Significant upturn in civil works gathers pace

An ever-growing worldwide requirement for new and upgraded physical infrastructure is set to drive a continuing stream of major civil engineering projects requiring heavy lift and specialised forwarding service support, reports *Phil Hastings*.

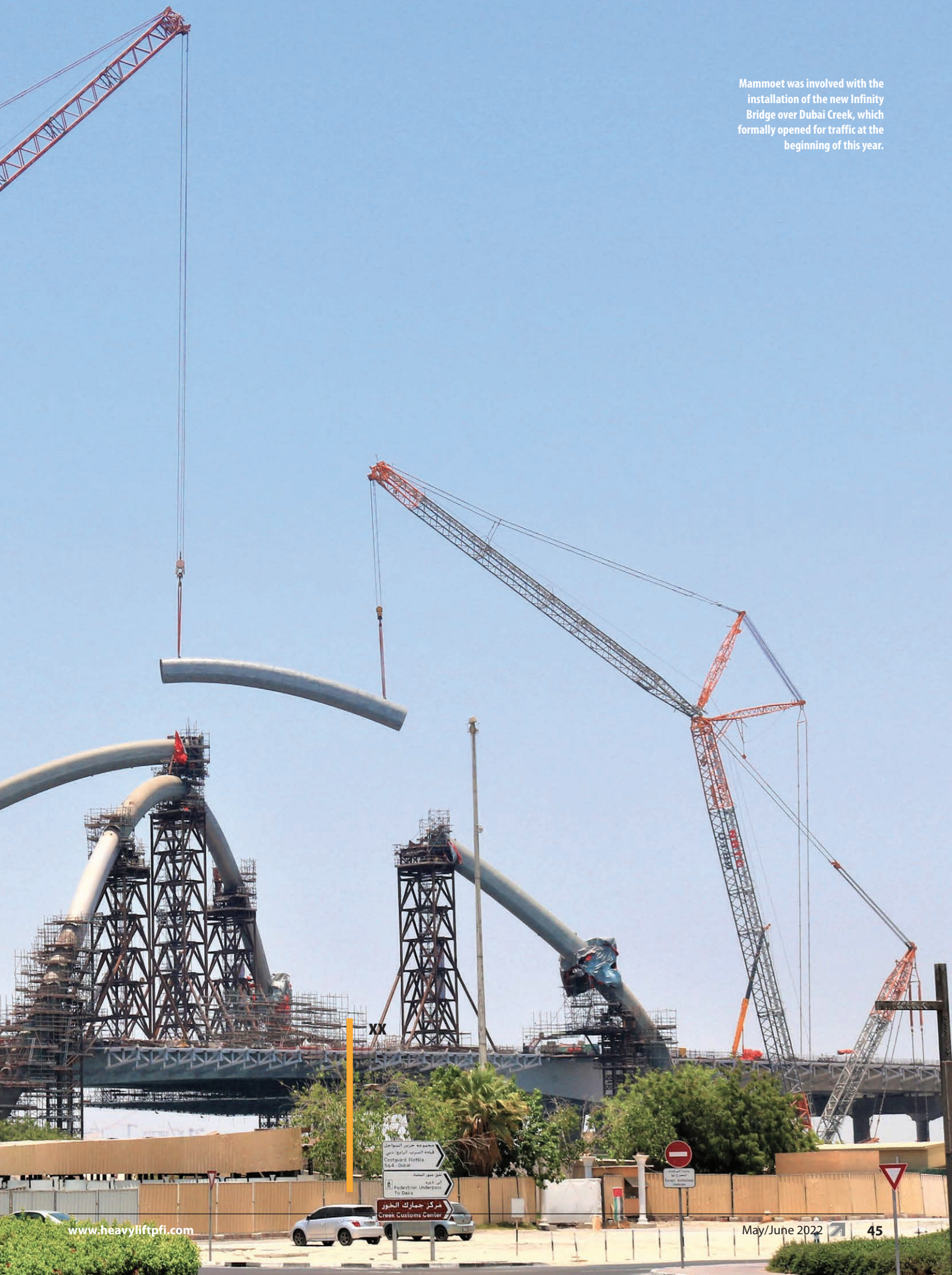
Examples of project work that will create heavy transport opportunities for the forwarding sector include the construction of roads, railways, metros, bridges, tunnels, ports, airports, major water and sewage systems, manufacturing industry buildings/complexes, large-scale residential developments, shopping centres and leisure facilities – particularly sports stadiums.

Recent assessments of the current and likely future actual size of the total global civil engineering/construction market vary, but there is general agreement that the value of the sector should see a compound annual growth rate of at least 4-6 percent over the next five or six years.

