Case Study: 064



ECS installs FRP bridge to span the River Brent

ECS Engineering Services has installed a public access bridge in Greenford, West London, as part of the River Brent Project regeneration scheme. Manufactured in fibre reinforced polymer (FRP) for long term durability and minimal environmental impact, the bridge was delivered on schedule and installed in one simple operation with ECS engineers on site for just four days to prepare the site, install the bridge and complete the project.



Regeneration projects are breathing new life into West London, not least in Ealing along the Brent River Corridor, where a key goal is to provide better opportunities for access and recreation. In partnership with six other borough councils, Ealing Council is spending millions of pounds in the River Brent Project regeneration scheme.

Key local projects include the Greenford to Gurnell Greenway project, which aims to improve the land and to transform under-used and disconnected green spaces along the River Brent into a beautiful and ecologically valuable riverside and parkland greenway.

Running through Ealing's 'green corridor', the River Brent is joined at Greenford by Costons Brook, which itself runs through the west side of Perivale Park. As part of the regeneration project, a new bridge was required to span Costons Brook, linking an existing public bridleway on one side with a new one on the other side.

As part of a commitment to minimise environmental impact - protecting wildlife sites, reducing pollution and keeping the rivers as natural as possible - and following consultation with the Environment Agency, an FRP bridge structure was specified. FRP is manufactured from mostly recycled materials, offering greater sustainability and cost-effectiveness when compared to virgin materials. It also has a significantly reduced environmental footprint when compared to concrete.

FRP maintains exceptional resistance to corrosion and UV radiation, is more durable than either steel or timber and provides a bridge of this type with a 100-year life expectancy. To fabricate and install the bridge, Ealing Council turned to ECS Engineering Services, a company with extensive experience in constructing FRP bridges and routinely specified by the Environment Agency for similar projects.

The new bridge for Costons Brook was manufactured as a single moulded piece, measuring 2 metres wide by 14 metres long and weighing just 4.4 tonnes – far lighter than a traditional construction. In advance of the bridge being delivered to the site, engineers from ECS had prepared the location.

Members of the public are already using and enjoying the bridge. Popular with leisure walkers, children and local nature lovers, the bridge is enabling them to move between the bridleways either side of Costons Brook to explore the natural beauty of the waterways and to enjoy the leisure space within the park.



