M62 Junction 6 Improvements

Nr Liverpool 2007

Client	Highways Agency
Contractor	Laing O'Rourke
Consultant	Pell Frischmann

This improvement project was undertaken to add two direct connections to the busy Junction 6 of the M62. This meant traffic would no longer need to use the present junction roundabout, thus reducing congestion and delays.

The project was procured under the Highways Agency's Early Contractor Involvement (ECI) scheme. This allowed Pell Frischmann and Laing O'Rourke to work with Reinforced Earth Company (RECo) in the development of design solutions at an early stage in the project.

Pell Frischmann asked RECo to design bridge abutments for three structures. Abutments for the M62 On-Slip bridge were required to support a 28m precast concrete integral bridge deck. This would be one of the United Kingdom's largest integral bridge spans supported on reinforced soil abutments.

RECo used numerical analysis to model the Reinforced Earth behaviour and examine the structure's response to thermal effects.

The advanced finite-difference model showed how the Reinforced Earth abutments would respond to the loading from the 28m span integral bridge deck.
This detailed analysis allowed a significantly more efficient design solution to be developed when compared to more traditional methods of analysis.