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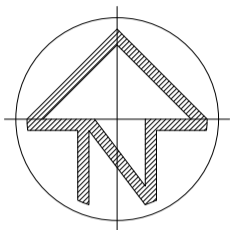
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# REVETMENT WALL AND FISH CLEANING FACILITY

## LAKEHAVEN DRIVE, SUSSEX INLET

### CONCEPT DESIGN



### DRAWING INDEX

- DN220291 S001 COVER SHEET
- DN220291 S002 NOTES SHEET
- DN220291 S010 SITE PLAN
- DN220291 S020 DETAILS SHEET



APPROXIMATE AREA OF WORKS

LOCALITY PLAN  
N.T.S.

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REVISION	AMENDMENTS	DATE	CKD	APP	CLIENT:	ARCHITECT:	THIS DRAWING AND THE CONCEPTS CONTAINED THEREIN ARE THE PROPERTY OF MI ENGINEERS. NO UNAUTHORISED COPYING IS PERMITTED. NOTHING IS TO BE CONSTRUCTED BASED ON THIS DRAWING, OR PART OF THIS DRAWING, WITHOUT THE WRITTEN PERMISSION OF MI ENGINEERS. DRAWINGS TO BE READ IN CONJUNCTION WITH OTHER RELATED DESIGN DOCUMENTATION. FURTHERMORE, WHERE MIENGINEERS RELIES ON THE INFORMATION SUPPLIED BY OTHERS TO PRODUCE THE DESIGNS, WE ACCEPT NO LIABILITY FOR ERRORS, TO THE EXTENT THAT THE DESIGN HAS MADE RELIANCE ON THIS INFORMATION. MUST BE READ IN COLOUR	PROJECT:	DESIGNED:	DRAWN:	SCALE:	SHEET SIZE:
A	ISSUED FOR REVIEW	-	-	TS			SYDNEY OFFICE 83 - 89 Renwick Street, Redfern NSW 2016 Tel (02) 8396 6565  SOUTH COAST OFFICE 49 Berry Street, Nowra NSW 2541 Tel (02) 4423 0566  WOLLONGONG OFFICE Suite 3a, 128-134 Crown Street, Wollongong NSW 2500 Tel (02) 4423 0566	REVETMENT WALL AND FISH CLEANING FACILITY LAKEHAVEN DRIVE, SUSSEX INLET CONCEPT DESIGN	TS	SP	-	A1
								DRAWING NAME: COVER SHEET	DRAWING STATUS PRELIMINARY	DRAWING No. S001		
									PROJECT No. DN220291	REVISION: A		

