

RAIL: EAST LONDON LINE

EXPRESS DELIVERY

By the end of next week London's newest rail service, the East London Line, will be handed over to its operator ahead of time and to a budget that was set six years ago. **Jackie Whitelaw** reports.

Nothing could dent the good mood of the project leaders at the East London Line offices on a snowy day last week. Not even London Overground infrastructure director Peter Richards' three hour journey to work that day could dampen the mood.

It is not often a complex £1bn railway construction job that involves squeezing itself into a packed capital city can claim to be coming in on budget and ahead of a finish line that was set six years ago. But this one is.

Design and build contractor Balfour Beatty Carillion joint venture (BBCJV) has, since 2006, been reinventing the infrastructure and technology on the old East London Underground Line to convert it into a national rail route that will become part of an overground orbital rail line round the centre of the capital.

And by the end of next week it will be handing the scheme on to the future operator London Overground Rail Operations Ltd (LOROL) for the trial operations phase of the project. Progress has been so swift that test running started almost four months early in October last year.

Public services on the core route from Dalston to New Cross Gate are likely to begin in April, way ahead of the 30 June promised when the scheme first got its funding.

The full service will start on 23 May to coincide with the traditional timetable change and the predictions are that 33M passengers will be using the route by 2011, rising to a projected 39M by 2016.

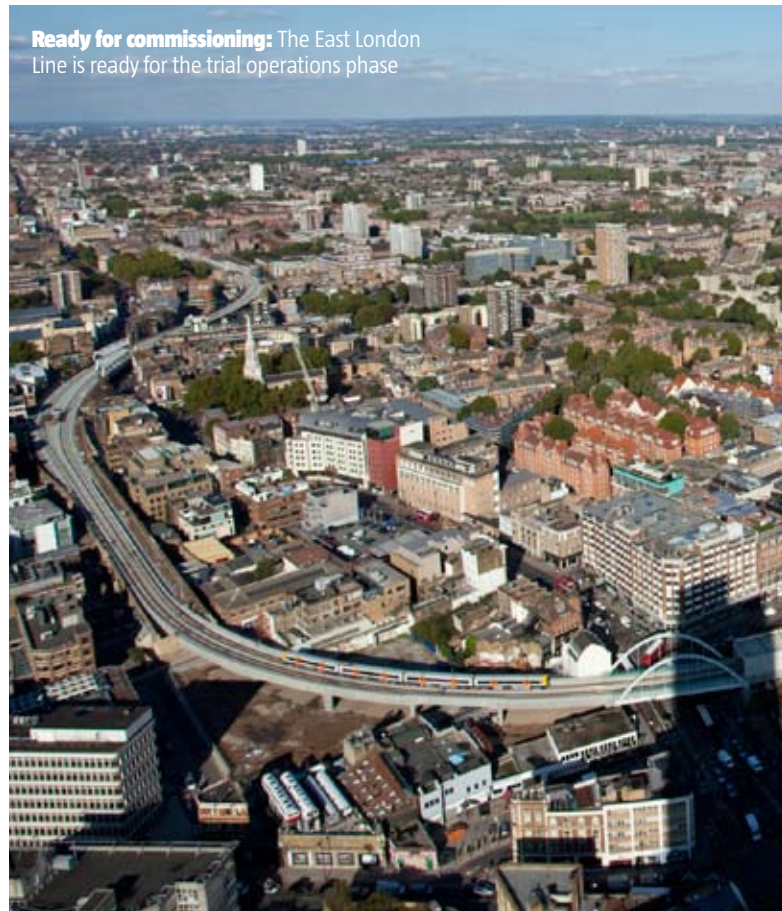
"We are particularly pleased about getting the route into service early, as it will have a huge benefit to the travelling public," says Richards.

"From the start, we have stressed to everyone that this job is about delivering an operational railway – infrastructure, rolling stock and operations. We have managed the integration between these aspects and transferred the risk for managing the interface between the infrastructure and main work systems to the main work contractor. That's why we went for a single NEC3 design and build main works contract, although this is about the maximum size you can do that with. It has meant that BBCJV has managed the interfaces and all the responsibility rests with one party to get on and do it."

That said, Richards and the London Overground team haven't just sat back and taken the plaudits while the contractor does all the work. The client team has taken the project by the scruff of the neck and managed it very tightly.

When Richards set up the job at the start of 2004. He formed an integrated client team. This included himself – freshly arrived from Transport for London – Parsons Brinckerhoff's Ashok Kothari as head of programme management and designers from Mott MacDonald, which has been acting as technical adviser to the project.

