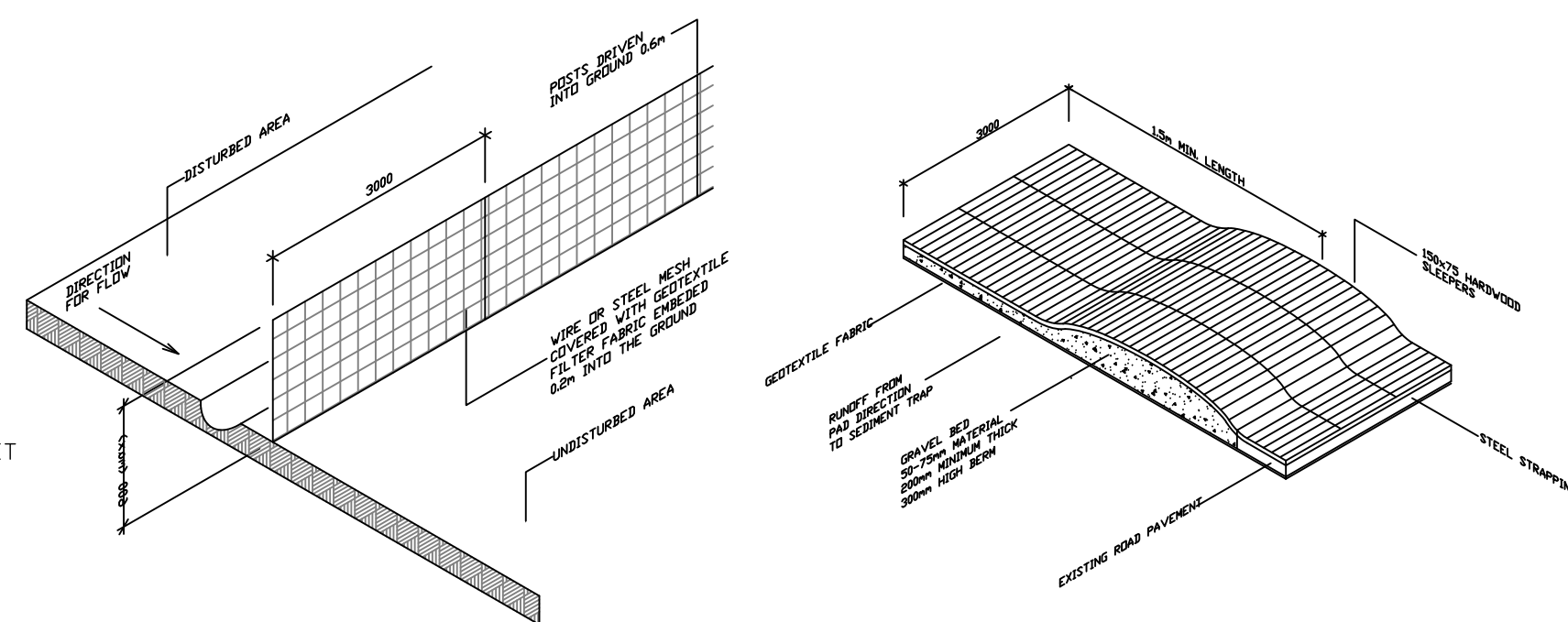
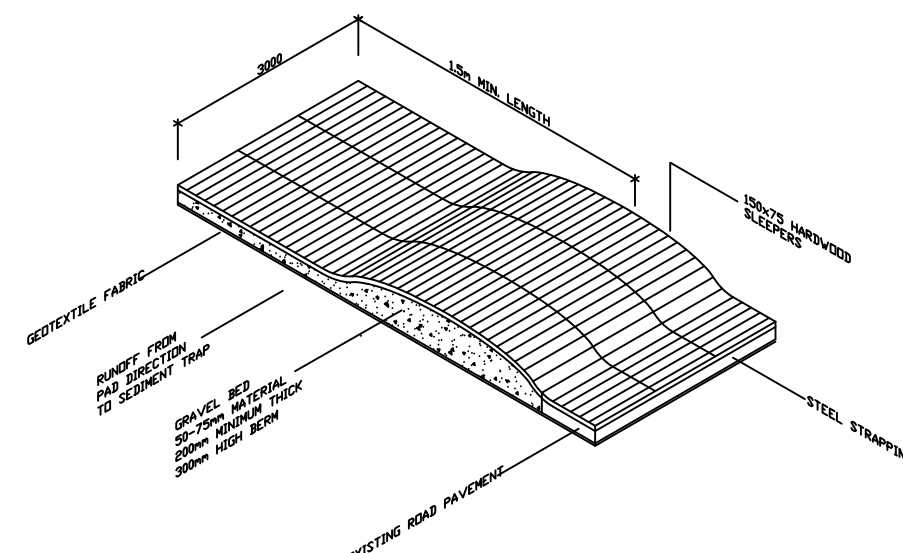