GENERAL NOTES

1. MAXIMUM DEPTH OF FILL (OTHER THAN BELOW) SHALL BE 400mm DEEP AND WELL COMPACTED IN 150mm LAYERS (AFTER COMPACTION) BY A MECHANICAL ROLLER. THIS FILL SHALL BE MOIST DURING COMPACTION.  
OR  
APPROVED SOUND GRANULAR FILL (FREE OF MATERIAL THAT WOULD PRECLUDE COMPACTION) SHALL BE PLACED TO A MAXIMUM DEPTH OF 800mm. FILL IS TO BE PLACED IN 200mm LAYERS (AFTER COMPACTION) BY A VIBRATING PLATE OR VIBRATING ROLLER. WHERE DEPTH OF FILL EXCEEDS 800mm CONTROLLED FILL SHALL BE PLACED IN ACCORDANCE WITH AS3798 (SEE TABLE 5.1 MINIMUM RELATIVE COMPACTION - ITEM 2) AND CERTIFIED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER. IF SOFT SPOTS ARE ENCOUNTERED THEN ALL SOFT MATERIAL IS TO BE REMOVED AND THEN BACKFILLED WITH A SUITABLE MATERIAL COMPACTED AS SPECIFIED ABOVE.
2. REMOVE ALL TOPSOIL, SOFT GROUND, GRASS AND OTHER DELETERIOUS MATERIAL FROM UNDER NEW FOUNDATIONS PRIOR TO CONSTRUCTION.
3. THE BUILDER AND OWNER ARE TO ENSURE THAT SITE DRAINAGE AND FOUNDATION MAINTENANCE IS CARRIED OUT IN ACCORDANCE WITH APPENDIX B OF AS2870 AS ENCLOSED IN THE SPECIFICATION. NOTE: DAMAGE CAN BE EXPECTED IF THE RECOMMENDATIONS OF APPENDIX B ARE NOT COMPLIED WITH.
4. PLACE SETDOWNS IN SLAB FOR TILES IF REQUIRED.
5. TILES TO BE LAID ON A FLEXIBLE BEDDING MORTAR.
6. THE ENGINEER SHALL VIEW AND APPROVE ALL CONCRETE WORK PRIOR TO THE POURING OF ANY CONCRETE.
7. NOTE: COUNCIL REQUIRES THAT THE RELEVANT FLOOR SLAB SHALL BE AT LEAST 300mm ABOVE GROUND LEVEL AT THE YARD GULLY.
8. THE INFORMATION CONTAINED ON THESE DRAWINGS IS FOR STRUCTURAL PURPOSES ONLY. IN ALL OTHER MATTERS, THE APPROVED ARCHITECTURAL DRAWING SHALL TAKE PRECEDENCE. ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
9. ALL WORK SHALL BE PROTECTED FROM TERMITE ATTACK IN ACCORDANCE WITH AS3660.1 AND LOCAL AUTHORITY REQUIREMENTS.
10. DURING CONSTRUCTION, THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. THE DESIGN INSTALLATION AND MAINTENANCE OF ALL TEMPORARY PROPPING, BRACING AND SHORING SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES. THE COST OF ALL SUCH WORK SHALL BE DEEMED TO BE INCLUDED IN THE CONTRACTORS TENDER.
11. ON CLASS H OR CLASS E SITES, PLUMBING AND DRAINAGE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT SPECIFICATION.
12. THE BUILDER SHALL ENSURE THAT THE GROUND SURROUNDING THE STRUCTURE SLOPES AWAY FROM THE BUILDING WITH IMPERVIOUS MATERIALS.
13. ALL WORKS CONDUCTED SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE RELEVANT AUSTRALIAN STANDARDS (INCLUDING ALL AMENDMENTS) AND THE CURRENT EDITION OF THE BUILDING CODE OF AUSTRALIA.
14. PROVIDE FINISHES AND FIXTURES THAT ALLOW FOR RELATIVE MOVEMENT BETWEEN OLD AND NEW STRUCTURES, TYPICAL.
15. WHERE ROCK IS ENCOUNTERED THE REMAINDER OF THE FOOTING SYSTEM SHALL BE FOUNDED ON ROCK AS APPROVED BY THE ENGINEER.
16. ELECTRIC HEATING CABLES MAY BE EMBEDDED IN THE SLAB WITHOUT ANY INCREASE IN THICKNESS OR REINFORCEMENT.  
WHERE HOT WATER HEATING PIPES ARE TO BE EMBEDDED IN A SLAB, THE SLAB THICKNESS SHALL BE INCREASED BY 25 mm AND AN INCREASE MADE IN THE MESH OF ONE LEVEL. (FOR EXAMPLE, SL72 FOR SL62, SL82 FOR SL72 AND SL92 FOR SL82.) THE MESH SHALL BE PLACED AT A SUITABLE LEVEL TO ACCOMMODATE THE PIPES.
17. IN BUILDINGS WITH MASONRY AND/OR CONCRETE SURFACES EXPOSED TO SALINE SOILS OR ACID SULPHATE SOILS, THE CONCRETE RAFT, SLAB, STRIP OR PAD FOOTING SHALL BE PROTECTED FROM THE AGGRESSIVE SOIL OR GROUNDWATER BY:  
- ISOLATION OF THE CONCRETE OR MASONRY FROM THE AGGRESSIVE SOIL BY INSTALLING 0.5mm THICK DAMP-PROOFING MATERIAL IN ACCORDANCE WITH AS2870 AND AS2904.
18. THE CONTRACTOR IS TO ENSURE THAT ALL WORK IS DONE IN A SAFE MANNER AND IN ACCORDANCE WITH ALL APPLICABLE SAFEWORK NSW REGULATIONS AND ANY OTHER APPLICABLE STATUTORY AUTHORITY REGULATIONS.
19. THE OWNERS ATTENTION IS DRAWN TO THE ACCEPTABLE LEVELS OF FOUNDATION PERFORMANCE AS OUTLINED BY AS 2870. ACCORDINGLY CATEGORY 1 OR 2 DAMAGE MAY BE EXPECTED UNDER SOME CONDITIONS. SHOULD A HIGHER LEVEL OF CRACK CONTROL BE REQUIRED THEN THE ENGINEER SHOULD BE NOTIFIED SO THAT THIS CAN BE INCORPORATED INTO THE DESIGN.
20. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES PRIOR TO START OF CONSTRUCTION AND TO ALLOW TO ADJUST THESE AS REQUIRED TO PROVIDE FOR THE INTENT OF THE DESIGN.
21. WHERE MIENGINEERS RELIES ON THE INFORMATION SUPPLIED BY OTHERS TO PRODUCE THE DESIGNS, WE ACCEPT NO LIABILITY FOR ERRORS, TO THE EXTENT THAT THE DESIGN HAS MADE RELIANCE ON THIS INFORMATION.

