EMBEDDING SUCCESSFUL WSUD ASSET MANAGEMENT PRACTICES- LESSONS FROM ACROSS THE DITCH

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ABSTRACT

Local and regional government agencies are responsible for managing more WSUD assets than ever before. However, most are struggling to effectively manage and maintain these assets, many of which are in poor functional condition.

The challenges are due, in part, to WSUD being a relatively new technology that combines civil (i.e. manholes and pipes) and landscape (i.e. plants) components. This requires input and involvement from a range of skillsets and staff in the planning, design, construction, establishment, handover and maintenance of these assets.

To address this, a local government community of practice has formed in Greater Melbourne, Australia to actively develop a successful and sustainable approach to WSUD Asset Management. These councils identified the key challenges as 'bringing it all together', i.e. integrating the not-so-complicated individual elements within clear, effective, documented processes and systems that support effective asset management.

An initial group of six Greater Melbourne councils (Moreland, Moonee Valley, Yarra, Greater Geelong, Brimbank and Melbourne), supported by Melbourne Water's Living Rivers program, have since been joined by another five Greater Melbourne councils (Boroondara, Casey, Cardinia, Monash and Whitehorse) to embark on a process mapping and gap analysis project as the first, critical step to understand and document current practices and identify specific priority actions tailored to each council.

Specifically, the project:

- Documented existing WSUD Asset Management processes and systems at each council
- Identified gaps and opportunities
- Identified strengths
- Recommended improvements
- Provided a report and presentation to each council and a collective summary report and presentation

In order to address the process-related issues, it was agreed that it was first necessary to understand and document the current project/asset management processes utilised by each participating council, and where the deficiencies or gaps may lie. The scope of the processes to be examined spans across six key phases from asset planning to operation/maintenance, as illustrated in Figure 1, below.

Figure 1 - Key project management and asset management phases for WSUD assets, examined as part of the project.

The project involved, for each council, up to two days of intensive in-house interviews/discussions with staff involved in the WSUD project/asset management process, as well as review of relevant Council systems and documentation. These interviews/discussions were typically undertaken in groups, based around council teams or project phases. In some cases, interviews were also conducted with individual staff. The first day of in-house interviews was utilised to gather data on the existing processes and issues, while the second day was used primarily for verification, obtaining additional detail, testing gaps/recommendations and accessing staff that were unavailable on Day 1.

Following the interviews, the data was analysed and a framework developed that highlights critical process elements – many of which represent common gaps for councils – in successful project management and asset management of WSUD systems. Each council's existing process was then assessed against this framework and strengths, deficiencies/gaps and recommendations identified. The recommendations were developed to align with each council's existing processes as much as possible, to avoid burdensome and/or unnecessary reworking of processes.

Each participating council received a separate report outlining the project findings relating to their own specific, individual processes. A summary report across all six councils was also prepared which highlights common themes/findings including key strengths, gaps, recommendations and opportunities for future collaboration to address issues collectively.

Melbourne is widely-regarded as a world leader in WSUD, partly due to the significant and ongoing investment by Melbourne Water in building local government capacity in WSUD and supporting project implementation, since the early 2000s. Melbourne Water's Living Rivers have provided tens of millions of dollars in grant funding co-contributions to local government in that time, and have supported a range of guidelines and training packages that help improve WSUD design, construction, maintenance and asset auditing practices. However, despite various capacity needs assessments over time, capacity building initiatives have never examined in detail the entire process local councils undertake from project planning to delivery and ongoing operation.

The project identified that many of the sub-optimal WSUD asset condition outcomes currently being experienced were related to gaps in this process, despite the generally a high degree of collaboration and enthusiasm to improve WSUD asset management across the local government community. Such gaps include:

- Lack of formal, documented process
- Lack of appropriate project documentation
- Existing, undocumented processes are often not consistent, adequately formal or involving all relevant internal staff.
- Inadequate communications/input between council departments
- Poor operational budgeting processes
- Poor understanding of specific maintenance requirements and associated costs

- Failure to recognise/implement process elements specific to WSUD (e.g. specific WSUD hold points getting 'lost' in the broader civil works project)
- Lack of adequate rigour/detail in undertaking necessary hold-points (often due to lack of resourcing or capacity)
- Poor or non-existent handover processes
- Inadequate ongoing asset inspection/maintenance data collection and review
- Poor or inconsistent data/document management
- Lack of clarity as to roles/responsibilities and ultimate 'ownership' of WSUD internally
- Lessons from past projects are not being systematically, formally captured and incorporated into future projects (e.g. from maintenance, construction, etc.).

The recommendations documented by the project address project management and asset management processes through all key project phases, as well as internal communications/collaboration, capacity building, process governance, contractor management, and data capture and monitoring/review requirements.

The local government community of practice is currently focusing on implementing the recommendations from the reports to assist in embedding successful WSUD Asset Management Practices, effectively creating a best practice 'blueprint' for the broader industry.

Each process will address the key project phases (as per Stage 1) of strategy/planning, design, construction, establishment, handover and maintenance/operation, and will be underpinned by appropriate, integrated project management documentation (such as checklists, sign-off forms and templates) and asset management systems (including prescribed fields and processes for data capture and review). However, the new processes also need to respect and work with – i.e. adapting, not entirely replacing – the existing processes and systems utilised at each council and will consider both councils' capital works (from multiple initiation points) and WSUD generated through urban development.

The success of the project owes itself to several key strengths:

- A unique approach of examining the entire 'asset lifecycle' process, from strategy/planning to maintenance and ultimately decommissioning/renewal;
- Using external consultants to lead the process mapping and gap analysis provided expert knowledge of the entire process and facilitated honest responses from staff of various backgrounds/perspectives (covering all 'key players' involved) which may have been challenging if led by internal staff;
- Fostering collaboration between councils, whereby resources can be pooled to maximise efficiency and the process strengths of one council can be drawn upon as an example for other councils struggling with that particular process element.

The issues and gaps identified within the WSUD asset management processes are not specific to Melbourne councils, with the findings also being highly relevant to councils across New Zealand. Sharing lessons and fostering collaboration across local government

in Australia and New Zealand is key in resolving these many – but surmountable – issues to ensure the ongoing success of WSUD.

Keywords

Water Sensitive Urban Design, WSUD, Water Sensitive Design, WSD, Asset Management, Collaboration, process mapping, gap analysis, inter-departmental, council process