



NSW GOVERNMENT | Planning & Environment
 Issued under the Environmental Planning and Assessment Act 1979
 Approved Application No. DA 9985
 granted on the 26 September 2019
 Signed [Signature]
 Sheet No. 1 of 13

GLEBE ISLAND DEPOT PROPOSED SILO STRENGTHENING STAGE 2



PROPOSED SILO STRENGTHENING - STAGE 2

LOCALITY PLAN
 NTS



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FOR CONSTRUCTION

SIZE	DATE	DRAWING No.	PROJECT No.	AREA	TYPE	DESC	NUMBER	REV
A1	2018-08-03	503124	- 0000	- DRG	- SI	- 0001	- 0	

GENERAL STRUCTURAL NOTES

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SCOPE OF WORK. ALL DISCREPANCIES SHALL BE REFERRED TO THE PRINCIPAL'S REPRESENTATIVE FOR CLARIFICATION PRIOR TO COMMENCING WORK.
- WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SCOPE OF WORK, RELEVANT CURRENT AUSTRALIAN STANDARDS AND STATUTORY REGULATIONS EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- ALL DIMENSIONS ARE IN MILLIMETRES, ALL CO-ORDINATES, CHAINAGES AND REDUCED LEVELS ARE IN METRES UNO.
- PROJECT HORIZONTAL DATUM IS AGD84 / AMG ZONE 55, PROJECT VERTICAL DATUM IS AHD.
- DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWINGS. WHERE DIMENSIONS CAN NOT BE DETERMINED FROM THE DRAWINGS, CLARIFICATION SHALL BE SOUGHT FROM THE PRINCIPAL'S REPRESENTATIVE PRIOR TO COMMENCING WORK.
- FOR WORKS THAT INVOLVE EXTENSION, MODIFICATION AND/OR CONNECTION TO EXISTING STRUCTURES, THE CONTRACTOR SHALL VERIFY ALL RELEVANT DIMENSIONS ON SITE PRIOR TO FINAL PRODUCTION OF SHOP DRAWINGS AND COMMENCEMENT OF FABRICATION.
- CONSTRUCTION ACTIVITIES SHALL NOT IMPINGE UPON OPERATIONS AT THE SITE EXCEPT BY PRIOR AGREEMENT IN WRITING BY THE PRINCIPAL'S REPRESENTATIVE.
- WHERE PROPRIETARY ITEMS REQUIRE HOLES DRILLED OR FIXINGS CAST IN, THE CONTRACTOR SHALL CONSTRUCT ACCURATE JIGS OR TEMPLATES FOR POSITIONING OF ALL HOLD DOWN BOLTS AND MOUNTINGS TRUE IN LOCATION.
- NOMINATION OF PROPRIETARY ITEMS DOESN'T INDICATE EXCLUSIVE PREFERENCE BUT INDICATES THE REQUIRED PROPERTIES OF THE ITEM. ANY SIMILAR ALTERNATIVES PROPOSED FOR USE MUST HAVE WRITTEN APPROVAL FROM THE PRINCIPAL'S REPRESENTATIVE.
- ANY MATERIAL NOT FULLY SPECIFIED AND WHICH THE CONTRACTOR PROPOSES TO USE IN THE WORKS SHALL COMPLY WITH RELEVANT AUSTRALIAN STANDARD (OR INTERNATIONAL STANDARD IN THE ABSENCE OF SUCH A STANDARD) AND BE SUITABLE FOR ITS INTENDED PURPOSE AND ENVIRONMENT. DETAILS OF SUCH PRODUCTS SHALL BE SUBMITTED TO THE PRINCIPAL'S REPRESENTATIVE FOR APPROVAL.
- SEALANT USED AS PART OF THE PERMANENT WORKS SHALL BE A POLYURETHANE BASED SEALANT (SIKAFLEX 221 OAE) UNO.
- ALL MATERIALS SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, IDENTIFICATION AND PROTECTION OF ALL SERVICES AS REQUIRED.
- ACRONYMS AND ABBREVIATIONS USED ON THE DRAWINGS INCLUDE THE FOLLOWING:

AHD	AUSTRALIAN HEIGHT DATUM	LWD	LOW WATER DATUM
AMG	AUSTRALIAN MAP GRID	MS	MILD STEEL
B/S	BOTH SIDES	N/A	NOT APPLICABLE
BTM	BOTTOM	NB	NOMINAL BORE
CFW	CONTINUOUS FILLET WELD	NOM	NOMINAL
CH	CHAINAGE	NTS	NOT TO SCALE
⌀	CENTERLINE	O/A	OVERALL
CPBW	COMPLETE PENETRATION BUTT WELD	O/S	OUTSIDE
BW	BUTT WELD	OAE	OR APPROVED EQUIVALENT
CRS	CENTRES	OD	OUTSIDE DIAMETER
C/W	COMPLETE WITH	PCD	PITCH CIRCLE DIAMETER
DIA	DIAMETER	PL	PLATE
DRG	DRAWING	REF	REFERENCE
EQ	EQUAL	PSM	PERMANENT SURVEY MARKER
FFL	FINISHED FLOOR LEVEL	RL	REDUCED LEVEL
FL	FLAT	SOP	SETOUT POINT
GA	GENERAL ARRANGEMENT	SQ	SQUARE
GALV	HOP DIP GALVANISED	STD	STANDARD
GL	GROUND LEVEL	THK	THICK
GR	GRADE	TOC	TOP OF CONCRETE
HAT	HIGHEST ASTRONOMICAL TIDE	TOF	TOP OF FLOOR
HD	HOLD DOWN	TOG	TOP OF GRATING
I/S	INSIDE	TOS	TOP OF STEEL
IL	INVERT LEVEL	TP	TANGENT POINT
IP	INTERSECTION POINT	TYP	TYPICAL
LAT	LOWEST ASTRONOMICAL TIDE	UNO	UNLESS NOTED OTHERWISE
LG	LONG	U/S	UNDERSIDE
		WP	WORKING POINT

REFER OTHER STANDARD DRAWINGS FOR FURTHER ABBREVIATIONS SUCH AS THE CONCRETE NOTES FOR ABBREVIATIONS RELATED TO REINFORCEMENT DESIGNATION.

SAFETY NOTES

- THE DESIGNER HAS PREPARED A SAFETY IN DESIGN (SID) RISK REGISTER IN ACCORDANCE WITH OCCUPATIONAL HEALTH AND SAFETY LEGISLATION. A COPY OF THE SID RISK REGISTER IS PROVIDED IN THE CONTRACT DOCUMENTS. THE REGISTER SUMMARISES SOME OF THE MAIN HAZARDS WHICH ARE INTRINSIC TO THE DESIGN. IT IS NOT INTENDED TO COVER CONSTRUCTION RISKS OR OTHER RISKS ASSOCIATED WITH THE PROJECT. THE CONTRACTOR SHALL TAKE NOTE OF THE RISKS IDENTIFIED IN THE SID RISK REGISTER AND ACTION THOSE ITEMS NOTED AS BEING THE CONTRACTORS RESPONSIBILITY.
- THE DOCUMENT IS FOR THE PERMANENT CONDITION ONLY AND DOES NOT SPECIFICALLY CATER FOR INTERIM ARRANGEMENTS DURING CONSTRUCTION AND ERECTION UNO.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL STRUCTURES, INCLUDING ADJACENT STRUCTURES, IN A SAFE AND STABLE CONDITION AND ENSURE THAT NO PART IS OVERSTRESSED AT ALL TIMES DURING CONSTRUCTION. THE CONSTRUCTOR IS TO ENGAGE A QUALIFIED AND SUITABLE EXPERIENCED ERECTION ENGINEER TO REVIEW AND APPROVE THE CONTRACTORS CONSTRUCTION AND METHODOLOGY AND TO PROVIDE THE DESIGN OF ANY TEMPORARY WORKS (SUCH AS PROPPING AND TEMPORARY BRACING) TO SUIT THE CONTRACTORS CONSTRUCTION SEQUENCE AND METHODOLOGY. THE CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS TO THE PRINCIPAL'S REPRESENTATIVE UPON REQUEST.
- CONSTRUCTION SEQUENCES SHOWN ON THESE DRAWINGS ARE INDICATIVE ONLY AND ARE PROVIDED TO HIGHLIGHT SOME OF THE KEY STEPS IN SEQUENCE OF WORKS. THEY DO NOT INCLUDE ALL ELEMENTS OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR PROGRAMMING THE WORKS TO SATISFY CONTRACTUAL REQUIREMENTS.
- PRIOR TO COMMENCING WORK ON SITE THE CONTRACTOR SHALL SUBMIT TO THE PRINCIPAL'S REPRESENTATIVE A DETAILED WORK METHOD STATEMENT INDICATING THE CONTRACTORS PLANNED SEQUENCE OF WORK.
- PRIOR TO CONSTRUCTION OF ALL CONCRETE FLOORS AND WALLS, THE CONTRACTOR SHALL PREPARE CONTRACTORS' WORKS DRAWINGS FOR REVIEW BY THE SUPERINTENDENT COMPRISING CO-ORDINATED FLOOR PLANS AND WALL ELEVATIONS AT 1:100 SCALE SHOWING ALL PROPOSED PENETRATIONS, OPENINGS AND CAST-IN FIXINGS. PREPARATION OF THESE DRAWINGS SHALL INCLUDE THE PLANNING AND CO-ORDINATION OF ALL TRADES WHICH MAY REQUIRE PENETRATIONS, OPENINGS AND FIXINGS. THE DRAWINGS SHALL BE PREPARED IN TIME FOR USE IN THE SCHEDULING OF REINFORCEMENT.
- JOB HAZARD ANALYSES SHALL BE PREPARED BY THE CONTRACTORS WORK CREW PRIOR TO COMMENCING WORK ACTIVITIES.

FOOTINGS

- FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING CAPACITY OF 3500 kPa. THE FOUNDATION MATERIAL SHALL BE APPROVED BY THE ENGINEER FOR THIS ALLOWABLE BEARING CAPACITY BEFORE PLACING REINFORCEMENT OR CONCRETE.
- THE DESIGN IS BASED ON GEOTECHNICAL INVESTIGATION REPORT NO. 4315 PREPARED BY CONNELL WAGNER DATED 23 JANUARY 2002
- FOOTINGS SHALL BE LOCATED CENTRALLY UNDER WALLS AND COLUMNS UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
- FOOTINGS SHALL BE CONSTRUCTED AND BACKFILLED AS SOON AS POSSIBLE FOLLOWING EXCAVATION TO AVOID EITHER SOFTENING OF THE FOUNDING MATERIAL OR DRYING OUT BY EXPOSURE.
- EXCAVATE FOR FOOTINGS TO THE NOMINATED SIZE AND DEPTH. FOOTING FOUNDING LEVELS ARE PROVISIONAL SUBJECT TO ACTUAL SITE CONDITIONS AND APPROVAL BY THE ENGINEER.
- CONCRETE

