

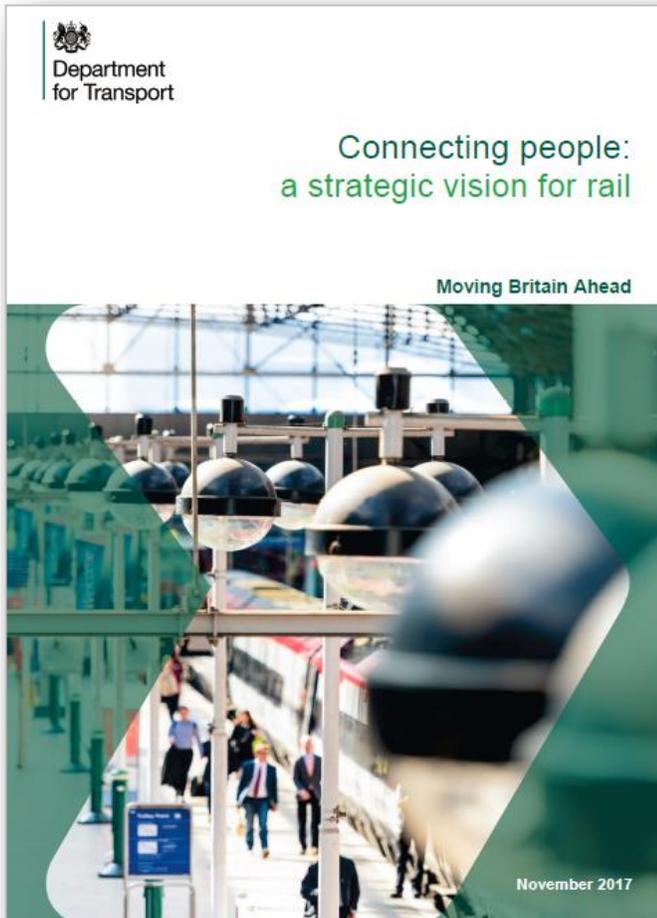
System Operator Planning a better network for you



West Sussex Connectivity

Alex Hellier – Lead Strategic Planner

Context



“The surge in demand over the past 20 years means we need to **invest in capacity**. To rebalance the economy and create more homes we also need to **forge new links between places**, spurring development and economic growth”

“Our challenge to our partners is to work with Government and the industry to **develop compelling proposals** for the next generation of rail schemes, identifying the places where rail is the **right answer for local transport needs** and finding the places where **rail schemes fit best** with housing strategies”

DfT, November 2017

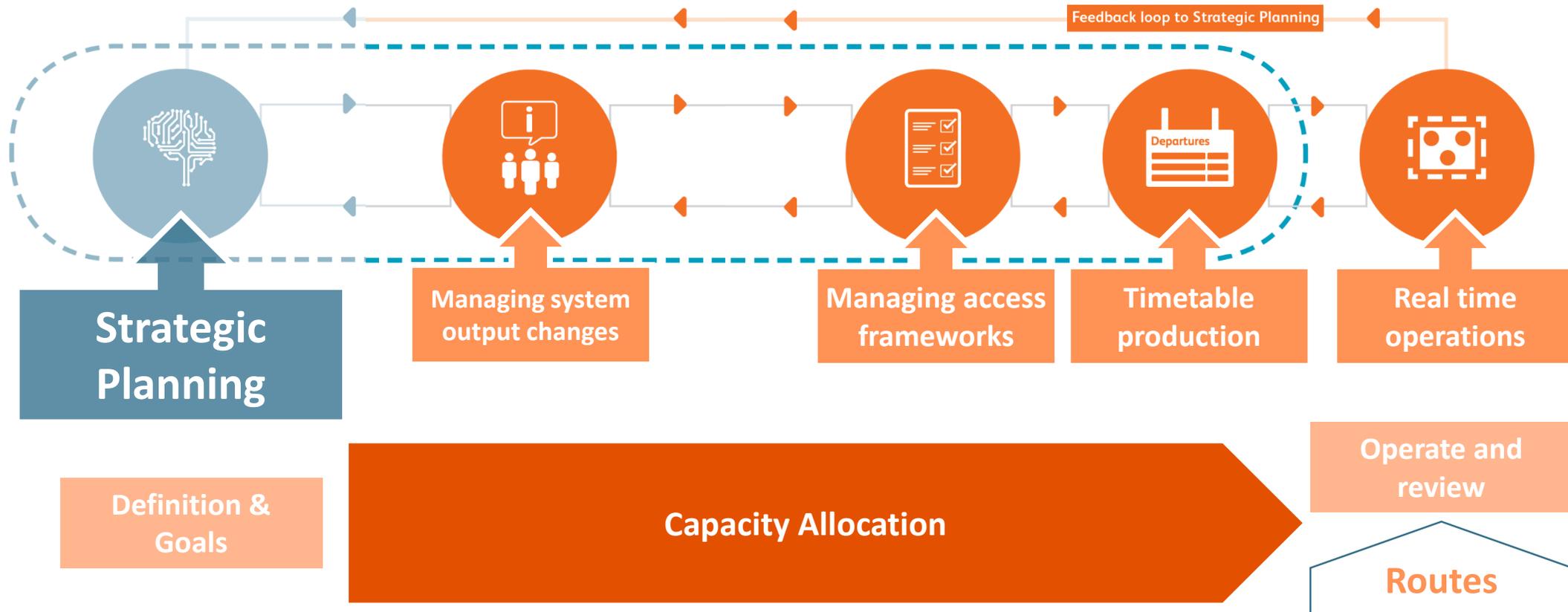
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South East Route CP6 Investment 2019-24

- £4.2bn on Operations, Maintenance and Renewal
 - Replacing 662km of rail
 - £66m renewing track and metallic structures
 - Renewing 18 level crossings
 - Improving the condition of 300 of the worst condition earthworks sites & installing more monitoring systems
 - Electrical works to improve the safety of customer and staff
- Recently delivered:
 - New footbridge at Fishersgate
 - New customer information systems at all stations including screens and speakers

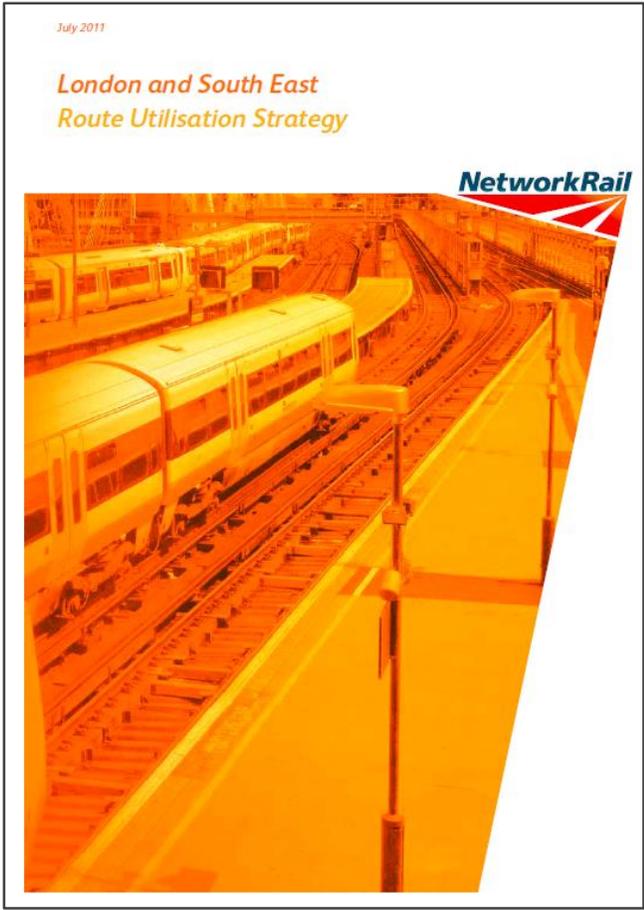
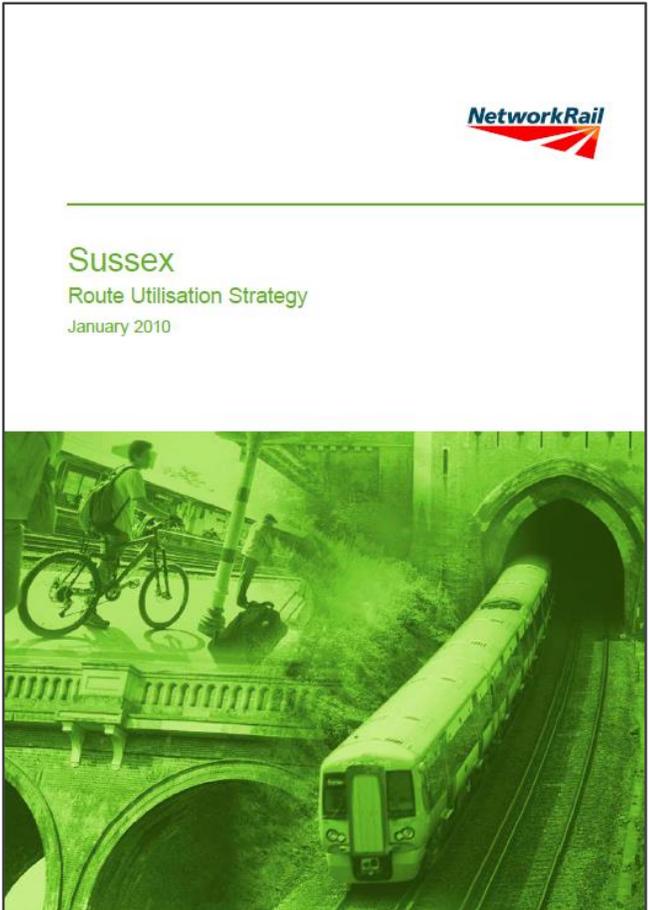
Strategic planning



