

A5117 Deeside Junctions Improvement

Client: Highways Agency/ Carillion
Completed 2012



A major highway scheme for the improvement of approximately 5km of the A5117 from Junction 16 of the M56 in Cheshire to the Deeside Park Interchange at the A550/A548 in Flintshire. The route forms part of the Trans-European Network, which connects Ireland with Scandinavia. Objectives were to minimise impact on people and property; landscape character; and sensitive ecological areas.



New Great Crested Newt wetland habitat

Moore Environment were involved with the project from the early planning stage in 2003 to completion of the aftercare period for landscape works in 2012. Our role was Environmental Co-ordinator and Landscape Architect, responsible for briefing and managing a multi-disciplinary team through the planning and environmental master plan design stages, including carrying out an Environmental Impact Assessment, producing the Environmental Statement and providing expert witness services at the Public Inquiry. We then carried out the detailed design and specification of environmental measures, managed and coordinated advanced archaeological and ecological works, provided advice during construction and supervised the implementation of environmental measures, including landscape planting during the capital works and 3 years aftercare.

'At all times the work undertaken by Moore Environment was of the highest quality and the advice received was robust and well considered.'

Stephen Greenhalgh Project Manager Highways Agency



Key features of the environmental design include:-

- mounding to screen the road and vehicles from properties and public areas, and provide noise protection where possible - the field side of screen mounds were re-graded to shallow gradients and returned to agriculture to reduce land take and assist in the integration of the scheme into the surrounding landscape
- incorporation of an additional 130,000 cubic metres of excess material, to provide a rolling landform between carriageways, minimise waste material and assist integration
- 6.4km of new native species-rich hedgerow planting to replace approximately 6km of species-poor hedgerow lost to the works
- 7.1ha of native woodland and shrub planting within the highway boundary
- 11ha of species-rich grassland with wildflowers on low nutrient substrate
- creation of new field ponds, replacing seven times the area of wetland lost and designed to maximise visual amenity and nature conservation value
- semi-ornamental feature planting at junctions to provide place markers
- creation of a two contemporary artwork installations in the form of the 'English Lion' and 'Welsh Dragon' in earthworks in the vicinity of the England / Wales border



Technical Summary



Location: Cheshire/Flintshire
Type of scheme/site and size: 5km of Highways Agency Trunk Road
Outline brief: Carry out a full EIA and publish an ES. Design and manage mitigation for all environmental aspects, in accordance with ES commitments, prior to and during construction including post-construction monitoring.

Contract value: £ 60M at 2009 prices
Completion date: Construction: 2008. Landscape works: 2007-2008. Planting managed as part of the 3 year aftercare period until 2012.

Project team: Client: Highways Agency. Main Contractor: Carillion.
 Env. Co-ordinator & L-escape Architect: Moore Environment
 Lead Designer: Amey. L-escape Contractor: Lowther Forestry
Planning authority: Cheshire West & Chester Council/Flintshire County Council

Materials:



Gateway feature during construction

- Wet woodland created using soils translocated from an original wet woodland site. Plots lined with clay, prior to placement of the soils, to ensure water retention and encourage establishment of the flora.
- Gateway features created using galvanised steel edging with infill material of 19-25mm white marble pebbles over white weed suppressant membrane.
- Low nutrient soils for species-rich grasslands sourced from select locations on site, in accordance with a Soil Management Plan.
- Wildlife, pollution and attenuation ponds within floodplain lined using geotextile bound bentonite with overburden of low nutrient soil.
- Wildlife kerbs provide safe passage for great crested newts around drainage gullies.

Planting:



Hedgerow planting

- 6.4km of new native species-rich hedgerow planting to replace approx 6km of species-poor hedgerow lost
- 7.1ha of native woodland and shrub planting 11ha of species-rich grassland with wildflowers
- HA BAP and site surveys informed species selection.
- All planting designed to achieve specific objectives such as screening, or habitat enhancement.
- Native plant material grown from local provenance seed sources where possible to ensure sustainability, improved establishment and resilience to pests, diseases and climatic conditions.
- Wildflower plug planting carried out to supplement areas seeded as species-rich grassland/wildflower.

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