

# Water Positive Projects

Caring for water is at the very heart of sustainable development. Only when water is properly cared for can it be considered a renewable resource that facilitates life.



Quick removal of water can no longer be a starting consideration for projects. Careful thought must be given to the design and technology that enables the collection, cleaning, holding and reuse of water to protect the natural environment.

## Achieving Water Positive

ACO's Water Positive assists in delivering sustainable water management for the built environment by demonstrating how caring for water can be achieved through 3 core project considerations. Design, Technology and Environment.



### Positive Technology

Facilitating the delivery of sustainable water management



### Positive Design

The foundation of good water management



### Positive Environment

Good water management helps create sustainable ecosystems

## Sustainable Services

The Gloucester Gateway M5 motorway services created a new sustainable standard in an area of outstanding natural beauty. With minimal landscape disruption, the structures are built into the undulating hills softened with organic forms and green roofs.

An ambitious landscaping solution required ACO to create a SuDS solution to manage and control rainwater run-off, and support habitats to enable wildlife to flourish. ACO KerbDrain, Qmax and Swale Inlets were combined to integrate with ponds, bio-retention areas, filtration strips and wetlands. The scheme blended seamlessly into the surrounding landscape and created amenity areas for people and wildlife alike.



### The Project

Gloucester Gateway Services, Gloucester

### The Brief

To provide a SuDS drainage solution to reduce flood risk and help maximise biodiversity within the area.

### The Solution

ACO KerbDrain, ACO Qmax and ACO SuDS Swale Inlet



### The Project

Asda Store, Leicester

### The Brief

To design an integrated drainage solution that combines proprietary and vegetative systems to achieve effective surface water management on-site.

### The Solution

ACO Qmax and ACO SuDS Swale Inlet



## Setting the Standard

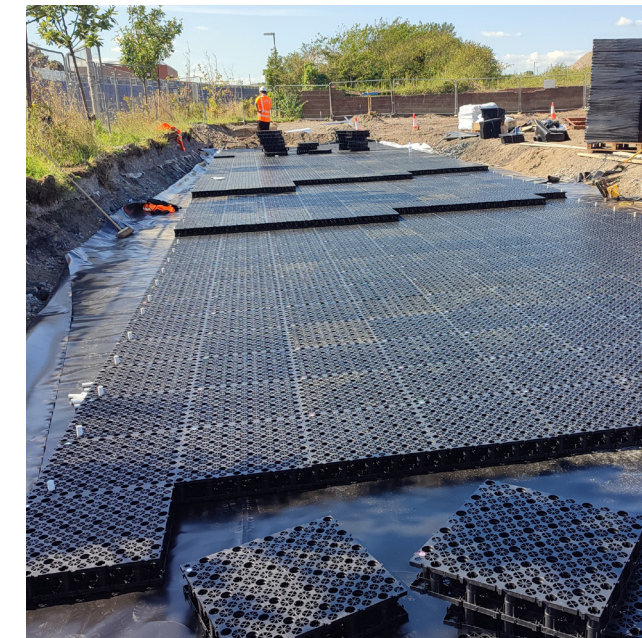
Visitors to Asda Leicester experience a dramatically improved landscape with a level of biodiversity never attained before on a retail development. Both customers and residents benefit from an integrated drainage solution that combines proprietary and vegetative systems.

Nearby homes have an enhanced environment with trees, plants and water providing a natural dividing line, quelling noise, and providing a natural visual buffer. ACO channel systems integrate with granular sub-bases and filter strips which outlet via ACO Swale Inlets into detention basins and swales creating an impressive and efficient treatment train.

## Beneath the Surface

The redevelopment of the Port Talbot Docklands aims to help drive employment and growth within the area. Critical to the scheme is the extension of the Harbourside Car Park which serves many local businesses and people.

Due to limited underground space, ACO designed a new shallow attenuation tank system, ACO GroundBloxx, with added filtration media to manage storm water run-off. Two QuadraCeptor filtration units were installed on the site to remove sediment and pollutants before returning the water back to the natural environment. The combined use of the systems meet required mitigation measures specified in the Flood and Water Management Act 2010 (Wales).



### The Project

Harbourside Car Park, Port Talbot

### The Brief

To provide flood mitigation solutions to ensure surface water is effectively managed and treated on the newly re-developed Port Talbot Docklands scheme.

### The Solution

ACO GroundBloxx and ACO QuadraCeptor



### The Project

Ashridge Farm, Wokingham

### The Brief

To provide a system which can protect wildlife from the road and ensure habitats remained connected.

### The Solution

ACO Climate Tunnel, ACO Guide Wall Systems



## Guiding the Way

The Ashridge Farm project includes a newly constructed 550m roadway and residential area, which is accompanied by a 4.5-hectare open space that has been thoughtfully designed to safeguard and enhance the diversity of the local wildlife and surrounding community. The development features an "eco pond" that has been intentionally created to attract various forms of wildlife, such as newts, amphibians, and birds.

In order to avoid interfering with the habitats of the local fauna, ACO Climate Tunnels and Guide Walls were installed to help secure a safe pathway for mammals and amphibians as they cross the new road network. The entire scheme was planned with care and consideration to ensure that the wildlife and the ecosystem were protected.



