

## Polystorm Modular Cell

Attenuation & Soakaway Solutions

## Climate Change

Average UK temperatures are expected to rise by up to 2 - 3.5°C by 2080, resulting in a dramatic change in the seasonal distribution of rainfall and subsequent weather patterns. The flooding witnessed during recent years is a clear indication that climate change is causing more frequent and extreme weather events and innovative solutions are required to cope with increased pressure on our existing drainage and water management networks.

## Legislation to address the problems

Recognition of the impact of climate change has resulted in new regulations and updated guidance for surface water drainage and flood risk. In 2002, the Government revised approved document part H of the building regulations, with updated planning guidance notes for PPS:25 Flood Risk and Assessment following in recent years.

Sustainable Urban Drainage Systems (SUDS) are an alternative to the traditional approach of collecting stormwater in pipes and discharging it into treatment works or watercourse.



## The Modular Solution to Sustainable Urban Drainage Systems

The Polystorm range of water storage cells are structurally strong, individual modular cells which can be built up to form a structure of any shape or size. The structure can receive rainwater collected from the roof gutter system or surface drains and either releases the water within set discharge limits (attenuation) or, where soil conditions allow, be wrapped in a permeable geotextile and slowly release the water back into the surrounding soil (soakaway).

Every site is different, different ground conditions, planning requirements and design considerations will all have an influence on the sustainable drainage system selected. Polystorm products are flexible enough for any situation, whether soakaway or attenuation systems, trafficked or non-trafficked, deep or shallow excavation, there is a design configuration to suit every site constraint.



### Polystorm Xtra

Designed for use in deeper burial depths and heavily trafficked installations with a load bearing capacity of 80 tonnes.



### Polystorm

Designed for use in light trafficked and loaded applications with a load bearing capacity of 40 tonnes.



### Polystorm Lite

Designed for use in landscaped, pedestrian or other non-loaded applications with a load bearing capacity of 20 tonnes.

## Value Engineered Structures

Polypipe Water Management Solutions are the only manufacturer able to offer value engineered structures to create a cost effective bespoke solution.

Our team of engineers are able to design Polystorm Lite, Polystorm and Polystorm Xtra as a hybrid system, creating a unique and bespoke solution based on the site constraints and requirements of any given project.

To request a copy of our technical manual call: **01709 770000**

or visit: **[www.polypipewms.com](http://www.polypipewms.com)**



# The Benefits of Polystorm

## 95% void ratio

- Providing greater water storage capacity and reduced excavation and disposal costs.

## Modular units

- Allow flexibility of shape – ideal for shallow excavation systems, narrow strips or use in restricted areas.

## Lightweight yet robust

- Excellent health and safety and installation benefits.

## Cost effective

- Especially when used as a hybrid, value engineered system.

## Recyclable

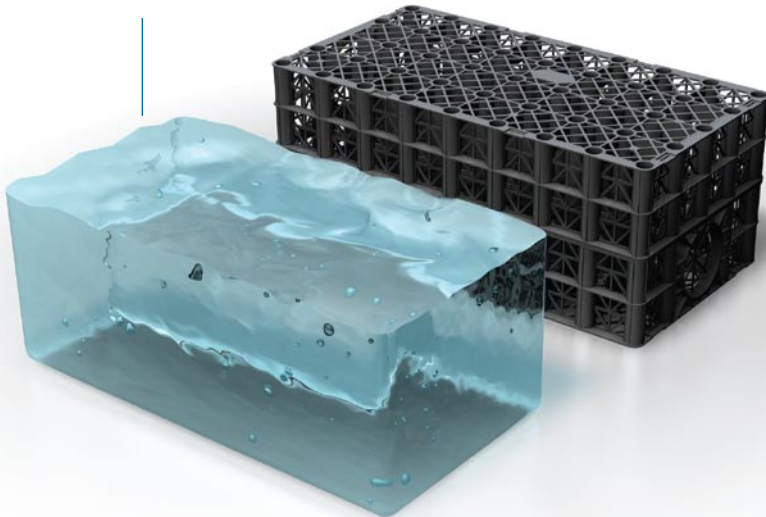
- 100% recyclable at the end of its useful life.

