



# STRUCTURAL STEELWORK

Primary structural steel frames





**World-leading  
steel fabrication  
and construction  
for bridges  
and complex  
structures**

## **INTRODUCING CLEVELAND BRIDGE**



### **Over 140 years of steel innovation**

Cleveland Bridge is a global leader in the design, engineering, fabrication and construction of steel bridges and complex structures. Founded in the UK in 1877, our company has a long track record of innovation, helping to create some of the world's most iconic structures, from the Victoria Falls Bridge and the Wembley Stadium Arch, to the Sydney Harbour Bridge and The Shard in London.

### **Local knowledge, global reach**

As part of the Al Rushaid Group, we produce high-quality structural steel components at advanced manufacturing centres in the UK, Dubai and Saudi Arabia. Our network of sales offices covers Europe, India, China and the Middle East, taking Cleveland Bridge expertise to clients around the world.

### **Precision-made steel for challenging applications**

Our combination of highly skilled designers and engineers with technically advanced manufacturing facilities enables us to produce up to 150,000 tonnes of precision-engineered steel every year. Our products are engineered to fulfil the most demanding applications in the highways, rail, transport infrastructure, commercial, stadia, industrial, energy and public building sectors.

# COMPLEX STEEL STRUCTURES

## – built to perfection

Building large-scale complex structures requires high-quality materials, engineering ingenuity and project management expertise. Cleveland Bridge has been constructing iconic buildings and bridges around the world for over 140 years, applying British construction and engineering excellence to achieve some of the most challenging structures.



### The complete structural steelwork package

Our experienced teams design, manufacture, fabricate and install primary structural steelwork for high-rise buildings, power stations, airport terminals, rail stations, sports stadia, industrial plants and many other structures. Using our modern factories and well-trained workshops, we are able to manufacture and install complex structural frames and the heavy transfer structures that support them – for buildings of any size.

### Collaboration and ingenuity

Collaboration is at the heart of every Cleveland Bridge project. From early engagement with architects and designers, through contributions to planning, whole life costs, buildability and logistics and coordination with main contractors and sub-contractors, our willingness to engage, contribute and collaborate early is the key to successful, safe and efficient project delivery. These attributes contribute positively to sustainable building, built with a minimum impact on our environment.



This collaboration with the project team and the interfacing trades for example incorporating decking systems, precast concrete components as well as fire protection and specialist coatings allows Cleveland Bridge to maximise the buildability process, reducing both time and cost for the whole project.

It's a collective attitude, a mindset, a common behaviour that's hard to quantify – but which is positively acknowledged by everyone we work with. It's a willingness to share expertise upstream and downstream, a passion for problem solving and responding collectively to challenges throughout any programme. It's the reason we have built so many long-lasting relationships with clients, contractors and suppliers who recognise the value of our collaborative ethos.

### Working together to save time, costs and risks

The benefits of this approach speak for themselves – by working together to deliver these projects we save time and resources, improve safety, reduce risks, minimise waste and optimise value. By contributing our expertise from the design and planning stage we ensure that structures are efficient and practical to build – first time around. The impact of our expertise is greater the earlier we are involved, helping clients to find safer, faster, more efficient ways to build their structures, significantly improving building management and maintenance.

When it comes to the construction work itself, our site teams are equally experienced, innovative and cooperative – ensuring programmes are fulfilled safely, on time, on budget and to the highest standards.





### COMMERCIAL BUILDING PROJECTS

- Canary Wharf, London
- The Shard, London
- Burj Al Arab, Dubai
- Emirates Towers, Dubai
- George R. Brown Convention Center, Houston
- Haymarket Hub, Newcastle-Upon-Tyne
- Hong Kong & Shanghai bank, Hong Kong

## WHAT WE BUILD:

### Commercial buildings - Primary structural steelwork and heavy transfer structures

Cleveland Bridge has the steelwork capacity, engineering knowledge and construction expertise to design, manufacture and install primary structural steelwork for any large-scale commercial building. That includes all structural columns and beams as well as the heavy transfer structures required to support the weight of high-rise buildings.

Basement structures for large buildings often require heavy plate girders with complex shear stud arrangements – exactly like the bridge structures for which we are renowned.

Our structural engineering expertise enables us to design and fabricate structures that work with the changing dynamics of tall buildings as they rise, and to engineer structures for the specific capacity and loading requirements of low, medium and high-rise applications.