CARBON FRP APPLICATION GUIDELINES

- THE FOLLOWING GUIDELINES MUST BE CONFIRMED WITH THE MANUFACTURER OF THE FRP AND ITS BONDING SYSTEM AND ITS REQUIREMENTS COMPLIED WITH IN ALL RESPECTS. SUBMIT A FULL METHOD STATEMENT FOR COMMENT PRIOR TO EXECUTING THIS WORK. FRP SYSTEM TO BE MASTER BUILDERS 'MASTERBRACE' FIB COMPOSITE STRENGTHENING SYSTEM OR SIKA WRAP OR APPROVED EQUIVALENT. THE INSTALLATION OF THE STRENGTHENING SYSTEM SHALL BE PERFORMED BY SUITABLY QUALIFIED AND TRAINED WORKERS. WITHOUT EXCEPTION, THE SYSTEM MANUFACTURER OR A RECOGNISED INDEPENDENT BODY WILL HAVE CERTIFIED THESE WORKERS.
- PREPARATION OF THE SUBSTRATE:**
ANY UNSOUND MATERIAL ON THE SUBSTRATE TO BE REMOVED AND REPLACED USING APPROPRIATE EPOXY MORTAR. PREPARE SUBSTRATE BY SHOTBLASTING, NEEDLE GUN OR GRINDING, TO REMOVE THE CONCRETE LAITENCE. ALL CRACKS, BLOW HOLES AND SURFACE DEFECTS SHALL BE REPAIRED PRIOR TO PLACING THE FRP STRIPS. WHERE REPAIR OF THE CONCRETE SUBSTRATE IS REQUIRED, THE PREPARED SURFACE SHOULD NOT DEVIATE MORE THAN 5mm OVER 2m OR 1mm OVER 0.3m. THE PREPARED SURFACE SHALL RESEMBLE COARSE SANDPAPER (APPROX. 60 GRIT) WITH MINOR EXPOSURE OF AGGREGATES. ANY FILLING PUTTY SHALL MEET ALL REQUIREMENTS CONCERNING CONCRETE REPAIR PRODUCTS. THE APPLICATION SHALL BE ACCORDING TO THE SPECIFICATIONS OF THE MANUFACTURER AND THE COMPATIBILITY OF THE PUTTY AND RESIN FOR THE SHEET APPLICATION SHALL BE PROVIDED. THE PREPARED SURFACE SHALL BE DUST FREE BEFORE FURTHER APPLICATION OF THE STRENGTHENING TECHNIQUE. THIS CAN BE ACHIEVED BY CLEANING BY MEANS OF VACUUM OR OIL FREE COMPRESSED AIR. ANY PRIMER APPLIED SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN BY THE MANUFACTURER. ANY SHARP CORNERS OF COLUMNS SHALL BE CHAMFERED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- HANDLING OF FRP FABRIC:**
CARE SHALL BE TAKEN TO AVOID UNRAVELLING OF THE FABRIC ENDS.
- CUTTING THE FRP FABRIC:**
CUTTING SHALL BE DONE BY SHARP SCISSORS OR KNIFE
- CARBON FRP INSTALLATION:**
THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION. THE AMBIENT AIR TEMPERATURE WILL LIE WITHIN THE RANGE OF 5°C TO 35°C WHEN ADHESIVELY BONDING OR LAMINATING. UNDER NO CIRCUMSTANCES SHOULD THIS WORK BE PERFORMED WHEN RAINING OR IN FOGGY OR OTHER HIGH HUMIDITY CONDITIONS. THE CONCRETE MUST BE DRY AND FREE OF SURFACE MOISTURE WITH A MEASURED MAXIMUM CONCRETE WATER CONTENT BELOW 4%. IN ANY INSTANCE, THE TEMPERATURE OF THE CONCRETE SUBSTRATE SHALL BE AT LEAST 8°C.
- ALL TESTING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS

CARBON FRP PROPERTIES

- | | |
|---|--|
| PERFORMANCE REQUIREMENTS FOR FRP FABRIC | |
| FIBRE WEIGHT | - 300g/m ² (IN PRINCIPAL DIRECTION) |
| ULTIMATE FIBRE TENSILE STRENGTH | - 3500 MPa |
| MODULUS OF ELASTICITY | - 230 GPa |
| ULTIMATE STRAIN | - 1.5 % |

Planning & Environment

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Approved Application No. DA 9985

granted on the 26 September 2019

Signed [Signature]

Sheet No. 2 of 13

File Name: 2018-09-27 10:32:30 - 0306
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 Plot Date: 2018-09-27 10:32:30



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REV	DATE	REVISION DETAILS	APPROVED
0	2018-09-27	ISSUED FOR CONSTRUCTION	G.FINDLAY

SCALE	SIZE
NOT TO SCALE	A1
DRAWN	D.PAMUNGKAS
DESIGNED	M.VINCE
REVIEWED	G.FINDLAY

FOR CONSTRUCTION	APPROVED
G.FINDLAY	G.FINDLAY
G.FINDLAY	G.FINDLAY

PROJECT	TITLE
GLEBE ISLAND SILO STRENGTHENING	GENERAL NOTES
DRAWING No.	503124 - 0000 - DRG - SI - 0003 - 0

CONCRETE NOTES

1. GENERAL

- 1.1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF AS 3600, ANY MATTER IN DOUBT SHALL BE REFERRED TO THE ENGINEER.
- 1.2. ALL DIMENSIONS ARE IN MILLIMETRES UNO.
- 2. CONCRETE**
- 2.1. CONCRETE QUALITY SHALL BE AS PER THE SPECIFICATION.
- 2.2. CONCRETE MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR ACCEPTANCE.
- 2.3. THE USE OF BLENDED CEMENTS, AND/OR CHEMICAL ADMIXTURES SHALL BE SUBJECT TO APPROVAL BY THE PRINCIPAL'S REPRESENTATIVE. SUBJECT TO THE APPROVAL OF THE ENGINEER, FLY ASH MAY BE INCORPORATED IN THE CONCRETE.
- 2.4. A CONCRETE BLINDING LAYER 50 THICK SHALL BE PLACED BELOW ALL CONCRETE TO BE CAST ON THE GROUND UNO. REFER SLABS ON GROUND DETAILS FOR ALTERNATIVE BLINDING MATERIAL BENEATH SLABS ON GROUND.
- 2.5. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- 2.6. ALL FORMED EXPOSED EDGES AND RE-ENTRANT CORNERS SHALL BE CHAMFERED OR FILLETED 20mm.
- 2.7. CONCRETE COVER TO ALL REINFORCEMENT (INCLUDING FITMENTS) SHALL BE AS FOLLOWS UNO:

ELEMENTS	COVER
PRECAST CONCRETE	50
PRECAST CONCRETE - DECKING UNITS - BOTTOMS AND SIDES	60
CONCRETE CAST AGAINST GROUND	75
CONCRETE CAST ON TOP OF BLINDING LAYER	60
BELOW GROUND CONCRETE CAST AGAINST FORMS	60
ALL OTHER SURFACES	50

COVER TOLERANCE ON POSITION OF REINFORCEMENT AND TENDONS	
BEAMS, SLABS, COLUMNS & WALLS	-5 / +10mm
SLABS ON GROUND	-10 / +20mm
FOOTINGS CAST IN THE GROUND	-10 / +40mm

- 2.8. CONCRETE SHALL BE COMPACTED BY MEANS OF APPROVED HIGH FREQUENCY MECHANICAL VIBRATORS OF THE IMMERSION TYPE WITH A MINIMUM FREQUENCY OF 120Hz AND WITH SUFFICIENT ENERGY OUTPUT TO ENSURE COMPLETE COMPACTION OF ALL PARTS OF THE CONCRETE SECTION.
- 2.9. ALL EXPOSED CONCRETE SURFACES SHALL BE CURED IN ACCORDANCE WITH THE SPECIFICATION FOR A MINIMUM CONTINUOUS DURATION OF 7 DAYS COMMENCING IMMEDIATELY AFTER INITIAL SET OF THE CONCRETE.
- 2.10. CONCRETE FINISHES SHALL BE IN ACCORDANCE WITH THE SPECIFICATION. WHERE NOT SPECIFIED OR SHOWN OTHERWISE ON THE DRAWING CONCRETE FINISHES SHALL BE AS FOLLOWS:
 - EXPOSED TRAFFICABLE SURFACES SHALL BE BROOM FINISHED.
 - THE TOPS OF ALL PLINTHS AND PEDESTALS WHICH ARE TO SUPPORT BASE PLATES SHALL BE SCABBLED WITH A SURFACE ROUGHNESS OF 4.2 mm.
 - OTHER UNFORMED EXPOSED SURFACES SHALL BE FINISHED USING A STEEL TROWEL.
- 2.12. FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS 3610.
- 2.13. CONSTRUCTION JOINTS SHALL BE USED ONLY WHERE SHOWN ON THE DRAWINGS OR APPROVED BY THE PRINCIPAL'S REPRESENTATIVE. JOINT FACES SHALL BE PROPERLY FORMED PERPENDICULAR TO THE MEMBER AXIS, SCABBLED TO EXPOSE COARSE AGGREGATE, CLEANED FREE OF LAITANCE AND LOOSE MATERIAL AND THOROUGHLY WETTED PRIOR TO CONTINUATION OF CONCRETING. ALTERNATIVELY, THE CONCRETE SET TIME AT JOINT SURFACES SHALL BE RETARDED AND THE SURFACE WATER-WASHED TO EXPOSE THE COARSE AGGREGATE PRIOR TO CONTINUATION OF CONCRETING.

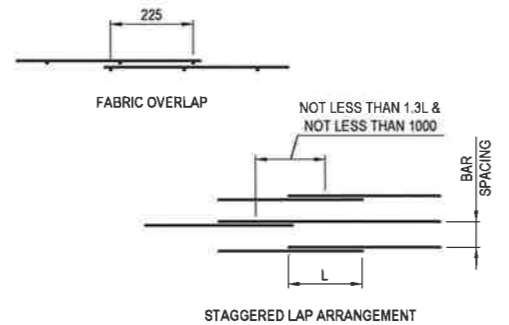
3. REINFORCEMENT

- 3.1. ALL REINFORCING BARS AND FABRIC SHALL COMPLY WITH AS/NZS 4671.
- 3.2. MINIMUM LAP LENGTHS FOR REINFORCEMENT SHALL BE AS FOLLOWS UNO:

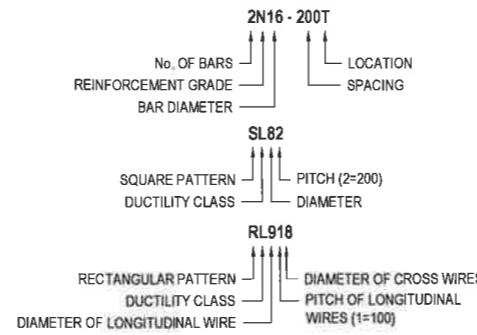
BAR SIZES	BAR LAP AND DEVELOPMENT LENGTHS 'L'					
	FOR SLABS <300 THICK AND VERTICAL REINFORCEMENT IN WALLS (K _r = 1, K _v = 1.25)			FOR SLABS >300 THICK AND HORIZONTAL REINFORCEMENT IN WALLS (K _r = 1.3, K _v = 1.25)		
	CONCRETE GRADE			CONCRETE GRADE		
	32	40	50	32	40	50
N12	500	500	500	600	500	500
N16	700	850	650	900	800	700
N20	950	850	800	1200	1100	950
N24	1200	1100	960	1550	1400	1250
N28	1500	1350	1200	1950	1750	1550
N32	1800	1600	1450	2350	2100	1800

NOTES:

- BAR LAP AND DEVELOPMENT LENGTHS ARE BASED ON AS 3600 WITH GRADE 500 REINFORCEMENT AND 30mm CONCRETE COVER TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.
- N36 BARS AND LARGER SHALL NOT BE LAP SPLICED. FOR SUCH BARS, MECHANICAL COUPLERS SHALL BE USED HAVING CAPACITY NOT LESS THAN THE BARS BEEN CONNECTED.
- WHERE LAPS ARE SPECIFIED TO BE STAGGERED, THE SET-OUT SHALL BE AS FOLLOWS:



- 3.1. MINIMUM DEVELOPMENT LENGTHS FOR REINFORCEMENT SHALL BE AS FOR LAP LENGTHS UNO.
- 3.2. POSITIONS OF REINFORCEMENT LAPS AND SPLICES UNLESS SHOWN, SHALL BE IN ACCORDANCE WITH AS 3600 AND SHALL BE TO THE APPROVAL OF THE ENGINEER.
- 3.3. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARY IN TRUE PROJECTION OR SCALE.
- 3.4. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON PLASTIC OR GRADE 50 CONCRETE CHAIRS GENERALLY AT NOT GREATER THAN 900 CENTRES BOTH WAYS. BAR CHAIRS SUPPORTED ON THE GROUND SHALL HAVE SUITABLE SPREADER PLATES.
- 3.5. ALL REINFORCEMENT SHALL BE SECURED WITH TIE WIRE (AT ALTERNATE INTERSECTIONS AT LEAST) AND ALL TIE ENDS SHALL BE TURNED INWARDS CLEAR OF THE COVER ZONE. TIE WIRE PASSING THROUGH THE CONCRETE COVER ZONE SHALL NOT BE PERMITTED.
- 3.6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION OF REINFORCING BAR BENDING SCHEDULES.
- 3.7. WELDING, FLAME CUTTING OR SITE BENDING OF REINFORCEMENT IS NOT PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- 3.8. ALL COGS, HOOKS AND BENDS SHALL COMPLY WITH AS 3600 UNO.
- 3.9. AT PENETRATIONS WITH DIMENSIONS LESS THAN 300 REINFORCEMENT SHALL BE DISPLACED EACH SIDE OF THE PENETRATION UNO. AT PENETRATIONS WITH DIMENSIONS GREATER THAN 300. REFER TO CONCRETE DRAWINGS FOR DETAILS.
- 3.10. SPACER BARS BETWEEN 2 OR MORE LAYERS OF PARALLEL REINFORCING BARS SHALL BE THE LARGER OF N32 OR THE PRIMARY BAR DIAMETER & PLACED AT 1200 CENTRES UNO.
- 3.11. REINFORCEMENT DESIGNATION:
BAR AND FABRIC IS DENOTED AS FOLLOWS:



