

## FACT SHEET: RAINGARDENS

Raingardens (or a landscaped stormwater retention area) are specially-designed garden beds that filter stormwater runoff from surrounding areas or stormwater pipes. They are designed to be self-watering and low maintenance by capturing rainwater that runs off hard surfaces such as roofs and driveways (also called stormwater runoff).

While they may look similar to a standard garden, raingardens are specially sited and designed to naturally filter stormwater run-off and remove pollutants. Raingardens can help keep our waterways healthy before water is released into the local drainage system.

### Benefits of a raingarden

They have many benefits including:

- saving you time and money by being low-maintenance and make use of runoff water;
- preventing pollutants and improving water runoff entering our rivers and creeks;
- Reducing the chance of flooding and erosion during heavy storms;
- Providing habitat for native fauna;
- Recharging groundwater supply;
- Creating an attractive garden and community; and
- Improving the health of our region's waterways.

### Draft Development Control Plan amendment provisions

One of the ways that Council proposes to support the community to further conserve drinking water and protect the region's waterways is through its proposed Draft Water Sensitive Design measures. These will be put in place through an amendment to the Tamworth Regional Council Development Control Plan 2010.

This DCP will require that all new houses and other forms of development incorporate a range of water efficiency measures called Water Sensitive Design Essentials in the design stage of the proposed developments. Compliance with three out of six essentials will be required. One of the essentials to choose from is inclusion of a raingarden.

Under Council's guidelines, a raingarden shall have a filter media area sized at 1.5% of the contributing catchment area. Where a rainwater

tanks with at least 3000 litres is installed then a minimum of 2m<sup>2</sup> of retention area will be acceptable.

### Types of raingardens

There are three types of raingardens to choose from:

- in-ground;
- above-ground planter box; and
- porous paving.

#### *Did you know?*

A raingarden is only wet during and immediately after rain, leaving it dry most of the time. This is due to the drainage and filtration properties of the soil combination used in the raingarden.

### Location

A licensed plumber will be able to help determine a suitable location based on the direction of stormwater drainage flows and the depth of existing stormwater pipes. They can also ensure modified stormwater pipes are reconnected properly.

Locate your raingarden as close as possible to the water source:

- from a downpipe;
- near a rainwater tank overflow outlet; and
- near a paved area or driveway.

In-ground raingardens should not be located:

- over or in close proximity to a septic tank;
- near building foundations and its 'zone of influence';
- near underground services such as water, sewer, gas and electricity; and
- underneath large trees to the extent of its canopy because the root system will interfere with your excavations.

### Construction

Raingardens are low-maintenance but require a specific set up to maximise the effect (see figure 1).

1. Garden Surface – Water collects and settles on the garden surface from a disconnected downpipe, rainwater tank overflow or

- pavement runoff. Drought tolerant plants are recommended to be planted to tolerate dry conditions in between rain. An overflow pipe is also required to prevent flooding.
2. Filter Media: Loamy Sand – Water soaks through the plants and filter media, trapping rubbish and sediment on the garden surface. It also feeds and stabilises plant roots. The soil and plant roots work together to naturally filter the water and remove pollutants.
  3. Submerged Zone: Sand and carbon source – Improves treatment performance in particularly excess nutrient removal and enhances the recovery and maintenance of healthy plants during dry periods
  4. Transition Layer: Coarse Sand – Retains soil and further filters the water before it is dispelled.
  5. Drainage layer: Gravel – A perforated collection pipe or slotted pipe collects the filtered rainwater and is dispelled into the stormwater infrastructure.

When designing and building a raingarden, make sure:

- it is designed to treat stormwater runoff from gentle rainfall – runoff from heavy storms should bypass the raingarden into the drainage system;
- the base of the raingarden is above the surrounding groundwater level; and
- the filter media is tested before installation to confirm it meets hydraulic conductivity and plant growth standards, and holds enough moisture to support the plants.

## Plant Selection

Raingardens need particular plants with roots that help keep the filter media absorbent, and help break down the pollution. Only use plants that can grow in sandy soils and tolerate dry conditions for several weeks in between rains.

Trees, fruit and vegetable plant species are not recommended to be planted in a raingardens because they can have a negative impact on the longevity and effectiveness the garden.

In addition, raingardens should be kept free of grass clippings and mulch because it can be washed away during high rainfall and can impact the health of connecting waterways.

Recommended plant species for raingardens in the Tamworth Region:

- *Typha* species
- *Lomandra* species
- *Juncus* species
- *Carex* species
- *Dianella* species

### Did you know?

You don't need to fertilise or spray the plants with herbicides because stormwater will contain enough nutrients. The naturally filtered metals, phosphorus, nitrogen and ammonium from stormwater runoff will act as a fertiliser to the plants.

### Do I need Council approval to create a raingarden?

Typically, a raingarden less than 600mm deep does not require Council approval. However, you must comply with a number of conditions. Please refer to the [State Environmental Planning Policy \(Exempt and Complying Development Codes\) 2008](#) to ensure that the raingarden and associated structures, such as a retaining wall, do not need Council approval before carrying out any works.

## Documentation and Plans

For information relating to the lodgement of a development application please see the [Development Support](#) section of Council's website.

## Applicable Fees

Where Council approval is required, Council's adopted [Fees and Charges](#) will apply.

## Need help?

For further information:

- Call us on (02) 6767 5555;
- Email: [trc@tamworth.nsw.gov.au](mailto:trc@tamworth.nsw.gov.au); or

Visit the Development Hub counter:

Tamworth Regional Council

437 Peel Street, Tamworth

between 8:30am to 4:30pm weekdays.