To: East West Rail Company
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Response to East West Rail consultation

This consultation response offers ideas and commentary on the proposed route alignment for the central section of East West Rail, focused on the part between Cambridge and Cambourne.

Contents

Abbreviations used

- EWR: East West Rail
- WAML: West Anglia Main Line, running between London Liverpool St and Cambridge
- CTR: Consultation Technical Report

'Assessment Factors' refers to the fifteen factors used to assess the options, reproduced at the end of this document.

Electrification

We ask the Department for Transport to:

1. Make an unambiguous statement about what, if any, diesel locomotives will run on EWR.
2. Commit to electrifying the central section of EWR (Bedford–Cambridge) at the time of construction.
3. Set a date by when the eastern section of EWR (Cambridge–Felixstowe) will be electrified.

Supporting Assessment Factors: 4, 5, 14

Commentary

Because it is still undecided whether EWR will be electrified, local communities have concluded that they should expect diesel trains, including freight locomotives, to be running for some years after the line opens. Since diesel trains are polluting, noisy and cause vibration, many people are opposed to the railway for this reason alone.

CTR 3.5.2 states that "EWR Co also aims to deliver a net zero carbon railway, in line with existing and developing net zero carbon policy, legislation and commitments at a global, national and local level." However, the government has avoided making a firm commitment about how this will be delivered, and by when. It has made references to the possibility that battery or hydrogen power may be the preferred solution, even though neither is expected to be viable for long-distance freight haulage.

Even if battery or hydrogen power were to be viable, it is an irrefutable fact of physics that transmitting high-voltage electricity directly to locomotives is considerably more energy-efficient. That is especially true for hydrogen, where there are large energy losses in the production of 'green' hydrogen (by electrolysis using zero-carbon electricity) and in the generation of electricity in a hydrogen fuel cell.

High-voltage overhead line equipment is a tried-and-tested technology that adds only about 10% to the construction cost if designed and installed with the track. The extra cost will amount to no more than a rounding error when the whole-life cost of the railway is taken into account.

Alignment of southern approach

We ask EWR Co to:

4. Review the technical constraints that appear to have ruled out from consideration a more northerly alignment linked to the existing railway between Addenbrooke's Rd bridge and Shepreth Junction (see Figure 1).
5. Consider ways to reduce the elevation of the southern approach, including the possibility of tunnelling, rather than cutting, through Chapel Hill.
6. Illustrate the configuration of a grade-separated Shepreth Junction, including an option where the Liverpool St lines dive under the Royston/EWR lines.
7. Clarify what is the capacity of the twin-track section between Shepreth and Harston junctions, and when this may become a constraint.
8. Consider building a diversion for the A10 from south of Foxton level crossing, along the south-west side of the railway line to London Rd (B1368) (see Figure 2).

Supporting Assessment Factors: 6, 10, 11, 14

Commentary: Alternative southern approach

A more northerly alignment between Comberton and the WAML (see Figure 1) could reduce the journey distance by 3.3km and have benefits for the landscape and line capacity:

- The appraised benefit of the reduced journey time reduction is likely to be large.
- There would be reduced visual, noise and severance impacts on the villages and landscape around Harston, Haslingfield, Harlton and Little Eversden.
- The separation of EWR and King's Cross/St Pancras services at the four-track section south of Cambridge South maximises capacity on both lines, which could be of long-term benefit, especially if there is a large shift to rail-freight between Felixstowe and new intermodal hubs, for instance at Milton Keynes/Bletchley (on the M1) and Swindon (on the M4).

We acknowledge that there are counterbalancing disbenefits: demolition of people's homes in Great Shelford; detrimental visual and environmental impacts on the land between Hauxton and South Cambridge; and potential interference with university telescopes. Nevertheless, we believe it would be worth exploring this option in more detail.

