

INSTALLATION GUIDELINE

OSMORIA Geoclean

Open ditch, swale and infiltration basin

Removing hydrocarbons and PAHs from stormwater



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1. INTRODUCTION

OSMORIA™ Geoclean® aquatextile is a high-performance material designed for sustainable stormwater management. Installed directly in infiltration structures, OSMORIA Geoclean effectively filters hydrocarbons and PAHs from stormwater, protecting soil, surface water, and groundwater while preserving biodiversity.

The aquatextile is a durable, lightweight material that is easy to install, making it ideal for public works sites. However, to ensure optimal performance and long-term durability, it is essential to follow these guidelines:

- Comply with the owner's instructions regarding materials used in conjunction with the aquatextile.
- Follow the installation recommendations provided in this document.

2. BEFORE INSTALLATION

1. Layout plan

Before installation, create a layout plan to ensure optimal sizing of the rolls in relation to the structure. The plan should account for a minimum overlap of 30 cm on vertical surfaces. The aquatextile must extend at least 30 cm above the highest water level (50 cm for open infiltration basins). If the aquatextile is not covered immediately, additional length may be needed to anchor the strips at the top of the slope.

2. Storage of rolls prior to installation

Store the rolls on a flat, clean, and horizontal surface. Ensure the storage area is free of sharp objects or stones that could damage the rolls.

Ensure the packaging is intact and has not been compromised by weather or UV exposure.

Rolls can be stacked in pyramids up to three high, ensuring the base is wedged securely for stability. If the rolls will be stored for several weeks, cover them with a tarp to protect them from the elements. Keep the rolls in their original packaging until installation. If rolls are only partially used, rewrap them in the original packaging for future use.

3. Cutting the strips

Set up a designated cutting area outside the installation zone. Cut the strips to the required length based on the layout plan, and number them accordingly for easy installation.

3. INSTALLATION

1. Unrolling the aquatextile

Unroll the aquatextile strips on a smooth, level surface that is free of sharp objects or stones. Follow the layout plan to ensure proper overlaps. The blue side of the aquatextile should face up (towards the sky), while the white side should be in contact with the permeable soil or drainage layer. Water flows from the blue side to the white side.

If stakes are used, avoid placing them in areas where water infiltration occurs.



Figure 1: Laying aquatextile strips on the bottom and slopes of the structure, with soil blocks used for ballasting at the top

2. Piping through the aquatextile

In the event of raw water entering the infiltration structure via a pipe, it is strongly recommended that the OSMORIA Geoclean aquatextile should not be crossed, or at the very least that the crossing should be made above the highest water level in the structure.

If it is impossible to follow these recommendations, the aquatextile must be sealed off from the supply pipe with the utmost care, as follows, to prevent untreated water from passing along the pipe.

Cut the aquatextile crosswise at the point where the pipe passes through the aquatextile. This cut should be made with a cutter, taking the necessary safety precautions. The length of both cuts should be slightly smaller than the diameter of the pipe.

The pipe is then forced through this cut-out, from the outside (grey side) to the inside (blue side) of the structure. OSMORIA Geoclean deforms and applies with perfect contact all around the pipe. Secure the 4 aquatextile corners to the pipe with a stainless-steel clamp.



Figure 2: Cross-cutting of aquatextile for pipe passage



Figure 3: Pipe passes through aquatextile in the cut-out

Make sure the pipe is stable at the crossing point, so that it does not transfer stress to the aquatextile

3. Backfilling

Backfill carefully with the specified granular material. Machinery should not drive directly over the OSMORIA Geoclean aquatextile.

When covering slopes, start from the bottom and work upwards. Ensure the stability of the soil before backfilling the embankment.



Figure 4: Staking the strips in place at the top of the slope



Figure 5: Covering the bottom and slopes with permeable soil



Figure 6: Completing the installation by covering the aquatextile with permeable topsoil in the infiltration basin



Figure 7: Covering the aquatextile with permeable topsoil

4. SCHEMATIC DIAGRAMS

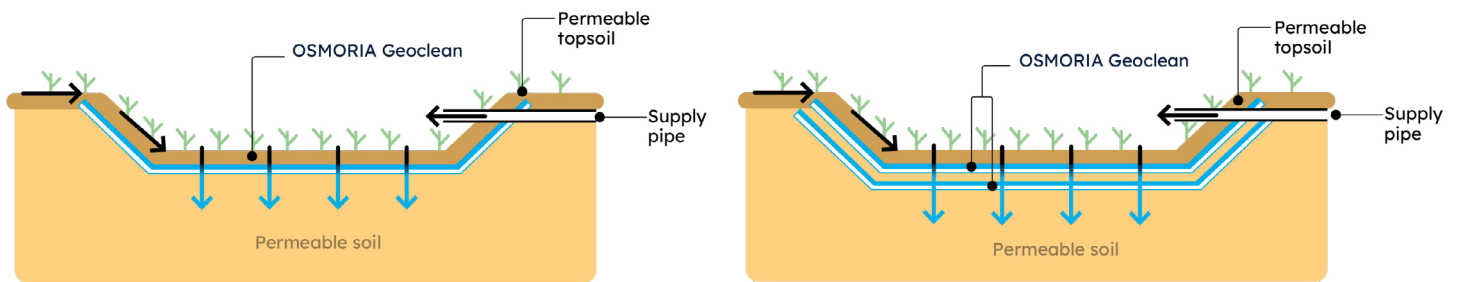


Diagram 1: Infiltration basin with 1 or 2 treatment levels (permeable soil)

