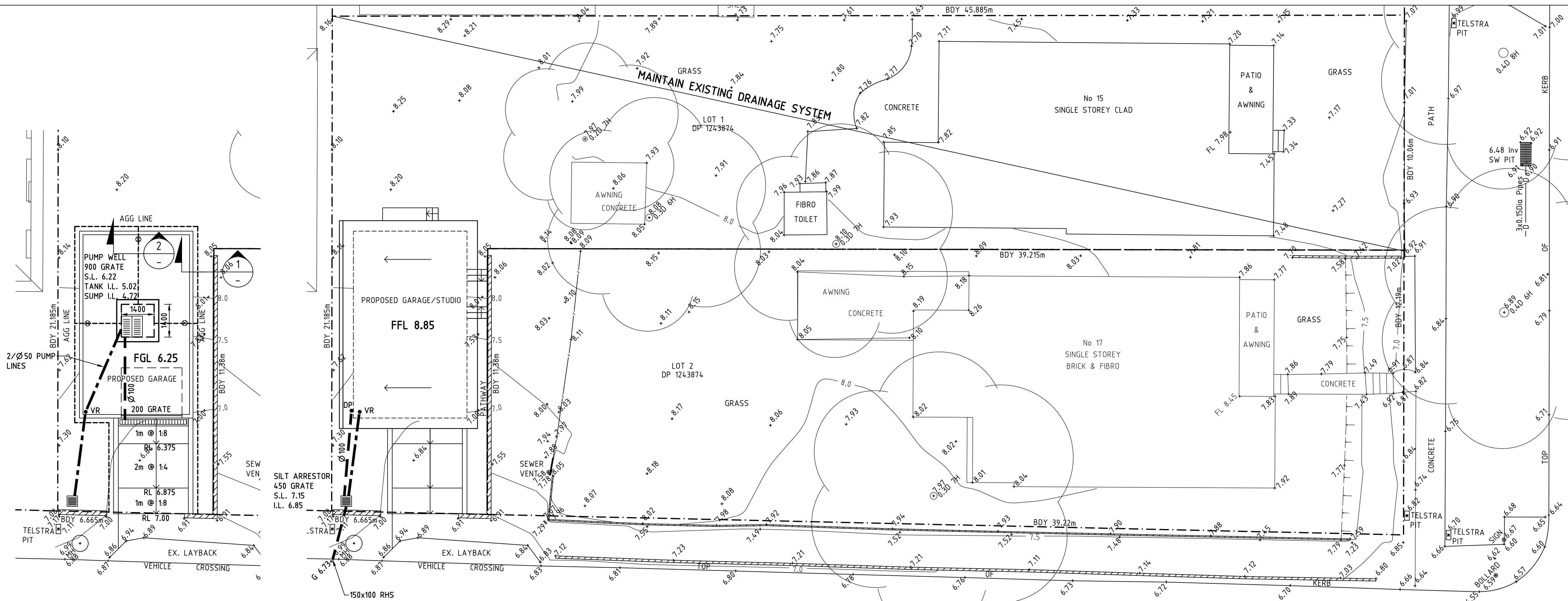




Revisions	
B 01/03/24 FOR C.D.C. - AMENDED	
A 03/12/19 FOR C.D.C.	