In our factories we fabricate beams and girders to meet the specific demands of each building. Our knowledge of the steel marketplace and our relationships with steel mills and stockholders enable us to recommend and source the optimum materials for each project – helping to control costs without compromising on structural strength, performance or safety.

Working with BIM, and the use of modern software enables an interface with the designers to model the structure, ahead of manufacture to identify the challenges for design and installation. Whilst also facilitating O&M requirements to help the asset owner manage their structure in an efficient way.

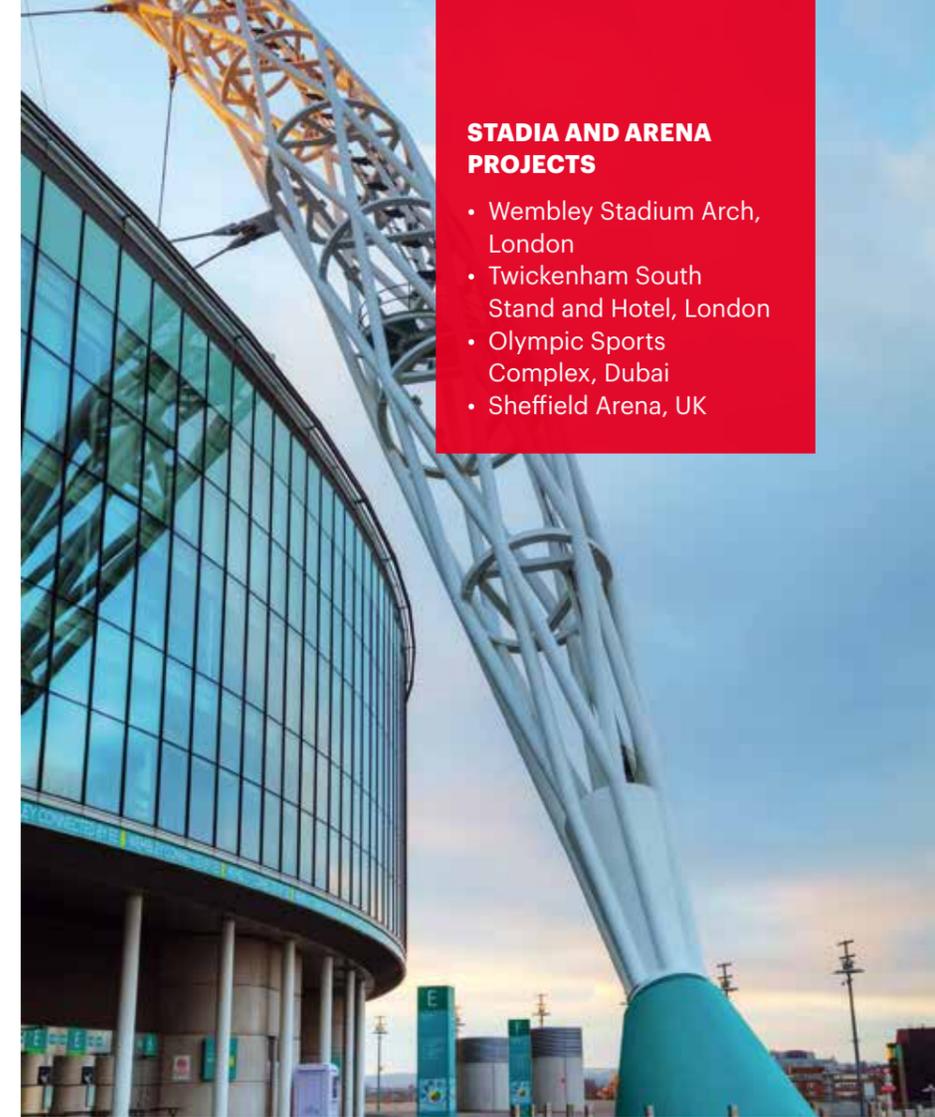
Our ability to design, fabricate and install heavy transfer structures and primary steelwork makes Cleveland Bridge one of a select group of steel contractors able to provide a complete structural steelwork package for any large building. In addition, our vast factories offers the capacity to manage large-scale orders and to fabricate and deliver the huge components required for the world's tallest buildings.

