

East West Rail Central Section moves towards route options

TWO preferred corridor options have been identified as offering the best value for money for the Central Section of the East West Rail project.

The options are: Corridor 1 - Bedford (Central or South)-Sandy-Cambridge; and Corridor 2 - Bedford (Central or South)-Hitchin-Cambridge.

The East West Rail project, originally proposed, developed and championed by the East West Rail Consortium and now fully supported by both the Department for Transport and Network Rail, has three sections:

- The Western Section: opening of the first phase from Oxford Parkway to Bicester is planned for October 26, while the stretch from Oxford to Oxford Parkway should follow next spring (RAIL 774, 777). By the early 2020s, the whole of this section eastwards to Bedford should be open as a 100mph railway.

- The Eastern Section: includes the existing lines from Cambridge to Ipswich and Norwich.

- The Central Section: linking the Western and Eastern sections, from the Bedford area to Cambridge.

The entire Oxford to Cambridge route was once the well-established 'Varsity Line'. However, building developments since the closures



Steve Broadbent
Contributing Writer
rail@bauermedia.co.uk

of the 1960s have made the task of re-forging the link between the two university cities particularly challenging.

When RAIL reviewed the Central Section last September (RAIL 756), consultant Atkins had just completed a study indicating which journey pairs would make the best contribution to economic growth.

Subsequent work by Network Rail suggested seven broad corridors for the new railway towards Cambridge. The aim was then to reduce these to the three best performing, and finally down to a single preferred option for the route (RAIL 762).

Seven months on, and Network Rail has bettered its 'three corridor' aim. Just two broad corridors now remain in the continuing, largely

desk-based evaluation, each with the same variant within it.

Network Rail Principal Strategic Planner Graham Botham told RAIL that the Atkins report and other inputs from the East West Rail Consortium (EWRC) "have really helped us identify the value of connecting various places, which was always going to be critical".

He added: "We have always been very conscious not to start drawing lines on maps." Hence the two corridors that have now emerged are (at this stage) just that - broad corridors with no inference as to where the track will eventually go.

On developing the Central Section as part of a strategic rail solution, Botham told RAIL: "We started looking at key origins and destinations: what are the basic service concepts, and what would those do in terms of a broad geographic route area or corridor

along which a line of route would

fit? And which of those would give best value for money?"

NR Lead Programme Development Manager Erica Blamire explained how the original large number of corridors was refined to seven and now to just two: "Criteria such as economic benefit and value for money were determined, along with aspects such as how each corridor aligns with the DfT's Long-Distance High-Speed Strategy and how they complement the National Freight Strategy." This approach then allows actual proposed track alignments to be developed in the coming months.

There has also been considerable involvement from the EWRC's various local authorities, particularly in the area of developing how this new railway would help unlock economic growth.

A fundamental change in the way the railway is regarded has emerged in the past few years, with the Government putting the railway at the centre of its key policy of encouraging economic growth across the UK. The whole of the Oxford-Cambridge corridor offers huge potential for further growth, but this potential is currently constrained by the inability of potential employees to live near to and travel to potential

areas of (largely high-quality) work.

Recent work has also studied the effect that train services running over the Central Section would have on interconnecting lines, such as the East Coast and Midland Main Lines (ECML, MML). For example, do they have the capacity for such potential services, and would infrastructure work be needed?

The MML is already reckoned to be fairly full north of Bedford, while the ECML has well-documented capacity problems. "These aspects were all brought together. We have been focusing on what differentiates the various corridors - such as topography which would impact on journey time - as we have reduced the options to two," said Botham.

Self-evidently, all the evaluated corridors have to somehow connect the EWR Western Section with Cambridge, although at this stage no evaluation is made of how the services would be catered for at Cambridge.

Given that the abandoned alignment eastwards to Sandy has been built over in places, the railway geography and natural topography around Bedford means that the variant affecting both options is how the Central Section will join the Western Section. An east-to-north connection with the MML is surely a necessity, but will the Central Section route go into Bedford, or skirt it to the south?

Whatever route in Bedford is eventually proposed, from there one of the two proposed corridors goes to Cambridge via Sandy, while the other would link the existing Cambridge-Hitchin line from somewhere near Hitchin to Bedford.

