



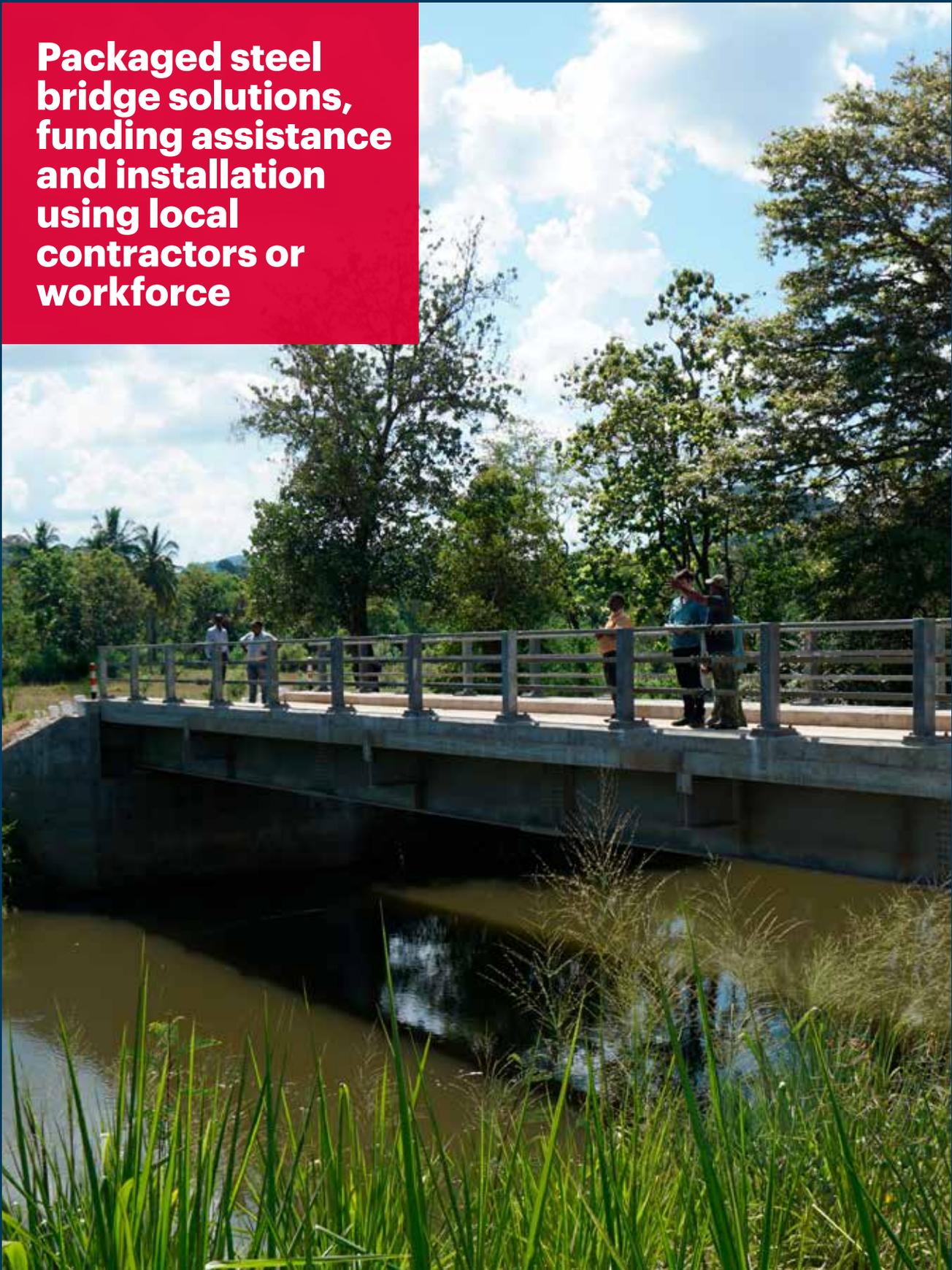
cleveland

RURAL BRIDGE DEVELOPMENT

Connecting Communities



**Packaged steel
bridge solutions,
funding assistance
and installation
using local
contractors or
workforce**



VERSATILE, FLEXIBLE Modular Bridging

High strength, low maintenance rural bridges

As a global leader in bridge engineering, Cleveland Bridge UK has an impressive track record of providing modular bridges for remote rural areas.

Bridge kits enabling installation in rural areas

Our modular bridges are delivered as a complete kit of parts to enable simplified and quick assembly on site. Our service is designed for ease of erection even in the most remote locations. Through precision planning and highly organised logistics we can meet the tightest timescales, from initial order to final installation of a fully operational bridge.

