



Discover one of the UK's
most dynamic sectors

**THE UK CONSTRUCTION
EQUIPMENT INDUSTRY**

CEA
Construction Equipment Association

A powerful voice



Construction Equipment Association

The UK construction equipment industry is worth US\$16 billion a year to the British economy and its influence can be seen in virtually every country in the world. Such a powerful industry demands a powerful voice.

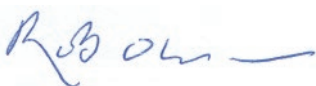
With over 125 members – including original manufacturers and suppliers – the Construction Equipment Association (CEA) represents some of the world's biggest UK-based names.

We support our members' interests by promoting their world-class research and development, manufacturing skills and cutting-edge products, all of which play a vital role in shaping our world.

We also help influence legislation and EU and global regulation. One of the ways we do this is by being an active member of the EU's Committee for European Construction Equipment, as well as the lead organisation in CESAR, a hugely successful plant security scheme.

This brochure is designed to give you a flavour of our thriving industry and to demonstrate why the UK is such an attractive base for so many companies. We thank you for taking the time to discover more.

If you'd like any further information, please visit www.thecea.org.uk or call us on +44 (0)20 8253 4502.



Rob Oliver, CEA Chief Executive

Supported by:



**UK Trade
& Investment**



**Department
for Business
Innovation & Skills**

The Construction Equipment Industry in the UK is an important element of this country's engineering capability and is a cornerstone of the UK manufacturing base.

Manufacturing is critical to the success of the UK economy. Over one third of the earthmoving equipment made in Europe comes from the UK, with the sector exporting over 60% of its UK production. Not only is this an extensive range of finished equipment – but the UK also has countless component and accessory suppliers and specialist service providers.

UK companies have many great strengths which have helped them drive forward key developments in equipment and product design and technical innovation, so there is no doubt the UK has the skills and capabilities to continue to succeed in the global market place.

It is vital that this message is promoted to potential customers across the world. Working with industry and the Construction Equipment Association (CEA), The Department for Business, Innovation and Skills (BIS) and UK Trade & Investment (UKTI) will continue to play a key role in ensuring the very best of what the UK has to offer is available to those who wish to buy and use UK equipment, components and services.

Both BIS and UKTI have a long history of engagement with and support for the sector in the UK and working with the CEA. UKTI is therefore pleased to be able to support the CEA and its ongoing mission to showcase the wide range of high quality innovative products, technological developments and expertise the UK construction equipment industry can offer."

Construction and Mining Equipment – which encompasses manufacturing, engineering and many other knowledge-based high-technology manufacturing sectors – is integral to the UK's success and globally the UK is a key player. The UK remains one of the world's leading manufacturing nations.

The UK is home to major international manufacturing brands, such as JCB, Caterpillar, Cummins, Komatsu, Perkins, Terex and many other UK advanced manufacturing companies supplying all these businesses.

The UK construction equipment industry is worth an estimated US\$16 billion to the British economy, employing some 40,000 people in the UK, exporting more than 60% of production to more than 160 countries.



An industry to be proud of



Construction machines are the backbone of the modern world – their strength and versatility is demanded in the building of every road, home, office, school, hospital, landmark, railway, airport, mine, quarry and port.

Today, the UK stands at the pinnacle of construction equipment innovation. Leading brands such as JCB, Terex, Komatsu and Caterpillar are thriving here thanks to our outstanding environment for technological innovation, greener engineering and worldwide trade.