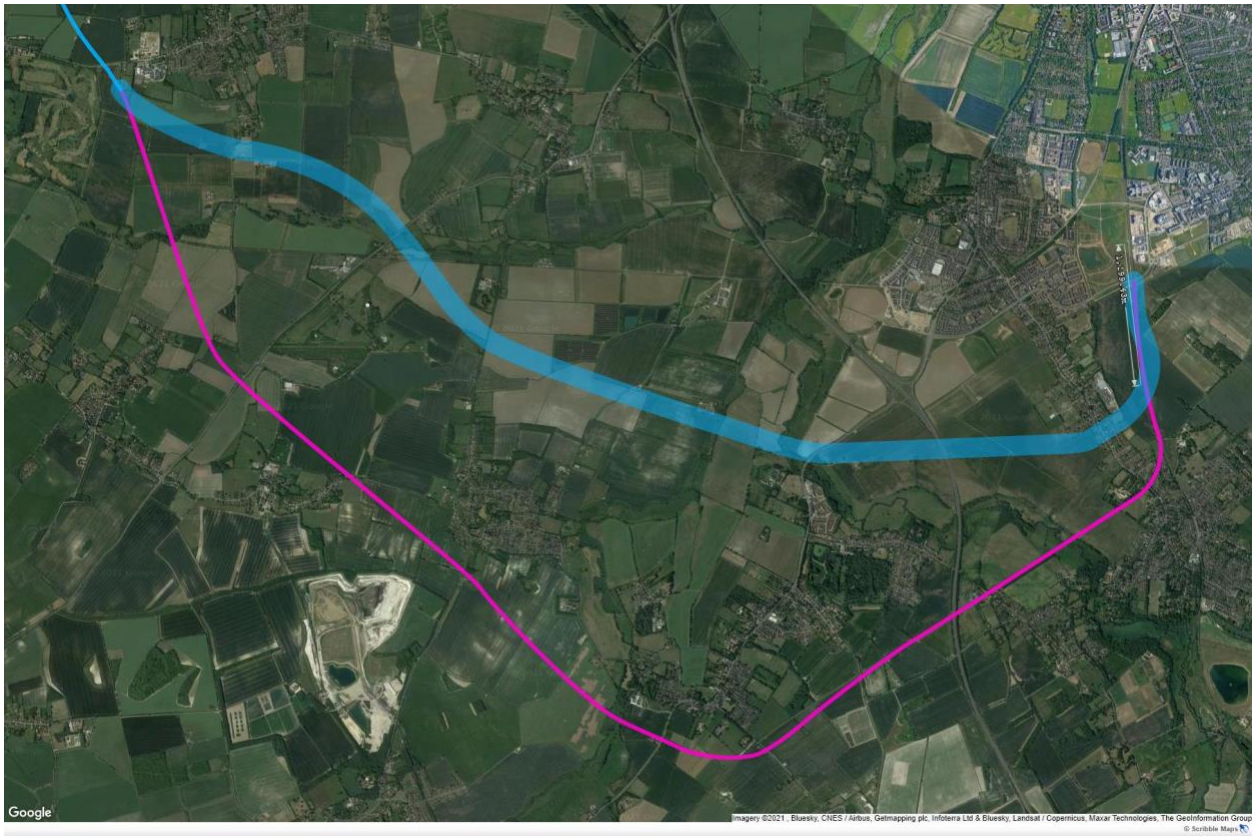


Figure 1: Alternative alignment for southern approach between Comberton and Cambridge

CTR 10.3.3 states:

> *EWR Co found the option to join the WAML north of Shepreth Junction, between Addenbrooke's Road Bridge and Shepreth Junction, to have the following key impacts identified:*
>
> - *Joining the WAML at this location would require the purchase and demolition of several properties, including potentially Shelford Rugby Club, several houses on Cambridge Road, and the Scotsdales garden centre and cafe;*

It is unclear why the alignment has to run through the rugby club and garden centre. Could it not run to the south of them? We of course do not make light of the demolition of people's homes, but those impacts would be considerably easier to compensate and mitigate, and hence make this option more viable.

> - *This option would significantly disrupt the scheduled monument located in the field to the west of the existing WAML opposite Nine Wells; and*

This would depend on the archaeological value of the site and design of the earthworks.

> - *Grade separation (where one track passes over or under another to avoid train movement conflicts) would be required, either now or in the future, to locate the EWR lines on the east side of the WAML in this option. With grade separation, the EWR lines would need to be located on the east side to ensure that the potential future extension of services east of Cambridge is feasible. However, the distance available in this area to*

> *achieve grade separation is insufficient. The railway constraints for maintaining track gradients suitable for freight services mean that tracks would not return to ground level before Addenbrooke's Road bridge and, more crucially, Cambridge South station.*

We agree that grade-separation would be required, and believe this could be achieved within the space and gradient constraints. The point at which the lines cross can be 1,200m south of the southern end of the Cambridge South station platforms (in the currently proposed configuration). That should be sufficient distance to achieve the vertical separation required at a gradient shallower than the 1:80 maximum required in the design specification (CTR 3.10.6), especially if the existing lines are dipped slightly (they currently run on a low embankment).

Going west, the line would need to remain elevated over the A1301, M11, A10 and River Cam, mostly on a viaduct to preserve permeability around the river for wildlife and people. Further west, the land is flatter than south of Harlton, which should therefore require lower embankments, with roads passing under or over depending on the relative elevation of the line. Relocation of some of the university telescopes may be necessary if the electromagnetic interference and vibration cannot be sufficiently mitigated.

Commentary: Shepreth Branch Junction

On the current proposal, it is unclear whether, and for how long, the capacity of Shepreth Branch Junction will be adequate if it remains as an at-grade junction. Since freight trains will have to cross opposing WAML trains in both directions to move between the Royston and Newmarket lines, it seems pragmatic to remove that conflict by grade-separating the Shepreth junction.

An option that seems not to have been considered is to drop the Liverpool St lines and possibly elevate the Royston lines slightly in order to create a dive-under configuration. It could potentially be combined with a shallow bridge on Granham's Rd, replacing the level crossing. This arrangement would greatly reduce the impact on houses in Great Shelford, and have minimal visual impact on the landscape.

This configuration would also be compatible with a grade-separated EWR junction, as described above.

Commentary: A10 diversion

CTR 10.4.64 states that consideration is being given to "providing a new road connecting Newton Road to the A10 at a new junction along Royston Road as a permanent road traffic diversionary route." If this new road were extended north-east to London Rd (B1368) (see Figure 2), it would bypass the Foxton level crossing, which is acknowledged[1] to be a problem in terms of severance and safety. It would also bypass most of Harston, in particular the high street, providing significant improvements to safety and air quality in the part of the village

[1] GRIP 2 Feasibility Study Report (2013)

where people are most active. There would, however, be a negative impact for residents living along London Rd.