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Previously...



Industry comments on Route Study process...

*not sufficiently focused on the needs of **customers, passengers and freight users***

*various **customer and funder needs***

*do not focus sufficiently on **incremental service changes***

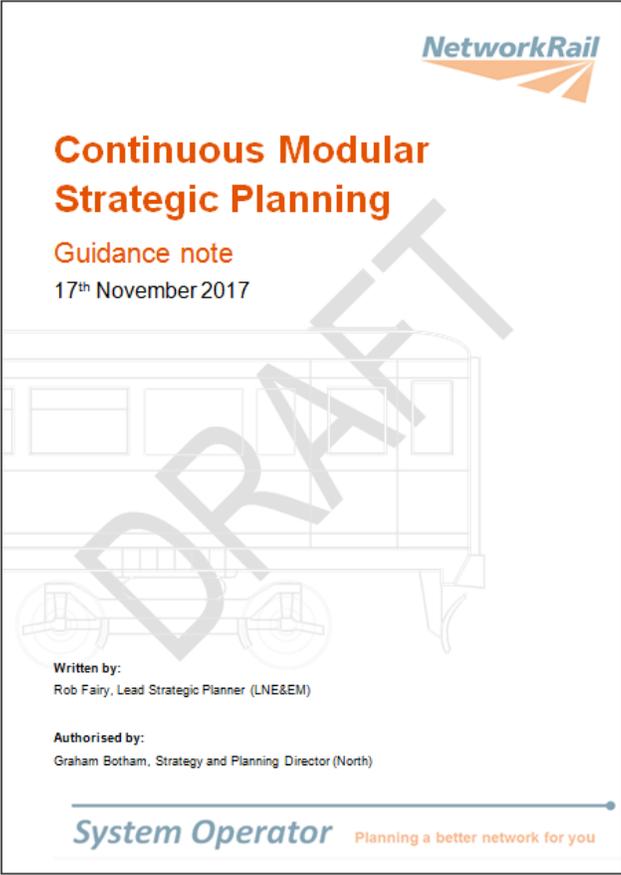
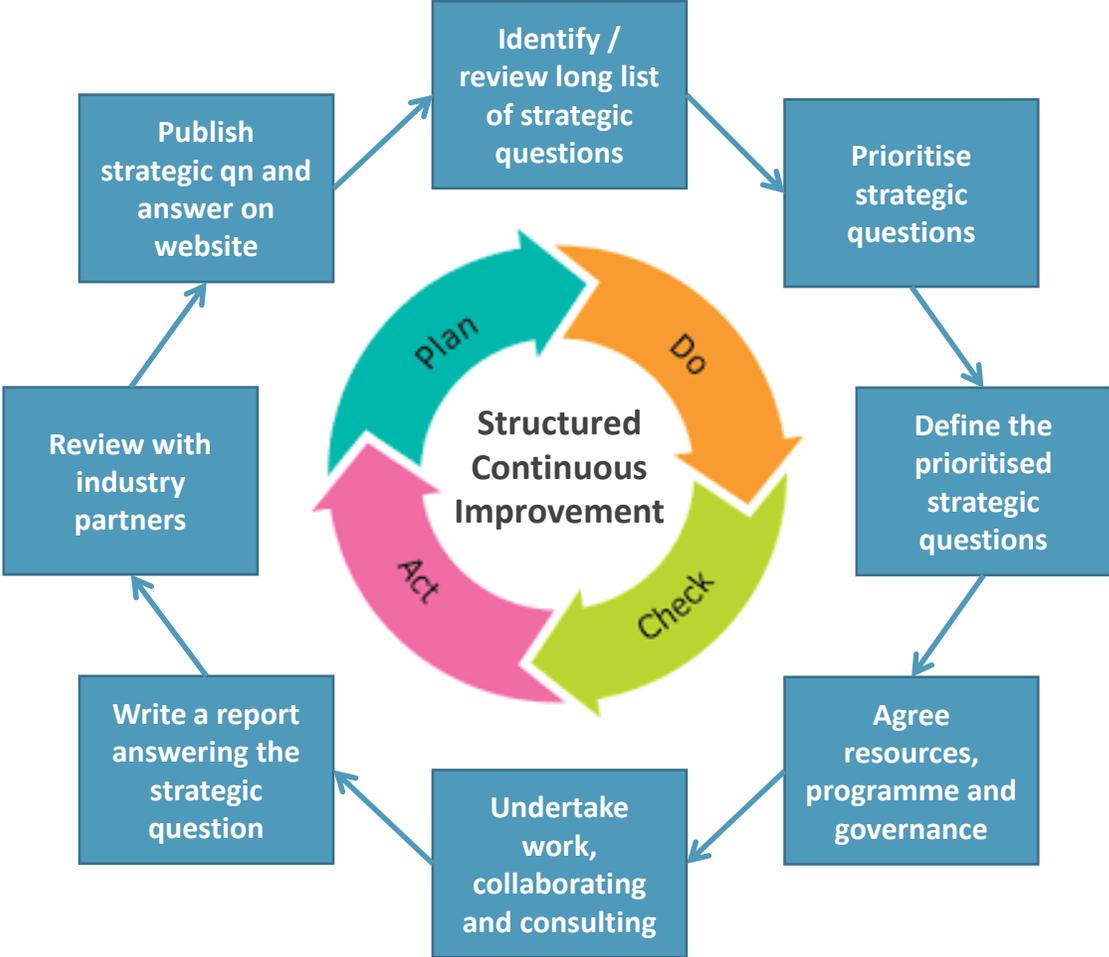
*do not consistently identify significant **customer intelligence***

*needs greater emphasis '**bottom-up**' from **route level***

*Publications can become **unwieldy, outdated**, and fail to fully inform industry **decision-making***

*must become more **dynamic** and its products more **easily accessible***

What is Continuous Modular Strategic Planning?



