

GENERAL

- ## CONCRETE

- 2.1 CONCRETE WHERE USED SHALL BE CLASS S50 IN ACCORDANCE WITH AS 4997.

REINFORCEMENT

- 3.1 CLEAR COVER TO NEW REINFORCEMENT SHALL BE 65mm UNLESS OTHERWISE SHOWN.
3.2 BAR LAP LENGTHS SHALL BE IN ACCORDANCE WITH THE DIMENSIONS SHOWN IN THE DRAWINGS.
3.3 ALL CUTTING AND BENDING OF REINFORCEMENT TO BE IN ACCORDANCE WITH AS 3600.
3.4 NEW REINFORCEMENT SHALL CONSIST OF CLASS N - 500 MPa DEFORMED REINFORCING BARS TO AS/NZS 4671.

STEELWORK

- 4.1 ALL WELDING SHALL BE STRUCTURAL PURPOSE IN ACCORDANCE WITH AS/NZS 1554.
- 4.2 UNLESS NOTED OTHERWISE ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS USING EA3XX OR GREATER ELECTRODES.
- 4.3 STAINLESS STEEL BOLTS SHALL BE ISOLATED FROM MILD STEEL MEMBERS WITH THE USE OF GRP WASHERS.
- 4.4 ALL BOLTS AND THREADED RODS SHALL BE SUPPLIED WITH NUTS AND WASHERS UNLESS OTHERWISE SPECIFIED ALL BOLTS, NUTS AND WASHERS SHALL BE HIGH STRENGTH 300 IN ACCORDANCE WITH AS/NZS 3679.1.
- 4.5 UNLESS NOTED OTHERWISE ALL BOLTS AND THREADED ROD SHALL BE SNUG TIGHTENED IN ACCORDANCE WITH AS4100. ALL BOLTS SHALL BE RE-TIGHTENED AFTER 3 MONTHS
- 4.6 ALL THREADED RODS SHALL BE DIAMETER 20 UNLESS OTHERWISE SHOWN AND SHALL BE GRADE 300 IN ACCORDANCE WITH AS/NZS 3679.1.
- 4.7 ALL NEW STEEL WORK SHALL BE PREPARED AND COATED ACCORDING TO THE REQUIREMENTS OF SECTION 7 PAINTING- NEW STEEL WORK NOTES.
- 4.8 UNLESS OTHERWISE SPECIFIED ALL STRUCTURAL STEEL SECTION SHALL BE MINIMUM GRADE 300 IN ACCORDANCE WITH AS/NZS 3679.1.
- 4.9 ALL STRUCTURAL STEEL PLATE SHALL BE MINIMUM GRADE 350 IN ACCORDANCE WITH AS/NZS 3679.
- 4.10 ALL STRUCTURAL STEEL FLAT (MERCHANT BAR) SHALL BE MINIMUM GRADE 350 IN ACCORDANCE WITH AS/NZS 3679.1.
- 4.11 FABRICATION SHALL COMPLY WITH THE REQUIREMENTS OF AS 4100.
- 4.12 CORROSION FROM EXISTING STEELWORK SHALL BE MEASURED AND RECORDED, A MAXIMUM ALLOWABLE SECTION LOSS IN ANY SINGLE DIRECTION OF EACH MEMBER COMPONENT IS SHOWN IN THE TABLE BELOW

TOTAL SECTION LOSS LIMIT (mm)		
MEMBER	FLANGE	WEB
610 UB 101	10.0	5.0
310 UB 46	2.2	1.5

TIMBERWORK

- 5.1 ALL NEW BOLTS, SCREWS AND THREADED ROD THROUGH TIMBER ELEMENTS SHALL BE COATED WITH DENSOPASTE AND ALL EXPOSED THREADS AND NUTS SHALL BE COATED WITH DENSOPASTE FOLLOWING TIGHTENING OF NUTS IN ACCORDANCE WITH THE SPECIFICATION.
- 5.2 THE ENDS OF ALL NEWLY CUT SURFACES OF EXISTING TIMBER, SHALL RECEIVE END GRAIN TREATMENT.
- 5.3 ALL HOLES WITHOUT BOLTS IN EXISTING TIMBER ELEMENTS WITHIN 15m OF GROUND LINE OR PERMANENT WATER LINE, SHALL BE FILLED WITH CONBEXTRA EP GROUT OR SIMILAR APPROVED.

