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ne of the biggest headaches for contractors working in a city centre is the difficulty in getting materials and equipment delivered to site at the right time and without bringing the surrounding area to a standstill.

Of course, many site deliveries are scheduled to take place overnight and at weekends when the roads are relatively empty. But few city-centre sites have the luxury of on-site storage space and so there are inevitable vehicle movements at all times of the day.

Such is the challenge for contractors on projects like Crossrail, the Olympic Park and big high-rise schemes like the Shard, that over the past decade or so a new breed of logistics specialists has grown up, dedicated to keeping sites building at optimum speed.

The secret weapon in these companies' arsenals is the 'consolidation centre', a strategically-located storage and distribution facility where materials can be stored as a jumping-off point for just-in-time delivery.

Conventional site deliveries, direct from a supplier, are often uncoordinated, with many separate deliveries a day inevitably resulting in a build-up of traffic both on site and on the approaches to the site.



This is inefficient. Vehicle utilisation is poor, with trucks often travelling to site with a part-load and returning empty, and the resulting road congestion delays other road users and leads to high fuel consumption and high levels of vehicle emissions. It's costly and harmful to the environment.

The advantages of reducing construction traffic are obvious: lower fuel costs, less congestion, less noise, safer roads and less pollution.

WRAP, the Waste & Resource Action Programme, estimates that consolidation can reduce vehicle traffic to and from sites by up to 70% during the busiest phase of a project - usually the fit-out stage, when many suppliers are competing for limited space.

There are times when consolidation offers few benefits - for example, there's no advantage in using a consolidation centre for deliveries of full-vehicle loads, says WRAP - but the planning and scheduling of such deliveries by a logistics specialist will still bring advantages.

The LCCC

Located just outside the City, in London's Docklands, the London Construction Consolidation Centre is a specialist distribution facility providing just-in-time deliveries of construction materials to projects.

Materials and plant are delivered to the 12,000m² centre in bulk and stored before being called off to site in the quantities needed for the next day.

The LCCC supports between three and six projects. These have included Skanska's Barts Hospital phase II and the Quadrant III project run by Sir Robert McAlpine.

Wilson James says that the LCCC has achieved 97% of goods delivered right first time - compared with the industry average of just 30%.

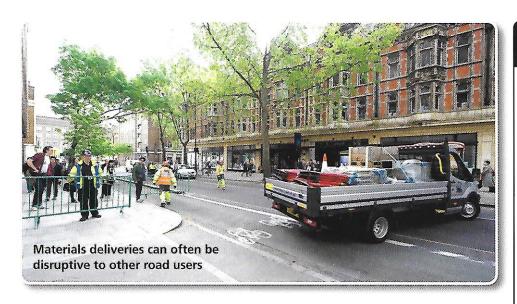
It also says that construction freight journeys are reduced by up to 68% and CO₂ emissions reduced by up to 70% as a result.

Contractors who use the LCCC have calculated an increase in site productivity of up to 47%, says Wilson James.



consolidatio

How do you deliver materials efficiently to a busy city-centre construction site? The answer is 'consolidation', writes David Taylor



One of the leading proponents of the consolidation idea is logistics and security specialist Wilson James, which claims to be the first company in the UK to set up a construction consolidation centre to serve multiple clients.

Managing director Peter Jacobs says that the use of consolidation centres for construction logistics really started to take off with the "Rethinking Construction" movement almost 20 years ago.



The 12,000m² LCCC can service several different clients and projects

"I was using consolidation centres with [property developer] Stanhope well over 10 years ago," says Jacobs. Stanhope's renowned construction director, Peter Rogers, was a leading light in the drive to improve procurement efficiency.

Jacobs only joined Wilson James a couple of years ago (see box), but the company was already well-known for its logistics capability. Wilson James took over and now runs one of the first dedicated construction logistics centres, set up by Mace in 2001 to service ongoing work at Heathrow Terminals 1-4. Wilson James ran the facility throughout the construction of Terminal 5.

"We still have our Heathrow consolidation centre," says Jacobs, who adds that Wilson James is the airport's official "logistics integrator" (the Tier 1 contractors are described as "delivery integrators").

But Wilson James' most significant innovation is the London Construction Consolidation Centre (LCCC), the first such facility in the UK to service multiple clients, according to the company. Wilson James, in partnership with Stanhope, Transport for London and Bovis Lend Lease, originally set this up as a pilot scheme, based in Bermondsey.

The LCCC has since relocated to Silvertown, near London City Airport, putting it only five miles from the City of London and six miles from the West End. It's outside the Congestion Zone and the London Lorry Control Zone, which means that deliveries to the LCCC can be made at any time of the day or night.

It's also handy for the M25, M1, A13 and A406 trunk routes.

"Silvertown serves all types of clients and contractors," says Jacobs.

One of the benefits of consolidating materials deliveries on the city's doorstep is that mixed loads can be carried on each lorry, which calls at the appropriate site according to a pre-planned route.

Peter Jacobs

Peter Jacobs joined Wilson James in 2014 as a non-executive director and was appointed managing director in September last year.

He's quite a catch for the company, bringing with him a CV boasting senior roles with leading building contractors and a track record in delivering ambitious projects, especially in and around London.

Jacobs spent 24 years with Bovis Lend Lease where he was a director for 10 years and headed up the team behind the London 2012 Athletes' Village.

He subsequently joined Morgan Sindall as managing director of the firm's London and Airports division and served as president of the Chartered Institute of Building between June 2012 and June 2014.

Jacobs believes that the role of logistics specialists like Wilson James will become increasingly crucial to the successful delivery of complex construction projects.

"The increasing impact of BIM and off-site fabrication in the industry will provide an opportunity to increase productivity on site, but only if there is professional and disciplined logistical support," he says.



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