Individual bridge sections are sized to allow easy shipping and transportation to site. These sections can be erected easily with limited need for heavy or complex lifting equipment.



Built to british quality standards for long-life durability

All our modular bridges are made to British quality standards using proven technology. The galvanised steel structures are built to provide a long life with minimal maintenance. We can supply a range of decking surfaces to suit different end uses, as well as a range of ancillary fixtures and fittings. Bridges can be designed to carry highways, railways or heavy plant and construction traffic.

Building vital connections

We see our bridges as more than just physical structures. For many communities, they create a link to the outside world, opening up vital routes for the provision of food, medical supplies and trade.

Spanning what were once insurmountable barriers – or replacing inadequate crossings – these bridges create opportunities for the development of commerce and access to infrastructure. In rural areas, they are often instrumental in enabling access to education, employment and healthcare.



A RANGE OF PRODUCTS for all your rural development needs

Beam bridges

for shorter spans

Modular beam bridges are the ideal choice for bridges up to 30 metres long. They are constructed from steel beams which run the length of the span, with cross bracing in between. The steel or concrete decking sits on top of the supporting beams. A steel-concrete composite deck is the preferred option for enhanced strength, rigidity and long life. For this option, the beams are supplied with shear studs which are cast into the concrete on site, anchoring it in place.

Handrails can be added as an option, and bridges can be single lane or double lane, depending on the site and the expected traffic volumes. The entire steel structure is designed to sit on concrete abutments, which are cast on site.

As a fully galvanised steel structure, the bridge is protected against corrosion and designed for permanent use with minimal maintenance. The kit supplied includes all steelwork, including main girders and cross-bracing, bearings, splice plates, bolts, handrails and permanent formwork for the concrete deck, where applicable.

Truss bridges

for longer spans

Truss bridges are the modular option for spans between 30 and 60 metres. Multiple spans can be used to create even longer bridges, supported by piers between each span. For one bridge in the Philippines, we created a 300-metre crossing comprising five 60-metre spans.

On a truss bridge, the decks sits between the supporting trusses, which run the length of the bridge along each side. This has the advantage of giving greater clearance below the bridge to allow for river traffic, vehicles or flooding, since there are no structural beams below the deck.



Truss bridges can be single or double lane, according to requirements, and are fully galvanised for protection against the elements. Walkways can be created within the trusses, using handrails to separate pedestrians and traffic. Alternatively, walkways can be fitted outside the trusses for greater safety, allowing the deck between the trusses to be used entirely for traffic.

Panel bridges

for disaster relief

These bridges are designed for rapid deployment, and can be installed with minimal preparatory site works. That makes them ideal for disaster relief or emergency response situations, when bridge connections need to be re-established urgently following a natural disaster or other emergency.

OUR HERITAGE drives us forward



1877

Cleveland Bridge UK was formed in UK



1905

Victoria Falls Bridge completed



1906

Edward VII Bridge completed in Newcastle



1932

Sydney Harbour Bridge completed in Australia



1933

Chiswick Bridge completed in UK



1943

Howrah Bridge constructed in India



1964

Forth Road Bridge completed in Edinburgh



1973

Bosphorus Bridge constructed in Turkey



1974

Rio Niteroi Bridge constructed in Brazil



1982

Thames Flood Barrier completed



1988

Canary Wharf building construction



1991

Queen Elizabeth II bridge constructed in Dartford



1997

Tsing Ma Bridge completed in Hong Kong



2000

Emirates Towers completed



2003

Carquinez Bridge constructed in California



2005

Philippines rural modular bridges constructed



2006

Twickenham Rugby Stadium - south stand and hotel constructed



2007

Wembley Stadium arch constructed



2012

The Shard completed



2016

Sri Lanka rural bridging programme

FUNDING OPTIONS

Bridges are a key ingredient in the United Nations sustainable development goals and form a key tactic in their drive to make human settlements inclusive, safe, resilient and sustainable. The UK government supports this aim and has developed a number of initiatives including an assisted bridge replacement project.

Cleveland Bridge as an industry leader have a rich history of working with a range of National Governments and NGO's to assist infrastructure financing, specifically in rural areas and developing countries.

For example, we work with the governments of many countries to help secure funding for bridge projects from the World Bank, export agencies such as UK Export Finance (UKEF) and other similar institutions. This critical financial support enables the construction of important infrastructure throughout the developing world.





