

ULLADULLA HARBOUR SOUTHERN BOAT RAMP REPLACEMENT

25 WASON STREET, ULLADULLA NSW 2539



DRAWING SCHEDULE		
PLAN No.	DRAWING TITLE	REV
C-01-00-01	COVER SHEET AND LOCALITY PLAN	1
C-01-00-02	GENERAL NOTES	1
C-01-03-01	GENERAL ARRANGEMENT PLAN	1
C-01-04-01	BOAT RAMP LAYOUT PLAN	1
C-01-04-02	LONGITUDINAL SECTIONS	1

LOCALITY PLAN
SCALE 1:1500



NOT FOR CONSTRUCTION

THIS DRAWING AND THE CONCEPTS CONTAINED THEREIN ARE THE PROPERTY OF WESTLAKE PUNNETT & ASSOCIATES PTY LTD. NO UNAUTHORISED COPYING IS PERMITTED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE. DO NOT SCALE - NO RESPONSIBILITY WILL BE TAKEN BY WESTLAKE PUNNETT & ASSOCIATES PTY LTD FOR ANY DISCREPANCIES CAUSED BY THE SCALING OF THESE DRAWINGS.

REV.	AMENDMENTS	APPROVED	DATE
1	ISSUED FOR COMMENT	J.RITTER	20.04.2026



WESTLAKE PUNNETT & ASSOCIATES PTY LTD
ABN 38 120 322 536

EMAIL office@westlakepunnett.com.au
PHONE 02 4423 5533
ADDRESS PO Box 1573 NOWRA, NSW 2541
WEBSITE www.westlakepunnett.com.au

COVER SHEET AND LOCALITY PLAN
CLIENT: SHOALHAVEN CITY COUNCIL
PROJECT: ULLADULLA HARBOUR BOAT RAMP REPLACEMENT
ADDRESS: 25 WASON STREET, ULLADULLA NSW 2539

APPROVED			
Designed: B.HAUVILLE			
Drawn: J.NUNES			
Checked: J.RITTER			
Datum	Size	Scale	Date
	A1	1:1500	20.04.2026
Project No.	Drawing No.	Rev.	
W26022	C-01-00-01	1	

GENERAL NOTES

- GENERAL**
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. DIMENSIONS ARE NOT TO BE SCALED FROM THESE DRAWINGS.
 - THE ENGINEER IS TO INSPECT ALL WORK PRIOR TO THE POURING OF CONCRETE. PROVIDE 48 HOURS NOTICE FOR ALL INSPECTIONS.
 - GENERALLY DIMENSIONS STATED ARE IN mm AND HEIGHTS IN m AHD.

- CONCRETE WORKS**
- ALL WORK TO BE INSPECTED BY THE ENGINEER PRIOR TO POURING.
 - ALL CONCRETE IS TO HAVE 135mm SLUMP AND 20mm AGGREGATE UNLESS NOTED OTHERWISE. CONCRETE STRENGTH AND COVER ARE TO BE SHOWN IN TABLE S1 UNLESS NOTED OTHERWISE.**
 - ALL CONCRETE IS TO BE COMPACTED WITH A MECHANICAL VIBRATOR IN ACCORDANCE WITH AS3660.
 - ALL CONCRETE IS TO BE CURED IN ACCORDANCE WITH AS3660.

ELEMENT	COVER (mm)			STRENGTH (MPa)
	TOP	BOTTOM	SIDES	
BOAT RAMP SLAB	65	65	65	50
PRECAST PLANKS	65	65	65	50
TOE PROTECTION	65	65	65	50

- ALL CONCRETE STRUCTURES ARE TO BE WATER-CURED FOR AT LEAST 7 DAYS AND PREFERABLY 14 DAYS UNDER AMBIENT CONDITIONS.
- DRYING SHRINKAGE AT 56 DAYS NOT GREATER THAN 600e-6 mm/mm, DETERMINED IN ACCORDANCE WITH AS1012.13.
- CONCRETE MIX DESIGN SATISFYING THE RECOMMENDATIONS PROVIDED WITHIN AS 4997-2005.
- ALL REINFORCING BARS ARE TO BE D5000 GRADE BARS UNLESS NOTED OTHERWISE. ALL REINFORCING MESH IS TO BE D500 UNLESS NOTED OTHERWISE. SPLICES IN REINFORCING BARS ARE TO LAP MIN 600mm.
- PROVIDE 500x500 N12 'L' BARS AT ALL EXTERNAL CORNERS IN SLAB. 'L' BARS PROVIDED TOP AND BOTTOM IN PIERED AREAS.
- SLABS ARE TO BE LAID ON 200um VAPOR BARRIER ON 75mm COMPACTED DGB20 BLINDING LAYER.
- PIERS ARE TO BE CLEANED OUT OF ALL LOOSE MATERIAL PRIOR TO THE INSPECTION BY THE ENGINEER. IN ADDITION THE CONTRACTOR IS TO ENSURE THAT ALL LOOSE MATERIAL IS REMOVED IMMEDIATELY PRIOR TO POURING. ALL PIERS ARE TO BE INSPECTED AND AFFIRMED BY THE ENGINEER PRIOR TO POURING.
- THE CONTRACTOR IS TO ENSURE THAT THE FINISHED SURFACE GRADES AWAY FROM THE STRUCTURE AND THAT THE SITE STORMWATER AND DRAINAGE SYSTEMS ARE INSTALLED SO THAT WATER DOES NOT POND NEAR THE STRUCTURE DURING OR AFTER CONSTRUCTION.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK FOR ANY SERVICES LOCATED WITHIN THE ZONE OF INFLUENCE OF THE STRUCTURE, AND ADVISE THE ENGINEER OF THEIR PRESENCE.
- THIS DESIGN HAS BEEN BASED ON THE FOLLOWING GEOTECHNICAL REPORTS: BO/C12835 BY ACT GEOTECHNICAL ENGINEERS PTY LTD.
- DO NOT MAKE ANY CONSTRUCTION JOINTS, HOLES OR CHASES IN THE CONCRETE ELEMENTS UNLESS APPROVED BY AN ENGINEER.
- PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3600 AND AS1379.
- THE SLIP RESISTANCE OF ALL TRAFFICABLE SURFACES IS TO HAVE A FRICTION ANGLE OF NOT LESS THAN 18°.
- DO NOT POUR SLABS ON HOT AND/OR WINDY DAYS WHEN THE BLEED WATER EVAPORATION RATE MAY EXCEED 0.5 kg/m² PER HOUR
- LAP SLAB MESH ONE FULL PANEL OF FABRIC SO THAT THE TWO OUTER MOST TRANSVERSE WIRES OF ONE SHEET OVERLAP THE TWO OUTER MOST TRANSVERSE WIRES OFF THE SHEET BEING LAPPED.

