239858-ENG-001(D)

WYEE WEST PAPER SUBDIVISION
LOTS 202 TO 400 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUNBA ROADS, WYEE

DIAL1100 BEFORE YOU DIG

239858 – WYEE WEST PAPER SUBDIVISION

Sheet Title	Sheet Description
239858-ENG-001(D)	TITLE SHEET, DRAWING INDEX & LOCALITY PLAN
239858-ENG-002(D)	OVERALL SITE PLAN, GENERAL NOTES & EXISTING INFRASTRUCTURE
239858-ENG-101(D)	ROAD & STORMWATER ARRANGEMENT PLAN: SHEET 1
239858-ENG-102(D)	ROAD & STORMWATER ARRANGEMENT PLAN: SHEET 2
239858-ENG-103(D)	ROAD & STORMWATER ARRANGEMENT PLAN: SHEET 3
239858-ENG-104(D)	ROAD & STORMWATER ARRANGEMENT PLAN: SHEET 4
239858-ENG-111(D)	ROAD AND STORMWATER TYPICAL SECTIONS: SHEET 1
239858-ENG-112(D)	ROAD AND STORMWATER TYPICAL SECTIONS: SHEET 2
239858-ENG-113(D)	ROAD AND STORMWATER TYPICAL SECTIONS: SHEET 3
239858-ENG-121(D)	ROAD SETOUT TABLES
239858-ENG-201(D)	ROAD LONGITUDINAL SECTION: MC01 – SHEET 1
239858-ENG-202(D)	ROAD LONGITUDINAL SECTION: MC01 – SHEET 2
239858-ENG-203(D)	ROAD LONGITUDINAL SECTION: MC01 – SHEET 3
239858-ENG-204(D)	ROAD LONGITUDINAL SECTION: LANE
239858-ENG-205(D)	ROAD LONGITUDINAL SECTIONS: KARAKUNBA ROAD
239858-ENG-206(D)	ROAD LONGITUDINAL SECTIONS: TULKABA ROAD
239858-ENG-207(D)	ROAD LONGITUDINAL SECTION: PIRAMA ROAD
239858-ENG-208(D)	ROAD LONGITUDINAL SECTION: WAROPARA ROAD
239858-ENG-209(D)	ROAD LONGITUDINAL SECTION: TULLOKAN ROAD
239858-ENG-210(D)	ROAD LONGITUDINAL SECTIONS: DILLABIRRA ROAD
239858-ENG-221(D)	ROAD CROSS SECTIONS: MC01 – SHEET 1
239858-ENG-222(D)	ROAD CROSS SECTIONS: MC01 – SHEET 2
239858-ENG-223(D)	ROAD CROSS SECTIONS: MC01 – SHEET 3
239858-ENG-224(D)	ROAD CROSS SECTIONS: MC01 – SHEET 4
239858-ENG-225(D)	ROAD CROSS SECTIONS: MC01 – SHEET 5
239858-ENG-226(D)	ROAD CROSS SECTIONS: MC01 – SHEET 6
239858-ENG-227(D)	ROAD CROSS SECTIONS: LANE
239858-ENG-228(D)	ROAD CROSS SECTIONS: KARAKUNBA ROAD – SHEET 1
239858-ENG-229(D)	ROAD CROSS SECTIONS: KARAKUNBA ROAD – SHEET 2
239858-ENG-230(D)	ROAD CROSS SECTIONS: KARAKUNBA ROAD – SHEET 3
239858-ENG-231(D)	ROAD CROSS SECTIONS: KARAKUNBA ROAD – SHEET 4
239858-ENG-232(D)	ROAD CROSS SECTIONS: TULKABA ROAD – SHEET 1
239858-ENG-233(D)	ROAD CROSS SECTIONS: TULKABA ROAD – SHEET 2
239858-ENG-234(D)	ROAD CROSS SECTIONS: TULKABA ROAD – SHEET 3
239858-ENG-235(D)	ROAD CROSS SECTIONS: PIRAMA ROAD – SHEET 1
239858-ENG-236(D)	ROAD CROSS SECTIONS: PIRAMA ROAD – SHEET 2
239858-ENG-237(D)	ROAD CROSS SECTIONS: PIRAMA ROAD – SHEET 3
239858-ENG-238(D)	ROAD CROSS SECTIONS: WAROPARA ROAD – SHEET 1
239858-ENG-239(D)	ROAD CROSS SECTIONS: WAROPARA ROAD – SHEET 2
239858-ENG-240(D)	ROAD CROSS SECTIONS: WAROPARA ROAD – SHEET 3
239858-ENG-241(D)	ROAD CROSS SECTIONS: TULLOKAN ROAD – SHEET 1
239858-ENG-242(D)	ROAD CROSS SECTIONS: TULLOKAN ROAD – SHEET 2
239858-ENG-243(D)	ROAD CROSS SECTIONS: DILLABIRRA ROAD – SHEET 1
239858-ENG-244(D)	ROAD CROSS SECTIONS: DILLABIRRA ROAD – SHEET 2
239858-ENG-245(D)	ROAD CROSS SECTIONS: DILLABIRRA ROAD – SHEET 3
239858-ENG-301(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK01, 02, 35, 36
239858-ENG-302(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK03, 04, 37, 38
239858-ENG-303(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK05, 06, 39, 40
239858-ENG-304(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK07, 08, 41, 42
239858-ENG-305(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK09, 10 & 43
239858-ENG-306(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK11 & 12
239858-ENG-307(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK13, 14, 15, 16
239858-ENG-308(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK17 & 18
239858-ENG-309(D)	INTERSECTION DETAIL PLAN: KERB RETURN MK19

239858 – WYEE WEST PAPER SUBDIVISION

Sheet Title	Sheet Description
239858-ENG-310(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK20, 21
239858-ENG-311(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK22 & 23
239858-ENG-312(D)	INTERSECTION DETAIL PLAN: KERB RETURN MK24
239858-ENG-313(D)	INTERSECTION DETAIL PLAN: KERB RETURNS MK32, 33, 34
239858-ENG-314(D)	INTERSECTION DETAIL PLAN: KERB RETURN MK44
239858-ENG-401(D)	STORMWATER CATCHMENT PLAN: SHEET 1
239858-ENG-402(D)	STORMWATER CATCHMENT PLAN: SHEET 2
239858-ENG-403(D)	STORMWATER CATCHMENT PLAN: SHEET 3
239858-ENG-404(D)	STORMWATER CATCHMENT PLAN: SHEET 4
239858-ENG-405(D)	STORMWATER CATCHMENT PLAN: SHEET 5
239858-ENG-410(D)	STORMWATER SETOUT TABLES & PSD TABLES
239858-ENG-411(D)	STORMWATER CALCULATIONS MINOR EVENT: SHEET 1
239858-ENG-412(D)	STORMWATER CALCULATIONS: MINOR EVENT SHEET 2
239858-ENG-413(D)	STORMWATER CALCULATIONS: MINOR EVENT SHEET 3
239858-ENG-415(D)	STORMWATER CALCULATIONS: MAJOR EVENT SHEET 1
239858-ENG-416(D)	STORMWATER CALCULATIONS: MAJOR EVENT SHEET 2
239858-ENG-417(D)	STORMWATER CALCULATIONS: MAJOR EVENT SHEET 3
239858-ENG-421(D)	STORMWATER LONGITUDINAL SECTIONS: LINE 01
239858-ENG-422(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 02, 03, 04, 05
239858-ENG-423(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 06, 07, 08, 09, 10, 11
239858-ENG-424(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 12, 13, 14
239858-ENG-425(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 15, 16, 17, 18, 19, 20
239858-ENG-426(D)	STORMWATER LONGITUDINAL SECTIONS: LINE 21
239858-ENG-427(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 22, 23
239858-ENG-428(D)	STORMWATER LONGITUDINAL SECTIONS: LINE 24
239858-ENG-429(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 25, 26, 27
239858-ENG-430(D)	STORMWATER LONGITUDINAL SECTIONS: LINE 28
239858-ENG-431(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 29, 30, 31, 32, 33, 50
239858-ENG-432(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 51, 55
239858-ENG-433(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 56, 60, 61
239858-ENG-434(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 62, 63, 64
239858-ENG-435(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 65, 66, 67, 68, 69
239858-ENG-436(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 71, 72
239858-ENG-437(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 73, 74, 75
239858-ENG-438(D)	STORMWATER LONGITUDINAL SECTIONS: LINES 76, 77
239858-ENG-439(D)	STORMWATER LONGITUDINAL SECTIONS: TANK LINES
239858-ENG-461(D)	STORMWATER DETAILS: DETENTION TANKS
239858-ENG-462(D)	STORMWATER DETAILS: SCOUR PROTECTION DETAILS
239858-ENG-501(D)	SITE REGRADE AND TREE REMOVAL PLAN: SHEET 1
239858-ENG-502(D)	SITE REGRADE AND TREE REMOVAL PLAN: SHEET 2
239858-ENG-503(D)	SITE REGRADE AND TREE REMOVAL PLAN: SHEET 3
239858-ENG-504(D)	SITE REGRADE AND TREE REMOVAL PLAN: SHEET 4
239858-ENG-801(D)	EROSION & SEDIMENT CONTROL PLAN: SHEET 1
239858-ENG-802(D)	EROSION & SEDIMENT CONTROL PLAN: SHEET 2
239858-ENG-803(D)	EROSION & SEDIMENT CONTROL PLAN: SHEET 3
239858-ENG-804(D)	EROSION & SEDIMENT CONTROL PLAN: SHEET 4
239858-ENG-811(D)	EROSION & SEDIMENT CONTROL NOTES
239858-ENG-812(D)	EROSION & SEDIMENT CONTROL DETAILS
239858-ENG-901(D)	LINEMARKING & SIGNAGE PLAN: SHEET 1
239858-ENG-902(D)	LINEMARKING & SIGNAGE PLAN: SHEET 2
239858-ENG-903(D)	LINEMARKING & SIGNAGE PLAN: SHEET 3
239858-ENG-904(D)	LINEMARKING & SIGNAGE PLAN: SHEET 4

WARNING
HIGH PRESSURE GAS MAIN WITHIN LIMIT OF WORKS



LOCALITY SKETCH
NOT TO SCALE

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
TITLE SHEET, DRAWING INDEX & LOCALITY PLAN

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	001	D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 08:56 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-001(D).dwg

239858-ENG-002(D)

MGA

ORIGIN OF LEVELS
M.G.A. 94
P.M. 70267
E: 358 935.256
N: 6 327 311.717
AHD: 30.510m A.H.D.



PLAN
SCALE 1:1500

GENERAL NOTES:-

1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED CONSTRUCTION MANAGEMENT PLAN, AND COUNCIL'S ENGINEERING GUIDELINES FOR CONSTRUCTION.
2. THE LOCATION OF ALL EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE CONFIRMED ON SITE AFTER PEGGING OF ROAD LOCATION IN CONSULTATION WITH COUNCIL STAFF PRIOR TO THEIR INSTALLATION. EROSION & SEDIMENT CONTROL DEVICES ARE TO BE INSTALLED PRIOR TO CONSTRUCTION COMMENCING, AND MAINTAINED DURING THE CONTRACT PERIOD UNTIL 60% VEGETATIVE COVER ACHIEVED.
3. ALL CONCRETE STORMWATER DRAINAGE PIPES ARE TO BE RUBBER RING JOINTED REINFORCED CONCRETE PIPES (R.C.P.) OR APPROVED EQUIVALENT.
4. ALL INTERALLOTMENT DRAINAGE TO BE SEWER GRADE uPVC (UNLESS OTHERWISE SHOWN) OR AN APPROVED EQUIVALENT. THE MINIMUM SLOPE OF INTERALLOTMENT DRAINAGE LINES SHALL BE 1%. THE INTERALLOTMENT DRAINAGE UNLESS SHOWN OTHERWISE, SHALL BE A MINIMUM OF 0.75m FROM THE BOUNDARY AND LOCATED WITHIN EASEMENT AS SHOWN.
5. ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED AND EXPOSED PRIOR TO EARTHWORKS COMMENCING AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM BOTH POSITION & LEVEL OF THESE UTILITIES IN CONJUNCTION WITH THE APPROPRIATE AUTHORITY.
6. SUBSOIL DRAINS ARE TO BE PROVIDED AS LOCATED ON PLANS AND TO COUNCIL INSPECTOR'S SATISFACTION.
7. PAVEMENT THICKNESS AND ASSOCIATED EARTHWORKS TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY DOUGLAS PARTNERS - REPORT ON GEOTECHNICAL INVESTIGATION: PROPOSED PAVEMENT AND STORMWATER BUSHELLS RIDGE ROAD AND GOROKAN ROAD, WYEE, REF: 91390.00 R001.Rev0 DATED OCTOBER 2018.
8. EARTHWORKS SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN AS3798-2007 'GUIDELINES FOR EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'. FOR FILL LESS THAN 2m COMPACTED THICKNESS, LEVEL 2 SUPERVISION IS APPROPRIATE. FOR FILL GREATER THAN 2m COMPACTED THICKNESS, LEVEL 1 SUPERVISION IS REQUIRED. FILL IS TO BE PLACED IN HORIZONTAL LAYERS WITH COMPACTION OF EACH LAYER TO A MINIMUM DRY DENSITY RATIO OF 95% STANDARD COMPACTION.
9. VEHICULAR ACCESS AND ALL SERVICES ARE TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION WORKS.
10. MAINTENANCE ON ALL SEEDED AREAS SHALL BE OVER A 3 MONTH PERIOD.
11. TRAFFIC CONTROL MEASURES TO BE IN ACCORDANCE WITH AS1742.
12. ALL LEVELS MUST BE OBTAINED FROM ESTABLISHED BENCH MARKS AS DIRECTED BY THE SUPERINTENDENT.
13. THE CONTRACTOR IS TO ENSURE THAT ALL UNDESIRABLE MATERIAL (INCL. VEGETATIVE MATERIAL) IS REMOVED FROM THE SUBGRADE LEVEL OF THE PROPOSED ROAD PRIOR TO ANY ROAD PAVEMENT BEING PLACED.
14. THE CONTRACTOR IS TO ENSURE THAT ALL THE NECESSARY SERVICE PIPE CONDUITS AND FITTINGS ARE IN PLACE PRIOR TO THE KERB BEING PLACED.
15. ALL INTERALLOTMENT DRAINAGE PITS TO BE CONSTRUCTED IN ACCORDANCE WITH LAKE MACQUARIE CITY COUNCILS STANDARD DRAWINGS EGSD-409.
16. ALL KERB INLET PITS TO BE CONSTRUCTED IN ACCORDANCE WITH LAKE MACQUARIE CITY COUNCILS STANDARD DRAWINGS EGSD-401-403.
17. ANY STORMWATER PITS OVER 1200mm DEEP REQUIRE INSTALLATION OF STEP IRONS.
18. ALL PITS TO BE BENCHED AND STREAMLINED.
19. ALL HEADWALLS SHALL BE CAST INSITU AND CONSTRUCTED IN ACCORDANCE WITH RTA STD. DRAWING MD.R11.A02.A.1 (MIN. REQUIREMENT) WITH CONCRETE APRON TO EXTENT OF WINGWALLS.
20. MAKE SMOOTH JOIN WITH EXISTING WORKS.
21. CLEARING AND GRUBBING - NO TREES ARE TO BE REMOVED WITHOUT PERMISSION UNLESS OTHERWISE IDENTIFIED OUTSIDE OF LIMIT OF WORKS.
22. SURVEY MARKS ARE TO BE CAREFULLY PRESERVED BY THE CONTRACTOR. DAMAGED, DESTROYED OR LOST MARKS WILL BE REPLACED BY THE SUPERVISING SURVEYOR AT THE CONTRACTOR'S EXPENSE.
23. ALL SIGNPOSTING & LINEMARKING TO BE IN ACCORDANCE WITH AS1742.2 - 1994 PART 2.
24. ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE:
    - EROSION & SEDIMENT CONTROL PLANS.
    - LAKE MACQUARIE CITY COUNCIL CONDITIONS OF DEVELOPMENT CONSENT.
25. TREES AND OTHER VEGETATION MAY ONLY BE REMOVED FROM THE SITE OF ROAD, DRAINAGE, BUSHFIRE MITIGATION AND REGRADING WORKS. AN APPLICATION SHALL BE MADE TO COUNCIL FOR THE REMOVAL OF ANY OTHER TREES.
26. TREES AND SHRUBS WHICH ARE FELLED SHALL BE SALVAGED FOR RE-USE, EITHER IN LOG FORM, OR AS A WOODCHIP MULCH FOR EROSION CONTROL AND/OR SITE REHABILITATION. NON-SALVAGEABLE MATERIAL SUCH AS ROOTS AND STUMPS SHALL BE DISPOSED OF IN AN APPROVED MANNER.
27. CONTRACTOR IS TO UNDERTAKE CCTV INSPECTION OF ALL CONSTRUCTED STORMWATER INFRASTRUCTURE, PREPARE FINDINGS AND REPORT TO COUNCIL.
28. ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH JEMENA'S "GUIDELINE TO DESIGNING, CONSTRUCTING AND OPERATING AROUND EXISTING AS2885 NATURAL GAS PIPELINES" REF: GAS-960-GI-PI-001. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INFORM THE SUPERINTENDANT OF ANY INSTANCES REQUIRING DEVIATION FROM SAID STANDARD.

WARNING
HIGH PRESSURE GAS MAIN
WITHIN LIMIT OF WORKS

DIAL 1100
BEFORE YOU DIG

NOT FOR CONSTRUCTION

100mm AT FULL SIZE

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
0 15 30 45 60 A1 / A3
1:1500 / 1:3000

DESIGN FILE N:\239858\Design\12D\
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
OVERALL SITE PLAN, GENERAL NOTES & EXISTING INFRASTRUCTURE

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	002	D

Plotted By: tims Plot Date: 06/08/20 – 08:57 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-002(D).dwg

239858-ENG-101(D)

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- 18 — DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- 18 — EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING STORMWATER
- PROPOSED STORMWATER
- NO GO AREA
- GAS — EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) TO BE REMOVED
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.5m

(A) EASEMENT TO DRAIN WATER 2 WIDE
(B) EASEMENT TO DRAIN WATER 3 WIDE

NOTES:

1. ALL PRAM RAMPS TO BE CONSTRUCTED IN ACCORDANCE WITH COUNCIL REQUIREMENTS STANDARD DRAWING EGSD–102.
2. 'RT KERB' IS ROLL TOP KERB TO L.M.C.C. SPECIFICATIONS. 'SA KERB' IS STANDARD SA KERB TO L.M.C.C. SPECIFICATIONS. 'SB DISH GUTTER' IS STANDARD SB KERB TO L.M.C.C. SPECIFICATIONS SEE SHEET 112 FOR DETAILS.
3. PROVIDE 100mm SUBSOIL DRAIN FOR BASE OF SERVICE TRENCH TO KERB INLET PITS. SEE SHEET 113 FOR DETAILS.
4. REFER TO SHEET 113 FOR TYPICAL SUBSOIL LOCATION.
5. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURER'S SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE.
6. COLONGRA HIGH PRESSURE GAS PIPELINE TO REMAIN. SURROUNDING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH JEMENA'S GUIDELINES.
7. PROVIDE 1x 150x50x4mm GALV RHS TO LOT BOUNDARY IN ACCORDANCE WITH EGSD–404 WHERE APPROPRIATE.
8. WORKS WITHIN EXISTING LOTS TO BE MINIMISED AS MUCH AS POSSIBLE.
9. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.13.
10. AUSGRID PROPOSES TO UPGRADE EXISTING OVERHEAD POWER IN THIS AREA TO UNDERGROUND POWER. REFER TO AUSGRID FOR DETAILS.
11. SYDNEY TRAINS POWER POLES ARE NOT TO BE DISTURBED.
12. SUBSOIL DRAIN FLUSHING POINTS SHALL BE PROVIDED AT THE CREST POINT OF A ROAD, UPSTREAM LIMIT OF WORKS AND ADJACENT TO DRAINAGE PITS OR AT APPROXIMATELY 60m INTERVALS.
13. REFER SHEETS 111, 112, 113 FOR TYPICAL SECTIONS.
14. REFER SHEETS 501 TO 504 FOR REGRADE DETAILS.
15. ALL EXISTING DRIVEWAY STORMWATER CULVERTS WITHIN ROAD RESERVES TO BE REMOVED AND DISPOSED OF AT AN AUTHORISED WASTE MANAGEMENT FACILITY.

MGA

ORIGIN OF LEVELS
M.G.A. 94
P.M. 70267
E: 358 935.256
N: 6 327 311.717
AHD: 30.510m A.H.D.

ADJOINS SHEET 103

ADJOINS SHEET 102

KARAKUNBA ROAD

1.2m WIDE FOOTPATH

RT KERB (TYPICAL)

SEE INTERSECTION DETAIL SHEET 312

SEE INTERSECTION DETAIL SHEET 311

SEE INTERSECTION DETAIL SHEET 310

RIGHT OF CARRIAGEWAY 2.0m WIDE

RIGHT OF CARRIAGEWAY 10.0m WIDE

(NOT NAMED) LANE

NO GO AREA

DILLABIRRA ROAD (UNFORMED)

BUSHELLS RIDGE ROAD

MC01 (BUSHELLS RIDGE ROAD)
PM 23845

GAS MAIN: SEE NOTE 6

TAIL OUT NEW GUTTER TO EDGE OF EXISTING ROAD. SEE DETAIL ON SHEET 113

SAWCUT INTO EXISTING PAVEMENT TO MAKE SMOOTH CONNECTION (ALONG CONTROL LINE MC01) SEE DETAIL ON SHEET 113

SA KERB R 60.000

RT KERB R 8.000

383 DP7506; 384 DP7506; 385 DP7506; 386 DP7506; 387 DP7506; 388 DP7506; 389 DP7506; 390 DP7506; 391 DP7506; 392 DP7506; 393 DP7506; 394 DP7506

333 DP7506; 332 DP7506; 331 DP7506; 330 DP7506; 329 DP7506

382 DP7506; 381 DP7506; 380 DP7506; 379 DP7506; 378 DP7506; 377 DP7506; 376 DP7506; 375 DP7506; 374 DP7506; 373 DP7506; 372 DP7506; 371 DP7506; 370 DP7506; 369 DP7506; 368 DP7506; 367 DP7506

100 DP1232264

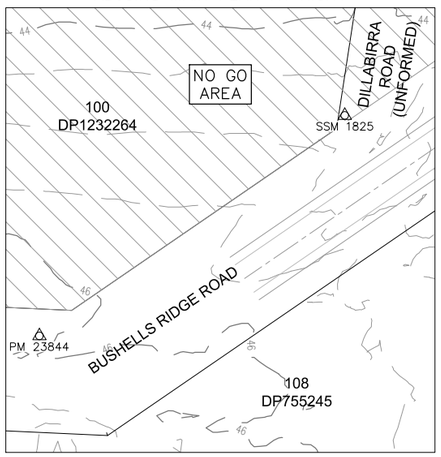
108 DP755245

109 DP755245

ADJOINS INSET AT LEFT

PLAN
SCALE 1:500

ADJOINS MAIN PLAN AT RIGHT



INSET PLAN
SCALE 1:500

WARNING
HIGH PRESSURE GAS MAIN WITHIN LIMIT OF WORKS

DIAL 1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

DESIGN FILE N:\239858\Design\12D\

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

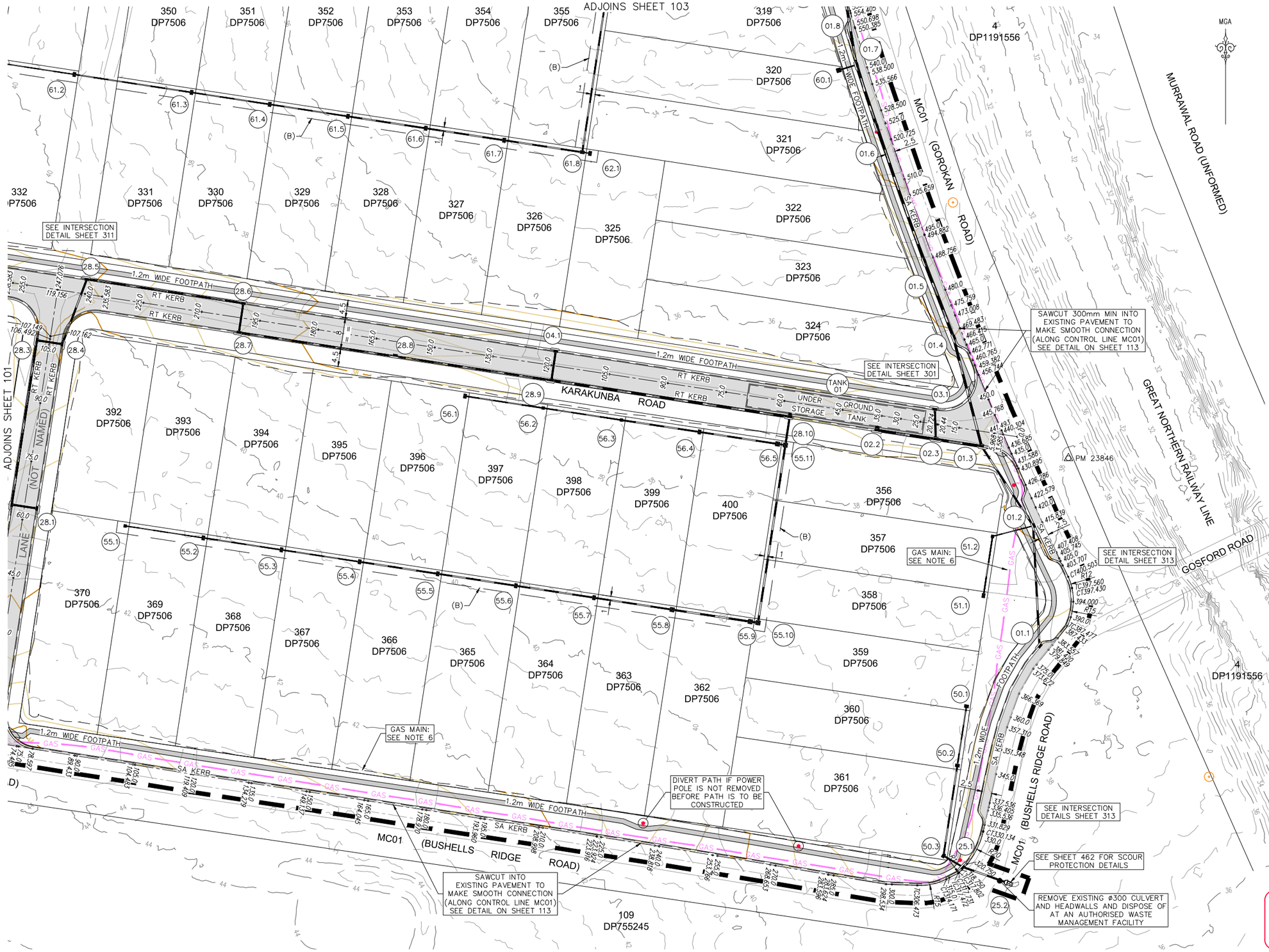
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS ROAD & STORMWATER ARRANGEMENT PLAN: SHEET 1

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	101	D

Plotted By: tims Plot Date: 06/08/20 – 08:57 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–101(D).dwg

100mm AT FULL SIZE

239858-ENG-102(D)



PLAN
SCALE 1:500

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING STORMWATER
- PROPOSED STORMWATER
- NO GO AREA
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) TO BE REMOVED
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.5m

(A) EASEMENT TO DRAIN WATER 2 WIDE
(B) EASEMENT TO DRAIN WATER 3 WIDE

NOTES:

1. ALL PRAM RAMPS TO BE CONSTRUCTED IN ACCORDANCE WITH COUNCIL REQUIREMENTS STANDARD DRAWING EGSD–102.
2. 'RT KERB' IS ROLL TOP KERB TO L.M.C.C. SPECIFICATIONS. 'SA KERB' IS STANDARD SA KERB TO L.M.C.C. SPECIFICATIONS. 'SB DISH GUTTER' IS STANDARD SB KERB TO L.M.C.C. SPECIFICATIONS SEE SHEET 112 FOR DETAILS.
3. PROVIDE 100mm SUBSOIL DRAIN FOR BASE OF SERVICE TRENCH TO KERB INLET PITS. SEE SHEET 113 FOR DETAILS.
4. REFER TO SHEET 113 FOR TYPICAL SUBSOIL LOCATION.
5. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURER'S SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE.
6. COLONGRA HIGH PRESSURE GAS PIPELINE TO REMAIN. SURROUNDING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH JEMENA'S GUIDELINES.
7. PROVIDE 1x 150x50x4mm GALV RHS TO LOT BOUNDARY IN ACCORDANCE WITH EGSD–404 WHERE APPROPRIATE.
8. WORKS WITHIN EXISTING LOTS TO BE MINIMISED AS MUCH AS POSSIBLE.
9. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.13.
10. AUSGRID PROPOSES TO UPGRADE EXISTING OVERHEAD POWER IN THIS AREA TO UNDERGROUND POWER. REFER TO AUSGRID FOR DETAILS.
11. SYDNEY TRAINS POWER POLES ARE NOT TO BE DISTURBED.
12. SUBSOIL DRAIN FLUSHING POINTS SHALL BE PROVIDED AT THE CREST POINT OF A ROAD, UPSTREAM LIMIT OF WORKS AND ADJACENT TO DRAINAGE PITS OR AT APPROXIMATELY 60m INTERVALS.
13. REFER SHEETS 111, 112, 113 FOR TYPICAL SECTIONS.
14. REFER SHEETS 501 TO 504 FOR REGRADE DETAILS.
15. ALL EXISTING DRIVEWAY STORMWATER CULVERTS WITHIN ROAD RESERVES TO BE REMOVED AND DISPOSED OF AT AN AUTHORISED WASTE MANAGEMENT FACILITY.

WARNING
HIGH PRESSURE GAS MAIN WITHIN LIMIT OF WORKS

DIAL 1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 — A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS ROAD & STORMWATER ARRANGEMENT PLAN: SHEET 2

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	102	D

Plotted By: tims Plot Date: 06/08/20 – 08:57 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–102(D).dwg

100mm AT FULL SIZE

239858-ENG-103(D)

ADJOINS INSET PLAN BELOW

ADJOINS SHEET 104

ADJOINS SHEET 102

ADJOINS SHEET 101

ADJOINS MAIN PLAN ABOVE

100mm AT FULL SIZE

MGA

DIAL1100 BEFORE YOU DIG

100 DP1232264 — SEE INTERSECTION DETAIL SHEET 308

PIRAMA ROAD — RT KERB — 1.2m WIDE FOOTPATH

DILLABIRRA ROAD — RT KERB

TULKABA ROAD — RT KERB — 1.2m WIDE FOOTPATH

KARAKUNBA ROAD — RT KERB

GREAT NORTHERN RAILWAY LINE

MC01 (GOROKAN ROAD) — 1.2m WIDE FOOTPATH — SA KERB

SB DISH DRAIN

PM 70271

PM 70272

4 DP1191556

UNDER GROUND STORAGE TANK (TANK 02)

LOCALLY DIVERT FOOTPATH TO AVOID ENCROACHMENT TO SYDNEY TRAINS' HV POWER POLE

SEE INTERSECTION DETAIL SHEET 303

SAWCUT 300mm MIN INTO EXISTING PAVEMENT FOR SMOOTH CONNECTION ALONG GOROKAN ROAD (CONTROL LINE MC01) SEE SHEET 113 FOR DETAILS

REMOVE EXISTING TWIN ø600 CULVERTS AND ASSOCIATED HEADWALL AND PIT. DISPOSE OF AT AN AUTHORISED WASTE MANAGEMENT FACILITY

SEE INTERSECTION DETAIL SHEET 309

SEE INTERSECTION DETAIL SHEET 312

SEE INTERSECTION DETAIL SHEET 302

NO GO AREA

GAS MAIN: SEE NOTE 6

SEE SHEET 462 FOR SCOUR PROTECTION TO CATCH DRAIN

CAP FOR FUTURE CONNECTION. REFER NOTE 9

REFER SHEET 113 FOR GPT PAD DETAILS

INSET PLAN
SCALE 1:500

PLAN
SCALE 1:500

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING STORMWATER
- PROPOSED STORMWATER
- NO GO AREA
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) TO BE REMOVED
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.5m

(A) EASEMENT TO DRAIN WATER 2 WIDE

(B) EASEMENT TO DRAIN WATER 3 WIDE

NOTES:

1. ALL PRAM RAMPS TO BE CONSTRUCTED IN ACCORDANCE WITH COUNCIL REQUIREMENTS STANDARD DRAWING EGSD-102.
2. 'RT KERB' IS ROLL TOP KERB TO L.M.C.C. SPECIFICATIONS. 'SA KERB' IS STANDARD SA KERB TO L.M.C.C. SPECIFICATIONS. 'SB DISH GUTTER' IS STANDARD SB KERB TO L.M.C.C. SPECIFICATIONS SEE SHEET 112 FOR DETAILS.
3. PROVIDE 100mm SUBSOIL DRAIN FOR BASE OF SERVICE TRENCH TO KERB INLET PITS. SEE SHEET 113 FOR DETAILS.
4. REFER TO SHEET 113 FOR TYPICAL SUBSOIL LOCATION.
5. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURER'S SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE.
6. COLONGRA HIGH PRESSURE GAS PIPELINE TO REMAIN. SURROUNDING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH JEMENA'S GUIDELINES.
7. PROVIDE 1x 150x50x4mm GALV RHS TO LOT BOUNDARY IN ACCORDANCE WITH EGSD-404 WHERE APPROPRIATE.
8. WORKS WITHIN EXISTING LOTS TO BE MINIMISED AS MUCH AS POSSIBLE.
9. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.13.

WARNING
HIGH PRESSURE GAS MAIN WITHIN LIMIT OF WORKS

NOTES CONTINUED:

10. AUSGRID PROPOSES TO UPGRADE EXISTING OVERHEAD POWER IN THIS AREA TO UNDERGROUND POWER. REFER TO AUSGRID FOR DETAILS.
11. SYDNEY TRAINS POWER POLES ARE NOT TO BE DISTURBED.
12. SUBSOIL DRAIN FLUSHING POINTS SHALL BE PROVIDED AT THE CREST POINT OF A ROAD, UPSTREAM LIMIT OF WORKS AND ADJACENT TO DRAINAGE PITS OR AT APPROXIMATELY 60m INTERVALS.
13. REFER SHEETS 111, 112, 113 FOR TYPICAL SECTIONS.
14. REFER SHEETS 501 TO 504 FOR REGRADE DETAILS.
15. ALL EXISTING DRIVEWAY STORMWATER CULVERTS WITHIN ROAD RESERVES TO BE REMOVED AND DISPOSED OF AT AN AUTHORISED WASTE MANAGEMENT FACILITY.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

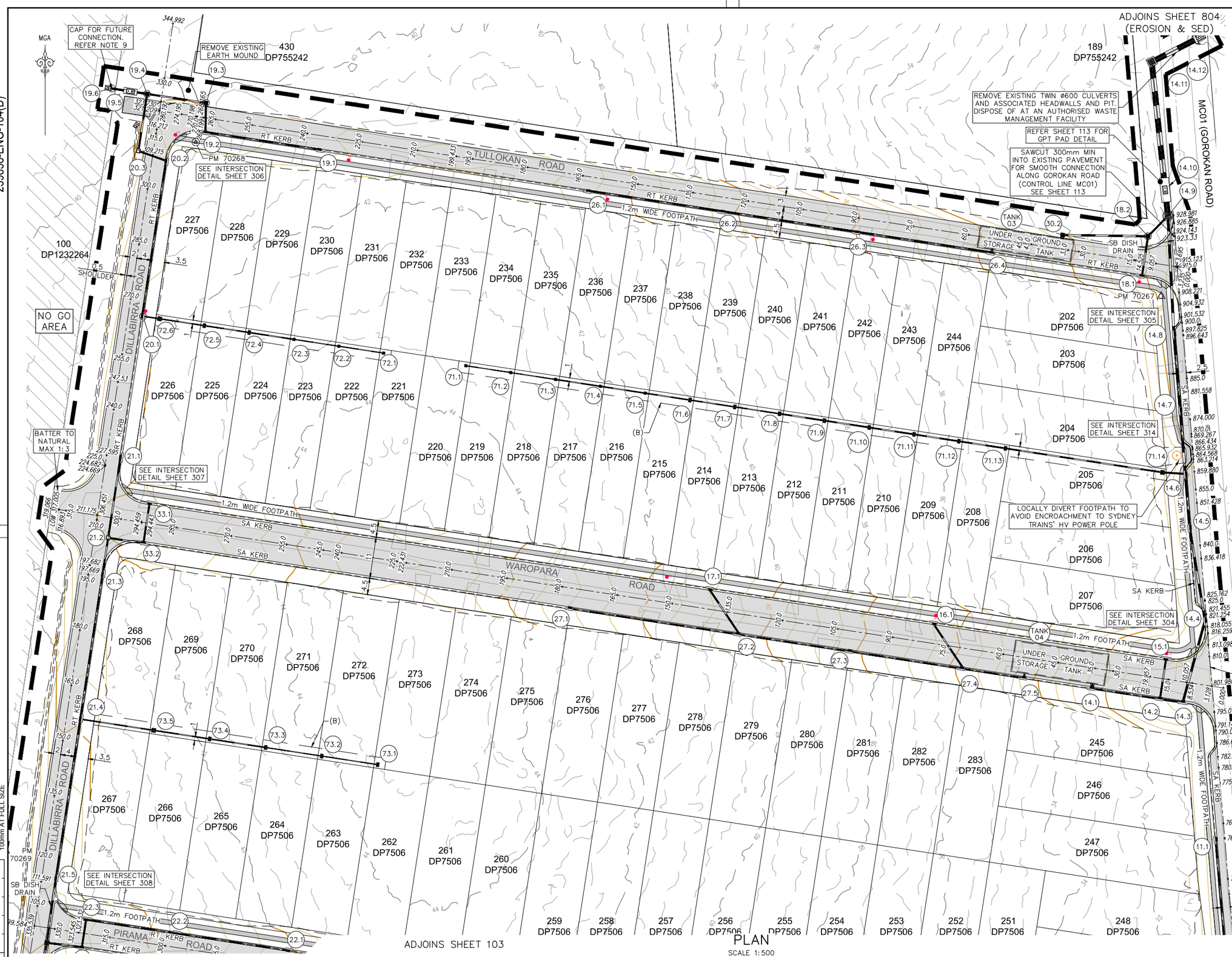
PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS ROAD & STORMWATER ARRANGEMENT PLAN: SHEET 3

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 103 — REV. D

Plotted By: tims Plot Date: 06/08/20 – 08:58 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-103(D).dwg

239858-ENG-104(D)



LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING STORMWATER
- PROPOSED STORMWATER
- NO GO AREA
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) TO BE REMOVED
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.5m

(A) EASEMENT TO DRAIN WATER 2 WIDE
(B) EASEMENT TO DRAIN WATER 3 WIDE

NOTES:

1. ALL PRAM RAMPS TO BE CONSTRUCTED IN ACCORDANCE WITH COUNCIL REQUIREMENTS STANDARD DRAWING EGSD–102.
2. 'RT KERB' IS ROLL TOP KERB TO L.M.C.C. SPECIFICATIONS. 'SA KERB' IS STANDARD SA KERB TO L.M.C.C. SPECIFICATIONS. 'SB DISH GUTTER' IS STANDARD SB KERB TO L.M.C.C. SPECIFICATIONS SEE SHEET 112 FOR DETAILS.
3. PROVIDE 100mm SUBSOIL DRAIN FOR BASE OF SERVICE TRENCH TO KERB INLET PITS. SEE SHEET 113 FOR DETAILS.
4. REFER TO SHEET 113 FOR TYPICAL SUBSOIL LOCATION.
5. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURER'S SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE.
6. COLONGRA HIGH PRESSURE GAS PIPELINE TO REMAIN. SURROUNDING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH JEMENA'S GUIDELINES.
7. PROVIDE 1x 150x50x4mm GALV RHS TO LOT BOUNDARY IN ACCORDANCE WITH EGSD–404 WHERE APPROPRIATE.
8. WORKS WITHIN EXISTING LOTS TO BE MINIMISED AS MUCH AS POSSIBLE.
9. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.13.
10. AUSGRID PROPOSES TO UPGRADE EXISTING OVERHEAD POWER IN THIS AREA TO UNDERGROUND POWER. REFER TO AUSGRID FOR DETAILS.
11. SYDNEY TRAINS POWER POLES ARE NOT TO BE DISTURBED.
12. SUBSOIL DRAIN FLUSHING POINTS SHALL BE PROVIDED AT THE CREST POINT OF A ROAD, UPSTREAM LIMIT OF WORKS AND ADJACENT TO DRAINAGE PITS OR AT APPROXIMATELY 60m INTERVALS.
13. REFER SHEETS 111, 112, 113 FOR TYPICAL SECTIONS.
14. REFER SHEETS 501 TO 504 FOR REGRADE DETAILS.
15. ALL EXISTING DRIVEWAY STORMWATER CULVERTS WITHIN ROAD RESERVES TO BE REMOVED AND DISPOSED OF AT AN AUTHORISED WASTE MANAGEMENT FACILITY.

WARNING
HIGH PRESSURE GAS MAIN WITHIN LIMIT OF WORKS

DIAL 1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

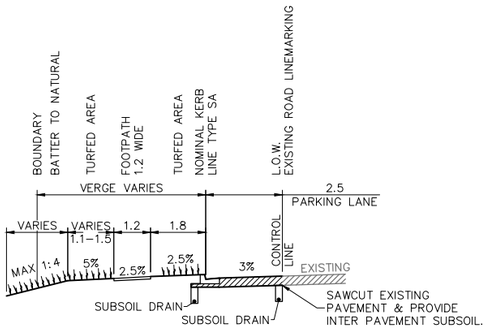
PLAN TITLE: INFRASTRUCTURE WORKS ROAD & STORMWATER ARRANGEMENT PLAN: SHEET 4

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	104	D

Plotted By: tims Plot Date: 06/08/20 – 08:58 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–104(D).dwg

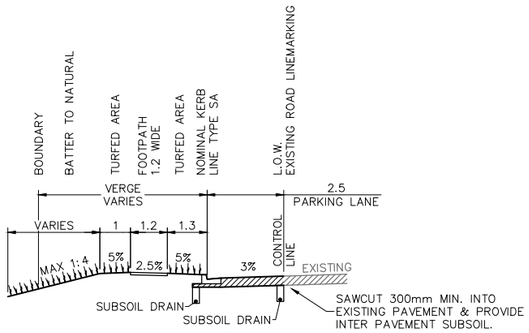
100mm AT FULL SIZE

239858-ENG-111(D)



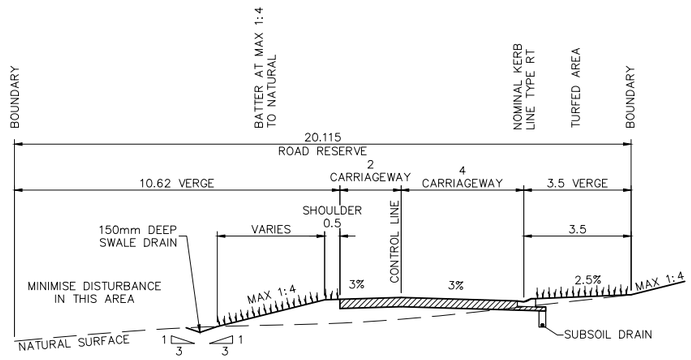
TYPICAL CROSS SECTION MC01

BUSHELLS RIDGE RD
CH 335–379m
SCALE 1:100 NATURAL



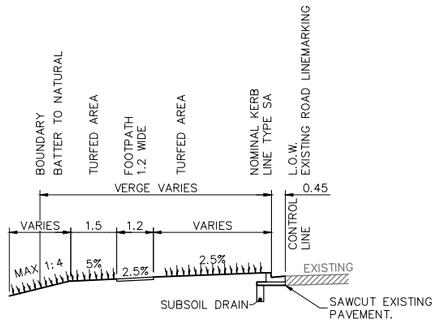
TYPICAL CROSS SECTION MC01

GOROKAN RD
CH 589–669m
SCALE 1:100 NATURAL



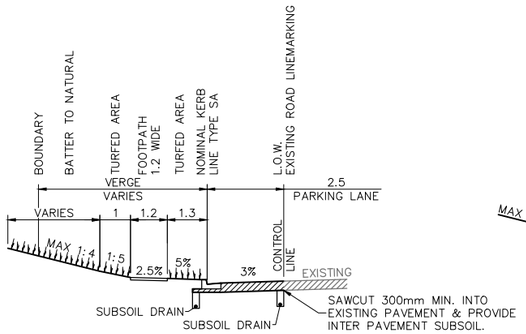
TYPICAL CROSS SECTION

DILLABIRRA RD
CH 0–311m
SCALE 1:100 NATURAL



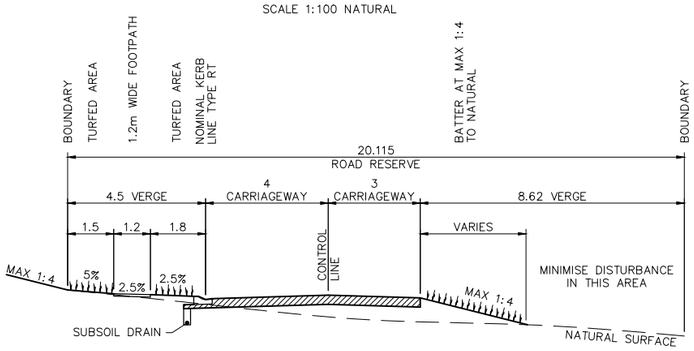
TYPICAL CROSS SECTION MC01

BUSHELLS RIDGE RD
CH 78–331m
SCALE 1:100 NATURAL



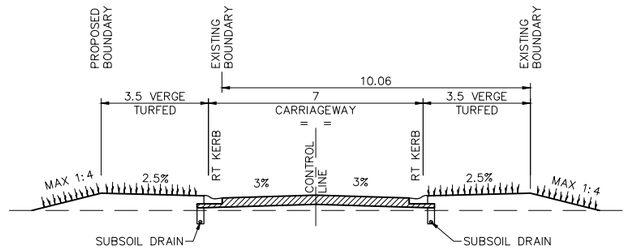
TYPICAL CROSS SECTION MC01

GOROKAN RD
CH 466–550m
SCALE 1:100 NATURAL



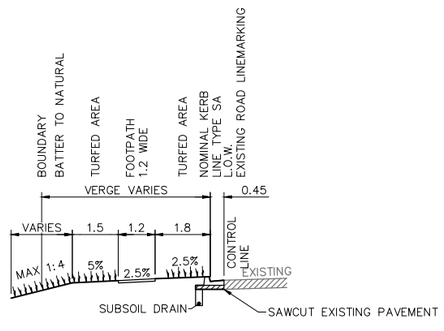
TYPICAL CROSS SECTION

TULLOKAN RD
CH 15–270m
SCALE 1:100 NATURAL



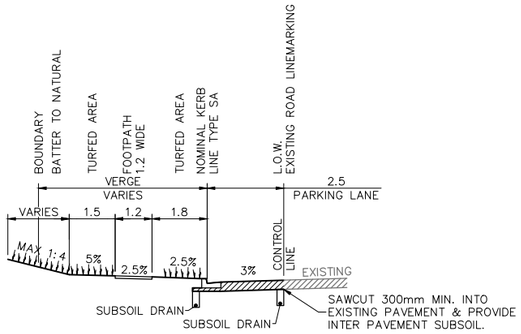
TYPICAL CROSS SECTION

LANE (NOT NAMED) CH 12–107m
SCALE 1:100 NATURAL



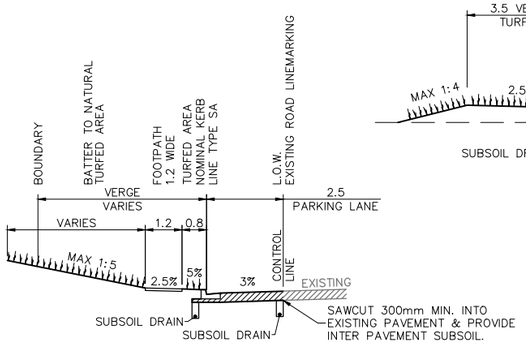
TYPICAL CROSS SECTION MC01

BUSHELLS RIDGE RD
CH 0–55m
SCALE 1:100 NATURAL



TYPICAL CROSS SECTION MC01

GOROKAN RD
CH 408–422m
SCALE 1:100 NATURAL



TYPICAL CROSS SECTION MC01

GOROKAN RD
CH 716–782m
CH 825–859m
CH 869–897m
SCALE 1:100 NATURAL

REFER SHEET 112 FOR TYPICAL KERB PROFILES

NOTES:

1. BATTER AT MAXIMUM 1 IN 4. REFER TO SECTIONS FOR DETAILS.
2. CONTRACTOR TO PROVIDE TURF STRIP BESIDE ALL CONCRETE PATHS.
3. ALL AREAS BETWEEN CONCRETE PATHS AND KERB ARE TO BE FULLY TURFED. ALL TURF ON VERGES FRONTING RESIDENTIAL LOTS TO BE BUFFALO. ALL OTHER TURF TO BE COUCH.
4. REFER TO LAKE MACQUARIE CITY COUNCIL (LMCC) STANDARD DRAWING EGSD–101 FOR KERB PROFILES AND DIMENSIONS.
5. REFER TO LMCC STANDARD DRAWING EGSD–102 FOR KERB RAMP DETAILS.
6. REFER TO LMCC STANDARD DRAWING EGSD–103 FOR RESIDENTIAL VEHICLE CROSSING DETAILS.
7. REFER TO LMCC STANDARD DRAWING EGSD–201 AND EGSD–202 FOR DRIVEWAY DETAILS.
8. REFER TO LMCC STANDARD DRAWING EGSD–301 FOR CONCRETE FOOTPATH DETAILS.
9. REFER TO LMCC STANDARD DRAWING EGSD–401 FOR SUBSOIL DRAIN DETAILS.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES 0 1 2 3 4 A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC | DATUM A.H.D. | GDA 94 ZONE 56

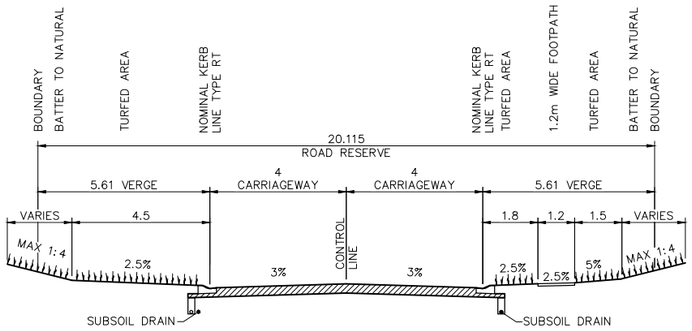
PROJECT WYEE WEST PAPER SUBDIVISION

PLAN TITLE INFRASTRUCTURE WORKS
ROAD AND STORMWATER TYPICAL SECTIONS: SHEET 1

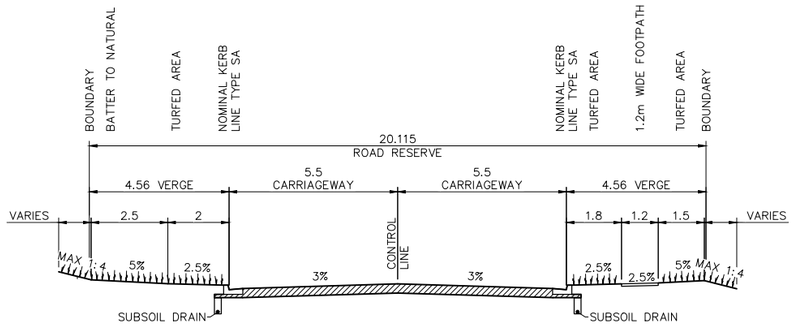
PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 111 | REV. D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 08:58 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–111(D).dwg



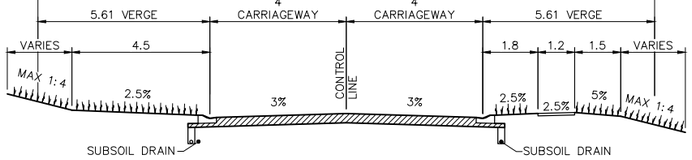
TYPICAL CROSS SECTION
KARAKUNBA RD CH 320–347m
TULKABA RD CH 105–366m
PIRAMA RD CH 35–323
SCALE 1:100 NATURAL



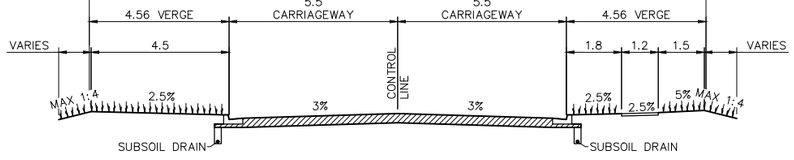
TYPICAL CROSS SECTION
WAROPARA RD CH 45–245m
SCALE 1:100 NATURAL

NOTES:

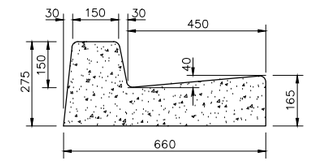
1. BATTER AT MAXIMUM 1 IN 4. REFER TO SECTIONS FOR DETAILS.
2. CONTRACTOR TO PROVIDE TURF STRIP BESIDE ALL CONCRETE PATHS.
3. ALL AREAS BETWEEN CONCRETE PATHS AND KERB ARE TO BE FULLY TURFED. ALL TURF ON VERGES FRONTING RESIDENTIAL LOTS TO BE BUFFALO. ALL OTHER TURF TO BE COUCH.
4. REFER TO LAKE MACQUARIE CITY COUNCIL (LMCC) STANDARD DRAWING EGSD–101 FOR KERB PROFILES AND DIMENSIONS.
5. REFER TO LMCC STANDARD DRAWING EGSD–102 FOR KERB RAMP DETAILS.
6. REFER TO LMCC STANDARD DRAWING EGSD–103 FOR RESIDENTIAL VEHICLE CROSSING DETAILS.
7. REFER TO LMCC STANDARD DRAWING EGSD–201 AND EGSD–202 FOR DRIVEWAY DETAILS.
8. REFER TO LMCC STANDARD DRAWING EGSD–301 FOR CONCRETE FOOTPATH DETAILS.
9. REFER TO LMCC STANDARD DRAWING EGSD–401 FOR SUBSOIL DRAIN DETAILS.



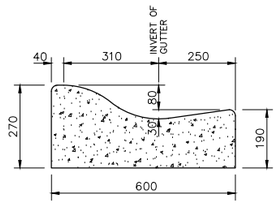
TYPICAL CROSS SECTION
KARAKUNBA RD CH 35–310m
TULKABA RD CH 18–85m
SCALE 1:100 NATURAL



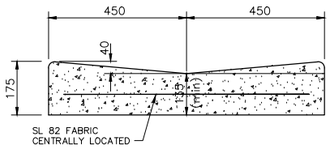
TYPICAL CROSS SECTION
WAROPARA RD CH 255–294m
SCALE 1:100 NATURAL



STANDARD KERB & GUTTER
(LMCC)



ROLL TOP KERB
(MODIFIED RT)(LMCC)



SB KERB
(DISHED CROSSING)(LMCC)

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 1 2 3 4 — A1 / A3 1:100 / 1:200

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email:hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

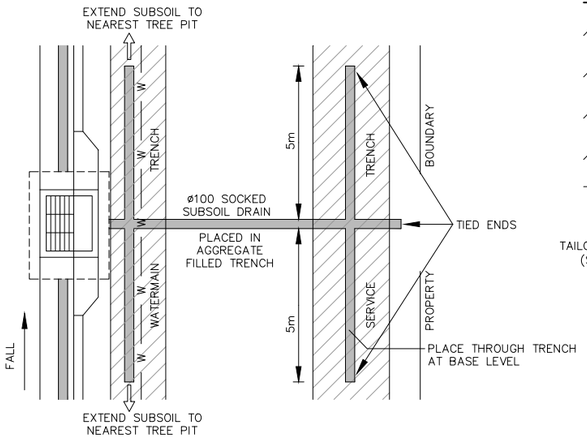
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
ROAD AND STORMWATER TYPICAL SECTIONS: SHEET 2

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	112	D

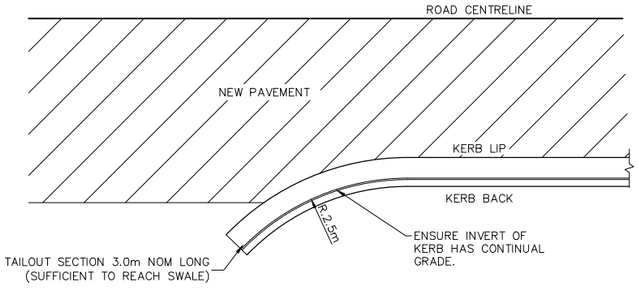
Plotted By: tims Plot Date: 06/08/20 – 08:58 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–112(D).dwg

100mm AT FULL SIZE

239858-ENG-113(D)

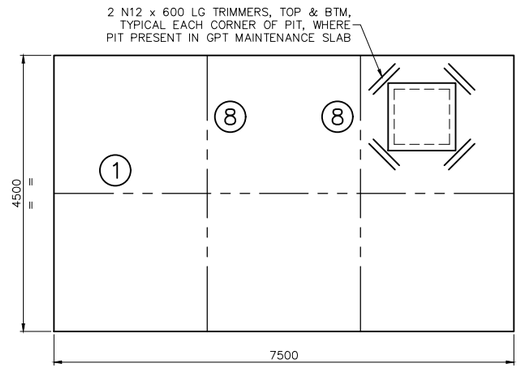


SAG PIT



KERB TAILOUT DETAIL

SCALE NTS



GPT SERVICE PARKING AREA SLAB PLAN

2 REQUIRED ON WESTERN SIDE OF DILLABIRRA ROAD

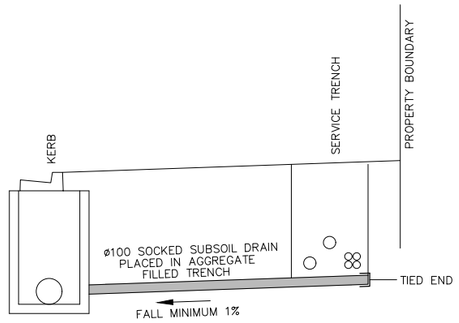
SCALE 1:50

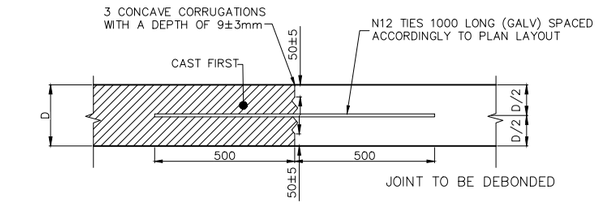
PAVEMENT NOTES:

1. WHERE CONNECTION BETWEEN NEW PAVEMENT AND EXISTING PAVEMENT IS REQUIRED A KEYED CONNECTION OF 500mm WIDTH SHOULD BE CUT INTO THE EXISTING PAVEMENT. IF THE EXISTING PAVEMENT IS GREATER THAN 400mm THICK, TWO BENCHES SHOULD BE CUT INTO THE EXISTING PAVEMENT EACH OF MINIMUM 300mm WIDTH. THE CONNECTION BETWEEN NEW PAVEMENT AND EXISTING PAVEMENT SHOULD BE LOCATED AWAY FROM TRAFFIC WHEEL PATHS WHERE POSSIBLE.

NOTES:

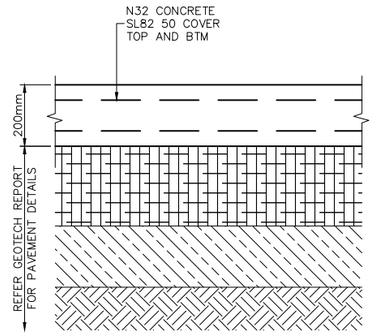
1. CONTRACTOR TO PROVIDE TURF STRIP BESIDE ALL CONCRETE PATHS.
2. ALL AREAS BETWEEN CONCRETE PATHS AND KERB ARE TO BE FULLY TURFED. ALL TURF ON VERGES FRONTING RESIDENTIAL LOTS TO BE BUFFALO. ALL OTHER TURF TO BE COUCH.
3. REFER TO LAKE MACQUARIE CITY COUNCIL STANDARD DRAWING EGSD–101 FOR KERB & GUTTER DETAILS U.N.O.
4. REFER TO LAKE MACQUARIE CITY COUNCIL STANDARD DRAWING EGSD–301 FOR FOOTPATH DETAILS.
5. REFER TO LAKE MACQUARIE CITY COUNCIL STANDARD DRAWING EGSD–201 FOR PAVEMENT JOINT DETAILS.
6. REFER TO LAKE MACQUARIE CITY COUNCIL STANDARD DRAWING EGSD–401 FOR SUBSOIL DRAINAGE DETAILS.





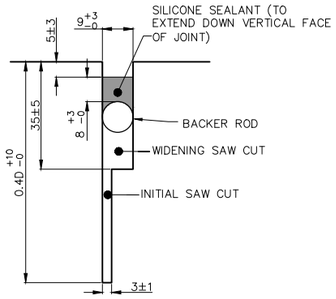
① LONGITUDINAL, TIED AND FORMED JOINT

SCALE NTS

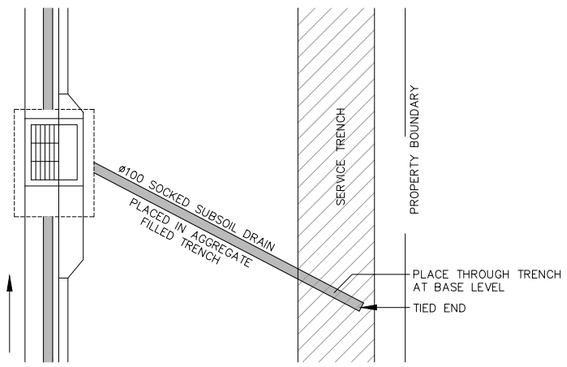


TYPICAL GPT SERVICE PARKING SLAB

SCALE NTS



DETAIL A

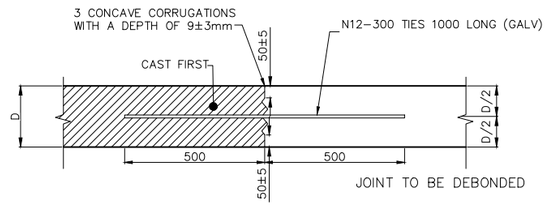


ON GRADE PIT

SERVICE TRENCH SUBSOIL DRAINAGE LINES

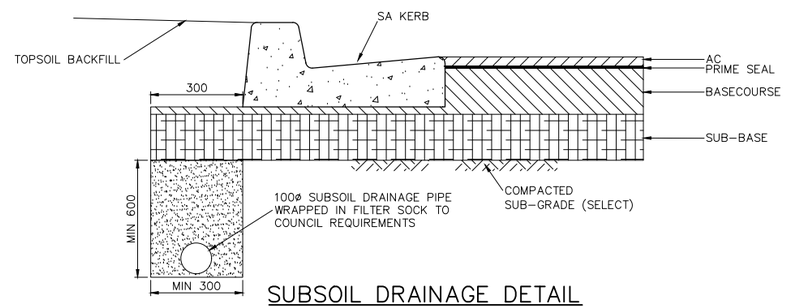
N.T.S.

NOTE:
ALL SUBSOIL DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH NCC STD DWG A2003 OR LMCC EQUIVALENT.



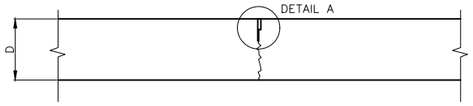
⑦ TRANSVERSE CONSTRUCTION, TIED AND FORMED

SCALE NTS



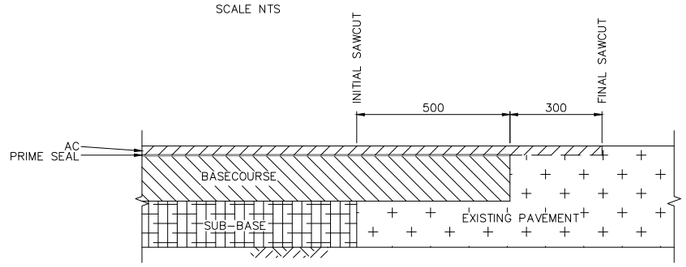
SUBSOIL DRAINAGE DETAIL

N.T.S.



⑧ TRANSVERSE CONTRACTION, UNDOWELLED AND INDUCED

SCALE NTS



TYPICAL PAVEMENT CONNECTION DETAIL

N.T.S.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
0 1 2 3 4 A1 / A3 1:100 / 1:200
0 1 2 A1 / A3 1:50 / 1:100
0 0.1 0.2 0.3 0.4 A1 / A3 1:10 / 1:20
0 10 20 30 40mm A1 / A3 1:1 / 1:2

DESIGN FILE N:\239858\Design\12D\
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
ROAD AND STORMWATER TYPICAL SECTIONS: SHEET 3

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 113 – REV. D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 08:58 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–113(D).dwg

239858-ENG-121(D)

ENG CL –> MC01 (BUSHELLS RIDGE ROAD) HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358706.011	6326768.068	59°15'52.24"			
	15.000	358718.904	6326775.734	59°15'52.24"			
IP 2	15.023	358718.924	6326775.746				
TC	15.808	358719.643	6326776.059	66°30'16.19"			
IP 3	29.259	358732.191	6326781.513		R = 60.000	26.903	25°41'25.08"
	30.000	358733.204	6326780.132	80°03'25.83"			
CT	42.710	358745.862	6326780.989	92°11'41.27"			
IP 4	44.075	358747.225	6326780.937				
	45.000	358748.147	6326780.861	94°42'15.59"			
IP 5	52.659	358755.780	6326780.233				
IP 6	59.487	358762.536	6326779.240				
	60.000	358763.042	6326779.154	99°38'17.44"			
IP 7	74.485	358777.322	6326776.729				
	75.000	358777.831	6326776.647	99°11'03.99"			
IP 8	89.433	358792.079	6326774.343				
	90.000	358792.639	6326774.257	98°45'36.20"			
IP 9	104.483	358806.953	6326772.051				
	105.000	358807.463	6326771.968	99°14'15.55"			
IP 10	119.409	358821.685	6326769.655				
	120.000	358822.270	6326769.567	98°36'18.93"			
IP 11	134.279	358836.388	6326767.430				
	135.000	358837.101	6326767.322	98°34'51.97"			
IP 12	149.137	358851.080	6326765.213				
	150.000	358851.933	6326765.083	98°39'26.40"			
IP 13	164.045	358865.818	6326762.969				
	165.000	358866.761	6326762.819	99°02'24.31"			
IP 14	178.970	358880.557	6326760.624				
	180.000	358881.575	6326760.468	98°43'44.46"			
IP 15	193.960	358895.374	6326758.349				
	195.000	358896.402	6326758.193	98°37'56.34"			
IP 16	208.998	358910.241	6326756.092				
	210.000	358911.231	6326755.935	99°02'10.04"			
IP 17	223.916	358924.974	6326753.749				
	225.000	358926.045	6326753.581	98°53'24.99"			
IP 18	238.818	358939.697	6326751.446				
	240.000	358940.864	6326751.254	99°20'51.50"			
IP 19	253.766	358954.447	6326749.018				
	255.000	358955.664	6326748.815	99°28'34.47"			
IP 20	268.653	358969.131	6326746.567				
	270.000	358970.458	6326746.340	99°41'23.61"			
IP 21	283.596	358983.860	6326744.052				
	285.000	358985.246	6326743.824	99°20'46.68"			
IP 22	298.534	358998.600	6326741.626				
	300.000	359000.065	6326741.565	92°22'11.04"			
TC	306.473	359006.532	6326741.298	92°22'11.04"			
IP 23	310.322	359010.465	6326741.135		R = –15.000	7.699	29°24'24.28"
CT	314.171	359013.971	6326742.924	62°57'46.76"			
	315.000	359014.709	6326743.301	62°57'46.76"			
TC	317.472	359016.911	6326744.425	62°57'46.76"			
IP 24	317.602	359017.027	6326744.484		R = –1.000	0.259	14°50'54.82"
CT	317.731	359017.124	6326744.571	48°06'51.94"			
TC	317.802	359017.177	6326744.618	48°06'51.94"			
IP 25	323.968	359021.918	6326748.870		R = –20.000	12.331	35°19'35.46"
	330.000	359023.298	6326754.951	13°10'15.43"			
CT	330.134	359023.328	6326755.081	12°47'16.48"			
IP 26	336.405	359024.716	6326761.197				
	345.000	359026.545	6326769.595	12°17'12.36"			
IP 27	351.348	359027.896	6326775.798				
IP 28	357.310	359029.399	6326781.567				
	360.000	359030.302	6326784.101	19°36'54.39"			
IP 29	366.369	359032.440	6326790.100				
IP 30	373.672	359036.051	6326796.448				
	375.000	359036.883	6326797.483	38°46'48.96"			
IP 31	381.420	359040.904	6326802.488				
IP 32	387.433	359044.665	6326807.179				
TC	387.477	359044.685	6326807.219	26°16'28.24"			

ENG CL –> MC01 (GOROKAN ROAD) HORIZONTAL POINTS

	390.000	359045.607	6326809.564	16°38'19.37"			
IP 33	392.454	359046.972	6326811.853		R = –15.000	9.953	38°01'00.22"
CT	397.430	359045.921	6326816.912	348°15'28.02"			
TC	397.560	359045.894	6326817.039	348°15'28.02"			
IP 34	399.032	359045.593	6326818.487		R = –12.000	2.943	14°03'07.96"
CT	400.503	359044.950	6326819.819	334°12'20.06"			
	405.000	359042.993	6326823.868	334°12'20.06"			
IP 35	405.745	359042.669	6326824.538				
IP 36	415.839	359038.355	6326833.664				
	420.000	359036.667	6326837.467	336°03'55.20"			
IP 37	430.895	359032.247	6326847.425				
	435.000	359030.535	6326851.156	335°21'04.77"			
IP 38	436.685	359029.832	6326852.688				
IP 39	441.493	359027.995	6326857.131				
IP 40	445.768	359026.263	6326861.040				
	450.000	359024.675	6326864.962	337°57'44.42"			
IP 41	460.765	359020.636	6326874.941				
	465.000	359019.069	6326878.875	338°16'53.69"			
IP 42	469.483	359017.410	6326883.040				
IP 43	475.759	359015.199	6326888.914				
	480.000	359013.677	6326892.872	338°57'56.35"			
IP 44	488.756	359010.534	6326901.045				
IP 45	494.882	359008.389	6326906.783				
	495.000	359008.348	6326906.894	339°51'05.58"			
IP 46	505.659	359004.677	6326916.900				
	510.000	359003.283	6326921.011	341°16'09.14"			
IP 47	520.725	358999.839	6326931.168				
	525.000	358998.468	6326935.217	341°17'34.09"			
IP 48	535.566	358995.079	6326945.225				
	540.000	358993.777	6326949.464	342°55'50.92"			

ENG CL –> MC01 (GOROKAN ROAD) HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 49	550.385	358990.729	6326959.392				
	555.000	358989.424	6326963.818	343°34'19.34"			
IP 50	565.113	358986.564	6326973.518				
	570.000	358985.253	6326978.226	344°26'42.46"			
IP 51	580.167	358982.527	6326988.021				
	585.000	358981.331	6326992.703	345°40'02.61"			
IP 52	595.219	358978.801	6327002.604				
	600.000	358977.638	6327007.242	345°55'28.91"			
IP 53	610.161	358975.167	6327017.098				
	615.000	358974.118	6327021.822	347°28'54.94"			
IP 54	625.211	358971.905	6327031.790				
	630.000	358970.880	6327036.468	347°38'43.25"			
IP 55	640.270	358968.683	6327046.500				
	645.000	358967.805	6327051.148	349°18'06.57"			
IP 56	648.921	358967.077	6327055.001				
IP 57	655.305	358965.874	6327061.271				
	660.000	358965.085	6327065.899	350°19'29.20"			
IP 58	670.437	358963.331	6327076.187				
	675.000	358962.546	6327080.682	350°05'32.80"			
IP 59	677.609	358962.097	6327083.252				
IP 60	680.530	358961.671	6327086.142				
	690.000	358960.281	6327095.510	351°33'43.81"			
IP 61	690.773	358960.168	6327096.274				
IP 62	696.451	358959.210	6327101.871				
IP 63	700.618	358958.812	6327106.019				
	705.000	358958.239	6327110.363	352°29'12.56"			
IP 64	715.723	358956.837	6327120.994				
	720.000	358956.306	6327125.238	352°52'23.12"			
IP 65	730.731	358954.975	6327135.886				
	735.000	358954.580	6327140.137	354°41'26.52"			
IP 66	745.904	358953.571	6327150.994				
	750.000	358953.240	6327155.077	355°21'55.29"			
IP 67	760.953	358952.355	6327165.994				
	765.000	358952.000	6327170.025	354°57'59.51"			
IP 68	775.907	358951.043	6327180.890				
	780.000	358950.731	6327184.971	355°37'37.05"			
IP 69	791.146	358949.881	6327196.085				
	795.000	358949.541	6327199.924	354°56'24.96"			
	810.000	358948.218	6327214.865	354°56'24.96"			
IP 70	813.098	358947.945	6327217.951				
IP 71	816.259	358947.867	6327221.111				
IP 72	821.254	358947.343	6327226.079				
	825.000	358947.018	6327229.811	355°01'17.12"			
IP 73	836.418	358946.027	6327241.186				
	840.000	358945.749	6327244.757	355°33'07.59"			
IP 74	851.428	358944.863	6327256.150				
	855.000	358944.578	6327259.711	355°25'16.35"			
IP 75	866.434	358943.665	6327271.109				
	870.000	358943.378	6327274.663	355°23'03.24"			
IP 76	881.558	358942.448	6327286.183				
	885.000	358942.168	6327289.614	355°20'18.78"			
IP 77	896.643	358941.222	6327301.219				
	900.000	358940.894	6327304.560	354°23'37.69"			
IP 78	908.221	358940.091	6327312.741				
	915.000	358939.583	6327319.501	355°41'57.39"			
IP 79	924.143	358938.897	6327328.618				
IP 80	926.885	358938.756	6327331.357				
IP 81	928.981	358938.559	6327333.444	354°36'26.46"			

ENG CL–>TULKABA RD HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358989.379	6326974.904	278°42'09.02"			
	15.000	358974.552	6326977.173	278°42'09.02"			
	30.000	358959.725	6326979.443	278°42'09.02"			
	45.000	358944.897	6326981.712	278°42'09.02"			
	60.000	358930.070	6326983.982	278°42'09.02"			
	75.000	358915.243	6326986.252	278°42'09.02"			
	90.000	358900.415	6326988.521	278°42'09.02"			
	105.000	358885.588	6326990.791	278°42'09.02"			
	120.000	358870.761	6326993.060	278°42'09.02"			
	135.000	358855.933	6326995.330	278°42'09.02"			
	150.000	358841.106	6326997.599	278°42'09.02"			
	165.000	358826.279	6326999.869	278°42'09.02"			
	180.000	358811.451	6327002.138	278°42'09.02"			
	195.000	358796.624	6327004.408	278°42'09.02"			
	210.000	358781.797	6327006.678	278°42'09.02"			
	225.000	358766.970	6327008.947	278°42'09.02"			
	240.000	358752.142	6327011.217	278°42'09.02"			
	255.000	358737.315	6327013.486	278°42'09.02"			
	270.000	358722.488	6327015.756	278°42'09.02"			
	285.000	358707.660	6327018.025	278°42'09.02"			
	300.000	358692.833	6327020.295	278°42'09.02"			
	315.000	358678.006	6327022.564	278°42'09.02"			
	330.000	358663.178	6327024.834	278°42'09.02"			
	345.000	358648.351	6327027.104	278°42'09.02"			
	360.000	358633.524	6327029.373	278°42'09.02"			
TC	366.530	358627.069	6327030.361	278°42'09.02"			
	375.000	358619.808	6327034.373	319°08'31.60"			
IP 2	375.959	358615.200	6327032.178		R = 12.000	18.856	90°01'57.64"
IP 3	385.387	358617.023	6327044.045	8°44'06.65"			

ENG CL –> LANE HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	358769.664	6326775.101	8°44'08.60"
	15.000	358771.942	6326789.927	8°44'08.60"
	30.000	358774.220	6326804.753	8°44'08.60"
	45.000	358776.498	6326819.579	8°44'08.60"
	60.000	358778.777	6326834.405	8°44'08.60"
	75.000	358781.055	6326849.231	8°44'08.60"
	90.000	358783.333	6326864.057	8°44'08.60"
	105.000	358785.611	6326878.883	8°44'08.60"
IP 2	119.156	358787.761	6326892.874	8°44'08.60"

ENG CL –> KARAKUNBA RD HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	359031.993	6326855.490	278°42'08.87"
	15.000	359017.165	6326857.760	278°42'08.87"
	30.000	359002.338	6326860.029	278°42'08.87"
	45.000	358987.511	6326862.299	278°42'08.87"
	60.000	358972.683	6326864.569	278°42'08.87"
	75.000	358957.856	6326866.838	278°42'08.87"
	90.000	358943.029	6326869.108	278°42'08.87"
	105.000	358928.201	6326871.377	278°42'08.87"
	120.000	358913.374	6326873.647	278°42'08.87"
	135.000	358898.547	6326875.916	278°42'08.87"
	150.000	358883.719	6326878.186	278°42'08.87"
	165.000	358868.892	6326880.455	278°42'08.87"
	180.000	358854.065	6326882.725	278°42'08.87"
	195.000	358839.238	6326884.995	278°42'08.87"
	210.000	358824.410	6326887.264	278°42'08.87"
	225.000	358809.583	6326889.534	278°42'08.87"
	240.000	358794.756	6326891.803	278°42'08.87"
	255.000	358779.928	6326894.073	278°42'08.87"
	270.000	358765.101	6326896.342	278°42'08.87"
	285.000	358750.274	6326898.612	278°42'08.87"
	300.000	358735.446	6326900.881	278°42'08.87"
	315.000	358720.619	6326903.151	278°42'08.87"
	330.000	358705.792	6326905.420	278°42'08.87"
	345.000	358690.964	6326907.690	278°42'08.87"
	360.000	358676.137	6326909.960	278°42'08.87"
IP 2	367.969	358668.260	6326911.165	278°42'08.87"

ENG CL –> PIRAMA RD HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	358963.823	6327091.706	278°42'08.99"
	15.000	358948.995	6327093.976	278°42'08.99"
	30.000	358934.168	6327096.245	278°42'08.99"
	45.000	358919.341	6327098.515	278°42'08.99"
	60.000	358904.513	6327100.784	278°42'08.99"
	75.000	358889.686	6327103.054	278°42'08.99"
	90.000	358874.859	6327105.324	278°42'08.99"
	105.000	358860.032	6327107.593	278°42'08.99"
	120.000	358845.204	6327109.863	278°42'08.99"
	135.000	358830.377	6327112.132	278°42'08.99"
	150.000	358815.550	6327114.402	278°42'08.99"
	165.000	358800.722	6327116.671	278°42'08.99"
	180.000	358785.895	6327118.941	278°42'08.99"
	195.000	358771.068	6327121.210	278°42'08.99"
	210.000	358756.240	6327123.480	278°42'08.99"
	225.000	358741.413	6327125.750	278°42'08.99"
	240.000	358726.586	6327128.019	278°42'08.99"
	255.000	358711.758	6327130.289	278°42'08.99"
	270.000	358696.931	6327132.558	278°42'08.99"
	285.000	358682.104	6327134.828	278°42'08.99"
	300.000	358667.277	6327137.097	278°42'08.99"
	315.000	358652.449	6327139.367	278°42'08.99"
	330.000	358637.622	6327141.636	278°42'08.99"
IP 2	335.539	358632.147	6327142.474	278°42'08.99"

ENG CL–>WAROPARA RD HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	358952.017	6327206.404	278°42'08.98"
	15.000	358937.190	6327208.673	278°42'08.98"
	30.000	358922.362	6327210.943	278°42'08.98"
	45.000	358907.535	6327213.213	278°42'08.98"
	60.000	358892.708	6327215.482	278°42'08.98"
	75.000	358877.880	6327217.752	278°42'08.98"
	90.000	358863.053	6327220.021	278°42'08.98"
	105.000	358848.226	6327222.291	278°42'08.98"
	120.000	358833.399	6327224.560	278°42'08.98"
	135.000	358818.571	6327226.830	278°42'08.98"
	150.000	358803.744	6327229.099	278°42'08.98"
	165.000	358788.917	6327231.369	278°42'08.98"
	180.000	358774.089	6327233.639	278°42'08.98"
	195.000	358759.262	6327235.908	278°42'08.98"
	210.000	358744.435	6327238.178	278°42'08.98"
	225.000	358729.607	6327240.447	278°42'08.98"
	240.000	358714.780	6327242.717	278°42'08.98"
	255.000	358699.953	6327244.986	278°42'08.98"
	270.000	358685.125	6327247.256	278°42'08.98"
	285.000	358670.298	6327249.525	278°42'08.98"
	300.000	358655.471	6327251.795	278°42'08.98"
	315.000	358640.643	6327254.065	278°42'08.98"
IP 2	319.066	358636.624	6327254.680	278°42'08.98"

ENG CL –> TULLOKAN RD HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	358942.771	6327319.134	278°42'08.98"
	15.000	358927.944	6327321.404	278°42'08.98"
	30.000	358913.117	6327323.673	278°42'08.98"
	45.000	358898.289	6327325.943	278°42'08.98"
	60.000	358883.462	6327328.212	278°42'08.98"
	75.000	358868.635	6327330.482	278°42'08.98"
	90.000	358853.808	6327332.751	278°42'08.98"
	105.000	358838.980	6327335.021	278°42'08.98"
	120.000	358824.153	6327337.291	278°42'08.98"
	135.000	358809.326	6327339.560	278°42'08.98"
	150.000	358794.498	6327341.830	278°42'08.98"
	165.000	358779.671	6327344.099	278°42'08.98"
	180.000	358764.844	6327346.369	278°42'08.98"
	195.000	358750.016	6327348.638	278°42'08.98"
	210.000	358735.189	6327350.908	278°42'08.98"
	225.000	358720.362	6327353.177	278°42'08.98"
	240.000	358705.534	6327355.447	278°42'08.98"
	255.000	358690.707	6327357.717	278°42'08.98"
	270.000	358675.880	6327359.986	278°42'08.98"
IP 2	280.192	358665.805	6327361.528	278°42'08.98"

ENG CL –> DILLABIRRA RD HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	358617.023	6327044.046	8°44'06.76"
	15.000	358619.301	6327058.872	8°44'06.76"
	30.000	358621.579	6327073.698	8°44'06.76"
	45.000	358623.857	6327088.524	8°44'06.76"
	60.000	358626.135	6327103.350	8°44'06.76"
	75.000	358628.414	6327118.176	8°44'06.76"
	90.000	358630.692	6327133.002	8°44'06.76"
	105.000	358632.970	6327147.828	8°44'06.76"
	120.000	358635.248	6327162.654	8°44'06.76"
	135.000	358637.526	6327177.480	8°44'06.76"
	150.000	358639.804	6327192.306	8°44'06.76"
	165.000	358642.082	6327207.132	8°44'06.76"
	180.000	358644.360	6327221.958	8°44'06.76"
	195.000	358646.638	6327236.784	8°44'06.76"
	210.000	358648.916	6327251.610	8°44'06.76"
	225.000	358651.194	6327266.436	8°44'06.76"
	240.000	358653.472	6327281.262	8°44'06.76"
	255.000	358655.750	6327296.088	8°44'06.76"
	270.000	358658.028	6327310.914	8°44'06.76"
	285.000	358660.306	6327325.740	8°44'06.76"
	300.000	358662.584	6327340.566	8°44'06.76"
	315.000	358664.862	6327355.392	8°44'06.76"
	330.000	358667.140	6327370.218	8°44'06.76"
IP 2	344.992	358669.417	6327385.036	8°44'06.76"

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD SETOUT TABLES

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 121 REV. D

100mm AT FULL SIZE

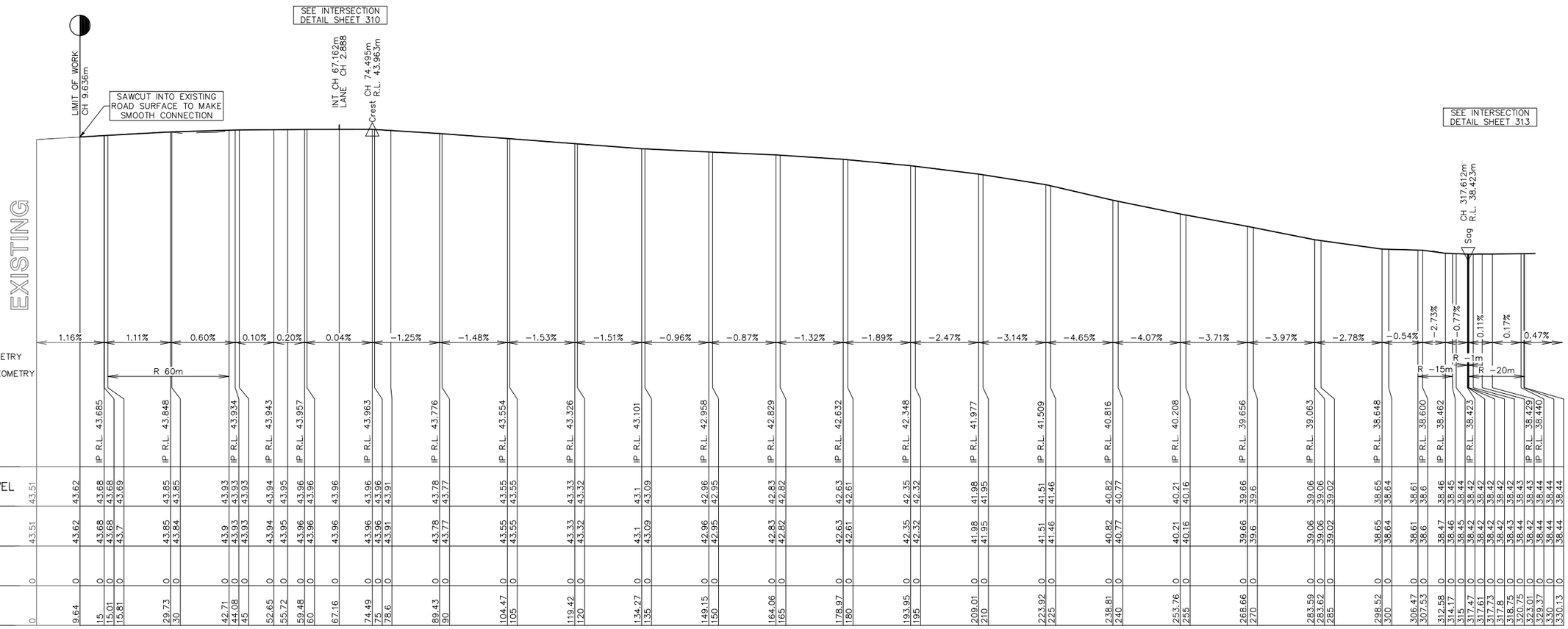
Plotted By: tims Plot Date: 06/08/20 – 08:58 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-121(D).dwg

239858-ENG-201(D)

NOTES:

1. MC01 TO MATCH EXISTING PAVEMENT ALONG BUSHELLS RIDGE ROAD AND GOROKAN ROAD.

BUSHELLS RIDGE ROAD
SAWCUT 300mm MINIMUM INTO EXISTING PAVEMENT AS REQUIRED TO MAKE SMOOTH CONNECTION ALONG CONTROL LINE MC01



LONGITUDINAL SECTION MC01 (BUSHELLS RIDGE ROAD & GOROKAN ROAD)
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD LONGITUDINAL SECTION: MC01 - SHEET 1

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 201 REV. D

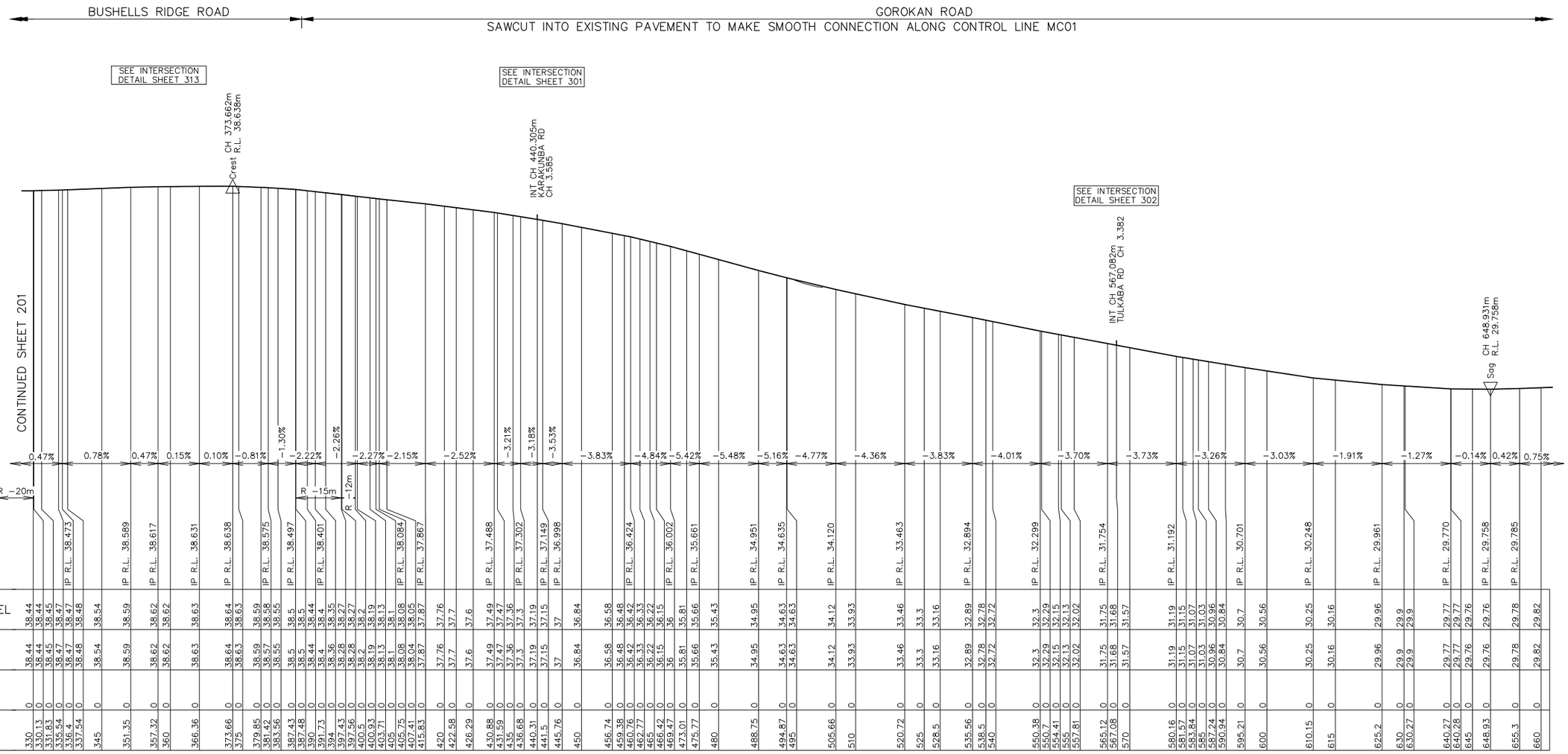
100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 08:58 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-201(D).dwg

