

Water Vole Habitat Creation and Re-Introduction Barking Riverside – Barking/ London/ United Kingdom Barking Riverside Ltd – L&Q – Mayor of London

BIG Biodiversity Challenge Award category: Medium Scale Permanent Award

Project overview

Barking Riverside is a residential development for 10,800 homes and is one of the largest developments in greater London. The site includes the former Barking Power Station, 2 kilometres of river frontage with remains of a disused wharf, pier and wider untouched natural landscapes spreading east towards Dagenham.

In 2015 water voles were trapped from a ditch on the Barking Riverside site. In 2016; 40 water voles were re-introduced to the site in 420m of high quality newly created water vole ditch habitat with associated ponds and seasonally inundated wetland areas. The habitats will be included within the recreational and amenity scope of the project design. The project has required frequent communication between ecologists, architects and construction staff to ensure the continued success of this project.

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

Large areas of the site comprised ruderal vegetation and bare ground typical of disturbed brownfield. There were several large ditches across the site the biodiversity levels were of interest as they had been undisturbed for a number of years. However contaminated aquatic and terrestrial habitats were an issue.

Were there any specific reasons that led to this project?

The project was a habitat mitigation requirement under a licence agreement from Natural England. This required compensation and enhancement of water vole habitat onsite. The habitat was designed to be incorporated into the recreational green space of the residential development and in keeping with the wetland habitats of the area.



Part of the 420 metres of ditch, pond and wetland habitat created for reintroduction of water voles to the site.

What were the biodiversity measures taken?

All methods for creation of water vole habitat and release of water voles was documented for the Natural England Licence. The work is also to be published in the Essex Naturalist Society Field Journal as an exemplary method. The water vole habitat is to be included as part of the site wide Sustainable Urban Drainage System forming part of a network of ponds and wetland habitats with mixed wildlife and amenity value. The water vole ditch network is monitored by ecologist monthly throughout the development construction period and will be passed to a community group upon completion. The primary aims of monitoring is to ensure the banks remain undamaged for burrowing and foraging vegetation with the water depth maintained at an appropriate depth for water voles.

The created wetland habitat is considered to be of high ecological value successfully supporting a breeding population of water voles. The habitats also supports several London Biodiversity Action Plan - priority species & species of conservation concern such as grass snake and common lizard. The project has already seen excellent gains for biodiversity with the habitat supporting a host of invertebrates such as dragonfly and damselflies, and waterbirds such as teal, snipe and kingfisher.

The water vole habitat is included within an ecological traffic light plan to alert all contractors and staff that the area is of high ecological value. Ecological tool box talks are undertaken quarterly to inform staff of protected species and ecological important habitats onsite.



Scanning water voles with a micro chip scanner during post release monitoring.

What were the biodiversity measures taken?

Local residents were invited to a presentation about water voles and the habitat creation work being undertaken. This included showing children and adults a live water vole that was due to be released as well as the release pens and how they are prepared. A second visit from the local George Carey Primary School was also organised with a wildlife presentation and question time for the children followed by a short walk.

How would you best describe the project?

Mitigation

Further information

New ditches were dug with steep, high banks suitable for year-round water vole burrowing and able to hold 1-1.5m of water suitable for water voles to dive and escape predators. The toe of the banks were planted with marginal vegetation translocated from the removed ditch (now infilled). This planting was supplemented with plug planting using native, locally-appropriate marginal aquatic plants. A native tussocky grassland mix was used to create thick grassy banks to provide cover behind the emergent vegetation. Willows such as goat willow were planted in the central island between the ditches which is designed to flood periodically creating an area of wet scrub.

The Barking Riverside design team are working on incorporating over 3000m of wet channels and banks with significant amounts of reed bed, marshy grassland (approximately 4.7ha) and standing water (approximately 1.8ha) within the green infrastructure of the development. This aims to further promote the water vole population onsite, provide connectivity to adjacent habitats and secure a viable, genetically diverse population of water voles in Barking.

Lessons learnt during the scheme include:

- be prepared to set back the release date of animals if the habitat is not considered sufficiently established -Ecologists revisited the site several times over the course of 18months before deciding that the habitat was sufficiently established to realise water voles.



Children from George Carey Primary School learning about wildlife at Barking Riverside

What was your personal motivation for carrying out the enhancement?

I wanted to create room for nature to be included within the fabric of this development, creating a habitat that is functional in terms of mitigation and drainage as well as providing a tranquil setting and space for both people and wildlife.