

# Design meets functionality

The much needed tollway connecting Melbourne's East will be open to traffic soon – and motorists will be able to see the locally-made and designed stainless steel skins made for the bridges' columns.

BY  
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In December 2007, ConnectEast hailed the opening of the Dandenong Bypass by Premier John Brumby - the first section of the EastLink project to be completed. ConnectEast also confirmed its growing confidence that EastLink itself will open to traffic by mid 2008, nearly six months ahead of the November 2008 contract date.

Managing Director, John Gardiner, said the completion of the \$65m Dandenong Bypass around 12 months early was a significant milestone for the team working on EastLink and an extraordinary achievement. "ConnectEast and our construction contractor Thiess John Holland are proud to deliver this road to the community ahead of time," Mr Gardiner said.

The Thiess John Holland (TJH) \$2.5bn contract to design and construct EastLink is a fixed-price, fixed-time contract. Thiess John Holland is constructing 88 bridges as part of the construction of EastLink – and the exterior stainless steel cladding for the bridges' circular columns is a Wood Marsh architectural concept developed by Fabmetal Specialists, Bayswater, VIC, in conjunction with TJH design engineers.

In order to reduce costs without losing the aesthetics and functionality of the designed stainless steel cladding, Fabmetal suggested using Rimex Metals' patterned, grade 304-2B textured, embossed & coloured stainless steel finishes. The Rimex Metals surface finishes are functional in terms of damage resistance, aesthetics and fabrication. The patterns and some surface finishes disguise wear, tear and damage, whilst also acting as a deterrent to fingerprints and vandalism.

"Reducing the original material thickness from 3mm to 1.2mm was an enormous advantage," says Gordon Heald,



Right: New Touch Laser in Bayswater, VIC, laser-cut every sheet for the bridges' external cladding according to the designers' plan. Photo: Schulz



Left: The Rimex Metals surface finishes are functional in terms of damage resistance, aesthetics and fabrication. Photo: TJH

Managing Director of Fabmetal Specialists in Bayswater. "Due to the embossed finish, the rigidity was enhanced by as much as 20%, eliminates oil canning and the grade 304-2B passivated in the manufacturing process provides a natural skin protection, avoiding tea staining."

However, from a laser cutting point, the Rimex originally complicated the issue.

As a longstanding customer, Fabmetal approached New Touch Laser to manufacture the designed stainless steel parts, and together with supplier Fagersta Steels Pty Ltd in Sydney, the companies solved initial issues involving logistics and manufacturing procedures.

"The tricky part was the need to keep the PVC intact on the Rimex which only has about 20% surface area that the PVC is actually adhered to. The initial problems were the PVC blowing off, but we eventually overcame this issue," explains New Touch's Managing Director, Sales, Brad Drury.

"We used three different machines for the job that involved processing a total of

30t of steel. We spent a lot of time perfecting the cutting of the material without blowing off the PVC or having a negative impact on the cut quality," Mr Drury explains. "To reduce waste we informed Fabmetal as to what machines would be best for different components and they got the sheets cut to length allowing for borders and clamps if needed."

The sheets were completely laser-cut, including the perforations, relief notches for pressing and the various sized rivet holes.

"I believe this project could only be achieved through the close working relationship of all three companies involved," Mr Drury says. The project was completed end of February 2008 and the columns' stainless steel skins can soon be admired when Eastlink opens to traffic. 

New Touch Laser  
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