FORMWORK

- ALL FORMWORK IS TO BE CONSTRUCTED IN ACCORDANCE WITH AS3610.
- ALL EXPOSED FORMWORK IS TO PROVIDE A CLASS 2 FINISH U.N.O.
- PROVIDE DRIP GROOVES AS REQUIRED.
- PROVIDE CHAMFERS TO CORNERS.
- THE FORMWORK IS NOT TO BE DISTURBED UNTIL THE CONCRETE HAS REACHED ITS DESIGN STRENGTH. IF THE DESIGN STRENGTH IS NOT DEMONSTRATED BY TESTING THEN THE FORMWORK IS TO BE LEFT IN PLACE FOR 28 DAYS.
- CONTRACTOR TO PROVIDE BACK PROPPING PLAN & METHOD STATEMENT TO PRINCIPALS ENGINEERING REPRESENTATIVE FOR APPROVAL PRIOR TO CONSTRUCTION.

PONTOON NOTES

- PONTOONS DESIGN LOADS IN THE FOLLOWING SECTION ARE TO BE BASED OFF THE FOLLOWING PARAMETERS:
- APPROACH VELOCITY OF 0.2 m/s (BASED ON MILD EXPOSURE CONDITIONS UP TO 10 TONNE VESSEL).
- WIND LOAD IN ACCORDANCE WITH AS1170.2 TERRAIN CATEGORY 1.
- RUBBER FENDERING IS TO BE FIXED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN SPECIFICATIONS.
- MOORING BOLLARDS ARE TO BE LOCATED BY THE CONTRACTOR IN CONSULTATION WITH COUNCIL & THE DESIGN ENGINEER.
- MOORING BOLLARDS ARE TO HAVE A SAFE WORKING LOAD OF NO LESS THAN 3.5 TONNE.
- ALL FLOATATION MODULES ARE TO BE CONSTRUCTED BY MARINE DOCK SYSTEMS AUSTRALIA OR AN EQUIVALENT AS APPROVED BY THE SUPERINTENDENT & DESIGN ENGINEER.

DESIGN LOADS

- SUPERIMPOSED LOADS ARE GENERALLY IN ACCORDANCE WITH AS1170.1, AND AS NOTED BELOW UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED ELSEWHERE IN THE DOCUMENTATION.

TABLE L1	
LOCATION	LIVE LOAD (kPa)
PONTOONS/FINGERS	5
GANGWAYS	5
FLOATATION/STABILITY	3

- DESIGN LIFE = 25 YEARS
- ENVIRONMENTAL LOADS
 - WIND LOADS ARE IN ACCORDANCE WITH AS1170.2 AND AS3962-2020 AND AS FOLLOWS:
- WIND REGION - A2
- TERRAIN CATEGORY - TC1.0
- IMPORTANCE LEVEL - 3
- ANNUAL PROBABILITY OF EXCEEDANCE - 1/1000
- REGIONAL WIND VELOCITY (V_R) - 66 m/s
- CONSIDERATION HAS BEEN MADE FOR THE FORCES OF DRAG ON VESSELS AND STRUCTURES.
 - WAVE LOADS ARE IN ACCORDANCE WITH T4.2 OF AS3962-2020 FOR A 'MODERATE' WAVE CLIMATE FOR BEAM SEAS:
- WAVE ARI UTILISED - 1/50
- SIGNIFICANT WAVE HEIGHT, H_s - 0.31m
- MINIMUM HORIZONTAL FORCE - 2kN/m
- CONSIDERATION FOR SEICHING AND MEASURED SIGNIFICANT WAVE HEIGHTS HAVE BEEN ANALYSED IN ACCORDANCE WITH REPORT NO. MHL1632 (DATED MAY 2007) AND MHL2592 (DATED JUNE 2018) BY MANLY HYDRAULICS LABORATORY.
 - BERTHING LOADS

TABLE L2			
BERTHING ENERGIES			
VESSEL LENGTH (m)	APPROACH VELOCITY (m/s)	BERTHING ENERGY (kNm)	ABNORMAL BERTHING ENERGY (kNm)
7.5	0.3	0.18	0.37

- LOAD COMBINATIONS
 - THE ABOVE LOADS HAVE BEEN ANALYSED WITH COMBINATIONS IN ACCORDANCE WITH AS1170.0 AND AS4997-2005.

ARMOUR ROCK SIZING	
MAX	600
MIN	300
D50	450
THICKNESS	900

NOTE: ROCK TO BE SOUND ANGULAR QUARRY ROCK WITH SPECIFIC GRAVITY OF 2.6 MIN.

TIDAL PLANES	
TIDAL PLANE	LEVEL (m AHD)
HAT	1.080
HHWSS	0.958
MHWS	0.617
MHW	0.509
MHWN	0.401
MSL	0.041
MLWN	-0.319
MLW	-0.427
MLWS	-0.536
ISLW	-0.779
LAT	-0.880
TIDAL PLANE VALUES TAKEN FROM AWRC# 216471 FROM MANLY HYDRAULICS LAB ON THE 17/11/2022.	

STRUCTURAL STEEL NOTES

- ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH AS4100, AS1554 AND AS/NZS5131 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS. CONSTRUCTION CATEGORY IN ACCORDANCE WITH AS/NZS5131 TO BE:
- IMPORTANCE LEVEL -3
- SERVICE CATEGORY -1
- FABRICATION CATEGORY -1
- CONSTRUCTION CATEGORY -2
- UNLESS NOTED OTHERWISE, ALL STEEL SHALL BE C350 GRADE.
- UNLESS NOTED OTHERWISE, ALL BOLTS SHALL BE M16 CATEGORY 8.8/S. NO CONNECTION SHALL HAVE LESS THAN 2 BOLTS. ALL BOLTS AND WASHERS SHALL BE 316 GRADE STAINLESS STEEL.
- FABRICATION SHALL COMPLY WITH AS/NZS5131.
- ERECTION SHALL COMPLY WITH AS/NZS5131.
- UNLESS NOTED OTHERWISE, ALL FILLET WELDS SHALL BE 6mm CONTINUOUS CATEGORY GP USING E41XX ELECTRODES. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION BUTT WELDS TO AS 1554.1.
- PROVIDE SEAL PLATES TO THE ENDS OF ALL HOLLOW SECTIONS.
- ALL STEELWORK SHALL BE SECURELY TEMPORARILY BRACED BY THE ERECTOR AS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.
- IT IS THE BUILDERS RESPONSIBILITY TO PROVIDE ALL CLEATS AND HOLES AS REQUIRED FOR ALL CONNECTIONS, WHETHER OR NOT THEY ARE DETAILED ON THESE DRAWINGS.
- ALL HOLDING DOWN BOLTS TO BE STAINLESS STEEL.
- ALL CONNECTION DETAILS ARE TO BE IN ACCORDANCE WITH AISC STANDARDISED STRUCTURAL CONNECTIONS UNLESS NOTED OTHERWISE.

