REINFORCEMENT NOTES

- ALL MATERIALS AND WORKMANSHIP ARE TO COMPLY WITH AS 3600 AND AS 4671 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- REINFORCEMENT SYMBOLS DENOTES GRADE 250S HOT ROLLED DEFORMED BAR TO AS 4671 - NORMAL DUCTILITY
 - DENOTES GRADE 250R HOT ROLLED PLAIN BAR TO AS 4671 NORMAL DUCTILITY DENOTES HARD-DRAWN PLAIN WIRE TO AS 4671 - LOW DUCTILITY
 - "RL", "SL" & "L" DENOTES HARD-DRAWN RIBBED WIRE FABRIC TO AS 4671 LOW DUCTILITY DENOTES GRADE 500N HOT ROLLED DEFORMED BAR TO AS 4671 - NORMAL DUCTILITY DENOTES GRADE 500E HOT ROLLED DEFORMED BAR TO AS 4671 - SEISMIC DUCTILITY
- THE NUMBER FOLLOWING THE BAR SYMBOL IS THE BAR DIAMETER IN mm. DO NOT USE LOW DUCTILITY REINFORCEMENT UNLESS SPECIFICALLY DOCUMENTED.
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- SCHEDULING & FABRICATION: UNLESS SPECIFIED OR APPROVED OTHERWISE; - REINFORCEMENT IS TO BE SUPPLIED AND BENT IN ACCORDANCE WITH AS 3600. - REINFORCEMENT CUT-OFF LOCATIONS IN BEAMS AND SLABS ARE TO COMPLY WITH THE DEEMED TO
 - COMPLY PROVISIONS OF AS 3600. - SPLICES TO REINFORCEMENT ARE TO BE MADE IN THE POSITIONS SHOWN. REINFORCEMENT SPLICES ARE
 - TO BE FULL TENSION SPLICES TO AS 3600. - THE MINIMUM LAP FOR ALL FABRICS IS TO BE ONE MESH +50mm. NO MORE THAN 3 SHEETS OF FABRIC CAN
- BE LAPPED AT ANY POSITION. MESH IS TO BE ORIENTED TO MINIMIZE MESH LAPPING DEPTH AT SPLICES. - THE MINIMUM JOGGLE LENGTH OF A REINFORCEMENT BAR IS 6 x BAR DIAMETER. PLACEMENT & FIXING: UNLESS SPECIFIED OR APPROVED OTHERWISE;
 - SUPPORT ALL REINFORCEMENT SECURELY IN ITS CORRECT POSITION USING APPROVED PLASTIC TIPPED BAR CHAIRS, SPACERS OR SUPPORT BARS. SUPPORT SPACINGS ARE TO BE SUCH AS TO POSITION AND MAINTAIN THE REINFORCEMENT TO THE TOLERANCES OF AS 3600, AND ARE TO BE AT 800mm MAXIMUM CENTRES IN SLABS AND AT A MAXIMUM OF 60 BAR DIAMETERS OR 1500mm MAXIMUM CENTRES OTHERWISE. - REINFORCEMENT IS TO BE SUPPORTED ALONG THE EDGES OF ALL CONSTRUCTION JOINTS. - REINFORCING BARS ARE NOT TO BE CUT TO AVOID PENETRATIONS NOT DETAILED ON THE DRAWINGS, BUT BE DISPLACED TO CLEAR THEM. ADDITIONAL REINFORCING CONSISTENT WITH THE REINFORCEMENT MAT
 - SPACING IS TO BE PROVIDED IN LINE WITH THE BLOCKOUTS. - REBENDING OF REINFORCEMENT WITH OR WITHOUT HEATING IS NOT PERMITTED. - WELD REINFORCEMENT ONLY WHERE DOCUMENTED. WELDING SHALL BE CARRIED OUT BY A QUALIFIED WELDER AND CONFORM TO THE REINFORCEMENT SUPPLIER'S RECOMMENDATIONS. INTER-RUN
 - TEMPERATURES ARE TO BE LESS THAN 200°C. - REINFORCEMENT TEMPERATURES ARE NEVER TO EXCEED 400°C. WHERE REINFORCEMENT IS TO BE HEATED FOR ANY PURPOSE, TEMPERATURE CRAYONS ARE TO BE USED FOR COMPLIANCE WITH THE TEMPERATURE LIMITS.
- REINFORCING LAP SCHEDULE