## Range

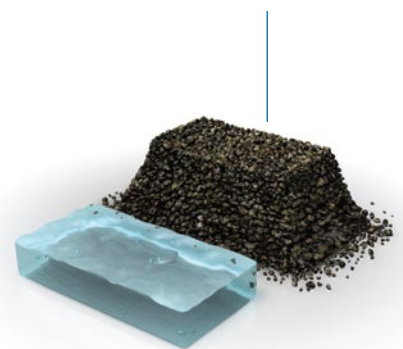
- Spans from 20 tonnes per square metre load bearing capacity up to a maximum of 80 tonnes per square metre load bearing capacity.
- The range can be designed for non-trafficked, trafficked or heavy trafficked applications.
- Suitable for both Attenuation and Soakaway systems.
- 50 year design life.
- BBA Approved.



95% Void Ratio



30% Void Ratio



Only a 30% void ratio achieved with traditional rubble filled soakaways compared with a 95% void ratio with Polystorm.

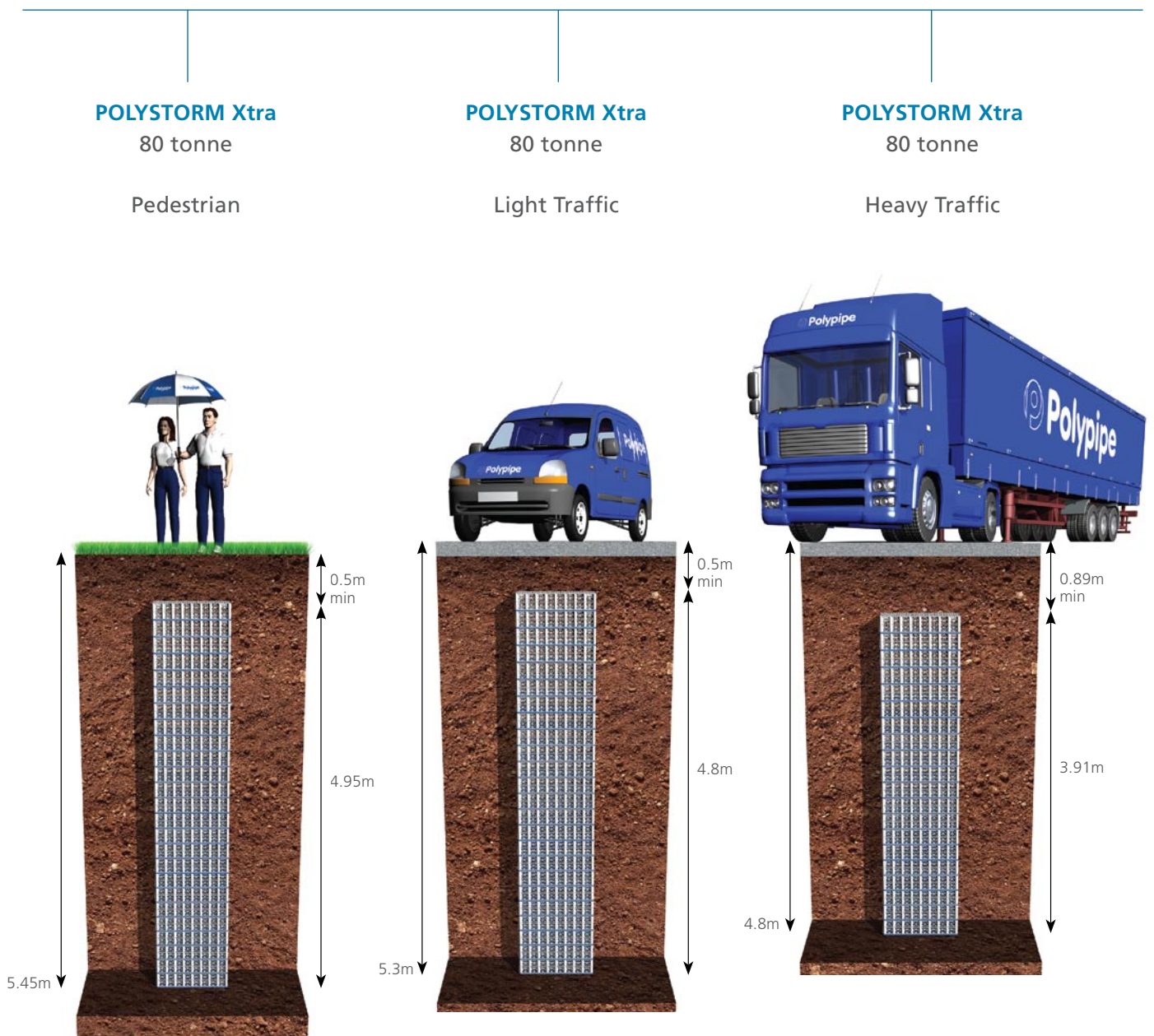
## Technical Specification Overview

Unit Type	Polystorm Lite	Polystorm	Polystorm Xtra
Dimensions	1m x 0.5m x 0.4m high	1m x 0.5m x 0.4m high	1m x 0.5m x 0.21m high
Unit Weight	7kgs	9kgs	6kgs
Loading	Max 20 tonnes per sq metre	Max 40 tonnes per sq metre	Max 80 tonnes per sq metre
Void Ratio	95%	95%	94%

