

Atlantis®
GREEN CITIES FOR LIFE

King George V Recreation Centre

Project Location

The Rocks, Sydney, NSW, Australia

Atlantis Application

Synthetic Turf Sub-drainage

Project Overview

The outdoor football court at King George V Recreation Centre in The Rocks required refurbishment after deterioration of the existing playing surface and failure of the drainage system to the street resulted in water pooling on the court. The project involved replacement of the existing synthetic turf with a new FIFA 2-star standard synthetic grass surface and upgrading the subsurface drainage arrangement.

Following removal of the existing synthetic surface, the drainage pits and pipework were cleaned. Atlantis® Flo-Cell® 30 mm drainage cells were then installed over a waterproof membrane on the existing asphalt substrate to provide drainage directly beneath the new permeable playing-surface build-up.

Technical Summary

Project	King George V Recreation Centre
Location	The Rocks, Sydney, NSW
Application	Synthetic Turf Sub-drainage
Completion	November 2017
Size	Not specified
Surface Use	Synthetic Football Field
Atlantis System	Flo-Cell® 30mm

Design Challenge

The existing outdoor football court required a drainage upgrade as part of the replacement of its deteriorated synthetic playing surface.

01 Address water pooling caused by failure of the existing drainage system to the street.

02 Provide rapid drainage beneath the replacement synthetic grass playing surface.

03 Integrate the new drainage layer with the existing asphalt court substrate.

04 Work with the existing drainage pits and pipework following cleaning of the drainage network.

05 Provide drainage beneath a permeable shock pad and synthetic turf build-up.

06 Support the upgrade to a new FIFA 2-star standard synthetic grass playing surface.

Solution

The existing synthetic grass was removed and the existing drainage pits and pipework were cleaned to restore the drainage pathway from the court.

The asphalt substrate was then cleaned and covered with a waterproof membrane. Atlantis Flo-Cell® 30 mm drainage cells were installed directly above the membrane. Although Flo-Cell® 20 mm had initially been considered, Sydney City Council selected the 30 mm system due to its greater flow properties.

A water-permeable shock pad was installed directly over the Flo-Cell® drainage layer. The playing area was finished with Enviroplay Hybrid 36 artificial grass incorporating sand and SBR rubber crumb infill, while Enviroplay Hybrid 60 artificial grass with sand and SBR infill was used in the non-playing areas.

Benefits

- Subsurface drainage provided directly beneath the synthetic playing surface.
- Flo-Cell® 30 mm selected for its greater flow properties compared with the initially considered 20 mm drainage cell.
- Existing asphalt substrate retained as part of the upgraded court build-up.
- Existing drainage pits and pipework cleaned and incorporated into the refurbishment.
- Water-permeable shock pad maintained drainage through the playing-surface build-up.
- Improved drainage reduced the water-pooling issue affecting the existing court.
- Upgraded drainage supported increased year-round use of the facility.

Considerations

The documented system build-up comprised:

- Existing asphalt substrate, cleaned before installation.
- Waterproof membrane over the asphalt.
- Atlantis® Flo-Cell® 30 mm drainage cell.
- Water-permeable shock pad.
- Enviroplay Hybrid 36 artificial grass with sand and SBR infill to the playing area.
- Enviroplay Hybrid 60 artificial grass with sand and SBR infill to non-playing areas.
- Existing drainage pits and pipework cleaned as part of the works.

Project Outcomes

- Existing synthetic turf was removed and replaced as part of the court refurbishment.
- Existing drainage pits and pipework were cleaned.
- Flo-Cell® 30 mm was selected in place of the initially considered Flo-Cell® 20 mm due to its greater flow properties.
- The drainage cells were installed above a waterproof membrane over the existing asphalt.
- A permeable shock pad separated the drainage layer from the artificial grass playing surface.
- Different artificial grass specifications were used for playing and non-playing areas.
- The completed refurbishment improved drainage and the playing surface, allowing increased use throughout the year.

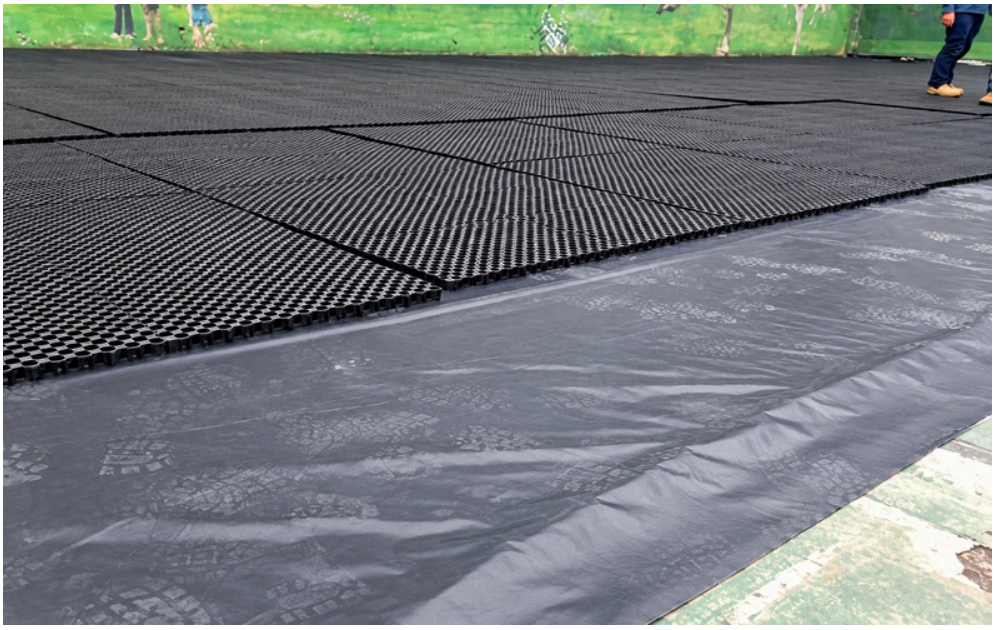
The completed system provided a dedicated drainage layer within the refurbished court build-up while retaining and integrating with the existing asphalt substrate and drainage infrastructure.

Did You Know?

Flo-Cell® 20 mm was initially considered for the project, but Flo-Cell® 30 mm was ultimately selected.

Sydney City Council selected the 30 mm drainage cell specifically because of its greater flow properties, providing the drainage layer beneath the new synthetic playing surface.













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Thank You For Your Attention



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