GENERAL NOTES

G1. THESE NOTES APPLY TO ALL DRAWINGS IN THE CONTRACT SET. WHERE SPECIFIC NOTES ON OTHER DRAWINGS APPLY THEY SHOULD BE READ IN CONJUNCTION WITH THE GENERAL NOTES.
G2. ALL DIMENSIONS ARE IN METRES (m). (UNLESS OTHERWISE STATED)
G3. ALL LEVELS SHOWN ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
G4. DO NOT SCALE DIMENSIONS FROM DRAWINGS.
G5. WORKS TO BE COMPLETED IN ACCORDANCE WITH AS 4000 – 1997 GENERAL CONDITIONS OF CONTRACT, TO THE APPROVED PLAN, TO THE SATISFACTION OF THE SUPERINTENDENT AND TO ALL RELEVANT STANDARD DRAWINGS WHERE APPLICABLE.
G6. WORKS SUPERVISOR TO BE CONTACTED A MINIMUM OF 5 WORKING DAYS PRIOR TO COMMENCEMENT OF ANY WORKS THAT AFFECT ROAD ASSETS.
G7. A PLANNING PERMIT IS REQUIRED FOR A NEW ACCESS OR ALTERATION TO AN EXISTING DRIVEWAY AND MAY BE REQUIRED FOR THE REMOVAL OF NATIVE VEGETATION.
G8. A TRAFFIC MANAGEMENT PLAN MUST BE PREPARED AND IS TO COMPLY WITH THE RELEVANT CODE OF PRACTICE FOR WORK SITE SAFETY TRAFFIC MANAGEMENT IN RELATION TO ANY WORKS UNDERTAKEN WITHIN THE ROAD RESERVE.
G9. THE TYPICAL PAVEMENT DIAGRAM SHOWN ON THIS SHEET IS A GUIDE FOR A TYPICAL LAYOUT OF A ROADWAY ACCESS FOR A RURAL ROAD.
G10. PAVEMENT LINE MARKING REQUIREMENTS AS PER SHEET 10 OF 10.
G11. UNDERGROUND SERVICES:
PRIOR TO ANY EXCAVATION WORKS, CHECK WITH ALL RELEVANT RESPONSIBLE AUTHORITIES (e.g. TELECOMMUNICATIONS, ELECTRICITY, GAS, WATER etc.)
ABOVEGROUND SERVICES:
PRIOR TO ANY WORKS AN INSPECTION OF THE CONSTRUCTION FOOTPRINT SHOULD BE UNDERTAKEN TO IDENTIFY ANY ABOVEGROUND SERVICES AND APPROPRIATE PRECAUTIONS TAKEN TO ELIMINATE THE POTENTIAL OH&S RISKS.
G12. THE CONTRACTOR IS REQUIRED TO CONFINE ALL CONSTRUCTION VEHICLES TO THE EASEMENTS AND ROAD RESERVES. ANY DAMAGE CAUSED TO ADJACENT PROPERTIES MUST BE MADE GOOD.
G13. ALL FILL AREAS TO BE COMPACTED AS SPECIFIED. ALL STRUCTURAL FILLING MATERIAL IS TO BE APPROVED BY THE SUPERINTENDENT AND THE RELEVANT ROAD AUTHORITY PRIOR TO PLACEMENT.
G14. ALL FILL AREAS EXCEEDING 200mm ARE TO BE STRIPPED OF TOPSOIL, FILLED AND TOPSOIL REPLACED TO ACHIEVE THE FINAL FINISHED FILL LEVELS SHOWN ON THE DRAWINGS.
G15. SUBGRADE TO BE SELECT CLAY MATERIAL PLACED IN 150mm LAYERS. (ASSUME CBR OF 10%)
G16. RESERVES/EASEMENTS TO BE LEFT IN A CONDITION SATISFACTORY TO THE SUPERINTENDENT AND RELEVANT ROAD AUTHORITY.
G17. ALL PIPE AND SERVICE TRENCHES UNDER ROADS TO BE BACKFILLED WITH CLASS 2 CRUSHED ROCK.
G18. NO TOPSOIL IS TO BE REMOVED FROM SITE.
G19. UNLESS OTHERWISE SHOWN, ALL TREE'S AND SHRUB'S ARE TO BE RETAINED. WRITTEN PERMISSION MUST BE OBTAINED FROM THE SUPERINTENDENT WHERE PARTICULAR CONSTRUCTION NECESSITATES THEIR REMOVAL.
G20. ALL DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH THE EPA'S GUIDELINE "CONSTRUCTION GUIDELINES FOR CONSTRUCTION SITES" – DECEMBER 1995.
G21. ENVIRONMENTAL PROTECTION INCLUDING SILT CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
G22. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CARE AND MAINTENANCE OF ALL TBM'S. TBM'S FOUND TO BE DISTURBED OR MISSING AT THE COMMENCEMENT OF CONSTRUCTION ARE TO BE RE-ESTABLISHED BY A QUALIFIED SURVEYOR.
G23. ALL WORKS SHALL BE SETOUT AND PEGGED ACCURATELY PRIOR TO THE COMMENCEMENT OF WORKS BY A SUITABLY QUALIFIED SURVEYOR.

CONSTRUCTION SETOUT TABLE

POINT NO.	EASTING	NORTHING	RL (AHD)	DESCRIPTION
1	408343.028	6174124.320	124.02	DESIGN EDGE OF SEAL
2	408346.486	6174122.744	123.89	DESIGN ROAD CENTRELINE
3	408349.943	6174121.168	123.76	DESIGN EDGE OF SEAL
4	408350.908	6174123.285	–	DESIGN EDGE OF SEAL
5	408364.683	6174126.982	123.21	DESIGN EDGE OF SEAL
6	408383.286	6174167.793	–	DESIGN EDGE OF SEAL
7	408366.445	6174175.692	–	DESIGN EDGE OF SEAL
8	408371.181	6174176.764	123.00	ROAD CENTRELINE/GRADE CHANGE
9	408387.126	6174218.564	123.13	DESIGN EDGE OF SEAL
10	408390.488	6174216.787	123.00	DESIGN ROAD CENTRELINE
11	408392.823	6174212.883	122.87	DESIGN EDGE OF SEAL
12	408403.581	6174209.866	122.51	DESIGN EDGE OF SEAL
13	408407.553	6174216.753	122.51	DESIGN EDGE OF SEAL
14	408407.186	6174218.119	–	DESIGN EDGE OF SEAL
15	408397.726	6174221.733	–	DESIGN EDGE OF SEAL
16	408408.511	6174234.725	–	DESIGN EDGE OF SEAL
17	408398.461	6174238.218	–	DESIGN EDGE OF SEAL
18	408414.066	6174249.754	123.00	CENTRE POINT / RADIUS 10m
19	408404.604	6174253.429	–	DESIGN EDGE OF SEAL
20	408419.856	6174241.416	–	DESIGN EDGE OF SEAL
21	408424.164	6174250.785	122.67	EDGE OF CONCRETE BOAT RAMP
22	408453.691	6174279.274	117.81	EDGE OF CONCRETE BOAT RAMP
23	408448.137	6174285.032	117.81	EDGE OF CONCRETE BOAT RAMP
24	408420.062	6174257.944	122.67	EDGE OF CONCRETE BOAT RAMP

EARTHWORK NOTES

E1. RECORDS SHALL BE KEPT OF ALL EARTHWORK CONSTRUCTION AS CONTAINED IN AS3798-2007 CLAUSE 3.4 AND A COPY MADE AVAILABLE TO THE SUPERINTENDENT UPON COMPLETION.
E2. ALL TOPSOIL SHALL BE SPRAYED WITH A PRE-EMERGENT HERBICIDE PRIOR TO STRIPPING.
E3. PRIOR TO THE COMMENCEMENT OF WORKS THE SITE SHALL BE STRIPPED AND MATERIAL STOCKPILED AT DESIGNATED LOCATIONS CLEAR OF THE WORKS.
E4. ANY EXCESS TOPSOIL SHALL REMAIN THE PROPERTY OF THE PRINCIPAL AND IS TO BE STORED AS DIRECTED FOR USE IN THE FUTURE.
E5. ALL SUBGRADE FILL MATERIAL IS NOT TO CONTAIN ANY VEGETABLE MATTER AND SHOULD CONFORM TO ONE OF THE CLASSES LISTED BELOW.

* GW-SC WELL GRADED SAND AND GRAVEL WITH CLAY BINDER
* GC CLAYEY GRAVEL SOILS
* SW-SC SAND WITH CLAY BINDER
* SC SILTY CLAY

E6. ALL LOOSE FILL MATERIAL SHALL BE SPREAD BEFORE COMPACTION TO FORM AN EVEN LAYER THICKNESS. WHERE PRACTICABLE THE LAYERS SHALL BE PARALLEL TO THE FINISHED SURFACE OR HORIZONTAL.
E7. FILL MATERIAL IS TO BE PLACED IN 150mm LAYERS COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AS 1289-E1.1.
E8. DUST SUPPRESSION IS TO BE ACHIEVED USING AN APPROVED METHOD OR COMBINATION OF METHODS.
E9. THE MOISTURE CONTENT OF THE FILL MATERIAL IS TO BE MONITORED AT ALL TIMES. WHERE NECESSARY ADDITIONAL WATER WILL BE BROUGHT TO THE SITE AND ADDED TO THE FILL MATERIAL AT A CONTROLLED RATE. THE WATER IS TO BE CLEAN AND CARTED/DISTRIBUTED USING APPROVED EQUIPMENT ONLY.
E10. ANY SOFT AREAS ENCOUNTERED ARE TO BE INSPECTED BY THE SUPERINTENDENT. THE SUPERINTENDENT MAY DETERMINE THAT THE SOFT MATERIAL IS TO BE EXCAVATED AND REMOVED FROM THE SITE. WHERE THE MATERIAL WITHIN THE SOFT SPOT IS DEEMED BY THE SUPERINTENDENT TO BE RECOVERABLE THE SUPERINTENDENT MAY ALSO DETERMINE A METHODOLOGY FOR TREATING THE UNSUITABLE MATERIAL.
E11. ALL HAULAGE ROUTES AND ALIGNMENTS WILL BE SUBJECT TO THE APPROVAL OF THE SUPERINTENDENT.
E12. ALL UNSUITABLE MATERIALS INCLUDING BUT NOT LIMITED TO LITTER, BUILDING WASTE, STONE, RUBBLE, DEBRIS, ORGANIC MATERIAL AND VEGETABLE MATTER SHALL NOT BE INCORPORATED INTO THE WORK. ALL SUCH MATERIAL SHALL BE COLLECTED ON A REGULAR BASIS AND STOCKPILED CLEAR OF THE WORKS AND IS TO BE DISPOSED OF BY THE CONTRACTOR TO AN APPROVED LOCATION.
E13. DE-WATERING WHERE APPLICABLE IS TO BE CARRIED OUT IN ACCORDANCE WITH THE EPA'S "CONSTRUCTION GUIDELINES FOR MAJOR CONSTRUCTION SITES" – DECEMBER 1995.
E14. ALL SURPLUS SPOIL MATERIAL NOT REQUIRED IS TO BE STOCKPILED CLEAR OF THE WORKS.
E15. ANY BORROW MATERIAL REQUIRED FOR SUBGRADE WILL BE SOURCED FROM AN APPROVED LOCATION AND TESTED IN ACCORDANCE WITH AS 1209.3.8.1.
E16. THE CONTRACTOR SHALL KEEP AND MAINTAIN DETAILED RECORDS OF THE COMPACTION METHOD USED AND THE PLACEMENT OF ALL FILL MATERIALS.
E17. THERE IS TO BE NO FILL MATERIAL PLACED AGAINST OR WITHIN CLOSE PROXIMITY TO FENCES OR OTHER NON STRUCTURAL OBJECTS WITHOUT THE SUPERINTENDENTS PRIOR APPROVAL.