7. PAINTING: NEW STEELWORK:

- 7.1 FINISH ALL STEEL TO PREPARATION GRADE P3 AS OUTLINED IN TABLE 1 OF ISO 8501-3, BUT WELD RIPPLE AND PROFILE (12 M TO 12 M) OF ISO 8501-3) ONLY DRESSED TO REMOVE IRREGULAR AND SHARP-EDGED PROFILES AND BE SMOOTH WITHOUT SUBSTANTIALLY REMOVING WELD MATERIAL TO THE EXTENT THAT THE WELD MAY BE WEAKENED.
- 7.2 ABRASIVE BLAST CLEAN ALL SURFACES TO BE COATED TO AS 15127.4 SA 2½ WITH A SHARP AND ANGULAR SURFACE PROFILE AVERAGING 80-100µm Rz.
- 7.3 APPLY ONE FULL COAT OF GLASS FLAKE REINFORCED EPOXY IN COLOUR BLACK BY AIRLESS SPRAY TO 400µm DFT.
- 7.4 USING A BRUSH, STRIPE COAT ALL EDGES, CORNERS, WELDS AND OTHER SURFACE IMPERFECTIONS AND AREAS INACCESSIBLE BY SPRAY.
- 7.5 APPLY ONE FULL COAT OF GLASS FLAKE REINFORCED EPOXY IN COLOUR GREY BY AIRLESS SPRAY TO 400µm DFT.
- 7.6 APPLY ABOVE SYSTEM AS 2 DISTINCTIVELY SEPARATE COATS AND OBSERVE THE MINIMUM RECOAT TIME BETWEEN THE TWO COATS. THE TWO COATS SHALL BE OF CONTRASTING COLOUR. WET ON WET APPLICATION IS NOT PERMITTED.
- 7.7 THE TOTAL DFT OF THE GLASS FLAKE REINFORCED EPOXY MUST COMPLY WITH 80/20 RULE, DEFINED AS FOLLOWS: 80% OF ALL THICKNESS MEASUREMENTS SHALL BE GREATER THAN, OR EQUAL TO THE SPECIFIED DFT, AND NONE OF THE REMAINING 20% OF MEASUREMENTS SHALL BE BELOW 80% OF THE SPECIFIED DFT.
- 7.8 ALL WORK TO BE CONDUCTED IN STRICT ACCORDANCE WITH THE COATING MANUFACTURER'S TECHNICAL DATASHEETS.
- 7.9 ALL ASPECTS OF SURFACE PREPARATION AND COATING APPLICATION MUST BE INSPECTED AND DOCUMENTED AS OUTLINED IN AS3896.10 THROUGH TO AS3896.14.

8. PAINING: EXISTING HOT DIPPED GALVANISED STEELWORK:

- 8.1 WASH ALL STEEL TO BE TREATED BY HIGH PRESSURE CLEANING (MINIMUM 25L/MIN AT 500PSI) TO REMOVE LOOSE AND FLAKING MATERIAL AND TO REMOVE SALT CONTAMINATION.
- 8.2 ABRASIVE BLAST CLEAN ALL SURFACES TO BE COATED TO AS1627.4 SA 2½ WITH A SHARP AND ANGULAR SURFACE PROFILE AVERAGING 80-100µm Rz.
- 8.3 TEST FOR RESIDUAL SALTS AS PER AS3894.6 METHOD A, ALTERNATIVE 2. THE RESIDUAL SOLUBLE SALT CONTAMINATION ON ANY BARE METAL SHALL BE LESS THAN 50mg/m² (5µg/cm²) OF TOTAL SOLUBLE SALTS (NOT ON SPECIFIC) IMMEDIATELY PRIOR TO APPLICATION OF THE TIG WELD COAT. ELCTROLYTE DETECTORS MAY BE USED TO INDICATE THE PRESENCE OF WATER-SOLUBLE SALTS. THE CONDUCTIVITY OF THE TEST LIQUID IS THEREFORE MEASURED AND THE CONDUCTIVITY IN MICRO SIEMENS (µS) SHALL BE CONVERTED TO µg/cm² OF RESIDUAL TOTAL SALT CONTAMINATION BY USING THE FOLLOWING FORMULA FROM ISO 8502-9:

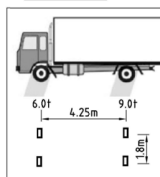
WHERE:
E1 = SURFACE CONCENTRATION OF TOTAL SALT IN $\mu\text{g}/\text{cm}^2$
S = CONDUCTIVITY IN $\mu\text{S}/\text{cm}$
V = VOLUME OF EXTRACT SOLUTION IN ml
A = TEST SURFACE AREA IN cm^2

EXAMPLE:
 $= 5.6 \mu\text{g} / \text{cm}^2$ OF TOTAL SOLUBLE SALTS.
 $S = 70 \mu\text{S} / \text{cm}$
 $V = 2 \text{ ml}$
 $A = 12.5 \text{ cm}^2$

IF SOLUBLE SALT CONTAMINATION EXCEEDS THE SPECIFIED
MAXIMUM, WATER WASHING AND ABRASIVE BLASTING SHALL BE
REPEATED UNTIL SALT LEVELS ARE BELOW THE MAXIMUM
ACCEPTABLE.