PIILING NOTES

- PILES ARE DESIGNED IN ACCORDANCE WITH AS2159-2009 - PILING - DESIGN AND INSTALLATION FOR THE LOADS SPECIFIED IN THE PILING SCHEDULE PROVIDED IN DETAIL DESIGN PHASE.
- PIILING INSTALLATION TO FOLLOW THE REQUIREMENTS PROVIDED BY THE FOLLOWING REPORTS:
- BO/C12835 BY ACT GEOTECHNICAL ENGINEERS PTY LTD.
- AT THE COMPLETION OF THE WORK DEEMED SATISFACTORY BY THE ENGINEER, AN INSPECTION/PILE CERTIFICATE SHALL BE PROVIDED.
- THE CONTRACTOR SHALL UTILISE A 'PIILING INSTALLATION LOG-BOOK' DURING PILE INSTALLATION. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO;
- PILE FOUNDING DEPTH
- PILE EMBEDMENT DEPTH INTO ROCK
- PILE CUT OFF LENGTH
- INNER PILE VOLUME (WHEN COREFILLING IS REQUIRED)
- SEABED LEVELS ARE APPROXIMATE ONLY & IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM ALL LEVELS PRIOR TO CONSTRUCTION, ANY VARIATION TO THOSE LEVELS SHOWN ON THE DRAWINGS IS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS TO TAKE PRECAUTIONS WHEN HANDLING PILES TO AVOID ANY DAMAGE TO PILES. PILES ARE TO BE HANDLED IN ACCORDANCE WITH AS2159. PILES THAT ARE DAMAGED DURING HANDLING OR STORAGE MAY BE REJECTED.
- THE WEIGHT OF THE HAMMER IS TO BE SELECTED IN ACCORDANCE WITH AS2159. MAXIMUM DROP HEIGHT SHALL NOT EXCEED 1.5m. THE CONTRACTOR IS TO PROVIDE THE ENGINEER WITH THEIR RIGS HAMMER MASS SO THAT THE SET CRITERIA CAN BE DETERMINED PRIOR TO PILING.
- THE CONTRACTOR SHALL ALLOW FOR SUFFICIENT PILE LENGTH TO ACHIEVE THE PILE LENGTH DETAILED BY STRUCTURAL DRAWINGS.
- PILE DRIVING SHALL BE CARRIED OUT CONTINUOUSLY UNTIL THE REQUIRED DEPTH IS ACHIEVED. PILES NOT DRIVEN CONTINUOUSLY AND LEFT FOR LONG PERIODS OF TIME MAY NEED TO BE LOAD TESTED.
- STEEL PILES MAY BE DRILLED DIRECTLY TO ROCK EMBEDMENT DEPTH. THE CONTRACTOR IS TO PROVIDE SUFFICIENT TEETH ON EACH PILE TOE TO ENSURE MINIMUM DRILL TIMES. TEETH MAY BE SPLAYED OUTSIDE THE PILE DIAMETER A MAXIMUM OF 15 mm AND INSIDE THE PILE DIAMETER A MAXIMUM OF 30 mm.
- PILES ARE TO BE DRIVEN SO THAT THEIR AXIS IS WITHIN 50mm OF THE SPECIFIED PLAN POSITION. TOPS OF ALL PILES SHALL BE CUT OFF WITHIN 15mm OF LEVEL SHOWN ON THE DRAWINGS. VARIATION OF THE PILE AXIS FROM VERTICAL SHALL NOT EXCEED 1 IN 75. ANY PILE OUTSIDE THESE TOLERANCES MUST BE RECTIFIED BY THE CONTRACTOR.
- THE CONTRACTOR IS TO CONFIRM THE LAYOUT OF ALL PILES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR & MUST ENSURE THAT ALL PILES ARE LOCATED CENTRALLY WITHIN THE PILE COLLARS UPON COMPLETION OF CONSTRUCTION. THE CONTRACTOR SHALL NOTE THAT LAYOUT & SITING DIMENSIONS WILL VARY DEPENDING ON EXACT PONTOON DIMENSIONS & SHALL ADJUST LAYOUT DIMENSIONS ON SITE TO SUIT.
- FOR TIMBER PILES, ALL SAW CUTS, CHECKOUTS AND BOLT HOLES ARE TO BE TREATED IMMEDIATELY WITH 'KOPPERS' C.N.EMULSION WHERE THE TIMBERS ARE ABOVE THE TIDAL ZONE AND VESSEY VEPOX CCS7 IN AND BELOW THE TIDAL ZONE.
- THE TOPS OF ALL TIMBER PILES UNDER THE JETTY ARE TO BE CUT OFF TO SUIT BOLT CLEARANCES AS SHOWN ON THE DRAWINGS. PILES ARE TO HAVE THEIR TOPS TRIMMED TO FORM A SLOPE SO THAT THE PILE CAN SHED WATER. FLOOD COAT THE TRIMMED TOP OF PILE WITH 2 COATS OF C.N.EMULSION ABOVE THE TIDAL ZONE OR VESSEY VEPOX CCS7 IN THE TIDAL ZONE. WHERE VOIDS APPEAR IN THE TOPS OF PILES, FILL THIS VOID WITH EPIREZ 633 UP TO THE NATURAL SLOPE OF THE TRIMMED PILE TOP AND THEN TREAT AS ABOVE.
- PILES SHALL BE CIRCULAR, NATURALLY TAPERED AND STRAIGHT. PILES ARE TO BE FREE FROM SHAKES, FRACTURES, SPLITS, DECAY, DECAY POCKETS AND ALL OTHER DEFECTS LIKELY TO IMPAIR THE PILES' STRENGTH AND SERVICEABILITY.
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 1538, AS 4100 AND AS 1554.1, 2 OR .5 AS APPROPRIATE AS 1250 MAY BE USED IN LIEU OF AS 4100 WITHIN THE RESTRICTIONS SPECIFIED UNDER PART B1.3 (C) (1) OF THE BUILDING CODE OF AUSTRALIA.
- THE CONTRACTOR IS TO ENSURE THE INSTALLATION EQUIPMENT IS CALIBRATED REGULARLY AT NO GREATER THAN SIX (6) MONTH INTERVALS.
- ALL PILES SHALL HAVE HOLES CORED TO A DIAMETER AT LEAST MATCHING THAT OF THE PROPOSED PILE SLEEVE.
- HDPE PILE SLEEVES TO EXTEND MINIMUM 1m BELOW FINISHED ROCK SURFACE.
- PILE SHAFTS TO BE INSTALLED AND HELD PLUMB TO CONTRACTORS DETAIL DURING INSTALLATION AND GROUTING.
- THE PILING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION AND INSTALLATION OF THE PILES IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS.

DURABILITY OF PILES

- PILES HAVE BEEN DESIGNED FOR A DESIGN LIFE OF 50 YEARS.