The Atkins study found that the most economically beneficial

journey pairs would favour a brand new line across Hertfordshire to the south of Luton and Stevenage. This route would require 8-9km (5-6 miles) of tunnel, and would add to the Cambridge-Bedford (and beyond at both ends) journey time.

As the focus is on which solution would provide the best value for money for the national rail network as a whole, Botham explains that "this corridor was considered, but it isn't one that has emerged as being a best option at the moment, and development has been paused". Heavy rail is probably not the solution to better links across Hertfordshire.

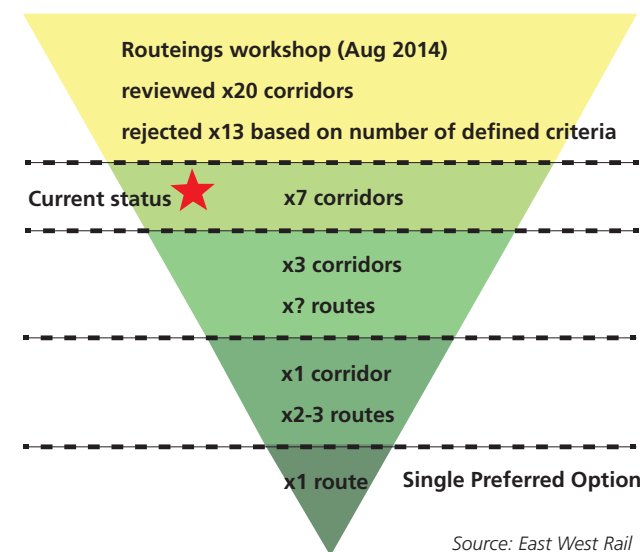
Connectivity is also a consideration. Blamire added: "Where the East West line touches another line, what do we do there? Do we pass over, or do we have an interchange?" Connectivity with the network adds value, but at a cost. Again, alternatives can be evaluated using established and accepted appraisal methods.

The EWRC members have a loud voice when it comes to suggesting where future rail services should operate. The DfT will also have a view, while Network Rail will develop the business cases (at least initially).

Blamire revealed that the next phase of work will probably look at some of the more prominent candidates for connection. Cambridge to Manchester and Birmingham are typical of the possibilities, and many cities outside of the EWRC area will be very keen for new, high-quality rail links to the technological powerhouse that is Cambridge.

While EWR as a whole has the potential to carry freight trains (the re-engineered line from Oxford to Bicester has been built to cater for

