

- Upperton Road Viaduct Major Maintenance Scheme

Biodiversity

Pre-Existing Conditions:

The site was located at the intersection of two linear wildlife corridors through the City: the Old River Soar and the Great Central Way (both of these passed underneath Upperton Road viaduct). The river corridor has been identified as being used by bats and birds and it is also probably used by mammals, including otters.

The site provides a foraging habitat and a commuting corridor for a locally significant numbers of bats (largely pipistrelles, a nationally common species). All species of bats are statutorily protected.

Bats were previously able to fly beneath the Upperton Road viaduct in order to travel either north or south along the Great Central Way or along the Old River Soar. The Old River Soar crossing point was previously used by the majority of bats (the 2005 survey recorded 88% of bats using this crossing point) in the locality, suggesting that this crossing point was more important than the Great Central Way crossing.

There were no statutorily designated sites within 1 km of the development area. However, the Viaduct did intersect two locally designated sites important for nature conservation (SINC). These include the former railway sidings that ran beneath the Upperton Road Viaduct (SINC 26: Ivanhoe/Mainline railway and sidings and Saffron Lane verges) and part of the Old River Soar (SINC 5: River Soar/Grand Union Canal (Watermead Way to Twelve Arches). The area comprises species-rich unimproved grasslands and early successional communities. These habitats are locally rare within the inner city Leicester area.

A triangular plot of semi-natural grassland existed on the northern side of Upperton Road.

Impacts Predicted Prior to Implementation:

Impacts were predicted to affect a number of ecological receptors. The AST predicted an overall slight adverse impact on biodiversity. Therefore, various mitigation measures were identified within the Ecology and Conservation Report (2005) in order to minimise adverse impacts. Table 4.1 identifies the ecological receptors that would be affected, the mitigation measures that were proposed, and the residual impacts that would be expected to remain, with mitigation in place.

Table 4.1 Mitigation Measures

Ecological Receptor	Mitigation	Predicted Residual Impact
Species rich grassland	The disused railway bridge would be fenced off from the rest of the construction area prior to the start of construction in order to ensure that the existing species rich grassland, located on the bridge (an area of approximately 300 m ²), is retained. This would provide a reservoir from which recolonisation of the grassland can take place.	Slight adverse
	The top 20-30cm of railway ballast on which the existing species rich grassland grew would be scraped off and stored either off site or on site.	
	Measures to ensure that the nutrient poor state of the substrate is retained would be implemented, i.e. the spoil piles should be fenced off and the contractors informed that no organic waste should be tipped onto the spoil.	
	Once construction is complete the ballast would be re-spread over the triangular section of land to the north of Upperton Road.	
	No seed should be spread on the ballast; instead it should be allowed to naturally regenerate from the seed bank latent within the ballast and from any air born seed arising from the reservoir on the disused railway bridge.	
	A management plan would be drawn up to ensure that at least 0.2 hectares of species rich grassland would be maintained in a floristically diverse state and not allowed to succeed into scrubland. Details of the management plan and a method statement of how the habitat restoration would be carried out would be drawn up during the detailed design stage.	
Wildlife Corridors	The bridge design would incorporate the inclusion of soft embankments on either side of the river bank that will act as a mammal ledge and maintain continuous vegetation underneath the bridge.	Slight adverse
	Habitat loss would be mitigated for by the restoration of the species rich grassland and through additional tree planting.	

Bats	Additional roosting habitat would be provided underneath the disused railway bridge through the provision of eight bat boxes.	Negligible
	Direct mortality would be minimised through the planting of standard trees to act as a deflector along Upperton Road.	
	Minimal light spills onto the area of species rich grassland and onto the River Soar would be achieved, for example, through the provision of rear screens fitted to the street lights. In addition, the avenue of standard trees proposed along Upperton Road should reduce light pollution once the trees become mature.	
	The planting of an avenue of trees along Upperton Road would help reduce the impacts of noise pollution and will also provide additional nesting habitat.	
Birds	Impacts upon breeding birds will be avoided by staging any vegetation clearance outside the sensitive breeding bird period (March 1st to August 1st).	Slight adverse
	The loss of bird habitat will be mitigated for through the restoration of the species rich grassland.	
	The planting of an avenue of trees along Upperton Road will help reduce the impacts of noise pollution and will also provide additional nesting habitat.	

