Vauxhall Nine Elms Battersea (VNEB) is the most significant regeneration programme in the UK. For the first time since the Power station closed in 1983 this 195 ha, iconic Grade II* listed site is being transformed into a thriving, high quality urban quarter. For BuroHappold Engineering this has provided our engineers with an outstanding opportunity to demonstrate their world-class reputation for delivery of sustainable civil engineering solutions.

This prime riverside development has posed a number of significant challenges and opportunities, not least in the area of flood risk and water resource management. Working closely with key stakeholders, including the Environment Agency (EA) and Port of London Authority (PLA), we have identified flood risk mitigation measures that will ensure the development is appropriately defended into the next century whilst maximising the ecological and landscape value of the riverside development.

Our engineers have used their extensive knowledge of the site, built up over ten years, to identify sustainable drainage solutions that make use of the tunnels that had originally drawn in water from the Thames to provide the steam to turn the power station turbines. In a reversal of their original purpose, they will now provide the infrastructure to take surface water flows from the early phases of the redevelopment away from the site and into the Thames.

This highly sustainable re-use of existing infrastructure has provided a significant reduction in flows on the existing drainage system, which has been welcomed by the EA as well as Thames Water.

Rather than turn their backs to the river our engineers are looking for opportunities to make the best use of the Thames and are currently working with the client and their contractors to explore how the 80,000m$^3$ of earth, resulting from the planned basement excavation of the site, might be removed from site via river barges. This will reduce thousands of lorry journeys on London’s already congested roads, providing benefits in terms of the environment as well as health and safety.

This strategy has also been welcomed by the EA and PLA after the team demonstrated it would provide major benefits without any ecological disruption to the river bed.

Our team is keen to explore further avenues for maximising the opportunities the Thames offers and is currently working with the client to develop a water taxi terminal that will extend the Thames Clipper service to London newest, iconic development.