# Heathrow Southern Railway

Meeting with Spelthorne Borough Council 26th March 2025

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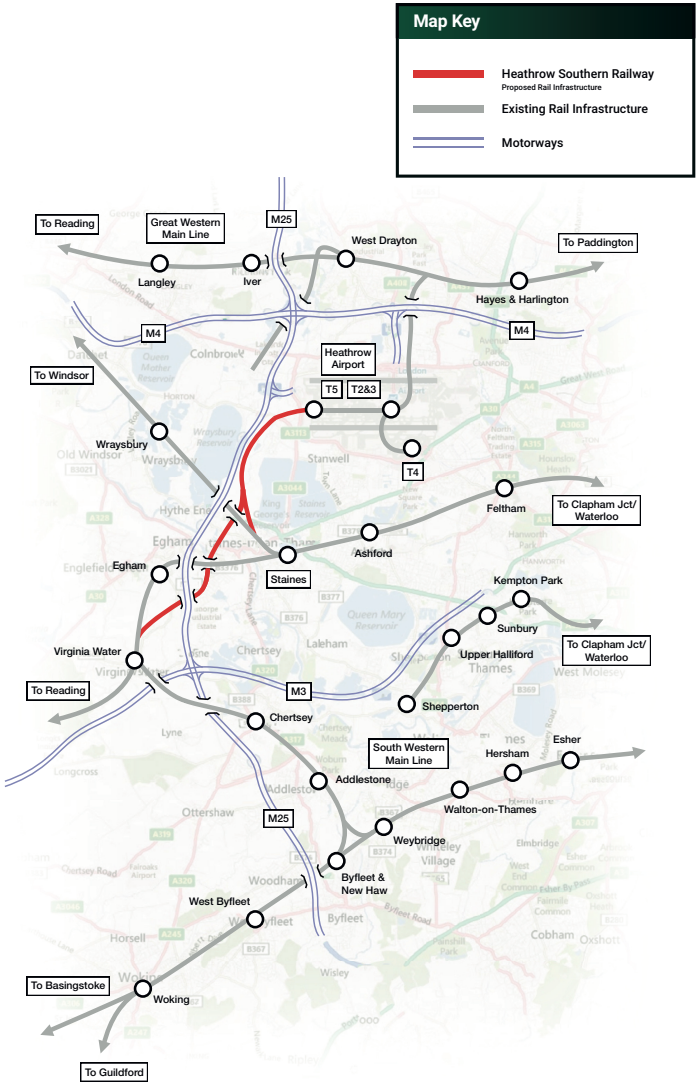
# Introduction

Thank you for the opportunity to meet again, following our previous discussion in September 2024.

I'd like to:

- Briefly remind you of the Heathrow Southern Railway scheme discussed at our last meeting in September 2024
- Provide an update of what has changed
- Answer questions you've asked in advance – and any others
- Propose some further topics for discussion



## Questions

**Q1 - How do you plan to access the site to carry out installation work to install the new rail line without harming Staines Moor?**

**Q2 – Re 1 above will this not require closure of the anti clockwise lanes of the M25 to do so for lengthy periods. How will this massive disruption be overcome?**

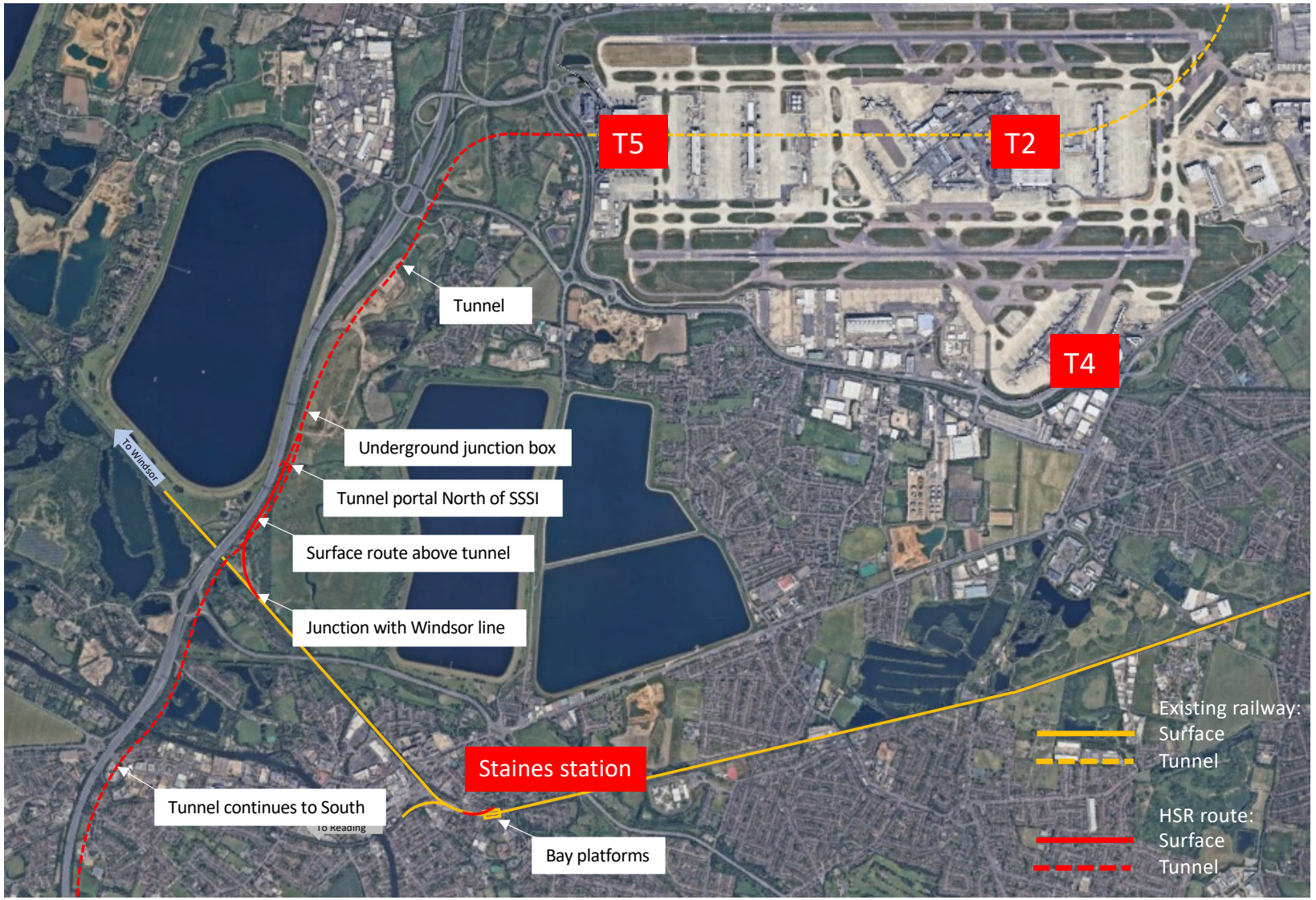
**Q3 - Is there, or will there be an impact assessment carried out to gauge how it will affect Staines residents?**

Before answering these, the following pages explain a significant change to Heathrow Southern Railway's proposal as a result of our recent meetings with National Highways.

National Highways are the Government company (as successor to Highways England) with statutory responsibility for planning, designing, building, operating and maintaining England's motorways and major A roads - the Strategic Road Network (SRN).

# Heathrow Southern Railway - September 2024 scheme

# Heathrow Southern Railway - September 2024 scheme




HSR extends in tunnel from west end of T5 station box.

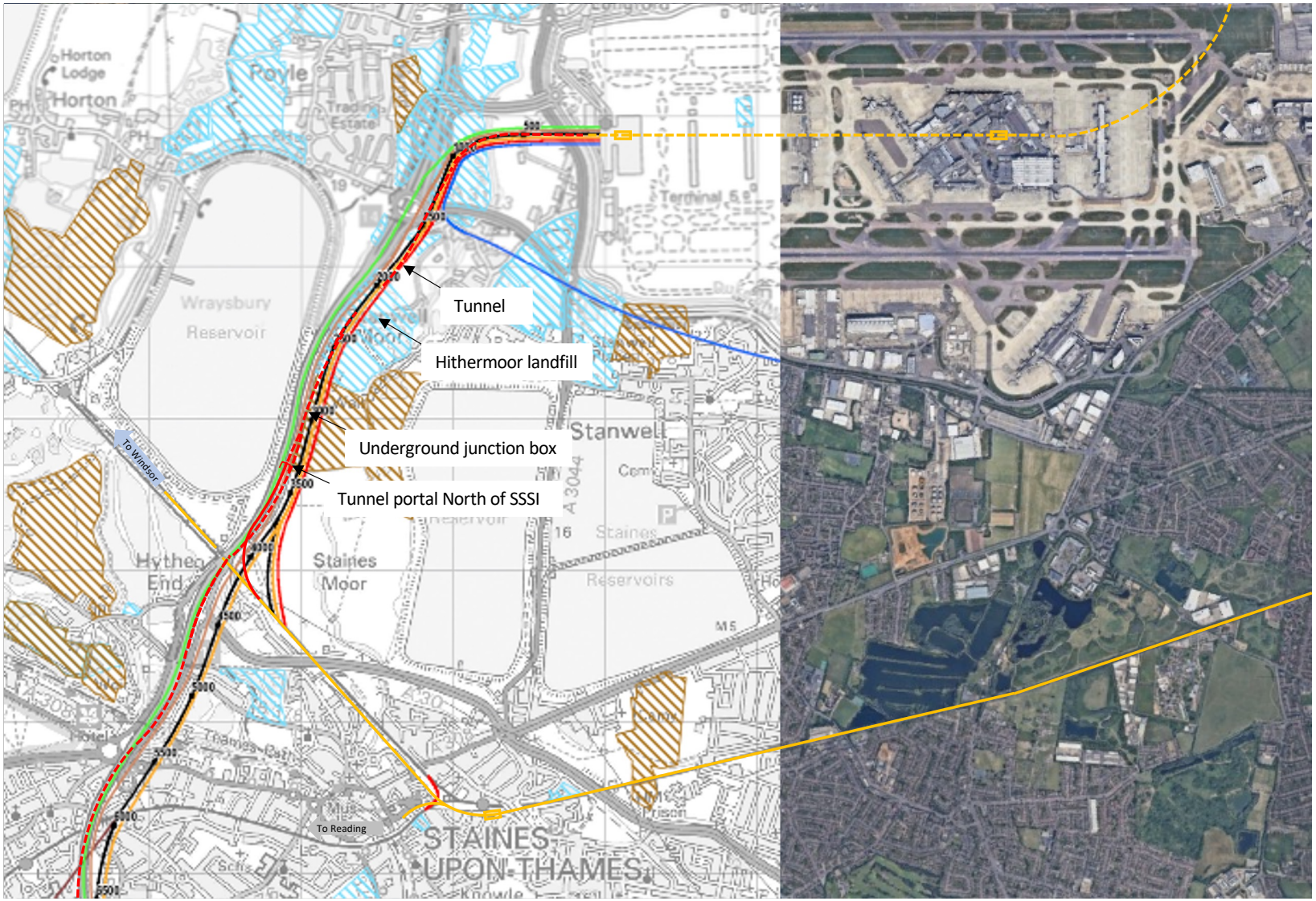
Underground grade separated junction box North of Staines Moor.

Surface line emerges from junction box, runs alongside M25 to an at-grade connection with the existing Windsor line.

Waterloo services continue through Staines, while Elizabeth Line trains terminate at new bay platforms.

Main HSR route to Woking continues in tunnel to south.

