

Tram Trains – the way to go

By Paul Hollinghurst and Peter Wakefield

Wisbech and Haverhill are the focus of Railfuture East Anglia reopening campaigns, regularly featuring in the branch's column in *Railwatch*.

With populations of 35,000 and 27,000 respectively, and village catchment areas adding thousands more, both towns are in a region of strong economic and population growth that is centred on Cambridge – but both lose out by having poor transport links into Cambridge.

The local authorities in Cambridgeshire have commissioned a series of studies looking into their reopening, and Network Rail's Light Rail Team has recently linked the two projects, suggesting tram-train could be an ideal technology to use for the reopenings.

So, what is the progress so far? What are tram-trains? Are they suited to these reopenings? And what is the way ahead?

Wisbech

The Wisbech line is currently mothballed, with most of the track in place. The trackbed is unobstructed over its seven-mile length to March where it joins the line linking Peterborough, Ely, Cambridge, Ipswich and Norwich.

Cambridgeshire County Council, and more recently the Cambridgeshire and Peterborough Combined Authority, are committed to the restoration of passenger services.

This is supported by over 5,000 local people who signed a Railfuture petition.

Over 10 years, a series of studies has produced a business case which is broadly aligned to Network Rail's **GRIP 3/PACE 1** project stages, showing the best benefit to cost ratio of 4.4:1 for a half hourly through service from Wisbech to Cambridge.

The reopening would seem to be straightforward but there are a couple of problems:

1 There are a large number of rights of way crossing the line, including many little used farm crossings. Network Rail believes expensive measures are necessary to protect these.

2 The business case assumes paths would be found through Ely to accommodate the half hourly service. The long-awaited Ely Area Capacity Enhancement could potentially have provided this, but despite the combined authority helping fund the study there are no guarantees that any new paths would be allocated to Wisbech, and the cost of these paths could have a significant impact on Wisbech's benefit to cost ratio.



WALES SHOWS THE WAY: Stadler Citylink tram-trains will run on new track between Cardiff Bay and Cardiff Central stations as part of the South Wales Metro
Picture: Transport for Wales

Network Rail has reviewed this work and at its recommendation the combined authority is commissioning yet another report – an *Options Assessment* report.

Our view is that after 10 years of work Network Rail should get the line rebuilt and introduce a shuttle between Wisbech and March until such time as paths are available through Ely.

Haverhill

In 1967 Haverhill was chosen as a London overspill town. At the same time, the railway was closed and the track lifted. Happily the line is relatively unobstructed from the junction off the West Anglia main line at Shelford through to Haverhill.

In 2015 the county council commissioned a *Cambridge to Haverhill Corridor Study* which was used as the basis for Railfuture East Anglia's bid to the Department for Transport's *Restoring Your Railway* fund.

It envisaged stations serving substantial settlements and businesses in Sawston, Linton, Granta Park and Haverhill, linking housing to jobs, education, healthcare and leisure in Cambridge.

The *Restoring Your Railway* result was announced in the autumn 2021 budget statement. The Haverhill proposal was found to be suitable for funding in principle and a good case for future development.

The DfT team was asked to keep the scheme under review for a future point in time but there was insufficient funding to cover the study.

The scheme has the strong support



South Wales tram-train interior

Picture: Transport for Wales

of the people of Haverhill and district with 5,000 signatures on a petition calling for the railway to be restored.

Tram-trains

Network Rail's Light Rail Team has suggested tram-train could be the most appropriate solution for Wisbech. The DfT asked the team to

assess Haverhill as part of the *Restoring Your Railway* bid and came to the same conclusion.

In this context the tram-trains would operate as light rail on the reopened sections of line, then continue on the existing National Rail network from March and Shelford through to Cambridge.

	Tram	Tram Train	Very Light Rail	Conventional Train
Ability to access Wisbech town centre	Green	Green	Yellow	Red
Compatibility with a future Garden Town extension	Green	Green	Green	Red
Ability to service an edge of town Wisbech Station	Green	Green	Green	Green
Comparative complexity of signalling control required	Yellow	Yellow	Yellow	Red
Comparative complexity of level crossing interventions	Green	Green	Yellow	Red
Complexity of station design/integration	Green	Green	Green	Yellow
Ability to operate on the main line	Red	Green	Red	Green
Comparative indicative capital cost	Yellow	Yellow	Yellow	Red
Comparative indicative operating cost	Green	Green	Green	Red

GREEN FOR GO: The traffic light chart from Network Rail's Light Rail Team report *Wisbech to March: Potential for Light Rail*

- in Wales and East Anglia

There are many tram-train systems operating in Europe and they are a major part of the modernisation of the Valley lines in South Wales. The Stadler-built tram-trains include an interior and ambience which is similar to the well-received new Stadler (class 755) trains operating in East Anglia, including several branch lines.

