

## Cambridge Crossrail

### Summary

This report outlines the current strengths, planned developments, and strategic opportunities presented by the existing railway infrastructure serving Cambridge and South Cambridgeshire. With its high-capacity electrified lines, frequent services, and excellent regional and national connectivity, this rail corridor supports both local and long-distance travel needs.

However, infrastructure bottlenecks, particularly at Cambridge Central, and the growing pressures from housing and economic expansion—especially around Waterbeach—demand coordinated investment and operational planning.

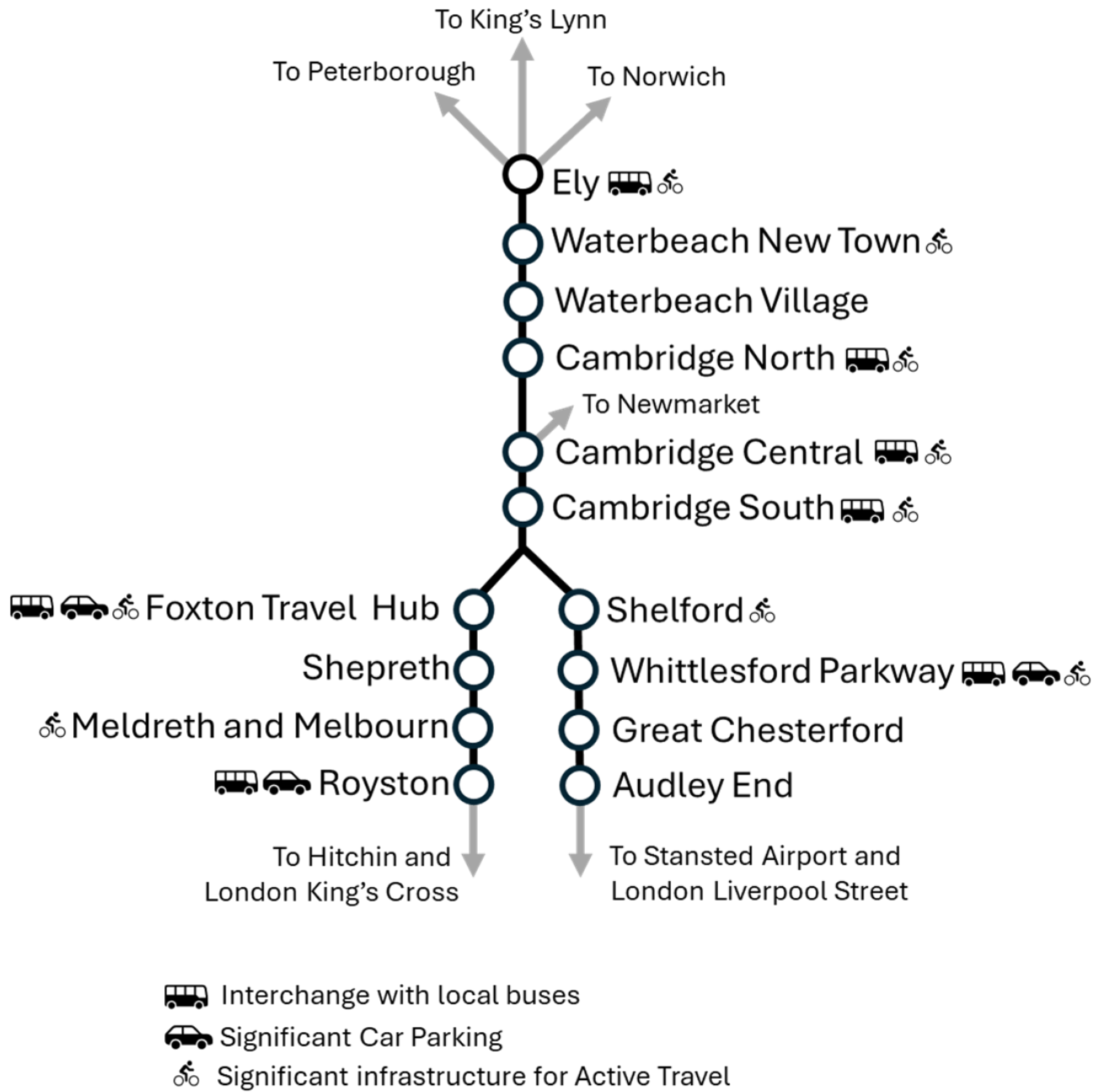
A key proposal of this report is the retention of Waterbeach Village station alongside the development of Waterbeach New Town station, enabled by timetable adjustments and a new turnback facility.