SIGNAGE AND LINEMARKING:

- LINE MARKING AND PAINT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS: AS1742 AND AS 4049.
- PAINT SHALL BE TYPE 3, CLASS A AND THE COLOUR SHALL BE WHITE AND NOT SUBJECT TO DISCOLOURATION BY BITUMEN FROM THE ROAD SURFACE. EACH LINE SHALL BE 80mm WIDE. ALL PAINT SHALL BE APPLIED BY MECHANICAL SPRAYER.
- LINE MARKING SHALL BE SPOTTED OUT AND APPROVED PRIOR TO SPRAYING.
- PAINT SHALL BE APPLIED AT A WET THICKNESS OF BETWEEN 0.35mm TO 0.40mm.
- PAINT 80mm LINEMARKING TO CARPARK PAVEMENT.
- ALL SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AUSTRALIAN STANDARDS.

ACCESS AND SAFETY:

- THE CONTRACTOR SHALL COMPLY WITH ALL STATUTORY AND INDUSTRIAL REQUIREMENTS FOR PROVISION OF A SAFE WORKING ENVIRONMENT INCLUDING TRAFFIC CONTROL.
- THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES ACCESS TO ALL BUILDINGS ADJACENT THE WORKS IS NOT DISRUPTED.
- WHERE NECESSARY THE CONTRACTOR SHALL PROVIDE SAFE PASSAGE OF VEHICLES AND/OR PEDESTRIANS THROUGH OR BY THE SITE.
- TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH AS1742.3 ARE TO BE IN PLACE AND MAINTAINED AT ALL TIMES. (TRAFFIC CONTROL PLANS TO BE SUBMITTED PRIOR TO COMMENCEMENT OF WORK.)

TRAFFIC MANAGEMENT:

- PARKING OF VEHICLES OR LOADING/UNLOADING OF VEHICLES ON ROADWAYS MAY CAUSE A TRAFFIC HAZARD. DURING CONSTRUCTION, MAINTENANCE OR DEMOLITION DESIGNATED PARKING FOR WORKERS AND LOADING AREAS SHOULD BE PROVIDED. TRAINED TRAFFIC MANAGEMENT PERSONNEL SHOULD BE RESPONSIBLE FOR THE SUPERVISION OF THESE AREAS. DELIVERY OF CONSTRUCTION MATERIALS SHOULD BE WELL PLANNED TO AVOID CONGESTION OF TRAFFIC AREAS AND TRAINED TRAFFIC MANAGEMENT PERSONNEL SHOULD BE USED TO SUPERVISE LOADING/UNLOADING AREAS.
- BUSY CONSTRUCTION AND DEMOLITION SITES PRESENT A RISK OF COLLISION WHERE DELIVERIES AND OTHER TRAFFIC ARE MOVING WITHIN THE SITE. A TRAFFIC CONTROL PLAN SUPERVISED BY TRAINED TRAFFIC MANAGEMENT PERSONNEL SHOULD BE ADOPTED FOR THE WORK SITE.

EARTHWORKS:

- EARTHWORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS RECOMMENDATIONS. REFER TO INFORMATION PROVIDED BY SHOALHAVEN CITY COUNCIL.
- STRIP TOPSOIL, VEGETABLE MATTER AND RUBBLE TO EXPOSE NATURALLY OCCURRING MATERIAL AND STOCKPILE ON SITE AS DIRECTED BY THE SUPERINTENDENT.
- WHERE FILLING IS REQUIRED TO ACHIEVE DESIGN SUBGRADE, PROOF ROLL EXPOSED NATURAL SURFACE WITH A MINIMUM OF TEN PASSES OF A VIBRATING ROLLER (MINIMUM STATIC WEIGHT OF 10 TONNES) IN THE PRESENCE OF THE SUPERINTENDENT.
- ALL SOFT, WET OR UNSUITABLE MATERIAL IS TO BE REMOVED AS DIRECTED BY THE SUPERINTENDENT AND REPLACED WITH APPROVED MATERIAL SATISFYING THE REQUIREMENTS LISTED BELOW.
- THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS, ROLLER MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED AT THE CONTRACTORS COST.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE AND MAINTAIN THE INTEGRITY OF ALL SERVICES, CONDUITS AND PIPES DURING CONSTRUCTION, SPECIFICALLY DURING THE BACKFILLING AND COMPACTION PROCEDURE. ANY AND ALL DAMAGE TO NEW OR EXISTING SERVICES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- USE OF VIBRATING ROLLERS ARE TO BE LIMITED DUE TO THE CLOSENESS OF EXISTING STRUCTURES. SAFE DISTANCE = 1.5 x DRUM WEIGHT (DMW).
- DURING CONSTRUCTION WATER RUNOFF SHALL BE COLLECTED AND CHANNLED AWAY FROM THE STRUCTURE.

SITE WORKS:

- ALL WORKS TO BE IN ACCORDANCE WITH SPECIFICATIONS AND AUSTRALIAN STANDARDS. CONFLICTS SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION.
- THE CONTRACTOR IS TO DESIGN, OBTAIN APPROVALS AND CARRY OUT REQUIRED TEMPORARY TRAFFIC CONTROL PROCEDURES DURING CONSTRUCTION IN ACCORDANCE WITH RMS & SHOALHAVEN CITY COUNCIL REGULATIONS AND REQUIREMENTS.
- THE CONTRACTOR IS TO OBTAIN ALL AUTHORITY APPROVALS AS REQUIRED.
- RESTORE ALL PAVED, COVERED, GRASSED AND LANDSCAPED AREAS TO THEIR ORIGINAL CONDITION ON COMPLETION OF WORKS.
- ON COMPLETION OF ANY TRENCHING WORKS, ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL, GRASSED AREAS AND ROAD PAVEMENTS.
- THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO LODGMENT OF TENDER AND PRIOR TO CONSTRUCTION.
- ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
(A) PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE.
(B) ENSURING THAT NOTHING IS NAILED TO THEM.
(C) PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLOUGHING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS:
(i) ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS GREATER.
(ii) A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO TRICKLE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH.
(iii) CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.
- IN CASE OF DOUBT OR DISCREPANCY REFER TO SUPERINTENDENT FOR CLARIFICATION OR CONFIRMATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
- MAKE SMOOTH TRANSITION TO EXISTING FEATURES AND CONSTRUCTION.
- TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF PAVEMENT AND A MIN 50mm IN BITUMINOUS PAVING.
- ALL CONSTRUCTION WORK IS TO BE CARRIED OUT SO THAT AT ANY TIME ADJOINING PROPERTY OWNERS ARE NOT DEPRIVED OF AN ALL-WEATHER ACCESS OR SUBJECTED TO ADDITIONAL STORM WATER RUN-OFF DURING THE PERIOD OF CONSTRUCTION.
- ALL GREEN WASTE IS EITHER TO BE REMOVED FROM SITE OR MULCHED ON SITE AND SPREAD OVER DISTURBED AREAS. NO GREEN WASTE IS TO BE BURNT ON SITE.