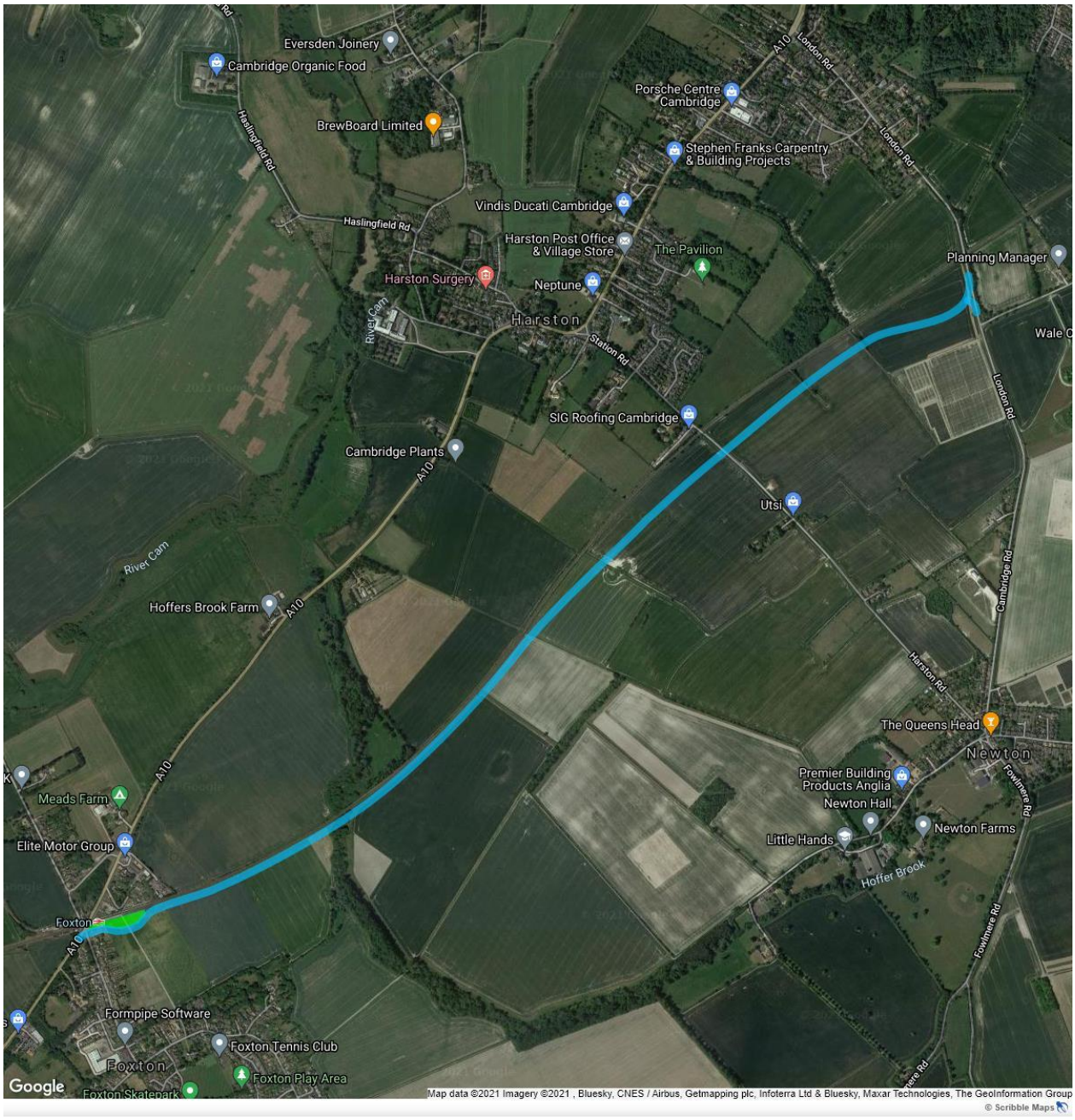


Figure 2: Potential diversion of the A10 alongside the railway line between Foxton and London Rd

Cambourne station

We support EWR Co's preference for a station to the north of Cambourne rather than to the south because it would have better road connectivity, and could support a more sustainable northward expansion of Cambourne, should this option be incorporated into the next Local Plan.

We ask EWR Co to:

9. Consider the option of taking the line under rather than over the A428 and Highfields Rd.
10. Consider locating the station above the A428 on a land bridge.

Supporting Assessment Factors: 1, 2, 6, 7, 14, 15

Commentary: north versus south station location

We note that road connectivity on the south side of Cambourne is poor, with access from the A428 being via the A1198 and Caxton bypass. To create more direct access to the station from Great and Upper Cambourne would require building a new road, for instance from Jeavons Lane, across the country park. However, all the roads in the south of Great Cambourne are narrow, designed for car access, not large buses. Parking and loading restrictions would be needed to introduced and enforced to ensure buses were not blocked.

Approaching from Caxton Rd from Bourn or Bourn Airfield, there is no direct connection to the A1198 Caxton bypass. A new link road would be needed if traffic is not to travel through the middle of Caxton or via a counterintuitive detour south in order to reach the station via the bypass.