### Cambridge Crossrail

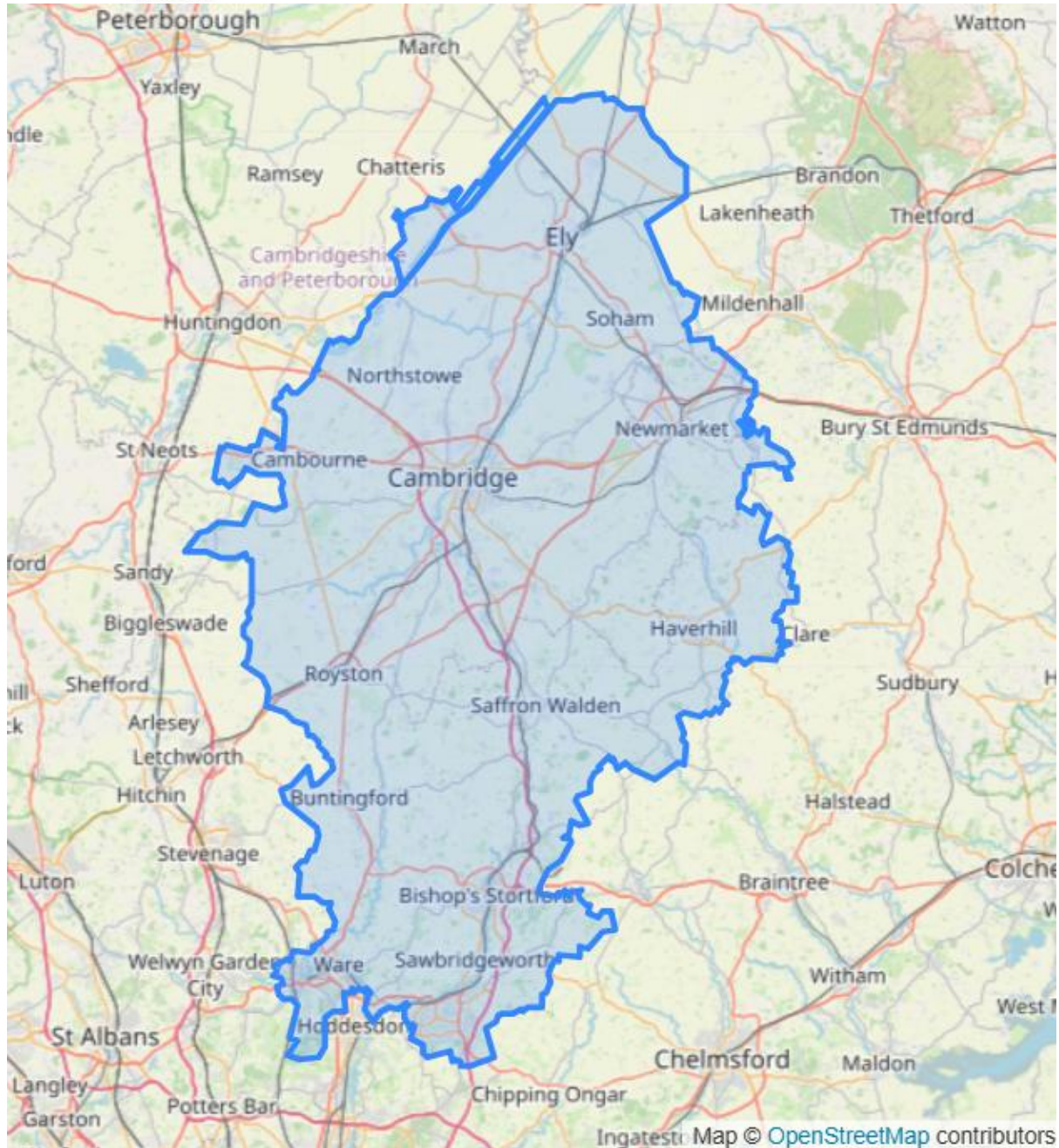
This railway connects east and south Cambridgeshire to London King's Cross and London Liverpool Street stations and every district in between, passing through the centre of the Travel to Work area for Cambridge.

This railway already gives us, for “free,” a fast, frequent, high-capacity train service providing long-distance connectivity **and** local connectivity.

With relatively few additional enhancements, it can provide even better connectivity to enable sustainable economic growth.