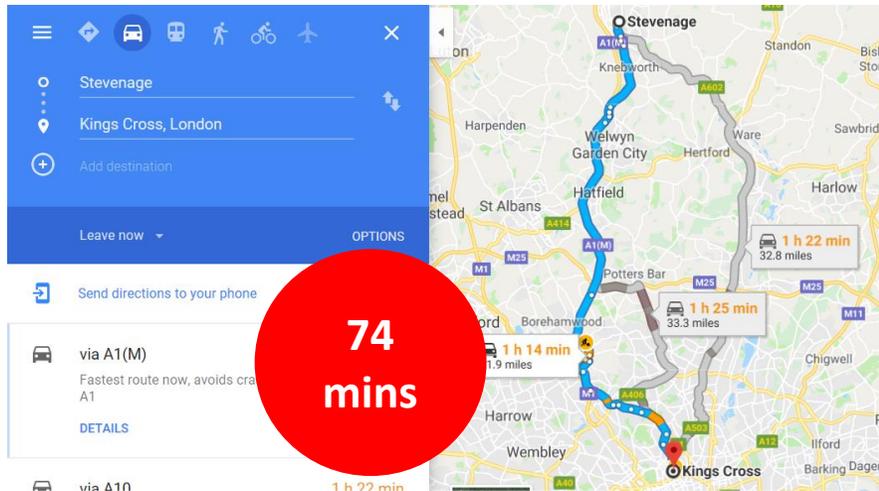
What is the railway for?

High volume, urban commuting (the “commercial” railway)

- **Urban space saving:**
 - A motorway lane can handle 1,500 vehicles per hour (with an average occupancy of just over 1 person per car)
 - Otherwise need parking and other highway infrastructure
 - Enhances urban realm
- **Transport efficiency**
 - A single 12-car Thameslink Cl.700 has a design capacity of 1,706 (at 4 standing passengers per square metre)
 - Urban rail – particularly electric rail – is far more efficient than private cars
- **Economic impacts**
 - **Agglomeration:** lots of similar activity concentrated into one place results in higher efficiency (e.g. the City for finance and legal)
 - **Urbanisation:** lots of different economic activity concentrated in one place results in higher efficiency (e.g. Central London)

High speed inter-urban travel (the “commercial” railway)

- City centre to city centre travel
- Rail mode share of 80-90% to central London, if not higher
- Competitiveness against traffic congestion and car parking charges
- Includes significant **business** and **leisure** markets



VS.

6:47 PM–7:18 PM
Thameslink >
6:47 PM from Stevenage · on time
4 min every 20 min
DETAILS

31 mins

7:09 PM–7:36 PM
LNER >

27 mins

The “social” railway

- **Non-London travel**
 - Journey times are not competitive against car
 - Rail rarely achieves above 20% mode share, even with a frequent and fast service
 - Car parks may be priced for the London commuter market, making short-distance journeys unattractive where the car parking charge is greater than the fare
- **Connectivity**
 - Greater quantum of services than the market requires to meet capacity
 - Connectivity requirements driven by stakeholder aspirations
- **Locations**
 - Distances too far from London to be commutable
 - Branches without direct services to London
 - Stations with demand suppressed by planning regulation e.g. National Park/Green Belt

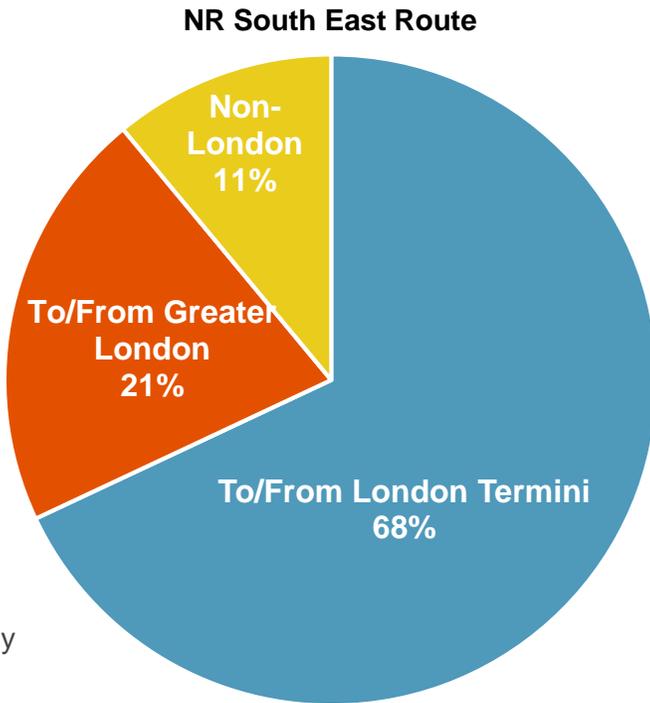
Who is going where?

What is our base line?

What does the South East Market comprise of?

Geographically

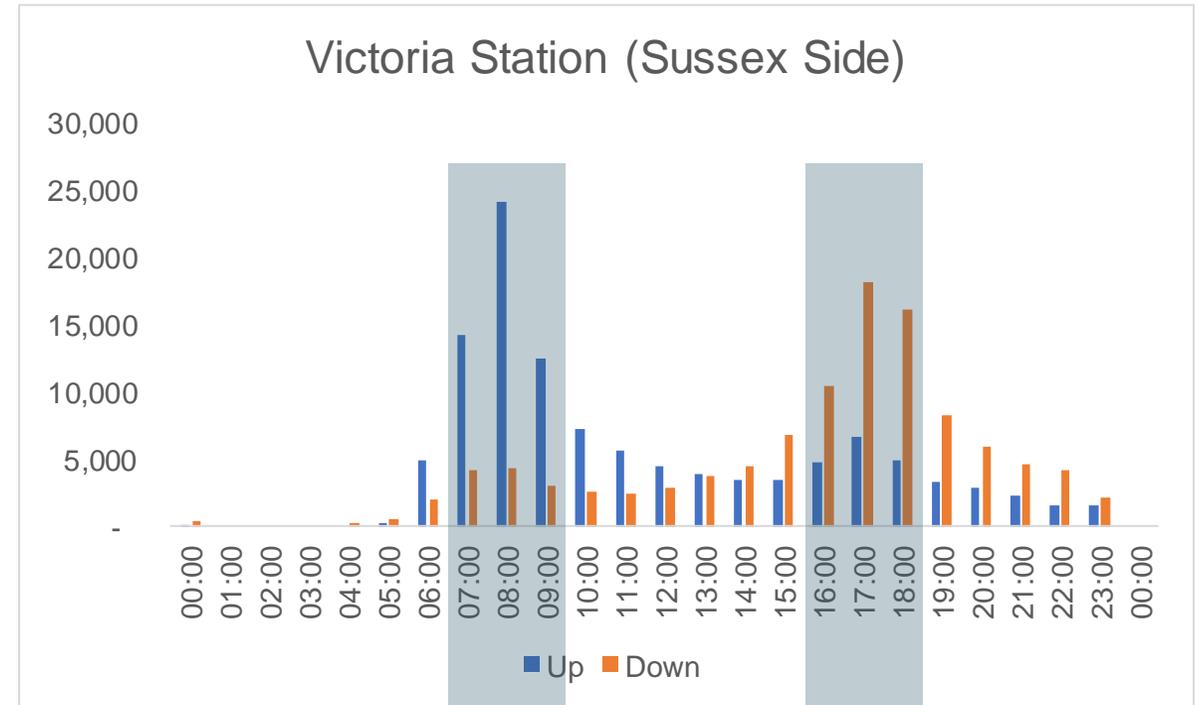
Centred on travel to, from, through and within London



Origin-Destination flow analysis
MOIRA Year to July 2018.

