

# HS2 Phase 1 Central, Fusion AWE1 & AWE2 - Area C2 Environmental Mitigation Works

## Project Profile

**Client:** Fusion JV - Morgan Sindall,  
BAM Nuttall and Ferrovial Agroman.

**Designer:** AECOM (2018 Batch)  
Amey (2020 Batch)

**Date:** Dec 2017—Nov 2021  
Maintenance of sites until Nov 21

**Value:** £14.5m



In 2016, Fusion were awarded Area Central of HS2's enabling works contracts. Delivering essential preparatory ground works to some 100km of the phase 1 route, before the commencement of major civil engineering activities. Fusion divided the 100km stretch of the HS2 phase 1 central section into 4 areas, C1, C2a, C2b and C3.

In 2017 Forkers were awarded the ecological mitigation receptor sites package within the C2 area. The C2 sites are spread between Great Missenden and Brackley. The sites would be constructed offline in advance of the main works and comprise wetland, grassland and woodland habitats. As well as provision of general habitat, the primary purpose of the sites is to accommodate translocation of Great Crested Newts and reptiles. The objective of the package is to deliver and manage matured sites ready to receive species that will be translocated from the main line works areas.



The sites in the 2018 - 2021 works we completed within the C2a & C2b packages are at;

- **Quainton, Diddershall and Woodlands Farm** located just north of Quainton
- **Oaks Farm & River Great Ouse** located off the A421 south of Brackley
- **Chetwode and Twyford Cutting** west of Calvert.
- **Bury Farm** near Great Missenden

The general nature of the work activities included:

- Site clearance and access.
- Habitat creation including;
  - ◇ 31 reptile basking banks and hibernaculas
  - ◇ 39 bat boxes
  - ◇ Installation of 9nr brush piles/egg laying heap boxes
  - ◇ Construction of 29nr environmental mitigation ponds, including placement of excavated material within site boundaries and marginal aquatic planting
- Extensive planting and landscaping including;
  - ◇ Woodland and hedgerow trees – 23,035nr woodland trees and 1,292m hedgerow,
  - ◇ 319,574m<sup>2</sup> grassland and overseeding
  - ◇ Installation of 6,733m stock fencing with gates around environmental mitigation sites.



As these works were some of the earliest to be carried out by HS2, there was a high profile public relations strategy which included attending local authority meetings, parish council meetings and visiting local schools.

# HS2 Phase 1 Central, Fusion AWE1 & AWE2 - Area C2 Environmental Mitigation Works (Cont'd)

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The AWE2 environmental mitigation schemes that we were awarded (2019/2021) comprised several sites, split into nine different areas. All sites were in the C2 area and located at:

- **Hewins Wood, Woodlands Farm and River Ray** located north west of Quainton (Bernwood Bats site).
- **Decoypond Wood** at Calvert (3 sites within Bernwood Bats area).
- **A422 Westbury and Bucks Goat Centre.**
- **Jones Hill Wood** near Great Missenden.

The AWE2 environmental mitigation works consisted of:

- ◇ 120,361m<sup>2</sup> of vegetation clearance, ground preparation and seeding
- ◇ Planting 49,216nr woodland and hedgerow trees
- ◇ Installation of 11,829m stock fencing, deer fencing, timber post and rail fencing and gates around environmental mitigation sites



We were also responsible for managing the maturation and maintenance of all the AWE1 & AWE2 sites until November 2021.

The projects required continual liaison with Fusion teams at their Birmingham and Aylesbury offices as well as on site during construction works. We also completed extensive pre-construction management plan documentation which included;

- Subcontractors Site Arrangements Plan, Quality Management Plan and ITP and detailed RAMS for all activities
- Traffic Management Plan and Logistics Management Plan, Environmental Management Plan and Soil Management Plan
- Mobilisation Plan, Welfare Management Plan, Emergency Management Plan and Security Management Plans

Continual monitoring and review of the construction control documentation, as well as approvals during and after site works, was required by both Fusion and HS2 during the contract. Adherence to HS2's high standards and governance procedures and standards was required during construction with particular emphasis on environmental reporting and security requirements.

Difficult accesses to remote sites required trackway matting and dealing with sensitive land owners and land agents. We were also involved with traffic management organisations for site access, planning and producing the traffic notices and consents with HS2, Fusion and local authorities.



# HS2 Phase 1 Central, Fusion AWE1 & AWE2 - Area C2

## Environmental Mitigation Works (Cont'd)

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In addition to the Environmental Mitigation schemes we were also involved in the **Calvert Site Vegetation Clearance Works** where we provided site supervision, labour and plant resources to facilitate clearance work and fencing by other specialists. The Calvert Vegetation Clearance Works were part of the enabling and construction work for the HS2 maintenance depot area at Calvert in Bucks and works included:

- Organising land possession and access.
- Site access to complete works.
- Vegetation clearance in preparation for construction of HS2 maintenance depot.
- Completing any environmental mitigation works in preparation for construction of HS2 maintenance depot.
- Constructing site access routes, haul roads and field ditch crossings for above works and in preparation for construction works on the HS2 maintenance depot.

Forkers initially provided Fusion with project management assistance to get the Calvert Vegetation Clearance scheme up and running, providing one fulltime Project Manager from Feb 2019 for 6 months, with other project management assistance with other parttime personal. Once works started on site in summer 2019, Forkers managed and provided site access and compound setups for all Fusion subcontractors completing works on the Calvert scheme and we then continued to facilitate site works from summer 2019 until completion in late 2021). This includes:

- Setting up site compounds and maintaining these compounds throughout.
- Providing site security.
- Providing site access to remote areas of the Calvert work area – Trackway / Stone Haul Roads / Ditch Crossings.
- Providing site fencing, both temporary and permanent for site perimeters and in areas where vegetation like hedgerows have been removed.
- Provide traffic management for all works, including assisting with Schedule 4 applications.
- Provide extra facilities during protestor eviction works by HS2 Security and Police, which included extra site facilities, site cabins and marquee facilities with catering.

