

Liebherr & DB Cargo: Safely and sustainably transporting aggregate materials into the city

Customer Story



How can critical aggregate materials – gravel, sand, and crushed stone – be transported into construction hubs like London, as quickly and cleanly as possible? Rail logistics specialist DB Cargo UK has partnered with Liebherr Great Britain and Siemens Financial Services to acquire modern, efficient material handlers for loading and unloading aggregates travelling by rail.

The UK’s construction industry relies on thorough logistical planning. Whether for plant, machinery or materials, meeting deadlines relies on deliveries being made in the right order and the right time.

In London, this comes with unique challenges. With a huge volume of building projects underway at any given period, there is pressure on material suppliers to have volumes of raw materials available, at the times and in the places required.

Core to the industry is the supply of aggregates, both in raw form and for use in ready mixed concrete production. London is a long way from most of the hard rock quarries in the UK, with many suppliers opting to remove road transport from the equation by operating dedicated rail services into the periphery of the city.

Rail services allow aggregate suppliers to deliver in bulk, keeping material costs down, but also significantly reducing carbon footprint, removing potentially hundreds of daily truck movements.



“We have been purchasing Liebherr material handlers for many years and find them to be an ideal machine for our operations. Liebherr Great Britain works very closely with us to deliver the machines optimally suited to our needs allowing us in return to work as effectively as possible, handling a variety of construction materials.”

Selaudin Vata, Operations Terminal Manager, DB Cargo

Reliable loading and offloading

One of the UK’s leading advocates of rail transport and material handling services is DB Cargo UK. As part of Germany’s DB Schenker Group, DB Cargo UK is one of the UK’s largest rail freight companies, transporting everything from cereals to coal, barbecues to biomass, and petroleum to steel.

Handling over 36 million tonnes per year, DB Cargo UK employs more than 2,200 people in its UK business and uses almost 230 diesel and electric locomotives to efficiently haul its range of cargoes across the country.

As well as offering customers a reliable and cost-effective service to take materials from A to B, the company also provides a loading and offloading service, using modern, fuel efficient and reliable material handling machines.

To maintain this service, DB Cargo UK operates a large fleet of Liebherr material handlers, with a batch of seven new LH 40 models arriving at a selection of depots in the past few months.

Changeover at Cricklewood

One of the latest arrivals, an LH 40 C, has been put to work at the company's Cricklewood depot in North London. The 151-hectare site opened in 2020 and was designed to be the UK's first 'net zero' rail freight terminal.

Among its features are a large green acoustic barrier (in essence, a wall of earth) to minimise the impact of noise and dust on nearby homes, and to provide a haven for birds and other wildlife. On-site machinery is fuelled by Hydro-treated Vegetable Oil (HVO) instead of white diesel, reducing CO2e emissions by 98% per litre. The new Liebherr material handlers are also HVO-compatible.

The depot is permitted to handle 500,000 tonnes of material annually and in recent years it has regularly done so. This volume is made up of both incoming aggregates and the export of inert soils to landfill.

Despite uncertainty in the construction market, the site remains a busy place with a steady stream of trucks coming in to be loaded. One of the UK's leading aggregate suppliers, Whatley Quarry in Somerset, sends over half of its output via the rail network, reducing congestion, cost and carbon impact.

With the LH 40, the whole process of unloading close to 1,000 tonnes of aggregates takes just over two hours in total and removes over fifty 8-wheelers off the roads from Somerset to London. Additionally, the LH 40 is economical to run, using just over 13 litres of fuel per hour – up to 20% less than previous models. The modern handlers improve uptime, and are expected to run at almost full capacity, with 85–90% use across DB Cargo UK's depots.



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Under the surface – financing the investment

The Liebherr material handlers represent a significant investment, and many companies would shy away from talking about how they finance such a purchase. This is not the case with DB Cargo UK. Siemens Financial Services (SFS), a specialist financier with knowledge of construction equipment, provided an £8.5m revolving credit line to finance the acquisition of the LH 40 machines.



"Mark Franklin at Liebherr Great Britain introduced us to John Kennedy at SFS, to help build a finance structure supporting DB Cargo UK's fleet replacement programme across multiple construction terminals. We couldn't be happier with the outcome."

Selaudin Vata, Operations Terminal Manager, DB Cargo

Under the terms of this solution, DB Cargo UK can lease the equipment for up to five years, benefiting from a 12-month drawdown window for each delivery. This means that the company only begins payment following delivery of a material handler, aligning machine costs with income from customer contracts.

For even further flexibility, the solution allows DB Cargo UK to smooth VAT payments across the financing period. SFS' expert Asset Management Specialists expect an advantageous resale value of the equipment at the end of the leasing term, reducing DB Cargo UK's monthly payments.

For Liebherr, this financial solution facilitated a multi-unit order, further aided by pre-approved, standardised documentation and processes.



Technical Specifications

The LH 40 model

In its typical scrap handling specification, the LH 40 model has a reach of between 13 and 15m depending on its boom and stick configuration. The seven models purchased by DB Cargo UK feature a much shorter and more capable equipment configuration comprising of a 7.6m straight boom and a short 5m angled stick.

The shorter than normal configuration allows for a slightly larger clamshell grab to be fitted, in this case a 3.5m³ GMZ40 with bolt-on cutting edges. The boom is fitted with Liebherr's ERC (Energy Recovery Cylinder) system which is a gas-filled central cylinder in which the gas compresses when the boom is lowered and releases as the boom is raised, reducing load on the engine, improving fuel efficiency and subsequently reducing emissions.

The LH 40 C

The new arrival at Cricklewood, **the LH 40 C** crawler handler, has been specified with Liebherr's quick-coupler system, enabling fast attachment changeover from the comfort and safety of the cab. "At Cricklewood we have three different clients and materials to handle," shared a rail terminal manager at DB Cargo UK

"We have our loose aggregates which we load into the sheds, we have a long-standing ready-mixed concrete client next door, and we also handle the export of inert material to a number of landfill sites across the UK."

"We currently use a pair of hired in 40 tonne excavators to load the outgoing inert material, but this will change soon as we have a muck spec grab coming for the LH 40 C. Having the quick-change system will save time on swapping attachments over and minimise any potential oil spills thanks to the simple and secure connectivity on the valve block."

Reliable, comfortable & efficient

The crawler LH 40 machines have been delivered on Liebherr's EW undercarriage which gives the machine an overall width of 4.4m on its 600mm wide pads. The long track frames allow almost 5.5m of track to be in contact with the ground, giving the machine a very stable working platform.

Access to the upper structure is a safe and simple affair thanks to wide, non-slip steps and large grab handles leading to a narrow platform alongside the cab. Unlike traditional cabs with their large, hinged doors, the LH 40 uses a sliding door system, making it easy for operators to get in and out of the machine.

The high specification of the cab and well laid out instrument panel make it a comfortable and pleasant place to spend a shift. "I've spent many hours on the LH machines and as far as I'm concerned, you won't get any better," one experienced operator said. "They are a reliable, powerful and stable machine to operate. The cab is comfortable and the little details such as the lighting positions make it just as good on night work as it does in the day."

The LH 40 C is powered by a 4-cylinder D934 Liebherr engine which delivers 211hp at 1,800rpm. A pair of variable displacement pumps each deliver 237 l/min delivering smooth and powerful operation. The combination of finely tuned hydraulics, ERC system and the fuel-efficient engine delivers class leading fuel economy averaging just 13.01 litres per hour.

Talk to the team



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