CONCRETE NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE CURRENT EDITION OF AS3600 AND AS2870 FOR RESIDENTIAL CONSTRUCTION.
2. CONCRETE SHALL CONFORM TO THE FOLLOWING UNLESS NOTED OTHERWISE:
  - CEMENT TYPE GB TO AS3972
  - CEMENT TYPE HE TO AS3972 (HIGH EARLY STRENGTH)
  - CEMENT TYPE LH TO AS3972 (LOW HEAT)
  - CEMENT TYPE SR TO AS3972 (SULFATE-RESISTING)
  - CEMENT TYPE SL TO AS3972 (SHRINKAGE LIMITED)
  - SLUMP OF 80mm ±10mm
  - MAXIMUM AGGREGATE SIZE OF 20mm
  - MAXIMUM DRYING SHRINKAGE STRAIN (TO AS1012 PART 13) SHALL NOT EXCEED 1000 MICROSTRAIN AT 56 DAYS UNLESS DESIGNATED AS SHRINKAGE LIMITED (SL)
  - STRENGTH GRADES FOR NORMAL CLASS (N) OR SPECIAL CLASS (S) AS SHOWN IN GENERAL NOTES
  - PROJECT ASSESSMENT OF CONCRETE STRENGTH IS REQUIRED IN ACCORDANCE WITH AS1379 AND THE SPECIFICATION
3. UNLESS NOTED OTHERWISE, THE CONCRETE MIX DESIGN SHALL MEET THE SPECIFICATION AND THE FOLLOWING CRITERIA:

ELEMENT	GRADE (MPa)	MIN. CEMENT CONTENT	W/C RATIO
BLINDING	N15	-	-
GENERAL WORKS	N25	300	0.55
SLAB ON GROUND	N32	300	0.45
SUSPENDED SLABS	N40	330	0.45
PIILING WORKS	N50	350	0.42

- SL40-C DENOTES A SPECIAL-CLASS, SHRINKAGE LIMITED (SL) MIX TO AS1379 WITH COLOUR CONTROLS TO ARCHITECT'S SPECIFICATIONS
- FOR SHRINKAGE LIMITED (SL) MIXES, MAXIMUM DRYING SHRINKAGE STRAIN (TO AS1012 PART 13) SHALL NOT EXCEED 650 MICROSTRAIN AT 56 DAYS.

4. CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE AS FOLLOWS U.N.O.:

ELEMENT	TOP (mm)	BOTTOM (mm)	SIDE (mm)
SLAB ON GROUND (INTERNAL)	30	30	30
SLAB ON GROUND (EXTERNAL)	45	30	45
SUSPENDED SLAB	30	30	30
FOOTINGS	50	50	50

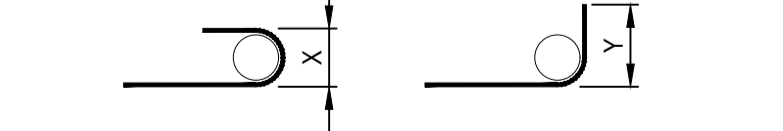
5. THE SIZES OF THE CONCRETE ELEMENTS DO NOT INCLUDE THICKNESSES OF ANY APPLIED FINISHES.
6. ALL CONCRETE SHALL BE COMPACTED ADEQUATELY IN ACCORDANCE WITH AS3600 BY THE USE OF A MECHANICAL VIBRATOR.
7. ALL CONCRETE SHALL BE CURED IN ACCORDANCE WITH AS3600.
8. BRICKWORK SHALL BE ARTICULATED CORRESPONDING TO THE LOCATIONS OF ANY KEYED JOINTS.
9. REINFORCEMENT SYMBOLS:  
N - DENOTES GRADE D500N DEFORMED BARS TO AS4671  
R - DENOTES GRADE R250N ROUND BARS TO AS4671  
SL - DENOTES WELDED GRADE D500L REINFORCING FABRIC TO AS4671
10. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
11. POLISHED CONCRETE SLAB MESH IS TO BE A MINIMUM SIZE OF SL81. SLAB THICKNESS IS TO BE INCREASED BY THE AMOUNT OF CONCRETE TO BE GROUND OFF (HONED), BURNISHED CONCRETE TO BE A MINIMUM OF 32MPa.  
HONED CONCRETE TO BE A MINIMUM OF 40MPa.
12. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE ENGINEER. LAPS SHALL BE IN ACCORDANCE WITH AS3600 AND NOT LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR.

