

Atlantis®
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University of Melbourne

Project Location

Melbourne, VIC, Australia

Atlantis Application

Stormwater Harvesting

Project Overview

Completed at the end of 2021, the University of Melbourne project incorporated a large-capacity underground rainwater harvesting system to reduce reliance on municipal water for irrigation, toilet flushing and other non-potable applications.

Delivered in partnership with Cooke & Dowsett, the system comprises 1,566 Atlantis Flo-Vault® modules forming a 246 KL rainwater tank. The underground installation incorporated Atlantis geotextile fabric and a waterproof membrane, with the Flo-Vault® modules assembled on site.

Technical Summary

Project	University of Melbourne
Location	Melbourne, VIC, Australia
Application	Stormwater Harvesting
Completion	End of 2021
Size	246 KL
Surface Use	--
Atlantis System	Flo-Vault®

Design Challenge

The University of Melbourne required a large-capacity rainwater harvesting system to support its water conservation objectives. The system needed to capture and store rainwater for reuse across several non-potable applications, specifically including irrigation and toilet flushing, thereby reducing dependence on municipal water supply.

Providing 246 KL of underground storage required the integration of a substantial modular tank within the university campus. The installation also needed to incorporate the required tank containment layers and allow 1,566 individual Flo-Vault® modules to be assembled on site to form the completed storage structure.

01 Provide 246 KL of underground rainwater storage.

02 Incorporate 1,566 Atlantis Flo-Vault® modules.

03 Harvest rainwater for irrigation, toilet flushing and other non-potable applications.

04 Reduce reliance on the municipal water supply.

05 Integrate the large-capacity harvesting system within the University of Melbourne campus.

06 Incorporate geotextile fabric and a waterproof membrane within the underground tank installation.

Solution

The underground harvesting tank was constructed using 1,566 Atlantis Flo-Vault® modules, providing a total rainwater storage capacity of 246 KL. The modular tank was configured to store harvested rainwater for subsequent non-potable use across the university.

The designated tank area was excavated and prepared before installation of the Atlantis geotextile fabric and Atlantis Waterproof Membrane (liner). The 1,566 Flo-Vault® modules were then assembled on site to form the underground storage structure.

The resulting system provides stored rainwater for irrigation, toilet flushing and other non-potable applications, reducing the university's reliance on external water sources.

Benefits

- 246 KL of underground rainwater storage capacity provided on campus.
- 1,566 Flo-Vault® modules incorporated into the harvesting tank.
- Harvested rainwater available for irrigation, toilet flushing and other non-potable uses.
- Reduced reliance on municipal and external water sources.
- Modular system assembled on site to form the underground tank.
- Geotextile fabric and waterproof membrane incorporated into the tank installation.

Considerations

Construction commenced with excavation of the designated area within the university campus to accommodate the underground rainwater tank. Atlantis geotextile fabric was installed within the prepared excavation, followed by the Atlantis Waterproof Membrane (liner).

The 1,566 Flo-Vault® modules were assembled on site, forming the modular structure required for the 246 KL underground storage system.

Project Outcomes

- 246 KL underground rainwater harvesting capacity delivered at the University of Melbourne.
- 1,566 Atlantis Flo-Vault® modules incorporated into the storage system.
- Rainwater storage provided for irrigation, toilet flushing and other non-potable applications.
- Reduced reliance on municipal water supply through rainwater harvesting and reuse.
- Flo-Vault® modules assembled on site as part of the underground tank installation.
- Geotextile fabric and waterproof membrane incorporated into the tank construction.

The project combined a 246 KL storage requirement with a 1,566-module underground configuration, providing the university with a dedicated rainwater harvesting system for non-potable reuse. On-site assembly of the Flo-Vault® modules, together with the geotextile and waterproof membrane installation, formed the underground storage system required to support irrigation, toilet flushing and other non-potable applications.

Did You Know?

The University of Melbourne rainwater harvesting tank combines 1,566 Atlantis Flo-Vault® modules to provide 246 KL of underground storage capacity.

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Thank You For Your Attention



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