International supply chain

At Cleveland Bridge our goal is to grow our business sustainably, as well as stimulating localised economic growth. We utilise local labour wherever possible, employing a dedicated Cleveland Bridge construction manager who will understand the market and local supply chain, project managing the local logistics and installation. Our strong ethical values and culture mean that we fully comply with all the latest international legislation on areas such as anti-corruption and modern slavery.

Building bridges with local communities

On site, we forge partnerships with the community to involve local people in many different aspects of our work. We engage local businesses in every project, from providing bridge decking materials to building abutments, piers and other structural elements on site. This collaborative approach creates much-needed training, education and employment opportunities in often remote communities.

Bringing communities together

Our rural bridges are used worldwide to unite remote communities and open new routes for trade and commerce. Equally importantly, our bridges bring urgent help when disasters have destroyed existing links and make a significant impact in speeding the flow of essential supplies to stricken areas.

We have built more than 1,000 modular bridges in rural parts of Sri Lanka and the Philippines alone, in the most challenging and difficult-to-access locations.

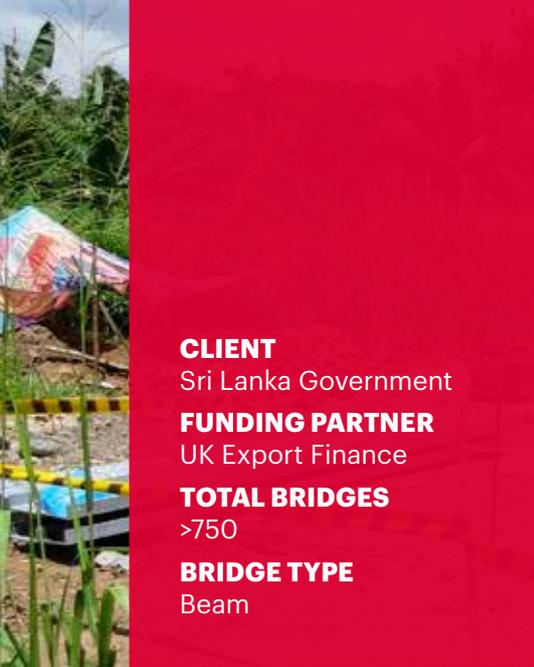


Environmental respect

Our experienced project managers ensure that environmental implications are fully considered from the outset. One of the first challenges for our on-site specialists is to conduct a thorough environmental survey, evaluating and prioritising all environmental considerations and ensuring they are incorporated into the project plan. We are vigilant about leaving a minimal footprint from our activity, by working to the strictest international standards.

Supporting projects worldwide

Our modular bridge kits are designed for easy shipping, so they are well suited to fulfil rural bridging requirements anywhere in the world.



CLIENT

Sri Lanka Government

FUNDING PARTNER

UK Export Finance

TOTAL BRIDGES

>750

BRIDGE TYPE

Beam



SRI LANKA Case Study

Cleveland Bridge (CBUK) was chosen by the Government of Sri Lanka to design, fabricate, install and project manage the installation of over 750 bridges into rural locations throughout the Country.

Working with our funding partners the UKDF, CBUK undertake environmental impact and social impact audits on each of the proposed locations to determine which locations meet the funding criteria. The environmental impact report checks for biodiversity, flora and fauna, rainfall levels amongst other things to ensure each bridge has minimal environmental impact, with maximum social improvement impact. The social impact audit looks at areas such as number of families affected, distances to settlements to understand how each bridge will directly improve the lives of those families within closest proximity.

Then once approved CBUK will design and fabricate each bridge in Darlington, which will then be containerised and shipped to Sri Lanka, we will then manage the onwards transshipment to the site.

All preparatory works to the site including the approach and the abutments are installed by CBUK utilising local labour and suppliers. We will then manage the erection and installation of these single lane bridges up to 30m in length. Each bridge is then handed over the government department.

KEY FACTS

- Environmental impact audits
- Social impact audits
- 750+ bridges
- Fabricated in Darlington, UK
- Shipped to Sri Lanka
- Single lane bridges
- Up to 30m in length

CLIENT

Department for Works and Highways (DPWH)

JOINT VENTURE

Balfour Beatty

FUNDING PARTNER

Export Credits Guarantee Department

TOTAL BRIDGES

>130

BRIDGE TYPE

Beam & Truss



PHILIPPINES Case Study

Working with our Joint Venture partner Balfour Beatty Cleveland Bridge have successfully installed several hundred bridges into rural locations in this geographically diverse country. Cleveland Bridge worked on a number of Philippine islands supplying and installing a wide range of bridges including beam and truss bridges. This project was necessitated by the governments drive to stimulate economic development through infrastructure improvement.