Commentary: A428 crossing

The vertical cross-section for Alignment 9 indicates that the line climbs over 10 metres above ground level east of Cambourne station in order to cross the A428 and Highfields Rd (see Figure 3). This will detract significantly from the landscape in a location that will be in close proximity to planned new housing. It will also reduce the rate at which eastbound trains are able to accelerate away from the station. If, instead, the line were dropped below the A428, it could run in a tunnel or cutting to between Highfields Rd and Hardwick Rd.

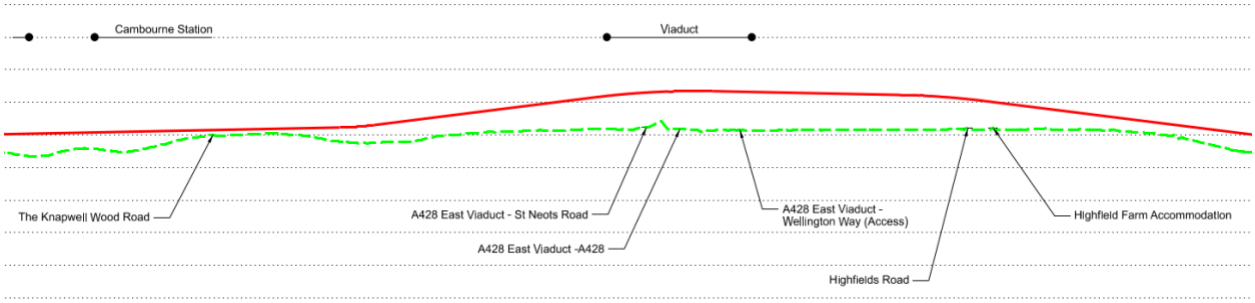


Figure 3: the line east of Cambourne station rises over 10m above ground level

Commentary: station on land bridge

Building the station on a land bridge over a slightly lowered A428 would greatly improve access on foot and by cycle from Great and Upper Cambourne. It would "create" developable land that could cover the build costs. Should Cambourne be extended to the north, the land bridge would provide connectivity between the existing and new parts of Cambourne, much in the way that Hatfield straddles the A1, with a land bridge connecting the two parts (see Figure 4). (We would not recommend emulating Hatfield in constructing a dual carriageway above the A428, which would reintroduce severance.) The land bridge should also serve as a green bridge for wildlife.

Figure 4: Hatfield straddles the A1, which runs in a 1.1km tunnel under the town

Comberton

We ask EWR Co to:

11. Analyse the costs and benefits of including a new railway station at Comberton.

Supporting Assessment Factors: 1, 6, 7

Commentary

If the line is going to run between Comberton and Toft, it would seem a missed opportunity not to provide access to the railway there. Furthermore, if the Cambourne station is located to the north of the A428, then there is an even greater need to have a station that is readily accessible from villages between the 428 and A603 (Comberton, Barton, Toft, Hardwick, Kingston, Barton, Great Eversden, Little Eversden and Harlton). The 2021 population of Harston & Comberton ward is 10,840.[2] Comberton Village College has 1,800 pupils and 250 staff.

The dwell times of electric trains are short, as can be seen from this timetable extract showing services stopping half-hourly at Foxton, Shepreth and Meldreth, and four other services running non-stop to Royston. Cambridge–Royston is 21km; Cambridge–Cambourne would be approximately 24km on the proposed alignment.

Cambridge	CBG	**d**	**0824**	**0827**	**0850**	**-**	**0854**	**0858**	**0909**
Foxton	FXN	**d**	**-**	**0836**	**-**	**-**	**-**	**0908**	**-**
Shepreth	STH	**d**	**-**	**0839**	**-**	**-**	**-**	**0911**	**-**
Meldreth	MEL	**d**	**-**	**0842**	**-**	**-**	**-**	**0914**	**-**
Royston	RYS	**a**	**0838**	**0846**	**0903**	**-**	**0908**	**0918**	**0925**

Cambridge South station

We ask EWR Co to:

12. Raise the level of ambition for the design of Cambridge South station to provide world-class inter-modal connectivity.

Supporting Assessment Factors: 1, 2, 6, 7, 11, 13, 15

Commentary

The most recently consulted upon plans for Cambridge South station were woefully inadequate. They included a constrained eastern entrance, which is unlikely to be cope with peak flows of station users; poor connectivity to bus services; insufficient and inconvenient cycle parking; and highly conflicted approach routes from all directions. This is covered in more detail in our response to the Cambridge South consultation.

[2] Cambridgeshire Insights 2018-Based Population Forecasts

The problem stems in part from using a standard model for station usage when Cambridge South will have highly atypical usage. It will serve a large employment site, multiple hospitals and a large residential population in Trumpington and Queen Edith's. Furthermore, the model takes no account of the modal shift to rail required to meet decarbonisation targets already set, which themselves are insufficient to decarbonise surface transport within a 1.5°C carbon budget.

Cambridge station

We ask EWR Co and Network Rail to:

13. Make a firm commitment to provide an eastern entrance to Cambridge station and an additional overbridge connecting all the platforms.

Supporting Assessment Factors: 1, 6, 11, 13, 15

Commentary

CTR 11.9.5 acknowledges that, "as well as additional platforms, facilities need to be provided for the additional passengers that would use these services," but proposes no detail.

