

## Polypipe Bluestream - Blue Roof Technologies

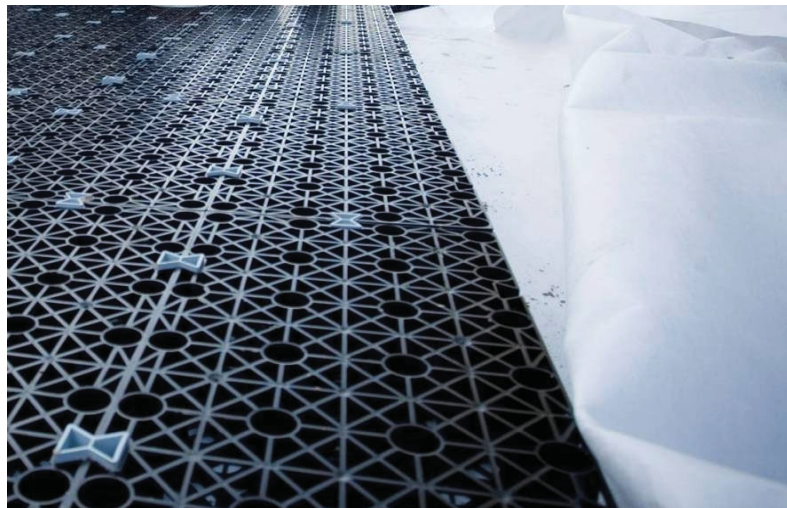
Every building project is unique and poses different water management and conservation challenges.

Traditionally, rainwater collection systems have been designed to collect and convey water away from the roof and podium levels as quickly as possible with minimal control of debris and pollutants.

The Polypipe Bluestream rainwater harvesting system offers an alternative philosophy that allows building designers to utilise these areas to integrate effective water management at source.



Figure 1 – Illustration of Polypipe Bluestream as both Rooftop and Podium Deck Rainwater Management Solutions



Polypipe Bluestream uses source control techniques and incorporates a lightweight, structural raft to capture, treat and attenuate rainwater. Harvested water can then be distributed back into the building using either gravity or pressurised water pipework systems for re-use in non potable applications.

Utilising Permavoid shallow geo-cellular cells it is possible to design rainwater source control into most projects either as a 'stand alone' system or as part of a complete water management solution.

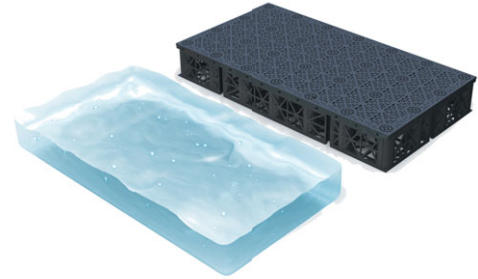
Incorporating silt interception systems at source and through the application of specialist separation and filtration geotextiles, it is possible to manage the ingress of silts and oils into the collected water system, therefore allowing rainwater to be stored locally in shallow attenuation voids and reducing the requirement for large below ground attenuation systems.

# TERRAIN

Technical Bulletin No.1 (2013)

**Polypipe Bluestream is a flexible solution that has many benefits:**

- 95% void ratio
- High compressive and tensile strength to resist dynamic loadings in excess of 70 tonnes
- Acts as an effective sub-base replacement system
- Two sizes available, 85mm and 150mm deep geo-cellular units
- Offers shallow storage and conveyance of rainwater at source
- Silts and debris are prevented from entering the water collection system at source
- Oils (hydrocarbons) are prevented from entering the water collection system and degraded naturally
- As part of a holistic approach to water management, Polypipe Bluestream can help reduce pipework sizes and downstream attenuation storage requirements
- Can improve the thermal insulation properties of the building
- Creates good acoustic properties
- Helps to maintain the longevity of building weathering finishes
- Shallow roof and podium attenuation systems can be integrated with soft landscaping irrigation systems.
- Lightweight system that is quick and easy to install allowing for reduced labour costs
- 100% recyclable materials
- Reduction in mains water costs depending on application
- Reduction in transportation requirements - when compared to a conventional aggregate subbase there is a potential 21:1 ratio reduction in vehicle movements



**Polypipe Bluestream can provide a consistent subbase platform and passive irrigation system for integration with soft landscape areas.**

