

Case Study

AN **idom** GROUP COMPANY

Project
Humber Bridge Tolling System

Date
February 2014

Client
HBB

Budget
£5.5m

Contractor
SICE

Architect
N/A

Project Management
Arup

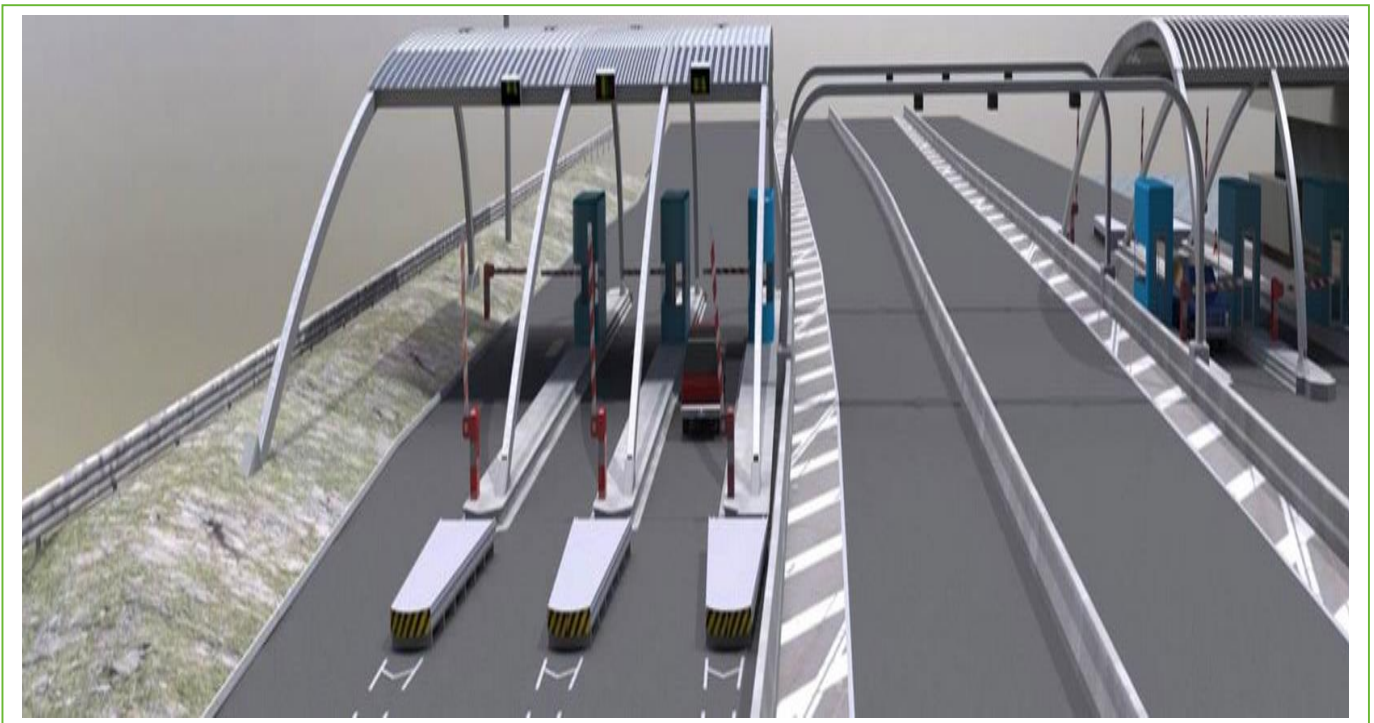
Overview

The Humber Bridge is a suspension bridge with an overall length of 2220m spanning the Humber between Barton-upon-Humber on the south bank and Hessle on the north bank, connecting the East Riding of Yorkshire and North Lincolnshire. When it was opened to traffic in June 1981, it became the longest single-span suspension bridge in the world and remained so for 16 years.

In July 2013, work began on an innovative new electronic tolling system that is designed to provide a more convenient crossing for Humber Bridge users. In February 2014 Idom Merebrook were appointed as design managers, for the main contractor, through a crucial stage of the M&E services design process. Our task was to help facilitate co-ordination of the separate sub-contract packages and aid the integration of the BMS and SCADA control systems. The works included electrical and mechanical services for the Humber Bridge toll plaza and Administration Building and the introduction of a combination of ETC (Electronic Toll Collection) and ORT (Open Road Tolling) lanes, enabling those vehicles equipped with a DSRC transponder (tag) to pass through the toll plaza without stopping or reducing their speed.

M&E Services included:

- Electrical and Mechanical Services for the Humber Bridge toll plaza and Administration Building (fire detection, access control, CCTV surveillance, intruders detection systems)
- Six Electronic Toll Collection (ETC) Lanes and four Free-Flow Open Road Tolling (ORT) Lanes with:
 - vehicle detection and classification system
 - enforcement system
 - operational migration from existing to the new toll collection system
 - hardware platform, including communications and disaster recovery
 - testing, commissioning, warranty and maintenance.



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