TYPICAL SECTION THRU OSD TANK  
1:20



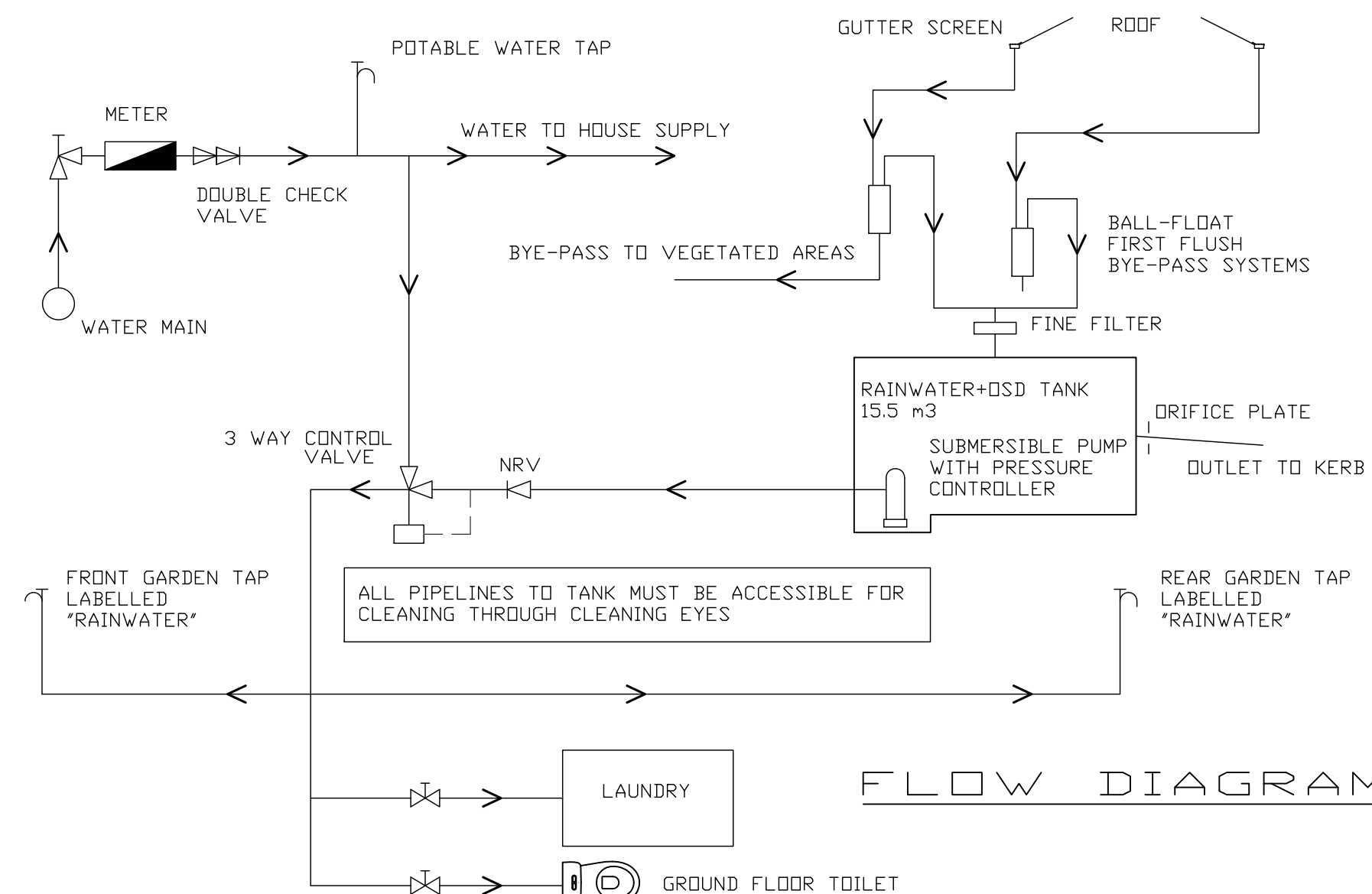
SEDIMENT FENCE DETAIL  
NTS



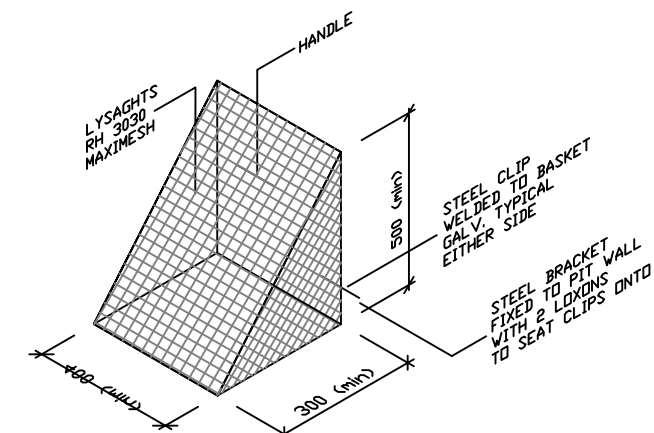
## TEMPORARY CONSTRUCTION EXIT

SITE PARAMETERS	
SITE AREA	556.4 m2
EXISTING IMPERVIOUS AREA	233.52 m2
NEW IMPERVIOUS AREA	333.6 m2
ZONE	2
SLOPE	20%
REQUIRED VOLUME	13 m3
PROVIDED RETENTION VOL	5 m3
PROVIDED DETENTION VOL	10.5 m3
DRIFICE DIAMETER	108 mm
1 YEAR POST DEV DISCHARGE	8 L/S
100 YEAR POST DEV DISCHARGE	22 L/S