(NB: CROSS WIRE PITCH = 200 FOR ALL RL FABRIC)
 REINFORCEMENT GRADE SYMBOLS:
 R - STRUCTURAL ROUND BAR GRADE R 250N
 N - DEFORMED BAR GRADE D 500N
 SL or RL - HARD DRAWN WIRE FABRIC GRADE D 500L

REINFORCEMENT POSITION SYMBOLS:
 T - TOP FACE EW - EACH WAY
 B - BOTTOM FACE EF - EACH FACE
 NF - NEAR FACE IF - INSIDE FACE
 FF - FAR FACE OF - OUTSIDE FACE

- 3.12. 2-N12 TRIMMER BARS 1000 LONG SHALL BE PLACED IN TOP OF SLABS ON GROUND AND T&B FOR SUSPENDED SLABS DIAGONALLY ACROSS ALL RE-ENTRANT CORNERS AND OPENINGS UNO (REFER STANDARD CONCRETE DETAILS).
- 3.13. HELICAL REINFORCEMENT SHALL BE SPLICED USING MECHANICAL MEANS. LAP AND WELDED SPLICES SHALL NOT BE PERMITTED.
- 3.14. ALL REINFORCEMENT STEEL SHALL BE CLEAN OF ALL CONTAMINATES INCLUDING BUT NOT LIMITED TO DIRT AND OILS PRIOR TO CONCRETING. ALL STEEL REO SHALL BE HOSED DOWN FROM ENVIRONMENTAL CONTAMINATES PRIOR TO FINAL PLACEMENT AND NO MORE THEN 24HRS PRIOR TO CONCRETE PLACEMENT.
- 3.15. PROVIDE PROTECTIVE CAPS TO ALL PROJECTING REINFORCEMENT.
- 4. MISCELLANEOUS**
- 4.1. HOLDING DOWN (HD) BOLTS NOT MANUFACTURED FROM STAINLESS STEEL SHALL BE HOT DIP GALVANISED.
- 4.2. CHEMICAL ANCHORS SHALL BE RAMSET CHEMSET INJECTION REO 502 SERIES WITH A4-70 STAINLESS STEEL ANCHORS UNO.
- 4.3. STARTER BARS TO BE INSTALLED IN EXISTING CONCRETE SHALL BE RAMSET CHEMSET REO 502 ANCHORS USING HOT DIP GALVANISED N BARS UNO.
- 4.4. WHERE EXISTING STAINLESS STEEL CHEMICAL ANCHORS, STUDS OR THE LIKE BECOME DISUSED AS A PART OF THE WORKS, THEY SHALL BE CUT OFF FLUSH WITH THE STEEL OR CONCRETE SURFACE UNO.
- 4.5. WHERE EXISTING NON STAINLESS STEEL ANCHORS, STARTER BARS, STUDS OR THE LIKE BECOME DISUSED AS A PART OF THE WORKS, THEY SHALL BE CUT OFF FLUSH WITH THE STEEL SURFACE, OR 40 BELOW THE CONCRETE SURFACE AND THE HOLES FILLED WITH EPOXY GROUT UNO.

STRUCTURAL STEEL

- S1 ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH AS4100 AND AS1554 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- S2 UNLESS NOTED OTHERWISE, ALL STEEL SHALL BE OF THE FOLLOWING GRADE IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARD.

TYPE OF STEEL	GRADE
UNIVERSAL BEAMS AND COLUMNS, PARALLEL FLANGE CHANNELS, LARGE ANGLES TO AS/NZS3679.1	300 PLUS
FLATS, SMALL ANGLES, TAPER FLANGE BEAMS AND COLUMNS TO AS/NZS3679.1	250
WELDED SECTIONS TO AS/NZS3679.2	300
HOT ROLLED PLATES, FLOOR PLATES AND SLABS TO AS/NZS3678	250
HOLLOW SECTIONS TO AS1163	
- CIRCULAR SECTIONS LESS THAN 265mm OUTSIDE DIA	C250
- SECTIONS OTHER THAN THE ABOVE	C350
COLD FORMED PURLINS AND GIRTS TO AS1397	G450 Z350

- S3 WORKSHOP FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE SUPERINTENDENT IN ACCORDANCE WITH THE SPECIFICATION FOR REVIEW AT LEAST 7 DAYS PRIOR TO COMMENCEMENT OF FABRICATION. FABRICATION SHALL NOT COMMENCE WITHOUT THE SUPERINTENDENT'S APPROVAL OF THE WORKSHOP DRAWINGS.

- S4 THE CONTRACTOR SHALL ENSURE THAT FIXINGS BETWEEN STEELWORK AND OTHER BUILDING ELEMENTS ARE COORDINATED AND INSTALLED. WHERE POSSIBLE THE FIXINGS SHALL BE SHOWN ON THE WORKSHOP FABRICATION DRAWINGS.

- S5 THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL BE SUPERVISED BY A QUALIFIED PERSON EXPERIENCED IN SUCH SUPERVISION, IN ORDER TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET.

- S6 ALL MEMBERS SHALL BE SUPPLIED IN SINGLE LENGTHS. SPLICES SHALL ONLY BE PERMITTED IN LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS.

- S7 ALL STEELWORK SHALL BE SECURELY TEMPORARILY BRACED BY THE CONTRACTOR AS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.

- S8 BOLTING:
BOLTING CATEGORIES ARE IDENTIFIED ON THE STRUCTURAL DRAWINGS IN THE FOLLOWING MANNER.

- BOLT CATEGORY COMMENTS:**
- 8.8/S COMMERCIAL BOLTS OF GRADE 4.6 TO AS1111 SNUG TIGHTENED
 - 8.8/SB HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 SNUG TIGHTENED
 - 8.8/TB HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A BEARING TYPE JOINT
 - 8.8/TF HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A FRICTION TYPE JOINT WITH FAYING SURFACES LEFT UNCOATED U.N.O.

- S9 UNLESS NOTED OTHERWISE ALL BOLTS SHALL BE M20 CATEGORY 8.8/S. NO CONNECTION SHALL HAVE LESS THAN 2 BOLTS. ALL BOLTS AND WASHERS SHALL BE GALVANISED. ALL HOLES SHALL BE 2MM LARGER THAN THE BOLT DIAMETER UNLESS NOTED OTHERWISE.

- S10 /TB AND /TF BOLT CATEGORIES SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 15 OF AS4100, USING EITHER THE PART-TURN METHOD OR THE DIRECT-TENSION INDICATOR METHOD.

- S11 WELDING:
ALL WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS1554.1.
ELECTRODES SHALL BE EITHER TO AS1553, AS1858, AS2203 OR AS2717, AS APPROPRIATE

UNLESS NOTED OTHERWISE, ALL FILLET WELDS SHALL BE 6mm CONTINUOUS CATEGORY SP USING E48XX ELECTRODES OR EQUIVALENT. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION BUTT WELDS CATEGORY SP TO AS1554.1 UNO.

THE EXTENT OF NON-DESTRUCTIVE WELD EXAMINATION SHALL BE AS NOTED BELOW UNLESS OTHERWISE NOTED.

RADIOGRAPHIC OR ULTRASONIC EXAMINATION SHALL BE TO AS1554.1, AS2177.1 AND AS2207 AS APPROPRIATE.

TYPE OF WELD AND CATEGORY	EXAMINATION METHOD	EXTENT (% OF TOTAL LENGTH OF WELD TYPE)
FILLET WELDS, GP + SP	VISUAL INSPECTION	100
BUTT WELDS, GP	VISUAL INSPECTION	100
BUTT WELDS, SP	VISUAL INSPECTION	100
BUTT WELDS, SP	ULTRASONIC TESTING	10

- S12 GROUT ALL STEEL BASES BY DRY PACKING USING GROUT WHICH IS NON-SHRINK AND HAS A MINIMUM COMPRESSIVE STRENGTH AT 7 DAYS OF 40 MPa.
- S13 PROTECTIVE COATING:
STRUCTURAL STEELWORK NOT ENCASED IN CONCRETE SHALL HAVE THE FOLLOWING PROTECTIVE COATING UNLESS STATED OTHERWISE IN THE SPECIFICATION.
INTERNAL MEMBERS - ALL SURFACES
PRIMER: HIGH BUILD ZINC PHOSPHATE TO GPC - C- 29/2 A
SURFACE PREPARATION: POWER TOOL CLEAN TO AS1627.2 OR ABRASIVE BLAST CLEAN TO AS1627.4 CLASS 2
DRY FILM THICKNESS: MINIMUM 75 MICRONS
EXTERNAL MEMBERS: REFER TO SPECIFICATION
- S14 STEELWORK INTENDED TO BE CONCRETE ENCASED SHALL BE UNPAINTED. ENCASING CONCRETE SHALL BE GRADE N32 UNLESS NOTED OTHERWISE PROVIDING A COVER ADEQUATE TO SUIT FIRE RATING OR EXPOSURE CONDITIONS. CONCRETE ENCASEMENT SHALL BE CENTRALLY REINFORCED WITH 5mm WIRE TO AS4617 OR 6mm STRUCTURAL GRADE BARS TO AS4617 AT 150mm PITCH.

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Sheet No. 3 of 13



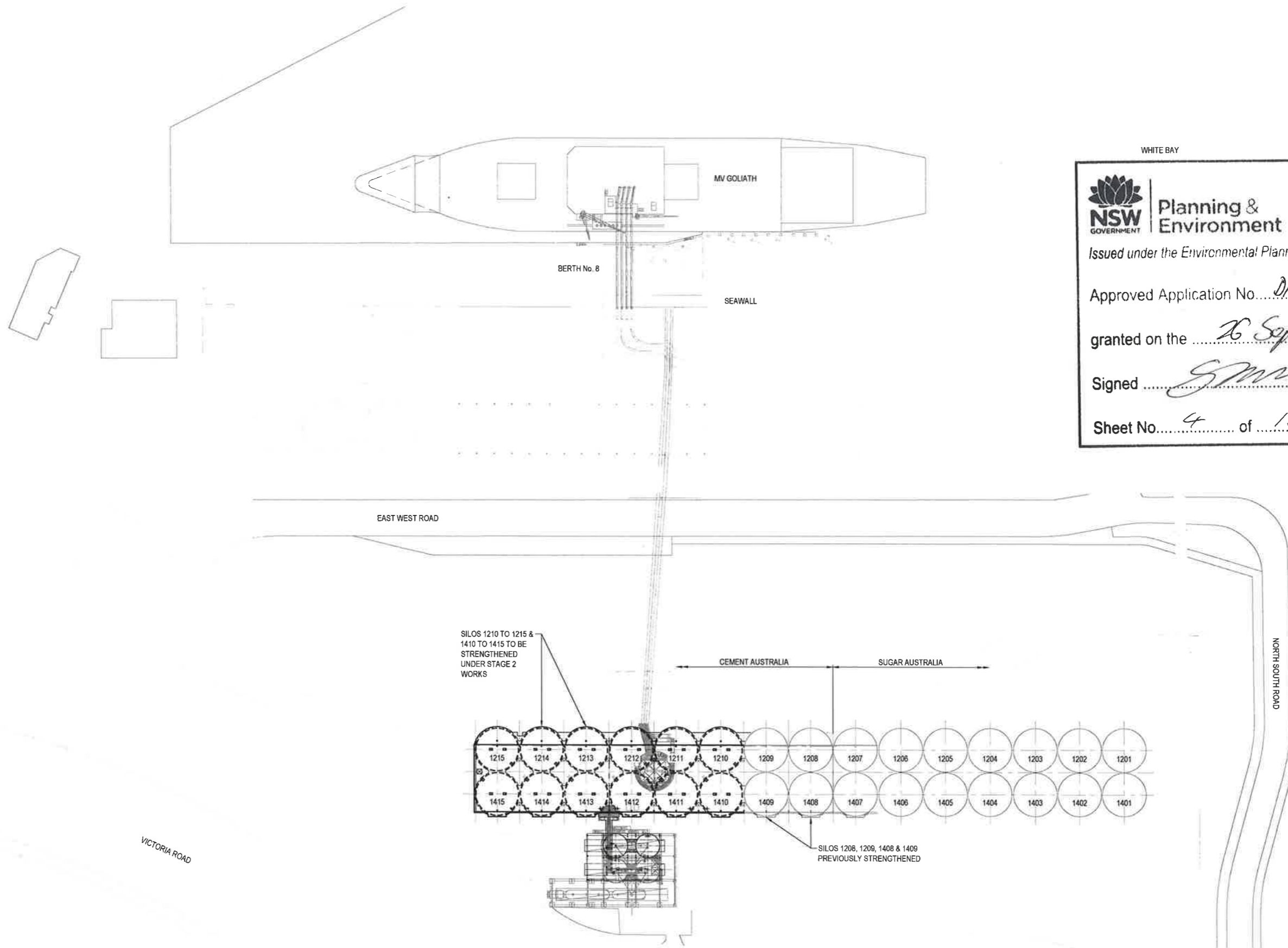
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DRAWN	DESIGNED	REVIEWED	APPROVED	DATE
D.PAMUNGKAS	M.VINCE	G.FINDLAY	G.FINDLAY	2019-09-27