# Heathrow Southern Railway - September 2024 scheme



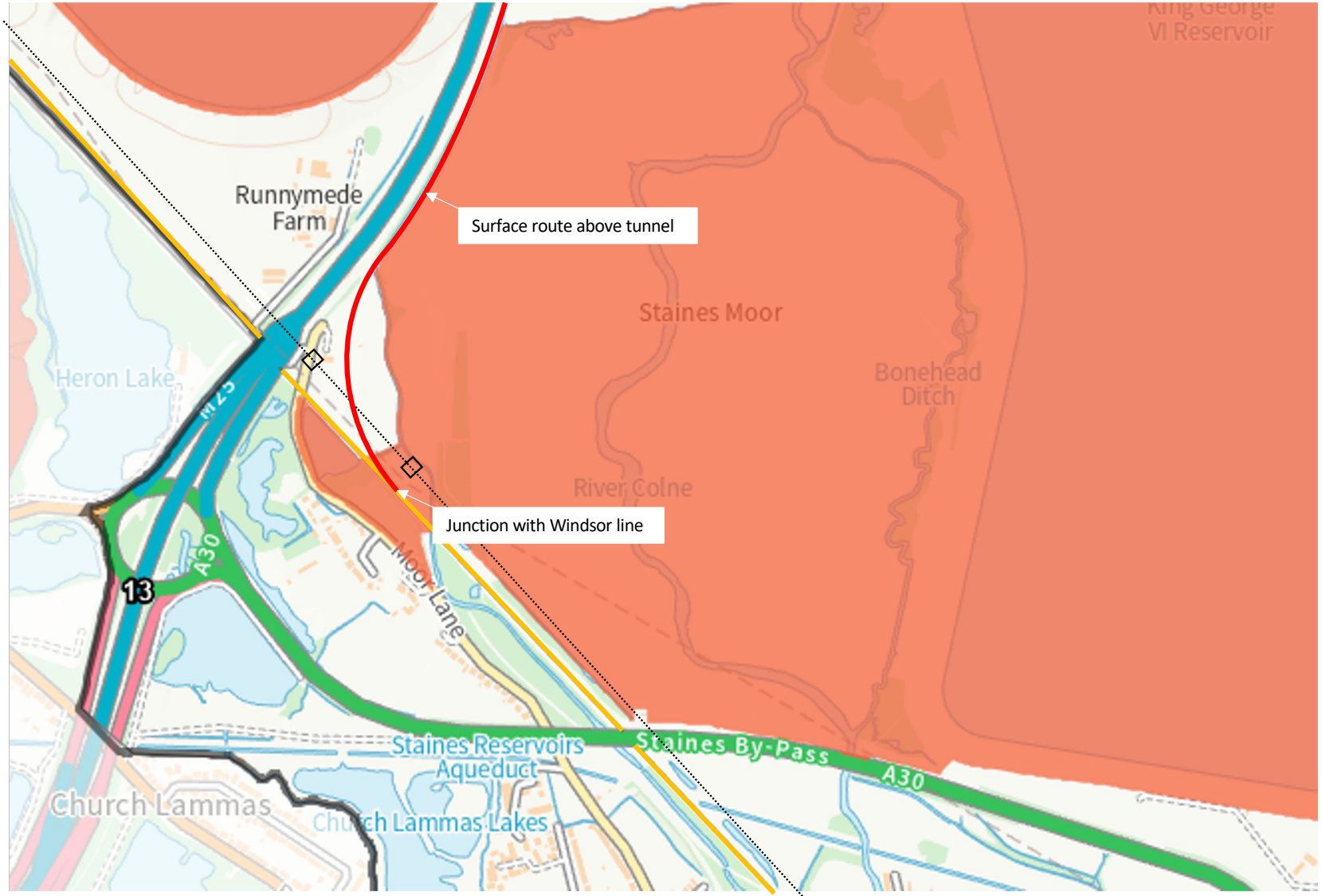

Plan also shows alternative alignments studied as part of original options appraisal.

- Authorised landfill sites
- Historic landfill sites
- Existing Network Rail/HAL infrastructure
- Proposed HSR infrastructure (at grade)
- Proposed HSR infrastructure (tunnelled)

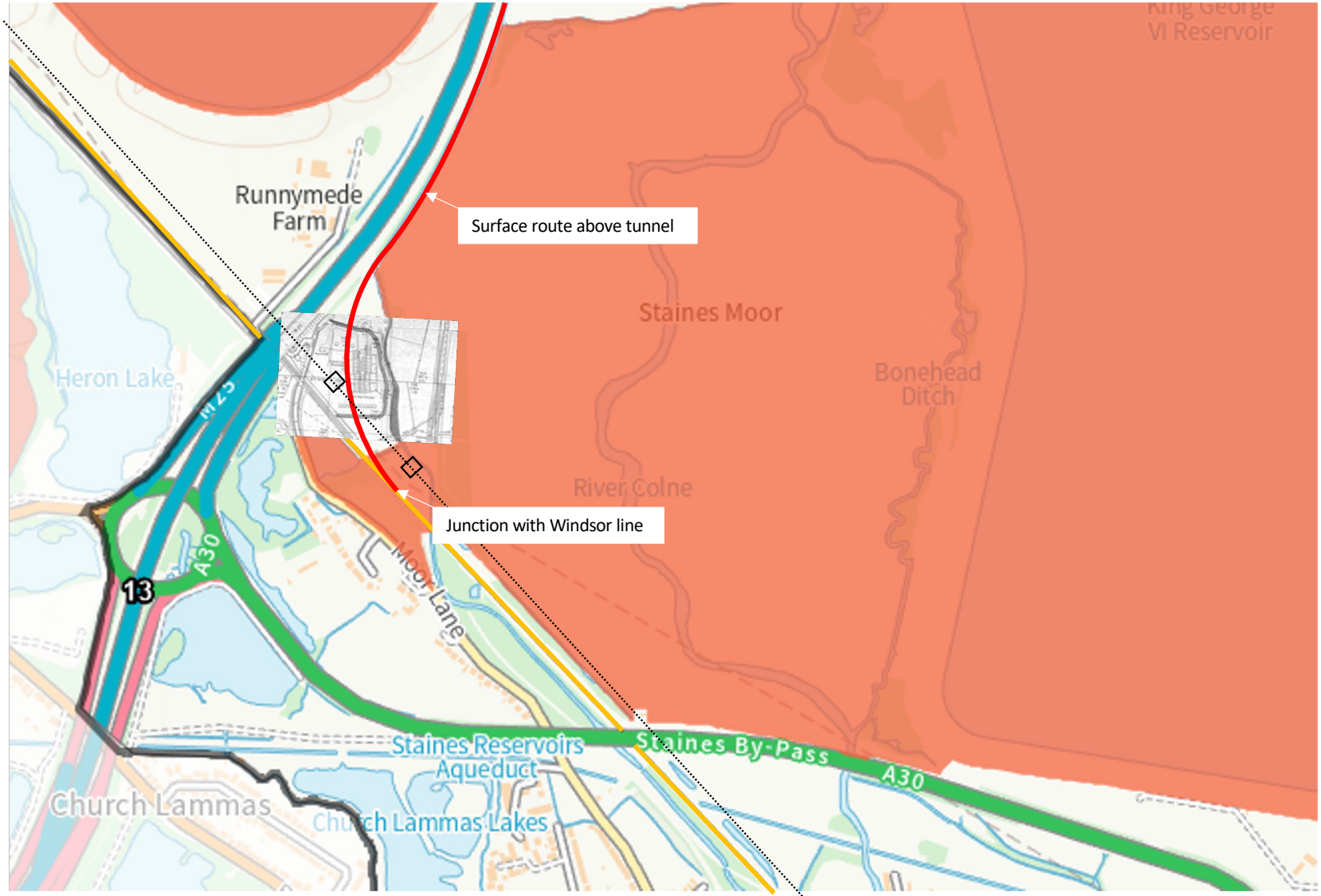
# Junction with Windsor Line - September 2024 scheme

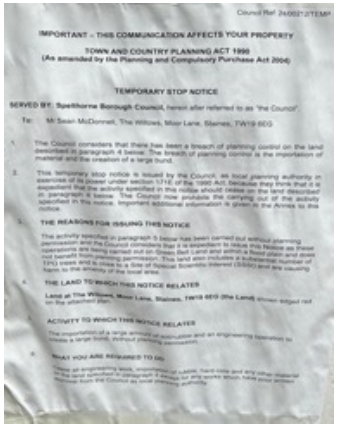

SSSI

# Junction with Windsor Line and Staines Moor SSSI - September 2024 scheme



# Junction with Windsor Line and The Willows - September 2024 scheme



IMPORTANT – THIS COMMUNICATION AFFECTS YOUR PROPERTY

TOWN AND COUNTRY PLANNING ACT 1990
(As amended by the Planning and Compulsory Purchase Act 2004)

TEMPORARY STOP NOTICE

SSSI

# M25 corridor - September 2024 scheme assumptions

## M25 South West Quadrant Strategic Study

Stage 3 Report

Department for Transport

highways england

- *"The M25 South West Quadrant has consistently been the busiest section of the UK motorway network since it opened in the late 1980s. Nine of the ten busiest sections of the SRN are in this area. Today the busiest section (between J14 and J15) carries more than 220,000 vehicles every day. Severe congestion is a regular occurrence with a 12 hour 'peak period' effectively lasting from 6am to 6pm*
- *This study recommends that the focus of future work should not be on widening the existing road. Instead, attention should be given to how to reduce pressures and provide parallel capacity to relieve the motorway network. This should work first to find alternatives to travel, or to move traffic to more sustainable modes.*
- *Particular emphasis should be given to improving orbital public transport connections and enabling more rail journeys to be made without the need for interchange in central London.*
- *Options include …. creation of new or improved rail links, such as to Heathrow from the south."*

Highways England Stage 3 Report, 2016

# M25 corridor - September 2024 scheme assumptions

Department for Transport | highways england


Department for Transport | highways england

## Initial work

**Conclusions of study to date:**

- **Directly adding capacity to the M25 SWQ not feasible**
- **Road pricing rejected due to lack of capacity away from the M25 to absorb diverted trips**
- **Conditions better where alternative capacity exists away from M25**

**Recommendation:**

- **Instead of widening the existing M25, attention should be given to reducing traffic demand and providing parallel capacity to relieve the pressure on the M25.**

Department for Transport | highways england

## Problems, issues, opportunities

### Issues and opportunities

**Rail – Factors influencing choice of M25SWQ use over rail**

Generic factors:

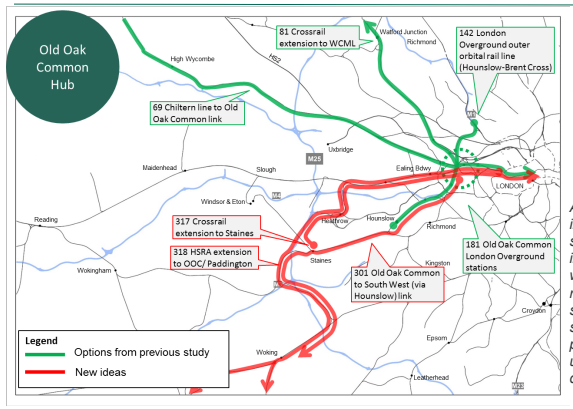
- Trip chaining, the need to carry heavy luggage, or personal preferences

Specific to study area:

- Predominantly radial network focused on trips to/from central London
- Orbital journey times by rail are not competitive, limited frequency, need to interchange in London or use bus for part of the journey.
- Peak period crowding on some routes, particularly those involving Central London interchange
- Some residential areas and some key destinations are remote from the rail network.

Department for Transport | highways england

## Options – rail




*Early Draft – Work in progress*

*All options are shown indicatively. No specific alignment is implied, except where existing rail routes are used. No specific service/calling pattern is implied, unless inherent in the description.*

- In October 2016, Government announced it had accepted the Airports Commission's to support a third runway at Heathrow.
- During 2018, after considering Heathrow Airport Ltd's (HAL) detailed proposals, Highways England restated their policy position, which assumed:
  - No widening of the M25
  - Prioritising alternative transport options, including Southern Rail Access, to relieve pressure on this section of the M25.
- Parliament voted to designate the Airports National Policy Statement in June 2018.

# Heathrow Southern Railway - March 2025 revised scheme

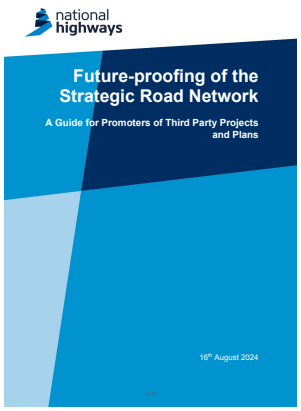


https://www.youtube.com/watch?v=MGyQjZozOkg#:~:text=Once%20built%2C%20new%20collector%2Fdistributor,for%20non%2Dairport%20M25%20traffic.

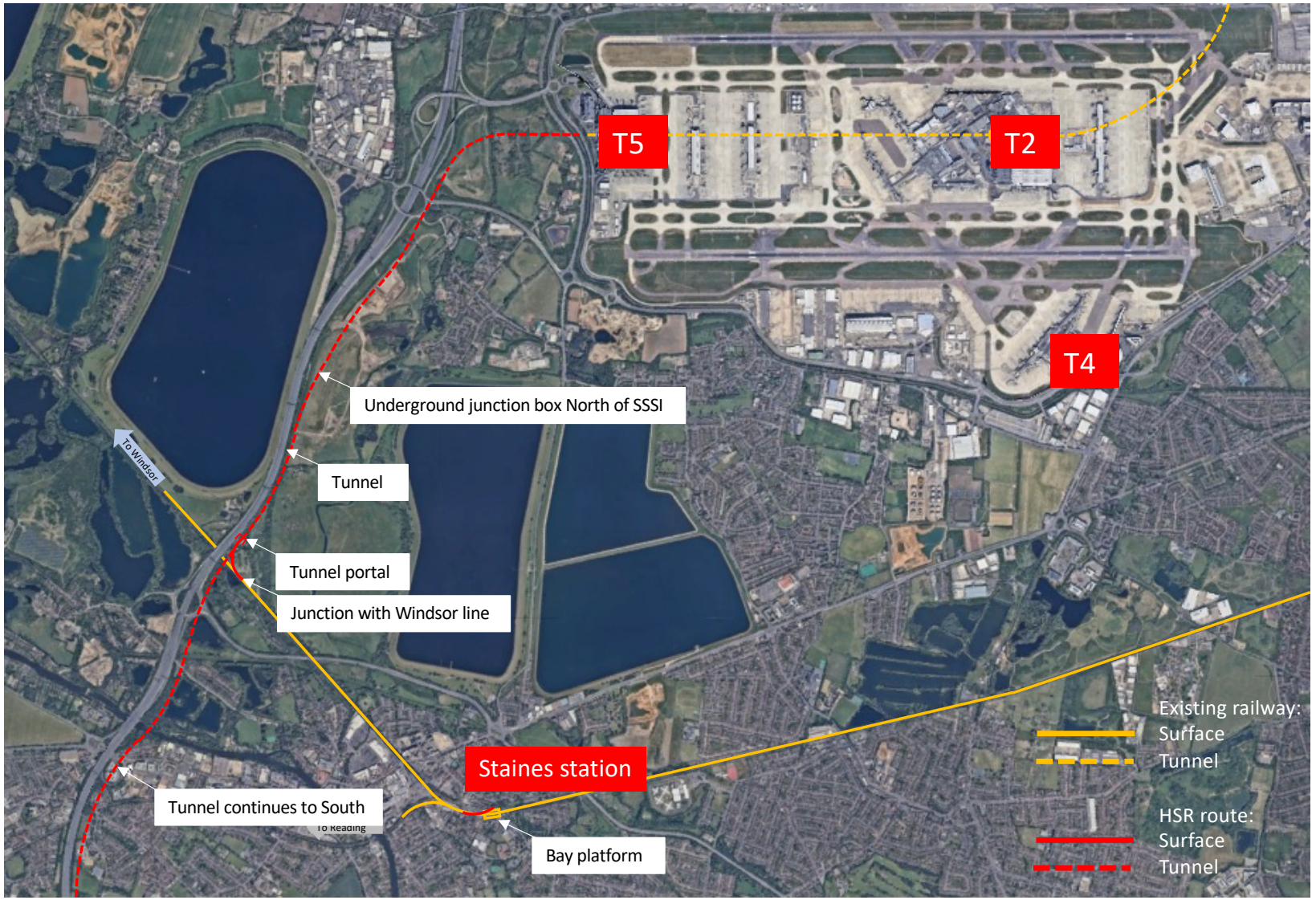
However, National Highways have subsequently *"developed wider safeguarding policy guidance on futureproofing, updated to reflect the significant impact of HS2 and EWR on structures over/under the Strategic Road Network. Heathrow Southern Railway should therefore assume passive provision for M25 widening, whether additional running lanes and/or collector distributor roads (as included in HAL's NWR proposal)"* – HSR/National Highways Meeting 2nd December 2024

