

# Bill Boley Project Profile

## Total Solutions in Controlled Hydraulic Movement and Jacking

### Project Designation/ Location

To lower steel frames each weighing 270 tonnes into the Firth of Forth to provide support for piling operations for the foundations of the new Forth Road Bridge - the Queensferry Crossing.

### Client

Bridge construction consortium

### End Customer

Scottish Government



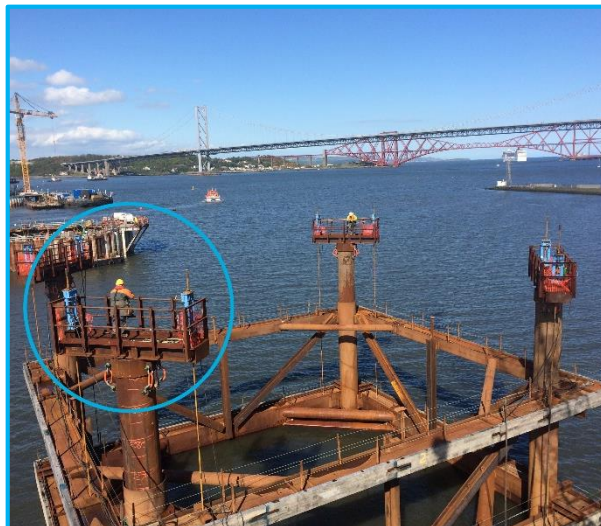
Artist's impression

### Project Challenge

To lower three large steel frames in a uniform manner into the estuary from isolated stations. The furthest frame was lowered down 10 metres below water level.

### Bill Boley Solution

Four pairs of long-range rod jacks (70 tonne capacity each) were fitted to the stanchions at each corner as highlighted in blue opposite. The frames were linked to these via steel rods and then slowly lowered down to the required depth. The remote nature of the installation added to the complexity of the project.



### Background Information

The Queensferry Crossing (formerly the Forth Replacement Crossing) is a road bridge under construction in Scotland. It will connect Lothian, at South Queensferry, to Fife, at North Queensferry.

Proposals for a second Forth crossing were first put forward in the 1990s, but it was not until the discovery of structural issues with the Forth Road Bridge in 2005 that plans were moved forward. The decision to proceed with a replacement bridge was taken at the end of 2007, although the following year it was announced that the existing bridge would be retained as a public transport link.

The Queensferry Crossing will be a cable-stayed bridge, with an overall length of 2.7 km. It will be the third bridge across the Forth at Queensferry, alongside the Forth Road Bridge completed in 1964, and the Forth Bridge completed in 1890. The bridge is due to be complete by 2016.