Temporally

Concentrated into the peak hours, but significant demand spread elsewhere



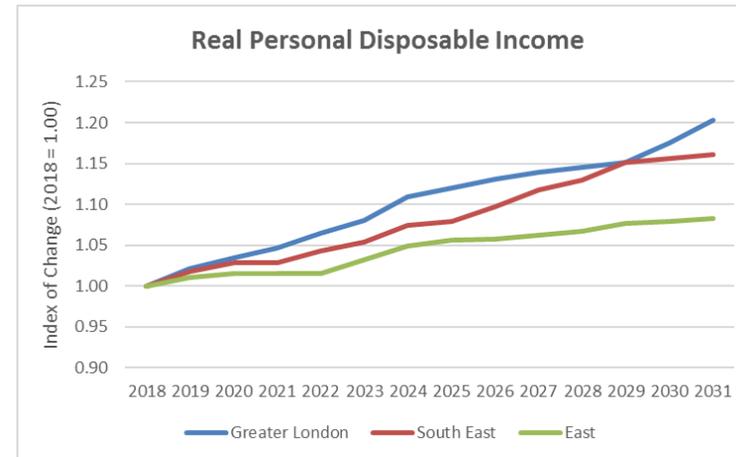
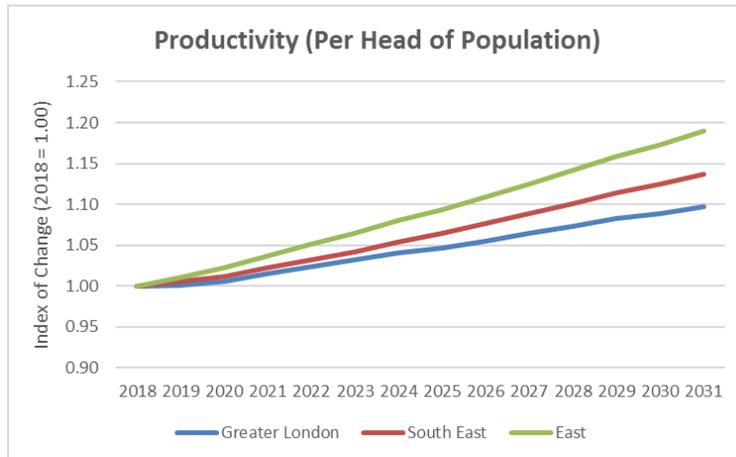
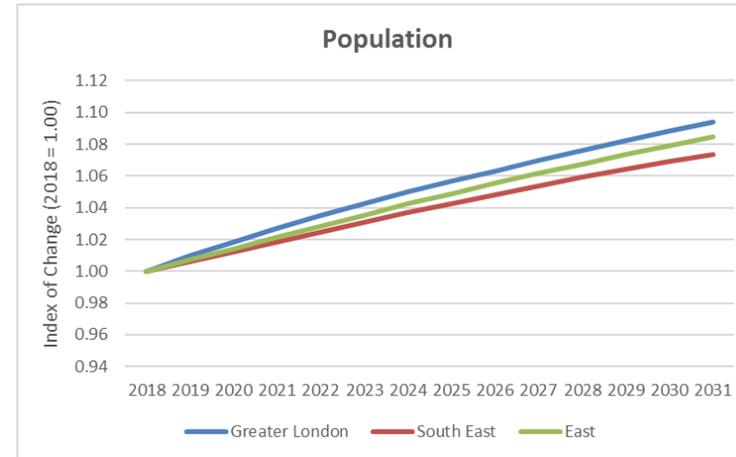
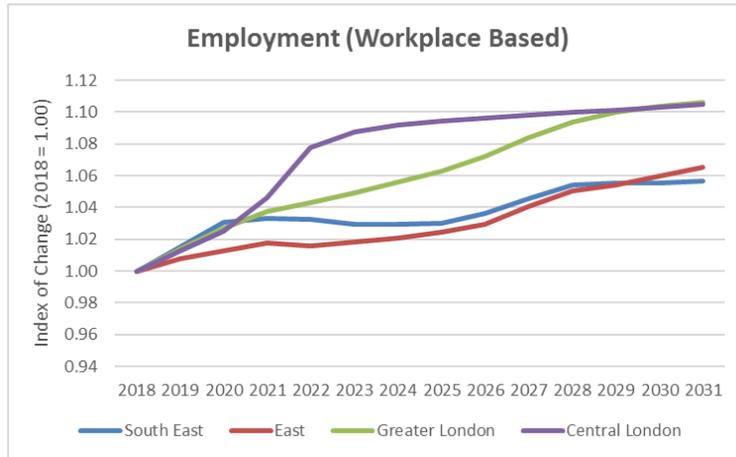
A number of factors were behind the recent slowdown in the London & South East market

- “Disruptive” factors
 - Punctuality & reliability
 - Industrial disputes
 - Disruptive possessions
- Economic uncertainty
- Recent research suggests that the average number of journeys made on a Season ticket has declined by ~20% over the last couple of decades (although we are unclear if this is a ‘slow burning’ or relatively recent shift in the market)

Flexible & part-time working

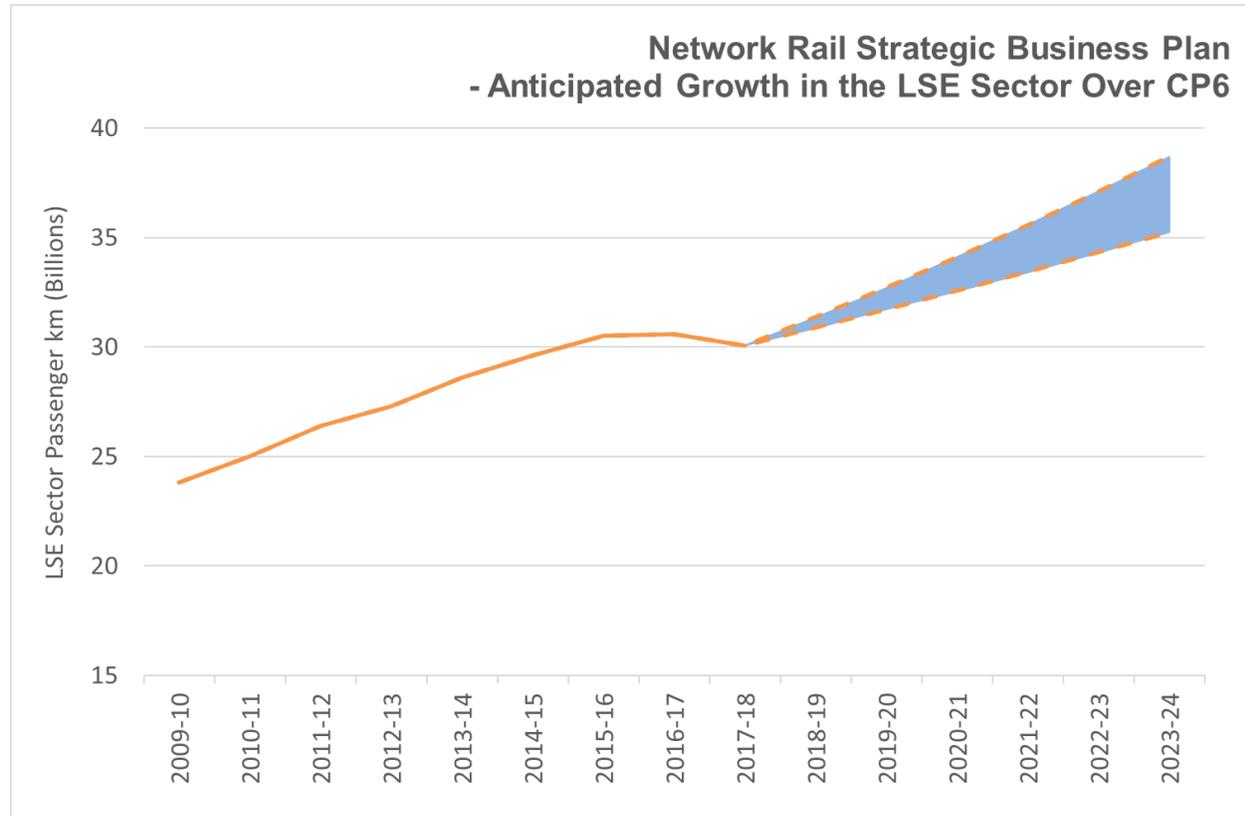
- What is it?
 - Working less than “full time”, either fewer hours or fewer days per week
 - Working “compressed hours”
 - Flexible start & finish times
 - Sabbaticals or longer periods away from work
 - Working from flexible locations, including homeworking and “*third space*” working
 - Short term & zero-hours contracts – the “*Gig Economy*”
- All of which have the potential to reduce the number of trips made by commuters, and/or change the time of day when they do travel

External drivers of passenger demand in the LSE sector are forecast to be positive ...