### Stadia and arenas - Facilitating architectural and structural ingenuity

Sports stadia and public arenas are some of the most eye-catching structures in the built environment. Stadia designed to safely accommodate thousands of people while providing unobstructed views and fulfilling the aesthetic vision of the architects require significant structural ingenuity.

Such structures feature large open spans and many have vast gravity-defying cantilevered canopies. Cleveland Bridge has been responsible for fabricating and installing structural steelwork for landmark arenas and auditoria around the world. Our expertise enables us to achieve the aesthetic and architectural forms of these structures, while ensuring they are buildable in practice in a live environment with often constrained sites.

Many large-scale stadia are located in built-up areas hemmed in by residential and commercial properties where access is restricted, and where the space available to manoeuvre and lift large steel components is severely limited. What's more, sports stadia frequently need to be constructed in the off-season in the sporting calendar, which limits programme times. Often the playing surface at the centre of the arena must be protected too, limiting suitable locations for cranes and delivery vehicles.

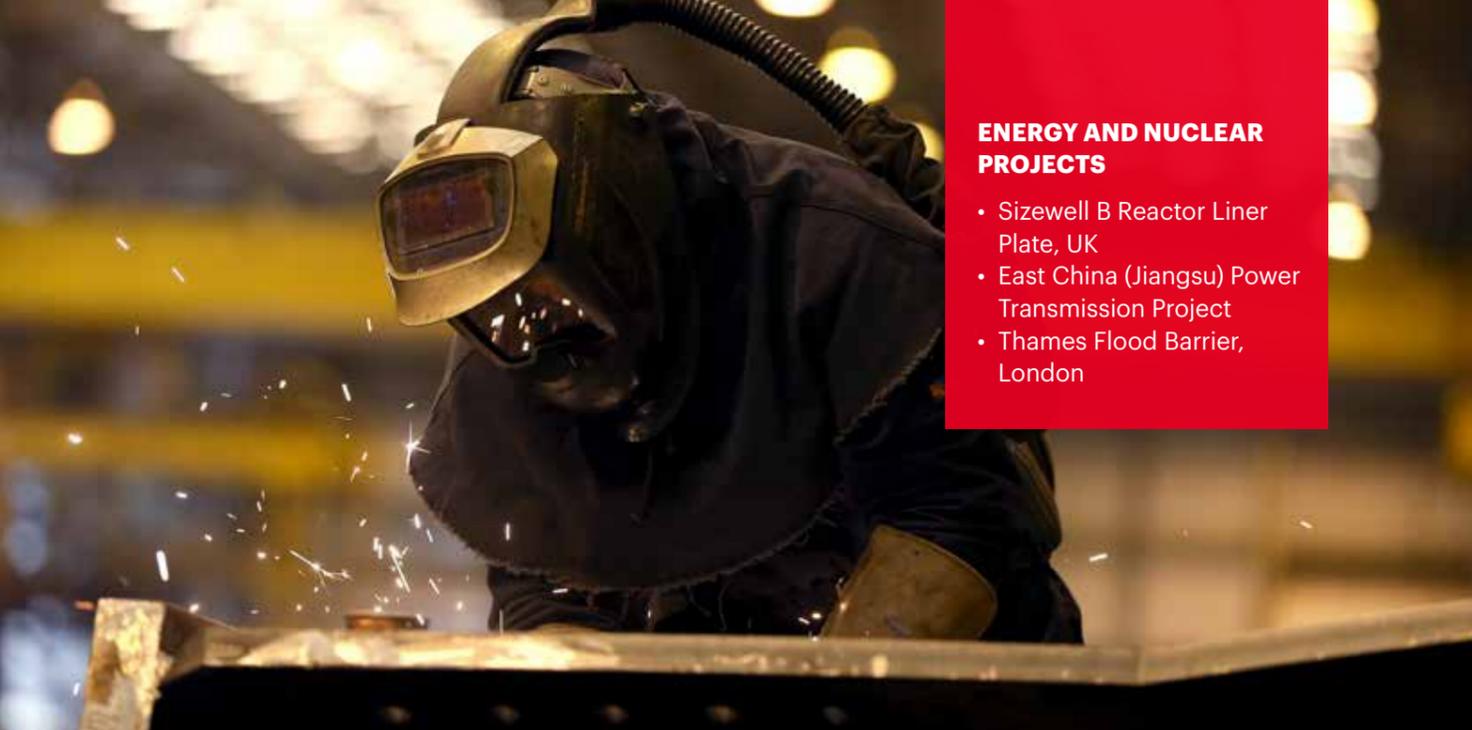


### STADIA AND ARENA PROJECTS

- Wembley Stadium Arch, London
- Twickenham South Stand and Hotel, London
- Olympic Sports Complex, Dubai
- Sheffield Arena, UK