REINFORCEMENT LAP LENGTHS (LESS THEN 300mm OF CONCRETE BELOW THE BAR)							
BAR SIZE							
N12	N16	N20	N24	N28	N32	N36	N40
500	750	1000	1400	1700	2000	2300	2750

REINFORCEMENT LAP LENGTHS (MORE THEN 300mm OF CONCRETE BELOW THE BAR)							
BAR SIZE							
N12	N16	N20	N24	N28	N32	N36	N40
650	1000	1300	1800	2200	2600	3000	3600

13. MINIMUM OVERALL DIMENSIONS OF 180° HOOKS AND 90° COGS MAY BE NO SMALLER THEN THE FOLLOWING TABLE:

180° HOOKS OVERALL DIMENSION (X)				
PIN DIA.	BAR NOMINAL SIZE (D)			
	12	16	20	24
3D	60	-	-	-
4D	70	100	120	140
90° COGS OVERALL DIMENSION (Y)				
PIN DIA.	BAR NOMINAL SIZE (D)			
	12	16	20	24
3D	160	-	-	-
4D	170	200	240	280



GRAVITY RETAINING WALL NOTES

1. CONSTRUCTION TO BE IN ACCORDANCE WITH AS4678 AND ALL CURRENT AMENDMENTS.
2. SITE PREPARATION AND EXCAVATION SHALL INCLUDE THE REMOVAL OF ALL MATERIALS NECESSARY FOR THE CONSTRUCTION OF THE EARTH-RETAINING STRUCTURE.
3. THE FOUNDATION SHALL BE COMPACTED TO PROVIDE APPROXIMATELY UNIFORM SUBGRADE STIFFNESS AND REQUIRED BEARING CAPACITY. SOFT SPOTS SHALL BE REMOVED AND REPLACED WITH SUITABLE FILL.
4. ALL FILL MATERIAL SHALL COMPLY WITH THE DESIGN.
5. WHERE FILL IS TO BE COMPACTED, THE WORK SHALL BE PERFORMED SUCH THAT THE COMPACTION CAN BE ACHIEVED WITHOUT DAMAGING OR DISLODGING ADJACENT STRUCTURES AND RETAINING WALL.
6. THE DRAINAGE SYSTEM SHALL BE PROVIDED SUCH THAT IT:  
6.1. IS CAPABLE OF RELIEVING HYDROSTATIC HEAD BEHIND THE STRUCTURE  
6.2. DRAINS FREELY TO A LOCATION REMOVED FROM THE STRUCTURE  
6.3. INCORPORATES A MEANS OF PREVENTING SILTATION  
6.4. DOES NOT LEAD TO SCOURING EROSION

CONCRETE REPAIR NOTES

1. AREAS OF CONCRETE THAT ARE REQUIRED TO BE REPAIRED (INCLUDED AREAS OF CONCRETE THAT HAVE BEEN DEMOLISHED), SHALL BE TREATED AS FOLLOWS:
  - 1.1. MARK OUT AREA OF CONCRETE TO BE REPAIRED
  - 1.2. PROP SURROUNDING SLAB AS REQUIRED
  - 1.3. BREAKAWAY CONCRETE TO EXPOSE REINFORCEMENT AND TAKE BACK UNTIL CLEAN SOUND REINFORCEMENT AND CONCRETE HAS BEEN LOCATED
  - 1.4. WIRE BRUSH CLEAN REINFORCEMENT TO REMOVE ALL RUST AND PAINT WITH A ZINC RICH PRIMER SUCH AS "PARCHEM NITOPRIME ZINCRICH"
  - 1.5. PAINT CONCRETE SURFACE WITH "PARCHEM NITOBOND HAR" AND REPAIR AREA WITH "PARCHEM HB25 REPAIR MORTAR"
2. ALL REPAIR PRODUCTS ARE TO BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. WHERE CONCRETE IS SAW CUT AND THE ENDS OF THE REINFORCEMENT ARE EXPOSED, THE EXPOSED ENDS SHOULD BE PAINTED WITH A ZINC RICH PRIMER SUCH AS "PARCHEM NITOPRIME ZINCRICH". A SKIM COAT OF SIKA "SIKALASTIC 150" SHOULD THEN BE APPLIED TO THE CONCRETE SURFACE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

