

Meridian Water: River Naturalisation Design



Client

London Borough of Enfield

Key collaborators

Karakusevic Carson Architects, Periscope (Landscape Architects), UK Environment Agency

Key services provided

Provided ecological input to designs for naturalisation of watercourses as part of an outline planning application for Meridian Water Phase 2, a mixed-use residential-led development in the London Borough of Enfield

Fee

£40,000

Duration

6 months

Arup's team of ecologists worked closely with architects, landscape architects, hydrological engineers and hydro-geomorphologists to restore on-site rivers to a more natural state.

The ecology and water teams worked closely with architects, landscape architects and hydrological engineers to create naturalisation designs for watercourses within the Meridian Water Phase 2 site in the London Borough of Enfield. The designs not only restored the heavily modified rivers to their near-natural state thereby enhancing biodiversity, they also alleviate flooding and improved the overall urban environment by bringing people closer to nature via provision of riverside public realm.

To achieve the designs and avoid impact to the environment, a series of options were developed and analysed in consultation with the UK Environment Agency. As well as maximising biodiversity, the designs were created to renaturalise as much of the rivers as possible, via bed and bank modifications. They also had to accommodate future flood events, minimise impacts from heavily contaminated land, and enhance those sections of the river where full renaturalisation was not possible.

Our work resulted in a robust river design resilient to future flood events and other climate change impacts. It also ensured space for recreation, reducing footfall to nearby protected sites and limiting wildlife disturbance within the development.

The ecology team liaised with the UK Environment Agency to understand their requirements and determine the optimum design to improve biodiversity, accommodate flooding and maximise public space. This helped streamline planning by ensuring stakeholder input throughout the design process.