REINFORCING LAP SCHEDULE

DAD ~	FOOTING LAP		BEAM LAP		SLAB	COLUMN &	HORIZONTAL	
BAK⊘	BARØ BTM TOP BTM TOP	LAP	VERTICAL WALL LAP	WALL LAP				
N12	500	600	400	500	500	500	500	
N16	700	900	600	800	700	600	800	
N20	950	1250	850	1100	950	850	1100	
N24	1250	1650	1100	1450	1250	1100	1450	
N28	1500	1950	1400	1800	1500	1400	1800	
N32	1850	2350	1700	2200	1800	1700	2200	

NOTES TO THE LAP SCHEDULE

- SLABS >300mm THICK ARE TO BE TREATED AS BEAMS
- MINIMUM CONCRETE STRENGTH 25MPa IN FOOTINGS, 32 MPa OTHERWISE
- MINIMUM COVER TO LAPPING BARS IN FOOTINGS 50mm FOR BARS>24mm DIA, 40mm OTHERWISE - MINIMUM COVER TO LAPPING BARS IN BEAMS 40mm
- MINIMUM COVER TO LAPPING BARS IN SLABS 25mm
- MINIMUM COVER TO LAPPING BARS IN WALLS 40mm
- MINIMUM COVER TO LAPPING BARS IN COLUMNS 40mm REQUIRES 3 OR MORE FITMENTS IN LAP LENGTH

DESIGN LOAD PARAMETERS

DL1 THE STRUCTURAL ELEMENTS HAVE BEEN DESIGNED FOR PERMANENT AND SUPERIMPOSED LOADS IN ACCORDANCE WITH AS 1170, AS 1657, AND AS SHOWN IN THE TABLE BELOW:

AREA	SDL kPa	LL kPa
ACCESS PLATFORMS	0.5 kPa	2.5 kPa
ACCESS STAIRS	0.5 kPa	2.5 kPa
SPECIAL ACCESS PLATFORMS	0.5 kPa	4.0 kPa
PROCESS BUILDINGS- FLOORS	1.0 kPa	5.0 kPa
OFFICES - GENERAL	1.0 kPa	3.0 kPa
TOILETS/AMENITIES	1.5 kPa	2.0 kPa
SWITCHROOMS	2.0 kPa	7.5 kPa
PLANTROOMS	1.0 kPa	5.0 kPa
STORAGE	1.0 kPa	10.0 kPa MIN
ROOVES - NON TRAFFICABLE	0.25 kPa	0.25 kPa MIN
ROOVES - TRAFFICABLE	0.5 kPa	1.5 kPa
ROOVES - ACCESSIBLE	1.0 kPa	4.0 kPa

DL2 THE STRUCTURES DOCUMENTED HAVE BEEN DESIGNED TO WITHSTAND WINDLOADS IN ACCORDANCE WITH AS1170.2 AND THE FOLLOWING PARAMETERS:

WIND LOADING	
REGION	А
IMPORTANCE LEVEL	3
ANNUAL PROBABILITY OF EXCEEDANCE	1:1000
ULTIMATE REGIONAL WIND SPEED (m/sec)	46
SERVICEABILITY REGIONAL WIND SPEED (m/sec)	37.0
TERRAIN CATEGORY	2
TOPOGRAPHY MULTIPLIER (Mt)	1
SHIELDING MULTIPLIER (Ms)	1