EXISTING SERVICES:

- THE LOCATION OF UNDERGROUND SERVICES SHOWN ON THESE PLANS IS INDICATIVE ONLY.
- THE CONTRACTOR IS TO UNDERTAKE ALL DBYD ENQUIRIES FOR THE SITE AND LIAISE WITH SERVICE AUTHORITIES AS REQUIRED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND CONFIRM THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE DISCUSSED WITH THE RELEVANT SERVICE AUTHORITIES.
- THE CONTRACTOR IS TO CONFIRM SPECIFIC CLEARANCE REQUIREMENTS BETWEEN SERVICES AND STRUCTURES WITH RELEVANT SERVICE AUTHORITIES. THE COSTS ASSOCIATED WITH AUTHORITY CALL OUTS ARE TO BE BOURNE BY THE CONTRACTOR.
- CARE TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER COMMUNICATION, GAS OR ELECTRICAL SERVICES. HAND EXCAVATION ONLY IN THESE AREAS.
- THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING SERVICES THAT ARE TO BE RETAINED IN THE VICINITY OF THE PROPOSED WORKS. ANY AND ALL DAMAGE TO THESE SERVICES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR UNDER THE DIRECTION OF THE SUPERINTENDENT, AND AT CONTRACTOR'S COST.
- THE CONTRACTOR SHALL ALLOW FOR ADJUSTMENT (IF REQUIRED) OF EXISTING SERVICES IN AREAS AFFECTED BY WORKS.
- THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIRED) OF EXISTING SERVICES IN AREA AFFECTED BY WORKS UNLESS DIRECTED OTHERWISE ON THE DRAWINGS OR BY THE SUPERINTENDENT.
- THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
- PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN APPROVAL FOR THE RELOCATION AND/OR CONSTRUCTION OF TEMPORARY SERVICES AND FOR ANY ASSOCIATED INTERRUPTION OF SUPPLY.
- THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
- ADJUST ALL UTILITY SERVICE COVERS TO SUIT NEW GRADES & LEVELS TO MEET SERVICE PROVIDERS SPECIFICATIONS.

NOT FOR CONSTRUCTION

THIS DRAWING AND THE CONCEPTS CONTAINED THEREIN ARE THE PROPERTY OF WESTLAKE PUNNETT & ASSOCIATES PTY LTD. NO UNAUTHORISED COPYING IS PERMITTED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE. DO NOT SCALE - NO RESPONSIBILITY WILL BE TAKEN BY WESTLAKE PUNNETT & ASSOCIATES PTY LTD FOR ANY DISCREPANCIES CAUSED BY THE SCALING OF THESE DRAWINGS.

REV.	AMENDMENTS	APPROVED	DATE
1	ISSUED FOR COMMENT	J.RITTER	20.04.2026

APPROVED	DATE
J.RITTER	20.04.2026



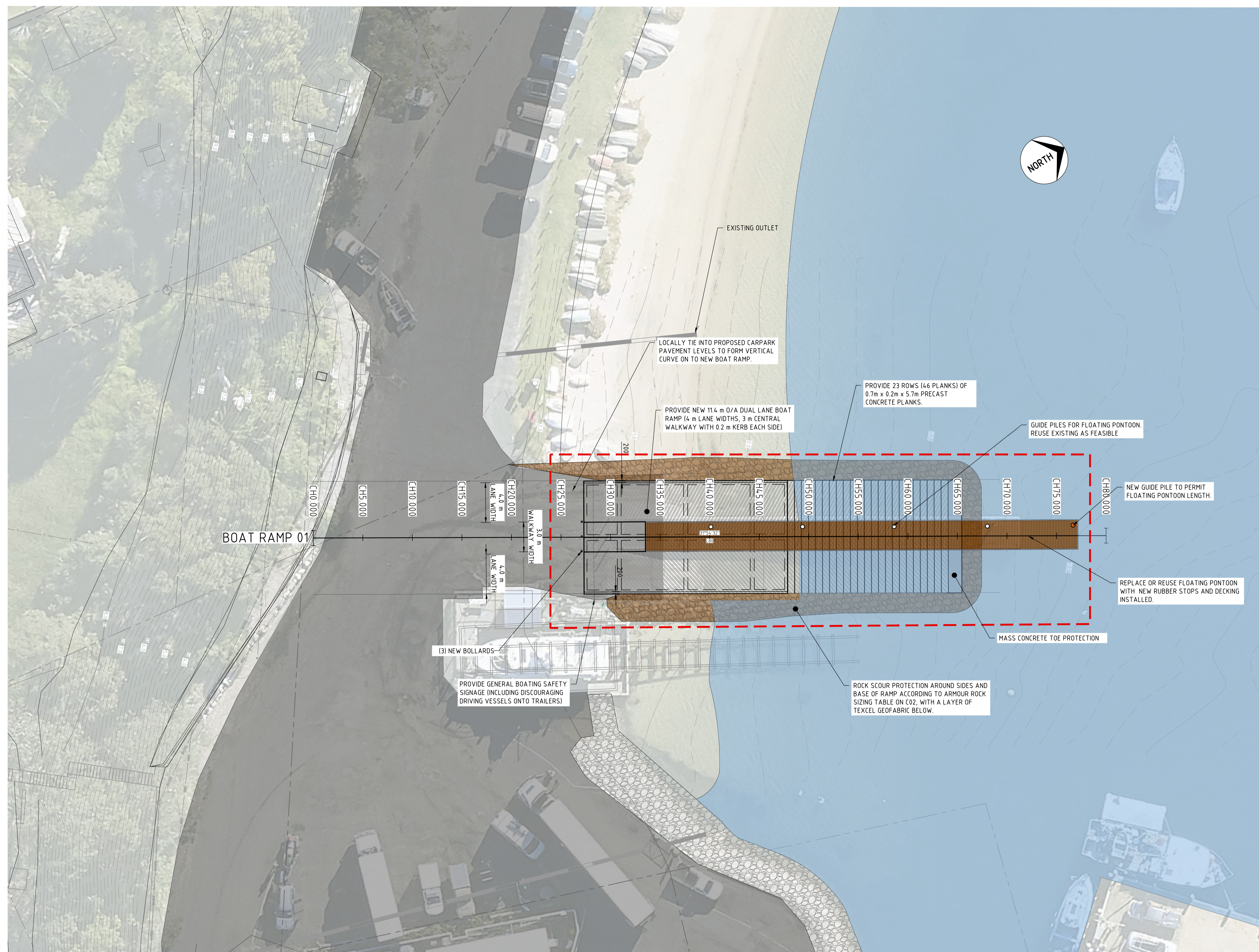
Westlake Punnett & Associates Pty Ltd
ABN 38 120 322 536

EMAIL office@westlakepunnett.com.au
PHONE 02 4423 5533
ADDRESS PO Box 1573 NOWRA, NSW 2541
WEBSITE www.westlakepunnett.com.au

GENERAL NOTES

CLIENT: SHOALHAVEN CITY COUNCIL
PROJECT: ULLADULLA HARBOUR BOAT RAMP REPLACEMENT
ADDRESS: 25 WASON STREET, ULLADULLA NSW 2539

APPROVED		Designed: B.HAUVILLE	
J.RITTER		Drawn: J.NUNES	
Checked: J.RITTER			
Datum	Size	Scale	Date
	A1	N.A.	20.04.2026
Project No.	Drawing No.	Rev.	
W26022	C-01-00-02	1	



BOAT RAMP 01

EXISTING OUTLET

LOCALLY TIE INTO PROPOSED CARPARK PAVEMENT LEVELS TO FORM VERTICAL CURVE ON TO NEW BOAT RAMP.