**Map: Cambridge Crossrail**



**Map: Cambridge Travel to Work Area**

## What does the railway do now?

It provides fast and frequent connections to and from London, a key advantage our region enjoys:

- superb connectivity to the key financial centres via Liverpool Street station to the City of London and Canary Wharf;
- superb connectivity via King's Cross-St Pancras to the surrounding high-tech hubs and nearby Old Street;
- superb connectivity directly to Stansted Airport, Gatwick Airport, with one change onto the Elizabeth Line at Liverpool Street or Farringdon for Heathrow Airport;

**and** superb connectivity to most of the developing technology hubs in and around Cambridge via the stations at:

Station	Trains per hour (minimum)
Whittlesford	4
Royston	3
Meldreth / Melbourn	1 (middle of day) 2 (all other times)
Cambridge South	All trains stop
Cambridge Central	All trains stop
Cambridge North	Currently 5
Waterbeach Village	Currently 2
Waterbeach New Town	Could or should be 4
Ely	Currently 4

These stations serve their own communities as well as hundreds of key skilled workers who live in London and other large centres such as Stevenage, Hitchin, Harlow, Bishop's Stortford.



**Map: Cambridge Ahead - sites of key technology research parks**



Other important communities served by a station for local connectivity are at Elsenham, Newport, Audley End, Great Chesterford, Shelford, Ashwell & Morden, Shepreth, Foxton.

It is important to note that the railway operates with heavy flows of people in both directions throughout the day.

More services are frequently added to the timetable to cope with increasing demand.

All trains are high capacity and can generally cope with demand.

**Frequency** is improving, and more services are certainly required at some stations. Speed is not a problem as all the railways we are analysing are electrified.

### **Capacity and Cambridge Central Station**

Train capacity is generally not a problem or can be rectified relatively easily. Our train operating companies currently have coaches available to cope with rapidly rising demand.

Cambridge Central Station has capacity issues.

The number of trains it can accommodate is approaching its limit, as are the number of daily users through its platforms and concourse.

Currently, about 11 million people pass through the station each year.

The movement through the station will increase dramatically as more research hubs are opened and more trains are timetabled.

It will require additional platforms to cope with more train services already envisaged and East West Rail services.

It will need an eastern entrance to take pressure off the existing western entrance.

It will need a southern footbridge to relieve the current northern bridge and overcrowding along platform 4.

It is recognised that even with extra “through” platforms, terminating train services at the station “eat up” available capacity...

### **Turn-back platforms elsewhere – an opportunity**

Where possible, it is sensible just to pause trains at Central Station and send them on to “turn back” at a less stressed location.

To the north, trains go on to turn back at Cambridge North and Ely. Both these stations need additional trackwork to make the turn-back more efficient.

There is an ideal situation to provide a state-of-the-art turn-back at Waterbeach New Station.

### **Turn-backs to the south**

Currently, nearly all trains entering Central Station from the north continue south to destinations such as London Liverpool Street, London King's Cross, London St Pancras, Stratford and Stansted Airport.

As South Station develops its travel patterns, there will need to continue trains from Newmarket and other origins to it.

Turn-backs are currently possible at Great Chesterford and Whittlesford Parkway. The latter will become more and more important as the Genome Campus at Hinxton develops. We believe Whittlesford should be the site to develop to cope with future traffic demands.

### **CrossCity**

As Cambridge has three major stations, doing so enables all three to have the same level of service, thus providing a high-frequency cross-city service "free" of charge. Which brings us to the importance of Waterbeach.

### **Waterbeach**

Waterbeach is an expanding village with a population of about 5,600, as recorded by the 2021 census.

The station serves about 8,500 people within a 3km radius of it.

Many of its residents work in Cambridge, and most of its younger residents will eventually use the city for their educational and leisure activities.

The village railway station makes it easy to access those places of work, the sixth form colleges, and the shopping and leisure facilities afforded by the city.

331,764 journeys began or ended at the station in the year ending March 2024, according to the official footfall figures issued by the Office of Rail and Road.

The station is served by an excellent electric train service of a minimum of 2 trains an hour in each direction, largely provided by the King's Lynn–Ely to Cambridge and London King's Cross service, from early at 05:27 to Cambridge and London to late at 23:27. The journey time to Cambridge North is just 4 minutes, to central Cambridge just 9 minutes.

In the morning and late afternoon peak hours, there are several additional trains serving the village en route from/to Ely from/to London Liverpool Street.

The station has two platforms, each able to accommodate 8 cars—the normal length of most trains. They were lengthened in 2020 as part of a package of improvements along the line at Waterbeach, Littleport, and King's Lynn, costing £22m.

More improvements are in development.

From January 2026, less than a year from now, Cambridge South station will open. This new station will serve the Cambridge Biomedical Campus, which of course includes the five major hospitals either in use or in development.