Diagram 2: Infiltration basin with drainage bed (low permeability soil)

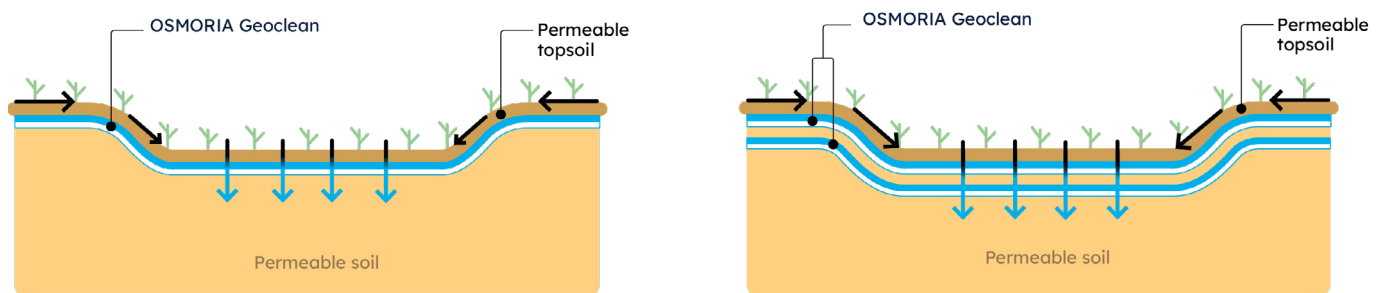
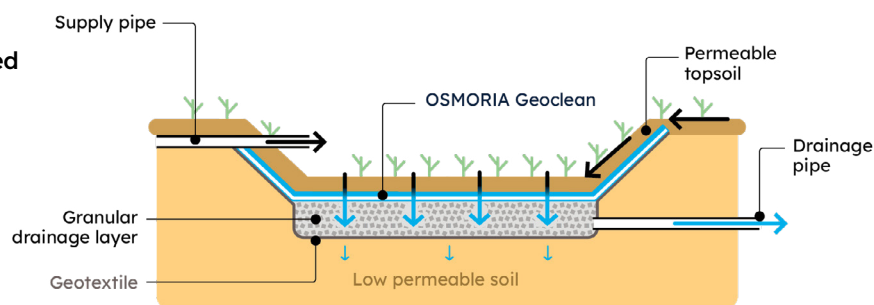
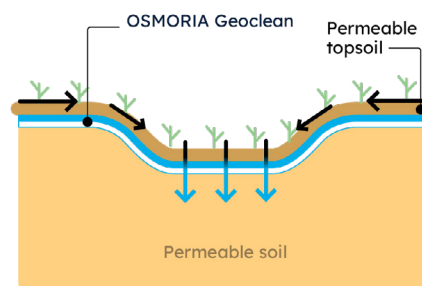


Diagram 3: Infiltration swales with 1 or 2 treatment levels (permeable soil)

Diagram 4: Infiltration ditch (permeable soil)



5. SPECIAL CASE: AQUATEXTILE CROSSINGS

Aquatextile crossings should be avoided wherever possible. These guidelines ensure that any polluted water is filtered by the aquatextile.

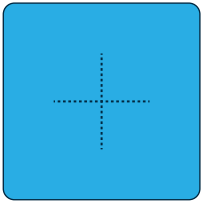


Diagram A

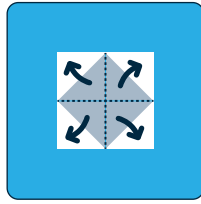


Diagram B

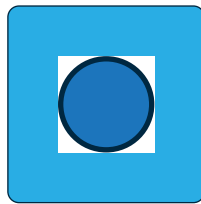


Diagram C

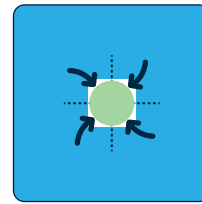


Diagram D

1. Pipe crossings on embankments

Crossings should ideally occur above the highest water level.

- Cut the aquatextile crosswise (+) where the crossing occurs (see Diagram A).
- Ensure the cut is slightly smaller than the diameter of the pipe to maintain a tight seal (see Diagram B).
- Insert the pipe through the cutout, preventing untreated water from bypassing the aquatextile.
- Secure the corners of the aquatextile around the pipe with a clamp (see Diagram C).
- Backfill as described in earlier steps.

2. Planting in structures with aquatextile

If planting is necessary, remove the soil over an area twice the size of the plant's root ball.

- Cut the aquatextile crosswise (+) to allow the root ball to pass through (see Diagram A).
- Fold back the four corners to facilitate planting (see Diagram B).
- Once the plant is in place and the soil surface is reconstituted, fold the corners back around the trunk, ensuring an edge-to-edge fit (see Diagram D).
- If gaps remain, cover the cut area with an additional layer of aquatextile and backfill to secure

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