Park Farm - Water Vole Habitat Creation
Welford, Northampton, UK

Kier on behalf of Canal and River Trust

BIG Biodiversity Challenge Award category: **Small Scale Permanent Award**

Project overview

The project involved culvert replacement works under the Grand Union Canal at Park Farm on behalf of the Canal and River Trust (CRT). The project team consisted of around 10 personnel with a project value of circa £192,000.

The project was carried out under the Utilities division of Kier and the main works were civil in nature. The main works also involved relining the culvert between the inlet and towpath side waterway wall and construction of a new outlet structure. In order to carry out the works, a section of the canal had to be dammed to allow the canal to be closed and de-watered.

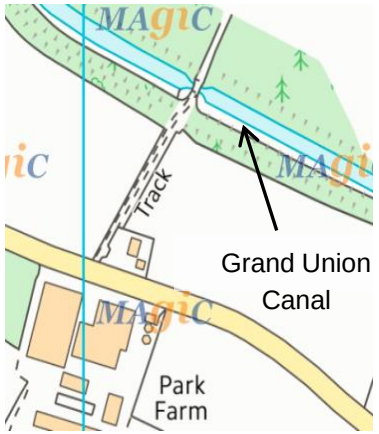
What were the biodiversity conditions on site, prior to the enhancement?

The project was located in a rural setting as per the photograph and map shown to the right. The biodiversity conditions were moderate and there was potential for protected species within the area including water voles upstream.

section of the canal where works were undertaken

Were there any specific reasons that led to this project?

As part of the Kier Strategy for a Sustainable Business, we have a biodiversity target where all projects are encouraged to boost biodiversity by protecting, enhancing or creating habitats for plants, insects, birds or animals. During pre-construction site meetings the team explored opportunities to enhance the environment and concluded the most appropriate measure would be to create habitat for the water vole to encourage it back to the area.



What were the biodiversity measures taken?

The CRT ecology report stated there was potential vole habitat upstream of the project location. However, the project location itself, with a flat bank and high water level with little freeboard wasn't ideal habitat for water voles.

Water voles live in burrows excavated within the banks of rivers, ditches, ponds, and streams. Burrows are normally located adjacent to slow moving, calm water. They also live in reed beds where they will weave ball shaped nests above ground if no suitable banks exist in which to burrow.

Water voles prefer lush riparian vegetation which provides important cover to conceal them when they are above ground adjacent to the water body. Although, they generally prefer open wetland habitats away from tree cover.

With this in mind, Kier and CRT expanded the scope of works to include construction of a clay bank along the offside of the canal at Park Farm culvert, as shown in the photograph to the right. The photograph on page 1 also shows the offside bank to the right hand of the picture where the bank was later created, the reeds were replaced and will grow in front of the bank creating cover for the burrows. This habitat enhancement has been implemented to encourage water voles back to the area on a long term basis.

The clay used to construct the bank was reused from the temporary dam and material excavated from the culvert. A total of 120 tonnes of material was reused which saved around £2000 and diverted at least 8 heavy goods vehicles off the local roads reducing traffic flow to the site and at least 250 miles saved on transporting the material to a local recycling facility.

Offside location where clay bank created

What were the biodiversity measures taken?

In addition, part of the bank was also seeded with wildflowers and we hope to see a burst of colour on the banks very soon which will benefit the general public from a visual aspect but also local insect populations including pollinators.

How would you best describe the project?

Habitat enhancement to encourage water vole back to this part of the canal system.

Further information

As noted above, part of the Kier Strategy for a Sustainable Business is to create habitat enhancements wherever possible and to add value to the local ecosystem with the aim of long term benefit. This project was carried out during January – March 2017 so the benefits are yet to be seen although CRT are monitoring the situation.

Kier carry out an Environment Week each year in honour of World Environment Day. Last year, the CRT framework looked at temporary and small scale enhancements such as creating bird and bat boxes. The Environment Week held last year helped to promote awareness amongst project teams so when this opportunity arose, the Kier project team were well aware of the value this habitat enhancement could offer.

part of clay bank with wildflower seed sowed

What was your personal motivation for carrying out the enhancement?

Kier staff are encouraged to create habitat enhancements wherever possible. Working on the CRT framework, Kier aim to carry out small scale enhancements but on a framework scale they amount to a substantial increase in biodiversity on the canal system as a whole. Kier hope to create a portfolio of enhancements going forward using the Ciria application forms as case studies for best practice and promoting within the business and at industry forums. We will continue to monitor any enhancements with the client and follow up as appropriate – hopefully the habitat will establish over the years proving to be valuable.