Cleveland Bridge were chosen by the Philippine government due to their proven track record and the effectiveness and durability of their modular bridging solution. The product is supplied fully galvanised, reducing the ongoing maintenance costs and extending the life of each bridge.

The modular design allows bridges from 10-60m in length to be erected single span from the same basic components all manufactured from high grade steel, fully galvanised.

Cleveland Bridge designed, supplied and managed the installation of beam bridges up to 30m, these were all 2 lane with walkway on both sides. Working with our JV partner CBUK project managed the logistics and installation of Truss bridges up to 96m in length.

For the entire project CBUK managed the complex logistical operation including the transshipment to the very rural locations.

KEY FACTS

- JV with Balfour Beatty
- 130+ rural bridges across Philippines
- Beam (up to 30m long) and truss bridges (up to 96m long)
- Supplied fully galvanised

WHY WORK WITH Cleveland Bridge?



Manufacturing excellence

Our extensive 27,000m² manufacturing facility in Darlington is a site of manufacturing excellence. It incorporates a full complement of integrated steel fabrication services, including saw and drill lines, fitting shop, blasting and paint shops, enabling precision manufacturing of all types of modular bridge. It is accredited to BS EN 9001:2008, ISO 3834-2:2005 (WQMS) and BS 1090-1:2009 – assuring you of the highest quality steel products in compliance with international standards.



Health & safety

Safeguarding the people who work on or come into contact with our sites is our highest priority. Keeping people safe shapes our attitudes and behaviours on site and inspires continuous improvement. Our rigorous health and safety policies and training are accredited to OHS 18001 and involve everyone from the factory floor to site teams and directors. We monitor, audit and review our procedures and systems to learn from our experiences and inform future practices.



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 work with local bridge decking suppliers and with local workers and suppliers in the construction of abutments and other site-based structural elements. This collaborative approach helps to create valuable training, education and employment opportunities, as well as developing transferable skills in the local workforce, which leave a lasting legacy in the areas where we work.



Skilled people

From our bridge designers and steelwork fabricators to our on-site project managers, we bring knowledge, experience and a collaborative approach to every project. Our project managers are multi-talented planners, communicators, organisers, trouble-shooters and inspirational leaders. They work with local trades across the world to ensure all works are completed to the highest standard, on schedule and on budget. They have the skills to direct and support local workforces, and to work simultaneously across multiple sites.



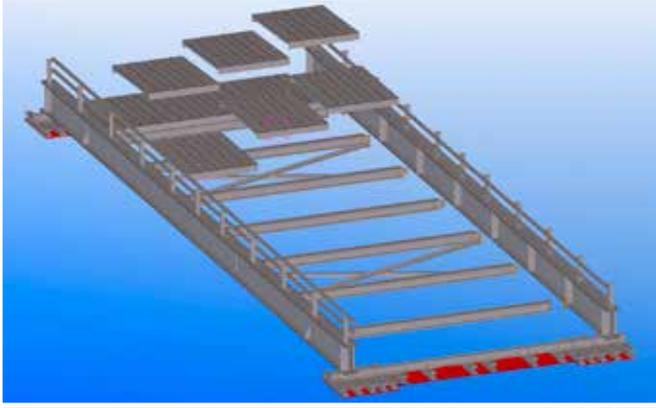
Problem solving

We work closely with clients from the earliest stages of their project, to ensure we understand their requirements and devise the most cost-effective solutions, using local labour and materials wherever possible. Many rural locations are difficult to access and present restrictions on component size and weight. All factors are considered from the outset to deliver a bridge that can be completed right first time. Our teams are accustomed to dealing with unpredictable events and challenging sites, and have a track record of problem-solving and collaborating with local teams to complete projects on schedule.



BIM/TEKLA modelling

Where bridges need to be tailored for specific sites, or where bespoke bridge designs are required, we use building information modelling (BIM) with advanced TEKLA 3D software to generate complete digital representations of the steel structure. 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.



CLEVELAND BRIDGE UK

at a glance

- Established in 1877, based in Darlington, England
- Proven track record of design, fabrication and installation of rural development bridges
- Combined group fabrication capacity of 170,000 tonnes per annum
- Commitment to the highest quality standards throughout the business
- Ability to organise and assist with range of funding options
- Commitment to working with local partners, providing training, experience and employment opportunities
- 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 minimising environmental impact and adherence to international environmental standards
- Provider of turnkey solution that organises and manages full transport to site

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