PROJECT	TITLE	DRAWING No.	PROJECT No.	AREA	TYPE	DISC	NUMBER	REV
GLEBE ISLAND SILO STRENGTHENING	STRUCTURAL CONCRETE AND STEEL NOTES	503124	0000	DRG	SI		0004	0



NOTES:
1. REFER TO DRG No. SI-0003 & 0004 FOR NOTES.



WHITE BAY

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Sheet No. 4 of 13

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 Client: CEMENT AUSTRALIA
 Project: GLEBE ISLAND SILO STRENGTHENING
 Drawing: GENERAL SITE PLAN
 Date: 2018-09-27 12:29:05

SITE PLAN
1:500

5 0 10 20m
SCALE 1:500



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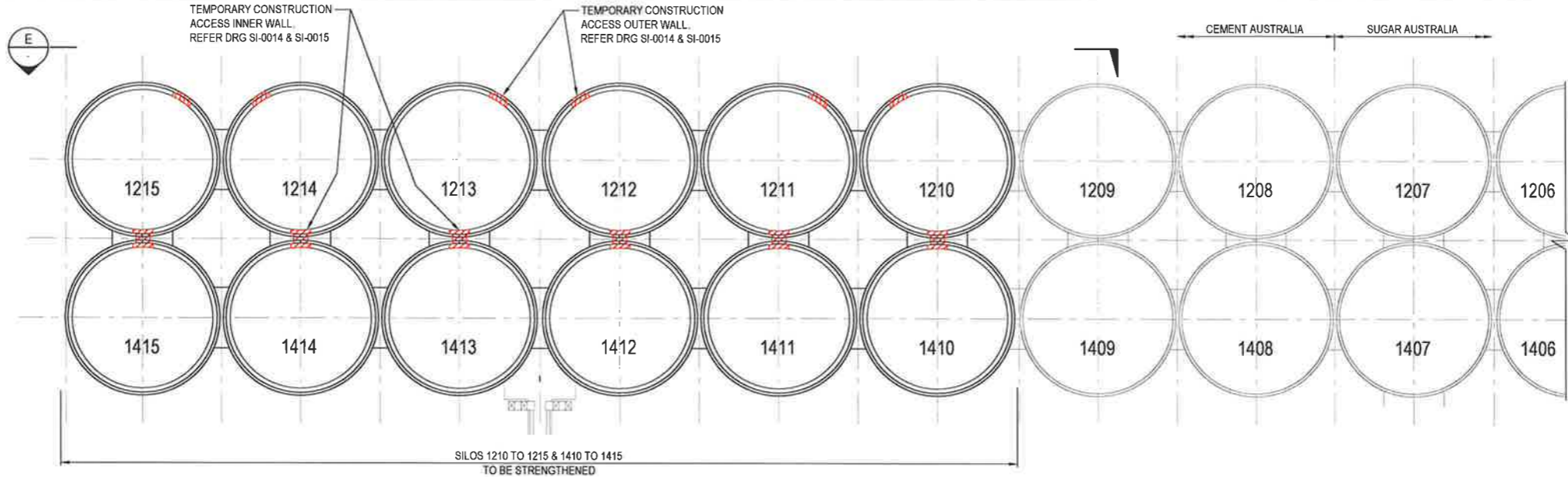
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CEMENT AUSTRALIA

REV	DATE	REVISION DETAILS	APPROVED
0	2018-09-27	ISSUED FOR CONSTRUCTION	G.FINDLAY

SCALE	SIZE
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DRAWN	DESIGNED
D.PAMUNGKAS	M.VINCE
REVIEWED	G.FINDLAY

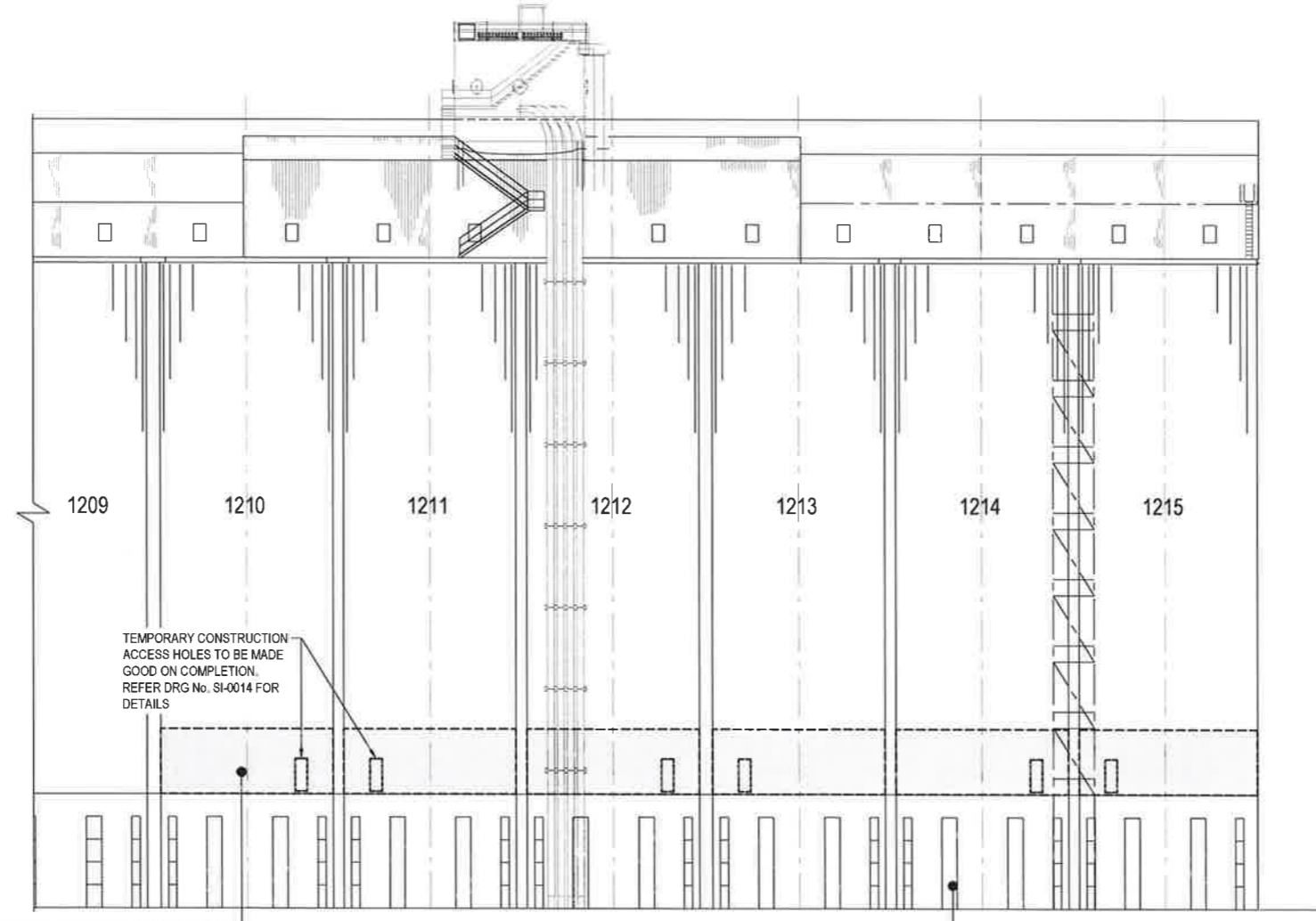
FOR CONSTRUCTION	APPROVED
G.FINDLAY	G.FINDLAY
DATE	2018-09-27

PROJECT	TITLE
GLEBE ISLAND SILO STRENGTHENING	GENERAL SITE PLAN
DRAWING No.	PROJECT No.
503124 - 0000	503124 - 0000
DRG - SI - 0010	DRG - SI - 0010
REV	0



- NOTES:**
1. REFER TO DRG No. SI-0003 & 0004 FOR NOTES.
 2. INFILL TO BE RECESSED TO DELINEATE WINDOW OPENINGS. REFER DRG No. SI-0012.

SILO GENERAL ARRANGEMENT PLAN
1:200



ELEVATION E
1:200

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granted on the *26 September 2019*

Signed *G. Findlay*

Sheet No. *5* of *13*

File Path: C:\Users\pau\Documents\Projects\SILO\SILO\SILO.dwg
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 User: pau



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REV	DATE	REVISION DETAILS
0	2018-09-27	ISSUED FOR CONSTRUCTION

APPROVED
G.FINDLAY

SCALE	SIZE
1:200	A1
DRAWN D.PAMUNGKAS	APPROVED G.FINDLAY
DESIGNED M.VINCE	DATE 2018-09-27
REVIEWED G.FINDLAY	

FOR CONSTRUCTION

APPROVED
G.FINDLAY

PROJECT	TITLE
GLEBE ISLAND SILO STRENGTHENING	GENERAL ARRANGEMENT AND ELEVATION
DRAWING No.	PROJECT No.
503124 - 0000 - DRG - SI - 0011 - 0	



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Sheet No. 6 of 13

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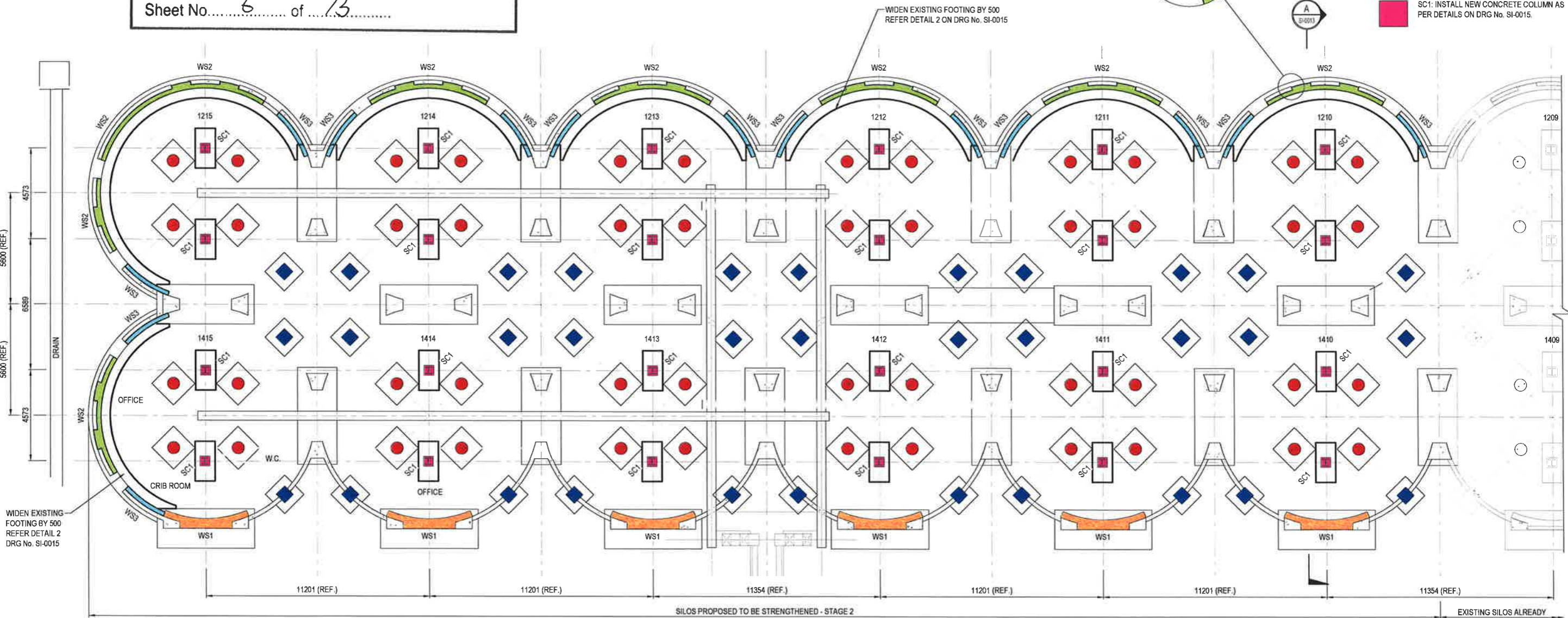
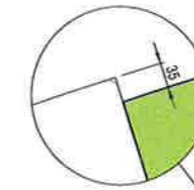
- 1. REMOVE & RELOCATE EXISTING EQUIPMENT AND SERVICES AS NECESSARY TO CARRY OUT ABOVE WORK. REFER DRG No. SI-0018 & SI-0019.

