

Halgavor Bridge



Details

Description	Cycle bridge crossing A30 close to Bodmin, Cornwall, UK.
Client	Highways Agency
Date of project	2000 - 2001
Where FRP composites are used and why	<p>Bridge deck is of sandwich construction with girder sections hand laminated along with the internal structure. The GRP deck is covered with a rubber layer made from recycled car tyres. The span is suspended from steel masts and suspension cables attached to steel parapet posts bolted to the deck structure.</p> <p>Composites were chosen for light-weight, excellent durability and low maintenance. A single piece construction allowed for a quick installation, reducing the time when the A30 had to be closed to 24 hours.</p> <p>Cyclists, walkers and horse riders will use the bridge.</p>
Type of composite used	The FRP deck was manufactured by Vosper Thornycroft using resin infusion with vinyl ester resin (for its enhanced corrosion resistance and mechanical properties) and an ultraviolet (UV) resistant gel-coat. Polyester pultrusions were also used longitudinally to locate the deck.
Design details	It is constructed in three parts, 8.5m x 2m and with the main span 32m long. The bridge is 3.5m wide.
Project partners	Flint and Neill, Wilkinson Eyre Architects, Balfour Beatty, Vosper Thornycroft
Key publications	<p>Firth, I. <u>New Materials for New Bridges - Halgavor Bridge, UK</u>, in "Structural Engineering International", May 2002, n. 2 v. 12</p> <p>David Westaway, <u>Building a future for composites: composites are becoming a more economical option in many infrastructure applications</u>, Reinforced Plastics, September 2001, 62-66.</p> <p>Editorial Team, <u>Adhesives for landmark UK composite bridge</u>, Engineeringtalk, 6 March 2001.</p>

Contact