Refurbishment work along the route on some of the older structures was let as an enabling works contract to Taylor Woodrow, now Vinci Construction. "Refurbishment is risky,



Ready for commissioning: The East London Line is ready for the trial operations phase

and it was prudent to do that first before we let the bigger contract. It also gave us an opportunity to bed in the new client team," Richards explains.

"And then as a client we worked very hard towards letting the main works contract to programme. We didn't let ourselves slip. By doing that we created

float for the rest of the project and that has helped allow us come in early."

It was accepted early on that as the route was switching from a Tube service to main line running, trying to keep the old Tube line active while work went on was impractical.

"But we pushed to get London Underground to agree to get the route closed as early as possible to help the programme," says Kothari. He has the authority of decades of experience on major international rail projects behind him and a very persuasive manner. LUL agreed to shut down the line in December 2007 although it had originally wanted to keep it open until the following April.

"It meant we had time to go in and assess the asset, identify the critical issues and put plans in place," Kothari explains.

"And we did all our planning before we hired our contractor, which meant we had a firm grip on the scheme."

To help BBCJV, Kothari and his project managers sat down with them and worked out non-contractual milestones that had to be hit right from the very beginning so the programme



"Refurbishment was risky and it was prudent to do that first"

Peter Richards,
London Overground



WHO'S WHO

Client London Overground for Transport for London
Other parties London Underground, Network Rail
Programme manager Parsons Brinckerhoff
Client's technical adviser Mott MacDonald
Contractor Balfour Beatty Carillion
Contractor's designers Scott Wilson, Tony Gee & Partners
Rolling stock Bombardier Transport
Operator LOROL
Enabling works Taylor Woodrow (now Vinci Construction)

didn't slip from the start, which is a risk on many schemes.

"Once milestones were hit we agreed new ones for more and more complex elements of the programme."

Everything didn't always go to plan however. The critical GE19 bridge, where the route approaches Shoreditch High Street station from the Thames,



"We pushed London Underground to agree to close the route as early as possible"

Ashok Kothari, Parsons Brinckerhoff

WHAT THE CONTRACTORS SAY



It's very rare that one team of people is given the opportunity to create a complete fully integrated running railway

from the ground up. All those involved can't help but take great pride in such an achievement. The culture of the job has been important. It is one of complete openness, no secrets, shared decisions, facing and solving problems together."

Mike Casebourne, project director BBCJV



"Our biggest challenge was ramping up the design process to produce a fully integrated design of a brand

new railway that was ready for construction from start to finish in the overall time available. Our greatest success was to begin test running of trains on the new railway by 5 October 2009; within three years of a cold start."

Adam Stuart, construction director, BBCJV

EAST LONDON LINE IN BRIEF

New twin track signalling, communications and traction power installed along:

- 3.5km of new or refurbished viaduct running north from Whitechapel to Dalston Junction
- 3.2km south of Whitechapel to Surrey Quays through Brunel's Thames tunnel
- Existing 2.1km at grade section

between Surrey Quays and New Cross Gate stations. Work also involves new stations at Dalston Junction, Haggerston, Hoxton and Shoreditch High Street; refurbishing former Tube stations at Shadwell, Wapping, s and Surrey Quays; procurement of 44 trains – 20 for the East London Line, 24 for the North London Line.

dropped some of its Omnia planks onto the main rail line beneath when it was being lowered into position. "It slipped off the temporary tapering shim and dropped into its final position," Richards recalls.

"Practically, it was straightforward to recover but we had to make sure Network Rail was happy for us to continue work. That process took five to six weeks, but we factored in a lot of float. That's where the preplanning really paid off."

Other issues have arisen with manufacture of the rolling stock. This hit delays partly as a result of cashflow problems with Bombardier's suppliers caused by the recession.

Kothari had allocated project managers to all the critical elements of the project and Phil Clark – in charge of rolling stock – went to spend four days a week with the manufacturer to get things on track. In some cases new local suppliers were found. In others Bombardier advanced money to suppliers to offset cashflow problems.

Richards is very pleased with the safety record on the East London Line project. The overall accident frequency is a laudable 0.2 per million man-hours worked. "And we've twice exceeded 1M man-hours without an accident," he says.

"We have some very dedicated people on this project, with very little churn," Richards says. There's a collaborative, positive culture, which has all helped towards getting the job out the door on time and on budget. I created the team I wanted, and they stayed," says Richards.