An 8 step guide to a total Polystorm system
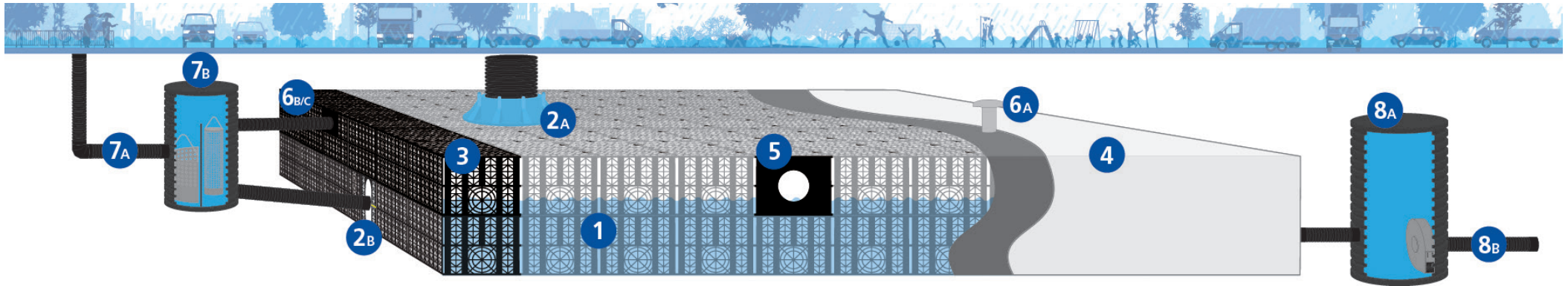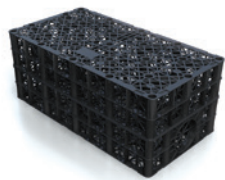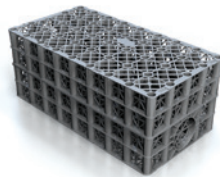
1 Select modular cell

Polystorm Lite
Product code: PSM2
Compressive strength: 20 tonne/m^2

Landscaped/pedestrian

Polystorm Lite has been specifically designed for non-trafficked, landscaped and pedestrian applications at lower depths.

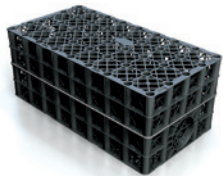**Polystorm**
Product code: PSM1
Compressive strength: 44 tonne/m^2

Trafficked

The original Polystorm cell made of virgin material for trafficked and loaded applications at greater depths.
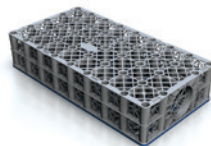
Polystorm-R
Product code: PSM1A
Compressive strength: 61 tonne/m^2

Trafficked

The standard Polystorm cell for trafficked and loaded applications at greater depths has the added benefits of a higher recycled material content.

Polystorm Xtra
Product code: PSM3
Compressive strength: 83 tonne/m^2

Heavy trafficked, deep or reduced cover

Designed for use in deeper burial depths for heavily trafficked applications making it suitable for use in very heavily trafficked areas, deep applications and where reduced cover is required.

2 Select access if maintenance and inspection is required
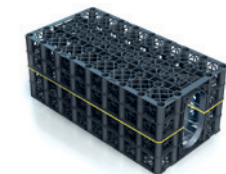
2A Polystorm Access

Polystorm Access provides a 1m x 0.5m vertical shaft within a Polystorm geocellular structure to enable surface access for remote camera inspection and maintenance activities such as flushing and rodding.

2B Polystorm Inspect

Polystorm Inspect provides a tunnel along the length of a fully installed Polystorm system to enable horizontal access for inspection and maintenance. It can also be used in conjunction with Polystorm Access.
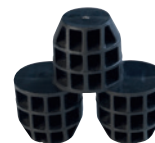
Connection accessories

- Shear Connectors
  Product code: PSMSC

- Clips
  Product code: PSMCLIP

- Brick Bond Connectors
  Product code: PSMBBSC

Polypipe

3 Select if treatment is required
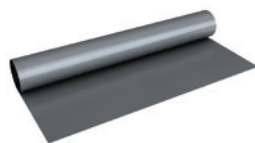
Permavoid Medium Duty with Biomat

Product code: PSM1BM
Comprising of a high strength, low density, oil treating geosynthetic floating mat for use with the Polystorm range of modular geocellular units.

For multi-stage oil interception the Permavoid Medium Duty with Biomat can be used in conjunction with Permachannel (linear treatment) or a pre-fabricated RIDGISTORMSeparate Weir and Baffle Chamber (point treatment).
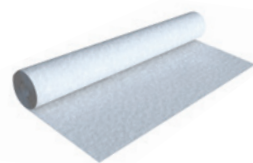
5 Pipe Connections

A flange adaptor is attached at both the inlet and outlet points to allow water to enter and exit the tank via connecting pipes.

