

# Operation, Maintenance, Rectification and Optimisation of 20 stormwater harvesting sites

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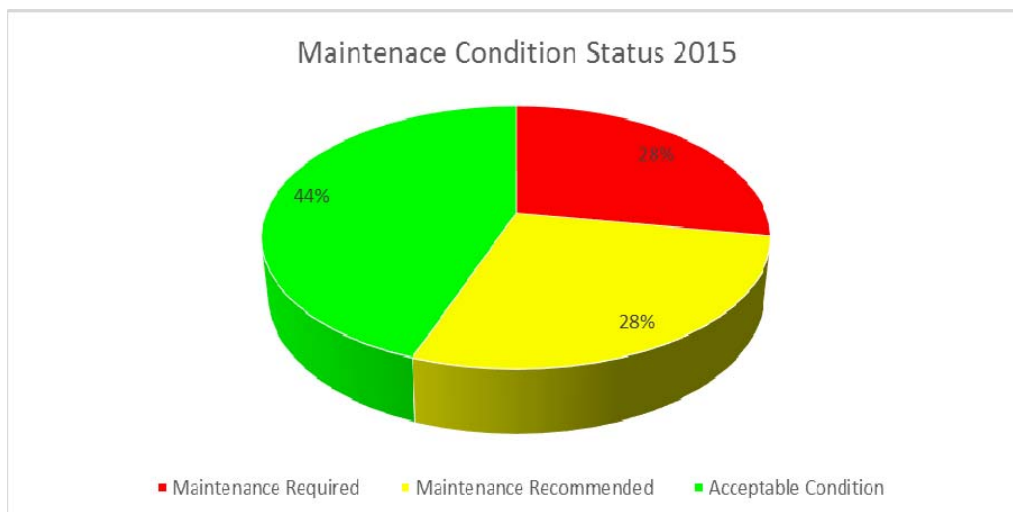
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## Abstract

*A Sydney based Council has invested in 20 water recycling infrastructure plants (stormwater, rainwater and groundwater) and is now looking at the operation and maintenance, rectifications and optimisation of these plants. Optimal Stormwater has been engaged to undertake the operation, maintenance, rectification and optimisation of these twenty sites. With experience as a design, construction and operation & maintenance company, Optimal Stormwater was selected over others, including Sydney Water. In the first 3 months the percentage of plants with operational status jumped from 50% to 95%.*

*Through the operation and maintenance of all sites, multiple sites have been upgraded through innovative ways to improve reliability, safety and minimise maintenance costs. This paper draws lessons for consideration by those involved in the design, construction and especially the O&M of stormwater harvesting systems which can hopefully be replicated with as positive results as this Council example. It is also very relevant for other Councils who may be considering the outsourcing of the operation of their stormwater harvesting infrastructure. As systems these days use plumbers and electricians, process control engineers, telemetry, etc, it is sometimes beyond the comfort level for the park maintenance staff that are expected to operate them. This paper has a focus on the process by which the O&M was outsourced and the outcomes of the project to date.*

*The stormwater harvesting maintenance condition status is shown in a Pie chart for the beginning of the project in Figure 1.*



**Figure 1: Maintenance Condition Status at commencement of O&M in 2015**

This condition status in the maintenance management plan highlights visually to the client the scale



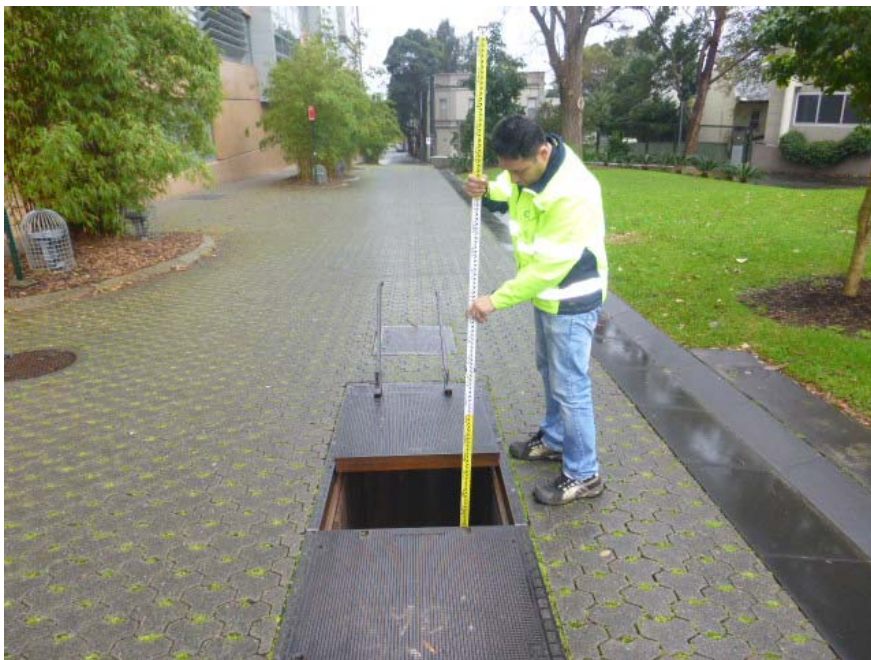
**Figure 2: Operation and Maintenance of filters**



**Figure 3: Operation and maintenance of UV lamps**



**Figure 4: Operation and maintenance of pond offtakes and aerators**



**Figure 5: Inspection of primary treatment GPTs upstream of harvesting systems as part of operation and maintenance**



**Figure 9: Pumpwell with three large pumps**