

Project Profile

Objective

To resolve flooding of a pedestrian underpass whilst also addressing the need to improve and prevent pollution of groundwater

Solution

4 No. Downstream Defender®s to remove polluting sediments and debris from the surface water runoff and 5,000 m³ of Stormbloc® in several areas to provide infiltration.



Product Profile

Stormbloc®

- Infiltration / soakaway applications.
- Fully accessible for inspection and maintenance.
- Very strong (suitable for use under trafficked areas).
- High void ratio (95%).
- Low cost.

Downstream Defender®

- Advanced hydrodynamic vortex separator for removing pollutants from surface water.
- Most efficient separator available.
- No pollutant re-entrainment.
- Low system headloss.
- No moving parts and minimal maintenance.
- Independently tested and verified performance.

Hydro SUDS Road Drainage Helps Minimise Central Basingstoke Flood Risk

A major new sustainable road drainage scheme is being installed by Carillion to provide stormwater control and reduce flooding risk as part of the £9.5 million improvement of the A340 Aldermaston Road, Basingstoke using Hydro International's Stormbloc® infiltration blocks and Downstream Defender® silt protection units.

Control of stormwater flow from impervious surfaces, including roads, has been identified by the Pitt report and DEFRA's Future Water strategy as a major priority in the management of flood risk. In addition, the reduction of pollution and sediment and the improvement of groundwater reserves through infiltration, are also significant requirements. By using Hydro's Downstream Defender® and Stormbloc® products with the new infrastructure, Hampshire County Council is taking the opportunity to invest in the sustainability of the project.

The existing A340 Aldermaston Road layout was constructed in the late 1960s with drainage ditches and soakaways to distribute surface water from the road and new ring road around the centre of Basingstoke.

Subsequent developments in the surrounding area have resulted in a number of modifications to the original drainage scheme; some of these have resulted in regular flooding of the pedestrian underpass.

The replacement and supplementary drainage on the A340 and the Aldermaston roundabout will comprise in-kerb surface water drainage systems which collect and direct water to carrier drains. The drains channel the stormwater through Hydro's Downstream Defender® hydrodynamic silt and oil separators to Hydro's Stormbloc® modular blocks which provide a storage and infiltration blanket over the underlying chalk formation.

In total, four Downstream Defender®s and over 5,000 cu.m. of Stormbloc® modular infiltration blocks (the largest project to date) have been installed. The Hydro products are located under soft landscaped areas within the perimeter of the Aldermaston roundabout (at the North, South East and South West points) and to the West of the A340. In all, the infiltration blankets provide storm drainage for around 500 m of carriageway, and 700 m of roundabout circulatory carriageway.



Hydro's Downstream Defender® is designed to provide effective silt and sediment separation at all levels of flow up to its designed maximum, with no power requirements and maintenance reduced to sump emptying. It is thus ideal for dealing with first flush and fluctuating flows occurring in high rainfall areas. Its patented internal components also prevent re-entrainment, with full retention of all captured sediments and floatables over a wide range of flows and through multiple storm events.

Hydro's Stormbloc® is a modular system which provides a 95% void ratio, and requires only shallow excavation; its load bearing characteristics allow landscaping or vehicle loading above it. In addition, Stormbloc® features access for CCTV inspection and water jetting through patented tunnels, and offers low maintenance requirements.

Over the 15 month project, the new A340 Aldermaston scheme will enable better management of traffic through signalisation and remote monitoring, provide more reliable travel times and will improve road safety. Carriageway widening, a proposed dual carriageway and a bus lane on the A340 are also part of the planning investigations.

Additional pedestrian footways and new access are being included in the proposed 50 hectare new homes development at Merton Rise and will include the installation of surface and foul water drainage (including further SUDS drainage / infiltration blankets) to serve the new development.



If you would like any further information on Hydro's Stormbloc®, Downstream Defender® or any of Hydro International's stormwater, wastewater and sewage treatment systems, please call the

Stormwater Hotline on: 01275 337977

This information is for guidance only and not intended to form part of a contract. Hydro International pursues a policy of continual development and reserves the right to amend specifications without prior notice. Equipment is patented in countries throughout the world.

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