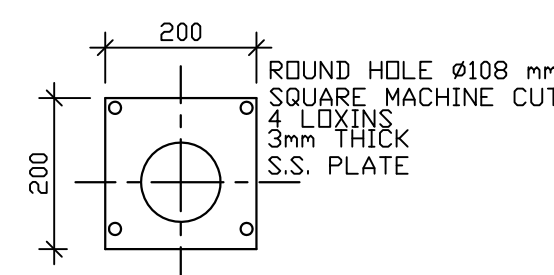
SITE PARAMETER



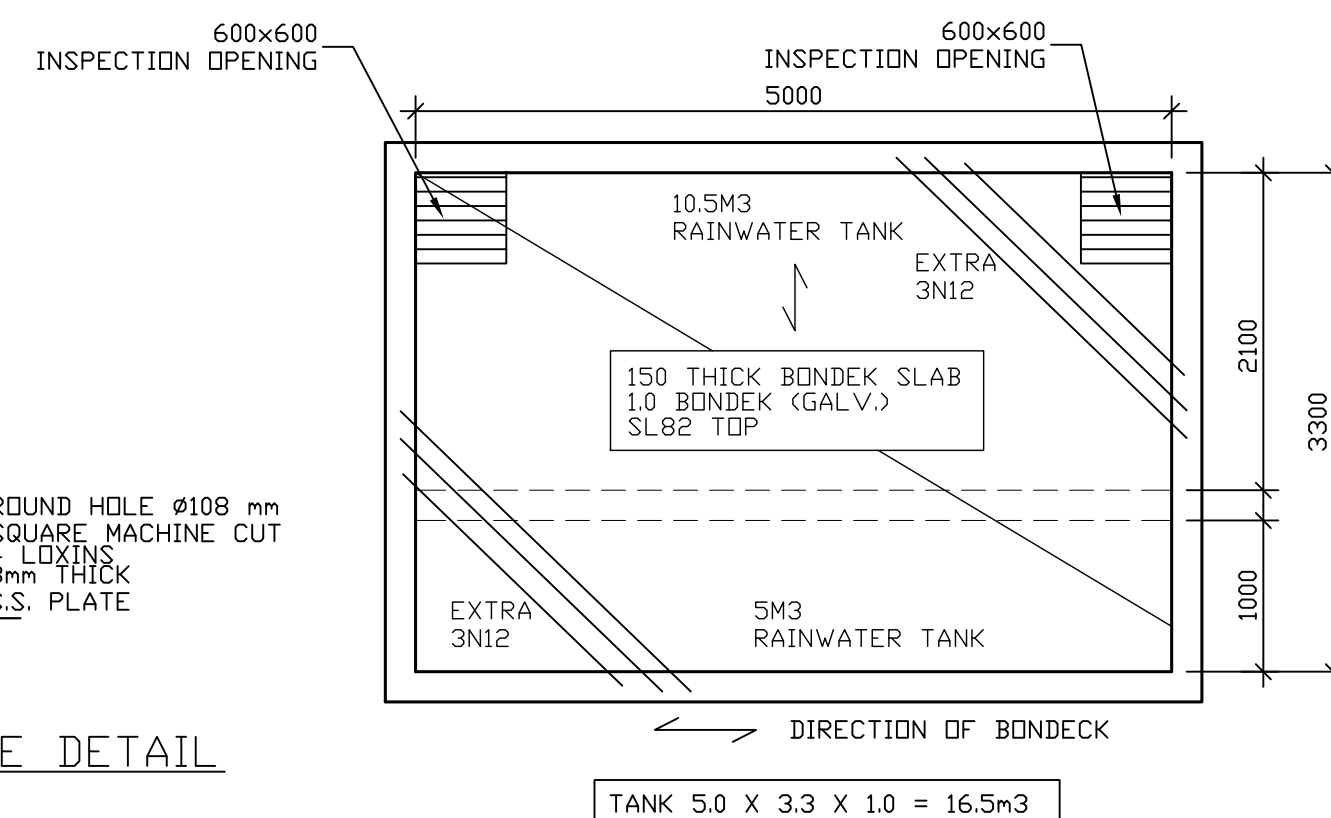
## FLOW DIAGRAM



SCREEN DETAIL  
NTS



ORIFICE PLATE DETAIL  
1:10



PLAN ON TANK  
1:50

## HYDRAULIC NOTES

- H1 ALL SERVICES ARE TO BE LOCATED IN THE FIELD IN CONJUNCTION WITH A RESPONSIBLE OFFICER OF EACH RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- H2 DRAINAGE PITS ARE TO BE 450 mm SQUARE OR LARGER AND FITTED WITH A GALVANISED GRATE.
- H3 DRAINAGE PIPE SIZES ARE Ø100 mm UNLESS NOTED.
- H4 DRAINAGE PIPES SHALL BE SEWER GRADE PVC UNLESS NOTED.
- H5 ALL BARE SOIL AREAS ARE TO BE PROTECTED FROM EROSION BY TEMPORARY MEASURES AND RE-VEGETATED AT CESSATION OF CONSTRUCTION.