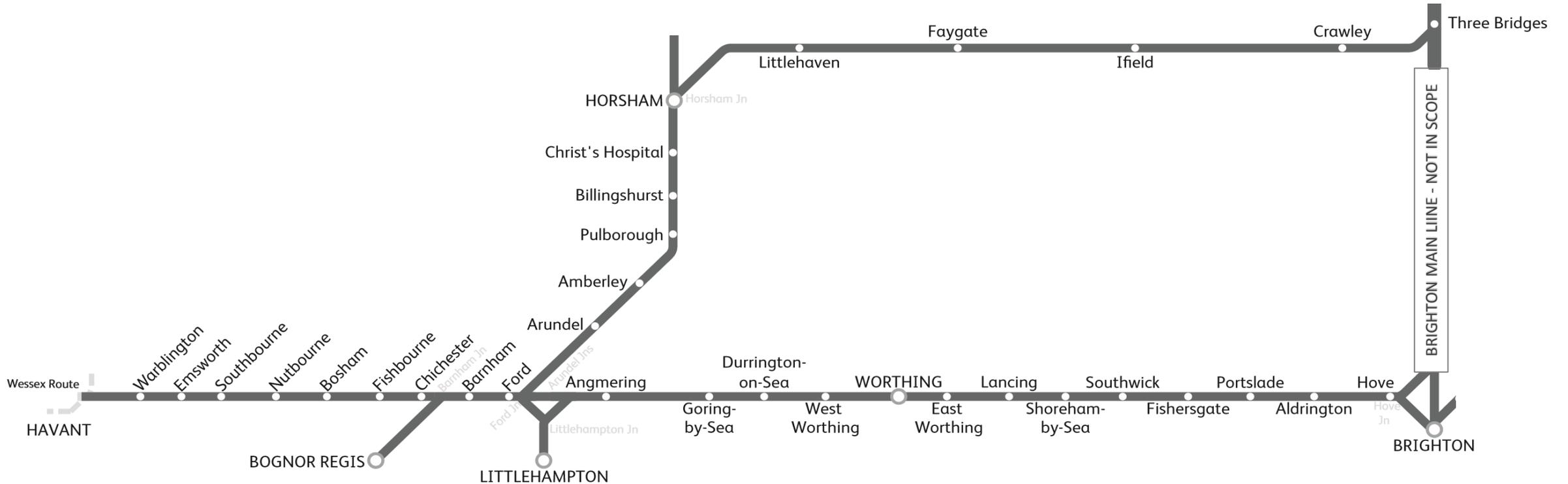
Source: CEBR macro-economic forecasts, January 2019

NR's January '18 Strategic Business Plan anticipated LSE Sector growth in the range 15% - 26% by the end of CP6



West Coastway focus

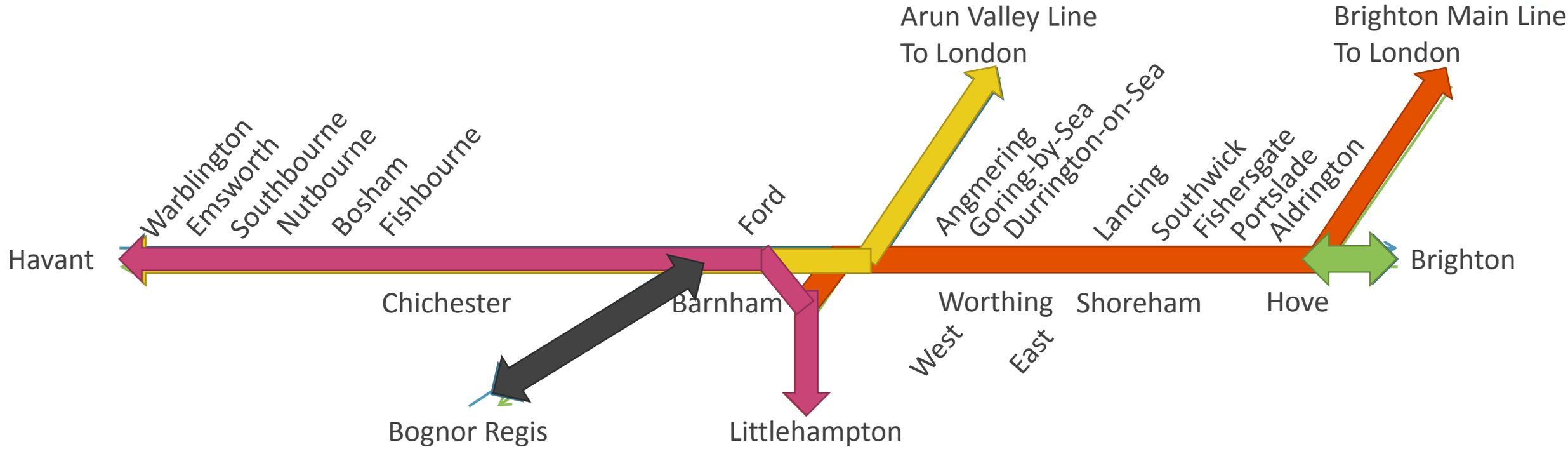
West Coastway Schematic map



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Build up of lines and services



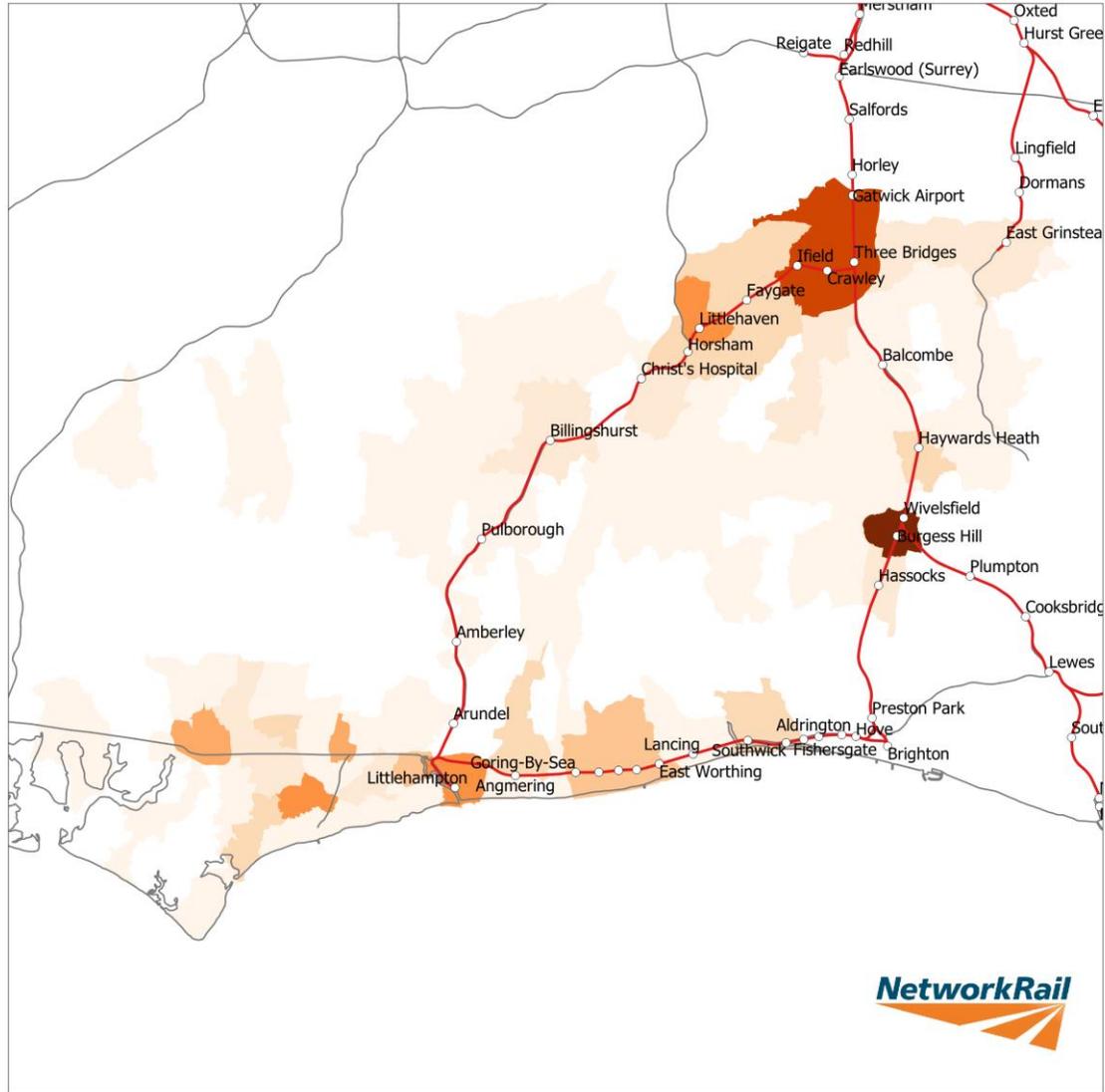
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The basics