THE STRUCTURES DOCUMENTED HAVE BEEN DESIGNED TO WITHSTAND EARTHQUAKE LOADS IN ACCORDANCE WITH AS1170.4 AND THE FOLLOWING SITE PARAMETERS:

EARTHQUAKE LOADING	
IMPORTANCE LEVEL	3
ANNUAL PROBABILITY OF EXCEEDANCE	1:1000
PROBABILITY FACTOR (kp)	1.3
HAZARD FACTOR (z)	0.09
SITE SUB-SOIL CLASS	Се
EARTHQUAKE DESIGN CATEGORY (EDC)	II

ABBREVIATIONS

GENERAL ABBREVIATIONS MAY INCLUDE THE FOLLOWING: - CONSTRUCTION JOINT - CENTRELINE CTJ - CONTRACTION JOINT - DEEP/ DEPTH - DOWELLED JOINT DWG DRAWING(S) - EXPANSION JOINT EJ - EQUALLY SPACED EQ EGL - EXISTING GROUND LEVEL GΑ - GENERAL ARRANGEMENT - HEIGHT/ HIGH NOM - NOMINAL NSOE - NOT SHOWN ON ELEVATION NSOP - NOT SHOWN ON PLAN NTS - NOT TO SCALE - OPPOSITE REQ - REQUIRED SIM - SIMILAR - SAW CUT JOINT - TO BE CONFIRMED TYP - TYPICAL THK - THICK UNO - UNLESS NOTED OTHERWISE US - UNDERSIDE - WIDE/ WIDTH

REINFORCEMENT ABBREVIATIONS MAY INCLUDE THE FOLLOWING: B OR BTM

- BOTTOM FACE - BOTH SIDES C OR CENT - CENTRALLY PLACED CLR - CLEAR CRS - CENTRES DIA - DIAMETER - EACH FACE EW - EACH WAY - FAR FACE - FAR SIDE FS H OR HORIZ - HORIZONTAL - LONG - LENGTH VARIES - NEAR FACE - NEAR SIDE REINF - REINFORCEMENT T OR TOP - TOP FACE T&B - TOP & BOTTOM FACE V OR VERT VERTICAL

STRUCTURAL STEEL ABBREVIATIONS MAY INCLUDE THE FOLLOWING:

- CONTINUOUS FILLET WELD **FPBW** - FULL PENETRATION BUTT WELD **FSBW** - FULL STRENGTH BUTT WELD PPBW - PARTIAL PENETRATION BUTT WELD - PLATE

TEMPORARY WORK NOTES

- TW1 IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE OVERALL STABILITY OF THE STRUCTURE WHILST
- UNDER CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ADVICE FROM THE CONTRACTORS ENGINEER. ALL VERTICAL DISPLACEMENTS AND MOVEMENTS ARE TO BE LIMITED TO ENSURE THE STRUCTURE IS NOT SUBJECTED TO LOADS OR MOVEMENTS CAUSING STRUCTURAL DISTRESS TO ANY ELEMENT WHILE THE STRUCTURE IS BEING TEMPORARILY SUPPORTED.
- TW3 STRUCTURE TO BE ADEQUATELY BRACED TO PREVENT ANY HORIZONTAL MOVEMENT OR

HEAD OFFICE - GOLD COAST SUITE 106, 20 LAKE ORR DRIVE,

REV AS CONSTRUCTED 100mm ON ORIGINAL DRAWING SIGNATURE: FOR CONSTRUCTION REV P.GILL 30.05.23 ISSUED FOR CONSTRUCTION 30.05.23 CP PG DATE DWN APP SIGNATURE: 1 ster Lill 3 DESCRIPTION **REVISIONS** 3227 RPEQ No.

SHIRE OF OPPORTUNITY

CONSTRUCTION

TAROOM SEWAGE TREATMENT PLANT UPGRADE STRUCTURAL GENERAL NOTES - PART 2

TARSTP - DWG- STR-0011

DRAWING STATUS

REVISION