PIER NOTES

1. 450 DIA. CONCRETE PIERS BEARING 200mm INTO 100kPa NATURAL MATERIAL AT 2400mm MAX. SPACING THROUGH COMPACTED FILL INTO NATURAL MATERIAL. PIER DEPTH TO BE 600mm MIN. EXCEPT  
A) WHERE GREATER DEPTH IS REQUIRED TO EXTEND BELOW THE ZONE OF INFLUENCE LINES,  
B) WHERE GREATER DEPTH IS REQUIRED TO ACHIEVE AN EVEN BEARING NATURAL MATERIAL, OR  
C) WHERE PIERING THROUGH FILL MATERIAL IS REQUIRED.  
D) WHERE NOTED OTHERWISE.  
THE ENGINEER SHALL VIEW AND APPROVE ALL PIERS BEFORE POURING CONCRETE.
2. ADDITIONAL PIERS MAY BE REQUIRED ADJACENT TO ANY SERVICE TRENCH, AS DIRECTED BY AN ENGINEER.
3. WHERE SOFT SPOTS (BEARING CAPACITY LESS THAN 100kPa ARE ENCOUNTERED IN NATURAL FOUNDATION MATERIAL OR WHERE FILL EXCEEDS 400mm THEN ADDITIONAL PIERS TO SUITABLE FOUNDING MATERIAL MAY BE REQUIRED AND SHALL BE POSITIONED ACCORDING TO THE ENGINEERS DIRECTION.
4. WHERE ROCK IS ENCOUNTERED THE REMAINDER OF THE FOOTING SYSTEM SHALL BE FOUNDED ON ROCK AS APPROVED BY THE ENGINEER.
5. THE CONTRACTOR SHALL CLEAN THE BASE OF THE PIERS SO AS TO ENABLE INSPECTION BY THE ENGINEER.
6. THE APPROVAL OF THE ENGINEER IS REQUIRED PRIOR TO PLACEMENT OF CONCRETE.
7. THE CONTRACTOR SHALL SCABBLE THE TOP OF THE POURED PIER TO ENSURE A LEVEL SURFACE OF GOOD QUALITY CLEAN CONCRETE.

STRUCTURAL SAFETY

1. TEMPORARY SHORING OF EXCAVATIONS AS REQUIRED BY BUILDER WHERE EXCAVATIONS ARE REQUIRED IN PROXIMITY TO EXISTING STRUCTURES AND SERVICES CONSULT THE GEOTECHNICAL ENGINEER
2. TEMPORARY BRACING OF STRUCTURES DURING CONSTRUCTIONS
3. REASONABLE CONSTRUCTION LOADS ALLOWED FOR ON SLABS AND FRAMES (CONFIRM WITH ENGINEER FOR SPECIFIC VALUE)
4. PROVIDE FALL RESTRAINTS AND BARRIERS AS REQUIRED
5. WORKCOVER CODES OF PRACTISE FOR CONSTRUCTION OF STRUCTURES

EARTHWORKS

1. APPROPRIATE BARRIERS SHOULD BE INSTALLED AROUND ALL EXCAVATIONS.
2. BATTERS AND BENCHING SHOULD OCCUR ON EXCAVATIONS TO MINIMISE THE RISK OF COLLAPSE AND ENGULFMENT.
3. TEMPORARY SHORING SHOULD BE INSTALLED AS REQUIRED BY THE BUILDER AND DESIGNED BY AN ENGINEER AS NECESSARY.
4. CONFINED SPACES - ENSURE ANY WORKERS ARE CARRYING A CURRENT TICKET FOR SPECIFIED WORKS AND CARRY OUT WORK IN ACCORDANCE WITH WORK COVER CODES OF PRACTICE.
5. EXCAVATION IN PROXIMITY TO EXISTING BUILDINGS AND SERVICES TAKE CARE NOT TO UNDERMINE. ENGAGE SPECIALIST UNDERPINNING CONTRACTORS AS REQUIRED IF IN DOUBT ABOUT ANY COMPONENT OF A TASK, ASK THE SUPERVISOR.
6. IF YOU FEEL A TASK IS NOT SAFE TO CARRY OUT, DO NOT START WORK UNTIL APPROPRIATE MEASURES HAVE BEEN TAKEN TO MAKE THE TASK SAFE OR APPROPRIATE TRAINING HAS BEEN PROVIDED. MAKE SURE YOU AND FELLOW WORKERS ARE FAMILIAR WITH THE MEASURES (WORK COVER CODES, SWMS, MDS) IN PLACE TO MAKE THE TASK AS SAFE AS POSSIBLE. IF YOU SEE ANY UNSAFE PRACTISES TAKING PLACE, REPORT TO A SUPERVISOR. YOUR HEALTH AND SAFETY IS YOUR RESPONSIBILITY.

ACCESS AND SAFE MOVEMENT

1. LIMITING PUBLIC ACCESS
2. ENSURE SUITABLE FENCING TO KEEP PUBLIC OUT
3. DELINEATE BETWEEN WORK AREAS AND PATHS OF TRAVEL
4. PROVIDE SUFFICIENT TRAFFIC CONTROL AND BARRIERS TO SAFELY SEPARATE WORKERS AND MEMBERS OF PUBLIC FROM VEHICLES AND PLANT FROM WORKERS AND PUBLIC
5. APPROPRIATE BARRIERS AND FALL PREVENTION NEAR EDGES AND EXCAVATIONS
6. SAFE CROSSINGS AND EXCLUSION ZONES
7. PLANNED EMERGENCY EXIT ROUTES AND ASSEMBLY AREA