- 36 stations – many close together
- 113 level crossings
- Mostly two-tracks
- Passing loops at Worthing and Barnham
- 750V dc third (conductor) rail electrified throughout
- Flat junctions
- Differing services and markets
- Some overcrowding on trains arriving into Brighton, but short trains

Housing Growth by Parish (West Sussex)



Legend

Planned Housing Growth

- 0 - 500
- 500 - 1000
- 1000 - 1500
- 1500 - 2000
- 2000 - 2500
- 2500 - 3000
- 3000 - 3500
- 3500 - 4000
- 4000 - 4500
- 4500 - 5000
- 5000 - 5381

Modular Strategic Plan

- During this process we aim to look at the whole travel experience
- Local plans – e.g. housing, schools
- Understand stakeholders aspirations – what do people want?
 - stations/journey time/reliability conundrum
- Transport for the South East aspirations
- Talking to other transport providers about how we integrate and serve new developments
- Output will be ‘choices for funders’
 - Enhancements pipeline
 - TSGN refranchising
 - Third party investment

Key

Each line represents a train train arriving at its destination in the Brighton area. The colour of the line refers to its GTR service group:

Southern

Gatwick Express

London Overground

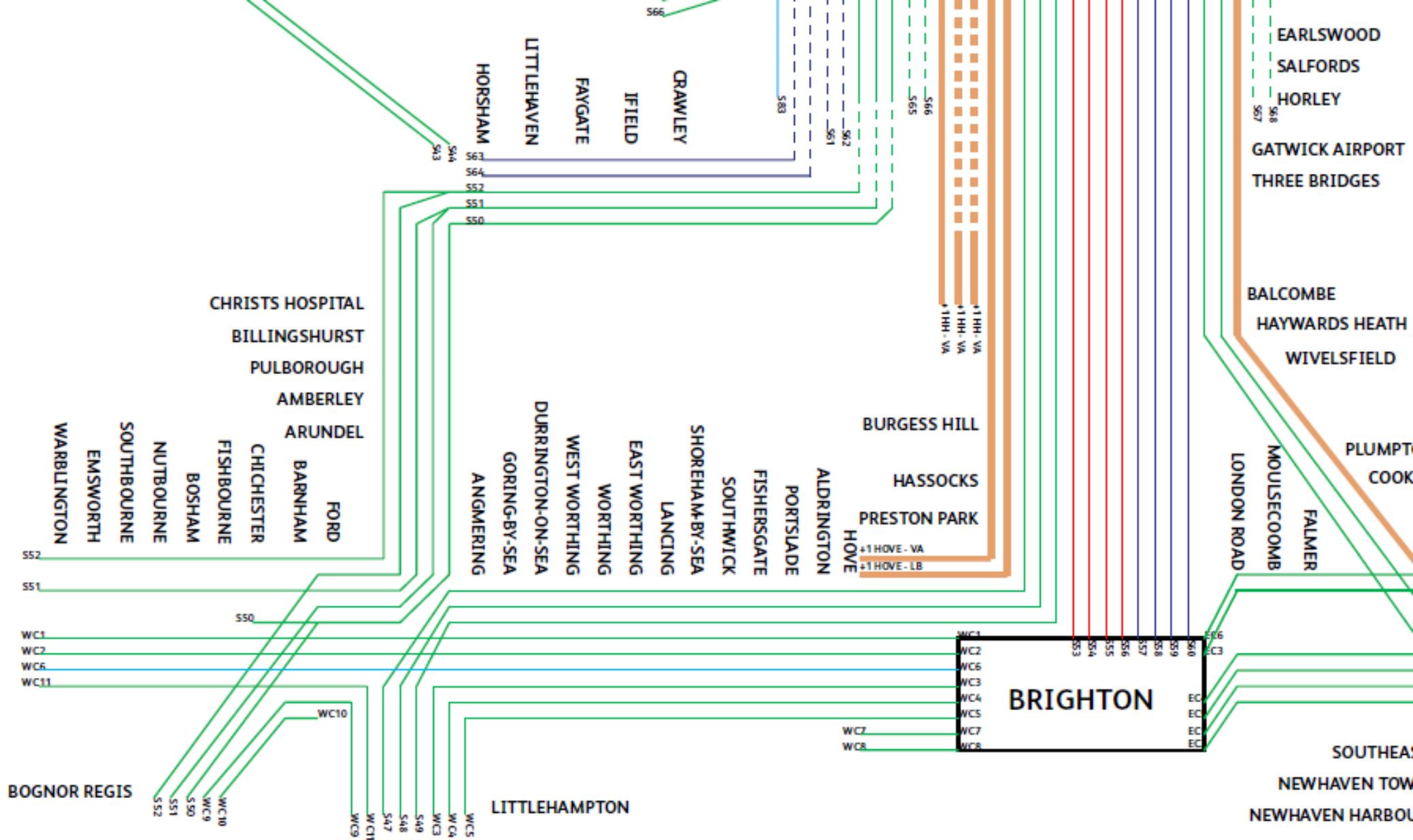
Thameslink

First Great Western

Additional BML services proposed

Additional ELL services proposed

(Based on DTT2011)



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Thank you

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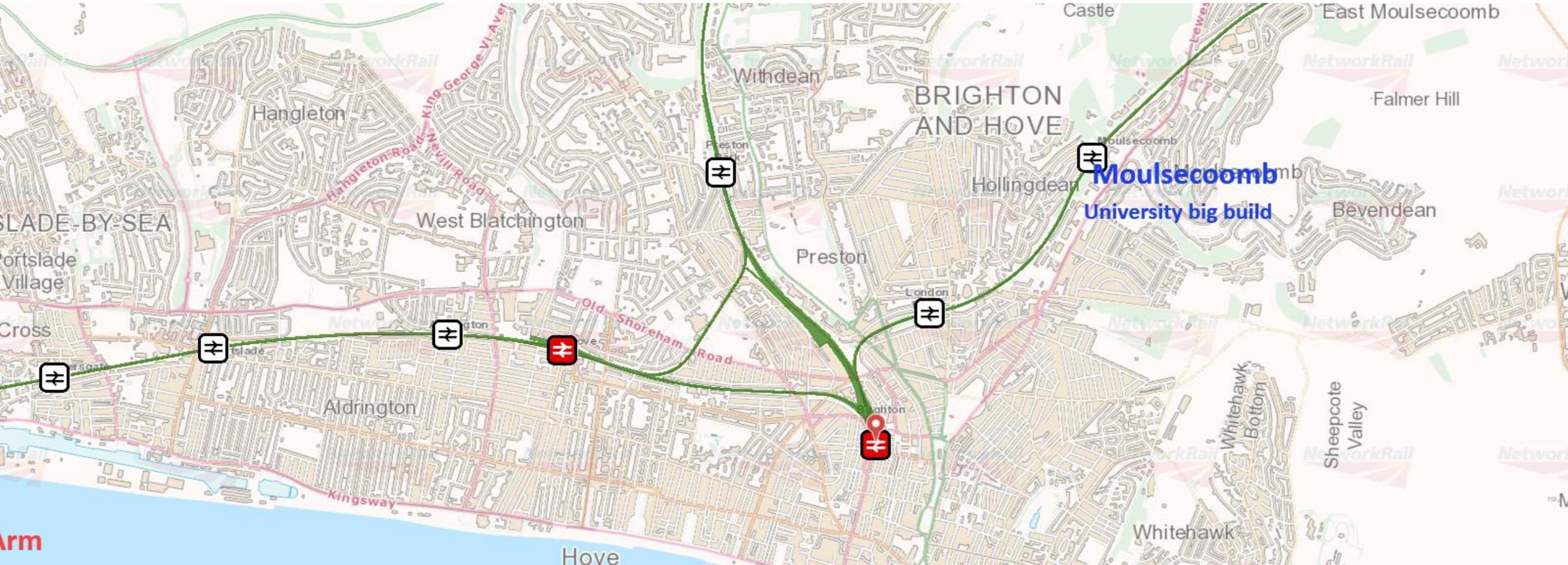
Stakeholder Maps

The following maps show developments and stakeholder aspirations that NR have been made aware of following consultation.

