

Atlantis®
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Westfield Sports School

Project Location

Fairfield West, NSW, Australia

Atlantis Application

Synthetic Turf Sub-drainage

Project Overview

Westfield Sports School required a subsurface drainage system beneath a new synthetic football field. The originally proposed drainage build-up consisted of 150 mm of gravel and 50 mm of sand, with no guaranteed drainage flow.

Atlantis Flo-Cell® 30 mm Drainage Cell was selected as the subsurface drainage layer across the 4,500 m² field. The documented system provided a drainage flow of 240 L/min at a 1% gradient while reducing the required cut-and-fill depth by 170 mm. Installation progressed at approximately 1,500 m² per day, allowing the synthetic grass system to be installed immediately afterwards.

Technical Summary

Project	Westfield Sports School
Location	Fairfield West, NSW, Australia
Application	Synthetic Turf Sub-drainage
Completion	April 2010
Size	4,500 m²
Surface Use	Synthetic Football Field
Atlantis System	Flo-Cell® 30mm

Design Challenge

The football field required a subsurface drainage layer beneath the synthetic playing surface. The initial specification proposed a 200 mm combined gravel-and-sand drainage profile, but this configuration did not provide a guaranteed drainage flow and required greater excavation and fill depth.

01 Provide subsurface drainage beneath the synthetic football field.

02 Achieve a defined drainage flow across the field.

03 Reduce the depth required for the subsurface drainage build-up.

04 Reduce the associated cut-and-fill requirement.

05 Cover the full 4,500 m² playing-field area with a continuous drainage layer.

06 Allow installation of the synthetic grass system to proceed immediately following completion of the drainage layer.

Solution

Atlantis Flo-Cell® 30 mm Drainage Cell was installed across the 4,500 m² football field as the subsurface drainage layer.

The system replaced the originally proposed 150 mm gravel and 50 mm sand drainage build-up. The documented Drainage Cell configuration provided a drainage flow of 240 L/min at a 1% gradient and reduced the required cut-and-fill depth by 170 mm.

Benefits

- Defined drainage flow of 240 L/min at a 1% gradient.
- 170 mm reduction in cut-and-fill depth compared with the originally proposed drainage build-up.
- 30 mm cellular drainage layer used in place of 150 mm gravel plus 50 mm sand.
- Continuous subsurface drainage provided across 4,500 m².
- Installation rate of approximately 1,500 m² per day.
- Synthetic grass installation able to proceed immediately after completion of the Drainage Cell layer.

Considerations

The drainage system formed part of the subsurface build-up beneath the synthetic football surface. The documented design required the Drainage Cell to operate at a 1% gradient to achieve the stated drainage flow.

Installation sequencing was also significant to the project. Ford Civil installed approximately 1,500 m² of Drainage Cell per day, enabling the synthetic grass system to follow immediately after the drainage layer was completed.

Project Outcomes

- 4,500 m² of Atlantis® 30 mm Drainage Cell installed beneath the football field.
- Documented drainage flow of 240 L/min at a 1% gradient.
- Original 150 mm gravel and 50 mm sand drainage proposal replaced by a 30 mm cellular drainage layer.
- Cut-and-fill requirement reduced by 170 mm.
- Drainage Cell installation progressed at approximately 1,500 m² per day.
- Synthetic grass installation followed immediately after completion of the drainage layer.
- Completed field provided a synthetic football playing surface over the subsurface drainage system.

The project used a thin-profile cellular drainage layer to achieve the documented drainage requirement while substantially reducing the depth of the originally proposed subsurface drainage build-up.

Did You Know?

The Atlantis Flo-Cell® 30mm drainage solution reduced the proposed subsurface drainage depth by 170 mm.

