

## TRACK RENEWAL ON MIDLAND MAINLINE SILEBY, LEICESTERSHIRE

S&C North Alliance (AmeySersa and Network Rail)

BIG Biodiversity Challenge Award category: Small Scale Permanent

### Project overview

The S&C North Alliance is a partnership between AmeySersa (a contractor) and Network Rail (the client participant) that jointly delivers Switches and Crossings (S&C) track renewals across two thirds of the UK rail network. The ten year contract promotes the use of innovative technology to upgrade track safely and sustainably, reducing disruption to rail services. Amey's Environment and Sustainability team provides support to the contract, helping engineering colleagues to understand and mitigate environmental risks. These include disturbance to great crested newts (GCN), badgers and other protected species living alongside the railway.

As part of a detailed site-specific assessment, a population of GCN was discovered breeding in a field pond next to a proposed S&C construction site on the Midland Mainline at Sileby. Trackside torchlight surveys revealed that the newts were using the ballast edge and concrete cable troughing as terrestrial habitat close to the pond.

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

The trackside troughing was in a dilapidated state, providing good habitat for GCN to shelter and hibernate. Previous surveys indicated that a medium level population was breeding in the field pond at the foot of the railway embankment. An active badger sett was also located near to the renewal.

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

A solution was needed that would allow the safety-critical track renewal works to proceed without causing harm to legally protected species. The renewal required the replacement of ballast and cable troughing – in which GCN were sheltering – during a series of fast-turnaround weekend rail possessions,



*Great crested newt breeding pond next to railway*

secured in advance through negotiation with the train operators. Following detailed consultation with Natural England, a bespoke mitigation strategy was devised that would safeguard the newt population. This involved securing a European Protected Species mitigation licence to translocate GCN from the work area to enhanced terrestrial habitat at the breeding pond.

### What were the biodiversity measures taken?

As GCN and their habitat are fully protected by law, the mitigation strategy sought to avoid harm to individual GCN and maintain the favourable conservation status of the local population. This was achieved by trapping GCN from the work area into terrestrial habitat features created for them at the receptor site.

The features included a newt hibernaculum and three refuges created from logs, brash and building materials. These were sited next to the pond, and on the adjacent wooded railway embankment, to provide a long-term habitat enhancement and suitable compensation for the temporary disturbance to their trackside habitat.

Working on a busy mainline railway posed several logistical and safety challenges that had to be overcome in order for the trap out to be successful. It was not possible to install newt fencing around the worksite perimeter, as it would have to cross the railway. Instead, 500m of one-way exclusion fencing was installed along the edge of the worksite, between the trackbed and the railway embankment adjacent to the pond.

Pitfall traps could not be sunk into the ballast so the trap out involved night-time searches along the fenceline while working under a safe system of protection from train movements. This was followed by five nights of intensively hand searching the cable troughing, which is where the vast majority of newts were found. In total, 47 GCN, two smooth newts and a grass snake were translocated from the work area to the enhanced habitat at the pond.



*Terrestrial habitat enhancements included a hibernaculum and refuge piles at the GCN receptor site (brown square) next to the pond. Bottom photo shows GCN in troughing*

Additional measures were put in place due to the presence of badgers on the embankment at one end of the worksite. These included using a robust design of newt fencing and low voltage electric fencing to prevent badgers entering the worksite, as well as minimising noise and physical disturbance near to the badger sett.

## How would you best describe the project?

Mitigation

### Further information

The second phase of the track renewal is due to be completed in November 2016 and further hand searching for GCN will be undertaken along the fenceline ahead of those works. A licence modification has also been submitted to Natural England to extend the scope to include other track renewal works being undertaken in the same area by another contractor.

Amey's ecologists will continue to attend site to provide briefings and supervision during core works and to check that the mitigation measures for GCN and badgers are working. This will include monitoring the habitat features installed by the pond for evidence of GCN.

Key to the success of this project was engagement with a range of parties to ensure the essential track works could go ahead without impacting on protected wildlife. We worked closely with Network Rail, Natural England, the local landowner and the fencing contractors, Three Shires Ltd, to design and deliver a mitigation strategy that would work within the constraints of maintaining the nationally strategic rail infrastructure. One of the main outcomes has been an increased awareness of ecology within the Alliance and a better understanding and acceptance that environmental risks to project delivery can be effectively managed with sensible, proportionate and timely action.



*Wildlife fencing in place next to the worksite*

## What was your personal motivation for carrying out the enhancement?

As well as seeking to drive best practice in the environmental management of track works, the project makes a welcome contribution to Network Rail's 'net positive approach' to biodiversity on the Midland Mainline, which aims to replace more habitat than is lost as part of rail improvement works.