Proposed Ashford to Reading Direct Railway via Gatwick

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Infinity Bridge, Stockton-on-Tees

Intesa SanPaolo Tower, Turin

Olympic Velodrome, London

HS2 Old Oak Common Station, London

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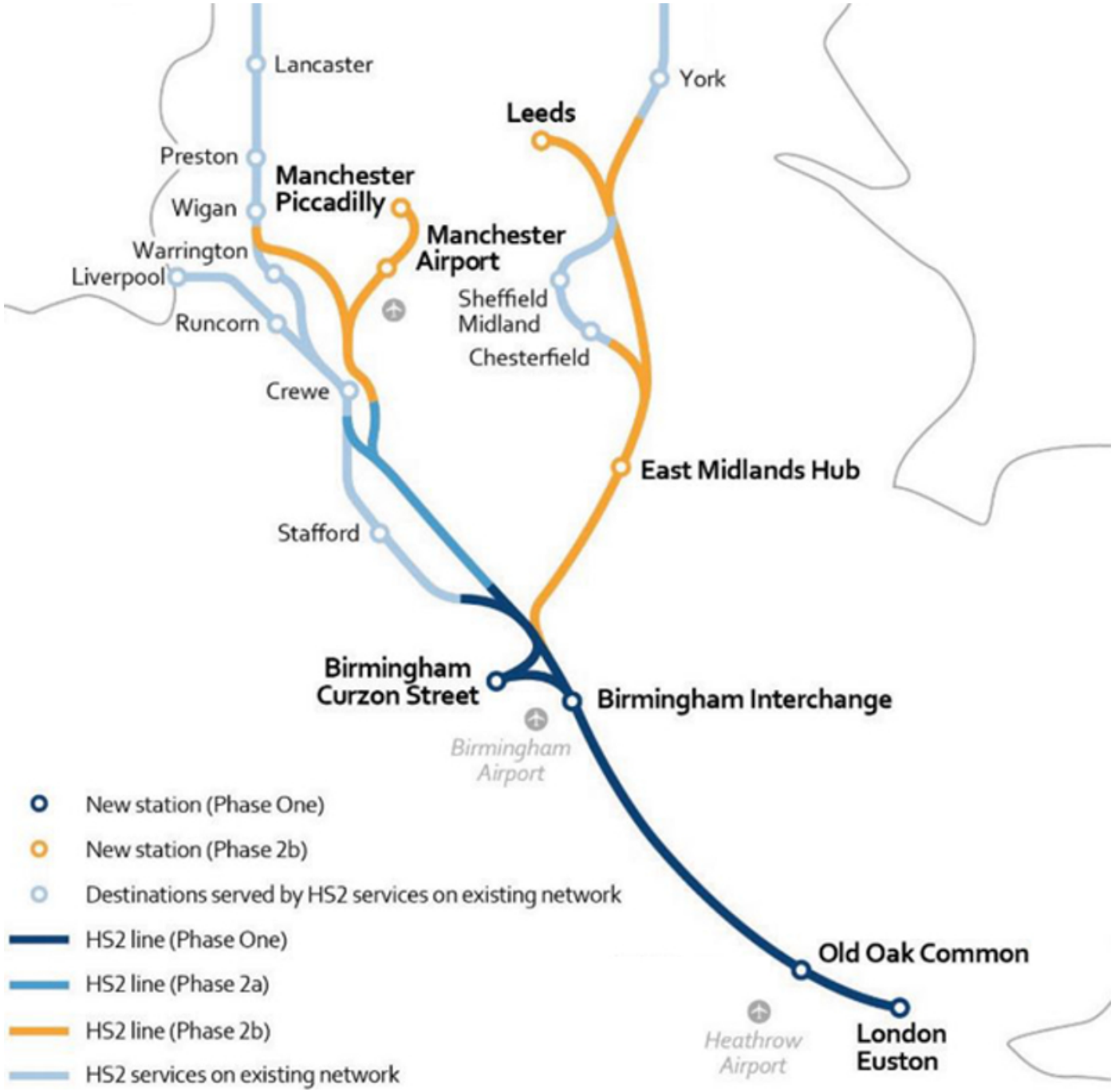
50
KM

HS2



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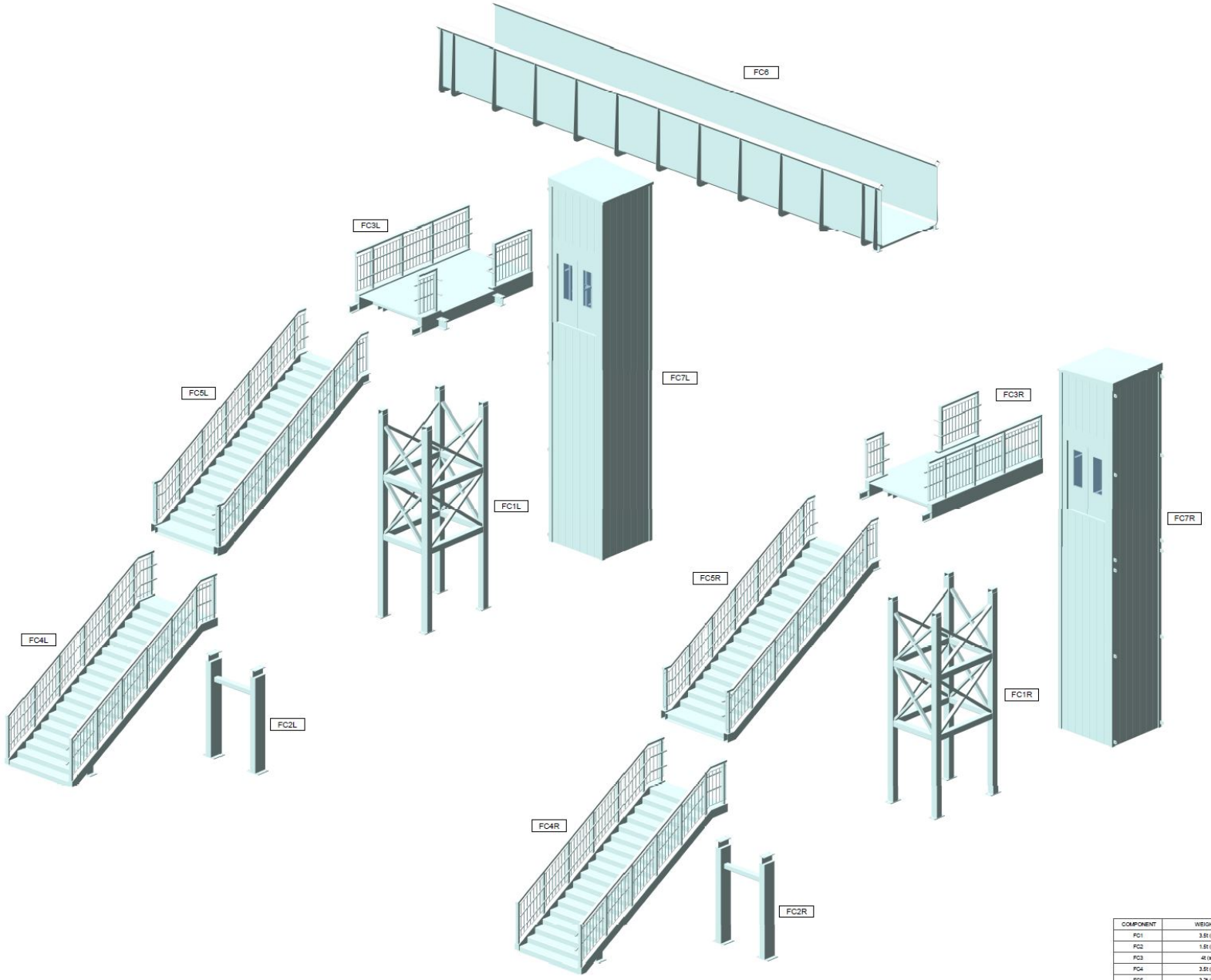

COMPONENT	WEIGHT (t)
FC1	3.5t (x2)
FC2	1.5t (x2)
FC3	4t (x2)
FC4	3.5t (x2)
FC5	3.2t (x2)
FC6	12t
FC7	6t APPROX. TOTAL LIFT WEIGHT
TOTAL	43.9t

