

Hoads Wood Embankment Stabilisation

Bear's Lane, Hoads Wood

J Murphy and Sons Ltd

BIG Challenge 2015 submission category: Large scale permanent

Project overview

J Murphy & Sons Ltd. were contracted by Network Rail for design & construction of emergency embankment stabilisation works at Hoads Wood Substation ELR: XTD 52m 50ch – 53m 10ch.

The pre-construction team conducted investigations and stability assessments of the embankment and will undertake detailed design and construction of stabilisation measures.

The order of work will include, Site Mobilisation, Surveys, Track Monitoring, De-vegetation, Access / Haul Road, Embankment Re-grading, Ballast Retaining Fence.

Due to the presence of Great Crested Newts (GCN) on site a Mitigation Licence from Natural England was required for the stabilisation of the embankment.

This included installation of Newt Fencing surrounding the entire site. Once installed, newt capture was conducted using the pitfall trapping technique. 60 day of trapping during suitable conditions was conducted.



Photo: Site team with bee boxes

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

The location of the embankment slip was in a rural setting which had vegetation cover including trees, grasses and weeds.

There is a golf course to the north of the site and several small ponds present. This provided an ideal habitat for great crested newts and reptiles.

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

Biodiversity offsetting was part of the conditions with the mitigation licence from Natural England.

What were the biodiversity measures taken?

Due to the sensitive location of the site where Great Crested Newts were present, a Natural England Mitigation Licence was required.

Advice on the process for licensing was provided to Murphy's by Southern Ecological Solutions (SES) initially and throughout the emergency works period with an ecological clerk of works being on site ensuring operations were undertaken with suitable mitigation in place to minimise potential impacts upon GCN's.

Trapping was undertaken during the emergency period to capture and move GCN's disturbed or displaced as the track was stabilised.

After the stabilisation of the embankment was complete and after the new trapping was concluded the site team constructed 4 hibernacula and bee boxes from used trees that were previously felled that would have been otherwise removed as waste to help replace the lost habitat by attracting bugs and insects back into the area.

With this, the reinstated embankment was seeded with wild flowers so the efforts of the site team at Hoads Wood to ensure wildlife is enticed back into the area.

How would you best describe the project?

Mitigation.

Further information

Working in collaboration with our subcontractors UPAC and our onsite ecologists Southern Ecological Solution the need to offset the biodiversity loss from the initial stages of the project was a key factor in the decision to incorporate the aforementioned enhancements.



Photo: Hoad's wood embankment stabilisation

Construction of the hibernacula were conducted by the onsite ecologist and the bee boxes were constructed and installed the UPAC team.

Wildflower species are worth preserving in their own right and also provide food and homes for insects, birds, and mammals, and increase biodiversity.

Wildflowers support pollinators including bees whose decline has been well documented in recent years and these biodiversity enhancements aim to improve these in the area.