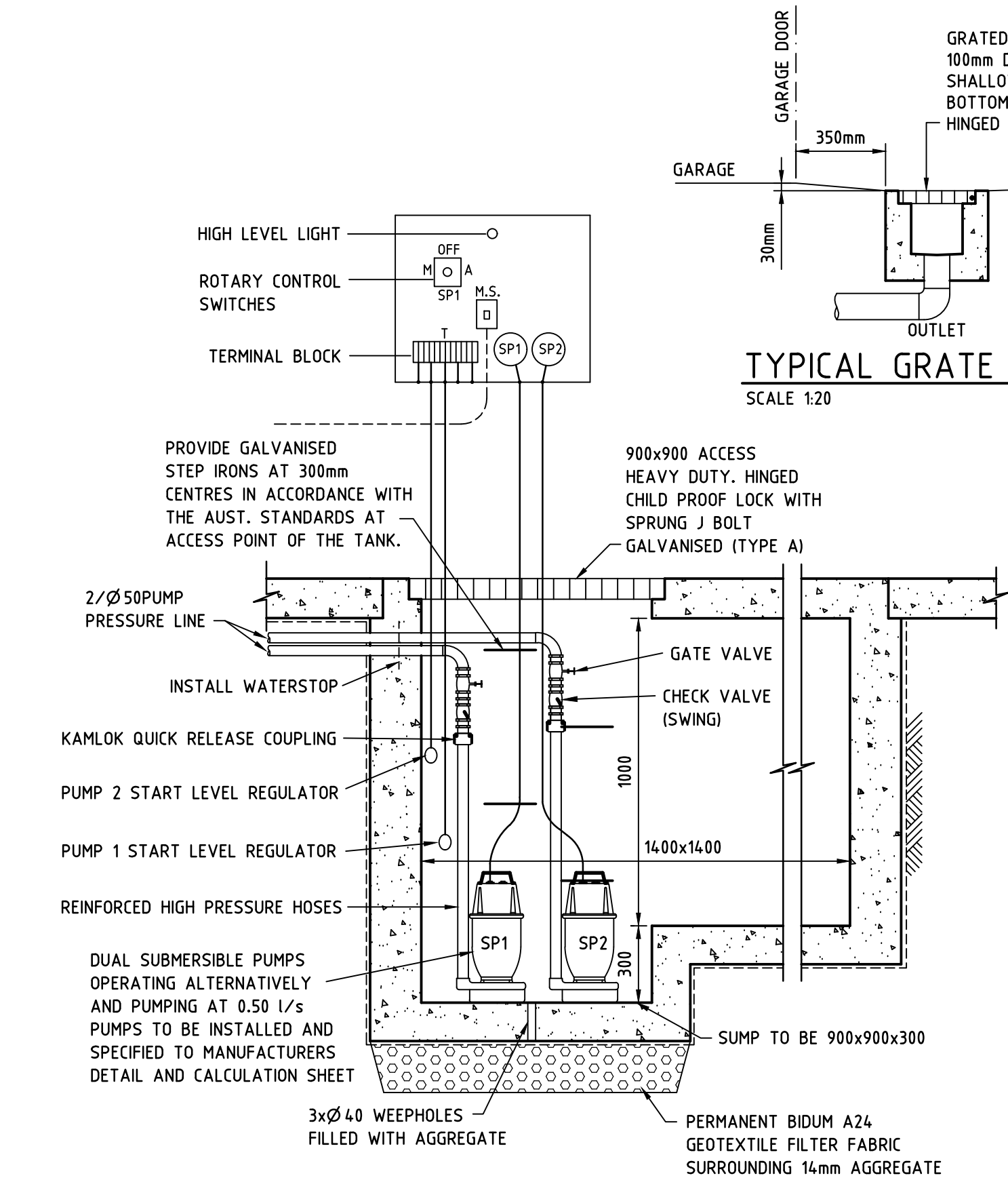
- EROSION CONTROL NOTES**
1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
 2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
 3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER, TO COUNCIL'S STANDARDS.
 4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
 5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

- NOTES**
1. ALL LINES ARE TO BE Ø100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
 2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
 3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
 4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
 5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
 6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
 7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
 8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
 9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
 10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
 11. ALL DP'S TO HAVE LEAF GUARDS
 12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
 13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
 14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
 15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
 16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

- SYMBOLS**
- | | |
|--------|--|
| F.F.L. | FINISHED FLOOR LEVEL |
| F.G.L. | FINISHED GARAGE LEVEL |
| T.K. | TOP OF KERB |
| * +1.0 | FINISHED LEVEL |
| + +1.0 | EXISTING LEVEL |
| S.L. | SURFACE LEVEL |
| I.L. | INVERT LEVEL |
| 20 R | ROOF CATCHMENT AREA (m2) |
| 20 I | IMPERVIOUS CATCHMENT AREA (m2) |
| 20 L | LANDSCAPED CATCHMENT AREA (m2) |
| Ø100 | Ø100 DOWN PIPE OR EQUIVALENT |
| SP | SPREADER |
| VD | VERTICAL DROP |
| VR | VERTICAL RISER |
| ⊕ | RAIN WATER HEAD & DOWN PIPE |
| ⊙ | CLEAN OUT POINT |
| ⊙ | Ø150 SUMP |
| ■ | CONCRETE COVER JUNCTION PIT |
| ■ | GRADED INLET PIT 450x450 |
| ▨ | 200Wx100D GRATED DRAIN WITH 2% BTM SLOPE |
| ▨ | STORMWATER PIPE |
| ▨ | SUSPENDED STORMWATER PIPE |
| ▨ | CHARGED STORMWATER PIPE |
| --- | PUMP LINE |
| --- | Ø100 SUBSOIL PIPE |
| --- | SILT FENCE |
| --- | OVERLAND FLOW |