PROVIDE NEW 11.4 m O/A DUAL LANE BOAT RAMP (4 m LANE WIDTHS, 3 m CENTRAL WALKWAY WITH 0.2 m KERB EACH SIDE)

PROVIDE 23 ROWS (46 PLANKS) OF 0.7m x 0.2m x 5.7m PRECAST CONCRETE PLANKS.

GUIDE PILES FOR FLOATING PONTOON. REUSE EXISTING AS FEASIBLE

NEW GUIDE PILE TO PERMIT FLOATING PONTOON LENGTH.

REPLACE OR REUSE FLOATING PONTOON WITH NEW RUBBER STOPS AND DECKING INSTALLED.

MASS CONCRETE TOE PROTECTION

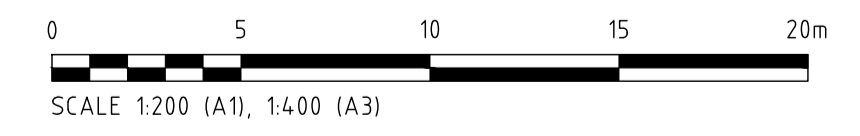
ROCK SCOUR PROTECTION AROUND SIDES AND BASE OF RAMP ACCORDING TO ARMOUR ROCK SIZING TABLE ON C02, WITH A LAYER OF TEXCEL GEOTEXTILE BELOW.

(3) NEW BOLLARDS

PROVIDE GENERAL BOATING SAFETY SIGNAGE (INCLUDING DISCOURAGING DRIVING VESSELS ONTO TRAILERS)

LEGEND	
	EXTENT OF CONSTRUCTION WORKS.
	EXISTING CONTOURS (MAJOR 1m INTERVAL)
	EXISTING CONTOURS (MINOR 0.2m INTERVAL)
	EXISTING PROPERTY BOUNDARY
	PROPOSED SCOUR PROTECTION
	EXISTING GUIDE PILES TO BE RETAINED
	NEW GUIDE PILE

GENERAL ARRANGEMENT PLAN
SCALE: 1:200



NOT FOR CONSTRUCTION

THIS DRAWING AND THE CONCEPTS CONTAINED THEREIN ARE THE PROPERTY OF WESTLAKE PUNNETT & ASSOCIATES PTY LTD. NO UNAUTHORISED COPYING IS PERMITTED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE. DO NOT SCALE - NO RESPONSIBILITY WILL BE TAKEN BY WESTLAKE PUNNETT & ASSOCIATES PTY LTD FOR ANY DISCREPANCIES CAUSED BY THE SCALING OF THESE DRAWINGS.

REV.	AMENDMENTS	APPROVED	DATE
1	ISSUED FOR COMMENT	J.RITTER	20.04.2026



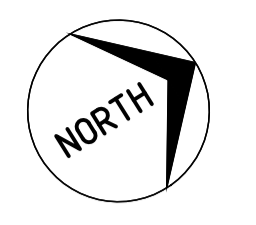
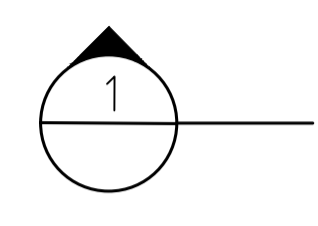
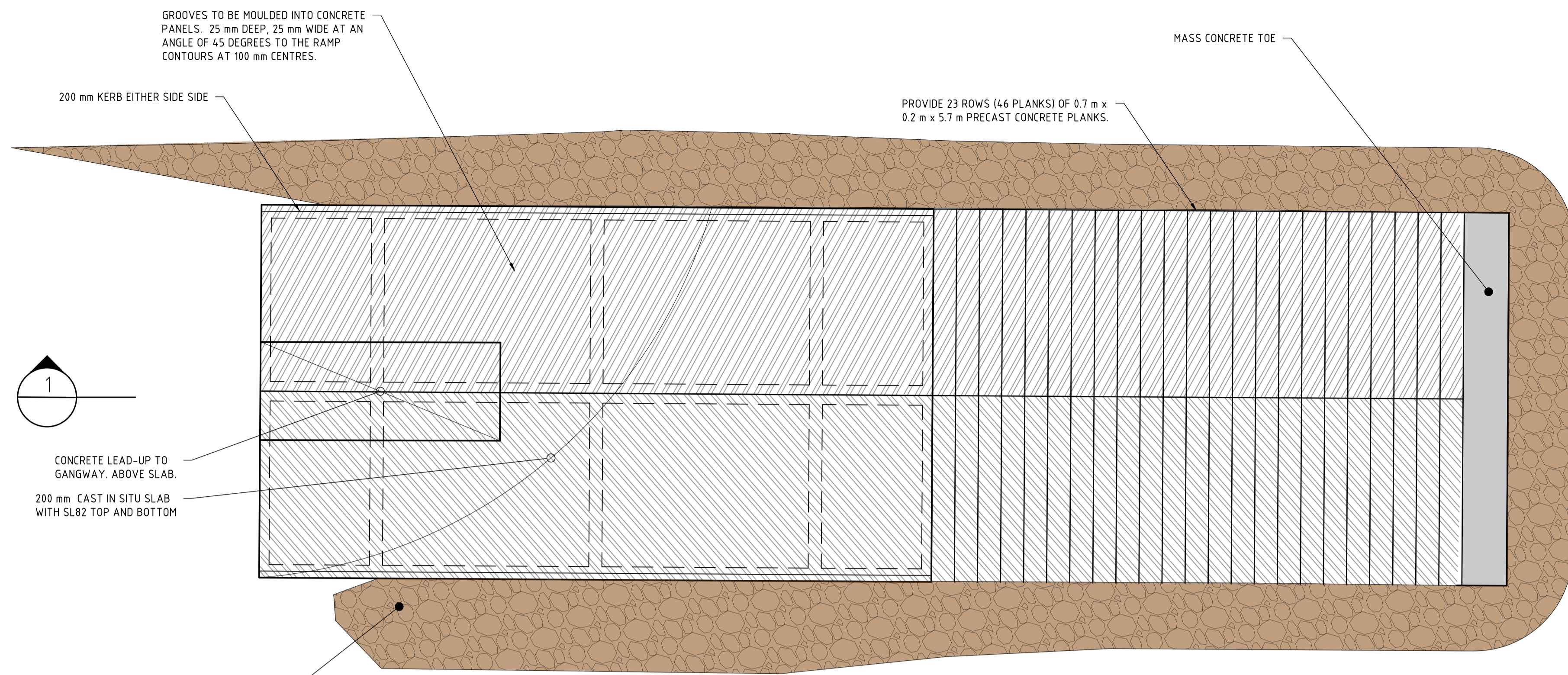
WESTLAKE PUNNETT & ASSOCIATES PTY LTD
ABN 38 120 322 536