National Highways must now *"work collaboratively with third parties from the earliest stages of a plan or project to ensure that suitable future-proofing provisions are included in order to allow us to fulfil our statutory direction, as set out in the Licence"* –Future-proofing policy, August 2024

This would therefore require the HSR surface alignment proposed in September 2024 to shift East, encroaching onto Staines Moor.




# Heathrow Southern Railway - March 2025 revised scheme




The HSR alignment has therefore been revised to avoid impacting the SSSI and allow for future M25 widening.

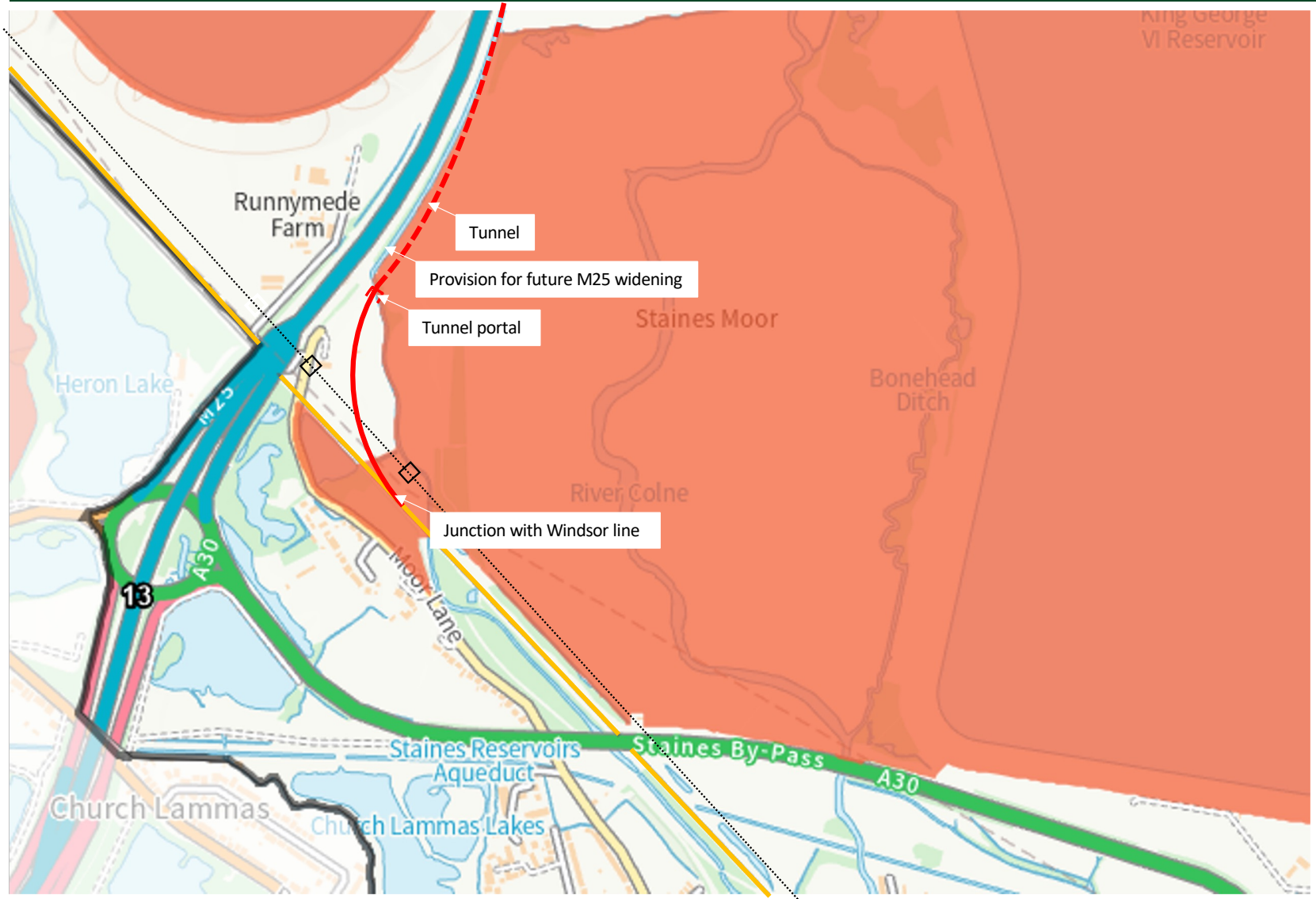
The tunneled connection with T5 now continues past Staines Moor.

The route for Elizabeth Line and Waterloo services then emerges from the tunnel on the Willows site, South of the SSSI, to join the Windsor line.

The HSR main line continues South in tunnel.

# Junction with Windsor Line - March 2025 revised scheme

# Junction with Windsor Line and SSSI - March 2025 revised scheme



# Construction access - March 2025 revised scheme

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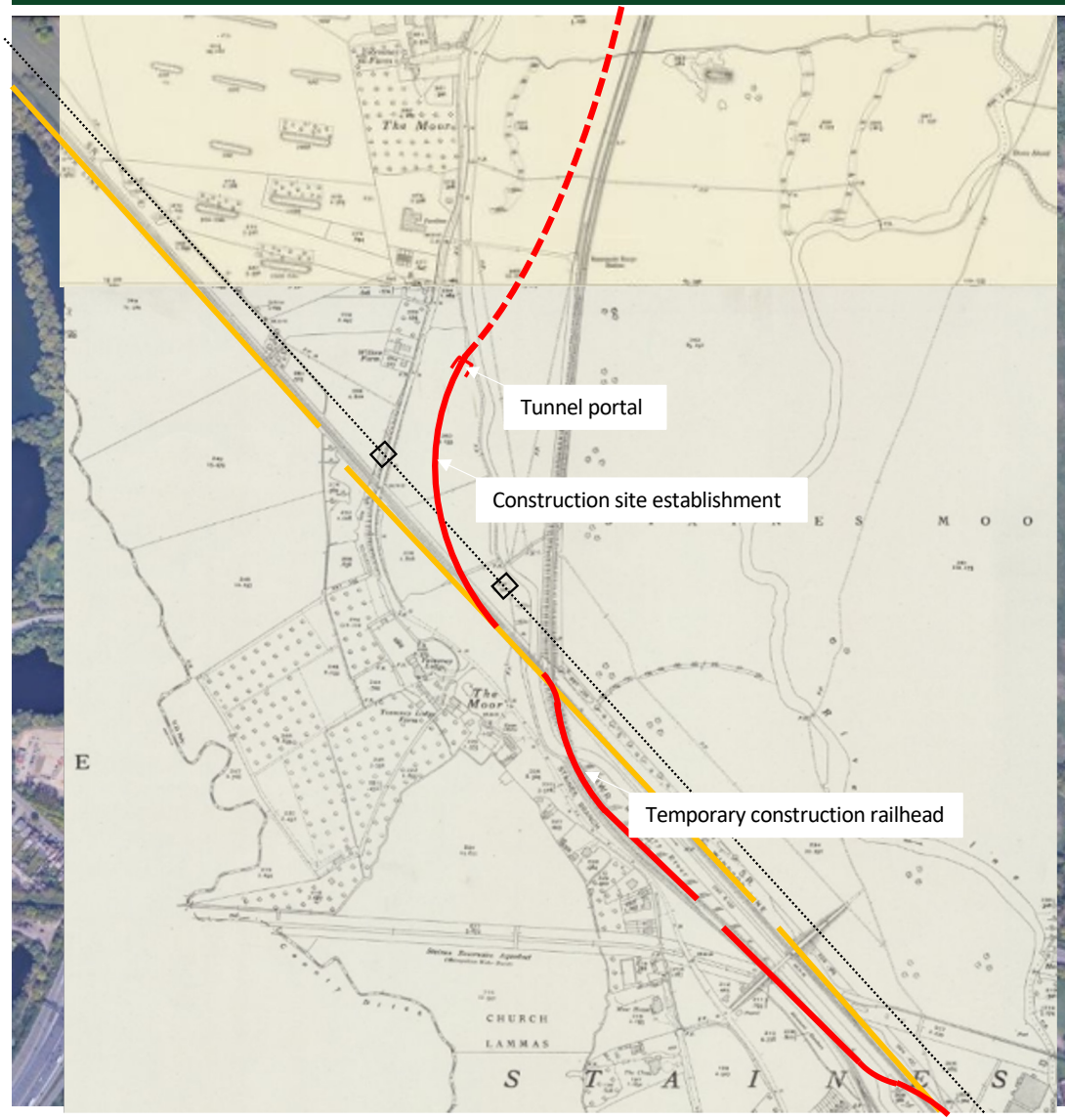
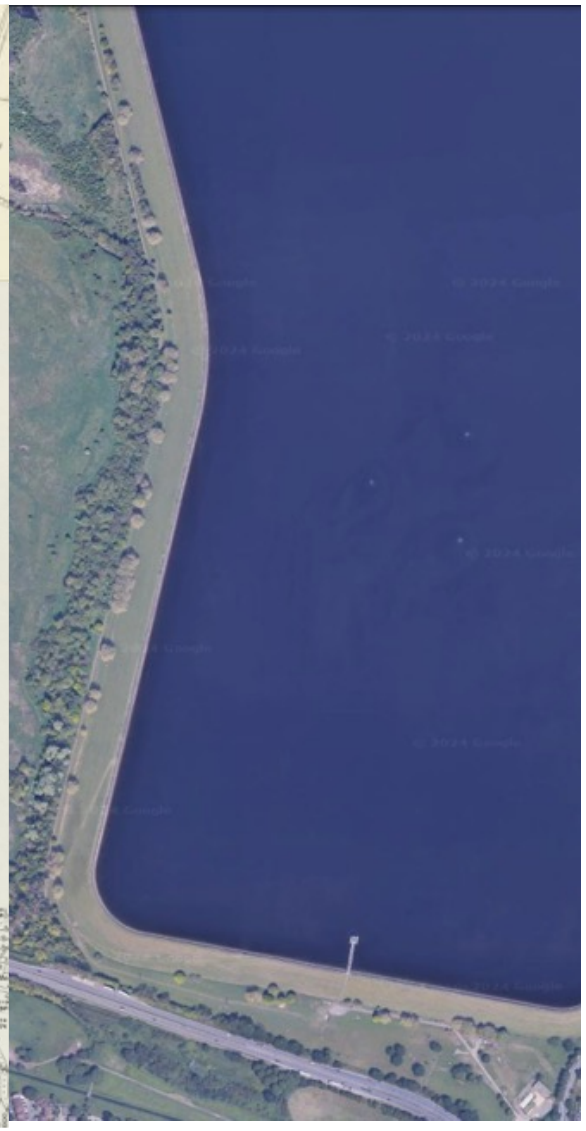
Network Rail land ownership

# Construction access - March 2025 revised scheme



Plan of Staines West – Colnbrook – West Drayton branch line c.1935

# Construction access - March 2025 revised scheme


1 - View to South from Moor Lane bridge over Windsor Line with The Willows to left – location of proposed HSR junction

2 - View from Moor Lane to The Willows

## Questions

**Q1 - How do you plan to access the site to carry out installation work to install the new rail line without harming Staines Moor ?**

A - The revised alignment allows all construction access and site establishment to be located outside Staines Moor SSSI. A proposed temporary reinstatement of the former Staines West – Colnbrook – West Drayton branch line will provide a railhead for construction materials

**Q2 – Re 1 above will this not require closure of the anti clockwise lanes of the M25 to do so for lengthy periods. How will this massive disruption be overcome?**

