GENERAL NOTES

G1 - THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

G2 - CONSTRUCTION FROM THESE DRAWINGS SHALL NOT COMMENCE WITH APPROVAL HAS BEEN RECEIVED FROM LOCAL AUTHORITIES.

G3 - DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.

G4 - SETTING OUT DIMENSIONS SHOWN ON THESE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR.

G5 - DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO MAINTAIN THE WORKS AND THE EXCAVATIONS STABLE AT ALL TIMES.

G6 - ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT S.A.A. CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES.

G7 - THE STRUCTURAL WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LOADS: AS1170.1, AS1170.2, AS1170.4

G8 - THE CONTRACTOR SHALL CHECK FOR EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF THE WORKS, AND ANY CLASHES WITH THE NEW WORK SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER.

G9 - ALL PROPRIETARY ITEMS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS AND INSTRUCTIONS.

G10 - U.N.O. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES.

FOUNDATIONS

F1 - UNLESS NOTED OTHERWISE FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 600 KPa. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE SUPERINTENDENT OF THE FOUNDATION MATERIAL BEFORE PLACING CONCRETE. SITE CLASS 'A' SITE. ROCK

F2 - FOOTINGS SHALL BE LOCATED CENTRALLY UNDER COLUMNS AND WALLS U.N.O.

F3 - UNLESS PROPPED ADEQUATELY DO NOT BACKFILL RETAINING WALLS (OTHER THAN CANTILEVER WALLS) UNTIL FLOOR CONSTRUCTION AT TOP AND BOTTOM IS COMPLETED, ENSURE FREE DRAINING BACKFILLING AND DRAINAGE IS IN PLACE.

F4 - FOOTINGS SHALL BE CONSTRUCTED AND BACKFILLED AS SOON AS POSSIBLE FOLLOWING EXCAVATION TO AVOID SOFTENING OR DRYING OUT BY EXPOSURE.

F5 - DETAILED GEOTECHNICAL INVESTIGATION HAS NOT BEEN CARRIED OUT ON THE SITE. JOSHUA CONSULTING ENGINEERS HAVE INSPECTED THE SITE AND HAVE CARRIED OUT A LIMITED INSPECTION. WHILST ALL CARE HAS BEEN TAKEN, JOSHUA CONSULTING ENGINEERS WILL NOT ACCEPT RESPONSIBILITY FOR ANY POSSIBLE CHANGES IN THE FOUNDATION CONDITIONS, RESULTING IN CHANGES TO THE FOOTINGS.

F6 - ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH AS3798.

F7 - TERMITE PROTECTION SHALL BE IN ACCORDANCE WITH AS3660.

BRICKWORK AND BLOCKWORK

B1 - ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700.

B2 - STRENGTHS OF BRICKS, CLASS OF BLOCKS AND TYPE OF MORTAR SHALL BE AS FOLLOWS:

ELEMENT	MATERIAL	STRENGTH (CS) OR CLASS	MORTAR TYPE
BRICKWORK	CLAY	20 MPa	1:0:4 WITH WATER THICKENER
BLOCKWORK	CONCRETE	25 MPa	

B3 - PLACE 2 LAYERS OF GALVANISED IRON WITH GRAPHITE SMEAR BETWEEN ALL MASONRY BEARING SURFACES BEFORE PLACING CONCRETE U.N.O.

B4 - NON-LOAD BEARING WALLS SHALL BE KEPT 15mm CLEAR FROM SOFFITS OF CONCRETE ELEMENTS AND BE TIED WITH ABBEY ALLIGATOR U.N.O. HEAD RESTRAINTS AT 600 CENTRES.

B5 - ALL CORES SHALL BE FILLED WITH CORE FILLING CONCRETE AND COMPACTED THOROUGHLY.

B6 - ALL REINFORCEMENT SHALL BE POSITIONED AS SHOWN ON DETAILS AND TIED SECURELY.

B7 - MORTAR PROTRUDING INTO CORES SHALL BE REMOVED BEFORE GROUTING.

B8 - PROVIDE CLEAN OUT OPENINGS IN THE BOTTOM COURSE IN ALL CORES FOR MORTAR REMOVAL AND POSITIONING AND TYING OF THE VERTICAL REINFORCEMENT.

