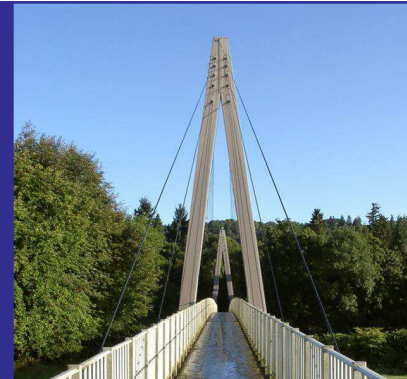


Aberfeldy Footbridge



Overview

In 1992, 14.5 tonnes of composite material were used to construct the world's first major advanced composite footbridge at Aberfeldy constructed by Maunsell with help from Dundee University. The footbridge spans a river and links a golf course.

Details

Location	Aberfeldy, Scotland
Description	All composite footbridge over a river on a golf course.
Client	Aberfeldy Golf Club
Date of project	1991
Where FRP composites are used and why	<p>This is the world's first major advanced composite footbridge. 14.5 tonnes of composite materials are contained in the bridge. A unique method of erection of towers, cables and deck was used which needed no site craneage. This was made possible by the lightweight components. The bridge was completed by the addition of GRP handrailing and a wear-resistant deck finish, providing a life to first maintenance of over 20 years. The minimal foundations and rapid site assembly meant that the solution was very cost effective for the client. Key benefits from using composites are:</p> <ul style="list-style-type: none"> • Fully bonded composite structure • Light and durable • Erected without craneage.
Specific design details	Bridge span = 64m
Type of composite used	<p>Parapets – pultruded GRP sections Cables – Kevlar-49 fibres sheathed in low density polyethylene Deck – pultruded GRP sections GRP – E-glass fibre and isophthalic polyester resin</p>
Performance in service	<p>On inspection after 17 years, the primary structure of the Aberfeldy footbridge is still in good condition. However the GRP parapet has proved less durable than the primary structure. Weathering of the resin exposing the fibres has highlighted the importance of good specification. Secondly the connection between the parapet and base has proved inadequate. Other problems include the mould and lichen growth visible on the bridge due to combination of poor design and lack of maintenance have exacerbated the problem.</p>
Project partners	<p>Manufacturer – GEC Reinforced Plastics Maunsell Structural Plastics</p>

Contact