The station entrance, ticket hall, taxi rank, pick-up/drop-off area and access road (Great Northern Rd) are all congested at peak times. An eastern entrance from Rustat Rd would relieve the pressure. It would also better serve the growing number of residents who live east of the railway line. The Marleigh and Land North of Cherry Hinton developments alone are adding 2,500 new homes east of the railway line.

The platform overbridge is also congested at peak times. It can take several minutes for all the passengers alighting from a 12-car train to leave the platform. Meanwhile, people crossing in the opposite direction struggle to make progress through the crowd. The addition of more train services will increase congestion, potentially to the point where it becomes a safety issue. The single-lift capacity is inadequate to serve the needs of the large number of visitors with luggage and cycles. An additional overbridge with larger lifts on the south side of the station would relieve pressure here.

Extract from Cambridge Local Plan (2018)

Policy 21: Station Areas West and Clifton Road Area of Major Change

Proposals within Station Areas West and the Clifton Road Area should:

q. allow the potential for future improvements to the access for pedestrians and cyclists between Station Areas West and Clifton Road Area, **including investigation of a possible foot and cycle eastern entrance to the railway station**;

Northern alignment

We ask EWR Co to:

14. Review the fitness of a northern approach to project objectives without the presumption that all EWR services must run continuously through Cambridge.
15. Re-test the infrastructure requirements for trains to terminate at Cambridge South or replace existing services to London or Stansted Airport.
16. Test the impact on east-west journey times with interchanging at Cambridge station, and whether this could be cross-platform to minimise inconvenience and delay.
17. Model the trip demand patterns for east-west travel through Cambridge, compared with all services calling at Cambridge North, central and South stations (all three of which serve expanding employment centres), and potentially replacing some existing services to/from Stansted Airport and London termini.
18. Review the capacity implications of a grade-separated junction at Milton.
19. Consider the following additional track options to optimise the routing of freight trains between Milton and Coldhams Lane junctions, individually and in combination:
    a) between Milton junction and Cambridge North (or A14 if the bridge aperture is not wide enough to accommodate a third track);
    b) to the east of Fulbourn, or
    c) between Coldhams Lane junction and Cambridge North station.
20. Review in more detail the costs and benefits of a new chord at Coldham's Common to provide an east-west through-route for freight trains, with or without a realignment of the Newmarket line (see below).
21. Review in more detail the costs and benefits of a new chord connecting the Cambridge and Soham lines south of Ely.

