CASE STUDY

Sydney Olympic Park Authority (SOPA) manages vital ecological assets with strategic asset management

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CHALLENGE

SOPA are custodians of Sydney Olympic Park, a district constructed for the 2000 Sydney Olympic and Paralympic Games and now recognized as a world-class business, education, residential, recreation and events district attracting over 14 million annual visitors.

It is one of Australia's largest and most diverse urban parklands that includes waterways, constructed wetlands and bioretention systems, as well as a habitat for endangered green and golden bell frogs. These natural assets provide a critical combination of community services and outcomes: from stormwater conveyance, treatment and harvesting, to biodiversity, recreational opportunities and scenic amenities.

Like many other asset intensive agencies that are required to manage ecological assets, SOPA was looking for help with strategic asset management planning and maintenance of their ecological assets, including bioretention systems, constructed wetlands, and swales, as well as their naturally occurring infrastructure such as estuaries, ponds, saltmarsh, mangrove wetlands, and waterways.

Such natural assets require ongoing proactive planning, management and investment to maximise return on constrained funding and resource capacity. However, given their complex and sometimes unpredictable lifecycle management needs, unlike traditional assets such as roads or drains, SOPA struggled to effectively integrate the management of ecological assets into broader asset management systems so they can be given the same standing as other civil infrastructure. SOPA also found that its asset, environmental and engineering teams did not possess the relevant knowledge to manage and plan for ecological assets, resulting in some assets deteriorating in condition with declining vegetation cover and reduced biodiversity.

Whether assets are natural or constructed green infrastructure, the challenge lies in having access to the most effective knowledge to optimize the management of these assets and include them in the general asset management plan. It was clear that SOPA required a

Sydney Olympic Park

Customer: Sydney Olympic Park Authority (SOPA), New South Wales, Australia

Vitals:

- SOPA is part of the Property & Development team at the New South Wales Department of Planning and Environment
- It is responsible for the management of all public places, including 430 hectares of parklands and 158 ecological assets such as lakes, ponds, waterways, bioretention and wetlands

Challenges: Sydney Olympic Park Authority (SOPA) needed a tailored strategic asset management framework and plan to restore and sustainably manage its complex but vital wetland and ecological asset portfolio over the next 20 years. This includes delivering on required levels of service, controlling risks and driving continual improvement.

Results: Siemens, in partnership with E2Designlab, worked with SOPA to guide their long-term management and restoration. Together, we:

- Developed a framework incorporating SOPA's ecological assets, environmental obligations, and current asset management processes, systems, and requirements
- Conducted an asset audit of 158 ecological assets to understand condition and rectification requirements
- Developed a strategic asset management plan capable of sustainably delivering the required levels of service over the next 20 years
- Prepared concept designs and costings for different options to restore degraded natural assets.

solution to provide greater certainty in how to manage the overall asset portfolio to sustainably deliver required levels of service, control risks, and drive the continual improvement of its ecosystems.

The team at SOPA reached out to environmental consultancy E2Designlab and Siemens to conduct an audit and review of its ecological assets, environmental obligations and current asset management practices.

SOLUTION

Rising to the challenge, a multidisciplinary team of environmental engineers, scientists and strategic asset management specialists across Siemens and E2Designlab worked with SOPA to develop an asset management framework and plan capable of sustainably delivering required levels of service, managing risks and driving continual improvement in the asset portfolio over the next 20 years.

The project team investigated historical and contextual issues and risks affecting the assets, and used our Predictor Platform to model alternative funding options and strategies based on a real-world understanding of asset performance and the causes of asset deterioration.

The team distilled the project into four key stages:

- **Develop a strategic asset management framework** by reviewing relevant internal and external materials to understand SOPA's ecological assets, environmental obligations, and current asset management processes, systems, and requirements.
- **Undertake an audit of 158 ecological assets** to understand their current condition, risks, levels of service and maintenance and rectification requirements.
- **Develop an asset management plan** capable of sustainably delivering required levels of service, controlling risks, and sustaining the health and function of the natural assets.
- **Develop concept designs and costings** for different options to restore degraded assets to a good and serviceable condition.

RESULTS

SOPA now has a costed and prioritized maintenance and rectification schedule to address present-day issues, as well as a long-term asset management plan that lays the foundation for the sustainable management of SOPA's ecological assets, ensuring the delivery of their important services and community values. Furthermore, it provides a platform to support future corporate ESG goals.

The project has successfully embedded the asset management planning and data for the ecological assets within SOPA's broader asset management systems and is one of the first projects in Australia where this has been achieved

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