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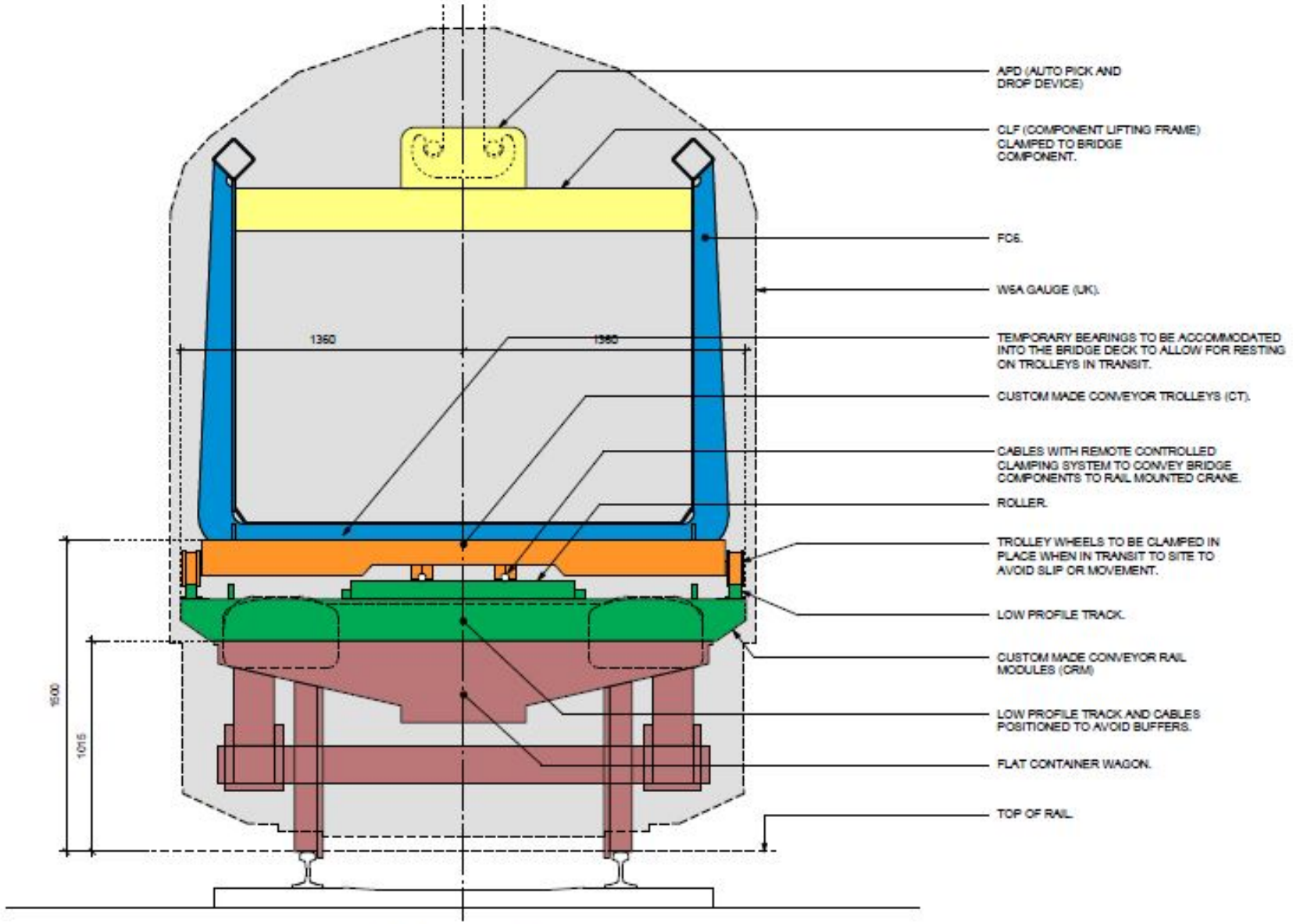

FC6 - SECTION 1

1 : 20

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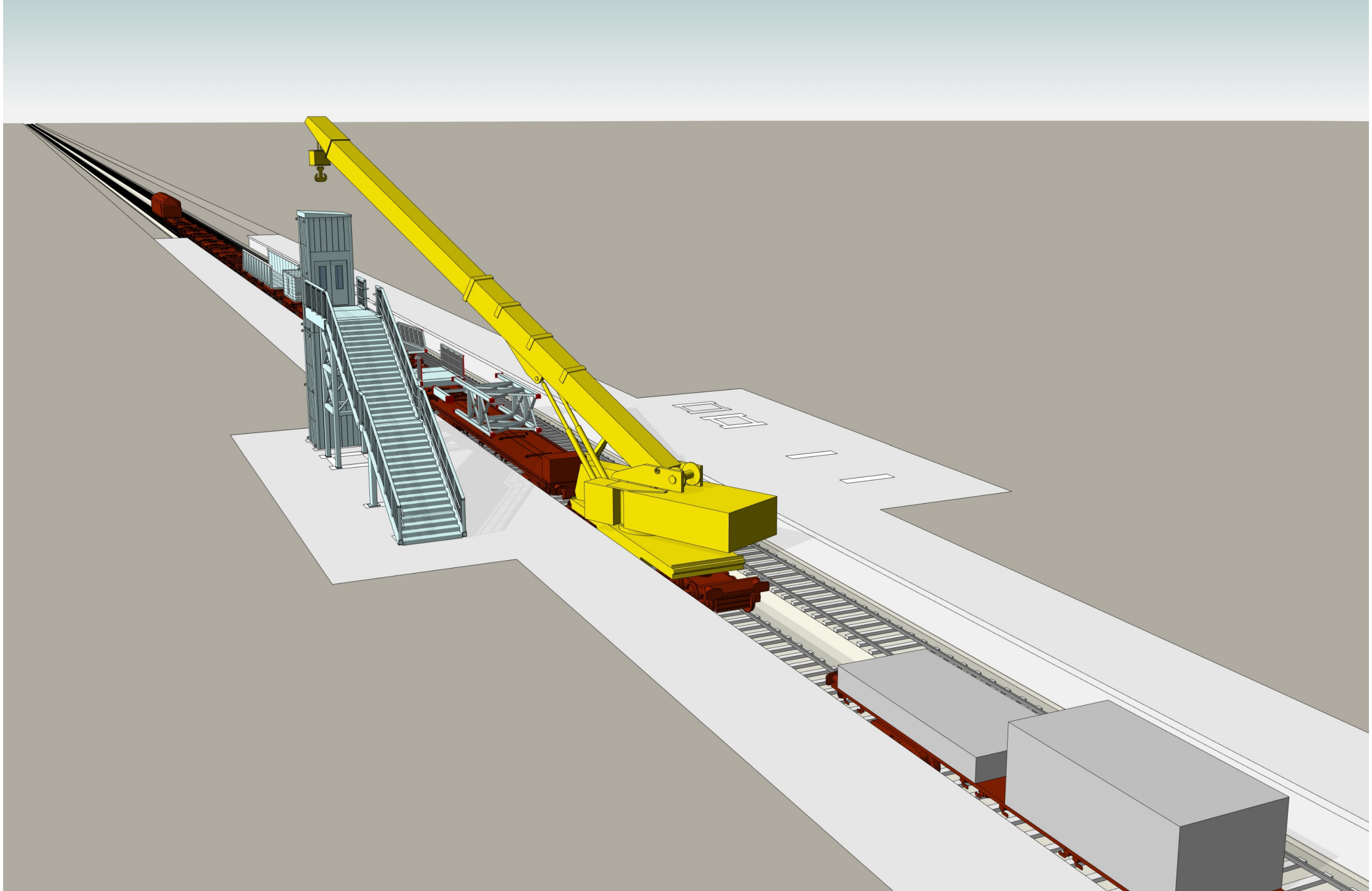

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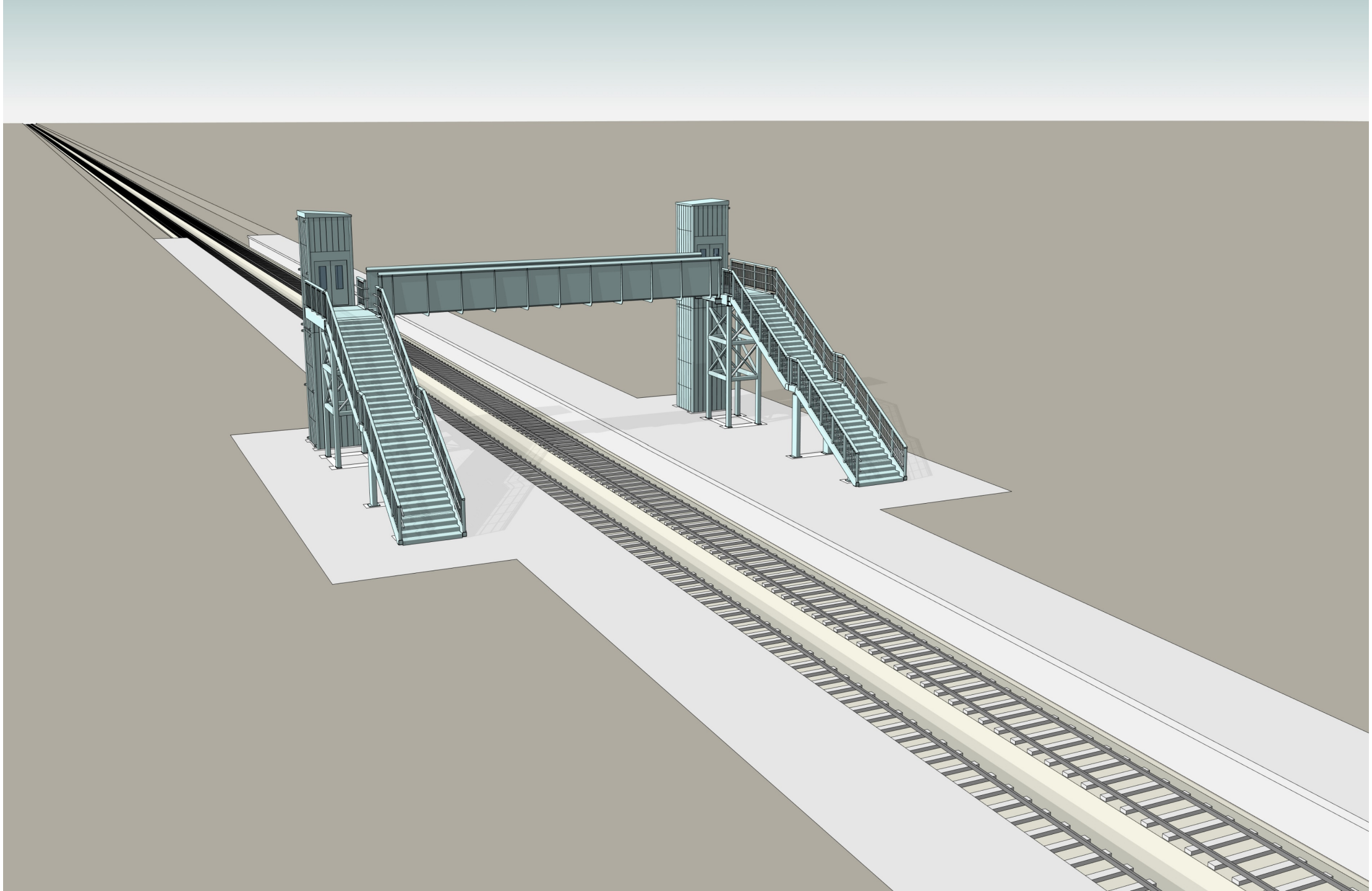