Supporting Assessment Factors: 2, 6, 7, 10, 14, 15

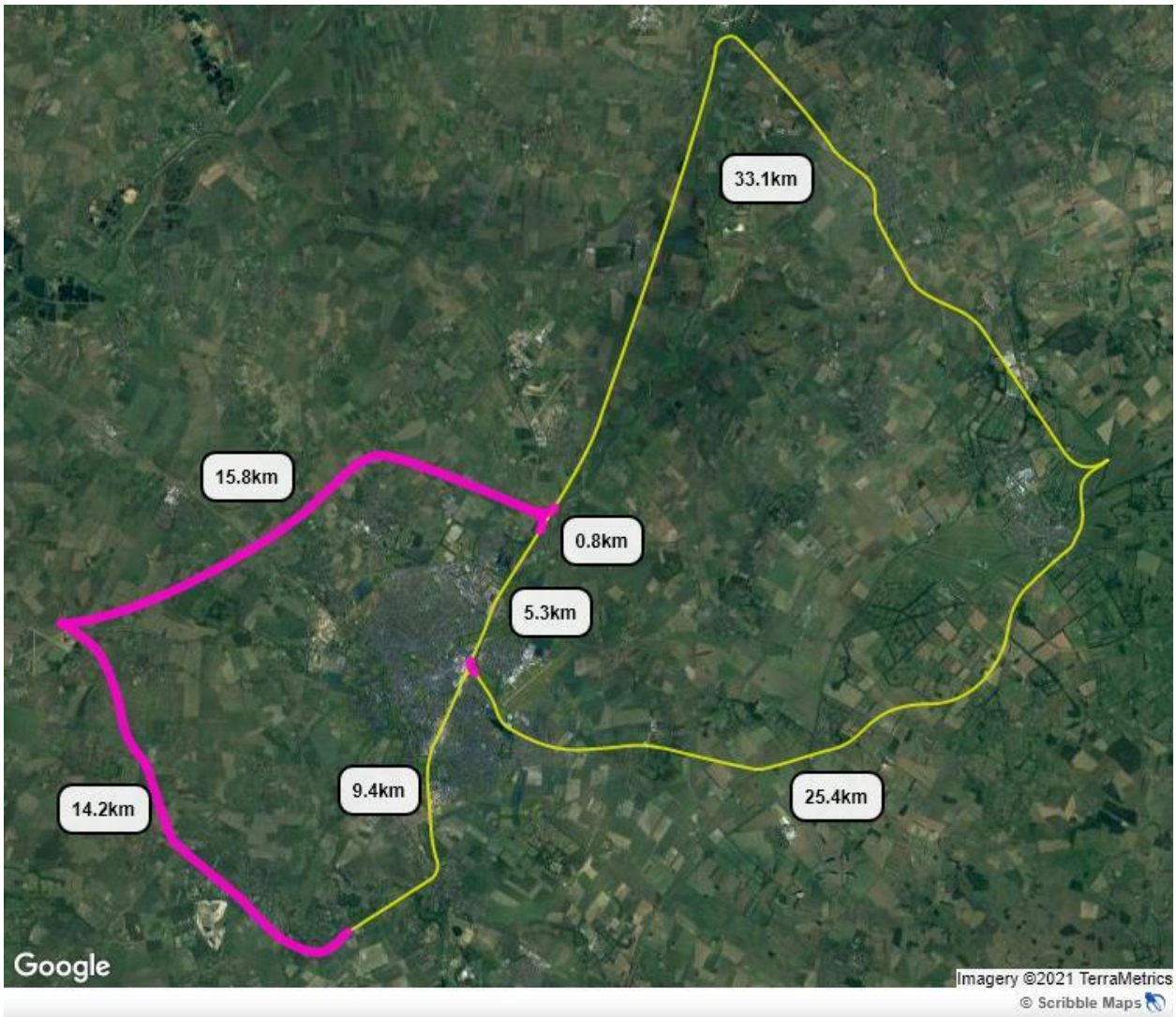
Commentary

For two reasons it seems important to review the northern approach:

a) The proposed southern alignment has unexpectedly large visual and severance impacts on the landscape in a beautiful, heritage-rich and ecologically important quadrant of South Cambridgeshire.
b) A northern approach could enable services to call at Cambridge North, central and South stations, all of which are expanding employment centres. The North East Cambridge Area Action Plan includes 8,000 new homes and space for 22,000 new jobs.
c) A northern approach would open up a route for freight trains that avoids busy Cambridge stations; residential areas in Cambridge, Cherry Hinton and Newmarket; the tight curve at Coldhams Lane junction, and the single-track tunnel under the Newmarket race course.

We note that Appendix F of the Technical Report concludes that, "in engineering terms, a northern route from Cambourne to Cambridge is feasible, although it would be complex and expensive to consent, construct and operate." It therefore seems reasonable to test some of the design and operational constraints used to assess a northern approach.

We also note that both approaches create east-west freight-train paths of a similar distance (see Figure 5).



Combined distance	via Newmarket	via Soham
Northern approach	47.3 km	49.7 km
Southern approach	49.0 km	62.0 km

Figure 5: Freight routes via northern or southern approach (new track shown in pink)

Commentary: Junctions

All of the illustrations of options for track additions south of Milton junction (CTR Appendix F, p68 ff) show EWR trains running on a pair of tracks on the west side of a set of four. None show EWR trains using the eastern pair. Yet 2.2.12 of CTR Appendix F (p53) states, "*This would mean that a grade-separated junction is required where the EWR route joins the WAML in order that*

the EWR lines could sit to the east of the existing route." It is unclear why this appears not to have been modelled operationally.

Grade-separation of both EWR lines at the Milton junction would also reduce the severance of the land that may become a sports lake, and could be combined with bridging the A10 between Milton and Waterbeach.

The same paragraph (2.2.12) also asserts, *"Two chords would also be required on Coldham's Common and at Ely to create additional capacity and avoid conflicts with existing services."* It is unclear why both chords are needed, when this level of redundancy is not proposed for the southern approach.

Commentary: Newmarket Rd bridge

> *CTR 2.5.75. Options 1 and 2 would both cause significant road disruptions to Cambridge due to the road bridge closures and rebuilds. Traffic diversions would likely need to be in place for a significant time until all works were complete. Accessibility to the bridge sites and construction area are very tight. The replacement of the A1134 Newmarket Road bridge carries significant risks and complexity, particularly due to its proximity to a Grade 1 Listed Chapel. This has an impact on both options. [CTR Appendix F, p95]*

The difficulties and risks are possibly exaggerated. Newmarket Rd crosses the railway on two bridges, both of which are two lanes wide (see Figure 6). The southern bridge could be rebuilt, whilst leaving the northern bridge open to traffic. The northern bridge could then be either demolished or replaced with a lightweight pedestrian/cycle bridge that links with the Chisholm Trail. Careful design of the replacement bridge(s) could greatly enhance the setting and accessibility of the Leper Chapel.

Commentary: Fen Rd level crossing

> *CTR 2.5.15. Fen Road crosses the existing two track railway at Chesterton level crossing and provides access to residential and commercial properties to the east side of the railway. It is assumed an increase in the number of tracks will require the closure of the level crossing potentially cutting off access to the properties between the railway and the River Cam. Grade separation of the level crossing is not considered practicable whilst retaining access to Moss Bank and the properties closest to the crossing along Fen Road. Therefore, an alternative access would be required such as a new road bridge over the River Cam. [CTR Appendix F, p66]*

The closure of the Fen Road level crossing is favour of a new bridge from Cowley Rd is desirable for operational and safety reasons even now, and therefore is not a negative for a northern approach.

Figure 6: Newmarket Rd bridges over the railway, adjacent to the Lepter Chapel (top-right)

Eastern section

We ask the Department for Transport to:

22. Review the impacts of running more rail services through Cherry Hinton, in particular in relation to the level crossings at Cherry Hinton High St and Yarrow Rd.
23. Review the costs and benefits of realigning the Newmarket line between Coldhams Lane junction and Fulbourn.
24. Review the optimal location for a Cambridge East railway station.
25. Review if there are significant benefits in routing freight trains via Soham rather than Cherry Hinton and Newmarket.