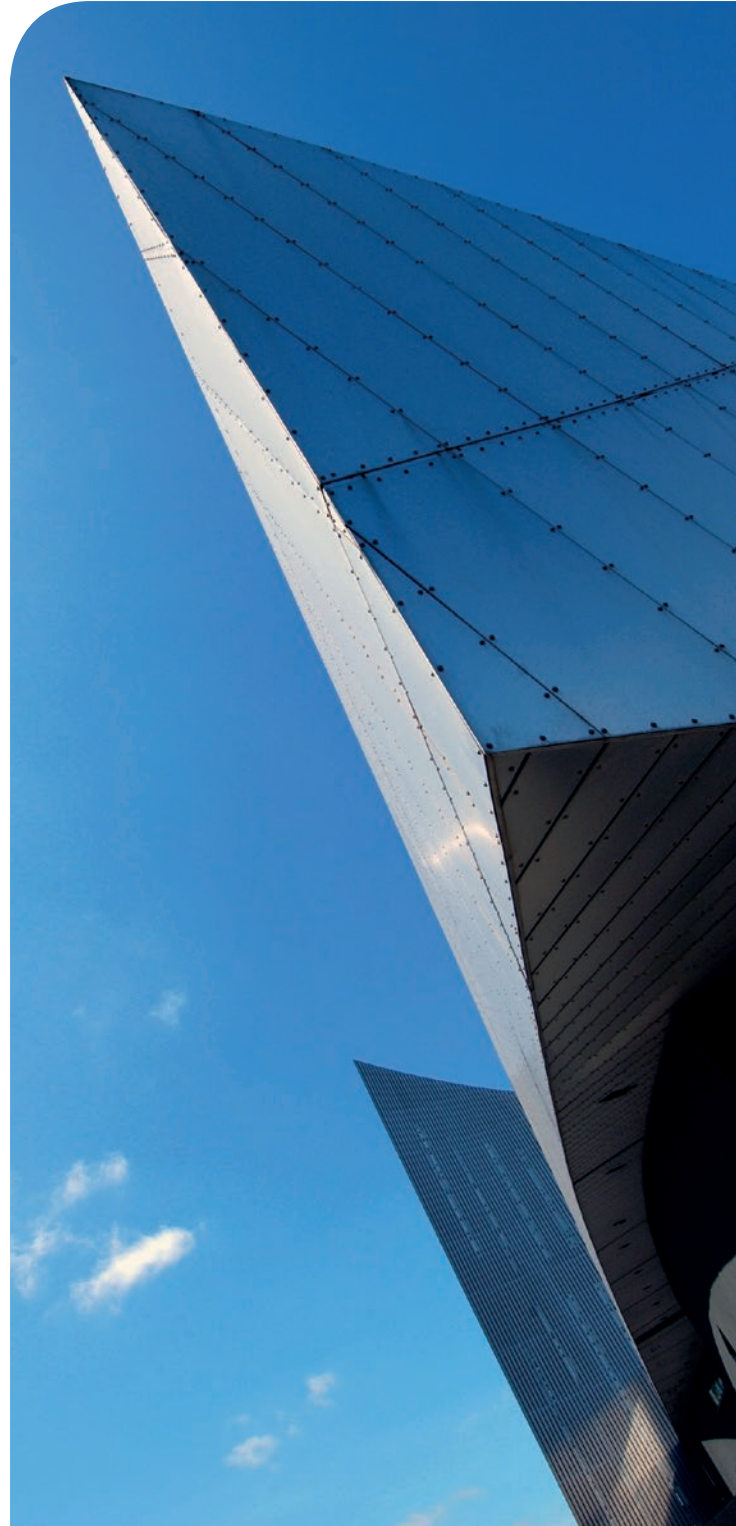
Companies also benefit from a highly skilled UK work force, with around 40,000 people currently employed in the sector. Each one is a vital cog in the design, development, manufacture, testing and marketing of these incredible products. Thanks to this huge expertise and highly supportive climate, construction machines have evolved rapidly in recent years, becoming ever more powerful, reliable, efficient, safe and cost effective.

The continued success of our industry is vital to the UK's economy. It's currently worth a staggering US\$16 billion a year, as we produce more earthmoving equipment than any other European country. Around 60% of our products are exported to over 160 countries, meaning we're also the second largest net exporter of construction machines in the world.

This is an industry proud of its history and achievements and in great shape for an exciting future. We hope you can help us continue to grow on the global stage.