This is where the value of our knowledge, experience and our collaborative approach bring the greatest benefits. Our steelwork lifting and installation expertise means we can devise suitable methods for safely and accurately installing the large components required for these huge structures. We have a track record of completing major stadia within challenging timescales, and have the expertise needed to deliver these vast public-use amenities in the most cost and time-efficient manner.





### ENERGY AND NUCLEAR PROJECTS

- Sizewell B Reactor Liner Plate, UK
- East China (Jiangsu) Power Transmission Project
- Thames Flood Barrier, London

### Energy and nuclear infrastructure - Heavyweight structures for challenging sites

Cleveland Bridge understands the design, engineering and construction demands posed by heavy structures in the energy sector. We have the expertise to build everything from vast turbine halls to nuclear containment doors and the large buildings required to house power-generation assets and ancillary systems.

Our ability to produce steel components to the tightest tolerances and our skill in coordinating multifaceted construction projects in collaboration with on-site teams makes us the partner of choice for many energy sector projects. Our bridge-building capabilities give us the equipment and expertise to build very heavy structures using plate girders fabricated in our factory.

We have expertise in the nuclear sector, providing structural components for both secure nuclear island buildings and non-island structures.

Our capabilities mean we can also play a key role in nuclear decommissioning programmes, fabricating heavy steelwork for the vast structures built over existing plant to contain the dismantling operations. Experienced in the complexity of the Energy industry, Cleveland Bridge have successfully worked in Oil and Gas, Power generation and transmission as well as the renewable sector.



Cleveland Bridge manufacturing excellence is achieved and recognised to international standards. Certified to ISO 9001:2015 (Quality Management Systems), BS EN 1090-2: 2018 Execution Class 4 (CE marking in line with the Construction Products Regulations), EN ISO 3834 part 2 (Welding Quality Management Scheme).

### Rail and transport infrastructure - Steelwork construction in operational environments

Cleveland Bridge has developed market-leading expertise in managing rail and air terminal construction projects around live transport hubs, maintaining access for the travelling public and ensuring their safety and comfort while erecting huge structures in close proximity.

These large public buildings are often architecturally important, our teams are skilled at managing projects and structural detailing so that the architect's vision can be realised while delivering a robust, high-quality structure that is buildable in practice. Rail and airport terminals often feature long-spans of steelwork over wide open spaces, making our ability to manufacture and deliver steel components over 50 metres long an important factor.

It's our attention to detail that makes these challenging projects a success – our engineers focus on the details so that we understand the function of every nut and bolt, and can identify efficiencies and improvements to create the optimum structure. A crucial element in these transport structures is the interface between the primary structural steelwork and the secondary steelwork and cladding. Our precision fabrication ensures that every connection and hole in the primary steelwork is accurately positioned to facilitate a hassle-free secondary construction phase.



### RAIL AND TRANSPORT PROJECTS

- Reading Station, UK
- London Bridge Station, UK
- Paddington Station, UK
- Humber Sea terminal, UK

Cleveland Bridge leads the way in the construction of major rail terminals, where the challenges of limited possession windows and the need to maintain uninterrupted rail services are significant limiting factors. Our award-winning project to build the new Reading Station saw the entire transfer deck erected alongside the existing station, and then slid into place overnight. Similarly, at London Bridge Station, we constructed ten new platforms in an extremely restricted site, with live train services operating throughout. On every major rail project, we work with the full supply chain to manage the interface with the public, maintaining their access to rail services while keeping them safe throughout the works.



# WHY WORK WITH CLEVELAND BRIDGE?



## Our experience and values

Over a significant period we have been demonstrating to our clients our ability to add value to the Design and Construct process. Our management and project teams have a level of experience unprecedented in our industry. Some of our core skills include an ability to think laterally and search for innovative engineering solutions. Our strong ethical values and culture mean that we fully comply with all the latest international legislation.