Positive prospects

Senior executives with leading project forwarders and heavy lift service providers are also generally positive about the prospects going forwards.

Franklin Alvarez, regional head of transport engineering Americas, dteq Transport Engineering Solutions (part of deugro group), expects "a significant upturn in the next couple of years following the Covid-19 crisis... Various projects were put on hold due to the pandemic and funding was diverted to tackle health and



Mammoet was involved with the installation of the new Infinity Bridge over Dubai Creek, which formally opened for traffic at the beginning of this year.

dteq's work on a pulp and paper mill project in South America included civil engineering work for the 230 km journey undertaken by OOG and heavy lift cargo.

socioeconomic issues around the world. However, as the number of Covid-19 cases declines, we will see the vast majority of countries taking a new look at their infrastructure and future growth."

He pointed out that the USA, for example, has recently approved one of the largest bipartisan infrastructure deals in its history, with investment of over USD500 billion going into projects relating to public transit, the upgrading of airports and ports, passenger rail and offshore wind.

"That investment will allow for the creation of new heavy lift projects in which civil engineering will be key – and as a result, engineering companies like dteq and project freight forwarders like deugro will be involved with new challenges in the near future."

Early involvement

As background to his comments, Alvarez explained that dteq's participation in heavy lift projects includes being involved with the early phases where civil engineering is key to providing solutions for the design and construction of infrastructure like jetties, port development and expansion, roadway design, traffic studies and geotechnical studies.

"We are also currently involved in a large-scale pulp and paper mill project in South America which entails undertaking a variety of civil engineering works for the 230 km journey being undertaken by over 200 out-of-gauge (OOG) and heavy lift cargo pieces," he added.

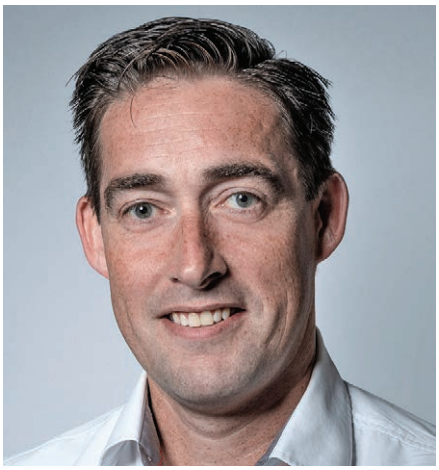
Ruedi Reisdorf, ceo of Swiss global forwarder Fracht, confirmed that the impact of Covid-19 on overall global civil engineering industry project activity levels has been more of a temporary blip than a sustained slowdown.

Fracht's current involvement in the sector includes working on railway extension projects in Saudi Arabia and managing the movement of boring machines for tunnel construction in Australia and the UK.

"Civil engineering is a long-term business. It can take many years for a project to secure approval and financing – some can be around for more than a decade before they actually get built," commented Reisdorf.

"So while there was certainly a kind of pause during 2020/21 due to Covid-19, projects previously in the pipeline are now getting back into shape.

"In addition, the push to 'build back better' [post-covid] in the USA, together with similar initiatives in Europe funded by the EU, is surely something that will create quite a few new major civil engineering projects."



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– Richard van Looij, Mammoet

Ongoing demand

Other logistics providers said that they had not experienced any significant downturn in civil engineering industry demand for their services over the last couple of years.

