

EnviroCrate Installation Instructions

Pre-installation notes:

For attenuation systems: position the inflow and outflow connections level with the base of the EnviroCrate structure

For infiltration systems: position the inflow connection at the top of the EnviroCrate structure.

NB

For traffic with axle weight over 4 tonnes use a different EnviroCrate

For traffic with axle weight up to 4 tonnes the minimum cover required is 900mm & max cover of 1800mm

For traffic with axle weight up to 2 tonnes the minimum cover required is 700mm & max cover of 2000mm

For traffic with axle weight up to 1 tonnes the minimum cover required is 500mm & max cover of 2000mm

For pedestrian only the minimum cover required is 300mm & max cover of 2000mm

Installation Instructions:

1/. Excavate to the required length, width and depth and level the base. Make sure that the area is enough to allow plant access around sides to compact the backfill material (500mm minimum)

Ensure the base is smooth and level with no sharp protrusions. Check that the slopes are cut back to a safe angle or adequately supported and that a safe access is possible to allow site personnel to enter the excavation.

2/. Inspect the base for soft spots and if any are present, excavate and replace with compacted granular fill material.

3/. Lay 75mm sharp sand bedding layer to the base of the excavation and level off. Lay the geotextile protection fleece (180g non woven, needle punched type GT1900), ensuring a minimum 150mm overlap. This is required for both attenuation and infiltration tanks(soak-aways).

4/. Lay the geomembrane (if tank is for water storage) over the geotextile and sand bedding layer and up the sides of the excavation. Examine the geomembrane for damage and test all welds/ taped joints.

5/. Assemble the EnviroCrate units (1m x 1m x 0.4m High) and install within the void in accordance with the installation schedule for correct positioning. Special clips are provided to join the units to prevent displacement (single clips for adjacent units (3 per unit) and double clips for all multi layer applications (1per unit)).

6/. Complete the geotextile and/or geomembrane encapsulation to the sides and top of the installation, ensuring that the protection fleece (if attenuation) has sufficient to overlap by 150mm minimum. The geomembrane should be welded with double seams or taped using double sided tape and inspected for damage, testing the welds/joints as required.

7/. Connect the drainage connections to the installation using proprietary adaptors. Alternatively for infiltration systems use flange adaptors and attach them to the EnviroCrate units with self tapping screws. For attenuated systems, it is recommended that all connections and air vent installations are achieved using sealed drainage connections into a preformed socket using proprietary seals “top hats” available to order.

8/. Backfill around the installation with Type 1 or 2 sub base, compacting in 150mm layers, in accordance with the Specification for Highway Works.

9/. Place a 75mm sharp sand protection layer if required over the top of units and continue to backfill as follows:

For trafficked areas (car parks etc):

Type 1 or 2 sub base material compacted in 150mm layers in accordance with the Specification for Highway Works. Compaction equipment on top of the system not to exceed 2,300kg per sq.metre.

Backfill the sides with granular material (not cohesive)

For landscaped and non-trafficked areas:

Selected “as dug” material with a unit size no more than 75mm compacted to 90% maximum dry density. Compaction equipment on top of the system not to exceed 2,300kg per sq.metre.

10/. Finalise the pavement construction / landscaping over the EnviroCrate system.