## Manufacturing excellence

Our global manufacturing facilities incorporate a full complement of integrated steel fabrication processes, including saw and drill lines, fitting shop, blasting and paint

shops. With a capacity to lift up to 100Tonnes, its scale means we can manufacture steel components >50m in length. The company is certified to specific infrastructure certification schemes in particular the Railway Industry Supplier Qualification Scheme (RISQS), National Highway Sector Schemes NHSS19a (Corrosion Protection of Ferrous materials by Industrial Coatings) and NHSS20 (The Execution of Steelwork in Transportation Infrastructure Assets). All certificates are certified by a UKAS accredited auditing body. The company works to these standards as a minimum and strives for continuous improvement.

## Skilled people

On any construction project, the calibre of people working on site is key to delivering a safe, efficient, high-quality programme. Our site teams inspire confidence in clients and fellow contractors, with a proven ability to work to tight programmes on challenging sites. Allied to their technical knowledge and practical skills, they bring an ability to self-manage, taking decisions and responding to challenges in collaboration with other site teams, hauliers, suppliers and anyone who comes into contact with the project.

Our project managers have earned a reputation for smooth, seamless end-to-end programme delivery. They are multi-talented planners, communicators, organisers, trouble-shooters and inspirational leaders. Under their guidance, we have established an enviable track record for fulfilling complicated construction programmes on schedule and on budget.

## BIM/TEKLA modelling

We incorporate building information modelling (BIM) within our design process and use advanced TEKLA 3D software to generate complete digital representations of steel frameworks and structures. Our experienced design and engineering teams can assess and confirm all aspects of general arrangements, fabrication, component drawings and Strumis CNC files for material handling and automatic cutting or drilling.

## Value engineering

Value engineering and design development have long been integral to the Cleveland Bridge ethos. Working together with clients, architects, engineers and sub-contractors, we share expertise and knowledge to devise the most efficient programme plans and structural designs for optimum project value. We bring a fresh perspective to every project, contributing expertise and insights that look beyond short-term economies to identify improvements in functionality, buildability, programme management and whole-life costing – delivering long-term benefits for clients and their buildings.



## Looking after our people – every day

The health, wellbeing and happiness of our people are central to our success. Our factory shift patterns and flexible working hours allow our people to achieve a healthy work-life balance. We have introduced part-time working for retired employees, as a way to retain their skills and enable them to share their vast experience with newer team members. We offer counselling services and a range of health and wellbeing workshops. The benefits of looking after our people are borne out in the levels of engagement, productivity and enthusiasm we see among our teams.

## Providing a safe place to work

Nothing is more important than keeping our people safe at work. Despite working on large-scale construction sites, we have achieved well over 1,000,000 hours with no lost-time incidents. We have an accident frequency rate (AFR) of zero, against a BCSA target of 0.4.

We have introduced behavioural safety training, helping to make safety awareness self-sustaining in the organisation. We give people the freedom to report or challenge unsafe behaviours, to take responsibility and take action to improve safety.

## CSR and sustainability

Cleveland Bridge always aims to make a positive impact in the communities where we work, taking an active role in building relationships with local people, organisations and businesses. We apply supply chain mapping to ensure we target a significant proportion of our procurement from within 75 miles of our manufacturing site.

We work with local colleges, support apprenticeships and implement local health and safety initiatives. We invest heavily in training and development, and maintain ethical trading standards across our operations. We are members of the Supply Chain Sustainability School, which helps us to meet the environmental targets set out by the UK Construction Strategy 2025.

Sustainability extends to all areas of our business. By employing a large number of apprentices, we work hard to nurture the next generation of steelwork engineers – helping to sustain our success and enhance our expertise for the future. We also place significant value on engaging with our local community, schools and colleges to encourage the next generation of engineers and to put value back into our local community.

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# CLEVELAND BRIDGE UK

## *at a glance*

- Established in 1877, based in Darlington, England
- Proven track record of design, fabrication and installation of multifaceted steelwork projects.
- Combined group fabrication capacity of 170,000 tonnes per annum.
- Commitment to the highest quality standards throughout the business.
- Full suite of capabilities, from turn-key solutions to provision of product-specific services across multiple sectors.
- Highly experienced engineering team, offering design, value engineering, project and site management expertise.
- Commitment to working with local partners, providing training, experience and employment opportunities.
- Commitment to minimising environmental impact and adherence to international environmental standards.