Flange Adaptor to EN1401

Polystorm Cell with Drainage Flange Connection

5a. Polystorm cells with Flange Connections to Ridgidrain drainage pipes: PSMCRD225 (225mm), PSMCRD300 (300mm), PSMCRD375 (375mm)

5b. Polystorm Inspect cells with Flange Connections to Ridgidrain drainage pipes: PSM4CRD225 (225mm), PSMCRD300 (300mm)

5c.* Flange Adaptor to EN1401: PSMFA110 (110mm), PSMFA160 (160mm)

5d.* Flange Adaptor to Ridgidrain: PSMFA150 (150mm), PSMFA225 (225mm), PSMFA300 (300mm), PSMFA375 (375mm), PSMFA450 (450mm), PSMFA600 (600mm)

* Note: If PSM flanges PSMFA110-600 are used for lateral connections on to the side of a PSM tank, then Head loss will occur due to the lattice structure of a PSM unit (circa 48% void). This should be considered during hydraulic calculations.

4 Select wrap

Geomembrane for retention & attenuation

Product Code:PV13010
An impermeable membrane for wrapping around geocellular structures to form watertight tanks. This is then wrapped in a geotextile which protects the geomembrane during installation.

Permatex 300 for infiltration or protection

Product code: PV23006
A non-woven protective geotextile that can be used for soakaway infiltration solutions or to wrap a geocellular tank before a geomembrane is installed for added protection.

Permafilter Geotextile for infiltration

Product code: PV23002
This geotextile has been specifically designed to remove hydrocarbon pollution, treating the captured water before infiltrating it into the ground for treatment and infiltration.

Polypipe Soakaway Geotextile

Product code: PVTS1000
Polypipe Soakaway Geotextile is a UV stabilized, polypropylene geotextile, designed to complement our existing Polystorm geocellular system.
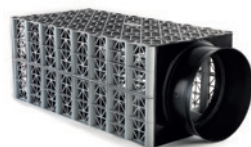
Polypipe Heavy Duty Soakaway Geotextile

Product code: PVTS2000
Polypipe HD Soakaway Geotextile is a heavy duty, UV stabilized, polypropylene geotextile, designed to complement our existing Polystorm geocellular system.
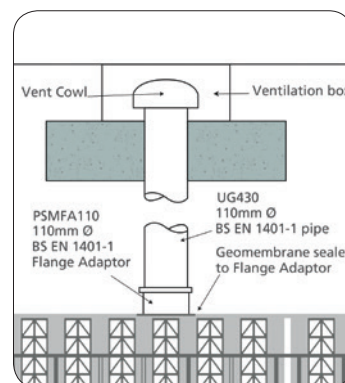
6 Venting

Every attenuation tank requires at least one vent to maximise hydraulic performance, reduce stress on encapsulating geomembranes and avoid stagnant water. This can be done by installing either a Vent Cowl or a connection pipe to vent air directly into an upstream chamber.

6A
Vent Cowl

Product code: SCV40
To vent air above ground.

Vent Cowl — Ventilation box

PSMFA110
110mm Ø
BS EN 1401-1
Flange Adaptor

UG430
110mm Ø
BS EN 1401 pipe

Geomembrane sealed to Flange Adaptor
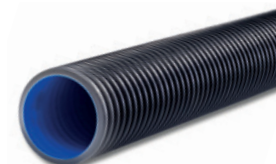
6B
BS EN1401-1 pipe

Product code: UG430
Joint to tank PSMFA110 with UG430.

6C
150mm Ridgidrain pipe

Product code: RD150X6PE
For ventilation into the upstream chamber. Joint to tank PSMFA150 with RD150X6PE.
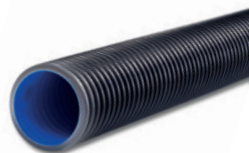
Polypipe

7 Associated upstream products

7A

Ridgidrain

Ridgidrain can be utilised within a Polystorm system by allowing captured surface water to enter the attenuation or infiltration tank.

7B

RIDGISTORMSeparate Chambers

RIDGISTORMSeparate Chambers are self-cleaning and prevent the ingress of debris, silt, organic and even other particles into the Polystorm structure, extending its useful life.

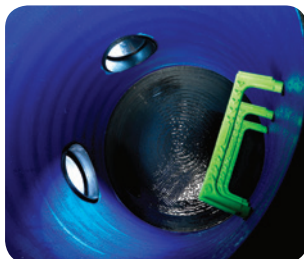### Silt Traps
Small diameter
(320-460mm)

Silt traps are available from the RIDGISTORMSeparate Silt Traps range.

Catchpits
Larger diameter
(450-3000mm)

Catchpits are available from the RIDGISTORMSeparate range.

Filter Chambers
Large diameter
(500-3000mm)

In addition to silt traps and catchpits, we also offer RIDGISTORMSeparate Filter Chambers with additional treatment features.
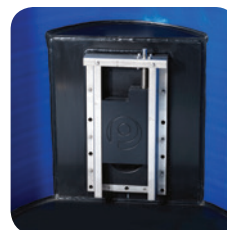
8 Associated downstream products

8A

RIDGISTORMCheck

A choice of Vortex or Orifice Plate Flow Control Chambers for precise control of site discharge rates.

RIDGISTORMControl

Pre-fabricated structured wall chambers which feature 'in-line' system components such as penstocks, gate valves or flap valves to control system flows and facilitate maintenance.
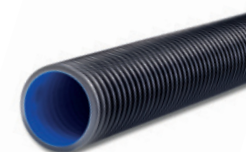
Penstock

Gate valve

Flap valve

8B

Ridgidrain

Ridgidrain can be utilised to drain away stored water from a Polystorm attenuation tank.

For full datasheets of products in the Polystorm system, please visit our website www.polypipe.com/toolbox

Polypipe