

Rain Gardens

North Kellyville Release Area

MAINTENANCE AND OPERATIONS PLAN

Subdivision and Development Certification

Revision B – October 2015

THE
HILLS
Sydney's Garden Shire



Why is maintenance important for my rain garden?

Rain gardens, like most water sensitive urban design (WSUD) elements, require some ongoing maintenance to ensure their sustained and effective operation. If your rain garden is not maintained properly it will become inefficient and fail to adequately treat stormwater, negatively impacting on the receiving environment and creating other more local nuisance impacts.

This maintenance and operations plan has been prepared to assist property owners/ occupiers with respect to the ongoing maintenance of the "rain garden" constructed on their property, located within the North Kellyville release area.

For information on "rain gardens" in general, including their purpose, function and why they are required for properties within the North Kellyville release area, please refer to the separate fact sheet entitled "Rain Gardens North Kellyville Release Area" a copy of which is available on Council's website:

www.thehills.nsw.gov.au

There are two main maintenance issues that apply to rain gardens, as follows:

1. Rain gardens are a form of "bio-retention" and rely on plants for their function. Infestation by weeds needs to be managed to promote the growth of desired plant species. Consequently, the period between when the rain garden is first constructed and the plants are established (typically two to four years) is where this weed management is most important. Intensive initial planting can reduce the requirement for weed removal, hence the pot size and planting density requirements included on the standard detail.
2. The layers of filter media below the ground in rain gardens can become clogged with fine particles, reducing its efficiency. This can result in untreated stormwater overflowing out of the rain garden, also creating localised nuisance stormwater impacts. Stormwater typically contains sediment and other gross pollutants from urban surfaces. The regular removal of sediment and other gross pollutants is necessary to maintain the design flow capacity and environmental protection function of the rain garden.

The Hills Shire Council

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The rain garden constructed on your property cannot be removed or modified without written consent from Council.

The owner/ occupier is wholly and solely responsible for the maintenance of the rain garden.

This is a legal requirement enforced via the positive covenant that appears on the title of your property.

Under the terms of this positive covenant, Council has the legal right to inspect the rain garden and issue an order requiring any necessary maintenance or rectification work deemed necessary to ensure the rain garden performs as expected.



To ensure your rain garden operates effectively, the following maintenance tasks are required:

1. The landscaping within the rain garden must be checked to ensure healthy growth of the plants (native sedges and grasses). This includes the removal of weeds, replacing any dead or dying plants and the replacement of rock/ mulch.

This should occur quarterly (minimum).

2. The surcharge pit and the lot outlet pit at either end of the rain garden must be inspected and any debris, sediment or blockages removed. Specific attention should be paid to the sump in the surcharge pit, otherwise water will become trapped and stagnate within this pit.

This should occur quarterly (minimum).

3. The area surrounding the surcharge pit must be checked and any localised scour or erosion rectified by placing rock.

This should occur quarterly (minimum).

4. Check that the localised depression bordering the rain garden, within which stormwater ponds during heavy rain, is clear of obstructions (such as imported topsoil, sheds, large pots etc;) impeding the amount of storage available.

This should occur quarterly (minimum).

5. Flush clean the underlying sub-soil drainage network by inserting a hose down the flushing point provided on the surface of the rain garden. This will remove any collected fines or debris. The collected fines or debris must then be removed from the lot outlet pit at the end of the rain garden.

This should occur annually (minimum).

Further Information:

The maintenance frequencies nominated above are a guide only. More regular maintenance may be required for a poorly designed or constructed rain garden.

Further, a quick visual inspection during or following a storm will give an indication as to whether additional maintenance is required. For example, excessive nuisance runoff or ponding might be caused by a blockage in a pit or pipe, or if there is a build up of sediment in the layers of filter media below the ground.

Longer term, it may become necessary to replace the layers of filter media below the ground completely. The design life of a rain garden is directly linked to its proper design, construction and maintenance.