239858-ENG-202(D)

NOTES:

1. MC01 TO MATCH EXISTING PAVEMENT ALONG BUSHELLS RIDGE ROAD AND GOROKAN ROAD.



DATUM 21.0

CHAINAGE	DESIGN LEVEL	EXISTING SURFACE	CUT\FILL
330	38.44	38.44	0
330.13	38.44	38.44	0
331.83	38.45	38.45	0
335.54	38.47	38.47	0
336.4	38.47	38.47	0
337.54	38.48	38.48	0
345	38.54	38.54	0
351.35	38.59	38.59	0
357.32	38.62	38.62	0
360	38.62	38.62	0
366.36	38.63	38.63	0
373.66	38.64	38.64	0
375	38.63	38.63	0
379.85	38.59	38.59	0
381.42	38.58	38.57	0
383.56	38.55	38.55	0
387.43	38.5	38.5	0
387.48	38.5	38.5	0
391.73	38.44	38.4	0
394	38.4	38.4	0
397.43	38.36	38.36	0
397.56	38.35	38.28	0
400.5	38.27	38.2	0
400.93	38.19	38.19	0
403.71	38.13	38.13	0
405	38.1	38.1	0
405.75	38.08	38.08	0
407.41	38.04	38.04	0
415.83	37.87	37.87	0
420	37.76	37.76	0
422.58	37.7	37.7	0
426.29	37.6	37.6	0
430.88	37.49	37.49	0
431.59	37.47	37.47	0
435	37.36	37.36	0
436.68	37.3	37.3	0
440.31	37.19	37.19	0
441.5	37.15	37.15	0
445.76	37	37	0
450	36.84	36.84	0
456.74	36.58	36.58	0
459.38	36.48	36.48	0
460.76	36.42	36.42	0
462.77	36.33	36.33	0
465	36.22	36.22	0
466.42	36.15	36.15	0
469.47	36	36	0
473.01	35.81	35.81	0
475.77	35.66	35.66	0
480	35.43	35.43	0
488.75	34.95	34.95	0
494.87	34.63	34.63	0
495	34.63	34.63	0
505.66	34.12	34.12	0
510	33.93	33.93	0
520.72	33.46	33.46	0
525	33.3	33.3	0
528.5	33.16	33.16	0
535.56	32.89	32.89	0
538.5	32.78	32.78	0
540	32.72	32.72	0
550.38	32.3	32.3	0
550.7	32.29	32.29	0
554.41	32.15	32.15	0
555	32.13	32.13	0
557.81	32.02	32.02	0
565.12	31.75	31.75	0
567.08	31.68	31.68	0
570	31.57	31.57	0
580.16	31.19	31.19	0
581.57	31.15	31.15	0
583.84	31.07	31.07	0
585	31.03	31.03	0
587.24	30.96	30.96	0
590.94	30.84	30.84	0
595.21	30.7	30.7	0
600	30.56	30.56	0
610.15	30.25	30.25	0
615	30.16	30.16	0
625.2	29.96	29.96	0
630	29.9	29.9	0
630.27	29.9	29.9	0
640.27	29.77	29.77	0
640.28	29.77	29.77	0
645	29.76	29.76	0
648.93	29.76	29.76	0
655.3	29.78	29.78	0
660	29.82	29.82	0

LONGITUDINAL SECTION MC01 (BUSHELLS RIDGE ROAD AND GOROKAN ROAD)

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email:hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD LONGITUDINAL SECTION: MC01 - SHEET 2

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 202 REV. D

100mm AT FULL SIZE

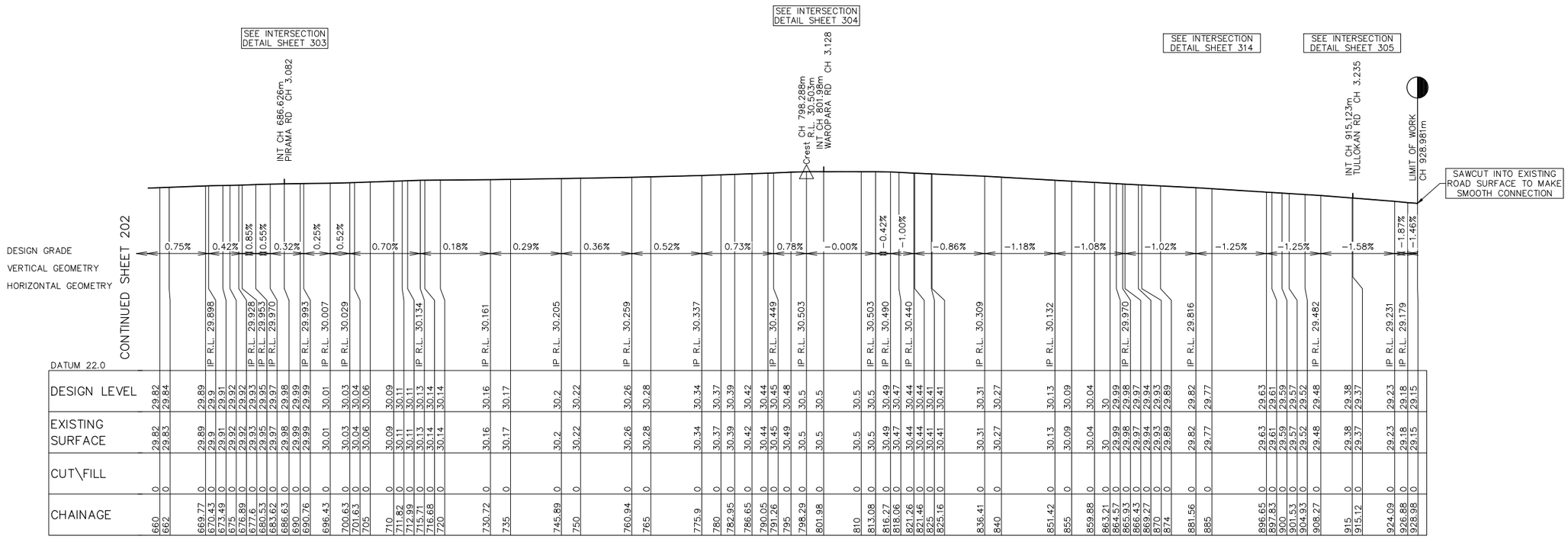
Plotted By: tims Plot Date: 06/08/20 – 08:58 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-202(D).dwg

239858-ENG-203(D)

NOTES:

1. MC01 TO MATCH EXISTING PAVEMENT ALONG BUSHELLS RIDGE ROAD AND GOROKAN ROAD.

GOROKAN ROAD
SAWCUT INTO EXISTING PAVEMENT TO MAKE SMOOTH CONNECTION ALONG CONTROL LINE MC01



CHAINAGE	DESIGN LEVEL	EXISTING SURFACE	CUT\FILL	
660	29.82	29.82	0	
662	29.84	29.83	0	
669.77	29.89	29.89	0	
670.43	29.9	29.9	0	IP R.L. 29.898
673.49	29.91	29.91	0	
675	29.92	29.92	0	
678.89	29.93	29.93	0	IP R.L. 29.928
680.53	29.95	29.95	0	IP R.L. 29.953
683.62	29.97	29.97	0	IP R.L. 29.970
686.63	29.98	29.98	0	
690	29.99	29.99	0	IP R.L. 29.993
690.76	29.99	29.99	0	
696.43	30.01	30.01	0	IP R.L. 30.007
700.63	30.03	30.03	0	IP R.L. 30.029
701.63	30.04	30.04	0	
705	30.06	30.06	0	
710	30.09	30.09	0	
711.82	30.11	30.11	0	
712.99	30.11	30.11	0	
715.71	30.13	30.13	0	IP R.L. 30.134
716.68	30.14	30.14	0	
720	30.14	30.14	0	
730.72	30.16	30.16	0	IP R.L. 30.161
735	30.17	30.17	0	
745.89	30.2	30.2	0	IP R.L. 30.205
750	30.22	30.22	0	
760.94	30.26	30.26	0	IP R.L. 30.259
765	30.28	30.28	0	
775.9	30.34	30.34	0	IP R.L. 30.337
780	30.37	30.37	0	
782.95	30.39	30.39	0	
786.65	30.42	30.42	0	
790.05	30.44	30.44	0	IP R.L. 30.449
791.26	30.45	30.45	0	
795	30.49	30.49	0	
798.29	30.5	30.5	0	IP R.L. 30.503
801.98	30.5	30.5	0	
810	30.5	30.5	0	
813.08	30.5	30.5	0	IP R.L. 30.503
816.27	30.49	30.49	0	IP R.L. 30.490
818.06	30.47	30.47	0	
821.26	30.44	30.44	0	IP R.L. 30.440
821.46	30.44	30.44	0	
825	30.41	30.41	0	
825.16	30.41	30.41	0	
836.41	30.31	30.31	0	IP R.L. 30.309
840	30.27	30.27	0	
851.42	30.13	30.13	0	IP R.L. 30.132
855	30.09	30.09	0	
859.88	30.04	30.04	0	
863.21	30	30	0	
864.57	29.99	29.99	0	IP R.L. 29.970
865.93	29.98	29.98	0	
866.43	29.97	29.97	0	
869.27	29.94	29.94	0	
870	29.93	29.93	0	
874	29.89	29.89	0	
881.56	29.82	29.82	0	IP R.L. 29.816
885	29.77	29.77	0	
896.65	29.63	29.63	0	
897.83	29.61	29.61	0	
900	29.59	29.59	0	
901.53	29.57	29.57	0	
904.93	29.52	29.52	0	
908.27	29.48	29.48	0	IP R.L. 29.482
915	29.38	29.38	0	
915.12	29.37	29.37	0	
924.09	29.23	29.23	0	IP R.L. 29.231
926.88	29.18	29.18	0	
928.98	29.15	29.15	0	IP R.L. 29.179

LONGITUDINAL SECTION MC01 (BUSHELLS RIDGE ROAD AND GOROKAN ROAD)
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

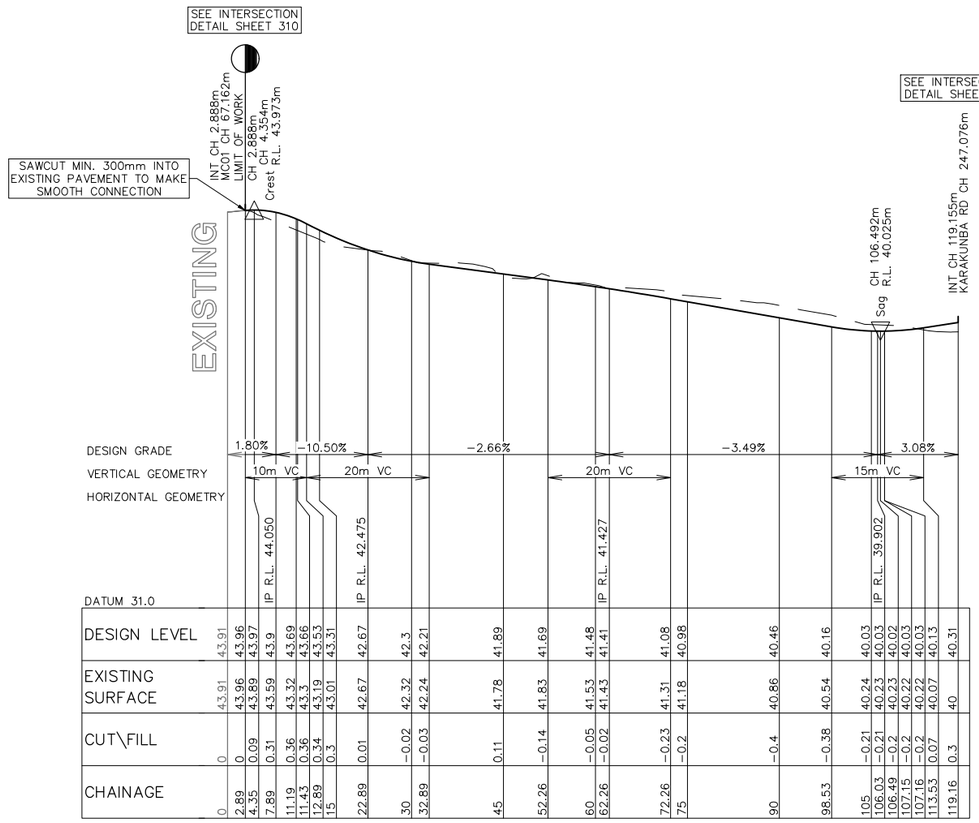
PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD LONGITUDINAL SECTION: MC01 - SHEET 3

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 203 REV. D

100mm AT FULL SIZE

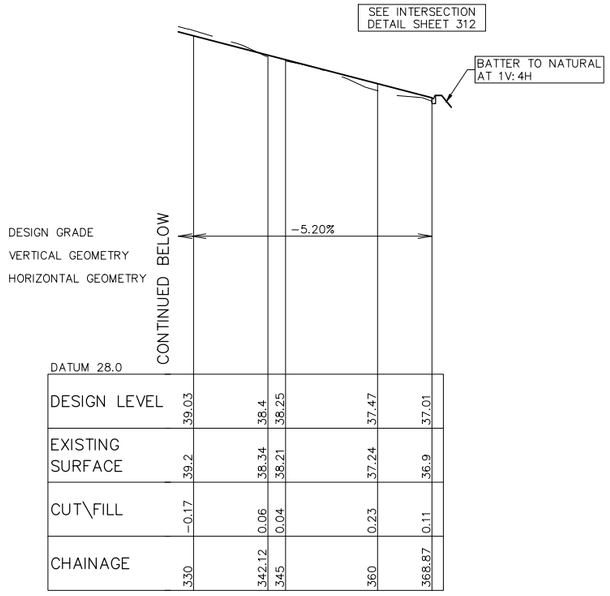
Plotted By: tims Plot Date: 06/08/20 – 08:59 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-203(D).dwg

239858-ENG-204(D)



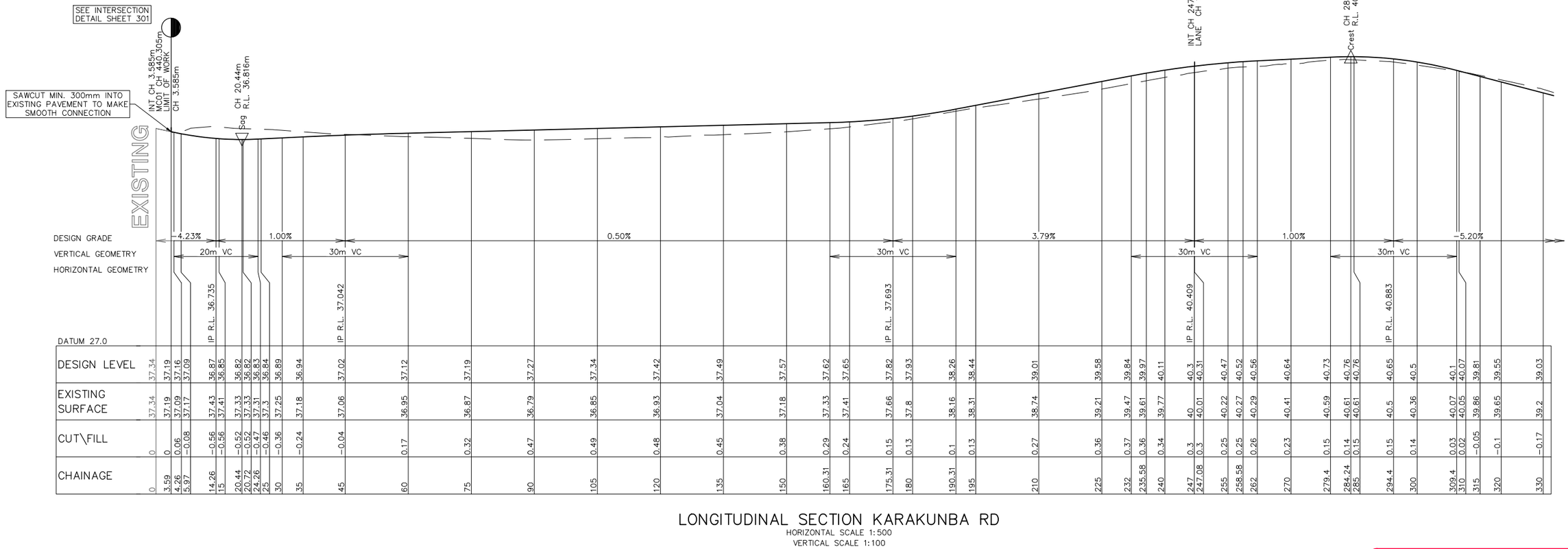
| | | |

239858-ENG-205(D)



LONGITUDINAL SECTION KARAKUNBA RD

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100



LONGITUDINAL SECTION KARAKUNBA RD

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

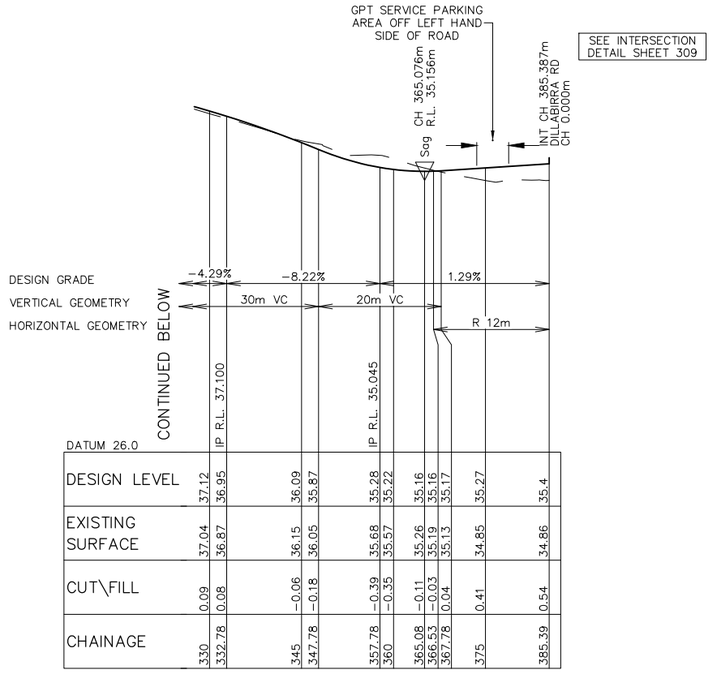
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
ROAD LONGITUDINAL SECTIONS: KARAKUNBA ROAD

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	205	D

100mm AT FULL SIZE

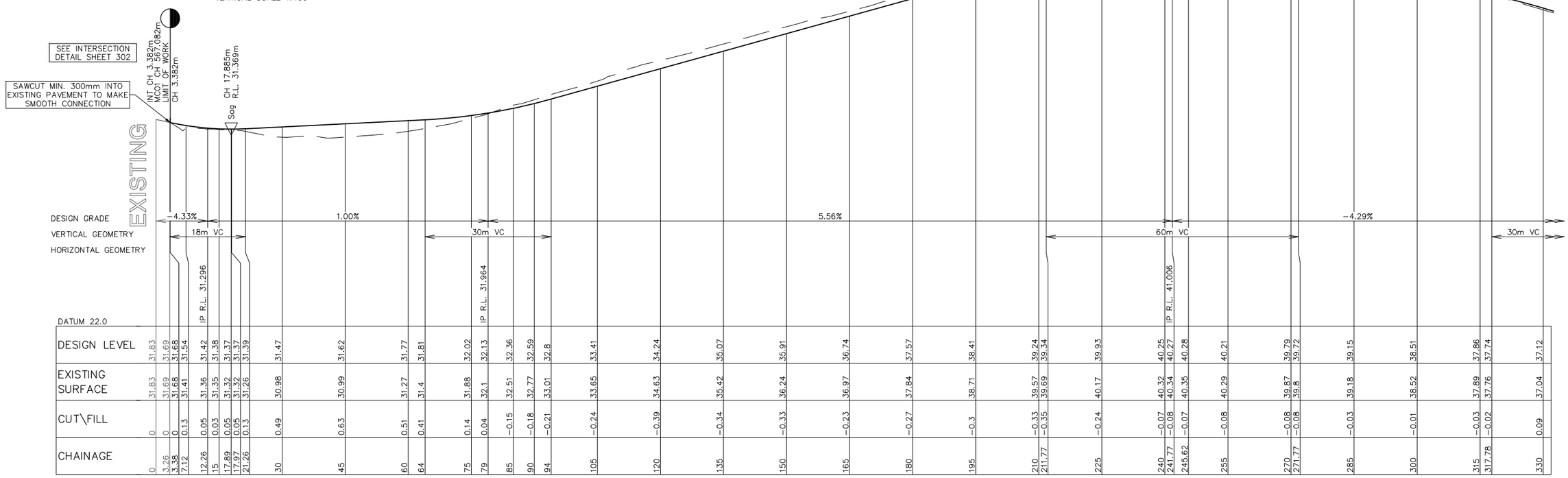
Plotted By: tims Plot Date: 06/08/20 - 08:59 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-205(D).dwg

239858-ENG-206(D)



LONGITUDINAL SECTION TULKABA RD

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100



LONGITUDINAL SECTION TULKABA RD

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

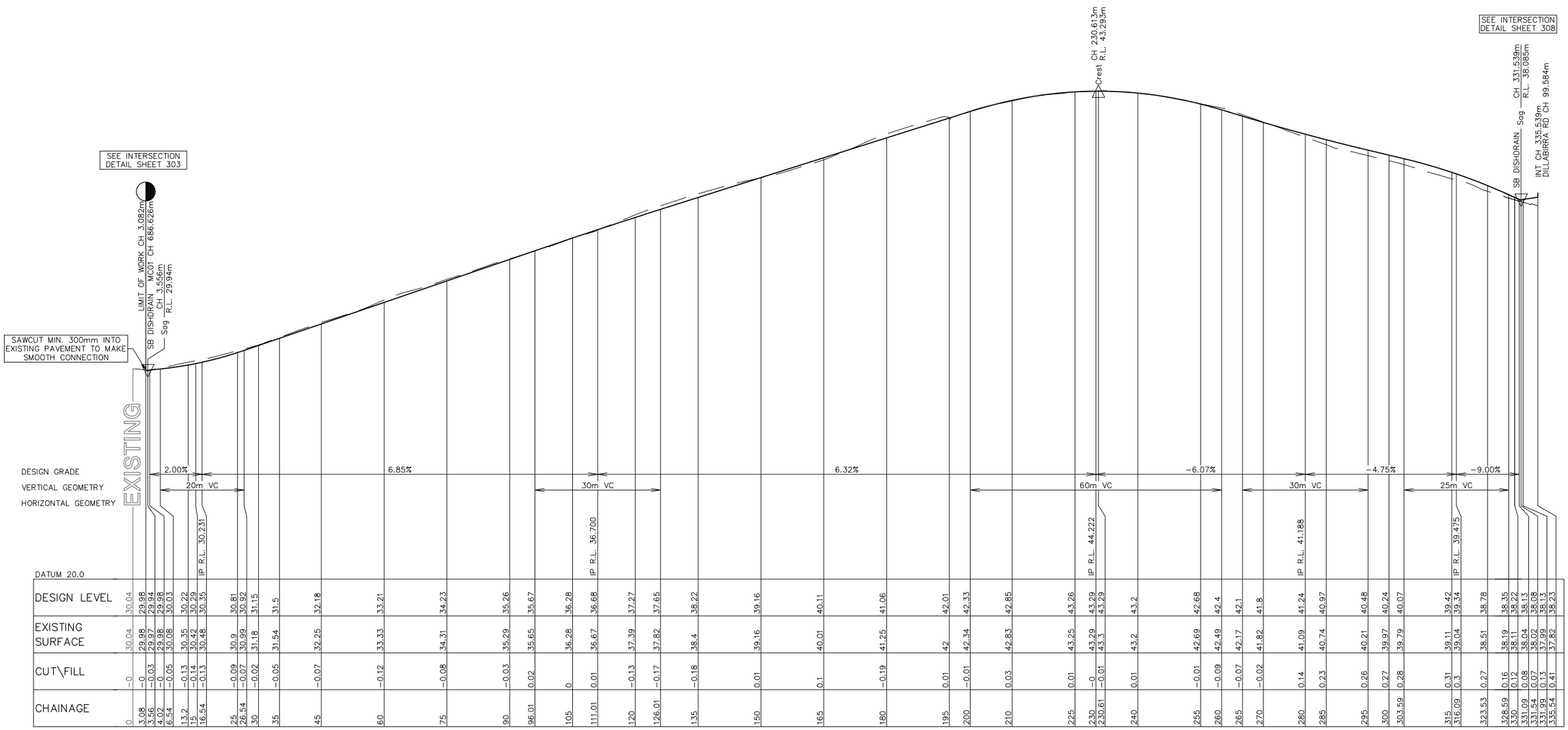
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
ROAD LONGITUDINAL SECTIONS: TULKABA ROAD

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	206	D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 - 08:59 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-206(D).dwg

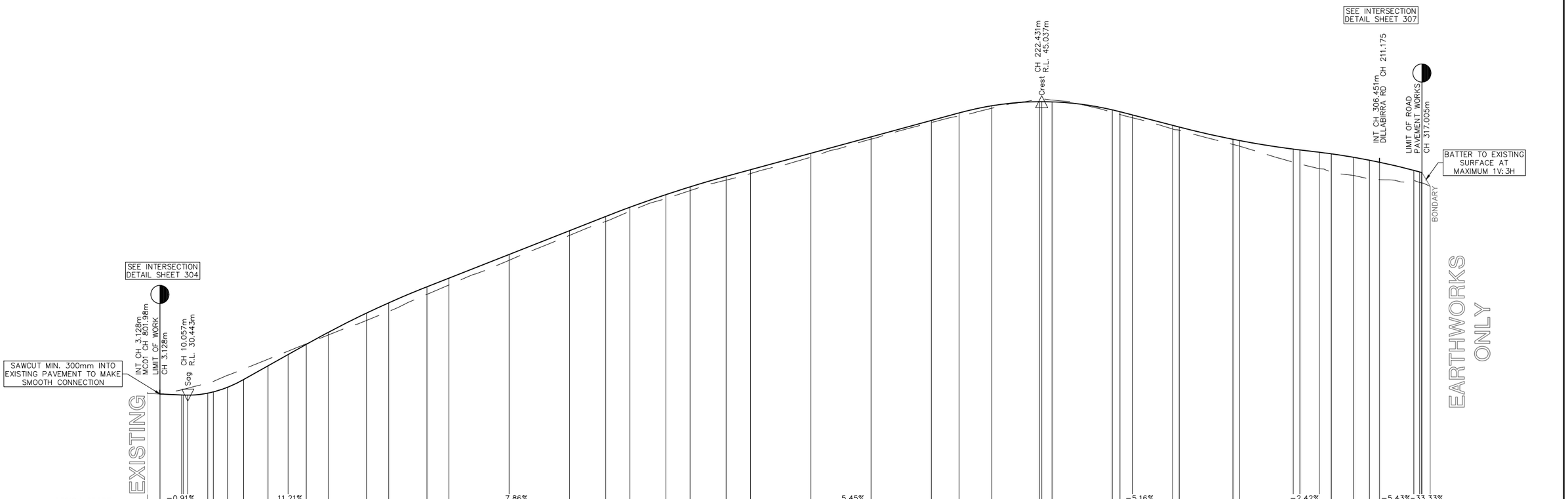
239858-ENG-207(D)



DATUM 20.0

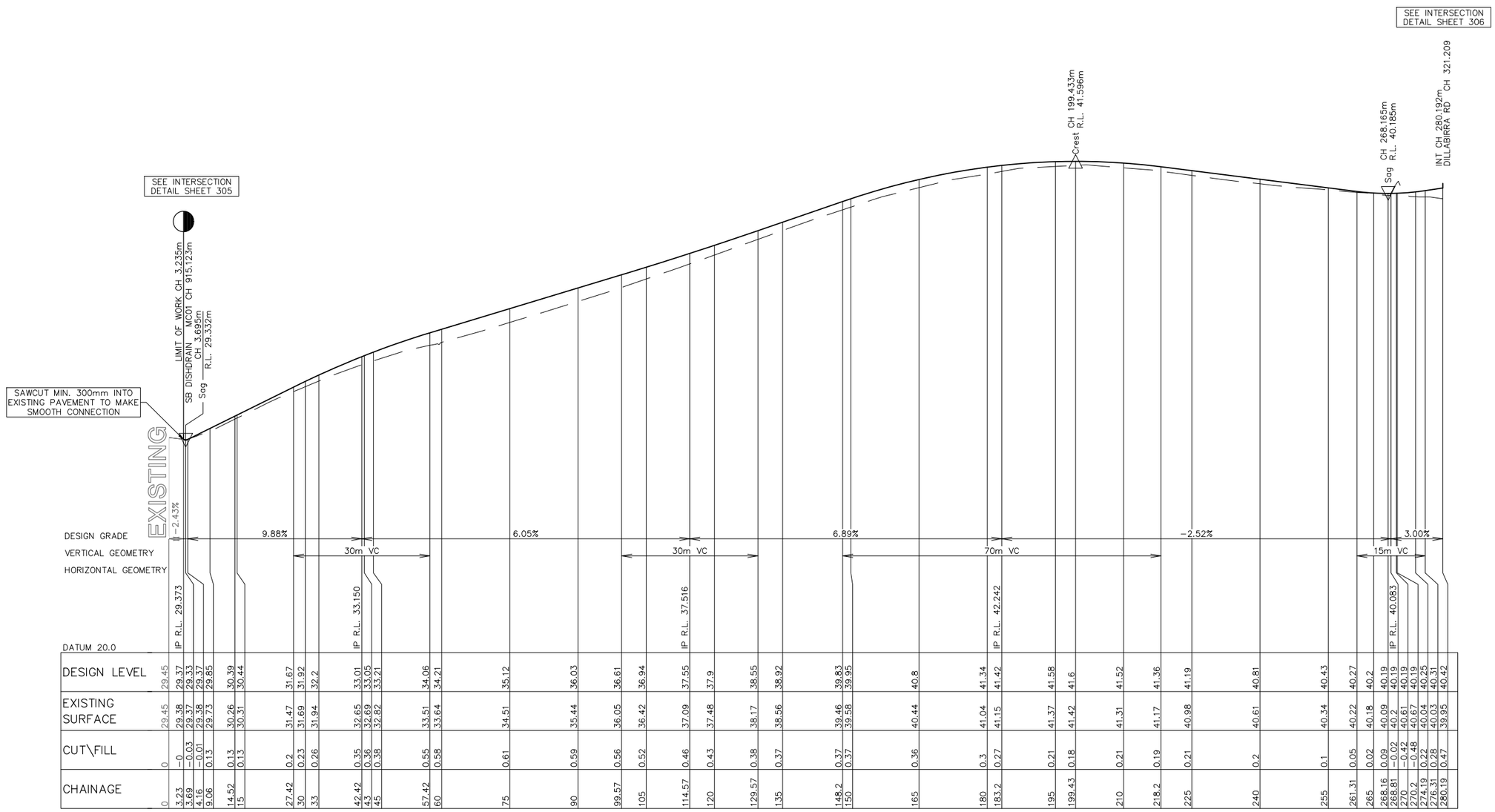
| | | |

239858-ENG-208(D)



| | | |

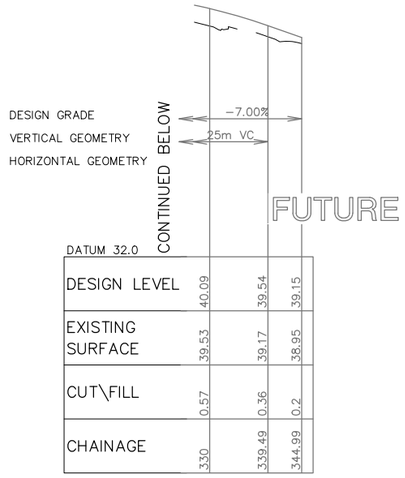
239858-ENG-209(D)



DATUM 20.0

| | | |

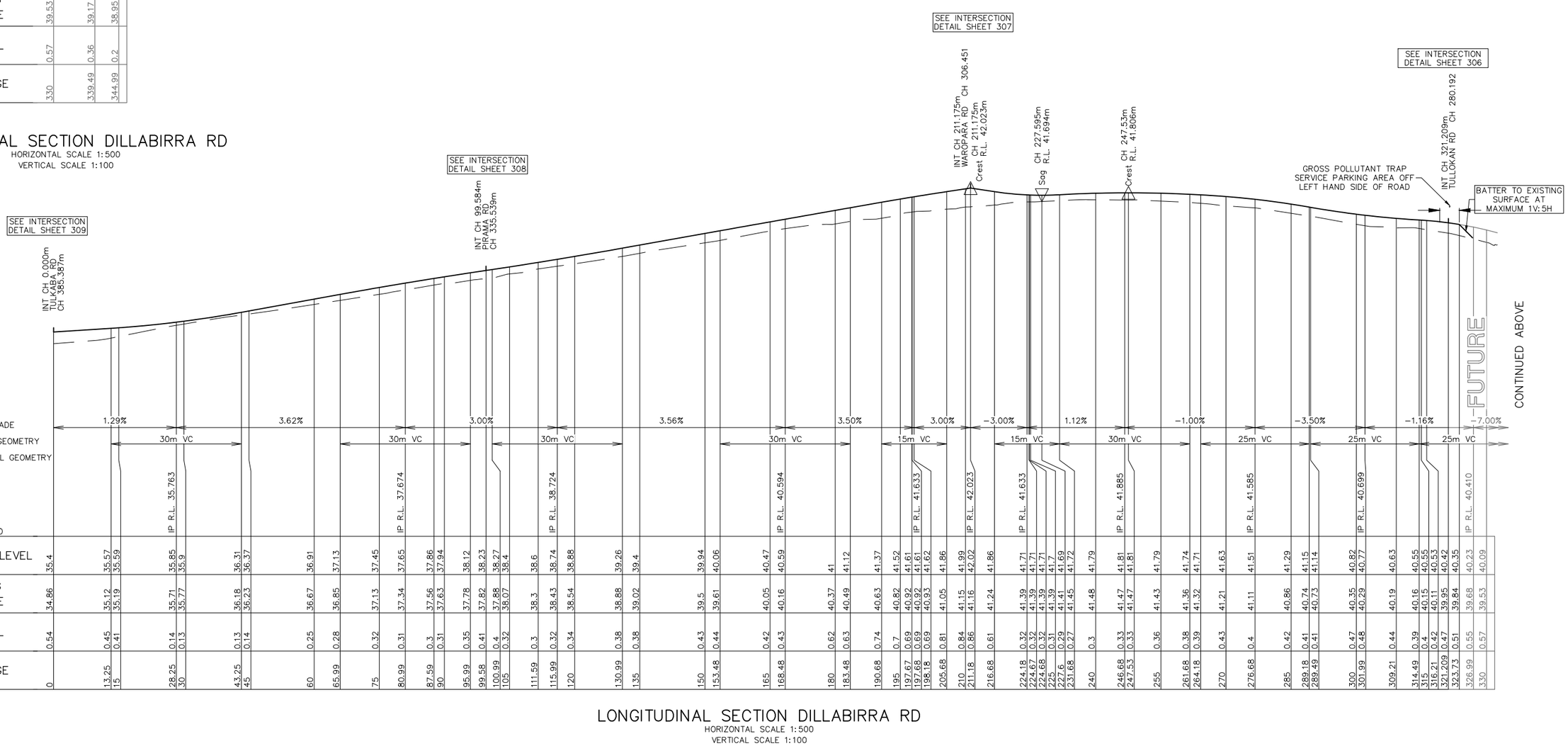
239858-ENG-210(D)



DATUM 32.0				
DESIGN LEVEL	40.09	39.54	39.15	
EXISTING SURFACE	39.53	39.17	38.95	
CUT\FILL	0.57	0.36	0.2	
CHAINAGE	330	339.49	344.99	

LONGITUDINAL SECTION DILLABIRRA RD

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100

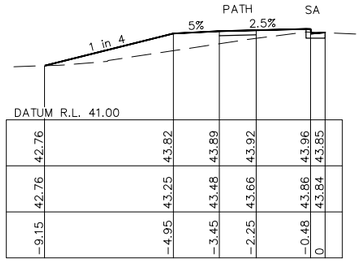


DESIGN GRADE	1.29%		3.62%		3.00%		3.56%		3.50%	3.00%	−3.00%	1.12%	−1.00%	−3.50%	−1.16%	−7.00%
VERTICAL GEOMETRY	30m VC		30m VC		30m VC		30m VC		30m VC	15m VC	15m VC	30m VC	25m VC	25m VC	25m VC	
HORIZONTAL GEOMETRY		IP R.L. 35.763		IP R.L. 37.674		IP R.L. 38.724		IP R.L. 40.594		IP R.L. 41.633	IP R.L. 42.023	IP R.L. 41.633	IP R.L. 41.885	IP R.L. 41.585	IP R.L. 40.699	IP R.L. 40.410

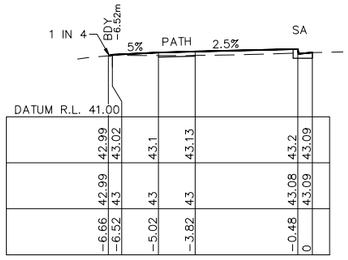
| DATUM 26.0 | | | |

239858-ENG-221(D)

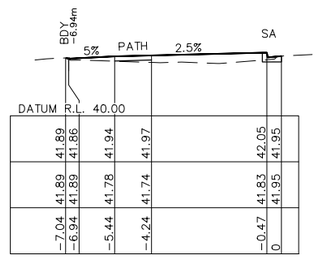
REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



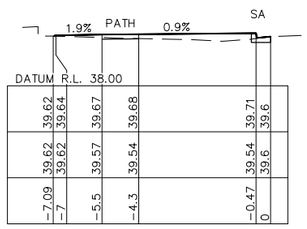
CH 30



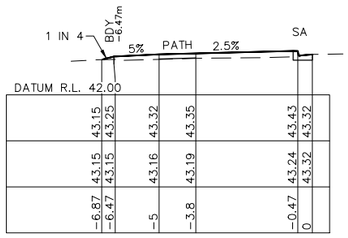
CH 135



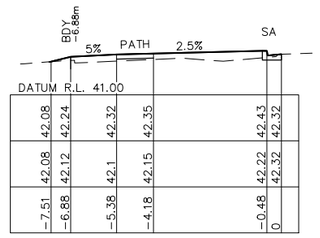
CH 210



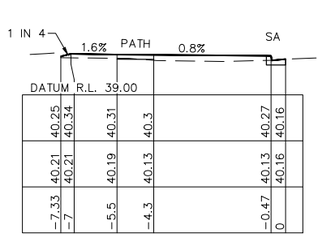
CH 270



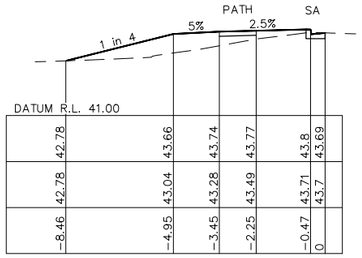
CH 120



CH 195

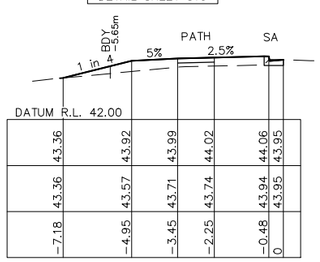


CH 255

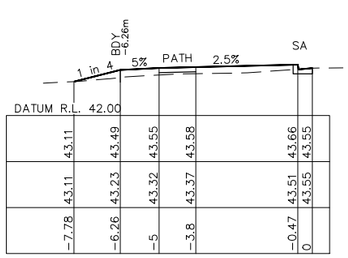


CH 15.81

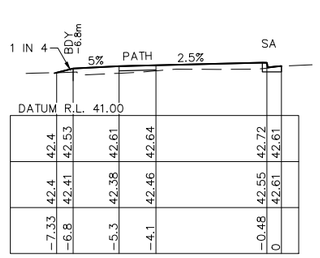
SEE INTERSECTION DETAIL SHEET 310



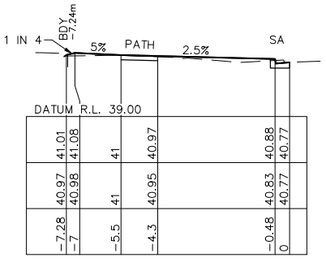
CH 55.72 (MK20 CH 0.00)



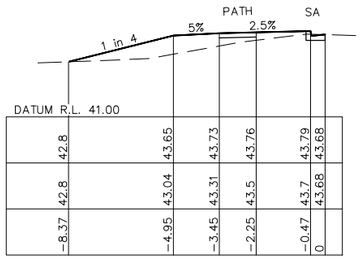
CH 105



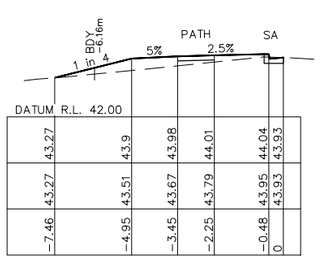
CH 180



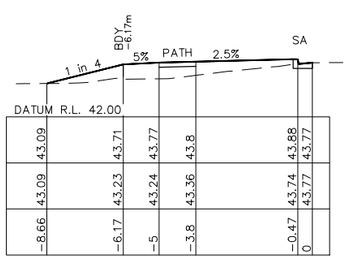
CH 240



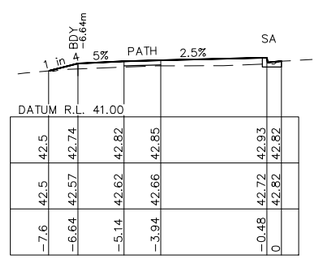
CH 15



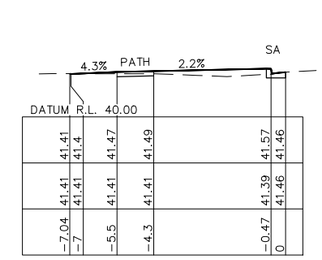
CH 45



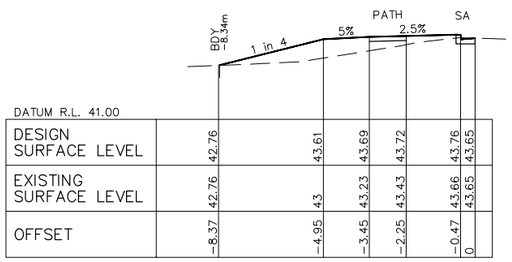
CH 90



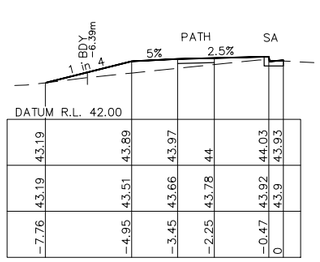
CH 165



CH 225

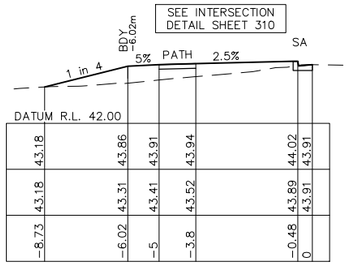


CH 11.7

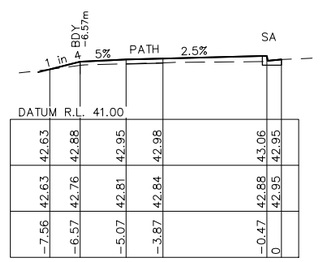


CH 42.71

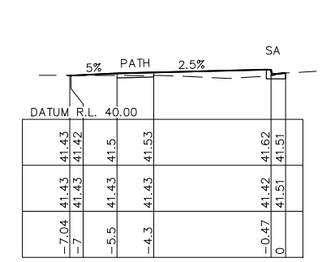
SEE INTERSECTION DETAIL SHEET 310



CH 78.6 (MK21 CH 13.207)



CH 150



CH 223.92

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 1 2 3 4 NATURAL — A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email:hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC | DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
MC01 - SHEET 1

PROJECT No. 239858 - DISCIPLINE ENG - NUMBER 221 | REV. D

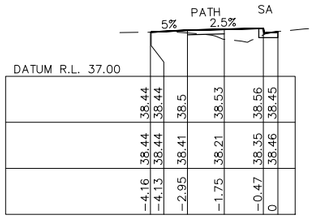
100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 - 08:59 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-221(D).dwg

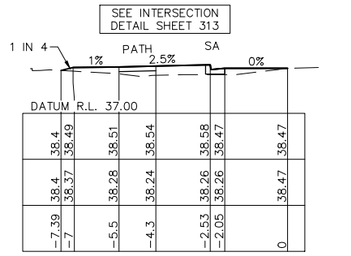
239858-ENG-222(D)

100mm AT FULL SIZE

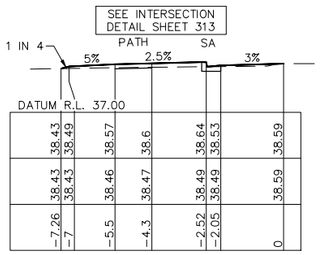
REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



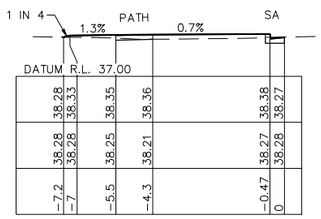
CH 314.17



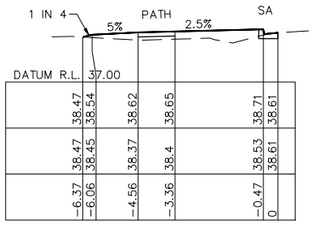
CH 335.54 (MK32 CH 4.384)



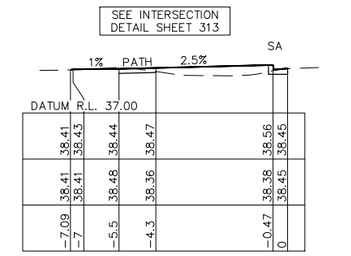
CH 379.85 (MK33 CH 0.000)



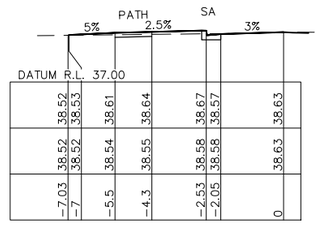
CH 397.56



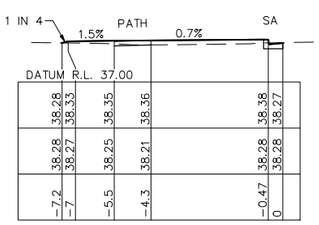
CH 306.47



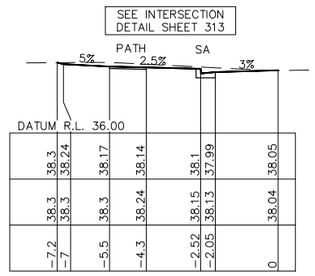
CH 331.83 (MK32 CH 0.00)



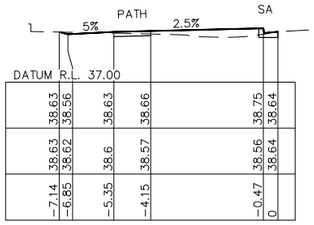
CH 375



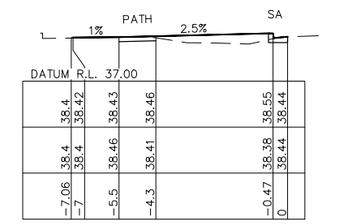
CH 397.43



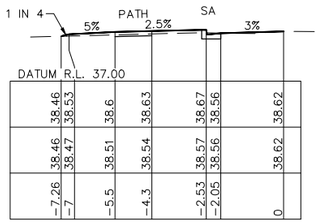
CH 407.41 (MK34 CH 4.386)



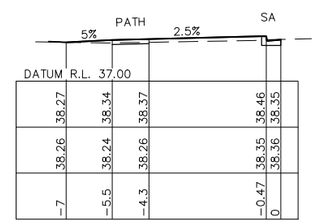
CH 300



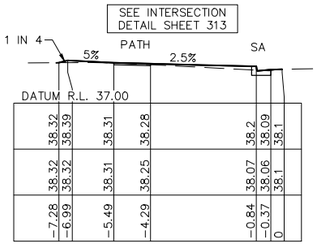
CH 330.13



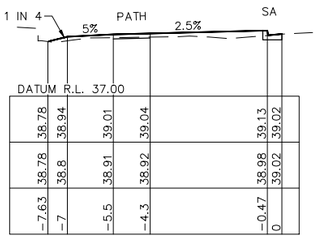
CH 360



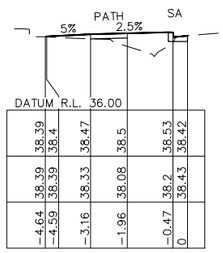
CH 394



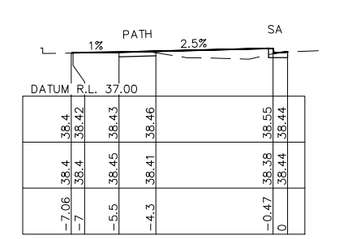
CH 405



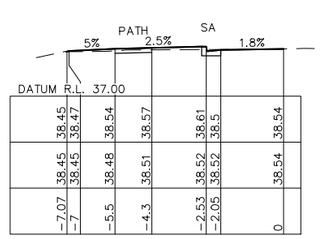
CH 285



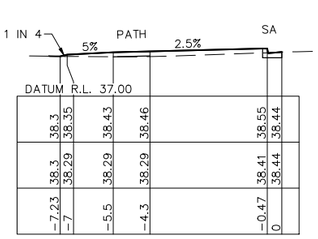
CH 318.75



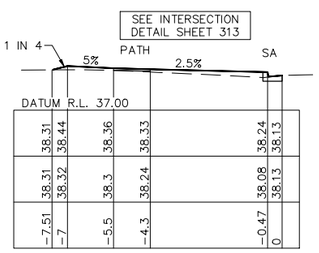
CH 330



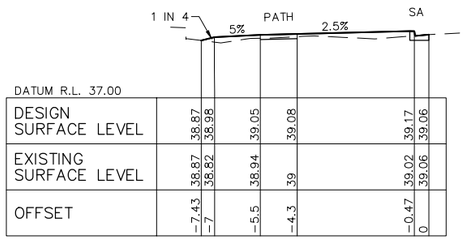
CH 345



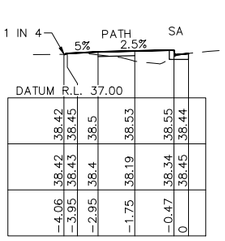
CH 390



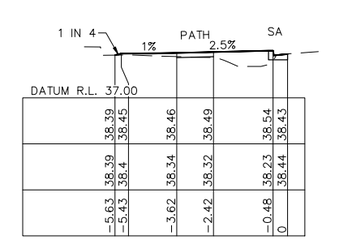
CH 403.71 (MK34 CH 0.00)



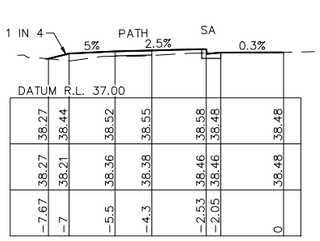
CH 283.62



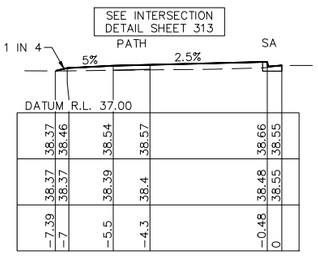
CH 315



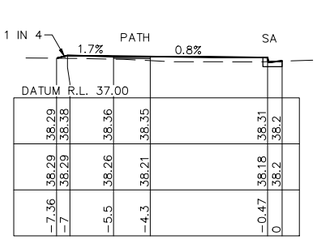
CH 320.75



CH 337.54



CH 383.56 (MK33 CH 4.384)



CH 400.5

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 1 2 3 4 NATURAL — A1 / A3 1:100 / 1:200

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC | DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS

ROAD CROSS SECTIONS: MC01 - SHEET 2

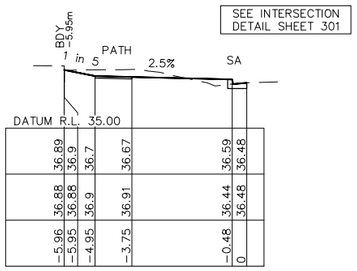
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	222	D

Plotted By: tims Plot Date: 06/08/20 - 08:59 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-222(D).dwg

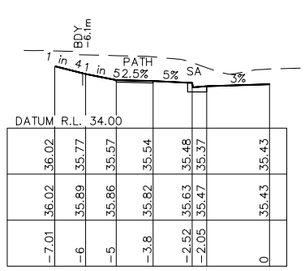
239858-ENG-223(D)

100mm AT FULL SIZE

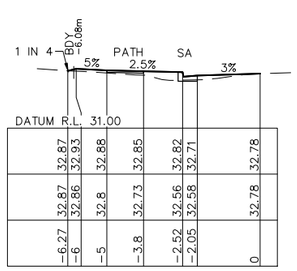
REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



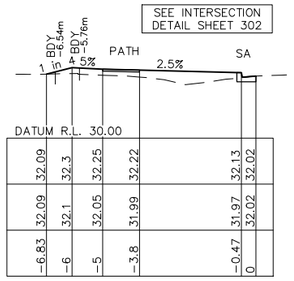
CH 459.38 (MK02 CH 17.807)



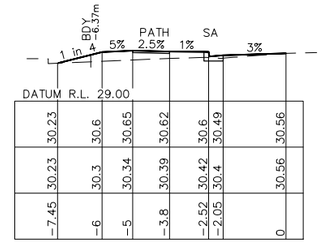
CH 480



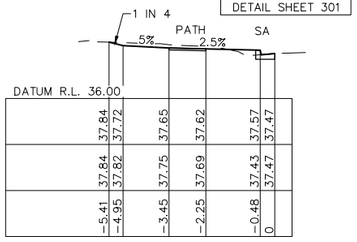
CH 538.5



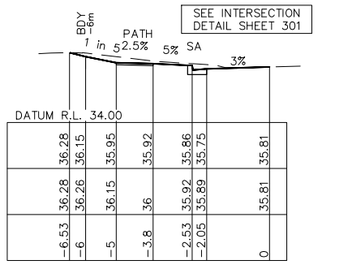
CH 557.8 (MK03 CH 0.000)



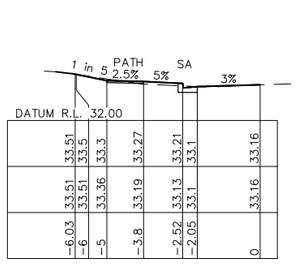
CH 600



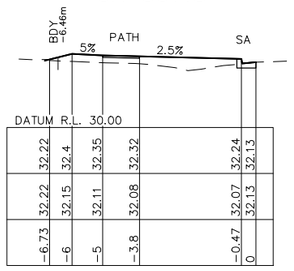
CH 431.59 (MK01 CH 0.000)



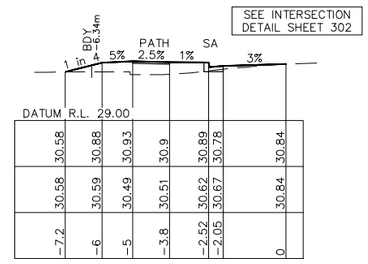
CH 473.01 (MK36 CH 10.926)



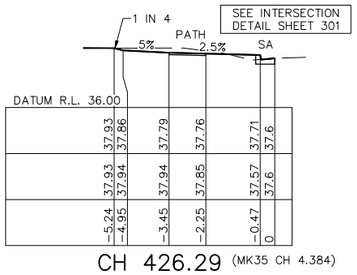
CH 528.5



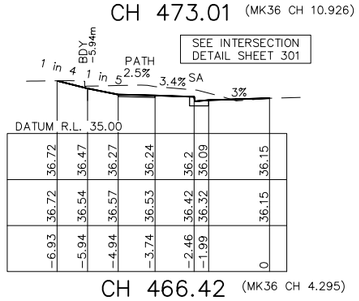
CH 555



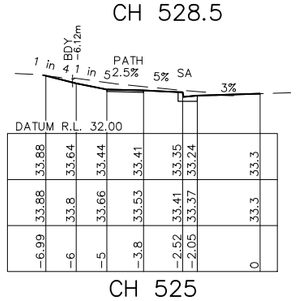
CH 590.94 (MK38 CH 4.384)



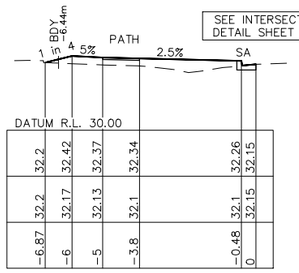
CH 426.29 (MK35 CH 4.384)



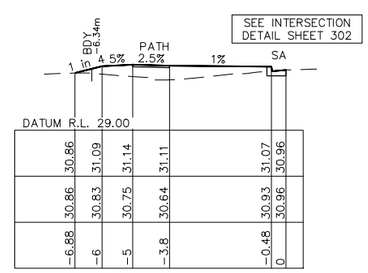
CH 466.42 (MK36 CH 4.295)



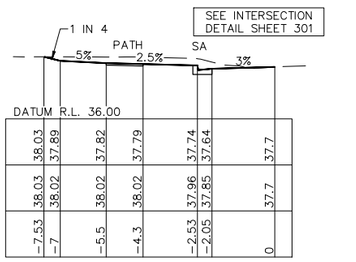
CH 525



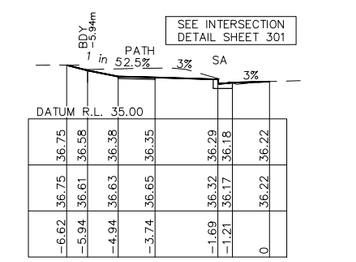
CH 554.4 (MK37 CH 4.384)



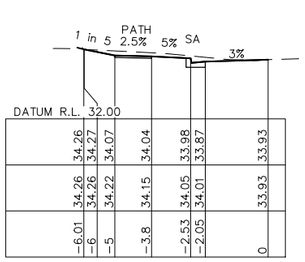
CH 587.24 (MK38 CH 0.000)



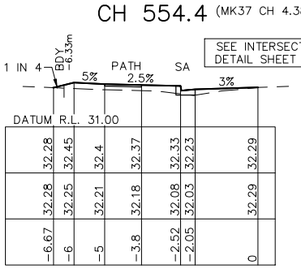
CH 422.58 (MK35 CH 0.000)



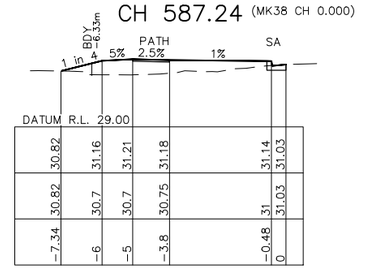
CH 465



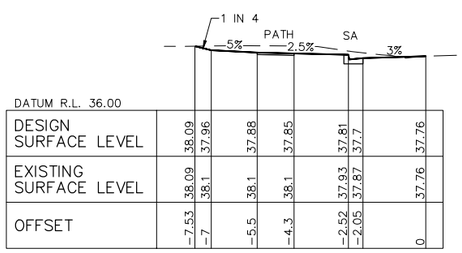
CH 510



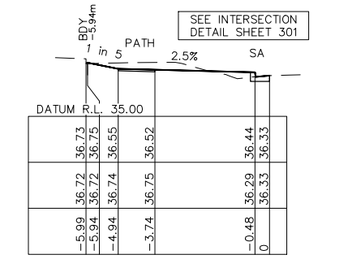
CH 550.7 (MK37 CH 0.000)



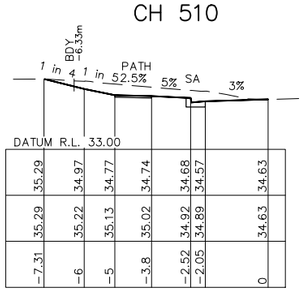
CH 585



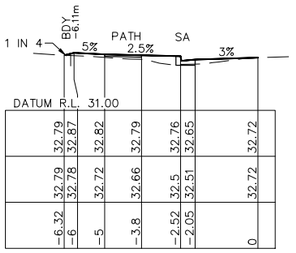
CH 420



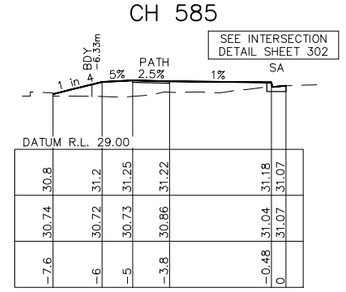
CH 462.77 (MK36 CH 0.000)



CH 495



CH 540



CH 583.84 (MK04 CH 16.670)

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 1 2 3 4 — NATURAL — A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS

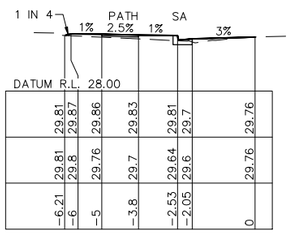
ROAD CROSS SECTIONS: MC01 - SHEET 3

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	223	D

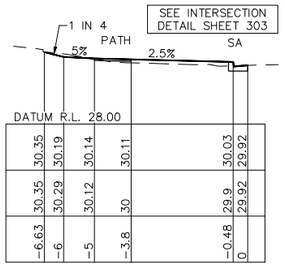
Plotted By: tims Plot Date: 06/08/20 – 09:00 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-223(D).dwg

239858-ENG-224(D)

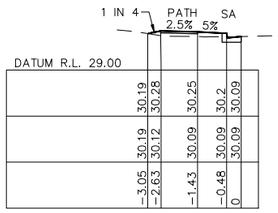
REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



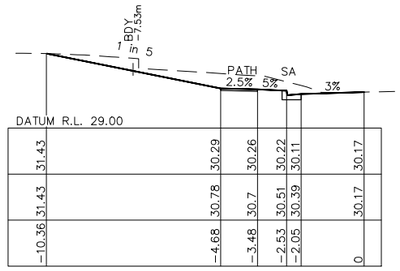
CH 645



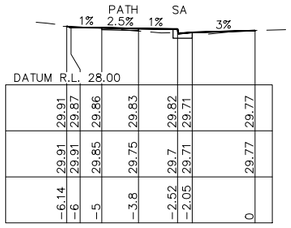
CH 675



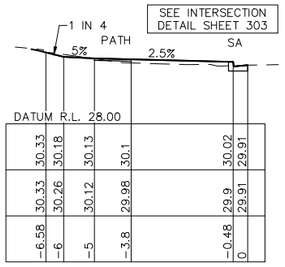
CH 710



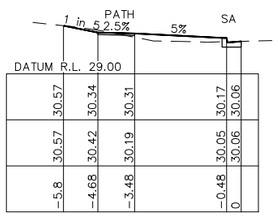
CH 735



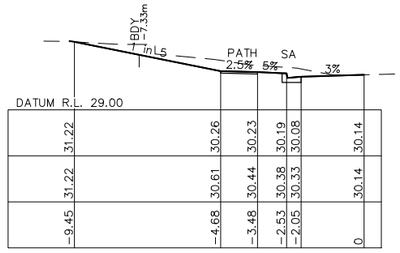
CH 640.27



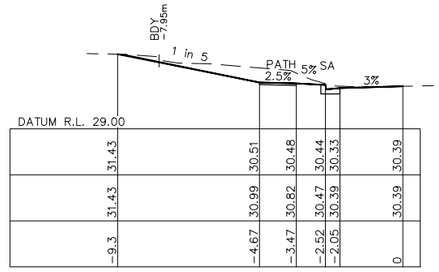
CH 673.49 (MK39 CH 4.381)



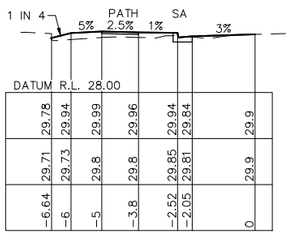
CH 705



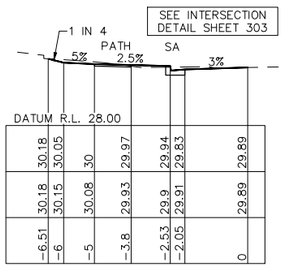
CH 720



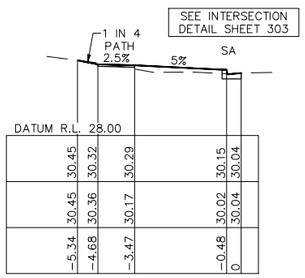
CH 782.95 (MK41 CH 0.00)



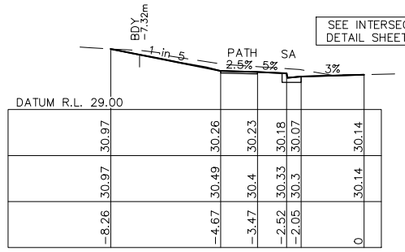
CH 630.27



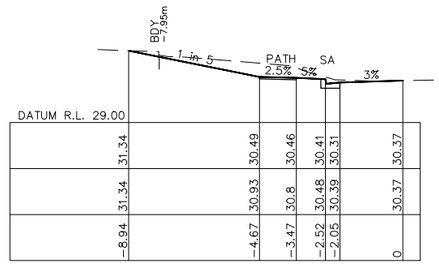
CH 669.77 (MK39 CH 0.000)



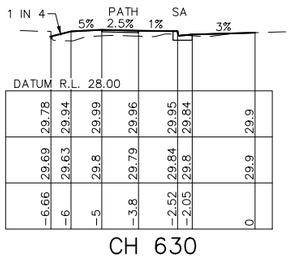
CH 701.63 (MK06 CH 15.665)



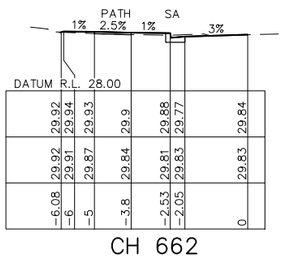
CH 716.68 (MK40 CH 4.385)



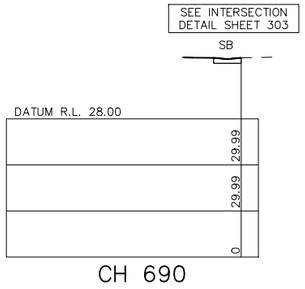
CH 780



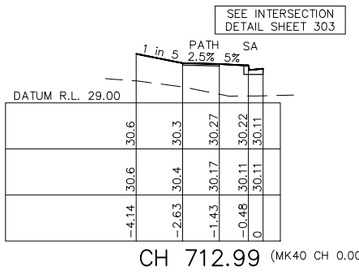
CH 630



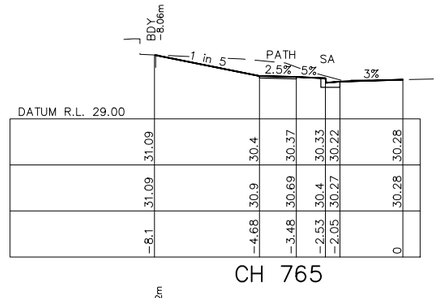
CH 662



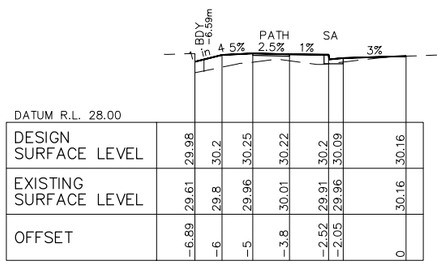
CH 690



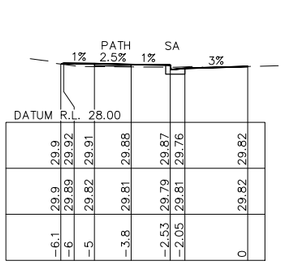
CH 712.99 (MK40 CH 0.000)



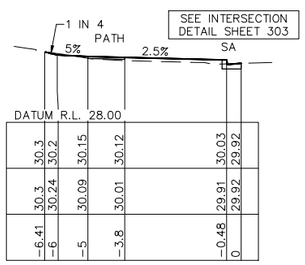
CH 765



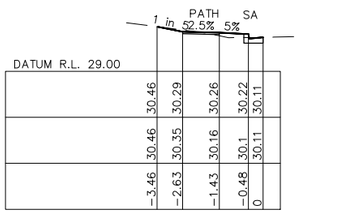
CH 615



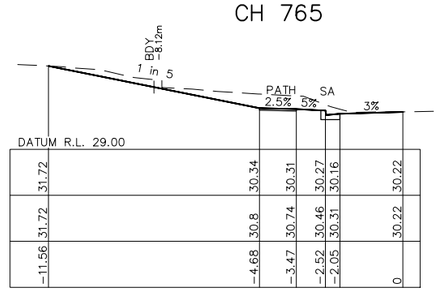
CH 660



CH 676.88 (MK05 CH 0.000)



CH 711.82



CH 750

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 A1 / A3
NATURAL 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: MC01 - SHEET 4

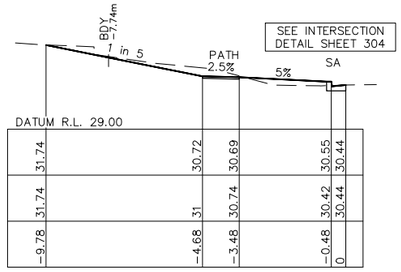
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	224	D

Plotted By: tims Plot Date: 06/08/20 – 09:00 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-224(D).dwg

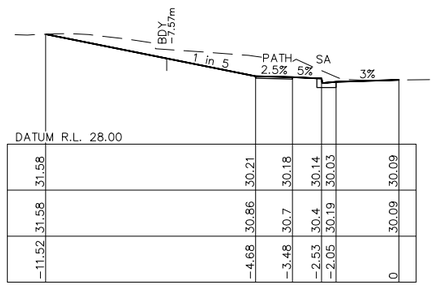
100mm AT FULL SIZE

239858-ENG-225(D)

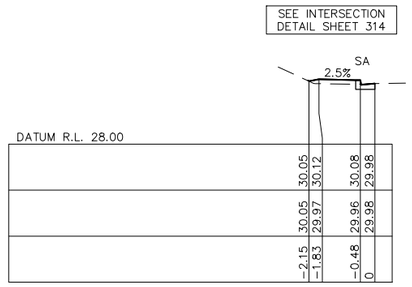
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



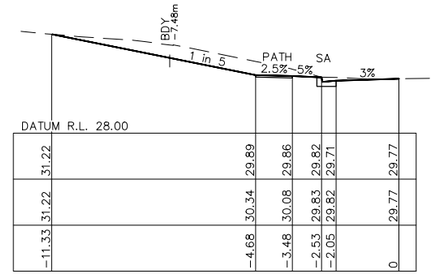
CH 821.46 (MK42 CH 0.000)



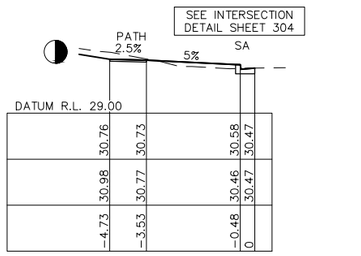
CH 855



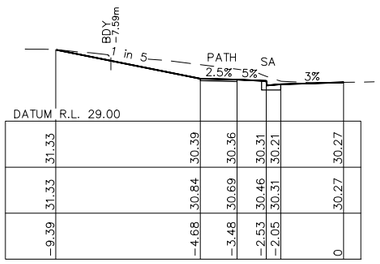
CH 865.93 (MK44 CH 6.767)



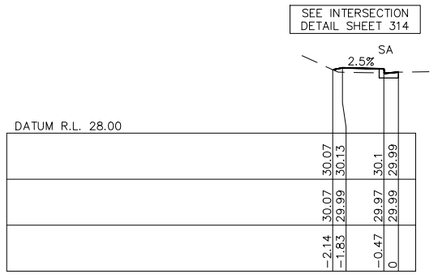
CH 885



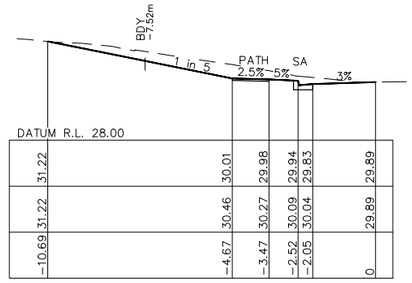
CH 818.05 (MK08 CH 20.445)



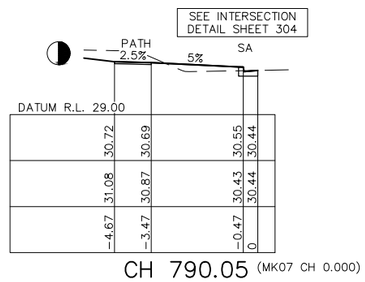
CH 840



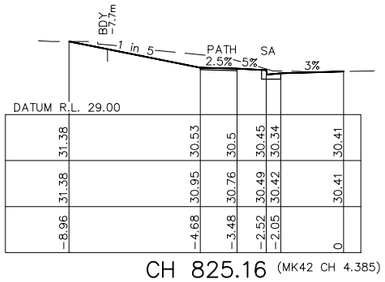
CH 864.57



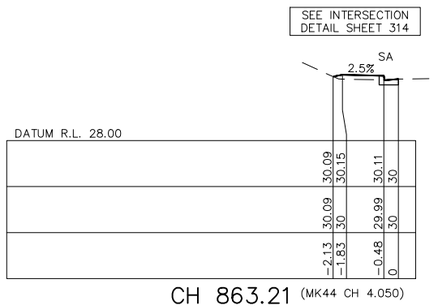
CH 874



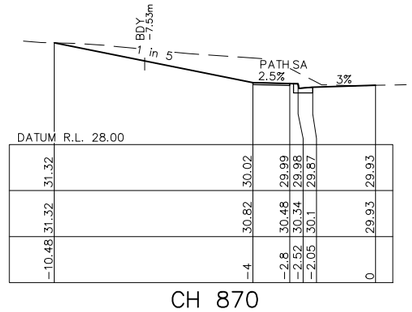
CH 790.05 (MK07 CH 0.000)



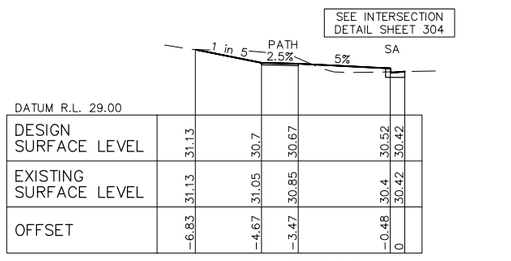
CH 825.16 (MK42 CH 4.385)



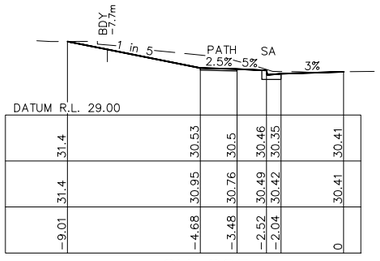
CH 863.21 (MK44 CH 4.050)



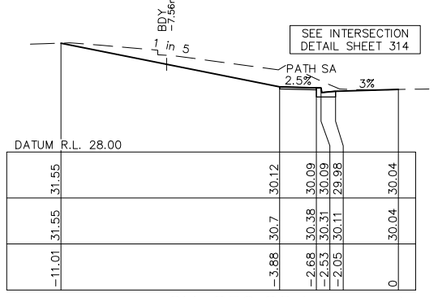
CH 870



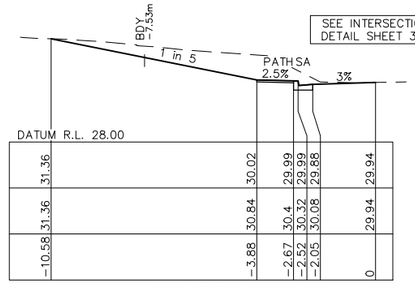
CH 786.65 (MK41 CH 4.384)



CH 825



CH 859.88 (MK44 CH 0.000)



CH 869.27 (MK44 CH 10.818)

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 NATURAL
A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: MC01 - SHEET 5

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	225	D

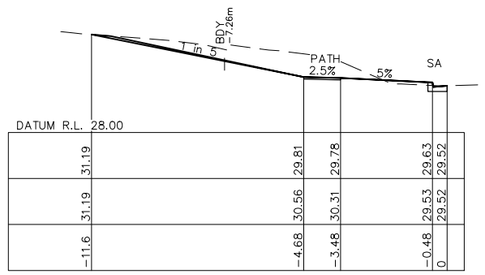
Plotted By: tims Plot Date: 06/08/20 - 09:00 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-225(D).dwg

100mm AT FULL SIZE

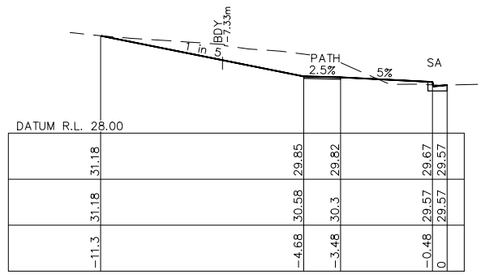
239858-ENG-226(D)

100mm AT FULL SIZE

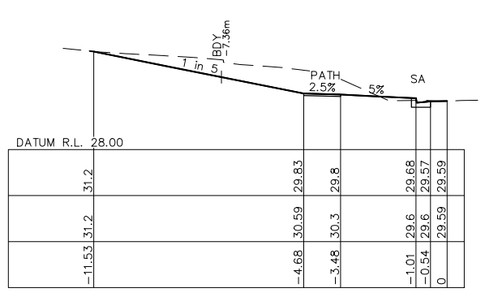
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



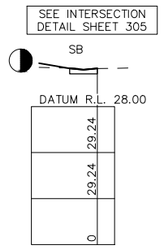
CH 904.93 (MK09 CH 0.000)



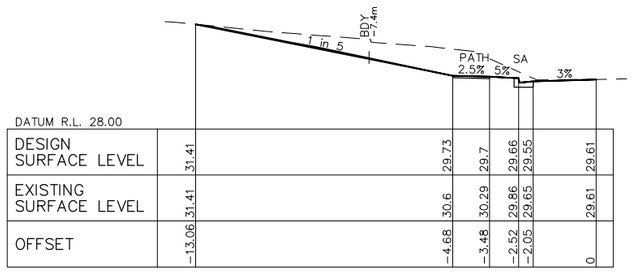
CH 901.53 (MK43 CH 4.384)



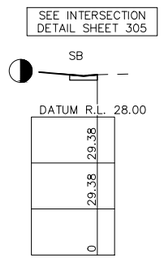
CH 900



CH 923.33



CH 897.83 (MK43 CH 0.000)



CH 915

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4
NATURAL
A1 / A3
1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA,
TULLOKAN, WAROPARA, PIRAMA, TULKABA
AND KARAKUMBA ROADS, WYEE

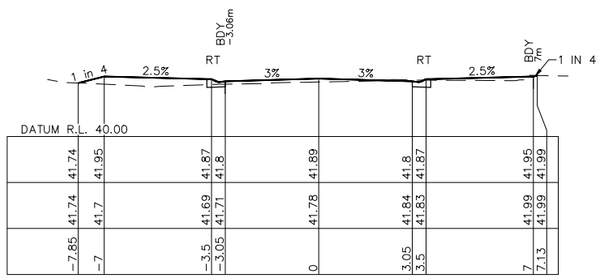
SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
MC01 - SHEET 6

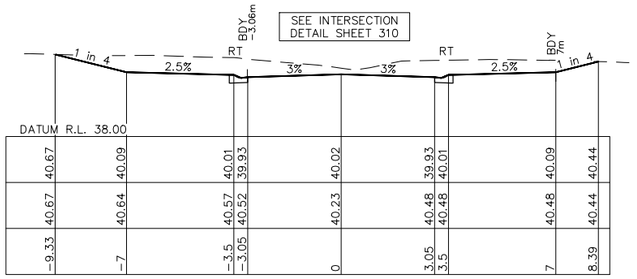
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	226	D

Plotted By: tims Plot Date: 06/08/20 – 09:00 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-226(D).dwg

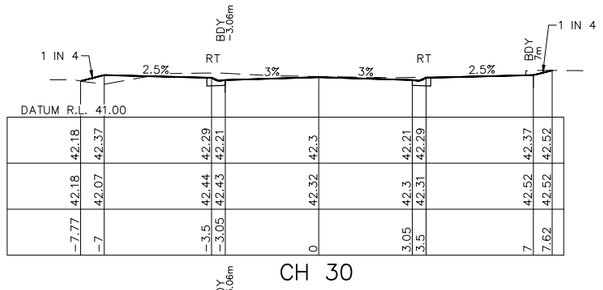
239858-ENG-227(D)



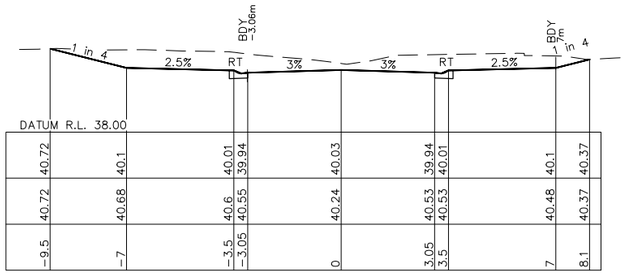
CH 45



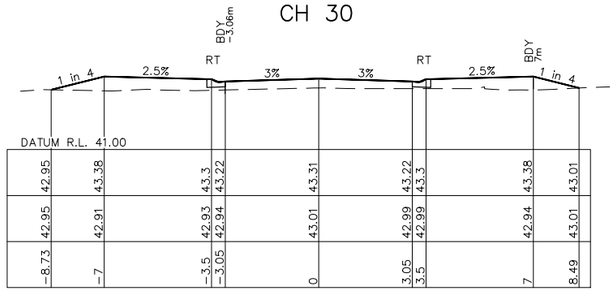
CH 106.49



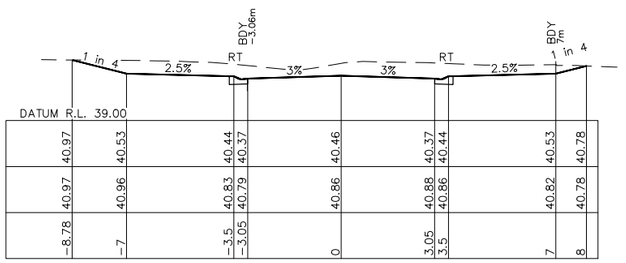
CH 30



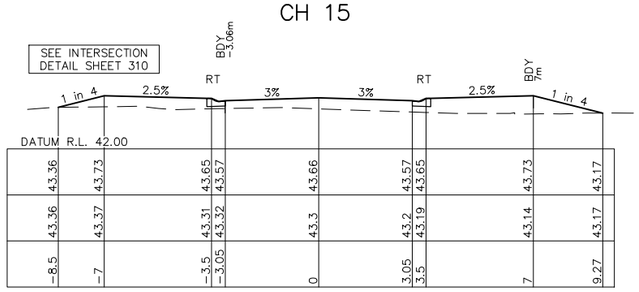
CH 105



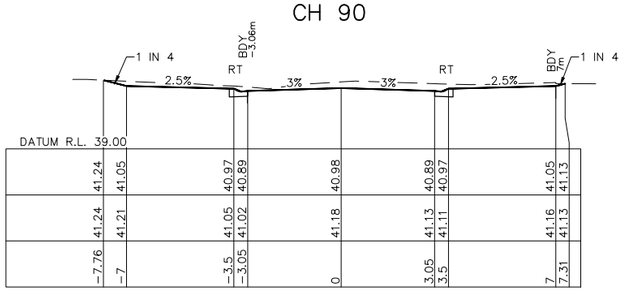
CH 15



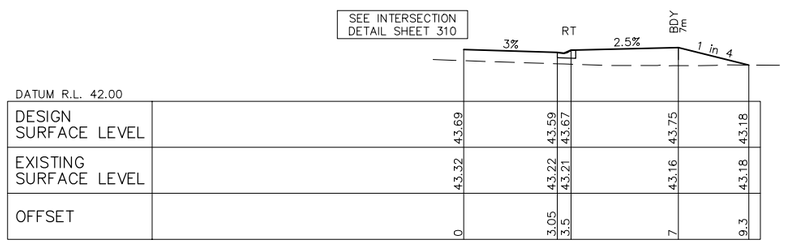
CH 90



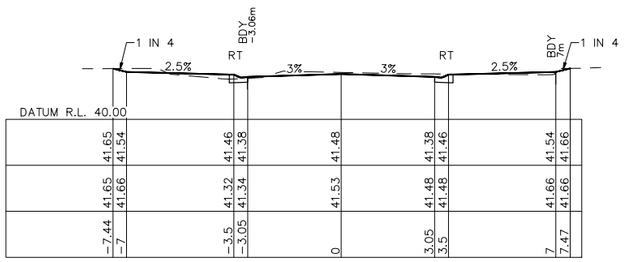
CH 11.43 (MK20 CH 0.000)



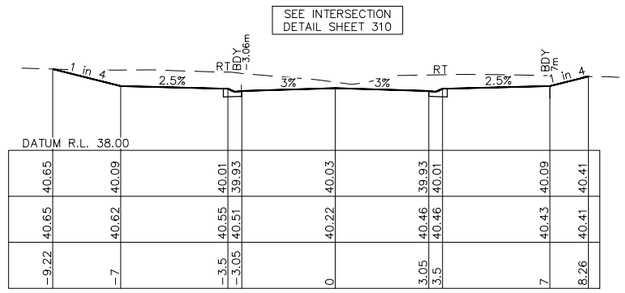
CH 75



CH 11.19 (MK21 CH 0.000)



CH 60



CH 107.15 (MK22 CH 13.268)

REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 1 2 3 4 NATURAL — A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email:hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: LANE

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	227	D

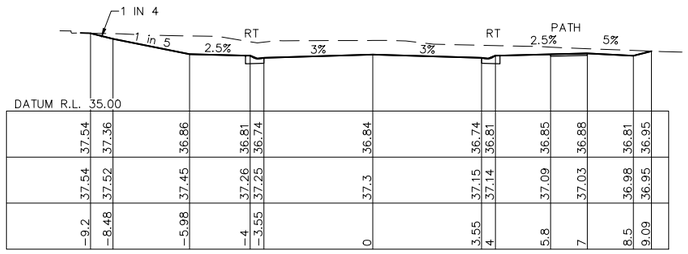
100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:00 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-227(D).dwg

239858-ENG-228(D)

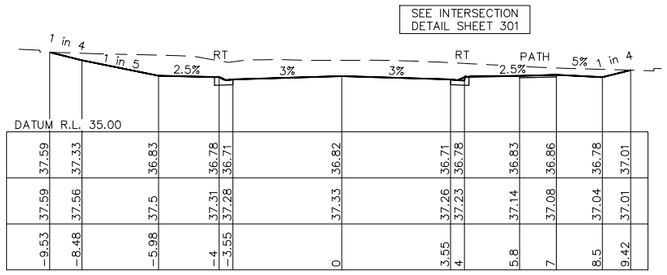
100mm AT FULL SIZE

REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



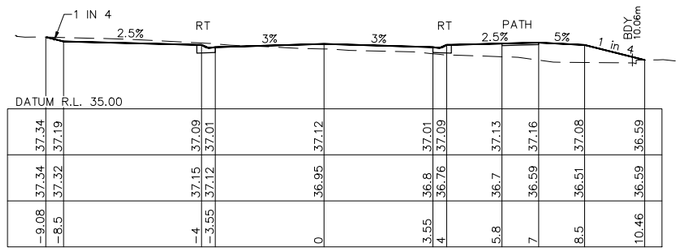
	37.54	37.36	36.86	36.81	36.74	36.84	36.74	36.81	36.85	36.88	36.81	36.95	
	37.54	37.52	37.45	37.26	37.25	37.3	37.15	37.14	37.09	37.03	36.98	36.95	
−9.2		−8.48	−5.98	−4	−3.55	0	3.55	4	5.8	7	8.5	9.09	

CH 25



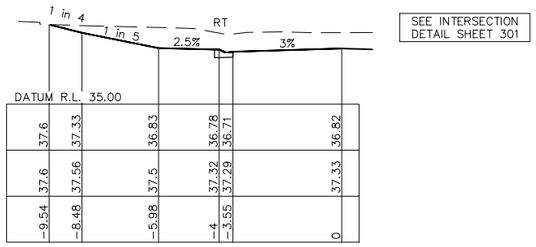
	37.59	37.33	36.83	36.78	36.71	36.82	36.71	36.78	36.83	36.86	36.78	37.01	
	37.59	37.56	37.5	37.31	37.28	37.33	37.26	37.23	37.14	37.08	37.04	37.01	
−9.53		−8.48	−5.98	−4	−3.55	0	3.55	4	5.8	7	8.5	9.42	

CH 20.72 (MK02 CH 0.000)



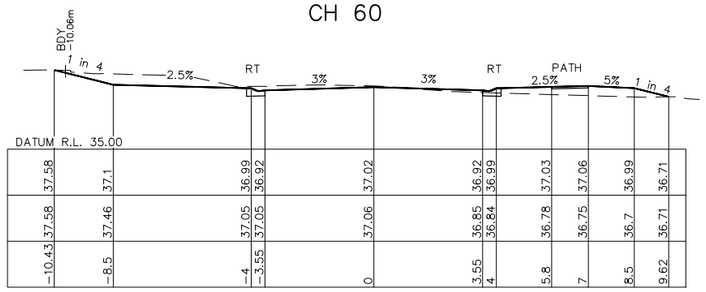
	37.34	37.19		37.09	37.01	37.12	37.01	37.09	37.13	37.16	37.08	36.59	
	37.34	37.32		37.15	37.12	36.95	36.8	36.76	36.7	36.59	36.51	36.59	
−9.08		−8.5		−4	−3.55	0	3.55	4	5.8	7	8.5	10.46	

CH 60



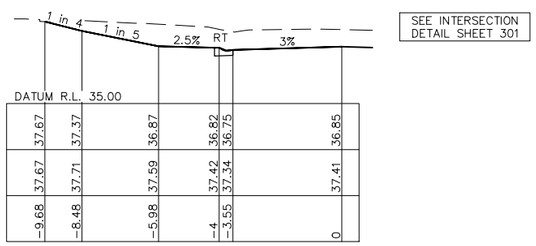
	37.6	37.33	36.83	36.78	36.71	36.82	
	37.6	37.56	37.5	37.32	37.29	37.33	
−9.54		−8.48	−5.98	−4	−3.55	0	

CH 20.44



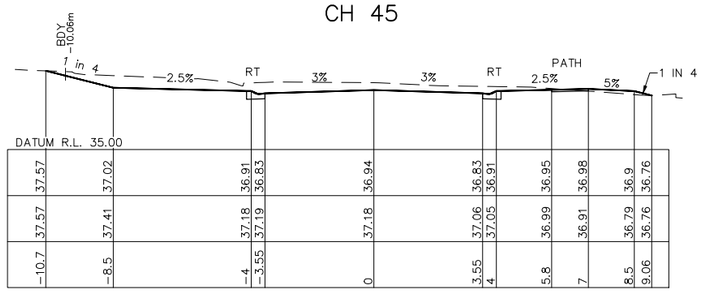
	37.58	37.1		36.99	36.92	37.02	36.92	36.99	37.03	37.06	36.99	36.71	
	37.58	37.46		37.05	37.05	37.06	36.85	36.84	36.78	36.75	36.7	36.71	
−10.43		−8.5		−4	−3.55	0	3.55	4	5.8	7	8.5	9.62	

CH 45



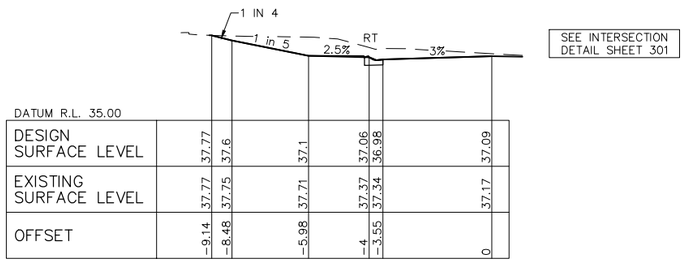
	37.67	37.37	36.87	36.82	36.75	36.85	
	37.67	37.71	37.59	37.42	37.34	37.41	
−9.68		−8.48	−5.98	−4	−3.55	0	

CH 15



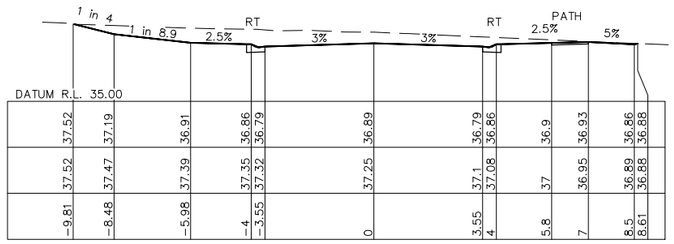
	37.57	37.02		36.91	36.83	36.94	36.83	36.91	36.95	36.98	36.9	36.76	
	37.57	37.41		37.18	37.19	37.18	37.06	37.05	36.99	36.91	36.79	36.76	
−10.7		−8.5		−4	−3.55	0	3.55	4	5.8	7	8.5	9.06	

CH 35



DESIGN SURFACE LEVEL	37.77	37.6	37.1	37.06	36.98	37.09	
EXISTING SURFACE LEVEL	37.77	37.75	37.71	37.37	37.34	37.17	
OFFSET	−9.14	−8.48	−5.98	−4	−3.55	0	

CH 5.97 (MK01 CH 8.355)



	37.52	37.19		36.86	36.79	36.89	36.79	36.86	36.9	36.93	36.86	36.88	
	37.52	37.47		37.35	37.32	37.25	37.1	37.08	37	36.95	36.89	36.88	
−9.81		−8.48	−5.98	−4	−3.55	0	3.55	4	5.8	7	8.5	8.61	

CH 30

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 1 2 3 4 NATURAL — A1 / A3 1:100 / 1:200

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE.