The key facts

- The construction equipment industry is worth more than US\$16 billion a year to the UK economy.
- Around 60% of equipment is manufactured for export.
- The UK is the world's second largest net exporter of construction equipment.
- The industry employs over 40,000 people in the UK.
- The UK is the fourth largest manufacturer of construction equipment in the world with over 50,000 units produced annually.
- The UK produces more earthmoving equipment than any other European country.
- Manufacturing accounts for 10 – 11% of UK GVA, and 44% of exports.
- Manufacturing accounts for 69% (nearly 70%) of UK business R&D.
- Over 1,400 manufacturers in the UK's construction equipment supply chain.

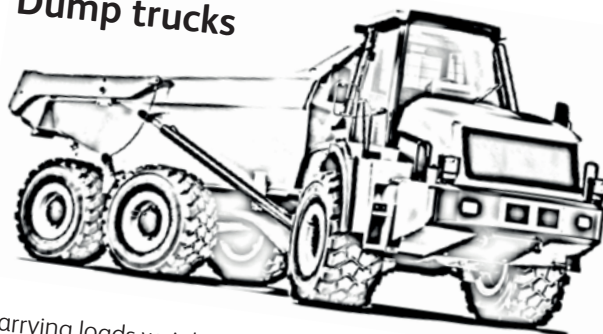


The machines shaping our world

On every construction site, in every quarry mine, in every town and city in the world, construction equipment is shaping our modern world. We've all seen the machines in action, yet while they might look similar, each one has been carefully designed to do a specific job.

Some of the world's best designers and engineers are constantly working on groundbreaking new technologies, making each new model more intuitive, efficient, environmentally friendly and adept at handling the next task...

Dump trucks



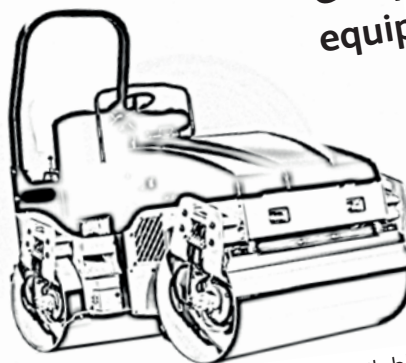
Carrying loads weighing 15 to 365 tonnes, dump trucks, in rigid and articulated chassis configuration, are massively useful in hauling huge amounts of stone, earth, coal and ore quickly and efficiently. They can be spotted on large construction sites and in quarrying and open-cast mining applications.



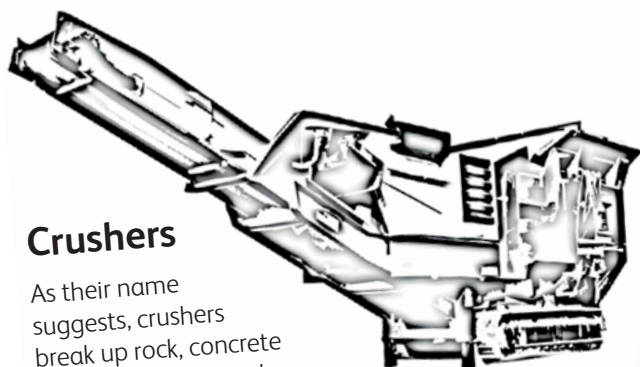
Wheel-loading shovels

With an articulated chassis, wheeled loaders are suitable for high production areas like forests, quarries, mines and waste disposal sites. Bucket size varies from 1 to 35 cubic metres, depending on the tasks ahead.

Compaction equipment

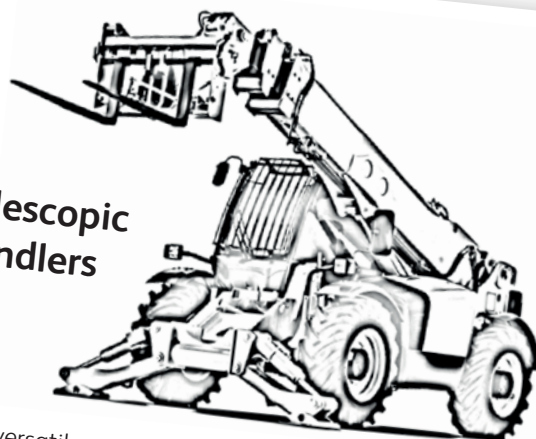


A wide range of machines is available for compacting earth or crushed rock, providing firm foundations and smooth roads. This includes paver-finishers (for laying hot asphalt), hand-guided vibrating plates and tandem rollers.