BEACHING NOTES

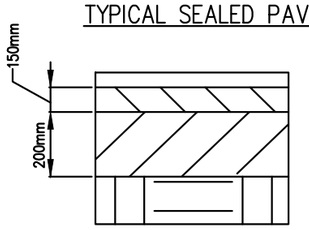
B1. BEACHING STONE SHALL CONSIST OF CLEAN SOUND HARD QUARRIED ROCK OF UNIFORM QUALITY WITH AN UNCONFINED CRUSHING STRENGTH OF NOT LESS THAN 25MPa AND FREE OF DEFINED CLEAVAGE PLANES.
B2. THE SIZE AND GRADING OF THE STONE SHALL CONFORM AS NEARLY AS PRACTICAL TO THE SIZES SET OUT IN TABLE 1.
B3. THE MINIMUM THICKNESS SHALL BE AS DEFINED IN TABLE 1.
B4. UNLESS NOTED OTHERWISE THE STANDARD BEACHING SIZE SHALL BE TYPE 3.
B5. ALL BEACHING TO BE UNDERLAIN BY BIDIM A44 OR APPROVED EQUIVALENT GEOTEXTILE MEMBRANE KEYED IN ALONG ALL EDGES.

TABLE 1

% PASSING SCREEN SIZE			
% PASSING	TYPE 2	TYPE 3	D50 = 225
450mm	-	-	100
300mm	-	100	70-95
225mm	100	70-95	40-65
150mm	60-65	50-70	20-35
75mm	40-65	35-50	10-20
37.5	20-35	15-30	-
26.5	10-20	10-20	-
MINIMUM LAYER THICKNESS	150	225	300

LOCALITY PLAN
SCALE – NTS

TYPICAL SEALED PAVEMENT



7mm Primerseal +
14/7 Two coat final seal

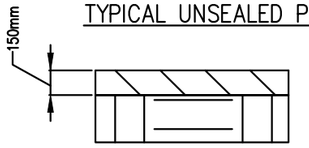
Basecourse – 50% mix PSG & Class 2 FCR – Stabilise with 1.5% Triple Blend

Subbase – PSG – Stabilise with 1.5% Triple Blend Assume CBR of > 30%

Subgrade – Assume CBR of 10% – Stabilise with 3% Quicklime

*Triple Blend – 60% Cement, 30% Slag, 10% Fly Ash.

TYPICAL UNSEALED PAVEMENT



Basecourse – 50% mix PSG & Class 2 FCR – Stabilise with 1.5% Triple Blend

Subgrade – Assume CBR of 10% – Stabilise with 3% Quicklime

*Triple Blend – 60% Cement, 30% Slag, 10% Fly Ash.

EARTHWORKS AND CONCRETE SCHEDULE

ITEM	SEAL (m2)	BASECOURSE (m3)	SUBBASE (m3)	CUT (m3)	FILL (m3)	CONCRETE (m3)	CONCRETE BASE CLASS 2 FCR (m3)	CONCRETE STRENGTH (MPa)
SEALED ROADWAY	2519	497	663	330	1318			
UNSEALED ROADWAY		2376						
BOAT RAMP				350.75	4.5	81	45.5	40
ACCESS RAMP						21	19	25
TOTALS	2519	2873	663	680.75	1322.50	102	64.50	

DRAWING SET REGISTER

DRAWING NO.	DRAWING DESCRIPTION	REVISION
2016-107/SHT1	DESIGN NOTES AND LOCALITY PLAN	2
2016-107/SHT2	DESIGN NOTES 2	2
2016-107/SHT3	SITE PLAN	3
2016-107/SHT4	BOAT RAMP SITE PLAN	3
2016-107/SHT5	RIVER CROSS-SECTIONS	3
2016-107/SHT6	RAMP CROSS-SECTIONS	3
2016-107/SHT7	ROADWAY CROSS-SECTIONS	2
2016-107/SHT8	ROADWAY LONGITUDINAL SECTION	2
2016-107/SHT9	DESIGN DETAILS	2
2016-107/SHT10	PAVEMENT LINEMARKING DETAILS	2
2016-107/SHT11	PONTOON DESIGN PLAN AND DETAILS	2

REV	DATE	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	REVISIONS
–	–				–
2	23/10/17				ISSUED FOR CONSTRUCTION
1	30-08-17				ISSUED FOR DISCUSSION

LEVEL BOOK: AMS-BK101

NORTH

SCALE N.T.S.

SURVEYED BY	DRAWN	DESIGNED	DATE
D.LEE	D.LEE	D.LEE	30-08-17

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N.106 901 777

MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

PROPOSED DARLINGTON POINT BOAT RAMP

DESIGN NOTES & LOCALITY PLAN

RICH RIVER IRRIGATION DEVELOPMENTS
Unit 1, 164 Ogilvie Avenue, Echuca. 3564.
Telephone (03) 5482 2564 Fax (03) 5482 1918 Email admin@rrid.com.au

SHEET NUMBER	DRAWING NUMBER	REVISION
01 OF 11	2016-107	2

A3

CONCRETE GENERAL

C1. CONCRETE SHALL BE IN ACCORDANCE WITH AS3600 CONCRETE STRUCTURES.

C2. EXPOSURE CLASSIFICATION FOR DURABILITY IS B1.

C3. CONCRETE TO BE AS FOLLOWS:

STRUCTURAL ELEMENT	WALKWAY	BOAT RAMP SLAB
STRENGTH GRADE (MPa)	N25	N40
CEMENT TYPE	GP	GP

C4. MINIMUM 15mm CHAMFERS ARE REQUIRED ON ALL EXPOSED CONCRETE EDGES AND CORNERS.

C5. THE USE OF CONCRETE ADMIXTURES WHERE REQUIRED SHALL BE SUBJECT TO THE APPROVAL OF THE SUPERINTENDENT AND SHALL CONFORM TO AS1478.1. WHERE FORMS TO BE STRIPPED BEFORE 24 HRS SIKA RAPID 1 OR EQUIVALENT SHOULD BE USED.

C6. SURFACE FINISHES SHALL BE IN ACCORDANCE WITH AS3610 UNLESS SHOWN OTHERWISE ON DRAWINGS.

C7. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.

C8. ELAPSED TIME BETWEEN WETTING OF MIX AND DISCHARGE OF CONCRETE AT SITE MUST BE AS SHORT AS POSSIBLE AND COMPLY WITH THE FOLLOWING.

CONCRETE TEMPERATURE AT TIME OF DISCHARGE (°C)	MAXIMUM ELAPSED TIME (HOURS)
10-24	2.00
24-27	1.50
27-30	1.00
30-32	0.75

C9. NO UNCONTROLLED WATER TO BE ADDED ON SITE WITHOUT PRIOR CONSENT OF MIX DESIGNER.

C10. THE COVER (OR "CLEAR COVER") AS STATED ON THE DRAWINGS, SHALL BE THE CLEAR DISTANCE FROM THE FACE OF ANY REINFORCEMENT, WIRE TIES FOR FIXING REINFORCEMENT, FORMWORK FIXINGS OR SIMILAR METAL WORK TO THE NEAREST CONCRETE SURFACE.

C11. COVER TO BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

SUBSTRATE	MINIMUM COVER (mm)
DAMP PROOF MEMBRANE	40
BLINDING LAYER	50
ON GROUND	75

C12. CONCRETING SHALL BE COMMENCED AT THE LOWEST LEVEL OF EACH PART OF THE WORK AND SHALL BE BROUGHT UP IN A MANNER APPROVED BY THE PROJECT MANAGER, THE PLACING ROUTINE BEING SUCH THAT EACH LAYER MUST STILL BE SOFT WHEN A NEW LAYER IS PLACED UPON IT. THE CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY APPROVED VIBRATORS.

C13. CONCRETE SHALL NOT BE PLACED IN WATER, EXCEPT WITH THE APPROVAL OF THE PROJECT ENGINEER, AND THEN UNDER SUCH CONDITIONS AS THE PROJECT ENGINEER MAY IMPOSE.

C14. IMMEDIATELY BEFORE PLACING CONCRETE, ALL SURFACES OR FOUNDATION UPON OR AGAINST WHICH THE CONCRETE IS TO BE PLACED, SHALL BE FREE FROM STANDING WATER (EXCEPT AS PROVIDED ABOVE), MUD, OR DEBRIS. ALL SURFACES OF ROCK UPON OR AGAINST WHICH CONCRETE IS TO BE PLACED, SHALL IN ADDITION, BE FREE AND CLEAN FROM OIL, OBJECTIONABLE COATINGS AND FROM ALL LOOSE, SEMIDETACHED OR UNSOUND FRAGMENTS. THE SURFACE OF ABSORPTIVE FOUNDATIONS AGAINST WHICH CONCRETE IS TO BE PLACED SHALL BE MOISTENED THOROUGHLY.

C15. DO NOT USE VIBRATORS TO MOVE CONCRETE ALONG FORMS, USE PLACEMENT METHODS THAT WILL MINIMISE PLASTIC SETTLEMENT AND SHRINKAGE CRACKING. LIMIT VERTICAL FREE FALL BY USE OF CHUTES, ETC. KEEP CHUTES VERTICAL, FULL AND IMMERSED IN PLACED CONCRETE. PLACE CONCRETE IN LAYERS AND BLEND SUCCEEDING LAYERS BY COMPACTION. MAINTAIN A PLASTIC CONCRETE EDGE BETWEEN CONSTRUCTION JOINTS. PROPERLY COMPACT CONCRETE USING MECHANICAL VIBRATORS (AND HAND METHODS IF REQUIRED) TO REMOVE AIR BUBBLES AND GIVE MAXIMUM COMPACTION WITHOUT SEGREGATION OF CONCRETE. TAKE CARE TO AVOID CONTACT BETWEEN VIBRATORS AND PARTIALLY HARDENED CONCRETE, FORMWORK OR REINFORCEMENT.

C16. IN COLD WEATHER MAINTAIN TEMPERATURE OF FRESHLY MIXED CONCRETE WITHIN LIMITS SHOWN BELOW. 'OUTDOOR' AIR TEMPERATURE IS AIR AT TIME OF MIXING, OR PREDICTED OR LIKELY AIR TEMPERATURE DURING NEXT 48 HOURS. BEFORE AND WHILE PLACING CONCRETE. MAINTAIN TEMPERATURE OF FORMWORK AND REINFORCEMENT AT >5°C. DO NOT USE CALCIUM CHLORIDE, SALTS, CHEMICALS OR OTHER MATERIAL IN MIX TO LOWER THE FREEZING POINT OF CONCRETE. DO NOT ALLOW FROZEN MATERIALS TO ENTER MIXER. KEEP FORMS, MATERIALS, EQUIPMENT IN CONTACT WITH CONCRETE FREE OF FROST AND ICE. HEAT CONCRETE MATERIALS (OTHER THAN CEMENT) TO MINIMUM TEMPERATURE NECESSARY TO ENSURE TEMPERATURE OF PLACED CONCRETE IS WITHIN LIMITS SPECIFIED. MAXIMUM WATER TEMPERATURE: 60°C WHEN PLACED IN MIXER.

