Tools to assist developing a WSUD asset register

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Why is WSUD asset management important?

Current situation

• Increasing number of WSUD assets constructed by councils
• Increasing number of WSUD assets handed over to councils from developers
• Uncertainty around location, maintenance regimes and life cycle costs
• Generally means they are not identified on asset management systems or databases
• Asset management is required to ensure they meet their intended design and function.
Risks of not developing a WSUD asset register

Asset becomes a LIABILITY

- Key staff move on and the local knowledge is lost
- Assets may fall into disrepair
- Asset may not function as intended and stormwater quality is not treated
- Investment is ‘wasted’
- Community and council perception is that they don’t work, look ugly etc.
- Increased barriers for implementation going forward
Benefits of WSUD asset management

Knowing the asset exists

Enable maintenance

• Understanding maintenance requirements, levels of service and responsibility
• Budgeting

Financial planning and reporting

Asset handover status

Understanding catchment performance

• Assist in tracking against treatment targets
• Assist in planning future works
• Enable catchment scale modelling
Results show

- **18% (=7)** have an in-depth understanding of where their WSUD assets are located
- **5% (=2)** have an in-depth understanding of maintenance requirements
- **3% (=1)** have an in-depth understanding of life cycle maintenance costs
Industry need

Data Clarification

- Need to identify what data is needed e.g. performance, valuation, lifecycle, maintenance requirements

What is WSUD?

- Uncertainty about what to include
Addressing the knowledge gap

Critical need for consistency in WSUD asset data collection and guidance

To assist in this industry knowledge gap:

• WSUD asset location database
• Maintenance Guidelines
• Life Cycle Costing of WSUD treatments
Methodology

- 25 Councils took part
- Developed a standard template for data capture
  - Location
  - Owner
  - Age
  - Dimensions
  - Pollutant removal
  - Maintenance requirements
- Council provided known information
- Desk top review of known developments in the area
WSUD Asset Database continued

- Identified over **2,700** treatments
- Treatments captured:
  - Raingardens
  - Wetlands
  - Vegetated and Bioretention Swales
  - Street tree pits
  - Green roofs
  - Tanks associated with large scale harvesting
- Currently developing a user friendly template to ensure the data is kept up to date
- Will form part of the annual data swap process between Council and Melbourne Water
WSUD asset management systems

Inconsistent approach to asset management across Melbourne municipalities

Asset Management System including WSUD, LCC and maintenance regimes with hand held PDA’s

GIS mapping of assets with varying levels of data capture

Spreadsheet held by one council officer that is not widely known or available to other departments

Non existent data or inconsistent data set
Council will be provided:

- GIS map in various file types e.g. DAT, KLM, MAP
- Click to see data on each asset
- Overview map in PDF
- Excel database
Maintenance Guidelines

**Maintenance Guidelines are designed to provide:**

- Practical, standardised guidance for designing and implementing maintenance programmes for stormwater treatment assets.
- Advice on performance indicators
- Suggested models for asset ownership and responsibility within council
- Provides suggested timing of maintenance tasks which can be linked to Asset Management Systems

**Stormwater treatment assets covered by the guidelines include:**

- Raingardens
- Tree pits
- Vegetated swales and bio-swales
- Permeable pavements
The Guidelines contain:

- Schedule of Inspection and Maintenance activities
- Inspection and maintenance forms
- Sample tender documentation for maintenance contracts
- Example asset operation and access summary

### MAINTENANCE SCHEDULE

<table>
<thead>
<tr>
<th>Timing</th>
<th>Component</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Following storms</td>
<td>Grass filter strip (if included), kerbing, paved area</td>
<td>Remove rubbish, leaves and other debris from the grass filter strip and surrounding drainage area.</td>
</tr>
<tr>
<td></td>
<td>Ponding area</td>
<td>Clear inflow points of sediment, rubbish and leaves. Check for erosion or gouging and repair. Test drainage of ponding area - check garden 12 hours after rain to ensure no water is ponding. Top up filter media and mulch as necessary (ensuring level is below surrounding hard surface and overflow).</td>
</tr>
<tr>
<td></td>
<td>Mulch</td>
<td>Mulch may need to be redistributed or added around inflow points.</td>
</tr>
</tbody>
</table>
Developing the Guidelines:

• Workshops with Parks and Infrastructure staff across 27 councils
• Draft available for comment

Developing maintenance training

• Clearwater developed training in line with the Maintenance Guidelines
Asset Management Systems should contain financial data that can be used for forecasting expenditure associated with maintenance and renewal.

**Methodology**

Worked with councils to obtain available costing data for:

- Design
- Construction
- Maintenance
- Renewal

Inconsistent or non-existent data captured by councils

Currently determining a schedule of rates where data was not reliable

Available end of June 2013
Where to now . . . .

• The resources are currently in their final stages of development and will be provided to councils by the end of June 2013.

• The Guidelines and Life Cycle Costing data will be available on the Melbourne Water website.

• The development of these resources is the first of its kind in Australia and a positive step forward for planned and consistent WSUD asset management across the Melbourne Region.