

**GREAT CRESTED NEWT BREEDING POND AT HORSFORTH RAILWAY STATION
HORSFORTH, LEEDS
NETWORK RAIL**

BIG Biodiversity Challenge Award Category: Monitoring, Maintenance & Management

Project overview

As part of the Harrogate re-signalling works a licence was required for great crested newts in order to enable embankment works to facilitate new sidings and drainage. The works were located within suitable lineside habitat that is within 500m of two ponds with medium populations of great crested newts.

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

Prior to the works, the site comprised an area of coarse grassland and woodland. An area of swampland had also become established when a sub-surface drain became blocked causing an upwelling of water within the aforementioned coarse grassland.

What were the reasons behind this project ?

The creation of an aquatic habitat, of suitability for great crested newts was a compensation requirement of the European Protected Species Licence. However where once only a small area of relatively unsuitable ephemeral swamp habitat was present, Network Rail chose to create a large, permanent pond, plant with suitable egg laying vegetation for great crested newts. Following the ponds installation, it was required to undertake 5 annual monitoring visits, which are due to be completed in 2019.



*Created pond at
Horsforth Station*



*Great Crested Newt
in the above pond*

What were the biodiversity measures taken?

In order to provide effective compensation to replace lost habitat a large, permanent pond, plant with suitable egg laying vegetation for great crested newts. In addition to the pond, the surrounding embankment was planted with selected coarse grasses and woodland, to provide suitable terrestrial habitat for great crested newts, while several log and masonry piles were created as hibernacula.

Following the completion of the pond construction, the drawings and design documents were retained and circulated so that similar biodiversity enhancements and compensation can be replicated by other teams on projects nationwide.

In order to maintain the suitability of the habitat, Network Rail hold a volunteering event every 2 years, whereby the pond is dredged of algae and other macrophytes which are unsuitable for egg-laying in order to prevent suitable plant species from being outcompeted and also to prevent the eutrophication of the pond.

Due to the monitoring requirement at the pond, the Network Rail team saw an opportunity to not only provide environmental awareness training to its own staff, but also opened the monitoring visits up to members of the Institute of Environmental Monitoring and Assessment (IEMA) as a training opportunity. The training sessions have been extremely well attended with many attendees expressing sincere gratitude for the opportunity and also for the provision of a 'different' type of hands-on training course and alternative continued professional development.

Network Rail plan to offer this training in the remaining years of monitoring.



Volunteers searching beneath hibernacula and refugia



Volunteers awaiting darkness to start torchlight survey

Further information

The above efforts have resulted in the establishment of a medium sized population of great crested newts known to be breeding within the pond which therefore means that the pond has succeeded in compensating for the loss of the existing habitat as a similarly sized newt population is present post works completion.

Advice for similar projects in the future would be to implement a regular maintenance regime as ponds tend to silt up and become overcrowded with vegetation poorly suited to the needs of the species for which it was created.

Involvement in the BIG Biodiversity Challenge provided an incentive to member of staff working on the project as the idea of recognition for their hard work, year on year, arranging and undertaking pond maintenance and organising and running training courses.

Project Team

- Network Rail IP Signalling – Northern Environment Team
- Network Rail staff members and IEMA members

What was the motivation for carrying out the enhancement?

It was a legal requirement to re-instate great crested newt aquatic habitat, however the motivation for delivering the training was based on the idea of providing a valuable service to Network Rail and IEMA members, but also a great opportunity for raising environmental awareness amongst these groups, providing transferable skills which will hopefully be taken with them onto future projects.



Volunteers undertaking torchlight survey of the pond



Three newt species captured from the pond