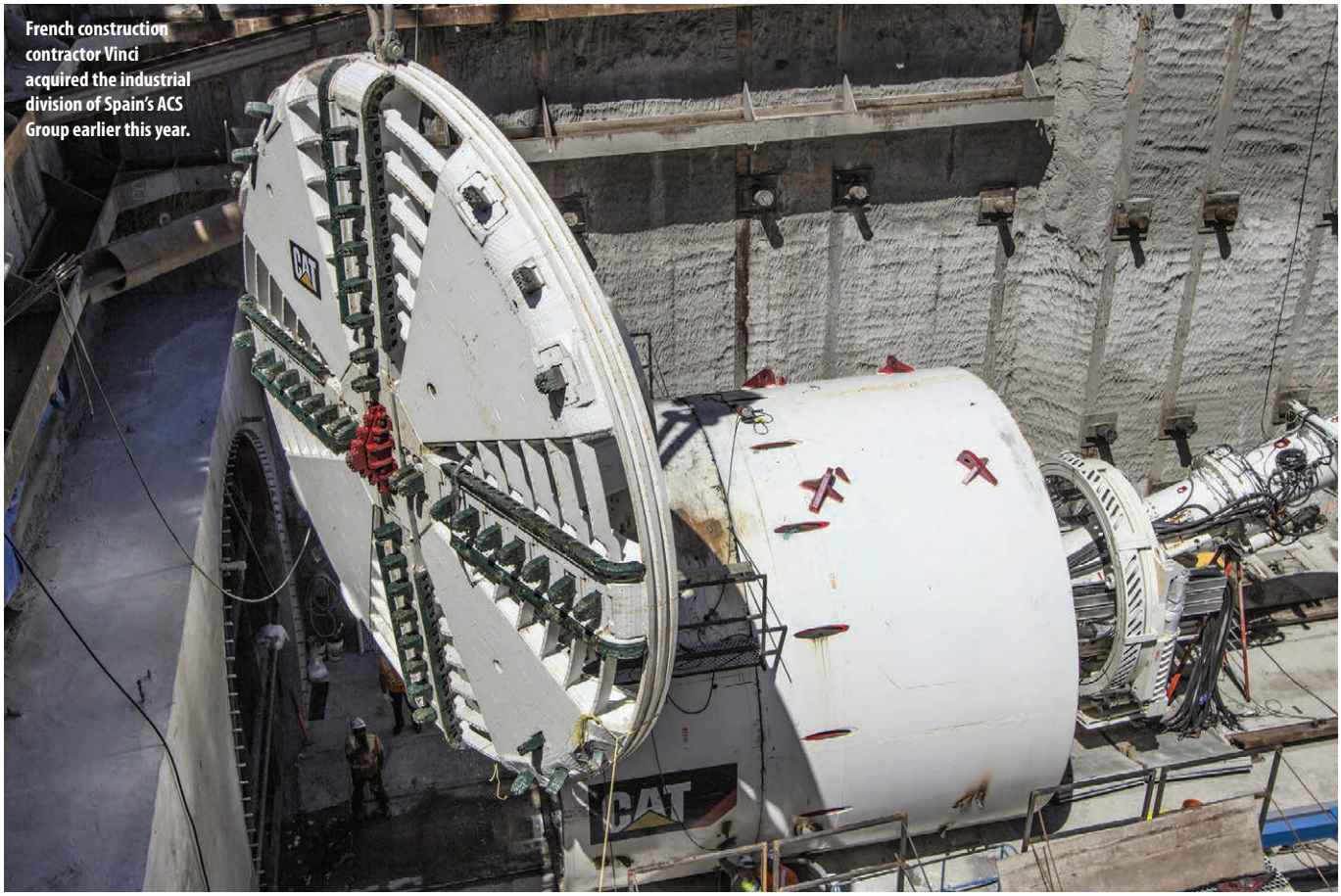
One of those was Richard van Looij, segment lead civil for Netherlands-based global heavy lift services provider Mammoet, which is regularly involved with urban infrastructure projects worldwide, notably bridges and other civil engineering work.

"The last couple of years have been challenging, of course, due to Covid-19 and related issues such as difficulties moving people in and out of different countries," he commented. "Actually, though, we were extremely busy through 2020/21 as work on infrastructure projects pressed ahead."

Geographically, van Looij singled out Europe and the USA as particularly strong civil engineering project markets at the moment. "In Europe, the Netherlands, Belgium, France, UK and Scandinavian countries stand out as they extend their infrastructure or replace things like bridges which are at the end of their lifespan."

He added that Mammoet is currently seeing an increase in two types of bridge project requiring heavy lift support.

The first is a straightforward



French construction contractor Vinci acquired the industrial division of Spain's ACS Group earlier this year.

decommissioning operation where a bridge is lifted and taken away to be dismantled. It is then replaced by a new bridge.

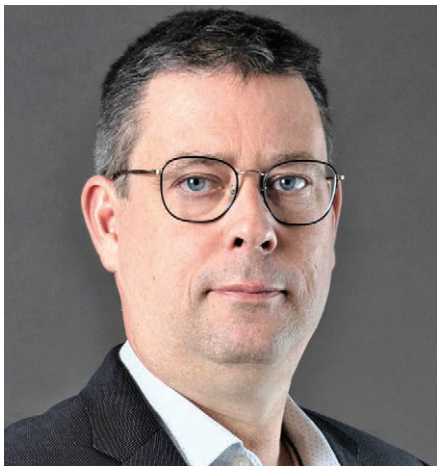
In one recent example, Mammoet assisted with removing a 500-tonne, 30 m steel arch bridge at Vianen, the Netherlands, on a Sunday evening. To complete the job, Mammoet built a large gantry system to support and lift the arch.

