



moving bridges

**Shoreham Adur Ferry Bridge**  
Shoreham-by-Sea, West Sussex, England



**Front cover | Media City cable stayed swing bridge**  
Salford Quays, Manchester, England



Newhaven swing bridge | East Sussex, England



Pont Y Werin bascule bridge | River Ely, Cardiff Bay, Wales



Whether you're looking for basic advice or a complex assessment, a partner or a leader, inspiration or the total solution, KGAL has the breadth, skill, scale and award-winning experience to meet and exceed your expectations.

Our people specialise in all aspects of mechanical, electrical and hydraulic engineering for moving bridges and structures; these disciplines have dominated KGAL's service output since our inception over two decades ago.

**So, whatever the task, we've probably done it before.**

**And that's good news for you.**

Whether you're the owner, architect, contractor or civil engineer - appointing, recommending, or making a simple preliminary enquiry - our experience means there's less risk for you.

Our design and engineering experts, many with strong construction or contractor backgrounds, are fanatical, innovative and accountable. And all of them technically skilled and commercially aware. It's why professionals want to work for us, and clients want us to work for them.

If you'd like to get in touch you'll find contact information on the back page, or visit our website for more information about our capabilities.



Bridge feasibility study



Countess Wear bascule bridge | Exeter, England



Peel Harbour swing bridge | Isle of Man



Control station | Berth 6 linkspan, Dover Port

You'd expect us to be able to do all the technical engineering, and we can; through all the stages of a project. From the initial concept to Site Acceptance Testing (SAT), KGAL's experts design, specify, simulate, test, install, supervise and commission.

But what sets us apart is the 'extra mile'.

Understanding the local context, thinking of the whole life cycle of a project, seeing the bigger picture from the outset, stepping further back from the start point to see where an alternative approach could save costs or add value.

It's not innovation for innovation's sake. Where designs or processes are tried and tested we won't propose an

alternative route - but we'll still look to see if we can make any evolutionary improvements.

Not to add cost, but to add value. Taking the standard to the gold standard.

From our three offices in the UK, our clients find the outstanding service they expect - but with unexpected added value.

Sean O'Casey pedestrian swing bridge  
Spanning the River Liffey in Dublin, Ireland



It's not just having the experienced support of KGAL that helps you to achieve your objectives. It's knowing that KGAL has the best people, *and* the best tools too.

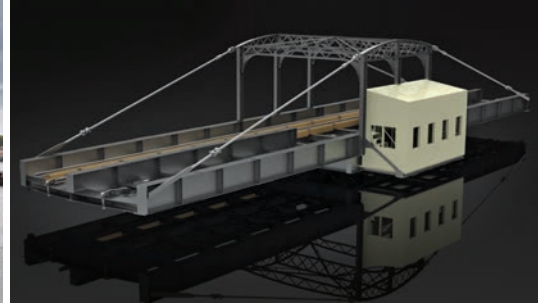
Our staff have an abundance of relevant engineering practice providing an unrivalled depth of knowledge in understanding the problems associated with heavy moving structures including Ro-Ro linkspans and passenger access bridges.

Our power systems modelling quickly determines energy needs to calculate through life energy costs and ways in which to recover energy. Our hydraulic simulation software enables us to accurately verify designs. And with BIM-compliant 3D modelling we minimise risks (for example, a collision of parts or components).

All this, along with our own ISO 9001 accredited process-driven culture, enables us to optimise the entire workflow to improve efficiencies and reduce costs - without sacrificing quality.

Our professional engineering consultancy services address the mechanical and hydraulic operation and electrical control of all the moving elements of a bridge or structure; from the core activity power system to locking pins, jacks, guard rails and barriers. Our expertise also covers the standing electrical elements too: CCTV, control rooms, remote facilities, and the lighting for architecture, signage, way-finding and marine traffic.

And, with the right ongoing maintenance - all to ensure the security of your asset, its environment, and the safety requirements of stakeholders - KGAL's professionalism delivers one more essential benefit: your own peace of mind.



Refurbishment of railway swing bridges

Despite our range of experiences and skills, some clients choose to engage us for elements or modules of our expertise.

It's an approach we're familiar with. We're comfortable with collaborating and like to think of ourselves, with undiminished pride, as the partners who help to enable.

Conversely, some clients ask us to undertake more than the structure's moving elements, and we're happy with that too.

**We offer a range of associated services:**

▪ **Strand Jacking and Deck Launching**

KGAL has experience of managing hydraulic systems for incremental heavy lifting and slide erection in bridge construction.

▪ **Site Supervision**

We can manage the project site, sub-contractors, deliveries and all compliance issues (including health and safety) to help ensure the project is delivered on time and in accordance with applicable codes and expectations.

▪ **Asset Inspections**

We can undertake condition assessments and / or CE compliance authentication; either of the whole structure or its component parts.

▪ **Project Management**

We can manage all aspects of a project on your behalf; from defining the initial design requirements, through the preparation of specifications and vendor assessments, to all facets of managing the design and build stages.

Sovereign Harbour bascule bridge  
Eastbourne, West Sussex, England



Back cover | Ro-Ro linkspan  
Dover Port Berth 6, England

KGAL Consulting Engineers

**Moving Structures** | Water Control | Tidal Energy and Hydropower



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