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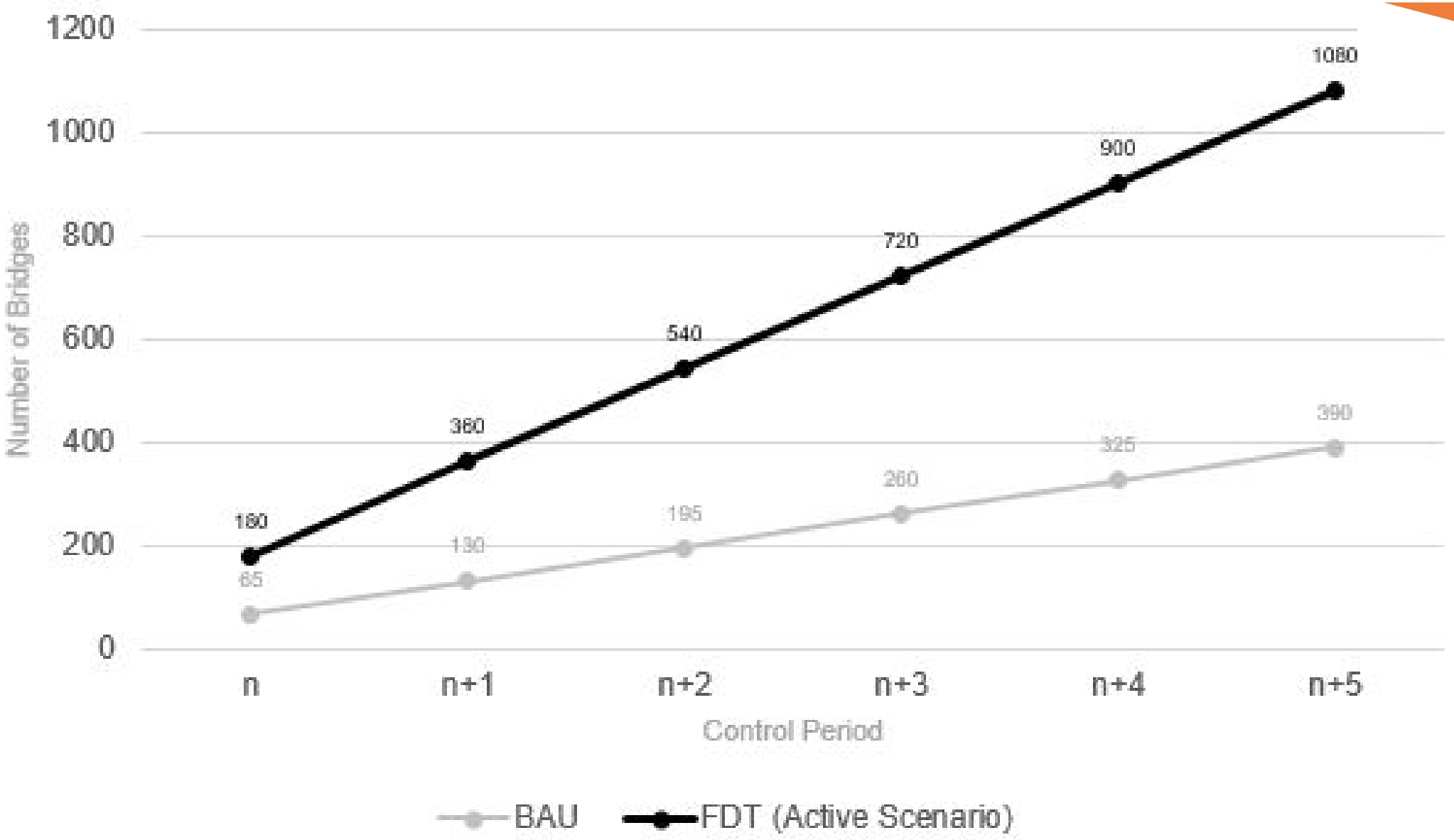
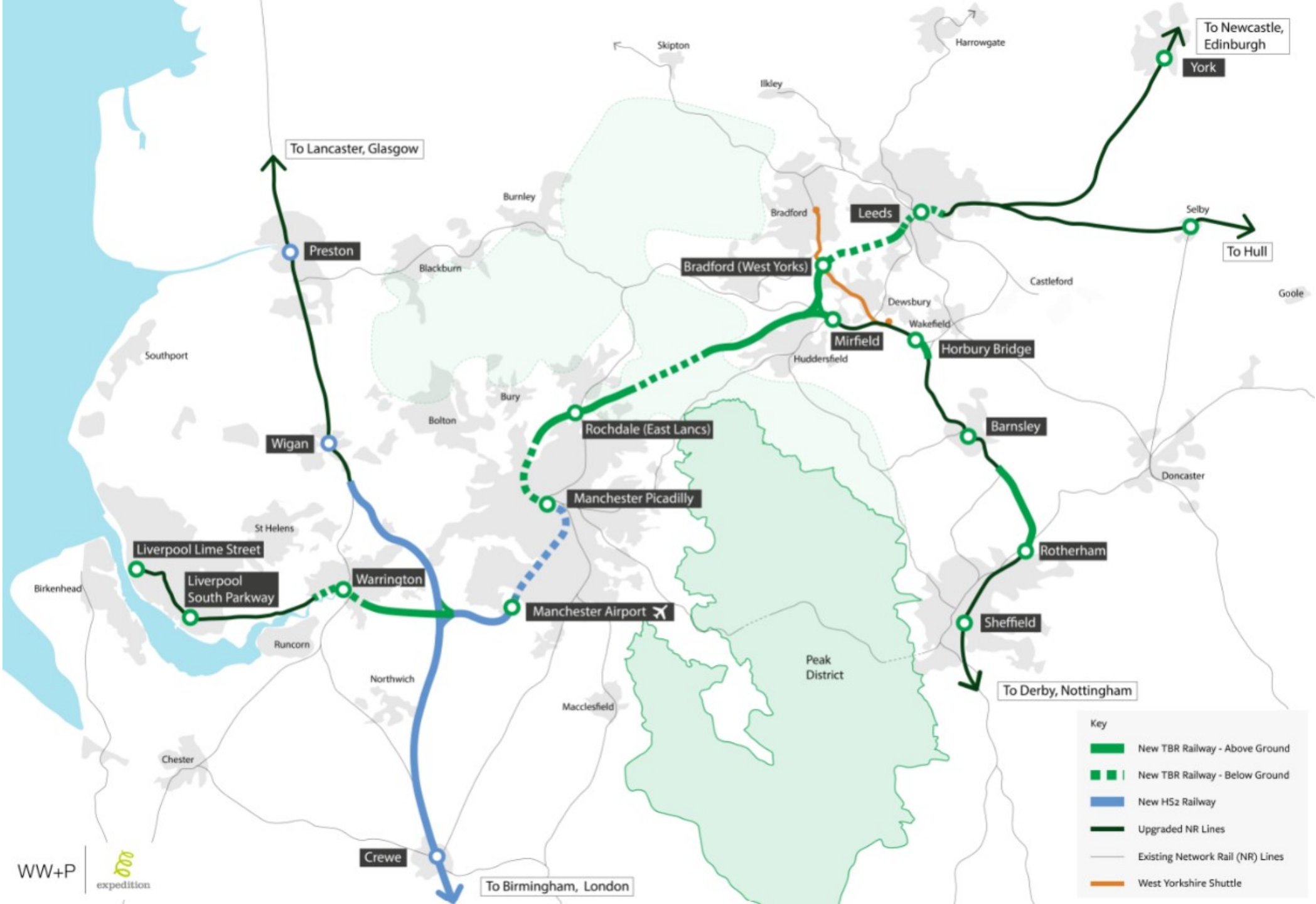
Cumulative bridges over successive control periods





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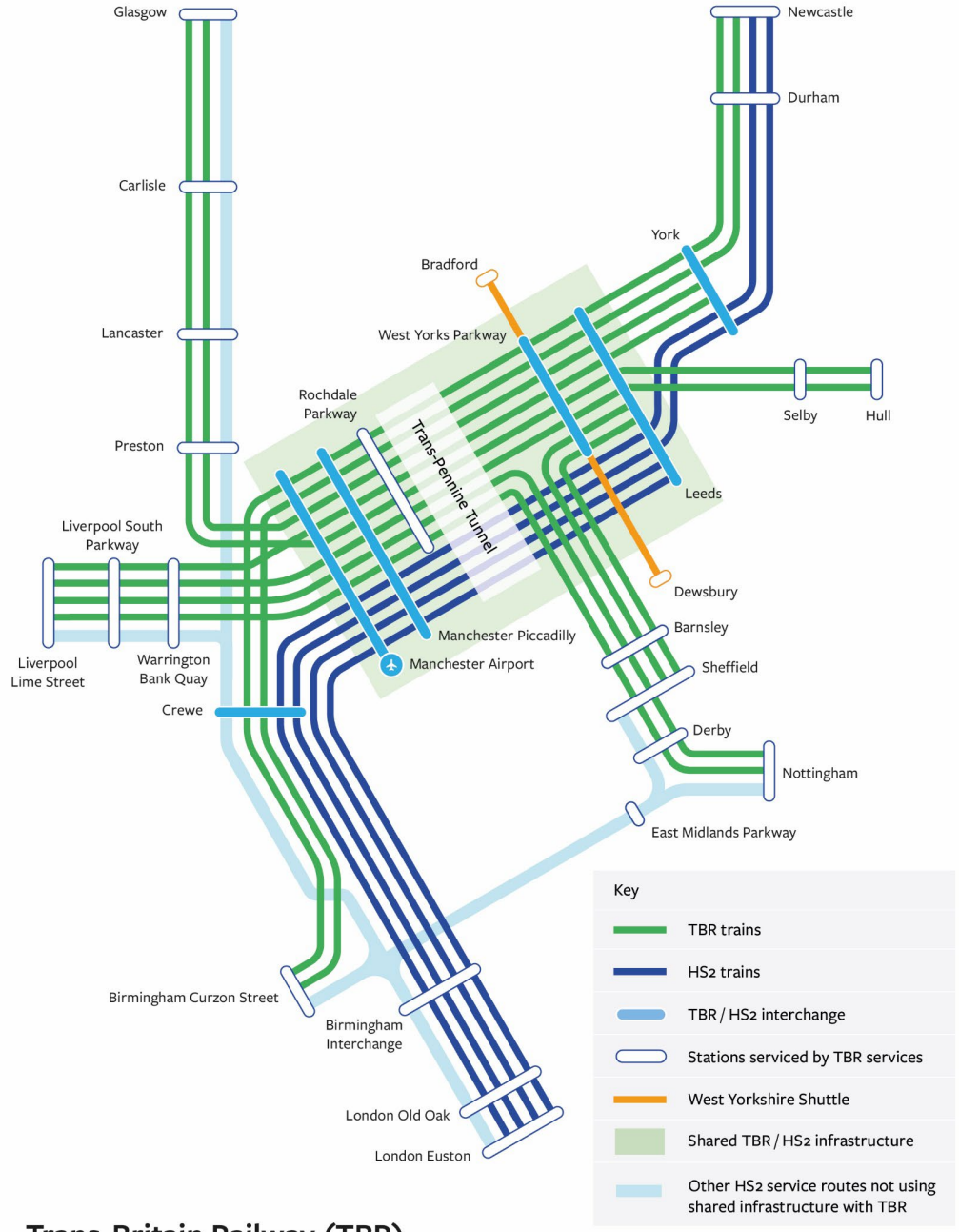