Nearly all the research laboratories and hospitals are within a 10-minute walk of the new station.

All trains currently passing the station site will call there—including the two an hour, all day long, from/to Waterbeach. The journey time will be about 10 minutes. There will be no way quicker.

Not only that, Waterbeach's children attending Long Road Sixth Form College will be within a 5-minute walk (from Cambridge South station).

Currently, most of Waterbeach village residents are within a 1km radius of the village station—easily walkable or bikeable in a few minutes.

### **Waterbeach New Town**

A new station at Waterbeach will serve the new town.

This station will be about 2km north of the village station.

Planning has been in process for the new station since 2018.

At the time, things were very different.

Waterbeach (village) station was only able to handle 4-coach trains. The idea of a brand-new station seemed to be a salvation, as the platforms were short, narrow, and often overcrowded.

The trains were overcrowded as they could only be just 4 coaches long. As the prospect of the new station seemed to be a game changer for the better, Railfuture East Anglia wrote this to the South Cambridgeshire DC planning consultation for the new station:

*"7.17 Railfuture East Anglia*

*The current station, with its narrow platforms, poor shelter, poor cycle storage, poor car parking facilities, and staggered platforms that are operationally both on the 'wrong side' of the relatively dangerous level crossing, is very difficult to improve for current users. It is not well suited.*

*7.18 Railfuture supports moving the station as long as it is linked to the existing village by a purpose-built/improved village-only car access to a village-only new station car park. As the current station serves a wide catchment area, a separate road from the A10 through the proposed new settlement site to a separate car park must be provided from day one.*

*7.19 All footways, cycleways, and roads leading to the new station must be carefully waymarked.*

*7.20 Both platforms must have good quality heating areas, canopies, and toilet facilities, and the station must be built to the highest architectural standards.*

*REPORT TO: Planning Committee 12 Sep 2018*

*AUTHOR/S: Michael Huntington, Principal Planning Officer."*

## **Change happens**

Over the seven years or so since this consultation, many things have changed to enable us to have a change of mind.

The current village station has been considerably improved, as in 2020 the platforms were extended to berth 8 cars, so now 8-car trains operate all services.

There are now 2 trains every hour in each direction.

Cambridge North station (opened in 2017) has become the main "railhead" station for Cottenham and neighbouring settlements, with many users transferring there.

The result is that the car park at Waterbeach village station is now generally adequate.

The development of Cambridge and its district has changed considerably.

It is clear that the Government is determined to enable/encourage the growth of the knowledge-based industries in the U.K., with their specialised skill sets, and that should be concentrated in and around Cambridge.

It is expected that the number of jobs, together with the population, will rise massively over the next decades.

Some talk of the area's population growing to over a million people.

Peter Freeman, the former MD of Homes England, is now concentrating his skills on managing the "Cambridge Development Corporation."



It now seems very shortsighted and wasteful to close and demolish a railway station that serves a substantial and fast-growing population.

### **But the railway industry has a problem**

Waterbeach Village is currently served by two trains an hour operating “all stations” from King’s Lynn to Cambridge South (seven intermediate stops), then fast (non-stop) to London King’s Cross.

Each stop adds a minimum of 2 minutes to the timetable. Adding an eighth stop at Waterbeach Village, as well as serving Waterbeach New Town, will be operationally difficult on this incredibly important train service from King’s Lynn and Ely, as the railway through Cambridge is very congested—and will get even more so when East West Rail services arrive.

So we agree that both stations at Waterbeach cannot be served by this existing very busy service.

It is sensible that the eventual New Town’s 30,000+ population should be served by the above direct and fast King’s Lynn–Ely–Cambridge and London service.

Although many in Waterbeach Village will find the new station equally as easy to locate as the old, many more will find it is not. We think that both stations must now be kept.

### **A possible solution?**

Waterbeach Village station has had a lot of money spent on it during the recent upgrade. It will use up more resources if it is demolished.

There will have to be an expensive public inquiry if it is to be closed.

Closing the existing station will cost millions of pounds on top of the recent funding to upgrade it.

Surely we should be searching for ways to keep it and use it as a valuable asset for future generations.

### **Is there an additional train service that may be available to serve a retained Waterbeach station?**

We believe that the current Cambridge Central to King’s Cross stopping train service can be started back at Waterbeach New Town.

This runs at 30-minute intervals throughout much of the day, calling at Cambridge South, Foxton, Shepreth, Meldreth/Melbourn, Royston, Baldock, Letchworth, Hitchin, Stevenage, Knebworth, Welwyn North, Welwyn Garden City, Hatfield, Potters Bar, Alexandra Palace, and Finsbury Park.