B9 - MINIMUM COVER TO BARS IN BLOCKWALLS SHALL BE 50mm FROM OUTSIDE FACE OF BLOCKS U.N.O.

B10 - PROVIDE BRICKWORK JOINT AT EVERY 6.0m CENTRES U.N.O.

B11 - FOR REINFORCED BLOCK RETAINING WALL, PROVIDE RETAINING WALL BLOCKS TO ACHIEVE THE REQUIRED COVER FOR DURABILITY. TOP GROOVED BLOCKS IN THE RETAINING WALL ARE UNACCEPTABLE.

B12 - PROVIDE MEDIUM DUTY 'ABEY' TIES AT EVERY FOUR COURSES IN ANY CAVITY BRICKWORK. TYP. U.N.O. (STAINLESS STEEL). DURABILITY OF WALL TIES SHALL BE IN ACCORDANCE WITH TABLE 5.1 AND APPENDIX-F OF AS3700.

CONCRETE

C1 - ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 LATEST EDITION AS AMENDED, EXCEPT WHEREVARIED BY THE CONTRACT DOCUMENTS.

C2 - CONCRETE QUALITY.

ELEMENT	SLUMP	MAX. AGG SIZE	TYPE OF CEMENT	EXPOSURE CLASSIFIC.	CONCRETE GRADE
FOOTING	80± 20	20	GP	A1	N32
CORE FILL	100±30	10	GP	B2	N32
SLAB	80±20	20	GP	A1/B2	N32

NOTE: FOR ADDITIONAL REQUIREMENTS RELATING TO SPECIAL CLASS CONCRETE SEE THE SPECIFICATION

PROJECT CONTROLLED TESTING SHALL BE CARRIED OUT AS PER AS1379.

C3 - CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN:

ELEMENT	EXPOSURE CLASSIFICATION	COVER
FOOTING CORE FILLING SLAB	A1 B2 A1/B2	40 65 25/45

NOTE: WHERE NO COVER IS INDICATED THE REQUIREMENTS OF AS3600 SHALL BE MET.

C4 - FOR UNFORMED SURFACES THE FINISHES ARE AS FOLLOWS:

AREA	FORMWORK SURFACE FINISH CLASS
EXPOSED	CLASS 2
UNEXPOSED	CLASS 4

C5 - ALL CONCRETE SHALL BE CURED IN ACCORDANCE WITH AS3600 U.N.O.

C6 - SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

C7 - CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.

C8 - BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.

C9 - NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

C10 - REINFORCEMENT IS REPRESENTED DIAGRAMATICALLY, IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.

C11 - SPLICES IN THE REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN. THE WRITTEN APPROVAL OF THE SUPERINTENDENT SHALL BE OBTAINED FOR ANY OTHER SPLICES. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT, AS NOMINATED IN AS3600.

C12 - WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

C13 - CONDUITS, PIPES ETC. SHALL BE PLACED IN THE MIDDLE ONE THIRD OF THE SLAB DEPTH AND SPACED AT NOT LESS THAN 3 DIAMETERS. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT.

C14 - REINFORCEMENT SYMBOLS:
- S - DENOTES GRADE 250N DEFORMED BARS TO AS/NZS 4671
- N - DENOTES GRADE 500N HOT ROLLED HIGH STRENGTH DEFORMED BARS TO AS/NZS 4671. (NORMAL DUCTILITY)
- R - DENOTES GRADE 250N HOT ROLLED PLAIN BARS TO AS/NZS 4671.

C15 - ALL REINFORCEMENT FABRIC SHALL BE DEFOREMED BARS TO AS/NZS 4671 GRADE 500 AND SHALL BE SUPPLIED AS FLAT SHEETS.

C16 - SLAB REINFORCEMENT SHALL EXTEND AT LEAST 65mm OVER MASONRY WALLS AND 50% OF BOTTOM REINFORCEMENT SHALL BE COGGED TO ACHIEVE ANCHOAGE A SIMPLY SUPPORTED ENDS.

C17 - ALL THE REQUIREMENTS OF THE ACSE CONCRETE SPECIFICATION DOCUMENT SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE U.N.O.

C18 - UNLESS NOTED OTHERWISE NO ALLOWANCE HAS BEEN MADE FOR STACKED MATERIALS ON THE CONCRETE STRUCTURE.