SAFE WORKING ENVIRONMENT

1. SAFE CLEAN /CLEAR ACCESS TO SITE AND AROUND THE SITE
2. PPE SHALL BE USED FOR NOISY ACTIVITIES AND OR WORKING IN PROXIMITY TO PLANT
3. WORKING AT HEIGHTS PROVIDE APPROPRIATE SCAFFOLDING, TEMPORARY PLATFORMS AND FALL RESTRAINT (IF WORKING AT HEIGHTS ABOVE 2m)
4. SUFFICIENT WATER SUPPLY AND AMENITIES ON SITE
5. SLIPS AND TRIPS - FINISHED SURFACES APPROPRIATELY SLIP RESISTANCE, STEPS HIGHLIGHTED
6. SURROUNDING AREA SHOULD BE CONSIDERED DURING WRITING OF SWMS - WORKING IN BUSHLAND, IN CLOSE TO EXPLOSIVE CHEMICALS (I.E. PETROL STATIONS ETC)
7. MANUAL TASKS SHOULD BE CARRIED OUT IN A SAFE MANNER, BENDING KNEES, NOT LIFTING MORE THAN CAPABLE OF, USING MECHANICAL HELP AS REQUIRED
8. CHECK FOR OVERHEAD POWERLINES AND CLEARLY HIGHLIGHT THEIR LOCATION AND PROTECT WORKERS AND LINES FROM EACH OTHER
9. WORKING OVER OR IN PROXIMITY TO WATER - SUITABLE PROTECTION PROVIDED TO PREVENT FALLS. SUITABLE PPE PROVIDED WHEN WORKING OVER OR NEXT TO BODIES OF WATER
10. APPROPRIATE FALL RESTRAINTS SHOULD BE PROVIDED WHEN WORKING IN PROXIMITY TO CONTAMINATED WATER SUCH AS SEWAGE (HAZARDOUS MATERIALS)

EXISTING AND DECOMMISSIONED SERVICES

1. ENSURE DBYD IS CARRIED OUT
2. CONTRACTOR IS TO LOCATE AND BE RESPONSIBLE FOR ENSURING ALL SUB-CONTRACTORS ARE AWARE OF EXISTING SERVICES AND TO PROVIDE SUFFICIENT PROTECTION
3. EARTHING OF ELECTRICAL INSTALLATIONS
4. REMOVE AS REQUIRED IN ACCORDANCE WITH WORK COVER CODES OF PRACTISE

PLANT AND MACHINERY

1. WORKING IN PROXIMITY TO MACHINERY ENSURE SWMS FOR WORKING IN PROXIMITY TO PLANT
2. ENSURE CLEAR PATHS OF MOVEMENT
3. SUITABLE PPE AND EQUIPMENT - EAR PROTECTION, HIGH VIS, SPOTTERS, RADIOS
4. SAFE WORKING AREA AND SUITABLE BARRIERS / DELINEATION
5. SUITABLE ACCESS FOR MACHINERY, DELIVERIES AND REMOVAL OF MATERIALS
6. TOWER CRANE LOCATIONS AND FOUNDATIONS DESIGNED BY SUITABLY QUALIFIED PERSON

HAZARDOUS MATERIALS AND MATERIAL HANDLING

1. DEMOLITION OF EXISTING STRUCTURES (HAZARDOUS MATERIALS REPORT) IE ASBESTOS, LEAD PAINT - ENSURE SWMS ARE IN PLACE WHEN REQUIRED AND WORKERS ARE QUALIFIED AND/OR TRAINED FOR EACH TASK.
2. PRESENCE OF HAZARDOUS MATERIALS IN THE EXISTING GROUND - MAY BE DISTURBED DURING EARTHWORKS
3. USE OF HAZARDOUS MATERIALS IN CONSTRUCTION - ENSURE WORKERS ARE FAMILIAR WITH MATERIAL DATA SHEETS (MDS) AND SWMS ASSOCIATED WITH MATERIALS AND PRODUCTS PROPOSED FOR USE
4. LARGE HEAVY MEMBERS THAT CANNOT BE CRANED -BUILDER CAN REQUEST SPLICE DETAILS TO EASE CONSTRUCTABILITY AND SAFE INSTALLATION
5. CONSIDER THE WORKING ENVIRONMENT AND SURROUNDING PROXIMITY TO POTENTIALLY HAZARDOUS MATERIALS
6. ENSURE SUFFICIENT VENTILATION FOR WORKS BEING PERFORMED

SOFT SPOT NOTES

1. ALL SOFT SPOTS SHALL HAVE ALL LOOSE MATERIAL REMOVED AND SHALL BE BACK FILLED WITH SUITABLE MATERIAL AND COMPACTED AS INDICATED IN NOTE 1 OF GENERAL NOTES.