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

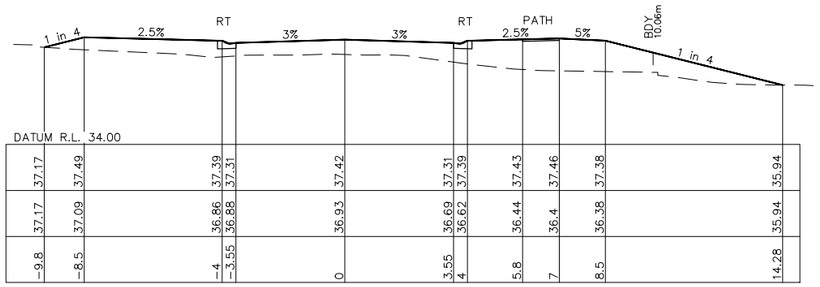
PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: KARAKUNBA ROAD - SHEET 1

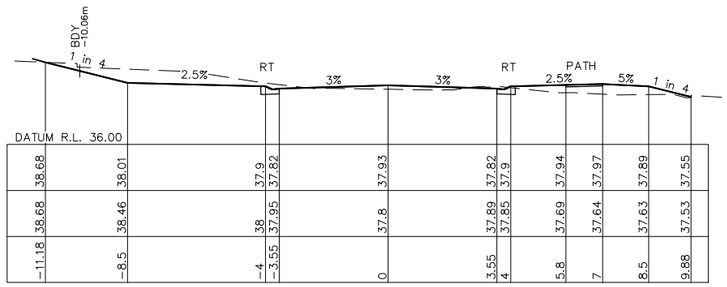
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	228	D

Plotted By: tims Plot Date: 06/08/20 – 09:00 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-228(D).dwg

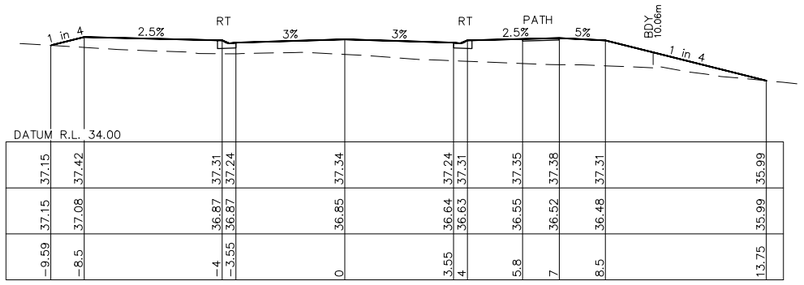
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



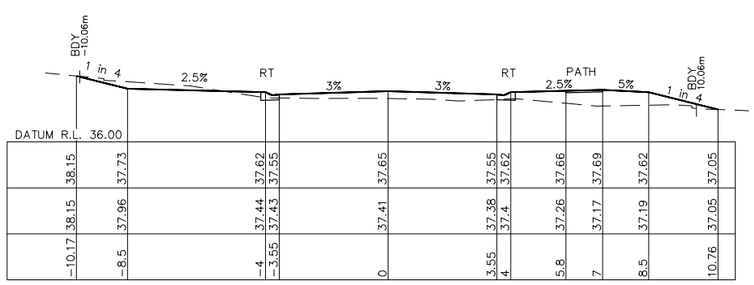
CH 120



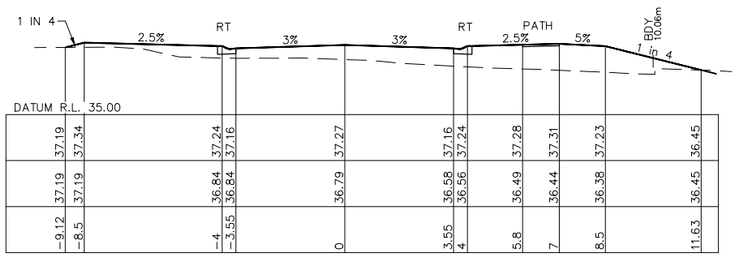
CH 180



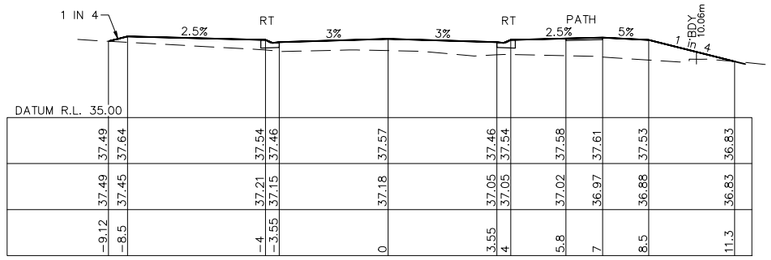
CH 105



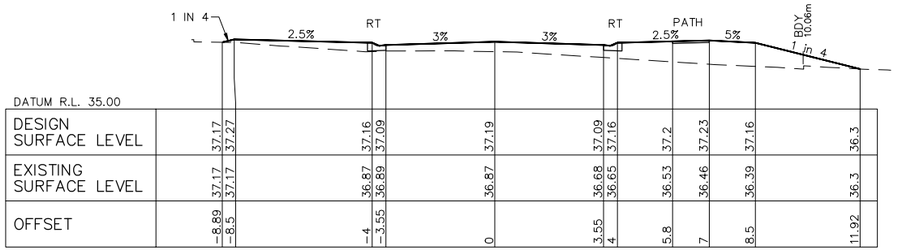
CH 165



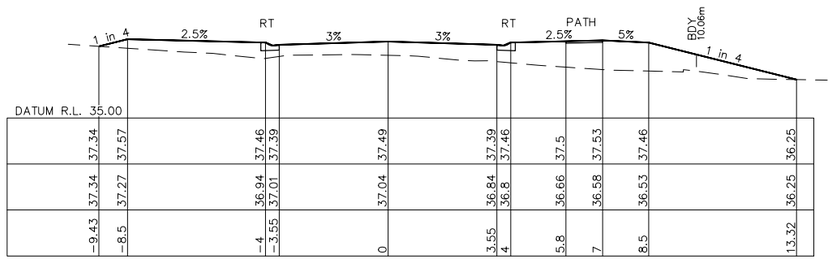
CH 90



CH 150



CH 75



CH 135

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
0 1 2 3 4 A1 / A3
NATURAL 1:100 / 1:200

DESIGN FILE N:\239858\Design\12D\
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: KARAKUNBA ROAD - SHEET 2

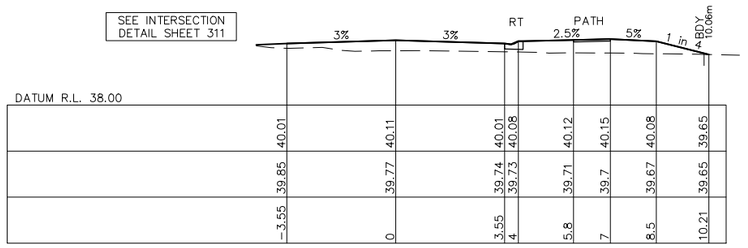
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	229	D

239858-ENG-229(D)
100mm AT FULL SIZE

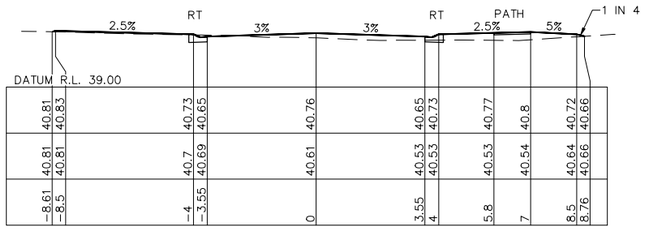
Plotted By: tims Plot Date: 06/08/20 - 09:00 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-229(D).dwg

239858-ENG-230(D)

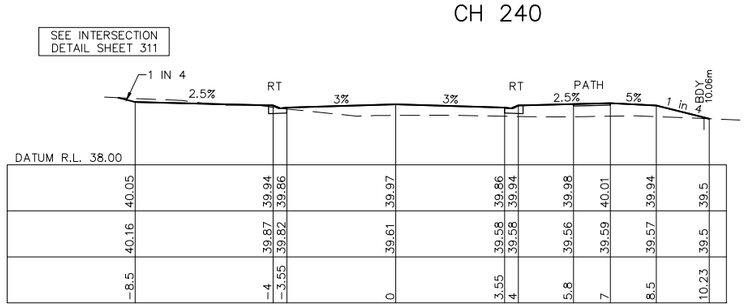
100mm AT FULL SIZE



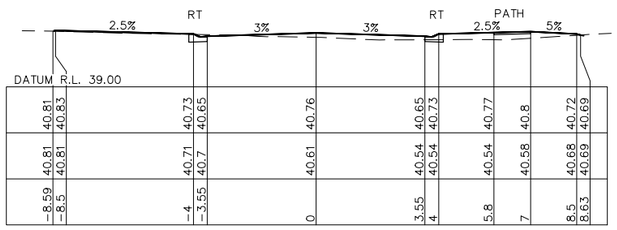
CH 240



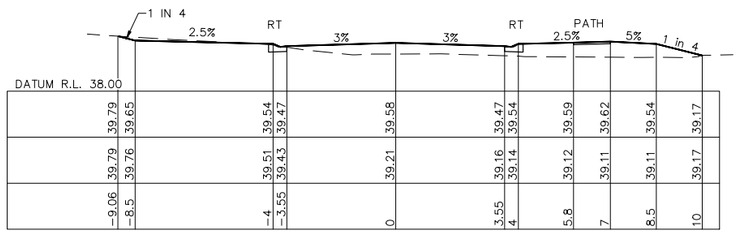
CH 285



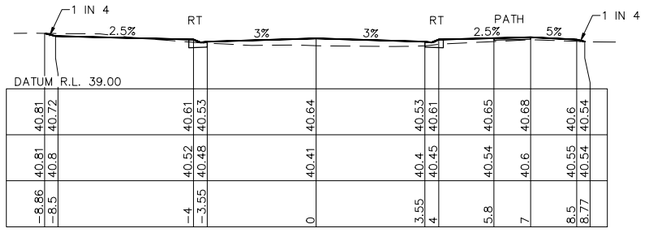
CH 235.58 (MK22 CH 0.000)



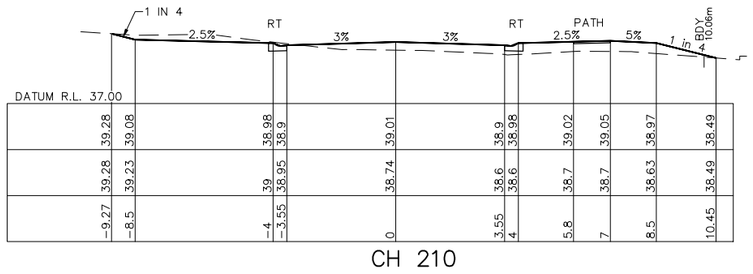
CH 284.24



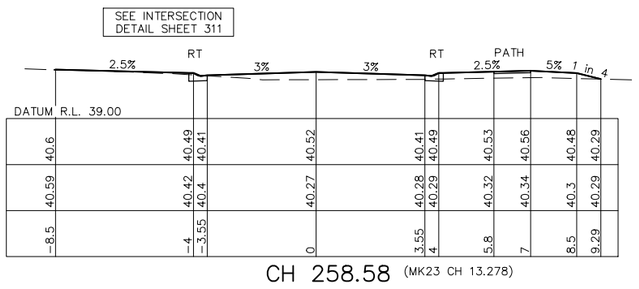
CH 225



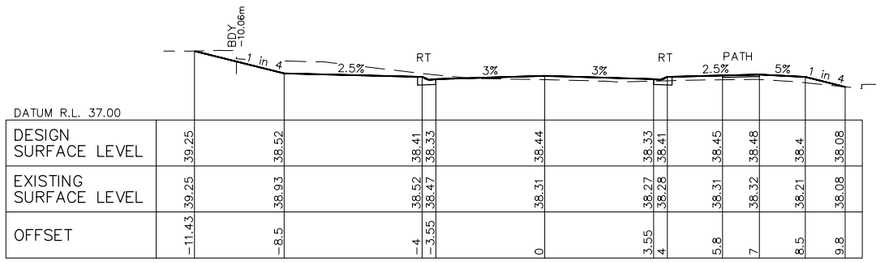
CH 270



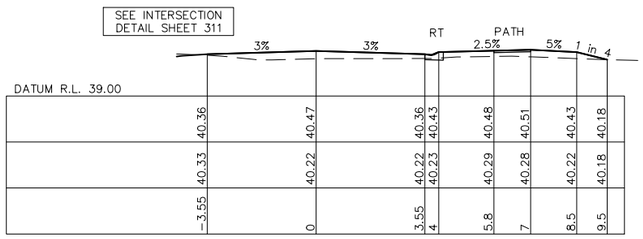
CH 210



CH 258.58 (MK23 CH 13.278)



CH 195



CH 255

REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 1 2 3 4 NATURAL — A1 / A3 1:100 / 1:200

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

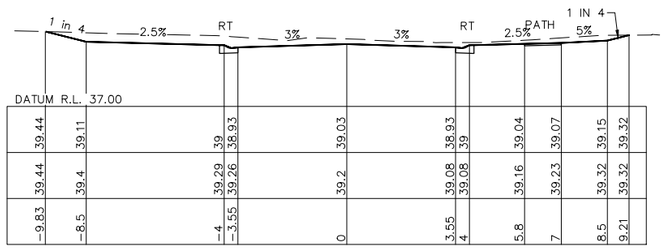
PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
KARAKUNBA ROAD - SHEET 3

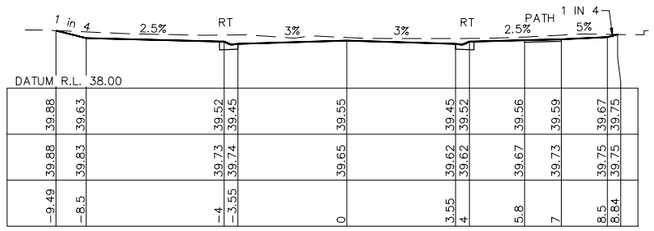
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	230	D

Plotted By: tims Plot Date: 06/08/20 – 09:00 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-230(D).dwg

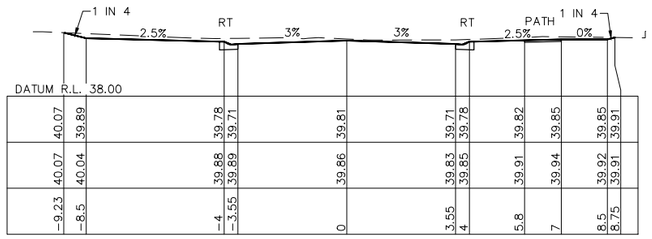
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



CH 330

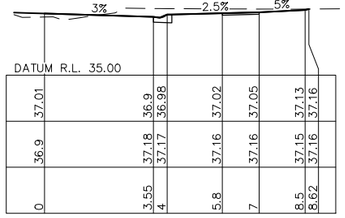


CH 320

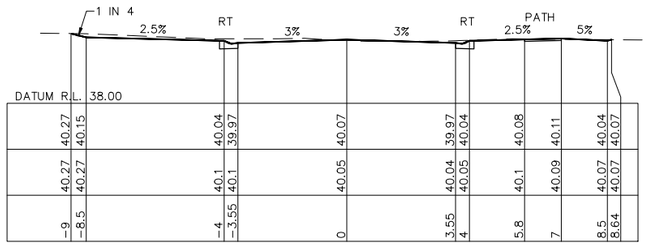


CH 315

SEE INTERSECTION
DETAIL SHEET 312

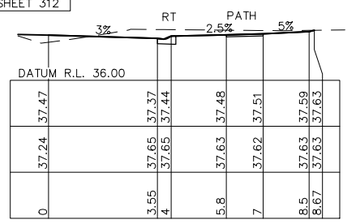


CH 368.87

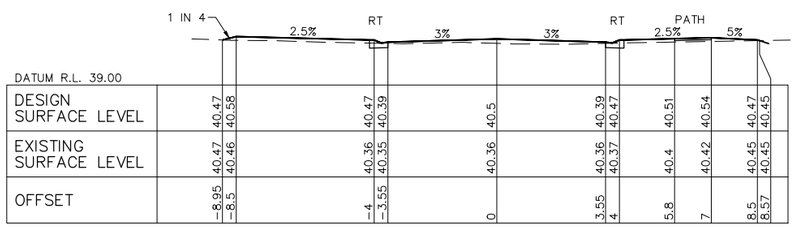


CH 310

SEE INTERSECTION
DETAIL SHEET 312

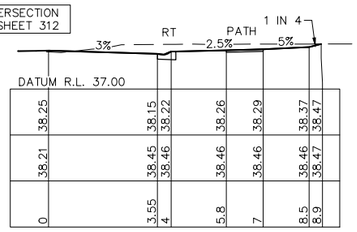


CH 360



CH 300

SEE INTERSECTION
DETAIL SHEET 312



CH 345

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 NATURAL
A1 / A3
1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA,
TULLOKAN, WAROPARA, PIRAMA, TULKABA
AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
KARAKUNBA ROAD - SHEET 4

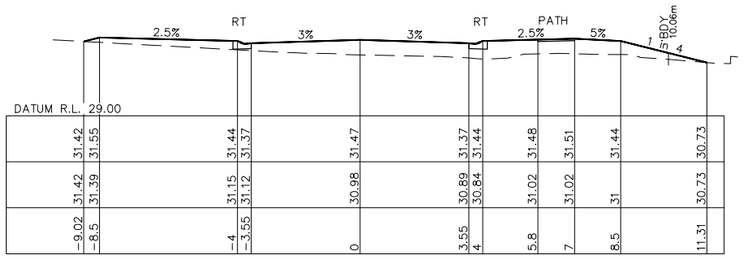
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	231	D

239858-ENG-231(D)

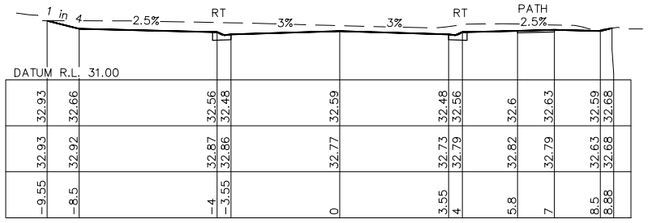
100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 - 09:01 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-231(D).dwg

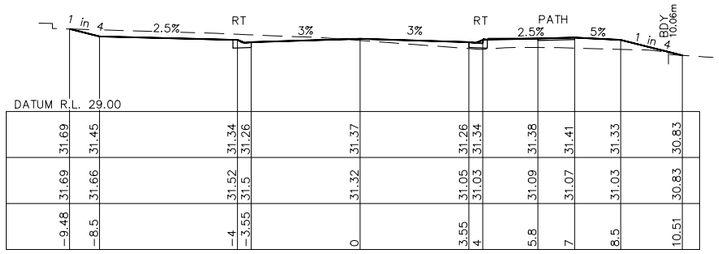
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



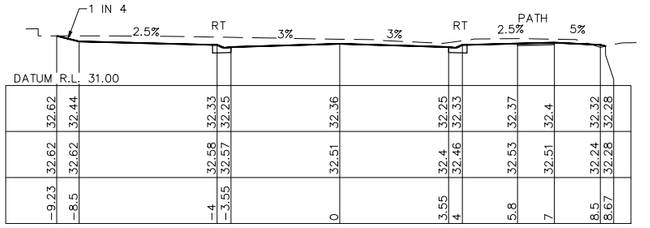
CH 30



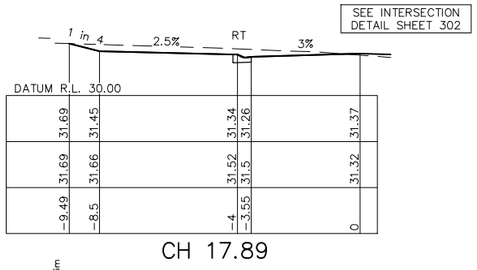
CH 90



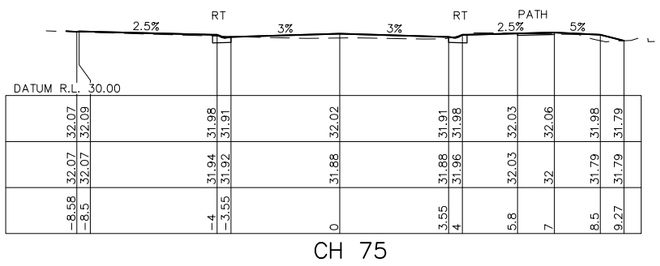
CH 17.97 (MK04 CH 0.000)



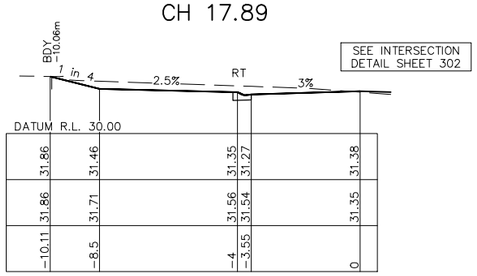
CH 85



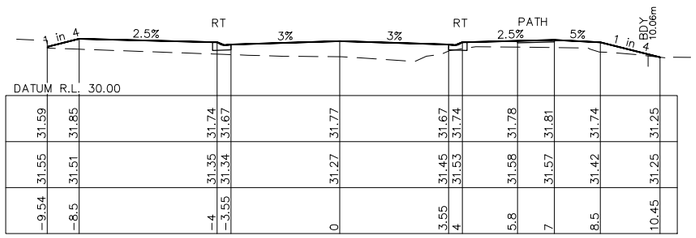
CH 17.89



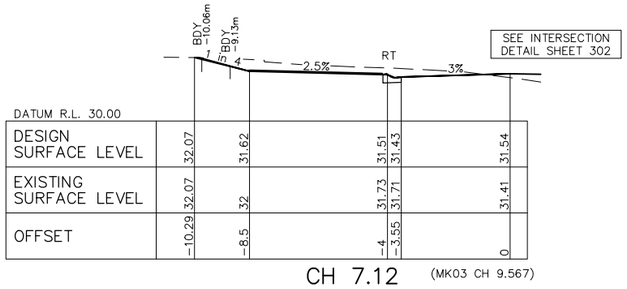
CH 75



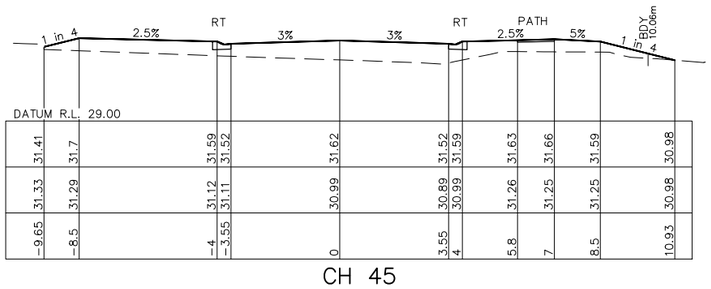
CH 15



CH 60



CH 7.12 (MK03 CH 9.567)



CH 45

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 A1 / A3
NATURAL 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

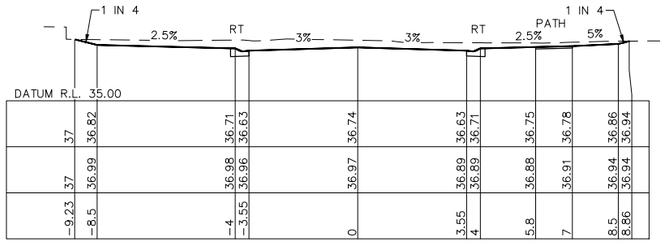
PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: TULKABA ROAD - SHEET 1

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	232	D

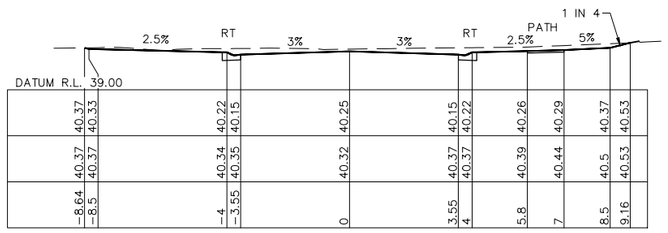
100mm AT FULL SIZE

239858-ENG-233(D)

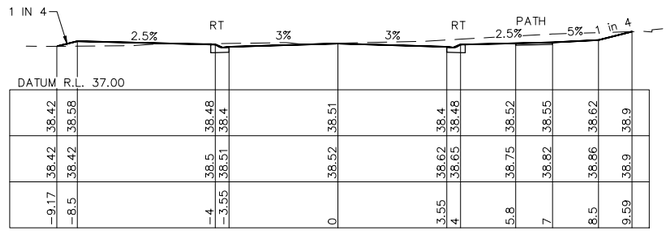
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



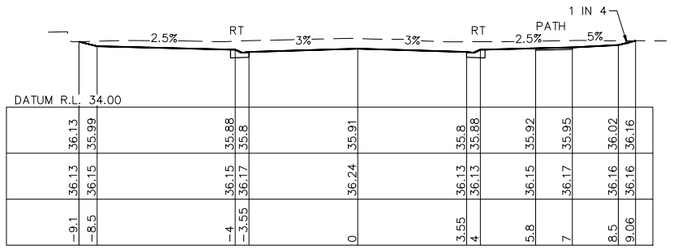
CH 165



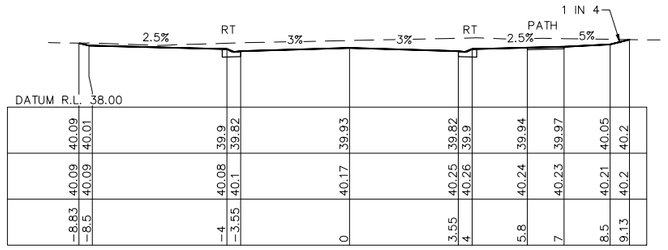
CH 240



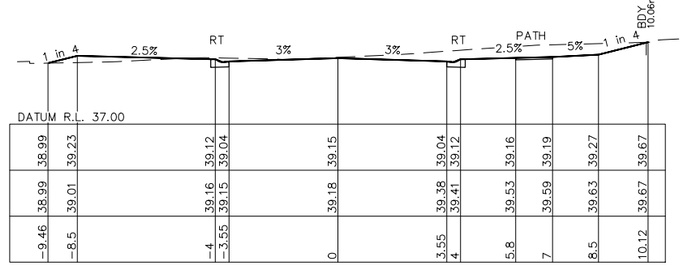
CH 300



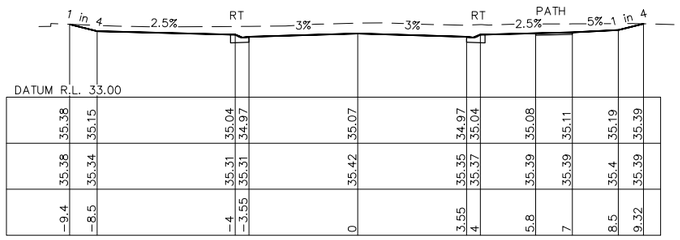
CH 150



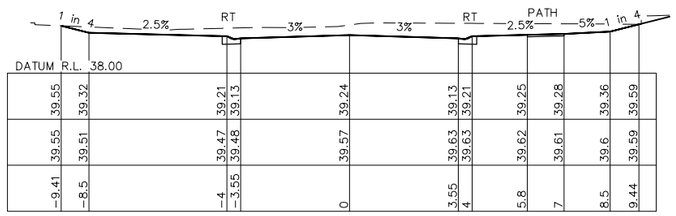
CH 225



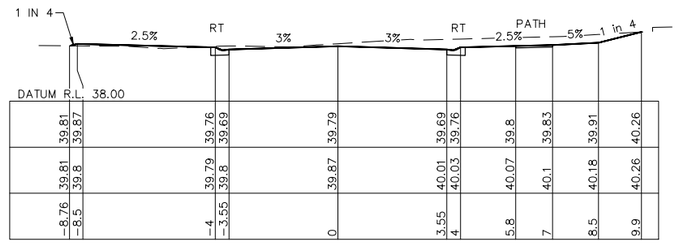
CH 285



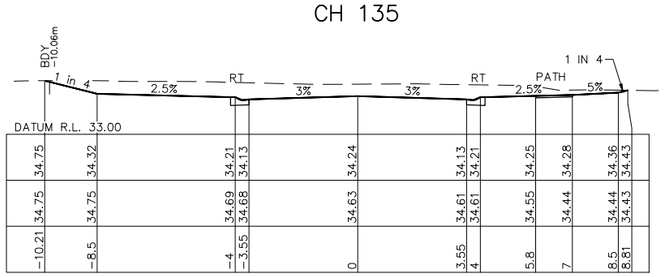
CH 135



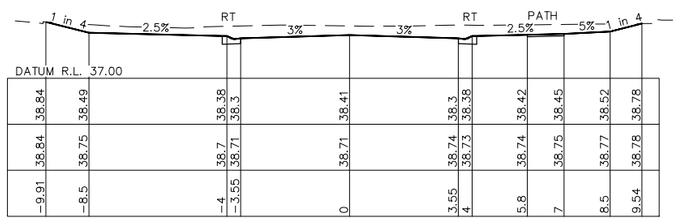
CH 210



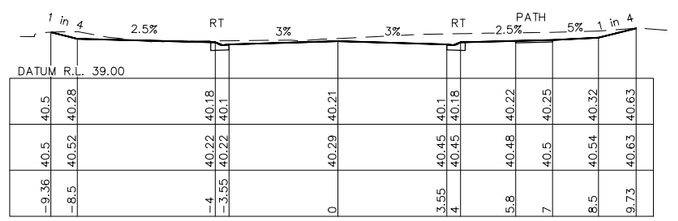
CH 270



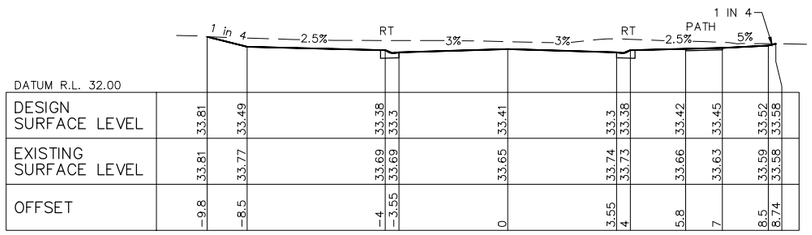
CH 120



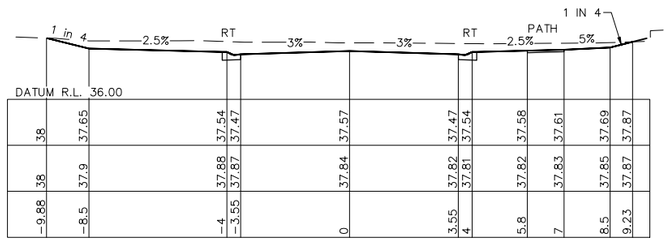
CH 195



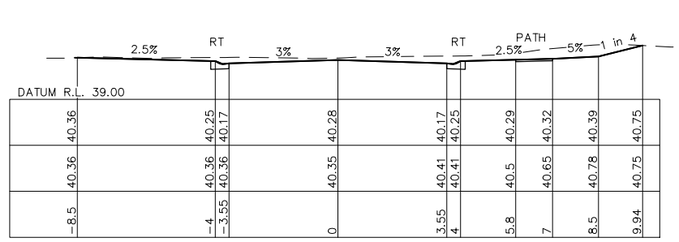
CH 255



CH 105



CH 180



CH 245.62

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 NATURAL
A1 / A3
1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA,
TULLOKAN, WAROPARA, PIRAMA, TULKABA
AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

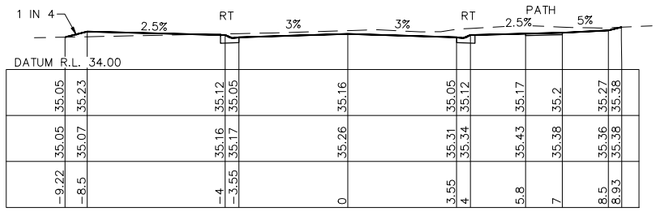
PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
TULKABA ROAD - SHEET 2

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	233	D

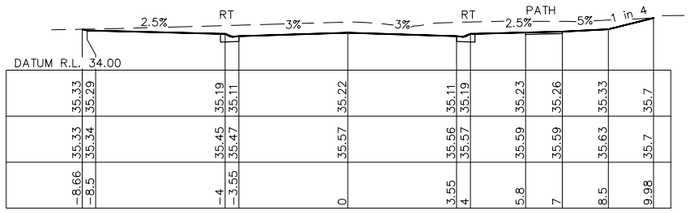
100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 - 09:01 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-233(D).dwg

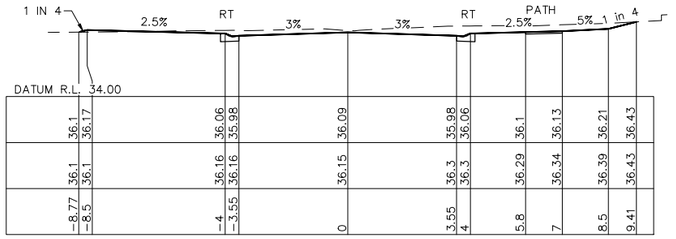
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



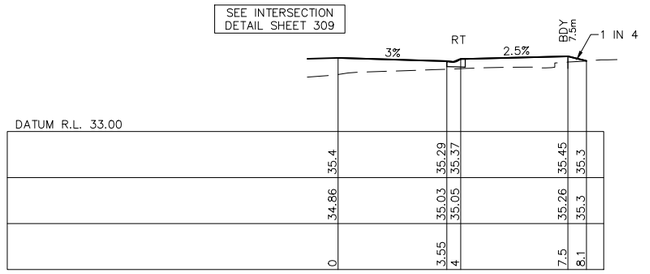
CH 365.08 (MK19 CH 366.530)



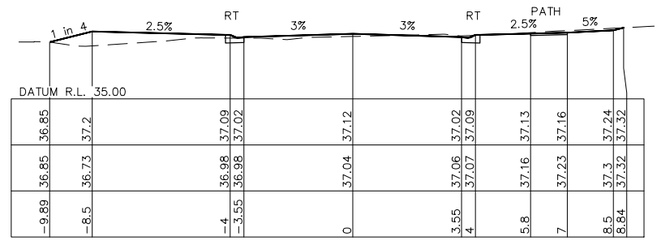
CH 360



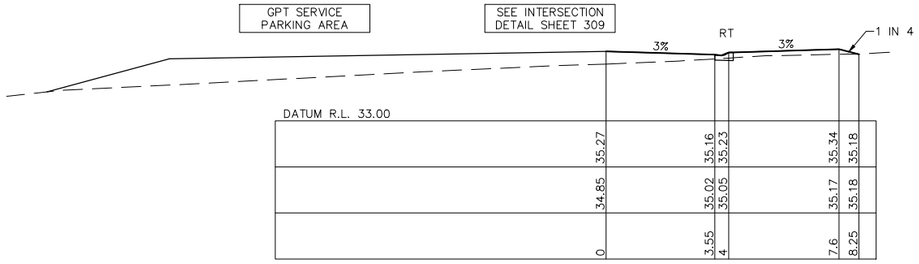
CH 345



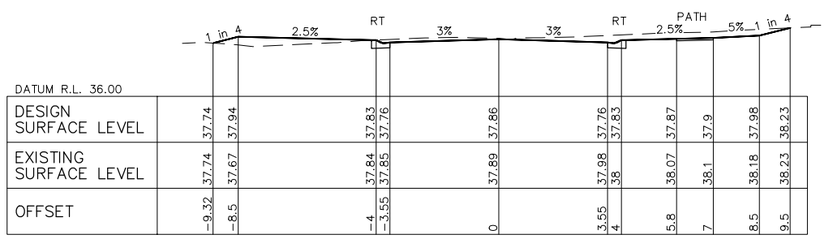
CH 385.39 (DILLABIRRA RD CH 0.00)



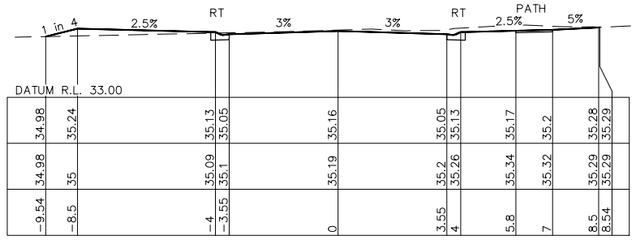
CH 330



CH 375



CH 315



CH 366.53

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4
NATURAL
A1 / A3
1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA,
TULLOKAN, WAROPARA, PIRAMA, TULKABA
AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
TULKABA ROAD - SHEET 3

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	234	D

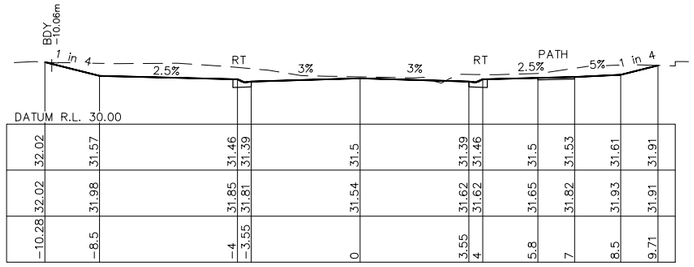
100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:01 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-234(D).dwg

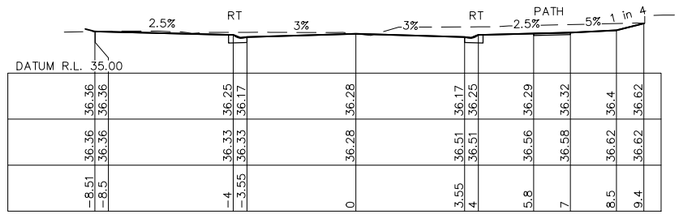
239858-ENG-235(D)

100mm AT FULL SIZE

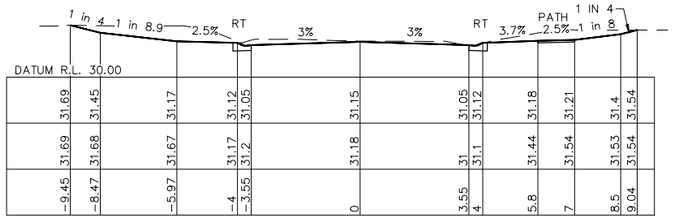
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



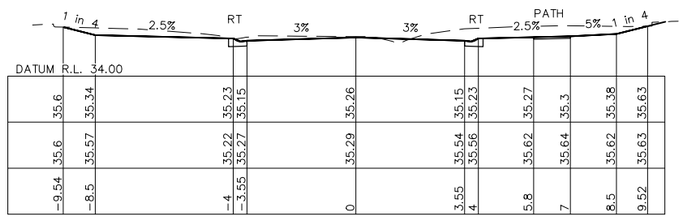
CH 35



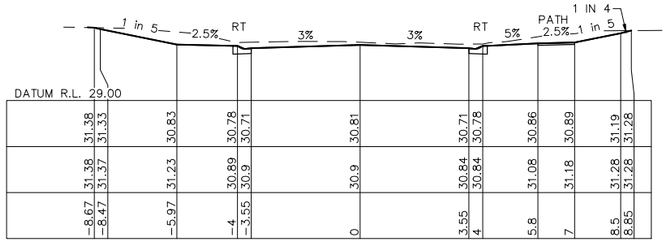
CH 105



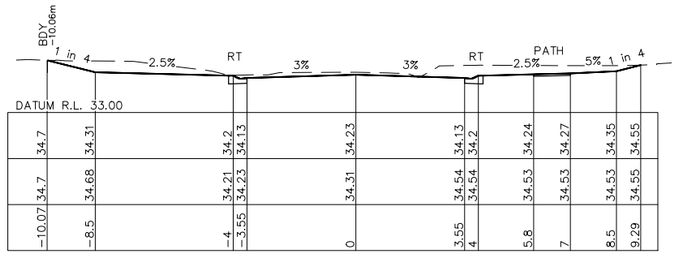
CH 30



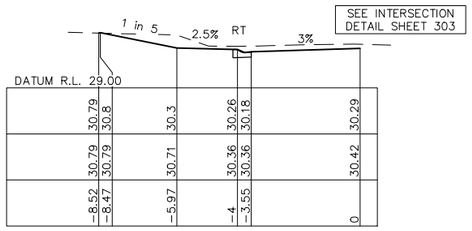
CH 90



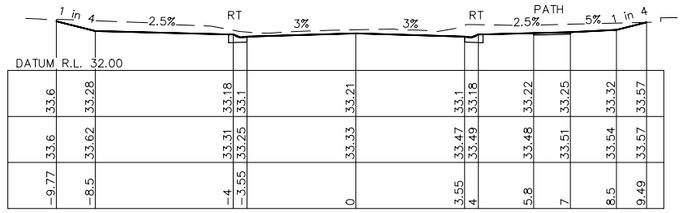
CH 25



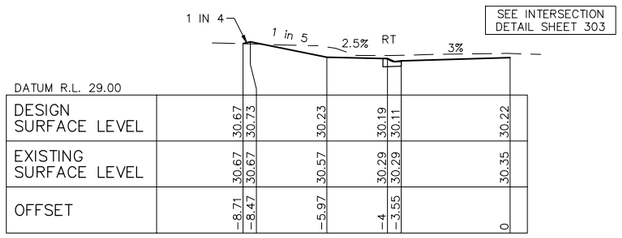
CH 75



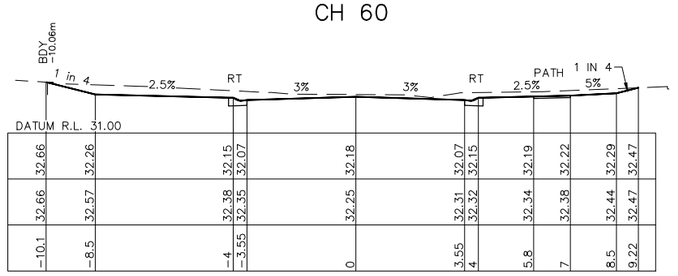
CH 15



CH 60



CH 13.2 (MK05 CH 15.529)



CH 45

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 A1 / A3
NATURAL 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

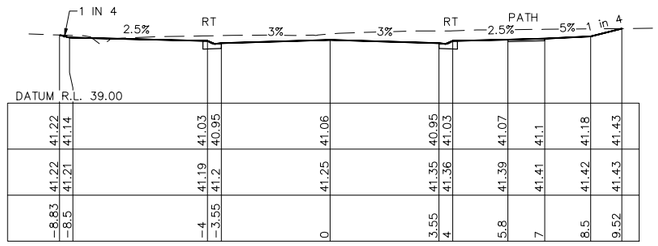
PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
PIRAMA ROAD - SHEET 1

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	235	D

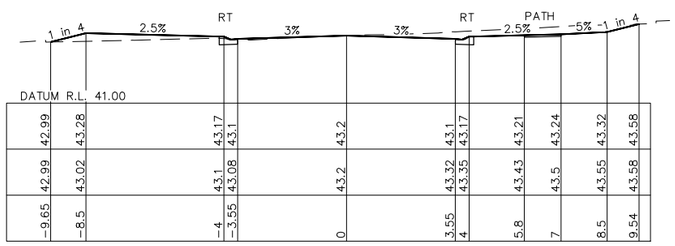
Plotted By: tims Plot Date: 06/08/20 – 09:01 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-235(D).dwg

239858-ENG-236(D)

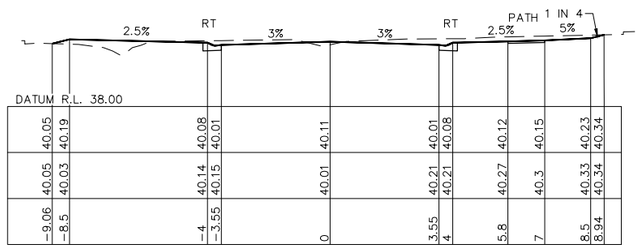
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



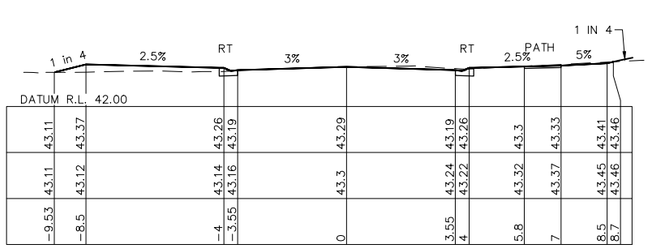
CH 180



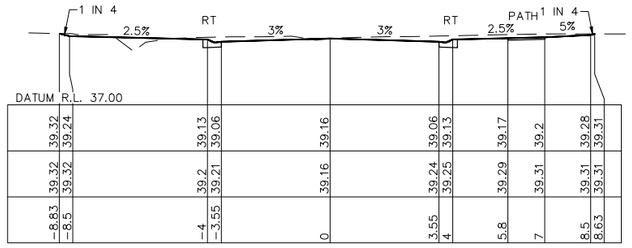
CH 240



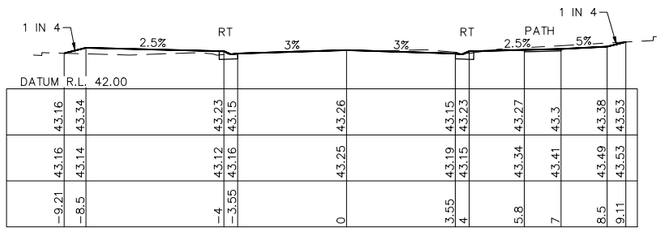
CH 165



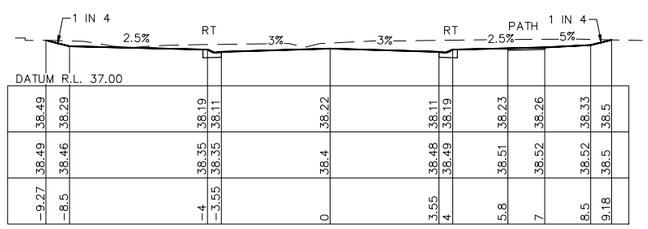
CH 230.61



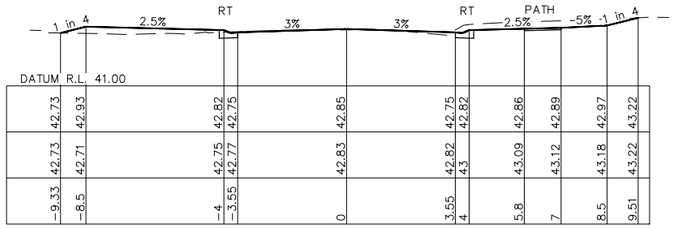
CH 150



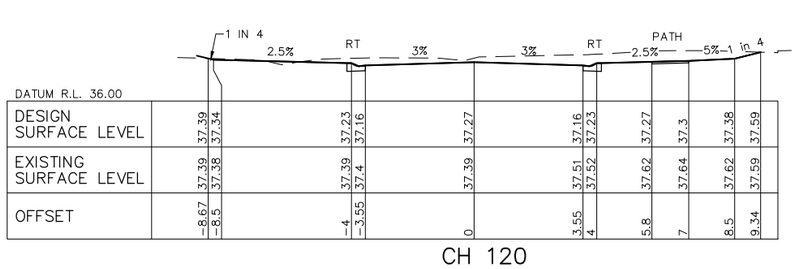
CH 225



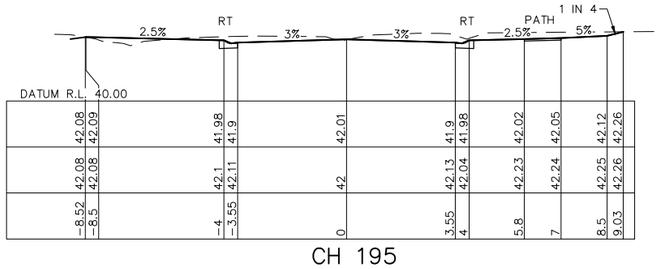
CH 135



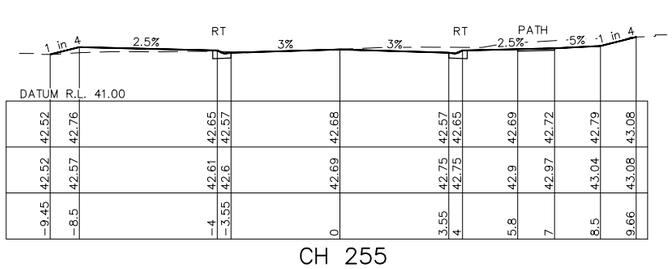
CH 210



CH 120



CH 195



CH 255

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 NATURAL
A1 / A3 1:100 / 1:200
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
PIRAMA ROAD - SHEET 2

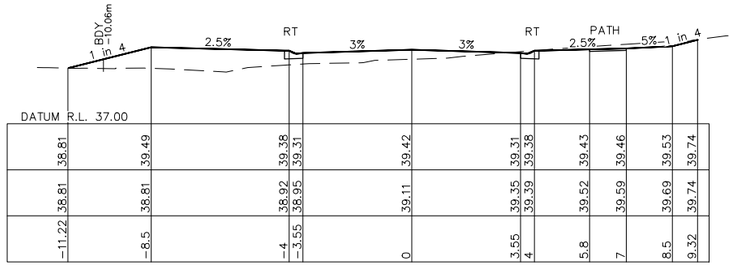
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	236	D

Plotted By: tims Plot Date: 06/08/20 – 09:01 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-236(D).dwg

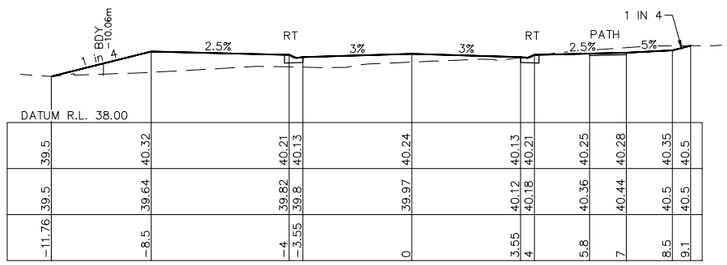
100mm AT FULL SIZE

239858-ENG-237(D)

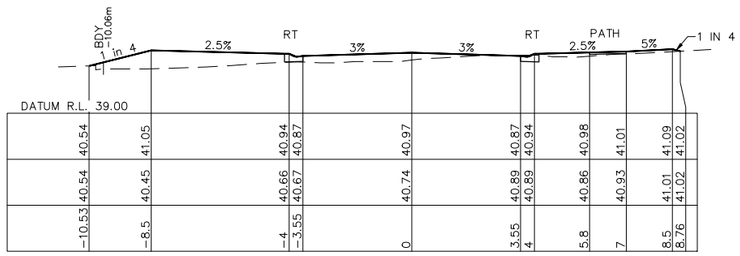
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



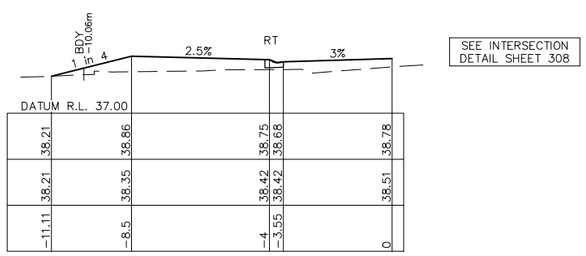
CH 315



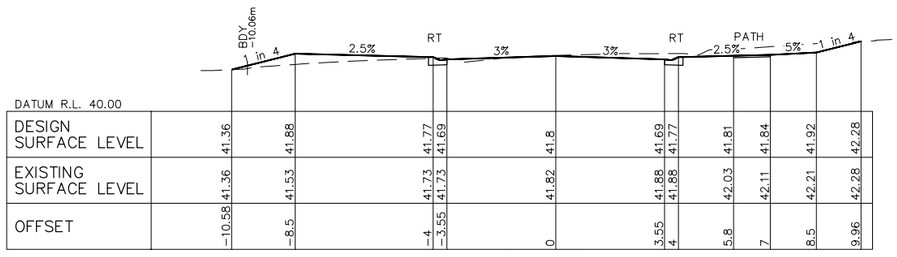
CH 300



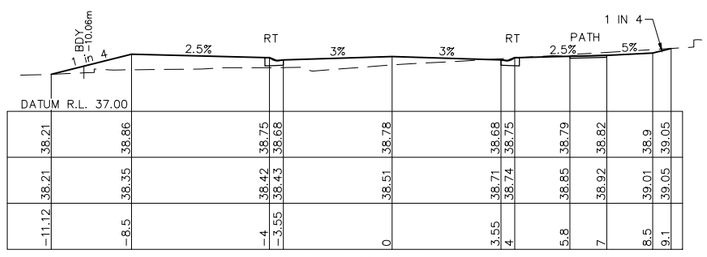
CH 285



CH 323.55 (MK17 CH 13.278)



CH 270



CH 323.53

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4
NATURAL
A1 / A3
1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA,
TULLOKAN, WAROPARA, PIRAMA, TULKABA
AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
PIRAMA ROAD - SHEET 3

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	237	D

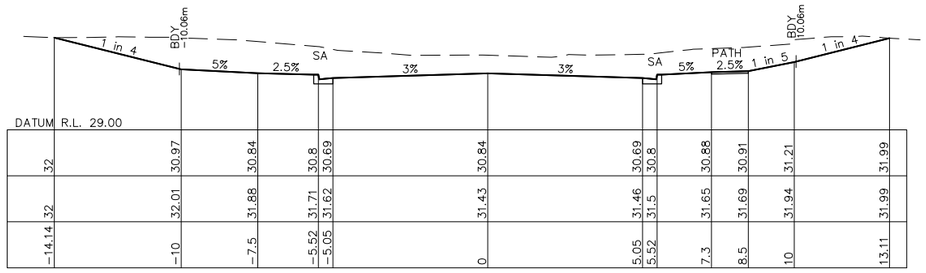
Plotted By: tims Plot Date: 06/08/20 - 09:01 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-237(D).dwg

100mm AT FULL SIZE

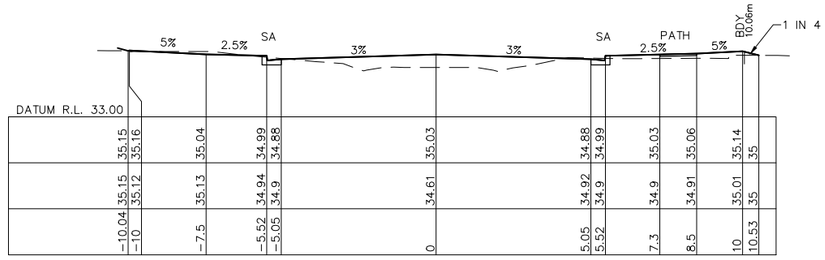
239858-ENG-238(D)

100mm AT FULL SIZE

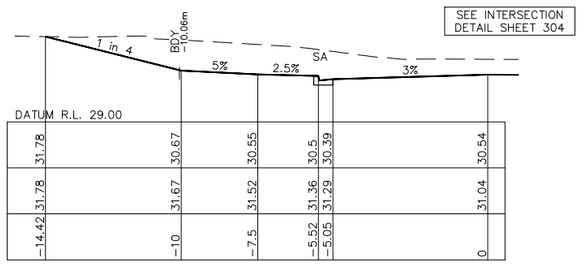
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



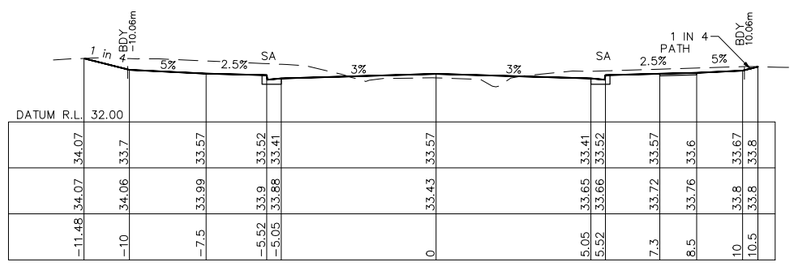
CH 19.96 (MK08 CH 0.000)



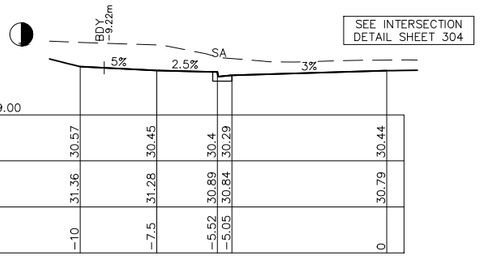
CH 60



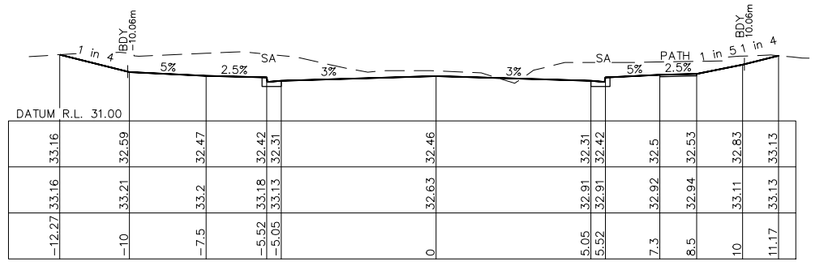
CH 15



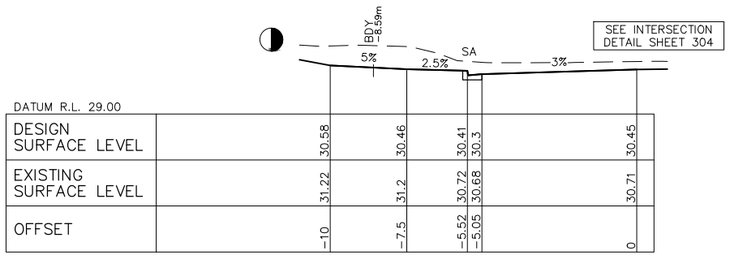
CH 45



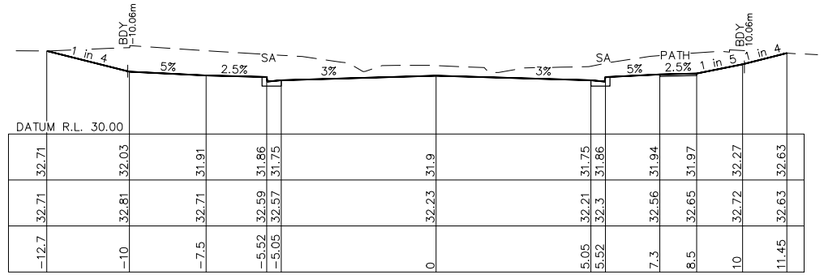
CH 10.06



CH 35



CH 8.53 (MK07 CH 11.345)



CH 30

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
0 1 2 3 4 A1 / A3
NATURAL 1:100 / 1:200

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA,
TULLOKAN, WAROPARA, PIRAMA, TULKABA
AND KARAKUMBA ROADS, WYEE

PROJECT WYEE WEST PAPER SUBDIVISION

PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
WAROPARA ROAD - SHEET 1

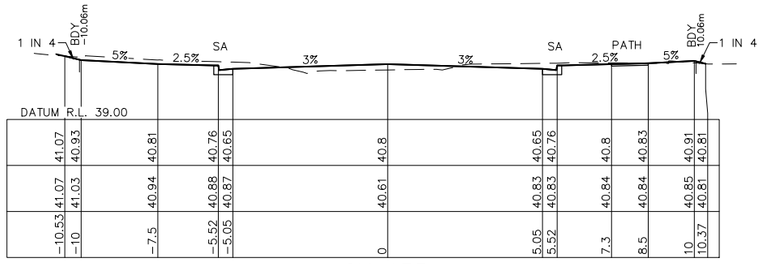
SURVEYED	DATUM	PROJECT No.	DISCIPLINE	NUMBER	REV.
LMCC	A.H.D. GDA 94 ZONE 56	239858	ENG	238	D

Plotted By: tims Plot Date: 06/08/20 - 09:02 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-238(D).dwg

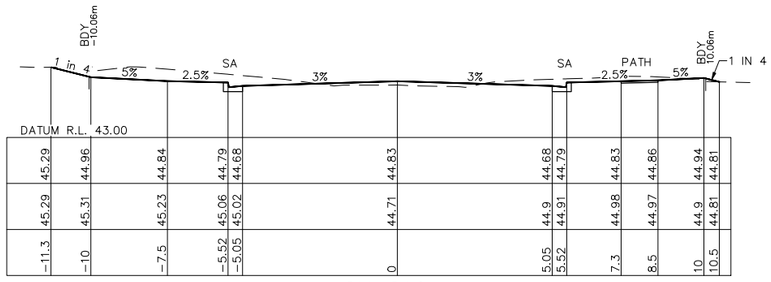
239858-ENG-239(D)

100mm AT FULL SIZE

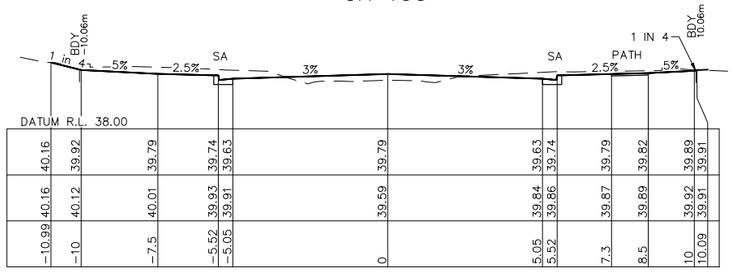
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



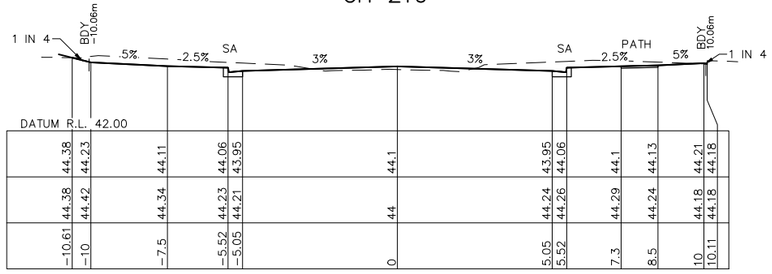
CH 135



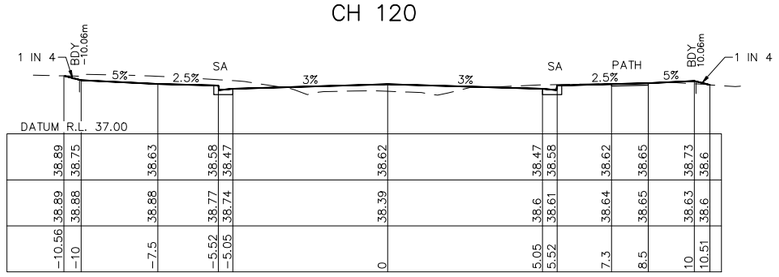
CH 210



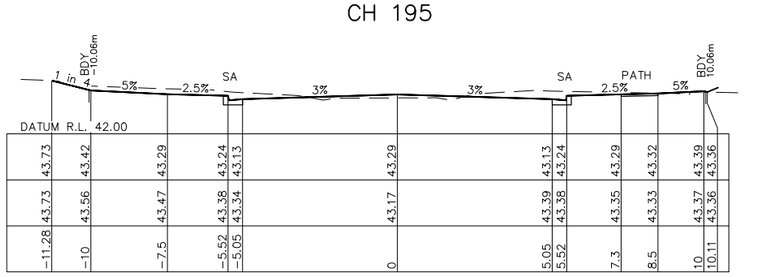
CH 120



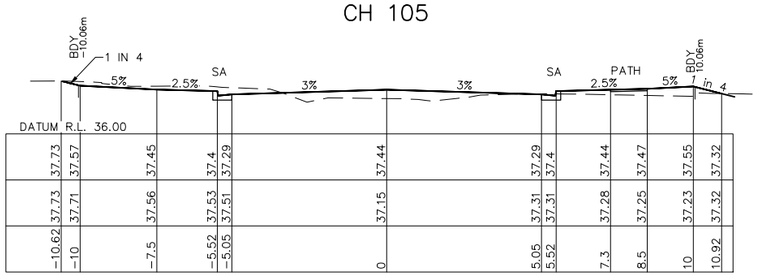
CH 195



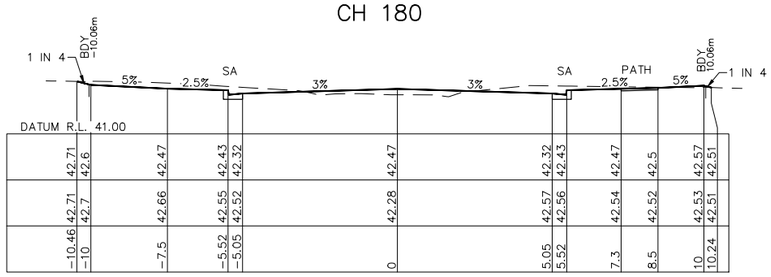
CH 105



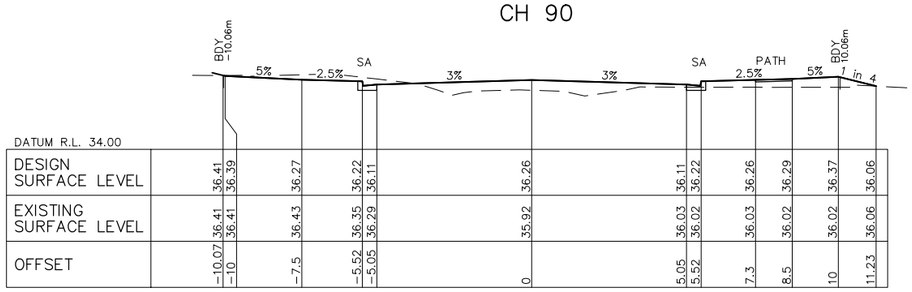
CH 180



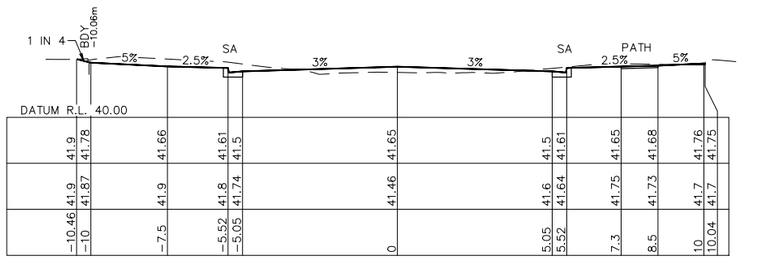
CH 90



CH 165



CH 75



CH 150

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 NATURAL
A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA,
TULLOKAN, WAROPARA, PIRAMA, TULKABA
AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

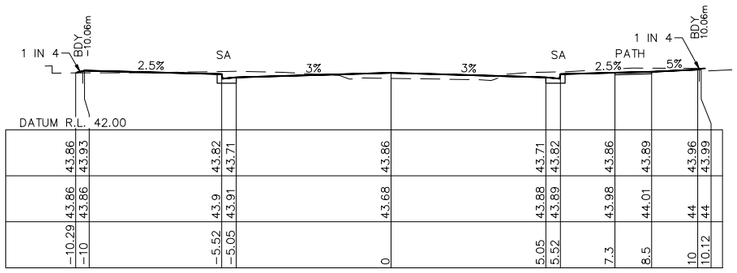
PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
WAROPARA ROAD - SHEET 2

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	239	D

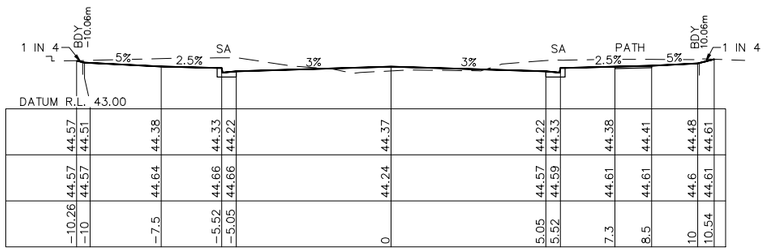
Plotted By: tims Plot Date: 06/08/20 – 09:02 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-239(D).dwg

239858-ENG-240(D)

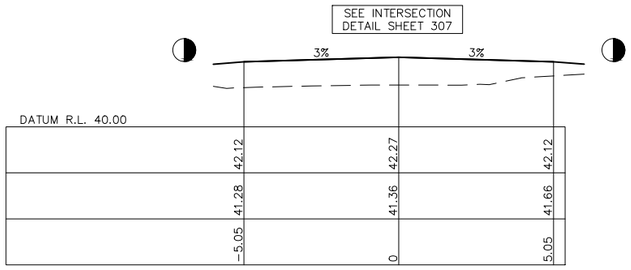
REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



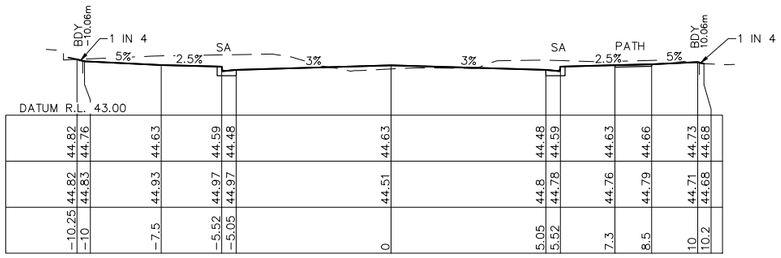
CH 255



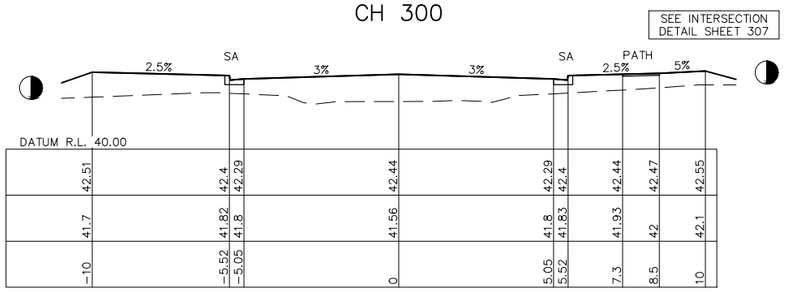
CH 245



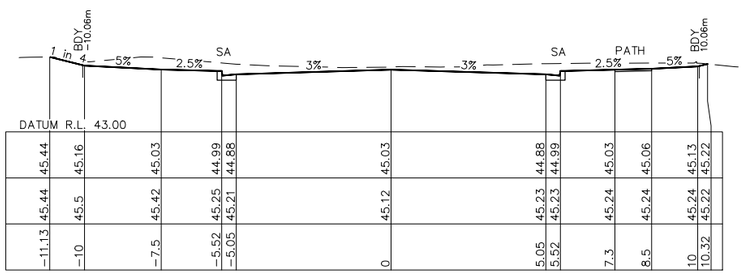
CH 300



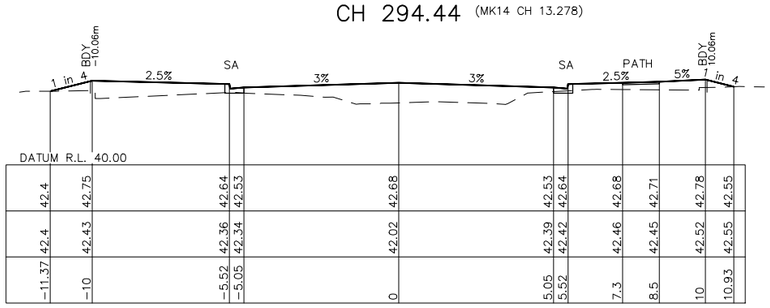
CH 240



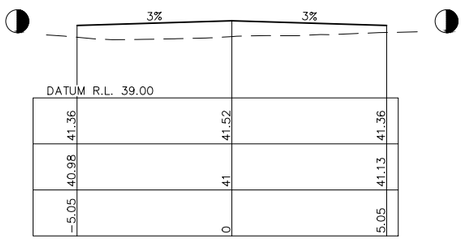
CH 294.44 (MK14 CH 13.278)



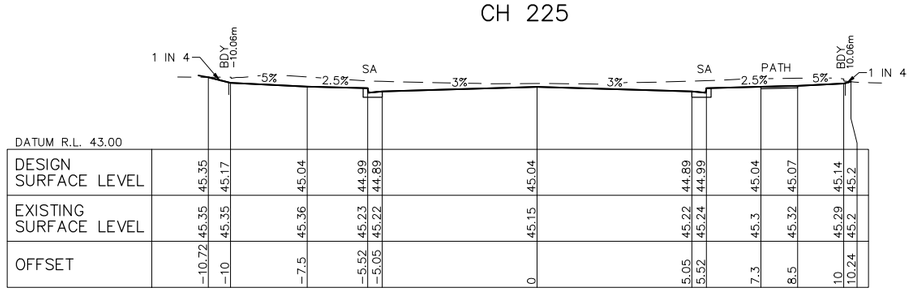
CH 225



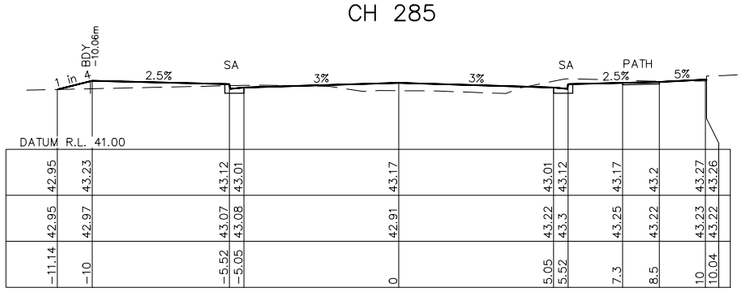
CH 285



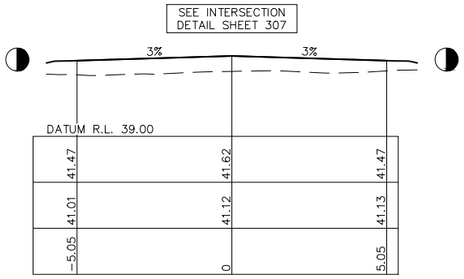
CH 316.89



CH 222.43



CH 270



CH 315

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 1 2 3 4 NATURAL — A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC | DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: WAROPARA ROAD - SHEET 3

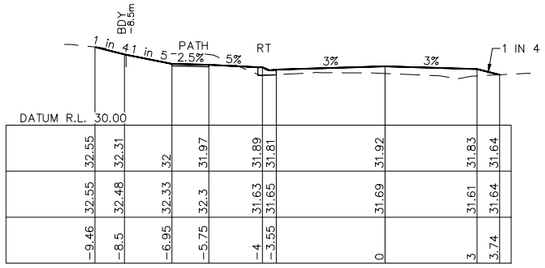
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	240	D

Plotted By: tims Plot Date: 06/08/20 - 09:02 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-240(D).dwg

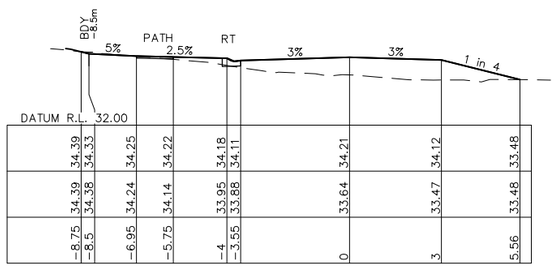
100mm AT FULL SIZE

239858-ENG-241(D)

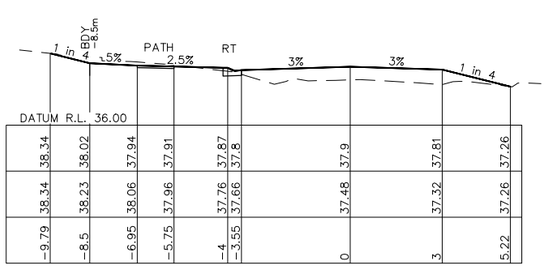
REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



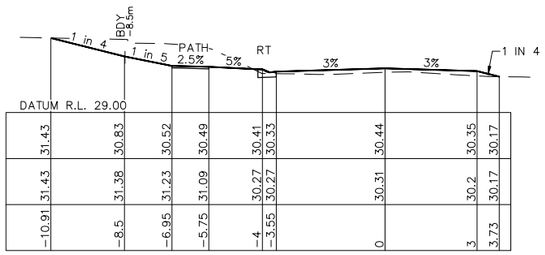
CH 30



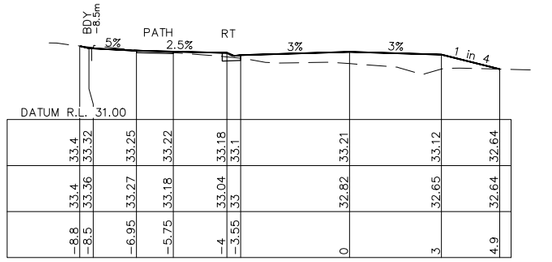
CH 60



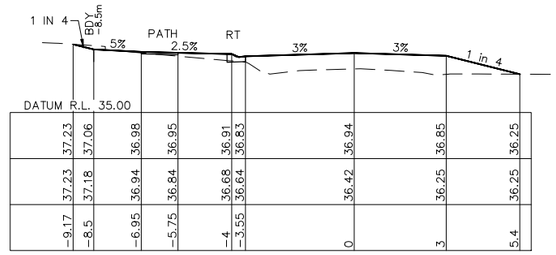
CH 120



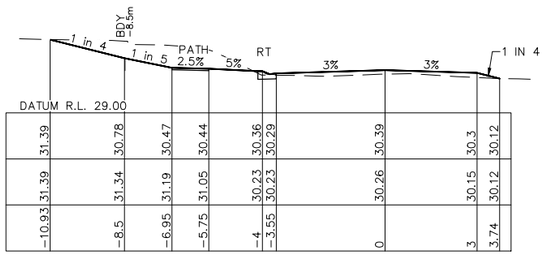
CH 15



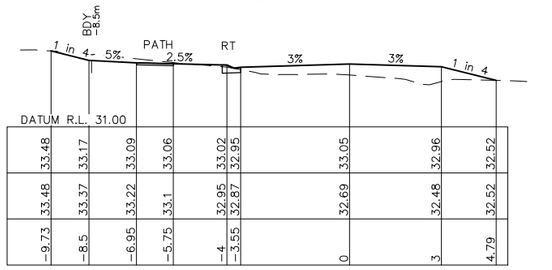
CH 45



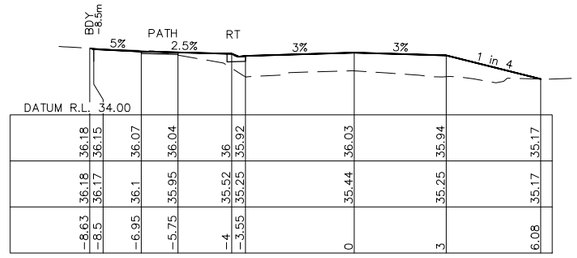
CH 105



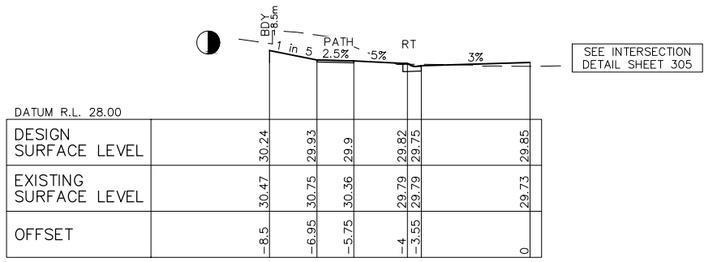
CH 14.53 (MK10 CH 0.000)



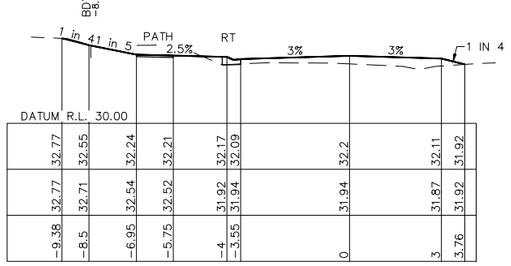
CH 43



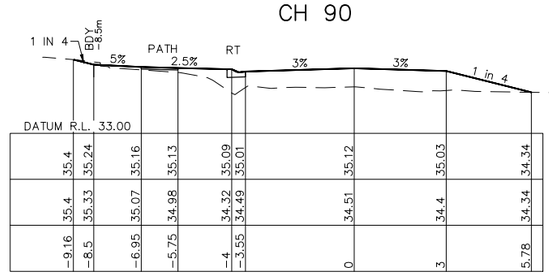
CH 90



CH 9.06 (MK09 CH 11.163)



CH 33



CH 75

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 NATURAL
A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

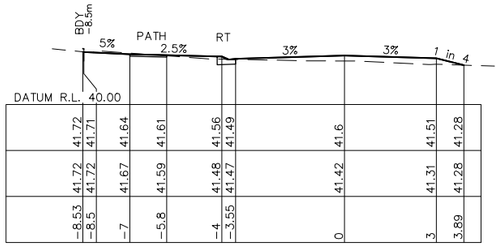
PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: TULLOKAN ROAD - SHEET 1

PROJECT No. 239858 - DISCIPLINE ENG - NUMBER 241 REV. D

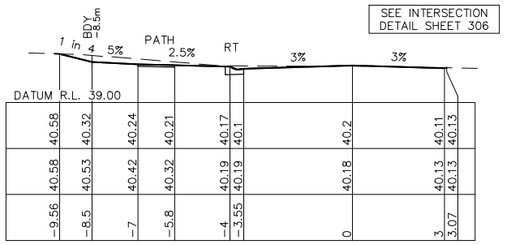
100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:02 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-241(D).dwg

239858-ENG-242(D)

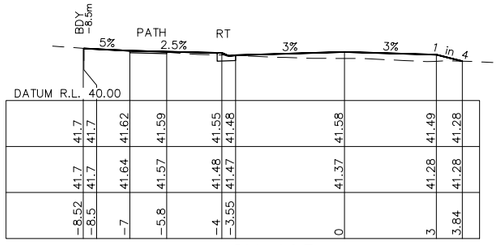


CH 199.43

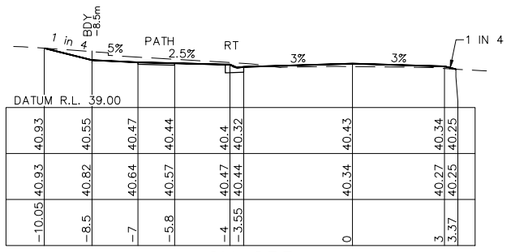


CH 265 (MK12 CH 0.000)

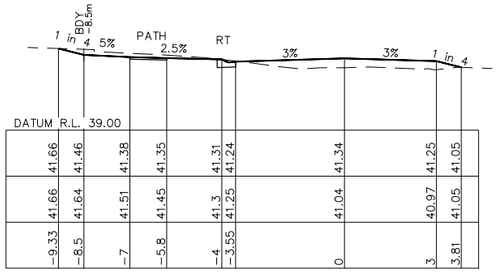
REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



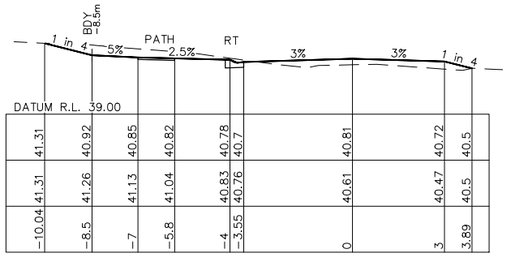
CH 195



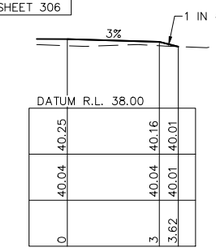
CH 255



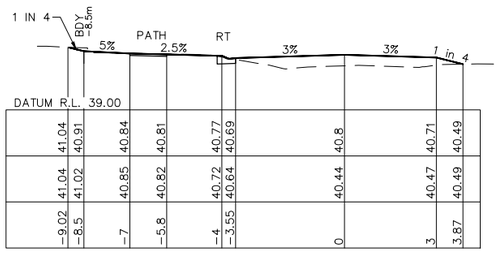
CH 180



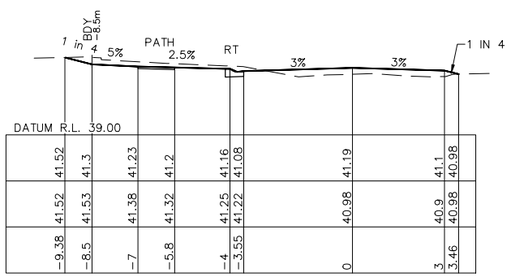
CH 240



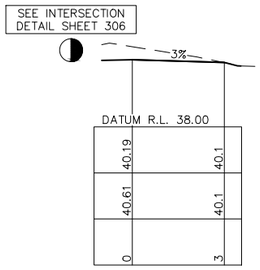
CH 274.19 (MK11 CH 12.562)



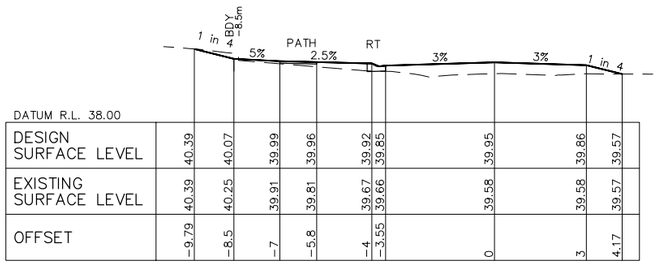
CH 165



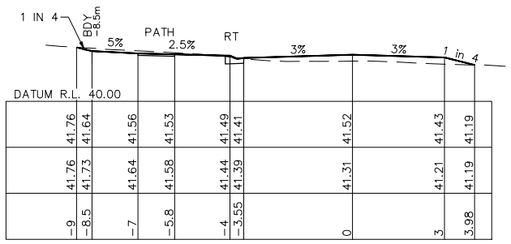
CH 225



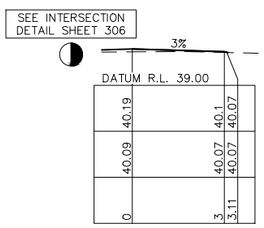
CH 270



CH 150



CH 210



CH 268.17

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 1 2 3 4 NATURAL — A1 / A3 1:100 / 1:200

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE.

