Case Study 2: HS2 Edgcote Viaduct

Background

Set low into the landscape, the 515m-long and 8m high Edgcote Viaduct will carry the railway across the floodplain of the River Cherwell, south of Chipping Warden.

The landscape design surrounding the viaduct includes over 17 ha of new habitat for birds, bats, invertebrates, newts and other amphibians, including marshland, meadow and woodland planting. The habitats created adjacent to and under Edgecote Viaduct will mitigate fragmentation issues caused by the construction of HS2 and, once habitats have matured, from a distance the viaduct will be largely hidden by woodland.

Figure 8. An artist's impression of the Edgcote Viaduct in 10 years time post construction

The following design considerations have enabled the viaduct to minimise fragmentation, and integrate into the existing landscape:

- Low Profile: By keeping the structure low, the viaduct will remain below the horizon line reducing its prominence when viewed from a distance with a combination of existing and new hedgerows and woodlands helping to preserve the scenic beauty of the surroundings.

- River Cherwell Meander: The design allows for the natural meander of the River Cherwell to be maintained around the structure as reasonably practicable.

- Minimal Vegetation Removal: Through careful surveys, a minimal amount of vegetation needed to be removed during construction, ensuring the preservation of the existing landscape wherever possible.

- Enhanced Habitat Creation: The landscape design creates habitat by incorporating ponds, hibernacula, deciduous woodland, wetland spaces, hedgerows, and wildflower grassed areas, creating new wildlife habitats.

- Connectivity Strategies: The planting design facilitates the connectivity of riparian habitats through the reintroduction of wetland woodland and grassland, linking with existing hedgerows and woodland copses.

Figure 1. An artist's impression of the Edgcote Viaduct

Figure 2. An artist's impression of the Edgcote Viaduct

The Edgcote Viaduct exemplifies a harmonious blend of sustainable engineering and ecological considerations. Its strategic design not only reduces environmental impacts but also prioritizes the integration of the structure into the natural landscape, displaying a commitment to responsible infrastructure development.