



Review of WSC Stormwater maintenance contribution rates

March 2020



wave
CONSULTING

1 Introduction and background

With the adoption of the Integrated Water Management Policy, Wollondilly Shire Council (WSC) is aware that as urban development is delivered in the local government area, there will be more stormwater management assets that will ultimately be handed over to WSC in the future, under the Dedication of Land Policy – PLA0036. These assets will require maintenance, and these costs are collected up front.

Wave Consulting was commissioned by WSC to review the maintenance rates currently being used and advise on any future maintenance costs that will occur through the implementation of the policy.

The following tasks were completed as part of this review:

1. A review of rates currently used to estimate maintenance costs
2. Update Attachment 1 in Dedication of Land Policy –PLA0036 (to more explicitly notes the rates, units, and the assets)
3. Add to the table in Attachment 1 in Dedication of Land Policy –PLA0036 to incorporate industry data from across Australia re maintenance rates
4. Consider what changes are required to bring WSUD assets in roads into the Land Dedication and contributions for maintenance

This memo documents the above tasks.

2 Policy

The following WSC policies are relevant to stormwater contributions and have been noted here for clarity.

Dedication of Land Policy – PLA0036

WSC's Planning - Dedication of Land Policy –PLA0036 provides a framework for managing the dedication of land and stormwater infrastructure to avoid burdening council with unreasonable maintenance costs associated with these assets.

The policy objectives are:

- To detail the requirements of Council for land proposed to be dedicated for infrastructure, environmental or community purposes.
- To ensure that only suitable land is dedicated to provide quality infrastructure, opportunities and services to the community.
- To ensure Council is not burdened with high maintenance land or land with poor usability.
- To ensure Council is not burdened with the costs of stabilising, remediating or otherwise rectifying land that carries risks to human or environmental health.
- To ensure environmental conservation lands are only dedicated to Council if a funding source is available for long term maintenance.
- To ensure that lands to be dedicated to Council for drainage and stormwater management purposes are provided with a source of funds for the maintenance of those lands
- To achieve, in a balanced way, the objectives of the Wollondilly Community Strategic Plan.

This policy applies to all land within WSC except land dedicate to council under section 94 of the Environmental Planning and Assessment Act.

4 Review of rates

This section outlines suggestions to change existing rates, and also possible rates for new assets that WSC will now be receiving.

Item	Details	Unit Cost	Unit	Recurrence	Annualised cost*	Comment	References
Council Inspection	<p>Testing of bio-retention basins</p> <p>Check attachment of orifice plate to wall of pit and check attachment of screen to wall of pit</p> <p>Check screen for corrosion/damage</p> <p>Inspect DCP walls/headwall structure for cracks and spalling</p> <p>Inspect DCP sump (if present (for sediment/sludge)</p> <p>Inspect bioretention basins structures for sediment and debris accumulation, vegetation, weed growth, erosion, scour, excessive ponding, vandalism</p>	\$467	(Not specified)	2/year	\$934	Reasonable rate to inspect, assuming each visit takes 1-2 hours onsite and 30 mins to complete report sheet and issue any work orders.	NA
Insurance	Council to assess and renew insurance policy annually	\$106	(Not specified)	1/year	\$106	Out of scope.	NA
Repair of OSD Structures	Replace/repair corroded or damaged componentry (grates, screens concrete structures etc) as necessary	\$3,187	(Not specified)	0.1/yr	\$319	Out of scope, however, recommend WSC convert this rate to a square metre of assets rate in line with others.	NA
Mowing and Debris/sediment removal	Mow basin, clear debris from headwall and screen, overflow weir, grates and outlet pipes. Clear sediment, debris, weeds and dead/dying vegetation. Replace plants as necessary	\$797	(Not specified)	4/yr	\$3,188	Out of scope.	NA
Fence Repair	Repair/replace damaged fence components as required	\$1,594	(Not specified)	0.1/yr	\$159	Out of scope.	NA

