

TAY BRIDGE

Project Name

Tay Bridge Bearing Replacement

Client

Tay Road Bridge Joint Board

Main Contractor

Cleveland Bridge

Programme

Apr 05 – Jan 07

Tonnage

700 tonnes



Project Description

The decks carry two lanes of the dual carriageway that forms the A92 linking Dundee to Newport over the Firth of Tay.

The Tay Road Bridge is a 2.25km long, dual carriageway estuarine crossing comprising twin steel box girders acting compositely with reinforced concrete cantilever decks. Each two-lane carriageway is 6.7m wide and the bridge has a raised single Central Cycle/walkway of width 2.4m between guardrails. The bridge has 43 spans that are supported by some 42 piers along its length across the Firth of Tay.

The contract comprises of the replacement of the current bridge bearings, located on the top of 74 column tops with 676 existing bearings to be removed and to be subsequently replaced with 296 new bearings.

This is to be achieved by temporary supporting the bridge, extract the existing bearings, which involves the removal of top section of the pier. The installation of the new bearings and the re-instating of the pier tops subsequently follow this. This has to be achieved whilst maintaining the operation of the bridge traffic system.

Project elements and Workslope include:

- Traffic Management on the Southbound carriageway
- Blast cleaning existing steelwork to remove paint, and the application of a Protective Treatment system.
- Procurement of the new replacement bearings, the removal of existing bearings and the installation of the replacement bearings.
- To install permanent strengthening internally within the box girder, by installing structural stiffeners and concrete locally to the proposed jacking points.
- The jacking up and down of the bridge to allow the removal and replacement of the bridge bearings.
- The removal of the pier tops to allow the removal and replacement of bearings (Hydro-demolition), the subsequent reinstatement of the pier tops.

Client Contact for Reference

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