NOTES:

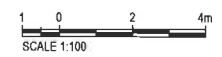
- 1. REFER TO DRG No. SI-0003 & 0004 FOR NOTES.
- 2. FOR STRENGTHENING DETAILS OF WALLS REFER TO DRG No. SI-0014 & 0015.
- 3. THIS DRAWING SHALL BE READ IN COLOUR.

LEGEND:

- INSTALL 6 LAYERS OF CARBON FRP WRAP TO CIRCULAR COLUMN IN ACCORDANCE WITH NOTES ON DRG No. SI-0003 & 0004.
- INSTALL 2 LAYERS OF CARBON FRP WRAP TO COLUMN IN ACCORDANCE WITH NOTES ON DRG No. SI-0003 & 0004.
- WS1: REMOVE EXISTING WINDOWS AND INSTALL NEW WALL STRENGTHENING AS PER DETAILS ON DRG No. SI-0014 & 0015.
- WS2: REMOVE EXISTING WINDOWS AND INSTALL NEW WALL STRENGTHENING AS PER DETAILS ON DRG No. SI-0014 & 0015.
- WS3: INSTALL NEW WALL STRENGTHENING AS PER DETAILS ON DRG No. SI-0014 & 0015.
- SC1: INSTALL NEW CONCRETE COLUMN AS PER DETAILS ON DRG No. SI-0015.



SILO STRENGTHENING PLAN 1:100



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REV	DATE	REVISION DETAILS	APPROVED
0	2018-09-27	ISSUED FOR CONSTRUCTION	G.FINDLAY

SCALE	SIZE
1:100	A1

FOR CONSTRUCTION

APPROVED

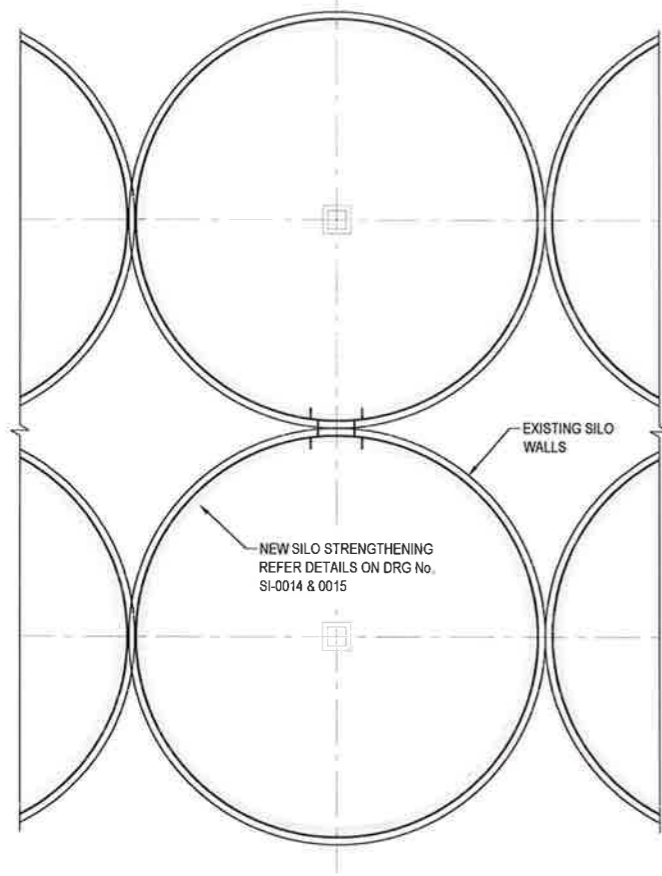
G.FINDLAY

G.FINDLAY

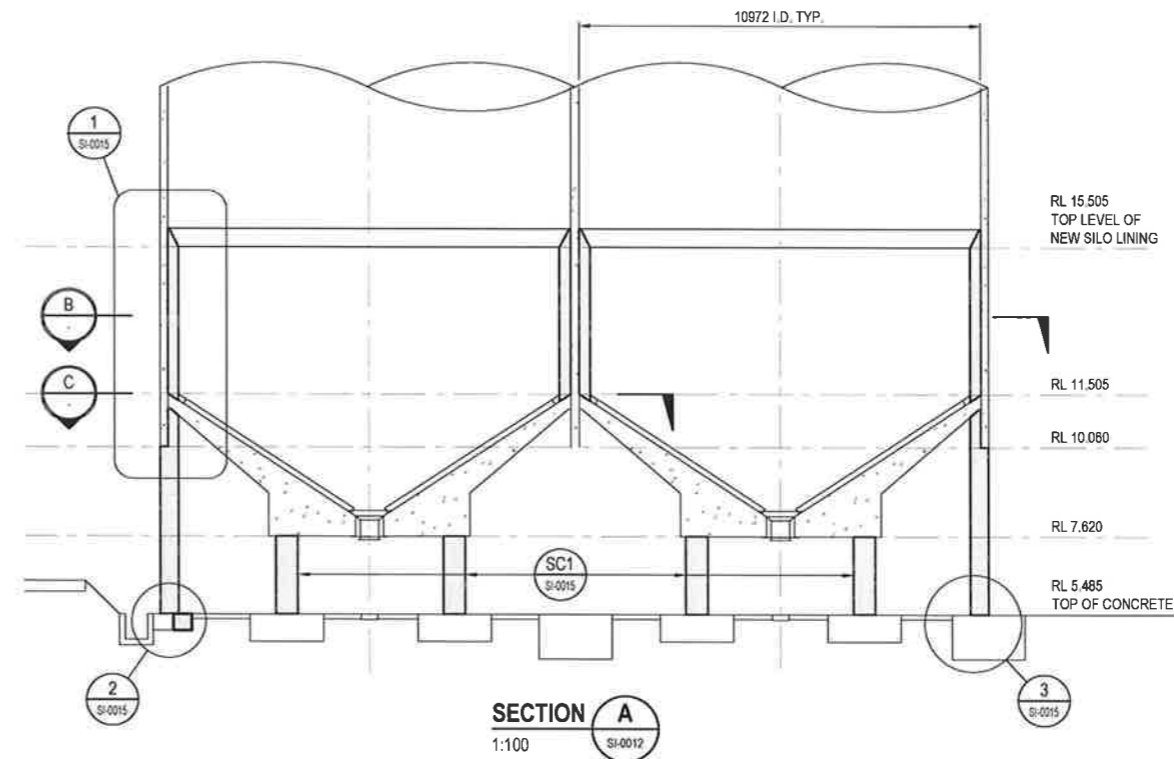
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GLEBE ISLAND SILO STRENGTHENING	SILO STRENGTHENING PLAN

PROJECT No.	AREA	TYPE	DISC	NUMBER	REV
503124	0000	DRG	SI	0012	0

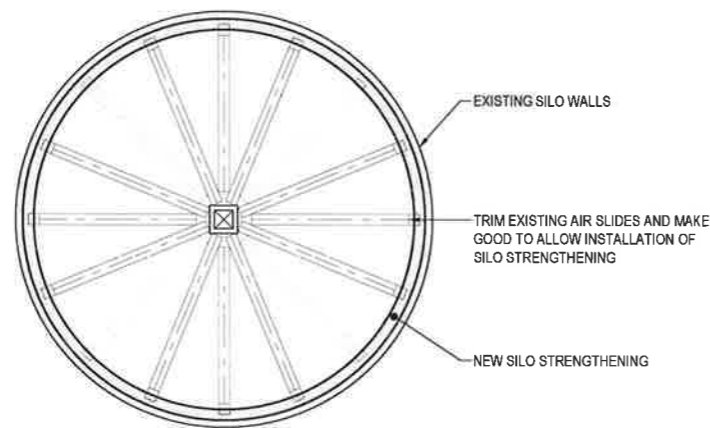
NOTES:
 1. REFER TO DRG No. SI-0003 & 0004 FOR NOTES.



SECTION B
 1:100



SECTION A
 1:100



SECTION C
 1:100

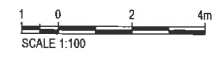
NSW GOVERNMENT | **Planning & Environment**
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Sheet No. 2 of 13



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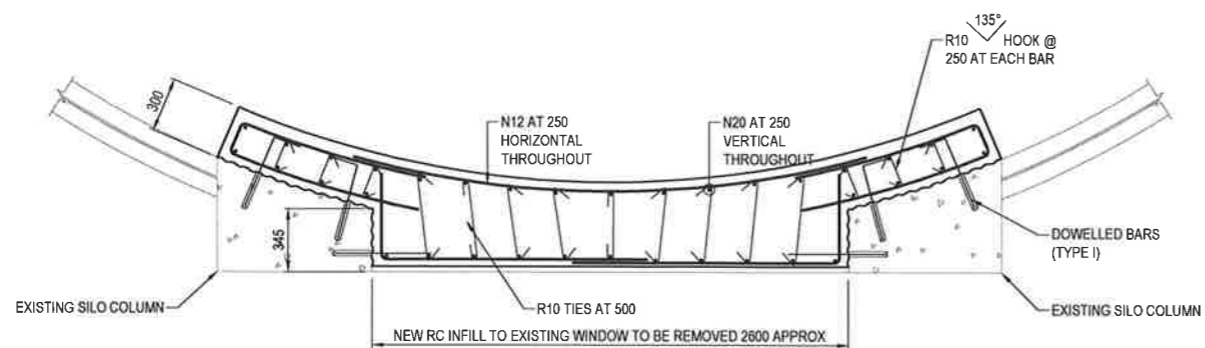


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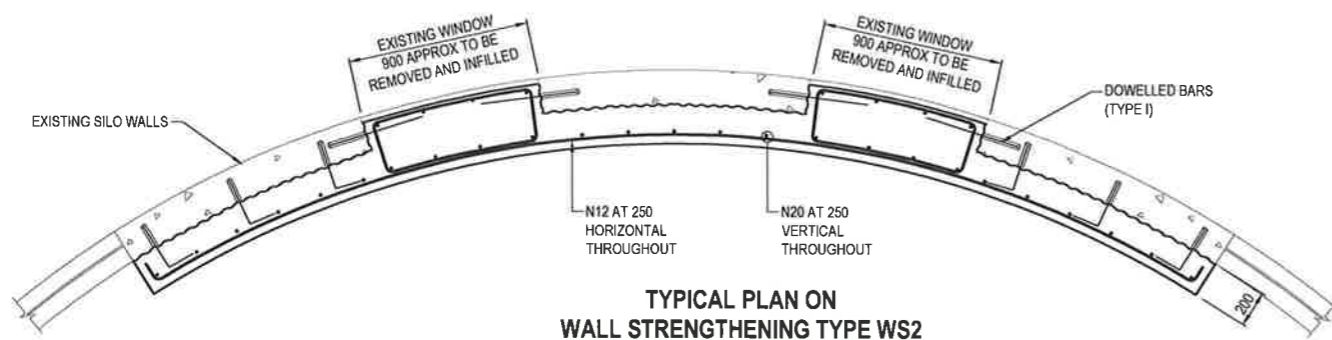
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DRAWN		APPROVED
D.PAMUNGKAS		
DESIGNED		DATE
M.VINCE		2019-09-27
REVIEWED		G.FINDLAY
G.FINDLAY		G.FINDLAY

