



## Precast: Matching Desires with Design

The most successful civil engineering projects are those that combine excellent performance with attractive appearance. Owners, architects, contractors, engineers and landscape architects are interested in demonstrating their professional capabilities by designing civil engineering structures which aesthetically integrate into their sites and enhance their surroundings: structures which reflect the designer's attention to architecture, excellence in detail and construction.

The Merri Creek Bridges on the 17km Craigieburn Bypass Project in Melbourne, Victoria are no exception and provide an excellent example on the use of precast concrete to minimise the aesthetic and environmental impact of an infrastructure project on its surroundings.

Abigroup contractors approached The Reinforced Earth Company (RECO) to design and supply over 5200m<sup>2</sup> of reinforced soil wall abutments for four major bridges on this project. The Merri Creek Bridges are one of these, with the wall abutments having a facing area of 3492m<sup>2</sup> and a maximum height of 15.38m.

### **Precast manufacturer**

Reinforced Earth

### **Contractor**

Abigroup Contractors

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### **Minimising aesthetic and environmental impact**

Merri Creek begins near Wallan, a town on Melbourne's northern outskirts, and joins the Yarra River at Dight's fall, Collingwood approximately 70km downstream. The Creek is highly treasured from an environmental perspective; hence any development along its course is extremely sensitive and should have minimum aesthetic and environmental impact on its surroundings.

The use of a bluestone rock fixed to the wall, was identified as an aesthetically pleasing solution, which would allow the structure to blend in well with the natural surroundings. However due to safety issues caused by fixing rock to a cast insitu wall in excess of 15m heights, along with the construction time required to do this, it was decided that this was not a practically feasible solution for this project.

### **Precast gives bluestone appearance**

Instead, the precast manufacturer worked closely with the head contractor in developing a new random bluestone appearance, which could be used on the precast concrete facing panels of the reinforced earth wall. The specially created panel achieves a look, mimicking that created traditionally by fixing natural bluestone rock to cast insitu walls, without any of the negative drawbacks.

### **Specify precast early to achieve maximum benefits**

A project of this nature is testament to the fact that when precast is specified or selected in the earliest phases of a project, the precast manufacturer can help owners, their engineers and architects to maximize the design possibilities, allowing architectural expression to be easily accomplished.