

Atlantis®
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Bold Park Aquatic Centre

Project Location
Floreat, WA
Australia

Atlantis Application

Vertical Garden

Project Overview

The Bold Park Aquatic Centre project incorporated an indoor green wall within the facility's cafeteria at 215 The Boulevard, Floreat, Western Australia. Developed for the Town of Cambridge, with Doric Constructions as head contractor, the vertical garden was designed as an integrated architectural and landscape feature within the indoor cafeteria environment.

The green wall was designed at 10.2 m long × 4.08 m high, providing approximately 41.6 m² of vertical planting area, and was suspended 1,000 mm above finished floor level. The installation was positioned within an inset precast panel bordered by stonework and required the irrigation and drainage infrastructure to be concealed from view within the cafeteria.

The system incorporated 50 Atlantis Gro-Wall® units and approximately 900 plants, supported by a three-zone irrigation system, drainage collection and dedicated lighting. Plant arrangement and growing conditions also required consideration of varying solar exposure across the indoor wall.

Technical Summary

Project	Bold Park Aquatic Centre
Location	215 The Boulevard, Floreat, WA 6014
Application	Vertical Garden
Completion	September 2015
Size	41.6 m²
Surface Use	Indoor Vertical Garden
Atlantis System	Gro-Wall® Slim Pro

Design Challenge

The green wall needed to form a substantial planted feature within the indoor cafeteria while being carefully integrated with the surrounding architectural finishes. At 10.2 m long and 4.08 m high, the approximately 41.6 m² installation was suspended 1,000 mm above finished floor level and located within an inset precast panel bordered by stonework.

The design also required the wall's operational infrastructure to remain visually unobtrusive. Irrigation pipes and drip lines were to be concealed within the green wall, while drainage pipework was to remain hidden behind the planted system. Water supply, drainage collection and overflow therefore needed to be coordinated with the surrounding building services rather than treated as independent landscape elements.

Planting conditions introduced an additional horticultural constraint. The western aspect exposed parts of the wall to direct evening sunlight, while north-facing glazing provided high levels of filtered light. Plant positioning therefore needed to respond not only to the desired visual pattern but also to differences in light exposure, water requirements, growth habits and shading created by adjacent foliage.

01 Integrate an approximately 41.6 m² indoor vertical garden within the cafeteria.

02 Suspend the green wall 1,000 mm above finished floor level within the architectural wall recess.

03 Conceal irrigation and drainage infrastructure from the occupied cafeteria space.

04 Provide individual drip feeding to each plant.

05 Integrate a three-zone irrigation system with proprietary in-line drippers.

Solution

The vertical garden was designed around the Atlantis® Gro-Wall® modular system, with 50 Gro-Wall® units providing the structure for approximately 900 plants. The modular grid allowed the planting to be arranged in bands and patterns while enabling individual plant positions to respond to horticultural requirements.

A three-zone irrigation system with proprietary in-line drippers was integrated into the wall. Irrigation pipes and drip lines were concealed within the green wall, while drainage pipework was concealed behind the garden. Collection gutters connected through 50 mm PVC drainage to the designated outlet, with overflow directed to the stormwater outlet.

The planting system incorporated a soil-less, open, free-draining growing medium to provide an appropriate root-zone environment. Plant arrangement was coordinated with differences in light exposure, water requirements, growth habits and foliage shading across the wall.

Benefits

- Approximately 41.6 m² of indoor vertical planting integrated within the cafeteria.
- 50 Gro-Wall® units providing capacity for approximately 900 plants.
- Irrigation pipes, drip lines and drainage infrastructure integrated with the wall and concealed from the occupied cafeteria space.
- Three-zone irrigation system allowing irrigation to be managed across the planted wall.
- Plant positioning able to respond to variations in light exposure, water requirements and growth characteristics.
- Soil-less, free-draining growing media incorporated to provide the required root-zone environment.

Considerations

The Gro-Wall® units were designed to be assembled on site and fixed to the precast panel wall. Installation also required coordination with the building works for the drainage provision, irrigation equipment and lighting.

Water was supplied from the town mains via a ¾-inch ball valve, while the collection gutter drained through 50 mm PVC pipework passing through the precast and brick walls to an outlet in the cleaners' room. The associated

plumbing works needed to be coordinated with existing services during wall construction.

The installation sequence included assembly and fixing of the Gro-Wall® system, installation and testing of the three-zone irrigation system, placement of growing media and plants, controller programming, and maintenance training and handover.

Project Outcomes

- Approximately 41.6 m² vertical garden designed for the Bold Park Aquatic Centre cafeteria.
- 50 Atlantis® Gro-Wall® units incorporated into the vertical garden design.
- Approximately 900 plants accommodated within the system.
- Green wall suspended 1,000 mm above finished floor level within the architectural wall recess.
- Three-zone irrigation system integrated with proprietary in-line drippers.
- Irrigation and drainage infrastructure designed to remain concealed from the cafeteria space.

The key technical consideration was the coordination of a large indoor planted wall with the architectural envelope, building services and variable internal growing conditions. The approximately 41.6 m² Gro-Wall® installation required irrigation and drainage infrastructure to be concealed within and behind the wall while plant placement responded to differences in direct and filtered light, water demand, growth habit and foliage shading.

Did You Know?

The Bold Park Aquatic Centre green wall was designed to accommodate approximately 900 plants across 50 Gro-Wall® units within a 10.2 m × 4.08 m indoor wall.


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Thank You For Your Attention



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