PROJECT	TITLE
GLEBE ISLAND SILO STRENGTHENING	TYPICAL SILO STRENGTHENING PLAN AND SECTION
DRAWING No.	PROJECT No.
503124 - 0000 - DRG - SI - 0013 - 0	503124 - 0000 - DRG - SI - 0013 - 0

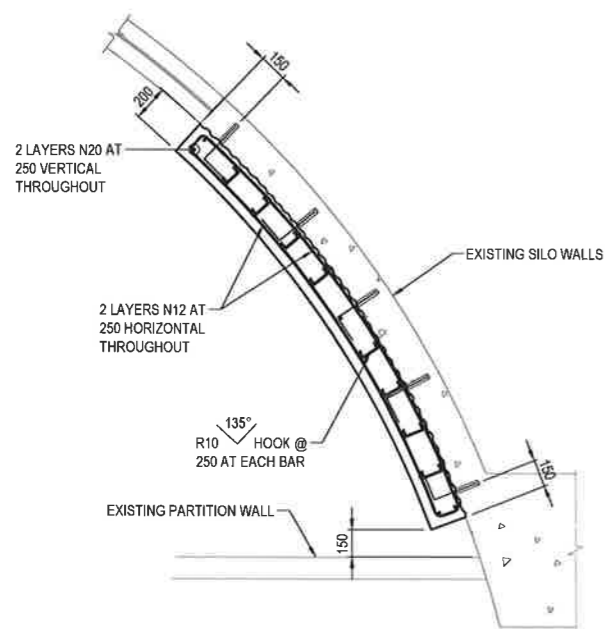
NOTES:
1. REFER TO DRG No. SI-0003 & 0004 FOR NOTES.



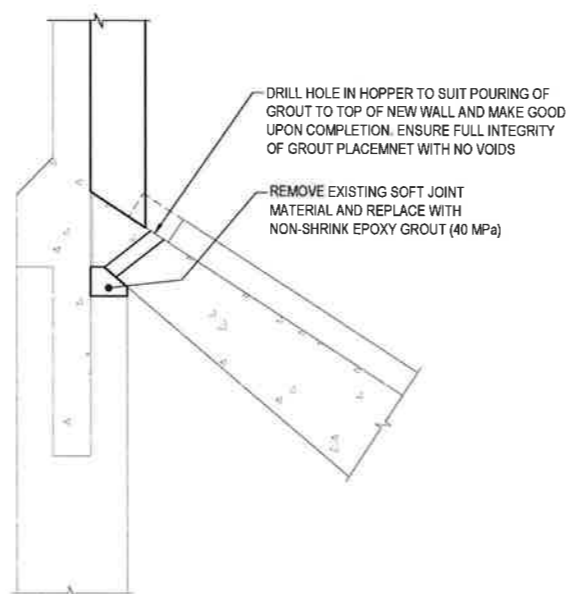
TYPICAL PLAN ON WALL STRENGTHENING TYPE WS1
1:20
REFER DRG No. SI-0012 FOR LOCATION



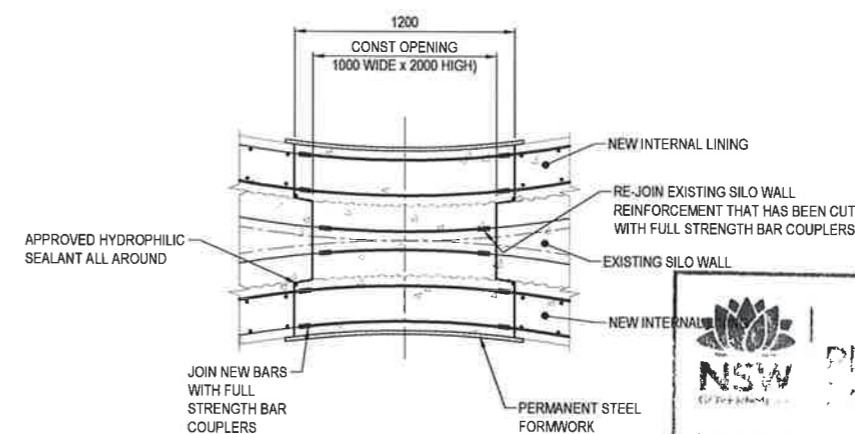
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1:20
REFER DRG No. SI-0012 FOR LOCATION



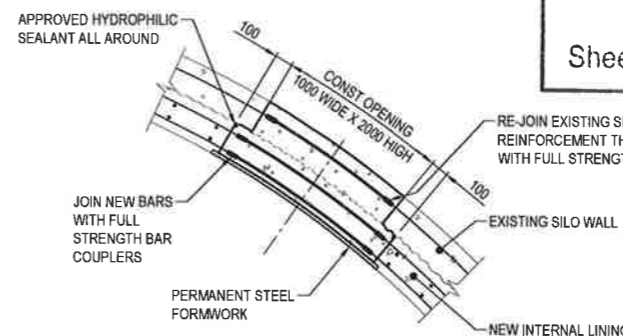
TYPICAL PLAN ON WALL STRENGTHENING TYPE WS3
1:20
REFER DRG No. SI-0012 FOR LOCATION



TYPICAL SECTION THROUGH EXISTING COLUMN SOFT JOINT
1:20
CONFIRM LOCATIONS ON SITE REQUIRED ON ALL EXISTING COLUMNS



PLAN SECTION TYPICAL TEMPORARY CONSTRUCTION OPENING - INNER WALL
1:20
REFER DRG No. SI-0011 FOR LOCATION



PLAN SECTION TYPICAL TEMPORARY CONSTRUCTION OPENING - OUTER WALL
1:20
REFER DRG No. SI-0011 FOR LOCATION

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Sheet No. 8 of 13

DOWELLED BARS (TYPE I)
N20 DOWELS AT 500 CTS, 140 MINIMUM EMBEDMENT INTO EXISTING CONCRETE USING LOKFIX P40 FOR HORIZONTAL HOLES (OR APPROVED EQUIVALENT) ALL INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

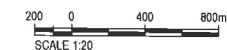
NOTE
FOR THE LOCATION OF COLUMN AND WALL STRENGTHENING REFER TO DRG No. SI-0012.
SCABBLE ALL EXISTING CONCRETE SURFACES TO 2mm AMPLITUDE WHICH NEW CONCRETE WILL BE POURED AGAINST.

DOWELLED BARS (TYPE II)
N20 DOWELS AT 250 CTS, 400 MINIMUM EMBEDMENT INTO EXISTING CONCRETE USING LOKFIX S40 FOR VERTICAL HOLES (OR APPROVED EQUIVALENT) ALL INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

IMPORTANT
ALL SILO, WALL AND COLUMN STRENGTHENING WORK TO BE DONE ONLY WHEN THE SILO IS EMPTY.

DOWELLED BARS (TYPE III)
N20 DOWELS AT 250 CTS, 400 MINIMUM EMBEDMENT INTO EXISTING CONCRETE USING LOKFIX S40 FOR VERTICAL HOLES (OR APPROVED EQUIVALENT) ALL INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

NON-SHRINK GROUT
WHERE NOTED ON THE DRAWINGS, ALL NON-SHRINK GROUT SHALL BE EPIREZ 380C OR APPROVED EQUIVALENT.



