THE PARTICLE SIZE GRADING, AND THE COMPOSITION SHOULD NOT BE DOMINATED BY A SMALL PARTICLE SIZE RANGE.

- SOIL PROPERTIES AS4419-2003 (SOILS FOR LANDSCAPING & GARDEN USE) FILTER MEDIA THAT DOES NOT MEET THE FOLLOWING SPECIFICATION WILL BE REJECTED :

- ORGANIC MATTER CONTENT - LESS THAN 5 % (w/w)
- PH - 5.5 - 7.5
- ELECTRICAL CONDUCTIVITY (E/C) - < 1.2dS/m
- PHOSPHORUS < 100mg/kg
- ORTHOPHOSPHATE < 80mg/kg

- POTENTIAL FILTER MEDIA SHOULD BE ASSESSED BY A HORTICULTURALIST TO ENSURE THAT THEY ARE CAPABLE OF SUPPORTING A HEALTHY VEGETATION COMMUNITY.

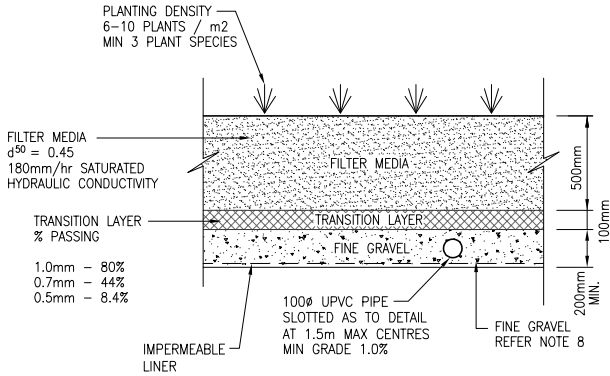
- THE TRANSITION LAYER MATERIAL IS TO BE A CLEAN WELL GRADED SAND/COARSE SAND MATERIAL CONTAINING LITTLE OR NO FINES.

- THE DRAINAGE LAYER IS TO BE CLEAN, FINE GRAVEL, SUCH AS 2-5mm WASHED SCREENINGS.

- THE FILTER MATERIAL IS TO BE LIGHTLY COMPACTED DURING INSTALLATION TO PREVENT MIGRATION OF FINE PARTICLES. IN SMALL SYSTEMS, A SINGLE PASS WITH A VIBRATING PLATE, WHILE IN LARGE SYSTEMS A SINGLE PASS WITH A ROLLER MACHINERY (eg. A DRUM LAWN ROLLER) WILL BE ADEQUATE. FILTER MEDIA SHOULD BE INSTALLED IN TWO LIFTS UNLESS THE DEPTH IS LESS THAN 500mm

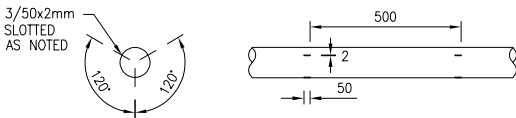
- FILTER MEDIA SHALL COMPLY WITH THE LATEST VERSION OF THE FAWB GUIDELINES FOR SOIL FILTER MEDIA IN BIO-RETENTION SYSTEMS. WHERE CONFLICT EXISTS BETWEEN THE FAWB GUIDELINE AND THE SPECIFICATIONS ON THIS DRAWING THE SPECIFICATIONS ON THIS DRAWING SHALL BE FOLLOWED.

- LANDSCAPING SHALL COMPLY WITH THE LATEST VERSION OF THE HEALTHY WATERWAYS GUIDELINE FOR CONSTRUCTION AND ESTABLISHMENT OF VEGETATED STORMWATER MANAGEMENT SYSTEMS. PLANT SPECIES TO BE IN ACCORDANCE WITH LOCAL CITY COUNCIL REQUIREMENTS.