When operating to tram-train (light rail) standards, there are two major advantages over heavy rail:

- ◆ Level crossings are significantly cheaper
- ◆ Extensions can directly serve town centres and new housing developments including street running, roadside alignments, and sharp curves and steep gradients to make use of available land.

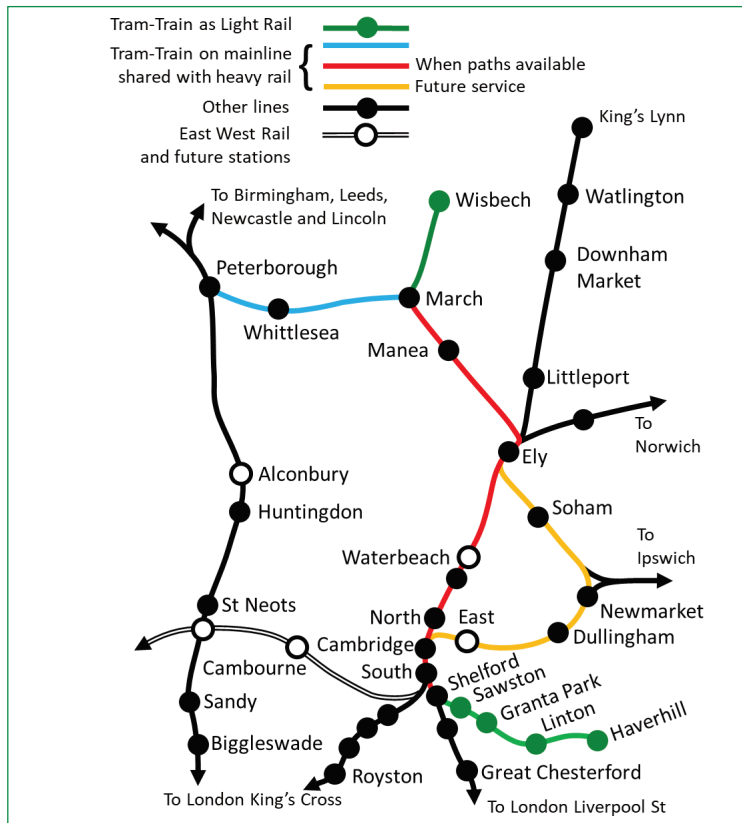
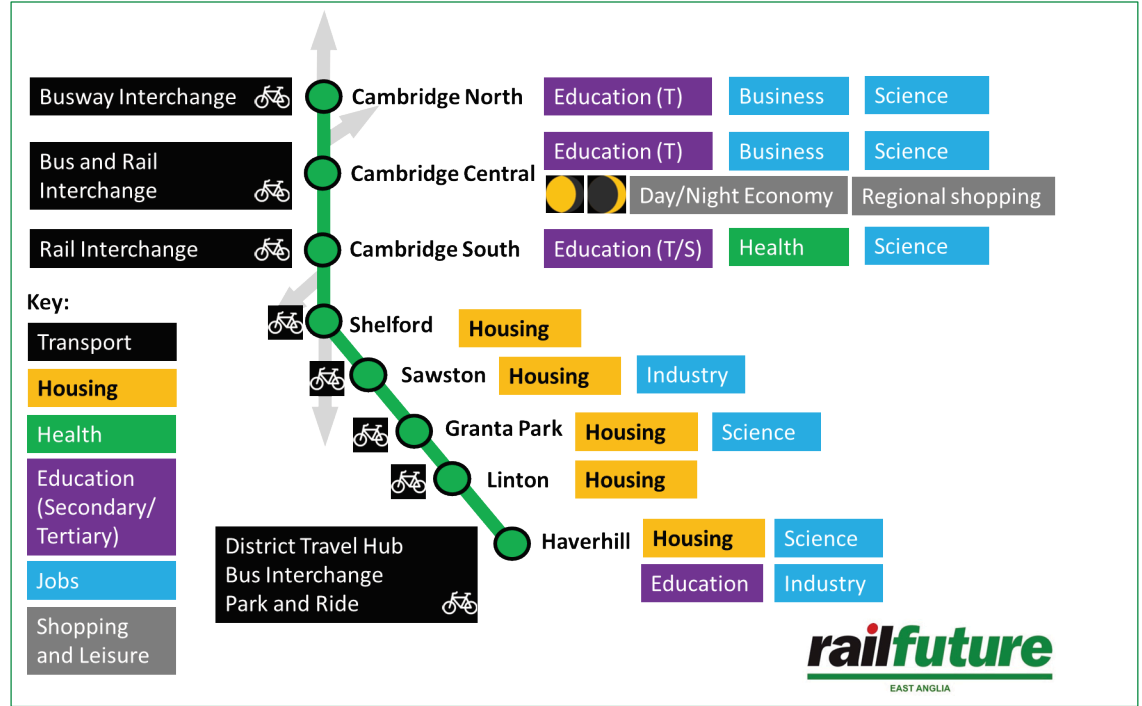
They are also very attractive to passengers both inside and out.