## Let us help you create a Water Positive project

Incorporating sustainable design practices and appropriate product technologies is essential in creating a water positive scheme. With our expertise in this field, we can help your project to become an exemplary model of how sustainable design can benefit the environment through the responsible management of water resources.

### Contact us today:

Our teams are here to equip you with the knowledge you need to progress your project quickly and confidently.



## High Flying Solutions

The Londoner Hotel is a towering eight-storey structure above ground level and extends six-storeys below, making it the deepest building in London. Featuring a spacious commercial kitchen, indoor swimming pool, and 350 rooms, it was crucial to implement effective systems to manage FOG and water on-site.

To achieve this, the hotel features a custom ACO Lipujet grease management solution that facilitates the filtration and disposal of FOG, safeguarding the UK sewer network. Additionally, the hotel is fitted with ACO Shower Channels and Twin Slot Channels, which effectively convey internal surface water and prevent pooling within the hotel.



### The Project

Madani Girl's School, London

### The Brief

To provide a blue roof solution to manage rainwater on-site, whilst providing an amenity space for the school to utilise.

### The Solution

ACO RoofBloxx



### The Project

The Londoner Hotel, London

### The Brief

To design a comprehensive range of solutions to manage Fats, Oils and Grease (FOG) and water within the hotel amenities.

### The Solution

ACO Lipujet, ACO Lifting Station, ACO Shower Channels and ACO Twin Slot Channels



## High-Level Thinking

Madani Girls' School, located in the Tower Hamlets borough of inner-city London, operates within a purpose-built Grade II listed Victorian building. To provide a high-quality teaching and learning experience for its students, the school sought to expand its facilities.

However, the site's inadequate ground conditions prevented the use of infiltration and other forms of Sustainable Drainage Systems (SuDS) to manage surface water, leaving attenuation as the sole viable technique. To address this challenge, a blue roof was selected to manage surface water effectively while also allowing for the multi-functional use of the roof space. ACO RoofBloxx was chosen for the project and demonstrated how rainwater can be sustainably managed with amenity in mind.

## Delivering Elegance Through Biophilic Design

The extension of a family home included a striking open plan kitchen-dining and entertainment space at the back of the property. The objective of was to create a seamless connection between the interior and the garden, reflecting the homeowner's love for nature.

The garden project featured a green roof and living wall, incorporating biophilic design and offering a connection to nature. The movement of water was a crucial aspect of the project; the ability to collect and convey water for irrigation was integral to the garden's design, allowing the surrounding greenery to thrive. To manage surface water, the discreet ACO HexDrain Brickslot was chosen for its strong hydraulic performance and minimalist design.



### The Project

Herondale, Family Home

### The Brief

To provide a discreet slot drainage system for the collection and irrigation of surface water.

### The Solution


ACO HexDrain Brickslot



**The Project**  
Abergavenny High Street, Monmouthshire

**The Brief**  
To offer a drainage channel system which collects all surface water run-off, whilst retaining the heritage look of the town centre.

**The Solution**  
ACO MultiDrain MD Brickslot




## Paving the Way

To improve Abergavenny's town centre, fitted paving needed rebuilding and daytime traffic flow issues had to be addressed. The solution was a shared space featuring Welsh pennant setts and slabs, street furniture, and greenery.

Traffic flow restrictions during working hours create a safer environment for pedestrians, encouraging active travel and greater use of the space. To manage surface water without compromising the heritage look, ACO MultiDrain MD with Brickslot gratings was installed between the new paving, efficiently channelling water from streets and roofs to the drainage network.

## Supporting nature

Rushden Lakes Retail Park is situated beside Skew Bridge Lake, a picturesque body of water that forms a part of the Nene Valley Wetlands. This expansive area encompasses four Wildlife Trust nature reserves, each providing valuable habitats and lagoons. Thanks to these conditions, the area has been able to support nationally important populations of various bird species. Over 200 trees were planted on the development, with the support of ACO solutions. ACO KerbDrain and Qmax were installed as part of the SuDS management train to aid with surface water collection. Meanwhile, ACO StormBrixx, with its high void ratio, offered an effective solution for tree pits, providing ample root space and resistance to traffic loads. Oil interceptors were used to purify run-off on-site, ensuring water could be returned to the wetlands to help enhance and replenish the surrounding environment.



### The Project

Rushden Lakes Retail Park

### The Brief

To design a SuDS drainage scheme which collected and conveyed surface water, while also offering an infiltration solution for tree pits.

### The Solution

ACO KerbDrain, ACO Qmax and ACO StormBrixx



### The Project

Drummond Park, Ludgershall

### The Brief

To design a SuDS Infiltration tank system to reduce flood risk and support the development of 412 new homes.

### The Solution

ACO StormBrixx



## No Flooding in Site

The development of Drummond Park is an excellent example of sensitive regeneration. The former Defence Medical Equipment Depot site has been repurposed to include new homes, a local school, and transport links and outlets. The development has helped to foster a sense of community within a beautiful countryside location.

In order to mitigate flood risks and support the surrounding environment, an infiltration tank was chosen to allow stormwater to slowly infiltrate back into the ground and soak away. ACO StormBrixx was selected for this purpose, and a customised stepped edge design was created to meet the site's boundaries. Sustainable construction was a crucial aspect of the project, and due to the innovative stackable design of StormBrixx, the carbon footprint resulting from transportation and logistics was significantly reduced, thus minimising the environmental impact.