OUTDOOR AIR TEMPERATURE	TEMPERATURE OF CONCRETE	
	MINIMUM	MAXIMUM
>5°C	10°C	32°C
<5°C	18°C	32°C

C17. IN HOT WEATHER PREVENT PREMATURE STIFFENING OF FRESH CONCRETE; REDUCE WATER ABSORPTION AND EVAPORATION LOSSES. MIX, TRANSPORT, PLACE AND COMPACT CONCRETE AS QUICKLY AS POSSIBLE. DURING PLACEMENT TEMPERATURE OF CONCRETE MUST NOT EXCEED TEMPERATURES BELOW.

CONCRETE ELEMENT	TEMPERATURE
NORMAL CONCRETE IN FOOTINGS, BEAMS, COLUMNS, WALLS AND SLABS f'c ≤ 32MPa	35°C
MASS CONCRETE SECTIONS ≥ 1.0m EACH DIMENSION, OR CONCRETE f'c ≥ 40 MPa IN SECTIONS ≥ 600mm THICKNESS	27°C

C18. DO NOT MIX CONCRETE WHEN SURROUNDING OUTDOOR SHADE TEMPERATURE ≥ 38°C MAINTAIN TEMPERATURE OF FORMWORK AND REINFORCEMENT AT ≤32°C BEFORE AND DURING PLACING. MAINTAIN SPECIFIED TEMPERATURE OF PLACED CONCRETE BY:
- COOL CONCRETE USING LIQUID NITROGEN INJECTION BEFORE PLACING, OR
- COVER CONTAINER IN WHICH CONCRETE IS TRANSPORTED TO FORMS, OR
- SPRAY COARSE AGGREGATE USING COLD WATER OR USE CHILLED MIXING WATER.

C19. PROTECT FRESH CONCRETE FROM PREMATURE DRYING - PARTICULARLY IN HOT, WINDY OR DRY (LOW HUMIDITY) CONDITIONS, EXCESSIVELY HOT OR COLD TEMPERATURES, RAIN, ETC. PROVIDE WIND BREAKS. MAINTAIN CONCRETE AT A REASONABLY CONSTANT TEMPERATURE WITH MINIMUM MOISTURE LOSS FOR CURING PERIOD.

C20. KEEP ON SITE A LOG BOOK RECORDING EACH PLACEMENT OF CONCRETE INCLUDING DATE, CLIMATIC CONDITIONS, PORTION OF WORK, SPECIFIED GRADE AND SOURCE OF CONCRETE, DELIVERY DOCKET DATA, METHODS OF PLACEMENT AND COMPACTION, PROJECT ASSESSMENT CARRIED OUT, SLUMP MEASUREMENT AND VOLUME.

C21. CONSTRUCTION JOINTS OR POUR BREAKS WHERE NOT SHOWN ON THE DRAWINGS SHALL BE LOCATED AND FORMED TO THE APPROVAL OF THE PROJECT ENGINEER.

C22. CURING OF ALL CONCRETE SHALL COMMENCE NO LATER THAN 2 HOURS AFTER FINISHING OPERATIONS HAVE BEEN COMPLETED. THE CONCRETE SHALL BE CURED FOR A PERIOD OF 7 DAYS (UNLESS APPROVED OTHERWISE BY THE ENGINEER) BY ONE OF THE FOLLOWING METHODS:
- PONDING OR CONTINUOUS SPRINKLING WITH WATER.
- USE OF AN ABSORPTIVE COVER KEPT CONTINUOUSLY WET.
- COATING WITH AN APPROVED SPRAYED MEMBRANE CURING COMPOUND WHERE COMPATIBLE WITH FINISHES.
- USE OF AN APPROVED MOISTURE RETAINING COVERING SUCH AS HEAVY GAUGE BUILDERS PLASTIC OR PAPER FIRMLY HELD AGAINST CONCRETE SURFACES TO PREVENT AIR CIRCULATION.

C23. CONSTRUCTION SUPPORT PROPPING SHALL BE LEFT IN PLACE WHERE NEEDED TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING. WHEN AIR TEMPERATURE IS BELOW 5°C OR ABOVE 35°C SPECIAL CONCRETE PLACEMENT PRECAUTIONS SHALL BE TAKEN IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE.

C24. STRIP FORMWORK TO AS3600 CLAUSE 17.6. REMOVE FROM TIE BOLTS WITHOUT DAMAGING CONCRETE. PARTS OF BOLTS LEFT IN CONCRETE MUST NOT INTRUDE INTO COVER CONCRETE. FLUSH FILL HOLES USING MATERIAL MATCHING CONCRETE SURFACE COLOUR, STRENGTH AND DURABILITY.

C25. THE CONCRETE FINISH SHALL BE TO THE SATISFACTION OF THE PROJECT ENGINEER.

C26. SURFACE IRREGULARITIES SHALL BE TESTED BY USE OF A TEMPLATE 1.5m LONG AND SHALL CONSISIT OF A STRAIGHT EDGE. THE MAXIMUM SURFACE IRREGULARITY FOR EACH CLASS OF FORMWORK MEASURED USING THE TEMPLATE SHALL BE AS FOLLOWS:
- CLASS 2 - 5mm
- CLASS 3 - 7mm
- CLASS 4 - NO MEASUREMENT REQUIRED.
- CLASS 5 - NO MEASUREMENT REQUIRED.

C27. THOSE CONCRETE SURFACES REQUIRED TO BE RENDERED AND ANY OTHER CONCRETE SURFACE WHICH THE PROJECT ENGINEER MAY ORDER TO BE RENDERED SHALL BE TREATED AS FOLLOWS:
- THE CONCRETE SURFACE SHALL BE SCABBLED AND DAMPENED.
- CEMENT MORTAR, MIXED IN THE PROPORTION OF 80kg OF PORTLAND CEMENT TO 0.1m^3 OF SAND (DRY RODDED MEASUREMENT), SHALL BE APPLIED IN ONE OR TWO COATS, AS MAY BE ORDERED BY THE PROJECT MANAGER, TO FORM A TOTAL THICKNESS OF ABOUT 13mm.
- FOR TWO-COAT WORK, THE FIRST COAT SHALL BE WELL WORKED ON TO THE SURFACE AND SHALL BE SCORED BEFORE IT HAS SET HARD AND SHALL BE KEPT DAMP UNTIL THE SECOND COAT IS APPLIED.

C28. ALL CONCRETE PILES SHALL BE INSTALLED IN ACCORDANCE WITH AS2159.

FORMWORK

FW1. ALL FORMWORK TO BE CLASS 3 IN ACCORDANCE WITH AS 3610.

FW2. ALL HOLES LEFT BY FORM TIES TO BE PLUGGED TO FULL COVER DEPTH WITH CEMENTITIOUS GROUT.

FW3. FORMS TO BE CLEANED OF ANY TIE WIRE, REINFORCEMENT OFFCUTS, SCREWS, FIXINGS, DIRT ETC. BEFORE POUR.

FW4. FORM SURFACES SHALL BE SMOOTH AND FREE FROM HOLES OR IRREGULARITIES, AND TO THE SATISFACTION OF THE PROJECT MANAGER. BEFORE CONCRETE IS PLACED, THE SURFACES OF THE FORMS SHALL BE COATED WITH AN APPROVED FORM COATING THAT WILL EFFECTIVELY PREVENT STICKING AND WILL NOT STAIN THE CONCRETE SURFACES.

FW5. MINIMUM FORMWORK STRIPPING TIMES FOR VERTICAL FACES SHALL BE AS GIVEN IN AS 3610, TABLE 5.4.1.

SEALANT

PS1. SEALANT TO BE EMERSEAL PU40 OR APPROVED EQUIVALENT INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR IMMERSED WATER APPLICATIONS OR APPROVED ALTERNATIVE.

PS2. SURFACE TO BE PREPARED USING PARCHEM PRIMER 13 OR APPROVED ALTERNATIVE.

REINFORCEMENT

R1. REINFORCEMENT SHALL BE DEEMED TO INCLUDE ALL REINFORCING BARS, REINFORCING MESH, AND DOWEL BARS. REINFORCEMENT SHALL COMPLY WITH AS4671-2001.

R2. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY; IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.

R3. REINFORCING MESH TO BE GRADE D500L COLD ROLLED HIGH STRENGTH DEFORMED FABRIC IN ACCORDANCE WITH AS 4671

R4. REINFORCING BARS TO BE GRADE D500N HOT ROLLED HIGH STRENGTH DEFORMED BARS IN ACCORDANCE WITH AS 4671.

R5. N12 TRIM BARS ARE REQUIRED ON ALL SLOPING, VERTICAL AND HORIZONTAL FACES OF CONCRETE WHERE THERE IS NO OTHER BAR WITHIN 100mm OF THAT FACE.

R6. LAPPING OF REINFORCING BARS AND FABRIC TO BE IN ACCORDANCE WITH AS 3600.

R7. REINFORCEMENT WHICH REQUIRES FABRICATION OR BENDING TO SHAPE SHALL BE SUPPLIED IN THE FULL LENGTH SHOWN ON THE DRAWINGS. REINFORCEMENT SHALL BE COLD BENT TO THE SPECIFIED SHAPE. BARS SHALL NOT BE BENT AFTER FABRICATION UNLESS SHOWN ON THE DRAWINGS.

R8. STRAIGHT BARS SHALL BE SUPPLIED TO THE FULL LENGTHS SHOWN ON THE DRAWINGS. WHERE LAPPING OF STRAIGHT BARS IS UNAVOIDABLE, SUCH LAPS SHALL BE STAGGERED AND A MINIMUM OF TWO WIRE TIES PLACED AT EACH LAP.

R9. REINFORCING MESH IS TO BE LAPPED A MINIMUM OF TWO BARS AT ANY SPLICE.

R10. WHERE NOT SHOWN ON THE DRAWINGS, ADOPT THE FOLLOWING LAP SPLICE LENGTHS.

BAR SIZE & TYPE	HORIZONTAL BARS WITH MORE THAN 300mm CONCRETE CAST BELOW	OTHER BARS
N12	375	300
N16	560	450
N20	830	660
N24	1150	920
N28	1530	1220
N32	1900	1520
N36	2340	1870

R11. REINFORCEMENT SYMBOLS:
N GRADE D500N DEFORMED BAR.
RL & SL GRADE D500L DEFORMED FABRIC
THE NUMBER FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES.

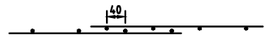
R12. REINFORCEMENT NOTATIONS:
EF EACH FACE
EW EACH WAY
T TOP
B BOTTOM
CP CENTRALLY PLACED

R13. WELDING OF REINFORCEMENT WILL ONLY BE PERMITTED WITH THE PRIOR APPROVAL OF THE ENGINEER.