EMAIL: office@westlakepunnett.com.au
PHONE: 02 4423 5533
ADDRESS: PO Box 1573 NOWRA, NSW 2541
WEBSITE: www.westlakepunnett.com.au

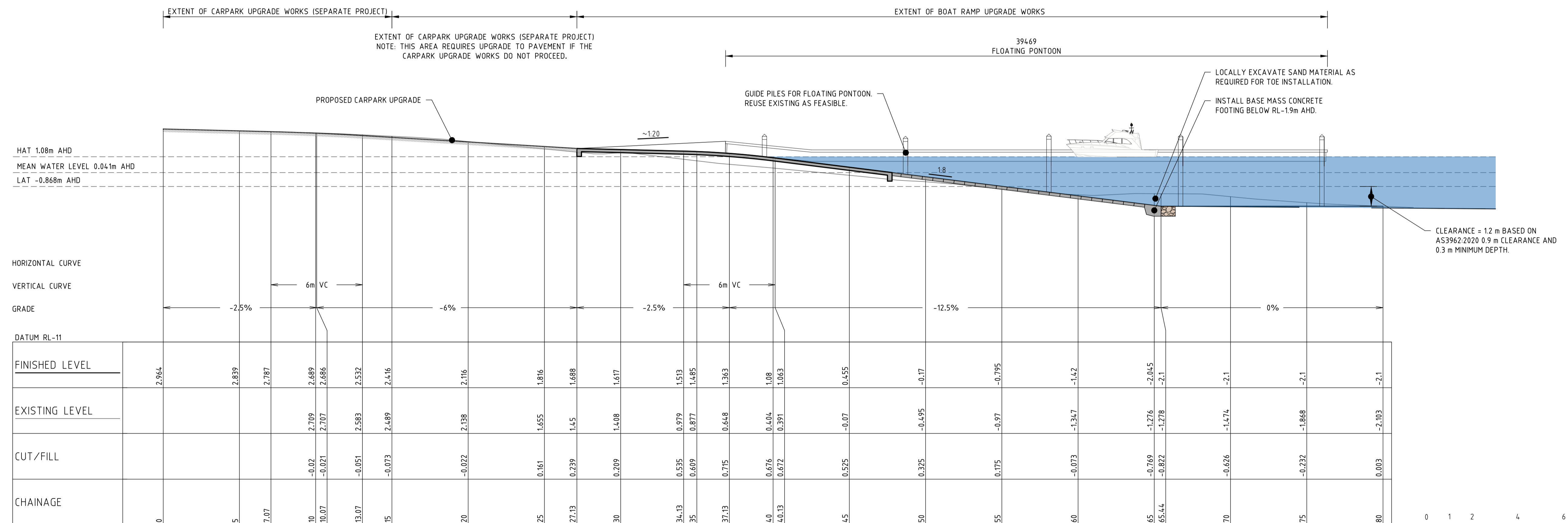
GENERAL ARRANGEMENT PLAN

CLIENT: SHOALHAVEN CITY COUNCIL
PROJECT: ULLADULLA HARBOUR BOAT RAMP REPLACEMENT
ADDRESS: 25 WASON STREET, ULLADULLA NSW 2539

APPROVED		Designed: B.HAUVILLE	
J.RITTER		Drawn: B.ASHE	
Checked: J.RITTER		Datum	
Size	Scale	Date	Rev.
A1	1:200	20.04.2026	1
Project No. W26022	Drawing No. C-01-03-01		



BOAT RAMP LAYOUT PLAN
SCALE: 1:100



LONGITUDINAL SECTION BOAT RAMP 01

SCALE 1:150 (HORIZONTAL)
SCALE 1:150 (VERTICAL)



DATUM RL-11	0	5	7.07	10	10.07	13.07	15	20	25	27.13	30	34.13	35	37.13	40	40.13	45	50	55	60	65	65.44	70	75	80
FINISHED LEVEL	2.964	2.839	2.787	2.689	2.686	2.532	2.416	2.116	1.816	1.688	1.617	1.513	1.485	1.363	1.08	1.063	0.555	-0.17	-0.795	-1.42	-2.045	-2.1	-2.1	-2.1	-2.1
EXISTING LEVEL				2.709	2.707	2.583	2.489	2.138	1.655	1.45	1.408	0.979	0.877	0.648	0.404	0.391	-0.07	-0.495	-0.97	-1.347	-1.276	-1.278	-1.174	-1.868	-2.103
CUT/FILL				-0.02	-0.021	-0.051	-0.073	-0.022	0.161	0.239	0.209	0.535	0.609	0.715	0.676	0.672	0.525	0.325	0.175	-0.073	-0.769	-0.822	-0.626	-0.232	0.003
CHAINAGE	0	5	7.07	10	10.07	13.07	15	20	25	27.13	30	34.13	35	37.13	40	40.13	45	50	55	60	65	65.44	70	75	80

THIS DRAWING AND THE CONCEPTS CONTAINED THEREIN ARE THE PROPERTY OF WESTLAKE PUNNETT & ASSOCIATES PTY LTD. NO UNAUTHORISED COPYING IS PERMITTED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE. DO NOT SCALE - NO RESPONSIBILITY WILL BE TAKEN BY WESTLAKE PUNNETT & ASSOCIATES PTY LTD FOR ANY DISCREPANCIES CAUSED BY THE SCALING OF THESE DRAWINGS.