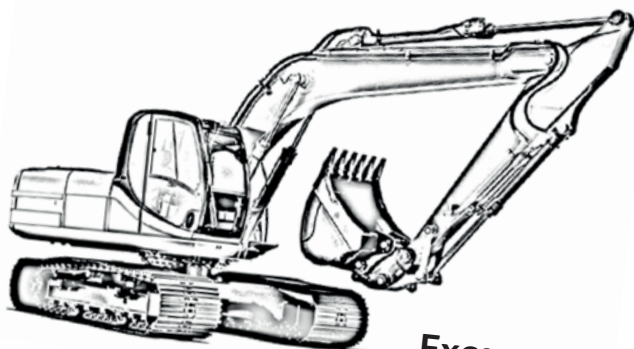
Crushers

As their name suggests, crushers break up rock, concrete and bricks. They can be static or mobile and are often used in the quarrying industry. Mobile crushers are common on large projects where they're used to recycle concrete and brick into hardcore.



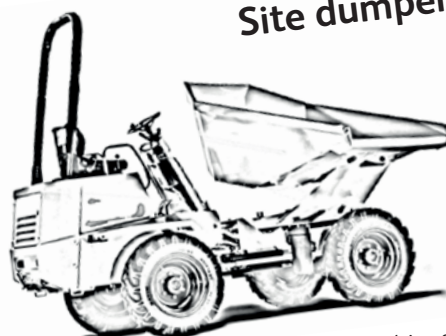
Telescopic handlers

These versatile machines are now one of the world's most popular, thanks to their ability to lift heavy loads vertically and forwards in front of the operator. Lift heights range from 6 to 18 metres.



Excavators

These highly efficient machines have flexible, 360 degree rotating arms that are at once powerful and precise, making digging and loading easy. Mounted on wheels or crawler tracks for tough terrains, they weigh as little as 1 tonne or as much as 120.



Site dumpers

These small-wheeled, efficient machines are perfect for small construction sites and shifting and dumping loose materials like sand, gravel and stone. Their capacity ranges from 2 to 8 cubic metres.



Backhoe loaders

These powerful, flexible machines are recognisable by a scoop loader at the front and a versatile excavating arm at the rear that can dig to depths of 6.5 metres. They come as two-wheel drive, four-wheel drive and even four-wheel drive and four-wheel steer.



Skid-steer loaders

These small, versatile machines get their name because they steer by varying the speed of their wheels or tracks from one side to the other, maximising stability and flexibility. They come with a range of attachments for performing a multitude of tasks, including grading and loading.

Around the globe



UK-designed and manufactured construction equipment is working hard in every corner of the world.

Whether they're bringing to life a new hospital, stadium, motorway or community, our machines are the catalyst that brings people together, enables a better way of life and makes once impossible designs a reality. You can find them everywhere in...

Civil engineering

Constructing and maintaining our roads, railways, bridges and iconic buildings.

Utilities

Constructing and maintaining our vital waterways, power stations, sewage works, pipelines and telecommunication structures.

Industrial services

Maximising efficiency in demolition, waste handling, landfill, recycling and scrap processing.

Mining and quarrying

Excavating and processing earth, rock, sand and many other materials.

Manufacturing

Our machines can be found in the timber industry, in agriculture, defense and many other sectors. As well as in the production of materials such as cement, asphalt, bricks and roofing tiles.



Engineering excellence



The UK has a proud history of engineering excellence and innovation, and nowhere is that more evident than in the construction equipment industry.

Companies continue to make huge investments in research and development; designing and producing machines that are ever more powerful, clean, safe and technologically advanced.

In order to maintain these high levels of engineering excellence, companies are investing in the engineers, designers and manufacturers of today – and tomorrow.

Our sector boasts strong links with the UK's best research intensive universities, which attract leading academics and talented students from all over the world and develop important new ideas, techniques and components.

Industrial collaborations with these centres of excellence mean that every year UK-based construction equipment companies can tap into scores of ambitious new graduates, keeping our sector right at the cutting edge of technological advances.