R14. A BOND BREAKING MATERIAL SHALL BE USED BETWEEN CONTACTING SURFACES AT CONTROL JOINTS. REFER DRAWINGS. REINFORCEMENT SHALL NOT BE CONTINUOUS THROUGH CONTROL JOINTS UNLESS NOTED OTHERWISE.

R15. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON EITHER PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1000 CRS BOTH WAYS, BARS SHALL BE TIED AT ALTERNATIVE INTERSECTIONS.

R16. SUPPLY AND LAY FABRIC IN FLAT SHEETS. AT SPLICES, FABRIC SHALL BE LAPPED AS FOLLOWS:



MAXIMUM THREE SHEETS OF FABRIC TO BE LAPPED AT ANY SPLICE

R17. ALL STARTER BARS TO EXISTING CONCRETE TO BE GROUTED USING EITHER HILTI HIT-HY 150 MAX. OR HILTI HIT-RE 500.

R18. BEFORE THE REINFORCEMENT IS PLACED, THE SURFACE OF THE REINFORCEMENT AND THE SURFACES OF ANY METAL BAR SUPPORTS SHALL BE CLEANED OF ANY HEAVY RUST, LOOSE MILL SCALE, DIRT, GREASE AND OTHER FOREIGN SUBSTANCES. AFTER BEING PLACED, THE REINFORCEMENT SHALL BE MAINTAINED IN A CLEAN CONDITION UNTIL IT IS COMPLETELY EMBEDDED IN THE CONCRETE.

R19. REINFORCEMENT SHALL BE ACCURATELY PLACED AND SUPPORTED TO PREVENT DISPLACEMENT DURING ALL STAGES OF CONCRETING. TACK WELDING OR WIRE TIES ARE ACCEPTABLE METHODS FOR PREVENTING SUCH DISPLACEMENT.

R20. WHERE APPROVED BY THE PROJECT ENGINEER THE CONTRACTOR SHALL BE PERMITTED TO LOCATE JOINTS OR SPLICES AT LOCATIONS OTHER THAN THOSE SHOWN ON THE DRAWINGS.

R21. WHERE WELDED SPLICES IN REINFORCING BARS ARE USED, THE EQUIPMENT, MATERIALS AND ALL WELDING AND TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH AS 1554.3 - 2002. REINFORCING BAR LAP LENGTHS SHALL BE MAINTAINED ACROSS ALL WELDED LOCATIONS.

COFFER DAM

CD1. STEEL SHEET PILE COFFER TO BE INSTALLED IN ACCORDANCE WITH AS2159.

REV	DATE	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	REVISIONS
-	-				-
2	23/10/17				ISSUED FOR CONSTRUCTION
1	30/08/17				ISSUED FOR DISCUSSION

LEVEL BOOK: AMS-BK101

SURVEYED BY	DRAWN	DESIGNED
D.LEE	D.LEE	D.LEE

SCALE N.T.S.

DATE 30-08-17

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N.106 901 777

MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

PROPOSED DARLINGTON POINT BOAT RAMP

DESIGN NOTES 2

RICH RIVER IRRIGATION DEVELOPMENTS
Unit 1, 164 Ogilvie Avenue, Echuca. 3564.
Telephone (03) 5482 2564 Fax (03) 5482 1918 Email admin@rrid.com.au

SHEET NUMBER	DRAWING NUMBER	REVISION
02 OF 11	2016-107	2

A3

LOCALITY PLAN

NOT TO SCALE

PM 24182
124.35

NORTH

SCALE

HORIZONTAL
VERTICAL

25 12.5 0 25 50 75

meters

DIAL BEFORE YOU DIG www.1100.com.au

Services

The location of services shown on the plan should be proven to be correct prior to construction.

The relevant authorities should be contacted prior to commencement of works to ascertain the correct location of all services.

Disclaimer

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REV	DATE	REVISIONS
3	23/10/17	ISSUED FOR CONSTRUCTION
2	30/08/17	PRELIMINARY DESIGN FOR DISCUSSION
1	21/12/16	DRAFT FOR DISCUSSION

LEGEND

Asphalt Driveway		Concrete Driveway		Gravel Driveway		S.E.C. U/G Cable	E	Fire Hydrant		Proposed Culvert	
Proposed K & C		Permanent Mark	PM	Tree to be removed		Gas Main	G	Fire Plug	F.P.	Proposed Picnic Table	
Conduits	C	Telstra U/G Cable	T	Telstra Pole		Sewer Main	S	Valve		Proposed Shelter	
Existing Drains	D	Water Main	W	Telstra Pit		Property Outlet	SW	S.E.C. Pole		Survey Station	PEG
Existing Drain Pits		Proposed Drain Pits		Proposed Drains	PD	Existing K & Ch		Existing Culvert		Rock Spalling	

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N. 106 901 777

SURVEY NOTES

Topographical & Feature Survey
Datum A.H.D.
Contour Interval 100 mm.

MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

PROPOSED DARLINGTON POINT BOAT RAMP

SITE PLAN

RICH RIVER IRRIGATION DEVELOPMENTS
UNIT 1, 164 OGILVIE AVENUE, ECHUCA 3564
Telephone (03) 5482 2564 Fax (03) 5482 1918

TITLE	SIZE	SHEET NUMBER	DRAWING NUMBER	REVISION
DARLINGTON POINT BOAT RAMP DESCRIPTION: SITE PLAN (1:1000)	A1	03 OF 11	2016-107	3

LOCALITY PLAN
NOT TO SCALE

NORTH

RRUMBIDGEE

EXISTING BEACHING

CH 0.00

TOP OF LEVEE BANK/RETAINING WALL

WALKWAY

RIVER SECTION 3

119.20 117.50 115.50 115.70 116.00 116.30 116.90 118.00 118.30 118.90

CH 76.06

PROPOSED FUTURE PONTOON EXTENSION

PROPOSED 30m LONG PONTOON

ACCESS RAMP TO BE FIXED WITH N12 STARTER BARS TO EXISTING WALKWAY

STATION 1
E 408425.382
N 6174290.414
ELE. 123.47

PROPOSED CONCRETE DISABILITY ACCESS RAMP (3m wide X 100mm thick with SL81 mesh centrally placed)

RIVER SECTION 2

118.70 118.00 117.00 116.20 116.30 118.30 118.90

CH 114.22

PT 23

RETAINING WALL

ROCK ARMOUR SCOUR PROTECTION

RIVER SECTION 1

117.80 117.00 117.10 118.30 118.90

CH 82.26

TYPE 2 BEACHING

Water Level

PT 24

PT 22

116.00 116.50 116.60 117.20

ROADWAY SECTION "E"

PT 21

PT 19

PT 18

PT 17

PT 16

LEVEE BANK 126.84

119.80 119.50

RIVER

CH 0.00

DRAIN

PT 20

"E"

B 119.80

SCALE
HORIZONTAL
VERTICAL
10 5 0 10 20 30
meters

SURVEY NOTES

Topographical & Feature Survey
Datum A.H.D.
Contour Interval 100 mm.

DIAL BEFORE YOU DIG www.1100.com.au

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REV	DATE	REVISIONS
3	23/10/17	ISSUED FOR CONSTRUCTION
2	30/08/17	PRELIMINARY DESIGN FOR DISCUSSION
1	21/12/16	DRAFT FOR DISCUSSION

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LEGEND

Asphalt Driveway		Concrete Driveway		Gravel Driveway		S.E.C. U/G Cable	E	Fire Hydrant	F.H.	Proposed Culvert	
Proposed K & C		Permanent Mark	PM	Tree to be removed		Gas Main	G	Fire Plug	F.P.	Proposed Picnic Table	
Conduits	C	Telstra U/G Cable	T	Telstra Pole		Sewer Main	S	Valve		Proposed Shelter	
Existing Drains	D	Water Main	W	Telstra Pit		Property Outlet	SW	S.E.C. Pole		Survey Station	PEG
Existing Drain Pits		Proposed Drain Pits		Proposed Drains	PD	Existing K & Ch		Existing Culvert		Rock Spalling	

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N. 106 901 777

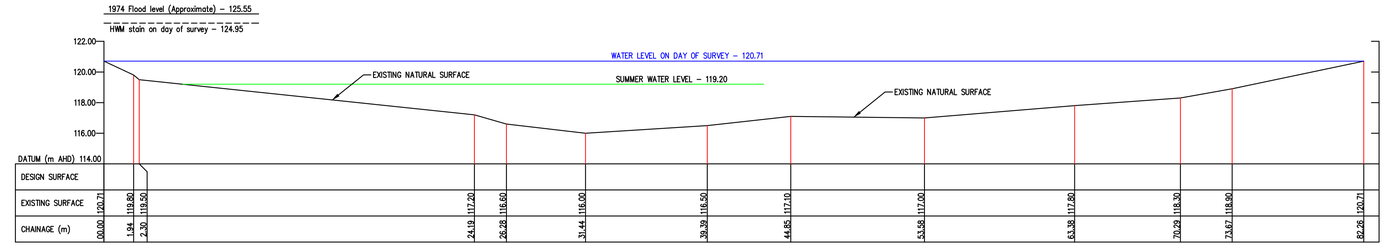
RICH RIVER IRRIGATION DEVELOPMENTS
UNIT 1, 164 OGILVIE AVENUE, ECHUCA 3564
Telephone (03) 5482 2564 Fax (03) 5482 1918

MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

PROPOSED DARLINGTON POINT BOAT RAMP

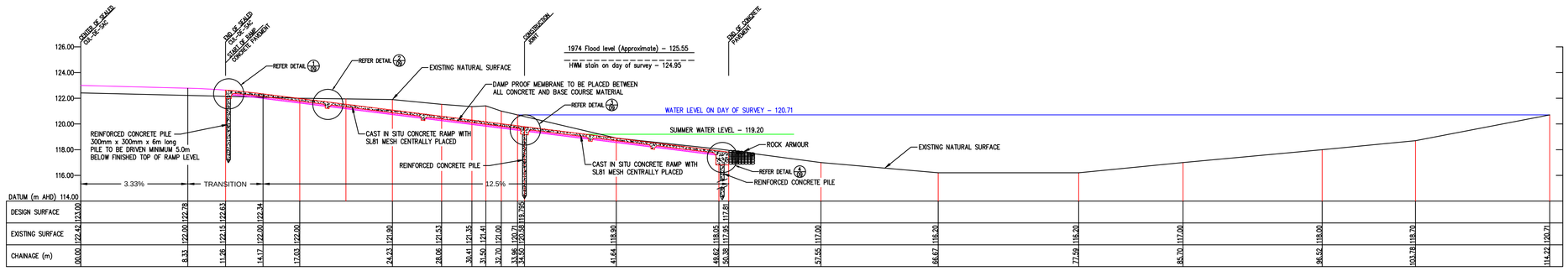
BOAT RAMP SITE PLAN

TITLE	SIZE	SHEET NUMBER	DRAWING NUMBER	REVISION
DARLINGTON POINT BOAT RAMP DESCRIPTION: BOAT RAMP SITE PLAN (1:250)	A1	04 OF 11	2016-107	3