REV.	AMENDMENTS	APPROVED	DATE
1	ISSUED FOR COMMENT	J.RITTER	20.04.2026

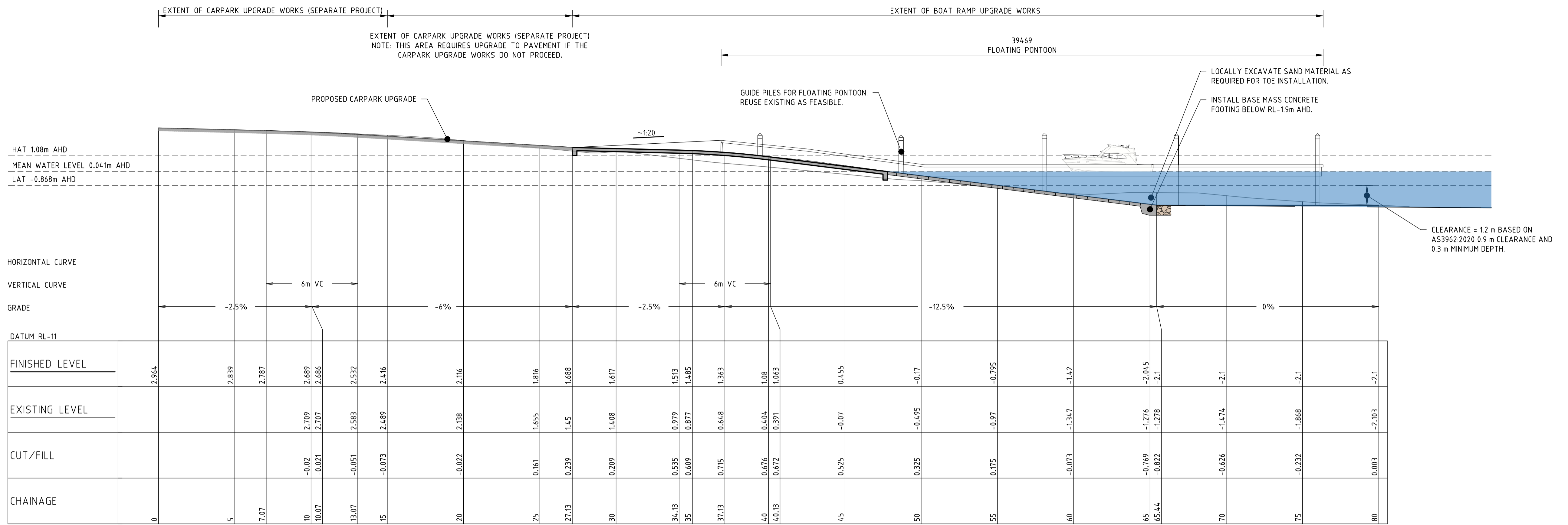


WESTLAKE PUNNETT & ASSOCIATES PTY LTD
ABN 38 120 322 536
EMAIL: office@westlakepunnett.com.au
PHONE: 02 4423 5533
ADDRESS: PO Box 1573 NOWRA, NSW 2541
WEBSITE: www.westlakepunnett.com.au

BOAT RAMP LAYOUT PLAN AND LONGITUDINAL SECTION
CLIENT: SHOALHAVEN CITY COUNCIL
PROJECT: ULLADULLA HARBOUR BOAT RAMP REPLACEMENT
ADDRESS: 25 WASON STREET, ULLADULLA NSW 2539

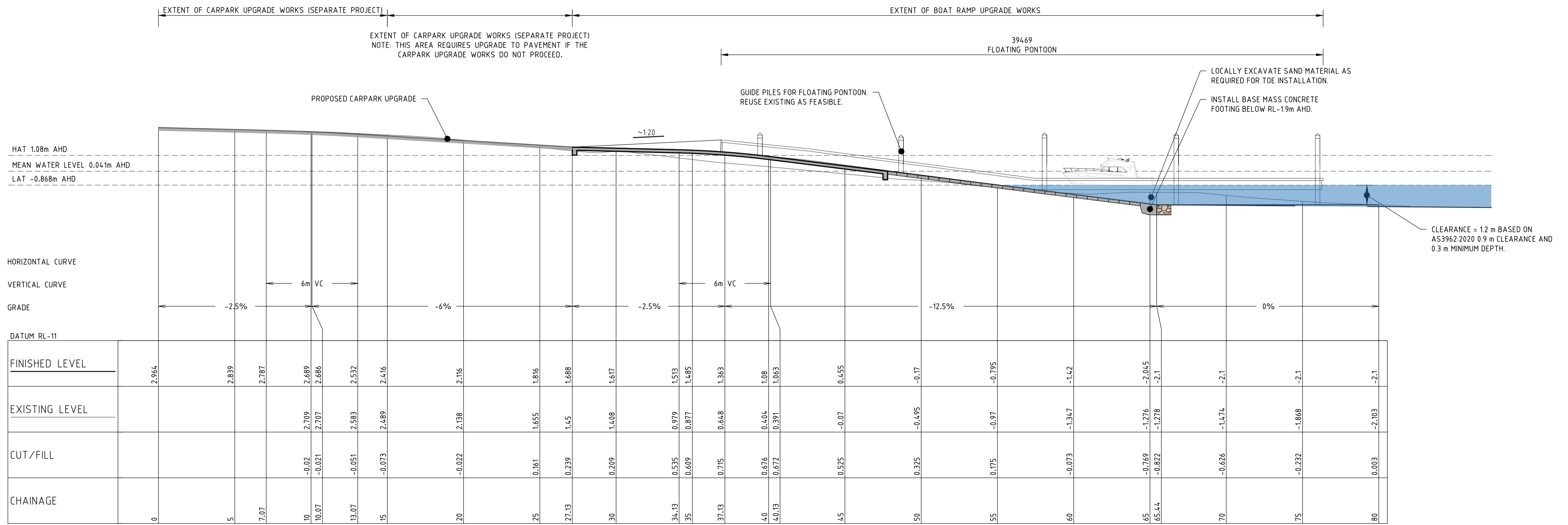
APPROVED			
Designed: B.HAUVILLE			
Drawn: B.ASHE			
Checked: J.RITTER			
Datum	Size	Scale	Date
	A1	VARIES	20.04.2026
Project No.	Drawing No.	Rev.	
W26022	C-01-04-01	1	

NOT FOR CONSTRUCTION



LONGITUDINAL SECTION BOAT RAMP 01

SCALE 1:150 (HORIZONTAL)
SCALE 1:150 (VERTICAL)



LONGITUDINAL SECTION BOAT RAMP 01

SCALE 1:150 (HORIZONTAL)
SCALE 1:150 (VERTICAL)



NOT FOR CONSTRUCTION

THIS DRAWING AND THE CONCEPTS CONTAINED THEREIN ARE THE PROPERTY OF WESTLAKE PUNNETT & ASSOCIATES PTY LTD. NO UNAUTHORISED COPYING IS PERMITTED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE. DO NOT SCALE - NO RESPONSIBILITY WILL BE TAKEN BY WESTLAKE PUNNETT & ASSOCIATES PTY LTD FOR ANY DISCREPANCIES CAUSED BY THE SCALING OF THESE DRAWINGS.

REV.	AMENDMENTS	APPROVED	DATE
1	ISSUED FOR COMMENT	J.RITTER	20.04.2026



WESTLAKE PUNNETT & ASSOCIATES PTY LTD
ABN 38 120 322 536

EMAIL office@westlakepunnett.com.au
PHONE 02 4423 5533
ADDRESS PO Box 1573 NOWRA, NSW 2541
WEBSITE www.westlakepunnett.com.au

LONGITUDINAL SECTIONS

CLIENT: SHOALHAVEN CITY COUNCIL
PROJECT: ULLADULLA HARBOUR BOAT RAMP REPLACEMENT
ADDRESS: 25 WASON STREET, ULLADULLA NSW 2539

APPROVED	Designed:	Drawn:	Checked:	Datum	Size	Scale	Date
J.RITTER	B.HAUVILLE	B.ASHE	J.RITTER		A1	1:150	20.04.2026
	Project No. W26022	Drawing No. C-01-04-02	Rev. 1				