Table 1. New assets and cost estimates

Item	Details	Unit Cost	Unit	Recurrence	Annualised cost*	Comment	References
GPT inspection	Inspect GPT for volume full and any damage. Arrange clean if greater than 60% full. (6 times per year)	\$100.00	item	6/yr	\$600.00	Inspection of a number of assets to reduce travel cost. Simple report on spreadsheet and issue work orders.	3 & 4
Median Vegetated Swale	Inlet sediment and debris clean-out, weeding, vegetation replacement, rubbish and leaf litter removal, pruning. Simple inspection report. (4 visits per year)	\$6.00	per square metre	4/yr	\$24.00	Cost based on MW WSUD LCC and Adoption Guidelines with rate adjusted for CPI.	1 & 5
Grassed swale	Mow, clear sediment and debris from inlets, clear outlet, weed control and oversow as necessary. Simple inspection report.(4 visits per year)	\$3.50	per square metre	4/yr	\$14.00	Cost based on MW WSUD LCC and Adoption Guidelines with rate adjusted for CPI.	1 & 5
Nature strip bioretention (<50sqm)	Inlet sediment and debris clean-out, weeding, vegetation replacement, rubbish and leaf litter removal, pruning. Simple inspection report. (4 visits per year)	\$17.00	per square metre	4/yr	\$68.00	Cost based on MW WSUD LCC and Adoption Guidelines with rate adjusted for CPI.	1, 2 & 5
Larger Bioretention (50-200sqm)	Inlet pit sediment and debris clean-out, weeding, vegetation replacement, rubbish and leaf litter removal. Simple inspection report. (4 visits per year)	\$6.00	per square metre	4/yr	\$24.00	Cost based on Water by Design and Adoption Guidelines with rate adjusted for CPI.	1 & 2
Tree pits	Inlet sediment and debris clean-out, weeding, rubbish and leaf litter removal, tree inspection and pruning. Simple inspection report. (6 visits per year)	\$175.00	per asset	6/yr	\$1,050.00	Cost based on MW WSUD LCC and Adoption Guidelines with rate adjusted for CPI.	1 & 5
Wetland s (500-10,000 sqm)	Inspect and clear inlet and outlet as required, weed control, litter and debris removal, vegetation replacement as required. Simple inspection report. (4 visits per year). Inclusive of sediment basins.	\$3.00	per square metre	4/yr	\$12.00	Cost based on MW WSUD LCC and Adoption Guidelines with rate adjusted for CPI.	1 & 5

5 Other issues to consider for contribution rates

There are some other issues that WSC should be aware of and may also influence the contribution rates.

How do you predict future maintenance costs?

The cost listed should be reviewed every four years to benchmark against known council maintenance costs (if maintained in house or via contractors) or against industry costs (if costs are not known to council). Items may also be altered, or new items added. Disposal costs (i.e. the cost of taking contaminated sediment or waste from a stormwater asset, to landfill) in particular are likely to increase above CPI rates in the coming years as there is increased pressure on the waste management and landfill industries.

How do you account for discount values?

The cost included in Section 4 are based on AUD 2020 rates, but to forecast a total cost to cover a cost into the future it is common to discount the values to come up with an equivalent cost in today's dollars. It is unclear if this method is being used in your calculations. The Dedication of Land Policy seems to allow for the indexation of costs in line with the Sydney All Groups CPI.

In previous projects that involve an assessment of life cycle costs, we have referred to the NSW Treasury 2017 guideline: NSW Government Guide to Cost-Benefit Analysis.

Monitoring of the first five years maintenance by applicant

Council may wish to consider introducing a mechanism to inspect and evaluate the condition of the assets in the first five years. This ensures that when this asset is transferred to council, Council has confidence that they are receiving an asset in good condition. The costs of this proposed inspection in the first five years (ideally completed twice a year for five years) should also be considered in the calculation of contribution rates.

By year five the plants in all stormwater assets should be well established. The assets should be free of weeds and litter, sediment has been removed including a clean of sediment basins. Reports on maintenance activities including volume of material (litter and sediment) should be provided to council. Council inspection should be undertaken twice yearly, for all the first five years of establishment, and this cost included in the applicant's fee.

Ensuring stormwater asset maintenance is adequately funded

Although contributions do not often cover the maintenance of roads/intersection assets, it is important for Council to ensure that this exemption does not extend to the maintenance of stormwater assets, particularly where those assets are within the road reserve, and median strips. These are still technically stormwater assets, not road infrastructure, and need maintenance contributions.

This should be clearly communicated to developers.

6 Conclusions

The contributions rates WSC is using need to be updated, and they need to be specifically reflect the size (or length) of an asset (usually in square metres), to accurately assess the necessary maintenance costs.

The cost of maintaining WSUD assets is still not that well researched, mostly due to the fact that maintenance is often completed by private companies who have little interest in sharing their data and cost estimates.