

STORMWATER DRAINAGE CALCULATIONS

ARI	1:100	Runoff Coefficient	
Roof Area	898		
Paved Area	2631	0.90	
Total	3529	0.93	

Infiltration Rate	2	m/day (assumed)	
Infiltration Area			
Swale 1	1	11.00	3.50
Drainwell 1	1	9.40	2.27
Drainwell 2	1	10.40	2.27
Drainwell 3	1	8.00	2.27
Soakwells (1.8m dia x 1.8m deep)	15	0.60	0.60
Total			168.56

Total Infiltration Rate					337.12	m3/day
Storage Capacity						
	Length	Width	Depth	Qty	Volume (m3)	
Swale 1	11.00	3.50	0.5	1	10.63	
Drainwell 1	9.40	2.27	0.88	1	19.13	
Drainwell 2	10.40	2.27	0.88	1	20.73	
Drainwell 3	8.00	2.27	0.88	1	15.95	
Above Ground Storage 1	Area	Average Depth			19.10	
Above Ground Storage 2	535	0.05			26.75	
Soakwells (1.8m dia x 1.8m deep)	2.54	1.8		15	68.67	
Total Storage Capacity					180.96	

Duration (min)	Duration (hr)	Intensity (mm/hr)	Inflow Volume (m3)	Infiltration Volume (m3)	Net Volume for Onsite Storage (m3)	Excess Volume (m3)
6	0.10	197.00	64.34	1.40	62.93	NIL
10	0.17	151.00	82.19	2.34	79.85	NIL
30	0.50	75.50	123.29	7.02	116.26	NIL
60	1.00	45.60	148.93	14.05	134.88	NIL
600	10.00	9.52	310.91	140.47	170.45	NIL
1440	24.00	5.54	434.23	337.12	97.12	NIL
2880	48.00	3.65	572.19	674.24	NIL	NIL
4320	72.00	2.78	653.70	1011.36	NIL	NIL

SITE DATA:

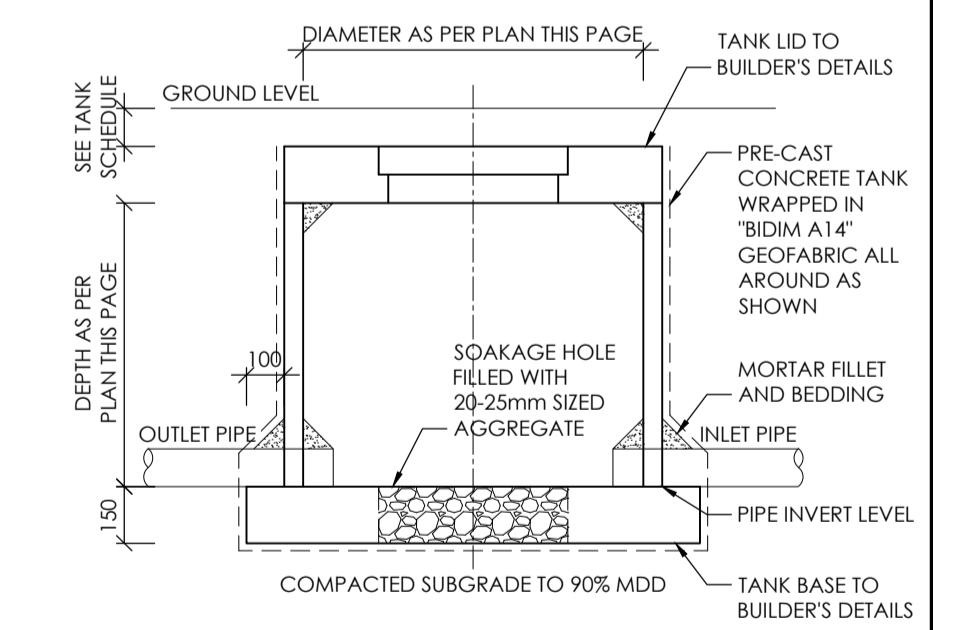
SITE CLASSIFICATION	= TO BE CONFIRMED
GROUND WATER TABLE	= OVER 2.5m BELOW EXISTING GROUND LEVEL
SOIL PERMEABILITY	= 2 m/day (TO BE CONFIRMED)

GENERAL NOTES:

