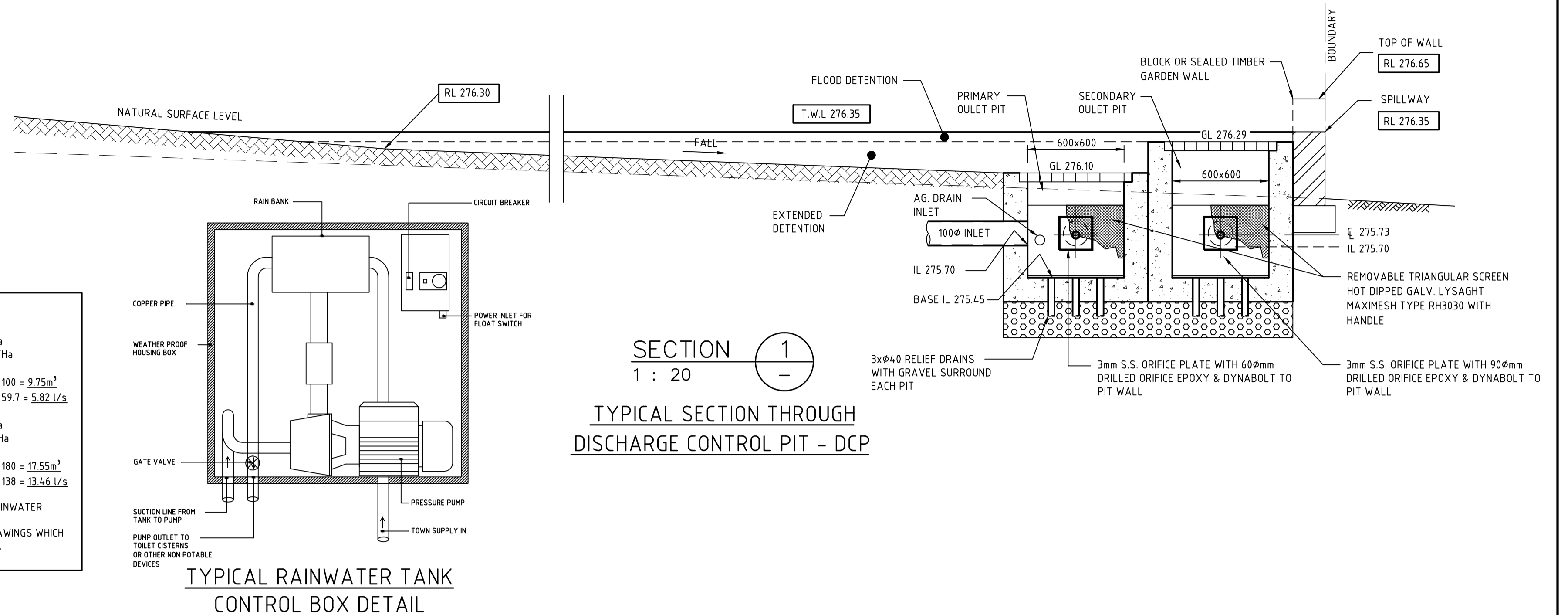


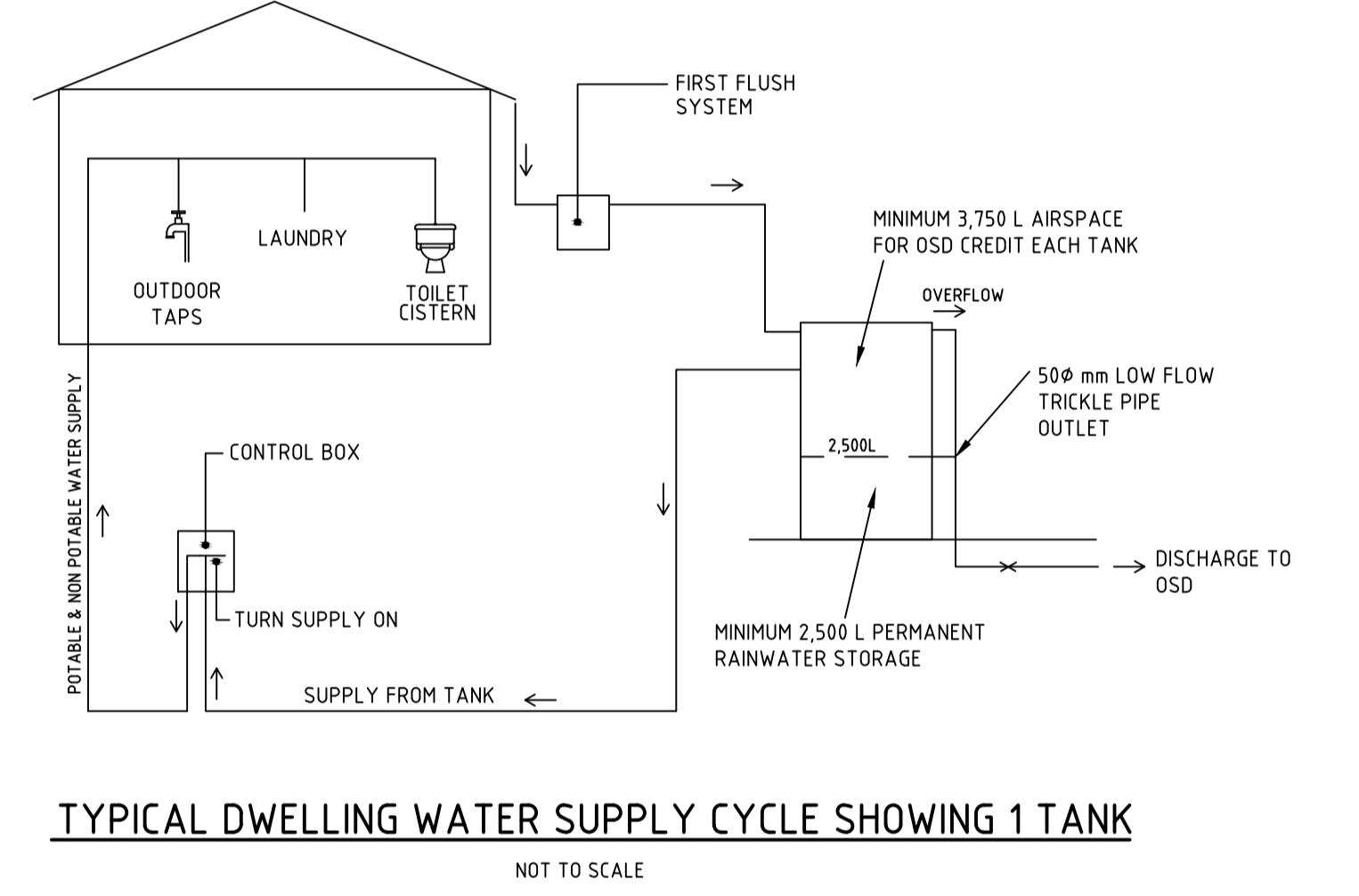
OSD REQUIREMENT SUMMARY

10YR DEVELOPMENT STORAGE REQUIREMENT (SSR)	= 100m ³ /Ha
10YR DEVELOPMENT PERMITTED SITE DISCHARGE (PSD)	= 59.7 L/s/Ha
10YR SSR FOR 975m ² LOT	= 0.0975 x 100 = 9.75m ³
10YR PSD FOR 975m ² LOT	= 0.0975 x 59.7 = 5.82 L/s
100YR DEVELOPMENT STORAGE REQUIREMENT (SSR)	= 180m ³ /Ha
100YR DEVELOPMENT PERMITTED SITE DISCHARGE (PSD)	= 138 L/s/Ha
100YR SSR FOR 975m ² LOT	= 0.0975 x 180 = 17.55m ³
100YR PSD FOR 975m ² LOT	= 0.0975 x 138 = 13.46 L/s

OSD ARRANGEMENT SHOWN INCORPORATES DEDICATED STORAGE IN RAINWATER TANKS AND ABOVE GROUND OSD IN LANDSCAPING AREAS. REFER TO EXAMPLE ON-SITE DETENTION CALCULATION SHEET THIS DRAWING WHICH COULD BE ADOPTED FOR CALCULATING EACH LOTS OSD REQUIREMENTS.