Supporting Assessment Factors: 1, 2, 6, 7, 10, 11, 12, 13, 15

Commentary: Coldhams Lane to Fulbourn

The existing alignment between Coldhams Lane junction and Fulbourn has several major drawbacks:

- The very tight curve at Coldham's Lane junction limits the line speed to 20mph. This could become a significant capacity constraint with full-length (775m) freight trains. It will take

them 1½ minutes to clear the Coldhams Lane junction, and up to 7½ minutes from entering Cambridge station and clearing the Coldhams Lane curve (a distance of 2.5km).
- The line passes close to people's homes in Cherry Hinton.
- The level crossing on Cherry Hinton High St cannot be designed out, so the severance and safety issues of this crossing will persist indefinitely.
- The level crossings on Yarrow Rd and Teversham Rd would be difficult to bridge.
- The combination of all three crossings being closed regularly would have significant impacts on community severance and traffic. Some of that traffic is likely to divert onto Coldhams Lane, Cherry Hinton/Fulbourn Rd and Brooks Rd, worsening congestion on these roads.

The location of a new Cambridge East station needs to be planned now:

- The most viable location for a Cambridge East station is on the site of the concrete mixing plant by Coldhams Lane. However, this is only one mile, as the crow flies, from Cambridge station. Road access from east of Cambridge would be through north Cherry Hinton, which already creates problems of severance, safety and pollution in this residential area.
- A location more central to the potential new airport development would better serve a new business district, and would put more homes within walking distance of the station.

These issues need to be examined now. For a realignment of the line between Coldham's Lane and Fulbourn to be possible, it needs to be developed with Marshall before final plans are drawn up for the Land North of Cherry Hinton (18/0481/OUT), which already has outline planning consent.

Commentary: Newmarket

The alignment through Newmarket also has drawbacks:

- The line passes close to people's homes in Newmarket.
- The single-track tunnel under the Newmarket race course could become a timetabling constraint in the future, in particular for the movement of freight.

Routing freight trains via Soham (twin-tracked) and a new chord south of Ely would bypass Newmarket and Cherry Hinton. The total distance would not be significantly greater if EWR were to build a northern approach to Cambridge (see Figure 5).

Demand modelling

We ask EWR and the Department for Transport to factor into demand forecast models:

26. A post-COVID reduction in peak-time daily commuting.
27. Other behaviour changes that are compatible with a 1.5°C carbon budget, not an extrapolation of business-as-usual.
28. Improved access to rail services by active and public transport, as promoted by current government policies, funded via the Greater Cambridge City Deal, and facilitated by the Combined Authority commissioning bus services (under Enhanced Partnership agreements of franchise concessions).
29. Sensitivity tests for reductions in car ownership, in line with social trends and decarbonisation targets and policies, which is likely to include some form of road pricing.
30. Creation of intermodal freight hubs at new locations accessible via EWR, e.g. at Milton Keynes/Bletchley (on the M1) and Swindon (on the M4).

Supporting Assessment Factors: 1, 7, 9, 10, 11, 12,

Commentary: decarbonisation

Decarbonisation of surface transport within a 1.5°C carbon budget requires significant modal shift from solo-occupancy driving to active, public and shared transport, and also much more efficient movement of freight. That entails an absolute reduction in total vehicle-mileage, relative to 2019 not relative to a business-as-usual growth scenario. A significant proportion of trips must shift to rail – in particular longer-distance trips, where the speed of trains offsets the slowness of first/last-mile connections compared with making the entire trip by car.

Modelling of passenger numbers and freight tonnage must be updated to take into account this transition, and ensure the design of EWR has sufficient capacity to accommodate it.

Commentary: freight

Currently, about 70% of containers landed at Felixstowe are then driven more than a hundred miles. According to the director of Transworth Rail, "there is scope for around another 50 trains a day to relieve the A14 in particular."[3]

Trains would replace around 2,000 HGV movements per day. There would be huge benefits in terms of reducing carbon emissions, diesel exhaust pollution, and particulates from tyre and road wear. *Provided electric locomotives are used*, the impact on residents living close to the railway should be low. However, we recommend reviewing whether freight trains would be better routed via Soham instead of Newmarket and Cherry Hinton (see previous sections).

[3] Open letter from Julian Worth, Director, Transworth Rail and CILT Rail Freight Forum Chair

Enhanced local connectivity

We ask EWR Co to:

31. Assist local communities in designing new and upgraded footways and cycleways along and across the route of EWR. The aim is to enable people with a wide range of abilities to walk, cycle or e-scooter from their home to travel hubs (rural bus and rail stations), local schools, major employment sites, sports and leisure centres and heritage sites.
32. Design all road, cycleway and bridleway diversions, whether temporary or permanent, to be compliant with the standards set out in Local Transport Note 1/20.

Supporting Assessment Factors: 1, 6, 12, 15

Commentary

Government policies have set out a very clear instruction to all transport planners and designers to prioritise enabling and facilitating active travel. That applies not only to trips to/from railway stations, but also in the vicinity of railway lines, which create greater severance than roads (other than motorways). Where EWR bridges a natural barrier or major road, there should be a presumption that a non-motorised user bridge will be included with the railway structure. This is more cost-effective than retrofitting and delivers immediate benefit to local communities.

