



A1 Rainton Crossroads, Thirsk North Yorkshire

Client

Highways Agency

Contractor

Mowlem

Consultant

Pell Frischmann

Works Completed

2004



The Highways Agency required a temporary solution to address safety issues at a problematic crossroads on the A1 trunk road. The proposed structure was intended to be used for a minimum of 10 years, with the possibility of the life-span being extended. The structure needed to be capable of being dismantled and re-used elsewhere. In order to minimise disruption to the adjacent carriageway, speed of construction was a key factor in selecting the preferred solution.

Mowlem Civil Engineering and its designers Pell Frischmann identified a modular bridge structure with Reinforced Earth abutments as being most suitable to meet the requirements of the project. They approached Reinforced Earth Co. Ltd. (RECo) to undertake the specialist design and supply of the abutments and wingwalls and to carry out the Category II checking of the design.

Reinforced Earth bridge abutments and wingwalls utilising precast concrete panels were designed to support the loads imposed by the 24m span composite bridge decks. A curved profile was adopted for the abutment wingwalls. The RECo system is faster to construct than in-situ methods and allows abutments to be constructed behind the walls, enabling the construction works to take place without disrupting traffic flow on the adjacent live highway.