Brighton to Littlehampton

West Coastway (East)

The sticky note map: Brighton to Fishersgate



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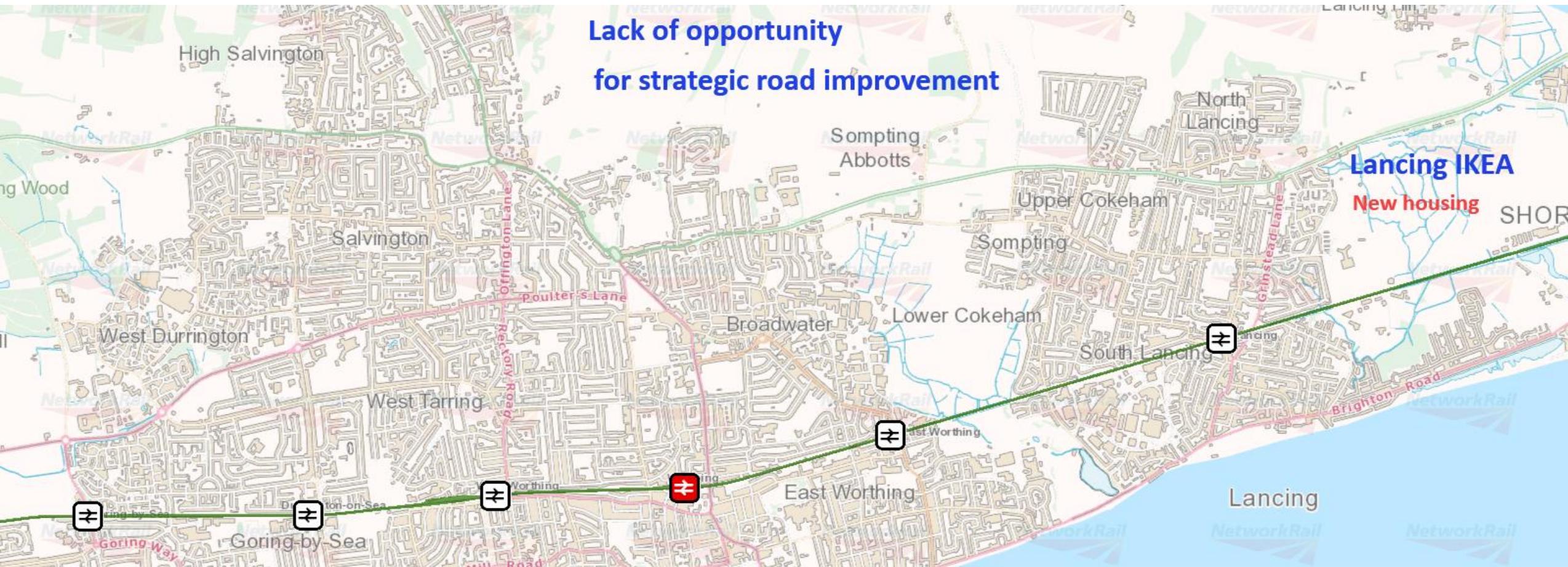
The sticky note map: Fishersgate – East Worthing



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The sticky note map: Lancing – Goring-by-Sea



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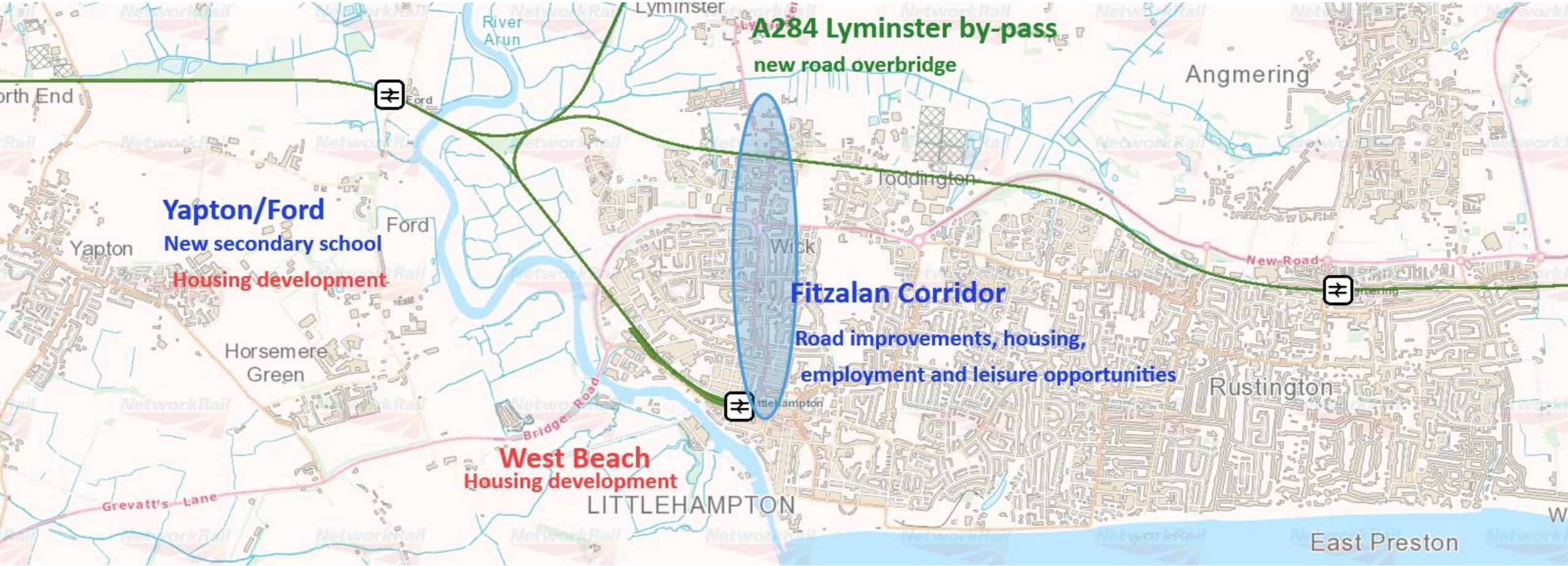
The sticky note map: Goring-by-Sea – Arundel Jn



