

**Jones Bridge**  
**Mickle Trafford**  
**J Murphey & Sons**

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

### Project overview

The scheme comprised of an underbridge replacement in semi-rural Cheshire as part of the Renewals Framework with Network Rail. It lasted 9 weeks at an approximate cost of £600,000.

The scope of works for the project included:

- Removal of trees along embankment close to the bridge
- Installation of a temporary haul road and compound area
- Replacement of existing single span underbridge over a private access path
- Reinstatement of surrounding areas – including planting of hedgerows and seeding embankments with wildflower mix

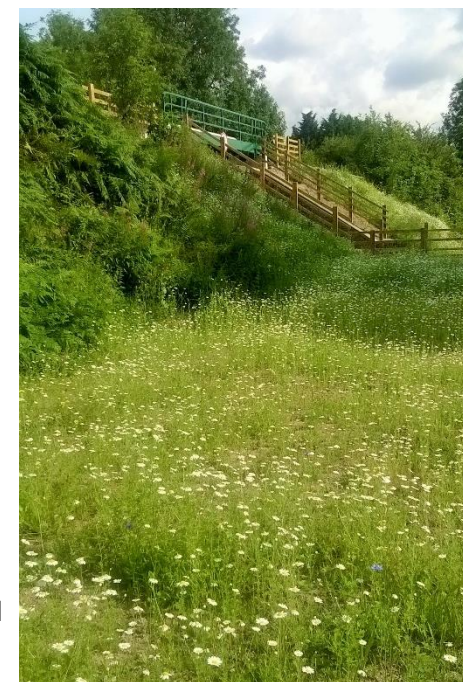
The general surroundings are semi-rural with improved agricultural grasslands to the east and north, and residential housing to the west. There are nearby ponds but they have no statutory designation cover. The floodplain grazing marsh areas to the east are classified as BAP priority habitat – the project was planned so as to have no impacts on these habitats.

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

The surroundings included scrub along the embankments with blackthorn, hawthorn and bramble. The ground was often bare, with occasional ivy covering and managed grassland below the bridge maintained at a short sward. There were a few semi-mature/mature trees on surrounding embankments and wider surroundings including willow, ash and oak.

### Were there any specific reasons that led to this project?

The project came about through the need for the necessary bridge replacement but offered the chance for additional enhancement through improved biodiversity potential of the grasslands and replacement of the smaller sections of poor hedgerow.



*The embankments and improved grasslands starting to show wildflower cover.*

## What were the biodiversity measures taken?

All measures taken during the project are easily replicable, being low impact on timelines and cost. The area was previously low maintenance, including hedgerows and short-sward grassland - ongoing management required no further take-up by the landowners than previous land use. Interaction between management, workers and environmental representatives was consistent from feasibility to client handover; site workers particularly enjoyed seeding and returning for site-checks as it let them see the positive results garnered from their work.

- Specialist ecological surveys were undertaken as part of the planning stages.
- Works were undertaken with precautionary working measures, including great crested newt protocols in the Environmental Management Plan.
- Access was selected to minimise machinery impacts avoid damage to ground flora, with works that could potentially affect the UK BAP Priority Habitat minimised to avoid disturbance of the habitat and associated species.
- To lift the bridge into place an aggregate crane-pad was created; aggregates were then used by the landowner adjacent to the site under an EA waste exemption, providing both reuse and positive interactions with the local community.
- 20kg wildflower meadow-seeds were spread, resulting in a varied bloom; early take-up is visible in the second picture. This supports a variety of our native micro-fauna and birds. Permanent pasture seed was also spread across areas of the improved grassland used for access/compound to ensure quick ground cover of species complementary to the area.



*Early bloom of the wildflower meadow seed spread during the project*

- A short section of defunct hawthorn (*Crataegus monogyna*) dominated hedgerow was removed - Post-works, 18m of new hedgerow were created; during maturity the mixture of native hawthorn (75%) and crab-apple (*Malus sylvestris*) (25%) will provide both a valuable habitat and corridor for fauna.
- Defunct trunks/branches removed during de-vegetation were piled on an adjacent project; acting as perfect microfauna habitat. This small act reduced disposal off-site and allowed creation of habitat for species often overlooked.



## How would you best describe the project?

Enhancement

## Further information

Regarding the GCN specific actions on site:

The ecological surveys undertaken as part of the planning stages highlighted the likely possibility of Great Crested Newts being present in ponds near to the site compound (approx. 140m) and the entrance track having a direct impact upon immediate terrestrial foraging/commuting habitat of improved grassland adjacent to ponds.

Works were undertaken with precautionary working measures, including a site specific great crested newt method statement and protocols being included in the Environmental Management Plan. This includes access routes constructed so as to prevent individual newts entering beneath the Terrafirma tracks whilst allowing safe passage over the surface of the access routes during darkness eg using sandbags/heavy matting along either side so as to prevent access beneath the Terrafirma but allow newts to pass safely over the access route from one side to the other. Ecological supervision was required in advance of works and during lifting/removal of any potential refuges in the working area adjacent to the bridge. Environmental briefings were given to the operational team and the environmental representatives with opportunities for questions and feedback from the teams.

Early ecological input prevented changes to work plans and disruption to project flow – disruptions have the potential to reduce worker buy in with biodiversity aspects so we foster involvement by creating awareness from day one of planning. Another method we employ to ensure worker biodiversity buy-in that site workers are involved in post-project site-checks – so they can see the often longer-term positive effects of their work.



*Tree trunks and branches removed during devegetation works were saved to provide microfauna habitat.*

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

We wanted to show that smaller, easy wins can be made throughout projects without incurring financial/logistical costs. Our entire team were individually motivated to ensure all the smaller aspects added up to a synergistic biodiversity gain. This correlates with wider strategic biodiversity visions of Network Rail for their enhancement schemes.