Compromising on the design of an active travel route, even temporarily, can lead people to make a long-term decision not to walk or cycle a trip or trip-stage. It is easier to put someone off than to persuade them to start walking or cycling.

Extracts from Gear Change: A bold vision for cycling and walking (July 2020)

Major new rail corridors will be designed to support local and National Cycle Network plans for improved traffic free links between communities within the corridor. This will help lock in benefits to communities disrupted by construction of new railways with a legacy of new greenways offering better connections between places.

Extracts from the Williams-Shapps Plan for Rail (May 2021)

14. … This will include identifying ways to improve accessibility, create new commercial space and improve connections with walking, cycling and other transport services …

23. … Each [Passenger Service Contract] will … require the operator to support the integration objectives for bus travel and cycling set out in the government's recent bus and cycling strategies [Gear Change: A bold vision for cycling and walking *and* Bus Back Better: National bus strategy for England].

40. … The government will invest substantial sums on safe cycle routes to stations, particularly in commuter towns such as Guildford and Harrogate, and increase cycle storage at stations, including at city-centre termini, where it is currently limited.

53. … This includes making it easier to get to and from stations by walking, cycling or other public transport …

Long-distance journeys

We ask EWR Co to:

33. Illustrate likely journey times to major destinations around the UK from Ipswich, Cambridge, Bedford, Milton Keynes and Oxford.
34. Explain how and where passengers will be able to interchange with HS2 services to destinations in the far north of England and Scotland.

Supporting Assessment Factors: 8, 9

Commentary

One of the greatest benefits of EWR is not being communicated to the general public yet. To take just one example: Cambridge to Coventry by road takes about 1½ hours. By rail, it takes 2¾ hours via London or (infrequently) via Nuneaton. The journey time by EWR, changing at Bletchley, should be competitive with driving.

Trips by train between East Anglia and Liverpool, Teesside, Tyne & Wear, Edinburgh and Glasgow are currently not competitive with flying from Stansted Airport. HS2 will offer considerably faster journey times, but only from London. The lack of a direct interchange between HS2 and EWR appears to be an ill-considered compromise.

Future consultation

The acrimonious campaigning against EWR has sown widespread mistrust in the project. As outlined above, the Department for Transport's position on electrification has been at the root of much of the negative sentiment towards the new railway. That has distracted from its manifold benefits.

All decisions about EWR involve balancing trade-offs. Multi-way discussion is the only way to explore those. We suggest that EWR organise a further phase of consultation along the lines of deliberative democracy or co-creation. That involves discussion and debate resulting in carefully considered recommendations. Even when individuals disagree with a recommendation, they are less likely to oppose it if they understand the reasoning and feelings that underpin other people's support for it.

Assessment factors

For ease of reference, the fifteen assessment factors set out by EWR are reproduced here:

1. **Transport user benefits** - the benefits experienced by passengers particularly in terms of journey time savings and modal shift (where people change the mode of transport they use to make a journey)
2. **Contribution to enabling housing and economic growth** - including best serving areas benefitting from land that can be developed
3. **Capital costs** - the upfront costs, including consideration of risk, to implement each option
4. **Operating costs** - the costs incurred in the delivery of the train service
5. **Overall affordability** - the financial implications of the options in terms of costs and incomes, over the whole life of the railway; also encompassing capital and operating costs
6. **Short distance connectivity** - to support commuting travel into key employment hubs (current and future)
7. **Short distance passenger services** - the extent to which EWR facilitates passengers wishing to make short distance local journeys on the EWR network
8. **Rail passenger connectivity to existing main lines** - the ease of interchange
9. **Long distance passenger services** - the extent to which EWR facilitates long distance passenger services beyond Oxford and Cambridge
10. **Freight demand** – satisfying both existing and future demand
11. **Performance** - the ability of the railway to meet or exceed customer expectations in terms of service reliability
12. **Alignment with wider railway strategy / infrastructure**
13. **Safety risk – both in terms of construction and operation**
14. **Environmental impacts and opportunities**
15. **Consistency with Local Plans**

About Smarter Cambridge Transport

Smarter Cambridge Transport is a volunteer-run think tank and campaign group. It was formed in 2015 to advance sustainable, integrated and equitable transport for the Cambridge region. It is run by a team of around 30 people, with a wide range of expertise and interests, and led by Edward Leigh, a qualified transport economist.

We believe that transport policies should offer car-independent travel options for as many people as possible as quickly as possible with the aim meeting these urgent objectives:

1. Decarbonise transport by reducing total vehicle-mileage.
2. Halt and reverse ecological damage from roads and road transport.
3. Improve public health by minimising toxic air pollution and promoting physical activity.
4. Promote social justice by enabling people of all ages, abilities and wealth to lead fulfilling lives without requiring a car.

To halve transport carbon emissions by 2030, in line with a 1.5°C decarbonisation pathway, we have to reduce total vehicle-mileage by at least a third by 2030. That is largely because most mileage during this decade will be in petrol/diesel vehicles on the road today and still being manufactured. Switching to electric vehicles is necessary for the long-term health of the planet, but it isn't a quick fix, and is entirely dependent on replacing most of the 84% of UK energy consumption derived from fossil fuels with zero-carbon electricity. So, the priorities now must be to reduce car usage and ownership, and increase the efficiency of freight movements.