

Moveable Bridge Capabilities

Atkins Rotherham have a wide range of experience in the design, supervision of manufacture, erection, installation and commissioning of mechanical, hydraulic and electrical control equipment for large movable structures.

We are an experienced engineering solutions provider with the ability to turn complex engineering ideas into technically viable and cost effective designs by pulling together knowledge and expertise through cross-discipline teamwork. Our flexibility enables us to adapt throughout the design process and interpret specific problems, to arrive at the optimal solution.

Our approach is to co-ordinate the design of the disciplines involved in a bridge in order to achieve an economic and practical design. We employ engineers with multidisciplinary experience in order that the interfaces can be effectively dealt with. We can select the equipment and types of motive power, transmission and control for best results without having to promote a particular manufacturer's equipment.

Depending upon the requirements of the project and client needs, we can offer a range of services from consultancy advice, to full turnkey support incorporating full detail design and project management, from concept stage through to installation and commissioning. Our experience has shown that it is necessary to strive for perfection in the installation of movable structures in order to eliminate the possibility of faults when the structure is complete.

We have worked on many movable structure/ bridge projects throughout the UK and abroad. Projects include:

- **Poole Harbour Twin Sails Bridge** – Exemplar designs and detailed specifications for the mechanical, electrical and hydraulic elements of this unique twin triangular bascule road and pedestrian bridge.
- **Media City Swing Bridge, Salford Quays** – Exemplar designs and detailed specifications for the mechanical, electrical and hydraulic elements of this distinctive swing bridge.
- **High Orchard Lift Bridge, Gloucester Quays** - Exemplar design drawings and specifications for the mechanical, electrical and hydraulic elements that would form the lifting mechanism for this single bascule road and pedestrian bridge.
- **Maryport Bridge, Cumbria** – Development, installation and commissioning of software for pedestrian bridge.
- **Dutch River Swing Bridge, Goole** - Mechanical, electrical and hydraulic design of actuating system. Specifically the design of all the bridge bearings, as well as the drive mechanism and associated equipment for the swing action. In addition, we also specified the control system, as well as writing and commissioning the control software.
- **Clarence Dock** - Structural, mechanical, electrical and hydraulic design of one fixed and two moving bridges.
- **Torquay Pedestrian Footbridge and Inner Harbour Impoundment** - Involving the full design of the structure and lifting mechanisms for the lift bridges and the impounding gates.
- **The Falkirk Wheel** - Design of the structure and mechanism for a totally unique rotating boat lift joining two canals in Scotland.
- **Great Wharf Road Lift Bridge, London Docklands** - Exemplar design of the lifting mechanism for the pedestrian and vehicular access to Canary Wharf.
- **Bellmouth Passage Rotating Footbridge** - Design of the rotating mechanism.

Generally clients know what kind of structure they want but do not possess the necessary in-house mechanical expertise to design or specify the machinery and control systems needed for movable structures. This is where we come to the fore with our experienced team of mechanical engineers. If you are considering a movable bridge or structure, contact our bridge team as early as possible and include them in the design process to ensure that the structure is both reliable and maintenance friendly.



Poole Harbour Twin Sails Bridge



High Orchard Lift Bridge, Gloucester Quays



Dutch River Swing Bridge, Goole



The Falkirk Wheel

Atkins Ltd

Bennett House, Pleasley Road, Whiston, Rotherham, S60 4HQ, UK. Tel: +44 (0)1709 373782
www.bennettmg.co.uk