

**TRENT VALLEY 4 TRACKING, CONTRACT 348, HADEMORE LEVEL CROSSING**

**Client:** Network Rail

**Consulting Engineers:** Scott Wilson

**Value:** £ 6.95M

**Duration:** March 2006 September 2007

**Scope of the Works**

The replacement of level crossing by a road bridge over the railway. The contract also includes the demolition and reconstruction of a local road bridge to accommodate the additional width of four rail tracks. A 900m section of railway widening is to be carried out during the works.

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*This is the second contract to  
be awarded to us by Network  
Rail on the Trent Valley 4  
Tracking project.*



The project involves significant interface with existing watercourses, including the diversion of a brook and extension of existing culvert systems. Also included is the demolition of two major structures including redundant cottages and a brick arch bridge over the railway.

The main works are due to be completed by March 2007, however, an underbridge, currently being used for access by other contractors is scheduled to be demolished in late 2007.

**Principal Quantities**

Principal quantities include 150,000m<sup>3</sup> general fill to roadworks and rail embankments, 400t reinforcement, 3000m<sup>3</sup> structural concrete, 19 precast concrete beams and 12 precast concrete culvert units.

### Demolition Works

During one weekend, we successfully completed the demolition of three redundant cottages. The cottages were scheduled to be demolished to accommodate the additional tracks required for the Trent Valley Four Tracking project on the West Coast Main Line.

Commencing at 7am under a T3 possession and OHLE isolation, the cottages were systematically demolished. Since the cottages had been redundant for almost a year, we had to implement measures to prevent bird and bat roosting during the early part of this year. The cottages were certified by qualified ecologists as being free of nesting birds prior to the demolition works commencing.

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*A Considerate Constructors  
Registered Site*



Approximately 250t of arisings have been generated which will be recycled for use in the site haul roads.

### Considerate Constructors

This site is registered under the Considerate Constructors Scheme.

## Recycling

The photographs below show the placement of Pulverised Fuel Ash as an embankment fill material, supplied from Rugeley Power Station. 135,000t of the material is to be used in lieu of clay.

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*We recycled 135,000t of a coal combustion by-product from a local power station - using it as fill material. This has led to us being shortlisted in the Innovation category of the Network Rail Environment Awards.*



Pulverised Fuel Ash (PFA) is a by-product of the combustion of coal at the power station. We redesigned the entire embankment at Hademore to make best use of the PFA and this is an excellent example of recycling on a large scale.



Had we not driven PFA as a suitable construction solution, the fill material would have to have been sourced from a local quarry or borrow pit - a much less environmentally friendly solution.

### Bridge Opened Three Months Early

We opened the largest of the two overbridges to traffic three months early in order to meet the Client's requirements. This enabled crucial works on the Trent Valley Four Tracking scheme to be carried out over the Christmas 2006 blockade.

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*"Careful planning is ensuring  
that the needs of the public  
are given every consideration  
so that disruption is kept to a  
minimum."*

BARY BRETTLELL  
BCs CEng MICE  
CONSIDERATE CONSTRUCTORS



Network Rail's TV4 Project Manager Keith Riley personally congratulated the team on their achievements and was present when the first vehicles crossed the bridge. This was the first bridge to be fully opened to traffic on the whole TV4 Scheme.

### Liaison with English Heritage

We worked closely with the local authority and English Heritage to move a pair of 180 year old, Grade 2 listed piers. The piers had to be carefully dismantled, catalogued and stored ready for re-erection 200 yards from their original position.