Tram-train for Wisbech

In December 2019, Network Rail's Light Rail Team issued its *Wisbech to March: Potential for Light Rail* report which concluded that tram, tram-train or very-light rail could all be used, but when the short- and long-term aspirations were taken into account "a tram-train solution appeared the best credible light-rail option. Tram-train would enable future operation on both the national rail network and any on-street operation into Wisbech town centre or to the Garden Town." The Garden Town is a plan to double the size of Wisbech to

70,000 or 80,000 people. The main factors driving this choice were:

- ◆ Ability to operate on the national rail network between Peterborough and Cambridge
- ◆ Cost-effective level crossing operation
- ◆ Ability to operate into Wisbech town centre and future extension of the service to serve the Wisbech Garden Town development using the highway network. Network



COLOURFUL OPPORTUNITIES: Tram-train routes which could both link and run over the existing Cambridgeshire rail network

Rail's traffic light chart shows tram-train coming out a clear leader for the aspirations of the combined authority.

Wisbech has considerable potential for freight so the track also needs to be adequate for heavy trains.

Tram-train for Haverhill

Responding to the Railfuture *Restoring Your Railway* bid, Network Rail's Light Rail Team noted that "this proposal has potential as a tram-train scheme" and "a light rail solution would reduce capital infrastructure costs for the reinstatement to Haverhill."

The team also noted that "the development of a tram-train fleet in the area could also tie in with other opportunities such as Wisbech."

Tram-train would give the opportunity to serve new housing developments in Haverhill and better serve research parks south east of Cambridge including Babraham and Granta Park.

Tram-train for Cambridgeshire

Railfuture agrees with Network Rail's vision, with the map showing how combining these two reopenings, along with a common tram-train fleet and depot, could be the start of a flourishing tram-train network in the region, linking into Cambridge Connect's vision of a light rail network for Cambridge City.

Manchester Metrolink has shown how, once a light rail network is established, there is a continuous desire to extend it.

Way ahead for tram-train Cambridgeshire

To make progress with this tram-train vision for Cambridgeshire, the

local authority organisations, including the combined authority, the Greater Cambridge Partnership and Suffolk County Council, need to set up a team to progress this with the DfT and Network Rail's Light Rail Team.

This is particularly urgent as the Greater Cambridge Partnership is proposing a rival scheme for the Haverhill corridor which envisages a large unsustainable park-and-ride facility linked by a dedicated bus road to Cambridge.

This is deeply unpopular locally and would permanently scar sensitive and historic landscapes as it is driven across the foot of the Gog Magog Hills, undermining sustainable public transport including the railway reopening and instead encouraging people to drive to the park and ride facility alongside the traffic-clogged A11 road.

Restored railways to Wisbech and Haverhill provide the only sustainable, long term, high quality public transport answer which the region needs to support its rapidly growing economy and population.

For further information about these reopening schemes including links to the studies mentioned, look at the Railfuture East Anglia webpages:

www.railfuture.org.uk/East-Anglia-Wisbech

www.railfuture.org.uk/East-Anglia-Haverhill

GRIP is the Governance for Rail Investment Projects (formerly Guide to Rail Investment Projects)

PACE is Project Acceleration in a Controlled Environment (Network Rail's replacement for GRIP)