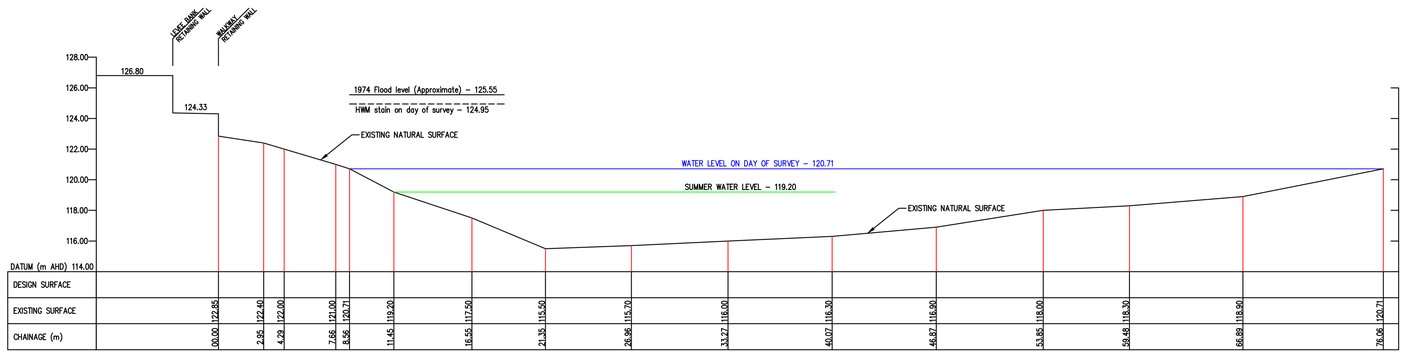
RIVER CROSS-SECTION 1

SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(Chainage 0.00 to Chainage 82.26)



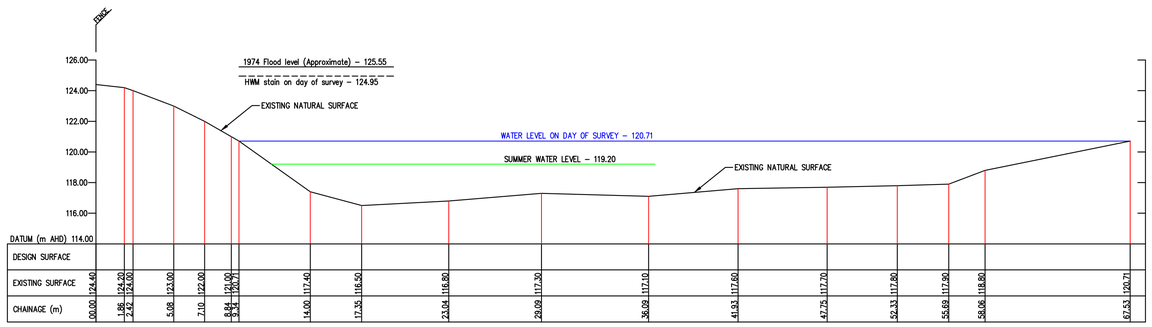
RIVER CROSS-SECTION 2

SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(Chainage 0.00 to Chainage 114.22)



RIVER CROSS-SECTION 3

SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(Chainage 0.00 to Chainage 76.06)



RIVER CROSS-SECTION 4

SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(Chainage 0.00 to Chainage 67.53)

REV	DATE	REVISIONS
3	23/10/17	ISSUED FOR CONSTRUCTION
2	30/08/17	PRELIMINARY DESIGN FOR DISCUSSION
1	21/12/16	DRAFT FOR DISCUSSION

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LEGEND

Asphalt Driveway		Concrete Driveway		Gravel Driveway		S.E.C. U/G Cable	E	Fire Hydrant		Proposed Culvert	
Proposed K & C		Permanent Mark	PM	Tree to be removed		Gas Main	G	Fire Plug		Proposed Picnic Table	
Conduits	C	Telstra U/G Cable	T	Telstra Pole		Sewer Main	S	Valve		Proposed Shelter	
Existing Drains	D	Water Main	W	Telstra Pit		Property Outlet	SW	S.E.C. Pole		Survey Station	PEG
Existing Drain Pits		Proposed Drain Pits		Proposed Drains	PD	Existing K & Ch		Existing Culvert		Rock Spalling	

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N. 106 901 777

MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

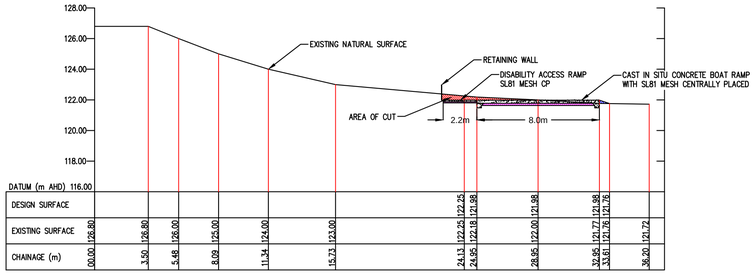
PROPOSED DARLINGTON POINT BOAT RAMP

RIVER CROSS - SECTIONS

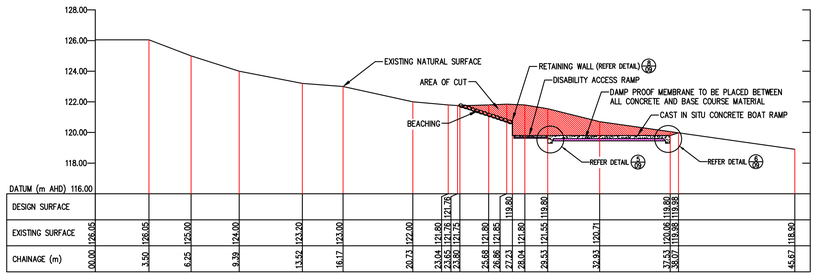
RICH RIVER IRRIGATION DEVELOPMENTS
UNIT 1, 164 OGILVIE AVENUE, ECHUCA 3564
Telephone (03) 5482 2564 Fax (03) 5482 1918

TITLE: DARLINGTON POINT BOAT RAMP
DESCRIPTION: RIVER CROSS-SECTIONS (1:200)

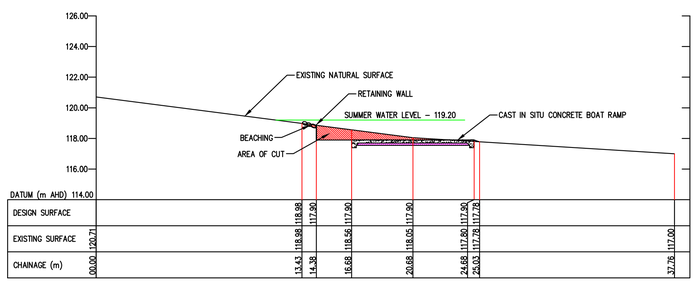
SIZE	SHEET NUMBER	DRAWING NUMBER	REVISION
A1	05 OF 11	2016-107	3



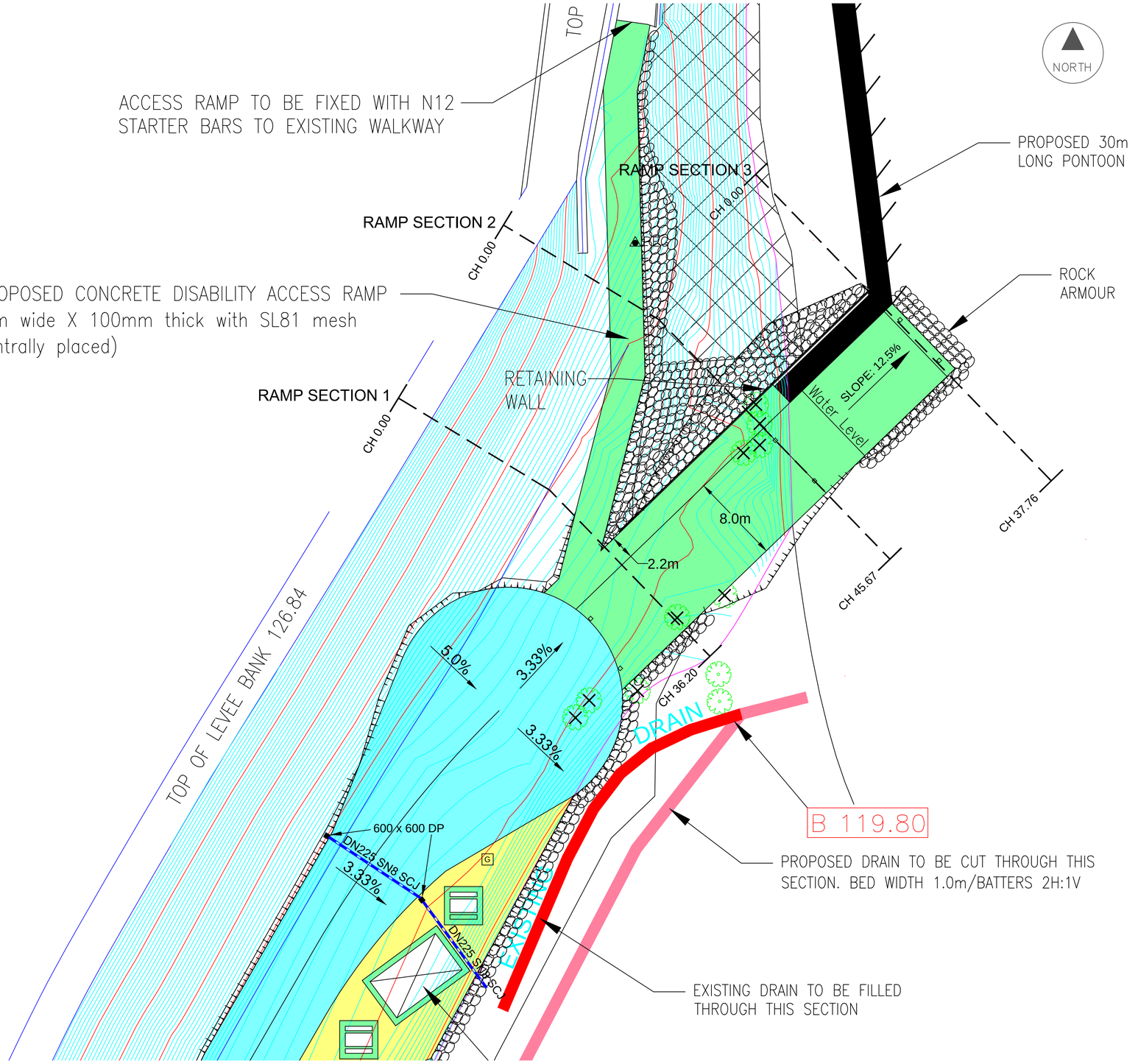
RAMP CROSS-SECTION 1
SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(Chainage 0.00 to Chainage 36.20)



RAMP CROSS-SECTION 2
SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(Chainage 0.00 to Chainage 45.67)



RAMP CROSS-SECTION 3
SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(Chainage 0.00 to Chainage 37.76)



SCALE
HORIZONTAL
VERTICAL
50 25 0 50 100 150
meters

LEGEND

- CONCRETE
- BASECOURSE
- AREA OF CUT
- AREA OF FILL

REV	DATE	REVISIONS
3	23/10/17	ISSUED FOR CONSTRUCTION
2	30/08/17	PRELIMINARY DESIGN FOR DISCUSSION
1	21/12/16	DRAFT FOR DISCUSSION