- DATUM IS LOCAL AND TO BE VERIFIED ON SITE.
- CHECK ALL DIMENSIONS ON SITE. READ ALL ENGINEERING DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL & SURVEY DRAWINGS. ANY DISCREPANCIES BETWEEN ENGINEERING DRAWINGS AND ARCHITECTURAL DRAWINGS SHALL BE CONFIRMED PRIOR TO COMMENCING CONSTRUCTION. DO NOT SCALE FROM THESE DRAWINGS.
- ALL WORK TO BE IN ACCORDANCE WITH "AS3500-2003 PLUMBING & DRAINAGE", THE "BUILDING CODE OF AUSTRALIA" AND THE LOCAL AUTHORITY'S STANDARD SPECIFICATIONS.
- LOT CONNECTION PIT (WHEN APPLICABLE) TO LOCAL AUTHORITY SPECIFICATIONS.
- WHERE MANHOLES ARE LOCATED IN THE AREAS SUBJECT TO VEHICULAR LOADING, STANDARD TRAFFICABLE LIDS ARE TO BE INSTALLED & BASED TO BUILDER'S DETAIL.
- ALL DRAINAGE PIPEWORK SHALL BE PVC CLASS HD STORMWATER, UNLESS WHERE LOCATED UNDERNEATH ANY STRUCTURES PIPEWORK SHALL BE PVC SEWER CLASS SN8.
- ALIGNMENT OF PIPES SHALL BE AS SHOWN ON THE PLAN & SHALL BE TO THE PIPE OR MANHOLE CENTRELINE.
- BEFORE CONSTRUCTION COMMENCES, THE CONTRACTOR SHALL:
 - CHECK ON SITE THE LOCATION OF THE EXISTING SERVICES WITH THE APPROPRIATE AUTHORITY. ENSURE PROPOSED STORMWATER PIPE DOES NOT CLASH WITH ANY EXISTING SERVICES.
 - ARRANGE FOR THE LOCATION AND THE LEVEL OF THE CONNECTION POINT TO EXISTING STORMWATER MANHOLE TO BE VERIFIED BY A SURVEYOR.
 - CONFIRM THAT BOUNDARY PEGS OR OTHER SURVEY REFERENCE POINTS TO BE USED IN SETTING OUT OF THE PROJECT ARE LOCATED IN THE CORRECT POSITIONS.
 - ENSURE A PERMIT & REINSTATEMENT SPECIFICATIONS ARE OBTAINED FROM THE LOCAL AUTHORITY IF EXCAVATION WILL BE IN A ROAD RESERVE OR RIGHT OF WAY.
 - ENSURE ALL DETAILS HAVE BEEN CHECKED AND THAT NO DISCREPANCIES EXIST. ALL QUERIES AND DISCREPANCIES ARE TO BE RESOLVED PRIOR TO COMMENCING WORKS.
- ALL EXCAVATIONS SHALL BE SECURED & MADE SAFE IN ACCORDANCE WITH REQUIREMENTS OF THE OCCUPATIONAL SAFETY & HEALTH ACT OF 1984, THE OCCUPATIONAL SAFETY & HEALTH REGULATION 1996 & OF ANY RELEVANT REGULATORY BODY.
- PROPERTIES WHICH HAVE BEEN EXCAVATED SHALL BE RETURNED TO AT LEAST A SIMILAR CONDITION TO THAT WHICH EXISTED PRIOR TO CONSTRUCTION.
- TRENCH BACKFILL SHALL BE CLEAN GRANULAR MATERIAL, COMPACTED TO A LEVEL NOT LESS THAN THAT OF THE SURROUNDING UNDISTURBED GROUND, FOR THE FULL DEPTH OF EXCAVATION. BACKFILL UNDER ROADS SHALL BE COMPACTED TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
- ALL CONNECTION INTO EXISTING LOCAL AUTHORITY STORMWATER ARE TO BE CARRIED OUT BY THE CONTRACTOR TO LOCAL AUTHORITY SPECIFICATIONS.
- THIS STORM WATER DESIGN IS TO BE READ IN CONJUNCTION WITH THE BUILDER'S ARCHITECTURAL DRAWINGS (PARTIALLY REPRODUCED HERE). CLIENT IS TO ENSURE LOCAL AUTHORITY HAVE APPROVED THESE DRAWINGS BEFORE BEING ISSUED FOR PRICING, TENDER & CONSTRUCTION.

LEGEND:

- 1500 PIPE
- 1000 PIPE FROM BUILDING DOWNSPOUT
- TRAFFICABLE STORMWATER TANK WITH GRATE COVER
- TRAFFICABLE STORMWATER TANK WITH CONCRETE COVER
- NON-TRAFFICABLE STORMWATER TANK WITH CONCRETE COVER
- TRAFFICABLE PRECAST SUMP PIT WITH GRATE COVER
- FALL DIRECTION
- IL+10.00 PIPE INVERT LEVEL
- TI+10.00 TOP OF TANK LEVEL
- RL+10.00 PAVEMENT LEVEL
- HP+10.00 PAVEMENT HIGH POINT
- LP+10.00 PAVEMENT LOW POINT
- BK+10.00 BOTTOM OF KERB
- TK+10.00 TOP OF KERB
- 8.16 EXISTING GROUND LEVEL



TYPICAL STORMWATER TANK DETAILS
SCALE 1:20

B	14-FEB-2020	ISSUE FOR REVIEW	JA	JA	JC
A	09-DEC-2019	ISSUE FOR REVIEW	JA	JA	JC
REV	DATE	DESCRIPTION	DRW	DSG	CHK

ISSUE FOR REVIEW

DRAWING TITLE	STORMWATER DRAINAGE PLAN AND DETAILS	DWG NO	D1	REVISION	B
PROJECT DETAILS	PROPOSED UNITED SERVICE STATION WANNEROO ROAD, NEERABU, WESTERN AUSTRALIA	PROJECT NO	TBC	SCALE	PAPER SIZE
DRAWING	J. ABADINAS	CHECK	J. CUBONG	AS NOTED	A1

STORMWATER DRAINAGE PLAN
SCALE 1:200