- H6 A SEDIMENT CATCHMENT POND IS TO BE PROVIDED AT THE RATE OF 120 m<sup>3</sup> CAPACITY PER HECTARE. DURING THE DETENTION TANKS MAY BE USED FOR THIS PURPOSE, PROVIDED SURFACE WATER IS RETAINED AS A POOL. DURING CONSTRUCTION A ADEQUATE SAFETY FENCING IS PROVIDED.
- H7 THE DOWNHILL BOUNDARY OF THE SITE IS TO BE PROTECTED BY MAY BALE OR FILTER FABRIC FENCE DURING CONSTRUCTION AS SHOWN IN ATTACHED DETAIL.
- H8 THE STREET DRAINAGE PIT LOCATED DOWNHILL OF THE SITE SHALL BE PROTECTED FROM SEDIMENT WITH MAY BALES.
- H9 A SINGLE CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED IN THE MANNER SHOWN IN ATTACHED DETAIL.
- H10 ALL EROSION PROTECTION MEASURES TO MEET THE REQUIREMENTS OF THE DEPT. OF CONSERVATION AND LAND MANAGEMENT AS OUTLINED IN URBAN EROSION & SEDIMENT CONTROL, SCS TECH. HANDBOOK NO. 2 1978 UNLESS SPECIFIED BY COUNCIL.

