

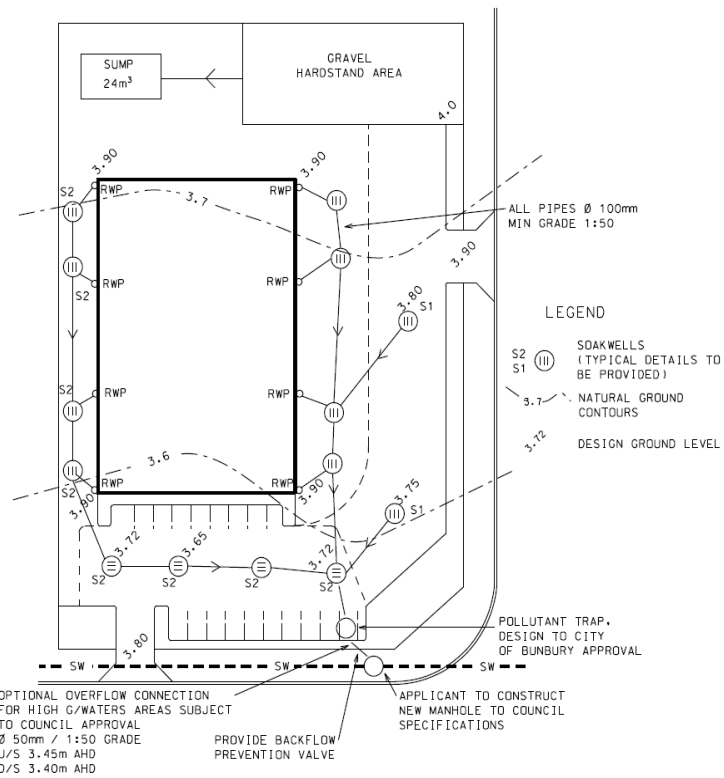
## Information Guide – Stormwater Drainage Plan

When a “Stormwater Drainage Plan” is required as a condition of a planning approval, it should comply with the Information Guide - *Stormwater Disposal from Private, Commercial and Industrial Properties* and contain the following information:

- North arrow and scale (all plans are to be provided at 1:200).
- Location of existing buildings to be retained and any existing building to be removed.
- Existing ground levels and contours, levels are to be in Australian Height Datum (AHD).
- Details of roads, accessways, crossovers, car parking and manoeuvring, fencing and verge treatments (including extent of sealed areas and stormwater drainage)
- Site levels, floor levels, location and details of cut/fill, and method of retaining - levels are to be in Australian Height Datum (AHD).
- Method of stormwater treatment (see diagram MISC-02-01 for an example of drainage plan using soakwells, over page)
- Groundwater impact assessment
- Others services located on site (e.g. Western Power/ Alinta / Telstra).
- Volume retention calculations

Typical volumes and areas served by standard sized soakwells is summarised in the following table for designers reference:

Soakwell size Diameter (m) x depth (m)	Storage Volume	Area served - 2m <sup>2</sup> per 65m <sup>2</sup>	Area served – sandy areas 1m <sup>3</sup> per 65m <sup>2</sup>
Ø 1.8m x 1.2m	3.0m <sup>3</sup>	100 m <sup>2</sup>	200 m <sup>2</sup>
Ø 1.5m x 1.2m	2.1 m <sup>3</sup>	70 m <sup>2</sup>	140 m <sup>2</sup>
Ø 1.2m x 1.2m	1.4 m <sup>3</sup>	45 m <sup>2</sup>	90 m <sup>2</sup>
Ø 1.2m x 0.9m	1.0 m <sup>3</sup>	35 m <sup>2</sup>	70 m <sup>2</sup>
Ø 0.2m x 0.6m	0.4 m <sup>3</sup>	12 m <sup>2</sup>	25 m <sup>2</sup>



**STORMWATER DRAINAGE**

Soakwell sizes: S1 = 1800 dia x 1800 deep = 4.6 m<sup>2</sup>  
 S2 = 1500 dia x 1200 deep = 2.1 m<sup>3</sup>

Sump size: 10m x 5m x 0.48 av.ht. = 24.0 m<sup>3</sup>  
 invert level 3.10m AHD

Storage in carpark: crossover level (overflow level) = 3.80 m AHD  
 average height of storage area = 0.066 m  
 area at crossover level = 500 m<sup>2</sup>  
 volume = 33.0 m<sup>3</sup>

Impervious Areas	Area (m <sup>2</sup> )	Design Vol. (m <sup>3</sup> ) 2m <sup>3</sup> per 65m <sup>2</sup>	Storage volume in Soakwells / Sumps (minimum 1m <sup>3</sup> /65m <sup>2</sup> )	Additional 1m <sup>3</sup> / 65 m <sup>2</sup> Storage above ground	Total Volume retained within the property
Roof Area	1000	30.8 m <sup>3</sup>	16.8 m <sup>3</sup> (08 nos S2)	} 33.0 m <sup>3</sup> (carpark)	} 67.2 m <sup>3</sup>
Car Park Area	500	15.4 m <sup>3</sup>	8.2 m <sup>3</sup> (04 nos S2)		
Paved Area	600	18.4 m <sup>3</sup>	9.2 m <sup>3</sup> (02 nos S1)		
Gravel hardstand	750	23.0 m <sup>3</sup>		24.0 m <sup>3</sup> (sump)	24.0 m <sup>3</sup>
<b>TOTAL</b>	<b>2850</b>	<b>87.6 m<sup>3</sup></b>			<b>91.2 m<sup>3</sup></b>

<b>BUNBURY CITY COUNCIL</b>					
<b>STORMWATER DRAINAGE PLAN</b> (SAMPLE ONLY)					
SCALE	N.T.S	DESIGN	A.T.	DRAWN	D.S. 01/2002
APPROVED		REVISD			CHECKED A.T. 01/2002
CITY ENGINEER	DATE				<b>MISC - 02 - 01</b> SHEET 1 OF 1