Project:	UPRCT Handbook Demonstration Example		
Site Address:	Montpelier Drive, The Oaks		
Job No.:			
Designer:			
Telephone:			
Site Data			
L.G.A	Wollondilly Shire Council		
Site Area	0.0975 ha	975 m ²	
Total Roof Area	0.025 ha	250 m ²	
Area of Site draining to OSD Storage	0.0975 ha	975 m ²	Satisfactory
Residual Site Area (Lot Area - Roof Area)	0.073 ha		
Area Bypassing Storage	0 ha		
Area Bypassing / Residual Site Area	0.0%		Satisfactory 30% Max
No. of Dwellings on Site	1		Satisfactory
Site Area per Dwelling	0.098 ha		
Roof Area per Dwelling	0.025 ha		
Basic OSD Parameters			
Basic SSR Vols	Ext Detention Storage	100 m ³ /ha	Total Storage 180 m ³ /ha
Basic SRDs	Primary Outlet	59.7 L/s/ha	Secondary Outlet 138 L/s/ha
OSD Tank Bypass			
Residual Lot Capture in OSD Tank	100%		
Adjusted SRDs	60 L/s/ha		138 L/s/ha
OSD Calculations			
Basic SSR Volume	Ext Detention Storage	9.75 m ³	Total Storage 17.55 m ³
Total Rainwater Tank Credits	2.50 m ³		4.50 m ³
Storage Volume			Total 13.05 m ³
Storage Volume	Ext Detention Storage	7.25 m ³	Flood Detention Storage 5.80 m ³
OSD Discharges	Primary Outlet	5.82 L/s	Secondary Outlet 7.63 L/s
RL of Top Water Level of Storage	276.290 m		276.350 m
RL of Orifice Centre-line	275.730 m		275.730 m
Number of Orifices	1		1
Estimated Downstream Flood Level	272.50 10 yr ARI		272.50 100 yr ARI
Downstream FL - RL of Orifice Centre-line	-3.23 Satisfactory		Satisfactory -3.23 m
Design Head to Orifice Centre	0.560 m	TWL Ext Detn Storage - RL Orifice	0.560 m
Calculated Orifice Diameter	61 mm Satisfactory		Satisfactory 70 mm
Overflow Weir & Freeboard Calculation			
RL of Minimum Habitable Floor Level	277.000 m		
RL of Minimum Garage Floor Level	276.720 m		
Length of Overflow Weir	1.20 m		
Site Runoff Coefficient	0.75		
Storm Intensity (5 min 100 yr ARI)	206 mm/h		
Peak Flow over Weir	41.8 L/s		
Depth of Flow over Weir	77 mm		
Freeboard to Habitable Floor	Satisfactory 573 mm		
Freeboard to Garage Floor	Satisfactory 293 mm		

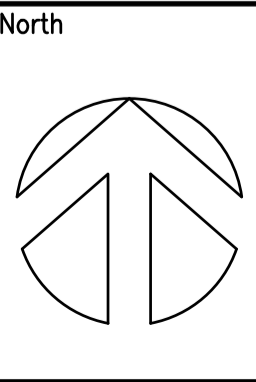


Rainwater Tank Calculations (per Dwelling)
Only Complete this Section if a Rainwater Tank Airspace Credit is Claimed
The calculations assume that the same size rainwater tank is installed on each dwelling

	Min	Max
% of Roof draining to Rainwater Tank	100.0%	Satisfactory 25.9% 100%
Total Rainwater Tank Volume	12.50 kL	Tank Volume OK
Min Volume that triggers Top-up	1.00 kL	Note - Min Vol in Tank < 10% Total Tank Vol
Total Tank Vol - Min Top-up Vol	11.50 kL	
Dedicated Airspace		
Dedicated Airspace	7.50 kL	Airspace > Max Credit - Reduce Airspace
Total Rainwater Tank Credits	2.50 m ³	Detention 7.50 kL
Dedicated Airspace Credit	3.75 kL	
Maximum Tank PSD	60 L/s/ha	
Maximum Tank Discharge	5.8 L/s	
Maximum Head to Centre of Tank Orifice	1.200 m	Satisfactory
Calculated Orifice Diameter	50 mm	Satisfactory
Dynamic Airspace		
Maximum Dynamic Storage (Nett Vol)	4.00 kL	Controls minimum % Roof to Rainwater Tank
Daily Demand on Rainwater Tank	0.657 kL/d	Satisfactory
Dynamic Airspace at start of Storm	2.04 kL	
Dynamic Airspace Credit	0.21 kL	Detention 0.21 kL
Combined Rainwater Tank Credit	3.96 kL	7.71 kL
Maximum Rainwater Tank Credit	2.50 kL	4.50 kL
Rainwater Tank Credit per Dwelling	2.50 kL	4.50 kL
Rainwater Tank Credit for the Site	2.50 m ³	4.50 m ³

REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
04	18/07/14	J.M.A	A.B	M.P	FINAL CC ISSUE
03	04/06/14	J.M.A	A.B	M.P	MINOR AMENDMENTS
02	17/04/14	J.M.A	S.C.A	M.P	REVISED FOR COUNCIL COMMENTS
01	30/08/13	J.M.A	S.C.A	J.A	CONSTRUCTION CERTIFICATE ISSUE

DRAWING STATUS	
DESIGN BY	J.M.A.
DRAWN BY	S.C.A.
FINAL APPROVAL	J.A.
SCALE:	AS SHOWN
(on A1 Original)	
C.C. ISSUE	



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WWW.SEEC.COM.AU

DRAWING TITLE TYPICAL HOUSE LOT ON-SITE DETENTION DETAILS			
PROJECT NO. 12000085	SUB-PR NO. P01	DRAWING NO. C540	REV 04