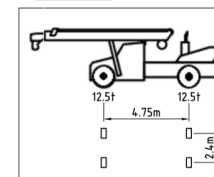
- 8.4 APPLY ONE FULL COAT OF GLASS FLAKE REINFORCED EPOXY IN COLOUR BLACK BY AIRLESS SPRAY TO 400µm DFT.
- 8.5 USING A BRUSH, STRIPE COAT ALL EDGES, CORNERS, WELDS AND OTHER SURFACE IMPERFECTIONS AND AREAS INACCESSIBLE BY SPRAY.
- 8.6 APPLY ONE FULL COAT OF GLASS FLAKE REINFORCED EPOXY IN COLOUR GREY BY AIRLESS SPRAY TO 400µm DFT.
- 8.7 APPLY ABOVE SYSTEM AS 2 DISTINCTIVELY SEPARATE COATS AND OBSERVE THE MINIMUM RECOAT TIME BETWEEN THE TWO COATS. THE TWO COATS SHALL BE OF CONTRASTING COLOUR. WET ON WET APPLICATION IS NOT PERMITTED.
- 8.8 THE TOTAL DFT OF THE GLASS FLAKE REINFORCED EPOXY MUST COMPLY WITH 80/20 RULE DEFINED AS FOLLOWS: 80% OF ALL THICKNESS MEASUREMENTS SHALL BE GREATER THAN, OR EQUAL TO THE SPECIFIED DFT, AND NONE OF THE REMAINING 20% OF MEASUREMENTS SHALL BE BELOW 80% OF THE SPECIFIED DFT.
- 8.9 ALL WORK TO BE CONDUCTED IN STRICT ACCORDANCE WITH THE COATING MANUFACTURER'S TECHNICAL DATASHEETS.

- DESIGN VEHICLE:



DYNAMIC LOAD ALLOWANCE: 0.2
ULTIMATE LIMIT LOAD FACTOR: 1.5

- DESIGN CRANE:



DYNAMIC LOAD ALLOWANCE: 0.1
ULTIMATE LIMIT LOAD FACTOR: 1.5

- DECK LOAD:
CLASS 10 DECK TO AS 4997.
LIVE LOAD: 10kPa
ULTIMATE LIMIT LOAD FACTOR: 1.5
- DESIGN LIFE: 10 YEARS
- CRANE LOAD

CONSTRUCTION SEQUENCE

1. REMOVE AND RELOCATE SERVICES, FIXINGS, BLOCKING, AND ALL OBSTACLES NECESSARY TO INSTALL THE NEW HALF-CAPS TO ONE SIDE OF THE EXISTING PILE BENT.
- SUPPORT AND STABILISE THE EXISTING MEMBERS AS REQUIRED
2. INSTALL THE JACKING COLLARS TO THE PILES
3. LOCATE AND SUPPORT THE NEW 380 PFC HALF-CAP ON THE PREPARED SIDE OF THE EXISTING PILE BENT
4. JACK THE NEW HALF CAP TO THE FINAL POSITION, ENSURE FULL SUPPORT AT ALL EXISTING STRINGER LOCATIONS AND ENSURE THE DECK IS LEVEL.
5. INSTALL THE NEW UC PACKERS AND LOAD TRANSFER FRAMES
6. ENSURE POSITIVE CONNECTION BETWEEN THE NEW HALF-CAPS AND ALL EXISTING MEMBERS. A MINIMUM OF 1 M20 BOLT OR COACH SCREW SHALL BE USED BETWEEN THE NEW PFC AND EXISTING MEMBERS.
7. INSTALL THE NEW 380 PFC HALF-CAP TO THE REMAINING SIDE OF THE PILE BENT BY REPEATING STEPS 1-6.
8. INSTALL THREADED ROD BETWEEN PFC'S AS NOMINATED
9. REPAIR PILES AS PER DRAWING NO. 014-A-148

DRAWING N°	DRAWING TITLE
014-A-141	GENERAL NOTES AND DRAWING LIST
014-A-142	GENERAL ARRANGEMENT - PLAN
014-A-143	SCOPE OF REPAIR TABLE
014-A-144	GENERAL ARRANGEMENT - SECTION
014-A-145	REPAIR DETAILS SHEET 1
014-A-146	REPAIR DETAILS SHEET 2
014-A-147	REPAIR DETAILS SHEET 3
014-A-148	REPAIR DETAILS SHEET 4

VICTORIA QUAY BERTH A REMEDIATION

GENERAL NOTES

(NOT FOR CONSTRUCTION)

Date	Oct 2020	Scale	NTS
Survey	MGA94 ZONE58		
Design	AB	Checked by Engineer	
Drawn	DK	I.Putt	
Checked	JP		
Job File No. 60536902			
DRG No	014-A-141		Rev C