

## Culverting of Gresty Brook, Crewe

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<b>Client</b>	Network Rail
<b>Designer</b>	Wardell Armstrong
<b>Value</b>	£600k
<b>Period</b>	2003.

Enabling works to allow extension of the existing track panel recycling facility at Basford Hall Sidings, Crewe involving culverting of the main Gresty Brook, filling over the new culvert to existing ground level and creation of an environmental mitigation area. Our experience in earthworks and main drainage enabled us to offer a cost saving alternative design for the scheme

The main elements of work included;

- Preliminary work involved excavation of 4no ponds and leats off the main Gresty Brook channel on eastern site as environmental mitigation, creating a new wetland habitat for translocation of endangered white clawed crayfish from the culvert site prior to construction work
- Pond excavations involved clearance of vegetation and trees, excavation and moving 21,500m<sup>3</sup> of material and forming an embankment to the rear of the mitigation site as a landscaped area.
- To allow translocation of the species over pumping of existing brook flows was required to allow excavation of the bed of the existing brook. The pumping equipment required incorporation of fine screens to prevent ingress of fish into pump suction and discharge areas
- Construction of 120m of new 2.7m x 2.7m pre-cast concrete culvert along line of existing watercourse to the western side of the sidings area.
- In-situ reinforced concrete transition chamber to link new culvert to existing 2.4m dia culvert beneath existing sidings and outfall structure. The open brook channel at the outfall was lined with gabions and stone pitching.
- 12000m<sup>3</sup> of site generated ballast backfill was placed over the culvert to make up site levels.