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PROJECT :

DESIGNED: TS

DRAWN: SP

SCALE: -

SHEET SIZE: A1

DRAWING STATUS: PRELIMINARY

DRAWING No. S002

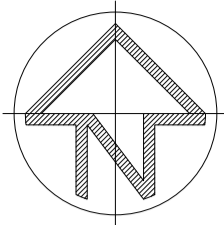
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CONSTRUCTION NOTES



LOCALITY PLAN

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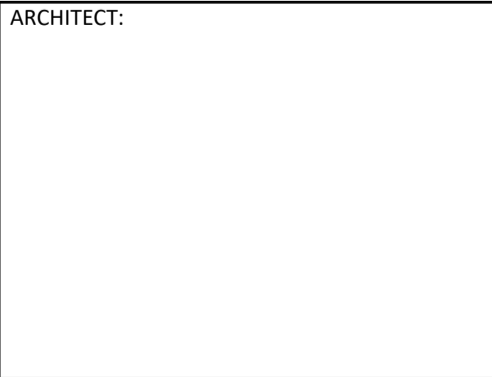
SITE PLAN

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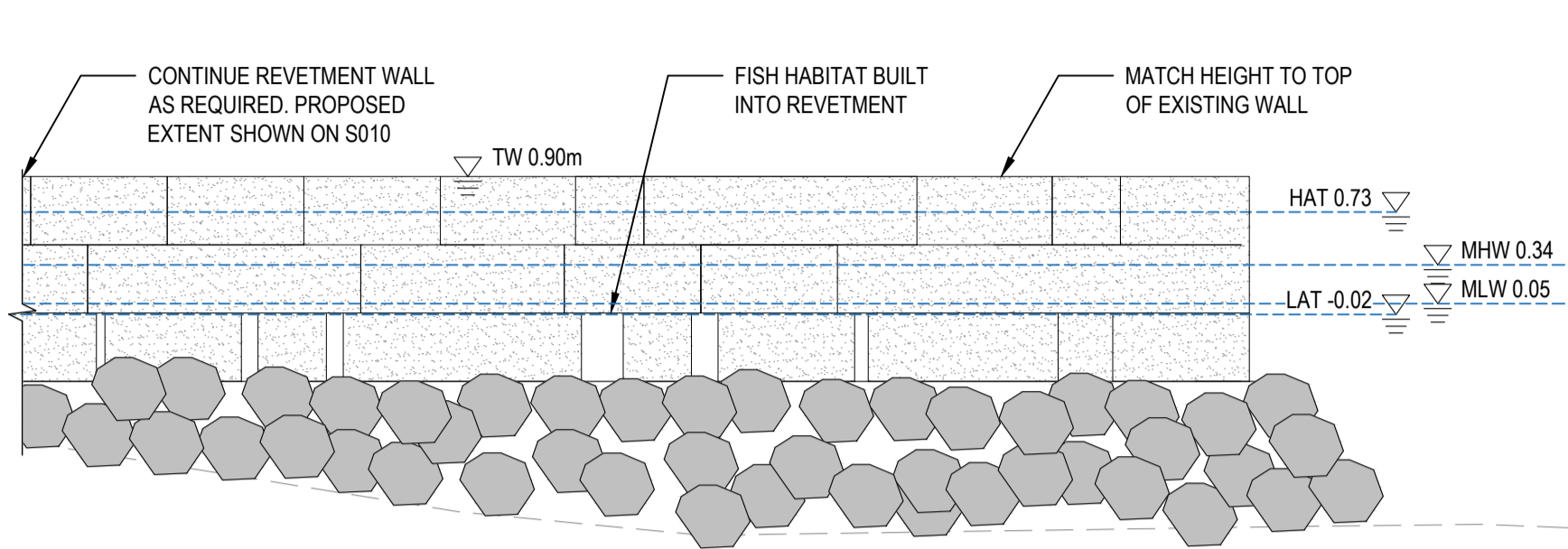
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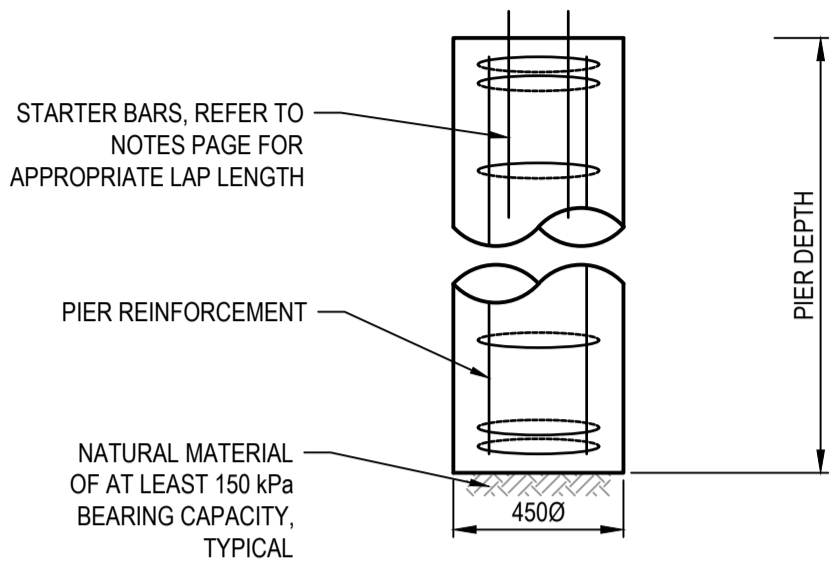
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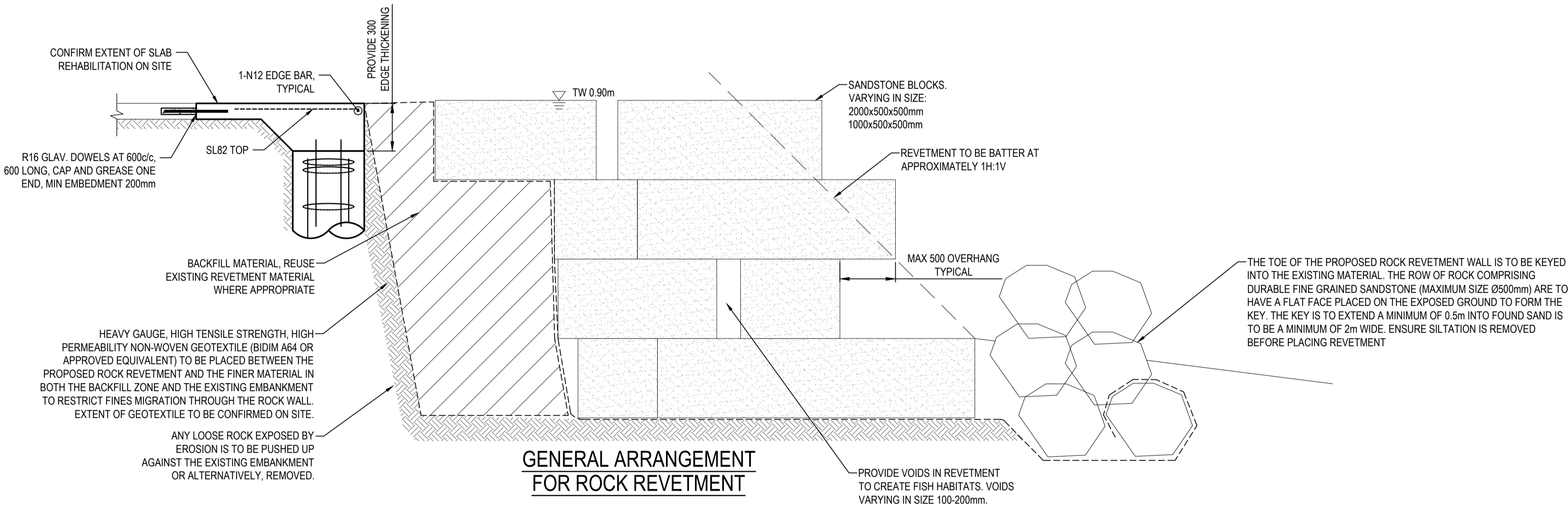


