

## **Enhancing the health and resilience of our living collections: Irrigation master planning**

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The Royal Botanic Garden Sydney (RBGS) is a world-renowned botanical institution that hosts over 5 million visitors annually and conserves over 30,000 plant specimens from Australia and around the world. The RBGS has recently developed and began implementing an irrigation master plan that aims to improve the water efficiency, sustainability, and quality of the irrigation system across the 30-hectare site. The irrigation master plan is based on a comprehensive assessment of the existing irrigation infrastructure, soil conditions, plant water requirements, and climate data. The irrigation master plan provides a strategic framework for the design, installation, operation, and maintenance of the irrigation system, as well as the monitoring and evaluation of its performance and impact on the living collections. The RBGS is a verdant haven of biodiversity and needs to be resilient and adaptive in the face of our planet's shifting climate. Water scarcity and the public perception of how water is used place enormous pressure on the RBGS. We need to be at the forefront of innovation and sustainable technology. The project's primary focus is on implementing a state-of-the-art irrigation central controller system, which will provide 20–30% water savings in comparison to the old system. The secondary focus is continued implementation of the Irrigation master plan which ensures a sustainable future driving generational change and collections resilience. This will also include exploration of opportunities to partner with the City of Sydney and WaterNSW to investigate options that utilise different water sources, suitable to support the Botanic Garden long into the future. The irrigation master plan contributes to the RBGS's vision of being a world-leading sustainable botanical institution that inspires, educates, and engages people with plants and nature.