A – The revised alignment avoids any impact on the M25, and provides the necessary passive provision for proposed future widening in connection with Heathrow expansion

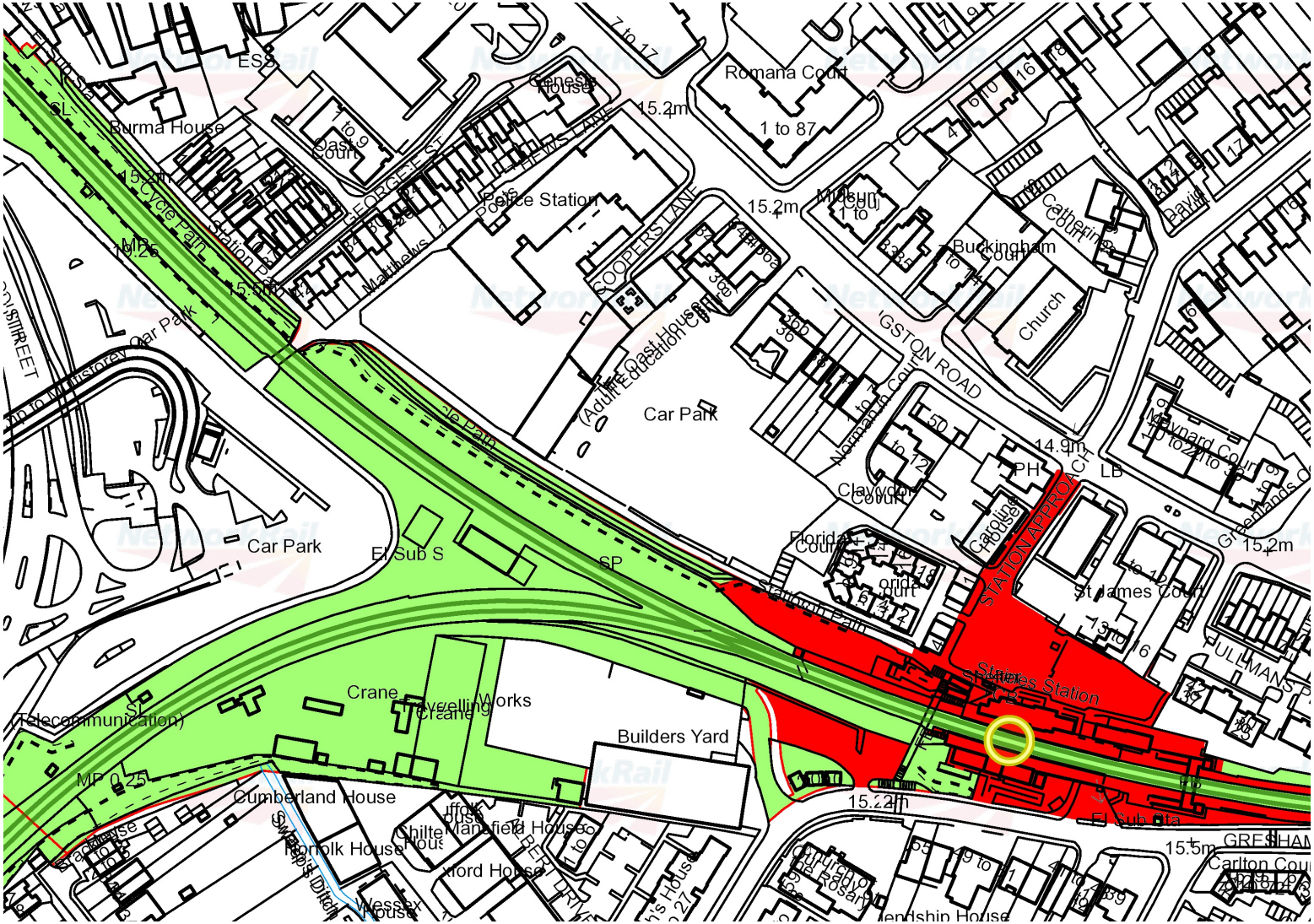
**Q3 - Is there, or will there be an impact assessment carried out to gauge how it will affect Staines residents ?**

A – A proposed construction methodology and all necessary environmental assessments will be carried out and made available for comment in the future public consultations on Heathrow Southern Railway.

## Questions

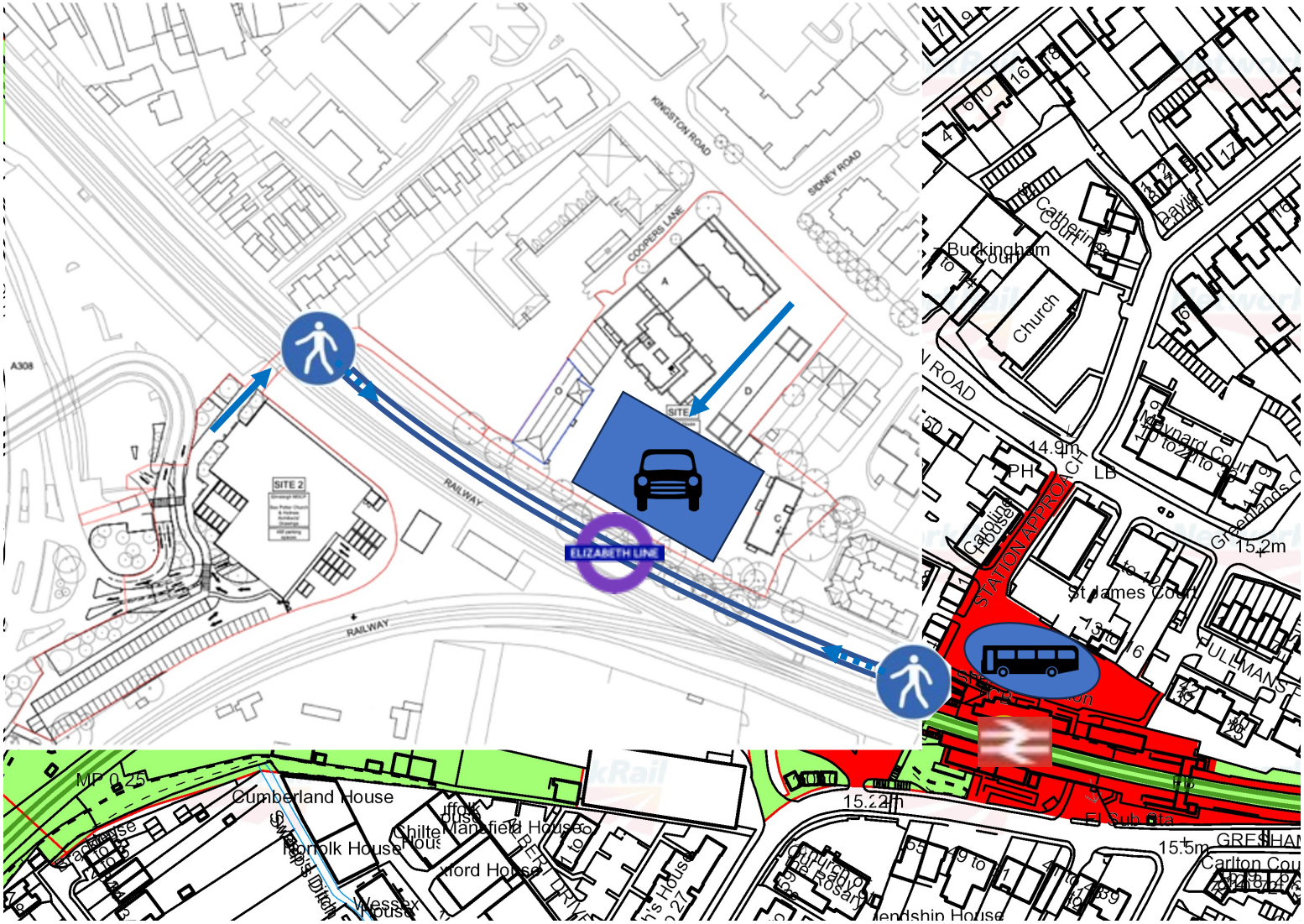
**Q4** - If the line is built what plans are being drawn up to ensure there is adequate parking at Staines Station? Currently there is very little public parking there available.

# Staines station - Existing Network Rail ownership




- Staines station and the adjacent railway land is constrained, with little opportunity to provide additional car parking within the site boundary.
- We propose to redesign the station forecourt to provide a more attractive setting for the (locally listed) station building.
- This will also include improved bus turning, passenger waiting and disabled parking facilities.

# Staines station - Proposed Heathrow Southern Railway development and wider opportunities




- New bay platforms will be constructed within the existing Network Rail boundary to allow Elizabeth Line trains to terminate and turn back.
- These will be fully accessible from both the existing station and a new Northern gateline closer to the town centre, with improved pedestrian and cycle access.
- We understand the planning application for the Council's Kingston Road car park site has been withdrawn.
- There may therefore be an opportunity to provide new decked car parking as part of a wider commercial and/or residential development to capture value created by Elizabeth Line services.

## Questions

**Q4 - If the line is built what plans are being drawn up to ensure there is adequate parking at Staines Station? Currently there is very little public parking there available.**

A – We will work with the Council to develop integrated design proposals for both Staines station and the adjoining land in the Council's ownership, to include detailed assessment of traffic impacts, car parking requirements, public transport improvements and active travel measures.

## Questions

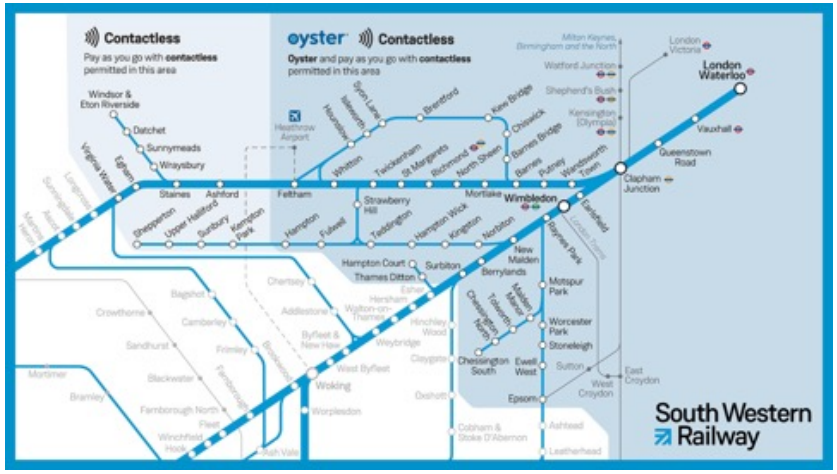
**Q5 - Whilst appreciating commercial confidentiality can you give us some idea of how the project will be financed ? Will it be 100% private funding or a Govt/Private arrangement?**

A – May I give a verbal summary in view of commercial and other sensitivities.

# Questions

**Q6 - Can you give us some idea of whether you will welcome and encourage the Oyster System to be a pre-condition for this line being built ?**

A – Following extension of London's contactless zone, we - and Heathrow - fully support the extension of TfL's fare zones to Spelthorne. Fares policy is TFL's responsibility but their - and the Mayor's – support for taking Elizabeth Line services to Staines makes it highly likely that zonal fares would also be extended.





SURREY

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Councillors and committees

## Decision details

### CAMPAIGN TO BRING SPELTHORNE'S TRAIN STATIONS INTO TfL ZONE 6

- Find out more about this issue
- Share this item

**Decision Maker:** Spelthorne Joint Committee

**Decision status:** Recommendations Approved

**Is Key decision?:** No

**Is subject to call in?:** No

Patti Taylor, representing the campaign team:

"*Is the Spelthorne Joint Committee willing to endorse the campaign for bringing Staines, Ashford, Sunbury and Shepperton stations into TfL's Zone 6, in order that Oyster card payments can be used into and out of London?*

*We believe that this would benefit not only our residents but Spelthorne's businesses, schools and workers, meaning less expensive rail fares and facilitating easier travel. Anyone travelling out of or into London from our stations can use Oyster up to Feltham but need to exit the train to purchase an onward ticket. This is inconvenient to say the least, and an expensive extra cost that deters visitors and workers in and out of our towns.*"

**The Spelthorne Joint Committee resolved to AGREE to:**
Fully support the campaign for bringing Staines, Ashford, Sunbury and Shepperton stations into TfL's Zone 6. The Joint Committee Chairman will write letters of support to the Secretary of State for Transport and the new train operator.

**Publication date:** 19/07/2017

**Date of decision:** 17/07/2017

**Decided at meeting:** 17/07/2017 - Spelthorne Joint Committee

change.org Start a petition My petitions Browse Subscription Log in

Petition details Comments Updates

1 RESPONSE

### Make Spelthorne Zone 6 (Ashford, Staines, Sunbury, Shepperton)

**16,224 have signed.** Let's get to 25,000!

**At 25,000 signatures,** this petition becomes one of the **top signed on Change.org!**

Mari Vi Soledad Martin signed this petition

Leigh Poynter signed this petition

**Sign this petition**

First name

The 'Spelthorne in the Zone' movement wants to see Staines, Ashford, Sunbury and Shepperton included in Zone 6 so that Oyster cards can be used, and the group says they are "pleased" smart ticketing will be included in the bidding process.

