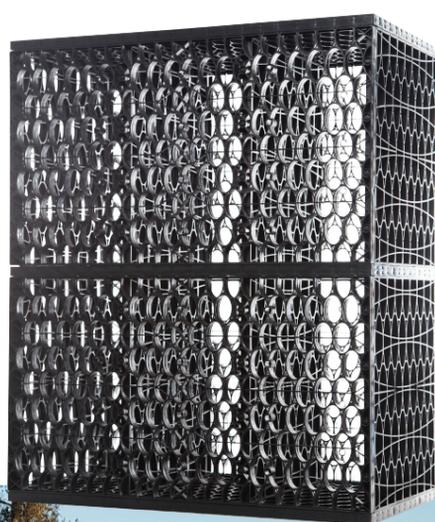


CASE STUDY ESCOTTS ROAD DEVELOPMENT AUCKLAND

RAINSMART® STORMWATER SYSTEM



CONTRACTOR	Twomey Construction
ENGINEER	CivilPlan Consultants Limited
CLIENT	Hughes Development Limited
LOCATION	Escotts Road, Tuakau, Auckland
PRODUCTS USED	RainSmart modules with impermeable liner and linear access

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PROJECT

The Riverside Grove, Tuakau, is a master planned residential development offering new sections ranging from 500m² to 2000m² with park, river and grove views. It includes native New Zealand vegetation due to an intensive replanting program that is being carried out as part of the project. This residential subdivision was required to store/retain a specific volume of water to meet the council consent requirements.

DESIGN

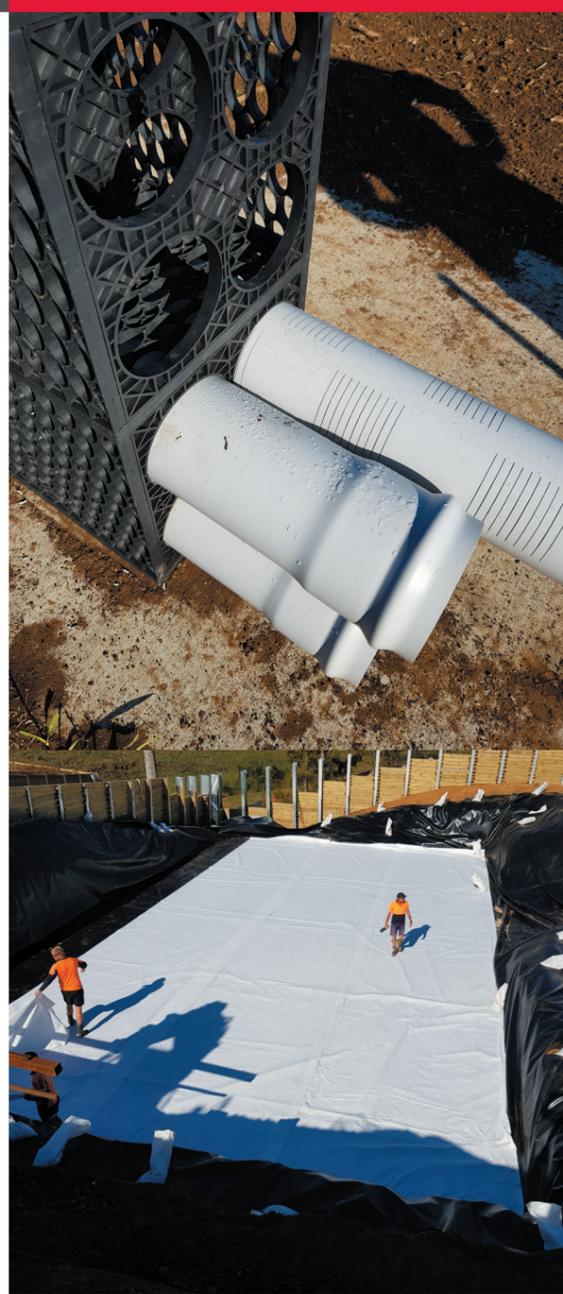
The RainSmart System was chosen as the preferred method of stormwater detention over one of the first options considered, which was to build a large pond that was not going to provide the usable space the residents needed. The experienced project engineers selected the RainSmart StormWater System as the alternative, utilising the Penta modules which only occupied an excavated area of 263m² to store 500m³ of stormwater and minimised the footprint. The linear access was included in the design to allow stormwater to deposit most of the sediments in the inlet and outlet manhole, while facilitating the system cleaning and maintenance. The impermeable liner was a critical component of the design due to a steel UB and timber rail retaining wall holding the southern-eastern part of the RainSmart system to prevent any leakage.

INSTALLATION

Twomey Construction were able to assemble the RainSmart Stormwater modules in the system excavation which prevented double handling of the modules and aided with an efficient excavation of the system. Overall, the installation was a success, with the stormwater system erected and completed in approximately 2 weeks.

The products used provided the following benefits to the project:

- Created usable space for landscape areas
- Maximised water storage capacity within the excavation due to the 95% void ratio
- Slowed down the release of water, which prevents erosion and mitigates the effects of flooding
- The RainSmart Stormwater modules were supplied flat-packed to minimise freight costs in delivering the system to site



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