

## Beam Parklands

### London Borough of Barking and Dagenham

Arup

*BIG Challenge 2015 submission category: Large scale permanent*

#### Project overview

Beam Parklands is a 53ha multifunctional wetland park for East London, linking deprived communities to the natural environment of this historic green space.

The park is home to numerous protected species and the scheme has worked to sensitively integrate a diverse range of new habitats into the landscape.

The site also functions as a flood storage reservoir, protecting homes, schools and businesses, including Barking Power Station.

The scheme has been delivered in partnership with the Environment Agency, Land Trust, London Boroughs of Barking & Dagenham and Havering.

The partnership project has delivered:

- 12ha of new BAP habitat including reedbeds, wet woodland, fen, orchards and acid grassland;
- Restored river channels;
- 25,000m<sup>3</sup> of additional flood storage;
- New entrances, paths and footbridge;



*Photo: Wetland excavation*

- Natural playgrounds and viewing points;
- Improved community engagement and interaction with local schools; and
- Secure management and maintenance of the site in perpetuity.

#### What were the biodiversity conditions on site, prior to the enhancement?

The area is surrounded by industrial legacy and remained largely unmanaged throughout the 20th Century. As a result, it was becoming dominated by encroaching scrub and invasive plant species.

The polluted watercourses were in poor condition, with heavily shaded straightened channels, which were largely inaccessible to the public.

#### Were there any specific conditions that led to you carrying out this work?

The project is part of the Phase 1 delivery of the East London Green Grid, a wider regeneration and creation of green spaces that will form a network of interconnected corridors.

A number of housing renewal schemes are planned or underway directly alongside the park and the increased flood capacity, to protect this new

housing, as well as the increased desirability that a renovated parkland would bring, were also important drivers for the project.

The creation of new habitat areas allowed for valuable contributions to be made to targets set out in the Borough and London-level Biodiversity Action Plans.

#### What were the biodiversity measures taken?

The biodiversity enhancements delivered comprised a mixture of preservation and creation measures to maximise the opportunities for gain.

Notable site features included existing wetlands (ponds, common reed, small areas of fen and wet woodland); mature trees framing the former hospital site; a previously extensive great crested newt population; water vole burrows; valuable bat foraging habitat; and vegetation mosaics supporting scarce breeding birds.

Each of these existing resources became a priority for retention and improvement and the building blocks for the new scheme, such that the creation of additional new habitat areas focused on delivering greater extents of these habitat types,



*Photo: Common blue butterfly*

designed to support the key species already present. Eventually, a further 12ha of such habitat, all listed as priority habitat types on the UK BAP, were created across the 53ha site.

Innovations included the re-use of all won materials within 500m of their excavated locations and the capping of earthworks with low-nutrient sub-soils to benefit wildflowers.

Small areas of wetland creation were also piloted, to test their development and resilience to factors such as invasive species regeneration and grazing by waterfowl, before these were implemented more widely across the site.

Long-term maintenance and management to ensure that these values were perpetuated was an essential part of the project.

In addition to in-perpetuity arrangements for land management, to maximise the value of the developing habitats, a full-time community officer role was funded, to organise a regular programme of events furthering greater environmental awareness amongst visitors and the local community.

Collaboration with the community was central to understanding the needs of local people, alongside fostering excitement in the aims and ambitions of the project.

Furthermore, to ensure the project employed best practice and cutting edge design and construction innovations, a stakeholder steering group was established, maximising knowledge transfer across the partnership team.

#### How would you best describe the project?

An enhancement.

#### Further information

The project process involved a number of key stages. A comprehensive site appraisal was first carried out by the team's landscape architects, ecologists and geomorphologists.

Detailed mapping of the site then allowed for the



*Photo: New pond*

identification of optimal habitat creation opportunities.

The approach prioritised protecting the existing site character, preserving valuable habitats that supported notable species and maximising opportunities for these existing habitats to expand through natural regeneration.

Major earthworks and construction ensued and much of the site looked to have recovered within four months of those activities ceasing, with habitat evolution aided by careful marginal planting around re-profiled watercourses and newly-created wetlands.

The biodiversity objectives of the project have been

met, with the creation of habitats suitable for key target species achieved, including confirmation of the continued presence of water vole and a number of key wetland bird species, allowing for the future expansion of such populations.

Revisiting the project area has allowed for the identification of a number of valuable lessons, as follows:

- Habitats provide a better measurement of the success of enhancement than species in the shorter-term.
- Management of new habitat areas needs to be carried out regularly in the early developmental stages to ensure that these start to evolve as intended.

- An understanding of off-site conditions and influences on the project site is essential in controlling and delivering successful enhancements. This knowledge will be invaluable in delivering similar projects in the future.

**What was your personal motivation for carrying out the enhancement?**

This project provided a rare opportunity to deliver real biodiversity benefits to a degraded site with clear potential for enhancement. Creating a diversity of habitats usually synonymous with rural marshes within a densely populated part of East London, giving people easy access to the natural environment, was a key motivator.



*Photo: Weasel*