Trans-Britain Railway (TBR)

Diagram showing typical hourly passenger train services on TBR network

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HS4Air: Proposed Geographic Route

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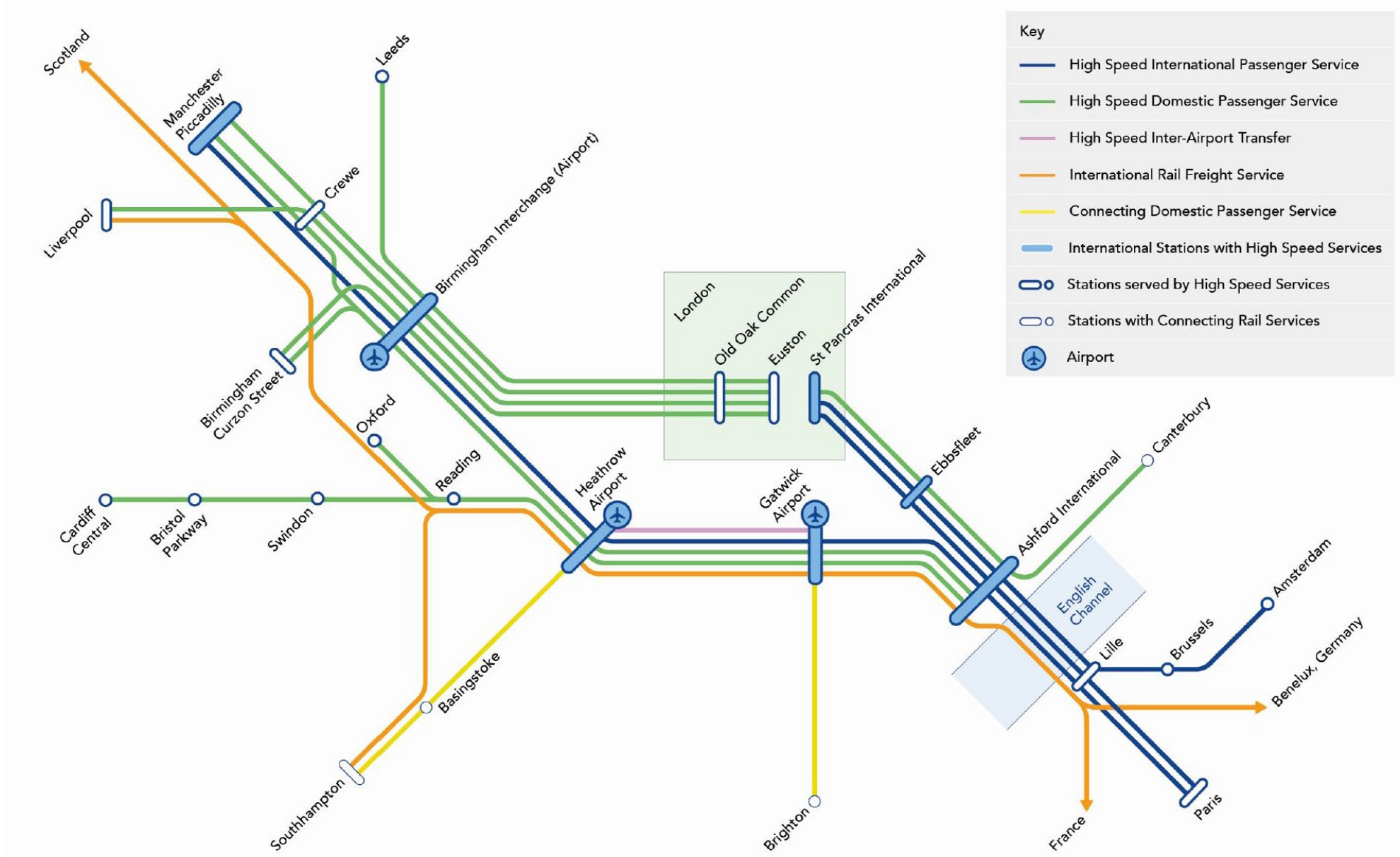

HS4Air: Proposed Train Services Using New High Speed Railway

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7 Orbital rail journey times are slow

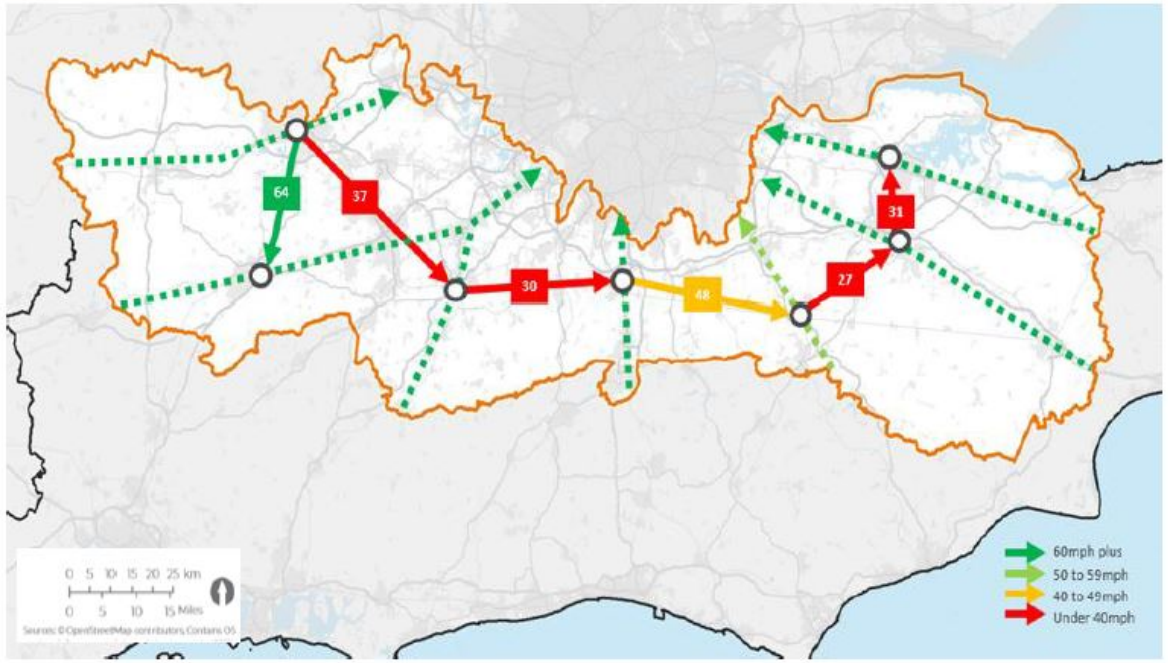
Journey speeds along orbital rail lines are slow when compared to the intersecting radial lines.

Additionally, some sections are under-served, such as Tonbridge to Medway which only typically experiences one stopping service per hour; or completely unserved, such as Kent to Gatwick and Surrey.

Journey times between strategic orbital pairs are slow due to services typically providing both a local and regional service by stopping at several intermediate stops. However, the demand along these corridors cannot justify separate faster services akin to those typically on radial corridors to London.

The need to interchange also makes rail a poor option for many trips. Most notably, this is the case for trips between Kent and Gatwick and Surrey, where an interchange at Redhill (or Central London) is required. This is amplified by poor service frequencies on the Tonbridge to Redhill line, currently only served by one train per hour in each direction.

Line speeds of the typical fastest service between major economic hubs on radial corridors



How do we improve journey times on key orbital rail routes? Is there an opportunity to run segregated regional and local services? Is there an opportunity to run direct services to more destinations?