FRICTION SLOPE (%)	100 mm PVC		150 mm PVC		225 mm PVC	
	Q (l/s)	EIA (m/s)	Q (l/s)	EIA (m/s)	Q (l/s)	EIA (m/s)
1.	5.6	8.5	16.5	26.0	48.6	75.0
2.	7.9	12.0	26.3	36.0	68.7	106.0
3.	11.2	15.5	38.6	44.0	84.2	130.0
4.	15.2	17.5	53.0	51.0	97.2	150.0
5.	12.5	19.0	36.9	57.0	109	168.0
10.	17.7	24.0	52.2	81.0	154	238.0

## SPECIAL NOTES

- 1 ALL PIPES TO BE LAID ON 75 mm SAND BED WITH THE BARRELS FULLY SUPPORTED BUT (CLASS REDUNDANT)
- 2 PROVIDE "CLEANING EYES" TO ALLOW PIPES NOT DIRECTLY CONNECTED TO PITS.
- 3 "HEAVY DUTY" GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS.
- 4 THE SURF OF THE DECKING IS TO BE FULLY SMOOTH, SELECTED.
- 5 ALL THE PLATES USED TO PROTECT THE PIPES ARE TO BE MACHINED TO THE EXACT DIMENSION
- 6 AS CALCULATED, FROM MINIMUM 3 mm THICK STAINLESS STEEL OR 3 mm THICK GALVANISED STEEL
- 7 AFTER MACHINING, THEY MUST BE CAST IN THE PIT WALLS OR PERMANENTLY FIXED IN THE PIT BY SOME
- 8 MEANS TO BE APPROVED BY THE ENGINEER. ALL PLATES MUST BE SMOOTH AND WITHOUT ANY PROTRUSIONS
- 9 A PLATE MEASURING NOT LESS THAN 400 mm x 200 mm SHALL BE IN SOME WAY PERMANENTLY
- 10 ATTACHED AND PROMINENTLY DISPLAYED WITHIN THE IMMEDIATE VICINITY OF THE OUSE DEVICE.
- 11 THIS PLATE SHALL ADVISE OCCUPERS OF THE PROPERTY OF THE EXISTENCE OF THE OUSE DEVICE
- 12 AND THAT THE DEVICE IS NOT IN ANY WAY TO BE TAMPERED WITH OR CHANGED WITHOUT PRIOR
- 13 WRITTEN CONSENT OF COUNCIL.
- 14 THE CONSTRUCTED OUSE INSTALLATION MUST BE APPROPRIATELY CERTIFIED BY A SUITABLY QUALIFIED
- 15 AND EXPERIENCED CONSULTING ENGINEER (GENERALLYLY A P.E. QUALIFICATION) WHO MUST STATE THAT
- 16 THE OUSE IS IN ACCORDANCE WITH THE OUSE ACT AND STANDARDS AND ALSO THAT IT IS
- 17 GENERALLY IN ACCORDANCE WITH APPROVED PLANS.
- 18 UPON COMPLETION OF THE OUSE WORKS, WORK-AS-EXECUTED (WAE) PLANS SHALL BE SUBMITTED TO
- 19 THE COUNCIL, BY THE CONSULTING ENGINEER, FOR REVIEWED SURVEYOR TO CHECK THAT THE VOLUME
- 20 OF OUSE BEING A OUSE IS IN ACCORDANCE WITH THE OUSE ACT AND STANDARDS AND ALSO IN ACCORDANCE
- 21 WITH DESIGN REQUIREMENTS. ANY CHANGES OR VARIATIONS TO THE APPROVED PLANS SHALL BE
- 22 HIGHLIGHTED IN RED.
- 23 COUNCIL WILL FILL IN THE STANDARD FORM FOR ON-SITE DESTRUCTION RECORD OF INSTALLATION ISSUED
- 24 BY COUNCIL AND WAE PLANS SHALL BE SUBMITTED TOGETHER WITH THE COMPLIANCE CERTIFICATE.

## GENERAL NOTES

- G.1 THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTION AS ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH THE WORK.
- G.2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
- G.3 SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY ON-SITE MEASUREMENT.
- G.4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
- G.5 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS OF THE SAA CODE AND THE BY-LAWS AND ORDINANCES OF THE RELATIVE BUILDING AUTHORITY.
- G.6 EXCAVATIONS SHALL NOT BE PERMITTED WITHIN 2 METRES OF AN EXISTING STRUCTURE WITHOUT PRIOR APPROVAL OR RECOMMENDATIONS FOR SHORING OR UNDERPINNING PROVIDED BY ENGINEER.
- FOUNDATIONS AND FOOTINGS
- F.1 FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE INTENSITY OF BEARING PRESSURE OF 150kPa. THE BUILDER SHALL OBTAIN APPROVAL OF THE FOUNDATION MATERIALS BEFORE PLACING CONCRETE.
- F.2 FOOTINGS SHALL BE PLACED UNDER WALLS AND COLUMNS UNLESS OTHERWISE NOTED.

