

Wetland Habitat Creation, A19 Roadside Enhancements

North East England

Sir Robert McAlpine

BIG Challenge 2015 submission category: Large scale permanent

Project overview

As part of the project, a 30 year concession to Design, Build, Finance and Operate (DBFO) 120km of the A19, between Dishforth in North Yorkshire and the Tyne Tunnel, Sir Robert McAlpine have undertaken numerous measures to enhance the biodiversity of the road network.

This work is part of a long-term landscape planning and management strategy, creating meaningful and long-lasting benefits to the local ecology.

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

A large portion of the road network is within the County Durham Magnesian Limestone belt, an area of unique and internationally important habitat; however, prior to Sir Robert McAlpine's involvement when the A19 DBFO was initiated, there was limited consideration given to the existing biodiversity and the verges were planted with low biodiversity value standard highway grasslands and woodland plots.



Photo: Initial construction

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

Ecologists were appointed by SRM to undertake a review the existing A19 Biodiversity Action Plan (BAP) and were then commissioned to carry out a network wide survey, paying particular notice to factors such as plants of particular interest and existing wildflower diversity.

The Highways Agency periodically makes funds available for Biodiversity enhancements and Sir Robert McAlpine were successful in bidding for funding to create wetland areas.

What were the biodiversity measures taken?

Two ponds have been constructed, designed by our partner consultant URS and installed by Sir Robert McAlpine, with landscaping including pond plants and peripheral wetland wildflower planting as recommended by the consultant ecologist. The location of the ponds was carefully selected so that:

- They were situated away from the carriageway.
- They could be self-filling and levelling, without suffering from contaminated surface water run-off.
- They were between two adjacent local Nature

- Parks (Billingham Beck Country Park and Fleet Fields Ponds) and would therefore contribute to connectivity and wildlife corridors.
- By placing the ponds within a woodland area, they would be beneficial to birds and invertebrates.

The ponds were fenced off to protect persons from the deep water and boggy surrounds, and protect wildlife from unnecessary human access.

How would you best describe the project?
An enhancement.

Further information

The ponds and surrounding area have been subject to routine monitoring surveys by the consultant ecologist and show a good quality pond habitat which is capable of supporting good populations of common amphibians and a diverse aquatic invertebrate fauna.

The first pond is approximately 9m x 7m in extent with depths up to 1m. It is unshaded and supports a diverse and well-developed marginal and aquatic vegetation.

Such marginal species include frequent Brooklime Veronica, Creeping Buttercup and Floating Sweet-grass, along with



Photo: 6 months after construction

more occasional or rarely occurring Bulrush, Soft-rush and Tufted Hair-grass. Water-crowfoot is frequent as an aquatic.

The pond is fenced and has a surrounding section of relatively species-rich neutral grassland which includes species such as Common Knapweed, Corn Marigold, Meadow Foxtail and Oxeye Daisy.

In terms of fauna, small numbers of breeding Common Frog and Smooth Newt were present. The second pond is approximately 8m x 7m, steep-sided and with depths exceeding 1m. Marginal vegetation includes occasional Bulrush, Creeping Buttercup, Great Willowherb, Soft-rush and Yellow Iris. Water-crowfoot is an abundant aquatic.

The pond is surrounded by young establishing Alder to 5m which are beginning to shade the pond. The pond is also partly shaded by mature Hawthorn and willow *Salix* sp. which are within a planted block of scrub/woodland to the south-east. The pond is fenced with a similar although less species-rich neutral grassland to that surrounding the other pond.

In terms of fauna, small numbers of breeding Smooth Newt were present. Maintenance.

The ponds and surrounding area have now been incorporated into the programme for annual ecological surveys and an allowance has been made in the landscape maintenance programme, which focuses on grass and

wildflower cutting, and removal of arisings; removal of self-set trees, control of encroachment and overshadowing by adjacent trees and shrubs, control of pond plants to ensure a variety is maintained and the pond is not overgrown.

Further Enhancements As well as pond and amphibious life, the ponds and associated plants have been instrumental in increasing the number of bird and invertebrate species within this area. Annual ecological monitoring surveys have been commissioned to assess the species present and discuss opportunities for further enhancements within this and adjacent woodland plots. Consideration is being made to installing bird and bat boxes.

What was your personal motivation for carrying out the enhancement?

Sir Robert McAlpine have been involved in the on-going management of this section of the A19 for many years and the current contract runs for the next 12 years.

Despite the works described above being outside of the contractual obligations, there is strong recognition of the importance of the local biodiversity, and the role



Photo: 12 months after construction

that this stretch of road can play in providing important improvements to the ecology.