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REV	DATE	REVISION DETAILS
0	2018-09-27	ISSUED FOR CONSTRUCTION

APPROVED
G.FINDLAY

SCALE
1:20

SIZE
A1

FOR CONSTRUCTION

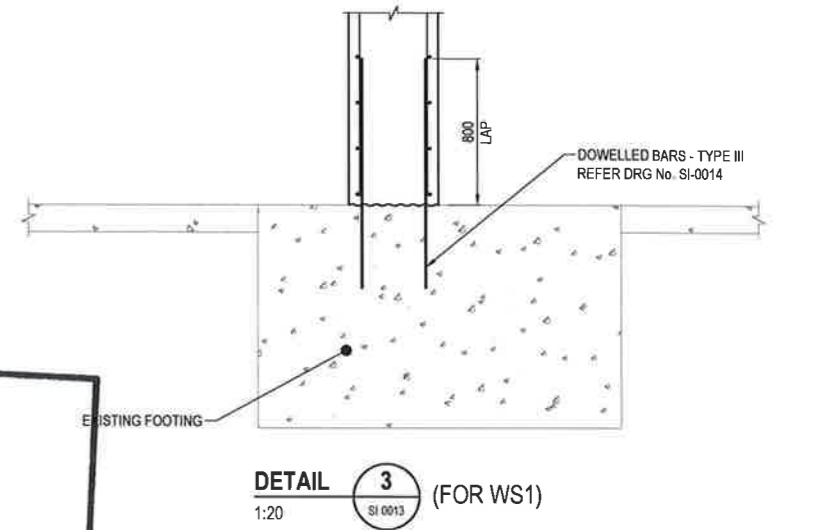
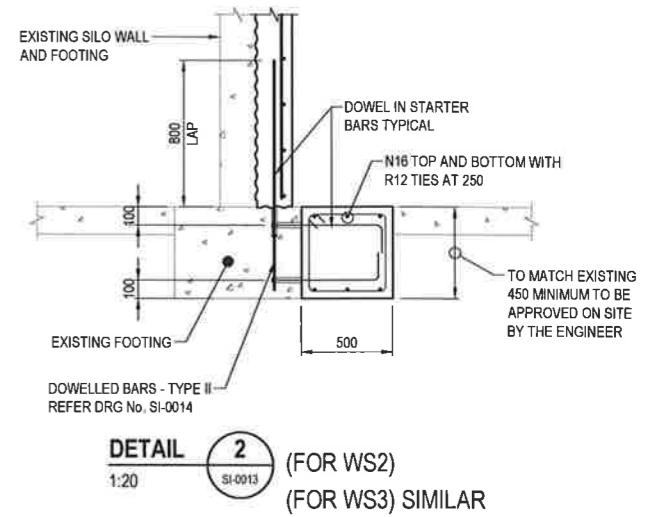
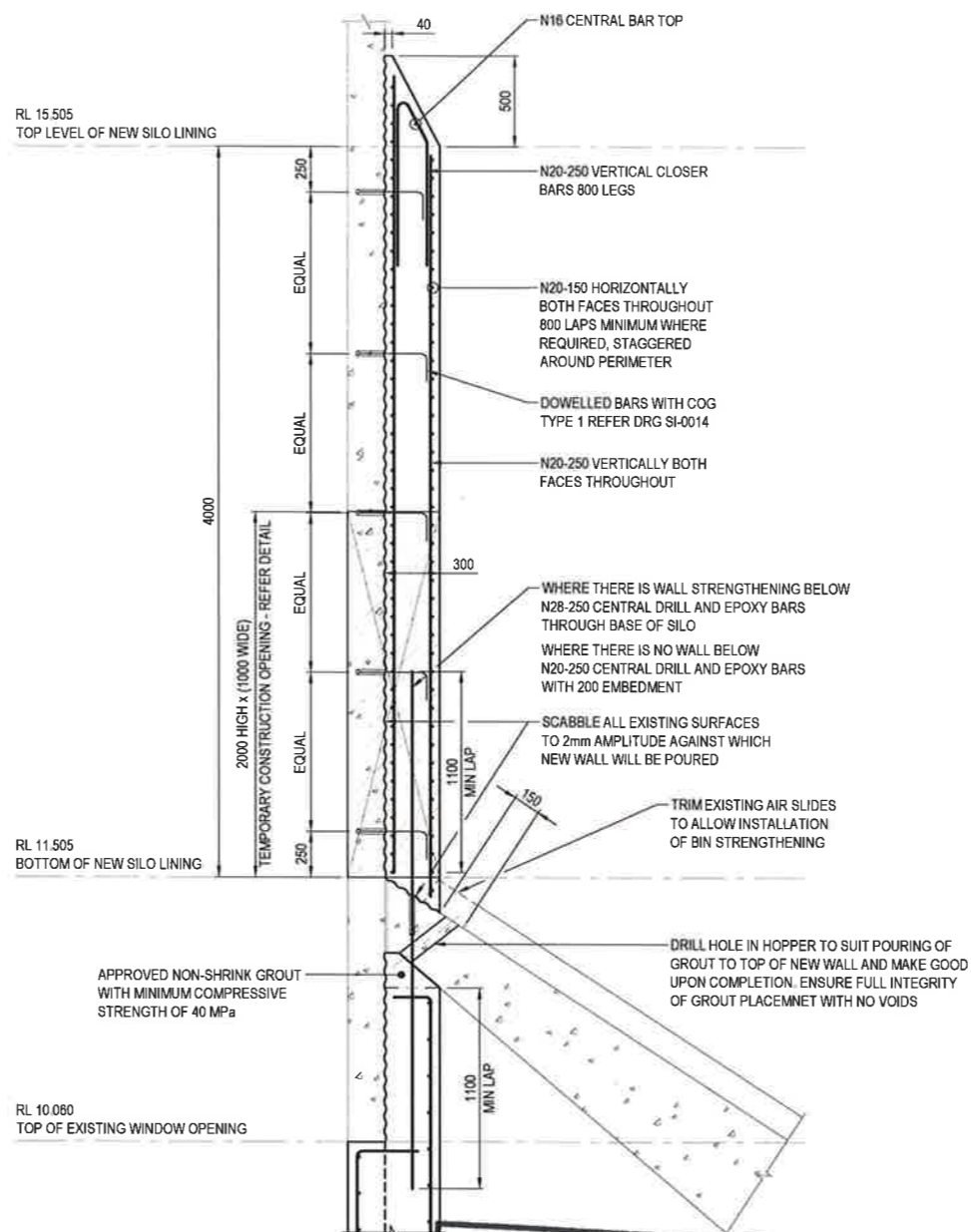
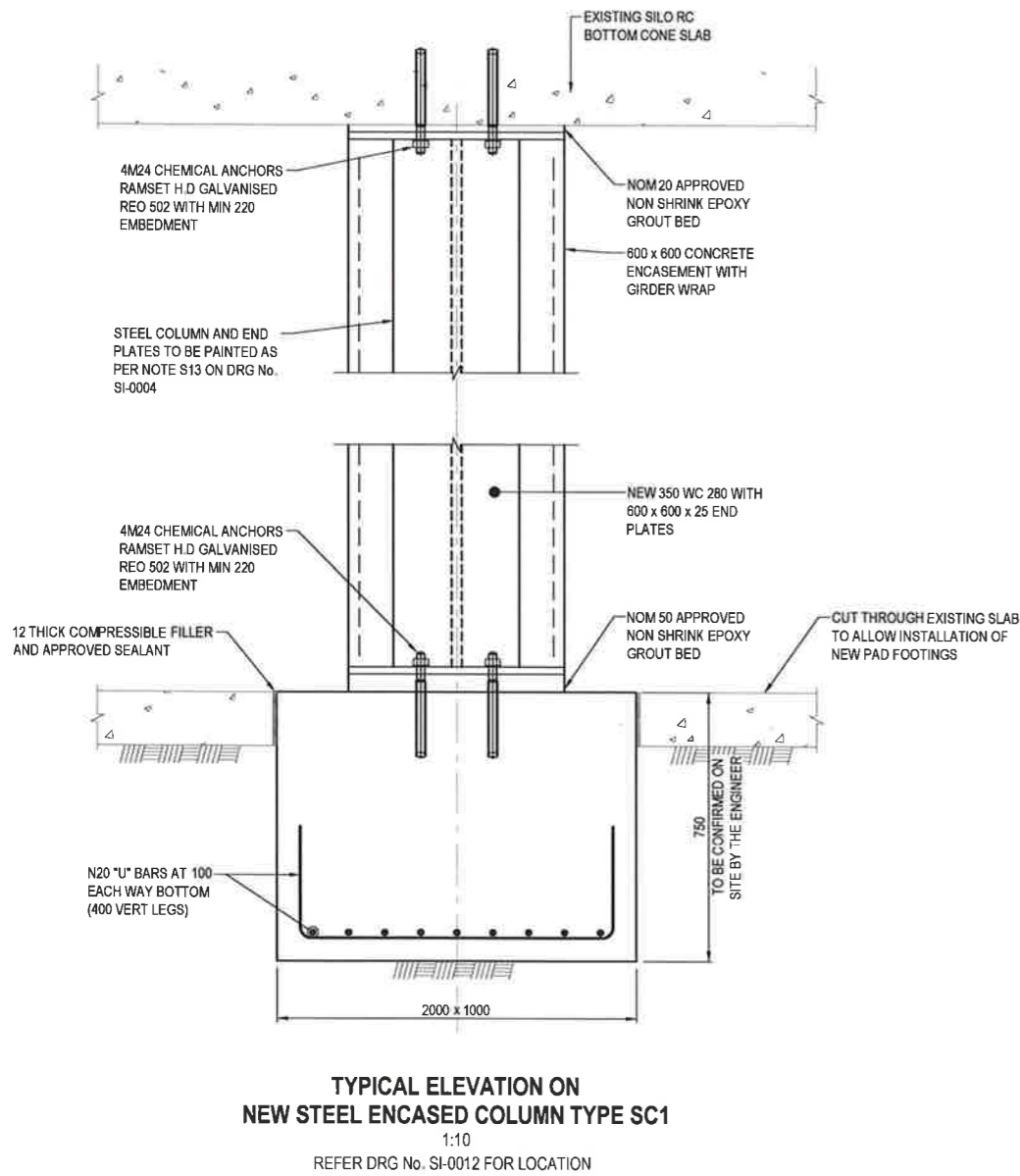
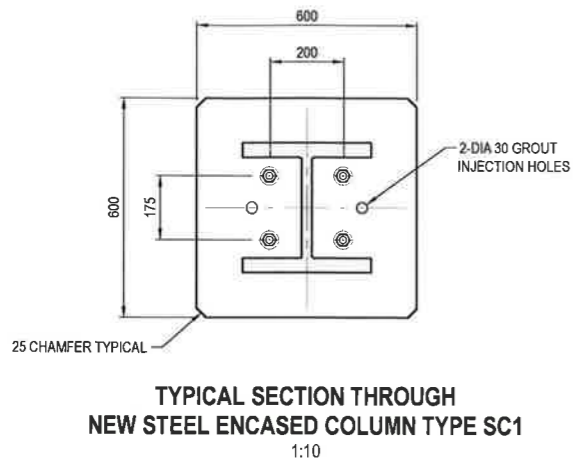
APPROVED
DATE
2018-09-27
G.FINDLAY
G.FINDLAY

PROJECT
GLEBE ISLAND SILO STRENGTHENING

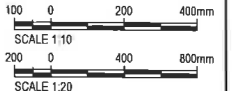
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TYPICAL SILO STRENGTHENING DETAILS SHEET 1

DRAWING No. 503124 - 0000 - DRG - SI - 0014 - 0

NOTES:
1. REFER TO DRG No. SI-0003 & 0004 FOR NOTES.



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File Date: 2018-09-27 02:28:30



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REV	DATE	REVISION DETAILS
0	2018-09-27	ISSUED FOR CONSTRUCTION

APPROVED	SCALE	SIZE
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	DRAWN	
	D.PAMUNGKAS	
	DESIGNED	
	M.VINCE	
	REVIEWED	
	G.FINDLAY	

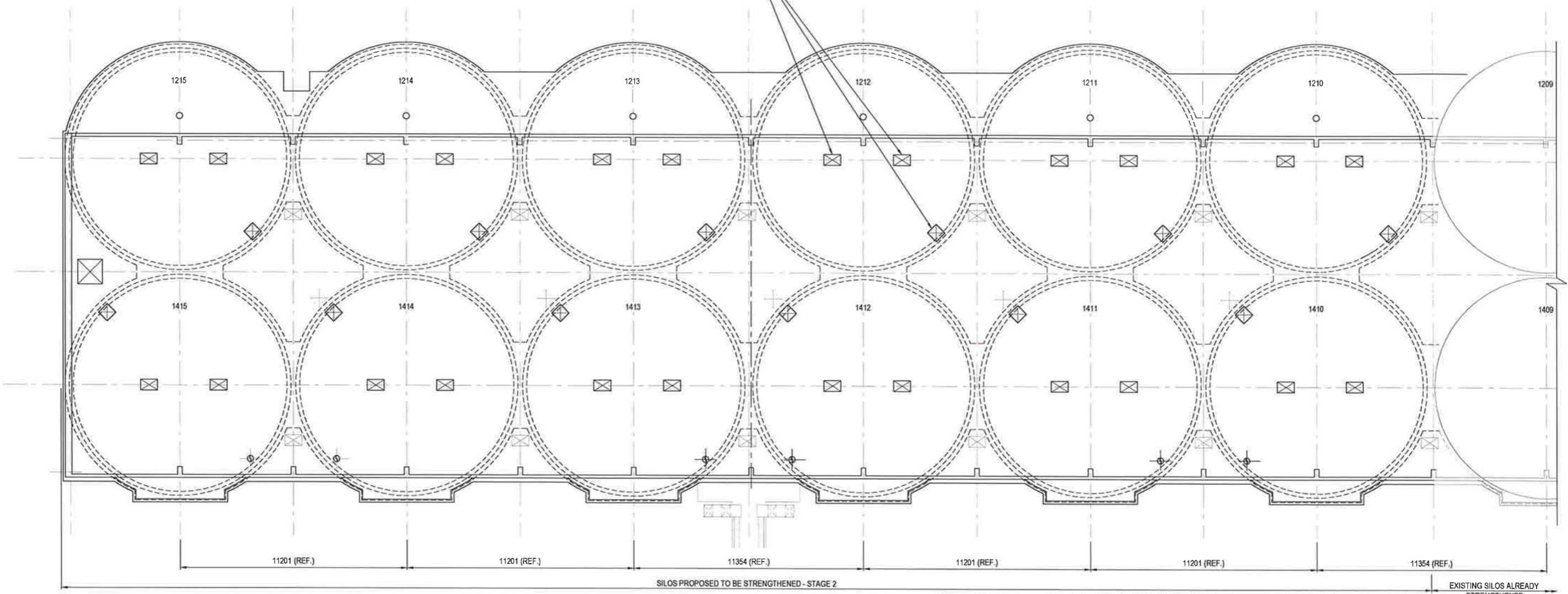
FOR CONSTRUCTION	APPROVED
	G.FINDLAY
	G.FINDLAY

PROJECT	TITLE
GLEBE ISLAND SILO STRENGTHENING	TYPICAL SILO STRENGTHENING DETAILS SHEET 2
DRAWING No.	PROJECT No.
503124	503124
0000	0000
DRG	DRG
SI	SI
0015	0015
0	0



- NOTES:**
1. REFER TO DRG No. SI-0003 & 0004 FOR NOTES.
 2. FOR STRENGTHENING DETAILS OF WALLS REFER TO DRG No. SI-0014 & 0015.
 3. THIS DRAWING SHALL BE READ IN COLOUR.