Information Gathered During Post-Implementation Monitoring:

A site visit was carried out on 20th November 2009. The following observations were made:

- Species Rich Grassland
 - Species rich grassland was present on the disused railway bridge to the north of the site.
 - The triangular plot of land to the north of Upperton Road and west of the River Soar had not been returned to semi-natural grassland, although the nutrient status of the soil in this area did appear to be lower than in other landscaped areas. Instead, this area was covered with shortly-mown grass, with a number of beds containing shrubs. The implemented mitigation is therefore different to that originally proposed.
- Wildlife Corridors:
 - Upperton Road now severs the Great Central Way corridor.

- The River Soar corridor remains continuous, although vegetation is reduced. There is no barrier to aquatic species, as the water flow is not restricted by any structure under normal flow conditions. Ledges have been included under the new bridge on both banks, although these are hard-engineered, and there is no vegetation beneath the bridge. It is noted that whilst it might have been possible to grow some shade-tolerant plants under the bridge, the terrestrial corridor remains continuous even without such planting.
- Bats:
 - Standard trees had been planted along Upperton Road and would serve to deflect bats away from the traffic.
 - Restoration of species-rich grassland has not occurred, and as a result, there has been a loss of habitat. However, tree planting has taken place.
 - It was not possible to gain access under the old railway bridge to observe any bat boxes.
 - It was not possible to observe levels of light spill, as the site visit was during daylight hours.
- Birds:
 - Restoration of the species-rich grassland had not taken place.
 - An avenue of trees had been planted along Upperton Road.

In December 2009, the nature conservation officer at Leicester City Council, Helen O'Brien, provided comments on the scheme. Her comments are summarised as follows:

- There had been little reinstatement of the banks of the Old River Soar to the north of Upperton Road.
- The species-rich grassland on the disused railway bridge had been retained. The vegetation on that bridge remains undisturbed and provides an important foraging area for wildlife.
- Part of the site adjacent to the old Great Central Way was to be left to reseed naturally from a retained area of species-rich grassland. This appears to have been done and the grassland has now started to re-vegetate. However, an adjacent section along the Great Central Way has been planted with non-native shrub species. This does not comply with the recommendations given by the nature conservation officer for the reinstatement of species-rich grassland.
- The proposed open area of species-rich grassland and tree planting has not been complied with. The area has been planted with non-native shrubs and trees interspersed with grassland. This will result in the loss of diversity of grassland species in this area and impact on the foraging area for bats and birds. Again,

this does not comply with the recommendations given by the nature conservation officer.

- It has been observed that grass cuttings had not been removed from the grassland area after mowing this autumn. These cuttings would act as a mulch and lead to the loss of diversity in the grassland.
- It has not been possible to verify whether bat boxes have been installed under the disused railway bridge.
- No management plan for the site has been submitted.

Discussions with the project team have taken place to determine the reasons for the differences between the proposed and actual mitigation measures. The reasons were as follows:

- Insufficient railway ballast containing seeds was available on site to create a nature area within the triangle of land to the north. This was discovered during the construction phase. The project manager from Leicester City Council, with input from the council's landscape team, agreed a revised planting scheme. There was no nature conservation officer in post at that time.
- Bat boxes were not installed beneath the old railway bridge, as the council's bridges team believed that to do so would compromise their ability to carry out safety inspections.

Actual Impacts Arising:

It should be noted that since the completion of initial investigations, further work has been undertaken to mitigate identified impacts. This has included removal of non-native species of trees and shrubs and re-seeding. The re-establishment of the grassland with native wildflowers will be managed as a meadow area and the retention and re-seeding of the nature conservation bridge with a wildflower mix. As a result of this additional mitigation the scheme's impacts are considered to be the same as predicted, namely slight adverse.

Cost

In carrying out the Upperton Road Bridge Scheme the regeneration works included Landscape improvement works carried out in 2008, estimated at £187,906.42 as part of the Target Cost Tender for the Upperton Bridge Project.