Bridge projects

The second type of project involves relocating an older bridge which has not yet reached the end of its lifespan but which is being required to handle higher loads than it was designed for. The bridge is moved and installed at a new location where it will handle lower loads while a new, higher-capacity bridge is built at its original site. "In that way, only one new bridge is required rather than two," explained van Looij.

Sarens, a Belgium-based crane rental and heavy lift service provider, executes an average of 70 bridge projects worldwide every year, many of them involving the deployment of accelerated replacement and installation technologies.

One of the most recent examples of such a project, in 2021, saw the company install new sections of the Seibert Bridge across the River Seine in Boulogne Billancourt, France, (following the demolition of the original bridge in 2018 due to corrosion). The two spans of the new bridge – one over a road and the other across the Seine – weighed around 2,240 tonnes.



One of the technical challenges of that installation operation was the fact that due to the dimensions of the bridge, a barge with significant dimension was required to ensure stability.

– Carl Sarens, Sarens

"One of the technical challenges in respect of that installation operation was the fact that due to the dimensions of the bridge, a barge with significant dimension was required to ensure stability," reported Carl Sarens, the company's director technical solutions, projects and engineering.

"However, due to the limitations of the River Seine, only a barge with limited width could be mobilised at the site. So, the team used Sarens' twin-barge, Karel-Victor, which was transported uncoupled on the River Seine and then coupled once onsite to double the width."

Strong markets

Emre Eldener, managing director of Kita Logistics, a Turkish international logistics service provider involved with major civil engineering projects in both Turkey and overseas, highlighted several other currently strong civil engineering markets for international logistics providers.

"We are seeing more and more major construction projects of various types taking place in Africa," he reported. "Turkish contracting firms are already very active on that continent – Kita, for example, has in the past moved a disassembled bridge to Sudan where it was constructed across the

Mammoet removes a steel arch bridge at Vianen in the Netherlands.

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– Emre Eldener, Kita Logistics

Nile River – and more will follow."

Looking ahead, he said Africa is also currently seeing further major new irrigation projects being discussed, as parts of the continent are very suitable for agriculture.

"Apart from Africa, several Turkish companies are very active in the construction of airports in regions such as Central Asia. One example is a new terminal at Almaty in Kazakhstan being built by Turkish operator TAV (which reported last year that it will invest around USD200 million in building a new international terminal that will double the airport's capacity to more than 14 million passengers annually)."

World's longest bridge

Eldener added that Kita's home country also has a very active civil engineering sector – highlighted by the official opening earlier this year of the Dardanelles suspension bridge (officially known as Çanakkale 1915 Bridge) which is said to be the longest bridge of its type in the world. Kita's role in that project included transporting 80, 115-tonne cable reels.

"Generally, Turkey is the third-largest user of cement in the world, which reflects the very strong construction environment. Accordingly, tower cranes, for example, are widely transported," commented Eldener.

Infrastructure projects

"Kita's general involvement in infrastructure projects in the country also includes moving components such as large valves, public transport vehicles, cable reels, pumps, etc."

As far as longer-term prospects for overall worldwide civil engineering industry projects are concerned, Mammoet's van Looij agreed with recent suggestions by sector analysts that the market should see steady growth over the rest of this decade.

"The challenge for us will be to adjust our position to be able to support that market growth and secure a portion of that business through the application of smart ideas," he added.

HLPFI

Recovering countries plan new infrastructure

A raft of new freight transport civil engineering projects are being prepared for the next few years as recovering economies bid to overcome the worldwide supply chain bottlenecks that followed the sharp Covid-19 related slowdown in 2020.

"Those bottlenecks have highlighted the fact that much of the world's landside freight transport infrastructure is far too old and slow and needs to be improved to avoid further supply chain disruptions in the future," explained Ruedi Reisdorf, ceo of Fracht.

"You cannot just build larger ships to move more goods by sea without also expanding the ports, terminals and railway infrastructure required to move those goods on to customers."

In fact, signs of potential major new investment to boost that sort of freight transport infrastructure are already appearing in some parts of the world.

Earlier this year, for example, the US Department of Transportation's Maritime Administration announced nearly USD450 million of newly available grant funding for port-related projects through its Port Infrastructure Development Program – "by far the largest investment in the programme ever".

That announcement followed the implementation of the Bipartisan Infrastructure Law in late 2021 committing to a total USD17 billion of investment in US ports and waterways.

Major new port and other freight transport infrastructure is also being planned in many other parts of both the developed and developing world.

In the UK, for example, research published by the British Ports Association revealed that new port investment announced in 2021 topped GBP1 billion (USD1.32 billion) "swelled by several big projects such as the GBP300 million (USD396 million) fourth berth at DP World's London Gateway [in southeast England]".