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LEGEND

Asphalt Driveway		Concrete Driveway		Gravel Driveway		S.E.C. U/G Cable	E	Fire Hydrant	F.H.	Proposed Culvert	
Proposed K & C		Permanent Mark	PM	Tree to be removed		Gas Main	G	Fire Plug	F.P.	Proposed Picnic Table	
Conduits	C	Telstra U/G Cable	T	Telstra Pole		Sewer Main	S	Valve		Proposed Shelter	
Existing Drains	D	Water Main	W	Telstra Pit		Property Outlet	SW	S.E.C. Pole		Survey Station	PEG
Existing Drain Pits		Proposed Drain Pits		Proposed Drains	PD	Existing K & Ch		Existing Culvert		Rock Spalling	

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N. 106 901 777

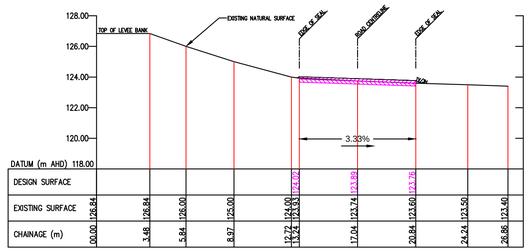
MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

PROPOSED DARLINGTON POINT BOAT RAMP

RAMP CROSS - SECTIONS

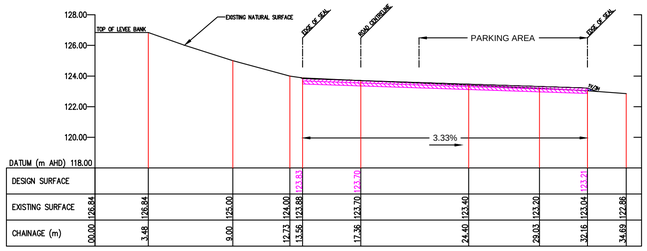
RICH RIVER IRRIGATION DEVELOPMENTS
UNIT 1, 164 OGILVIE AVENUE, ECHUCA 3564
Telephone (03) 5482 2564 Fax (03) 5482 1918

TITLE	SIZE	SHEET NUMBER	DRAWING NUMBER	REVISION
DESCRIPTION: RAMP CROSS-SECTIONS (1:200)	A1	06 OF 11	2016-107	3



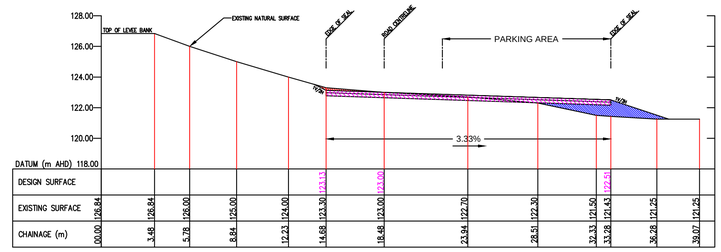
SEALED ROADWAY CROSS-SECTION A-A

SCALE 1:200 HORIZONTAL 1:200 VERTICAL



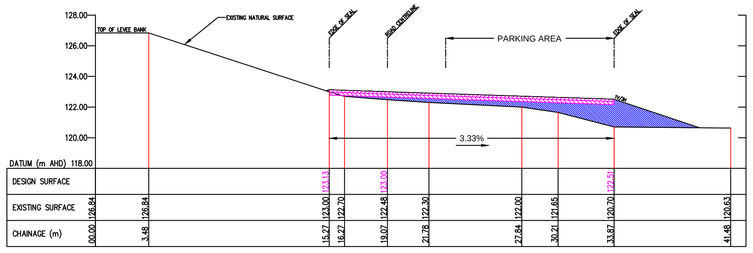
SEALED ROADWAY CROSS-SECTION B-B

SCALE 1:200 HORIZONTAL 1:200 VERTICAL



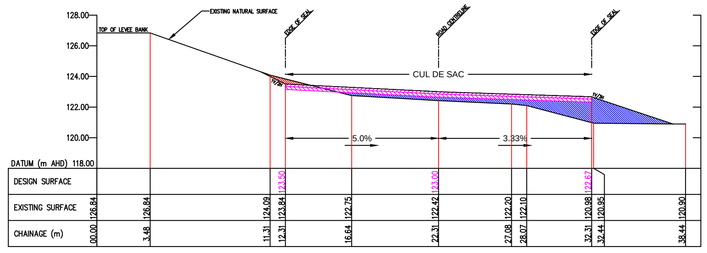
SEALED ROADWAY CROSS-SECTION C-C

SCALE 1:200 HORIZONTAL 1:200 VERTICAL



SEALED ROADWAY CROSS-SECTION D-D

SCALE 1:200 HORIZONTAL 1:200 VERTICAL



SEALED ROADWAY CROSS-SECTION E-E

SCALE 1:200 HORIZONTAL 1:200 VERTICAL

LEGEND

- BASECOURSE
- SUBBASE
- AREA OF CUT
- AREA OF FILL

REV	DATE	REVISIONS
2	23/10/17	ISSUED FOR CONSTRUCTION
1	30/08/17	DRAFT FOR DISCUSSION

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LEGEND

Asphalt Driveway		Concrete Driveway		Gravel Driveway		S.E.C. U/G Cable	E	Fire Hydrant	F.H.	Proposed Culvert	
Proposed K & C		Permanent Mark	PM	Tree to be removed		Gas Main	G	Fire Plug	F.P.	Proposed Picnic Table	
Conduits	C	Telstra U/G Cable	T	Telstra Pole		Sewer Main	S	Valve		Proposed Shelter	
Existing Drains	D	Water Main	W	Telstra Pit		Property Outlet	SW	S.E.C. Pole		Survey Station	PEG
Existing Drain Pits		Proposed Drain Pits		Proposed Drains	PD	Existing K & Ch		Existing Culvert		Rock Spalling	

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N. 106 901 777

MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

PROPOSED DARLINGTON POINT BOAT RAMP

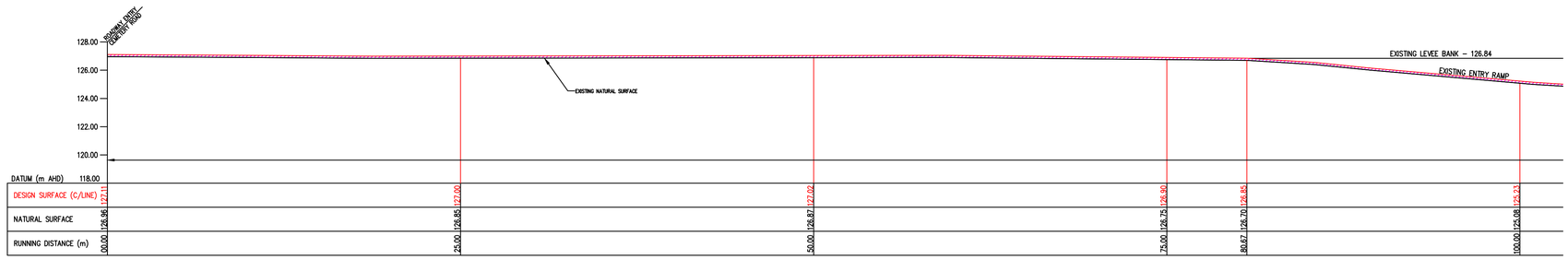
ROADWAY CROSS - SECTIONS

RICH RIVER IRRIGATION DEVELOPMENTS
UNIT 1, 164 OGILVIE AVENUE, ECHUCA 3564
Telephone (03) 5482 2564 Fax (03) 5482 1918

TITLE: DARLINGTON POINT BOAT RAMP

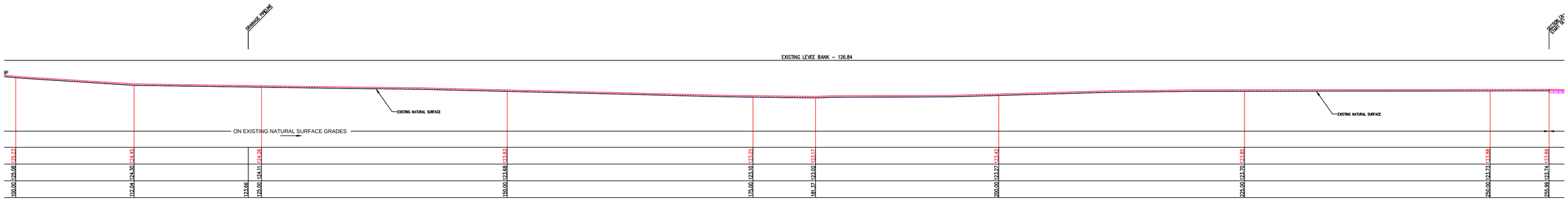
DESCRIPTION: ROADWAY CROSS-SECTIONS (1:200)

SIZE	SHEET NUMBER	DRAWING NUMBER	REVISION
A1	07 OF 11	2016-107	2



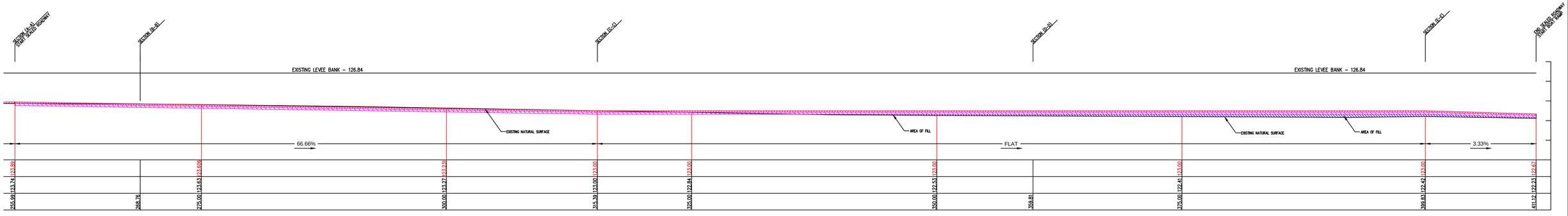
DESIGN ROAD LONGITUDINAL SECTION – (0–100)

SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(LOOKING NORTH WEST)



DESIGN ROAD LONGITUDINAL SECTION – (100–255.99)

SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(LOOKING NORTH WEST)



DESIGN ROAD LONGITUDINAL SECTION – (255.99–411.12)

SCALE 1:200 HORIZONTAL 1:200 VERTICAL
(LOOKING NORTH WEST)

LEGEND

- BASECOURSE
- SUBBASE
- AREA OF FILL

REV	DATE	REVISIONS
2	23/10/17	ISSUED FOR CONSTRUCTION
1	30/08/17	DRAFT FOR DISCUSSION

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LEGEND

Asphalt Driveway	Concrete Driveway	Gravel Driveway	S.E.C. U/G Cable	E	Fire Hydrant	F.H.	Proposed Culvert		
Proposed K & C	Permanent Mark PM	Tree to be removed	Gas Main	G	Fire Plug	F.P.	Proposed Picnic Table		
Conduits	C	Telstra U/G Cable	T	Telstra Pole		Sewer Main	S	Valve	Proposed Shelter	
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Existing Drain Pits		Proposed Drain Pits		Proposed Drains	PD	Existing K & Ch		Existing Culvert	Rock Spalling	

