

Forth Road Bridge, Scotland



The Forth Road Bridge spans the Firth of Forth west of Edinburgh, Scotland. Opened to traffic in 1964, the suspension bridge spans 1005 metres across the Firth; the total bridge length is 1828 metres. The toll bridge currently carries about 12 million vehicles per year.

The Forth Estuary Transport Authority (FETA) has commissioned Flint & Neill Limited to carry out a variety of consultancy work for them including:

- **Assessment of the barrier systems.** Flint & Neill Limited were commissioned by the FETA in 2003 to inspect and report on the many types of safety barriers and parapets used on the bridge. The barriers and parapets were mostly specially designed for the bridge over forty years ago, hence modern assessment Codes and Standards are not directly applicable.
- **Review of toll plaza protection.** The Brief was later extended by the client to include a comparative study of the protection at the toll booths. Visits were made to other bridges where F&N are involved and other tolled roads and bridges in Europe were researched.
- **Preparation of specifications for a main cable access gantry.** We were also commissioned in 2003 to provide advice on main cable access gantries. We employed our previous experience of specification, design, manufacture, testing and operation of similar gantries on other suspension and cable stayed bridges together with the client's specific requirements to compile a detailed specification and contract documents to enable the FETA to seek competitive tenders.
- **Global stability reviews.** FETA requested that Flint & Neill Limited carry out an independent audit into the corrosion of tie down anchorages in the splay cable towers to determine the risk to global stability should the tie-down bars be removed.
- **General advice on resurfacing.** Planning for a complete replacement of the bridge surfacing was taking part as the above work progressed. Major traffic delays were anticipated because of the need to close entire carriageways. The client requested F&N to study the feasibility of running some of the lighter traffic along the footways to ease the likely congestion. Advice was also given on our experiences of bridge resurfacing with both mastic asphalt and epoxy asphalt.