The UK is ideally situated for manufacturers to set up their global research and development centres.

The UK is a leader in the development of advanced telematics and diagnostics.

Quality training

UK-based companies 'large and small' are committed to ongoing, high-quality training.

The major equipment companies in particular offer some of the most sophisticated training programmes you'll find in any industry, spanning a vast range of roles.

Major manufacturers are now sponsoring flagship academies that will generate the British engineering talent of the future.

These new generations of skilled workers are vital for maintaining the competitiveness of the UK as a whole and especially of our rapidly evolving industry.

Continuous training in both manufacturing and of machine operators is the UK industry standard.

Recognising the need to bridge the skills gap, the CEA has developed a Skills Portal to assist manufacturers. www.thecea.org.uk/skills

UK manufacturers offer operator training in safety and compliance and to meet ever stricter operation safety legislation.



A greener, more efficient future

The UK and European Union have some of the most stringent environmental legislation in the world, yet the construction equipment industry has been pioneering cleaner technology for years. Year on year UK manufactured construction equipment is improved and enhanced to meet ever more stringent noxious emissions reduction legislation.

The changes won't stop there. More legislation is in the pipeline for further cuts over the next few years. Products are having to undergo serious redesigns and it's estimated that around 65% of research and development investment will go into meeting these targets.



Opportunities – the technology roadmap

A number of key changes are expected in the foreseeable future. Although many of these technologies are available in niche segments in the industry the innovation challenge may be to reduce cost and engineering effort to standardise them across the sector to achieve significant productivity gains over the next decade:

- Hybridisation – Integration of the engine and the driveline with an advanced energy storage system, to improve machine fuel efficiency by recovering waste energy, storing it for later use.
- Advanced Powertrain Technologies – further development of current and new engine technologies, for example waste heat recovery.
- Systems integration – integration of all vehicle systems to improve equipment productivity, notably controls which reduce operator inefficiency. Optimisation of hydraulics and engine control for example.
- Advanced telematics – remote monitoring of machines, plus increased machine awareness of its surrounding and condition to facilitate improved productivity, reduce downtime, improve operator and site safety and monitor compliance levels.

There's no doubt that the future of the worldwide construction industry – including the manufacture and operation of construction equipment – will need to continue to be more and more environmentally friendly. The UK is proud to be leading the world in the green technological revolution.

Mine development, construction and operation

Mine construction and operation

The UK offers world class contracting services for the construction and operation of mines. UK contractors' capabilities span the entire supply chain, enabling them to design, build, operate and close mining operations on behalf of mine owners.

These advanced operating procedures enable UK contractors to ensure mine construction project milestones are successfully delivered, while helping mine owners and operators meet health, safety, environmental and social obligations.

Processing

The UK's processing and refining capabilities include project management, design, plant construction, operation and process control capabilities. These are supported by a world-leading processing and refining equipment supply chain, alongside advanced testing facilities, safety best practice and the effective marketing of the processed output.

UK know-how and technologies offer advanced processing techniques, allowing many previously mined out areas and sub-economic ores to be re-evaluated for extraction and processing, enabling the mining of old tailings.



