



**the BIG
Biodiversity
Challenge**
do one thing

Lower Otter Restoration Project Budleigh Salterton, Devon EX9 6EP

Kier | Environment Agency | Clinton Devon Estates

BIG Biodiversity Challenge Award Category: *Innovation Award*

Project overview

The Lower Otter Restoration Project (LORP) is a managed realignment scheme along the Lower Otter in Budleigh Salterton, Devon. The project is led by the Environment Agency, supported by its Tier 1 contractor Kier Infrastructure and local partner organisations including Clinton Devon Estates who own the land around the estuary

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

Prior to works, a feature of the site is the diversity of heathland associated communities relating to its large area and range of substrate and topography, supporting birds and invertebrates. A variety of saltmarsh communities and additional tall herb and scrub areas support high numbers of breeding and overwintering bird species. Field drainage occurs as a mosaic with standing waterbodies including isolated stretches of ditch. There was widespread growth of invasive species, Japanese knotweed, Water Fern and Himalayan Balsam. The site was also home to a former domestic landfill which is known to have contaminated a wider area of soils.

Refer to:

- Baseline data
- Objectives from planning permission
- Work over and above requirements from planning permission
- Policy drivers – strategic and or local



Lower Otter – Prior to restoration works



Dead tree with Owl nesting box



Pond with poor quality water no emergent vegetation

What were the reasons behind this project ?

LORP is part of Project PACCo (Promoting Adaptation to Climate Change) which will restore 100ha of coastal habitat across this location and the Saane Valley in Normandy, France. The restoration of this land will enable better management of flooding, carbon absorption and provide benefits for people and wildlife. Part of the EA climate change adaptation strategy, the Lower Otter Restoration Project, by reconnecting the River Otter to its floodplain allowing it to flood, will provide compensation for that lost to coastal squeeze in sites such as the Exe estuary which are benefiting from new flood defence initiatives . Word count - 97

What were the biodiversity measures taken?

Works are supported by a team of Ecologists providing appropriate specialist knowledge covering plants, birds, trees and protected species including badgers and dormice. Through careful spatial and temporal works programming to successfully mitigated impacts to protected species on site.

Working alongside specialists from the EA and Devon Wildlife Trust to manage Beavers which have moved into the area. This is contributing to the wider understanding of impacts of construction around this keystone species and influencing development of UK policy and legal frameworks.



Stakeholder Engagement Group – Perimeter tour

Volunteers have helped move rare, divided sedge plants and 400 southern marsh orchids. One of the donor sites is grazing marsh associated with the Axe estuary where divided sedge was last recorded in 1934. Hedgerows across the site have also been improved, with hawthorn, blackthorn and dog rose providing infill planting. The project will see a net gain of 1.5km of hedgerow when completed.

An increased area of rare inter-tidal habitat with significant biodiversity benefits, including for birdlife. The project provides compensatory inter-tidal habitat for that lost to coastal squeeze in sites such as the Exe Estuary which are benefiting from new flood defence initiatives. The Lower Otter Estuary was identified as an area suitable for such new habitat creation.

The Project is working with local people and partner organisations to adapt and improve the downstream part of the River Otter, its estuary and its immediate surroundings for future generations. We are working with nature, rather than against it, in the face of continuing climate change.

Further information

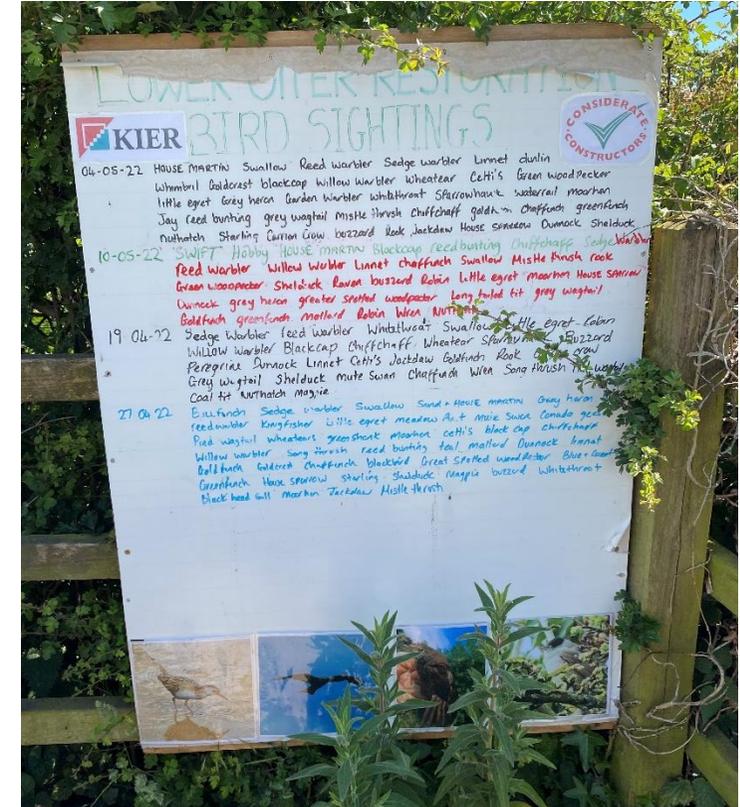
The Lower Otter Restoration Project will provide an increased habitat resource for overwintering birds, benthic estuarine invertebrates and intertidal, estuarine and migratory fish species in the Otter catchment. Ongoing monitoring will be carried out by the Environment Agency in association with University of Exeter.

Following commencement of works and development of new channels there have already been significant bird sightings including white fronted geese, little ringed plover (Schedule 1 protected species) and Glossy Ibis. The biodiversity, marine ecology and fish impact assessment have been identified in accordance with best practice and the necessary legislation.

The baseline information has been pulled together from existing data as well as additional monitoring. Pre-planning and pre-construction environmental surveys were undertaken. In addition to DNA testing to check for the presence of Great Crested Newts. Finger-tip searches for dormice, exclusion zones around protected species and other nesting birds, increased replacement planting for that removed, managing invasive species i.e. Japanese Knotweed and Himalayan Balsam, full-time ecologist presence on site, beavers. Mitigation measures consist of during the design stage, avoidance of adverse impacts, best practice design, pollution control measures, general good construction practices, habitat protection measures, sensitive landscaping and mitigation planting.

Protected species mitigation is in accordance with legal requirements and seeks to enhance the integrity of populations where possible to do so.

Initiatives have been shared more widely both within and external to Kier. The team wanted to showcase the biodiversity enhancements throughout the scheme illustrating what can be achieved in hard engineered structures with forethought.



Project Team

- Client / funders: Environment Agency, Clinton Devon Estates and PACCo
- Other design team members: Jacobs
- Volunteer organisations: Jurassic Coast Trust

What was the motivation for carrying out the enhancement?

Either from an organisational, individual or group point of view ie why did you do this one thing for biodiversity that goes over and above anything that was asked of you or your organisation?

The project recognises risks and seeks to deliver a more sustainable way forward by adapting to climate change, managing the area with natural processes. The desire is to improve the natural functioning, ecological health and environmental status of the river, demonstrate climate change adaptation.

Embankments, road, disused tip, an aqueduct and old railway line are artificial structures restricting natural processes and water flow subsequently reducing habitat quality and biodiversity. The 55 hectares of mudflat and saltmarsh will create new wildlife reserve of international conservation value. The motivation for the Lower Otter Restoration Project arose from landowner, Clinton Devon Estates.

