



Background

The GSO provides a dual carriageway connecting the M77 to the A726 at Philipshill, East Kilbride, Improving links between the Lanarkshire, Ayrshire and Renfrewshire conurbations, and also relieving communities along the A726 and B764 corridors of significant volumes of heavy through traffic and improving road safety.

At Philipshill the A726 was upgraded to provide a new elevated section of dual two-lane carriageway with connecting slip roads.

Challenge

Balfour Beatty Civil Engineering Limited and their lead designer, Atkins, identified a Reinforced Earth solution for the approach ramps to the main bridge structures at Phillipshill. Consequently Reinforced Earth Company won the sub contract to design and supply the walls.

Solution

As part of the planning and aesthetic requirements on the project, Reinforced Earth Company developed a rectangular panel system in which a vertical groove feature finish was cast into about 75% of the panels, with the remaining panels cast using a ribbed liner within the moulds, these panels were also coloured with a sandstone pigment. The bridge decks were designed to be supported on columns passing through the Reinforced Earth end walls. The unique nature of Reinforced Earth allowed this 'mixed' abutment arrangement as the steel soil reinforcement was designed to splay around the columns.

CASE STUDY

M77 Glasgow Southern Orbital

Glasgow

Reinforced Earth TerraQuad Retaining Walls

Client: East Renfrewshire Council

Consultant: W S Atkins

Contractor: Balfour Beatty

Construction: 2005

System: TerraQuad

Wall Area: 4835m²

Max Height: 6.5m

Design Load: HB

Design Life: 120 years



REINFORCED EARTH
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