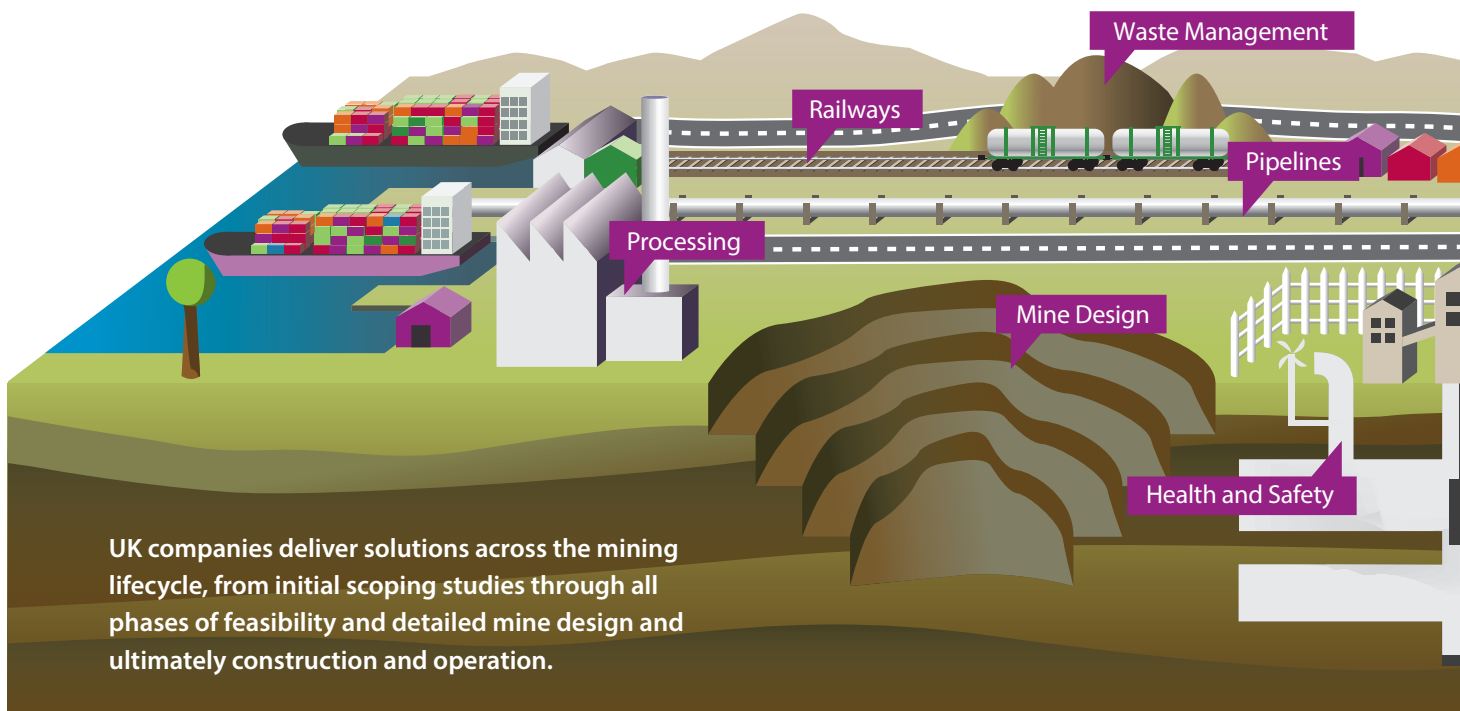
The mining lifecycle – UK capability



Establishing a climate for mining

UK companies and organisations have the expertise and experience to develop and create all the factors that promote a mutually constructive, welcoming and profitable climate for the development and management of mining operations – and beyond.

- Accessing finance Creating a policy and governance framework
- Creating a balanced economy
- Social, economic and environmental assessment and planning
- Stakeholder relations and management
- Learning and knowledge transfer
- International best practice



