

# INDUSTRIAL STORMWATER CODE OF PRACTICE FACT SHEET

## 2. Raingardens with a liner and subsoil drainage

A raingarden is a specially designed garden that receives and filters rain run-off from roofs or hard surfaces such as carparks and paving through layers of gravel and sand or similar materials.

Council recommends only using drained and lined raingardens which enables them to be located adjacent to buildings and pavements. Lined raingardens are found to be highly effective at treating large volumes of runoff and require little space.

Sites incorporating raingardens are to be graded so that the raingardens receive runoff from the nominated catchment area. Stormwater enters the raingarden from runoff from a surface which is graded toward the raingarden or from a stormwater pipe.

The surface area of the raingarden specified in the tool refers only to the area of filter media required. For example if batters are to be used to grade the raingarden to match surrounding levels then the final footprint of the raingarden may be larger than the minimum area specified in the tool. Batter slopes shall be no steeper than 1 in 4. Concrete edge treatment is permissible and this approach will minimise the footprint of the raingarden.

Overflow from any rainwater tank should be directed to the raingarden.

### Design Criteria

1. Raingardens should be designed in accordance with the Guidelines provided in Figure 1 below.
2. Raingardens are to be PVC lined and drained. Subsoil drainage shall be connected into the stormwater system.
3. Raingardens are not to be shaded by other tree plantings.
4. The surface area of the filter media is specified in the rapid assessment tool.
5. Batter slopes shall be no steeper than 1 in 4 (1 in 3 if planted) and used to match the raingarden surface to surrounding levels. This will increase the required footprint size.
6. Concrete edging is also permissible and will reduce the total footprint of the raingarden.
7. The raingarden shall have a depth of ponding of 200mm. Add 25% filter area if this is reduced to 100mm.
8. Raingardens need to be sustained through dry times. The raingarden is therefore to be irrigated during dry times (ideally with captured rainwater) .
9. Suitable plant species are provided in Figure 2. Planting density needs to be adequate to ensure functioning of the raingarden and complete cover within 2 years. Recommended densities have been provided.

**For any enquiries in relation to these guidelines, contact Council's Sustainable Environment Department on 9205 2200.**



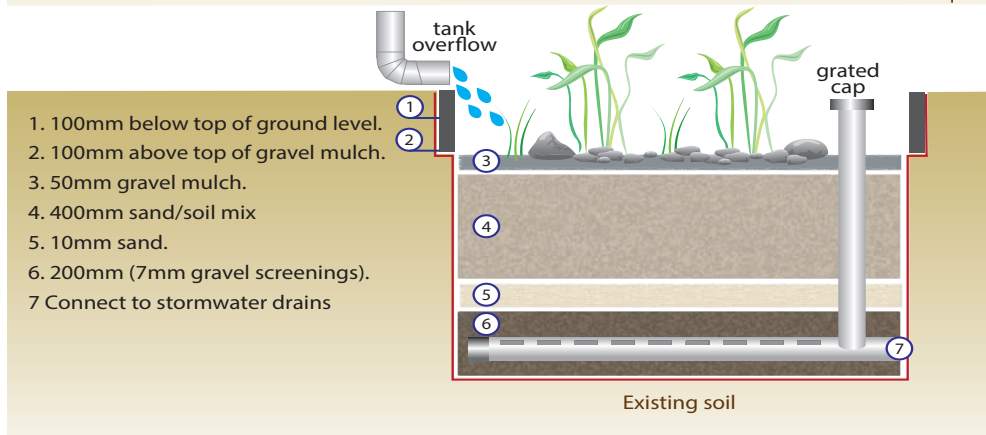
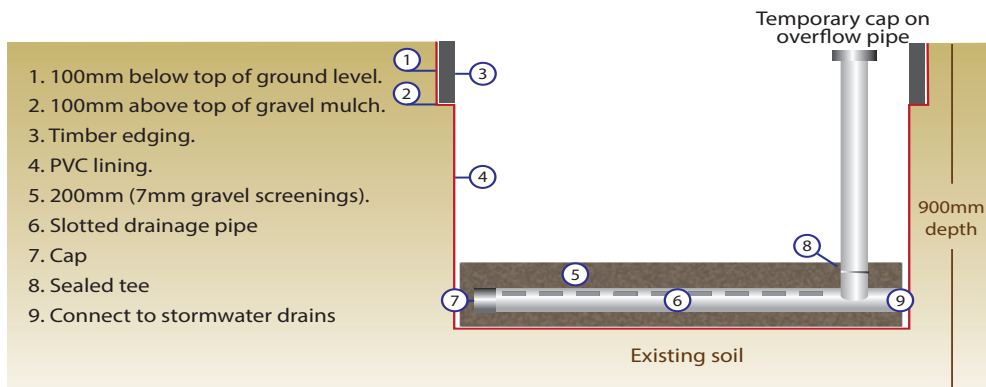


Figure 1. Lined inground rainwater garden.

## Examples of species recommended

Scientific Name	Common name	Height (m)	Width (m)	Density (m <sup>2</sup> )
<i>Acacia implexa</i> *	Lightwood	8	5	1
<i>Acacia melanoxylon</i> *	Blackwood	12	8	1
<i>Allocasuarina cunninghamiana</i> *	River Sheoak	15	8	1
<i>Carex appressa</i>	Tall Sedge	0.5-1.2	.05-1	4
<i>Callistemon sieberi</i>	River Bottlebrush	4	2	1
<i>Dianella admixta</i>	Black-anther Flax-lily	0.3-0.8	0.5-1.5	6
<i>Dianella longifolia</i>	Smooth Flax-lily	0.5	0.5	6
<i>Dianella tasmanica</i>	Tasman Flax-lily	0.75	1	4
<i>Ficinia nodosa</i>	Nobby Club-rush	0.5-1.5	0.6-2.0	5
<i>Gahnia radula</i>	Thatch Saw-sedge	1.5	1	4
<i>Juncus amabilis</i>	Hollow rush	0.2-1.2	0.2-0.5	6
<i>Juncus flavidus</i>	Yellow Rush	0.4-1.2	0.2-1	4
<i>Lepidosperma laterale</i> var. <i>laterale</i>	Variable Sword-sedge	1	0.4-1	4
<i>Lomandra filiformis</i> ssp. <i>Filiformis</i>	Wattle Mat-rush	0.3	0.3	6
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	1	1	4
<i>Lomandra nana</i>	Dwarf Mat-rush	1.5	10-20	5
<i>Myoporum parvifolium</i>	Creeping Boobialla	20-30	300	4
<i>Poa labillardieri</i>	Common Tussock-grass	0.3-0.8	1.3	4

\*Canopy trees are only suitable in vegetation over 6m<sup>2</sup> with a minimum width of 2m.