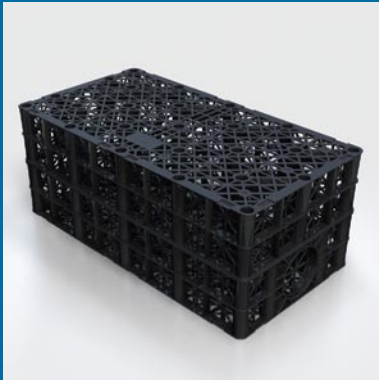
# Burial depths of the Polystorm range

The following illustrations indicate the appropriate use of Polystorm modular cell systems. When integrated as a hybrid structure, a complete value engineered solution can be adopted for any given project.

## Polystorm Xtra



Note: Minimum cover and burial depths may vary depending on load and ground conditions. Please contact Polypipe WMS for further information. All grades of Polystorm units may be used in situations outside of those recommended above, through the use of appropriate protective measures, designed to reduce the imposed loading on the proposed Polystorm structures.



Polystorm Lite



Polystorm



Polystorm Xtra

## Polystorm Lite and Polystorm

### POLYSTORM Lite

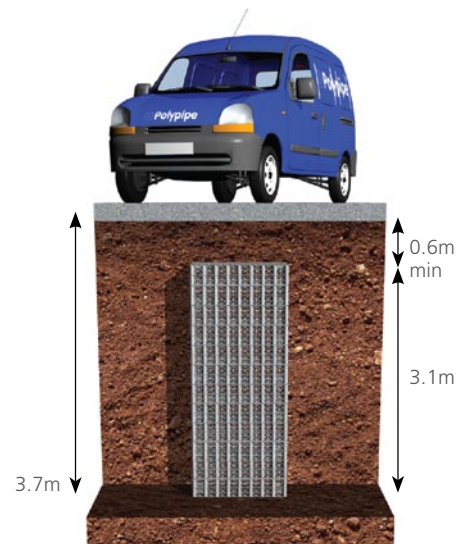
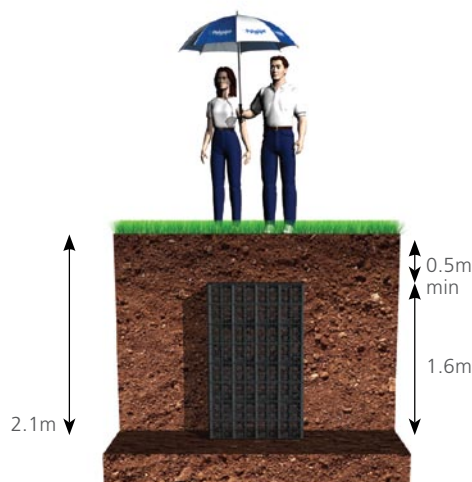
20 tonne