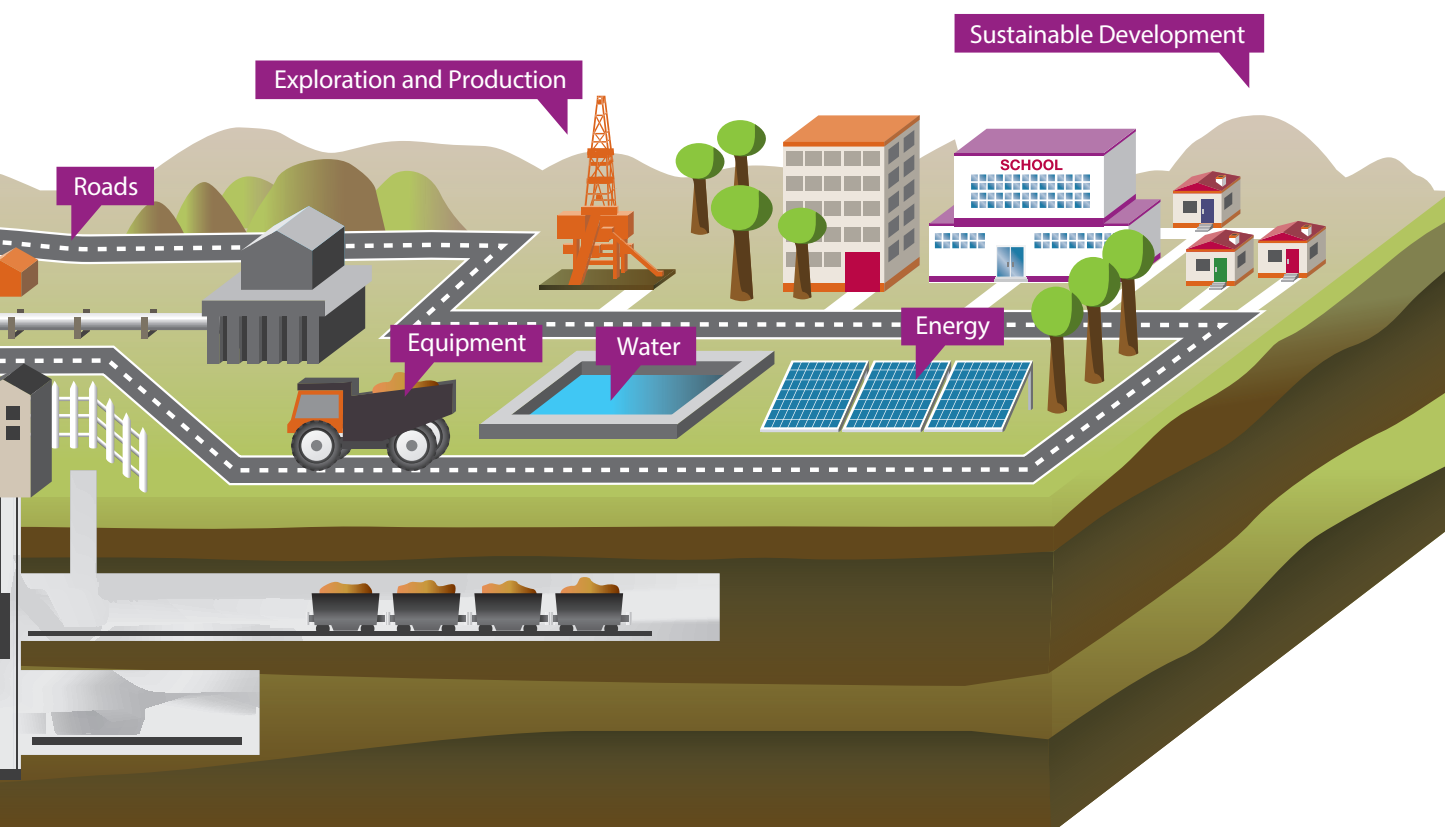
UK companies deliver solutions across the mining lifecycle, from initial scoping studies through all phases of feasibility and detailed mine design and ultimately construction and operation.



Managing risks and driving efficiencies

The UK provide support services that enable mine owners to mitigate and manage risk alongside maximising returns. e.g.

- Professional services
- Risk management and insurance
- Plant management and operational efficiency
- Commodities and financial market exchanges
- Research and development
- Skills and education



Infrastructure: roads, railways, ports, pipelines and support services

UK engineers and contractors have the advanced capabilities to design and construct the entire infrastructure needed to support mining – from transport, civil engineering, utilities and mine facilities to housing and the built environment.

The UK infrastructure supply chain also manufactures many of the vehicles, rolling stock, equipment, software and systems required for mining infrastructure to operate at its peak.



Image courtesy of Punchstock

Equipment

The UK's mining equipment designers and manufacturers deliver world-leading products across the entire mining lifecycle. At every stage of a mine's planning, construction, operation and closure there is a UK firm providing equipment.

UK companies supply surveying, drilling and testing equipment, electronics and software used during the exploration, feasibility and development of a mine. During construction, tunnelling and boring machinery, excavators and earth-moving equipment are powered by technology delivered by UK suppliers. Mine operations depend on UK-developed heating, ventilation and air conditioning (HVAC), power supply and transmission, water supply and monitoring equipment, sensors and software. The UK is also the base for many mine safety equipment manufacturers, ranging from those providing basic anti-slip solutions to sophisticated explosion-proof instrumentation.