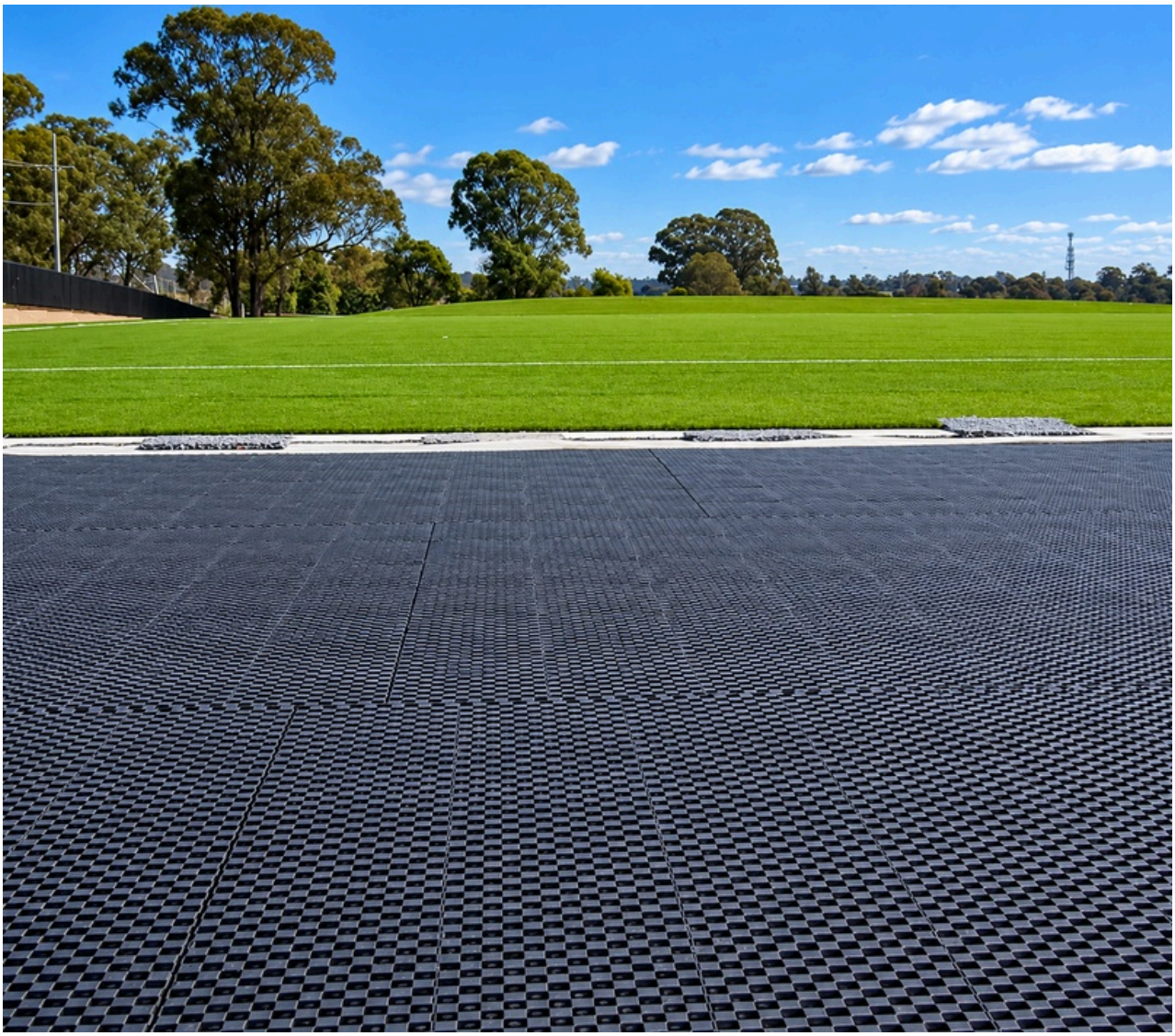
The original design proposed 150 mm of gravel plus 50 mm of sand. Atlantis® 30 mm Drainage Cell was used instead, providing a documented drainage flow of 240 L/min at a 1% gradient while reducing the required cut and fill.











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Thank You For Your Attention



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