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC | DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: TULLOKAN ROAD - SHEET 2

PROJECT No. 239858 - DISCIPLINE ENG - NUMBER 242 | REV. D

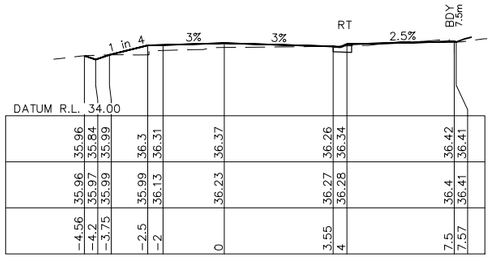
Plotted By: tims Plot Date: 06/08/20 - 09:02 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-242(D).dwg

100mm AT FULL SIZE

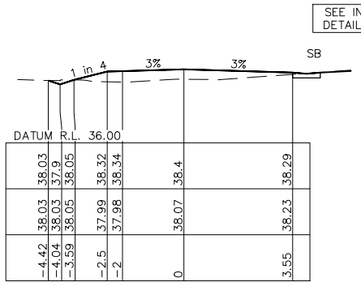
239858-ENG-243(D)

100mm AT FULL SIZE

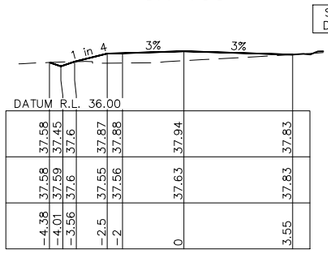
REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



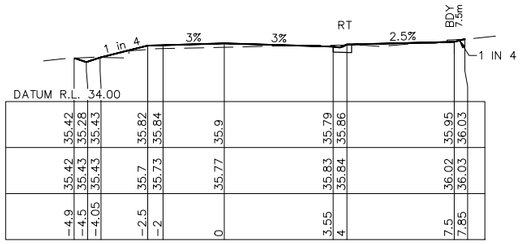
CH 45



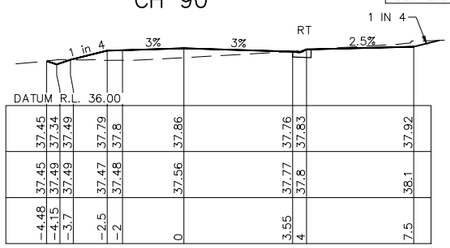
CH 105



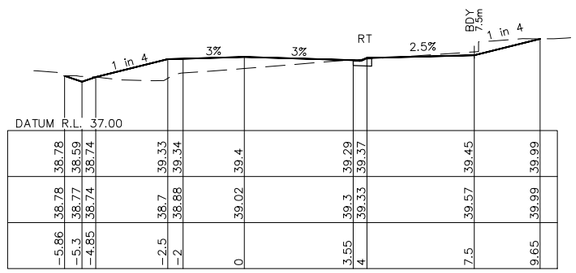
CH 90



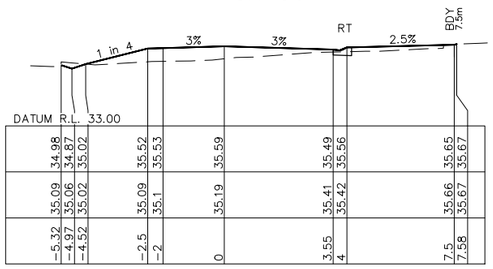
CH 30



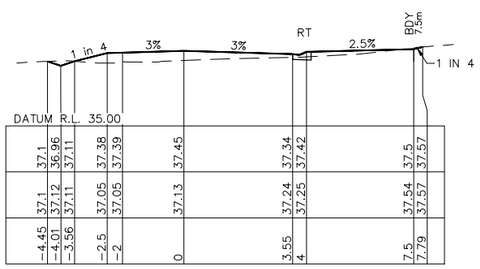
CH 87.59 (MK18 CH 87.591)



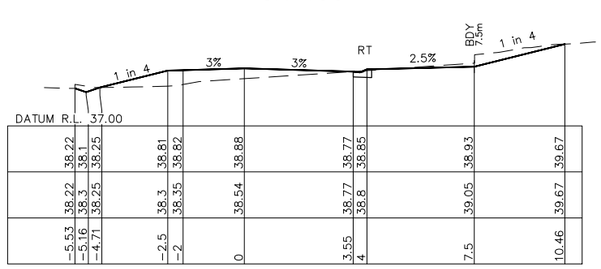
CH 135



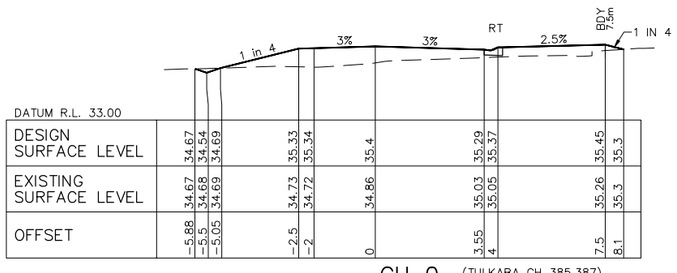
CH 15



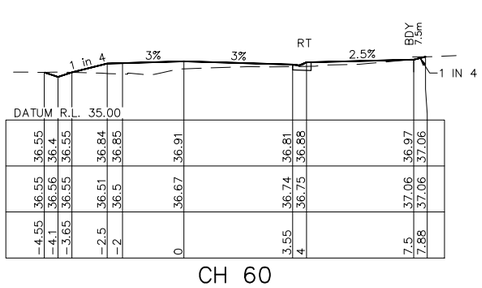
CH 75



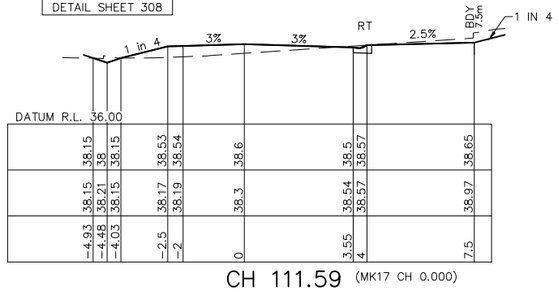
CH 120



CH 0 (TULKABA CH 385.387)
(MK19 CH 26.129)



CH 60



CH 111.59 (MK17 CH 0.000)

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 NATURAL
A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

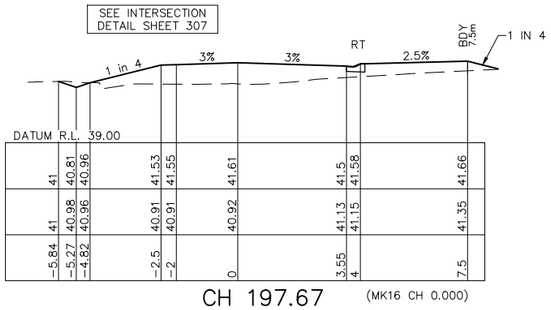
SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: DILLABIRRA ROAD - SHEET 1

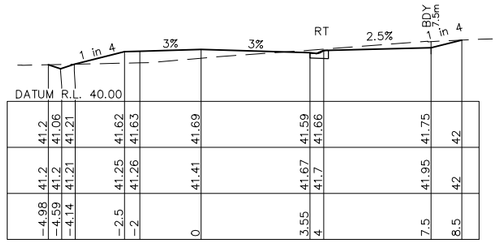
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	243	D

Plotted By: tims Plot Date: 06/08/20 - 09:02 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-243(D).dwg

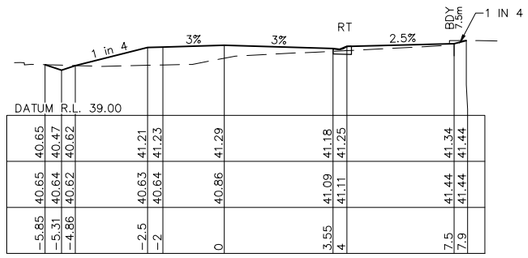
239858-ENG-244(D)



CH 197.67 (MK16 CH 0.000)

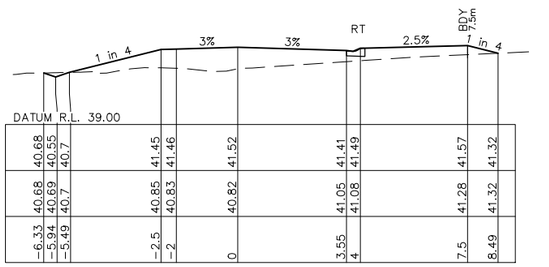


CH 227.59

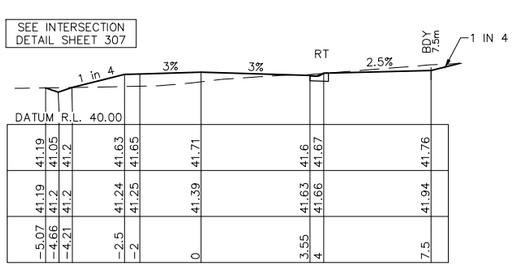


CH 285

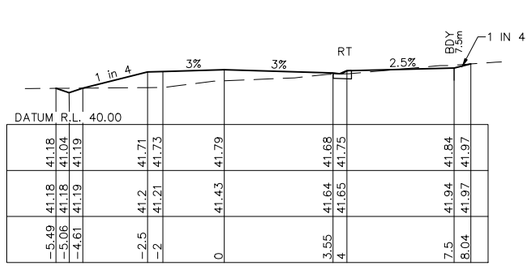
REFER TO SHEETS 501 TO 504 FOR SITE REGRADE PLAN DETAILS



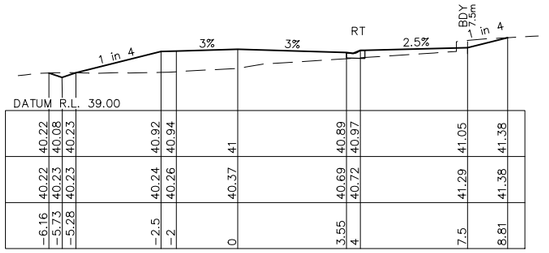
CH 195



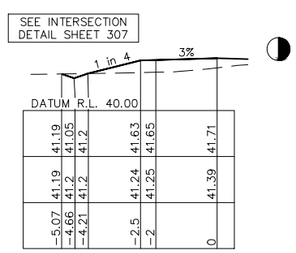
CH 224.68 (MK14 CH 0.000)



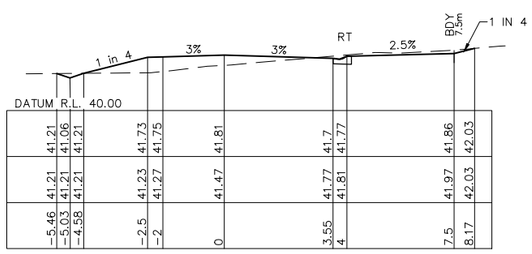
CH 255



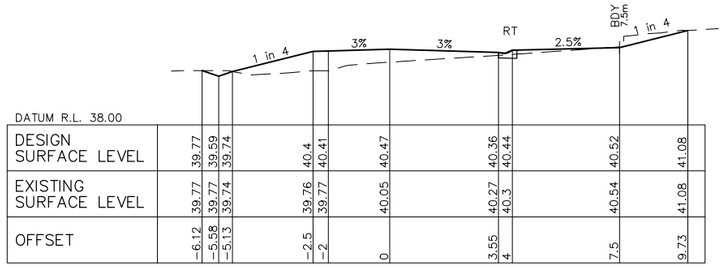
CH 180



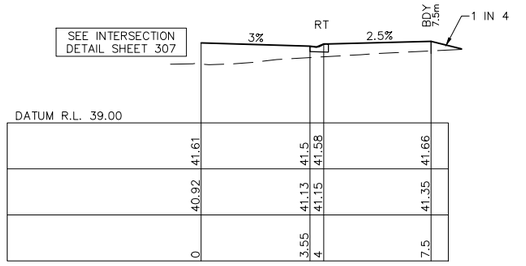
CH 224.67 (MK13 CH 113.268)



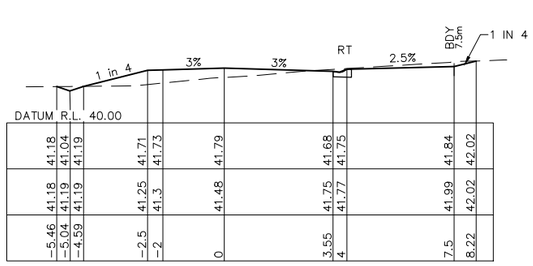
CH 247.53



CH 165



CH 197.68 (MK15 CH 13.268)



CH 240

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 1 2 3 4 NATURAL — A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC | DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS:
DILLABIRRA ROAD - SHEET 2

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	244	D

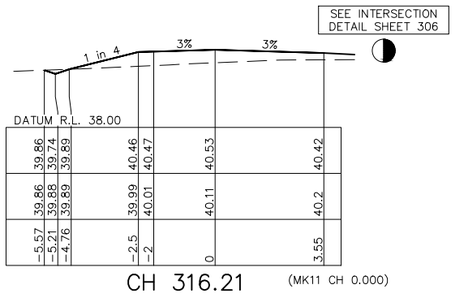
100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:02 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-244(D).dwg

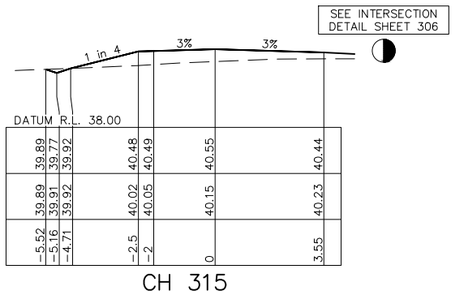
239858-ENG-245(D)

100mm AT FULL SIZE

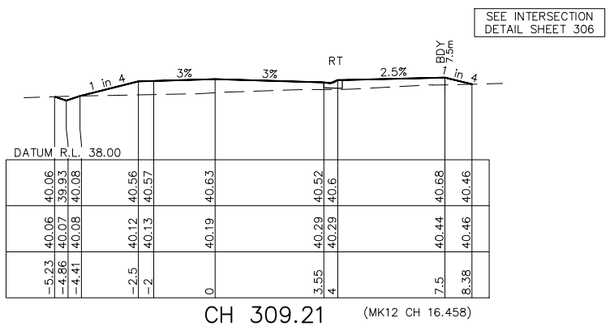
REFER TO SHEETS 501 TO 504
FOR SITE REGRADE PLAN DETAILS



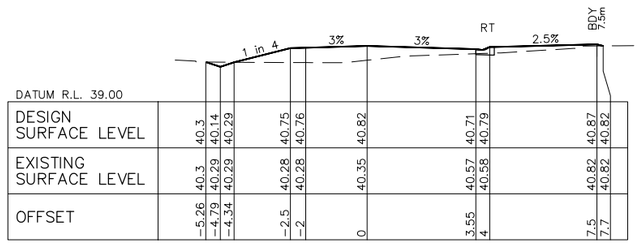
CH 316.21 (MK11 CH 0.000)



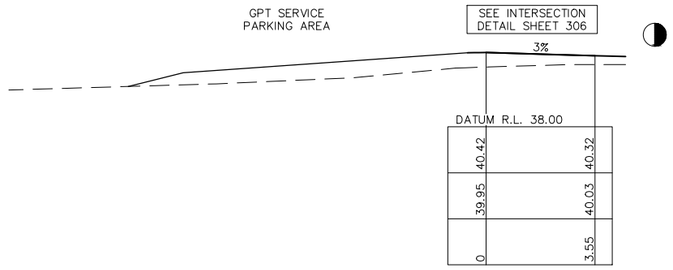
CH 315



CH 309.21 (MK12 CH 16.458)



CH 300



CH 321.22 (TULLOKAN CH 280.192)

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 1 2 3 4 A1 / A3
NATURAL 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT
LAKE MACQUARIE CITY

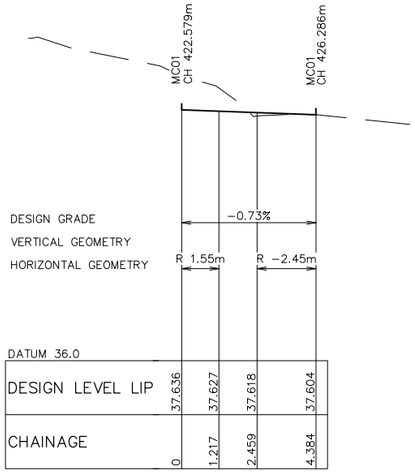
PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
ROAD CROSS SECTIONS: DILLABIRRA ROAD - SHEET 3

SURVEYED	DATUM	PROJECT No.	DISCIPLINE	NUMBER	REV.
LMCC	A.H.D. GDA 94 ZONE 56	239858	ENG	245	D

Plotted By: tims Plot Date: 06/08/20 – 09:02 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–245(D).dwg

239858-ENG-301(D)



LONGITUDINAL SECTION MK35

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- 18 DESIGN SURFACE MAJOR CONTOURS
- 18 DESIGN SURFACE MINOR CONTOURS
- 18 EXISTING SURFACE MAJOR CONTOURS
- 18 EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- GAS EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.2m

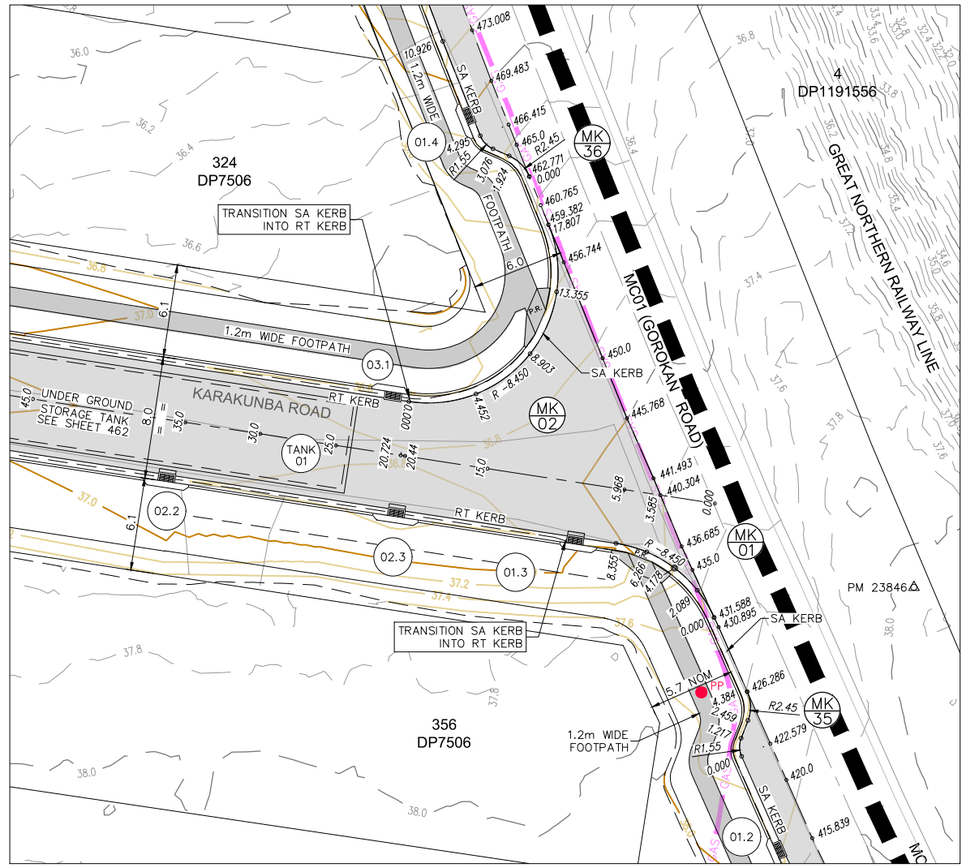
MGA

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD−901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

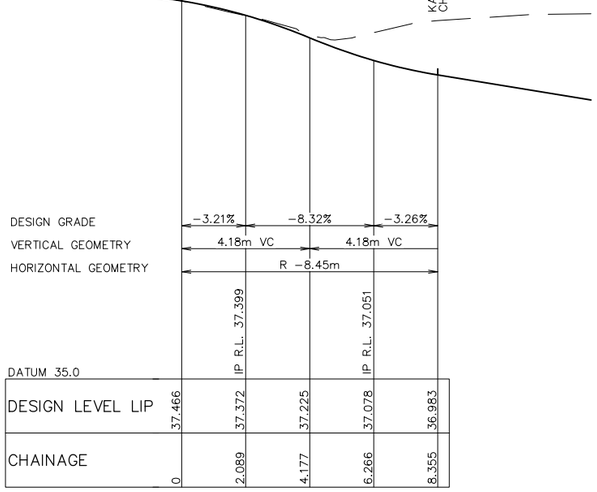
DESIGN RL ON LIP OF KERB

WARNING
HIGH PRESSURE GAS MAIN WITHIN LIMITS OF WORK



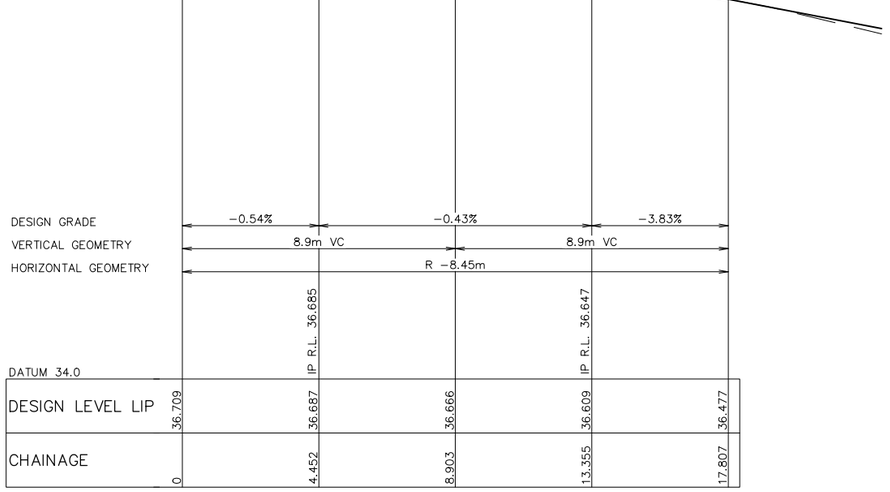
KERB RETURNS 01, 02, 35 & 36

SCALE 1:200



LONGITUDINAL SECTION MK01

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK02

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

ENG KR −> MK01 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	359031.958	6326848.056	335°21'04.77"			
	2.089	359030.862	6326849.828	321°11'17.09"			
IP 2	4.177	359030.058	6326852.195		R = −8.450	8.355	56°38'55.90"
IP 3	8.355	359025.556	6326852.884	278°42'08.87"			

ENG KR−>MK02 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	359012.044	6326862.135	98°42'08.89"			
IP 2	4.452	359016.902	6326861.392		R = −8.450	8.903	60°22'12.23"
CC	8.903	359019.951	6326865.247	38°19'56.66"			
IP 3	13.355	359022.999	6326869.103		R = −8.450	8.903	60°22'12.23"
IP 4	17.807	359021.155	6326873.658	337°57'44.42"			

ENG KR −> MK35 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	359033.747	6326838.993	336°03'58.60"			
IP 2	0.609	359033.486	6326839.580		R = 1.550	1.217	45°00'07.30"
CT	1.217	359033.717	6326840.179	21°04'05.90"			
TC	2.459	359034.164	6326841.338	21°04'05.90"			
IP 3	3.422	359034.528	6326842.285		R = −2.450	1.924	45°00'15.08"
IP 4	4.384	359034.117	6326843.213	336°03'50.82"			

ENG KR−>MK36 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	359019.894	6326876.805	338°16'53.69"	·		
IP 2	0.962	359019.518	6326877.748		R = −2.450	1.924	45°00'00.00"
CT	1.924	359018.586	6326878.149	293°16'53.69"	·		
TC	3.076	359017.527	6326878.604	293°16'53.69"	·		
IP 3	3.686	359016.937	6326878.858		R = 1.550	1.218	45°02'00.22"
CT	4.295	359016.700	6326879.455	338°18'53.91"	·		
IP 4	10.926	359014.249	6326885.617	338°18'53.91"	·		

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
A1 / A3 1:200 / 1:400
VERT A1 / A3 1:20 / 1:40
HORIZ A1 / A3 1:100 / 1:200
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

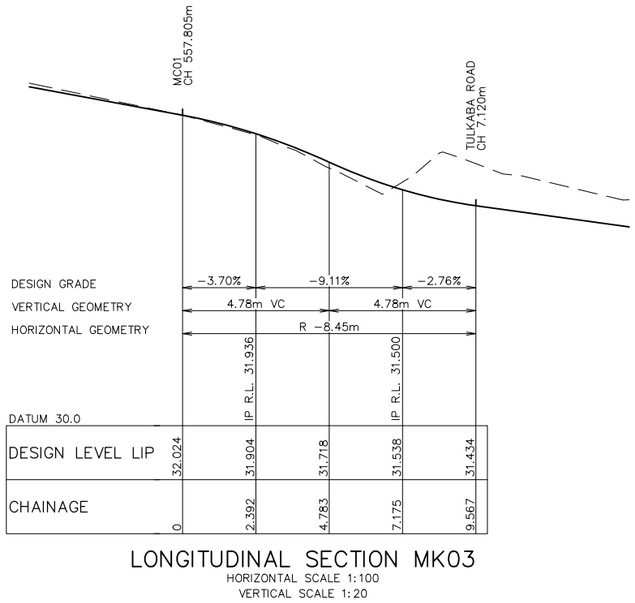
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK01, 02, 35, 36

PROJECT No. 239858 − DISCIPLINE ENG − NUMBER 301 REV. D

Plotted By: tims Plot Date: 06/08/20 − 09:03 Cad File: N:\239858\DWG's\Engineering\Civil\239858−ENG−301(D).dwg

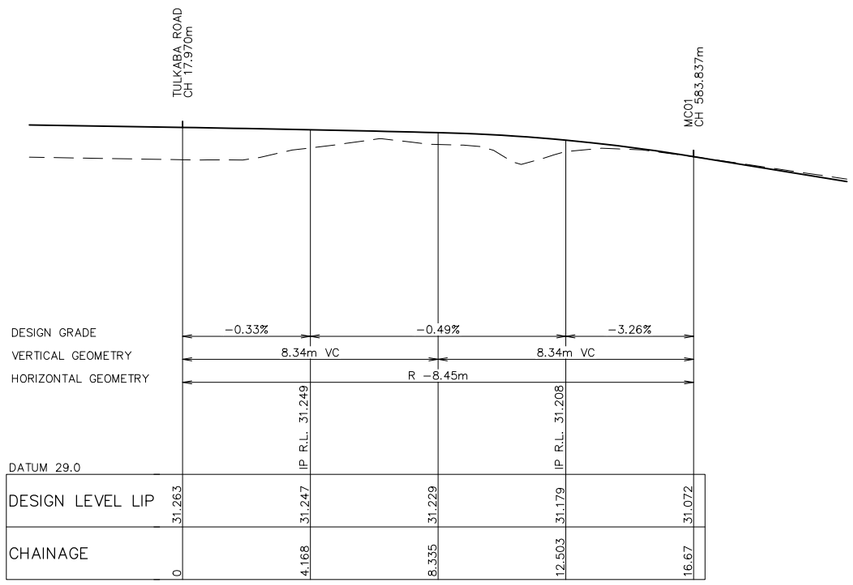
100mm AT FULL SIZE

239858-ENG-302(D)



LONGITUDINAL SECTION MK03

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK04

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.2m

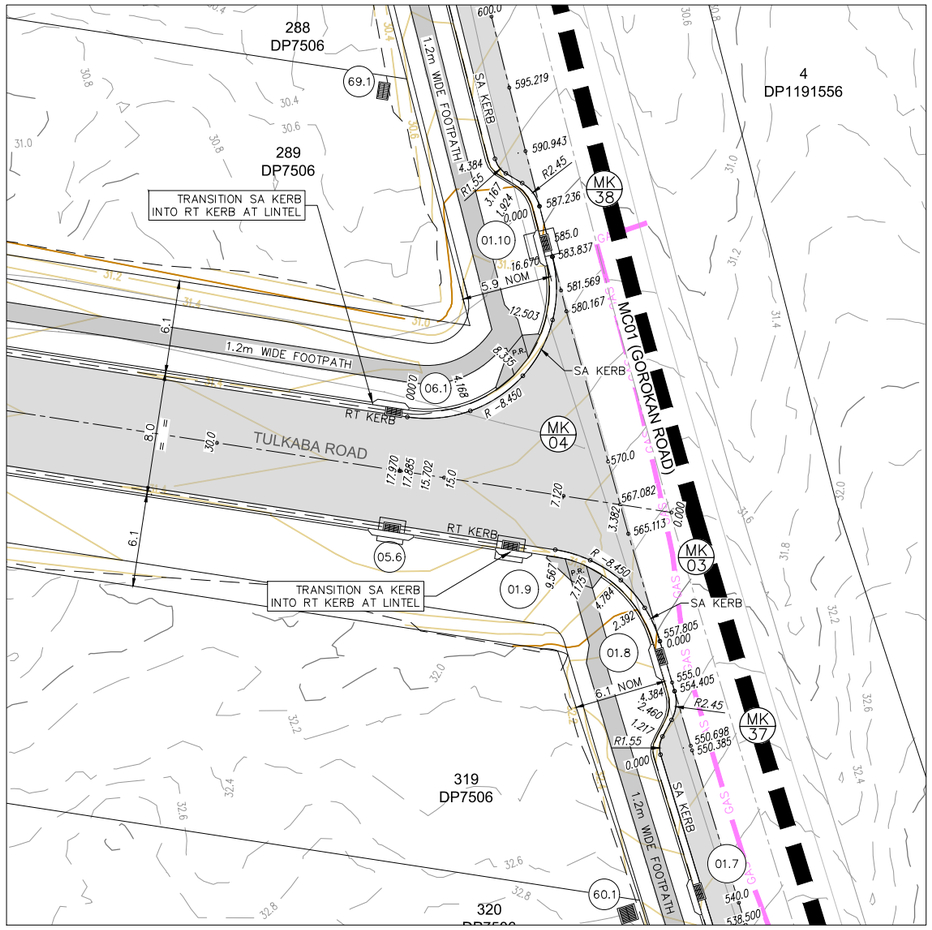
MGA

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD-901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB

WARNING
HIGH PRESSURE GAS MAIN WITHIN LIMIT OF WORKS



KERB RETURNS 03, 04, 37 & 38

SCALE 1:200

ENG KR −> MK03 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358988.631	6326966.509	343°34'19.34"			
	2.392	358987.641	6326968.677	327°21'16.63"			
IP 2	4.783	358987.112	6326971.659		R = −8.450	9.567	64°52'10.32"
IP 3	9.567	358981.804	6326972.472	278°42'09.02"			

ENG KR−>MK04 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358972.153	6326981.132	98°42'09.02"			
IP 2	8.335	358984.781	6326979.199		R = −8.450	16.670	113°02'06.40"
IP 3	16.670	358981.619	6326991.576	345°40'02.61"			

ENG KR −> MK37 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358988.674	6326959.112	343°34'19.34"			
IP 2	0.609	358988.493	6326959.728		R = 1.550	1.217	45°00'00.00"
CT	1.217	358988.800	6326960.292	28°34'19.34"			
TC	2.460	358989.394	6326961.383	28°34'19.34"			
IP 3	3.422	358989.879	6326962.274		R = −2.450	1.924	45°00'00.00"
IP 4	4.384	358989.592	6326963.248	343°34'19.34"			

ENG KR −> MK38 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358981.338	6326992.673	345°40'02.61"			
IP 2	0.962	358981.087	6326993.657		R = −2.450	1.924	45°00'00.00"
CT	1.924	358980.214	6326994.174	300°40'02.61"			
TC	3.167	358979.146	6326994.808	300°40'02.61"			
IP 3	3.775	358978.593	6326995.135		R = 1.550	1.217	45°00'00.00"
IP 4	4.384	358978.434	6326995.757	345°40'02.61"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
A1 / A3 1:200 / 1:400
VERT A1 / A3 1:20 / 1:40
HORIZ A1 / A3 1:100 / 1:200
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

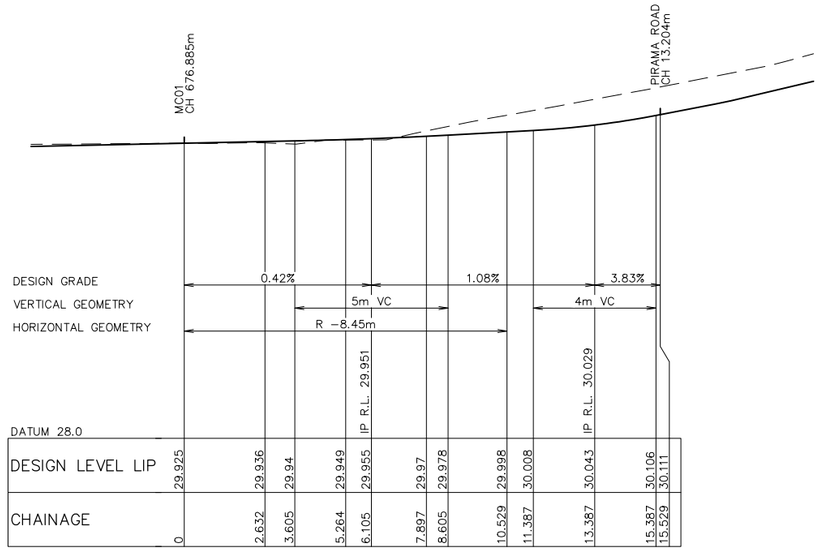
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK03, 04, 37, 38

PROJECT No. 239858 − DISCIPLINE ENG − NUMBER 302 REV. D

100mm AT FULL SIZE

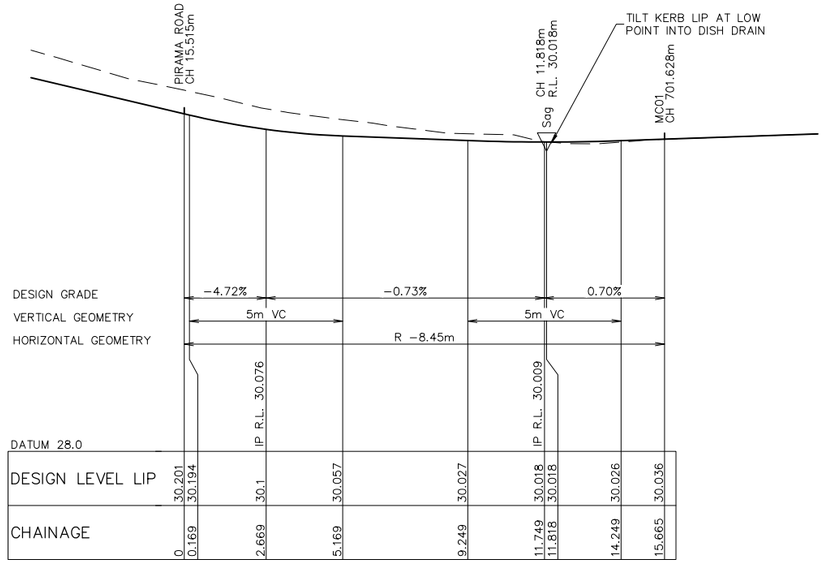
Plotted By: tims Plot Date: 06/08/20 − 09:03 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-302(D).dwg

239858-ENG-303(D)



LONGITUDINAL SECTION MK05

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK06

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

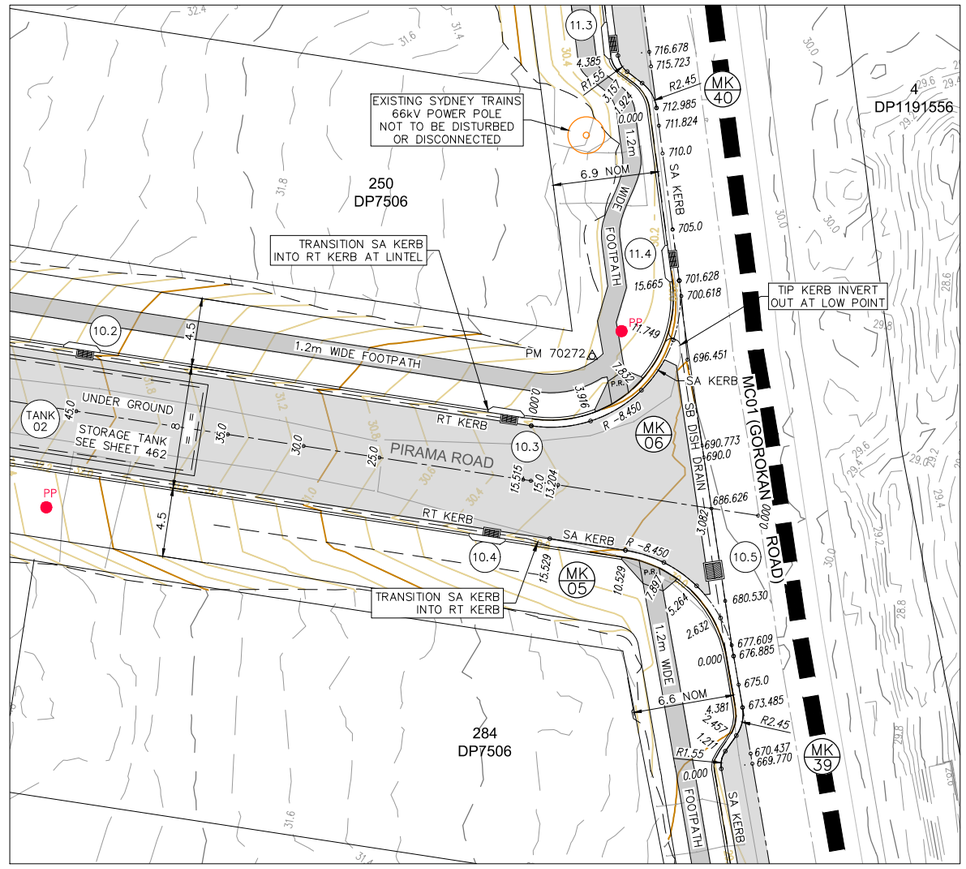
CONTOUR INTERVAL = 0.2m

MGA

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD–901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB



KERB RETURNS 05, 06, 39 & 40

SCALE 1:200

ENG KR –> MK05 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358962.221	6327082.540	350°05'32.80"			
	2.632	358961.375	6327085.021	332°14'39.48"			
IP 2	5.264	358961.177	6327088.520		R = –8.450	10.529	71°23'23.80"
	5.265	358959.809	6327087.123	314°23'46.16"			
	7.897	358957.674	6327088.645	296°32'52.85"			
CT	10.529	358955.176	6327089.438	278°42'08.99"			
	10.529	358955.176	6327089.438	278°42'08.99"			
	13.161	358952.574	6327089.837	278°42'08.99"			
IP 3	15.529	358950.234	6327090.195	278°42'08.99"			

ENG KR –> MK06 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358949.024	6327097.563	98°42'09.97"			
IP 2	0.000	358949.024	6327097.563				
	3.916	358952.893	6327097.872	72°08'56.65"			
IP 3	7.832	358960.152	6327095.859		R = –8.450	15.665	106°12'58.99"
	7.833	358956.215	6327099.879	45°35'40.84"			
	11.749	358958.290	6327103.159	19°02'25.04"			
IP 4	15.665	358958.680	6327107.020				
IP 5	15.665	358958.680	6327107.020	352°29'12.23"			

ENG KR–>MK39 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358961.422	6327075.189	350°19'29.20"			
IP 2	0.606	358961.314	6327075.818		R = 1.550	1.211	44°46'03.60"
CT	1.211	358961.681	6327076.341	35°05'32.80"			
TC	2.457	358962.398	6327077.360	35°05'32.80"			
IP 3	3.419	358962.981	6327078.191		R = –2.450	1.924	45°00'00.00"
IP 4	4.381	358962.806	6327079.190	350°05'32.80"			

ENG KR –> MK40 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358958.353	6327109.499	352°29'12.56"			
IP 2	0.962	358958.220	6327110.505		R = –2.450	1.924	45°00'00.00"
CT	1.924	358957.415	6327111.123	307°29'12.56"			
TC	3.167	358956.429	6327111.879	307°29'12.56"			
IP 3	3.775	358955.920	6327112.269		R = 1.550	1.217	45°00'00.00"
IP 4	4.384	358955.836	6327112.906	352°29'12.56"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
A1 / A3 1:200 / 1:400
VERT A1 / A3 1:20 / 1:40
HORIZ A1 / A3 1:100 / 1:200
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

DESIGN FILE N:\239858\Design\12D\

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

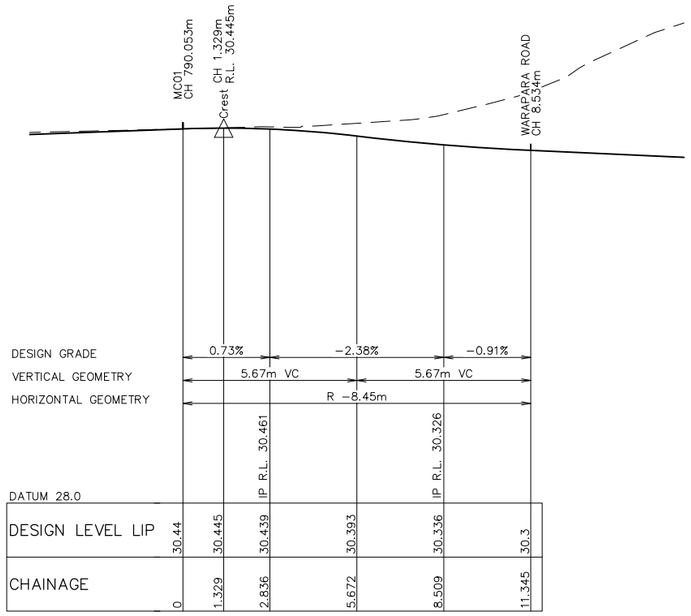
PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK05, 06, 39, 40

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 303 REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:03 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–303(D).dwg

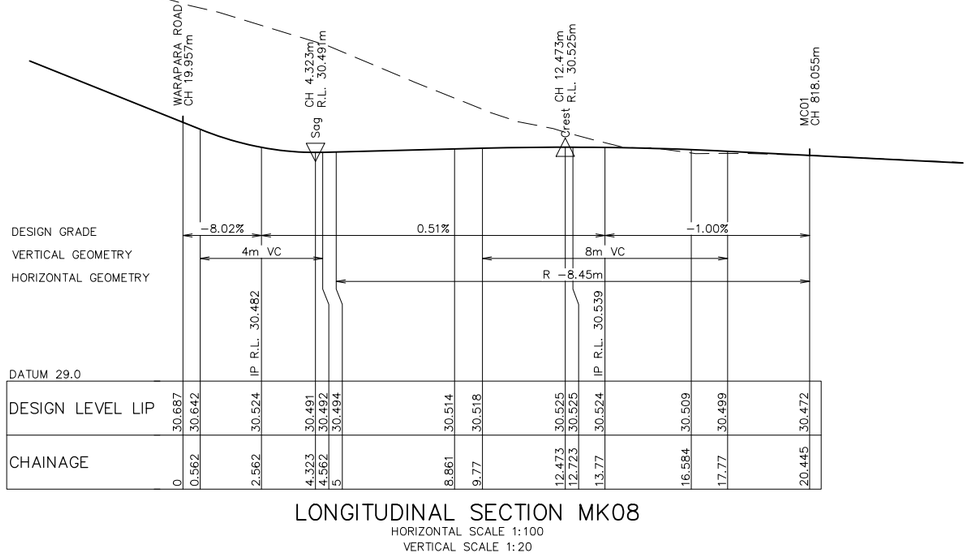
100mm AT FULL SIZE

239858-ENG-304(D)



LONGITUDINAL SECTION MK07

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK08

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

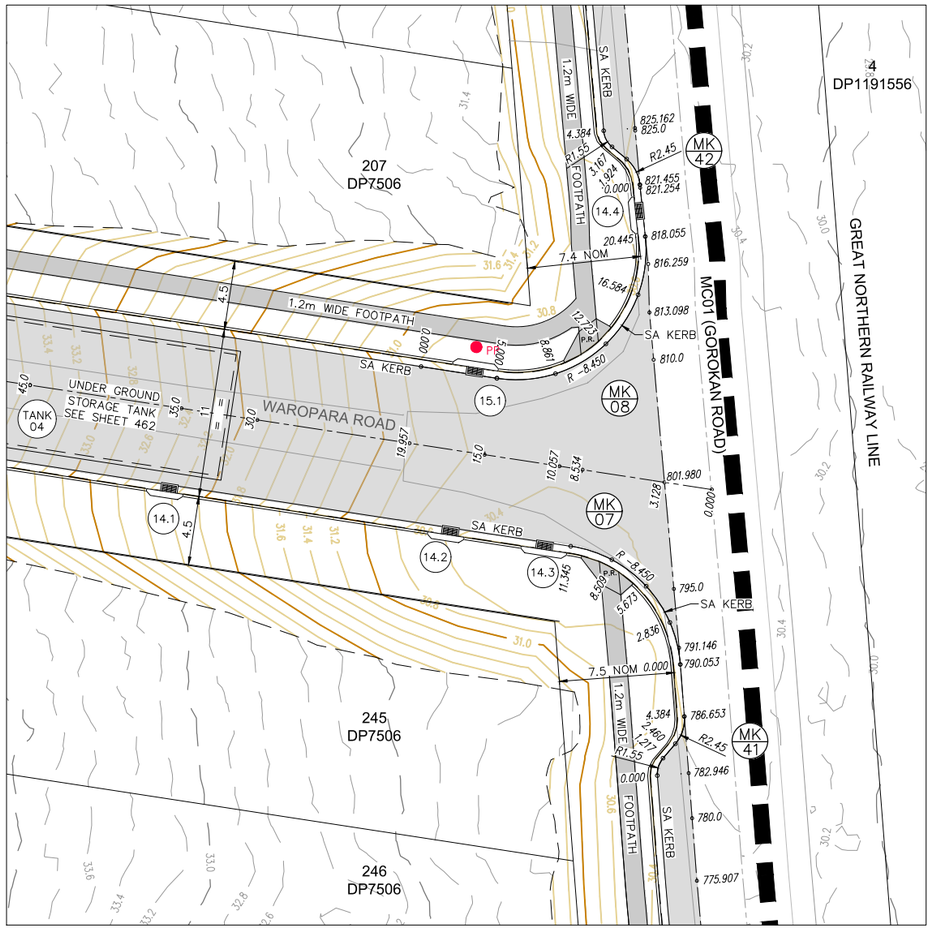
CONTOUR INTERVAL = 0.2m

MGA

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD-901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB



KERB RETURNS 07, 08, 41 & 42

SCALE 1:200

ENG KR −> MK07 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358949.964	6327194.995	355°37'37.05"			
	2.836	358949.282	6327197.734	336°23'44.09"			
IP 2	5.672	358949.453	6327201.688		R = −8.450	11.345	76°55'28.07"
	5.673	358947.735	6327200.096	317°09'51.12"			
	8.509	358945.497	6327201.816	297°55'58.16"			
IP 3	11.345	358942.817	6327202.703	278°42'08.98"			

ENG KR −> MK08 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358933.054	6327214.415	98°42'08.98"			
	1.139	358934.180	6327214.243	98°42'08.98"			
TC	5.000	358937.997	6327213.659	98°42'08.98"			
	8.861	358941.813	6327213.952	72°31'15.73"			
IP 2	12.722	358948.828	6327212.001		R = −8.450	15.445	104°43'24.62"
	12.723	358945.109	6327215.898	46°20'22.47"			
	16.584	358947.208	6327219.100	20°09'29.22"			
IP 3	20.445	358947.679	6327222.898	353°58'44.36"			

ENG KR −> MK41 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358948.462	6327187.752	355°37'37.05"			
IP 2	0.609	358948.413	6327188.392		R = 1.550	1.217	45°00'00.00"
CT	1.217	358948.831	6327188.880	40°37'37.05"			
TC	2.460	358949.640	6327189.823	40°37'37.05"			
IP 3	3.422	358950.301	6327190.593		R = −2.450	1.924	45°00'00.00"
IP 4	4.384	358950.224	6327191.605	355°37'37.05"			

ENG KR −> MK42 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358947.326	6327226.279	355°01'17.12"			
IP 2	0.962	358947.237	6327227.290		R = −2.450	1.924	45°00'00.00"
CT	1.924	358946.460	6327227.943	310°01'17.12"			
TC	3.167	358945.509	6327228.742	310°01'17.12"			
IP 3	3.775	358945.017	6327229.155		R = 1.550	1.217	45°00'00.00"
IP 4	4.384	358944.962	6327229.794	355°01'17.12"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
A1 / A3 1:200 / 1:400
VERT A1 / A3 1:20 / 1:40
HORIZ A1 / A3 1:100 / 1:200
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

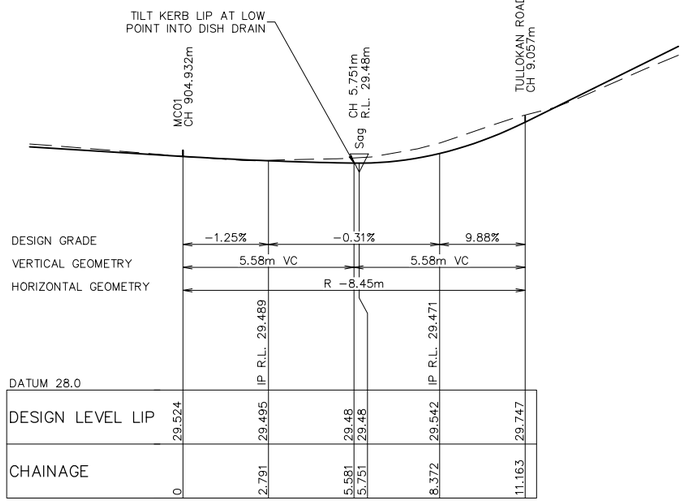
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK07, 08, 41, 42

PROJECT No. 239858 - DISCIPLINE ENG - NUMBER 304 REV. D

100mm AT FULL SIZE

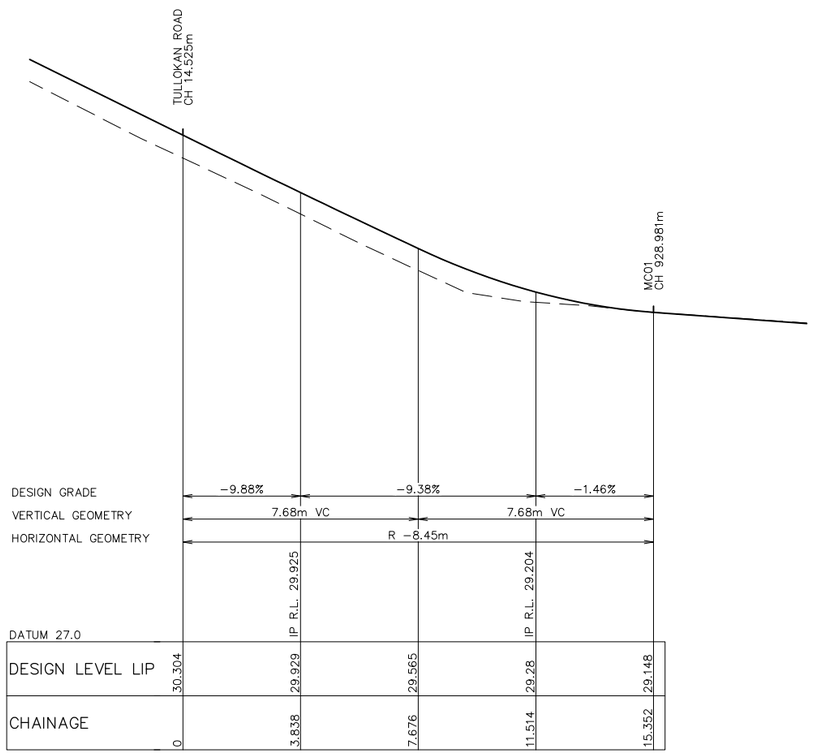
Plotted By: tims Plot Date: 06/08/20 - 09:03 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-304(D).dwg

239858-ENG-305(D)



LONGITUDINAL SECTION MK09

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK10

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

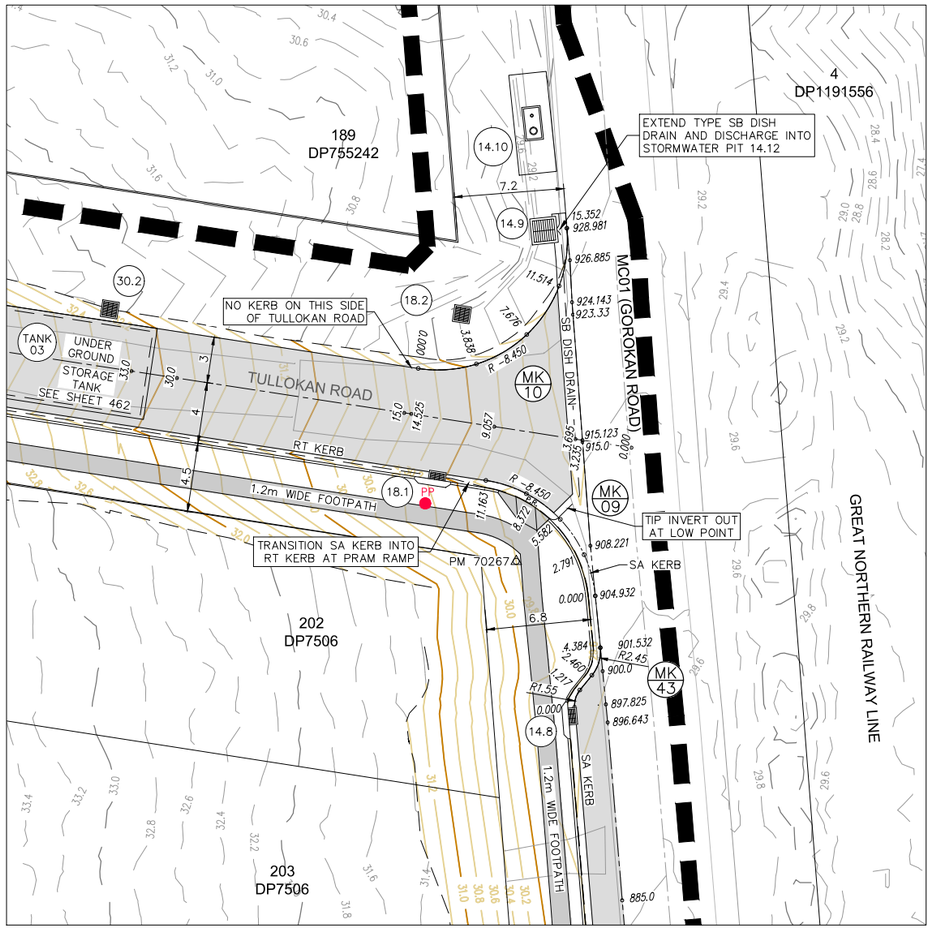
CONTOUR INTERVAL = 0.2m

MGA

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD-901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB



KERB RETURNS 09, 10 & 43

SCALE 1:200

ENG KR -> MK09 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358940.412	6327309.468	354°23'37.69"			
	2.791	358939.690	6327312.151	335°28'15.39"			
IP 2	5.581	358939.771	6327316.002		R = −8.450	11.163	75°41'28.72"
	8.372	358935.921	6327316.129	297°37'30.77"			
IP 3	11.163	358933.281	6327316.995	278°42'08.98"			

ENG KR -> MK10 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358928.868	6327324.297	98°42'08.98"			
	3.838	358932.662	6327324.583	72°40'43.26"			
IP 2	7.676	358939.577	6327322.658		R = −8.450	15.352	104°05'42.52"
	11.514	358938.054	6327329.673	20°37'51.82"			
IP 3	15.352	358938.559	6327333.444	354°36'26.46"			

ENG KR -> MK43 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358939.066	6327302.195	354°23'37.69"			
IP 2	0.609	358939.004	6327302.834		R = 1.550	1.217	45°00'00.00"
CT	1.217	358939.411	6327303.330	39°23'37.69"			
TC	2.460	358940.199	6327304.290	39°23'37.69"			
IP 3	3.422	358940.844	6327305.074		R = −2.450	1.924	45°00'00.00"
IP 4	4.384	358940.744	6327306.084	354°23'37.69"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
A1 / A3 1:200 / 1:400
A1 / A3 1:20 / 1:40
A1 / A3 1:100 / 1:200
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

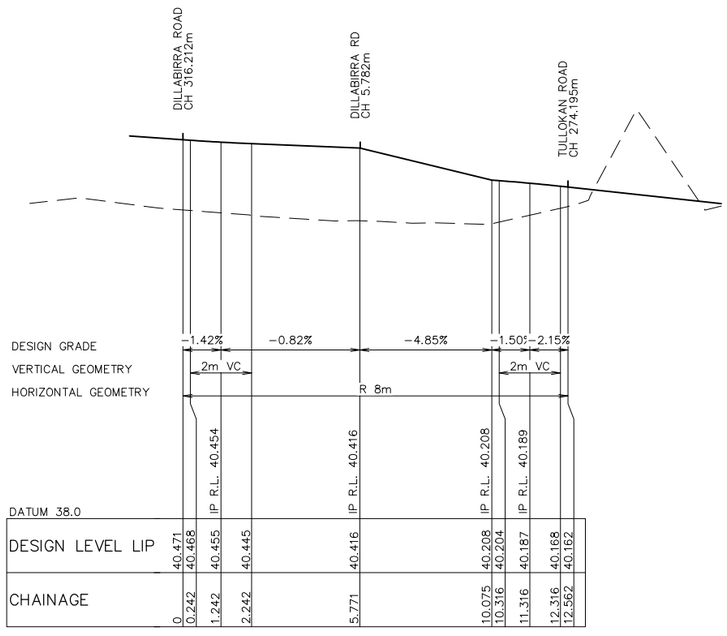
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK09, 10 & 43

PROJECT No. 239858 - DISCIPLINE ENG - NUMBER 305 - REV. D

100mm AT FULL SIZE

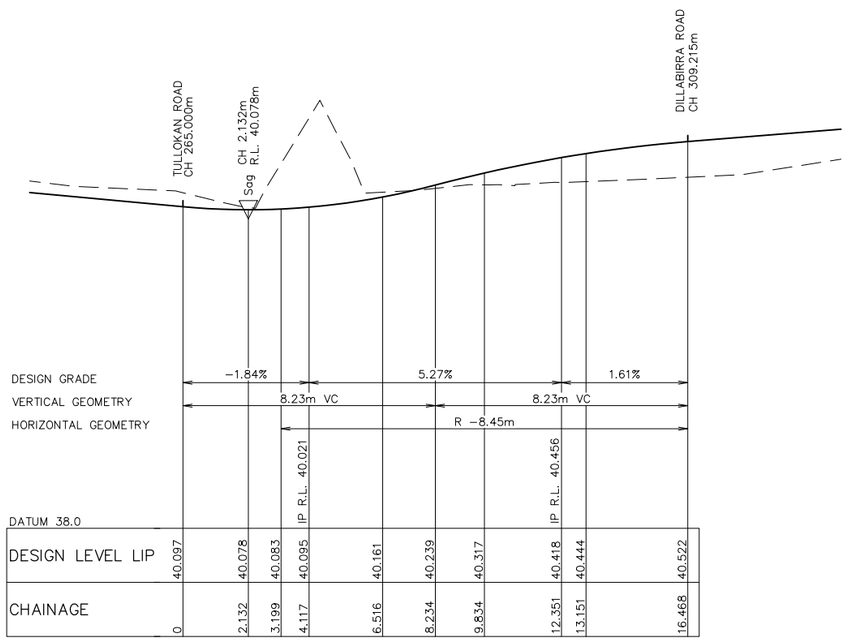
Plotted By: tims Plot Date: 06/08/20 - 09:03 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-305(D).dwg

239858-ENG-306(D)



LONGITUDINAL SECTION MK11

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK12

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

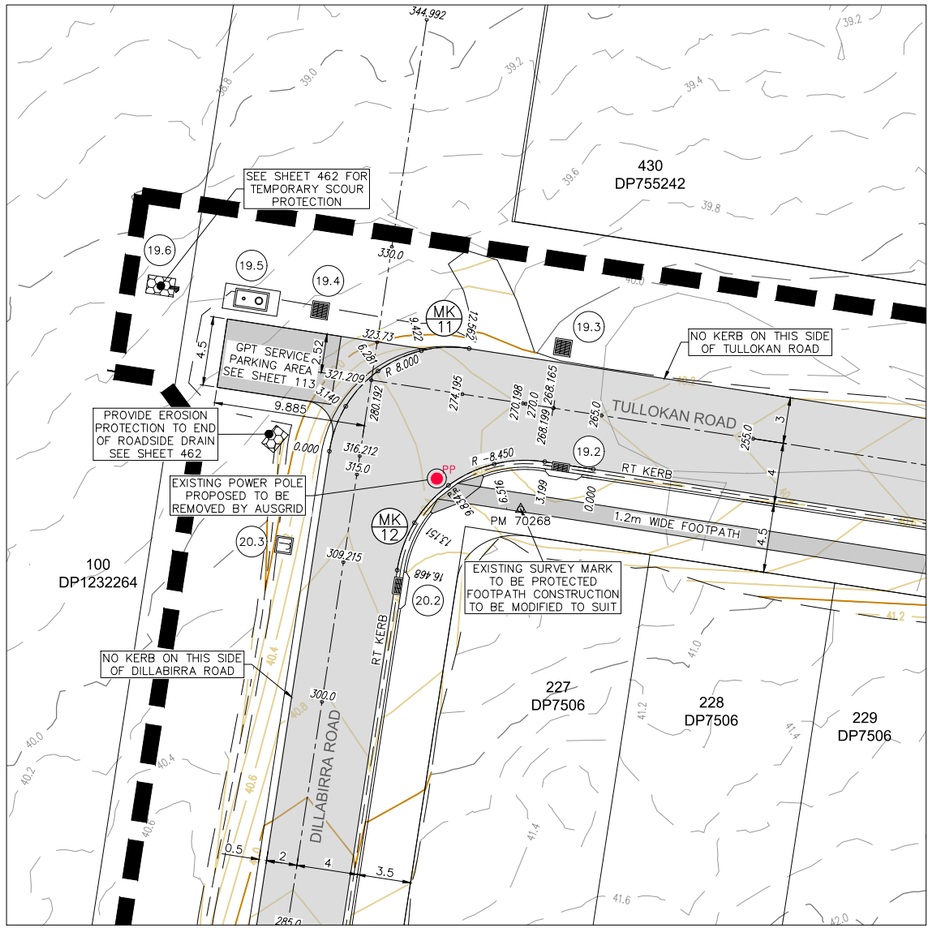
MGA

CONTOUR INTERVAL = 0.2m

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD-901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB



KERB RETURNS 11 & 12

SCALE 1:200

ENG KR −> MK11 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358663.069	6327356.893	8°44'06.73"			
	3.140	358664.135	6327359.826	31°13'38.56"			
IP 2	6.281	358664.263	6327364.796		R = 8.000	12.562	89°58'02.25"
	6.281	358666.242	6327362.128	53°43'10.39"			
	9.422	358669.070	6327363.448	76°12'42.22"			
IP 3	12.562	358672.187	6327363.586	98°42'08.98"			

ENG KR−>MK12 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358680.285	6327355.720	278°42'08.98"			
TC	3.199	358677.123	6327356.205	278°42'08.98"			
IP 2	9.833	358668.775	6327357.482		R = −8.450	13.268	89°58'02.22"
IP 3	16.468	358667.492	6327349.135	188°44'06.76"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
A1 / A3 1:200 / 1:400
A1 / A3 1:20 / 1:40
A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

DESIGN FILE N:\239858\Design\12D\

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

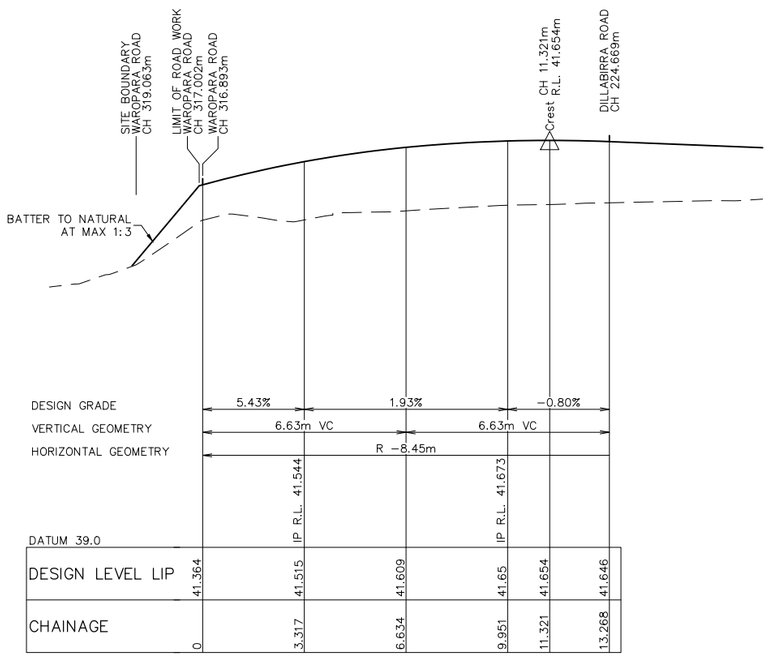
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK11 & 12

PROJECT No. 239858 − DISCIPLINE ENG − NUMBER 306 REV. D

Plotted By: tims Plot Date: 06/08/20 − 09:04 Cad File: N:\239858\DWG's\Engineering\Civil\239858−ENG−306(D).dwg

100mm AT FULL SIZE

239858-ENG-307(D)



LONGITUDINAL SECTION MK13

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

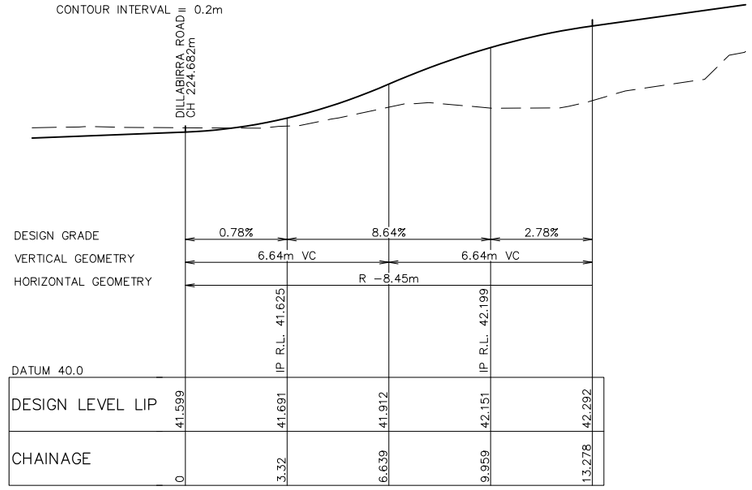
- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PR — PERAMBULATOR RAMP
- 18 — DESIGN SURFACE MAJOR CONTOURS
- 18 — DESIGN SURFACE MINOR CONTOURS
- 18 — EXISTING SURFACE MAJOR CONTOURS
- 18 — EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- GAS — EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- PP — EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.2m

NOTES:

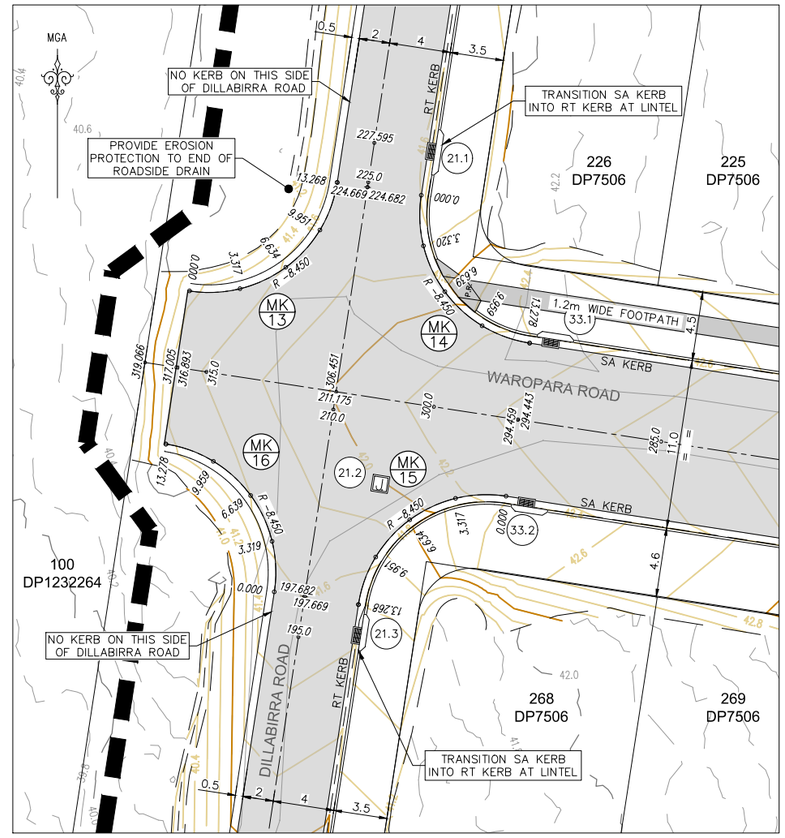
1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD−901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB



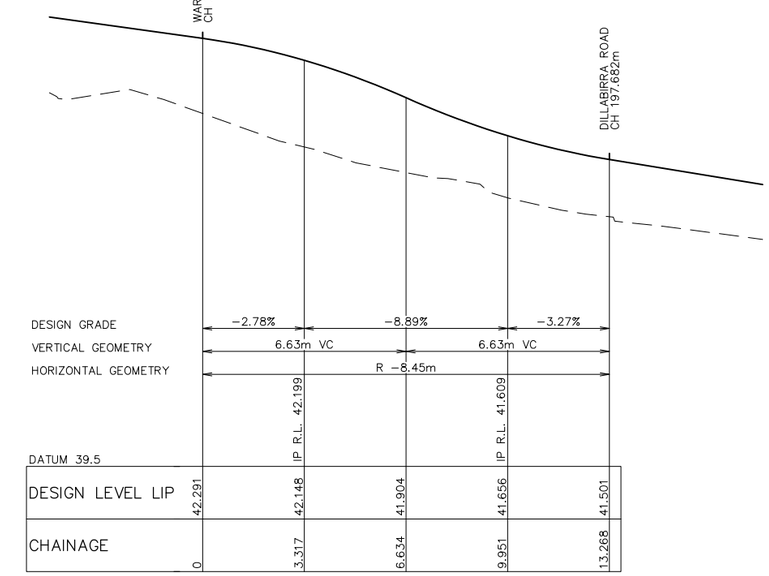
LONGITUDINAL SECTION MK14

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



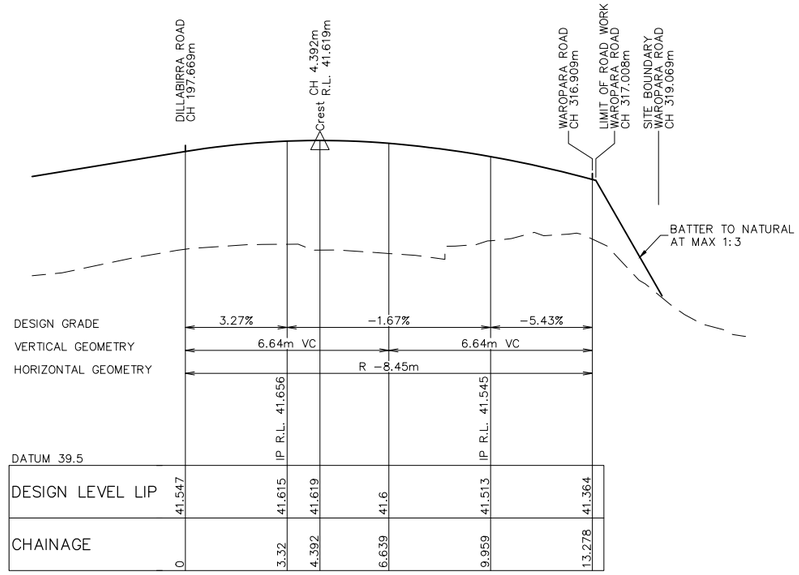
KERB RETURNS 13, 14, 15 & 16

SCALE 1:200



LONGITUDINAL SECTION MK15

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK16

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

ENG KR −> MK13 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358639.536	6327259.343	98°42'08.98"			
	3.317	358642.829	6327259.489	76°12'40.89"			
	6.634	358645.815	6327260.884	53°43'12.80"			
IP 2	6.634	358647.884	6327258.065		R = −8.450	13.268	89°58'02.25"
	9.951	358648.040	6327263.315	31°13'44.71"			
	13.268	358649.167	6327266.412	8°44'16.62"			
IP 3	13.268	358649.167	6327266.412	8°44'06.73"			

ENG KR −> MK14 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358654.654	6327265.582	188°44'06.73"			
	3.320	358654.799	6327262.287	166°13'37.62"			
	6.639	358656.195	6327259.299	143°43'08.50"			
IP 2	6.639	358653.370	6327257.225		R = −8.450	13.278	90°01'57.76"
	9.959	358658.628	6327257.072	121°12'39.39"			
	13.278	358661.728	6327255.946	98°42'10.27"			
IP 3	13.278	358661.728	6327255.946	98°42'08.98"			

ENG KR −> MK15 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358660.184	6327245.965	278°42'08.98"			
	3.317	358656.892	6327245.819	256°12'40.89"			
	6.634	358653.906	6327244.424	233°43'12.80"			
IP 2	6.634	358651.836	6327247.243		R = −8.450	13.268	89°58'02.25"
	9.951	358651.680	6327241.993	211°13'44.71"			
	13.268	358650.554	6327238.896	188°44'16.62"			
IP 3	13.268	358650.554	6327238.895	188°44'06.73"			

ENG KR −> MK16 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358645.066	6327239.726	8°44'06.73"			
	3.319	358644.921	6327243.021	346°13'37.62"			
	6.639	358643.526	6327246.009	323°43'08.50"			
IP 2	6.639	358646.350	6327248.082		R = −8.450	13.278	90°01'57.76"
	9.959	358641.093	6327248.236	301°12'39.39"			
	13.278	358637.993	6327249.362	278°42'10.27"			
IP 3	13.278	358637.993	6327249.362	278°42'08.98"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
- 0 5 10 — A1 / A3 1:200 / 1:400
- VERT 0 0.2 0.4 0.6 0.8 — A1 / A3 1:20 / 1:40
- HORIZ 0 1 2 3 4 — A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC | DATUM A.H.D. GDA 94 ZONE 56

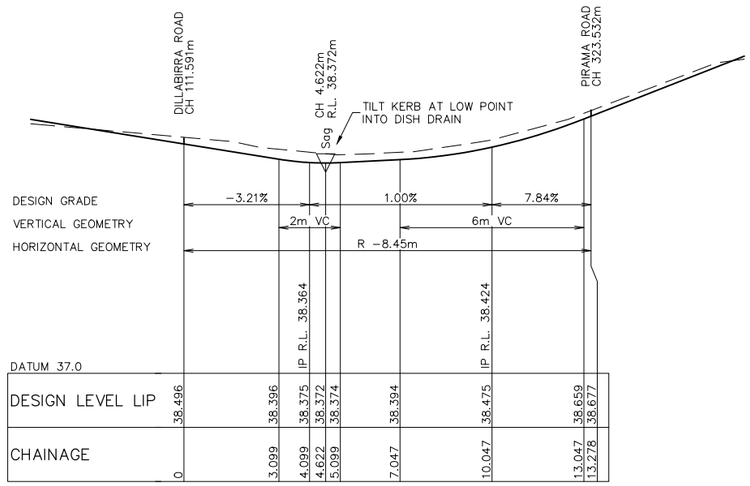
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK13, 14, 15, 16

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	307	D

Plotted By: tims Plot Date: 06/08/20 − 09:04 Cad File: N:\239858\DWG's\Engineering\Civil\239858−ENG−307(D).dwg

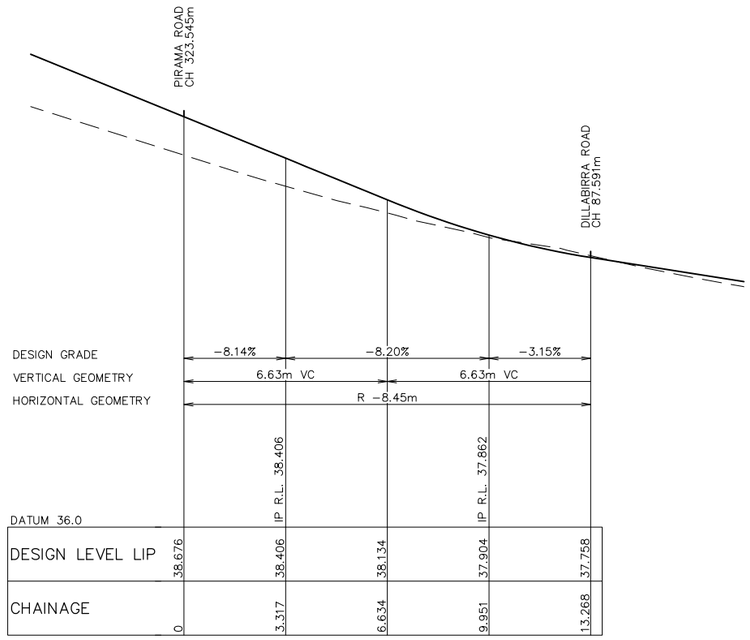
100mm AT FULL SIZE

239858-ENG-308(D)



LONGITUDINAL SECTION MK17

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK18

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

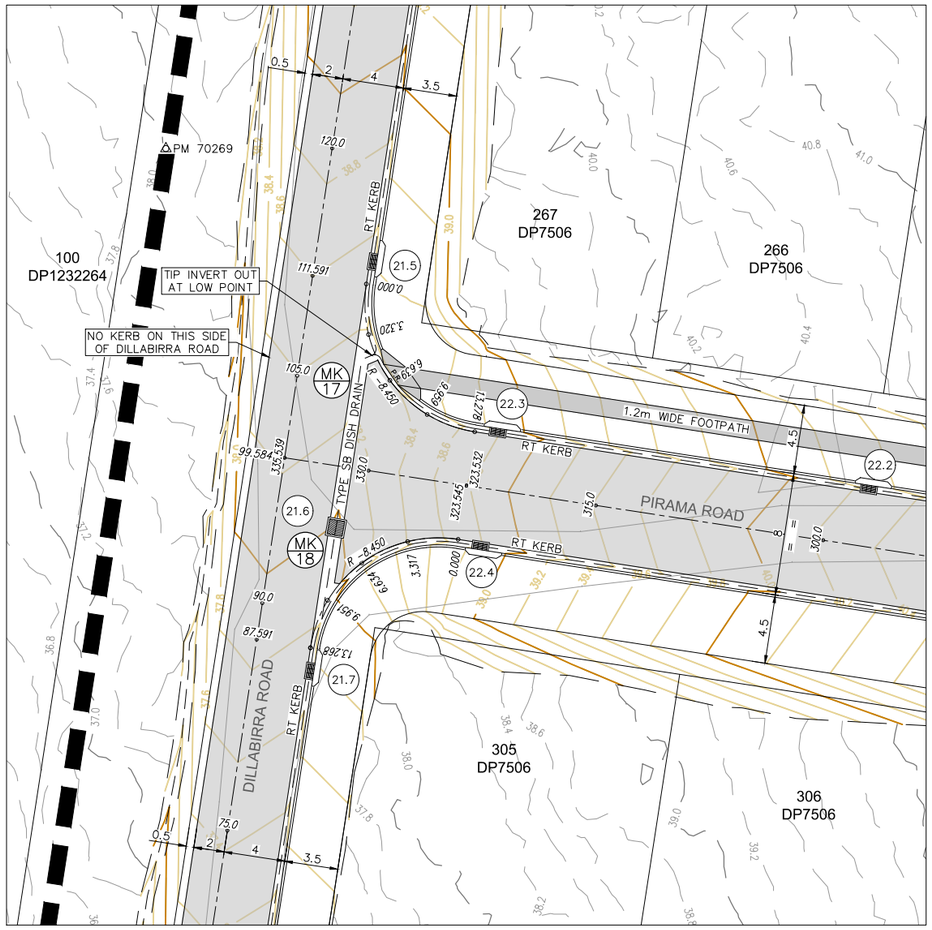
CONTOUR INTERVAL = 0.2m

MGA

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD−901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB



KERB RETURNS 17 & 18

SCALE 1:200

ENG KR −> MK17 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358637.479	6327153.803	188°44'06.73"			
	3.320	358637.624	6327150.508	166°13'37.62"			
	6.639	358639.020	6327147.519	143°43'08.50"			
IP 2	6.639	358636.195	6327145.446		R = −8.450	13.278	90°01'57.74"
	9.959	358641.453	6327145.293	121°12'39.39"			
	13.278	358644.553	6327144.167	98°42'10.27"			
IP 3	13.278	358644.553	6327144.167	98°42'08.99"			

ENG KR −> MK18 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358643.465	6327137.151	278°42'08.99"			
	3.317	358640.173	6327137.005	256°12'40.90"			
	6.634	358637.186	6327135.610	233°43'12.81"			
IP 2	6.634	358635.117	6327138.429		R = −8.450	13.268	89°58'02.26"
	9.951	358634.961	6327133.179	211°13'44.72"			
	13.268	358633.835	6327130.082	188°44'16.63"			
IP 3	13.268	358633.835	6327130.081	188°44'06.73"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
A1 / A3 1:200 / 1:400
A1 / A3 1:20 / 1:40
A1 / A3 1:100 / 1:200

DESIGN FILE N:\239858\Design\12D\
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email:hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK17 & 18

PROJECT No. 239858 − DISCIPLINE ENG − NUMBER 308 REV. D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 − 09:04 Cad File: N:\239858\DWG's\Engineering\Civil\239858−ENG−308(D).dwg

239858-ENG-309(D)

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

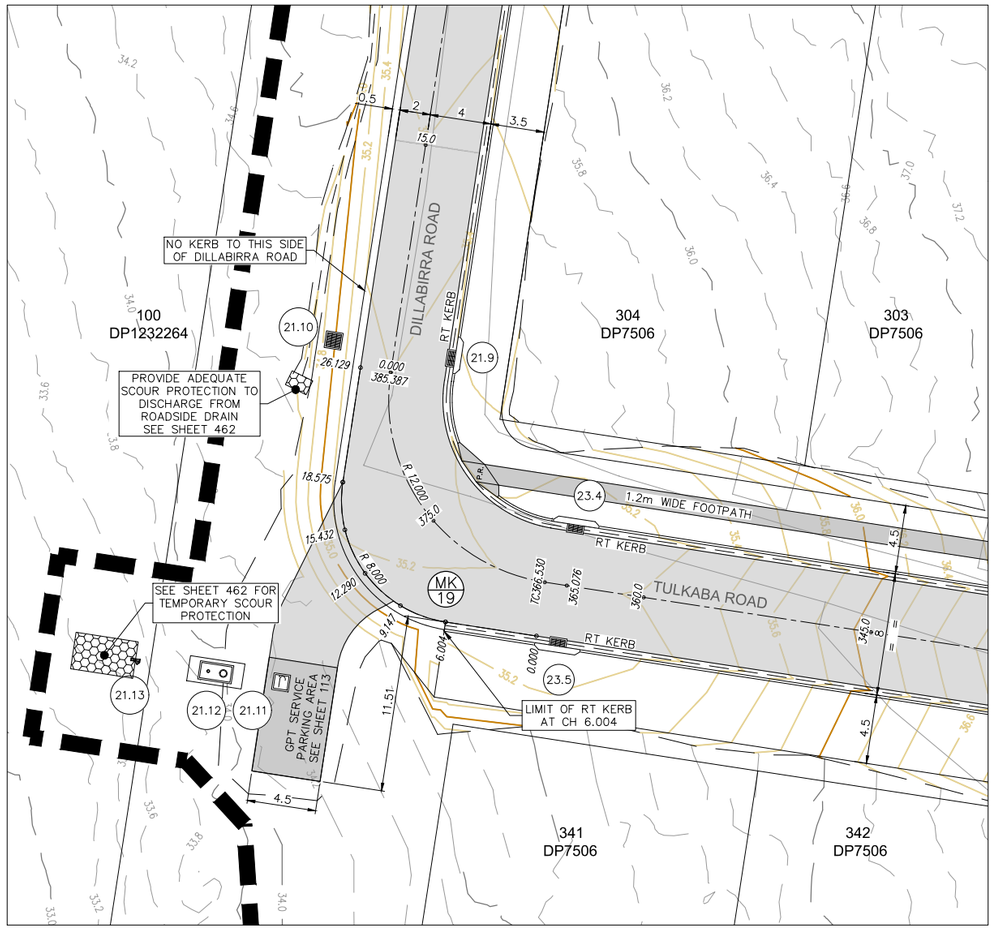
CONTOUR INTERVAL = 0.2m

MGA

NOTES:

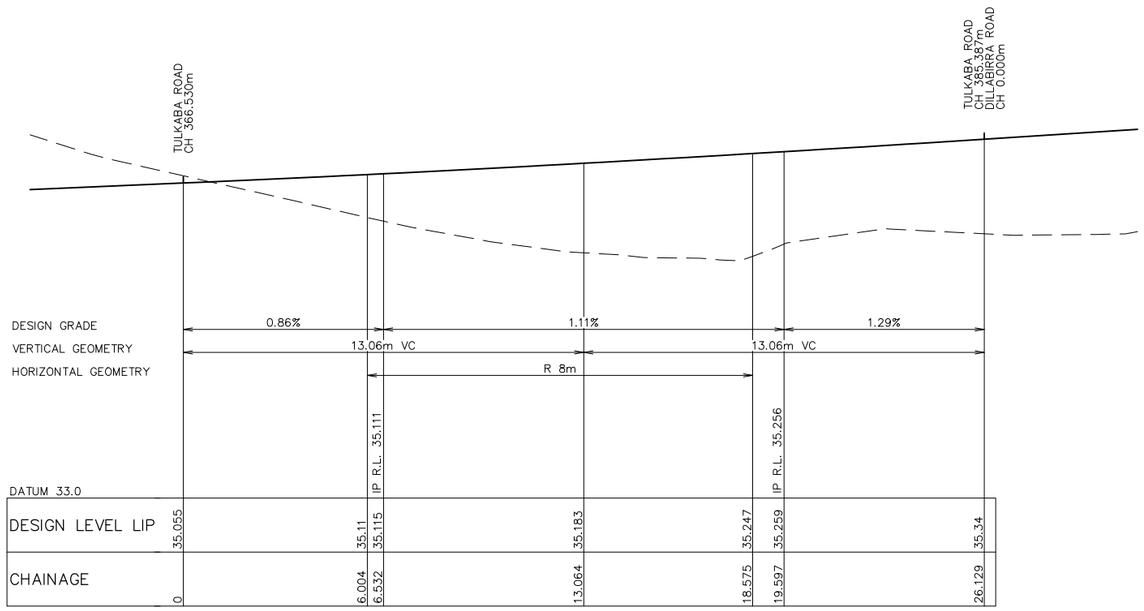
1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD-901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB



KERB RETURN 19
SCALE 1:200

ENG KR -> MK19 HORIZONTAL POINTS								
PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358626.532	6327026.852	278°42'07.95"			
	2.861	358623.703	6327027.285	278°42'07.95"			
	6.004	358620.597	6327027.760	278°42'07.95"			
IP 2	6.004	358620.596	6327027.761				
	9.147	358617.662	6327028.826	301°12'27.89"			
	12.289	358615.358	6327030.934	323°42'57.73"			
IP 3	12.290	358612.684	6327028.972		R = 8.000	12.571	90°02'00.20"
	15.432	358614.037	6327033.763	346°13'27.57"			
	18.575	358613.899	6327036.883	8°43'57.41"			
CT	18.575	358613.900	6327036.883	8°44'08.21"			
	21.718	358614.377	6327039.989	8°44'08.21"			
	24.860	358614.854	6327043.096	8°44'08.21"			
IP 4	26.129	358615.047	6327044.349	8°44'08.21"			



LONGITUDINAL SECTION MK19
HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
A1 / A3 1:200 / 1:400
VERT A1 / A3 1:20 / 1:40
HORIZ A1 / A3 1:100 / 1:200
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

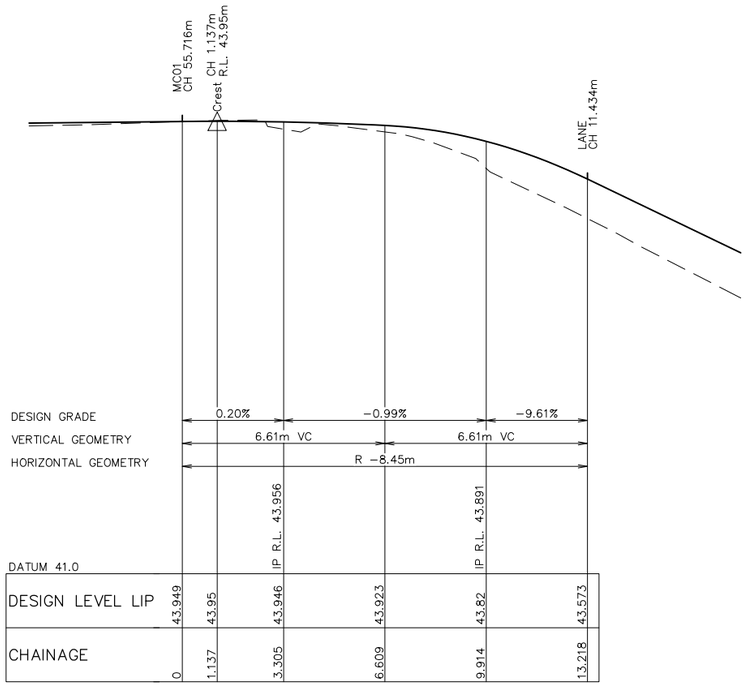
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURN MK19

PROJECT No. 239858 - DISCIPLINE ENG - NUMBER 309 REV. D

Plotted By: tims Plot Date: 06/08/20 - 09:04 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-309(D).dwg

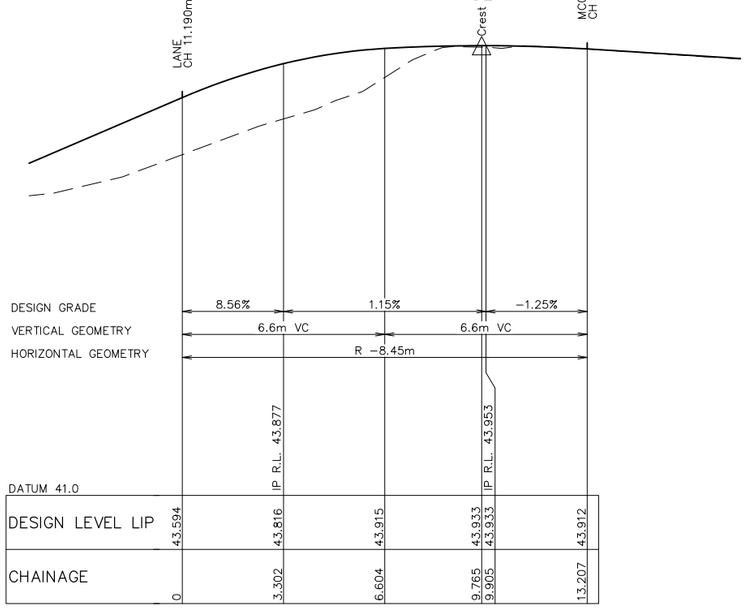
100mm AT FULL SIZE

239858-ENG-310(D)



LONGITUDINAL SECTION MK20

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK21

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

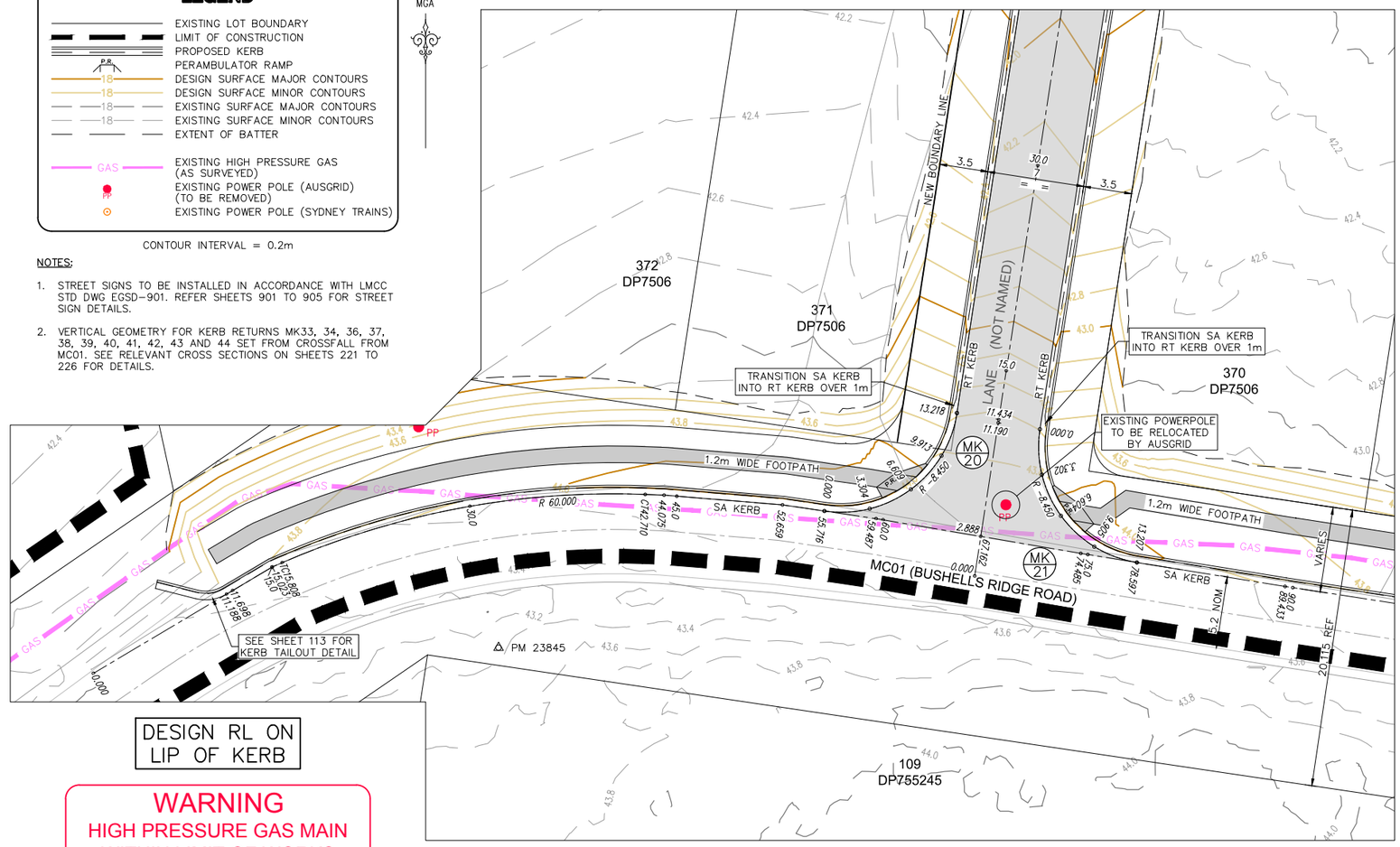
- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

MGA

CONTOUR INTERVAL = 0.2m

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD−901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.