Based on timings published in the new December 2025 timetable, the trains used to provide this service lay over in Cambridge station’s platforms 2/3 for 18 minutes.

Timings, based on the above timetable, indicate that instead of terminating at platform 2 or 3 in Cambridge, the service could continue to Waterbeach New Town, calling at Cambridge North and Waterbeach Village, and return after a 20-minute layover at New Town to Cambridge to take up the planned timetabled service back to London via most stations.

For example, using the timings of the December 2025 timetable:

Stevenage		
Hitchin		
Letchworth Garden City		
Baldock		
Ashwell and Morden		
Royston		
Meldreth		
Shepreth		
Foxton	07:54	08:24
Cambridge South	08:01	08:31
Cambridge Central	08:06 / 08:08	08:36 / 08:38
Cambridge North	08:12	08:42
Waterbeach Village	08:17	08:47
Waterbeach New	08:20	08:50
Waterbeach New	08:40	09:10
Waterbeach Village	08:44	09:14
Cambridge North	08:50	09:20
Cambridge Central	08:54	09:24
Cambridge South	08:58	09:28
Foxton	09:05	09:35

It is important that changes are not made to the planned timetable south of Cambridge, as there are complicated interactions with many other services from distant parts of the country.

We stress that, whilst none of these proposals have been validated by railway timetable experts, we think it is worth engaging with them to see if the extension to Waterbeach stations of the Cambridge–King’s Cross “stoppers” is actually possible.

On the face of it, no extra train units are needed, nor is that most valuable resource—the driver. The only extra cost would be the electricity to power the train over the extra 8 km to Waterbeach New Town and back.

## The Turnback

We have discussed the importance of creating efficient “turnbacks” for train services currently doing so at Cambridge Central.

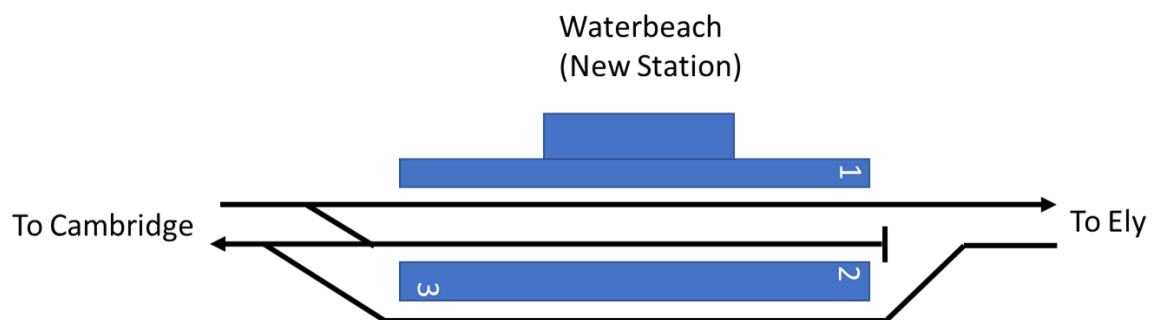
None of the above will be possible without changes to the planned railway track layout of Waterbeach New Town station.

Instead of a new platform on each side of the two running lines, the platform on the east side of the station should be designed to have two faces: the outer side for the main running line, the inner for terminating trains that are “turning back.”

There is additional expense created by the need to have three point ends that enable trains to cross from one line to another, and the additional signalling associated with them. Some (but probably not all) of the additional cost would be met by not having to demolish Waterbeach Village station and not holding a public inquiry into its closure.

This is a real opportunity to future-proof the railway’s capacity **now**. It will be more expensive to do so in the future.

This diagram shows the arrangement of a possible turnback at Waterbeach New Station.



## About Railfuture

**Railfuture** is the UK's leading independent organisation campaigning for better rail services for passengers and freight. **Railfuture** is a voluntary group representing rail users, with 20,000 affiliated and individual members.

**Railfuture** Ltd is a not-for-profit Company Limited by Guarantee.

This response is being given behalf of our large membership throughout Cambridgeshire.

Text by Peter Wakefield, Vice Chair Railfuture East Anglia [peter.wakefield@railfuture.org.uk](mailto:peter.wakefield@railfuture.org.uk)

Railfuture East Anglia [www.railfuture.org.uk/East+Anglia](http://www.railfuture.org.uk/East+Anglia)

Paul Hollinghurst, Secretary Railfuture East Anglia [paul.hollinghurst@railfuture.org.uk](mailto:paul.hollinghurst@railfuture.org.uk)

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