TYPICAL EXISTING ACCESS MANHOLE POSITION
(NOTE - SOME MANHOLES PROVIDE AIRSLIDE & SERVICES ACCESS)



**SILO ROOF PLAN
CONSTRUCTION ACCESS PENETRATIONS**
1:100

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SCALE 1:100

Proj.Dwg: 2018-09-27 17:31:00
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 Plot Date: 2018-09-27 17:31:00



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REV	DATE	REVISION DETAILS	APPROVED
0	2018-09-27	ISSUED FOR CONSTRUCTION	G.FINDLAY

SCALE	SIZE
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FOR CONSTRUCTION

APPROVED
G.FINDLAY
DATE
2018-09-27

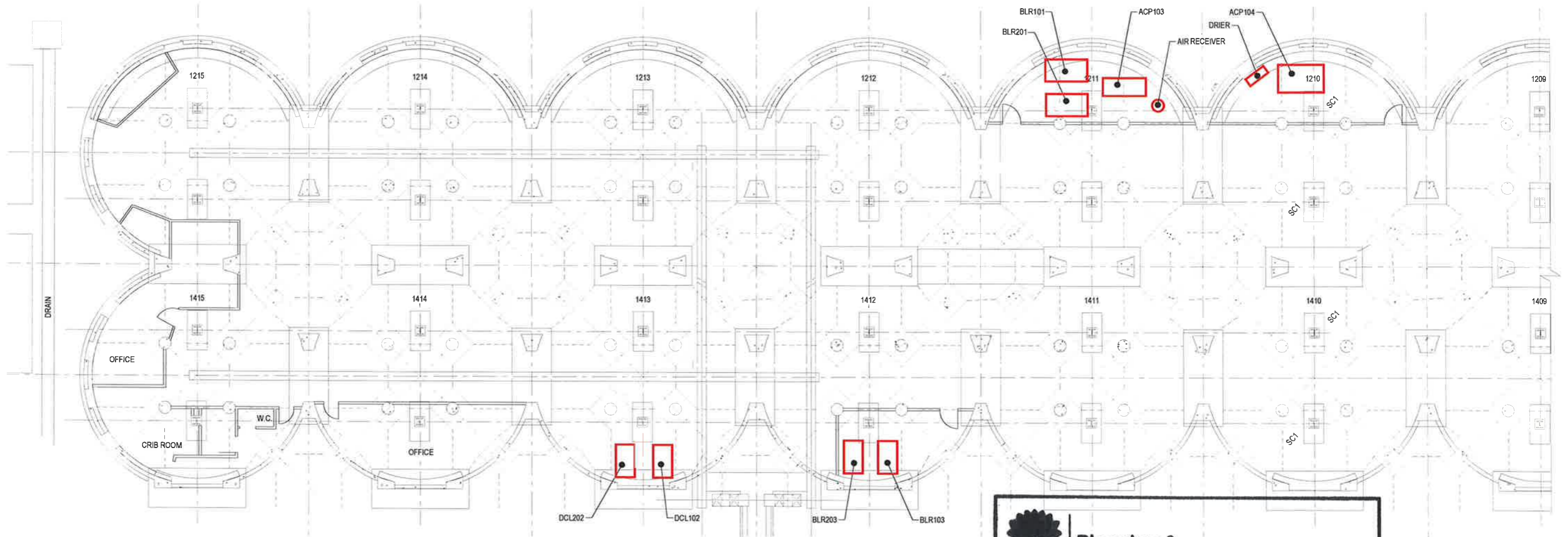
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DRAWING No. 503124 - 0000 - DRG - SI - 0016 - 0




NOTES:

1. REFER TO DRG No. SI-0003 & 0004 FOR NOTES.
2. FOR STRENGTHENING DETAILS OF WALLS REFER TO DRG No. SI-0014 & 0015.
3. THIS DRAWING SHALL BE READ IN COLOUR.



EXISTING BASEMENT EQUIPMENT LAYOUT
1:100



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Sheet No. 11 of 13



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REV	DATE	REVISION DETAILS	APPROVED
0	2018-09-27	ISSUED FOR CONSTRUCTION	G.FINDLAY

SCALE	SIZE
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DRAWN	DESIGNED
D.MARSHALL	M.VINCE
REVIEWED	G.FINDLAY

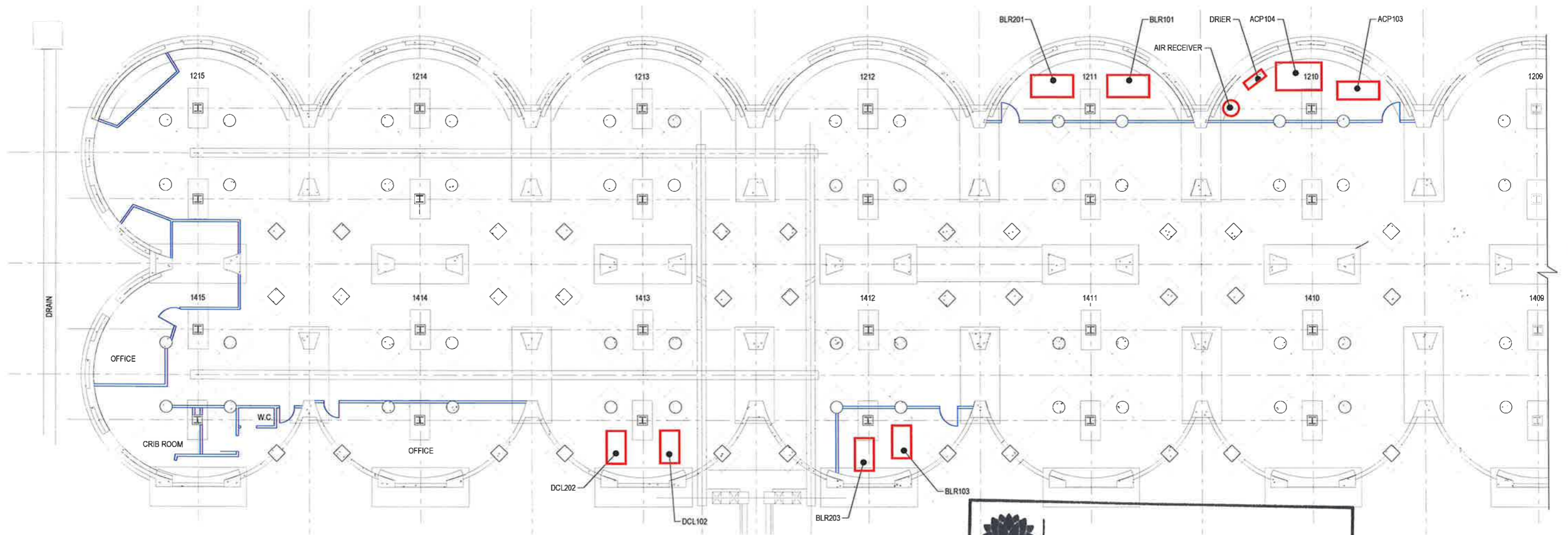
FOR CONSTRUCTION	APPROVED	DATE
G.FINDLAY	G.FINDLAY	2018-09-27

PROJECT	TITLE	DRAWING No.	PROJECT No.	AREA	TYPE	DISC	NUMBER	REV
GLEBE ISLAND SILO STRENGTHENING	EXISTING EQUIPMENT LAYOUT BASEMENT	503124 - 0000 - DRG - SI - 0018 - 0	503124 - 0000	0000	DRG	SI	0018	0



NOTES:

- 1. REFER TO DRG No. SI-0003 & 0004 FOR NOTES,
- 2. FOR STRENGTHENING DETAILS OF WALLS REFER TO DRG No. SI-0014 & 0015,
- 3. THIS DRAWING SHALL BE READ IN COLOUR.



PROPOSED BASEMENT EQUIPMENT LAYOUT
1:100

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Sheet No. 12 of 13



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REV	DATE	REVISION DETAILS	APPROVED
0	2018-09-27	ISSUED FOR CONSTRUCTION	G.FINDLAY

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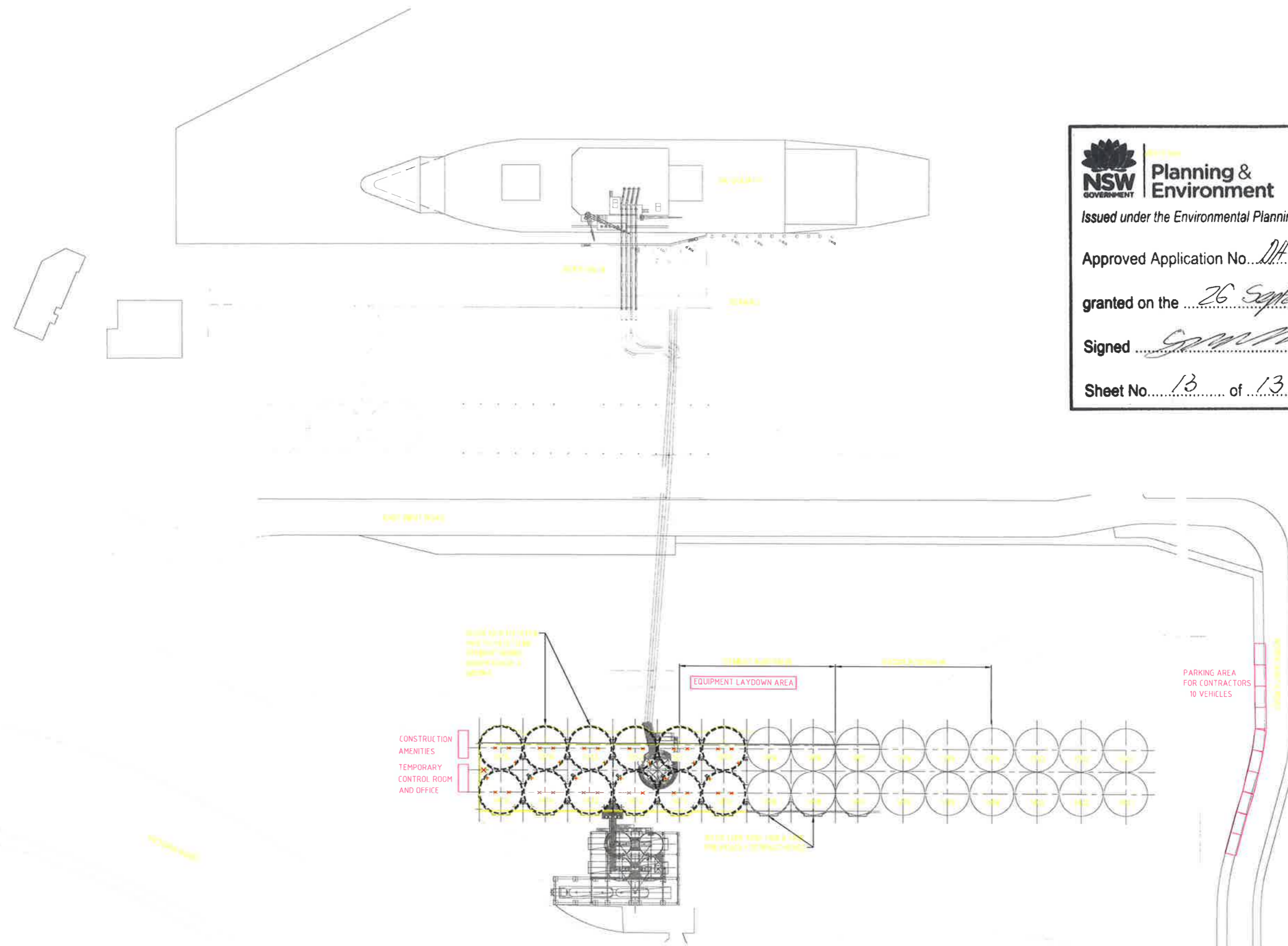
FOR CONSTRUCTION	APPROVED	DATE
	G.FINDLAY	2018-09-27

PROJECT	TITLE
GLEBE ISLAND SILO STRENGTHENING	PROPOSED EQUIPMENT LAYOUT BASEMENT

DRAWING No.	PROJECT No.	AREA	TYPE	EXEC	NUMBER	REV
503124	0000	DRG	SI	0019	0	



NOTES:
1. REFER TO OTHER DRAWINGS FOR DETAILS



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 Sheet No. 13 of 13

P:\Draws\2018-09-27\13-10 - 01.docx

SITE PLAN

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SCALE 1:500



REV	DATE	REVISION DETAILS	APPROVED
0	2018-09-27	ISSUED FOR CONSTRUCTION	G.FINDLAY
1	2019-07-18	PARKING AREA FOR CONTRACTORS	R. BULL

SCALE	SIZE
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DRAWN	DESIGNED
D.MARSHALL	M.VINCE
REVIEWED	G.FINDLAY

FOR CONSTRUCTION	
APPROVED	DATE
G.FINDLAY	2018-09-27

PROJECT	TITLE
GLEBE ISLAND SILO STRENGTHENING	LAYDOWN AREA TEMPORARY SITE OFFICE AND AMENITIES BLOCK
DRAWING No.	PROJECT No.
503124 - 0000 - DRG - SI - 0020 - 1	