DESIGN RL ON LIP OF KERB

WARNING
HIGH PRESSURE GAS MAIN WITHIN LIMIT OF WORKS

KERB RETURNS 20, 21

SCALE 1:200

ENG KR−>MK20 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358758.805	6326779.788	98°21'41.37"			
IP 2	6.609	358767.111	6326778.568		R = −8.450	13.218	89°37'32.77"
IP 3	13.218	358768.386	6326786.865	8°44'08.60"			

ENG KR −> MK21 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358774.378	6326785.698	188°44'08.60"			
	3.302	358774.519	6326782.420	166°20'52.76"			
	6.604	358775.897	6326779.443	143°57'36.92"			
IP 2	6.604	358773.105	6326777.411		R = −8.450	13.207	89°33'04.61"
	9.905	358778.306	6326777.215	121°34'21.09"			
	13.207	358781.381	6326776.073	99°11'05.25"			
IP 3	13.207	358781.381	6326776.073	99°11'03.99"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
A1 / A3 1:200 / 1:400
VERT A1 / A3 1:20 / 1:40
HORIZ A1 / A3 1:100 / 1:200
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

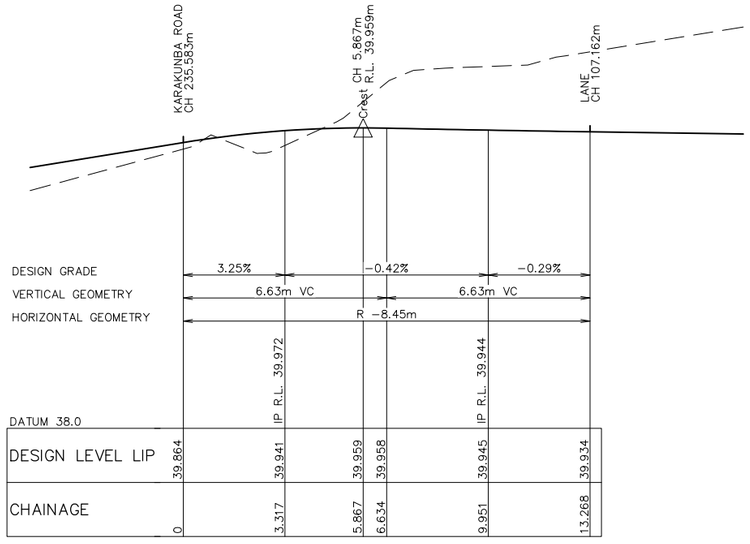
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK20, 21

PROJECT No. 239858 − DISCIPLINE ENG − NUMBER 310 REV. D

Plotted By: tims Plot Date: 06/08/20 − 09:04 Cad File: N:\239858\DWG's\Engineering\Civil\239858−ENG−310(D).dwg

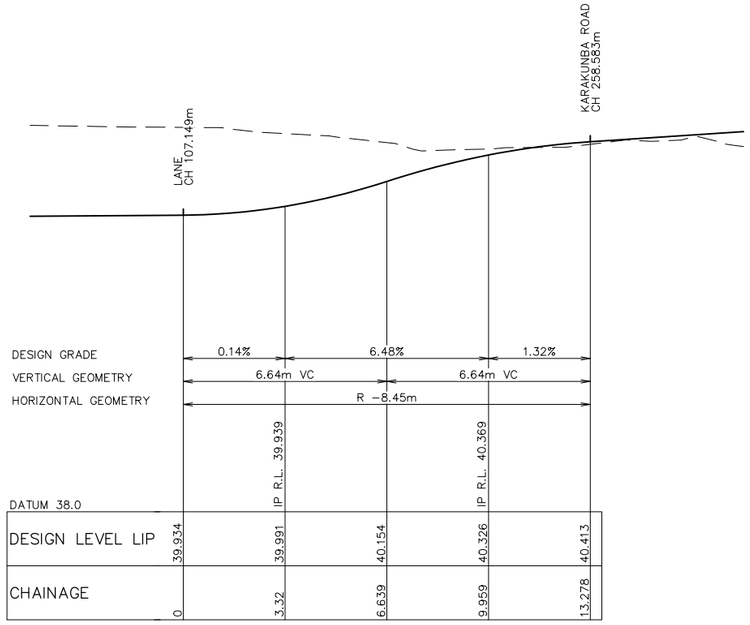
100mm AT FULL SIZE

239858-ENG-311(D)



LONGITUDINAL SECTION MK22

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20



LONGITUDINAL SECTION MK23

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

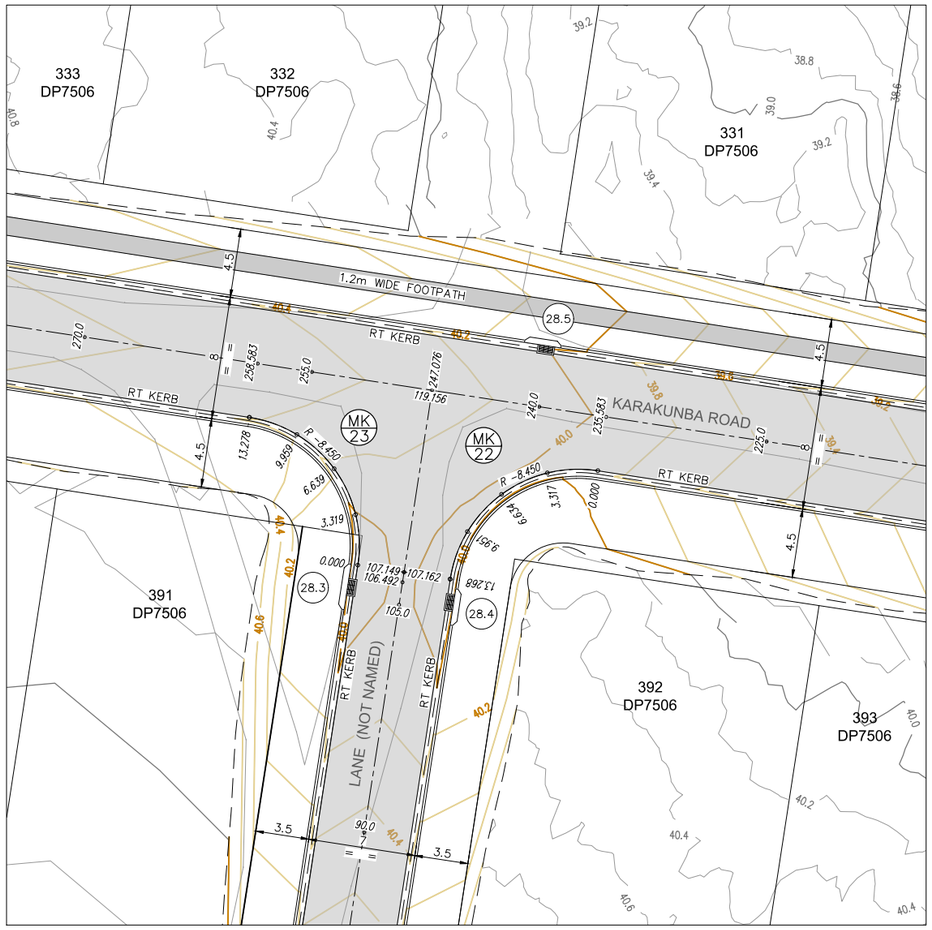
CONTOUR INTERVAL = 0.2m

MGA

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD-901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB



KERB RETURNS 22 & 23

SCALE 1:200

ENG KR -> MK22 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358798.584	6326887.626	278°42'08.87"			
	3.317	358795.292	6326887.480	256°12'40.78"			
	6.634	358792.306	6326886.085	233°43'12.69"			
IP 2	6.634	358790.237	6326888.904		R = −8.450	13.268	89°58'00.27"
	9.951	358790.080	6326883.654	211°13'44.60"			
	13.268	358788.954	6326880.557	188°44'16.51"			
IP 3	13.268	358788.954	6326880.556	188°44'08.60"			

ENG KR -> MK23 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358782.923	6326881.470	8°44'08.60"			
	3.319	358782.778	6326884.765	346°13'39.48"			
	6.639	358781.383	6326887.753	323°43'10.37"			
IP 2	6.639	358784.207	6326889.827		R = −8.450	13.278	90°01'59.73"
	9.959	358778.950	6326889.980	301°12'41.25"			
	13.278	358775.849	6326891.106	278°42'12.14"			
IP 3	13.278	358775.849	6326891.106	278°42'08.87"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
0 5 10 A1 / A3 1:200 / 1:400
VERT 0 0.2 0.4 0.6 0.8 A1 / A3 1:20 / 1:40
HORIZ 0 1 2 3 4 A1 / A3 1:100 / 1:200

DESIGN FILE N:\239858\Design\12D\
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK22 & 23

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	311	D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 - 09:05 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-311(D).dwg

239858-ENG-312(D)

ENG KR–>MK24 HORIZONTAL POINTS							
PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358693.278	6326903.745	278°42'08.89"			
IP 2	6.637	358684.923	6326905.023		R = –8.450	13.275	90°00'35.62"
CT	13.275	358683.646	6326896.669	188°41'33.27"			
IP 3	15.323	358683.336	6326894.644				
IP 4	22.923	358675.824	6326895.794				
TC	24.975	358676.134	6326897.822	8°41'29.09"			
IP 5	31.611	358677.411	6326906.173		R = –8.450	13.272	89°59'23.76"
CT	38.247	358669.059	6326907.452	278°42'05.33"			
IP 6	40.498	358666.834	6326907.792				
IP 7	47.598	358667.907	6326914.811	8°41'31.82"			

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- 18 DESIGN SURFACE MAJOR CONTOURS
- 18 DESIGN SURFACE MINOR CONTOURS
- 18 EXISTING SURFACE MAJOR CONTOURS
- 18 EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- GAS EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- PP EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

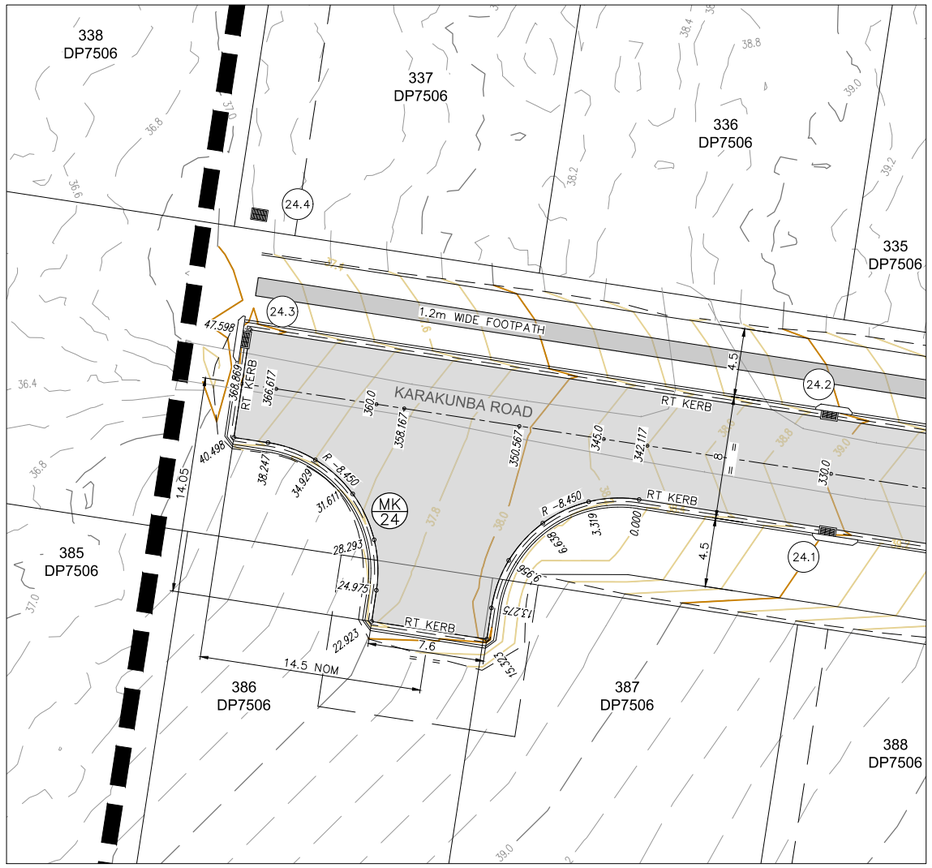
MGA

CONTOUR INTERVAL = 0.2m

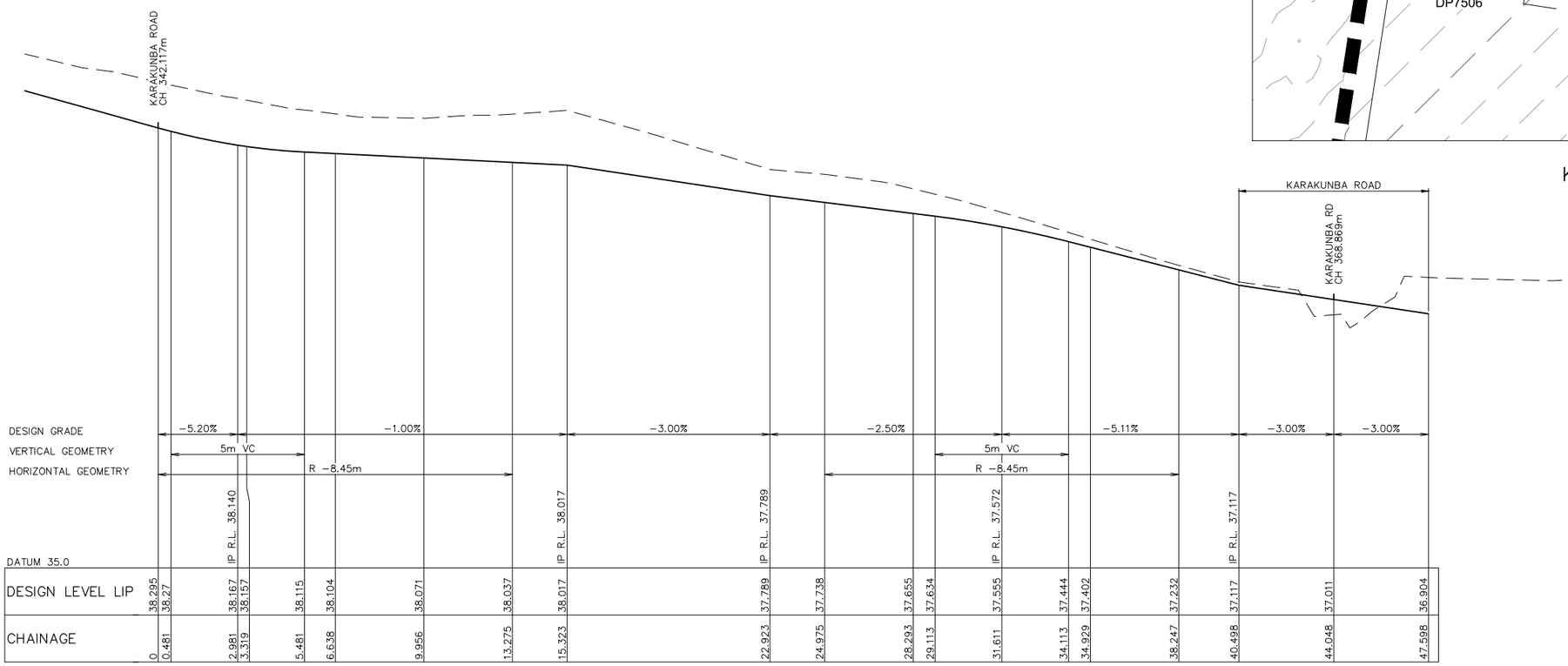
NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD–901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB



KERB RETURN 24
SCALE 1:200



LONGITUDINAL SECTION MK24
HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
A1 / A3 1:200 / 1:400
VERT A1 / A3 1:20 / 1:40
HORIZ A1 / A3 1:100 / 1:200
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC | DATUM A.H.D. GDA 94 ZONE 56

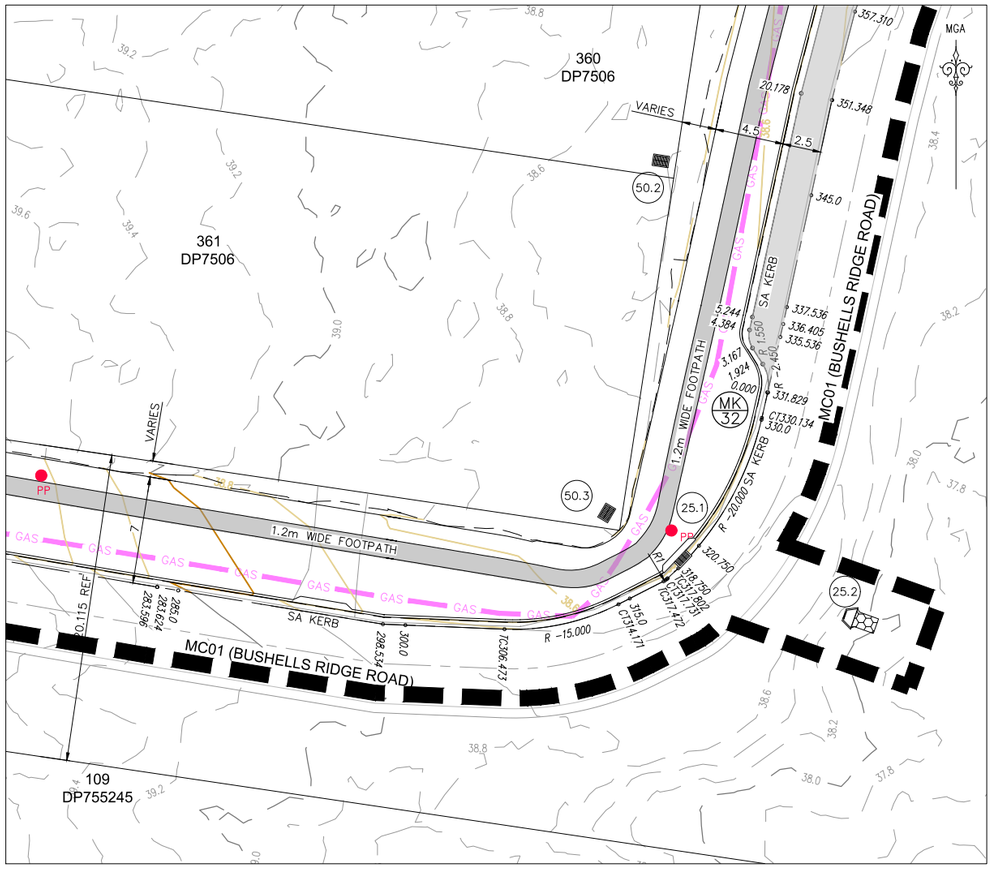
PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURN MK24

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 312 | REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:05 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–312(D).dwg

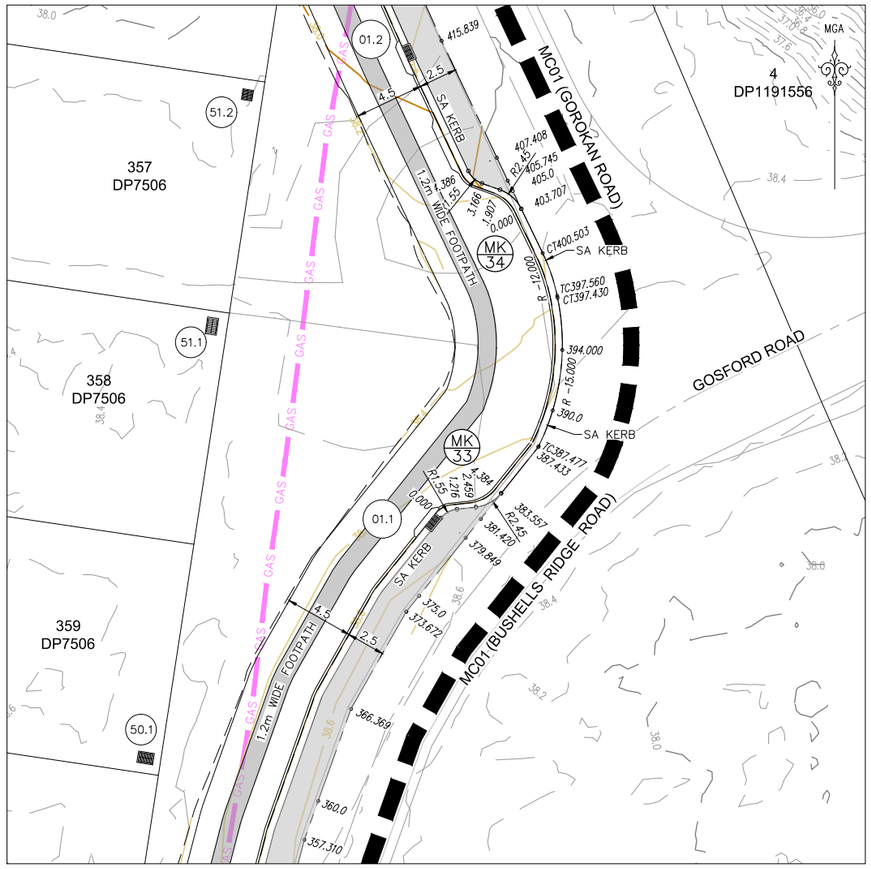
100mm AT FULL SIZE

239858-ENG-313(D)



KERB RETURN 32 PLAN

SCALE 1:200



KERB RETURNS 33 & 34 PLAN

SCALE 1:200

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

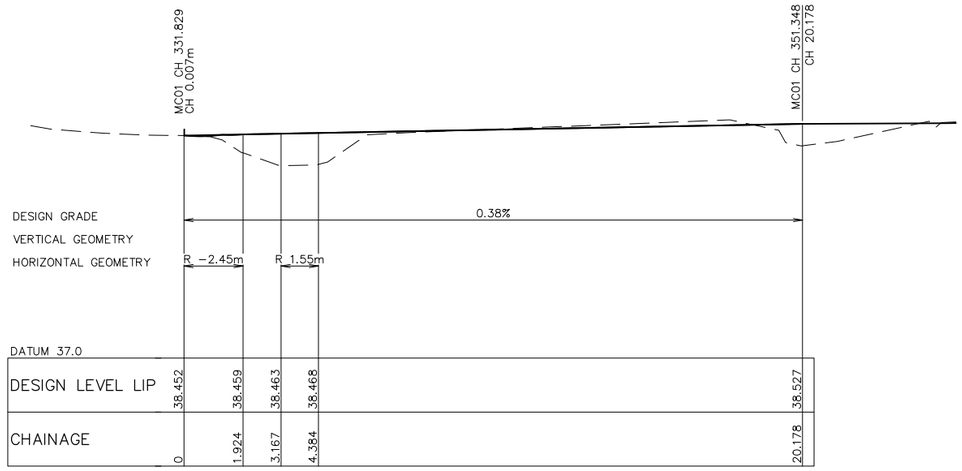
CONTOUR INTERVAL = 0.2m

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD-901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL ON LIP OF KERB

WARNING
HIGH PRESSURE GAS MAIN WITHIN LIMIT OF WORKS



LONGITUDINAL SECTION MK32

HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:20

ENG KR->MK32 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	359023.703	6326756.734	12°47'12.81"			
IP 2	0.962	359023.928	6326757.724		R = -2.450	1.924	44°59'53.13"
CT	1.924	359023.387	6326758.583	327°47'19.68"			
TC	3.167	359022.725	6326759.634	327°47'19.68"			
IP 3	3.775	359022.382	6326760.177		R = 1.550	1.217	44°59'58.53"
CT	4.384	359022.524	6326760.803	12°47'18.20"			
IP 4	5.244	359022.715	6326761.642				
IP 5	20.178	359025.893	6326776.234	12°17'12.36"			

ENG KR -> MK33 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	359038.322	6326802.547	38°46'45.98"			
IP 2	0.608	359038.724	6326803.047		R = 1.550	1.216	44°57'31.49"
CT	1.216	359039.361	6326803.117	83°44'17.47"			
TC	2.459	359040.597	6326803.253	83°44'17.47"			
IP 3	3.422	359041.606	6326803.364		R = -2.450	1.925	45°01'03.73"
IP 4	4.384	359042.241	6326804.156	38°43'13.74"			

ENG KR -> MK34 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	359043.556	6326822.704	334°12'22.40"			
IP 2	0.954	359043.118	6326823.608		R = -2.450	1.907	44°35'53.94"
CT	1.907	359042.172	6326823.945	289°36'28.46"			
TC	3.166	359040.986	6326824.368	289°36'28.46"			
IP 3	3.776	359040.380	6326824.584		R = 1.550	1.220	45°05'37.85"
IP 4	4.386	359040.105	6326825.166	334°42'06.31"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
0 5 10 A1 / A3 1:200 / 1:400
VERT 0 0.2 0.4 0.6 0.8 A1 / A3 1:20 / 1:40
HORIZ 0 1 2 3 4 A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

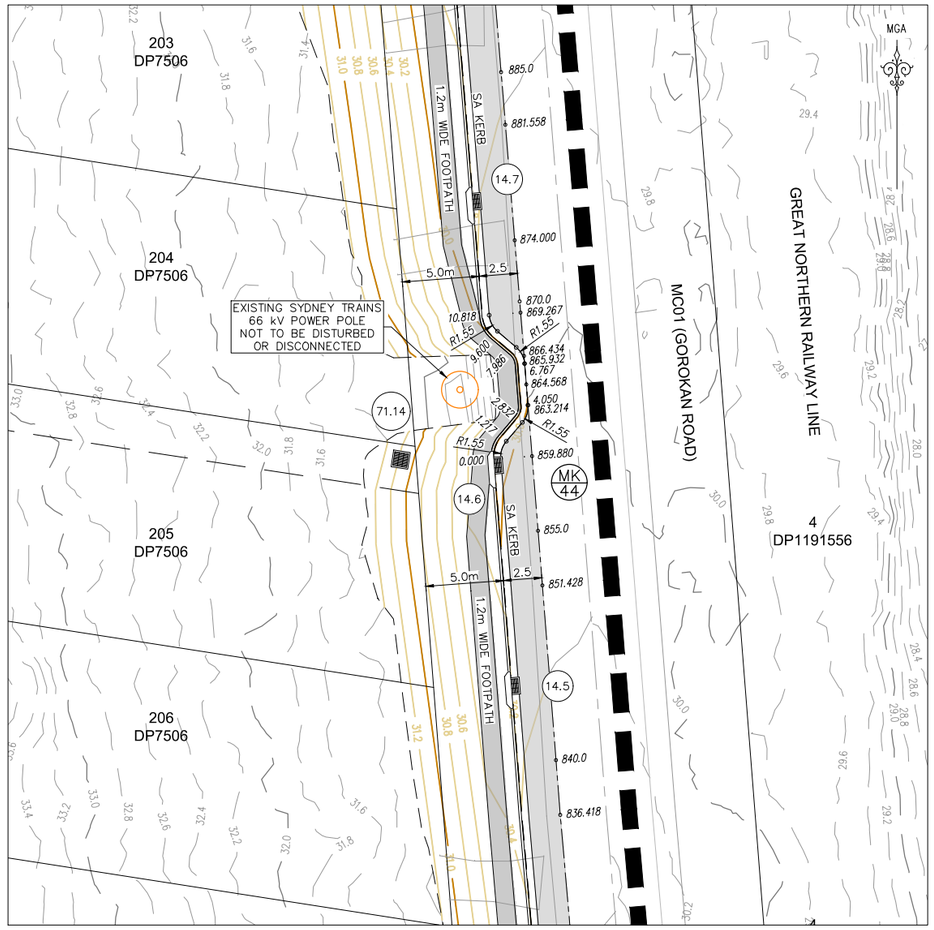
PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
INTERSECTION DETAIL PLAN: KERB RETURNS MK32, 33, 34

PROJECT No. 239858 - DISCIPLINE ENG - NUMBER 313 REV. D

Plotted By: tims Plot Date: 06/08/20 - 09:05 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-313(D).dwg

100mm AT FULL SIZE

239858-ENG-314(D)



KERB RETURN 44 PLAN

SCALE 1:200

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- PERAMBULATOR RAMP
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) (TO BE REMOVED)
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.2m

NOTES:

1. STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH LMCC STD DWG EGSD-901. REFER SHEETS 901 TO 905 FOR STREET SIGN DETAILS.
2. VERTICAL GEOMETRY FOR KERB RETURNS MK33, 34, 36, 37, 38, 39, 40, 41, 42, 43 AND 44 SET FROM CROSSFALL FROM MC01. SEE RELEVANT CROSS SECTIONS ON SHEETS 221 TO 226 FOR DETAILS.

DESIGN RL IS LIP OF KERB

ENG KR->MK44 HORIZONTAL POINTS

	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	358942.145	6327264.412	355°25'16.35"			
IP 2	0.609	358942.094	6327265.052		R = 1.550	1.217	45°00'00.00"
	1.217	358942.510	6327265.541	40°25'16.35"			
	2.832	358943.557	6327266.770	40°25'16.35"			
IP 3	3.441	358943.973	6327267.259		R = -1.550	1.217	45°00'00.00"
	4.050	358943.922	6327267.899	355°25'16.35"			
	6.767	358943.705	6327270.608	355°25'16.35"			
IP 4	7.376	358943.654	6327271.248		R = -1.550	1.218	45°02'13.10"
	7.986	358943.164	6327271.665	310°23'03.24"			
	9.600	358941.934	6327272.711	310°23'03.24"			
IP 5	10.209	358941.445	6327273.127		R = 1.550	1.217	45°00'00.00"
IP 6	10.818	358941.394	6327273.767	355°23'03.24"			

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES

0 5 10 — A1 / A3 1:200 / 1:400

VERT 0 0.2 0.4 0.6 0.8 — A1 / A3 1:20 / 1:40

HORIZ 0 1 2 3 4 — A1 / A3 1:100 / 1:200

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS

INTERSECTION DETAIL PLAN: KERB RETURN MK44

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	314	D

Plotted By: tims Plot Date: 06/08/20 - 09:05 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-314(D).dwg

100mm AT FULL SIZE

239858-ENG-401(D)

LEGEND

5.4	CATCHMENT NUMBER
0.2024ha	CATCHMENT AREA
	CATCHMENT BOUNDARY
(5.4)	PIT NUMBER
	EXISTING LOT BOUNDARY
	PROPOSED KERB
	EXISTING KERB
18	DESIGN SURFACE MAJOR CONTOURS
18	DESIGN SURFACE MINOR CONTOURS
18	EXISTING SURFACE MAJOR CONTOURS
18	EXISTING SURFACE MINOR CONTOURS
	EXTENT OF BATTER
	EXISTING STORMWATER
	PROPOSED STORMWATER

CONTOUR INTERVAL = 0.5m

NOTES:

1. ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED & EXPOSED PRIOR TO EARTHWORKS COMMENCING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM BOTH POSITION & LEVEL OF THESE UTILITIES.
2. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
3. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE.
4. PROVIDE 100mm SUBSOIL DRAIN AT BASE OF SERVICE TRENCH TO KERB INLET PITS IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SD035.

MGA

ADJOINS SHEET 403

ADJOINS SHEET 402

KARAKUNBA ROAD

(NOT NAMED) LANE

MC01 (BUSHELLS RIDGE ROAD)

DILLABIRRA ROAD (UNFORMED)

BUSHELLS RIDGE ROAD

100 DP1232264

108 DP755245

109 DP755245

PLAN
SCALE 1:500

DIAL 1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
STORMWATER CATCHMENT PLAN: SHEET 1

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 401 REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:05 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-401(D).dwg

100mm AT FULL SIZE

239858-ENG-402(D)



LEGEND

5.4	CATCHMENT NUMBER
0.2024ha	CATCHMENT AREA
	CATCHMENT BOUNDARY
(5.4)	PIT NUMBER
	EXISTING LOT BOUNDARY
	PROPOSED KERB
	EXISTING KERB
18	DESIGN SURFACE MAJOR CONTOURS
18	DESIGN SURFACE MINOR CONTOURS
18	EXISTING SURFACE MAJOR CONTOURS
18	EXISTING SURFACE MINOR CONTOURS
	EXTENT OF BATTER
	EXISTING STORMWATER
	PROPOSED STORMWATER

CONTOUR INTERVAL = 0.5m

NOTES:

1. ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED & EXPOSED PRIOR TO EARTHWORKS COMMENCING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM BOTH POSITION & LEVEL OF THESE UTILITIES.
2. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
3. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE.
4. PROVIDE 100mm SUBSOIL DRAIN AT BASE OF SERVICE TRENCH TO KERB INLET PITS IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SD035.

DIAL 1100 BEFORE YOU DIG

PLAN

SCALE 1:500

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 — A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS

STORMWATER CATCHMENT PLAN: SHEET 2

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 402 – REV. D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:06 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-402(D).dwg

239858-ENG-403(D)

MGA

ADJOINS SHEET 404

PIRAMA ROAD

DILLABIRRA ROAD

TULKABA ROAD

GREAT NORTHERN RAILWAY LINE

MC01 (GOROKAN ROAD)

DIAL 1100 BEFORE YOU DIG

ADJOINS INSET PLAN BELOW

ADJOINS MAIN PLAN ABOVE

ADJOINS SHEET 401

ADJOINS SHEET 402

TANK 02

100mm AT FULL SIZE

INSET PLAN
SCALE 1:500

PLAN
SCALE 1:500

LEGEND

5.4	CATCHMENT NUMBER
0.2024ha	CATCHMENT AREA
	CATCHMENT BOUNDARY
5.4	PIT NUMBER
	EXISTING LOT BOUNDARY
	PROPOSED KERB
	EXISTING KERB
18	DESIGN SURFACE MAJOR CONTOURS
18	DESIGN SURFACE MINOR CONTOURS
18	EXISTING SURFACE MAJOR CONTOURS
18	EXISTING SURFACE MINOR CONTOURS
	EXTENT OF BATTER
	EXISTING STORMWATER
	PROPOSED STORMWATER

CONTOUR INTERVAL = 0.5m

NOTES:

1. ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED & EXPOSED PRIOR TO EARTHWORKS COMMENCING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM BOTH POSITION & LEVEL OF THESE UTILITIES.
2. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.

NOTES CONTINUED:

3. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE.
4. PROVIDE 100mm SUBSOIL DRAIN AT BASE OF SERVICE TRENCH TO KERB INLET PITS IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SD035.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
STORMWATER CATCHMENT PLAN: SHEET 3

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 403 REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:06 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-403(D).dwg

239858-ENG-404(D)

ADJOINS SHEET 405

MGA

TULLOKAN ROAD

WAROPARA ROAD

PIRAMA ROAD

DILLABIRRA ROAD

MC01 (GOROKAN ROAD)

MURRAWAL ROAD

GREAT NORTHERN RAILWAY LINE

TANK 03

TANK 04

DF

430 DP755242

189 DP755242

100 DP1232264

4 DP1191556

14.11 19245m2

19.3 645m2

19.1 298m2

19.2 417m2

19.5 134m2

20.3 515m2

20.2 317m2

20.1 131m2

21.1 335m2

21.3 158m2

33.1 681m2

33.2 684m2

26.1 274m2

26.2 306m2

26.2 318m2

26.3 301m2

30.1 1540m2

18.1 357m2

14.9 376m2

14.8 279m2

14.7 139m2

14.6 204m2

14.5 268m2

14.4 385m2

14.3 364m2

14.2 147m2

14.1 183m2

27.1 406m2

17.1 784m2

16.1 585m2

27.2 456m2

27.3 302m2

27.4 301m2

27.5 209m2

15.1 726m2

21.4 288m2

21.5 329m2

21.6 287m2

22.3 245m2

22.2 314m2

11.1 304m2

11.2 327m2

227 DP7506 | 228 DP7506 | 229 DP7506 | 230 DP7506 | 231 DP7506 | 232 DP7506 | 233 DP7506 | 234 DP7506 | 235 DP7506 | 236 DP7506 | 237 DP7506 | 238 DP7506 | 239 DP7506 | 240 DP7506 | 241 DP7506 | 242 DP7506 | 243 DP7506 | 244 DP7506

202 DP7506 | 203 DP7506 | 204 DP7506 | 205 DP7506 | 206 DP7506 | 207 DP7506

226 DP7506 | 225 DP7506 | 224 DP7506 | 223 DP7506 | 222 DP7506 | 221 DP7506 | 220 DP7506 | 219 DP7506 | 218 DP7506 | 217 DP7506 | 216 DP7506 | 215 DP7506 | 214 DP7506 | 213 DP7506 | 212 DP7506 | 211 DP7506 | 210 DP7506 | 209 DP7506 | 208 DP7506

268 DP7506 | 269 DP7506 | 270 DP7506 | 271 DP7506 | 272 DP7506 | 273 DP7506 | 274 DP7506 | 275 DP7506 | 276 DP7506 | 277 DP7506 | 278 DP7506 | 279 DP7506 | 280 DP7506 | 281 DP7506 | 282 DP7506 | 283 DP7506

245 DP7506 | 246 DP7506 | 247 DP7506 | 248 DP7506

267 DP7506 | 266 DP7506 | 265 DP7506 | 264 DP7506 | 263 DP7506 | 262 DP7506 | 261 DP7506 | 260 DP7506

259 DP7506 | 258 DP7506 | 257 DP7506 | 256 DP7506 | 255 DP7506 | 254 DP7506 | 253 DP7506 | 252 DP7506 | 251 DP7506

ADJOINS SHEET 403

PLAN

SCALE 1:500

LEGEND

5.4	CATCHMENT NUMBER
0.2024ha	CATCHMENT AREA
	CATCHMENT BOUNDARY
(5.4)	PIT NUMBER
	EXISTING LOT BOUNDARY
	PROPOSED KERB
	EXISTING KERB
18	DESIGN SURFACE MAJOR CONTOURS
18	DESIGN SURFACE MINOR CONTOURS
18	EXISTING SURFACE MAJOR CONTOURS
18	EXISTING SURFACE MINOR CONTOURS
	EXTENT OF BATTER
	EXISTING STORMWATER
	PROPOSED STORMWATER

CONTOUR INTERVAL = 0.5m

NOTES:

1. ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED & EXPOSED PRIOR TO EARTHWORKS COMMENCING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM BOTH POSITION & LEVEL OF THESE UTILITIES.
2. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
3. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE.
4. PROVIDE 100mm SUBSOIL DRAIN AT BASE OF SERVICE TRENCH TO KERB INLET PITS IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SD035.

DIAL1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

100mm AT FULL SIZE

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson

Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC | DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS

STORMWATER CATCHMENT PLAN: SHEET 4

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	404	D

Plotted By: tims Plot Date: 06/08/20 – 09:06 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-404(D).dwg

239858-ENG-405(D)

LEGEND

5.4	CATCHMENT NUMBER
0.2024ha	CATCHMENT AREA
	CATCHMENT BOUNDARY
(5.4)	PIT NUMBER
	EXISTING LOT BOUNDARY
	PROPOSED KERB
	EXISTING KERB
18	DESIGN SURFACE MAJOR CONTOURS
18	DESIGN SURFACE MINOR CONTOURS
18	EXISTING SURFACE MAJOR CONTOURS
18	EXISTING SURFACE MINOR CONTOURS
	EXTENT OF BATTER
	EXISTING STORMWATER
	PROPOSED STORMWATER

CONTOUR INTERVAL = 0.5m

NOTES:

1. ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED & EXPOSED PRIOR TO EARTHWORKS COMMENCING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM BOTH POSITION & LEVEL OF THESE UTILITIES.
2. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
3. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE.
4. PROVIDE 100mm SUBSOIL DRAIN AT BASE OF SERVICE TRENCH TO KERB INLET PITS IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING SD035.

188 DP755242
4 DP1191556
GREAT NORTHERN RAILWAY LINE
WYEE ROAD
GOROKAN ROAD
MC01 (GOROKAN ROAD)
430 DP755242
189 DP755242
14.11 19245m2
19.3 645m2
19.5 134m2
19.1 298m2
26.1 274m2
30.1 1540m2
19.2 417m2
20.3 515m2
20.2 317m2
26.2 306m2
26.2 318m2
26.3 301m2
14.9 376m2
18.1 357m2
20.1 131m2
14.8 279m2
TULLOKAN ROAD
DILLABIRRA ROAD
TANK 03
100 DP1232264
227 DP7506
228 DP7506
229 DP7506
230 DP7506
231 DP7506
232 DP7506
233 DP7506
234 DP7506
235 DP7506
236 DP7506
237 DP7506
238 DP7506
239 DP7506
240 DP7506
241 DP7506
242 DP7506
243 DP7506
244 DP7506
202 DP7506
203 DP7506
226 DP7506
225 DP7506
224 DP7506
223 DP7506
222 DP7506
221 DP7506

ADJOINS SHEET 404

PLAN
SCALE 1:500

DIAL1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
STORMWATER CATCHMENT PLAN: SHEET 5

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 405 REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:06 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-405(D).dwg

100mm AT FULL SIZE

	STORMWATER SETOUT		
PIT NAME	PIT TYPE	EASTING	NORTHING
		m	m
01/1	2.4m LINTEL O/A SAG	358937.607	6326802.416
01/2	2.4m LINTEL O/A	359035.979	6326832.793
01/3	2.4m LINTEL O/A	359022.845	6326852.844
01/4	2.4m LINTEL O/A SAG	359020.715	6326873.48
01/5	2.4m LINTEL O/A	359008.175	6326900.145
01/6	2.4m LINTEL O/A	358996.033	6326934.536
01/7	2.4m LINTEL O/A	358990.946	6326950.083
01/8	2.4m LINTEL O/A	358988.456	6326965.422
01/9	2.4m LINTEL O/A	358978.849	6326972.469
01/10	2.4m LINTEL O/A	358981.158	6326991.459
01/11	2.4m LINTEL O/A	358968.502	6327035.526
01/12	ECOSOL GPT 4450	358967.548	6327044.204
01/13	3.0m LINTEL O/A SAG WITH PIT INSERT	358964.605	6327054.486
01/14	HEADWALL OUTLET	358975.788	6327057.666
02/2	2.4m LINTEL O/A	358996.153	6326856.93
02/3	3.0m LINTEL O/A SAG	359011.183	6326854.629
03/1	2.4m LINTEL O/A	359012.116	6326862.605
04/1	2.4m LINTEL O/A	358914.56	6326877.512
05/1	2.4m LINTEL O/A	358782.305	6327010.646
05/2	2.4m LINTEL O/A	358781.094	6327002.738
05/3	2.4m LINTEL O/A	358828.341	6326995.507
05/4	2.4m LINTEL O/A	358868.764	6326989.319
05/5	2.4m LINTEL O/A	358930.265	6326979.905
05/6	3.0m LINTEL O/A SAG	358971.095	6326973.656
06/1	2.4m LINTEL O/A	358972.225	6326981.601
07/1	2.4m LINTEL O/A	358931.476	6326987.813
08/1	2.4m LINTEL O/A	358864.226	6326998.107
09/1	2.4m LINTEL O/A	358823.406	6327004.355
10/2	2.4m LINTEL O/A	358919.946	6327102.469
10/3	2.4m LINTEL O/A	358947.609	6327098.235
10/4	2.4m LINTEL O/A	358946.399	6327090.327
10/5	900 x 900 VGRATE	358960.925	6327088.103
10/6	ECOSOL GPT 4450	358964.075	6327065.573
11/1	2.4m LINTEL O/A	358949.84	6327165.773
11/2	2.4m LINTEL O/A	358952.469	6327135.573
11/3	2.4m LINTEL O/A SAG	358954.138	6327122.428
11/4	2.4m LINTEL O/A	358958.092	6327107.843
12/1	2.4m LINTEL O/A	358857.681	6327103.906
13/1	2.4m LINTEL O/A	358798.028	6327113.037
14/1	2.4m LINTEL O/A	358916.584	6327206.238
14/2	2.4m LINTEL O/A	358934.914	6327203.432
14/3	3.0m LINTEL O/A SAG	358941.058	6327202.492
14/4	2.4m LINTEL O/A	358947.028	6327224.539
14/5	2.4m LINTEL O/A	358942.841	6327249.581
14/6	2.4m LINTEL O/A SAG	358941.705	6327263.955
14/7	2.4m LINTEL O/A	358940.32	6327281.168
14/8	2.4m LINTEL O/A SAG	358938.647	6327301.601
14/9	1500 x 1500 GSIP	358937.067	6327333.288
14/10	ECOSOL GPT 4450	358936.329	6327340.283
14/11	1500 x 1500 GSIP	358932.7	6327374.682
14/12	HEADWALL OUTLET	358944.23	6327380.573
15/1	3.0m LINTEL O/A SAG	358936.586	6327214.355
16/1	2.4m LINTEL O/A	358874.291	6327223.89
17/1	2.4m LINTEL O/A	358814.029	6327233.115
18/1	2.4m LINTEL O/A	358930.062	6327317.033
18/2	900 x 900 GSIP	358931.715	6327327.834
19/1	2.4m LINTEL O/A	358708.778	6327350.904
19/2	3.0m LINTEL O/A SAG	358678.109	6327355.598
19/3	900 x 900 GSIP	358678.299	6327363.662
19/4	900 x 900 GSIP	358662.458	6327366.087
19/5	ECOSOL GPT 4300	358657.975	6327366.773
19/6	DE	358652.954	6327367.542
20/1	2.4m LINTEL O/A	358661.37	6327306.326
20/2	2.4m LINTEL O/A	358667.937	6327349.067
20/3	900 x 900 GSIP	358660.106	6327350.775
21/1	3.0m LINTEL O/A SAG	358655.541	6327268.393
21/2	900 X 900 JUNCTION	358651.981	6327246.765
21/3	2.4m LINTEL O/A	358650.693	6327236.837
21/4	2.4m LINTEL O/A	358644.726	6327198.006
21/5	2.4m LINTEL O/A	358638.152	6327155.217
21/6	900 x 900 VGRATE	358635.494	6327137.916
21/7	2.4m LINTEL O/A	358634.051	6327128.53
21/8	2.4m LINTEL O/A	358627.779	6327087.709
21/9	2.4m LINTEL O/A	358621.204	6327044.913
21/10	900 x 900 GSIP	358613.296	6327046.128
21/11	900 x 900 JUNCTION	358609.87	6327023.831
21/12	ECOSOL GPT 4600	358605.61	6327024.483
21/13	DE	358600.366	6327025.285

	STORMWATER SETOUT		
PIT NAME	PIT TYPE	EASTING	NORTHING
		m	m
22/1	2.4m LINTEL O/A	358700.422	6327136.071
22/2	2.4m LINTEL O/A	358670.295	6327140.682
22/3	2.4m LINTEL O/A	358646.09	6327144.387
22/4	2.4m LINTEL O/A	358644.88	6327136.479
23/1	2.4m LINTEL O/A	358701.556	6327014.913
23/2	2.4m LINTEL O/A	358702.766	6327022.821
23/3	2.4m LINTEL O/A	358662.992	6327028.909
23/4	3.0m LINTEL O/A SAG	358629.112	6327034.095
23/5	3.0m LINTEL O/A SAG	358627.901	6327026.187
24/1	3.0m LINTEL O/A	358705.523	6326901.415
24/2	2.4m LINTEL O/A	358705.724	6326909.477
24/3	3.0m LINTEL O/A SAG	358667.359	6326914.205
24/4	600 x 900 GSIP	358668.499	6326922.315
24/5	900 x 900 GSIP	358675.521	6326968.017
24/6	600 x 900 GSIP	358655.137	6326971.137
24/7	600 x 900 GSIP	358635.247	6326974.182
24/8	600 x 900 GSIP	358615.356	6326977.226
24/9	900 x 900 JUNCTION	358612.885	6326977.604
25/1	3.0m LINTEL O/A SAG	359017.98	6326746.061
25/2	HEADWALL 375 OUTLET	359028.763	6326742.21
26/1	2.4m LINTEL O/A	358781.113	6327339.832
26/2	2.4m LINTEL O/A	358817.28	6327334.296
26/3	2.4m LINTEL O/A	358853.447	6327328.76
26/4	2.4m LINTEL O/A	358889.613	6327323.224
27/1	2.4m LINTEL O/A	358776.185	6327227.728
27/2	2.4m LINTEL O/A	358821.379	6327220.811
27/3	2.4m LINTEL O/A	358851.508	6327216.199
27/4	2.4m LINTEL O/A	358881.638	6327211.587
27/5	2.4m LINTEL O/A	358898.323	6327209.033
28/1	2.4m LINTEL O/A	358782.746	6326837.192
28/2	2.4m LINTEL O/A	358775.827	6326838.251
28/3	3.0m LINTEL O/A SAG	358782.25	6326880.055
28/4	2.4m LINTEL O/A	358789.169	6326878.992
28/5	2.4m LINTEL O/A	358795.228	6326895.777
28/6	2.4m LINTEL O/A	358835.052	6326889.682
28/7	2.4m LINTEL O/A	358833.842	6326881.774
28/8	2.4m LINTEL O/A	358873.646	6326875.919
28/9	2.4m LINTEL O/A	358913.38	6326869.599
28/10	2.4m LINTEL O/A	358974.022	6326860.317
29/1	2.4m LINTEL O/A	358775.739	6327124.542
29/2	2.4m LINTEL O/A	358805.866	6327119.931
29/3	2.4m LINTEL O/A	358836.49	6327115.243
29/4	2.4m LINTEL O/A	358866.12	6327110.708
29/5	2.4m LINTEL O/A	358896.247	6327106.096
30/2	900 x 900 GSIP	358908.744	6327328.151
33/1	2.4m LINTEL O/A	358663.14	6327256.211
33/2	2.4m LINTEL O/A	358661.468	6327245.288
50/1	600 x 600 GSIP	359019.045	6326786.904
50/2	600 x 600 GSIP	359016.73	6326771.835
50/3	600 x 900 GSIP	359013.203	6326748.879
51/1	600 x 900 GSIP	359023.372	6326815.065
51/2	900 x 900 GSIP	359025.688	6326830.135
55/1	600 x 600 GSIP	358804.934	6326832.785
55/2	600 x 900 GSIP	358824.833	6326829.739
55/3	600 x 900 GSIP	358844.717	6326826.696
55/4	600 x 900 GSIP	358864.601	6326823.653
55/5	600 x 900 GSIP	358884.485	6326820.61
55/6	600 x 900 GSIP	358904.368	6326817.567
55/7	600 x 900 GSIP	358924.252	6326814.524
55/8	900 x 900 GSIP	358944.136	6326811.481
55/9	900 x 900 GSIP	358964.02	6326808.438
55/10	900 x 900 GSIP	358965.997	6326808.135
55/11	900 x 900 GSIP	358972.949	6326853.342
56/1	600 x 900 GSIP	358891.434	6326865.819
56/2	600 x 600 GSIP	358911.319	6326862.775
56/3	600 x 600 GSIP	358931.203	6326859.732
56/4	600 x 900 GSIP	358951.088	6326856.688
56/5	900 x 900 GSIP	358970.972	6326853.644
60/1	900 x 900 GSIP	358986.536	6326948.729
61/1	600 x 600 GSIP	358772.121	6326950.702
61/2	600 x 900 GSIP	358792.01	6326947.657
61/3	600 x 900 GSIP	358821.84	6326943.091
61/4	600 x 900 GSIP	358841.728	6326940.047
61/5	600 x 900 GSIP	358861.627	6326937.001
61/6	600 x 900 GSIP	358881.437	6326933.969
61/7	600 x 900 GSIP	358901.386	6326930.915
61/8	600 x 900 GSIP	358921.273	6326927.872
61/9	900 x 900 GSIP	358928.207	6326973.081

	STORMWATER SETOUT		
PIT NAME	PIT TYPE	EASTING	NORTHING
		m	m
62/1	600 x 900 GSIP	358923.25	6326927.569
63/1	600 x 600 GSIP	358749.563	6327069.09
63/2	600 x 600 GSIP	358769.449	6327066.049
63/3	600 x 900 GSIP	358789.334	6327063.009
63/4	600 x 900 GSIP	358809.219	6327059.969
63/5	600 x 900 GSIP	358808.916	6327057.992
63/6	600 x 600 GSIP	358828.801	6327054.952
63/7	900 x 900 GSIP	358822.158	6327011.686
64/1	600 x 600 GSIP	358848.99	6327053.889
64/2	600 x 600 GSIP	358848.687	6327051.912
64/3	600 x 900 GSIP	358868.572	6327048.871
64/4	600 x 600 GSIP	358888.487	6327045.827
64/5	900 x 900 GSIP	358908.423	6327042.779
64/6	900 x 900 GSIP	358928.309	6327039.739
64/7	900 x 900 GSIP	358963.306	6327034.388
65/1	900 x 900 GSIP	358908.73	6327044.755
66/1	600 x 600 GSIP	358888.789	6327047.804
67/1	600 x 900 GSIP	358868.876	6327050.848
68/1	600 x 600 GSIP	358829.105	6327056.929
69/1	600 x 900 GSIP	358970.593	6327002.391
69/2	600 x 600 GSIP	358967.178	6327018.353
71/1	600 x 600 GSIP	358748.219	6327293.032
71/2	600 x 600 GSIP	358760.274	6327291.187
71/3	600 x 600 GSIP	358772.328	6327289.342
71/4	600 x 600 GSIP	358784.382	6327287.497
71/5	600 x 600 GSIP	358796.436	6327285.652
71/6	600 x 900 GSIP	358808.49	6327283.807
71/7	600 x 900 GSIP	358820.544	6327281.962
71/8	600 x 900 GSIP	358832.598	6327280.117
71/9	600 x 900 GSIP	358844.652	6327278.272
71/10	600 x 900 GSIP	358856.706	6327276.426
71/11	600 x 900 GSIP	358868.76	6327274.581
71/12	600 x 900 GSIP	358880.814	6327272.736
71/13	600 x 900 GSIP	358893.351	6327270.817
71/14	900 x 900 GSIP	358935.619	6327264.348
72/1	600 x 600 GSIP	358726.088	6327296.42
72/2	600 x 600 GSIP	358714.034	6327298.265
72/3	600 x 600 GSIP	358701.98	6327300.11
72/4	600 x 900 GSIP	358689.926	6327301.955
72/5	600 x 900 GSIP	358677.872	6327303.8
72/6	900 x 900 GSIP	358665.818	6327305.645
73/1	600 x 900 GSIP	358724.495	6327185.796
73/2	600 x 900 GSIP	358709.431	6327188.102
73/3	600 x 900 GSIP	358694.367	6327190.408
73/4	600 x 900 GSIP	358679.303	6327192.714
73/5	900 x 900 GSIP	358664.239	6327195.019
74/1	600 x 900 GSIP	358711.769	6327074.868
74/2	600 x 900 GSIP	358691.884	6327077.908
74/3	600 x 900 GSIP	358671.998	6327080.948
74/4	600 x 900 GSIP	358652.113	6327083.988
74/5	900 x 900 GSIP	358632.228	6327087.029
75/1	600 x 600 GSIP	358734.318	6326956.488
75/2	600 x 900 GSIP	358734.622	6326958.465
75/3	600 x 900 GSIP	358714.731	6326961.509
75/4	900 x 900 GSIP	358694.85	6326964.552
76/1	600 x 600 GSIP	358757.189	6326840.092
76/2	600 x 900 GSIP	358737.294	6326843.138
76/3	600 x 900 GSIP	358697.504	6326849.228
77/1	600 x 600 GSIP	358714.428	6326959.532
TANK01/1	OSD TANK	358953.835	6326980.344
TANK02/2	OSD TANK	358905.996	6327100.558
TANK03/2	OSD TANK	358896.848	6327326.163
TANK04/2	OSD TANK	358907.535	6327213.213

	PSD (L/s)	
Lot	10% AEP	1% AEP
202	13.6	24.4
203	14.6	26.3
204	15.5	28.0
205	13.0	23.5
206	14.1	25.4
207	15.1	27.2
208	10.7	19.2
209	10.7	19.2
210	10.7	19.2
211	10.7	19.2
212	10.7	19.2
213	10.7	19.2
214	10.7	19.2
215	10.7	19.2
216	10.7	19.2
217	10.7	19.2
218	10.7	19.2
219	10.7	19.2
220	10.7	19.2
221	4.3	11.7
222	4.3	11.7
223	4.3	11.7
224	4.3	11.7
225	4.3	11.7
226	4.3	11.7
227	4.3	11.7
228	4.3	11.7
229	4.3	11.7
230	4.3	11.7
231	4.3	11.7
232	4.3	11.7
233	10.7	19.2
234	10.7	19.2
235	10.7	19.2
236	10.7	19.2
237	10.7	19.2
238	10.7	19.2
239	10.7	19.2
240	10.7	19.2
241	10.7	19.2
242	10.7	19.2
243	10.7	19.2
244	10.7	19.2
245	12.8	33.8
246	13.7	36.3
247	14.7	38.9
248	11.7	31.1
249	12.9	34.2
250	14.1	37.3
251	12.2	32.2
252	12.2	32.2
253	12.2	32.2
254	12.2	32.2
255	12.2	32.2
256	12.2	32.2
257	12.2	32.2
258	12.2	32.2
259	12.2	32.2
260	12.2	32.2
261	12.2	32.2
262	5.9	18.5
263	5.9	18.5

	PSD (L/s)	
Lot	10% AEP	1% AEP
264	5.9	18.5
265	5.9	18.5
266	5.9	18.5
267	5.9	18.5
268	5.9	18.5
269	5.9	18.5
270	5.9	18.5
271	5.9	18.5
272	5.9	18.5
273	5.9	18.5
274	13.4	24.1
275	13.4	24.1
276	13.4	24.1
277	13.4	24.1
278	13.4	24.1
279	13.4	24.1
280	13.4	24.1
281	13.4	24.1
282	13.4	24.1
283	13.4	24.1
284	11.0	29.1
285	12.5	33.1
286	14.0	37.0
287	10.2	26.9
288	11.9	31.4
289	13.6	36.1
290	16.0	42.5
291	16.0	42.5
292	16.0	42.5
293	16.0	42.5
294	16.0	42.5
295	16.0	42.5
296	16.0	42.5
297	16.0	42.5
298	16.0	42.5
299	7.8	24.4
300	7.8	24.4
301	7.8	24.4
302	7.8	24.4
303	7.8	24.4
304	7.8	24.4
305	7.8	24.4
306	7.8	24.4
307	7.8	24.4
308	7.8	24.4
309	7.8	24.4
310	16.0	42.5
311	16.0	42.5
312	16.0	42.5
313	16.0	42.5
314	16.0	42.5
315	16.0	42.5
316	16.0	42.5
317	16.0	42.5
318	16.0	42.5
319	15.1	40.1
320	17.2	45.6
321	19.3	51.0
322	16.0	42.5
323	18.4	48.7
324	20.8	55.0
325	16.0	42.5

	PSD (L/s)	
Lot	10% AEP	1% AEP
326	16.0	42.5
327	16.0	42.5
328	16.0	42.5
329	16.0	42.5
330	16.0	42.5
331	16.0	42.5
332	16.0	42.5
333	16.0	42.5
334	7.8	24.4
335	7.8	24.4
336	7.8	24.4
337	7.8	24.4
341	7.8	24.4
342	7.8	24.4
343	7.8	24.4
344	7.8	24.4
345	7.8	24.4
346	7.8	24.4
347	7.8	24.4
348	16.0	42.5
349	16.0	42.5
350	16.0	42.5
351	16.0	42.5
352	16.0	42.5
353	16.0	42.5
354	16.0	42.5
355	16.0	42.5
356	15.1	39.8
357	15.3	40.6
358	15.3	40.6
359	18.4	64.1
360	18.4	64.1
361	28.1	97.7
362	18.8	49.9
363	18.8	49.9
364	18.8	49.9
365	18.8	49.9
366	18.8	49.9
367	18.8	49.9
368	18.8	49.9
369	18.8	49.9
370	18.8	49.9
371	7.5	23.5
372	9.3	29.2
373	14.5	45.5
386	7.8	24.4
387	7.8	24.4
388	7.8	24.4
389	7.8	24.4
390	16.0	42.5
391	13.0	34.4
392	16.0	42.5
393	16.0	42.5
394	16.0	42.5
395	16.0	42.5
396	16.0	42.5
397	16.0	42.5
398	16.0	42.5
399	16.0	42.5
400	16.0	42.5

NOTES:

1. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.12
2. LINTEL SIZES ARE OVERALL PIT LENGTHS.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

DESIGN FILE N:\239858\Design\12D\

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

PROJECT WYEE WEST PAPER SUBDIVISION

PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER SETOUT TABLES & PSD TABLES

SURVEYED	DATUM	PROJECT No.	DISCIPLINE	NUMBER	REV.
LMCC	A.H.D. GDA 94 ZONE 56	239858	ENG	410	D

Plotted By: tims Plot Date: 06/08/20 – 09:06 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-410(D).dwg

239858-ENG-410(D)

100mm AT FULL SIZE

239858-ENG-411(D)

100mm AT FULL SIZE

10% AEP PIT DETAILS

Node	Structure	Catchment	Imp.	Tc Imp.	Per.	Tc Per.	Catchment	Approach	Captured	Road	Max Flow	Velocity	Depth	VD	Bypass	Bypass	HGL	Grate level	Lost
		Area (ha)	%	(min)	%	(min)	Flow	Flow	Flow	Grade	Width	m/s	m	m2/sec	Flow	Pit	R.L. m	R.L. m	m2/sec
01/1	2.4m LINTEL O/A SAG	0.0022	100		0		1	1	1	1			0.04		0	01/2	36.892	38.49	
01/2	2.4m LINTEL O/A	0.0212	70		30		9	9	9	2.1	0.52	0.80	0.04	0.03	0	01/3	34.858	37.76	
01/3	2.4m LINTEL O/A	0.0285	50		50		11	11	11	3.3	0.52	1.00	0.04	0.04	0	TANK01/1	34.842	36.871	
01/4	2.4m LINTEL O/A SAG	0.0277	70		30		11	11	10	3.4			0.04		2	01/5	34.107	35.977	
01/5	2.4m LINTEL O/A	0.019	70		30		8	49	48	5.5	1.05	1.58	0.06	0.09	1	01/6	33.145	34.848	
01/6	2.4m LINTEL O/A	0.0333	70		30		14	49	48	3.8	1.18	1.38	0.06	0.09	1	01/7	31.475	33.191	
01/7	2.4m LINTEL O/A	0.0154	70		30		7	7	7	4	0.34	1.03	0.03	0.03	0	01/8	31.159	32.556	
01/8	2.4m LINTEL O/A	0.0149	70		30		6	21	21	3.7	0.72	1.14	0.05	0.05	0	01/9	30.21	32.02	
01/9	2.4m LINTEL O/A	0.0106	50		50		4	4	4	2.8	0.34	0.86	0.03	0.03	0	05/6	29.886	31.329	
01/10	2.4m LINTEL O/A	0.0196	70		30		8	8	8	2.9	0.45	0.91	0.04	0.04	0	01/11	29.633	31	
01/11	2.4m LINTEL O/A	0.0417	70		30		17	17	17	1.3	0.78	0.70	0.05	0.03	0	01/13	29.534	29.803	
01/12	ECOSOL GPT 4450		0		100		0	0	0	1.2							29.411	30.1	
01/13	3.0m LINTEL O/A SAG WITH PIT INSERT	0.0528	70		30		21	53	52	0.4			0.09		0	LOST	29.306	29.656	
01/14	HEADWALL OUTLET		0				0	0	0				100.00				29.1	29.077	
02/1	NO PIT		0		100		0	0	0	0.9							36.142	36.863	
02/2	2.4m LINTEL O/A	0.0211	55		45		8	8	8	0.9	0.52	0.52	0.04	0.02	0	02/3	35.307	36.814	
02/3	3.0m LINTEL O/A SAG	0.0316	55		45		12	12	12	0.8			0.05		0	01/4	34.946	36.684	
03/1	2.4m LINTEL O/A	0.0685	55		45		27	27	27	0.5	1.45	0.55	0.07	0.04	0	01/4	35.28	36.69	
04/1	2.4m LINTEL O/A	0.0575	55		45		22	22	22	0.5	1.28	0.52	0.07	0.03	0	TANK01/1	36.334	37.283	
05/1	2.4m LINTEL O/A	0.0327	55		45		13	45	44	5.5	1.02	1.56	0.06	0.09	0	09/1	37.775	39.115	
05/2	2.4m LINTEL O/A	0.0312	55		45		12	28	28	5.5	0.78	1.43	0.05	0.07	0	05/3	37.564	39.115	
05/3	2.4m LINTEL O/A	0.044	55		45		17	49	48	5.6	1.05	1.60	0.06	0.09	1	05/4	34.91	36.46	
05/4	2.4m LINTEL O/A	0.0453	55		45		18	50	49	5.6	1.05	1.60	0.06	0.09	1	05/5	32.595	34.188	
05/5	2.4m LINTEL O/A	0.0612	55		45		24	72	67	1	1.95	0.89	0.09	0.08	5	05/6	30.648	31.634	
05/6	3.0m LINTEL O/A SAG	0.0514	55		45		20	24	24	0.4			0.07		0	01/10	30.087	31.238	
06/1	2.4m LINTEL O/A	0.0285	55		45		11	11	11	0.4	0.95	0.41	0.06	0.02	0	01/10	30.09	31.241	
07/1	2.4m LINTEL O/A	0.057	55		45		22	22	22	1	1.05	0.68	0.06	0.04	0	06/1	30.653	31.634	
08/1	2.4m LINTEL O/A	0.0435	55		45		17	17	17	5.6	0.52	1.30	0.04	0.05	0	07/1	32.734	34.511	
09/1	2.4m LINTEL O/A	0.0401	55		45		16	16	16	5.6	0.52	1.30	0.04	0.05	0	08/1	35.218	36.805	
10/1	NO PIT		0		100		0	0	0	6.8							30.389	32.097	
10/2	2.4m LINTEL O/A	0.0253	55		45		10	10	10	6.8	0.45	1.40	0.04	0.06	0	10/3	30.026	32.048	
10/3	2.4m LINTEL O/A	0.0293	55		45		11	11	11	4.7	0.45	1.16	0.04	0.05	0	10/5	29.72	30.247	
10/4	2.4m LINTEL O/A	0.0882	55		45		34	34	34	4.7	0.85	1.36	0.05	0.07	0	10/5	29.628	30.247	
10/5	900 x 900 VGRATE	0.0473	70		30		19	19	18	0.4	1.28	0.46	0.07	0.03	0	10/6	29.501	29.924	
10/6	ECOSOL GPT 4450		0		100		0	0	0	0.9					0	01/13	29.363	29.787	
11/1	2.4m LINTEL O/A	0.0304	70		30		12	39	39	0.5	1.78	0.60	0.08	0.05	0	11/2	29.759	30.157	
11/2	2.4m LINTEL O/A	0.0327	70		30		13	40	40	0.3	1.95	0.49	0.09	0.04	0	11/3	29.734	30.059	
11/3	2.4m LINTEL O/A SAG	0.0181	70		30		8	21	20	1.1			0.06		1	11/4	29.669	30.035	
11/4	2.4m LINTEL O/A	0.011	70		30		4	19	19		2.45	0.00	0.10	0.00	0	10/5	29.591	30.001	
12/1	2.4m LINTEL O/A	0.0602	55		45		23	23	23	6.6	0.45	1.38	0.04	0.06	0	TANK02/2	34.669	36.267	
13/1	2.4m LINTEL O/A	0.0511	55		45		20	20	20	6.3	0.58	1.42	0.04	0.06	0	12/1	38.603	40.115	
14/1	2.4m LINTEL O/A	0.0183	60		40		7	7	7	11.2	0.45	1.79	0.04	0.07	0	14/2	30.243	32.269	
14/2	2.4m LINTEL O/A	0.0147	60		40		6	6	6	5.5	0.35	1.13	0.03	0.03	0	14/3	29.145	30.428	
14/3	3.0m LINTEL O/A SAG	0.0364	70		30		15	15	15	2.2			0.05		0	14/4	29.11	30.25	
14/4	2.4m LINTEL O/A	0.0812	60		40		33	33	33		1.55	0.56	0.07	0.04	0	14/5	29.017	30.414	
14/5	2.4m LINTEL O/A	0.0268	70		30		11	40	40	1.2	1.38	0.83	0.07	0.06	0	14/6	28.911	30.105	
14/6	2.4m LINTEL O/A SAG	0.0204	70		30		9	9	8	1.1			0.04		0	14/7	28.809	29.943	
14/7	2.4m LINTEL O/A	0.0139	70		30		6	22	22	1	1.12	0.69	0.06	0.04	0	14/8	28.521	29.763	
14/8	2.4m LINTEL O/A SAG	0.0279	70		30		11	39	31	1.3			0.07		8	14/9	28.467	29.517	
14/9	1500 x 1500 GSIP	0.0376	70		30		15	24	24						0	14/10	28.319	29.166	
14/10	ECOSOL GPT 4450		0		100		0	0	0						0	14/11	28.233	29.093	
14/11	1500 x 1500 GSIP	1.9245	5		95		235	235	235						0	LOST	28.097	28.559	
14/12	HEADWALL OUTLET		0				0	0	0				10.00				27.75	27.75	
15/1	3.0m LINTEL O/A SAG		70		30		0	0	0	4.7			0.00	0.00	0	14/4	29.145	30.463	
16/1	2.4m LINTEL O/A	0.0585	60		40		23	23	23	7.9	0.62	1.61	0.05	0.07	0	TANK04/2	34.593	36.42	
17/1	2.4m LINTEL O/A	0.0784	60		40		32	32	32	5.6	0.78	1.44	0.05	0.07	0	16/1	39.278	40.932	
18/1	2.4m LINTEL O/A	0.0357	70		30		15	15	15	9.9	0.45	1.69	0.04	0.07	0	14/9	28.726	30.037	
18/2	900 x 900 GSIP	0.154	60		40		57	57	56	9.9					1	14/9	28.725	29.773	
19/1	2.4m LINTEL O/A	0.0298	60		40		12	25	25	2.5	0.95	1.03	0.06	0.06	0	19/2	39.32	40.776	
19/2	3.0m LINTEL O/A SAG	0.0417	60		40		16	29	29	1.4			0.06		0	19/3	39.276	40.053	
19/3	900 x 900 GSIP	0.0645	60		40		24	24	24						0	LOST	39.239	40.047	
19/4	900 x 900 GSIP	0.0134	55		45		5	5	5						0	LOST	39.163	39.655	
19/5	ECOSOL GPT 4300		0		100		0	0	0								39.08	39.519	
19/6	* DE * SEE NOTE 1		0				0	0	0								39.028	39.38	
20/1	2.4m LINTEL O/A	0.0131	55		45		5	5	5	1	0.34	0.51	0.03	0.02	0	20/2	40.066	41.557	
20/2	2.4m LINTEL O/A	0.0317	55		45		12	12	12	2.4	0.45	0.83	0.04	0.03	0	19/2	39.242	40.516	
20/3	900 x 900 GSIP	0.0515	55		45		20	20	20						0	19/4	39.217	40.173	
21/1	3.0m LINTEL O/A SAG	0.1017	55		45		40	40	40	0.3			0.09		0	LOST	40.065	41.563	
21/2	900 x 900 JUNCTION		0		100		0	0	0				0				39.949	41.982	
21/3	2.4m LINTEL O/A	0.0844	55		45		6	6	6	3.3	0.44	0.59	0.39	0.02	0	21/4	39.739	41.409	
21/4	2.4m LINTEL O/A	0.0288	55		45		11	17	17	3.6	0.62	1.08	0.05	0.05	0	21/5	38.59	40.031	
21/5	2.4m LINTEL O/A	0.033	55		45		13	13	13	3.2	0.52	0.98	0.04	0.04	0	21/6	37.201	38.519	
21/6	900 x 900 VGRATE	0.0287	60		40		11	11	9	3	0.45	0.93	0.04	0.04	2	21/7	37.093	37.965	
21/7	2.4m LINTEL O/A	0.012	40		60		5	7	7	3.3	0.45	0.97	0.04	0.04	0	21/8	36.238	37.685	
21/8	2.4m LINTEL O/A	0.0303	55		45		12	12	12	3.6	0.45	1.02	0.04	0.04	0	21/9	34.712	36.231	
21/9	2.4m LINTEL O/A	0.0338	55		45		13	13	13	1.3	0.62	0.65	0.05	0.03	0	23/4	33.939	35.288	
21/10	900 x 900 GSIP	0.1702	55		45		54	54	54								33.584	34.972	
21/11	900 x 900 JUNCTION		0		100		0	0	0								32.957	34.727	
21/12	ECOSOL GPT 4600		0		100		0	0	0								32.556	33.9	
21/13	* DE * SEE NOTE 1		0				0	0	0								32.329	33.531	

10% AEP PIT DETAILS

Node	Structure	Catchment	Imp.	Tc Imp.	Per.	Tc Per.	Catchment	Approach	Captured	Road	Max Flow	Velocity	Depth	VD	Bypass	Bypass	HGL	Grate level	Lost
		Area (ha)	%	(min)	%	(min)	Flow	Flow	Flow	Grade	Width	m/s	m	m2/sec	Flow	Pit	R.L. m	R.L. m	m2/sec
22/1	2.4m LINTEL O/A	0.0315	55		45		12	24	24	6	0.62	1.40	0.05	0.06	0	22/2	40.246	41.843	
22/2	2.4m LINTEL O/A	0.0314	55		45		12	24	24	4.7	0.72	1.29	0.05	0.06	0	22/3	38.713	40.223	
22/3	2.4m LINTEL O/A	0.0245	55		45		9	21	21	7.8	0.52	1.53	0.04	0.06	0	21/5	37.422	38.769	
22/4	2.4m LINTEL O/A	0.0735	55		45		28	28	28	7.8	0.65	1.62	0.05	0.07	0	21/6	37.284	38.769	
23/1	2.4m LINTEL O/A	0.0351	55		45		14	14	14	4.3	0.45	1.11	0.04	0.04	0	23/5	37.38	38.78	
23/2	2.4m LINTEL O/A	0.0409	55		45		16	31	31	4.3	0.85	1.30	0.05	0.07	0	23/3	37.247	38.78	
23/3	2.4m LINTEL O/A	0.0399	55		45		16	31	31	5.6	0.78	1.44	0.05	0.07	0	23/4	34.857	36.94	
23/4	3.0m LINTEL O/A SAG	0.0532	55		45		21	36	36	1.2			0.07		0	23/5	33.576	35.025	
23/5	3.0m LINTEL O/A SAG	0.0969	55		45		37	37	36	1.2			0.07		0	LOST	33.375	35.025	
24/1	3.0m LINTEL O/A	0.0402	55		45		16	31	31	5.2	0.85	1.43	0.05	0.07	0	24/3	37.705	38.918	
24/2	2.4m LINTEL O/A	0.0346	55		45		13	13	13	5.2	0.45	1.22	0.04	0.05	0	24/3	37.508	38.865	
24/3	3.0m LINTEL O/A SAG	0.0877	55		45		35	66	64	3			0.07		0	LOST	35.728	36.9	
24/4	600 x 900 GSIP		0		100		0	0	0								35.555	37.233	
24/5	900 x 900 GSIP		5		95		0	0	8						0	24/6	35.243	37.306	
24/6	600 x 900 GSIP		0		100		0	0	8						0	24/7	34.644	36.35	
24/7	600 x 900 GSIP		0		100		0	0	8						0	24/8	33.822	35.123	
24/8	600 x 900 GSIP		0		100		0	0	8						0	24/9	33.099	34.121	
24/9	900 x 900 JUNCTION		0		100		0	0	0						0	LOST	33.075	34.004	
25/1	3.0m LINTEL O/A SAG	0.1051	100		0		40	40	34	0.2			0.09		5	LOST	37.739	38.384	
25/2	HEADWALL 375 OUTLET		0				0	0	0								37.584	38.158	
26/1	2.4m LINTEL O/A	0.0274	60		40		11	43	42	5	1.02	1.49	0.06	0.09	0	26/2	39.019	40.565	
26/2	2.4m LINTEL O/A	0.0306	60		40		12	44	44	6.8	0.95	1.70	0.06	0.09	0	26/3	36.65	38.197	
26/3	2.4m LINTEL O/A	0.0318	60		40		13	45	44	6.1	0.95	1.61	0.06	0.09	0	26/4	34.32	35.883	
26/4	2.4m LINTEL O/A	0.0301	60		40		12	44	44	6.6	0.95	1.67	0.06	0.09	0	TANK03/2	31.746	33.653	
27/1	2.4m LINTEL O/A	0.0406	60		40		16	43	42	5.4	0.95	1.51	0.06	0.08	0	27/2	41.255	42.931	
27/2	2.4m LINTEL O/A	0.0456	60		40		18	58	56	6.4	1.12	1.75	0.06	0.10	2	27/3	38.8	40.374	
27/3	2.4m LINTEL O/A	0.0302	60		40		12	40	40	7.9	0.85	1.76	0.05	0.09	0	27/4	36.46	38.1	
27/4	2.4m LINTEL O/A	0.0301	60		40		12	39	39	7.9	0.85	1.76	0.05	0.09	0	27/5	33.816	35.703	
27/5	2.4m LINTEL O/A	0.0209	60		40		8	22	22	9.5	0.52	1.69	0.04	0.07	0	TANK04/2	31.938	34.229	
28/1	2.4m LINTEL O/A	0.0449	50		50		17	17	17	3.1	0.62	1.01	0.05	0.05	0	28/4	39.805	41.255	
28/2	2.4m LINTEL O/A	0.0452	50		50		17	17	17	3.1	0.62	1.01	0.05	0.05	0	28/3	39.652	41.255	
28/3	3.0m LINTEL O/A SAG	0.07	50		50		28	57	55	1.7			0.07		0	28/4	38.683	39.911	
28/4	2.4m LINTEL O/A	0.0396	50		50		15	15	15	1.7	0.78	0.80	0.05	0.04	0	28/7	38.542	39.911	
28/5	2.4m LINTEL O/A	0.0296	55		45		11	11	11	2.8	0.52	0.92	0.04	0.04	0	28/6	38.21	39.986	
28/6	2.4m LINTEL O/A	0.0278	55		45		11	11	11	3.8	0.45	1.05	0.04	0.04	0	04/1	37.449	38.491	
28/7	2.4m LINTEL O/A	0.0394	55		45		15	47	47	3.8	1.12	1.35	0.06	0.08	1	28/8	37.337	38.491	
28/8	2.4m LINTEL O/A	0.043	55		45		17	49	48	0.8	1.75	0.75	0.08	0.06	0	28/9	36.791	37.483	
28/9	2.4m LINTEL O/A	0.0338	55		45		13	13	13	0.5	0.95	0.46	0.06	0.03	0	28/10	36.334	37.282	
28/10	2.4m LINTEL O/A	0.053	55		45		21	21	21	0.5	1.18	0.50	0.06	0.03	0	TANK01/1	36.268	36.975	
28/11	NO PIT		0		100		0	0	0	1							36.142	37.024	
29/1	2.4m LINTEL O/A	0.035	55		45		14	50	49	6.3	1.05	1.69	0.06	0.10	1	29/2	40.057	41.618	
29/2	2.4m LINTEL O/A	0.0299	55		45		11	37	37	6.3	0.85	1.57	0.05	0.08	0	29/3	38.176	39.691	
29/3	2.4m LINTEL O/A	0.0305	55		45		12	36	36	6.3	0.82	1.55	0.05	0.08	0	29/4	36.237	37.744	
29/4	2.4m LINTEL O/A	0.031	55		45		12	36	36	6.7	0.85	1.62	0.05	0.08	0	29/5	34.337	35.776	
29/5	2.4m LINTEL O/A	0.0294	55		45		11	36	36	6.8	0.85	1.63	0.05	0.08	0	TANK02/2	31.443	33.69	
30/1	NO PIT		0		100		0	0	0								31.305	32.406	
30/2	900 x 900 GSIP		0		100		0	0	0	8.6							30.794	32.099	
31/1	NO PIT		0		100		0	0	0								31.305	32.298	
32/1	NO PIT		0		100		0	0	0	11.2							31.242	32.446	
33/1	2.4m LINTEL O/A	0.068	60		40		27	27	27	2.5	0.95	1.028838246	0.055	0.056586104	0	21/1	40.985	42.287	
33/2	2.4m LINTEL O/A	0.0684	60		40		27	27	27	2.5	0.95	1.028838246	0.055	0.056586104	0	21/3	40.838	42.287	
50/1	600 x 600 GSIP		0		100		0	0	18						0	50/2	37.961	38.537	
50/2	600 x 600 GSIP		5		95		0	0	18						0	25/1	37.917	38.437	
50/3	600 x 900 GSIP		5		95		0	0	28						0	25/1	37.865	38.636	
51/1	600 x 900 GSIP		0		100		0	0	15	2.7					0	51/2	37.435	38.475	
51/2	900 x 900 GSIP		10		90		0	0	15	1.8					0	01/2	35.726	38.184	
55/1	600 x 600 GSIP		10		90		0	0	19						0	55/2	40.688	41.328	
55/2	600 x 900 GSIP		0		100		0	0	19						0	55/3	40.197	40.979	
55/3	600 x 900 GSIP		5		95		0	0	19						0	55/4	39.958	40.771	
55/4	600 x 900 GSIP		0		100		0	0	19						0	55/5	39.43	40.376	
55/5	600 x 900 GSIP		0		100		0	0	19						0	55/6	39.161	39.897	
55/6	600 x 900 GSIP		10		90		0	0	19						0	55/7	38.849	39.72	
55/7	600 x 900 GSIP		10		90		0	0	19						0	55/8	38.601	39.368	
55/8	900 x 900 GSIP		10		90		0	0	19						0	55/9	38.139	39.227	
55/9	900 x 900 GSIP		2		98		0	0	19						0	55/11	38.07	39.034	
55/10	900 x 900 GSIP		0		100		0	0	0						0	55/11	37.787	39.09	
55/11	900 x 900 GSIP		50		50		0	0	15						0	28/10	36.714	37.424	
56/1	600 x 900 GSIP		0		100		0	0	16						0	56/2	37.088	37.646	
56/2	600 x 600 GSIP		10		90		0	0	16						0	56/3	37.05	37.238	
56/3	600 x 600 GSIP		0		100		0	0	16						0	56/4	36.919	37.254	
56/4	600 x 900 GSIP		0		100		0	0	16						0	56/5	36.869	37.312	
56/5	900 x 900 GSIP		5		95		0	0	16						0	55/11	36.763	37.421	
60/1	900 x 900 GSIP		0		100		0	0	17						0	05/6	31.326	32.768	
61/1	600 x 600 GSIP		0		100		0	0	16						0	61/2	39.35	40.102	
61/2	600 x 900 GSIP		0		100		0	0	16						0	61/3	38.06	39.17	
61/3	600 x 900 GSIP		0		100		0	0	16						0	61/4	36.748	37.847	
61/4	600 x 900 GSIP		0		100		0	0	16						0	61/5	35.869	36.672	
61/5	600 x 900 GSIP		0		100		0	0	16						0	61/6	34.91	35.799	
61/6	600 x 900 GSIP		5		95		0	0	16						0	61/7	34.137	34.933	
61/7	600 x 900 GSIP		0		100		0	0	16						0	61/8	33.719	34.429	
61/8	600 x 900 GSIP		5		95		0	0	16						0	61/9	33.113	34.109	
61/9	900 x 900 GSIP		0		100		0	0	0	6.1					0	05/6	30.685	31.844	