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N. 106 901 777

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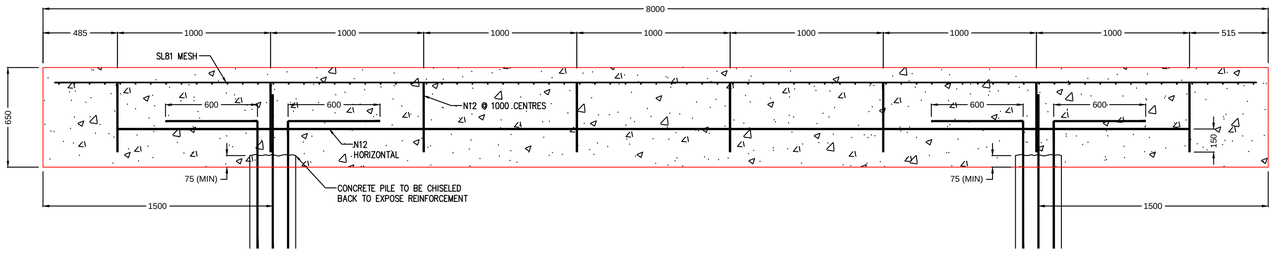
MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

PROPOSED DARLINGTON POINT BOAT RAMP

ROADWAY LONGITUDINAL - SECTION

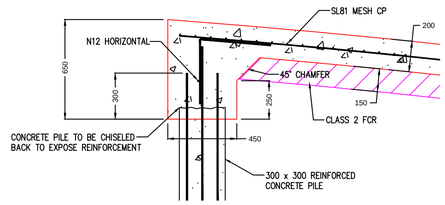
TITLE: DARLINGTON POINT BOAT RAMP
DESCRIPTION: ROADWAY LONGITUDINAL–SECTION (1:200)

SIZE	SHEET NUMBER	DRAWING NUMBER	REVISION
A1	08 OF 11	2016-107	2



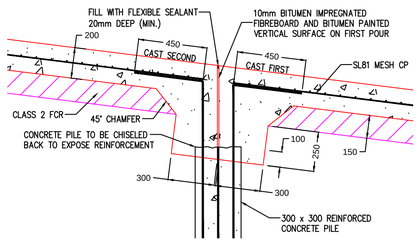
FRONT ELEVATION

DETAIL 1 / 05
1:20 (A1)

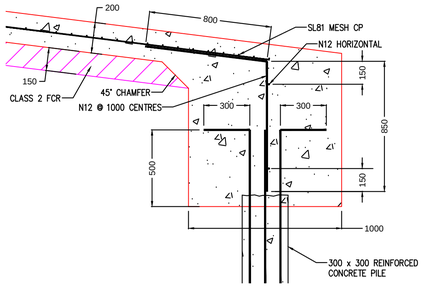


SIDE ELEVATION

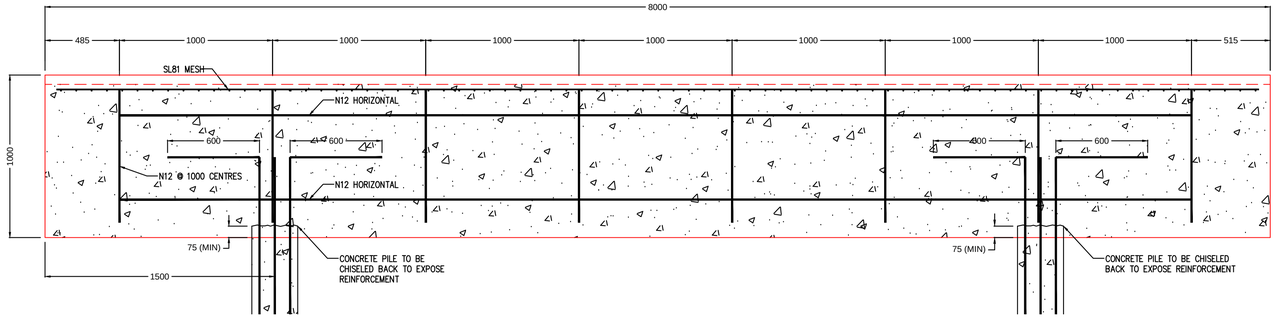
DETAIL 2 / 05
1:20 (A1)



DETAIL 3 / 05
1:20 (A1)

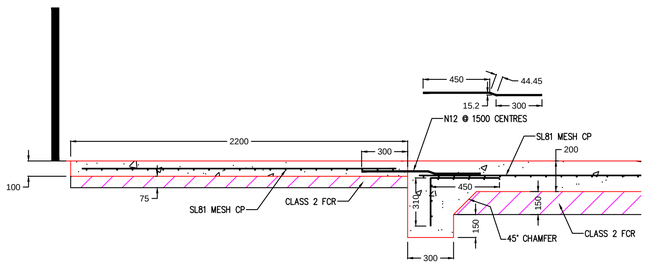


SIDE ELEVATION

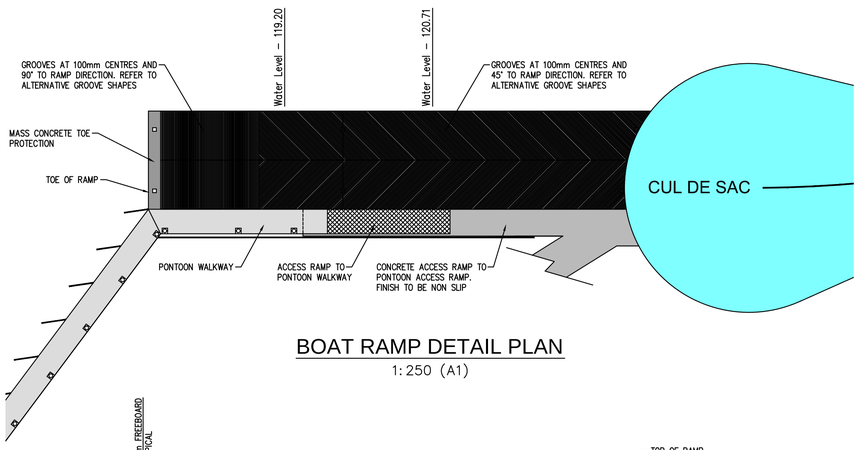


FRONT ELEVATION

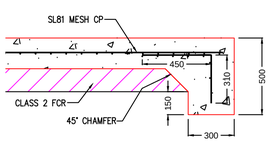
DETAIL 4 / 05
1:20 (A1)



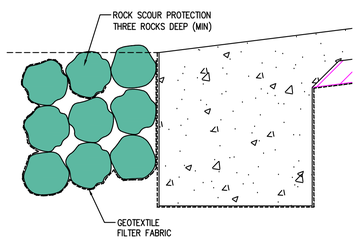
DETAIL 5 / 06
1:20 (A1)



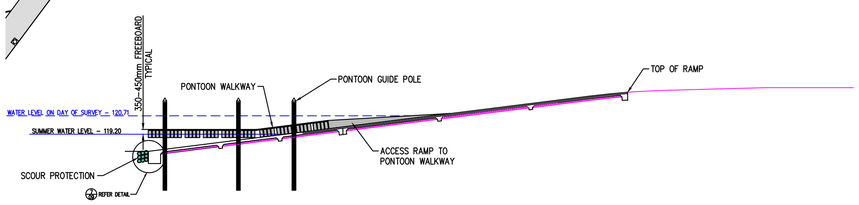
BOAT RAMP DETAIL PLAN
1:250 (A1)



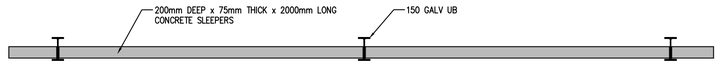
DETAIL 6 / 06
1:20 (A1)



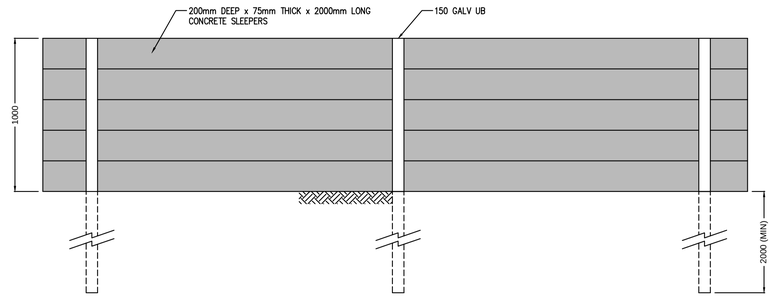
DETAIL 7 / 09
1:20 (A1)



SECTION AT ON RAMP PONTOON WALKWAY
1:250 (A1)

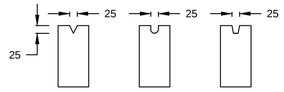


PLAN VIEW



FRONT ELEVATION

DETAIL 8 / 06
1:20 (A1)



ALTERNATIVE GROOVE SHAPES

REV	DATE	REVISIONS
2	23/10/17	ISSUED FOR CONSTRUCTION
1	30/08/17	DRAFT FOR DISCUSSION

Disclaimer

Notwithstanding any description contained in the plans or design specifications, the contractor shall be responsible for satisfying themselves as to the nature and extent of the specified works and the physical and legal conditions under which the works will be carried out, including site conditions, access, nature of material to be excavated, size and type of mechanical plant required and any like matters effecting the construction of the works.