The campaign group held its inaugural public meeting last Thursday (July 7), with a panel of councillors, Spelthorne Business Forum leaders and borough MP Kwasi Kwarteng discussing the economic impacts for the train user and businesses in the area.

This was the first public meeting held by Spelthorne in the Zone

# Groundwater flooding

LATEST

## Staines-on-Thames: A case study of groundwater flooding exacerbated by rapid urbanisation

**14 March 2025**

Royal Holloway University, University of London is in Egham, less than 10 minutes' drive from Staines-on-Thames.

Royal Holloway senior lecturer in earth science Dr Jonathan Paul – who trained as a geophysicist – has been studying the groundwater flooding in Staines. His studies have attracted the attention of local groups who are trying to fight further development and he has held multiple town halls to explain his findings to people who live in Staines.

"It's a super interesting part of the world," he told *NCE*. "It's peppered with old gravel pits and landfill sites that have been backfilled with rubbish and loads of clay."

Further exacerbating the issue is that the aquifer layer in the area is close to the surface. The area is covered in a layer of gravel that is 3-4m thick, and thinner in some places, he said.

"The water flowing through it is quite extensive," he said. "So, if you construct a huge basement through it, it basically blocks that flow of water and tends to make it rise to the surface and cause groundwater flooding."

Additionally, Paul has found that the area around Staines and as far as Windsor and Feltham is "pretty weird" because "the pattern of flooding isn't what you'd expect – it doesn't really follow the River Thames or smaller surface rivers".

"If you look at it on a map, it's basically discrete patches that don't correlate with rivers or topography," he said.

He and his research group have done tests using geophysical equipment on the gravel both in the field and in the lab.

"What we think is happening is the pattern of flooding that you see at the surface is a consequence of groundwater flow," he said. "The chemistry of the water that comes out has more of an affinity to the aquifer than to the River Thames."

Ultimately, this means "it's going to get worse", according to Paul.

"It's been getting worse for quite some time," he continued. "There were places flooding last winter that have never flooded before and I think that's basically because they're building on the floodplain."

He has been studying the groundwater situation in Staines for a few years, but he has heard from locals that the issue has been prominent in the area since 2014.

However, early 2024 when there were a series of named storms in England saw the situation reach new levels. For the first time people were realising the Thames hadn't burst its banks but properties a quarter or half a mile from the river were experiencing flooded basements, Paul said.

"[People realised] the water was rising vertically; coming out of drains, coming out of cracks in people's basements – and it was far more widespread and potentially dangerous than river flooding because you can't stop it with sandbags," he recalled.

The issues arising from groundwater flooding can be far worse than just flooded basements, too.

"What often happens is you get variable subsidence and foundering of the surface," Paul said. "So we've had buildings whose roofs are bowing and we've had sewage pipes that have broken because of the upward pressure on them."

He has been working in a street in south Staines where the sewage water has mixed with the foul lines, meaning the flood water brings sewage up out of the drains. "We've tested the water [in the street] and the levels of salmonella and E. coli are off the scale – way beyond World Health Organisation thresholds," he said.

He believes that groundwater flooding is "not being taken seriously" by the government because "there's nobody whose job is to look at groundwater flooding – they're only concerned with river flooding".

His team is trying to help by modelling it and "delineating the risk areas where the council and the Environment Agency might put resources in and try to mitigate the problem".

However, he accepts that there is not a lot of easy mitigation for groundwater flooding.

"I think probably the best thing they could do is – if they know the direction that groundwater is flowing – try and divert it," he said. "You can put in barriers like sheet piling in the subsurface and try to take it away from basements and channel it towards the Thames or water meadows.

"But I get asked this question all the time and it's super tricky – it's basically down to the decision-makers and how much disruption they would allow."

Paul said that this could be even more difficult in Staines, judging by what he and his team have uncovered through their studies, which shows that the water table in the area is "doing some pretty wacky things".

"We spent a couple of days using ground penetrating radar, which allowed us to map the water table pretty clearly to a really good spatial resolution," he said.

They found that the water table is usually around 3m below the surface but that this varied from 0.5m to 5m in depending on where they were standing.

"The water table is warped up and down on really fine spatial scales," he said.

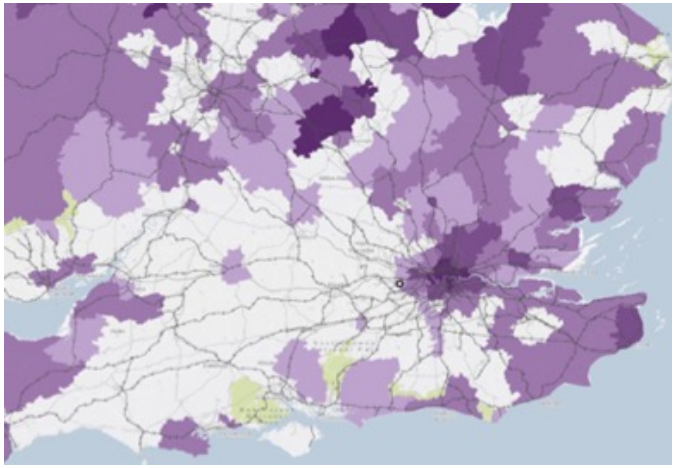
It's also "bouncing up and down on temporal scales" he added.

"Over the course of a week last summer we saw the water table in Staines drop by about half a metre," he said. "This might not sound like a lot, but an average figure for how much a water table might go up and down might be 10cm a year, so for it to jump half a metre in a week just indicates that there's something beneath the surface that is causing these water flows to fluctuate quite a lot in very short timescales."

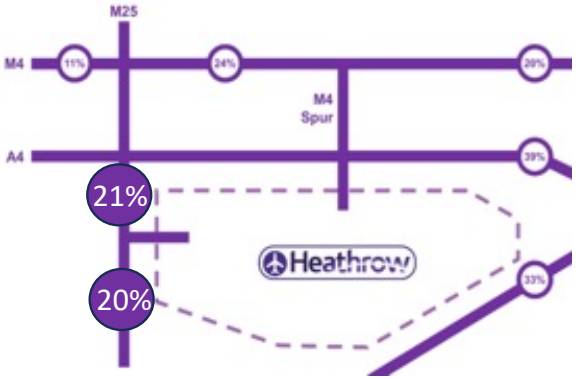
*'Dear Steve*
*I thought I would update you with an article in the New Civil Engineer, which came out today, about the Staines aquifer and flooding. I expect that the peer-reviewed scientific journal article will be published this month, which contains a lot more detail about our results and implications. I will send you the link as soon as it is published,*
*Best wishes*
*Jonny'*

Dr Jonathan Paul (jonathan.paul@rhul.ac.uk) – Senior Lecturer, Department of Earth Sciences, Royal Holloway University of London (RHUL)

# The need for new, direct rail access to Heathrow from across the region



Heathrow rail served catchment, Rail Projects Update, HAL April 2018




% Heathrow related traffic on roads around the airport – Surface Access Proposals, HAL 2019

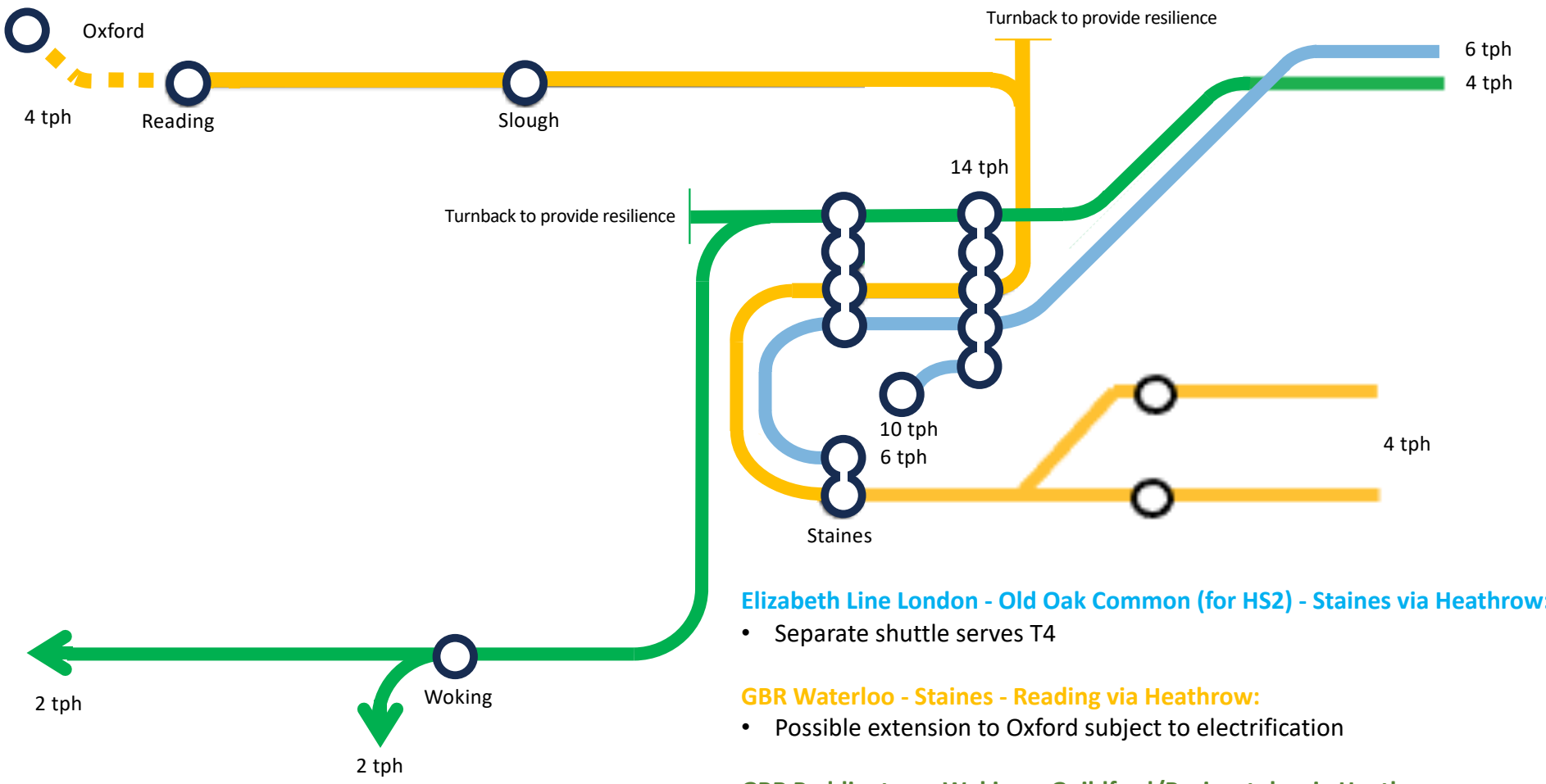
| | | % mode share | % sub-division | Pax/day | Vehicle occupancy | Trips/day | Multiplier adjustment | Total trips/day |
|---|---|---|---|---|---|---|---|---|
| **63m O&D passengers (2024)** | | | | 173,000 | | | | |
| **Mode share (2024)** | Private | 55 | | 95,150 | | | | |
| | Public | 45 | | 77,850 | | | | |
| | Total | 100 | | 173,000 | | | | |
| **Sub-mode share (2017 % adjusted)** | Car: Park & Fly | 26 | 7 | 12,110 | ÷ 1.5 | 8,073 | | 8,073 |
| | Car: Kiss & Fly | | 19 | 32,870 | ÷ 1.5 | 21,913 | X 2 | 43, 826 |
| | PHV: Backfilled | 29 | 7 | 12,110 | ÷ 1.5 | 8,073 | | 8,073 |
| | PHV: Not backfilled | | 22 | 38,060 | ÷ 1.5 | 25,373 | X 2 | 50,747 |
| | **Total** | **55** | **55** | **95,150** | | | | **110,719** |

- 2023 data confirms the M25 between J13 & J14 - in Spelthorne - had an average daily flow of 209,000 vehicles and the M4 around J3 of c.130,000 vehicles per day.
- c.80% of Heathrow related traffic uses the M25 and M4, equivalent to c.54,000 and 36,000 vehicles/day, or c.26% and 28% of total flows.
- Even constrained to two runways and a 480,000 ATM cap, Heathrow's passenger numbers continue to increase, from 80.9m in 2019 (pre-Covid) to 83.9m in 2024.
- Alongside this, transfer/transit passenger numbers continue to decline, reflecting increasing competition from Middle Eastern hubs, and create even greater surface access demand.
- HAL's two runway masterplan envisages increasing capacity to c.100mppa through both terminal and apron development with continued increases in aircraft size and load factors.
- In January 2025 Government reconfirmed policy support for HAL's North West Runway scheme, further increasing capacity to c.140mppa.