## SUB-GRADE

- SG.1 UNDER ALL SLABS ON GRADE, WHETHER ON CUT OR FILL, REMOVE SOFT SPOTS AND REFILL BY COMPACTING CUT SURFACES OR FILL SURFACES IN LAYERS NOT EXCEEDING 200 mm TO 95% DRY DENSITY, ENSURING MINIMUM SETTLEMENT TO SLABS.

## CONCRETE WORK

- C.1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.
- C.2 CONCRETE QUALITY SHALL BE AS TABULATED AND SHALL BE VERIFIED BY TESTS.

ELEMENT	SLUMP	MAX. SIZE AGG.	CEMENT TYPE	AD MIXTURE	mPa CONCRETE GRADE
ALL	80	20	A	NIL	32

- C.3 CLEAR CONCRETE COVERS TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN.

CAST IN FORMS COMPLYING WITH AS 1599			
ELEMENT	CONDITION 1 NOT EXPOSED TO WEATHER OR FRESH WATER	CONDITION 2 EXPOSED TO WEATHER OR FRESH WATER	CONDITION 3 CAST AGAINST OTHER CONCRETE OR THE GROUND
PAD FOOTINGS & PILE CAPS	-	65	75
STRIP FOOTINGS	-	50	65
SORE OR CAST PIERS	-	50	75
COLUMNS	40	50	75
WALLS, INCLUDING RETAINING WALLS	20	30	65
BEAMS	25	40	65
SLABS, INCLUDING DECK & YELLOW BLOCK CONSTRUCTION	20	30	65
REINFORCEMENT ADJACENT TO YELLOW BLOCKS INTEGRAL WITH STRUCTURE	5	-	-

- NOTE: 1. SLABS POURED OVER A MEMBRANE ON THE GROUND ARE INCLUDED AS SECTION 2.  
2. SLABS EXPOSED TO CORROSIVE VAPORS, CORROSIVE GROUND WATER, SEA WATER OR SPRAY ARE TO REQUIRE PROTECTION COVER AS NOTED OR NOT LESS THAN AS REQUIRED FOR CONCRETE 3.
- C.4. SIZES OF ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C.5. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER.
- C.6. BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY, UNO.
- C.7. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- C.8. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY. IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- C.9. SPLICES IN REINFORCEMENT MADE IN POSITIONS OTHER THAN SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.
- C.10. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
- C.11. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- C.12. ALL REINFORCING BARS SHALL COMPLY WITH AS 1302. ALL FABRIC SHALL COMPLY WITH AS 1303 AND AS 1304 AND SHALL BE SUPPLIED IN FLAT SHEETS.
- C.13. REINFORCING SYMBOLS  
S GRADE 230S DEFORMED BAR  
C GRADE 430C COLD WORKED DEFORMED BAR  
Y GRADE 430R REINFORCING FABRIC  
R GRADE 230R PLAN BAR  
F GRADE 450 WELDED WIRE FABRIC  
N GRADE 500 DEFORMED BAR
- THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES
- C.14. FABRIC REINFORCEMENT TO BE LAPPED 300 MINIMUM AT ENDS AND SIDES UNO. LAPS IN POSITION OF MAXIMUM MOMENTARE NOT PERMITTED.
- C.15. ALL REINFORCEMENT SHALL BE FULLY SUPPORTED ON INSULATED STEEL, PLASTIC OR CONCRETE CHAIRS SPACED AT 300 AND 750 CENTRES BOTH WAYS UNDER ROOF AND FABRIC REINFORCEMENT RESPECTIVELY. RODS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
- C.16. MINIMUM STRIPPING TIMES FOR FORMWORK SHALL AS BE RECOMMENDED IN AS 1509 OR AS DIRECTED BY ENGINEER.

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CLIENT: CARRY & HELEN SOCRATES  
PROJECT: STORMWATER MANAGEMENT PLAN FOR NEW DWELLING STRUCTURE AT 10 POULTON PARADE, FRENCHS FOREST

Drawn By: SD	Scale: AS SHOWN
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Checked By:	Drawing No.:
E. A. BENNETT M.I.E. Aust.	S-11-26683

Date:	Amendment
21/12/2018	A-03/06/2

Registered Professional Engineer 198230  
**Mr Edward A. Bennett**  
 MIEAust CPEng

Signature ..... Date 21 / 12 / 2018  
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National Professional Engineers Register