

Kylesku Bridge

Client: Highland Regional Council
Department of Roads and Transport
Main Contractor: Morrison Construction Ltd.



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The spectacular and elegant Kylesku Bridge is 160km to the north-west of Inverness. The bridge is significant not only because it brought together the two communities of Ullapool and Kylestome, but also because it opened up the west coast traffic route effectively completing the last link in the round Britain road network.

Kylesku is a large bridge having a total length of 275m and the width of water crossed by some 130m with a clearance above high water of 25m. A design of prestressed and reinforced concrete was chosen with no joints in the main element of the bridge. Movement joints and bearings being located at the abutments. The complex geometry and considerable height of the bridge called for extensive and costly temporary works design, thereby leading to consideration of the precasting and lifting of the centre span section.

Fagioli PSC were contracted jointly with Breda Transport B.V. to provide barge transportation and the loading and lifting system for the installation of the piece.

A particular problem was the fact that the general curvature of the bridge continued through the pre-cast section resulting in transverse movement of the centre of gravity



to the extent that the lifting loads on one side were almost double those on the other. The Fagioli PSC solution was to use twin L180 jacks working on 9 strand cables on the heavy side with single L180 jacks working on 12 strand cables on the light side. The jacks on each cantilever were powered from single L4/15D diesel engine power packs whose internal circuitry and design guaranteed a synchronous lift despite the odd number of jacks and the differing loads.

Load out of the section took place in a single morning with the section being safely moored across the river by mid-afternoon. Special fixed anchor fabrications terminating in a single pin connection enabled the lifting cables to be attached to the bridge section in just half an hour. Actual lifting took place at a maximum rate of 12 metres per hour, resulting in the 600 tonne section being safely in place by late evening.