## Proposed further discussion – 'Statement of Common Ground'

| Proposals | Requirements | Results | Benefits | Impacts |
|---|---|---|---|---|
| Extend Elizabeth Line services from Heathrow to Staines | Construct Windsor line junction and bay platforms at Staines | Direct, fast and frequent connectivity with Heathrow, OOC (for HS2) and London | Access to wider education and employment opportunities.<br>Transforms inward investor perceptions.<br>Increases value of development sites.<br>Enhances Staines potential for airport passengers & crew accommodation & hospitality | New Staines station infrastructure (within railway boundary).<br>Additional (electric) rail services over Windsor line. |
| Extend Waterloo services from Staines to Heathrow | Construct Windsor line junction | Direct, fast and frequent and connectivity with Heathrow, Thames Valley, Reading and potentially Oxford | | Additional (electric) services over Windsor line |
| Local transport integration | Staines station public realm | Provide bus/taxi interchange | Improved local transport facilities and accessibility | |
| Urban realm improvements | Enhance pedestrian/cycle links between station and town centre | | More attractive and accessible public ream | |
| Construction plan | Site establishment | Temporary railhead for materials/waste transport | Minimise HGV construction traffic | Potential local noise/dust/traffic during construction |
| Ecology and environmental plan | Environmental assessment and ground surveys | Mitigate groundwater flooding risk.<br>Opportunity for environmental works | Improve local footpath network consistent with SSSI protection measures | |

# Proposed further discussion – Integrated Western and Southern Rail Access




**Elizabeth Line London - Old Oak Common (for HS2) - Staines via Heathrow:**

- Separate shuttle serves T4

**GBR Waterloo - Staines - Reading via Heathrow:**

- Possible extension to Oxford subject to electrification

**GBR Paddington – Woking – Guildford/Basingstoke via Heathrow:**

- Possible extension to Portsmouth/Southampton

## Heathrow Airport Ltd.

Sophie, Tim, James and colleagues apologise that Heathrow isn't represented tonight but have provided the following statements:

**'Heathrow Southern Railway will benefit Staines residents in creating an intermodal hub, because the airport will continue to support with local bus connectivity, active travel links and minimising the impact of parking issues'** – Tim Leech, Head of Surface Access Strategy

**'HSRL is Heathrow's preferred southern rail scheme, and we are working with local authorities to understand how these benefits can be maximised and to ensure the project will deliver for local communities'** - Nigel Milton, Chief Communications & Sustainability Officer

# Thank you

May I also comment on the alternative Southern Light Rail proposal?

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HEATHROW SOUTHERN RAILWAY

# Southern Light Rail - 1


Southern Light Rail, Presentation to Heathrow Area Transport Forum November 2022

Example of rail viaduct construction, Thame Valley viaduct


Southern Light Rail, Presentation to Heathrow Area Transport Forum November 2022

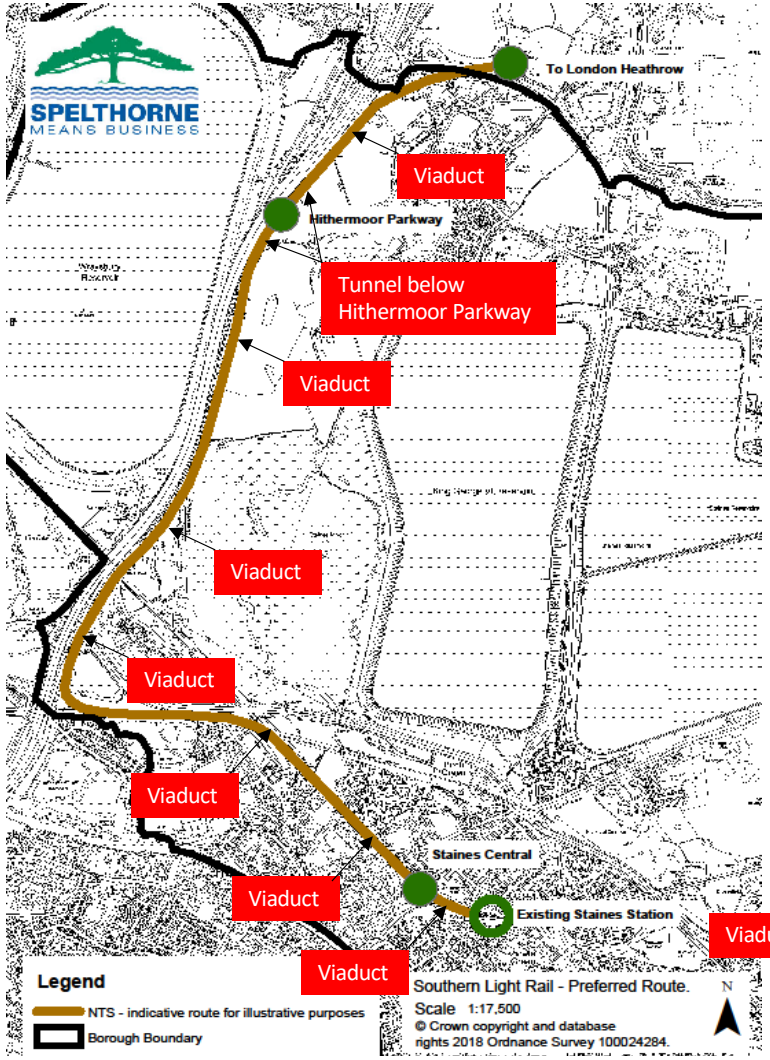
Submission to Airports Commission, Interlinking Transit Solutions July 2013

SLR propose construction of a viaduct from Staines station, crossing the railway junction to the West and extending through the town centre.

A viaduct would have significant adverse local impacts, both in construction and operation.

Spelthorne BC's 2002 Airtrack Planning Brief concluded the similar viaduct then proposed would be *"a prominent elevated feature … with the potential to be an intrusive feature having a damaging impact on the environment of the town centre."*

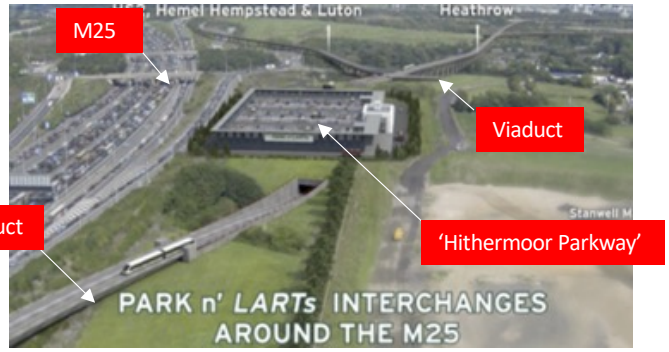
# Southern Light Rail - 2




Southern Light Rail, presentation to Heathrow Area Transport Forum, Spelthorne BC, November 2022

*LARTS Rapid Rail trains on the twin track guideway,* Submission to the Airports Commission, Interlinking Transit Solutions Ltd, 2013

*Elevated Rapid Transit at Beijing*, Submission to Inquiry on Surface Transport to Airports, Interlinking Transit Solutions, 2015




*Park and Ride interchange, Stanwell Moor,* Submission to Inquiry on Surface Transport to Airports, Interlinking Transit Solutions, 2015

- SLR propose an elevated viaduct structure continues through the SSSI and Green Belt.
- The route tunnels below 'Hithermoor Parkway,' a large 'Park & Ride' car park located in the Green Belt.
- *"A new station at Hithermoor Parkway is proposed where the light rail would serve a new Heathrow car park with a proposed 5,000 spaces for cars and access from the M25"* – HSR/SLR Compare and Contrast, Arup for HSPG/HATF, June 2024
- North of the car park, SLR climbs to another viaduct structure, crossing Stanwell Moor and the A3113 towards Heathrow.

## Southern Light Rail - 3

- The SLR scheme promoters propose the viaduct would be constructed using a launching girder. However, this requires a complex and costly bespoke system, economically justified only where a lengthy structure is to be constructed with relatively little variation in horizontal and vertical geometry – for example on the HS2 Colne Valley viaduct. It also requires road access for the large pre-cast spans, presenting significant challenges in an urban location.

- On leaving Staines station, the Southern Light Rail route would first cross the existing rail infrastructure west of Staines station, then be threaded through Staines town centre before curving sharply to join the M25 corridor. This is fundamentally unsuited to a launching girder methodology.

- Once the route joins the motorway corridor, only a very short section is above ground before it enters a tunnel north of Stanwell Moor.

- The viaduct construction would therefore be likely to require craneage of each pre-cast section from ground level, typical examples of which are shown above.

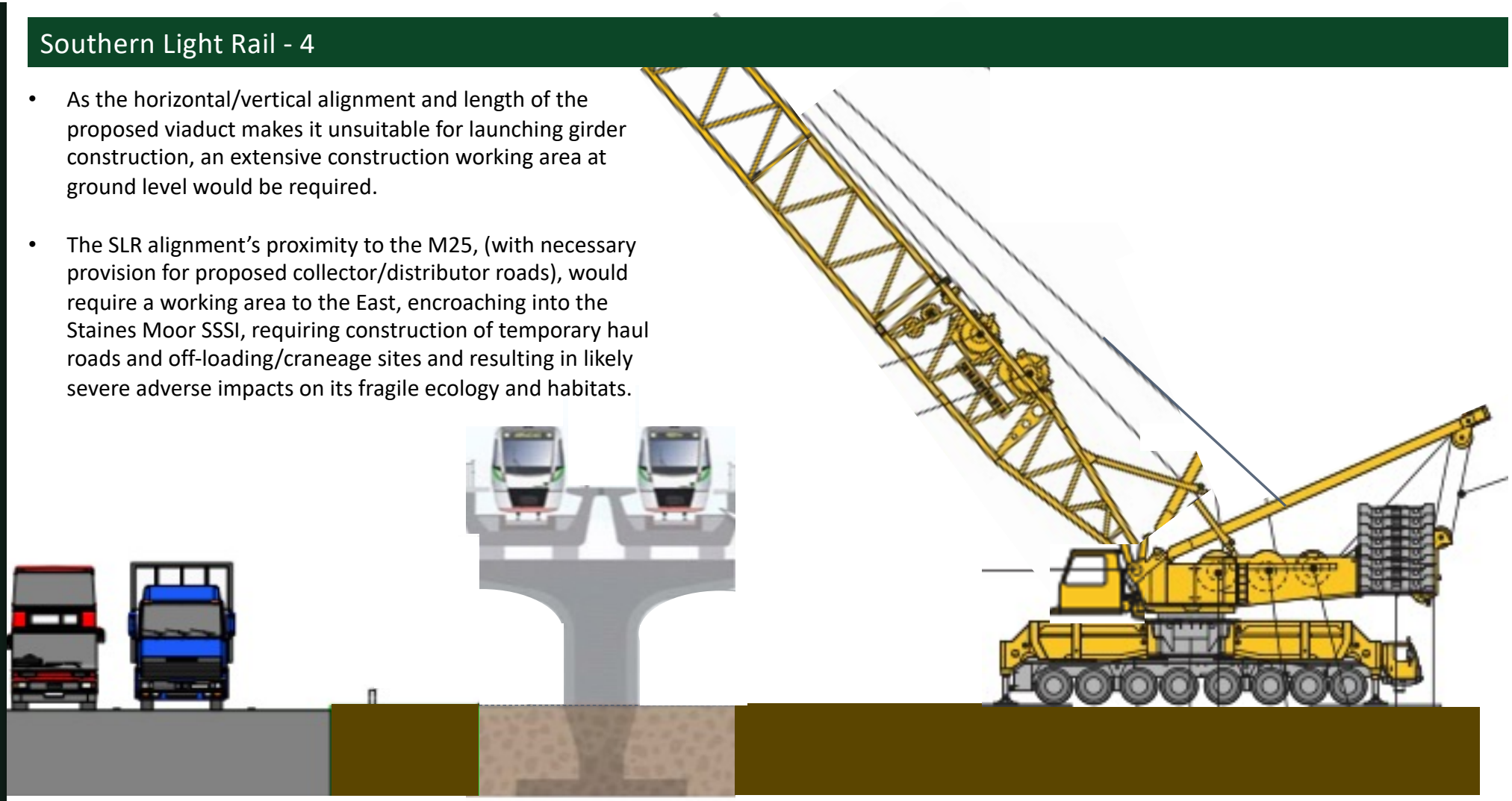
*Launching girder construction technique* - Submission to ORR Inquiry on Charging Framework for Heathrow, LARTS March 2016

2.1 miles HS2 Colne Valley viaduct, each pre-cast span 80m, constructed with 700 tonne launching girder shipped from Hong Kong and assembled on site

# Southern Light Rail - 4

- As the horizontal/vertical alignment and length of the proposed viaduct makes it unsuitable for launching girder construction, an extensive construction working area at ground level would be required.

- The SLR alignment's proximity to the M25, (with necessary provision for proposed collector/distributor roads), would require a working area to the East, encroaching into the Staines Moor SSSI, requiring construction of temporary haul roads and off-loading/craneage sites and resulting in likely severe adverse impacts on its fragile ecology and habitats.