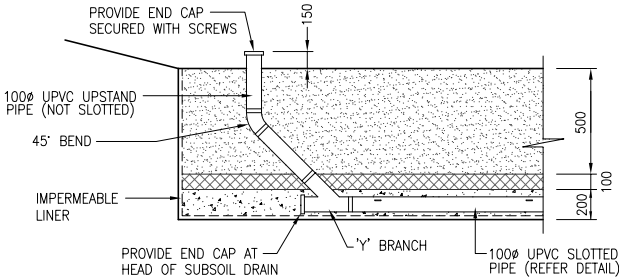
FILTER MEDIA SECTION

(NOT TO SCALE)



TYPICAL SLOTTED PIPE DETAILS

(NOT TO SCALE)



TYPICAL UPSTAND PIPE DETAILS

(NOT TO SCALE)

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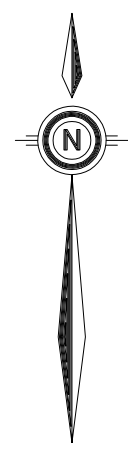
No.	DATE	REVISIONS
H	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
G	31.03.2021	ISSUED FOR D.A. APPROVAL
B	30.10.2019	MULCH REMOVED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET	BIO-RETENTION BASIN TYPICAL DETAILS
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

SHEET	BIO-RETENTION BASIN TYPICAL DETAILS
PROJECT	MANUFACTURED HOME ESTATE
LOCATION	LOT 1 on DP124173 550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
CLIENT	GEMLIFE PTY LTD

APPROVED	
B. ARTHUR RPEQ 4384, NER 694962 For and on behalf of WESTERA PARTNERS PTY LTD.	

DESIGNED	G.J.S.	SHEET NUMBER	33 OF 34
DRAWN	G.J.S.	REVISION	H
DATE DRAWN	OCTOBER 2019	PROJECT NUMBER	N19/009 PC
FILE NAME	Pre_Bio_Basin.dwg		



EARTHWORKS PLAN

SCALE 1:1000 0 10 20 30 40 50
(A1 SIZE)

EARTHWORKS SUMMARY

AREA OF FILL - 128,160 m²
AREA OF CUT - 2,873 m²
VOLUME OF FILL - 353,090 m³
VOLUME OF CUT - 709 m³

THE EARTHWORKS VOLUMES SHOWN ARE INDICATIVE NETT FIGURES ONLY BETWEEN EXISTING SURFACE LEVEL AND FINISHED SURFACE LEVEL. NO PROVISION FOR THE DEMOLITION WORKS, STRIPPING OF TOPSOIL, UNSUITABLE MATERIAL AND VEGETATION, COMPACTION LOSSES, BOXING OUT FOR ROADS OR EXCAVATION FORBIO-RETENTION BASINS AND SERVICE TRENCHES.

- AREA OF CUT -
- DEPTH OF FILL TABLE**
- 0.0m - 1.0m
 - 1.0m - 2.0m
 - 2.0m - 3.0m
 - 3.0m - 4.0m
 - 4.0m - 5.0m

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DATUM
A.H.D.
SSM 64762
R.L. 1.267

No.	DATE	REVISIONS
L	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL, VOLUMES CHANGED
K	22.07.2021	REVISED DEVELOPMENT LAYOUT ISSUED FOR APPROVAL
J	02.06.2021	RETAINING WALL ALONG SOUTHERN B'DY & BATTER AROUND CLUBHOUSE CHANGED
I	30.04.2021	RV ACCESS PATH AROUND CLUBHOUSE CHANGED
A	25.10.2019	ISSUED FOR D.A. APPROVAL

SHEET
PROJECT
LOCATION
CLIENT

PRELIMINARY EARTHWORKS PLAN
MANUFACTURED HOME ESTATE
LOT 1 on DP124173
550-578 RIVER ST & BURNS POINT FERRY RD, WEST BALLINA
GEMLIFE PTY LTD

APPROVED

B. ARTHUR
RPEQ 4384, NER 694962
For and on behalf of
WESTERA PARTNERS PTY LTD.

DESIGNED	G.J.S.
DRAWN	G.J.S.
DATE DRAWN	OCTOBER 2019
FILE NAME	Pre_Earth.dwg

SHEET NUMBER	34 OF 34
REVISION	L
PROJECT NUMBER	N19/009 PC