GENERAL ELEVATION ARRANGEMENT  
FOR ROCK REVETMENT  
SCALE 1:50



PIER REINFORCEMENT		
PIER DEPTH (mm)	STARTER BARS	PIER REINFORCEMENT
0-600	-	-
601-1800	2-N12	-
>1801	4-N12	6-N16 BARS WITH R10 CLOSED TIES AT 300 c/c

TYPICAL PIER UNDER EDGE THICKENING  
SCALE 1:20





GENERAL ARRANGEMENT  
FOR ROCK REVETMENT

SECTION 1  
SCALE 1:20  
S010

NOT FOR CONSTRUCTION



REVISION		AMENDMENTS		DATE	CKD	APP	CLIENT:	ARCHITECT:	PROJECT :		DESIGNED:	DRAWN:	SCALE:	SHEET SIZE:						
A	ISSUED FOR REVIEW			-	-	TS			SYDNEY OFFICE 83 - 89 Renwick Street, Redfern NSW 2016 Tel (02) 8396 6565  SOUTH COAST OFFICE 49 Berry Street, Nowra NSW 2541 Tel (02) 4423 0566  WOLLONGONG OFFICE Suite 3a, 128-134 Crown Street, Wollongong NSW 2500 Tel (02) 4423 0566	REVETMENT WALL AND FISH CLEANING FACILITY LAKEHAVEN DRIVE, SUSSEX INLET CONCEPT DESIGN				TS	SP	NOTED	A1			
										DRAWING STATUS		DRAWING No.								
										PRELIMINARY		S020								
										PROJECT No.		REVISION:								
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									DRAWING NAME: DETAILS SHEET											
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