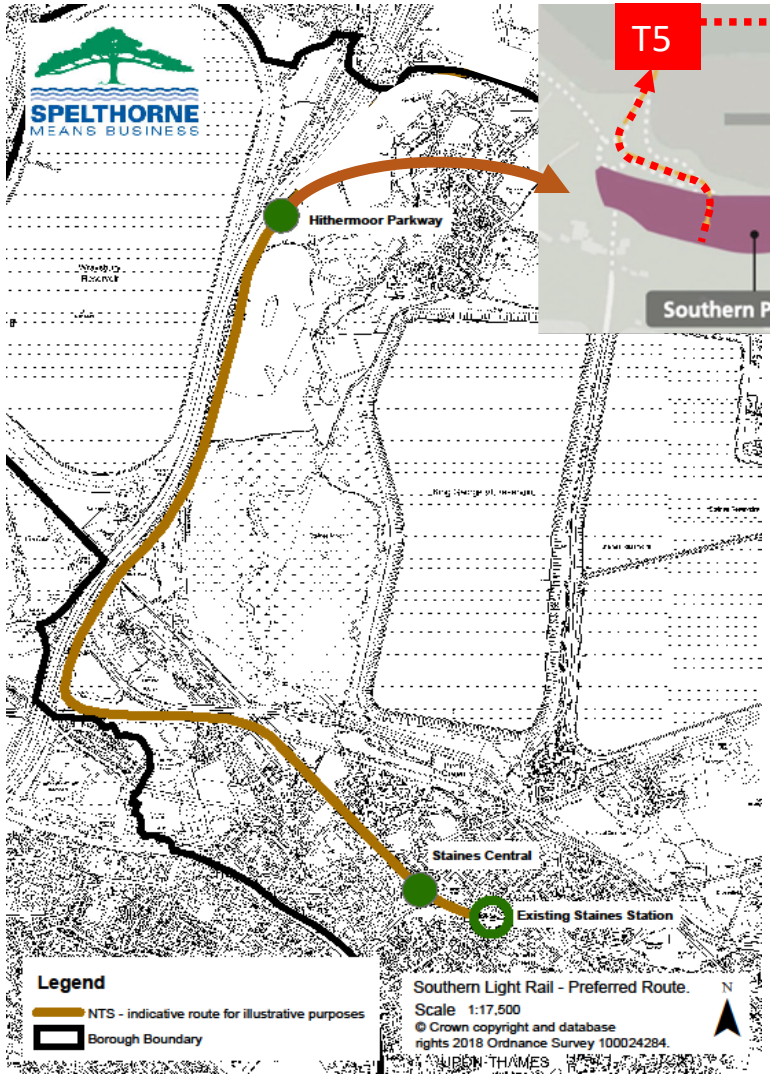


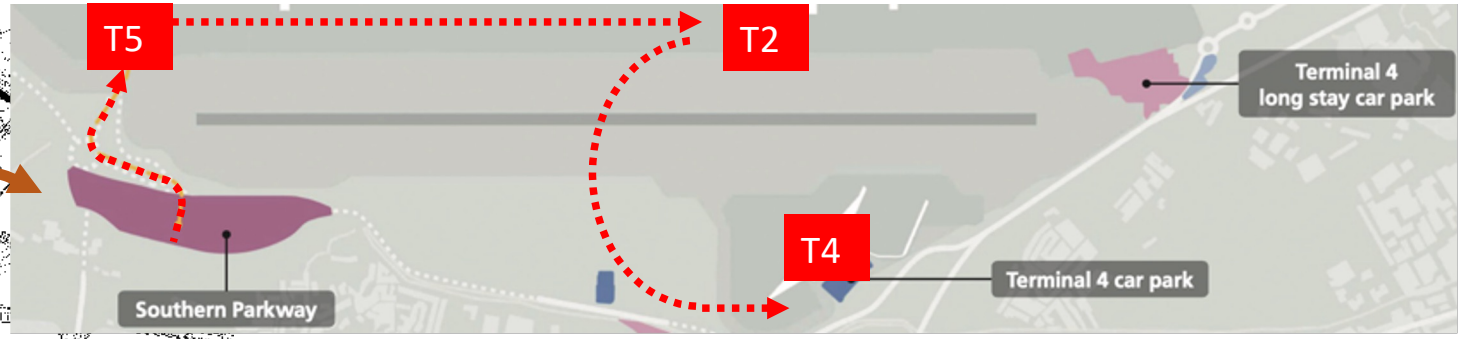
Protected zone for M25 Utilities/ Telecoms and anti-incursion measures

Southern Light Rail viaduct alignment, c.9m structural width

Working area/haul road between piers. Requires ground reinforcement for craneage & suitable access for construction traffic. Road access to be assessed to determine span length capable of transport to site

# Southern Light Rail - 5



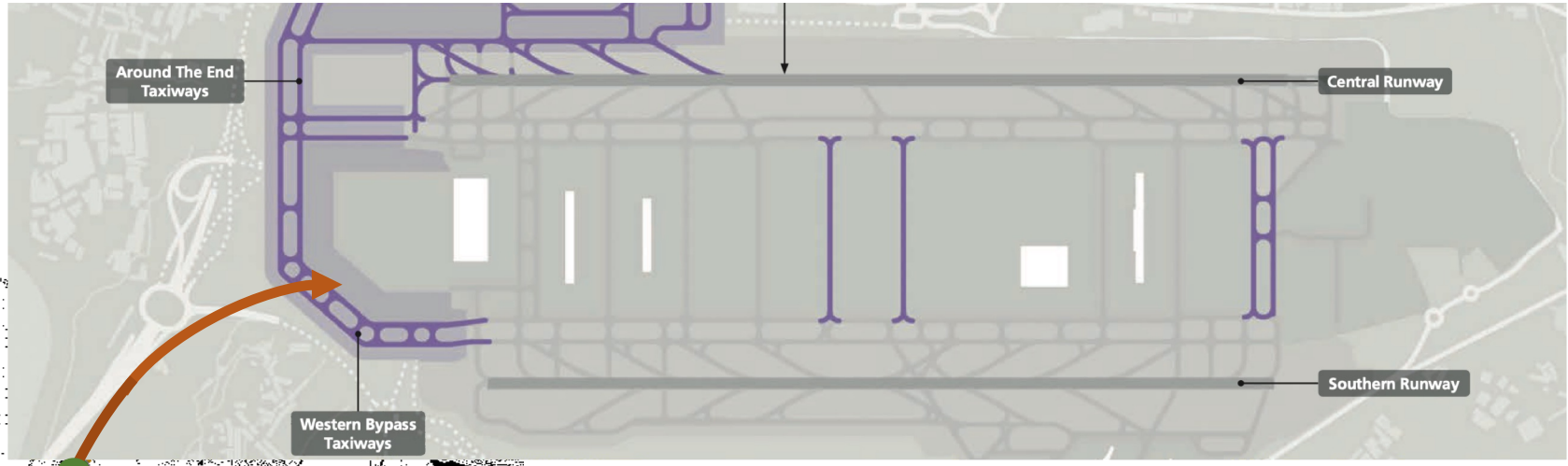

Landside connections from Southern Parkway overlaid on Airport Expansion Consultation Document, HAL June 2019

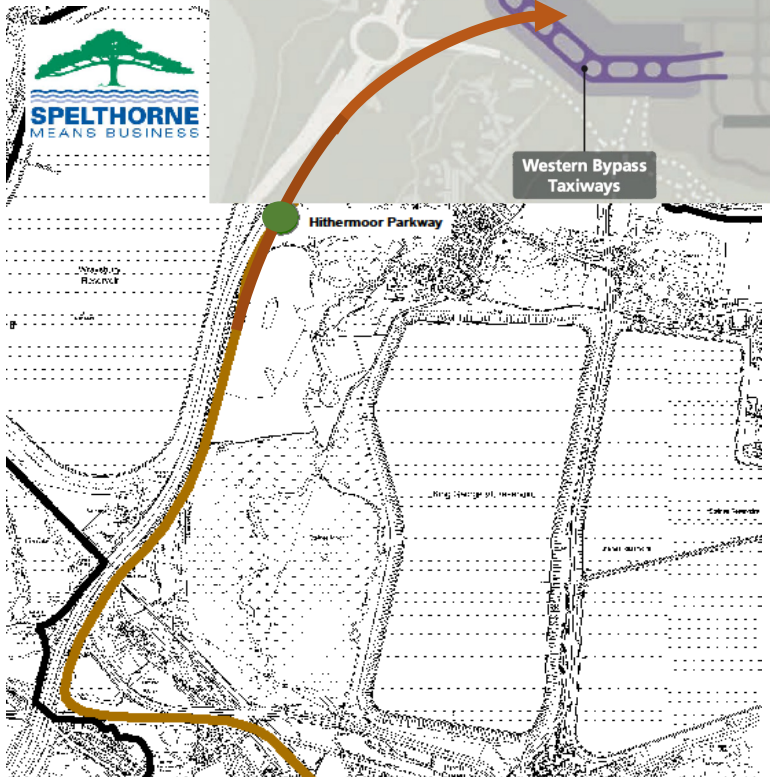

Presentation to Overview & Scrutiny Committee, Spelthorne BC, 3rd September 2019

*'Heathrow does not have the physical station infrastructure to incorporate the light rail scheme into Terminal 5'* – Nigel Milton, HAL letter to Cllr. Sexton, 21st December 2023.

Southern Light Rail would therefore need to terminate at the proposed Southern Parkway

# Southern Light Rail - 6




Western Bypass Taxiways, Airport Expansion Consultation Document, HAL June 2019

*'Western Bypass Taxiways will be located to the west of Terminal 5 and will help to reduce congestion within the existing airfield by providing an alternative north-south route for taxiing aircraft'* – Heathrow Expansion Consultation Document, HAL June 2019.

Southern Light Rail could not therefore alternatively terminate landside at or near T5

# Southern Light Rail - 7

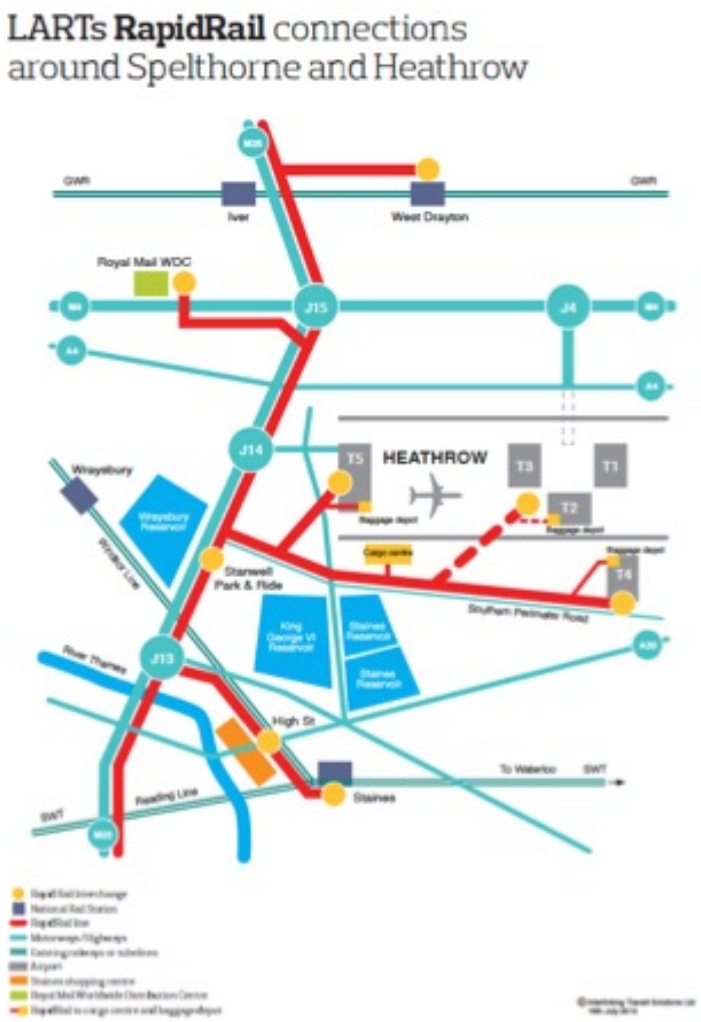



Fig. A1: LARTs RapidRail plan for connecting Heathrow and Staines-upon-Thames – Submission to the Airports Commission, Interlinking Transit Solutions July 2013

- Southern Light Rail would only provide a link between Staines and an interchange – via the Southern Parkway or similar - outside Heathrow's perimeter

- Spelthorne BC's analysis of BAA's Airtrack scheme in 2009 recognised its business case relied on new rail services connecting Heathrow directly to a wide geographic area

**Net additional passenger entry and exits in am peak - 8-9am**

| | 2015 | 2030 |
|---|---|---|
| Waterloo | 1675 | 1779 |
| Guildford | 353 | 421 |
| Woking | 380 | 421 |
| Reading | 133 | 177 |
| Chertsey | 301 | 324 |
| Staines | 22 | 30 |
| Ashford | 38 | 40 |

- *"The table* (above) *shows that the flow to the two main stations in Spelthorne is low, relative to other key destinations. The figures appear to show the business is dependent on passengers being drawn from a wide geographical area"* Report on Airtrack, Appendix A to the Deputy Chief Executive's Report to the Special Cabinet, Spelthorne BC 17th September 2009

- Southern Light Rail would require the vast majority of passengers to interchange at Staines to reach Heathrow.

