

Structural Drainage

Reservoir Roof and Walls, Deckdrain, Barrow Hill, London, UK



Project Description

The Thames Water site at Barrow Hill, in the leafy and affluent area of St John's Wood, was the location for the construction of a new potable water storage reservoir to serve West London. The new £2.5m concrete structure replaced the original decaying brick-built reservoir constructed in 1826 and was the first new-build reservoir in London for 100 years.

The Challenge

Built in this prestigious area and adjacent to Primrose Hill Park and Regent's Park it was important that the works be completed with as little disruption to residents and the local environment as possible. The end result would be required to blend in with surrounding parklands. The buried reservoir required adequate drainage to prevent groundwater pressure building up on the roof and walls, and the waterproofing required effective protection from damage during installation. Traditional stone drainage for this purpose would need to be imported from outside London, meaning considerable heavy-goods vehicle movements to site and associated air pollution as well as disruption to residents. It would also place an additional dead load on the roof in addition to the required topsoil needed to sustain vegetation to blend-in with the park. From the start of the project the design team were keen to adopt innovative technologies to address these practical issues.

Project Information

Client Thames Water

Contractor Ward & Burke

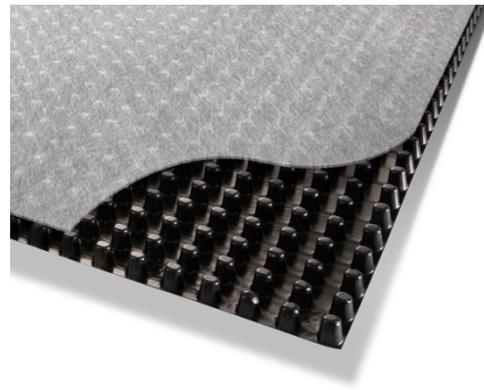
Consultant Black & Veatch

Products Deckdrain

Quantity 8,000m²

Benefits

- Combined drainage and protection to the waterproofing
- Replace costly granular material
- Easy handling on site.
- Reduce vehicle movements associated with stone delivery
- Rapid installation



ABG Deckdrain

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The Solution

Deckdrain was chosen by the designer as a modern alternative to traditional drainage stone. Deckdrain is a high performance drainage geocomposite comprising a high strength HDPE core with a geotextile filter bonded to the cusps. **Deckdrain** offers a dual function providing both subsurface drainage and additional protection to the waterproofing.

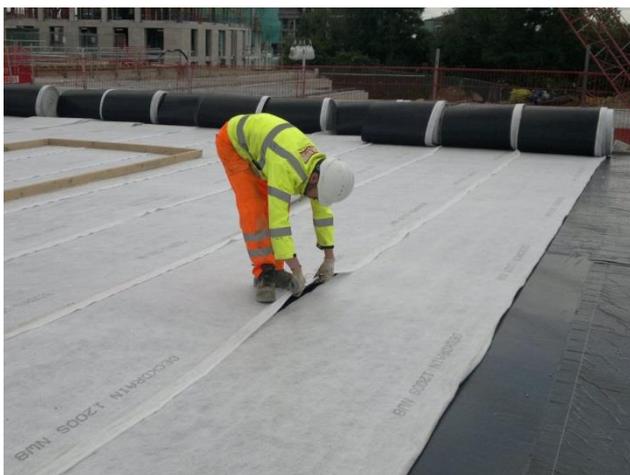
Deckdrain is easy to handle and install without plant. It adds little dead load to the structure and can be simply jointed using the geotextile flaps, before simply spreading the final topsoil and seed. **Deckdrain** provided a sustainable, cost-efficient and carbon-neutral solution on this project, avoiding the material and environmental costs associated with drainage stone.

The ABG Service

ABG provided design advice and technical assistance during installation.



Small rolls of Deckdrain are quickly laid directly on the waterproofing on the concrete roof slab and walls.



Deckdrain is butt-jointed and geotextile overlaps prevents soil ingress



Barrow Hill reservoir blends in with the adjacent Primrose Hill Park

Contact ABG today to discuss your project specific requirements and discover how ABG past experience and innovative products can help on your project.