Pedestrian

### POLYSTORM

40 tonne

Light Traffic



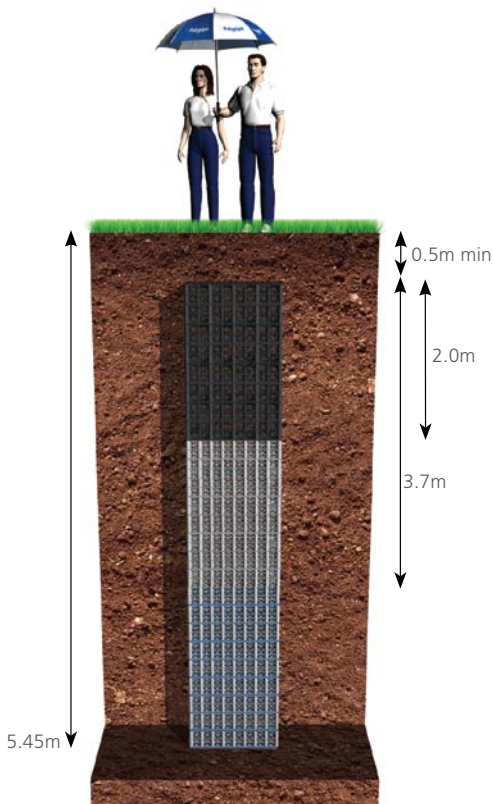
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# Hybrid Solution

## VALUE ENGINEERED STRUCTURES

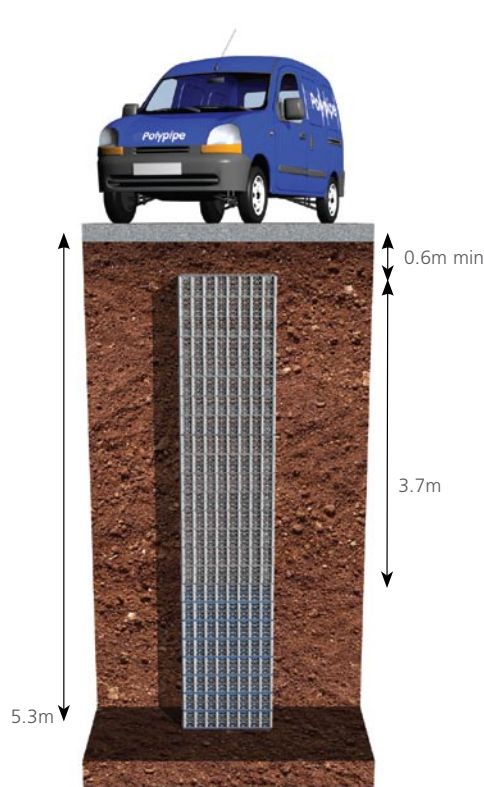
**POLYSTORM LITE  
POLYSTORM  
POLYSTORM XTRA**  
20 tonne

Pedestrian



**POLYSTORM  
POLYSTORM XTRA**  
40 tonne

Light Traffic



## Hybrid Solutions

Polypipe WMS are the only manufacturer who can offer a complete value engineered hybrid system utilising Polystorm Lite, Polystorm or Polystorm Xtra cells to create a bespoke solution based on the load requirements and burial depths for any given project.



For more information on Polystorm or any of our holistic water management solutions call Polypipe WMS on: **01709 770000** or visit: **[www.polypipewms.com](http://www.polypipewms.com)**

# Polystorm Modular Cells



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