C19 - DO NOT CONSTRUCT BRICKWORK OR PARTITION WALLS ON SUSPENDED SLABS UNTIL SLAB HAS BEEN STRIPPED AND DE-PROPPED.

STRUCTURAL STEEL

S1 - ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100 AND AS1554 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS

S2 - UNLESS NOTED OTHERWISE ALL STEEL SHALL BE IN ACCORDANCE WITH BHP GRADE 300 PLUS TO AS/NZS 3679.1 (1996) – HOT ROLLED SECTIONS.
GRADE 300 TO AS3679.2 (1991) – WELDED SECTIONS
GRADE 250 TO AS3678 (1996) – HOT ROLLED PLATES AND SLABS
GRADE 350 TO AS1663 (1993) – HOLLOW SECTIONS

S3 - THE CONTRACTOR SHALL PREPARE WORKSHOP DRAWINGS AND SHALL SUBMIT 3 COPIES OF EACH DRAWING FOR APPROVAL. FABRICATION SHALL NOT COMMENCE UNTIL APPROVAL HAS BEEN RECEIVED.

S4 - UNLESS NOTED OTHERWISE, ALL BOLTS SHALL BE M20 4.6/S (i.e. 20 DIAMETER BOLTS OF GRADE 4.6 TO AS1111) TIGHTENED USING A STANDARD WRENCH TO A 'SNUG TIGHT' CONDITION, WHERE BOLTS ARE DENOTED 8.8/TF, THEY SHALL BE GRADE 8.8 BOLTS TO AS1252, FULLY TENSIONED IN A CONTROLLED MANNER TO THE REQUIREMENTS OF AS4100. 'TF' DENOTESA FRICTION TYPE JOINT, FINISH COAT SHALL BE EXCLUDED FROM THE CONTACT SURFACES OF THE JOINTS. WHERE BOLTS ARE DENOTED 8.8/TB, THEY SHALL BE GRADE 8.8 BOLTS TO AS1252 TIGHTENED USING A LOAD INDICATING WASHER. 'TB' DENOTES A BEARING TYPE JOINT.

S5 - MINIMUM CONNECTION SHALL BE 2 M20 BOLTS, 10 GUSSET PLATE AND 6mm CONTINUOUS FILLET WELD.

S6 - ALL BOLTS, NUTS AND WASHERS SHALL BE DEGREASED AND POWER WIRE BRUSHED AND RECEIVE THE SAME SURFACE TREATMENT AS ADJACENT STEELWORK.

S7 - BUTT WELDS WHERE INDICATED ON THE DRAWINGS SHALL BE COMPLETE PENETRATION BUTT WELDS AS DEFINED IN AS1554 CATEGORY SP.

S8 - UNLESS NOTED OTHERWISE ALL WELDS SHALL BE 6mm CONTINUOUS FILLET WELDS AS DEFINED IN AS1554 CATEGORY SP.

S9 - STRUCTURAL STEELWORK SHALL HAVE THE FOLLOWING SURFACE TREATMENT IN ACCORDANCE WITH THE SPECIFICATION:

ELEMENT	SURFACE CLEANING	PRIMING AND FINISHED COATS
INTERNAL	POWER BRUSHED CLEANED	R.O.Z.P
EXTERNAL & LINTEL	HOT DIPPED GALVANISED TO AS4680	600g/m²

S10 - THE CONTRACTOR SHALL PROVIDE CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL TO STEEL AND TIMBER TO STEEL WHETHER OR NOT DETAILED ON THE DRAWINGS. ALL BOLTS, NUTS AND WASHERS SHALL BE DEGREASED AND POWER WIRE BRUSHED AND RECEIVE THE SAME SURFACE TREATMENT AS ADJACENT STEELWORK.

TIMBER
ALL TIMBER WORKS SHALL BE IN ACCORDANCE WITH AS1684.

DEMOLITION
ALL DEMOLITION WORKS SHALL BE IN ACCORDANCE WITH AS2601.

WIND LOAD

V_R	45 m/s
TERRAIN CATEGORY	3.0
$M_{z,cat}$	0.83
M_s	1.0
M_t	1.0
M_d	1.0

PROJECT: ARTARMON BOWLING CLUB
1A, BURRA ROAD, ARTARMON NSW 2064

CLIENT: WILLOUGHBY CITY COUNCIL

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