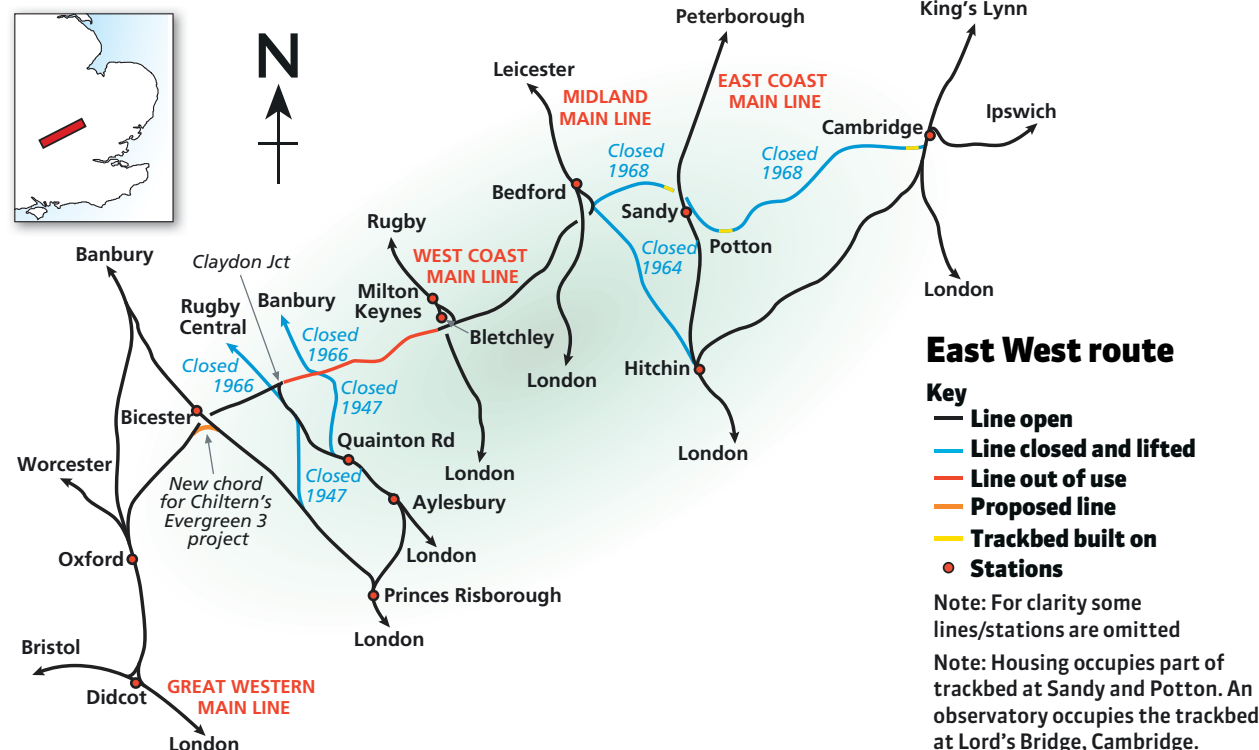
The Development Process



Source: East West Rail

East West Rail Consortium members

- The County Councils of Norfolk, Suffolk, Cambridgeshire, Hertfordshire, Buckinghamshire and Oxfordshire.
- The Borough Councils of Ipswich, Bedford and Luton.
- The District Councils of Stevenage, Aylesbury Vale, Wycombe and Cherwell.
- The Councils of Central Bedfordshire, Milton Keynes and Oxford City.



Development Phases & Output

Phase 2a	Phase 2b	Phase 2c
Activities: <ul style="list-style-type: none"> ■ x7 Corridors ■ Aspirational Service Specification ■ Constraint Analysis ■ Infrastructure Scoping ■ Cost Estimates & Risks ■ Stakeholder Consultation ■ Economic Appraisal 	Activities: <ul style="list-style-type: none"> ■ x3 Corridors & ? Routes ■ Site visits/Development ■ Stakeholder consultation ■ Option/Risk workshops ■ Consents ■ Economic Appraisal ■ Estimate updates ■ Programme development 	Activities: <ul style="list-style-type: none"> ■ x1 Corridor & 2-3 Routes ■ Site visits/Development ■ Stakeholder consultation ■ Option/Risk workshops ■ Environmental Assessment ■ Capability Analysis ■ Economic Appraisal ■ Estimate updates ■ Preferred route option

Source: East West Rail

the largest gauge), Botham pointed out that the rail freight traffic from Felixstowe Port will generally route via Peterborough on its way to the Midlands and the North.

It could well be that in this regard EWR becomes the victim of its own probable success - the number of passenger trains that will be proposed for the route in the coming months may well exceed the available capacity.

The next task is to narrow the two possible corridors down to one, and then to start defining the line of route, with the overall aim to have sufficient information gathered so as to properly inform the considerations for funding for Control Period 6 (the five years from April 2019, for which the first stage is Network Rail's Initial

Industry Plan that is due to be published in autumn 2016).

While the Central Section's capital costs have yet to be established, let alone made public, they will clearly reflect the size and scope of such a major scheme once it is defined.

A large part of the cost will most likely come via the DfT's five-yearly funding process. However, given the nation's economic situation, there will be strong pressure from Government for significant contributions from EWRC members (and probably from places seeking to benefit from the new route).

These could be from levies on building developments, 'Earn Back' funding from generated economic growth, or other means. Botham explained that by the time of the Initial Industry Plan: "We will have a cost range based on our work, and will have demonstrated that the choices offer good value for money."

It will be a huge and challenging project to define and deliver. Therefore care is also being taken to ensure that no aspect has been missed - that there is no skeleton in the cupboard that could cause a serious challenge to the eventual findings.

"We have to be sure our evidence base justifies any decision that we make as we move through the process, and we haven't missed anything," said Blamire.

The picture should be much clearer by this time next year. But in the meantime, the Central Section's momentum is certainly growing. **R**