# Southern Light Rail - 8

- Southern Light Rail would provide access to the Southern Parkway from Staines itself, and a small number of stations on the SWR network via interchange at Staines.
- *"The* (Southern Light Rail) *link would act as a standalone shuttle separate to existing rail services and would require passengers and staff travelling from outside Staines to interchange in order to continue with their onward journeys" (*Southern Access to Heathrow, Arup for HSPG, August 2021)
- *"Passengers travelling to or from airports, particularly for international journeys, have particular characteristics that set them aside from other rail users. For example, they are likely to place greater value upon the reliability of the service, especially when accessing the airport. They may be particularly deterred by interchange, partly because of the added risk of delay, but also due to difficulties associated with changing trains while carrying baggage"* (Model Development Report, A Report for HS2 Ltd, Atkins February 2010)

## Southern Light Rail - 9

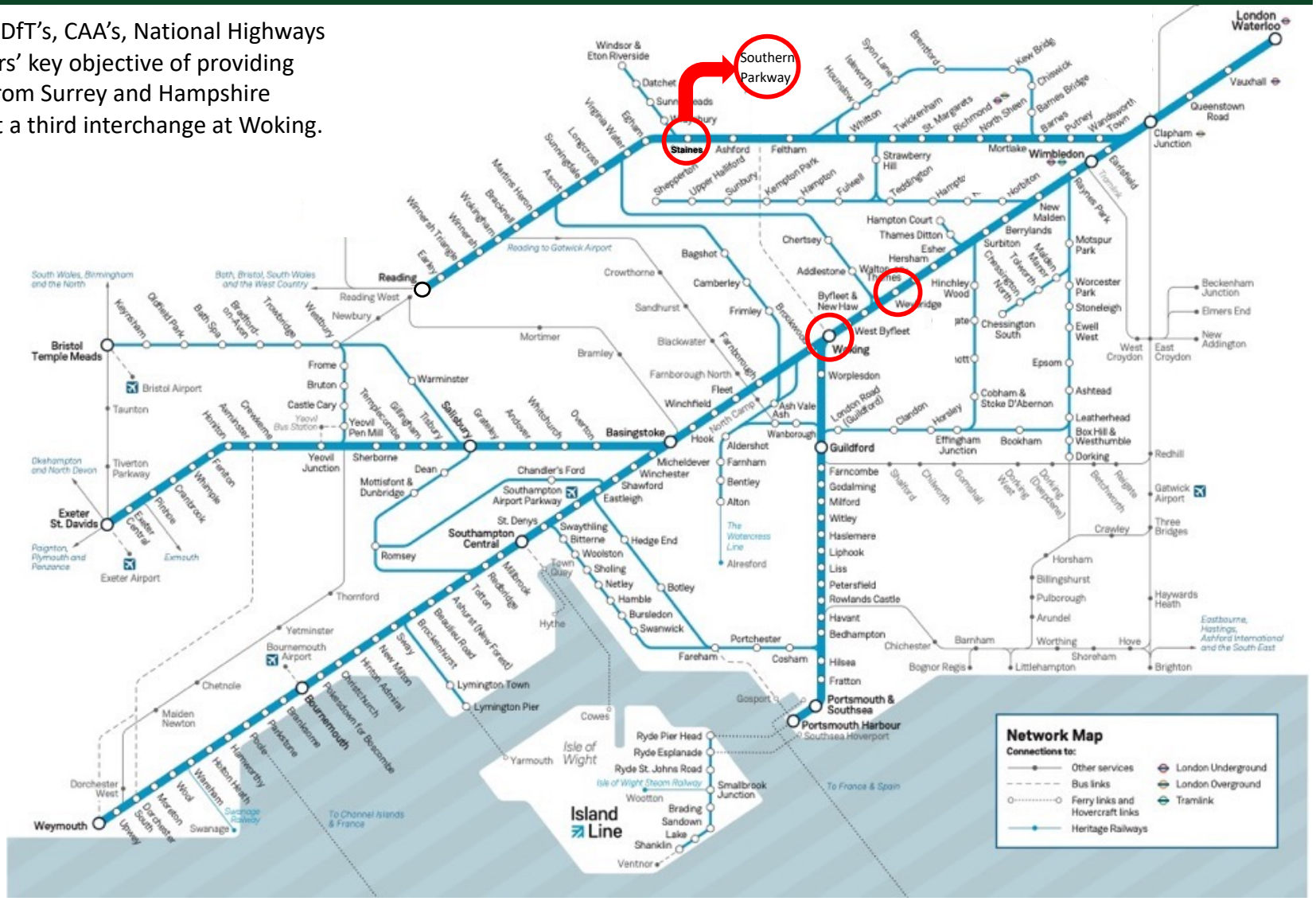
- The Southern Parkway would be accessible from some additional stations with a second interchange - at Weybridge – in addition to Staines itself.

- *"Each time a passenger has to change between trains at each leg of the journey, the total end to end journey time is increased by additional waiting time. The impact of this interchange penalty tends to be greater for passengers who are travelling with luggage, such as air passengers, and is particularly high for foreign travellers and those who are unfamiliar with our transport systems" (*Heathrow Airport Ltd submission to HS2 consultation, July 2010)

- *"Airport surface access trips are uniquely difficult to shift to sustainable modes for a number of reasons, including perceived barriers to using public transport for travellers with children and/or luggage"* (Mayor of London's response to Government's - Shirley Rodrigues, Deputy Mayor for Environment and Energy letter to Robert Court MP, 7th September 2021)

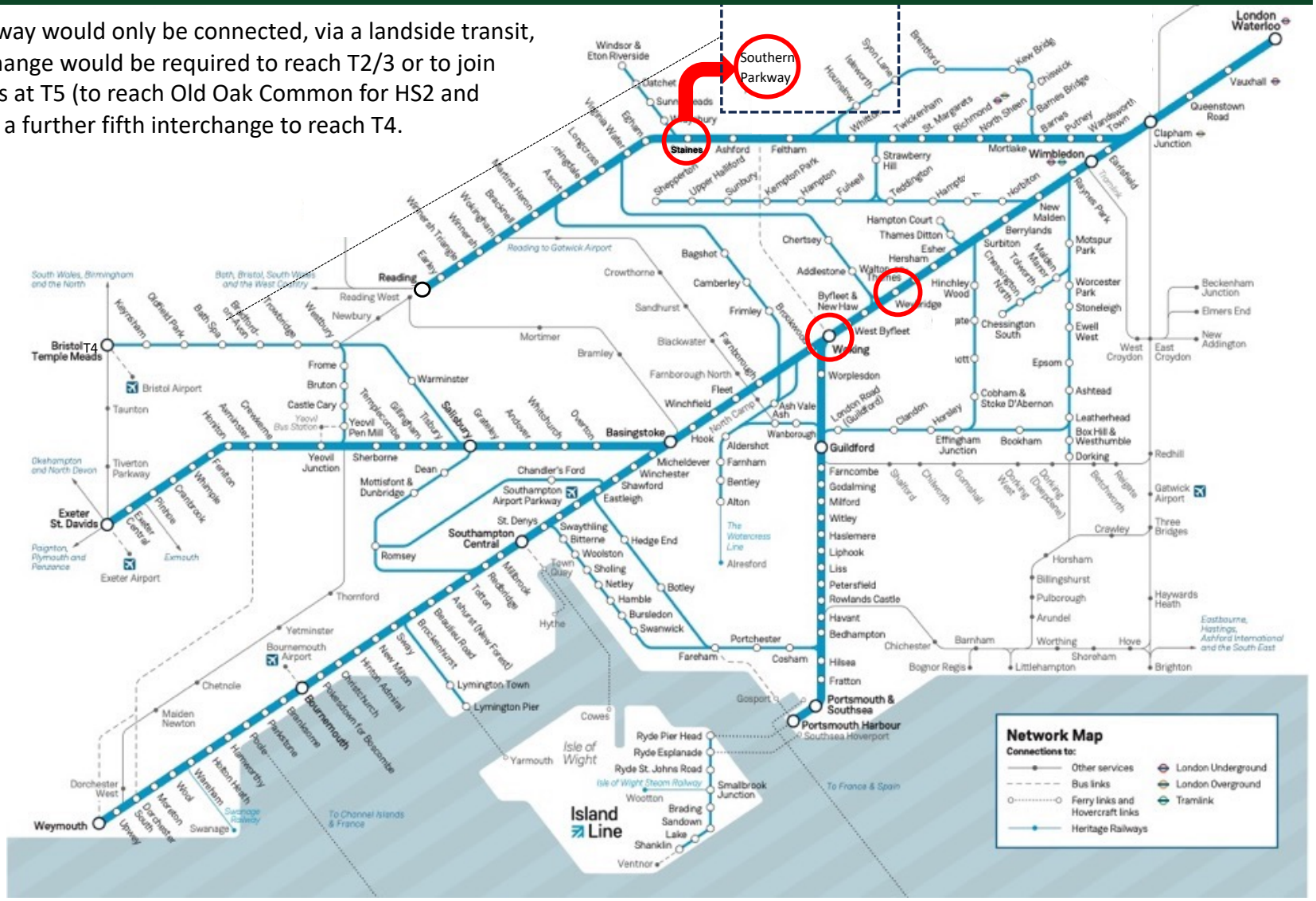
# Southern Light Rail - 10

- Meeting Heathrow's, DfT's, CAA's, National Highways and other stakeholders' key objective of providing access to Heathrow from Surrey and Hampshire would require at least a third interchange at Woking.



# Southern Light Rail - 11

- As the Southern Parkway would only be connected, via a landside transit, to T5, a fourth interchange would be required to reach T2/3 or to join Elizabeth Line services at T5 (to reach Old Oak Common for HS2 and central London), with a further fifth interchange to reach T4.



# Southern Light Rail - 12

| District | Total passengers | Private car/taxi passengers |
|---|---|---|
| City of Westminster | 4,736,782 | 1,733,436 |
| Kensington & Chelsea | 2,052,201 | 934,942 |
| Camden | 1,415,679 | 532,007 |
| Tower Hamlets | 867,747 | 318,277 |
| Hounslow | 797,986 | 482,252 |
| Ealing | 793,276 | 488,713 |
| Oxford | 749,672 | 315,812 |
| Richmond | 741,227 | 591,323 |
| Hammersmith & Fulham | 741,203 | 325,507 |
| Hillingdon | 737,338 | 519,130 |
| Wandsworth | 662,580 | 409,810 |
| Islington | 628,259 | 192,975 |
| City of London | 592,290 | 162,130 |
| Lambeth | 566,488 | 216,905 |
| Reading | 560,935 | 369,282 |
| Brent | 553,634 | 368,009 |
| Windsor & Maidenhead | 550,102 | 516,166 |
| Southwark | 531,788 | 243,634 |
| Barnet | 504,459 | 373,753 |
| Southampton | 478,216 | 265,561 |
| Bristol | 380,590 | 168,470 |
| Cambridge | 375,415 | 223,953 |
| Hackney | 362,485 | 148,064 |
| Harrow | 339,648 | 306,489 |
| Merton | 335,162 | 233,469 |
| Slough | 320,155 | 298,089 |
| Elmbridge | 319,090 | 309,613 |
| Haringey | 302,977 | 143,034 |
| Wycombe | 287,492 | 256,786 |
| Birmingham | 282,024 | 170,979 |
| Guildford | 280,893 | 255,077 |
| Newham | 277,426 | 109,403 |
| Brighton & Hove | 276,675 | 136,745 |
| Kingston on Thames | 276,111 | 219,275 |
| Lewisham | 271,093 | 157,842 |
| Bromley | 259,459 | 198,552 |
| Cardiff | 256,110 | 113,413 |
| Croydon | 246,826 | 191,607 |
| Dacorum | 238,440 | 225,219 |
| Enfield | 235,156 | 165,059 |
| Greenwich | 231,983 | 114,508 |
| Runnymede | 222,487 | 202,932 |
| Swindon | 221,946 | 186,739 |
| Bournemouth | 220,534 | 97,926 |
| Wokingham | 217,696 | 207,135 |
| Redbridge | 216,409 | 154,422 |
| Leicester | 214,275 | 149,393 |
| Basingstoke & Deane | 210,646 | 193,507 |
| Milton Keynes | 204,686 | 155,727 |
| **Total top 50 O&D districts** | 27,145,751 | 14,853,051 |
| Total LHR O&D pax 2018 (CAA data) | 51,658,000 | |

- Spelthorne is not in the top 50 Districts measured by total Heathrow O&D passenger numbers (CAA passenger survey 2018).
- Local passenger demand for access to Heathrow is therefore low, although c.3,000 local people (c.5% of total Borough workforce) are employed at Heathrow (Spelthorne Community Investment Programme, HAL 2018).
- Any rail business case is therefore dependent on passenger (& staff) demand from the wider London and SE region, recognising that any interchange in a rail journey suppresses demand but is a particular deterrent for time sensitive air travellers, often carrying luggage and making unfamiliar journeys.
- *"Promoters of surface access schemes* (need) *to have a clear incentive to promote use by non-airport users to develop a viable business case for their schemes" (*Economic regulation of capacity expansion at Heathrow: policy update, CAP1658, CAA April 2018)
- *"Previous studies have demonstrated that an interchange in a rail access journey to the airport suppressed demand by approximately 50%" (*High Speed Rail Development Programme: Strategic Choices, MVA/Systra for Greengauge 21 2008-09)
- *"Adding an interchange to a rail service, despite journey times remaining the same, can reduce demand for a service by 40%"* (Surface Connectivity: assessing the merits of the Airports Commission's options for UK aviation, Independent Transport Commission 2014)
- *"Consumers have also told us that they value a wider range of choices and … that they prefer some public transport options over others – for example direct rail services over complex multi-change journeys or coach" (*Join the Dots, Passenger Priorities, HAL June 2020)
- *"Heavy rail direct access is important for encouraging modal shift* (recognising) *interchange penalty"* (TfL, Southern Access to Heathrow Engagement Report, Arup May 2021)
- *"Airport passenger point of view – high interchange penalty, key concern of Heathrow Airport"* (HATF, Southern Access to Heathrow Engagement Report, Arup May 2021)

# Thank you

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