GARAGE DRAINAGE PLAN

SCALE 1:100

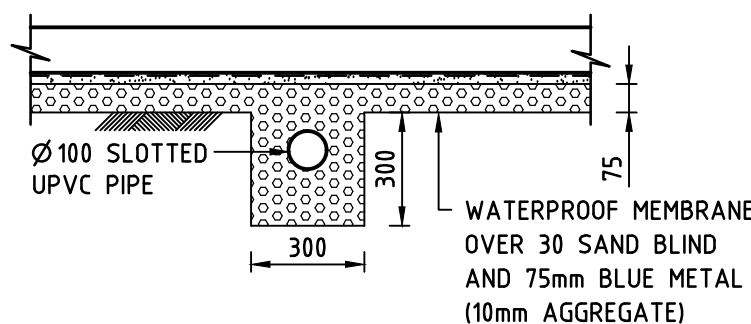


DESIGN SUMMARY	
TOTAL SITE AREA = 537m2	
PRE DEV. IMP. AREA = 212.2m2 (39.5%)	
POST DEV. IMP. AREA = 255.2m2 (47.5%)	
∴ NO O.S.D. IS REQUIRED	
NO RAINWATER TANK REQUIRED	

SITE AND ROOF DRAINAGE PLAN

SCALE 1:100

- NOTE:
1. MINIMUM ROOF FALL 1% TO OUTLETS
 2. WATERPROOF ALL CONCRETE ROOFS
 3. PROVIDE SAFETY OVERFLOW TO ALL ROOFS
 4. ALL DOWNPIPES TO BE CONSTRUCTED OF ONE MATERIAL FOR AESTHETICS REASONS AND PAINTED TO PROTECT THEM AGAINST ULTRA-VIOLET LIGHT DAMAGE.



TYPICAL GRATE SECTION
SCALE 1:20

SECTION 2
SCALE 1:20

COMPONENTS

1. TWO(2) PUMPS OMEGA SUBMERSIBLE PUMPS (240v)
2. ONE(1) PUMPS START CONTROL PANEL (CONTROL DESIGN TO ALTERNATE PUMPS ON START ON CONSECUTIVE START OPERATION)
3. TWO(2) GATE VALVES (BRONZE)
4. TWO(2) CHECK VALVES (SWING TYPE) (BRONZE)
5. TWO(2) SETS OF DISCHARGE HOSES WITH KAMLOK QUICK RELEASE COUPLINGS
6. ALL IN TANK PIT/PIPE AND PIPE FITTINGS, BRACKETS/SUPPORTS, HD GAL. CHAINS
7. FOUR(4) KWIK START KENRAHN MERCURY LEVEL FLOAT REGULATORS
8. INSTALLATION IN PROVIDED TANK/PIT

OPTIONS

1. TANK PACKAGE/COVERS/MANHOLE, ALARM BELL, LOW LEVEL ALARM REGULATOR

MODEL	ALINE	OUTLET SIZE	MAX FLOW	MAX HEAD	MOTOR SIZE	WEIGHT	POWER
OMEGA Z55-040	50mm	3.9 L/sec	11m	0.40 kW	11 kg	240v	
OMEGA Z55-075	50mm	6.6 L/sec	18m	0.75 kW	18 kg	240v	

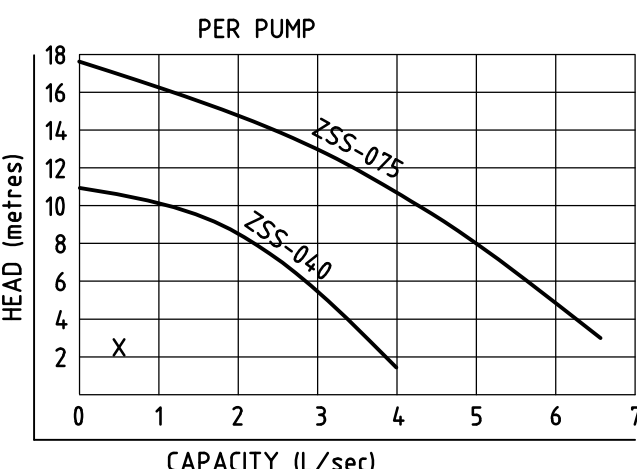
MINIMUM PUMP OUT REQUIREMENTS :
COUNCIL REQUIRES MINIMUM 3m3 PER
50m2 OF DRIVEWAY THEREFORE 20m2
REQUIRES 1.20 m3 OF STORAGE