NOTES:

1. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.12
2. LINTEL SIZES ARE OVERALL PIT LENGTHS.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC

DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION

PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER CALCULATIONS
MINOR EVENT: SHEET 1

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	411	D

Plotted By: tims Plot Date: 06/08/20 – 09:07 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-411(D).dwg

239858-ENG-412(D)

100mm AT FULL SIZE

10% AEP PIT DETAILS

Node	Structure	Catchment	Imp.	Tc Imp.	Per.	Tc Per.	Catchment	Approach	Captured	Road	Max Flow	Velocity	Depth	VD	Bypass	Bypass	HGL	Grate level	Lost
		Area (ha)	%	(min)	%	(min)	Flow	Flow	Flow	Grade	Width	m/s	m	m2/sec	Flow	Pit	R.L. m	R.L. m	m2/sec
62/1	600 x 900 GSIP		0		100		0	0	16						0	61/8	33.376	34.097	
63/1	600 x 600 GSIP		0		100		0	0	16						0	63/2	41.186	41.8	
63/2	600 x 600 GSIP		0		100		0	0	16						0	63/3	40.336	40.938	
63/3	600 x 900 GSIP		0		100		0	0	16						0	63/4	39.032	40.015	
63/4	600 x 900 GSIP		10		90		0	0	16						0	68/1	38.204	38.833	
63/5	600 x 900 GSIP		0		100		0	0	16	3.5					0	63/6	37.963	38.842	
63/6	600 x 600 GSIP		0		100		0	0	16	3.1					0	64/2	37.018	37.676	
63/7	900 x 900 GSIP		0		100		0	0	0	0.9					0	09/1	35.877	37.287	
64/1	600 x 600 GSIP		0		100		0	0	16						0	67/1	35.949	36.344	
64/2	600 x 600 GSIP		10		90		0	0	16	15.2					0	64/3	35.745	36.47	
64/3	600 x 900 GSIP		5		95		0	0	16	5.5					0	64/4	34.371	35.262	
64/4	600 x 600 GSIP		0		100		0	0	16	6.7					0	64/5	33.19	33.897	
64/5	900 x 900 GSIP		0		100		0	0	16	7.6					0	64/6	31.648	32.878	
64/6	900 x 900 GSIP		5		95		0	0	16	-1					0	64/7	30.295	31.895	
64/7	900 x 900 GSIP		0		100		0	0	10	4.2					0	01/13	29.657	29.979	
65/1	900 x 900 GSIP		5		95		0	0	16						0	64/5	31.968	32.911	
66/1	600 x 600 GSIP		20		80		0	0	16						0	65/1	33.393	33.935	
67/1	600 x 900 GSIP		35		65		0	0	16						0	66/1	34.641	35.252	
68/1	600 x 600 GSIP		10		90		0	0	16						0	64/1	37.254	37.758	
69/1	600 x 900 GSIP		0		100		0	0	14	24.2					0	69/2	29.872	30.495	
69/2	600 x 600 GSIP		0		100		0	0	12	6.8					0	64/7	29.717	30.049	
71/1	600 x 600 GSIP		0		100		0	0	11						0	71/2	42.726	43.313	
71/2	600 x 600 GSIP		10		90		0	0	11						0	71/3	42.62	43.261	
71/3	600 x 600 GSIP		10		90		0	0	11						0	71/4	42.095	42.837	
71/4	600 x 600 GSIP		0		100		0	0	11						0	71/5	41.505	42.205	
71/5	600 x 600 GSIP		0		100		0	0	11						0	71/6	40.875	41.605	
71/6	600 x 900 GSIP		5		95		0	0	11						0	71/7	40.055	41.069	
71/7	600 x 900 GSIP		5		95		0	0	11						0	71/8	39.318	40.24	
71/8	600 x 900 GSIP		0		100		0	0	11						0	71/9	38.243	39.096	
71/9	600 x 900 GSIP		5		95		0	0	11						0	71/10	37.48	38.433	
71/10	600 x 900 GSIP		0		100		0	0	11						0	71/11	36.478	37.563	
71/11	600 x 900 GSIP		0		100		0	0	11						0	71/12	35.659	36.67	
71/12	600 x 900 GSIP		25		75		0	0	11						0	71/13	34.745	35.792	
71/13	600 x 900 GSIP		0		100		0	0	11						0	71/14	33.475	34.49	
71/14	900 x 900 GSIP		0		100		0	0	13	20.6					0	14/6	29.034	31.172	
72/1	600 x 600 GSIP		0		100		0	0	4						0	72/2	42.893	43.584	
72/2	600 x 600 GSIP		0		100		0	0	4						0	72/3	42.775	43.563	
72/3	600 x 600 GSIP		0		100		0	0	4						0	72/4	42.206	43.04	
72/4	600 x 900 GSIP		0		100		0	0	4						0	72/5	41.868	42.833	
72/5	600 x 900 GSIP		0		100		0	0	4						0	72/6	41.359	42.336	
72/6	900 x 900 GSIP		15		85		0	0	4						0	20/1	40.45	41.811	
73/1	600 x 900 GSIP		15		85		0	0	6						0	73/2	43.805	44.585	
73/2	600 x 900 GSIP		0		100		0	0	6						0	73/3	43.106	43.851	
73/3	600 x 900 GSIP		0		100		0	0	6						0	73/4	42.167	43.227	
73/4	600 x 900 GSIP		0		100		0	0	6						0	73/5	41.11	42.171	
73/5	900 x 900 GSIP		0		100		0	0	6						0	21/3	40.057	41.335	
74/1	600 x 900 GSIP		0		100		0	0	8						0	74/2	40.379	41.236	
74/2	600 x 900 GSIP		25		75		0	0	8						0	74/3	38.89	39.835	
74/3	600 x 900 GSIP		0		100		0	0	8						0	74/4	37.824	38.806	
74/4	600 x 900 GSIP		0		100		0	0	8						0	74/5	36.676	37.738	
74/5	900 x 900 GSIP		0		100		0	0	8						0	21/7	34.903	36.494	
75/1	600 x 600 GSIP		10		90		0	0	8						0	75/2	39.231	40.077	
75/2	600 x 900 GSIP		30		70		0	0	8	7.3					0	75/3	39.139	40.106	
75/3	600 x 900 GSIP		20		80		0	0	8	0.2					0	75/4	38.354	39.21	
75/4	900 x 900 GSIP		20		80		0	0	8	4.3					0	24/5	37.128	38.377	
76/1	600 x 600 GSIP		0		100		0	0	7						0	76/2	40.921	41.604	
76/2	600 x 900 GSIP		0		100		0	0	9						0	76/3	40.542	41.478	
76/3	600 x 900 GSIP		0		100		0	0	14						0	24/1	39.565	40.518	
77/1	600 x 600 GSIP		0		100		0	0	8						0	75/4	38.392	39.176	
TANK01/1	OSD TANK		0		100		0	0	0	1					0	01/4	36.142	36.25	
TANK01.1/1	NO PIT		0		100		0	0	0	0.9							36.142	36.866	
TANK02/1	NO PIT		0		100		0	0	0	6.8							30.389	33.739	
TANK02/2	OSD TANK		0		100		0	0	0	6.8					0	10/4	30.389	31.05	
TANK02.1/1	NO PIT		0		100		0	0	0	6.8							30.389	32.125	
TANK03/1	NO PIT		0		100		0	0	0	6.6							31.305	33.702	
TANK03/2	OSD TANK		0		100		0	0	0	7.3					0	18/1	31.305	31.55	
TANK04/1	NO PIT		0		100		0	0	0	9.5							31.242	34.301	
TANK04/2	OSD TANK		0		100		0	0	0	10.3					0	14/1	31.242	31.5	
TANK04.1/1	NO PIT		0		100		0	0	0	11.2							31.242	32.341	

10% AEP PIPE DETAILS

Reach	Type	Length	Diameter	Upstream	Downstream	Pipe	HGL Grade	U/S HGL	D/S HGL	Ku	Ku headloss	Flow	Velocity	Capacity
		m	mm	IL	IL	grade %	%	R.L. m	R.L. m			L/s	m/s	Ratio %
01/1 to 01/2	RCP CLASS 3	30.4	375	36.88	36.27	2	2	36.892	36.283	2	0.001	1	0	0
01/2 to 01/3	RCP CLASS 3	24.1	375	34.56	34.32	1	0.11	34.868	34.842	2.5	0.103	49	1.28	26
01/3 to 01/4	RCP CLASS 4	28.5	525	34.09	33.8	1	1.21	34.521	34.176	2	0.321	400	1.85	86
01/4 to 01/5	RCP CLASS 4	20.9	525	33.79	32.89	4.3	3.96	33.972	33.145	0.7	0.135	400	2.96	42
01/5 to 01/6	RCP CLASS 3	36.5	525	32.88	31.2	4.6	4.37	33.069	31.475	0.6	0.078	439	4	44
01/6 to 01/7	RCP CLASS 3	16.4	525	31.2	30.62	3.5	0.97	31.318	31.159	0.6	0.156	474	4.11	55
01/7 to 01/8	RCP CLASS 4	15.5	525	30.62	30.06	3.65	3.67	30.904	30.334	1	0.255	492	2.27	55
01/8 to 01/9	RCP CLASS 3	12	525	29.98	29.11	7.2	1.39	30.053	29.886	0.7	0.157	507	5.48	40
01/9 to 01/10	BOX CULVERT	19.8	1200x600	29.11	28.91	1	0.23	29.678	29.633	2.4	0.209	975	1.35	47
01/10 to 01/11	BOX CULVERT	44.8	1500x600	28.91	28.64	0.6	0.13	29.594	29.534	0.7	0.039	978	1.09	47
01/11 to 01/12	BOX CULVERT	8.7	1500x600	28.64	28.59	0.55	0.18	29.427	29.411	1.3	0.108	1163	1.29	58
01/12 to 01/13	BOX CULVERT	10.6	1500x600	28.59	28.54	0.55	0.19	29.326	29.306	1	0.085	1163	1.29	58
01/13 to 01/14	BOX CULVERT	10.7	1800x600	28.54	28.48	0.55	0.2	29.121	29.1	2	0.185	1456	1.35	59
02/1 to 02/2	ORIFICE PLATE	1	250	34.25	34.24	1	82.27	36.142	35.307	0	0	160	0	
02/2 to 02/3	RCP CLASS 3	15.2	525	34.24	34.16	0.5	0.62	35.041	34.946	1.9	0.265	369	1.71	112
02/3 to 01/3	RCP CLASS 3	11.8	525	34.16	34.1	0.55	0.63	34.916	34.842	1.8	0.082	369	1.71	107
03/1 to 02/3	RCP CLASS 4	7.7	375	35.17	35.01	2	1.49	35.206	35.092	2	0.074	26	0.92	10
04/1 to 28/9	RCP CLASS 4	7.5	375	35.83	35.68	2	-0.01	36.333	36.334	2	0.083	21	1.21	8
05/1 to 05/2	RCP CLASS 4	7.5	375	37.61	37.46	2	1.51	37.68	37.566	2	0.096	44	0.97	17
05/2 to 05/3	RCP CLASS 3	47.8	375	37.46	34.69	5.79	5.47	37.523	34.91	2.3	0.041	72	3.02	16
05/3 to 05/4	RCP CLASS 3	40.9	375	34.69	32.3	5.85	5.43	34.816	32.595	1.6	0.095	251	3.9	54
05/4 to 05/5	RCP CLASS 3	62.2	375	32.3	29.99	3.71	3.03	32.533	30.648	0.8	0.066	317	3.69	87
05/5 to 05/6	RCP CLASS 3	41.3	600	29.99	29.2	1.91	0.62	30.342	30.087	1.6	0.304	542	2.61	59
05/6 to 01/9	RCP CLASS 3	7.8	675	29.2	29.11	1.16	0.27	29.907	29.886	1.5	0.197	575	1.61	59
06/1 to 05/6	RCP CLASS 4	7.6	375	29.68	29.38	4	0.03	30.089	30.087	2	0.002	14	0.13	4
07/1 to 05/5	RCP CLASS 4	7.5	375	30.29	29.99	4	0.01	30.649	30.648	2	0.038	30	0.61	8
08/1 to 05/4	RCP CLASS 4	9.5	375	32.68	32.3	4	0.94	32.684	32.595	2	0.05	17	1.72	5
09/1 to 05/3	RCP CLASS 4	9.8	375	34.94	34.69	2.5	1.4	35.047	34.91	1.6	0.172	129	1.46	43
10/1 to 10/2	ORIFICE PLATE	1	200	29.35	29.33	2	35.76	30.389	30.026	0	0	79	0	
10/2 to 10/3	RCP CLASS 3	28	375	29.33	28.9	1.54	0.53	29.869	29.72	2.1	0.167	146	1.69	61
10/3 to 10/4	RCP CLASS 4	7.5	450	28.9	28.85	0.65	0.2	29.643	29.628	2	0.085	147	0.92	59
10/4 to 10/5	RCP CLASS 4	14.7	450	28.85	28.7	0.99	0.24	29.536	29.501	2.1	0.094	151	0.95	50
10/5 to 10/6	RCP CLASS 4	22.7	600	28.7	28.59	0.5	0.14	29.395	29.363	2.7	0.105	256	0.9	54
10/6 to 01/13	RCP CLASS 4	11	600	28.59	28.54	0.5	0.14	29.321	29.306	1	0.041	255	0.9	54
11/1 to 11/2	RCP CLASS 3	30.3	375	29.1	28.95	0.5	0.04	29.747	29.734	2	0.013	39	0.36	29
11/2 to 11/3	RCP CLASS 3	13.3	375	28.95	28.88	0.5	0.17	29.691	29.669	1.9	0.043	78	0.7	58
11/3 to 11/4	UPVC-SN8	15.1	375	28.88	28.8	0.5	0.24	29.627	29.591	1.1	0.041	96	0.88	72
11/4 to 10/5	RCP CLASS 4	19.9	375	28.8	28.7	0.5	0.26	29.553	29.501	1	0.053	117	1.06	87
12/1 to 29/4	RCP CLASS 4	10.5	375	34.61	34.14	4.5	2.69	34.619	34.337	2	0.05	23	1.98	6
13/1 to 29/2	RCP CLASS 4	10.1	375	38.55	38.05	4.9	3.89	38.568	38.176	2	0.034	20	1.94	5
14/1 to 14/2	RCP CLASS 3	18.5	375	30.07	28.77	7	5.38	30.143	29.145	2.1	0.101	134	3.44	27
14/2 to 14/3	RCP CLASS 3	6.2	375	28.65	28.59	1	0.34	29.131	29.11	0.5	0.034	134	1.53	70
14/3 to 14/4	RCP CLASS 4	22.8	450	28.52	28.36	0.7	0.14	29.05	29.017	2.3	0.103	134	0.96	52
14/4 to 14/5	RCP CLASS 4	25.4	450	28.36	28.18	0.7	0.18	28.957	28.911	1.8	0.065	134	0.89	52
14/5 to 14/6	RCP CLASS 3	14.4	450	28.18	28.08	0.7	0.29	28.851	28.809	1.3	0.065	170	1.07	66
14/6 to 14/7	RCP CLASS 3	17.3	525	28	27.88	0.71	0.48	28.604	28.521	1.9	0.214	325	1.5	84
14/7 to 14/8	RCP CLASS 3	20.5	600	27.88	27.73	0.72	0.26	28.521	28.467	0	0	345	2.08	61
14/8 to 14/9	RCP CLASS 4	31.7	600	27.73	27.49	0.77	0.31	28.417	28.319	0.7	0.102	374	1.75	64
14/9 to 14/10	RCP CLASS 4	7	(2x)600	27.49	27.45	0.5	-0.01	28.232	28.233	1.6	0.096	611	1.08	65
14/10 to 14/11	RCP CLASS 4	34.6	(2x)600	27.45	27.28	0.5	0.22	28.174	28.097	1	0.06	616	1.09	65
14/11 to 14/12	RCP CLASS 4	12.9	(2x)600	27.28	27.15	1	0.39	27.8	27.75	2.7	0.297	821	1.45	62
15/1 to 14/2	RCP CLASS 4	11	375	28.94	28.72	2	0	29.145	29.145	2.1	0.059	-4	0.58	-1
16/1 to 27/4	RCP CLASS 4	14.3	375	34.53	33.71	5.8	5.23	34.564	33.816	2	0.028	23	2.17	5
17/1 to 27/2	RCP CLASS 4	14.3	375	39.2	38.65	3.9	3.03	39.233	38.8	2	0.044	31	2	8
18/1 to 18/2	RCP CLASS 4	10.7	375	28.44	27.87	5.4	-0.01	28.724	28.725	2	0.066	14	1.8	3
18/2 to 14/9	RCP CLASS 3	7.6	375	27.87	27.71	2	1.71	28.45	28.319	1.7	0.288	218	1.97	81
19/1 to 19/2	RCP CLASS 3	31	375	39.23	38.61	2	-0.09	39.248	39.276	2	0.071	25	1.51	9
19/2 to 19/3	RCP CLASS 4	7.8	375	38.61	38.55	0.75	0.09	39.246	39.239	2.7	0.032	54	0.49	33
19/3 to 19/4	RCP CLASS 4	16	375	38.55	38.4	0.96	0.17	39.19	39.163	2.1	0.05	77	0.7	41
19/4 to 19/5	RCP CLASS 2	4.5	450	38.32	38.25	1.5	0.22	39.09	39.08	1.8	0.074	143	0.9	38
19/5 to 19/6	RCP CLASS 2	5.1	450	38.25	38.18	1.5	0.22	39.039	39.028	1	0.041	143	0.9	38
20/1 to 20/2	RCP CLASS 3	42.2	375	39.98	38.97	2.4	1.83	40.015	39.242	2.2	0.055	31	1.73	11
20/2 to 20/3	RCP CLASS 4	7.9	375	38.97	38.85	1.5	-0.06	39.212	39.217	2.3	0.071	43	0.78	19
20/3 to 19/4	RCP CLASS 3	15.5	375	38.85	38.4	2.93	0.1	39.179	39.163	2.4	0.039	62	0.57	19
21/1 to 21/2	RCP CLASS 4	21.9	375	39.93	39.71	1	0	39.948	39.949	2	0.052	13	0.98	7
21/2 to 21/3	RCP CLASS 4	10	375	39.71	39.61	1	0.92	39.859	39.767	2.1	0.089	65	0.92	35
21/3 to 21/4	RCP CLASS 3	39.3	375	39.61	38.43	3	2.87	39.716	38.59	0.5	0.016	71	2.39	22
21/4 to 21/5	RCP CLASS 3	43.3	375	38.43	36.94	3.45	3.08	38.532	37.2	1.8	0.065	118	2.85	34
21/5 to 21/6	RCP CLASS 4	17.5	375	36.94	36.5	2.5	0.22	37.131	37.093	0.6	0.104	130	2.59	44
21/6 to 21/7	RCP CLASS 4	9.5	375	36.49	36.1	4.15	5.61	36.841	36.308	1.9	0.264	231	2.09	60
21/7 to 21/8	RCP CLASS 3	41.3	450	36.04	34.43	3.9	3.7	36.238	34.711	0	0	237	3.59	39
21/8 to 21/9	RCP CLASS 3	43.3	450	34.43	33.48	2.2	1.5	34.589	33.938	1.2	0.122	286	2.8	63
21/9 to 21/10	RCP CLASS 4	7.8	525	33.42	33.26	2	1.91	33.732	33.584	2.1	0.205	297	1.38	45
21/10 to 21/11	RCP CLASS 3	22.6	525	33.26	31.91	6	1.68	33.334	32.956	2.1	0.25	352	3.96	31
21/11 to 21/12	RCP CLASS 2	4.3	675	31.79	31.59	4.5	0.56	32.579	32.555	2	0.377	697	1.95	36
21/12 to 21/13	RCP CLASS 2	5.3	675	31.59	31.35	4.5	0.64	32.363	32.329	1	0.194	698	1.95	36

NOTES:

1. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.12
2. LINTEL SIZES ARE OVERALL PIT LENGTHS.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
STORMWATER CALCULATIONS: MINOR EVENT SHEET 2

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	412	D

Plotted By: tims Plot Date: 06/08/20 – 09:07 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-412(D).dwg

239858-ENG-413(D)

100mm AT FULL SIZE

10% AEP PIPE DETAILS

Reach	Type	Length	Diameter	Upstream	Downstream	Pipe	HGL Grade	U/S HGL	D/S HGL	Ku	Ku headloss	Flow	Velocity	Capacity
		m	mm	IL	IL	grade %	%	R.L. m	R.L. m			L/s	m/s	Ratio %
22/1 to 22/2	RCP CLASS 3	30.5	375	40.19	38.63	5.1	4.98	40.23	38.713	2	0.016	24	2.09	6
22/2 to 22/3	RCP CLASS 3	24.5	375	38.63	37.16	6	5.06	38.662	37.422	2	0.053	48	2.71	11
22/3 to 22/4	RCP CLASS 4	7.5	375	37.16	37.09	1	0.74	37.34	37.284	2.2	0.083	69	0.86	36
22/4 to 21/5	RCP CLASS 4	9.5	375	37.09	36.5	6.2	0.19	37.111	37.093	2.2	0.172	96	2.95	20
23/1 to 23/2	RCP CLASS 4	7.5	375	37.31	37.16	2	1.21	37.338	37.247	2	0.042	14	0.99	5
23/2 to 23/3	RCP CLASS 3	40.2	375	37.16	34.75	6	5.85	37.209	34.857	4.3	0.039	44	2.34	10
23/3 to 23/4	RCP CLASS 3	34.3	375	34.75	33.2	4.5	3.53	34.786	33.576	1.7	0.071	75	2.79	19
23/4 to 23/5	RCP CLASS 4	7.5	375	33.2	33.13	1	1.08	33.456	33.375	2.2	0.118	110	1.02	59
23/5 to 21/10	RCP CLASS 3	18.3	375	33.13	32.07	5.8	1.29	33.192	32.957	2.4	0.186	147	3.18	32
24/1 to 24/2	RCP CLASS 3	7.6	375	37.48	37.4	1	1.26	37.647	37.551	1.5	0.059	63	0.92	33
24/2 to 24/3	RCP CLASS 4	38.4	375	37.4	35.39	5.25	4.46	37.44	35.728	2.3	0.069	76	2.97	17
24/3 to 24/4	RCP CLASS 4	8.2	450	35.32	35.28	0.5	0.92	35.63	35.555	2.3	0.099	139	0.92	64
24/4 to 24/5	RCP CLASS 2	46.2	450	35.28	35.05	0.5	0.47	35.524	35.307	0.4	0.034	139	1.35	64
24/5 to 24/6	RCP CLASS 2	20.6	525	34.97	34.46	2.5	2.03	35.062	34.644	2.1	0.181	185	1.65	25
24/6 to 24/7	RCP CLASS 2	20.1	525	34.46	33.67	3.9	3.82	34.604	33.835	0.3	0.04	193	2.78	21
24/7 to 24/8	RCP CLASS 2	20.1	525	33.66	32.66	5	3.43	33.789	33.099	0.3	0.057	205	3.74	20
24/8 to 24/9	RCP CLASS 2	2.5	525	32.66	32.56	4	0.16	33.079	33.075	0.3	0.164	243	3.62	26
24/9 to 21/10	RCP CLASS 2	46.3	600	32.56	31.86	1.5	0.08	32.996	32.957	2.3	0.24	234	2.29	29
25/1 to 25/2	EXISTING	11.4	375	37.42	37.36	0.59	0.75	37.67	37.584	1.4	0.069	99	1.1	68
26/1 to 26/2	RCP CLASS 3	36.6	375	38.94	36.56	6.5	6.42	38.998	36.65	2	0.021	42	2.53	9
26/2 to 26/3	RCP CLASS 3	36.6	375	36.54	34.16	6.5	6.25	36.606	34.32	2.1	0.045	87	3.2	18
26/3 to 26/4	RCP CLASS 3	36.6	375	34.16	31.97	6	5.93	34.27	32.102	1.4	0.05	131	2.95	28
26/4 to TANK03/1	RCP CLASS 4	1	375	31.15	31.1	4.93	20.59	31.514	31.305	1.9	0.233	175	1.59	41
27/1 to 27/2	RCP CLASS 3	45.7	375	41.18	38.67	5.5	5.31	41.229	38.8	2	0.025	42	2.9	8
27/2 to 27/3	RCP CLASS 3	30.5	375	38.65	36.33	7.6	7.47	38.738	36.46	1.8	0.061	130	3.12	25
27/3 to 27/4	RCP CLASS 3	30.5	375	36.31	33.63	8.8	8.54	36.418	33.816	1.1	0.047	168	4.32	30
27/4 to 27/5	RCP CLASS 4	16.9	375	33.51	32.67	5	4.76	33.666	32.862	1	0.151	232	2.4	54
27/5 to TANK04/1	RCP CLASS 4	1.5	375	31.13	31.1	2	13.07	31.586	31.39	1.7	0.352	254	2.3	94
28/1 to 28/2	RCP CLASS 4	6.5	375	39.73	39.57	2.39	1.56	39.754	39.652	2	0.051	17	1.01	6
28/2 to 28/3	RCP CLASS 3	42.3	375	39.57	38.3	3	2.14	39.588	38.683	2.4	0.064	34	1.92	10
28/3 to 28/4	RCP CLASS 4	6.5	375	38.3	38.24	1	0.43	38.57	38.542	3.6	0.117	89	0.81	47
28/4 to 28/5	RCP CLASS 4	17.7	375	38.24	38.06	1	0.83	38.403	38.257	2.4	0.14	104	1.08	55
28/5 to 28/6	RCP CLASS 3	40.3	375	38.05	36.74	3.25	1.64	38.111	37.449	2.3	0.101	114	2.75	33
28/6 to 28/7	RCP CLASS 4	7.5	375	36.74	36.59	2	0.45	37.371	37.337	2.1	0.13	124	1.12	46
28/7 to 28/8	RCP CLASS 3	40.2	375	36.59	36.06	1.3	0.99	37.191	36.791	2.2	0.169	170	1.84	79
28/8 to 28/9	RCP CLASS 3	40.2	375	36.06	35.66	1	0.94	36.711	36.334	1.5	0.119	218	1.97	115
28/9 to 28/10	RCP CLASS 3	61.3	525	35.66	35	1.07	0.07	36.309	36.268	0.9	0.111	246	2.23	51
28/10 to 28/11	RCP CLASS 4	1	600	34.84	34.75	8.51	0.3	36.145	36.142	1.9	0.334	528	1.87	27
29/1 to 29/2	RCP CLASS 3	30.5	375	39.98	38.06	6.3	6.07	40.025	38.176	2	0.032	49	3.1	9
29/2 to 29/3	RCP CLASS 3	31	375	38.05	36.1	6.3	6.07	38.119	36.237	1.7	0.056	105	3.35	18
29/3 to 29/4	RCP CLASS 3	30	375	36.1	34.15	6.5	6.17	36.188	34.337	1.2	0.049	141	3.75	29
29/4 to 29/5	RCP CLASS 3	30.5	375	34.14	32.03	6.9	6.79	34.269	32.199	1.1	0.069	200	3.31	40
29/5 to TANK02/1	RCP CLASS 4	1	375	30.68	30.66	1.97	15.86	31.094	30.933	1.6	0.357	235	2.13	89
30/1 to 30/2	ORIFICE PLATE	1.6	250	30.75	30.7	3.09	31.62	31.305	30.794	0	0	95	0	
30/2 to 18/2	RCP CLASS 3	23	450	30.61	28.92	7.38	7.16	30.694	29.049	2.1	0.1	162	2.65	19
31/1 to 30/2	RCP CLASS 4	1	375	31.14	31.13	1	2.07	31.305	31.284	0	0	67	1.57	36
32/1 to 14/1	ORIFICE PLATE	1.8	215	30.2	30.18	1	56.51	31.242	30.243	0	0	104	0	
33/1 to 33/2	RCP CLASS 4	11	375	40.81	40.7	1	0.39	40.881	40.838	7	0.104	27	0.62	14
33/2 to 21/2	RCP CLASS 4	9.6	375	40.67	40.43	2.5	1.89	40.715	40.534	2.4	0.123	54	1.11	18
50/1 to 50/2	UPVC-SN8	15.2	225	37.67	37.6	0.5	0.15	37.94	37.917	2	0.022	19	0.47	54
50/2 to 50/3	UPVC-SN8	23.2	300	37.6	37.48	0.5	0.12	37.894	37.865	1.7	0.028	37	0.57	50
50/3 to 25/1	UPVC-SN8	5.6	300	37.48	37.42	1	0.38	37.76	37.739	2.6	0.114	65	0.93	62
51/1 to 51/2	UPVC-SN8	15.2	225	37.35	37.04	2	1.86	37.399	37.115	2	0.036	15	1.07	22
51/2 to 01/2	UPVC-SN8	10.7	150	35.61	34.77	7.81	7.59	35.667	34.858	1.7	0.059	31	2.43	56
55/1 to 55/2	UPVC-SN8	20.1	150	40.47	40.13	1.67	1.91	40.614	40.23	3.5	0.074	19	1.06	73
55/2 to 55/3	UPVC-SN8	20.1	225	40.06	39.76	1.5	0.83	40.124	39.958	1.6	0.075	39	1.58	54
55/3 to 55/4	UPVC-SN8	20.1	225	39.76	39.36	2	1.86	39.869	39.494	1.4	0.089	57	1.53	69
55/4 to 55/5	UPVC-SN8	20.1	300	39.28	38.98	1.5	1.26	39.414	39.161	0.1	0.018	76	2.17	49
55/5 to 55/6	UPVC-SN8	20.1	300	38.98	38.6	1.86	1.1	39.07	38.849	0.9	0.09	95	2.18	55
55/6 to 55/7	UPVC-SN8	20.1	300	38.6	38.28	1.6	0.66	38.734	38.601	0.8	0.116	114	1.97	72
55/7 to 55/8	UPVC-SN8	20.1	300	38.28	37.88	2	1.79	38.5	38.139	0.7	0.108	133	2.25	75
55/8 to 55/9	RCP CLASS 2	20.1	375	37.81	37.61	1	0.34	38.139	38.07	0	0	155	2.22	68
55/9 to 55/10	RCP CLASS 2	2	375	37.61	37.59	1	6.5	37.997	37.867	0.6	0.075	173	1.57	91
55/10 to 55/11	RCP CLASS 2	45.7	375	37.59	35.76	3.99	2.08	37.664	36.714	2.1	0.123	172	3.49	38
55/11 to 28/10	RCP CLASS 2	7.3	375	35.76	35.28	6.62	2.1	36.421	36.268	1.5	0.315	307	2.77	52
56/1 to 56/2	UPVC-SN8	20.1	225	36.77	36.41	1.8	0.11	37.072	37.05	2	0.067	19	1.43	30
56/2 to 56/3	UPVC-SN8	20.1	225	36.41	36.21	1	0.43	37.006	36.919	2.3	0.098	40	1.02	83
56/3 to 56/4	UPVC-SN8	20.1	300	36.21	36.01	1	0.21	36.912	36.869	0.7	0.031	62	0.97	60
56/4 to 56/5	UPVC-SN8	20.1	300	36.01	35.81	1	0.37	36.838	36.763	1	0.058	84	1.18	80
56/5 to 55/11	UPVC-SN8	2	300	35.81	35.79	1	0.4	36.722	36.714	0.7	0.076	108	1.53	86
60/1 to 01/7	UPVC-SN8	4.6	225	31.23	31	5	2.07	31.255	31.159	2	0.072	18	1.61	14
61/1 to 61/2	UPVC-SN8	20.1	150	39.27	38.05	6.04	5.92	39.305	38.113	4.5	0.045	16	1.64	33
61/2 to 61/3	UPVC-SN8	30.2	225	37.98	36.65	4.41	4.26	38.035	36.748	1.4	0.025	32	2.49	26
61/3 to 61/4	UPVC-SN8	20.1	225	36.65	35.72	4.63	4.13	36.699	35.869	1.4	0.049	48	2.82	38
61/4 to 61/5	UPVC-SN8	20.1	225	35.72	34.87	4.2	4.09	35.81	34.987	1.1	0.059	64	2.22	53
61/5 to 61/6	UPVC-SN8	20	300	34.79	33.95	4.2	3.86	34.91	34.137	0	0	80	3.22	31
61/6 to 61/7	UPVC-SN8	20.2	300	33.95	33.5	2.26	1.68	34.059	33.719	0.8	0.078	103	2.67	54
61/7 to 61/8	UPVC-SN8	20.1	300	33.5	32.93	2.84	2.6	33.636	33.113	0.7	0.083	116	2.6	55
61/8 to 61/9	UPVC-SN8	45.7	300	32.93	30.38	5.56	5.15	33.039	30.685	1.8	0.076	162	4.19	54
61/9 to 05/5	RCP CLASS 2	7.4	375	30.31	29.99	4.3	0.5	30.685	30.648	0	0	199	3.59	51

10% AEP PIPE DETAILS

Reach	Type	Length	Diameter	Upstream	Downstream	Pipe	HGL Grade	U/S HGL	D/S HGL	Ku	Ku headloss	Flow	Velocity	Capacity
		m	mm	IL	IL	grade %	%	R.L. m	R.L. m			L/s	m/s	Ratio %
62/1 to 61/8	UPVC-SN8	2	150	33.12	33.08	2	4.2	33.241	33.157	3.6	0.136	16	0.91	57
63/1 to 63/2	UPVC-SN8	20.1	150	41.1	40.22	4.38	3.96	41.133	40.336	4.5	0.053	16	1.64	39
63/2 to 63/3	UPVC-SN8	20.1	150	40.22	39.02	6	5.93	40.297	39.105	1.4	0.039	32	2.24	66
63/3 to 63/4	UPVC-SN8	20.1	225	38.94	37.81	5.61	4.07	39.022	38.204	0.1	0.01	48	3.16	35
63/4 to 63/5	UPVC-SN8	2	225	37.81	37.71	5.25	1.9	38.001	37.963	1.7	0.205	64	1.62	48
63/5 to 63/6	UPVC-SN8	20.1	225	37.71	36.86	4.2	4.21	37.864	37.018	1.7	0.105	82	2.12	68
63/6 to 63/7	UPVC-SN8	43.8	300	36.79	35.71	2.45	2.38	36.919	35.878	2	0.099	113	2.05	57
63/7 to 09/1	UPVC-SN8	7.7	300	35.71	35.01	9.15	6.98	35.753	35.218	1.4	0.124	113	3.39	30
64/1 to 64/2	UPVC-SN8	2	150	35.68	35.64	2	3.25	35.81	35.745	3.9	0.139	16	0.91	57
64/2 to 64/3	UPVC-SN8	20.1	150	35.64	34.33	6.47	6.4	35.707	34.42	1.5	0.038	32	2.31	63
64/3 to 64/4	UPVC-SN8	20.1	225	34.26	33.01	6.2	5.55	34.308	33.19	1.7	0.063	64	3.21	44
64/4 to 64/5	UPVC-SN8	20.2	225	33.01	31.58	7.09	6.99	33.116	31.706	1.2	0.075	96	2.8	62
64/5 to 64/6	UPVC-SN8	20.1	300	31.5	30.09	7	6.38	31.578	30.295	1.1	0.07	128	4.38	39
64/6 to 64/7	UPVC-SN8	35.4	300	30.09	28.85	3.5	1.63	30.235	29.657	0.6	0.06	145	3.5	62
64/7 to 01/11	RCP CLASS 2	6.2	450	28.7	28.64	1	0.34	29.555	29.534	1.8	0.116	183	1.15	59
65/1 to 64/5	UPVC-SN8	2	150	31.69	31.65	2	4.85	31.831	31.734	3.9	0.137	16	0.91	57
66/1 to 64/4	UPVC-SN8	2	150	33.1	33.08	1	3.2	33.254	33.19	3.8	0.139	16	0.91	81
67/1 to 64/3	UPVC-SN8	2	150	34.35	34.33	1	3.4	34.503	34.435	3.8	0.138	16	0.91	81
68/1 to 63/6	UPVC-SN8	2	150	36.98	36.94	2	4.85	37.117	37.02	3.9	0.137	16	0.91	57
69/1 to 69/2	UPVC-SN8	16.3	150	29.33	29.17	1	0.48	29.796	29.717	3.6	0.088	14	0.81	72
69/2 to 64/7	UPVC-SN8	16.5	225	29.17	29	1	0.27	29.702	29.657	1.2	0.025	27	0.68	56
71/1 to 71/2	UPVC-SN8	12.2	150	42.63	42.5	1.06	0.39	42.667	42.62	2	0.059	11	0.86	53
71/2 to 71/3	UPVC-SN8	12.2	150	42.5	42.09	3.31	3.13	42.559	42.177	1.8	0.061	21	1.39	59
71/3 to 71/4	UPVC-SN8	12.2	225	42.02	41.42	4.94	4.79	42.089	41.505	0.1	0.007	32	2.7	25
71/4 to 71/5	UPVC-SN8	12.2	225	41.42	40.74	5.54	4.79	41.459	40.875	1.1	0.045	43	2.99	31
71/5 to 71/6	UPVC-SN8	12.2	225	40.74	40.03	5.87	5.69	40.816	40.122	0.9	0.059	54	2.19	38
71/6 to 71/7	UPVC-SN8	12.2	225	39.95	39.17	6.42	5.64	40.006	39.318	0.8	0.049	64	3.59	43
71/7 to 71/8	UPVC-SN8	12.2	225	39.17	38.21	7.84	7.71	39.259	38.319	0.7	0.059	75	2.66	46
71/8 to 71/9	UPVC-SN8	12.2	300	38.14	37.35	6.48	6.26	38.243	37.48	0	0	86	3.84	27
71/9 to 71/10	UPVC-SN8	12.2	300	37.35	36.36	8.07	7.78	37.427	36.478	0.6	0.053	96	3.18	27
71/10 to 71/11	UPVC-SN8	12.2	300	36.36	35.47	7.33	6.29	36.426	35.659	0.6	0.053	107	4.27	31
71/11 to 71/12	UPVC-SN8	12.2	300	35.47	34.63	6.91	6.83	35.584	34.751	0.5	0.075	118	2.5	36
71/12 to 71/13	UPVC-SN8	12.7	300	34.63	33.34	10.18	9.67	34.702	33.475	0.5	0.043	128	5	32
71/13 to 71/14	UPVC-SN8	42.8	300	33.34	29.83	8.2	8.18	33.455	29.958	0.5	0.019	139	4.35	39
71/14 to 14/6	RCP CLASS 2	6.1	375	28.47	28.23	4.05	0.65	28.849	28.809	2.1	0.225	154	1.46	40
72/1 to 72/2	UPVC-SN8	12.2	150	42.84	42.72	1	0.77	42.869	42.775	2	0.025	4	0.74	22
72/2 to 72/3	UPVC-SN8	12.2	150	42.72	42.23	4.02	3.9	42.75	42.274	2	0.025	9	1.34	22
72/3 to 72/4	UPVC-SN8	12.2	225	42.15	41.8	2.92	2.74	42.202	41.868	0.1	0.004	13	1.73	13
72/4 to 72/5	UPVC-SN8	12.2	225	41.8	41.3	4.03	3.94	41.843	41.362	1.1	0.025	17	1.57	15
72/5 to 72/6	UPVC-SN8	12.2	225	41.3	40.34	7.9	7.27	41.336	40.45	0.9	0.023	22	2.86	13
72/6 to 20/1	UPVC-SN8	4.7	225	40.34	40.1	5	4.54	40.386	40.171	0.8	0.064	26	1.34	20
73/1 to 73/2	UPVC-SN8	15.2	150	43.77	43.05	4.73	4.49	43.791	43.106	2	0.014	6	1.71	14
73/2 to 73/3	UPVC-SN8	15.2	150	43.05	42.12	6.11	6.01	43.083	42.167	2	0.023	12	1.79	24
73/3 to 73/4	UPVC-SN8	15.2	225	42.12	41.05	7	6.92	42.165	41.11	0.1	0.003	18	2.59	11
73/4 to 73/5	UPVC-SN8	15.2	225	41.05	39.98	7	6.78	41.09	40.057	1.1	0.021	24	2.68	15
73/5 to 21/3	UPVC-SN8	20	225	39.98	38.58	7	6.95	40.039	38.651	0.9	0.018	30	2.56	19
74/1 to 74/2	UPVC-SN8	20.1	150	40.34	38.91	7.07	7.04	40.368	38.951	2	0.011	8	1.85	15
74/2 to 74/3	UPVC-SN8	20.1	225	38.84	37.76	5.37	5.22	38.874	37.824	1.4	0.015	16	2.23	12
74/3 to 74/4	UPVC-SN8	20.1	225	37.76	36.6	5.75	5.6	37.802	36.676	1.4	0.022	23	2.37	17
74/4 to 74/5	UPVC-SN8	20.1	225	36.6	34.89	8.49	8.43	36.655	34.959	1.1	0.02	31	2.74	18
74/5 to 21/7	UPVC-SN8	4.7	300	34.82	34.58	5	4.03	34.903	34.712	0	0	39	2.46	17
75/1 to 75/2	UPVC-SN8	2	150	39.14	39.08	3	2.1	39.181	39.139	2	0.05	8	0.7	23
75/2 to 75/3	UPVC-SN8	20.1	225	39.08	38.28	4	3.77	39.113	38.354	2.3	0.027	16	1.86	13
75/3 to 75/4	UPVC-SN8	20.1	225	38.28	37.04	6.14	5.93	38.32	37.128	1.8	0.035	31	2.48	22
75/4 to 24/5	UPVC-SN8	19.6	225	37.04	35.66	7	6.93	37.103	35.742	1	0.026	39	2.65	25
76/1 to 76/2	UPVC-SN8	20.1	150	40.85	40.55	1.5	1.44	40.898	40.609	2	0.023	8	0.99	31
76/2 to 76/3	UPVC-SN8	40.3	225	40.48	39.47	2.5	2.38	40.523	39.565	2	0.019	17	1.76	18
76/3 to 24/1	UPVC-SN8	53	225	39.47	37.63	3.48	3.45	39.54	37.71	2.3	0.025	31	2.03	29
77/1 to 75/3	UPVC-SN8	2	225	38.3	38.27	1	0.7	38.368	38.354	2	0.023	8	0.48	16
TANK01.1/1 to 02/2	RCP CLASS 4	1.1	450	35.79	35.78	1	6.04	36.142	36.077	0	0	241	2.15	78
TANK02.1/1 to 10/2	RCP CLASS 4	1.1	375	30.19	30.18	1	2.56	30.389	30.361	0	0	90	1.7	46
TANK04.1/1 to 14/1	RCP CLASS 4	1.5	375	31.13	31.11	1	2.07	31.242	31.211	0	0	30	1.26	16

NOTES:

1. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.12
2. LINTEL SIZES ARE OVERALL PIT LENGTHS.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC

DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION

PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER CALCULATIONS: MINOR EVENT SHEET 3

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 413 REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:07 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-413(D).dwg

239858-ENG-415(D)

100mm AT FULL SIZE

1% AEP PIT DETAILS

Node	Structure	Catchment	Imp.	Tc Imp.	Per.	Tc Per.	Catchment	Approach	Captured	Road	Max Flow	Velocity	Depth	VD	Bypass	Bypass	HGL	Grate level	Lost
		Area (ha)	%	(min)	%	(min)	Flow	Flow	Flow	Grade	Width	m/s	m	m2/sec	Flow	Pit	R.L. m	R.L. m	
01/1	2.4m LINTEL O/A SAG	0.0022	100		0		2	2	2	1			0.04		0	01/2	36.897	38.49	
01/2	2.4m LINTEL O/A	0.0212	70		30		16	28	22	2.1	0.95	0.94	0.06	0.05	5	01/3	36.031	37.76	
01/3	2.4m LINTEL O/A	0.0285	50		50		20	568	216	3.3	4.02	1.99	0.15	0.29	12	TANK01/1	35.983	36.871	
01/4	2.4m LINTEL O/A SAG	0.0277	70		30		20	42	17	3.4			0.06		25	01/5	34.871	35.977	
01/5	2.4m LINTEL O/A	0.019	70		30		14	140	87	5.5	1.78	2.00	0.08	0.16	52	01/6	34.329	34.848	
01/6	2.4m LINTEL O/A	0.0333	70		30		24	168	98	3.8	2.12	1.81	0.09	0.16	140	01/7	33.281	33.191	
01/7	2.4m LINTEL O/A	0.0154	70		30		11	150	58	4	1.98	1.79	0.09	0.15	166	01/8	32.654	32.556	
01/8	2.4m LINTEL O/A	0.0149	70		30		11	215	116	3.7	2.38	1.90	0.10	0.19	98	01/9	31.829	32.02	
01/9	2.4m LINTEL O/A	0.0106	50		50		8	111	73	2.8	1.88	1.46	0.08	0.12	42	05/6	30.963	31.329	
01/10	2.4m LINTEL O/A	0.0196	70		30		15	496	198	2.9	3.87	1.85	0.14	0.26	294	01/11	30.372	31	
01/11	2.4m LINTEL O/A	0.0417	70		30		31	318	-463	1.3	3.78	1.23	0.14	0.17	784	01/13	30.014	29.803	
01/12	ECOSOL GPT 4450		0		100		0	0	0	1.2							29.869	30.1	
01/13	3.0m LINTEL O/A SAG WITH PIT INSERT	0.0528	70		30		39	1459	491	0.4			0.15		968	LOST	29.96	29.656	
01/14	HEADWALL OUTLET		0				0	0	0								29.1	29.077	
02/1	NO PIT		0		100		0	0	0	0.9							36.25	36.863	
02/2	2.4m LINTEL O/A	0.0211	55		45		15	665	251	0.9	10.64	1.05	0.24	0.25	410	02/3	36.301	36.814	
02/3	3.0m LINTEL O/A SAG	0.0316	55		45		23	420	398	0.8			0.15		16	01/4	36.317	36.684	
03/1	2.4m LINTEL O/A	0.0685	55		45		49	94	66	0.5	2.58	0.73	0.10	0.08	26	01/4	36.334	36.69	
04/1	2.4m LINTEL O/A	0.0575	55		45		41	129	76	0.5	3.05	0.75	0.12	0.09	62	TANK01/1	37.374	37.283	
05/1	2.4m LINTEL O/A	0.0327	55		45		23	108	73	5.5	1.58	1.89	0.07	0.14	35	09/1	37.832	39.115	
05/2	2.4m LINTEL O/A	0.0312	55		45		22	65	49	5.5	1.25	1.70	0.06	0.11	16	05/3	37.622	39.115	
05/3	2.4m LINTEL O/A	0.044	55		45		31	132	81	5.6	1.75	2.00	0.08	0.16	63	05/4	36.527	36.46	
05/4	2.4m LINTEL O/A	0.0453	55		45		32	180	33	5.6	2.02	2.14	0.09	0.19	225	05/5	34.293	34.188	
05/5	2.4m LINTEL O/A	0.0612	55		45		44	398	144	1	7.56	0.99	0.20	0.20	363	05/6	31.784	31.634	
05/6	3.0m LINTEL O/A SAG	0.0514	55		45		37	740	368	0.4			0.15		367	01/10	31.486	31.238	
06/1	2.4m LINTEL O/A	0.0285	55		45		20	339	163	0.4	4.12	0.70	0.15	0.10	125	01/10	31.487	31.241	
07/1	2.4m LINTEL O/A	0.057	55		45		41	50	-70	1	1.62	0.81	0.08	0.06	116	06/1	31.742	31.634	
08/1	2.4m LINTEL O/A	0.0435	55		45		31	46	37	5.6	0.98	1.56	0.06	0.09	9	07/1	34.308	34.511	
09/1	2.4m LINTEL O/A	0.0401	55		45		29	64	49	5.6	1.18	1.67	0.06	0.10	15	08/1	36.777	36.805	
10/1	NO PIT		0		100		0	46	46	6.8							31.05	32.097	
10/2	2.4m LINTEL O/A	0.0253	55		45		18	78	57	6.8	1.28	1.91	0.07	0.12	14	10/3	31.067	32.048	
10/3	2.4m LINTEL O/A	0.0293	55		45		21	23	-57	4.7	0.72	1.29	0.05	0.06	80	10/5	30.379	30.247	
10/4	2.4m LINTEL O/A	0.0882	55		45		63	73	54	4.7	1.38	1.64	0.07	0.11	17	10/5	30.299	30.247	
10/5	900 x 900 VGRATE	0.0473	70		30		35	303	195	0.4	8.66	0.65	0.21	0.14	27	10/6	30.379	29.924	
10/6	ECOSOL GPT 4450		0		100		0	195	156	0.9					38	01/13	29.96	29.787	
11/1	2.4m LINTEL O/A	0.0304	70		30		22	92	60	0.5	2.55	0.72	0.10	0.07	72	11/2	30.379	30.157	
11/2	2.4m LINTEL O/A	0.0327	70		30		24	153	63	0.3	3.78	0.59	0.14	0.08	148	11/3	30.379	30.059	
11/3	2.4m LINTEL O/A SAG	0.0181	70		30		14	195	75	1.1			0.12		180	11/4	30.379	30.035	
11/4	2.4m LINTEL O/A	0.011	70		30		8	223	110		4.12	0.00	0.15	0.00	190	10/5	30.379	30.001	
12/1	2.4m LINTEL O/A	0.0602	55		45		43	50	39	6.6	1.02	1.71	0.06	0.10	10	TANK02/2	34.69	36.267	
13/1	2.4m LINTEL O/A	0.0511	55		45		37	37	29	6.3	0.85	1.57	0.05	0.08	7	12/1	38.616	40.115	
14/1	2.4m LINTEL O/A	0.0183	60		40		13	54	42	11.2	0.92	2.15	0.05	0.12	12	14/2	31.475	32.269	
14/2	2.4m LINTEL O/A	0.0147	60		40		11	17	-204	5.5	0.52	1.29	0.04	0.05	298	14/3	30.551	30.428	
14/3	3.0m LINTEL O/A SAG	0.0364	70		30		27	317	80	2.2			0.13		244	14/4	30.551	30.25	
14/4	2.4m LINTEL O/A	0.0812	60		40		59	297	151		4.12	0.00	0.15	0.00	148	14/5	30.527	30.414	
14/5	2.4m LINTEL O/A	0.0268	70		30		20	215	63	1.2	3.15	1.17	0.12	0.14	262	14/6	30.24	30.105	
14/6	2.4m LINTEL O/A SAG	0.0204	70		30		15	272	-100	1.1			0.14		436	14/7	30.101	29.943	
14/7	2.4m LINTEL O/A	0.0139	70		30		10	471	201	1	4.12	1.10	0.15	0.17	276	14/8	29.898	29.763	
14/8	2.4m LINTEL O/A SAG	0.0279	70		30		20	340	92	1.3			0.14		282	14/9	29.655	29.517	
14/9	1500 x 1500 GSIP	0.0376	70		30		28	432	231						508	14/10	29.337	29.166	
14/10	ECOSOL GPT 4450		0		100		0	508	427						97	14/11	29.191	29.093	
14/11	1500 x 1500 GSIP	1.9245	5		95		557	649	482						195	LOST	28.686	28.559	
14/12	HEADWALL OUTLET		0				0	0	0								27.75	27.75	
15/1	3.0m LINTEL O/A SAG		70		30		0	12	10	4.7			0.04		12	14/4	30.55	30.463	
16/1	2.4m LINTEL O/A	0.0585	60		40		42	54	42	7.9	1.02	1.87	0.06	0.11	12	TANK04/2	34.612	36.42	
17/1	2.4m LINTEL O/A	0.0784	60		40		57	57	44	5.6	1.12	1.64	0.06	0.10	12	16/1	39.295	40.932	
18/1	2.4m LINTEL O/A	0.0357	70		30		27	64	49	9.9	1.05	2.12	0.06	0.12	15	14/9	29.877	30.037	
18/2	900 x 900 GSIP	0.154	60		40		104	104	72	9.9					133	14/9	29.852	29.773	
19/1	2.4m LINTEL O/A	0.0298	60		40		21	57	43	2.5	1.38	1.20	0.07	0.08	13	19/2	40.183	40.776	
19/2	3.0m LINTEL O/A SAG	0.0417	60		40		30	83	83	1.4			0.09		0	19/3	40.159	40.053	
19/3	900 x 900 GSIP	0.0645	60		40		43	43	35						9	LOST	40.002	40.047	
19/4	900 x 900 GSIP	0.0134	55		45		10	17	-11						37	LOST	39.729	39.655	
19/5	ECOSOL GPT 4300		0		100		0	0	0								39.503	39.519	
19/6	* DE * SEE NOTE 1		0				0	0	0								39.328	39.38	
20/1	2.4m LINTEL O/A	0.0131	55		45		9	9	8	1	0.62	0.57	0.05	0.03	2	20/2	40.174	41.557	
20/2	2.4m LINTEL O/A	0.0317	55		45		23	24	20	2.4	0.85	0.97	0.05	0.05	5	19/2	39.996	40.516	
20/3	900 x 900 GSIP	0.0515	55		45		37	37	29						7	19/4	39.908	40.173	
21/1	3.0m LINTEL O/A SAG	0.1017	55		45		73	73	73	0.3			0.11		0	LOST	40.121	41.563	
21/2	900 x 900 JUNCTION		0		100		0	0	0				0				40.056	41.982	
21/3	2.4m LINTEL O/A	0.0844	55		45		11	22	17	3.3	0.75	1.09	0.05	0.05	4	21/4	39.876	41.409	
21/4	2.4m LINTEL O/A	0.0288	55		45		20	43	34	3.6	1.08	1.30	0.06	0.08	9	21/5	39.618	40.031	
21/5	2.4m LINTEL O/A	0.033	55		45		24	35	28	3.2	1.02	1.19	0.06	0.07	10	21/6	38.562	38.519	
21/6	900 x 900 VGRATE	0.0287	60		40		21	48	-131	3	1.22	1.24	0.06	0.08	202	21/7	38.072	37.965	
21/7	2.4m LINTEL O/A	0.012	40		60		9	221	119	3.3	2.48	1.83	0.10	0.19	102	21/8	37.304	37.685	
21/8	2.4m LINTEL O/A	0.0303	55		45		22	122	-165	3.6	1.85	1.64	0.08	0.13	287	21/9	36.357	36.231	
21/9	2.4m LINTEL O/A	0.0338	55		45		24	308	107	1.3	3.72	1.23	0.14	0.17	219	23/4	35.409	35.288	
21/10	900 x 900 GSIP	0.1702	55		45		106	106	106								34.924	34.972	
21/11	900 x 900 JUNCTION		0		100		0	0	0								34.054	34.727	
21/12	ECOSOL GPT 4600		0		100		0	0	0								33.173	33.9	
21/13	* DE * SEE NOTE 1		0				0	0	0								32.629	33.531	

1% AEP PIT DETAILS

Node	Structure	Catchment	Imp.	Tc Imp.	Per.	Tc Per.	Catchment	Approach	Captured	Road	Max Flow	Velocity	Depth	VD	Bypass	Bypass	HGL	Grate level	Lost
		Area (ha)	%	(min)	%	(min)	Flow	Flow	Flow	Grade	Width	m/s	m	m2/sec	Flow	Pit	R.L. m	R.L. m	
22/1	2.4m LINTEL O/A	0.0315	55		45		22	59	46	6	1.12	1.69	0.06	0.10	13	22/2	40.269	41.843	
22/2	2.4m LINTEL O/A	0.0314	55		45		22	73	54	4.7	1.38	1.64	0.07	0.11	19	22/3	38.841	40.223	
22/3	2.4m LINTEL O/A	0.0245	55		45		17	73	55	7.8	1.18	1.98	0.06	0.12	19	21/5	38.596	38.769	
22/4	2.4m LINTEL O/A	0.0735	55		45		53	53	41	7.8	1.02	1.86	0.06	0.11	11	21/6	38.404	38.769	
23/1	2.4m LINTEL O/A	0.0351	55		45		25	25	20	4.3	0.78	1.27	0.05	0.06	5	23/5	37.4	38.78	
23/2	2.4m LINTEL O/A	0.0409	55		45		29	78	57	4.3	1.45	1.60	0.07	0.11	21	23/3	37.265	38.78	
23/3	2.4m LINTEL O/A	0.0399	55		45		29	98	68	5.6	1.52	1.87	0.07	0.13	30	23/4	35.538	36.94	
23/4	3.0m LINTEL O/A SAG	0.0532	55		45		38	328	127	1.2			0.14		377	23/5	35.222	35.025	
23/5	3.0m LINTEL O/A SAG	0.0969	55		45		69	442	225	1.2			0.15		187	LOST	35.21	35.025	
24/1	3.0m LINTEL O/A	0.0402	55		45		29	77	59	5.2	1.38	1.72	0.07	0.12	18	24/3	37.846	38.918	
24/2	2.4m LINTEL O/A	0.0346	55		45		25	25	20	5.2	0.72	1.36	0.05	0.07	5	24/3	37.669	38.865	
24/3	3.0m LINTEL O/A SAG	0.0877	55		45		63	183	169	3					5	LOST	37.056	36.9	
24/4	600 x 900 GSIP		0		100		0	0	0								36.421	37.233	
24/5	900 x 900 GSIP		5		95		0	0	24						0	24/6	35.791	37.306	
24/6	600 x 900 GSIP		0		100		0	0	24						0	24/7	34.85	36.35	
24/7	600 x 900 GSIP		0		100		0	0	24						0	24/8	34.592	35.123	
24/8	600 x 900 GSIP		0		100		0	0	-163						197	24/9	34.218	34.121	
24/9	900 x 900 JUNCTION		0		100		0	197	-148						349	LOST	34.152	34.004	
25/1	3.0m LINTEL O/A SAG	0.1051	100		0		70	161	69	0.2			0.15		88	LOST	38.031	38.384	
25/2	HEADWALL 375 OUTLET		0				0	0	0								37.685	38.158	
26/1	2.4m LINTEL O/A	0.0274	60		40		20	78	57	5	1.38	1.69	0.07	0.12	21	26/2	39.028	40.565	
26/2	2.4m LINTEL O/A	0.0306	60		40		22	100	70	6.8	1.45	2.01	0.07	0.14	30	26/3	36.682	38.197	
26/3	2.4m LINTEL O/A	0.0318	60		40		23	111	75	6.1	1.58	1.99	0.07	0.15	36	26/4	34.376	35.883	
26/4	2.4m LINTEL O/A	0.0301	60		40		22	115	77	6.6	1.55	2.05	0.07	0.15	38	TANK03/2	32.081	33.653	
27/1	2.4m LINTEL O/A	0.0406	60		40		29	77	57	5.4	1.35	1.74	0.07	0.12	21	27/2	41.266	42.931	
27/2	2.4m LINTEL O/A	0.0456	60		40		33	126	83	6.4	1.65	2.07	0.08	0.16	43	27/3	38.838	40.374	
27/3	2.4m LINTEL O/A	0.0302	60		40		22	113	76	7.9	1.48	2.19	0.07	0.16	36	27/4	36.493	38.1	
27/4	2.4m LINTEL O/A	0.0301	60		40		22	106	73	7.9	1.45	2.17	0.07	0.15	33	27/5	34.417	35.703	
27/5	2.4m LINTEL O/A	0.0209	60		40		15	39	31	9.5	0.78	1.88	0.05	0.09	8	TANK04/2	32.577	34.229	
28/1	2.4m LINTEL O/A	0.0449	50		50		32	32	26	3.1	0.95	1.15	0.06	0.06	6	28/4	40.131	41.255	
28/2	2.4m LINTEL O/A	0.0452	50		50		32	32	26	3.1	0.95	1.15	0.06	0.06	6	28/3	40.121	41.255	
28/3	3.0m LINTEL O/A SAG	0.07	50		50		50	133	131	1.7			0.10		15	28/4	40.051	39.911	
28/4	2.4m LINTEL O/A	0.0396	50		50		28	47	37	1.7	1.38	0.99	0.07	0.07	9	28/7	39.809	39.911	
28/5	2.4m LINTEL O/A	0.0296	55		45		21	21	17	2.8	0.78	1.02	0.05	0.05	4	28/6	39.379	39.986	
28/6	2.4m LINTEL O/A	0.0278	55		45		20	24	-63	3.8	0.78	1.19	0.05	0.06	92	04/1	38.583	38.491	
28/7	2.4m LINTEL O/A	0.0394	55		45		28	120	78	3.8	1.82	1.67	0.08	0.14	42	28/8	38.426	38.491	
28/8	2.4m LINTEL O/A	0.043	55		45		31	158	84	0.8	2.95	0.95	0.12	0.11	235	28/9	37.63	37.483	
28/9	2.4m LINTEL O/A	0.0338	55		45		24	257	135	0.5	6.90	0.70	0.19	0.13	118	28/10	37.403	37.282	
28/10	2.4m LINTEL O/A	0.053	55		45		38	581	231	0.5	4.12	0.78	0.15	0.12	350	TANK01/1	36.9	36.975	
28/11	NO PIT		0		100		0	0	0	1							36.25	37.024	
29/1	2.4m LINTEL O/A	0.035	55		45		25	122	81	6.3	1.62	2.04	0.08	0.15	41	29/2	40.08	41.618	
29/2	2.4m LINTEL O/A	0.0299	55		45		21	127	83	6.3	1.65	2.06	0.08	0.16	43	29/3	38.231	39.691	
29/3	2.4m LINTEL O/A	0.0305	55		45		22	130	84	6.3	1.68	2.08	0.08	0.16	45	29/4	36.326	37.744	
29/4	2.4m LINTEL O/A	0.031	55		45		22	132	85	6.7	1.65	2.12	0.08	0.16	46	29/5	34.526	35.776	
29/5	2.4m LINTEL O/A	0.0294	55		45		21	132	85	6.8	1.65	2.14	0.08	0.16	46	TANK02/2	32.562	33.69	
30/1	NO PIT		0		100		0	0	0								31.444	32.406	
30/2	900 x 900 GSIP		0		100		0	0	0	8.6							30.851	32.099	
31/1	NO PIT		0		100		0	0	0								31.444	32.298	
32/1	NO PIT		0		100		0	0	0	11.2							31.5	32.446	
33/1	2.4m LINTEL O/A	0.068	60		40		49	49	39	2.5	1.283333333	1.157641369	0.065	0.075246689	11	21/1	41.035	42.287	
33/2	2.4m LINTEL O/A	0.0684	60		40		50	50	39	2.5	1.283333333	1.157641369	0.065	0.075246689	11	21/3	40.886	42.287	
50/1	600 x 600 GSIP		0		100		0	0	21						44	50/2	38.62	38.537	
50/2	600 x 600 GSIP		5		95		0	44	28						134	25/1	38.571	38.437	
50/3	600 x 900 GSIP		5		95		0	0	98						0	25/1	38.488	38.636	
51/1	600 x 900 GSIP		0		100		0	0	41	2.7					0	51/2	38.442	38.475	
51/2	900 x 900 GSIP		10		90		0	0	41	1.8					15	01/2	38.23	38.184	
55/1	600 x 600 GSIP		10		90		0	0	20						30	55/2	41.392	41.328	
55/2	600 x 900 GSIP		0		100		0	30	20						60	55/3	41.064	40.979	
55/3	600 x 900 GSIP		5		95		0	60	19						92	55/4	40.859	40.771	
55/4	600 x 900 GSIP		0		100		0	92	55						88	55/5	40.46	40.376	
55/5	600 x 900 GSIP		0		100		0	88	-43						180	55/6	40.023	39.897	
55/6	600 x 900 GSIP		10		90		0	180	36						203	55/7	39.837	39.72	
55/7	600 x 900 GSIP		10		90		0	203	-45						289	55/8	39.516	39.368	
55/8	900 x 900 GSIP		10		90		0	289	71						273	55/9	39.367	39.227	
55/9	900 x 900 GSIP		2		98		0	273	142						192	55/11	39.137	39.034	
55/10	900 x 900 GSIP		0		100		0	0	0						0	55/11	38.579	39.09	
55/11	900 x 900 GSIP		50		50		0	383	176						435	28/10	37.571	37.424	
56/1	600 x 900 GSIP		0		100		0	0	36						18	56/2	37.699	37.646	
56/2	600 x 600 GSIP		10		90		0	25	-37						92	56/3	37.606	37.238	
56/3	600 x 600 GSIP		0		100		0	92	24						120	56/4	37.605	37.254	
56/4	600 x 900 GSIP		0		100		0	120	-68						146	56/5	37.603	37.312	
56/5	900 x 900 GSIP		5		95		0	146	36						191	55/11	37.581	37.421	
60/1	900 x 900 GSIP		0		100		0	0	46						3	05/6	32.795	32.768	
61/1	600 x 600 GSIP		0		100		0	0	43						0	61/2	40.114	40.102	
61/2	600 x 900 GSIP		0		100		0	0	43						0	61/3	38.68	39.17	
61/3	600 x 900 GSIP		0		100		0	0	28						15	61/4	37.891	37.847	
61/4	600 x 900 GSIP		0		100		0	15	-17						73	61/5	36.745	36.672	
61/5	600 x 900 GSIP		0		100		0	73	96						20	61/6	35.849	35.799	
61/6	600 x 900 GSIP		5		95		0	20	-49						111	61/7	35.023	34.933	
61/7	600 x 900 GSIP		0		100		0	111	-46						198	61/8	34.547	34.429	
61/8	600 x 900 GSIP		5		95		0	236	116						175	61/9	34.202	34.109	
61/9	900 x 900 GSIP		0		100		0	175	-62	6.1					227	05/6	32.005	31.844	

NOTES:

1. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.12
2. LINTEL SIZES ARE OVERALL PIT LENGTHS.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

DESIGN FILE N:\239858\Design\12D\

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC

DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION

PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER CALCULATIONS: MAJOR EVENT SHEET 1

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	415	D

Plotted By: tims Plot Date: 06/08/20 – 09:07 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-415(D).dwg

239858-ENG-416(D)

100mm AT FULL SIZE

1% AEP PIT DETAILS

Node	Structure	Catchment	Imp.	Tc Imp.	Per.	Tc Per.	Catchment	Approach	Captured	Road	Max Flow	Velocity	Depth	VD	Bypass	Bypass	HGL	Grate level	Lost
		Area (ha)	%	(min)	%	(min)	Flow	Flow	Flow	Grade	Width	m/s	m	m2/sec	Flow	Pit	R.L. m	R.L. m	
62/1	600 x 900 GSIP		0		100		0	0	5						38	61/8	34.209	34.097	
63/1	600 x 600 GSIP		0		100		0	0	32						10	63/2	41.841	41.8	
63/2	600 x 600 GSIP		0		100		0	10	2						51	63/3	41.003	40.938	
63/3	600 x 900 GSIP		0		100		0	51	79						19	63/4	40.062	40.015	
63/4	600 x 900 GSIP		10		90		0	19	-56						115	68/1	38.914	38.833	
63/5	600 x 900 GSIP		0		100		0	0	43	3.5					0	63/6	38.726	38.842	
63/6	600 x 600 GSIP		0		100		0	0	38	3.1					29	64/2	37.729	37.676	
63/7	900 x 900 GSIP		0		100		0	0	0	0.9					0	09/1	36.991	37.287	
64/1	600 x 600 GSIP		0		100		0	140	-23						207	67/1	36.441	36.344	
64/2	600 x 600 GSIP		10		90		0	29	64	15.2					8	64/3	36.506	36.47	
64/3	600 x 900 GSIP		5		95		0	8	49	5.5					2	64/4	35.204	35.262	
64/4	600 x 600 GSIP		0		100		0	2	-23	6.7					67	64/5	33.966	33.897	
64/5	900 x 900 GSIP		0		100		0	355	66	7.6					331	64/6	32.995	32.878	
64/6	900 x 900 GSIP		5		95		0	331	44	-1					337	64/7	32.01	31.895	
64/7	900 x 900 GSIP		0		100		0	396	-87	4.2					510	01/13	30.136	29.979	
65/1	900 x 900 GSIP		5		95		0	257	12						288	64/5	33.045	32.911	
66/1	600 x 600 GSIP		20		80		0	229	14						257	65/1	34.041	33.935	
67/1	600 x 900 GSIP		35		65		0	207	24						229	66/1	35.349	35.252	
68/1	600 x 600 GSIP		10		90		0	115	19						140	64/1	37.84	37.758	
69/1	600 x 900 GSIP		0		100		0	0	24	24.2					13	69/2	30.542	30.495	
69/2	600 x 600 GSIP		0		100		0	13	-15	6.8					59	64/7	30.146	30.049	
71/1	600 x 600 GSIP		0		100		0	0	20						0	71/2	43.313	43.313	
71/2	600 x 600 GSIP		10		90		0	0	20						0	71/3	43.049	43.261	
71/3	600 x 600 GSIP		10		90		0	0	20						0	71/4	42.126	42.837	
71/4	600 x 600 GSIP		0		100		0	0	20						0	71/5	41.577	42.205	
71/5	600 x 600 GSIP		0		100		0	0	20						0	71/6	41.128	41.605	
71/6	600 x 900 GSIP		5		95		0	0	20						0	71/7	40.559	41.069	
71/7	600 x 900 GSIP		5		95		0	0	20						0	71/8	39.802	40.24	
71/8	600 x 900 GSIP		0		100		0	0	20						0	71/9	38.292	39.096	
71/9	600 x 900 GSIP		5		95		0	0	20						0	71/10	37.574	38.433	
71/10	600 x 900 GSIP		0		100		0	0	20						0	71/11	36.635	37.563	
71/11	600 x 900 GSIP		0		100		0	0	20						0	71/12	36.042	36.67	
71/12	600 x 900 GSIP		25		75		0	0	20						0	71/13	34.894	35.792	
71/13	600 x 900 GSIP		0		100		0	0	20						0	71/14	33.548	34.49	
71/14	900 x 900 GSIP		0		100		0	0	24	20.6					0	14/6	30.767	31.172	
72/1	600 x 600 GSIP		0		100		0	0	12						0	72/2	42.95	43.584	
72/2	600 x 600 GSIP		0		100		0	0	12						0	72/3	42.838	43.563	
72/3	600 x 600 GSIP		0		100		0	0	12						0	72/4	42.244	43.04	
72/4	600 x 900 GSIP		0		100		0	0	12						0	72/5	41.943	42.833	
72/5	600 x 900 GSIP		0		100		0	0	12						0	72/6	41.397	42.336	
72/6	900 x 900 GSIP		15		85		0	0	12						0	20/1	40.645	41.811	
73/1	600 x 900 GSIP		15		85		0	0	18						0	73/2	43.847	44.585	
73/2	600 x 900 GSIP		0		100		0	0	18						0	73/3	43.312	43.851	
73/3	600 x 900 GSIP		0		100		0	0	18						0	73/4	42.209	43.227	
73/4	600 x 900 GSIP		0		100		0	0	18						0	73/5	41.187	42.171	
73/5	900 x 900 GSIP		0		100		0	0	18						0	21/3	40.32	41.335	
74/1	600 x 900 GSIP		0		100		0	0	24						0	74/2	40.425	41.236	
74/2	600 x 900 GSIP		25		75		0	0	24						0	74/3	38.945	39.835	
74/3	600 x 900 GSIP		0		100		0	0	24						0	74/4	37.909	38.806	
74/4	600 x 900 GSIP		0		100		0	0	24						0	74/5	37.209	37.738	
74/5	900 x 900 GSIP		0		100		0	0	24						0	21/7	36.421	36.494	
75/1	600 x 600 GSIP		10		90		0	0	24						0	75/2	39.459	40.077	
75/2	600 x 900 GSIP		30		70		0	0	24	7.3					0	75/3	39.198	40.106	
75/3	600 x 900 GSIP		20		80		0	0	24	0.2					0	75/4	38.454	39.21	
75/4	900 x 900 GSIP		20		80		0	0	24	4.3					0	24/5	37.451	38.377	
76/1	600 x 600 GSIP		0		100		0	0	24						0	76/2	41.181	41.604	
76/2	600 x 900 GSIP		0		100		0	0	29						0	76/3	40.63	41.478	
76/3	600 x 900 GSIP		0		100		0	0	45						0	24/1	39.997	40.518	
77/1	600 x 600 GSIP		0		100		0	0	24						0	75/4	38.507	39.176	
TANK01/1	OSD TANK		0		100		0	113	-317	1					549	01/4	37.333	36.25	
TANK01.1/1	NO PIT		0		100		0	0	0	0.9							36.25	36.866	
TANK02/1	NO PIT		0		100		0	0	0	6.8							31.05	33.739	
TANK02/2	OSD TANK		0		100		0	2	-126	6.8					78	10/4	32.183	31.05	
TANK02.1/1	NO PIT		0		100		0	0	0	6.8							31.05	32.125	
TANK03/1	NO PIT		0		100		0	0	0	6.6							31.444	33.702	
TANK03/2	OSD TANK		0		100		0	0	0	7.3					0	18/1	31.444	31.55	
TANK04/1	NO PIT		0		100		0	0	0	9.5							31.5	34.301	
TANK04/2	OSD TANK		0		100		0	6	6	10.3					0	14/1	31.554	31.5	
TANK04.1/1	NO PIT		0		100		0	0	0	11.2							31.5	32.341	

1% AEP PIPE DETAILS

Reach	Type	Length	Diameter	Upstream	Downstream	Pipe	HGL Grade	U/S HGL	D/S HGL	Ku	Ku headloss	Flow	Velocity	Capacity
		m	mm	IL	IL	grade %	%	R.L. m	R.L. m			L/s	m/s	Ratio %
01/1 to 01/2	RCP CLASS 3	30.4	375	36.88	36.27	2	1.99	36.895	36.288	2	0.001	2	0	1
01/2 to 01/3	RCP CLASS 3	24.1	375	34.56	34.32	1	0	35.982	35.983	2.5	0.173	98	1.22	52
01/3 to 01/4	RCP CLASS 4	28.5	525	34.09	33.8	1	2.85	35.684	34.871	1.8	0.338	598	2.76	128
01/4 to 01/5	RCP CLASS 4	20.9	525	33.79	32.89	4.3	1.6	34.664	34.329	0.7	0.228	595	4.53	62
01/5 to 01/6	RCP CLASS 3	36.5	525	32.88	31.2	4.6	2.51	34.195	33.281	0.9	0.191	675	4.33	67
01/6 to 01/7	RCP CLASS 3	16.4	525	31.2	30.62	3.5	2.46	33.057	32.654	1.1	0.276	711	3.28	82
01/7 to 01/8	RCP CLASS 4	15.5	525	30.62	30.06	3.65	3.43	32.362	31.829	1.5	0.33	770	3.56	86
01/8 to 01/9	RCP CLASS 3	12	525	29.98	29.11	7.2	4.75	31.535	30.963	0.7	0.294	831	3.84	66
01/9 to 01/10	BOX CULVERT	19.8	1200x600	29.11	28.91	1	0.66	30.503	30.372	1.7	0.463	1669	2.32	81
01/10 to 01/11	BOX CULVERT	44.8	1500x600	28.91	28.64	0.6	0.48	30.231	30.014	0.7	0.142	1862	2.07	90
01/11 to 01/12	BOX CULVERT	8.7	1500x600	28.64	28.59	0.55	0.32	29.897	29.869	1.2	0.148	1575	1.75	79
01/12 to 01/13	BOX CULVERT	10.6	1500x600	28.59	28.54	0.55	0.32	29.722	29.688	1	0.156	1575	1.75	79
01/13 to 01/14	BOX CULVERT	10.7	1800x600	28.54	28.48	0.55	0.55	29.159	29.1	2	0.529	2461	2.28	100
02/1 to 02/2	ORIFICE PLATE	1	250	34.25	34.24	1	-5.02	36.25	36.301	0	0	123	0	
02/2 to 02/3	RCP CLASS 3	15.2	525	34.24	34.16	0.5	-0.91	36.179	36.317	1.5	0.288	420	1.94	128
02/3 to 01/3	RCP CLASS 3	11.8	525	34.16	34.1	0.55	-0.14	35.966	35.983	2	0.422	501	2.31	145
03/1 to 02/3	RCP CLASS 4	7.7	375	35.17	35.01	2	-0.09	36.31	36.317	2	0.118	71	1.43	26
04/1 to 28/9	RCP CLASS 4	7.5	375	35.83	35.68	2	0.07	37.353	37.348	2	0.045	73	0.66	27
05/1 to 05/2	RCP CLASS 4	7.5	375	37.61	37.46	2	1.2	37.712	37.622	2	0.121	73	1.09	27
05/2 to 05/3	RCP CLASS 3	47.8	375	37.46	34.69	5.79	2.11	37.534	36.527	2.3	0.088	122	3.34	27
05/3 to 05/4	RCP CLASS 3	40.9	375	34.69	32.3	5.85	5.17	36.409	34.293	1.3	0.119	368	3.33	80
05/4 to 05/5	RCP CLASS 3	62.2	375	32.3	29.99	3.71	3.98	34.261	31.784	0.8	0.062	370	3.35	101
05/5 to 05/6	RCP CLASS 3	41.3	600	29.99	29.2	1.91	0.47	31.568	31.372	1.6	0.313	701	2.48	76
05/6 to 01/9	RCP CLASS 3	7.8	675	29.2	29.11	1.16	0.71	31.019	30.963	1.5	0.455	873	2.44	89
06/1 to 05/6	RCP CLASS 4	7.6	375	29.68	29.38	4	-0.08	31.344	31.35	2	0.103	111	1.01	29
07/1 to 05/5	RCP CLASS 4	7.5	375	30.29	29.99	4	-0.13	31.742	31.752	1.6	0.033	-70	0.64	-18
08/1 to 05/4	RCP CLASS 4	9.5	375	32.68	32.3	4	0.03	34.296	34.293	2	0.011	37	0.33	10
09/1 to 05/3	RCP CLASS 4	9.8	375	34.94	34.69	2.5	0.86	36.611	36.527	1.2	0.16	177	1.6	59
10/1 to 10/2	ORIFICE PLATE	1	200	29.35	29.33	2	-1.67	31.05	31.067	0	0	52	0	
10/2 to 10/3	RCP CLASS 3	28	375	29.33	28.9	1.54	1.87	30.901	30.379	1.5	0.169	230	2.09	98
10/3 to 10/4	RCP CLASS 4	7.5	450	28.9	28.85	0.65	0.25	30.252	30.233	1.6	0.127	196	1.23	79
10/4 to 10/5	RCP CLASS 4	14.7	450	28.85	28.7	0.99	0.44	30.101	30.037	1.6	0.146	212	1.33	69
10/5 to 10/6	RCP CLASS 4	22.7	600	28.7	28.59	0.5	0.18	29.906	29.864	1.8	0.15	362	1.28	77
10/6 to 01/13	RCP CLASS 4	11	600	28.59	28.54	0.5	0.45	29.737	29.688	1	0.128	448	1.58	95
11/1 to 11/2	RCP CLASS 3	30.3	375	29.1	28.95	0.5	0	30.379	30.379	2	0.026	56	0.51	42
11/2 to 11/3	RCP CLASS 3	13.3	375	28.95	28.88	0.5	0	30.379	30.379	1.7	0.071	100	0.9	74
11/3 to 11/4	UPVC-SN8	15.1	375	28.88	28.8	0.5	0.16	30.319	30.295	2.7	0.102	146	1.32	108
11/4 to 10/5	RCP CLASS 4	19.9	375	28.8	28.7	0.5	0.57	30.15	30.037	1.6	0.164	188	1.7	140
12/1 to 29/4	RCP CLASS 4	10.5	375	34.61	34.14	4.5	0.88	34.618	34.526	2	0.075	39	2.33	10
13/1 to 29/2	RCP CLASS 4	10.1	375	38.55	38.05	4.9	3.34	38.568	38.231	2	0.049	29	2.13	7
14/1 to 14/2	RCP CLASS 3	18.5	375	30.07	28.77	7	3.87	31.269	30.551	1.7	0.215	285	3.44	57
14/2 to 14/3	RCP CLASS 3	6.2	375	28.65	28.59	1	-0.02	30.55	30.551	0.7	0.039	135	1.22	71
14/3 to 14/4	RCP CLASS 4	22.8	450	28.52	28.36	0.7	0.04	30.53	30.52	2.3	0.142	174	1.09	67
14/4 to 14/5	RCP CLASS 4	25.4	450	28.36	28.18	0.7	0.49	30.365	30.24	1.6	0.154	224	1.41	87
14/5 to 14/6	RCP CLASS 3	14.4	450	28.18	28.08	0.7	0.31	30.145	30.101	0.8	0.116	276	1.74	107
14/6 to 14/7	RCP CLASS 3	17.3	525	28	27.88	0.71	0.38	29.964	29.898	1.9	0.362	572	2.64	146
14/7 to 14/8	RCP CLASS 3	20.5	600	27.88	27.73	0.72	0.53	29.763	29.655	0.9	0.135	601	2.2	106
14/8 to 14/9	RCP CLASS 4	31.7	600	27.73	27.49	0.77	0.61	29.531	29.337	0.6	0.131	638	2.25	109
14/9 to 14/10	RCP CLASS 4	7	(2x)600	27.49	27.45	0.5	-0.01	29.129	29.13	2.2	0.275	1083	1.91	115
14/10 to 14/11	RCP CLASS 4	34.6	(2x)600	27.45	27.28	0.5	0.67	28.924	28.691	1	0.201	1123	1.99	120
14/11 to 14/12	RCP CLASS 4	12.9	(2x)600	27.28	27.15	1	3.48	28.201	27.75	2.1	0.493	1567	2.77	118
15/1 to 14/2	RCP CLASS 4	11	375	28.94	28.72	2	0	30.55	30.55	2.1	0.083	-24	0.88	-9
16/1 to 27/4	RCP CLASS 4	14.3	375	34.53	33.71	5.8	0.87	34.542	34.417	2	0.07	42	2.59	9
17/1 to 27/2	RCP CLASS 4	14.3	375	39.2	38.65	3.9	2.78	39.235	38.838	2	0.059	44	2.09	12
18/1 to 18/2	RCP CLASS 4	10.7	375	28.44	27.87	5.4	0.06	29.858	29.852	2	0.092	51	2.24	12
18/2 to 14/9	RCP CLASS 3	7.6	375	27.87	27.71	2	3.09	29.573	29.337	1.6	0.284	333	3.02	124
19/1 to 19/2	RCP CLASS 3	31	375	39.23	38.61	2	0.05	40.167	40.152	2	0.016	43	0.39	16
19/2 to 19/3	RCP CLASS 4	7.8	375	38.61	38.55	0.75	0.43	40.036	40.002	1.9	0.118	125	1.13	76
19/3 to 19/4	RCP CLASS 4	16	375	38.55	38.4	0.96	0.71	39.843	39.729	1.6	0.162	158	1.44	86
19/4 to 19/5	RCP CLASS 2	4.5	450	38.32	38.25	1.5	0.73	39.536	39.503	1.4	0.194	263	1.65	69
19/5 to 19/6	RCP CLASS 2	5.1	450	38.25	38.18	1.5	0.73	39.365	39.328	1	0.139	263	1.65	69
20/1 to 20/2	RCP CLASS 3	42.2	375	39.98	38.97	2.4	0.15	40.059	39.996	2.1	0.115	78	2.23	27
20/2 to 20/3	RCP CLASS 4	7.9	375	38.97	38.85	1.5	0.27	39.929	39.908	1.8	0.068	97	0.88	42
20/3 to 19/4	RCP CLASS 3	15.5	375	38.85	38.4	2.93	0.43	39.796	39.729	1.7	0.112	125	1.14	39
21/1 to 21/2	RCP CLASS 4	21.9	375	39.93	39.71	1	-0.15	40.024	40.056	2	0.091	34	1.18	18
21/2 to 21/3	RCP CLASS 4	10	375	39.71	39.61	1	0.83	39.947	39.864	2.1	0.116	110	1.04	58
21/3 to 21/4	RCP CLASS 3	39.3	375	39.61	38.43	3	0.38	39.79	39.64	0.7	0.075	125	2.67	38
21/4 to 21/5	RCP CLASS 3	43.3	375	38.43	36.94	3.45	2.23	39.521	38.557	2.1	0.157	251	3.03	71
21/5 to 21/6	RCP CLASS 4	17.5	375	36.94	36.5	2.5	2.22	38.46	38.072	0.4	0.101	273	2.52	91
21/6 to 21/7	RCP CLASS 4	9.5	375	36.49	36.1	4.15	5.44	37.82	37.303	1.5	0.278	377	3.41	97
21/7 to 21/8	RCP CLASS 3	41.3	450	36.04	34.43	3.9	2.12	37.231	36.357	0.4	0.072	428	3.82	70
21/8 to 21/9	RCP CLASS 3	43.3	450	34.43	33.48	2.2	1.88	36.225	35.409	1.6	0.186	441	2.77	96
21/9 to 21/10	RCP CLASS 4	7.8	525	33.42	33.26	2	0.97	34.998	34.923	1.7	0.437	491	2.27	74
21/10 to 21/11	RCP CLASS 3	22.6	525	33.26	31.91	6	2.44	34.604	34.054	1.7	0.339	573	2.65	50
21/11 to 21/12	RCP CLASS 2	4.3	675	31.79	31.59	4.5	5.87	33.426	33.173	1.8	0.628	1086	3.03	56
21/12 to 21/13	RCP CLASS 2	5.3	675	31.59	31.35	4.5	1.41	32.704	32.629	1	0.469	1086	3.03	56

NOTES:

1. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.12
2. LINTEL SIZES ARE OVERALL PIT LENGTHS.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

PROJECT WYEE WEST PAPER SUBDIVISION

PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER CALCULATIONS: MAJOR EVENT SHEET 2

SURVEYED LMCC

DATUM A.H.D. GDA 94 ZONE 56

PROJECT No. 239858 - DISCIPLINE ENG - NUMBER 416 REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:07 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-416(D).dwg

239858-ENG-417(D)