Mine processing plants and logistics are supplied by UK-developed high-output engines, conveyors, gearboxes and actuators. UK companies supply construction and facilities management equipment for the smooth running of mine infrastructure, including transportation, offices, housing and recreation. The UK is a world-class provider of environmental services, which include those for site remediation and clean-up, the supply, recovery and disposal of fine and industrial chemicals, and associated monitoring equipment and instrumentation.

The place to do business

The UK is an ideal home for construction equipment companies and suppliers. Uniquely positioned between mainland Europe and our biggest export customer, America, we boast great connections with all major markets via land, sea and air. It's an excellent infrastructure that makes us one of the premier places to do business on a global level.

Many companies are also attracted to the UK because of our highly favourable market conditions and strong government support for businesses wishing to operate internationally. The Construction Equipment Association also provides strategic help and support to businesses, helping them overcome trade barriers and break into new markets.

Established supply chain

Because there are so many major construction equipment companies here, there is already a large chain of established first-tier suppliers and major component manufacturers close at hand and exporting around the world. This makes it easy for companies to serve their clients, here and abroad, quickly and efficiently.

As highlighted earlier, the UK boasts a highly skilled work force and several major world-class research-led universities, which our businesses draw on for innovation, products and talented graduates. This specialist expertise is helping to maintain the UK's competitive edge over lower cost, emerging economies.

We believe the UK is the natural choice for the construction equipment sector and is producing the cutting-edge products the world demands. Now more than ever, in a tough economic climate, we want every market to know that UK-designed and manufactured machines are the best in the world and we truly are an amazing place to do business.



Discover more



Thank you for taking the time to find out more about the UK construction equipment sector.

As you can see, its influence stretches around the world and is right at the heart of some of the biggest and most important international projects and industries. In this country, our CEA members, who have created thousands of highly skilled jobs, are keeping the UK at the forefront of technological innovation and manufacturing, and are bringing billions of pounds to the economy every year. It is, therefore, vital we keep the construction equipment industry strong and vibrant.

You can find out more about how the Construction Equipment Association supports companies in the UK by visiting **www.thecea.org.uk**.

There you can see:

- How we help companies develop export strategies.
- How you can get detailed market information.
- Details on global trade shows and exhibitions.
- Information on forthcoming networking events.
- How we're helping to shape new legislation and keep our industry strong.

If you'd like to work more closely with us to promote our industry in your part of the world, please contact the Construction Equipment Association on +44 (0)20 8253 4502 or Email cea@admin.co.uk www.thecea.org.uk



UK Trade & Investment

How UK Trade & Investment can help.

UK Trade & Investment (UKTI) is the Government department that helps UK based companies succeed in an increasingly global economy. The range of expert services are tailored to the needs of individual businesses to maximise their international success.

UK Trade & Investment also helps overseas companies bring their high-quality investment to the UK's dynamic economy, acknowledged as Europe's best place from which to succeed in global business. UK Trade & Investment provide support and advice to investors at all stages of their business decision-making.

UKTI has professional advisors both within the UK and across more than 100 international markets in British Embassies and other diplomatic posts around the world.

If you are a UK – based company looking to develop your business in overseas markets or an overseas client looking for UK suppliers of world-class products and services, then please contact us for expert advice and practical support. Visit **ukti.gov.uk**.



Department for Business Innovation & Skills

The Department for Business, Innovation & Skills (BIS) is the department for UK economic growth. The department invests in skills and education to promote trade, boost innovation and help people to start and grow a business. BIS also protects consumers and reduces the impact of regulation. The BIS Automotive Unit leads responsibility across government for relationships with the UK's highly successful US\$16 billion construction equipment sector. We maintain one-to-one relationships with the Construction Equipment Association (CEA) and the leading UK and international firms in the sector and represent their interests in the development of Government policy.

For further information please visit **www.bis.gov.uk**.



The Construction Equipment Association

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