PUMP WELL DETAILS

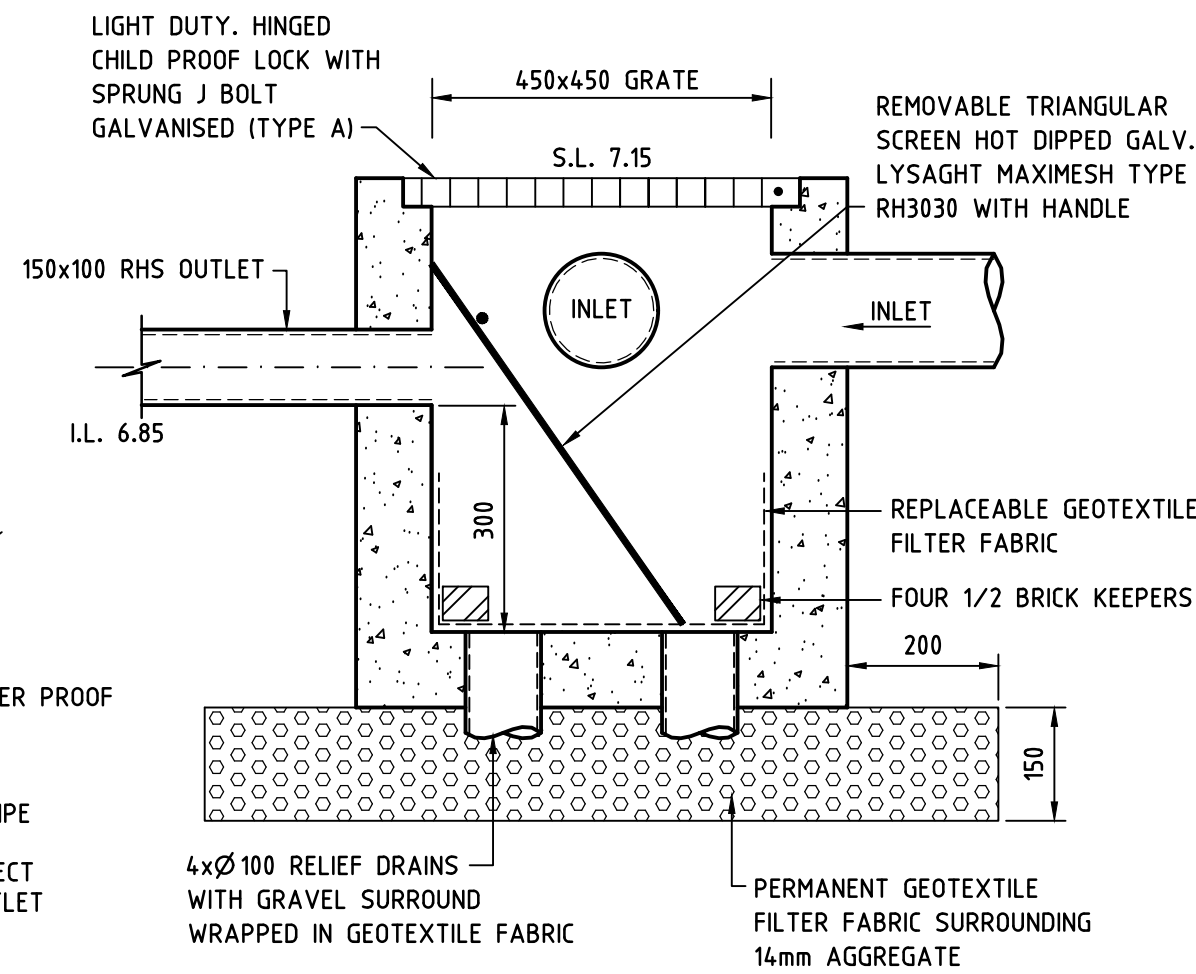
SUMP SIZE AND PUMP SIZE BASE ON 100 YEAR 1 HOUR STORM INTENSITY IS 89 mm/hr. AREA DRAINING TOWARDS SUMP IS 20m2
 $Q = CIA/3600 = 1.0 \times 89 \times 20 / 3600 = 0.50 \text{ L/s}$
VOLUME REQUIRED IS $0.50 \times (60 \times 60) = 1800 \text{ litres}$
STORAGE PROVIDED $1400 \times 1400 \times 1000 = 1960 \text{ litres}$
THEREFORE ADEQUATE STORAGE PROVIDED

USE DUAL Z55-040 PUMPS
TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL
WHICH WILL ALLOW FOR THE PUMPS TO ACT ALTERNATIVELY
AT 2.5m HEAD

