



DYER & BUTLER

Case Study

Midgham and Theale Culverts



THE SUCCESS OF THIS PROJECT WAS DUE TO DETAILED DESIGN AND PLANNING ALONG WITH PRACTICAL RESOLUTION OF ISSUES



Client: Network Rail

Duration: May 2007 - February 2008

Location: Various

Form of Contract: RT16
(ICE Design & Construct)

Value: £812,885

Civil Engineering and Building

CASE STUDY

MIDGHAM & THEALE CULVERTS

Design and Construction of the replacement of two culverts, Midgham and Theale, near Reading. The culverts are two separate structures 6 miles apart at stream crossings under the Network Rail mainlines between Theale and Thatcham stations comprising the following:

- M002a. The demolition of the existing brick pier and concrete beam structures. The design, manufacture and installation of new pre-cast concrete culverts which were lifted into place in a 52 hour possession in September 2007. The temporary removal of the tracks to allow demolition of the existing culverts and replacement and the track replacement and jointing with follow up ballast tamping and track monitoring prior to handover.
- M002b. The design work carried out by Dyer & Butlers design consultant (Scott Wilson) brought the outline design in line with Network Rails Line standards and specifications.
- M002c. An ecologist was employed to carry out an environmental survey that revealed the presence of slow worms and lizards on site which meant they had to be relocated to an adjacent site before the work started. The water flow through the Theale culvert supplied a fish farm and therefore there were strict restrictions on the generation and control of silt. A landrainage consent giving us permission to work within 10m of a watercourse was required and obtained from the Environment Agency.
- M002d. The works were constructed within a 52 hour possession of the Network rail main line. Also the site was adjacent to an aggregate supplier and concrete batching plant rail head and disruption to these operations had to be eliminated. All construction activities were planned with these condition a governing .factor.
- M002e. The co-ordination of the design and delivery of the precast culvert units and the removal and replacement of the permanent way along with Dyer & Butlers in house construction activities was a major element of the efficient planning and execution of the works.
- M002f. The designer employed by Dyer & Butler for these works was Scott Wilson, one of the alternatives within our proposed supply chain. The suppliers of the precast concrete units was Cornish Concrete Products, also one of the alternatives within our proposed supply chain.

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Multi-disciplinary teams ensure efficient planning and execution of the work.