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EnviroCrate 40-6

Loadbearing underground water storage/attenuation system

The Advantages of EnviroCrate

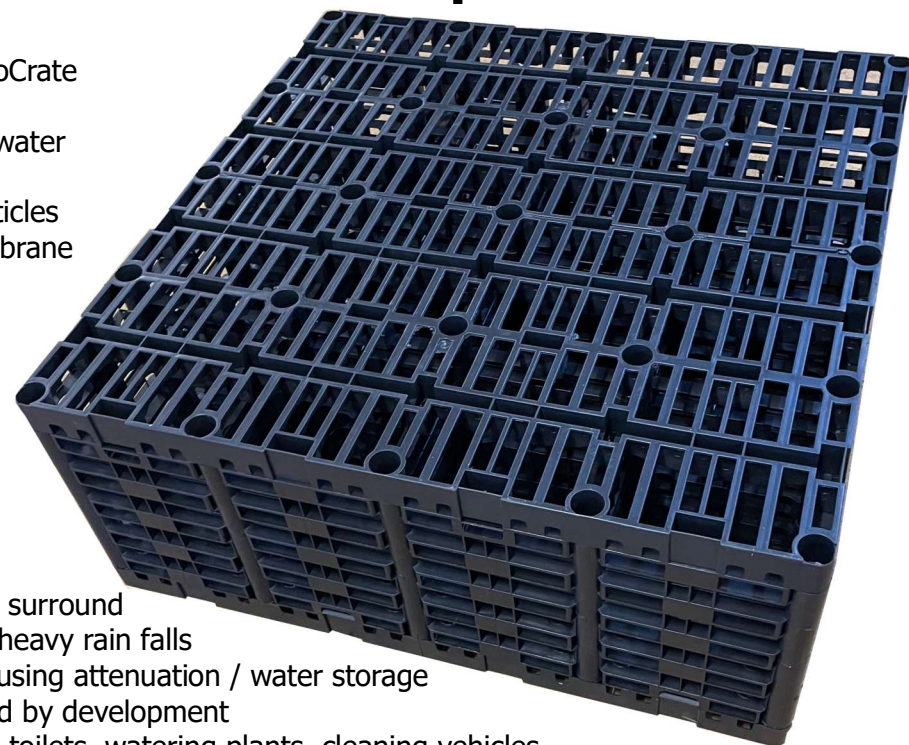
- # Assembled ready to install with up to 72M³ on a full load
- # Available in different configurations to meet specific load requirements
- # Other Pennine crates available up to 100tonnes/m² vertical
- # Simple and fast to install with 2.5 units per M³
- # Modular size of 1m x 1m plan x 400mm height ensures great versatility in both size and shape of storage
- # Lightweight units under 16kg removes need for mechanical handling

Ideal for Gardens & other Landscaped Areas

Uses

- # For permeable infiltration schemes, EnviroCrate units should be wrapped in a non-woven needle punched geotextile which allows water discharge through the subsurface whilst preventing the ingress of soil or sand particles
- # For water storage, impermeable geomembrane is used between the geotextile & the crate assembly

Inspectable systems available



Why use EnviroCrate?

- # Rainwater is "cleaned" by the geotextile surround
- # Decreases possibility of flooding during heavy rain falls
- # Allows development of difficult sites by using attenuation / water storage
- # Decreases environment problems caused by development
- # For water storage for subsequent use in toilets, watering plants, cleaning vehicles and other grey water usages
- # Prevents extreme peak flows to main drainage and water purification systems

Design

- # Following assessment of the required water to be stored (see CIRIA C522, R156 & BRE 365) the total number of EnviroCrate units can be calculated using 2.5 /m³ (1000 litres). Decide on the best configuration for the characteristics of the site in question and create the "box" accordingly using the length and width dimensions allowing for a 95% void ratio.
- # An EnviroCrate tank needs 75mm sharp sand beneath the tank to protect the geotextile. Also use sharp sand on top and around the sides (Depth of sand between 75 and 100mm depending on the size & sharpness of stones in the backfill)
- # Use a silt trap to minimise ingress into the tank and this should be inspected regularly. CCTV/back-jetting points are recommended.

PRODUCT DATA

	EnviroCrate40-6
NOMINAL SIZE	1000 x 1000 x 400mm
CAPACITY	400Litres(2.5 per cu.metre)
UNIT WEIGHT	15kg
VOID RATIO	96%
COMPRESSIVE STRENGTH	>150+KN/m ²
LATERAL STRENGTH	> 60+KN/m ²

Made from recycled polypropylene & can be recycled at end of use

MADE IN UK TO ISO9001 QUALITY STANDARDS

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