Orbital Rail

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9 Orbital rail connectivity to Gatwick airport is poor

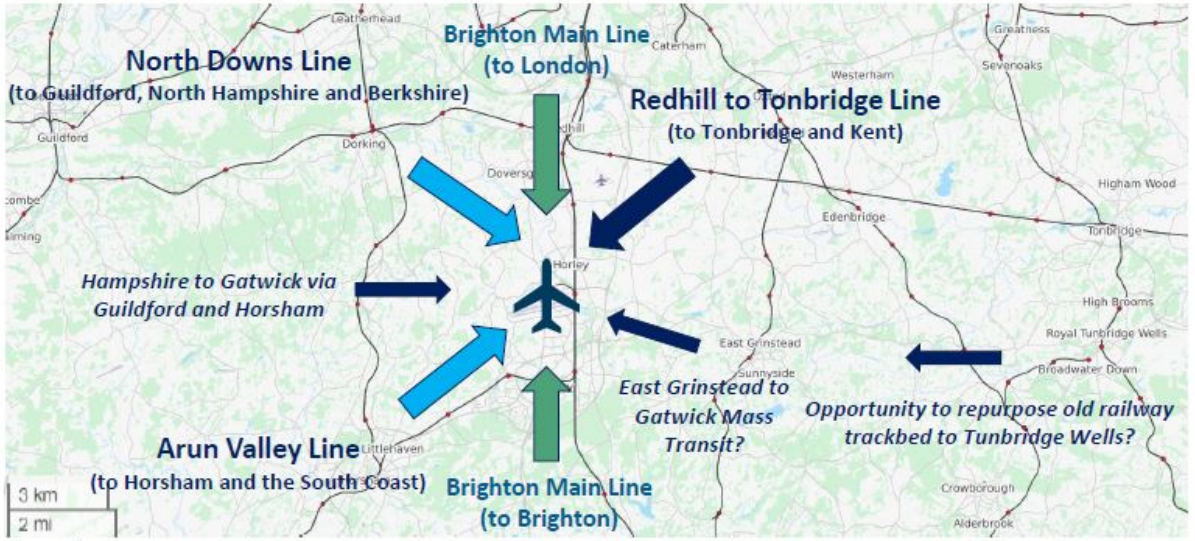
The rail service between Berkshire and Surrey to Gatwick is under-served. There are no direct services between Kent and Gatwick.

Gatwick Airport plans to construct a second runway which will increase capacity to over 65 million passengers a year.

As described in previous problem statements, the orbital corridors need various infrastructure upgrades to enable more services. Network Rail is undertaking improvements to increase the service from two to three. One option for providing direct services between Kent and Gatwick would be to bypass Redhill via a newly constructed curve near Redhill Aerodrome. This would also provide connectivity to new housing development planned in the area as well as the East Surrey Hospital. Through several developments are planned along this corridor a strong case that sufficient future demand exists to justify this level of intervention.

There are also mass transit opportunities to improve connectivity within the Gatwick diamond, which can enable local employees to access the airport more easily. A bus rapid transit network "Fastway", already exists in the area and the scope of this could increase bring wider local connectivity benefits.

Gaps in rail connectivity to Gatwick



What are the options of providing better, sustainable orbital access to Gatwick?

Gatwick Access

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UK Primary Railfreight Routes

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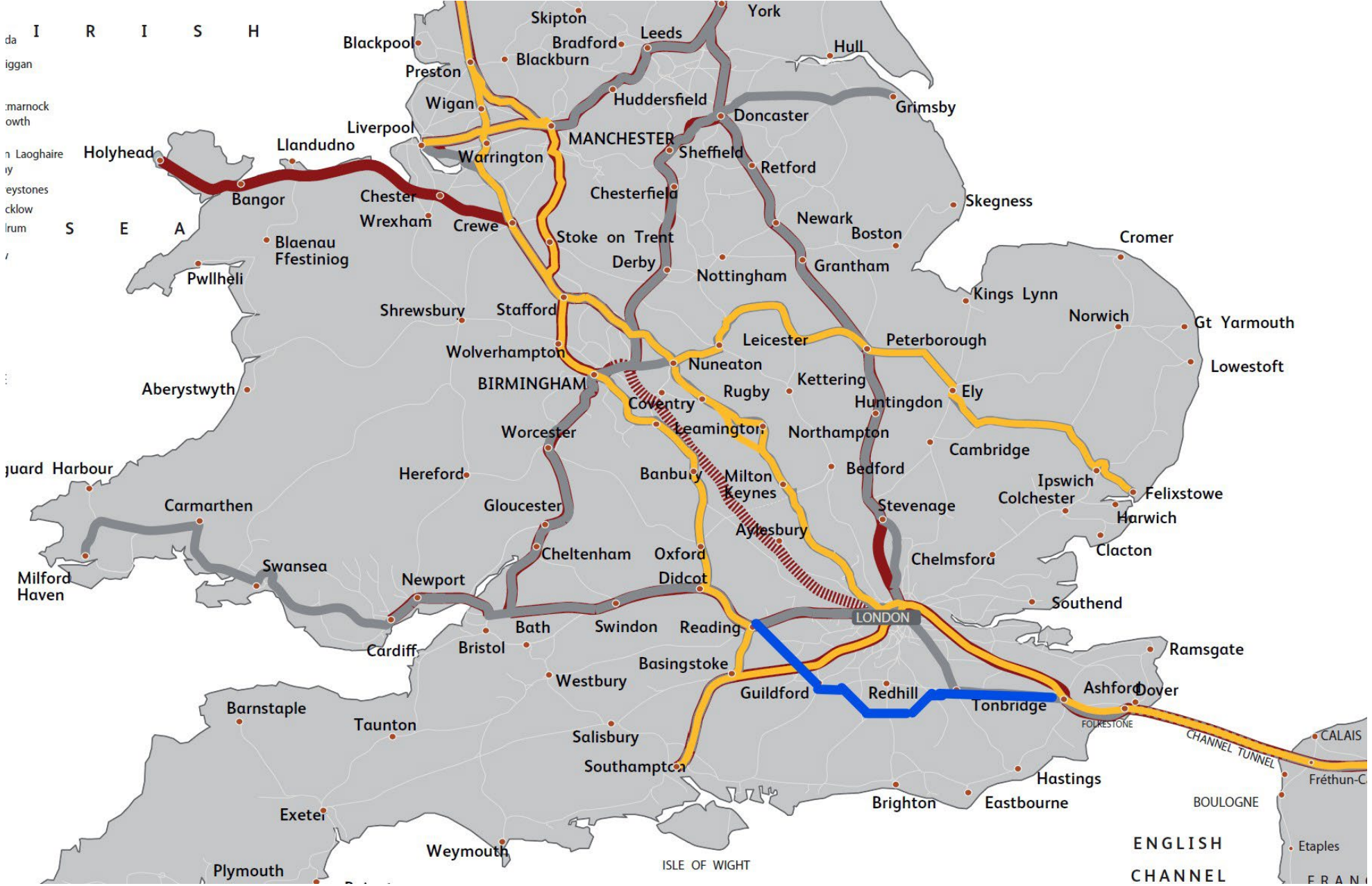

Ashford to Reading direct rail route avoiding London

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Proposed Ashford to Reading via Gatwick direct line

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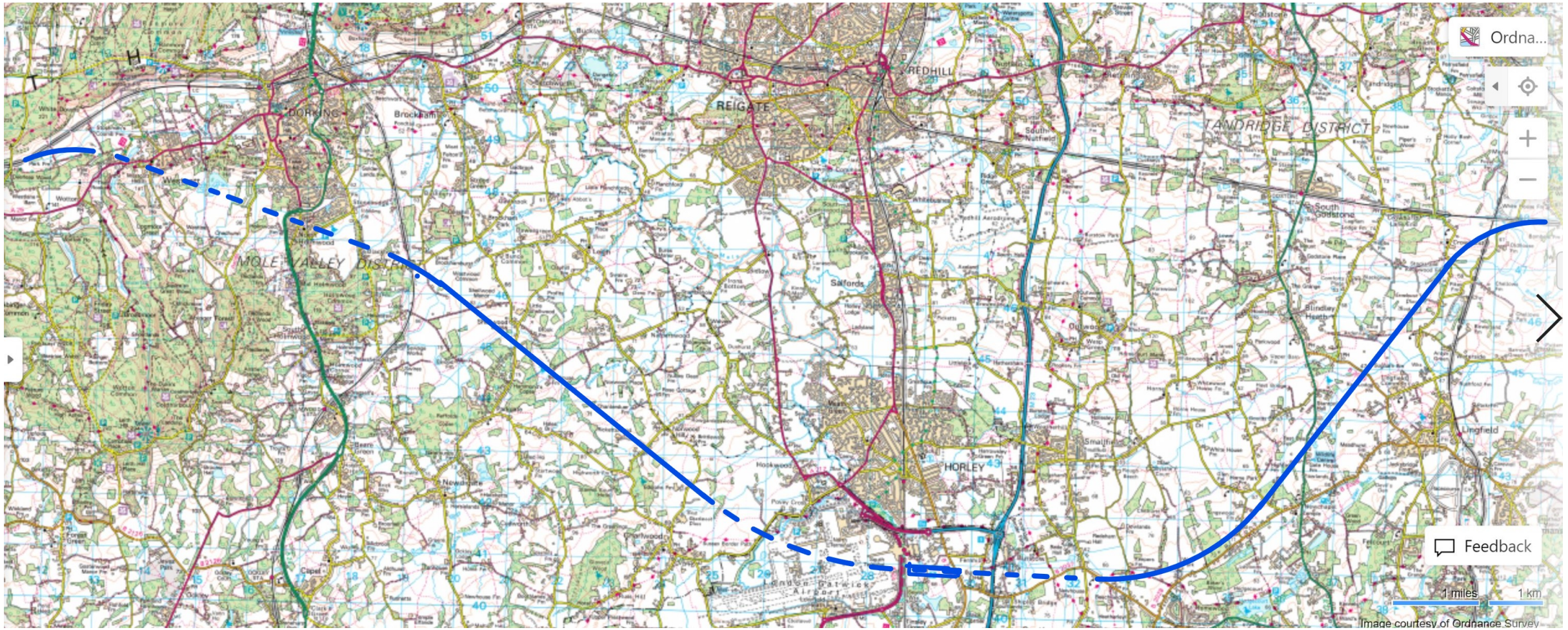

