

Queensferry Crossing: Design development through construction

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Summary

The Queensferry Crossing (part of the Forth Replacement Crossing project) is a new road bridge being constructed across the Forth Estuary in Scotland for the client, Transport Scotland. The bridge is 2.6km long, including a cable stayed structure with 2 main spans each of 650m and an approach viaduct from the south,

This paper describes progression of elements of the design as it has developed and challenges, to date, met during construction.

The design has been carried out in accordance with Eurocodes. Departures from standard and modification of design rules have been necessary in the detailed design phase. This has included studies and tests carried out to ensure adequate shear and torsion transfer capacity across construction joints.

Keywords: cable stayed bridge; design; construction.



Figure 1: Pier construction in progress – viewed from the South Abutment

1. Introduction

The Queensferry Crossing is a new road bridge being constructed across the Forth Estuary in