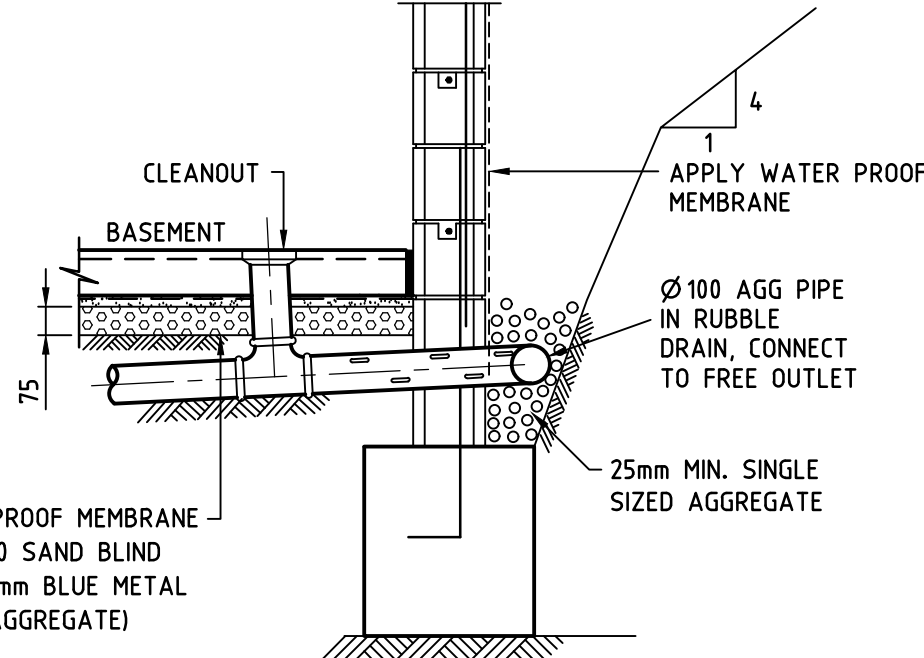
PUMPS USED MUST BE CLASS ONE, ZONE 2.



PUMP PERFORMANCE CURVES
SCALE 1:20



SILT ARRESTOR PIT-SECTION
SCALE 1:10



SECTION 1
SCALE 1:20

STANDARD PUMP OUT DESIGN NOTES

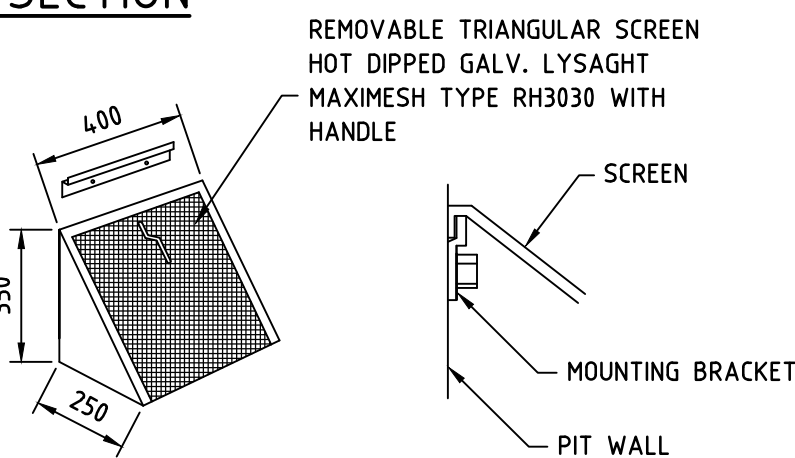
THE PUMP SHALL BE PROGRAMMED TO WORK ALTERNATIVELY SO AS TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.

A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.

A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE AND DRAIN THE TANK TO THE LEVEL OF THE LOW LEVEL FLOAT.

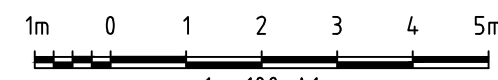
A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.

AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT AN A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.



MULTI PURPOSE FILTER SCREEN

SCALE 1:20
PRODUCT CODE: MMPS (MASCOT ENGINEERING)



FOR C.D.C.
CANTERBURY BANKSTOWN COUNCIL



DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE
IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE
DIAGRAMS FROM RELEVANT AUTHORITIES

ARCHITECT
ADVANCED ARCHITECTURE &
CONSTRUCTION

PROJECT
PROPOSED DEVELOPMENT
15 WINDSOR AVE,
CROYDON PARK

TITLE
SITE AND ROOF
DRAINAGE PLAN

ACN. 090 572 973
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UNITED CONSULTING ENGINEERS
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MAB	MAB	JSB	1:100 U.N.O.	1 of 1	B