LEGEND

Asphalt Driveway		Concrete Driveway		Gravel Driveway		S.E.C. U/G Cable	E	Fire Hydrant	F.H.	Proposed Culvert	
Proposed K & C		Permanent Mark	PM	Tree to be removed		Gas Main	G	Fire Plug	F.P.	Proposed Picnic Table	
Conduits	C	Telstra U/G Cable	T	Telstra Pole		Sewer Main	S	Valve		Proposed Shelter	
Existing Drains	D	Water Main	W	Telstra Pit		Property Outlet	SW	S.E.C. Pole		Survey Station	PEG
Existing Drain Pits		Proposed Drain Pits		Proposed Drains	PD	Existing K & Ch		Existing Culvert		Rock Spalling	

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N. 106 901 777

MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

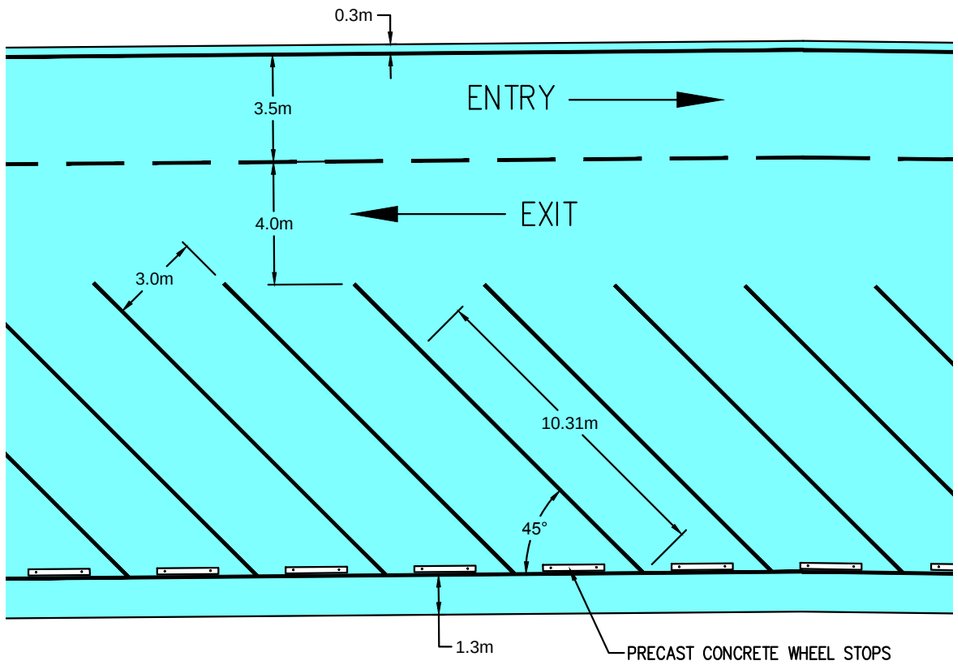
PROPOSED DARLINGTON POINT BOAT RAMP

DESIGN DETAILS

RICH RIVER IRRIGATION DEVELOPMENTS
UNIT 1, 164 OGILVIE AVENUE, ECHUCA 3564
Telephone (03) 5482 2564 Fax (03) 5482 1918

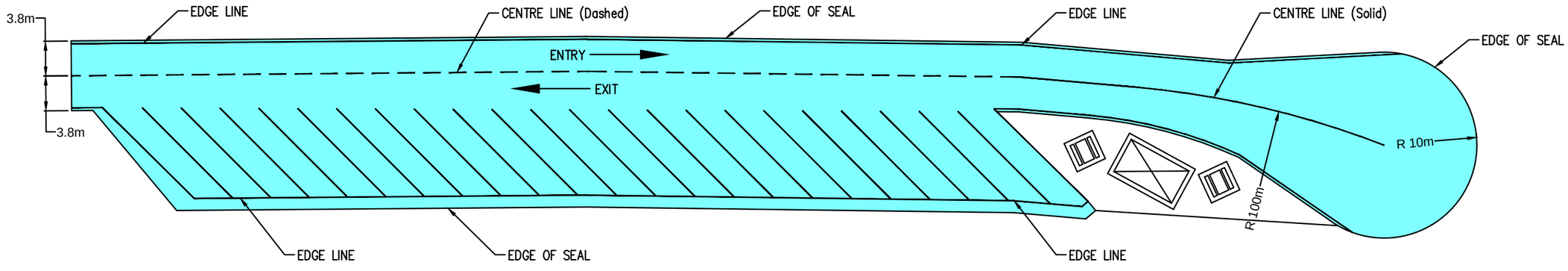
TITLE: DARLINGTON POINT BOAT RAMP
DESCRIPTION: DESIGN DETAILS

SIZE	SHEET NUMBER	DRAWING NUMBER	REVISION
A1	09 of 11	2016-107	2



PARKING BAY DIMENSIONS

1:200 (A3)



PAVEMENT LINEMARKING PLAN

1:500 (A3)

REV	DATE	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	REVISIONS
–	–				–
2	23/10/17				ISSUED FOR CONSTRUCTION
1	30–08–17				ISSUED FOR DISCUSSION

LEVEL BOOK: AMS–BK101

SURVEYED BY	DRAWN	DESIGNED
D.LEE	D.LEE	D.LEE

NORTH

SCALE: N.T.S.

DATE: 30–08–17

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N.106 901 777

MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

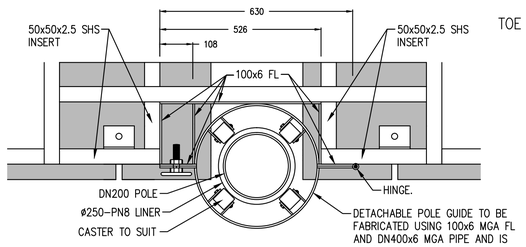
PROPOSED DARLINGTON POINT BOAT RAMP

PAVEMENT LINEMARKING DETAILS

RICH RIVER IRRIGATION DEVELOPMENTS
Unit 1, 164 Ogilvie Avenue, Echuca. 3564.
Telephone (03) 5482 2564 Fax (03) 5482 1918 Email admin@rrid.com.au

SHEET NUMBER	DRAWING NUMBER	REVISION
10 OF 11	2016–107	2

A3

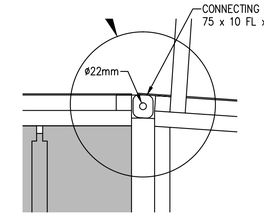


DETAIL 6/11 1:10 (A1)

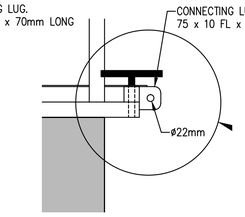
DETACHABLE POLE GUIDE

NOTE:
PONTOON SHOWN WITH DECKING AND FRAME REMOVED FOR CLARITY.

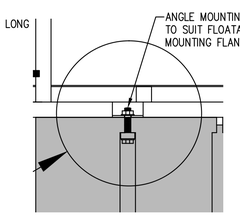
PLAN VIEW
1:100 (A1)



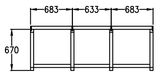
DETAIL 3/11 1:10 (A1)



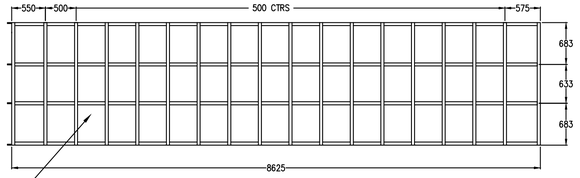
DETAIL 4/11 1:10 (A1)



DETAIL 5/11 1:10 (A1)

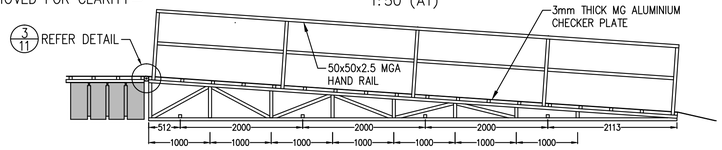


FRONT ELEVATION
1:50 (A1)



PLAN VIEW
1:50 (A1)

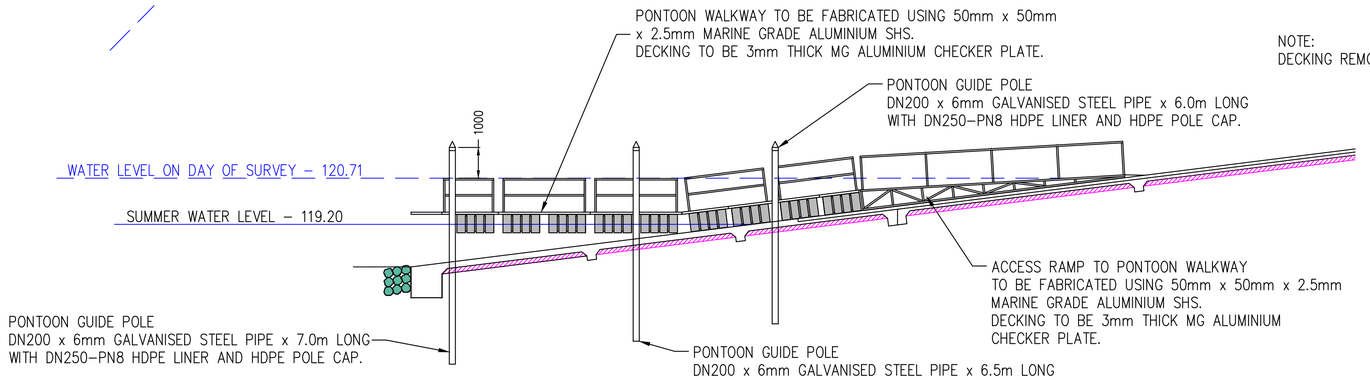
NOTE:
DECKING REMOVED FOR CLARITY



NOTE:
ACCESS RAMP TO BE FABRICATED USING 50x50x2.5 MARINE GRADE ALUMINIUM SHS.

SIDE ELEVATION
1:50 (A1)

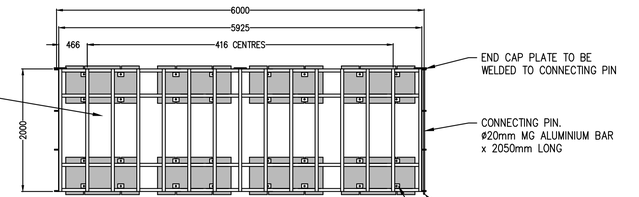
ACCESS RAMP DIMENSIONS



SECTION AT ON RAMP PONTOON WALKWAY
1:100 (A1)

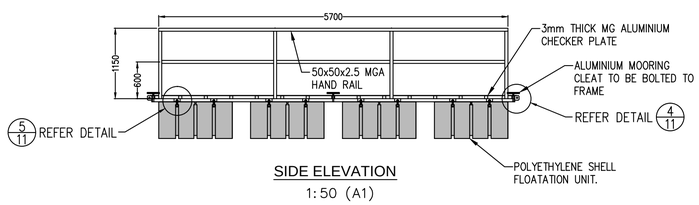
NOTE:
WALKWAYS AND HANDRAILS TO COMPLY WITH OH&S ACT 2004, OH&S REGULATIONS 2007 AND AS1657–FIXED PLATFORMS, WALKWAYS, STAIRWAYS AND LADDERS – DESIGN, CONSTRUCTION AND INSTALLATION.

NOTE:
DECKING REMOVED FOR CLARITY



NOTE:
DECKING FRAME TO BE FABRICATED USING 50x50x2.5 MARINE GRADE ALUMINIUM SHS.

PLAN VIEW
1:50 (A1)



SIDE ELEVATION
1:50 (A1)

TYPICAL PONTOON WALKWAY MODULE

REV	DATE	REVISIONS
2	22/01/18	ISSUED FOR CONSTRUCTION
1	19/01/18	DRAFT FOR DISCUSSION

Disclaimer

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LEGEND

Asphalt Driveway		Concrete Driveway		Gravel Driveway		S.E.C. U/G Cable	E	Fire Hydrant	F.H.	Proposed Culvert	
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Existing Drain Pits		Proposed Drain Pits		Proposed Drains	PD	Existing K & Ch		Existing Culvert		Rock Spalling	

RICH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N. 106 901 777

MURRUMBIDGEE SHIRE COUNCIL / APEX CLUB

PROPOSED DARLINGTON POINT BOAT RAMP

PONTOON DESIGN PLAN & DETAILS

RICH RIVER IRRIGATION DEVELOPMENTS
UNIT 1, 164 OGILVIE AVENUE, ECHUCA 3564
Telephone (03) 5482 2564 Fax (03) 5482 1918

TITLE	SIZE	SHEET NUMBER	DRAWING NUMBER	REVISION
DARLINGTON POINT BOAT RAMP DESCRIPTION: PONTOON DESIGN PLAN & DETAILS	A1	11 or 11	2016-107	2