100mm AT FULL SIZE

1% AEP PIPE DETAILS

Reach	Type	Length	Diameter	Upstream	Downstream	Pipe	HGL Grade	U/S HGL	D/S HGL	Ku	Ku headloss	Flow	Velocity	Capacity
		m	mm	IL	IL	grade %	%	R.L. m	R.L. m			L/s	m/s	Ratio %
22/1 to 22/2	RCP CLASS 3	30.5	375	40.19	38.63	5.1	4.56	40.23	38.841	2	0.04	46	2.53	11
22/2 to 22/3	RCP CLASS 3	24.5	375	38.63	37.16	6	0.38	38.688	38.596	2.5	0.154	101	3.23	21
22/3 to 22/4	RCP CLASS 4	7.5	375	37.16	37.09	1	0.65	38.453	38.404	1.4	0.146	155	1.4	81
22/4 to 21/5	RCP CLASS 4	9.5	375	37.09	36.5	6.2	1.03	38.17	38.072	2.1	0.234	194	1.91	41
23/1 to 23/2	RCP CLASS 4	7.5	375	37.31	37.16	2	1.01	37.341	37.265	2	0.059	20	1.12	7
23/2 to 23/3	RCP CLASS 3	40.2	375	37.16	34.75	6	4.09	37.185	35.538	4.7	0.084	77	3.12	17
23/3 to 23/4	RCP CLASS 3	34.3	375	34.75	33.2	4.5	0.56	35.413	35.222	3	0.193	145	2.93	36
23/4 to 23/5	RCP CLASS 4	7.5	375	33.2	33.13	1	0.11	35.164	35.156	2	0.299	224	2.03	118
23/5 to 21/10	RCP CLASS 3	18.3	375	33.13	32.07	5.8	4.84	34.938	34.054	1.8	0.224	303	2.74	66
24/1 to 24/2	RCP CLASS 3	7.6	375	37.48	37.4	1	1.53	37.785	37.669	0.6	0.061	158	1.47	83
24/2 to 24/3	RCP CLASS 4	38.4	375	37.4	35.39	5.25	1.5	37.52	36.945	2.1	0.146	176	3.19	40
24/3 to 24/4	RCP CLASS 4	8.2	450	35.32	35.28	0.5	1.94	36.58	36.421	1.8	0.365	345	2.17	158
24/4 to 24/5	RCP CLASS 2	46.2	450	35.28	35.05	0.5	1.25	36.37	35.791	0.3	0.057	345	2.17	158
24/5 to 24/6	RCP CLASS 2	20.6	525	34.97	34.46	2.5	2.96	35.461	34.85	1.9	0.352	495	2.29	67
24/6 to 24/7	RCP CLASS 2	20.1	525	34.46	33.67	3.9	0.51	34.695	34.592	0.4	0.154	513	4.33	56
24/7 to 24/8	RCP CLASS 2	20.1	525	33.66	32.66	5	1.33	34.486	34.218	0.3	0.106	538	2.48	51
24/8 to 24/9	RCP CLASS 2	2.5	525	32.66	32.56	4	0.64	34.168	34.152	0.3	0.071	449	2.08	48
24/9 to 21/10	RCP CLASS 2	46.3	600	32.56	31.86	1.5	0.1	34.1	34.054	1.8	0.22	440	1.56	54
25/1 to 25/2	EXISTING	11.4	375	37.42	37.36	0.59	1.33	37.837	37.685	1.1	0.194	206	1.86	141
26/1 to 26/2	RCP CLASS 3	36.6	375	38.94	36.56	6.5	6.34	39	36.682	2	0.028	57	2.88	12
26/2 to 26/3	RCP CLASS 3	36.6	375	36.54	34.16	6.5	6.1	36.608	34.376	2.6	0.074	127	3.33	26
26/3 to 26/4	RCP CLASS 3	36.6	375	34.16	31.97	6	5.9	34.296	32.139	1.5	0.08	202	3.1	43
26/4 to TANK03/1	RCP CLASS 4	1	375	31.15	31.1	4.93	27.68	31.725	31.444	1.6	0.362	283	2.56	67
27/1 to 27/2	RCP CLASS 3	45.7	375	41.18	38.67	5.5	5.23	41.231	38.838	2	0.034	57	3.15	11
27/2 to 27/3	RCP CLASS 3	30.5	375	38.65	36.33	7.6	7.41	38.751	36.493	1.8	0.085	183	3.24	35
27/3 to 27/4	RCP CLASS 3	30.5	375	36.31	33.63	8.8	6.53	36.408	34.417	1.2	0.085	259	5	46
27/4 to 27/5	RCP CLASS 4	16.9	375	33.51	32.67	5	7.89	34.27	32.939	1.1	0.174	374	3.39	88
27/5 to TANK04/1	RCP CLASS 4	1.5	375	31.13	31.1	2	48.33	32.225	31.5	1.6	0.356	406	3.67	151
28/1 to 28/2	RCP CLASS 4	6.5	375	39.73	39.57	2.39	0.08	40.126	40.121	2	0.09	27	1.3	9
28/2 to 28/3	RCP CLASS 3	42.3	375	39.57	38.3	3	0.11	40.097	40.051	5.4	0.12	53	2.02	17
28/3 to 28/4	RCP CLASS 4	6.5	375	38.3	38.24	1	0.67	39.853	39.809	3.7	0.216	167	1.51	88
28/4 to 28/5	RCP CLASS 4	17.7	375	38.24	38.06	1	1.21	39.593	39.379	1.6	0.218	195	1.76	102
28/5 to 28/6	RCP CLASS 3	40.3	375	38.05	36.74	3.25	1.62	39.237	38.583	2.3	0.161	211	2.61	61
28/6 to 28/7	RCP CLASS 4	7.5	375	36.74	36.59	2	0.52	38.465	38.426	1.5	0.135	146	1.32	54
28/7 to 28/8	RCP CLASS 3	40.2	375	36.59	36.06	1.3	1.65	38.294	37.63	1.5	0.135	216	1.95	100
28/8 to 28/9	RCP CLASS 3	40.2	375	36.06	35.66	1	0.64	37.606	37.348	1.4	0.13	262	2.37	138
28/9 to 28/10	RCP CLASS 3	61.3	525	35.66	35	1.07	0.49	37.198	36.9	1.4	0.176	361	1.67	75
28/10 to 28/11	RCP CLASS 4	1	600	34.84	34.75	8.51	6.31	36.314	36.25	1.4	0.588	919	3.25	47
29/1 to 29/2	RCP CLASS 3	30.5	375	39.98	38.06	6.3	5.9	40.03	38.231	2	0.051	81	3.59	14
29/2 to 29/3	RCP CLASS 3	31	375	38.05	36.1	6.3	5.83	38.133	36.326	1.7	0.099	196	4.04	34
29/3 to 29/4	RCP CLASS 3	30	375	36.1	34.15	6.5	5.69	36.232	34.526	1.2	0.097	278	4.51	58
29/4 to 29/5	RCP CLASS 3	30.5	375	34.14	32.03	6.9	6.07	34.412	32.562	0.9	0.115	441	4.9	90
29/5 to TANK02/1	RCP CLASS 4	1	375	30.68	30.66	1.97	113.6	32.203	31.05	1.5	0.359	485	4.39	182
30/1 to 30/2	ORIFICE PLATE	1.6	250	30.75	30.7	3.09	36.7	31.444	30.851	0	0	110	0	
30/2 to 18/2	RCP CLASS 3	23	450	30.61	28.92	7.38	3.58	30.675	29.852	2.1	0.177	266	4.2	32
31/1 to 30/2	RCP CLASS 4	1	375	31.14	31.13	1	4.93	31.444	31.394	0	0	159	1.9	84
32/1 to 14/1	ORIFICE PLATE	1.8	215	30.2	30.18	1	1.41	31.5	31.475	0	0	83	0	
33/1 to 33/2	RCP CLASS 4	11	375	40.81	40.7	1	0.33	40.922	40.886	7	0.113	38	0.58	20
33/2 to 21/2	RCP CLASS 4	9.6	375	40.67	40.43	2.5	1.77	40.727	40.557	2.4	0.16	77	1.16	26
50/1 to 50/2	UPVC-SN8	15.2	225	37.67	37.6	0.5	0.16	38.596	38.571	2	0.027	21	0.52	60
50/2 to 50/3	UPVC-SN8	23.2	300	37.6	37.48	0.5	0.13	38.519	38.488	3.2	0.075	48	0.67	64
50/3 to 25/1	UPVC-SN8	5.6	300	37.48	37.42	1	3.93	38.25	38.031	1.9	0.238	145	2.06	139
51/1 to 51/2	UPVC-SN8	15.2	225	37.35	37.04	2	0.7	38.336	38.23	2	0.106	41	1.02	59
51/2 to 01/2	UPVC-SN8	10.7	150	35.61	34.77	7.81	19.97	38.159	36.031	1.5	0.072	81	4.56	145
55/1 to 55/2	UPVC-SN8	20.1	150	40.47	40.13	1.67	1.36	41.337	41.064	1.8	0.055	20	1.14	79
55/2 to 55/3	UPVC-SN8	20.1	225	40.06	39.76	1.5	0.47	40.954	40.859	2.1	0.11	40	1.01	56
55/3 to 55/4	UPVC-SN8	20.1	225	39.76	39.36	2	1.43	40.748	40.46	1.9	0.116	59	1.48	71
55/4 to 55/5	UPVC-SN8	20.1	300	39.28	38.98	1.5	1.23	40.27	40.023	2.2	0.19	112	1.59	73
55/5 to 55/6	UPVC-SN8	20.1	300	38.98	38.6	1.86	0.47	39.931	39.837	2.5	0.125	80	1.14	47
55/6 to 55/7	UPVC-SN8	20.1	300	38.6	38.28	1.6	0.99	39.716	39.516	2.2	0.191	116	1.63	73
55/7 to 55/8	UPVC-SN8	20.1	300	38.28	37.88	2	0.32	39.43	39.366	2.3	0.098	71	1	40
55/8 to 55/9	RCP CLASS 2	20.1	375	37.81	37.61	1	0.31	39.199	39.137	2.3	0.175	137	1.24	60
55/9 to 55/10	RCP CLASS 2	2	375	37.61	37.59	1	10.4	38.787	38.579	1.9	0.35	273	2.47	144
55/10 to 55/11	RCP CLASS 2	45.7	375	37.59	35.76	3.99	1.86	38.422	37.571	1.5	0.157	272	2.47	60
55/11 to 28/10	RCP CLASS 2	7.3	375	35.76	35.28	6.62	4.83	37.252	36.9	1.9	0.319	478	4.33	81
56/1 to 56/2	UPVC-SN8	20.1	225	36.77	36.41	1.8	0.26	37.659	37.606	2	0.081	36	0.89	54
56/2 to 56/3	UPVC-SN8	20.1	225	36.41	36.21	1	0	37.606	37.605	2.2	0.002	6	0.15	12
56/3 to 56/4	UPVC-SN8	20.1	300	36.21	36.01	1	0	37.604	37.603	2.3	0.017	26	0.37	25
56/4 to 56/5	UPVC-SN8	20.1	300	36.01	35.81	1	0.05	37.591	37.581	2	0.016	27	0.39	26
56/5 to 55/11	UPVC-SN8	2	300	35.81	35.79	1	0.05	37.572	37.571	1.9	0.051	51	0.72	40
60/1 to 01/7	UPVC-SN8	4.6	225	31.23	31	5	0.52	32.678	32.654	2	0.165	53	1.63	41
61/1 to 61/2	UPVC-SN8	20.1	150	39.27	38.05	6.04	6.85	40.059	38.68	1.8	0.055	42	2.39	87
61/2 to 61/3	UPVC-SN8	30.2	225	37.98	36.65	4.41	2.47	38.637	37.891	0.7	0.043	85	2.14	69
61/3 to 61/4	UPVC-SN8	20.1	225	36.65	35.72	4.63	5.3	37.812	36.745	1	0.079	112	2.83	89
61/4 to 61/5	UPVC-SN8	20.1	225	35.72	34.87	4.2	4.12	36.659	35.829	1.3	0.094	101	2.53	84
61/5 to 61/6	UPVC-SN8	20	300	34.79	33.95	4.2	3.42	35.709	35.023	0.9	0.123	195	2.75	76
61/6 to 61/7	UPVC-SN8	20.2	300	33.95	33.5	2.26	1.77	34.904	34.547	1.1	0.137	152	2.15	80
61/7 to 61/8	UPVC-SN8	20.1	300	33.5	32.93	2.84	1.17	34.437	34.201	2.4	0.197	125	1.77	59
61/8 to 61/9	UPVC-SN8	45.7	300	32.93	30.38	5.56	4.55	34.087	32.005	1.8	0.115	219	3.09	74
61/9 to 05/5	RCP CLASS 2	7.4	375	30.31	29.99	4.3	0.67	31.833	31.784	1.3	0.256	220	1.99	56

1% AEP PIPE DETAILS

Reach	Type	Length	Diameter	Upstream	Downstream	Pipe	HGL Grade	U/S HGL	D/S HGL	Ku	Ku headloss	Flow	Velocity	Capacity
		m	mm	IL	IL	grade %	%	R.L. m	R.L. m			L/s	m/s	Ratio %
62/1 to 61/8	UPVC-SN8	2	150	33.12	33.08	2	0	34.201	34.201	1.8	0.009	5	0.31	19
63/1 to 63/2	UPVC-SN8	20.1	150	41.1	40.22	4.38	3.89	41.786	41.003	1.8	0.055	32	1.82	78
63/2 to 63/3	UPVC-SN8	20.1	150	40.22	39.02	6	4.4	40.948	40.062	1.8	0.055	34	1.93	70
63/3 to 63/4	UPVC-SN8	20.1	225	38.94	37.81	5.61	5.27	39.974	38.914	1.2	0.089	113	2.83	81
63/4 to 63/5	UPVC-SN8	2	225	37.81	37.71	5.25	0.85	38.743	38.726	2	0.196	58	1.45	43
63/5 to 63/6	UPVC-SN8	20.1	225	37.71	36.86	4.2	4.46	38.627	37.729	1.4	0.099	98	2.47	82
63/6 to 63/7	UPVC-SN8	43.8	300	36.79	35.71	2.45	1.42	37.614	36.991	1.7	0.115	154	2.18	78
63/7 to 09/1	UPVC-SN8	7.7	300	35.71	35.01	9.15	1.04	36.851	36.771	0.8	0.192	154	2.18	40
64/1 to 64/2	UPVC-SN8	2	150	35.68	35.64	2	-1.4	36.441	36.469	0.2	0.018	-24	1.34	-84
64/2 to 64/3	UPVC-SN8	20.1	150	35.64	34.33	6.47	6.11	36.433	35.204	1.8	0.055	40	2.27	80
64/3 to 64/4	UPVC-SN8	20.1	225	34.26	33.01	6.2	5.66	35.106	33.966	1.4	0.098	109	2.74	75
64/4 to 64/5	UPVC-SN8	20.2	225	33.01	31.58	7.09	4.38	33.878	32.995	1.2	0.088	100	2.52	64
64/5 to 64/6	UPVC-SN8	20.1	300	31.5	30.09	7	4.01	32.817	32.01	1.8	0.178	178	2.52	53
64/6 to 64/7	UPVC-SN8	35.4	300	30.09	28.85	3.5	4.91	31.875	30.136	1.8	0.135	222	3.13	94
64/7 to 01/11	RCP CLASS 2	6.2	450	28.7	28.64	1	0.19	30.026	30.014	2.7	0.294	234	1.47	76
65/1 to 64/5	UPVC-SN8	2	150	31.69	31.65	2	0.35	33.002	32.995	1.9	0.044	12	0.68	43
66/1 to 64/4	UPVC-SN8	2	150	33.1	33.08	1	0.55	33.977	33.966	1.9	0.065	14	0.82	73
67/1 to 64/3	UPVC-SN8	2	150	34.35	34.33	1	1.05	35.225	35.204	1.9	0.128	24	1.33	119
68/1 to 63/6	UPVC-SN8	2	150	36.98	36.94	2	0.75	37.744	37.729	1.9	0.115	19	1.08	68
69/1 to 69/2	UPVC-SN8	16.3	150	29.33	29.17	1	2.04	30.479	30.146	1.9	0.063	24	1.33	119
69/2 to 64/7	UPVC-SN8	16.5	225	29.17	29	1	0.03	30.141	30.136	2.5	0.012	12	0.31	25
71/1 to 71/2	UPVC-SN8	12.2	150	42.63	42.5	1.06	1.42	43.222	43.049	2	0.077	20	1.12	97
71/2 to 71/3	UPVC-SN8	12.2	150	42.5	42.09	3.31	6.12	42.99	42.244	1.3	0.059	40	2.24	110
71/3 to 71/4	UPVC-SN8	12.2	225	42.02	41.42	4.94	4.38	42.111	41.577	0.2	0.016	59	3.19	46
71/4 to 71/5	UPVC-SN8	12.2	225	41.42	40.74	5.54	2.93	41.485	41.128	1	0.092	79	2.78	58
71/5 to 71/6	UPVC-SN8	12.2	225	40.74	40.03	5.87	3.96	41.042	40.559	0.7	0.088	99	2.49	70
71/6 to 71/7	UPVC-SN8	12.2	225	39.95	39.17	6.42	5.59	40.484	39.802	0.6	0.076	119	2.99	80
71/7 to 71/8	UPVC-SN8	12.2	225	39.17	38.21	7.84	11.2	39.737	38.371	0.5	0.065	139	3.49	85
71/8 to 71/9	UPVC-SN8	12.2	300	38.14	37.35	6.48	5.89	38.292	37.574	0	0	159	4.52	50
71/9 to 71/10	UPVC-SN8	12.2	300	37.35	36.36	8.07	6.85	37.47	36.635	0.6	0.105	232	5.38	65
71/10 to 71/11	UPVC-SN8	12.2	300	36.36	35.47	7.33	3.91	36.519	36.042	0.5	0.117	211	5.01	62
71/11 to 71/12	UPVC-SN8	12.2	300	35.47	34.63	6.91	8.62	35.945	34.894	0.4	0.122	257	5.09	78
71/12 to 71/13	UPVC-SN8	12.7	300	34.63	33.34	10.18	9.81	34.792	33.548	0.4	0.102	259	5.92	64
71/13 to 71/14	UPVC-SN8	42.8	300	33.34	29.83	8.2	6.42	33.514	30.767	0.4	0.038	285	5.66	79
71/14 to 14/6	RCP CLASS 2	6.1	375	28.47	28.23	4.05	5.99	30.468	30.101	1.6	0.3	291	2.64	76
72/1 to 72/2	UPVC-SN8	12.2	150	42.84	42.72	1	0.39	42.885	42.838	2	0.065	12	0.83	59
72/2 to 72/3	UPVC-SN8	12.2	150	42.72	42.23	4.02	3.85	42.778	42.309	1.7	0.059	23	1.53	59
72/3 to 72/4	UPVC-SN8	12.2	225	42.15	41.8	2.92	2.37	42.232	41.943	0.1	0.012	35	2.29	35
72/4 to 72/5	UPVC-SN8	12.2	225	41.8	41.3	4.03	3.84	41.871	41.403	1.1	0.072	47	1.7	40
72/5 to 72/6	UPVC-SN8	12.2	225	41.3	40.34	7.9	5.72	41.343	40.645	0.9	0.054	59	3.78	36
72/6 to 20/1	UPVC-SN8	4.7	225	40.34	40.1	5	6.5	40.529	40.221	0.7	0.116	70	1.77	54
73/1 to 73/2	UPVC-SN8	15.2	150	43.77	43.05	4.73	3.21	43.801	43.312	2	0.045	19	1.95	43
73/2 to 73/3	UPVC-SN8	15.2	150	43.05	42.12	6.11	6.9	43.265	42.213	1.3	0.048	37	2.09	76
73/3 to 73/4	UPVC-SN8	15.2	225	42.12	41.05	7	6.65	42.201	41.187	0.1	0.01	56	3.57	36
73/4 to 73/5	UPVC-SN8	15.2	225	41.05	39.98	7	5.28	41.125	40.32	1	0.061	80	3.88	52
73/5 to 21/3	UPVC-SN8	20	225	39.98	38.58	7	3.19	40.256	39.618	0.8	0.072	103	4.13	67
74/1 to 74/2	UPVC-SN8	20.1	150	40.34	38.91	7.07	6.99	40.39	38.984	2	0.035	24	2.22	46
74/2 to 74/3	UPVC-SN8	20.1	225	38.84	37.76	5.37	4.92	38.898	37.909	1.7	0.051	53	3.2	39
74/3 to 74/4	UPVC-SN8	20.1	225	37.76	36.6	5.75	3.16	37.845	37.209	1.2	0.073	77	3.59	55
74/4 to 74/5	UPVC-SN8	20.1	225	36.6	34.89	8.49	3.59	37.144	36.421	1	0.08	122	4.66	72
74/5 to 21/7	UPVC-SN8	4.7	300	34.82	34.58	5	1.35	36.421	36.357	0.1	0.023	146	2.08	62
75/1 to 75/2	UPVC-SN8	2	150	39.14	39.08	3	6.6	39.33	39.198	2	0.129	24	1.38	71
75/2 to 75/3	UPVC-SN8	20.1	225	39.08	38.28	4	3.34	39.126	38.454	2.1	0.072	49	2.32	42
75/3 to 75/4	UPVC-SN8	20.1	225	38.28	37.04	6.14	4.52	38.361	37.451	1.4	0.094	98	2.87	67
75/4 to 24/5	UPVC-SN8	19.6	225	37.04	35.66	7	8.04	37.394	35.815	0.7	0.057	122	3.07	79
76/1 to 76/2	UPVC-SN8	20.1	150	40.85	40.55	1.5	2.26	41.125	40.671	2	0.056	24	1.33	97
76/2 to 76/3	UPVC-SN8	40.3	225	40.48	39.47	2.5	1.41	40.564	39.997	1.8	0.066	56	2.36	60
76/3 to 24/1	UPVC-SN8	53	225	39.47	37.63	3.48	3.96	39.948	37.846	1.5	0.06	106	2.67	97
77/1 to 75/3	UPVC-SN8	2	225	38.3	38.27	1	0.65	38.467	38.454	2	0.04	24	0.63	50
TANK01.1/1 to 02/2	RCP CLASS 4	1.1	450	35.79	35.78	1	-4.74	36.25	36.301	0	0	313	2.22	101
TANK02.1/1 to 10/2	RCP CLASS 4	1.1	375	30.19	30.18	1	-1.56	31.05	31.067	0	0	215	1.95	113
TANK04.1/1 to 14/1	RCP CLASS 4	1.5	375	31.13	31.11	1	1.67	31.5	31.475	0	0	244	2.21	129

NOTES:

1. IF WORKS OCCUR PRIOR TO ADJACENT DEVELOPMENT, CONSTRUCT SWALE AND GRADE OUT TO NATURAL AT DEAD ENDS 19.6 & 21.12
2. LINTEL SIZES ARE OVERALL PIT LENGTHS.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

PROJECT: WYEE WEST PAPER SUBDIVISION

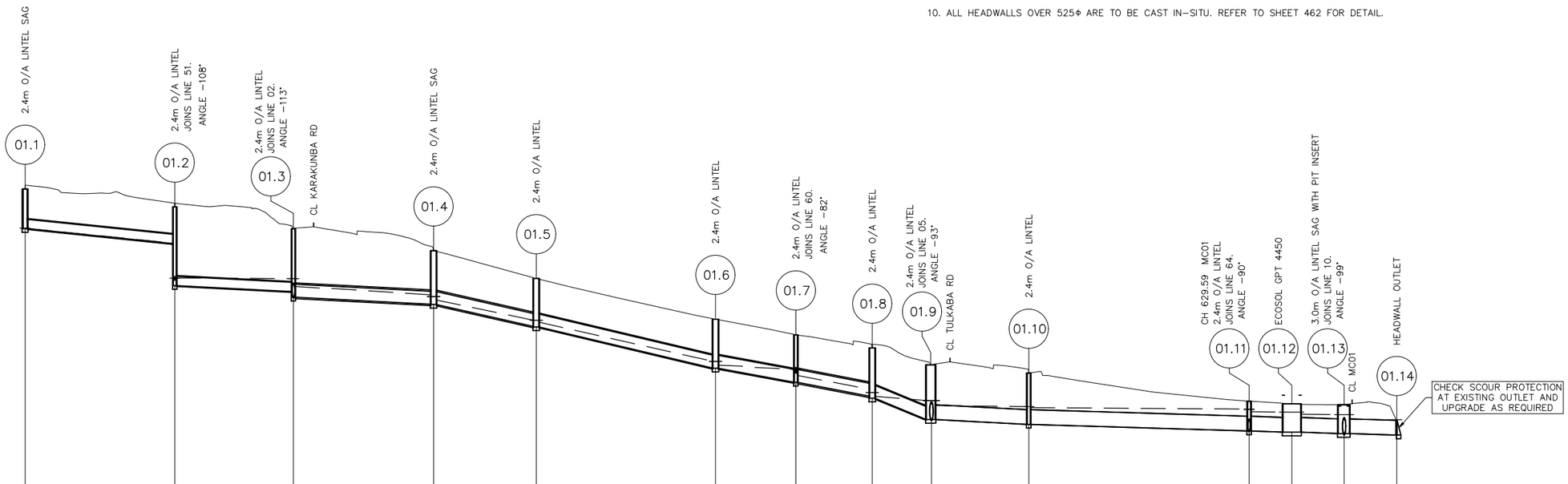
PLAN TITLE: INFRASTRUCTURE WORKS
STORMWATER CALCULATIONS: MAJOR EVENT SHEET 3

SURVEYED	DATUM	PROJECT No.	DISCIPLINE	NUMBER	REV.
LMCC	A.H.D. GDA 94 ZONE 56	239858	ENG	417	D

Plotted By: tims Plot Date: 06/08/20 – 09:07 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-417(D).dwg

239858-ENG-421(D)

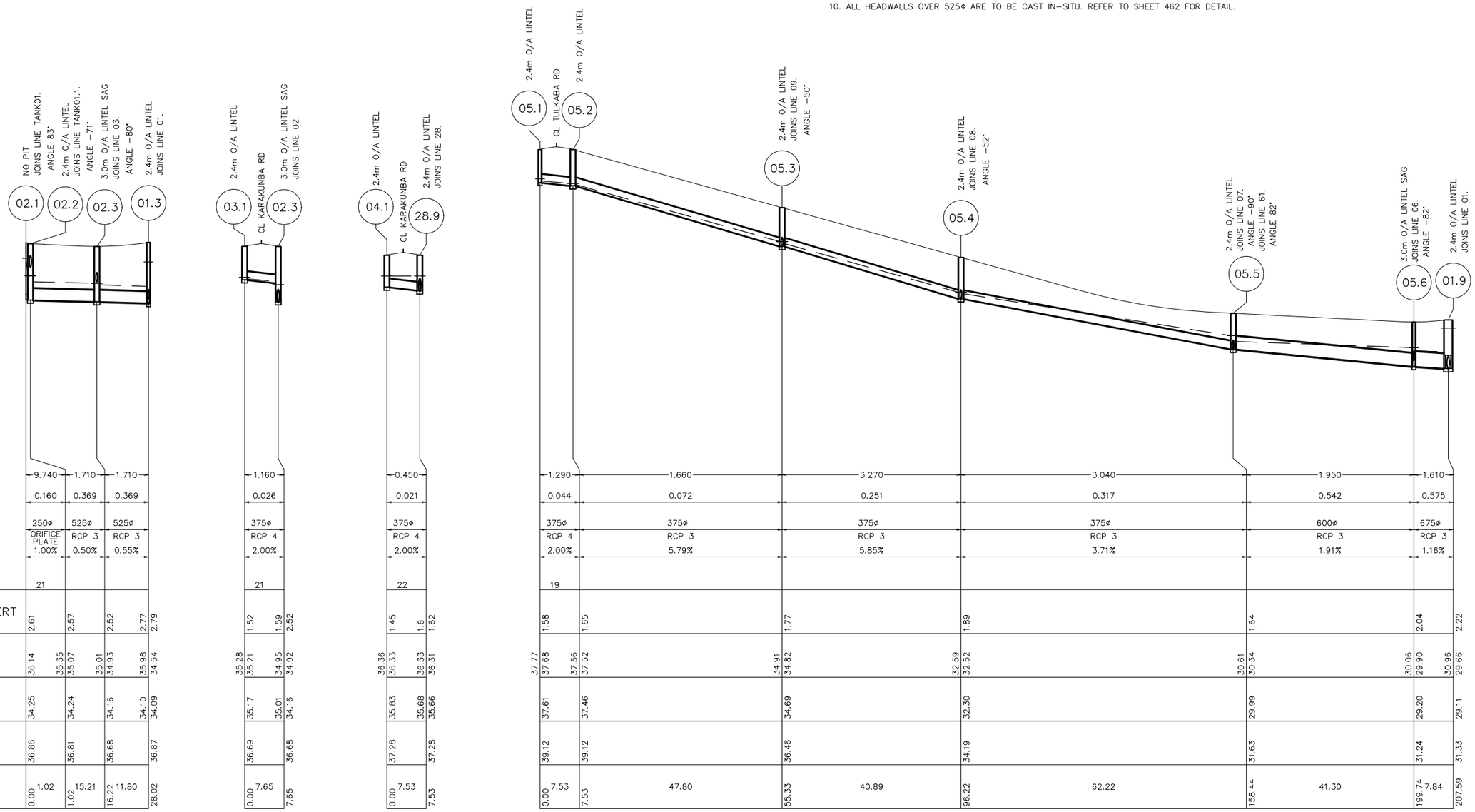
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



| | | |

239858-ENG-422(D)

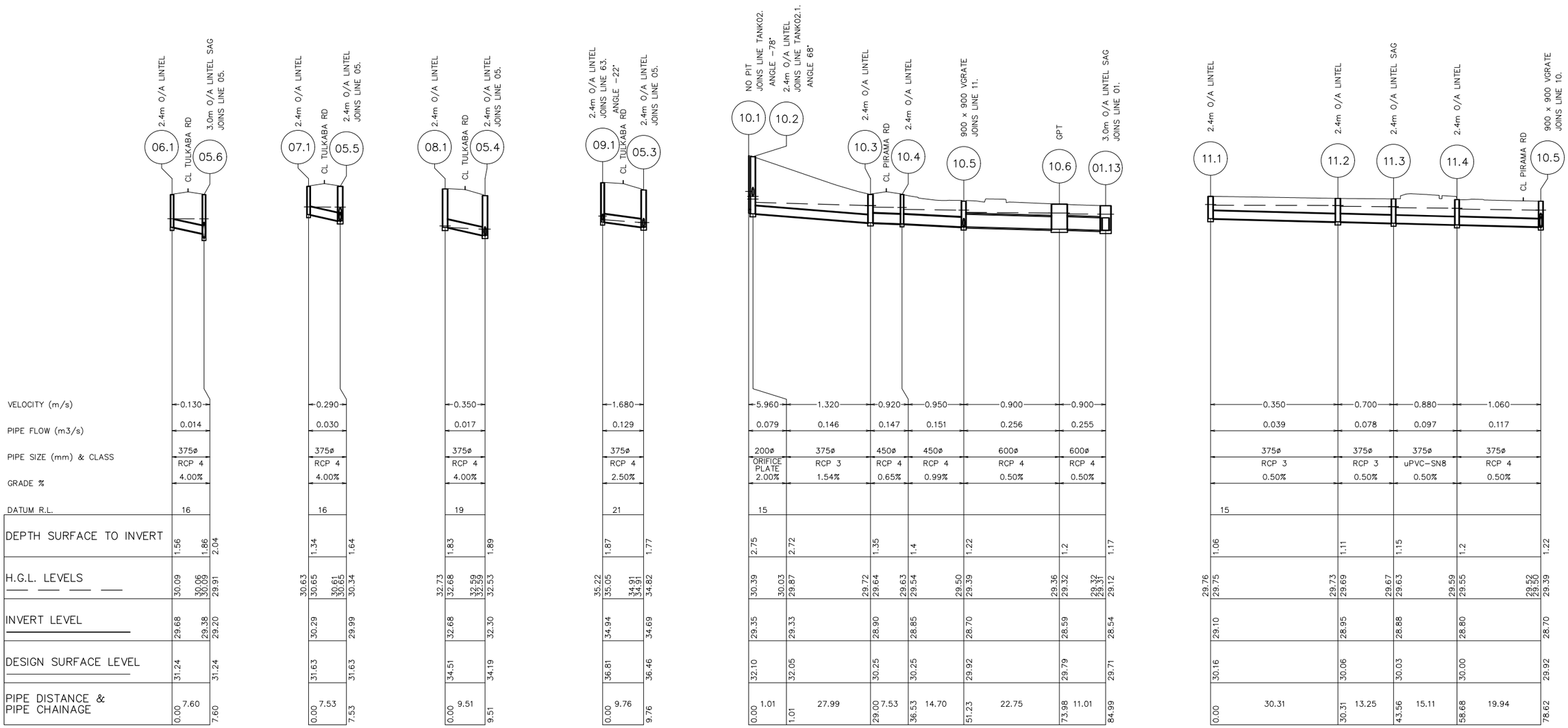
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



| | | |

239858-ENG-423(D)

NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



	LINE 06			LINE 07			LINE 08			LINE 09			LINE 10						LINE 11				
VELOCITY (m/s)	0.130			0.290			0.350			1.680			5.960	1.320	0.920	0.950	0.900	0.900	0.350	0.700	0.880	1.060	
PIPE FLOW (m3/s)	0.014			0.030			0.017			0.129			0.079	0.146	0.147	0.151	0.256	0.255	0.039	0.078	0.097	0.117	
PIPE SIZE (mm) & CLASS	375ø RCP 4			375ø RCP 4			375ø RCP 4			375ø RCP 4			200ø ORIFICE PLATE	375ø RCP 3	450ø RCP 4	450ø RCP 4	600ø RCP 4	600ø RCP 4	375ø RCP 3	375ø RCP 3	375ø uPVC–SN8	375ø RCP 4	
GRADE %	4.00%			4.00%			4.00%			2.50%			2.00%	1.54%	0.65%	0.99%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	
DATUM R.L.	16			16			19			21			15						15				
DEPTH SURFACE TO INVERT	1.56		1.86	1.34		1.64	1.83		1.89	1.87		1.77	2.75	2.72	1.35	1.4	1.22	1.2	1.06	1.11	1.15	1.2	1.22
H.G.L. LEVELS	30.09	30.06 30.09	29.91	30.63 30.65	30.61 30.65	30.34	32.73 32.68	32.59 32.53	32.53	35.22 35.05	34.91 34.91	34.82	30.39	30.03 29.87	29.72	29.64 29.63	29.54 29.50	29.39 29.36	29.32 29.31	29.76 29.75	29.73	29.69 29.67	29.63 29.59	29.55 29.52 29.50	29.39
INVERT LEVEL	29.68	29.38	29.20	30.29		29.99	32.68		32.30	34.94		34.69	29.35	29.33	28.90	28.85	28.70	28.59	28.54	29.10	28.95	28.88	28.80		28.70
DESIGN SURFACE LEVEL	31.24		31.24	31.63		31.63	34.51		34.19	36.81		36.46	32.10	32.05	30.25	30.25	29.92	29.79	29.71	30.16	30.06	30.03	30.00		29.92
PIPE DISTANCE & PIPE CHAINAGE	0.00 7.60		7.60	0.00 7.53		7.53	0.00 9.51		9.51	0.00 9.76		9.76	0.00 1.01	1.01 27.99	29.00 7.53	36.53 14.70	51.23 22.75	73.98 11.01	84.99	0.00 30.31		30.31 13.25	43.56 15.11	58.68 19.94	78.62

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER LONGITUDINAL SECTIONS: LINES 06, 07, 08, 09, 10, 11

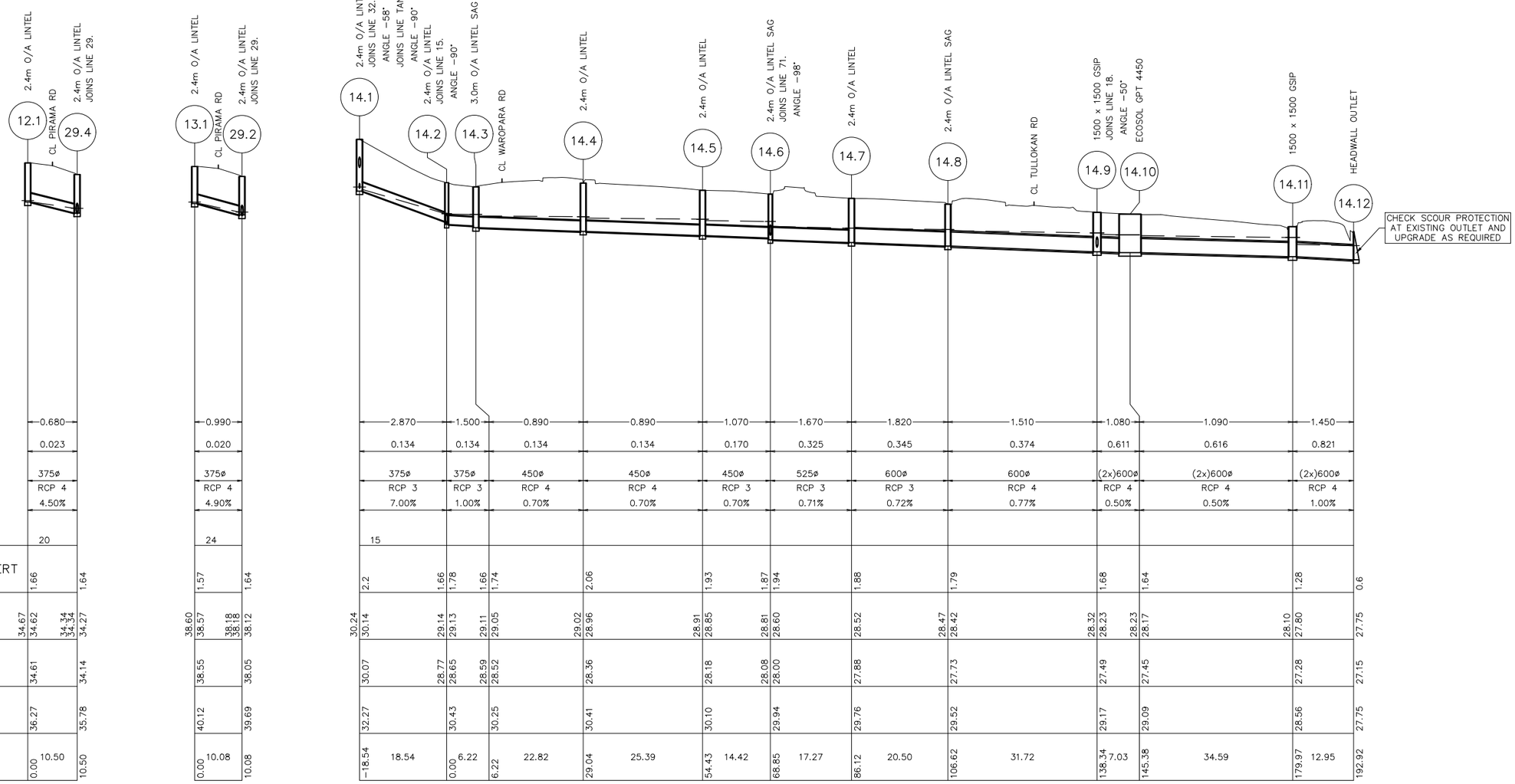
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	423	D

Plotted By: tims Plot Date: 06/08/20 – 09:08 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–423(D).dwg

100mm AT FULL SIZE

239858-ENG-424(D)

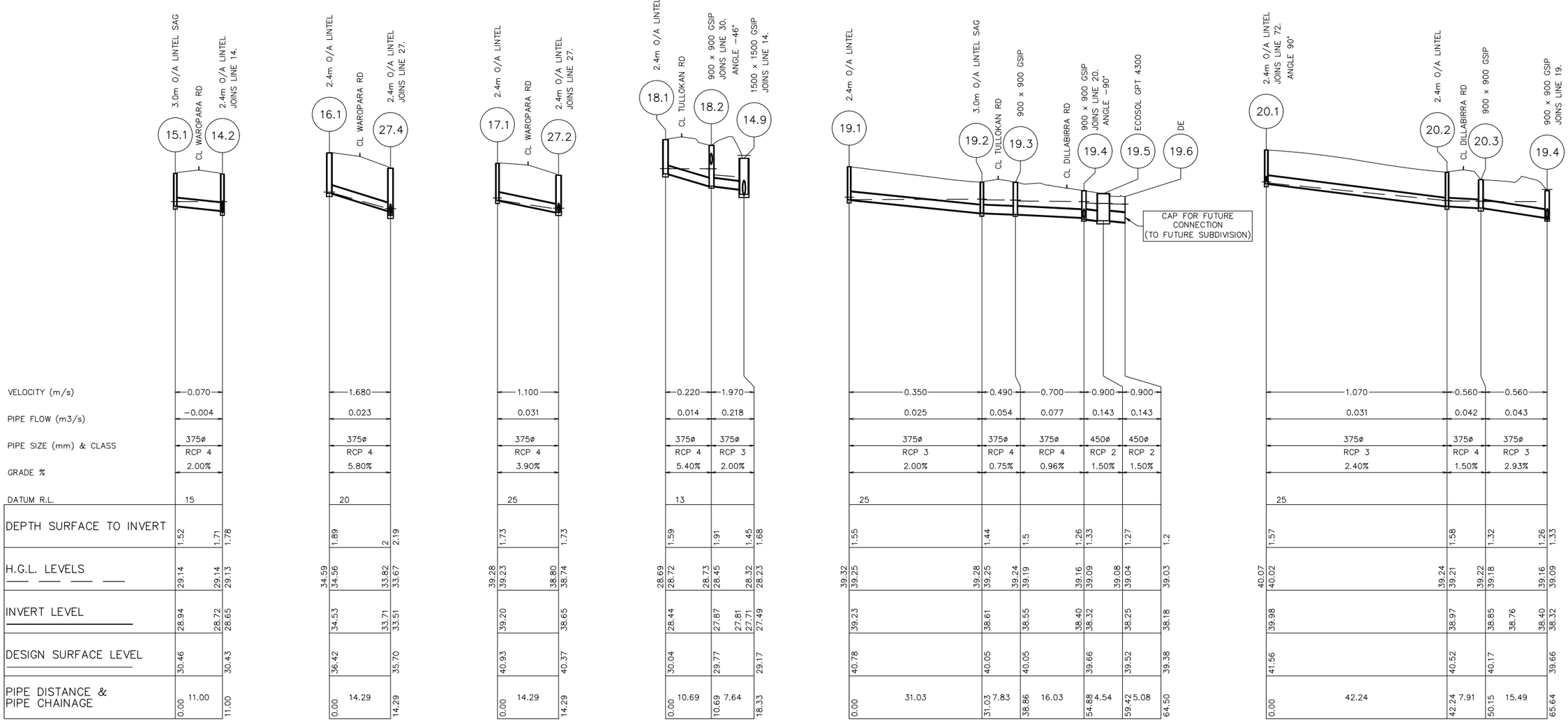
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



| | | |

239858-ENG-425(D)

NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



LINE 15 LINE 16 LINE 17 LINE 18 LINE 19 LINE 20

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

DESIGN FILE N:\239858\Design\12D\

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER LONGITUDINAL SECTIONS: LINES 15, 16, 17, 18, 19, 20

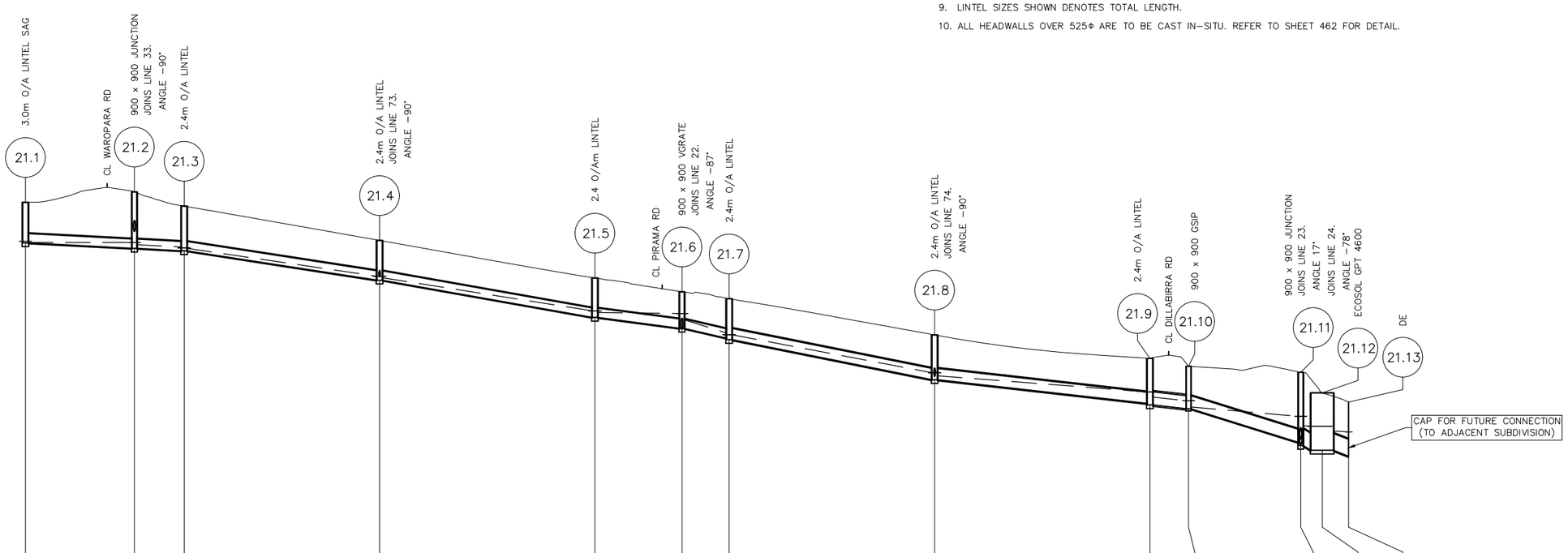
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	425	D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:08 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–425(D).dwg

239858-ENG-426(D)

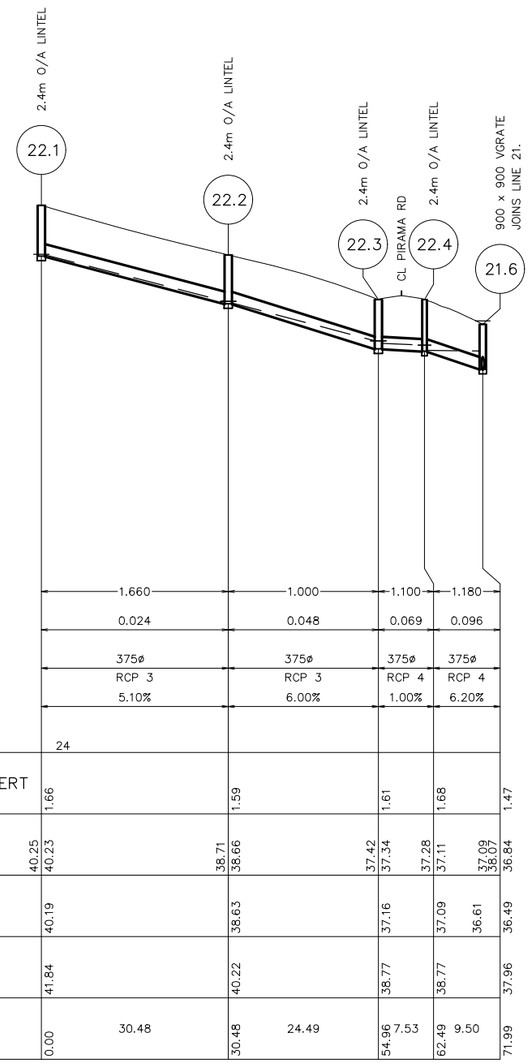
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525ϕ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



| | | |

239858-ENG-427(D)

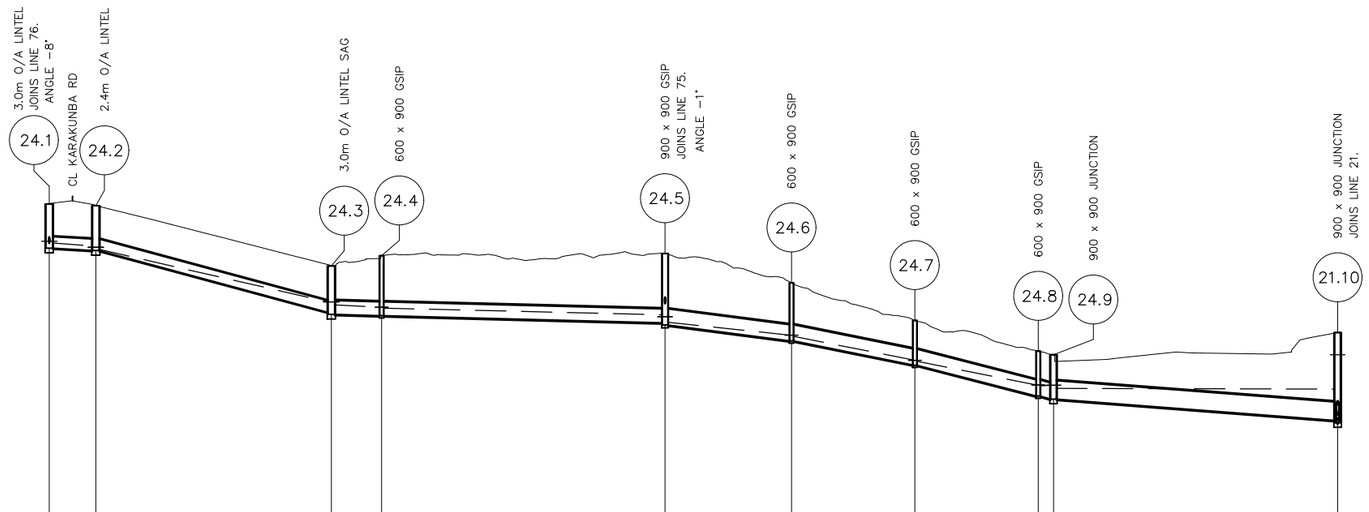
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



| | | |

239858-ENG-428(D)

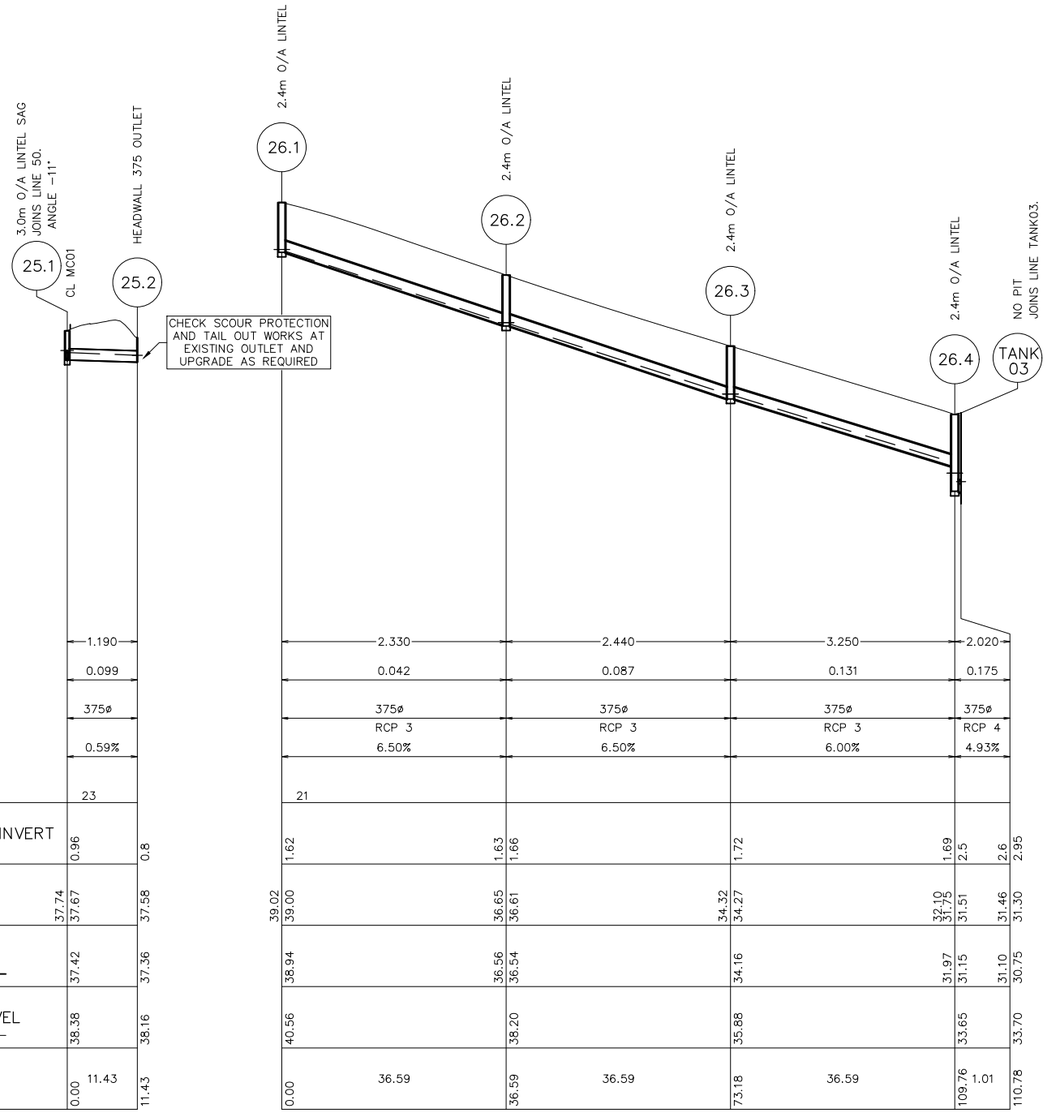
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.

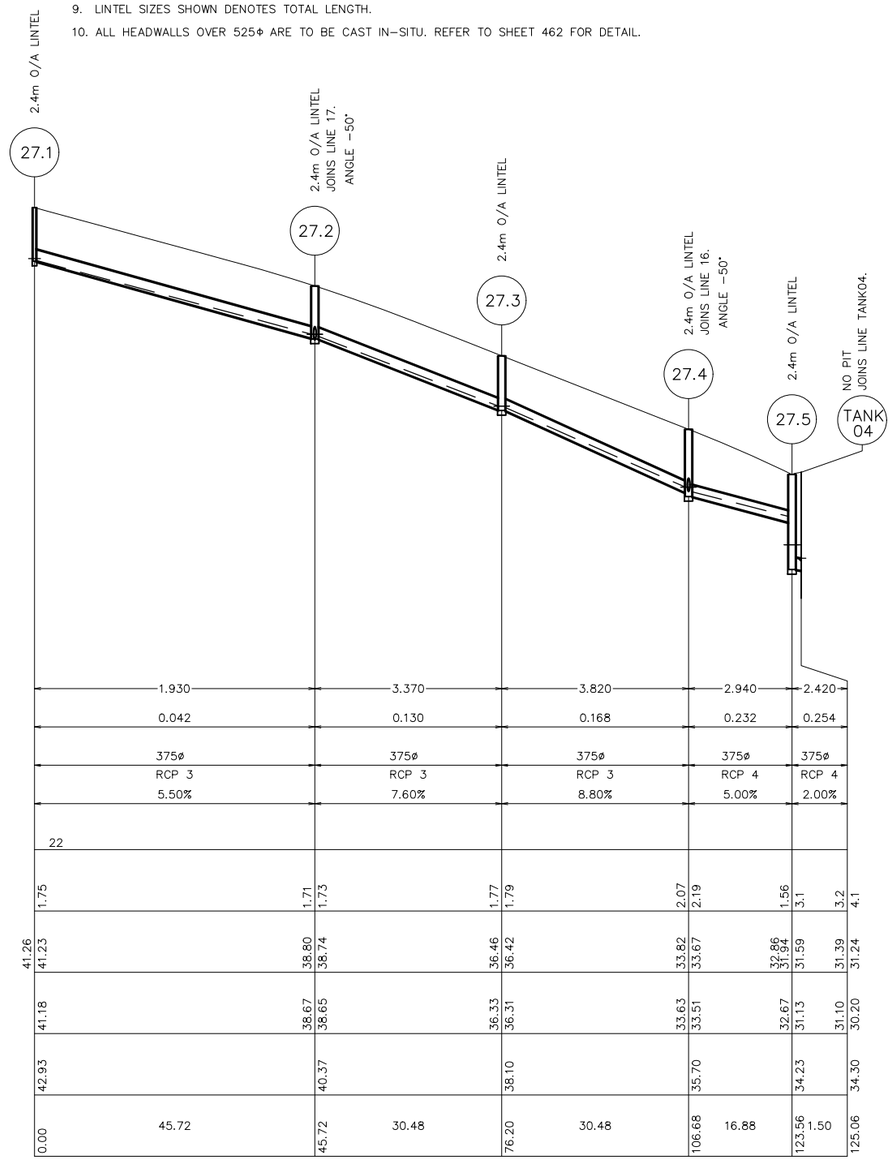


| | | |

239858-ENG-429(D)

NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.

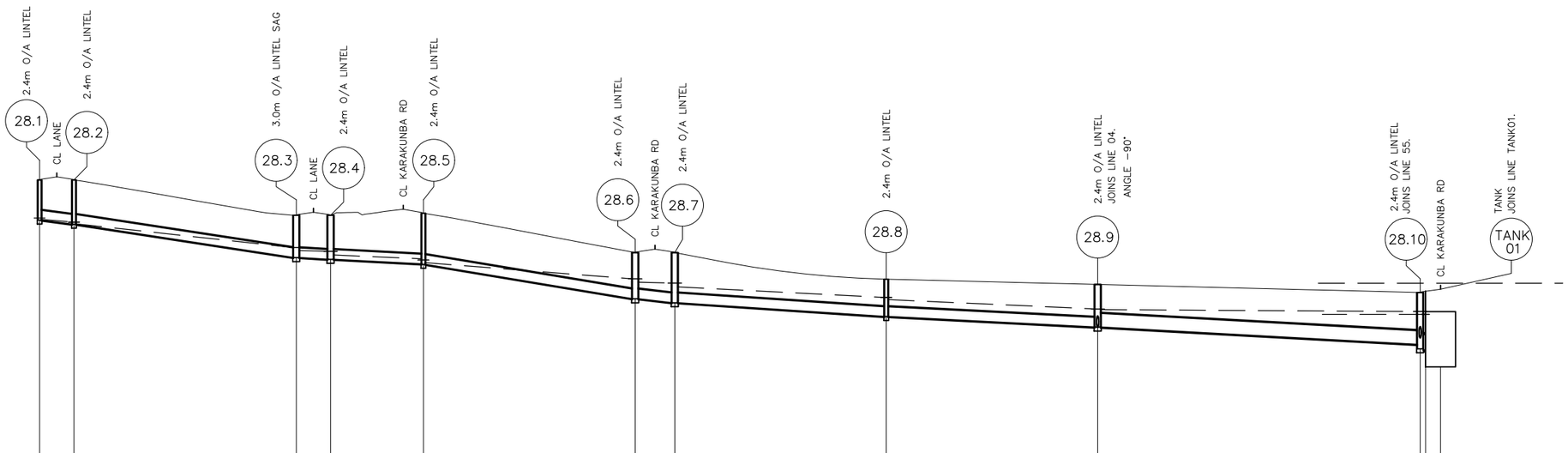




| | | |

239858-ENG-430(D)

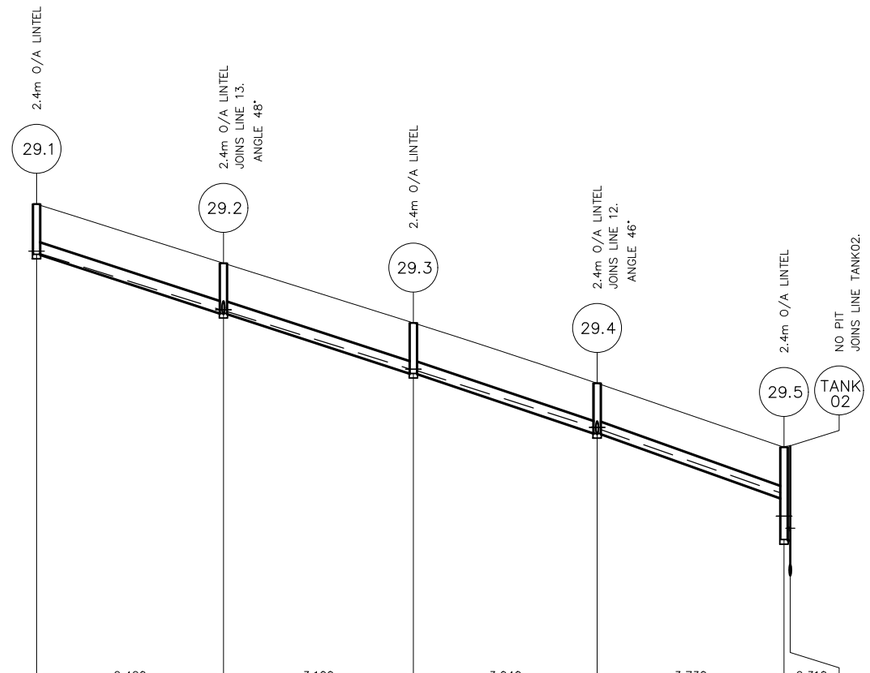
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



| | | |

239858-ENG-431(D)

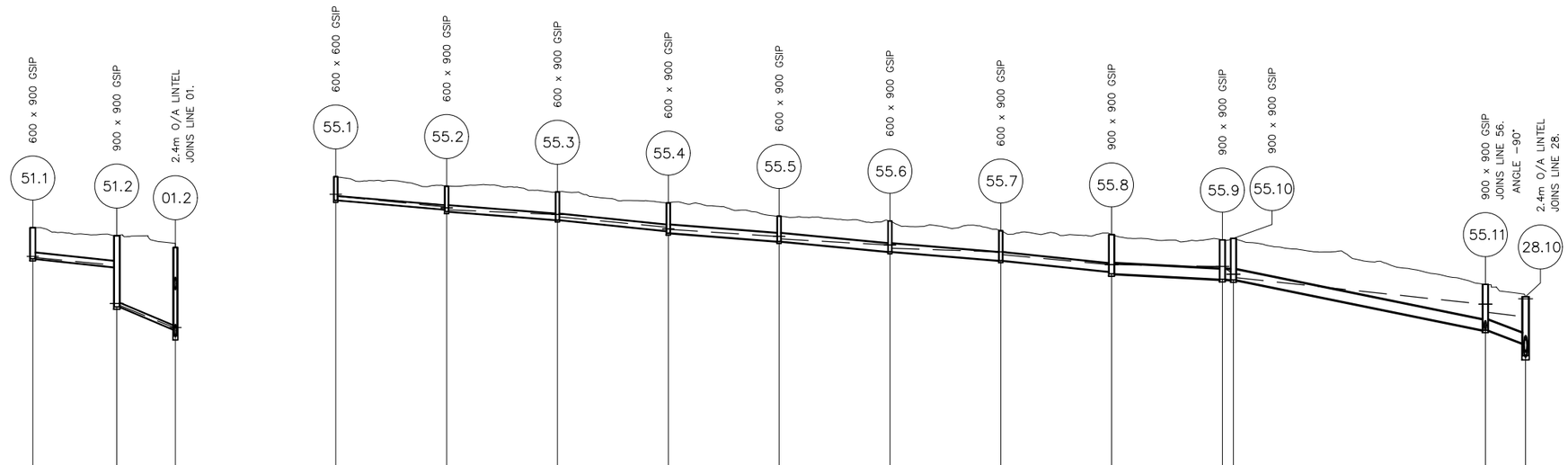
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525ϕ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



| | | |

239858-ENG-432(D)

NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



LINE 51

VELOCITY (m/s)	1.210	2.460	
PIPE FLOW (m3/s)	0.015	0.031	
PIPE SIZE (mm) & CLASS	225ø uPVC–SN8	150ø uPVC–SN8	
GRADE %	2.00%	7.81%	
DATUM R.L.	22		
DEPTH SURFACE TO INVERT	1.13	1.14 / 2.58	2.99 / 3.2
H.G.L. LEVELS	37.44 / 37.40	37.12 / 35.23 / 35.67	34.86 / 34.87
INVERT LEVEL	37.35	37.04 / 35.61	34.77 / 34.56
DESIGN SURFACE LEVEL	38.48	38.18	37.76
PIPE DISTANCE & PIPE CHAINAGE	0.00	15.25 / 15.25	10.65 / 25.90

LINE 55

VELOCITY (m/s)	1.210	1.230	1.780	1.930	1.840	1.900	2.180	1.630	1.970	1.980	3.040
PIPE FLOW (m3/s)	0.019	0.039	0.057	0.076	0.095	0.114	0.133	0.155	0.173	0.172	0.307
PIPE SIZE (mm) & CLASS	150ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	300ø uPVC–SN8	300ø uPVC–SN8	300ø uPVC–SN8	300ø uPVC–SN8	375ø RCP 2	375ø RCP 2	375ø RCP 2	375ø RCP 2
GRADE %	1.67%	1.50%	2.00%	1.50%	1.86%	1.60%	2.00%	1.00%	1.00%	3.99%	6.62%
DATUM R.L.	23										
DEPTH SURFACE TO INVERT	0.86 / 0.84	0.92	1.01 / 1.02	1.09	0.92	1.12	1.08 / 1.35	1.42	1.43	1.51	1.66 / 1.7	2.14
H.G.L. LEVELS	40.69 / 40.61 / 40.20	40.12	39.96 / 39.87 / 39.43	39.41	39.16 / 39.07	38.85 / 38.73	38.60 / 38.50	38.14	38.07 / 38.00 / 37.87	37.66	36.71 / 36.42	36.27 / 36.15
INVERT LEVEL	40.47 / 40.13	40.06	39.76 / 39.36	39.28	38.98	38.60	38.28 / 37.88	37.81	37.61	37.59	35.76	35.28 / 34.84
DESIGN SURFACE LEVEL	41.33	40.98	40.77	40.38	39.90	39.72	39.37	39.23	39.03	39.09	37.42	36.97
PIPE DISTANCE & PIPE CHAINAGE	0.00	20.13	20.13 / 20.12	40.25 / 20.12	60.36 / 20.12	80.48 / 20.12	100.59 / 20.12	120.71 / 20.12	140.82 / 20.12	160.94 / 2.00	162.94 / 45.74	208.68 / 7.29	215.97

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
STORMWATER LONGITUDINAL SECTIONS: LINES 51, 55

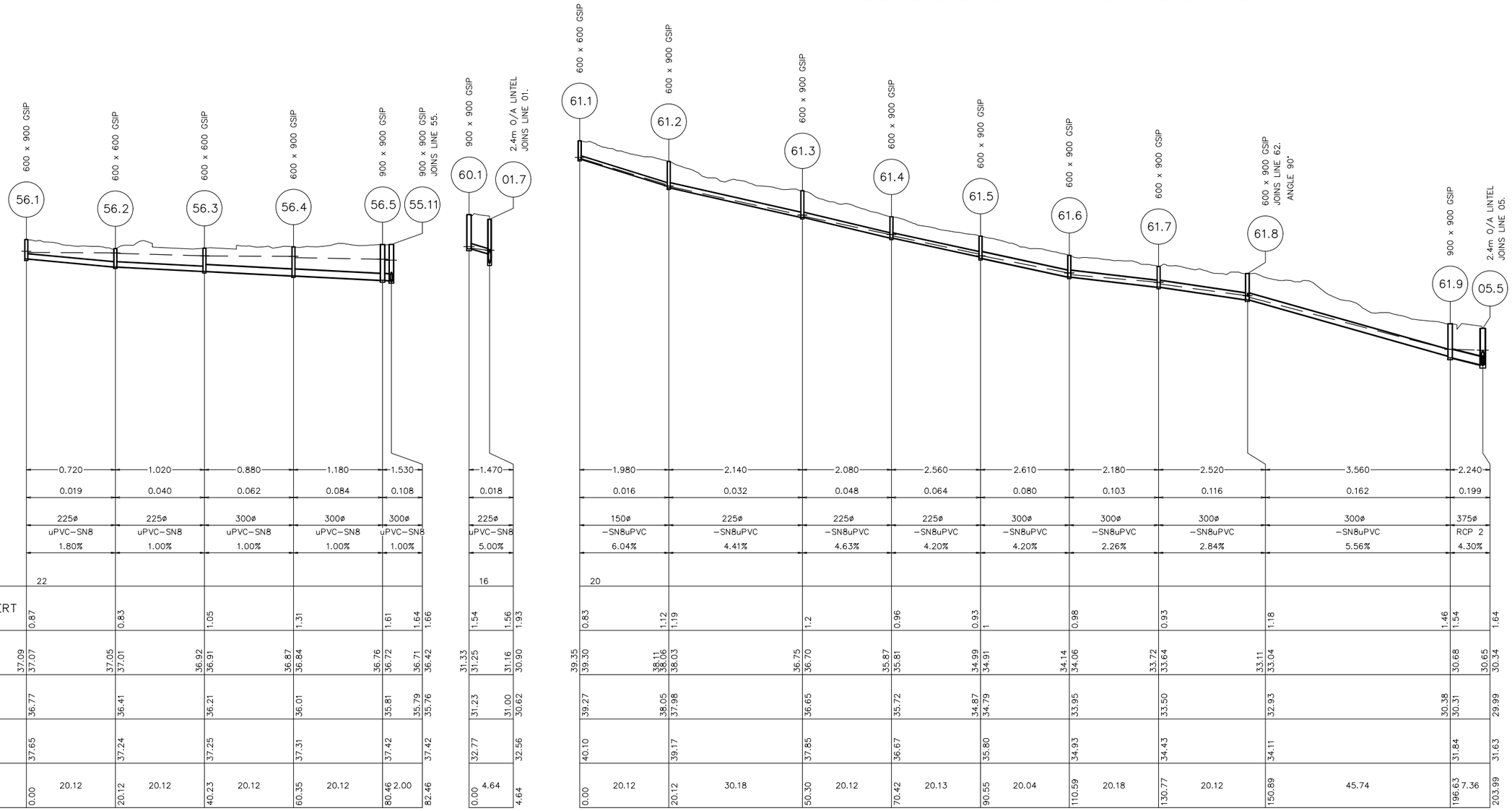
PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 432 – REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:10 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–432(D).dwg

100mm AT FULL SIZE

239858-ENG-433(D)

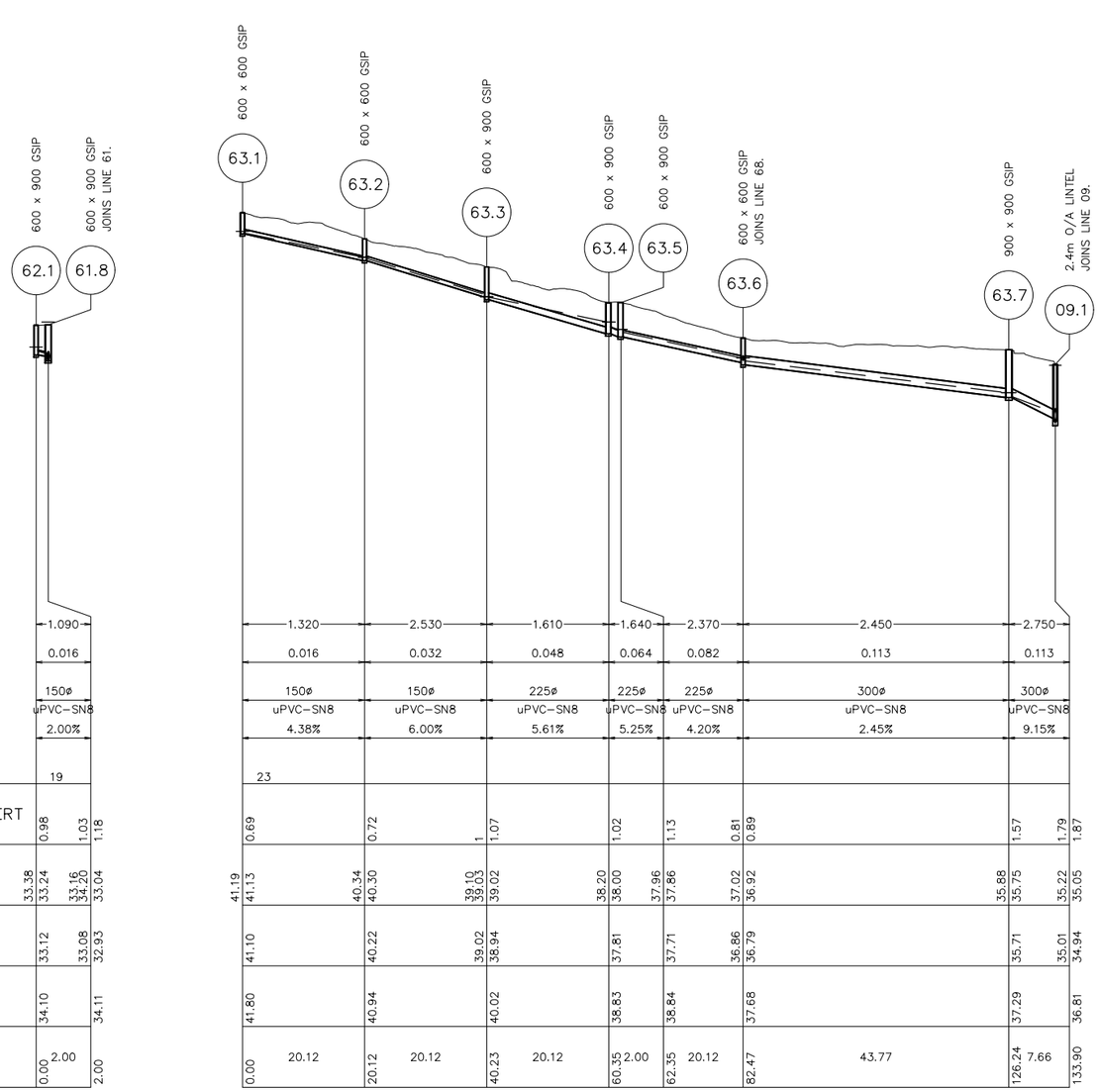
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



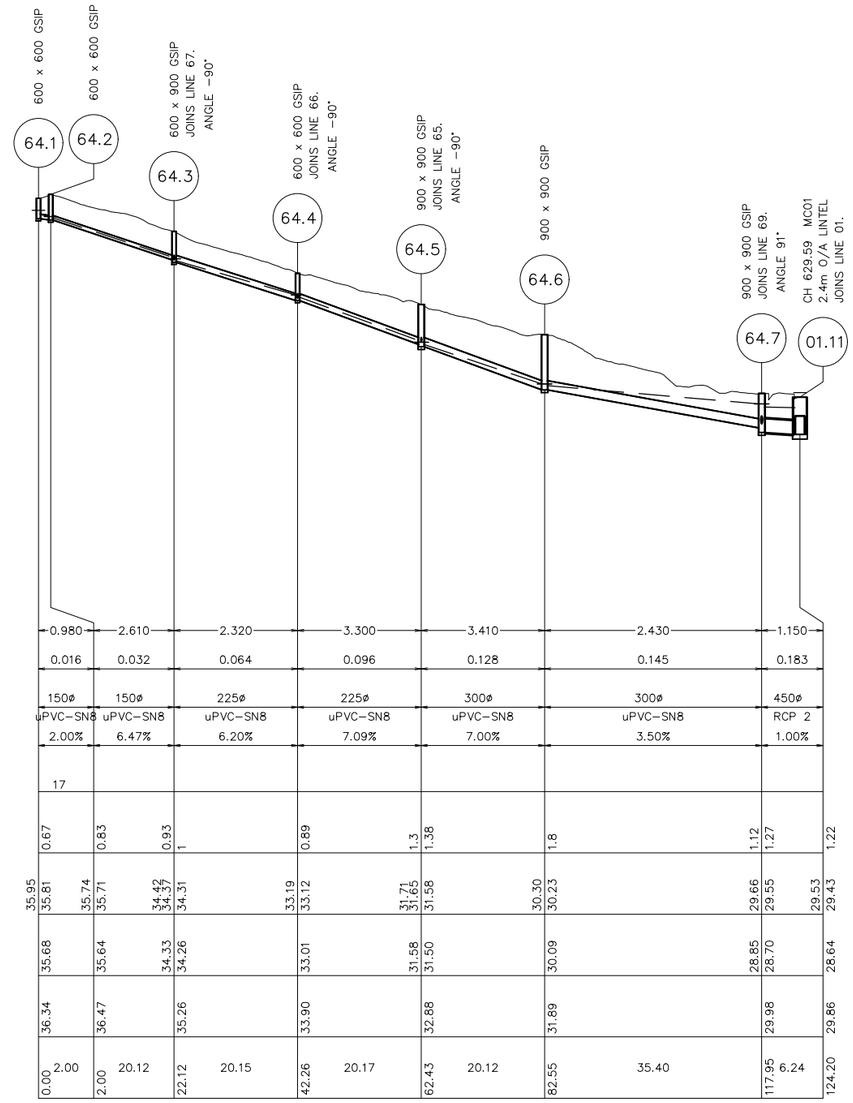
| | | |

239858-ENG-434(D)

NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525ϕ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



LINE 62 LINE 63



LINE 64

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER LONGITUDINAL SECTIONS: LINES 62, 63, 64

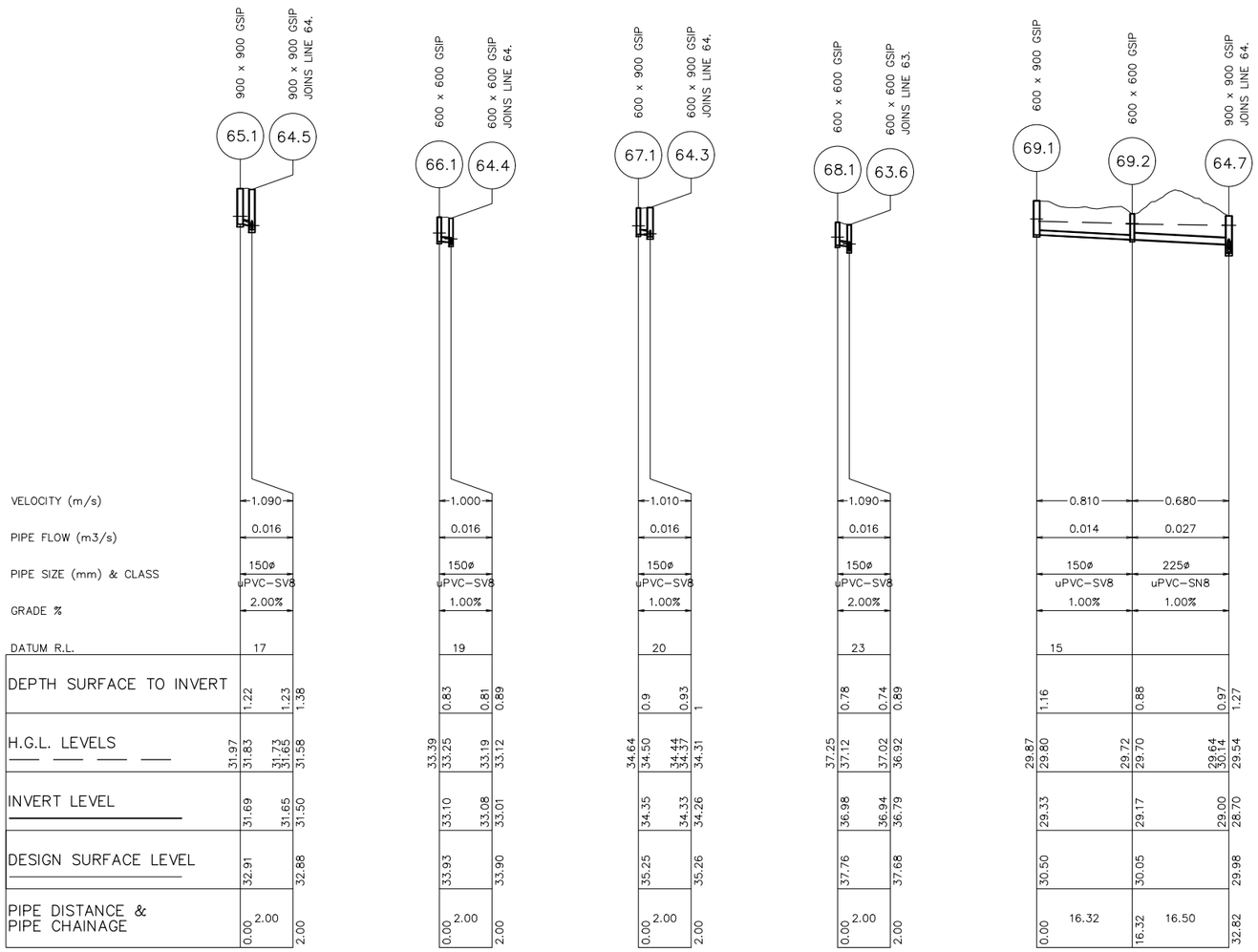
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	434	D

Plotted By: tims Plot Date: 06/08/20 – 09:10 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–434(D).dwg

100mm AT FULL SIZE

239858-ENG-435(D)

NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
STORMWATER LONGITUDINAL SECTIONS: LINES 65, 66, 67, 68, 69

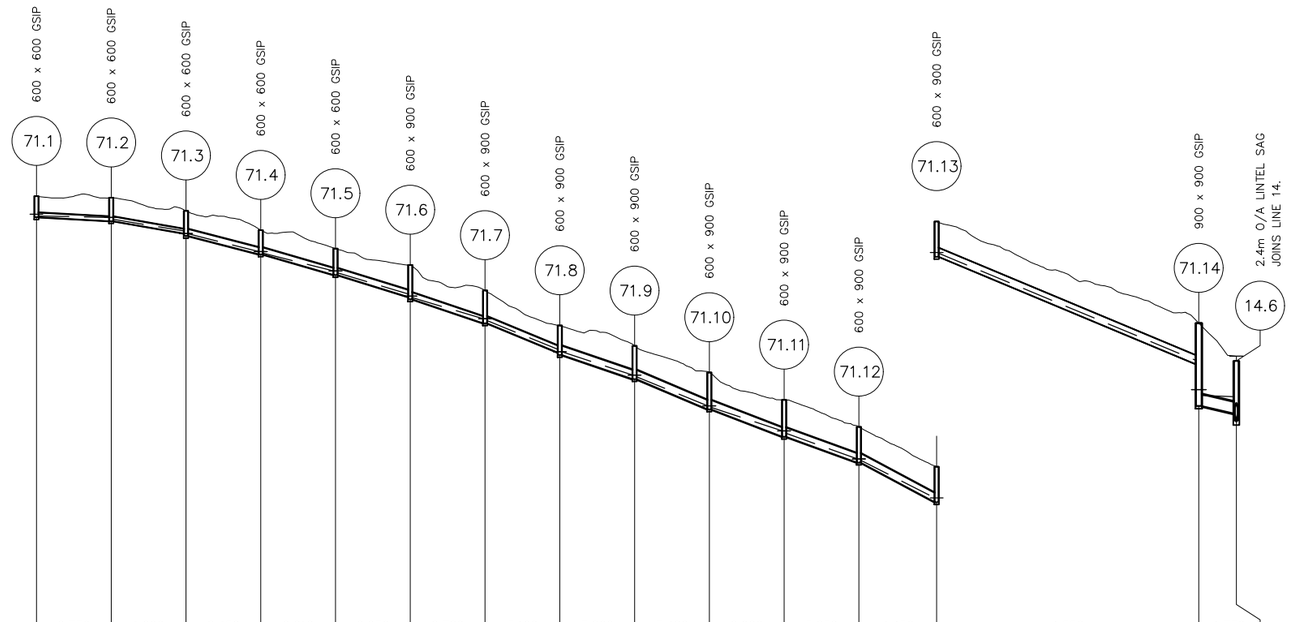
PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 435 REV. D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:10 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–435(D).dwg

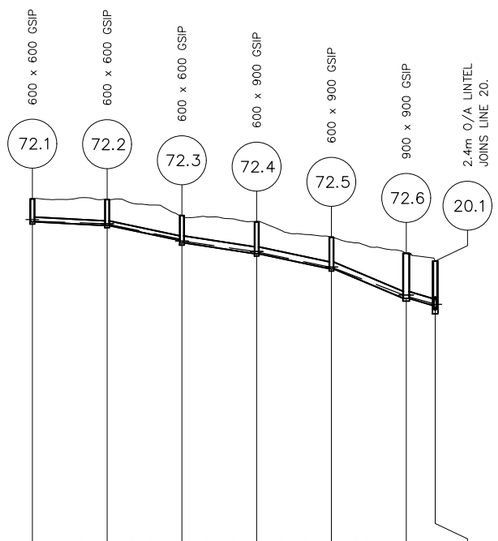
239858-ENG-436(D)

NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525ϕ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



VELOCITY (m/s)	0.770	1.660	2.450	2.210	2.630	2.780	3.190	3.260	3.480	2.960	3.230	4.450	4.550		1.770
PIPE FLOW (m3/s)	0.011	0.021	0.032	0.043	0.054	0.064	0.075	0.086	0.096	0.107	0.118	0.128	0.139		0.154
PIPE SIZE (mm) & CLASS	150ø uPVC–SN8	150ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	300ø uPVC–SN8	300ø uPVC–SN8	300ø uPVC–SN8	300ø uPVC–SN8	300ø uPVC–SN8	300ø uPVC–SN8		375ø RCP 2
GRADE %	1.06%	3.31%	4.94%	5.54%	5.87%	6.42%	7.84%	6.48%	8.07%	7.33%	6.91%	10.18%	8.20%		4.05%
DATUM R.L.	24												16		
DEPTH SURFACE TO INVERT	0.69	0.76	0.74	0.82	0.79	0.86	1.04	1.12	1.07	0.88	0.96	1.09	1.2	1.2	1.17	1.15	1.34	2.7	1.72	1.94
H.G.L. LEVELS	42.73	42.67	42.62	42.56	42.18 42.09	42.09	41.51	41.46	40.88	40.82	40.12 40.05	40.01	39.32	39.26	38.32	38.24	37.48	37.43	36.48	36.43	35.66	35.58	34.75 34.74	34.70	33.48	33.45	29.96 29.03	28.85	28.81	28.60
INVERT LEVEL	42.63	42.50	42.09	42.02	41.42	40.74	40.03	39.95	39.17	38.21	38.14	37.35	36.36	35.47	34.63	33.34	29.83	28.47	28.23	28.00
DESIGN SURFACE LEVEL	43.31	43.26	42.84	42.21	41.60	41.07	40.24	39.10	38.43	37.56	36.67	35.79	34.49					31.17		29.94
PIPE DISTANCE & PIPE CHAINAGE	0.00 12.19	12.19 12.19	24.39 12.19	36.58 12.19	48.78 12.19	60.97 12.19	73.17 12.19	85.36 12.19	97.56 12.19	109.75 12.19	121.94 12.19	134.14 12.68	146.82 42.76					189.58 6.12		195.71

LINE 71



VELOCITY (m/s)	0.700	1.540	1.410	1.870	1.630	1.770	
PIPE FLOW (m3/s)	0.004	0.009	0.013	0.017	0.022	0.026	
PIPE SIZE (mm) & CLASS	150ø uPVC–SN8	150ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	
GRADE %	1.00%	4.02%	2.92%	4.03%	7.90%	5.00%	
DATUM R.L.	27						
DEPTH SURFACE TO INVERT	0.75	0.85	0.81	0.89	1.04	1.03	1.47	1.45	1.57
H.G.L. LEVELS	42.89	42.87	42.77	42.75	42.27	42.20	41.87	41.84	41.36	41.34	40.45	40.39	40.17 40.07	40.02
INVERT LEVEL	42.84	42.72	42.23	42.15	41.80	41.30	40.34	40.10	39.98
DESIGN SURFACE LEVEL	43.58	43.56	43.04	42.83	42.34	41.81	41.56
PIPE DISTANCE & PIPE CHAINAGE	0.00 12.19	12.19 12.19	24.39 12.19	36.58 12.19	48.78 12.19	60.97 4.73	65.71

LINE 72

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC | DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER LONGITUDINAL SECTIONS: LINES 71, 72

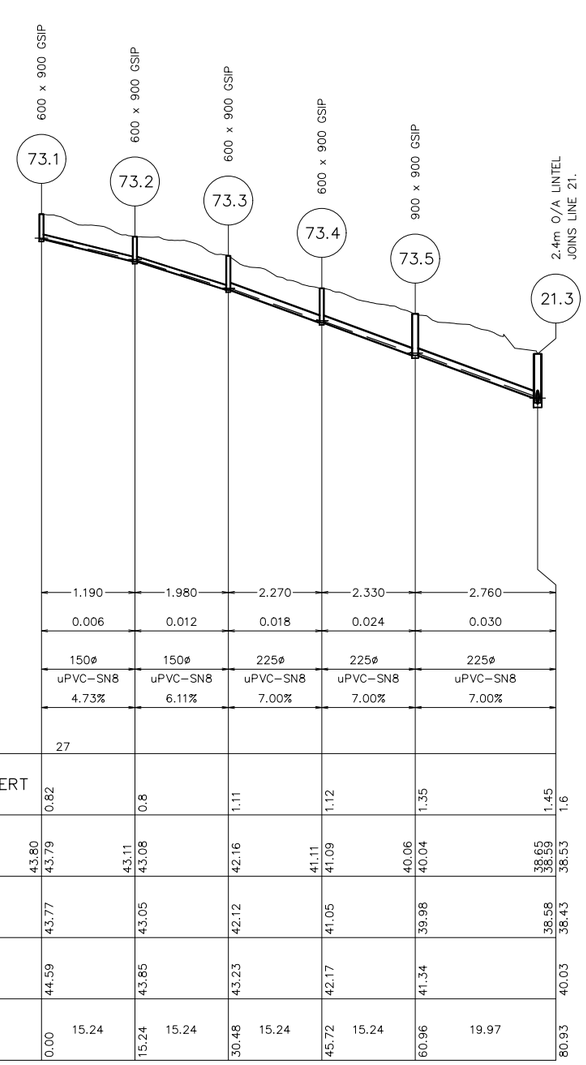
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	436	D

Plotted By: tims Plot Date: 06/08/20 – 09:10 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–436(D).dwg

100mm AT FULL SIZE

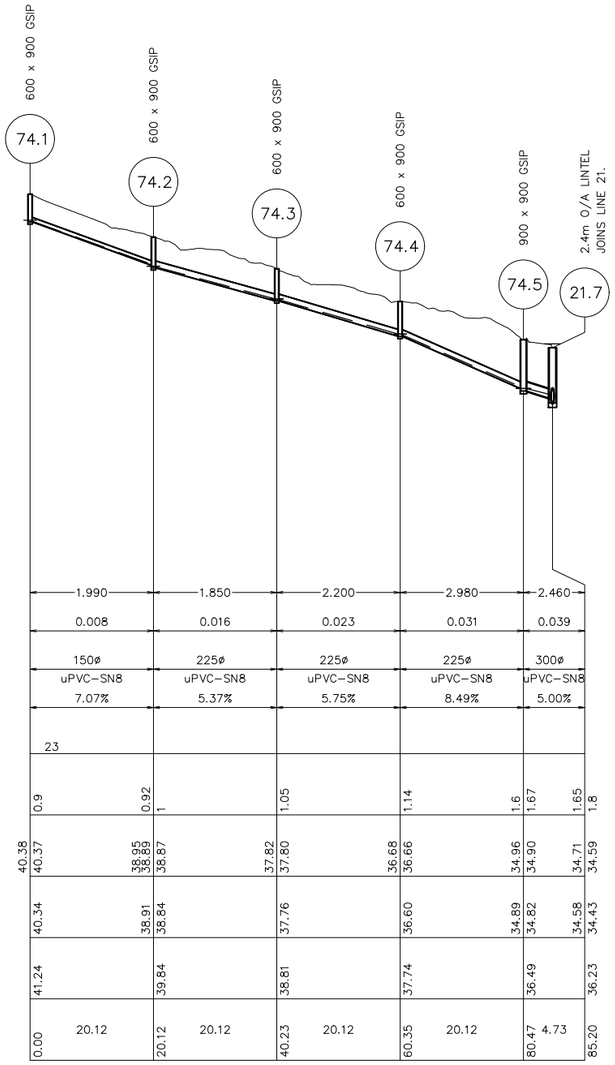
239858-ENG-437(D)

NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



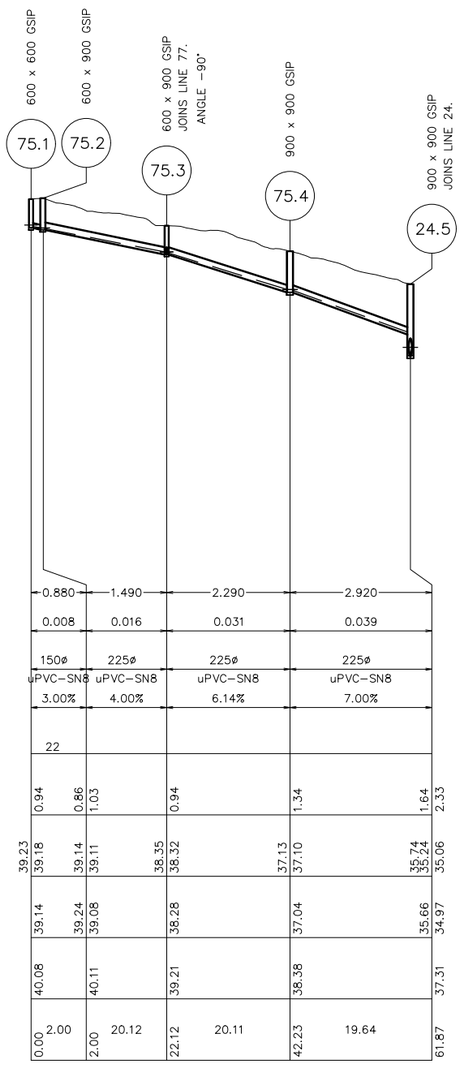
VELOCITY (m/s)	1.190	1.980	2.270	2.330	2.760	
PIPE FLOW (m3/s)	0.006	0.012	0.018	0.024	0.030	
PIPE SIZE (mm) & CLASS	150ø uPVC–SN8	150ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	
GRADE %	4.73%	6.11%	7.00%	7.00%	7.00%	
DATUM R.L.	27					
DEPTH SURFACE TO INVERT	0.82	0.8	1.11	1.12	1.35	1.45 1.6
H.G.L. LEVELS	43.80 43.79	43.11 43.08	42.16	41.11 41.09	40.06 40.04	38.65 38.59 38.53
INVERT LEVEL	43.77	43.05	42.12	41.05	39.98	38.58 38.43
DESIGN SURFACE LEVEL	44.59	43.85	43.23	42.17	41.34	40.03
PIPE DISTANCE & PIPE CHAINAGE	0.00 15.24	15.24 15.24	30.48 15.24	45.72 15.24	60.96 19.97	80.93

LINE 73



VELOCITY (m/s)	1.990	1.850	2.200	2.980	2.460	
PIPE FLOW (m3/s)	0.008	0.016	0.023	0.031	0.039	
PIPE SIZE (mm) & CLASS	150ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	300ø uPVC–SN8	
GRADE %	7.07%	5.37%	5.75%	8.49%	5.00%	
DATUM R.L.	23					
DEPTH SURFACE TO INVERT	0.9	0.92 1	1.05	1.14	1.6 1.67	1.65 1.8
H.G.L. LEVELS	40.38 40.37	38.95 38.89 38.87	37.82 37.80	36.68 36.66	34.96 34.90	34.71 34.59
INVERT LEVEL	40.34	38.91 38.84	37.76	36.60	34.89 34.82	34.58 34.43
DESIGN SURFACE LEVEL	41.24	39.84	38.81	37.74	36.49	36.23
PIPE DISTANCE & PIPE CHAINAGE	0.00 20.12	20.12 20.12	40.23 20.12	60.35 20.12	80.47 4.73	85.20

LINE 74



VELOCITY (m/s)	0.880	1.490	2.290	2.920	
PIPE FLOW (m3/s)	0.008	0.016	0.031	0.039	
PIPE SIZE (mm) & CLASS	150ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	225ø uPVC–SN8	
GRADE %	3.00%	4.00%	6.14%	7.00%	
DATUM R.L.	22				
DEPTH SURFACE TO INVERT	0.94	0.86 1.03	0.94	1.34	1.64 2.33
H.G.L. LEVELS	39.23 39.18	39.14 39.11	38.35 38.32	37.13 37.10	35.74 35.24 35.06
INVERT LEVEL	39.14	39.24 39.08	38.28	37.04	35.66 34.97
DESIGN SURFACE LEVEL	40.08	40.11	39.21	38.38	37.31
PIPE DISTANCE & PIPE CHAINAGE	0.00 2.00	2.00 20.12	22.12 20.11	42.23 19.64	61.87

LINE 75

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC | DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER LONGITUDINAL SECTIONS: LINES 73, 74, 75

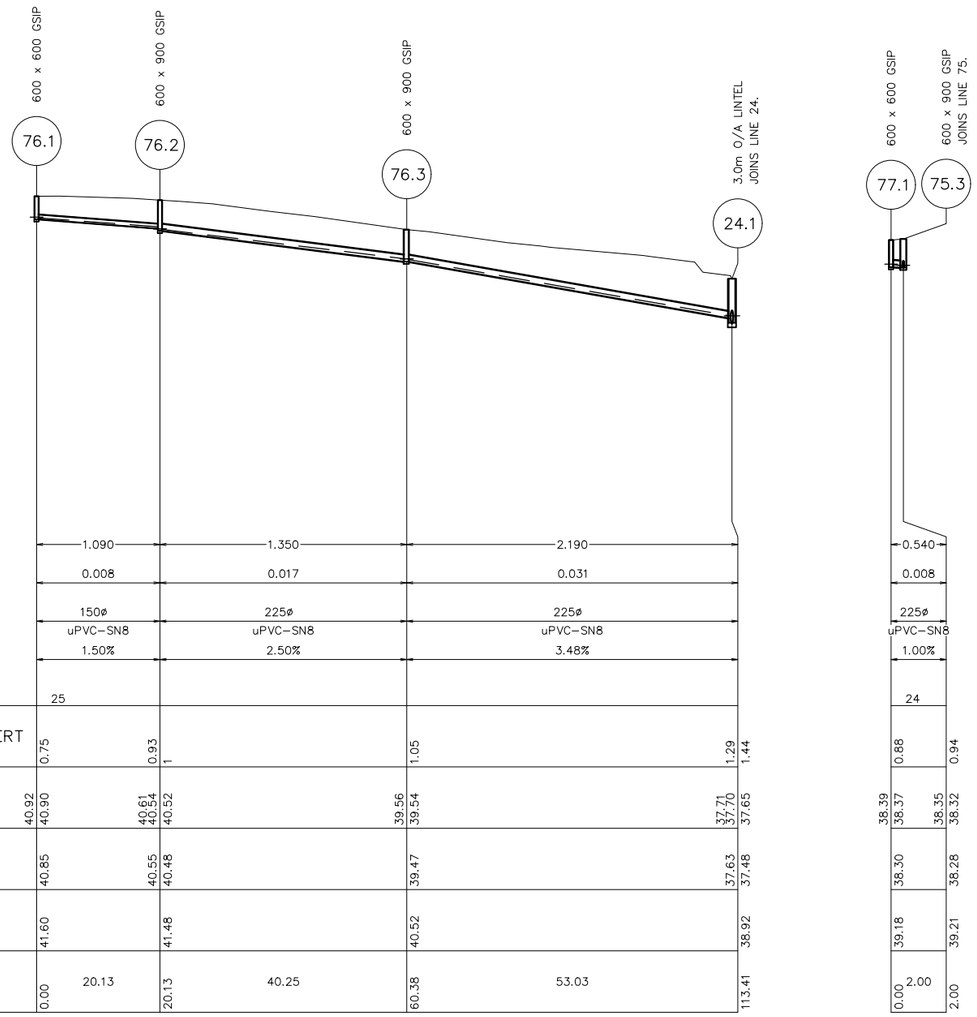
PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 437 | REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:10 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–437(D).dwg

100mm AT FULL SIZE

239858-ENG-438(D)

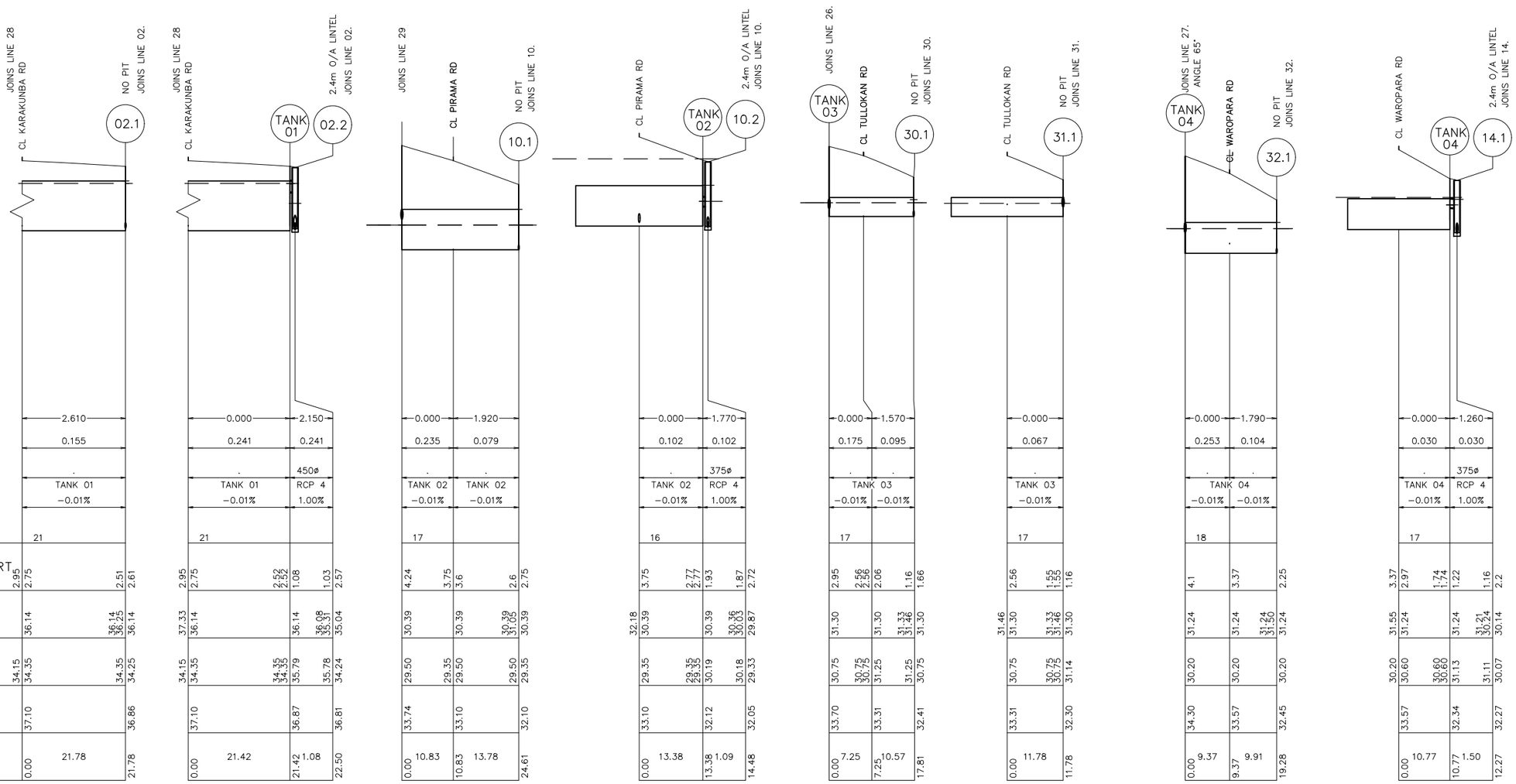
NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525Φ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



| | | |

239858-ENG-439(D)

NOTE:
1. ALL STORMWATER PIPE CLASSES ARE TO COMPLY WITH COUNCILS DESIGN AND CONSTRUCTION SPECIFICATIONS. IF THERE ARE DISCREPANCIES BETWEEN COUNCILS SPECIFICATIONS AND THE APPROVED CONSTRUCTION CERTIFICATE PLANS PLEASE NOTIFY THE SUPERINTENDENT IMMEDIATELY. IT IS THE CONTRACTORS RESPONSIBILITY TO USE THE APPROPRIATE CONSTRUCTION METHODOLOGY TO COMPACT AROUND/OVER STORMWATER PIPES AND ENSURE NO CRACKING OF THE STORMWATER PIPES OCCURS.
2. PULL STORMWATER PIPES TO MAXIMUM ALLOWABLE DEFLECTIONS (SEE MANUFACTURERS SPEC.) TO ENSURE CONTINUATION BENEATH KERB LINE WHERE APPLICABLE. PROVIDE LONG SOCKETS WHERE REQUIRED.
3. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
4. ALL PITS DEEPER THAN 1.2m TO HAVE STEP IRONS IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
5. KERB INLET PITS & OTHER PUBLIC PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–401.
6. INTERALLOTMENT DRAINAGE PITS ARE TO BE IN ACCORDANCE WITH LMCC STANDARD DRAWING EGSD–409.
7. INTERALLOTMENT DRAINAGE PIT SURFACE LEVEL FINISHED TO 100mm BELOW SURROUNDING GROUND LEVEL.
8. MONOWILLS HANDRAIL IS REQUIRED FOR HEADWALLS WITH A VERTICAL DROP EXCEEDING 0.9m.
9. LINTEL SIZES SHOWN DENOTES TOTAL LENGTH.
10. ALL HEADWALLS OVER 525ϕ ARE TO BE CAST IN–SITU. REFER TO SHEET 462 FOR DETAIL.



NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES
VERT 0 2 4 A1 / A3 1:100 / 1:200
HORIZ 0 10 20 A1 / A3 1:500 / 1:1000
ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC
DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION
PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER LONGITUDINAL SECTIONS: TANK LINES

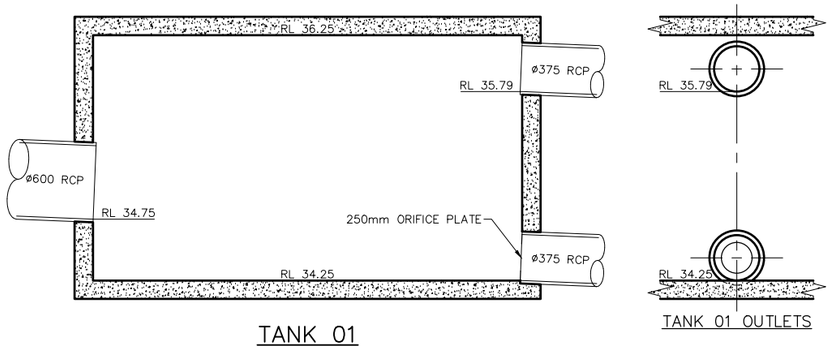
PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	439	D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:11 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–439(D).dwg

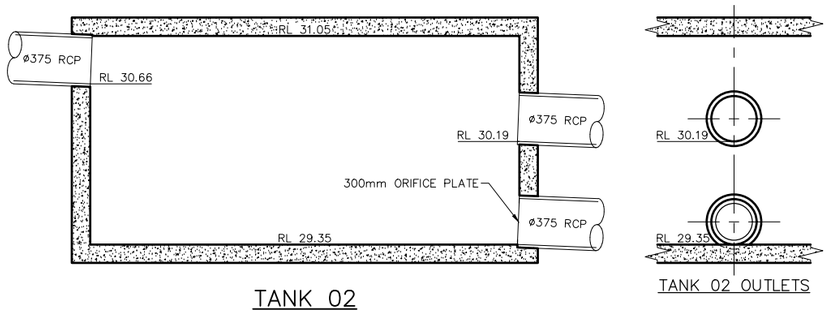
239858-ENG-461(D)

	Length	Width	Depth	Easting	Northing	Bearing
	m	m	m	m	m	
TANK01	45	5.5	2	358953.835	6326980.344	98°42'09.01"
TANK02	35	5.5	1.7	358905.996	6327100.558	98°42'08.99"
TANK03	25	5.5	0.8	358896.848	6327326.163	98°42'08.98"
TANK04	25	8	1.35	358907.535	6327213.213	98°42'08.98"



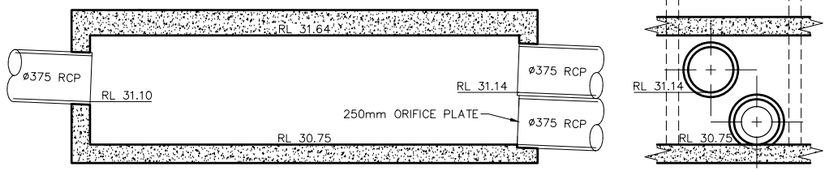
TANK 01

TANK 01 OUTLETS



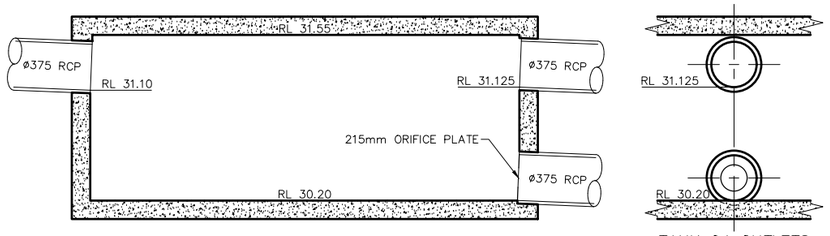
TANK 02

TANK 02 OUTLETS



TANK 03

TANK 03 OUTLETS



TANK 04

TANK 04 OUTLETS

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES

NOT TO SCALE

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson

Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA,
TULLOKAN, WAROPARA, PIRAMA, TULKABA
AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS

STORMWATER DETAILS:
DETENTION TANKS

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	461	D

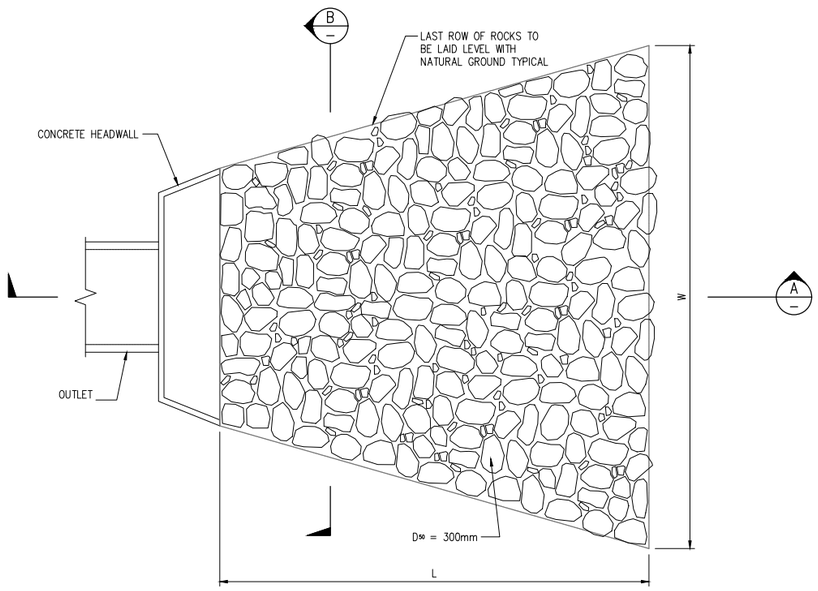
Plotted By: tims Plot Date: 06/08/20 – 09:11 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-461(D).dwg

100mm AT FULL SIZE

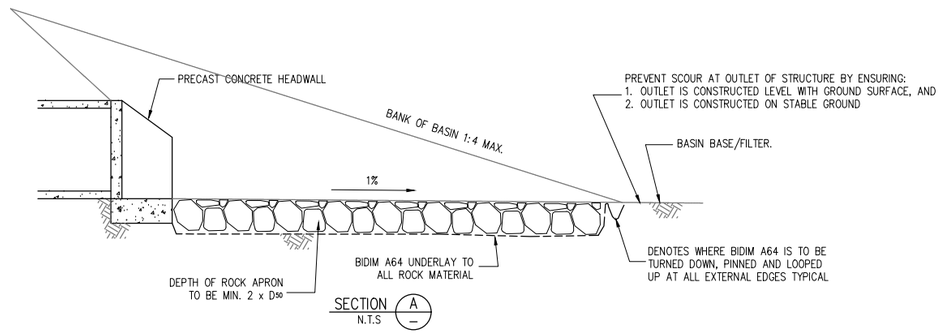
239858-ENG-462(D)

OUTLET	OUTLET SIZE	VELOCITY (m/s)	L	W
01.14	1800x600 BC	2.3	1.8	2.4
14.12	(2) x 600	2.8	2.4	1.8
19.16	450	1.7	1.8	1.2
21.13	675	3.1	4.1	2.4
25.2	375	1.9	1.5	1.0
SWALE NORTH	1000x125mm	1.2	1.0	1.5
SWALE SOUTH	1000x125mm	0.9	1.0	1.5
–	–	–	–	–

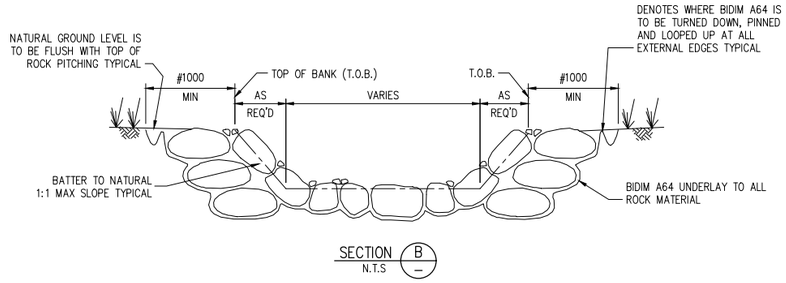
SCOUR PROTECTION HAS BEEN SIZED IN ACCORDANCE WITH AUSTROADS GUIDE TO ROAD DESIGN PART 5B FIGURES 3.15 & 3.16 (p.97)



PLAN VIEW OF OUTLET SCOUR PROTECTION
N.T.S



SECTION A – N.T.S



SECTION B – N.T.S

100mm AT FULL SIZE

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC

DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION

PLAN TITLE INFRASTRUCTURE WORKS
STORMWATER DETAILS: SCOUR PROTECTION DETAILS

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	462	D

Plotted By: tims Plot Date: 06/08/20 – 09:11 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-462(D).dwg

239858-ENG-501(D)

LEGEND (+ FILL - CUT) Lower_value		Upper_value		Colour
-9999	to	-4	m	
-4	to	-3.5	m	
-3.5	to	-3	m	
-3	to	-2.5	m	
-2.5	to	-2	m	
-2	to	-1.75	m	
-1.75	to	-1.5	m	
-1.5	to	-1.25	m	
-1.25	to	-1	m	
-1	to	-0.75	m	
-0.75	to	-0.5	m	
-0.5	to	-0.25	m	
-0.25	to	0	m	
0	to	0.250	m	
0.250	to	0.5	m	
0.500	to	0.75	m	
0.75	to	1	m	
1	to	1.25	m	
1.25	to	1.5	m	
1.5	to	1.75	m	
1.75	to	2	m	
2	to	2.5	m	
2.5	to	3	m	
3	to	3.5	m	
3.5	to	4	m	
4	to	99999	m	

MGA

LOT FILL REMEDIATION

1. REGRADE AREA TO BE STRIPPED TO STOCKPILE FOR REUSE.
2. FILL REGRADE AREAS WITH SITE WON FILL (INCLUDING STOCKPILE) IN ACCORDANCE WITH GEOTECH REPORT. EARTHWORKS TO BE UNDERTAKEN UNDER LEVEL 1 SUPERVISION IN ACCORDANCE WITH AS3798–2007. NO FILL TO BE PLACED WITHOUT PRIOR APPROVAL FROM GEOTECHNICAL ENGINEER.
3. PLACE MINIMUM 150mm, MAXIMUM 300mm THICK TOPSOIL TO REGRADE AREAS.
4. ALL DISTURBED AREAS, EXCLUDING FUTURE ROAD CORRIDORS, TO BE SEEDED WITH NATIVE SEED MIX.

LEGEND:

- TREE TO BE KEPT
- TREE TO BE REMOVED
- TREES IN AREA ONLY TO BE REMOVED WHERE REQUIRED.
- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING STORMWATER
- PROPOSED STORMWATER
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.5m

(A) EASEMENT TO DRAIN WATER 2 WIDE

(B) EASEMENT TO DRAIN WATER 3 WIDE



PLAN
SCALE 1:500

DIAL1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
SITE REGRADE AND TREE REMOVAL
PLAN: SHEET 1

SURVEYED	DATUM	PROJECT No.	DISCIPLINE	NUMBER	REV.
LMCC	A.H.D. GDA 94 ZONE 56	239858	ENG	501	D

Plotted By: tims Plot Date: 06/08/20 – 09:12 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–501(D).dwg

100mm AT FULL SIZE

239858-ENG-502(D)



LEGEND (+ FILL - CUT) Lower_value		Upper_value		Colour
-9999	to	-4	m	
-4	to	-3.5	m	
-3.5	to	-3	m	
-3	to	-2.5	m	
-2.5	to	-2	m	
-2	to	-1.75	m	
-1.75	to	-1.5	m	
-1.5	to	-1.25	m	
-1.25	to	-1	m	
-1	to	-0.75	m	
-0.75	to	-0.5	m	
-0.5	to	-0.25	m	
-0.25	to	0	m	
0	to	0.250	m	
0.250	to	0.5	m	
0.500	to	0.75	m	
0.75	to	1	m	
1	to	1.25	m	
1.25	to	1.5	m	
1.5	to	1.75	m	
1.75	to	2	m	
2	to	2.5	m	
2.5	to	3	m	
3	to	3.5	m	
3.5	to	4	m	
4	to	99999	m	

DIAL1100
BEFORE YOU DIG

LOT FILL REMEDIATION

1. REGRADE AREA TO BE STRIPPED TO STOCKPILE FOR REUSE.
2. FILL REGRADE AREAS WITH SITE WON FILL (INCLUDING STOCKPILE) IN ACCORDANCE WITH GEOTECH REPORT. EARTHWORKS TO BE UNDERTAKEN UNDER LEVEL 1 SUPERVISION IN ACCORDANCE WITH AS3798-2007. NO FILL TO BE PLACED WITHOUT PRIOR APPROVAL FROM GEOTECHNICAL ENGINEER.
3. PLACE MINIMUM 150mm, MAXIMUM 300mm THICK TOPSOIL TO REGRADE AREAS.
4. ALL DISTURBED AREAS, EXCLUDING FUTURE ROAD CORRIDORS, TO BE SEEDED WITH NATIVE SEED MIX.

LEGEND:

- TREE TO BE KEPT
- TREE TO BE REMOVED
- TREES IN AREA ONLY TO BE REMOVED WHERE REQUIRED.
- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING STORMWATER
- PROPOSED STORMWATER
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.5m

(A) EASEMENT TO DRAIN WATER 2 WIDE

(B) EASEMENT TO DRAIN WATER 3 WIDE

PLAN
SCALE 1:500

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
SITE REGRADE AND TREE REMOVAL
PLAN: SHEET 2

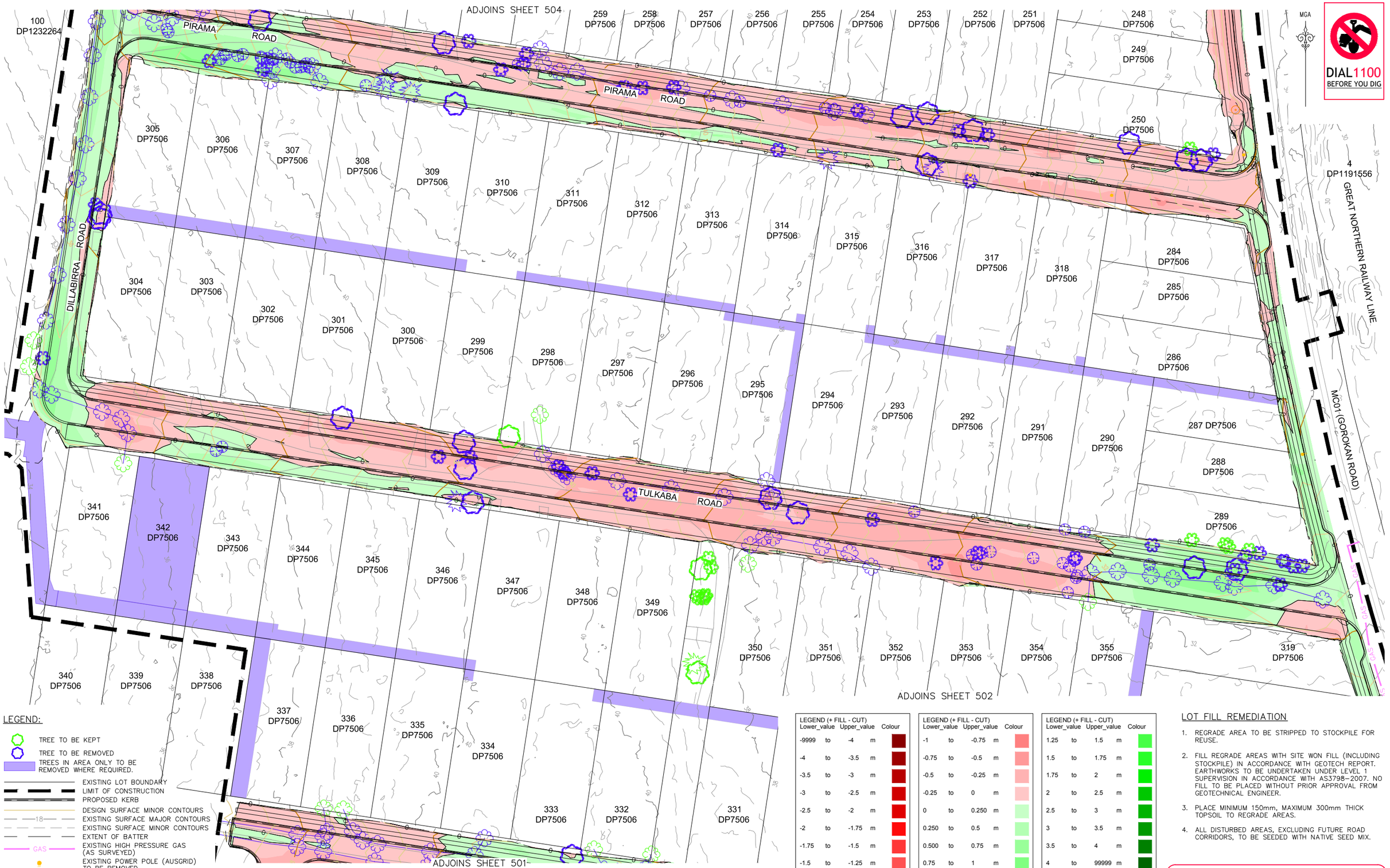
PROJECT No.		DISCIPLINE		NUMBER	REV.
239858	-	ENG	-	502	D

Plotted By: tims Plot Date: 06/08/20 - 09:13 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-502(D).dwg

100mm AT FULL SIZE

239858-ENG-503(D)

100mm AT FULL SIZE



LEGEND:

- TREE TO BE KEPT
- TREE TO BE REMOVED
- TREES IN AREA ONLY TO BE REMOVED WHERE REQUIRED.
- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- GAS — EXISTING HIGH PRESSURE GAS (AS SURVEYED)
- EXISTING POWER POLE (AUSGRID) TO BE REMOVED
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.5m

PLAN
SCALE 1:500

LEGEND (+ FILL - CUT) Lower_value		Upper_value		Colour
-9999	to	-4	m	
-4	to	-3.5	m	
-3.5	to	-3	m	
-3	to	-2.5	m	
-2.5	to	-2	m	
-2	to	-1.75	m	
-1.75	to	-1.5	m	
-1.5	to	-1.25	m	
-1.25	to	-1	m	

LEGEND (+ FILL - CUT) Lower_value		Upper_value		Colour
-1	to	-0.75	m	
-0.75	to	-0.5	m	
-0.5	to	-0.25	m	
-0.25	to	0	m	
0	to	0.250	m	
0.250	to	0.5	m	
0.500	to	0.75	m	
0.75	to	1	m	
1	to	1.25	m	

LEGEND (+ FILL - CUT) Lower_value		Upper_value		Colour
1.25	to	1.5	m	
1.5	to	1.75	m	
1.75	to	2	m	
2	to	2.5	m	
2.5	to	3	m	
3	to	3.5	m	
3.5	to	4	m	
4	to	99999	m	

LOT FILL REMEDIATION

1. REGRADE AREA TO BE STRIPPED TO STOCKPILE FOR REUSE.
2. FILL REGRADE AREAS WITH SITE WON FILL (INCLUDING STOCKPILE) IN ACCORDANCE WITH GEOTECH REPORT. EARTHWORKS TO BE UNDERTAKEN UNDER LEVEL 1 SUPERVISION IN ACCORDANCE WITH AS3798–2007. NO FILL TO BE PLACED WITHOUT PRIOR APPROVAL FROM GEOTECHNICAL ENGINEER.
3. PLACE MINIMUM 150mm, MAXIMUM 300mm THICK TOPSOIL TO REGRADE AREAS.
4. ALL DISTURBED AREAS, EXCLUDING FUTURE ROAD CORRIDORS, TO BE SEEDED WITH NATIVE SEED MIX.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 — A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
SITE REGRADE AND TREE REMOVAL PLAN: SHEET 3

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	503	D

Plotted By: tims Plot Date: 06/08/20 – 09:14 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-503(D).dwg

239858-ENG-504(D)

MGA

LEGEND:

- TREE TO BE KEPT
- TREE TO BE REMOVED
- TREES IN AREA ONLY TO BE REMOVED WHERE REQUIRED.

LEGEND (CONTINUED):

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- EXISTING STORMWATER
- PROPOSED STORMWATER
- EXISTING POWER POLE (SYDNEY TRAINS)

CONTOUR INTERVAL = 0.5m

(A) EASEMENT TO DRAIN WATER 2 WIDE

(B) EASEMENT TO DRAIN WATER 3 WIDE

LOT FILL REMEDIATION

1. REGRADE AREA TO BE STRIPPED TO STOCKPILE FOR REUSE.
2. FILL REGRADE AREAS WITH SITE WON FILL (INCLUDING STOCKPILE) IN ACCORDANCE WITH GEOTECH REPORT. EARTHWORKS TO BE UNDERTAKEN UNDER LEVEL 1 SUPERVISION IN ACCORDANCE WITH AS3798–2007. NO FILL TO BE PLACED WITHOUT PRIOR APPROVAL FROM GEOTECHNICAL ENGINEER.
3. PLACE MINIMUM 150mm, MAXIMUM 300mm THICK TOPSOIL TO REGRADE AREAS.
4. ALL DISTURBED AREAS, EXCLUDING FUTURE ROAD CORRIDORS, TO BE SEEDED WITH NATIVE SEED MIX.

ADJOINS INSET AT RIGHT

430 DP755242

100 DP1232264

189 DP755242

4 DP1191556

TULLOKAN ROAD

WAROPARA ROAD

DILLABIRRA ROAD

MC01 (GOROKAN ROAD)

GREAT NORTHERN RAILWAY LINE

227 DP7506, 228 DP7506, 229 DP7506, 230 DP7506, 231 DP7506, 232 DP7506, 233 DP7506, 234 DP7506, 235 DP7506, 236 DP7506, 237 DP7506, 238 DP7506, 239 DP7506, 240 DP7506, 241 DP7506, 242 DP7506, 243 DP7506, 244 DP7506, 202 DP7506, 203 DP7506, 204 DP7506, 205 DP7506, 206 DP7506, 207 DP7506, 208 DP7506, 209 DP7506, 210 DP7506, 211 DP7506, 212 DP7506, 213 DP7506, 214 DP7506, 215 DP7506, 216 DP7506, 217 DP7506, 218 DP7506, 219 DP7506, 220 DP7506, 221 DP7506, 222 DP7506, 223 DP7506, 224 DP7506, 225 DP7506, 226 DP7506

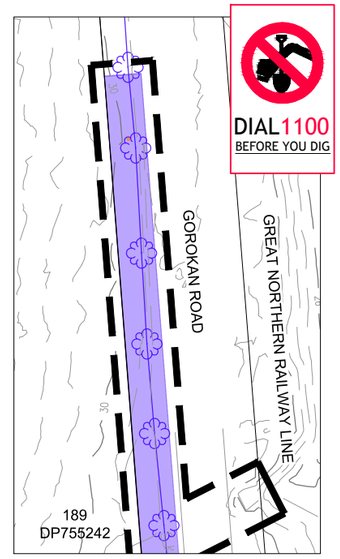
268 DP7506, 269 DP7506, 270 DP7506, 271 DP7506, 272 DP7506, 273 DP7506, 274 DP7506, 275 DP7506, 276 DP7506, 277 DP7506, 278 DP7506, 279 DP7506, 280 DP7506, 281 DP7506, 282 DP7506, 283 DP7506, 245 DP7506, 246 DP7506, 247 DP7506, 248 DP7506, 251 DP7506, 252 DP7506, 253 DP7506, 254 DP7506, 255 DP7506, 256 DP7506, 257 DP7506, 258 DP7506, 259 DP7506, 260 DP7506, 261 DP7506, 262 DP7506, 263 DP7506, 264 DP7506, 265 DP7506, 266 DP7506, 267 DP7506

4 DP119

ADJOINS SHEET 503

PLAN

SCALE 1:500



ADJOINS MAIN PLAN AT LEFT

INSET PLAN

SCALE 1:500

DIAL1100 BEFORE YOU DIG

LEGEND (+ FILL - CUT) Lower_value		Upper_value		Colour
-9999	to	-4	m	
-4	to	-3.5	m	
-3.5	to	-3	m	
-3	to	-2.5	m	
-2.5	to	-2	m	
-2	to	-1.75	m	
-1.75	to	-1.5	m	
-1.5	to	-1.25	m	
-1.25	to	-1	m	
-1	to	-0.75	m	
-0.75	to	-0.5	m	
-0.5	to	-0.25	m	
-0.25	to	0	m	
0	to	0.250	m	
0.250	to	0.5	m	
0.500	to	0.75	m	
0.75	to	1	m	
1	to	1.25	m	
1.25	to	1.5	m	
1.5	to	1.75	m	
1.75	to	2	m	
2	to	2.5	m	
2.5	to	3	m	
3	to	3.5	m	
3.5	to	4	m	
4	to	99999	m	

NOT FOR CONSTRUCTION

100mm AT FULL SIZE

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson

Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
SITE REGRADE AND TREE REMOVAL
PLAN: SHEET 4

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	504	D

Plotted By: tims Plot Date: 06/08/20 – 09:15 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–504(D).dwg

239858-ENG-801(D)

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- NO GO AREA
- PROPOSED STORMWATER
- SILT FENCE
- CONSTRUCTION ACCESS
- HAYBALE BARRIERS
- GEOTEXTILE INLET FILTER
- GRAVEL BAGS
- PROPOSED STOCKPILE LOCATION
- MESH & GRAVEL INLET FILTER
- WATER DIVERSION DRAIN

CONTOUR INTERVAL = 0.5m

MGA

NOTES:
1. SEDIMENT FENCES ALONG ROAD FRONTAGES ARE INDICATIVE ONLY: ALLOWANCE FOR RESIDENT ACCESS TO BE PROVIDED AND NEGOTIATED WITH INDIVIDUAL RESIDENTS ON SITE.



PLAN
SCALE 1:500

DIAL1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson

Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
EROSION & SEDIMENT CONTROL PLAN: SHEET 1

PROJECT No. 239858 – DISCIPLINE ENG – NUMBER 801 – REV. D

Plotted By: tims Plot Date: 06/08/20 – 09:15 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-801(D).dwg

100mm AT FULL SIZE

239858-ENG-802(D)



LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- NO GO AREA
- PROPOSED STORMWATER
- SILT FENCE
- CONSTRUCTION ACCESS
- HAYBALE BARRIERS
- GEOTEXTILE INLET FILTER
- GRAVEL BAGS
- PROPOSED STOCKPILE LOCATION
- MESH & GRAVEL INLET FILTER
- WATER DIVERSION DRAIN

CONTOUR INTERVAL = 0.5m

NOTES:
1. SEDIMENT FENCES ALONG ROAD FRONTAGES ARE INDICATIVE ONLY: ALLOWANCE FOR RESIDENT ACCESS TO BE PROVIDED AND NEGOTIATED WITH INDIVIDUAL RESIDENTS ON SITE.

DIAL1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

PLAN
SCALE 1:500

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS
EROSION & SEDIMENT CONTROL PLAN: SHEET 2

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	802	D

Plotted By: tims Plot Date: 06/08/20 – 09:15 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-802(D).dwg

100mm AT FULL SIZE

239858-ENG-803(D)

ADJOINS INSET PLAN BELOW

ADJOINS MAIN PLAN ABOVE

100mm AT FULL SIZE

ADJOINS SHEET 804

ADJOINS SHEET 801

ADJOINS SHEET 802

100 DP1232264

NO GO AREA

PIRAMA ROAD

DILLABIRRA ROAD

TULKABA ROAD

GREAT NORTHERN RAILWAY LINE

MC01 (GOROKAN ROAD)

TEMPORARY DIVERSION DRAINS

TEMPORARILY REMOVE LID FROM JUNCTION PITS TO COLLECT DISCHARGE FROM TEMPORARY DIVERSION DRAINS. REFIT LID AFTER COMPLETION OF ALL WORKS

LID TEMPORARILY REMOVED SEE NOTE ABOVE

NOMINAL STOCKPILE LOCATION

TEMPORARY DIVERSION DRAIN

TANK 02

4 DP1191556

DIAL1100 BEFORE YOU DIG

MGA

248 DP7506 · 249 DP7506 · 250 DP7506 · 251 DP7506 · 252 DP7506 · 253 DP7506 · 254 DP7506 · 255 DP7506 · 256 DP7506 · 257 DP7506 · 258 DP7506 · 259 DP7506

284 DP7506 · 285 DP7506 · 286 DP7506 · 287 DP7506 · 288 DP7506 · 289 DP7506 · 290 DP7506 · 291 DP7506 · 292 DP7506 · 293 DP7506 · 294 DP7506 · 295 DP7506 · 296 DP7506 · 297 DP7506 · 298 DP7506 · 299 DP7506 · 300 DP7506 · 301 DP7506 · 302 DP7506 · 303 DP7506 · 304 DP7506 · 305 DP7506 · 306 DP7506 · 307 DP7506 · 308 DP7506 · 309 DP7506 · 310 DP7506 · 311 DP7506 · 312 DP7506 · 313 DP7506 · 314 DP7506 · 315 DP7506 · 316 DP7506 · 317 DP7506 · 318 DP7506 · 319 DP7506 · 320 DP7506 · 321 DP7506

330 DP7506 · 331 DP7506 · 332 DP7506 · 333 DP7506 · 334 DP7506 · 335 DP7506 · 336 DP7506 · 337 DP7506 · 338 DP7506 · 339 DP7506 · 340 DP7506 · 341 DP7506 · 342 DP7506 · 343 DP7506 · 344 DP7506 · 345 DP7506 · 346 DP7506 · 347 DP7506 · 348 DP7506 · 349 DP7506 · 350 DP7506 · 351 DP7506 · 352 DP7506 · 353 DP7506 · 354 DP7506 · 355 DP7506

INSET PLAN
SCALE 1:500

PLAN
SCALE 1:500

CONTOUR INTERVAL = 0.5m

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- NO GO AREA
- PROPOSED STORMWATER
- SILT FENCE
- CONSTRUCTION ACCESS
- HAYBALE BARRIERS
- GEOTEXTILE INLET FILTER
- GRAVEL BAGS
- PROPOSED STOCKPILE LOCATION
- MESH & GRAVEL INLET FILTER
- WATER DIVERSION DRAIN

NOTES:
1. SEDIMENT FENCES ALONG ROAD FRONTAGES ARE INDICATIVE ONLY: ALLOWANCE FOR RESIDENT ACCESS TO BE PROVIDED AND NEGOTIATED WITH INDIVIDUAL RESIDENTS ON SITE.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS

EROSION & SEDIMENT CONTROL PLAN: SHEET 3

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	803	D

Plotted By: tims Plot Date: 06/08/20 – 09:15 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-803(D).dwg

239858-ENG-804(D)

MGA

ADJOINS INSET PLAN BELOW RIGHT

430 DP755242

189 DP755242

100 DP1232264

TULLOKAN ROAD

TEMPORARY DIVERSION DRAINS

DILLABIRRA ROAD

NO GO AREA

TEMPORARY DIVERSION DRAINS

WAROPARA ROAD

TEMPORARY DIVERSION DRAINS

DILLABIRRA ROAD

MC01 (GOROKAN ROAD)

TANK 03

TANK 04

DF

227 DP7506, 228 DP7506, 229 DP7506, 230 DP7506, 231 DP7506, 232 DP7506, 233 DP7506, 234 DP7506, 235 DP7506, 236 DP7506, 237 DP7506, 238 DP7506, 239 DP7506, 240 DP7506, 241 DP7506, 242 DP7506, 243 DP7506, 244 DP7506, 202 DP7506, 203 DP7506, 204 DP7506, 205 DP7506, 206 DP7506, 207 DP7506, 208 DP7506, 209 DP7506, 210 DP7506, 211 DP7506, 212 DP7506, 213 DP7506, 214 DP7506, 215 DP7506, 216 DP7506, 217 DP7506, 218 DP7506, 219 DP7506, 220 DP7506, 221 DP7506, 222 DP7506, 223 DP7506, 224 DP7506, 225 DP7506, 226 DP7506

268 DP7506, 269 DP7506, 270 DP7506, 271 DP7506, 272 DP7506, 273 DP7506, 274 DP7506, 275 DP7506, 276 DP7506, 277 DP7506, 278 DP7506, 279 DP7506, 280 DP7506, 281 DP7506, 282 DP7506, 283 DP7506, 245 DP7506, 246 DP7506, 247 DP7506, 248 DP7506, 251 DP7506, 252 DP7506, 253 DP7506, 254 DP7506, 255 DP7506, 257 DP7506, 258 DP7506, 259 DP7506, 260 DP7506, 261 DP7506, 262 DP7506, 263 DP7506, 264 DP7506, 265 DP7506, 266 DP7506, 267 DP7506

ADJOINS SHEET 803

PLAN
SCALE 1:500

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- DESIGN SURFACE MAJOR CONTOURS
- DESIGN SURFACE MINOR CONTOURS
- EXISTING SURFACE MAJOR CONTOURS
- EXISTING SURFACE MINOR CONTOURS
- EXTENT OF BATTER
- NO GO AREA
- PROPOSED STORMWATER
- SILT FENCE
- CONSTRUCTION ACCESS
- HAYBALE BARRIERS
- GEOTEXTILE INLET FILTER
- GRAVEL BAGS
- PROPOSED STOCKPILE LOCATION
- MESH & GRAVEL INLET FILTER
- WATER DIVERSION DRAIN

CONTOUR INTERVAL = 0.5m

NOTES:
1. SEDIMENT FENCES ALONG ROAD FRONTAGES ARE INDICATIVE ONLY: ALLOWANCE FOR RESIDENT ACCESS TO BE PROVIDED AND NEGOTIATED WITH INDIVIDUAL RESIDENTS ON SITE.

GOROKAN ROAD

GREAT NORTHERN RAILWAY LINE

189 DP755242

4 DP1191556

ADJOINS MAIN PLAN ABOVE LEFT

INSET PLAN
SCALE 1:500

4 DP1191556

GREAT NORTHERN RAILWAY LINE

- ROAD

MC01 (GOROKAN ROAD)

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
EROSION & SEDIMENT CONTROL PLAN: SHEET 4

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	804	D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:15 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-804(D).dwg

239858-ENG-811(D)

EROSION & SEDIMENT CONTROL NOTES:

GENERAL

1. ESCP REFERS TO EROSION AND SEDIMENT CONTROL PLAN OR A SOIL AND WATER MANAGEMENT PLAN (SWMP).
2. ESC REFERS TO EROSION AND SEDIMENT CONTROL.
3. SEDIMENT, INCLUDES, BUT IS NOT LIMITED TO, CLAY, SILT, SAND, GRAVEL, SOIL, MUD, CEMENT, AND CERAMIC WASTE.
4. ANY REFERENCE TO THE BLUE BOOK REFERS TO MANAGING URBAN STORMWATER – SOILS AND CONSTRUCTION. LANDCOM, 2004.
5. ANY REFERENCE TO THE IECA WHITE BOOKS (2008) REFERS TO IECA 2008. BEST PRACTICE EROSION AND SEDIMENT CONTROL. BOOKS 1–6.INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIA). PICTON NSW.
6. ANY MATERIAL DEPOSITED IN ANY CONSERVATION AREA FROM WORKS ASSOCIATED WITH THE DEVELOPMENT SHALL BE REMOVED IMMEDIATELY BY MEASURES INVOLVING MINIMAL GROUND AND/OR VEGETATION DISTURBANCE AND NO MACHINERY, OR FOLLOWING DIRECTIONS BY COUNCIL AND/OR WITHIN A TIMEFRAME ADVISED BY COUNCIL.

THE ESCP

7. THE ESCP AND ITS ASSOCIATED ESC MEASURES SHALL BE CONSTANTLY MONITORED, REVIEWED, AND MODIFIED AS REQUIRED TO CORRECT DEFICIENCIES. COUNCIL HAS THE RIGHT TO DIRECT CHANGES IF, IN ITS OPINION, THE MEASURES THAT ARE PROPOSED OR HAVE BEEN INSTALLED ARE INADEQUATE TO PREVENT POLLUTION.
8. PRIOR TO ANY ACTIVITIES ONSITE, THE RESPONSIBLE PERSON(S) IS TO BE NOMINATED. THE RESPONSIBLE PERSON(S) SHALL BE RESPONSIBLE FOR THE ESC MEASURES ONSITE. THE NAME, ADDRESS AND 24 HOUR CONTACT DETAILS OF THE PERSON(S) SHALL BE PROVIDED TO COUNCIL IN WRITING. COUNCIL SHALL BE ADVISED WITHIN 48 HOURS OF ANY CHANGES TO THE RESPONSIBLE PERSON(S), OR THEIR CONTACT DETAILS, IN WRITING.
9. AT LEAST 14 DAYS BEFORE THE NATURAL SURFACE IS DISTURBED IN ANY NEW STAGE, THE CONTRACTOR SHALL SUBMIT TO THE CERTIFIER, A PLAN SHOWING ESC MEASURES FOR THAT STAGE. THE DEGREE OF DESIGN DETAIL SHALL BE BASED ON THE DISTURBED AREA.
10. AT ANY TIME DURING CONSTRUCTION, THE ESC MEASURES ONSITE SHALL BE APPROPRIATE FOR THE AREA OF DISTURBANCE AND ITS CHARACTERISTICS INCLUDING SOILS (IN ACCORDANCE WITH THOSE REQUIRED FOR THE SITE AS PER DCP).
11. THE IMPLEMENTATION OF THE ESCP SHALL BE SUPERVISED BY PERSONNEL WITH APPROPRIATE QUALIFICATIONS AND/OR EXPERIENCE IN ESC ON CONSTRUCTION SITES.
12. THE APPROVED ESCP SHALL BE AVAILABLE ON–SITE FOR INSPECTION BY COUNCIL OFFICERS WHILE WORK ACTIVITIES ARE OCCURRING.
13. THE APPROVED ESCP SHALL BE UP TO DATE AND SHOW A TIMELINE OF INSTALLATION, MAINTENANCE AND REMOVAL OF ESC MEASURES.
14. ALL ESC MEASURES SHALL BE APPROPRIATE FOR THE SEDIMENT TYPE(S) OF THE SOILS ONSITE, IN ACCORDANCE WITH THE BLUE BOOK, IECA WHITE BOOKS OR OTHER CURRENT RECOGNISED INDUSTRY STANDARD FOR ESC FOR AUSTRALIAN CONDITIONS.
15. ADEQUATE SITE DATA, INCLUDING SOIL DATA FROM A NATA APPROVED LABORATORY, SHALL BE OBTAINED TO ALLOW THE PREPARATION OF AN APPROPRIATE ESCP, AND ALLOW THE SELECTION, DESIGN AND SPECIFICATION OF REQUIRED ESC MEASURES.
16. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED ESCP (AS AMENDED FROM TIME TO TIME) UNLESS CIRCUMSTANCES ARISE WHERE:
    a) COMPLIANCE WITH THE ESCP WOULD INCREASE THE POTENTIAL FOR ENVIRONMENTAL HARM; OR
    b) CIRCUMSTANCES CHANGE DURING CONSTRUCTION AND THOSE CIRCUMSTANCES COULD NOT HAVE BEEN FORESEEN; OR
    c) COUNCIL DETERMINES THAT UNACCEPTABLE OFF–SITE SEDIMENTATION IS OCCURRING AS A RESULT OF A LAND–DISTURBING ACTIVITY. IN EITHER CASE, THE PERSON(S) RESPONSIBLE MAY BE REQUIRED TO TAKE ADDITIONAL, OR ALTERNATIVE PROTECTIVE ACTION, AND/OR UNDERTAKE REASONABLE RESTORATION WORKS WITHIN THE TIMEFRAME SPECIFIED BY THE COUNCIL.
17. ADDITIONAL ESC MEASURES SHALL BE IMPLEMENTED, AND A REVISED ESCP SUBMITTED FOR APPROVAL TO THE CERTIFIER (WITHIN FIVE BUSINESS DAYS OF ANY SUCH AMENDMENTS) IN THE EVENT THAT:
    a) THERE IS A HIGH PROBABILITY THAT SERIOUS OR MATERIAL ENVIRONMENTAL HARM MAY OCCUR AS A RESULT OF SEDIMENT LEAVING THE SITE; OR
    b) THE IMPLEMENTED WORKS FAIL TO ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES SPECIFIED IN THESE CONDITIONS; OR
    c) SITE CONDITIONS SIGNIFICANTLY CHANGE; OR
    d) SITE INSPECTIONS INDICATE THAT THE IMPLEMENTED WORKS ARE FAILING TO ACHIEVE THE "OBJECTIVE" OF THE ESCP.
18. A COPY OF ANY AMENDED ESCP SHALL BE FORWARDED TO AN APPROPRIATE COUNCIL OFFICER, WITHIN FIVE BUSINESS DAYS OF ANY SUCH AMENDMENTS.

SITE ESTABLISHMENT INCLUDING CLEARING AND MULCHING

19. NO LAND CLEARING SHALL BE UNDERTAKEN UNLESS PRECEDED BY THE INSTALLATION OF ADEQUATE DRAINAGE AND SEDIMENT CONTROL MEASURES, UNLESS SUCH CLEARING IS REQUIRED FOR THE PURPOSE OF INSTALLING SUCH MEASURES, IN WHICH CASE, ONLY THE MINIMUM CLEARING REQUIRED TO INSTALL SUCH MEASURES SHALL OCCUR.
20. BULK TREE CLEARING AND GRUBBING OF THE SITE SHALL BE IMMEDIATELY FOLLOWED BY SPECIFIED TEMPORARY EROSION CONTROL MEASURES (E.G. TEMPORARY GRASSING OR MULCHING) PRIOR TO COMMENCEMENT OF EACH STAGE OF CONSTRUCTION WORKS.
21. TREES AND VEGETATION CLEARED FROM THE SITE SHALL BE MULCHED ONSITE WITHIN 7 DAYS OF CLEARING.
22. APPROPRIATE MEASURES SHALL BE UNDERTAKEN TO CONTROL ANY DUST ORIGINATING DUE TO THE MULCHING OF VEGETATION ONSITE.
23. ALL OFFICE FACILITIES AND OPERATIONAL ACTIVITIES SHALL BE LOCATED SUCH THAT ANY EFFLUENT, INCLUDING WASH–DOWN WATER, CAN BE TOTALLY CONTAINED AND TREATED WITHIN THE SITE.
24. ALL REASONABLE AND PRACTICABLE MEASURES SHALL BE TAKEN TO ENSURE STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT SYSTEMS, DRAINS TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
25. SITE EXIT POINTS SHALL BE APPROPRIATELY MANAGED TO MINIMISE THE RISK OF SEDIMENT BEING TRACKED ONTO SEALED, PUBLIC ROADWAYS.
26. STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT POINTS SHALL DRAIN TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
27. THE APPLICANT SHALL ENSURE AN ADEQUATE SUPPLY OF ESC, AND APPROPRIATE POLLUTION CLEAN–UP MATERIALS ARE AVAILABLE ON–SITE AT ALL TIMES.
28. ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND SEDIMENT BASIN EMBANKMENTS SHALL BE MACHINE–COMPACTED, SEEDED AND MULCHED WITHIN TEN (10) DAYS OF FORMATION FOR THE PURPOSE OF ESTABLISHING A VEGETATIVE COVER, OR LINED APPROPRIATELY.
29. SEDIMENT DEPOSITED OFF SITE AS A RESULT OF ON–SITE ACTIVITIES SHALL BE COLLECTED AND THE AREA CLEANED/REHABILITATED AS SOON AS REASONABLE AND PRACTICABLE.
30. CONCRETE WASTE AND CHEMICAL PRODUCTS, INCLUDING PETROLEUM AND OIL–BASED PRODUCTS, SHALL BE PREVENTED FROM ENTERING ANY INTERNAL OR EXTERNAL WATER BODY, OR ANY EXTERNAL DRAINAGE SYSTEM, EXCLUDING THOSE ON–SITE WATER BODIES SPECIFICALLY DESIGNED TO CONTAIN AND/OR TREAT SUCH MATERIAL. APPROPRIATE MEASURES SHALL BE INSTALLED TO TRAP THESE MATERIALS ONSITE.
31. BRICK, TILE OR MASONRY CUTTING SHALL BE CARRIED OUT ON A PERVIOUS SURFACE (E.G. GRASS OR OPEN SOIL) AND IN SUCH A MANNER THAT ANY RESULTING SEDIMENT–LADEN RUNOFF IS PREVENTED FROM DISCHARGING INTO A GUTTER, DRAIN OR WATER. APPROPRIATE MEASURES SHALL BE INSTALLED TO TRAP THESE MATERIALS ONSITE.
32. NEWLY SEALED HARD–STAND AREAS (E.G. ROADS, DRIVEWAYS AND CAR PARKS) SHALL BE SWEPT THOROUGHLY AS SOON AS PRACTICABLE AFTER SEALING/SURFACING TO MINIMISE THE RISK OF COMPONENTS OF THE SURFACING COMPOUND ENTERING STORMWATER DRAINS.
33. STOCKPILES OF ERODIBLE MATERIAL SHALL BE PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC OR ORGANIC) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS.
34. STOCKPILES, TEMPORARY OR PERMANENT, SHALL NOT BE LOCATED IN AREAS IDENTIFIED AS NO–GO ZONES (INCLUDING, BUT NOT LIMITED TO, RESTRICTED ACCESS AREAS, BUFFER ZONES, OR AREAS OF NON–DISTURBANCE) ON THE ESCP.
35. NO MORE THAN 150 METRES OF A STORMWATER, SEWER LINE OR OTHER SERVICE TRENCH SHALL TO BE OPEN AT ANY ONE TIME.
36. SITE SPOIL SHALL BE LAWFULLY DISPOSED OF IN A MANNER THAT DOES NOT RESULT IN ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
37. WHEREVER REASONABLE AND PRACTICABLE, STORMWATER RUNOFF ENTERING THE SITE FROM EXTERNAL AREAS, AND NON–SEDIMENT LADEN (CLEAN) STORMWATER RUNOFF ENTERING A WORK AREA OR AREA OF SOIL DISTURBANCE, SHALL BE DIVERTED AROUND OR THROUGH THAT AREA IN A MANNER THAT MINIMISES SOIL EROSION AND THE CONTAMINATION OF THAT WATER FOR ALL DISCHARGES UP TO THE SPECIFIED DESIGN STORM DISCHARGE.

SITE MANAGEMENT INCLUDING DUST

38. PRIORITY SHALL BE GIVEN TO THE PREVENTION, OR AT LEAST THE MINIMISATION, OF SOIL EROSION, RATHER THAN THE TRAPPING OF DISPLACED SEDIMENT. SUCH A CLAUSE SHALL NOT REDUCE THE RESPONSIBILITY TO APPLY AND MAINTAIN, AT ALL TIMES, ALL NECESSARY ESC MEASURES.
39. MEASURES USED TO CONTROL WIND EROSION SHALL BE APPROPRIATE FOR THE LOCATION AND PREVENT SOIL EROSION AT ALL TIMES, INCLUDING WORKING HOURS, OUT OF HOURS, WEEKENDS, PUBLIC HOLIDAYS, AND DURING ANY OTHER SHUTDOWN PERIODS.
40. THE APPLICATION OF LIQUID OR CHEMICAL–BASED DUST SUPPRESSION MEASURES SHALL ENSURE THAT SEDIMENT–LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD.
41. ALL CUT AND FILL EARTH BATTERS LESS THAN 3 METRES IN ELEVATION SHALL BE TOPSOILED, AND GRASS SEEDED/HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF GRADING IN CONSULTATION WITH COUNCIL.
42. ONCE CUT/FILL OPERATIONS HAVE BEEN FINALISED IN A SECTION, ALL DISTURBED AREAS THAT ARE NOT BEING WORKED ON SHALL BE STABILISED IN ACCORDANCE WITH TIME LINES IN THE BLUE BOOK.
43. ALL REASONABLE AND PRACTICABLE MEASURES SHALL BE TAKEN TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT FROM THE SITE.
44. SUITABLE ALL–WEATHER MAINTENANCE ACCESS SHALL BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.
45. SEDIMENT CONTROL DEVICES, OTHER THAN SEDIMENT BASINS, SHALL BE DE–SILTED AND MADE FULLY OPERATIONAL AS SOON AS REASONABLE AND PRACTICABLE AFTER A SEDIMENT–PRODUCING EVENT, WHETHER NATURAL OR ARTIFICIAL, IF THE DEVICE'S SEDIMENT RETENTION CAPACITY FALLS BELOW 75% OF ITS DESIGN RETENTION CAPACITY.
46. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, SHALL BE MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THEIR OPERATIONAL LIVES.
47. WASHING/FLUSHING OF SEALED ROADWAYS SHALL ONLY OCCUR WHERE SWEEPING HAS FAILED TO REMOVE SUFFICIENT SEDIMENT AND THERE IS A COMPELLING NEED TO REMOVE THE REMAINING SEDIMENT (E.G. FOR SAFETY REASONS). IN SUCH CIRCUMSTANCES, ALL REASONABLE AND PRACTICABLE SEDIMENT CONTROL MEASURES SHALL BE USED TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT INTO RECEIVING WATERS. ONLY THOSE MEASURES THAT WILL NOT CAUSE SAFETY AND PROPERTY FLOODING ISSUES SHALL BE EMPLOYED. SEDIMENT REMOVED FROM ROADWAYS SHALL BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
48. SEDIMENT REMOVED FROM SEDIMENT TRAPS AND PLACES OF SEDIMENT DEPOSITION SHALL BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.

SEDIMENT BASINS – INSTALLATION, MAINTENANCE AND REMOVAL INCLUDING SEDIMENT TRAPS

49. AS–CONSTRUCTED PLANS SHALL BE PREPARED FOR ALL CONSTRUCTED SEDIMENT BASINS AND ASSOCIATED EMERGENCY SPILLWAYS. SUCH PLANS SHALL VERIFY THE BASIN'S DIMENSIONS, LEVELS AND VOLUMES COMPLY WITH THE APPROVED DESIGN DRAWINGS. THESE PLANS MAY BE REQUESTED BY THE CERTIFIER OR COUNCIL.
50. SEDIMENT BASINS SHALL BE CONSTRUCTED AND FULLY OPERATIONAL PRIOR TO ANY OTHER SOIL DISTURBANCE IN THEIR CATCHMENT.
51. INSTALL AN INTERNAL GATED VALVE, OR SIMILAR, IN ANY OUTLET PIPE ONCE PIPES INSTALLED, OR INSTALL A SACRIFICIAL PIPE FROM BASIN THROUGH WALL TO EXTERNAL OUTLET POINT. THE VALVE SHALL BE CONNECTED TO A RISER MADE FROM SLOTTED PIPE IN THE BASIN. THE VALVE MAY BE OPENED ONCE CAPTURED WATER MEETS WATER QUALITY REQUIREMENTS. THE FINAL SETUP FOR TEMPORARY INTERNAL OUTLET STRUCTURES TO BE CONFIRMED PRIOR TO CONSTRUCTION WITH COUNCIL. THIS SETUP WILL ENABLE DISCHARGE OF TREATED WATER FROM SITE WITHOUT NEED FOR PUMPING.
52. A SEDIMENT STORAGE LEVEL MARKER POST SHALL BE WITH A CROSS MEMBER SET JUST BELOW THE TOP OF THE SEDIMENT STORAGE ZONE (AS SPECIFIED ON THE APPROVED ESCP). AT LEAST A 75 MILLIMETRES WIDE POST SHALL BE FIRMLY SET INTO THE BASIN FLOOR.
53. THE SITE MANAGER SHALL OBTAIN THE RELEVANT APPROVALS FROM THE RELEVANT ORGANISATIONS TO DISCHARGE TREATED WATER FROM ANY EXISTING BASINS. ORGANISATIONS MAY INCLUDE, BUT NOT BE LIMITED TO, HUNTER WATER, AND COUNCIL.
54. WHERE MORE THAN ONE STAGE IS TO BE DEVELOPED AT ONE TIME, OR BEFORE THE PRECEDING STAGE IS COMPLETE, THE SEDIMENT BASIN(S) FOR THESE STAGES SHALL HAVE SUFFICIENT CAPACITY TO CATER FOR ALL AREA DIRECTED TO THE BASIN(S).
55. PRIOR TO ANY FORECAST WEATHER EVENT LIKELY TO RESULT IN RUNOFF, ANY BASINS/TRAPS SHALL BE DEWATERED TO PROVIDE SUFFICIENT CAPACITY TO CAPTURE SEDIMENT LADEN WATER FROM THE SITE.
56. SUFFICIENT QUANTITIES OF CHEMICALS/AGENTS TO TREAT CAPTURED WATER SHALL BE PLACED SUCH THAT WATER ENTERING THE BASIN MIXES WITH THE CHEMICAL/AGENTS AND IS CARRIED INTO THE BASIN TO SPEED UP CLARIFICATION.
57. ANY BASIN SHALL BE DEWATERED WITHIN THE X–DAY RAINFALL DEPTH USED TO CALCULATE THE CAPACITY OF THE BASIN, AFTER A RAINFALL EVENT.
58. SUFFICIENT QUANTITIES OF CHEMICALS/AGENTS TO TREAT TURBID WATER SHALL BE SECURELY STORED ON–SITE TO PROVIDE FOR AT LEAST THREE COMPLETE TREATMENTS OF ALL BASINS REQUIRING CHEMICALLY TREATMENT ONSITE.
59. PRIOR TO THE CONTROLLED DISCHARGE (E.G. DE–WATERING ACTIVITIES) FROM EXCAVATIONS AND/OR SEDIMENT BASINS, THE FOLLOWING WATER QUALITY OBJECTIVES SHALL BE ACHIEVED:
    a) TOTAL SUSPENDED SOLIDS (TSS) TO A MAXIMUM 50mg/L;
    b) WATER PH BETWEEN 6.5 AND 8.5, UNLESS OTHERWISE REQUIRED BY THE COUNCIL;
    c) TURBIDITY (MEASURED IN NTUS) TO A MAXIMUM OF 60 NTU); AND
    d) EC LEVELS NO GREATER THAN BACKGROUND LEVELS.
60. THE DEVELOPMENT APPROVAL MAY REQUIRE TESTING OF ADDITIONAL WATER QUALITY ELEMENTS PRIOR TO DISCHARGE. E.G. HEAVY METALS.
61. A SAMPLE OF THE RELEASED TREATED WATER SHALL BE KEPT ONSITE IN A CLEAR CONTAINER WITH THE SAMPLE DATE RECORDED ON IT.
62. WATER QUALITY SAMPLES SHALL BE TAKEN AT A DEPTH NO LESS THAN 200MM BELOW THE WATER SURFACE OF THE BASIN.
63. NO ALUMINIUM BASED PRODUCTS MAY BE USED TREAT CAPTURED WATER ONSITE WITHOUT THE PRIOR WRITTEN PERMISSION FROM AN APPROPRIATE COUNCIL OFFICER. THE APPLICANT SHALL HAVE A DEMONSTRATED ABILITY TO USE SUCH PRODUCTS CORRECTLY AND WITHOUT ENVIRONMENTAL HARM PRIOR TO ANY APPROVAL.
64. THE CHEMICAL/AGENT USED IN TYPE D AND TYPE F BASINS TO TREAT CAPTURED WATER CAPTURED IN THE BASIN SHALL BE APPLIED IN CONCENTRATIONS SUFFICIENT TO ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES WITHIN THE X–DAY RAINFALL DEPTH USED TO CALCULATE THE CAPACITY OF THE BASIN, AFTER A RAINFALL EVENT.
65. ALL MANUFACTURERS' INSTRUCTIONS SHALL BE FOLLOWED FOR ANY CHEMICALS/AGENTS USED ONSITE, EXCEPT WHERE APPROVED BY THE RESPONSIBLE PERSON OR AN APPROPRIATE COUNCIL OFFICER.
66. THE APPLICANT SHALL ENSURE THAT ON EACH OCCASION A TYPE F OR TYPE D BASIN WAS NOT DE–WATERED PRIOR TO BEING SURCHARGED BY A FOLLOWING RAINFALL EVENT, A REPORT IS PRESENTED TO AN APPROPRIATE COUNCIL OFFICER WITHIN 5 DAYS IDENTIFYING THE CIRCUMSTANCES AND PROPOSED AMENDMENTS, IF ANY, TO THE BASIN'S OPERATING PROCEDURES.
67. SETTLED SEDIMENT SHALL BE REMOVED AS SOON AS REASONABLE AND PRACTICABLE FROM ANY SEDIMENT BASIN IF:
    a) IT IS ANTICIPATED THAT THE NEXT STORM EVENT IS LIKELY TO CAUSE SEDIMENT TO SETTLE ABOVE THE BASIN'S SEDIMENT STORAGE ZONE; OR
    b) THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE TOP OF THE BASIN'S SEDIMENT STORAGE ZONE; OR
    c) THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE BASINS SEDIMENT MARKER LINE.
68. SCOUR PROTECTION MEASURES PLACED ON SEDIMENT BASIN EMERGENCY SPILLWAYS SHALL APPROPRIATELY PROTECT THE SPILLWAY CHUTE AND ITS SIDE BATTERS FROM SCOUR, AND SHALL EXTEND A MINIMUM OF 3 METRES BEYOND THE DOWNSTREAM TOE OF THE BASIN'S EMBANKMENT.
69. SUITABLE ALL–WEATHER MAINTENANCE ACCESS SHALL BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.
70. MATERIALS, WHETHER LIQUID OR SOLID, REMOVED FROM ANY ESC MEASURES DURING MAINTENANCE OR DECOMMISSIONING, SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
71. ALL SEDIMENT BASINS SHALL REMAIN FULLY OPERATIONAL AT ALL TIMES UNTIL THE BASIN'S DESIGN CATCHMENT ACHIEVES 70% GROUND COVER OR SURFACE STABILISATION ACCEPTABLE TO COUNCIL.
72. THE ESC MEASURES INSTALLED DURING THE DECOMMISSIONING AND REHABILITATION OF A SEDIMENT BASIN SHALL COMPLY WITH SAME STANDARDS SPECIFIED FOR THE NORMAL CONSTRUCTION WORKS.
73. A SEDIMENT BASIN SHALL NOT BE DECOMMISSIONED UNTIL ALL UP–SLOPE SITE STABILISATION MEASURES HAVE BEEN IMPLEMENTED AND ARE APPROPRIATELY WORKING TO CONTROL SOIL EROSION AND SEDIMENT RUNOFF.
74. IMMEDIATELY PRIOR TO THE CONSTRUCTION OF THE PERMANENT STORMWATER TREATMENT DEVICE, APPROPRIATE FLOW BYPASS CONDITIONS SHALL BE ESTABLISHED TO PREVENT SEDIMENT–LADEN WATER ENTERING THE DEVICE.

REVEGETATION/STABILISATION

75. TEMPORARY STABILISATION MAY BE ATTAINED USING VEGETATION, NON REWETTABLE SOIL POLYMERS, OR PNEUMATICALLY APPLIED EROSION CONTROLS.
76. ALL CUT AND FILL EARTH BATTERS LESS THAN 3 METRES IN ELEVATION SHALL BE TOPSOILED, AND GRASS SEEDED/HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF GRADING IN CONSULTATION WITH COUNCIL.
77. ONCE CUT/FILL OPERATIONS HAVE BEEN FINALISED IN A SECTION, ALL DISTURBED AREAS THAT ARE NOT BEING WORKED ON SHALL BE STABILISED IN ACCORDANCE WITH TIME LINES IN THE BLUE BOOK.
78. THE LMCC SEED MIX SHALL BE USED UNLESS STATED ON THE ESCP/SWMP.
79. THE pH LEVEL OF TOPSOIL SHALL BE APPROPRIATE TO ENABLE ESTABLISHMENT AND GROWTH OF SPECIFIED VEGETATION PRIOR TO INITIATING THE ESTABLISHMENT OF VEGETATION.
80. NON REWETTABLE BINDER SHALL BE USED IN ALL HYDROMULCH/HYDROSEED/POLYMER MIXES ON SLOPES OR WORKS ADJACENT TO A WATER COURSE.
81. SOIL AMELIORANTS SHALL BE ADDED TO THE SOIL IN ACCORDANCE WITH AN APPROVED LANDSCAPE PLAN, VEGETATION MANAGEMENT PLAN, AND/OR SOIL ANALYSIS.
82. SURFACE SOIL DENSITY, COMPACTION AND SURFACE ROUGHNESS SHALL BE ADJUSTED PRIOR TO SEEDING/PLANTING IN ACCORDANCE WITH AN APPROVED LANDSCAPE PLAN, VEGETATION MANAGEMENT PLAN, AND/OR SOIL ANALYSIS.
83. PROCEDURES FOR INITIATING A SITE SHUTDOWN, WHETHER PROGRAMMED OR UN–PROGRAMMED, SHALL INCORPORATE REVEGETATION OF ALL SOIL DISTURBANCES UNLESS OTHERWISE APPROVED BY COUNCIL. THE STABILISATION WORKS SHALL NOT RELY UPON THE LONGEVITY OF NON–VEGETATED EROSION CONTROL BLANKETS, OR TEMPORARY SOIL BINDERS.

SITE MONITORING AND MAINTENANCE

84. THE APPLICANT SHALL ENSURE THAT APPROPRIATE PROCEDURES AND SUITABLY QUALIFIED PERSONNEL ARE ENGAGED TO PLAN AND CONDUCT SITE INSPECTIONS AND WATER QUALITY MONITORING THROUGHOUT THE CONSTRUCTION AND MAINTENANCE PHASE.
85. ALL ESC MEASURES SHALL BE INSPECTED AND ANY MAINTENANCE UNDERTAKEN IMMEDIATELY:
    a) AT LEAST DAILY (WHEN WORK IS OCCURRING ON–SITE); AND
    b) AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON–SITE); AND
    c) WITHIN 24HRS OF EXPECTED RAINFALL; AND
    d) WITHIN 18HRS OF A RAINFALL EVENT THAT CAUSES RUNOFF ON THE SITE.
86. WRITTEN RECORDS SHALL BE KEPT ONSITE OF ESC MONITORING AND MAINTENANCE ACTIVITIES CONDUCTED DURING THE CONSTRUCTION AND MAINTENANCE PERIODS, AND BE AVAILABLE TO COUNCIL OFFICERS ON REQUEST.
87. ALL ENVIRONMENTALLY RELEVANT INCIDENTS SHALL BE RECORDED IN A FIELD LOG THAT SHALL REMAIN ACCESSIBLE TO ALL RELEVANT REGULATORY AUTHORITIES.
88. ALL WATER QUALITY DATA, INCLUDING DATES OF RAINFALL, DATES OF TESTING, TESTING RESULTS AND DATES OF WATER RELEASE, SHALL BE KEPT IN AN ON–SITE REGISTER. THE REGISTER IS TO BE MAINTAINED UP TO DATE FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON–SITE FOR INSPECTION BY [INSERT NAME OF REGULATORY AUTHORITY] ON REQUEST.
89. AT NOMINATED INSTREAM WATER MONITORING SITES, A MINIMUM OF 3 WATER SAMPLES SHALL BE TAKEN AND ANALYSED, AND THE AVERAGE RESULT USED TO DETERMINE QUALITY.

INSTREAM WORKS

90. ALL INSTREAM WORKS (INCLUDING IN OR ADJACENT TO WATERCOURSES NATURAL OR MANMADE, FLOWING OR NOT) SHALL BE CARRIED OUT IN ACCORDANCE WITH THE IECA WHITE BOOKS.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

DESIGN FILE N:\239858\Design\12D\

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

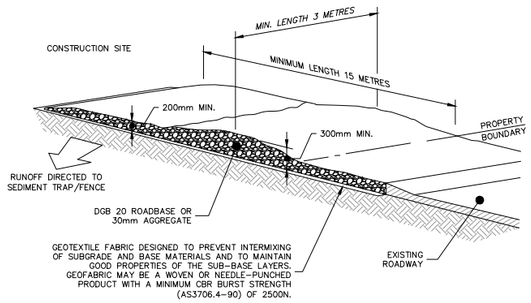
PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS
EROSION & SEDIMENT CONTROL NOTES

SURVEYED	DATUM	PROJECT No.	DISCIPLINE	NUMBER	REV.
LMCC	A.H.D. GDA 94 ZONE 56	239858	ENG	811	D

Plotted By: tims Plot Date: 06/08/20 – 09:15 Cad File: N:\239858\DWG's\Engineering\Civil\239858–ENG–811(D).dwg

100mm AT FULL SIZE

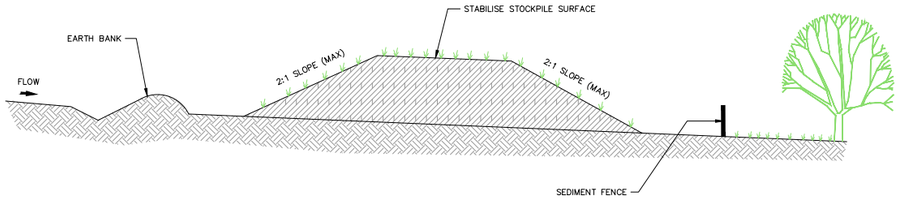


STABILISED SITE ACCESS (SD6-14)

N.T.S.

CONSTRUCTION NOTES:

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

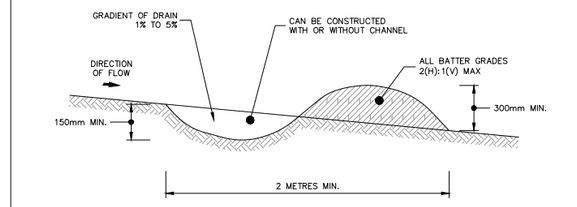


STOCKPILES (SD4-1)

N.T.S.

CONSTRUCTION NOTES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.



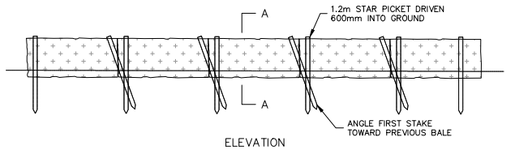
NOTE:
ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES.

DIVERSION DRAIN (SD5-5)

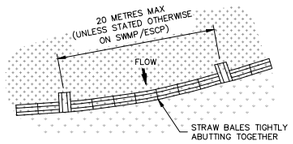
N.T.S.

CONSTRUCTION NOTES:

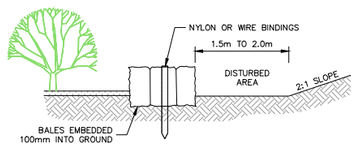
1. BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE – WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS,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



ELEVATION



PLAN



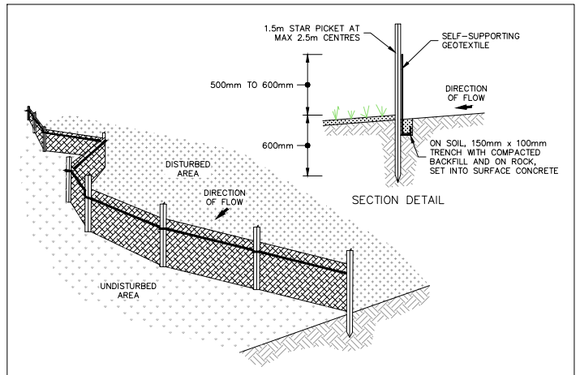
SECTION A–A

STRAW BALE FILTER (SD6-7)

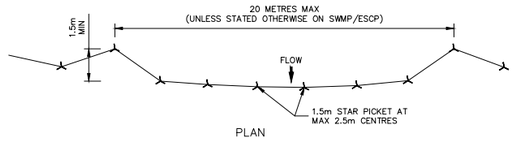
N.T.S.

CONSTRUCTION NOTES:

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



SECTION DETAIL



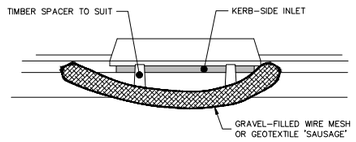
PLAN

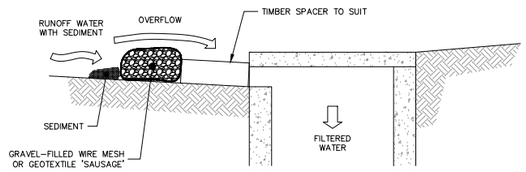
SEDIMENT FENCE (SD6-8)

N.T.S.

CONSTRUCTION NOTES:

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





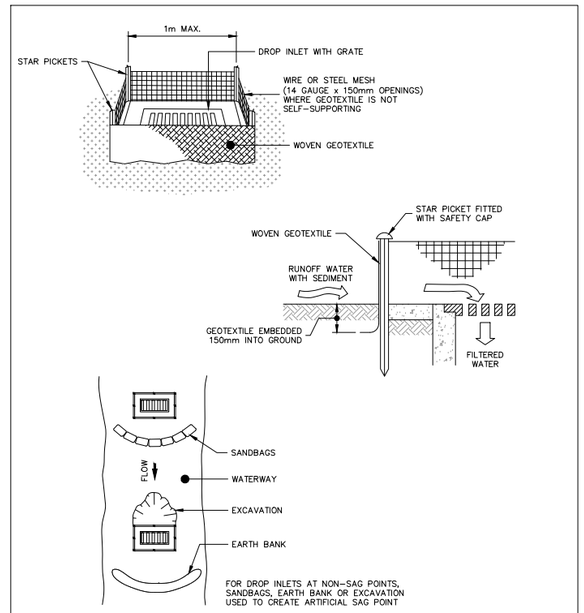
NOTE:
THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

MESH AND GRAVEL INLET FILTER (SD6-11)

N.T.S.

CONSTRUCTION NOTES:

1. INSTALL FILTERS TO KERB INLETS ONLY ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS SECTION ABOUT 150mm HIGH x 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.



GEOTEXTILE INLET FILTER (SD6-12)

N.T.S.

CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. REFER STANDARD DRAWINGS 6-7 & 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

SCALES

DESIGN FILE N:\239858\Design\12D\

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT

LAKE MACQUARIE CITY

PROPERTY DESCRIPTION

LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED LMCC

DATUM A.H.D. GDA 94 ZONE 56

PROJECT WYEE WEST PAPER SUBDIVISION

PLAN TITLE INFRASTRUCTURE WORKS
EROSION & SEDIMENT CONTROL DETAILS

PROJECT No.		DISCIPLINE		NUMBER	REV.
239858	-	ENG	-	812	D

239858-ENG-812(D)

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:15 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-812(D).dwg

239858-ENG-901(D)

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- (BB) TYPE BB BARRIER LINE
- (TB) TYPE TB GIVE WAY LINE
- (TB1) TYPE TB1 GIVE WAY LINE

MGA

ORIGIN OF LEVELS
M.G.A. 94
P.M. 70267
E: 358 935.256
N: 6 327 311.717
AHD: 30.510m A.H.D.

NOTES:

1. 'RT KERB' IS ROLL TOP KERB TO L.M.C.C. SPECIFICATIONS. 'SA KERB' IS STANDARD SA KERB TO L.M.C.C. SPECIFICATIONS. 'SB DISH GUTTER' IS STANDARD SB KERB TO L.M.C.C. SPECIFICATIONS SEE SHEET 111 FOR DETAILS.
2. REFER TO LANDSCAPE DRAWINGS FOR FURTHER DETAILS.
3. WORKS WITHIN EXISTING LOTS TO BE MINIMISED AS MUCH AS POSSIBLE.



PLAN
SCALE 1:500

DIAL 1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS LINEMARKING & SIGNAGE PLAN: SHEET 1

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	901	D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:16 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-901(D).dwg

239858-ENG-902(D)



LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- BB — TYPE BB BARRIER LINE
- TB — TYPE TB GIVE WAY LINE
- TB1 — TYPE TB1 GIVE WAY LINE

NOTES:

1. 'RT KERB' IS ROLL TOP KERB TO L.M.C.C. SPECIFICATIONS. 'SA KERB' IS STANDARD SA KERB TO L.M.C.C. SPECIFICATIONS. 'SB DISH GUTTER' IS STANDARD SB KERB TO L.M.C.C. SPECIFICATIONS SEE SHEET 111 FOR DETAILS.
2. REFER TO LANDSCAPE DRAWINGS FOR FURTHER DETAILS.
3. WORKS WITHIN EXISTING LOTS TO BE MINIMISED AS MUCH AS POSSIBLE.

DIAL1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

PLAN
SCALE 1:500

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS LINEMARKING & SIGNAGE PLAN: SHEET 2

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	902	D

100mm AT FULL SIZE

Plotted By: tims Plot Date: 06/08/20 – 09:16 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-902(D).dwg

239858-ENG-903(D)

100mm AT FULL SIZE

ADJOINS SHEET 904

ADJOINS SHEET 902

ADJOINS SHEET 901

100 DP1232264

4 DP1191556

PIRAMA ROAD

TULKABA ROAD

DILLABIRRA ROAD

GREAT NORTHERN RAILWAY LINE

MC01 (GOROKAN ROAD)

1.2m WIDE FOOTPATH

RT KERB

SA KERB

1.2m WIDE FOOTPATH

4.5 VERGE

3.5 VERGE

2.5 PARKING

GIVE WAY R1-2

TB

BB

MGA

DIAL1100 BEFORE YOU DIG

248 DP7506
249 DP7506
251 DP7506
252 DP7506
253 DP7506
254 DP7506
255 DP7506
256 DP7506
257 DP7506
258 DP7506
259 DP7506

305 DP7506
306 DP7506
307 DP7506
308 DP7506
309 DP7506
310 DP7506
311 DP7506
312 DP7506
313 DP7506
314 DP7506
315 DP7506
316 DP7506
317 DP7506
318 DP7506

304 DP7506
303 DP7506
302 DP7506
301 DP7506
300 DP7506
299 DP7506
298 DP7506
297 DP7506
296 DP7506
295 DP7506
294 DP7506
293 DP7506
292 DP7506
291 DP7506
290 DP7506

284 DP7506
285 DP7506
286 DP7506
287 DP7506
288 DP7506

341 DP7506
342 DP7506
343 DP7506
344 DP7506
345 DP7506
346 DP7506
347 DP7506
348 DP7506
349 DP7506
350 DP7506
351 DP7506
352 DP7506
353 DP7506
354 DP7506
355 DP7506

340 DP7506
339 DP7506
338 DP7506
337 DP7506
336 DP7506
335 DP7506
334 DP7506
333 DP7506
332 DP7506

319 DP7506
320 DP7506
321

R5-4-2(L)

P
6 AM - 5 PM
LMCC VEHICLES EXCEPTED

R5-4-2 DETAIL
NOT TO SCALE

PLAN
SCALE 1:500

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- BB — TYPE BB BARRIER LINE
- TB — TYPE TB GIVE WAY LINE
- TB1 — TYPE TB1 GIVE WAY LINE

NOTES:

1. 'RT KERB' IS ROLL TOP KERB TO L.M.C.C. SPECIFICATIONS. 'SA KERB' IS STANDARD SA KERB TO L.M.C.C. SPECIFICATIONS. 'SB DISH GUTTER' IS STANDARD SB KERB TO L.M.C.C. SPECIFICATIONS SEE SHEET 111 FOR DETAILS.
2. REFER TO LANDSCAPE DRAWINGS FOR FURTHER DETAILS.
3. WORKS WITHIN EXISTING LOTS TO BE MINIMISED AS MUCH AS POSSIBLE.

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION
LOTS 202 TO 378 D.P. 7506
GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC
DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION
PLAN TITLE: INFRASTRUCTURE WORKS LINEMARKING & SIGNAGE PLAN: SHEET 3

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	903	D

Plotted By: tims Plot Date: 06/08/20 – 09:16 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-903(D).dwg

239858-ENG-904(D)



PLAN
SCALE 1:500

LEGEND

- EXISTING LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- PROPOSED KERB
- BB — TYPE BB BARRIER LINE
- TB — TYPE TB GIVE WAY LINE
- TB1 — TYPE TB1 GIVE WAY LINE

NOTES:

1. 'RT KERB' IS ROLL TOP KERB TO L.M.C.C. SPECIFICATIONS. 'SA KERB' IS STANDARD SA KERB TO L.M.C.C. SPECIFICATIONS. 'SB DISH GUTTER' IS STANDARD SB KERB TO L.M.C.C. SPECIFICATIONS SEE SHEET 111 FOR DETAILS.
2. REFER TO LANDSCAPE DRAWINGS FOR FURTHER DETAILS.
3. WORKS WITHIN EXISTING LOTS TO BE MINIMISED AS MUCH AS POSSIBLE.

DIAL1100 BEFORE YOU DIG

NOT FOR CONSTRUCTION

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY
A	19.08.2019	INITIAL ISSUE	S.HO.	L.G.	R.CH.	L.G.
B	12.02.2020	PRELIMINARY ISSUE	S.HO.	T.L	A.L.	L.G.
C	19.03.2020	AMENDED FOR CLIENT COMMENTS	S.HO.	T.L	A.L.	L.G.
D	06.08.2020	AMENDED FOR COUNCIL COMMENTS	S.HO.	T.L	A.L.	L.G.

DESIGN FILE N:\239858\Design\12D\

SCALES: 0 10 20 A1 / A3 1:500 / 1:1000

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE

adw Johnson
Hunter Office
Unit 7/335 Hillsborough Rd
Warners Bay N.S.W. 2282
Phone: (02) 4978 5100
Fax: (02) 4978 5199
email: hunter@adwjohnson.com.au
www.adwjohnson.com.au
ABN 62 129 445 398

CLIENT: LAKE MACQUARIE CITY

PROPERTY DESCRIPTION: LOTS 202 TO 378 D.P. 7506 GOROKAN, BUSHELLS RIDGE, DILLABIRRA, TULLOKAN, WAROPARA, PIRAMA, TULKABA AND KARAKUMBA ROADS, WYEE

SURVEYED: LMCC

DATUM: A.H.D. GDA 94 ZONE 56

PROJECT: WYEE WEST PAPER SUBDIVISION

PLAN TITLE: INFRASTRUCTURE WORKS LINEMARKING & SIGNAGE PLAN: SHEET 4

PROJECT No.	DISCIPLINE	NUMBER	REV.
239858	ENG	904	D

Plotted By: tims Plot Date: 06/08/20 – 09:16 Cad File: N:\239858\DWG's\Engineering\Civil\239858-ENG-904(D).dwg

100mm AT FULL SIZE