Gatwick East West Loop

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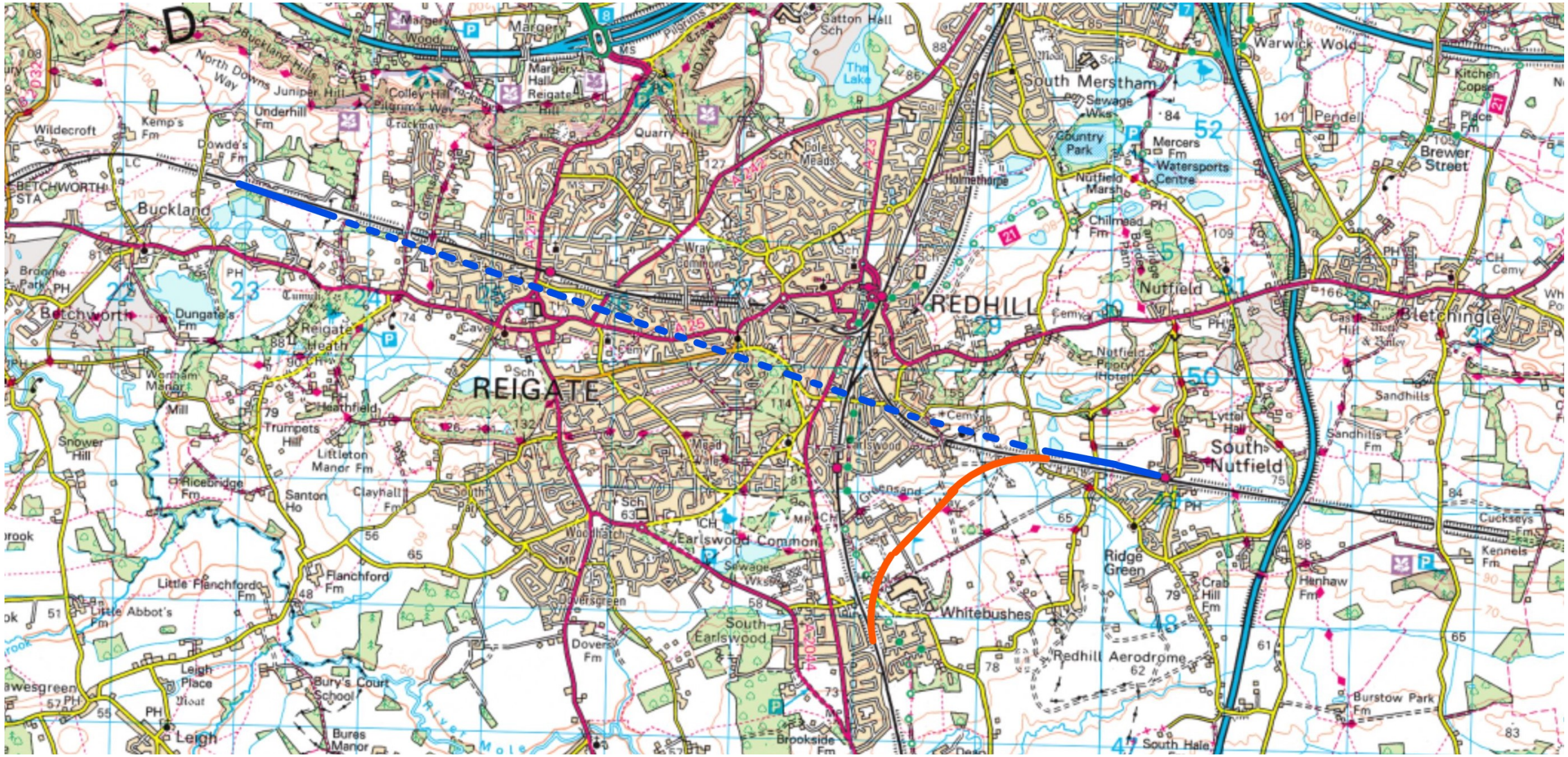

Redhill East West Tunnel

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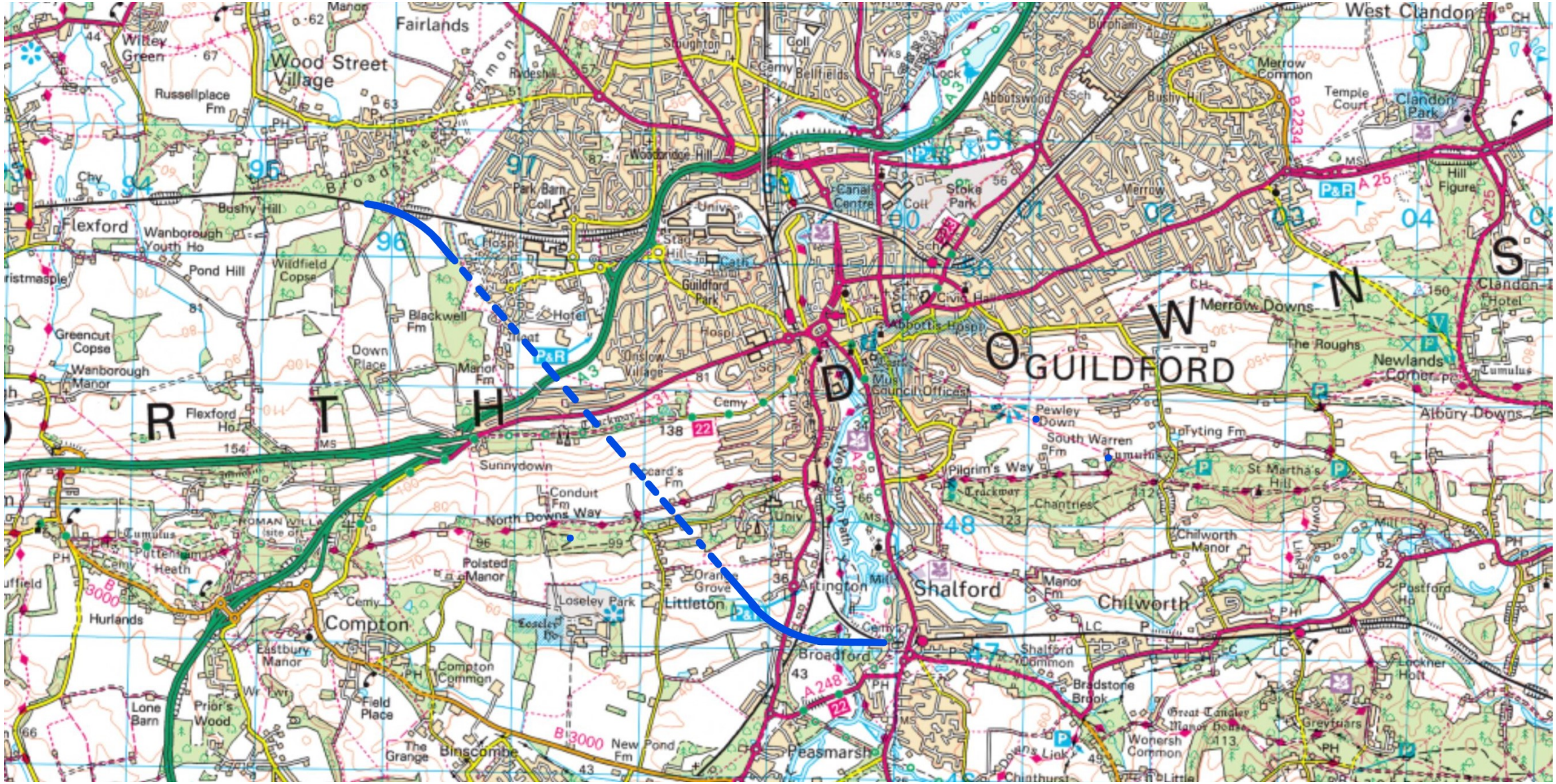

Guildford East-West avoiding line

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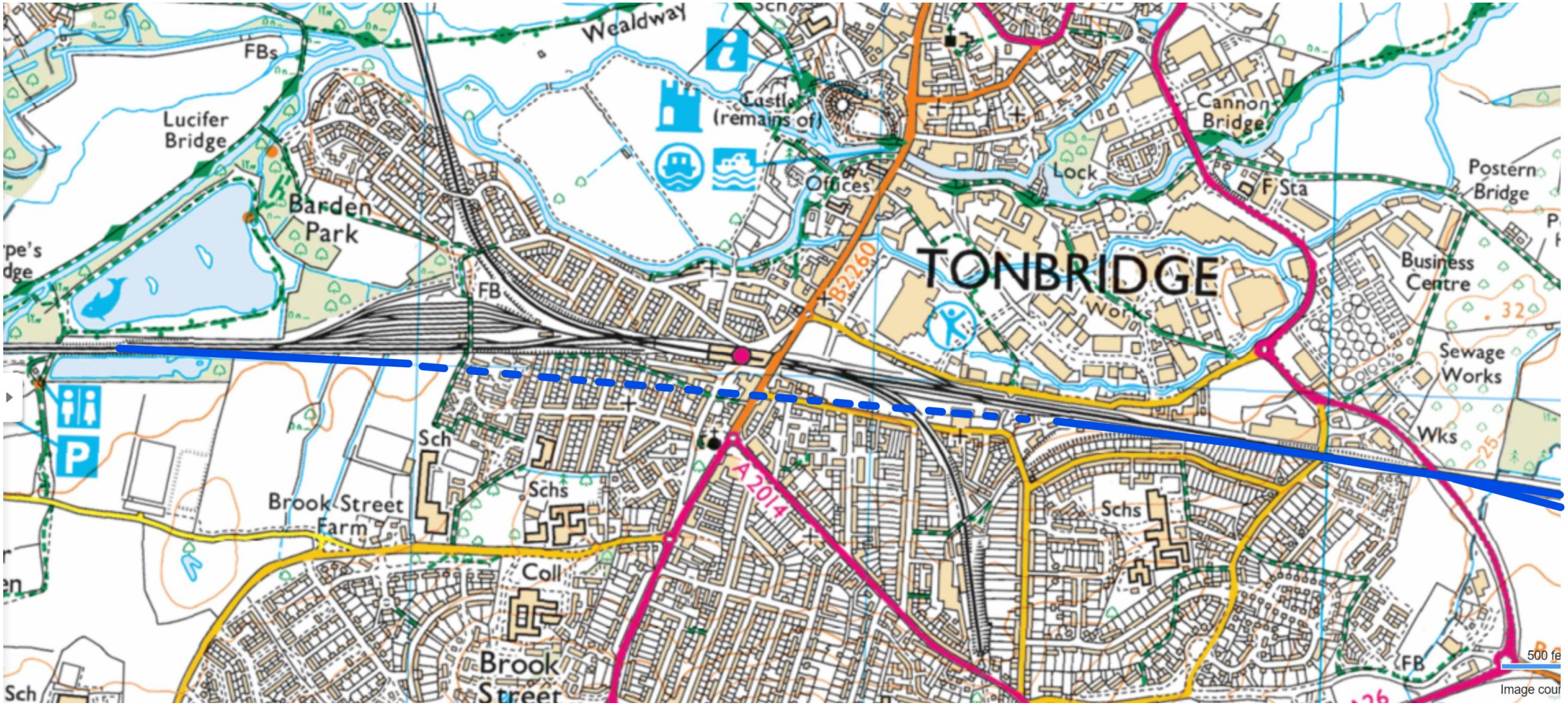

