



# IS Ratings for WATER ASSETS

*Assured Sustainability Outcomes*



# Infrastructure Sustainability Council

The Infrastructure Sustainability Council (ISC) has certified sustainability performance across Australia and New Zealand since 2012. We assess infrastructure assets across the full spectrum of the asset lifecycle and we measure impact across the quadruple bottom line of economic, environmental, social and governance.

## Sustainable Water Assets - An Investment in Thriving Communities

Incorporating sustainability throughout the entire lifecycle of water assets and infrastructure is essential for fostering resilient and thriving communities.

### Sustainable Water Infrastructure

- ✓ Minimises its environmental footprint and carbon impact,
- ✓ Helps preserve ecosystems and biodiversity,
- ✓ Ensures the long-term resilience of communities in the face of climate change by prioritising adaptability in design and thus becomes better equipped to withstand unpredictable weather patterns,
- ✓ Ensures a continuous and reliable water supply,
- ✓ Fosters innovation and set examples of best practice for the sector.





# IS Ratings

- IS Ratings provide a third party assured framework for achieving sustainability outcomes across the whole lifecycle of an infrastructure asset – from planning, design and construction to operations.
- IS Ratings are aligned with the UN Sustainable Development Goals and enable positive social, environmental, economic and governance outcomes.
- IS Ratings are suitable to all infrastructure types including road, water, rail, energy, airport, port and social infrastructure such as parks and public facilities.

## IS Ratings Help Achieve Sustainability Targets – on a Project Level

Many water authorities have set themselves ambitious organisational sustainability targets. To achieve those, the design, construction and management of the organisation's assets need to be aligned with the organisational objectives – IS Ratings can help bridge that gap.

The process helps identify, measure and improve key sustainability metrics, such as carbon emissions, water use, stakeholder engagement and achieving 3<sup>rd</sup> party assurance.

The impact of pursuing an IS Rating doesn't stop with the asset – it serves as a catalyst for building sustainability awareness and capacity across the organisation beyond the scope and duration of the project. It helps upskill the workforce, encourages innovation and drives process improvements. The rating rewards teams that are transforming their organisations step by step, whether that's by building capability in the leadership team or rolling out new procurement policies and thus embedding sustainability into the organisation's way of working.



# IS Essentials

## An Infrastructure Ratings Tool Designed with Water Projects in Mind

IS Essentials is a sustainability rating tool for infrastructure assets with a capital value of \$5-100m and covers the Design and As Built phases. The scalable scope and digital platform make it accessible for many water projects and it also allows for a number of small projects to be combined into a program rating. Recently launched, IS Essentials is already being used for water treatment facilities, a remote community water infrastructure upgrade and a wastewater (gas) to energy plant.

*"Undertaking the IS Essentials Rating has provided Water Corporation assurance of where we are already performing well in terms of sustainable infrastructure and also highlighted areas that we could improve on and provides a guided and structured way to do so."*

- Anita Dullabh – Specialist, Sustainable Infrastructure at Water Corporation



## Measure what Matters

We know measurement leads to better management. But sustainability is so broad – covering everything from carbon emissions to recycling rates, ethical labour practices to diversity and inclusion – that it's impractical for any organisation to measure and manage everything all at once. The secret is to start with the issues that are most material to your strategy and stakeholders, and focus on these.

*"The IS Rating challenges project teams to innovate and 'build better' by shifting the focus beyond business as usual".*

- Georgina Hurst, Principal, Strategy & Performance at Water Corporation



# Case Study

## Sunwater's Rookwood Weir Project

Rookwood Weir, a 16.2m high, 350m long concrete structure on the Fitzroy River in Central Queensland is capturing valuable water for use across the region.

The Rookwood Weir Project was the first weir in Australia and New Zealand to be awarded an Excellent IS v1.2 Design & As Built Rating. A key sustainability achievement was the substitution of 53 per cent of the cement portion of the mass concrete mix with recycled content (flyash and slag), resulting in significant savings in embodied emissions. Modifying the spillway length and abutment width also resulted in savings, including approximately 6,734 m<sup>3</sup> of concrete and 27.72 t of steel. The modified design also resulted in substantial energy savings by avoiding approximately 300,000m<sup>3</sup> of earth moved, an estimated 1,128,000 L of fuel, a financial saving of \$1.4 million, and an emissions saving of 3,251 tCO<sub>2</sub>-e.

The Fitzroy River supports 37 species of fish and six species of turtle, including the critically endangered White-throated Snapping Turtle and the vulnerable Fitzroy River Turtle. Dams and weirs impede the movement of aquatic fauna which results in the isolation of populations, a reduction in species abundance and diversity, and a decline in population health and productivity. Wider impacts can include degradation of the aquatic environment, reduction of waterway health, reduction in recreational and commercial fishing, and changes in cultural practices. Rookwood Weir includes an innovative fish lock with multiple entry and exist levels that allows for safe fish passage as head- and tail-waters fluctuate on the Fitzroy River. Also, Rookwood has a dedicated 172m long by 2m wide sloped turtle ramp, the design of which was informed by the largest freshwater turtle acoustic telemetry project in the world, that tracked the movement behaviour of turtles within 30km of the Fitzroy River across a five-year period. These structures provide safe upstream and downstream fish and turtle passage across a 369km stretch of the Fitzroy, Mackenzie and Dawson Rivers. Long-term monitoring of the fishway and turtle passage will be undertaken during operations to assess compliance with performance criteria. This sets a new benchmark for ecologically sustainable water infrastructure design in Australia.



# Case Study

## Sydney Water's Lower South Creek Treatment Program (Design & As-Built)

- 70% self-supply of renewable energy
- 8% reduction in embodied carbon
- 44.7% reduction in emissions compared to benchmark (>870,000t CO2-e over construction and 50 years' operation)
- 99% of water demand that is not required to be potable is supplied by recycled effluent
- Innovative processes and technologies, including the transfer of sludge for consolidated biosolids processing and installation of mechanical primary sedimentation screens, which were Australian firsts

## Water Assets that have Undertaken IS Ratings Include:

- [Parkes Shire Council Water Treatment Plant, NSW](#)
- [The New Murray Bridge Wastewater Treatment Plant, SA](#)
- [Yarra Park Recycled Water Treatment Facility, VIC](#)
- [Lower South Creek Treatment Program, NSW](#)
- [Enlarged Cotter Dam, ACT](#)
- [Whitsunday Waste Water Treatment Plant, QLD](#)
- [Central Interceptor, Auckland, NZ](#)

### Benefits of IS Ratings

- Support the delivery of corporate sustainability goals
- Ensure social, environmental, economic and governance outcomes – across the asset lifecycle.
- Build and improve sustainability capabilities, policies and tools
- Focus on the issues that are most material for your community.
- Support ESG reporting
- Foster innovation for sustainability
- Increase asset and community resilience
- Help attract sustainable finance





## How to Get Started

- Get in touch with the ISC to discuss the project and options at [info@iscouncil.org](mailto:info@iscouncil.org)
- Optional: Consider the benefits of joining the ISC's membership community of sustainability practice
- Register your project or program of works
- Build up your team with IS Training as required
- An ISC Project Manager will help you kick off and guide you through the process.

## When to Get Started

- The best time to get in touch is prior to procurement stage

## Testimonials

*"By working with IS Essentials, we challenged many of our business-as-usual decisions to deliver safer, more sustainable infrastructure."*

- Amanda Scarpato, Director Maritime Program Management Office, Maritime Safety Queensland