Tonbridge East-West avoiding tunnel

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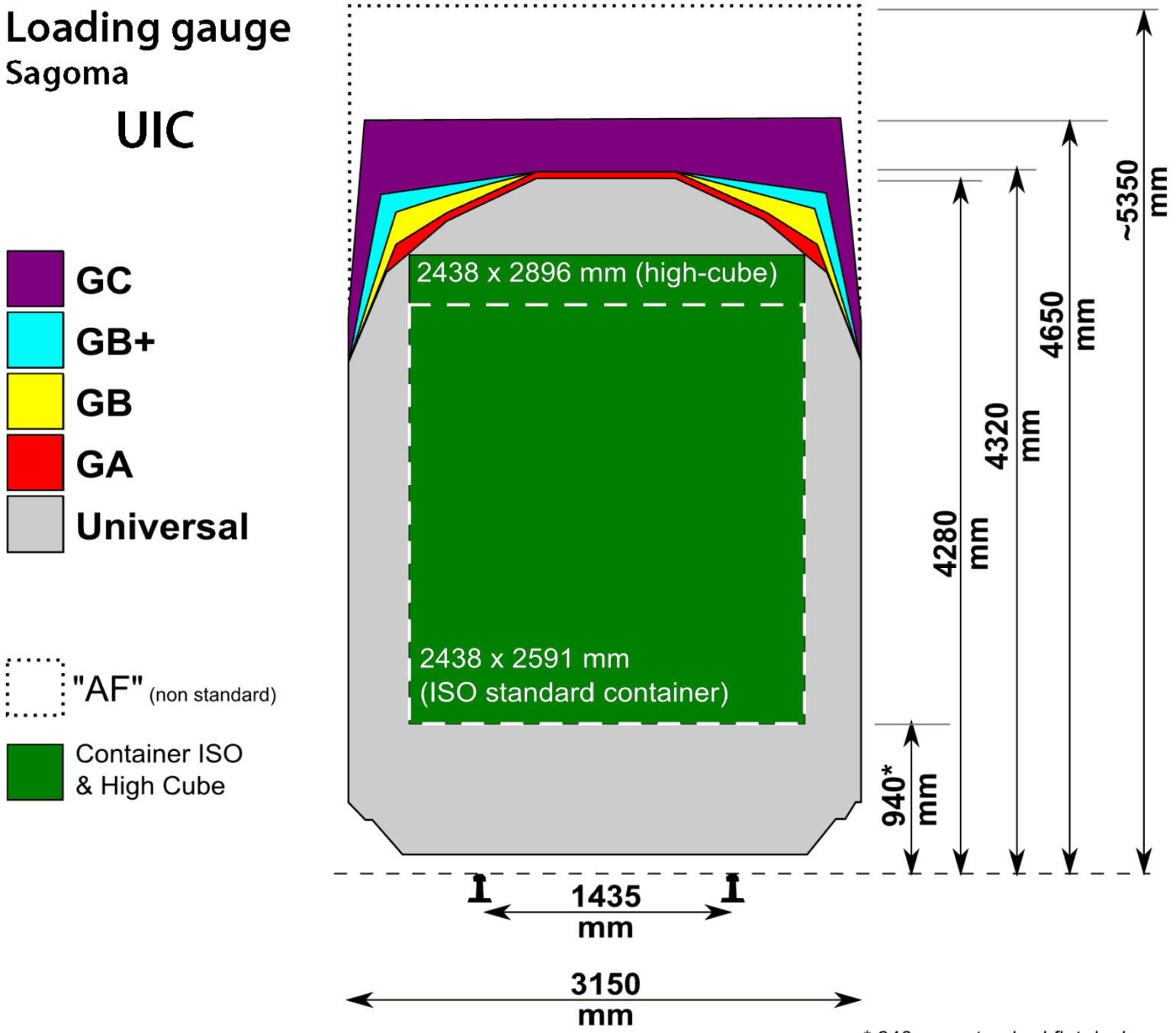
Loading gauge

Sagoma

UIC



* 940 mm: standard flat deck wagon

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Bridge Clearances to EU Gauges

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Title

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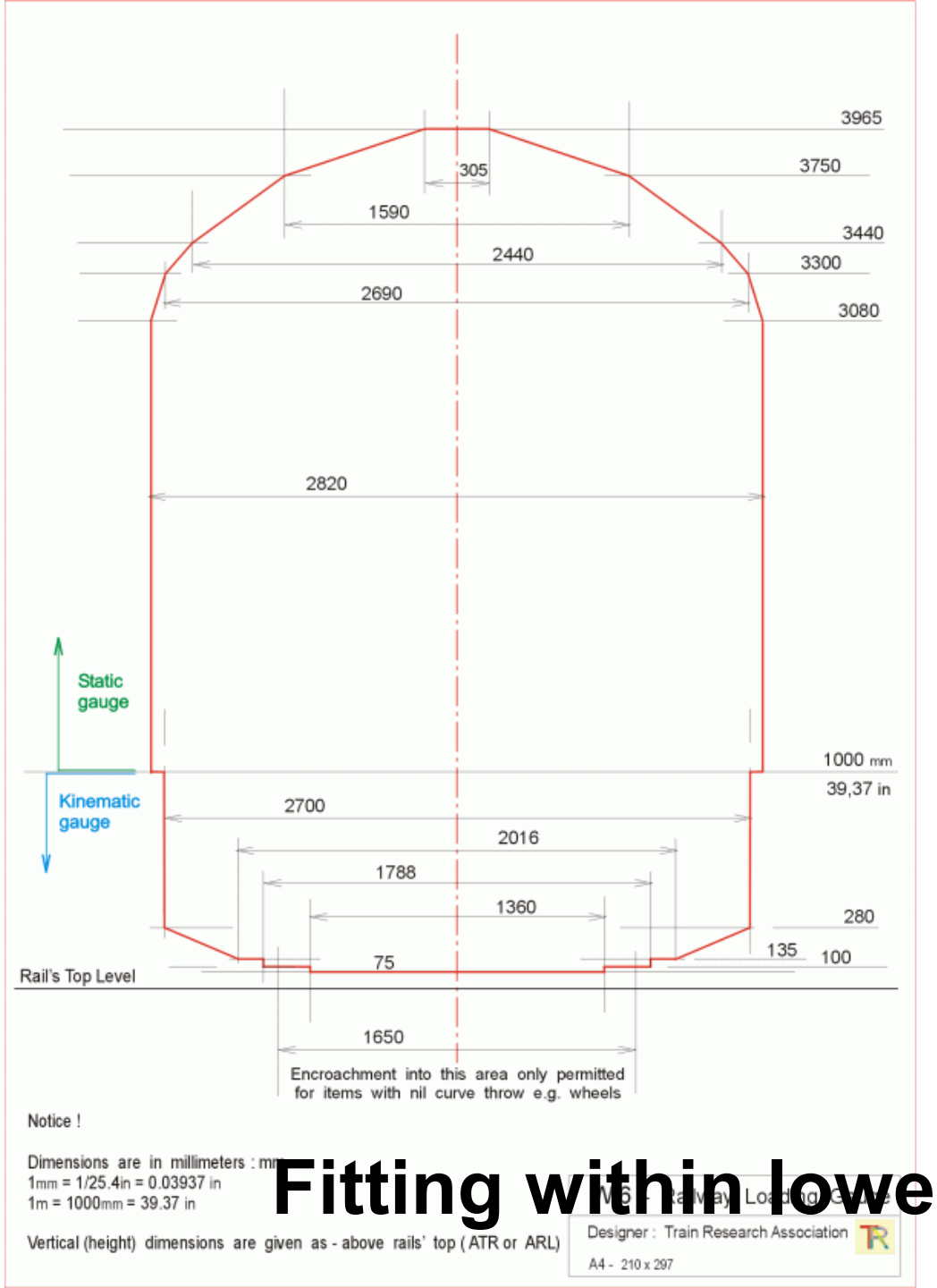

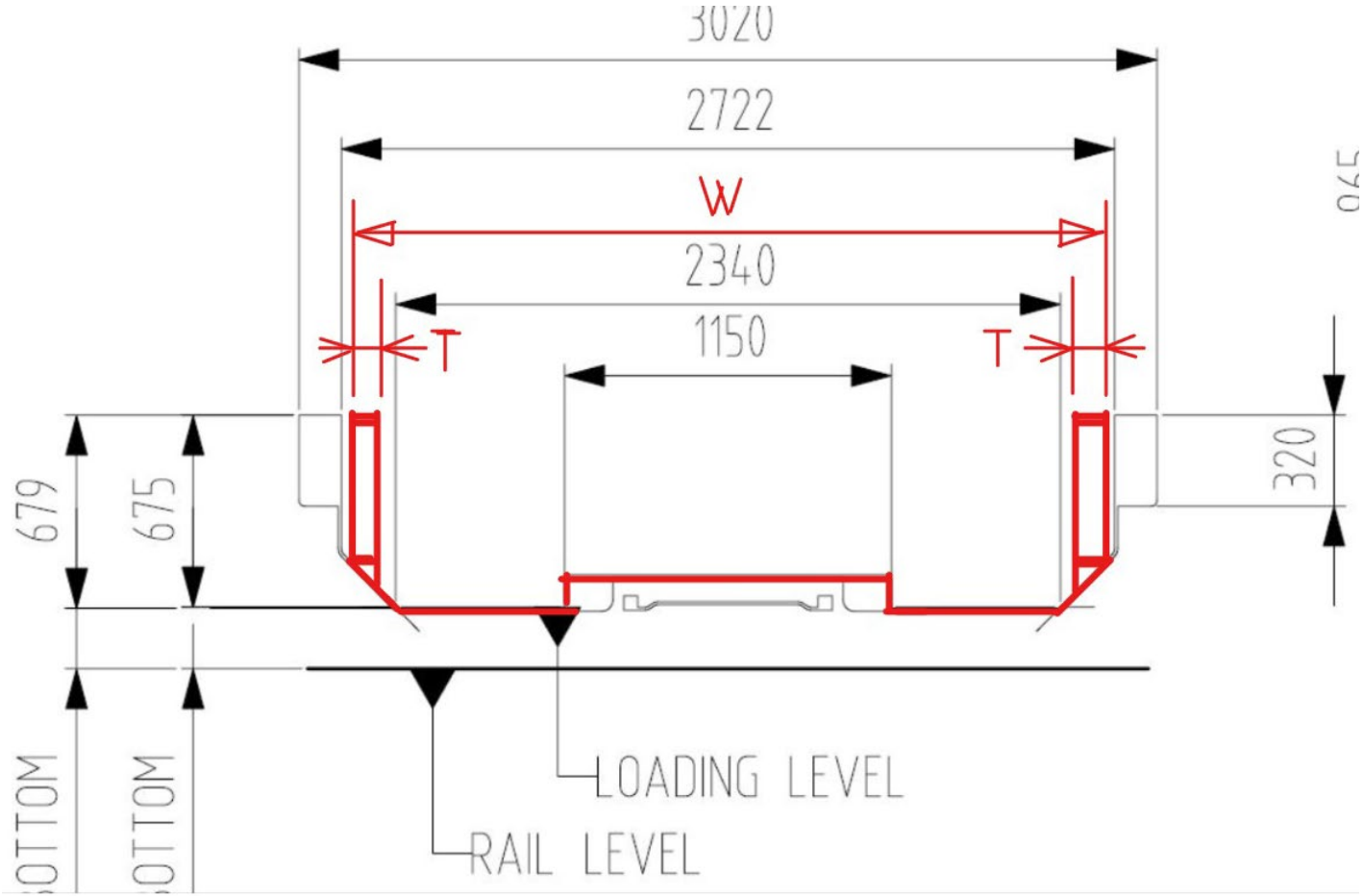

Fitting within lower part of UK Loading Gauge

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Proposed Ashford to Reading via Gatwick direct line

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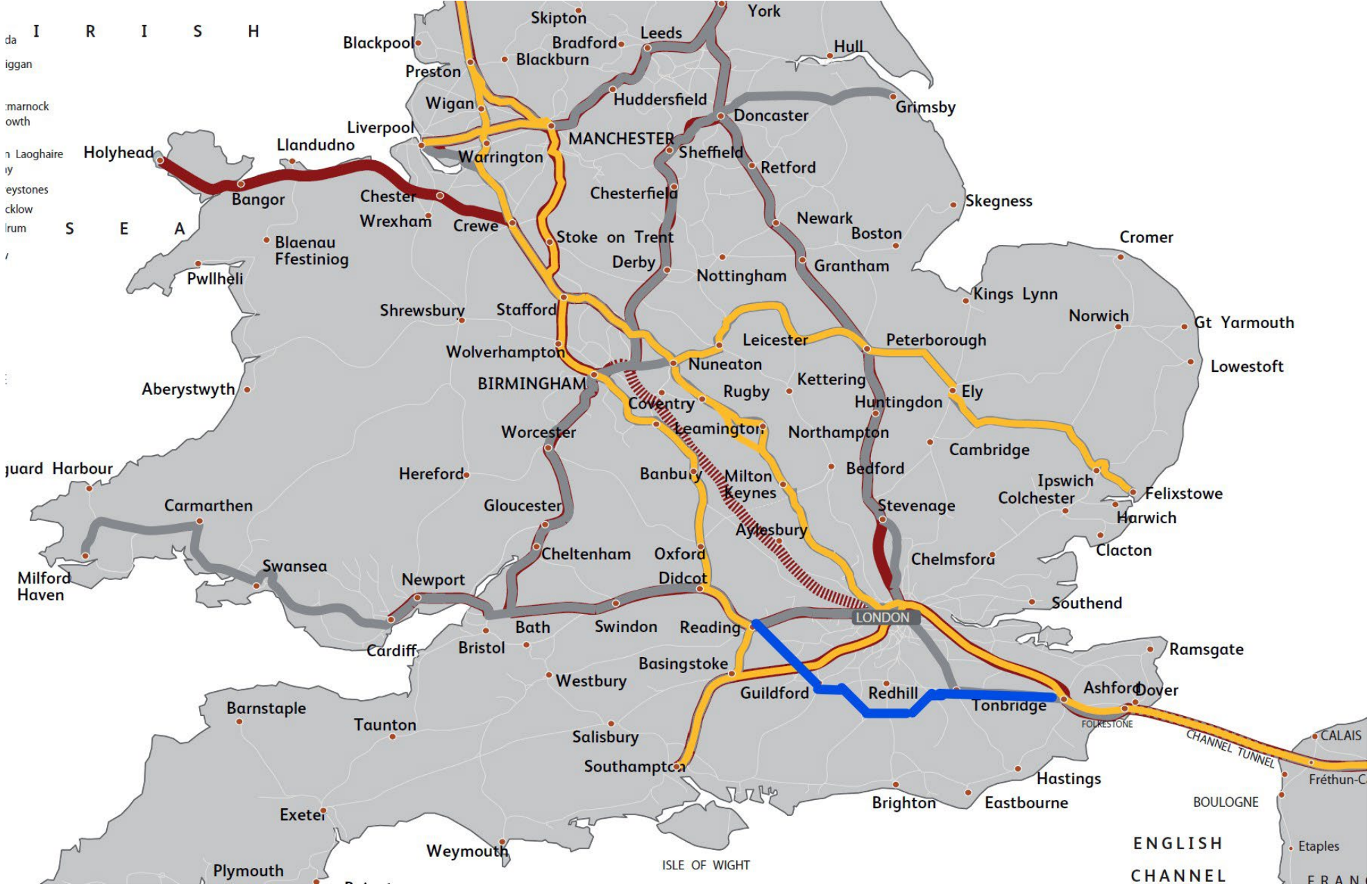

Ashford to Reading direct rail route avoiding London

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19 The Lower Thames Crossing will increase congestion on the local highway network

A number of stakeholders have identified the potential negative impacts the Lower Thames Crossing will have on the local highway network.

The Lower Thames Crossing will have a significant impact of the distribution of strategic transport demand in the area. It is forecast that this will particularly affect the way in which freight vehicles access the Channel Tunnel or Port of Dover from the rest of the UK. It is forecast that this will provide some relief to the M25 South West Quadrant.

However, consideration must also be given to how flows on the local traffic network may change and whether key orbital routes in North Kent such as the A229 have sufficient capacity to accommodate an expected increase in demand.

This area is already subject to significant levels of development growth. There are also planned sites of employment and leisure, such as the proposed London Resort near Northfleet, which will generate transport demand not yet considered as part of the local planning process.

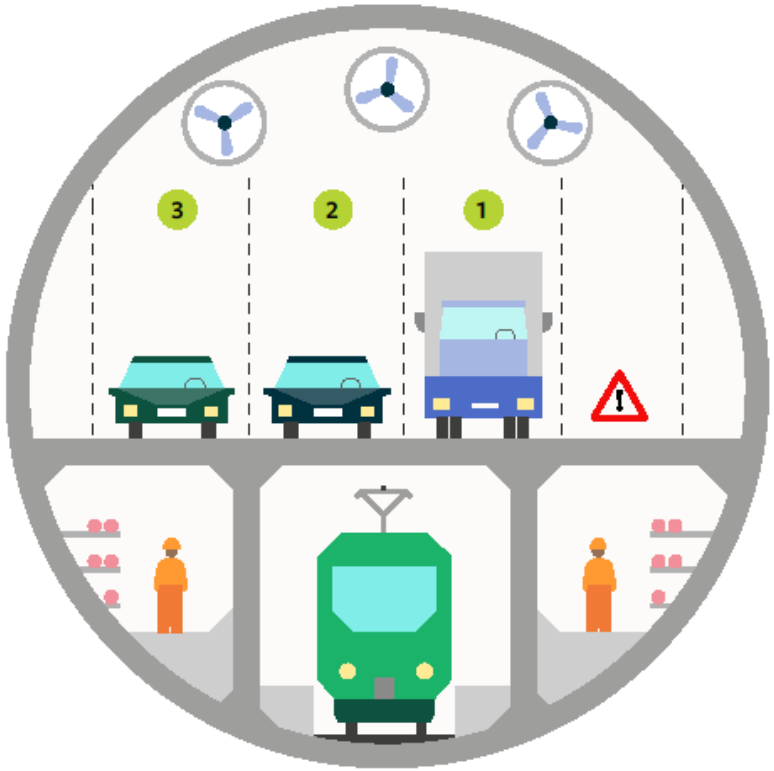
Planned Lower Thames Crossing

How do we make the rest of the transport network in this area sustainable and resilient to the changes caused by the Lower Thames Crossing and other planned large-scale developments?

Lower Thames Crossing

Comparison – 16m diameter tunnel sections used for road only and combined road / rail

Tunnel with 3-lane highway only



Tunnel with 3-lane highway + railway

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Proposed Ashford to Reading via Gatwick direct line

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Thank you

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