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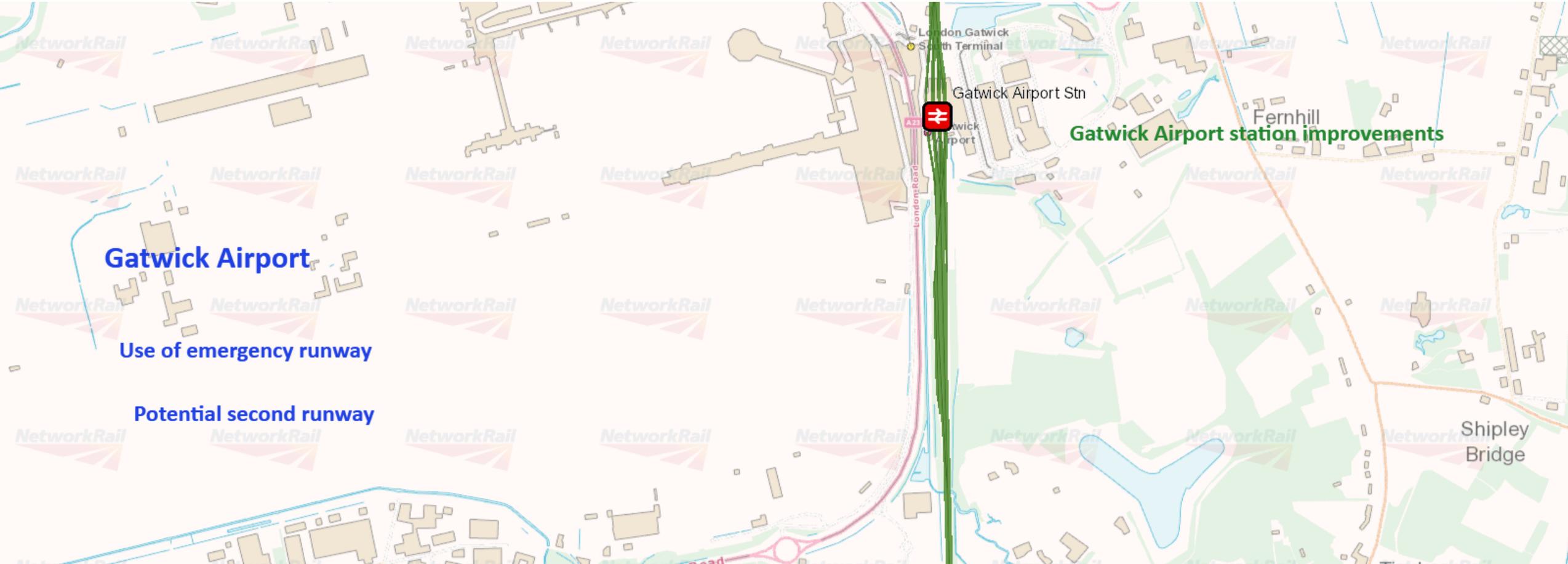
The sticky note map: Angmering – Ford/Littlehampton



Three Bridges to Bognor Regis

Arun Valley Line

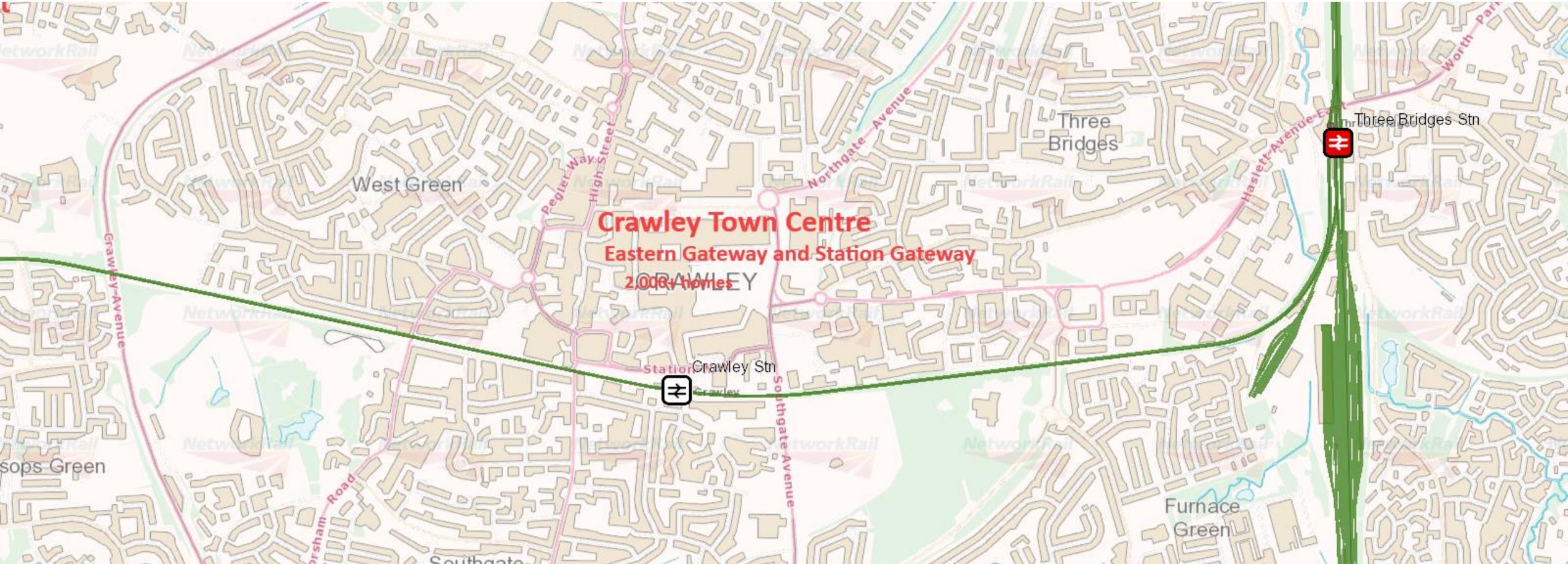
The sticky note map: Gatwick Airport (not in scope)



The sticky note map: North of Three Bridges (not in scope)



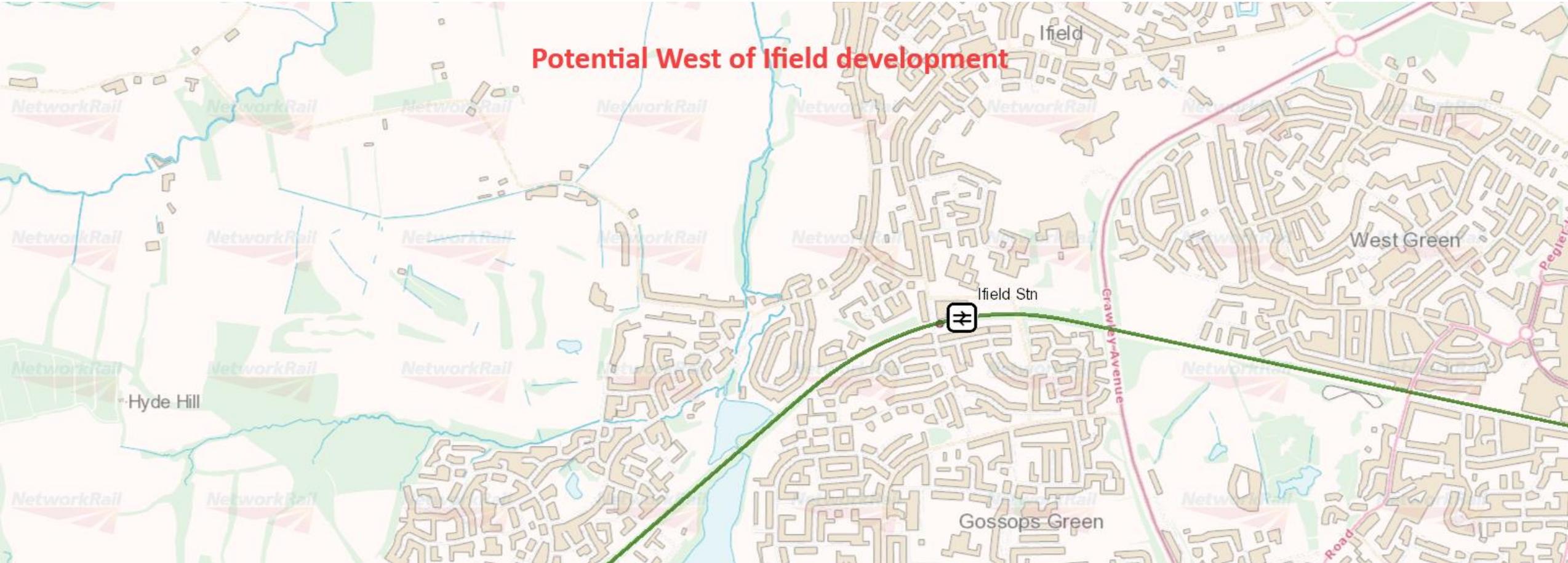
The sticky note map: Three Bridges - Crawley



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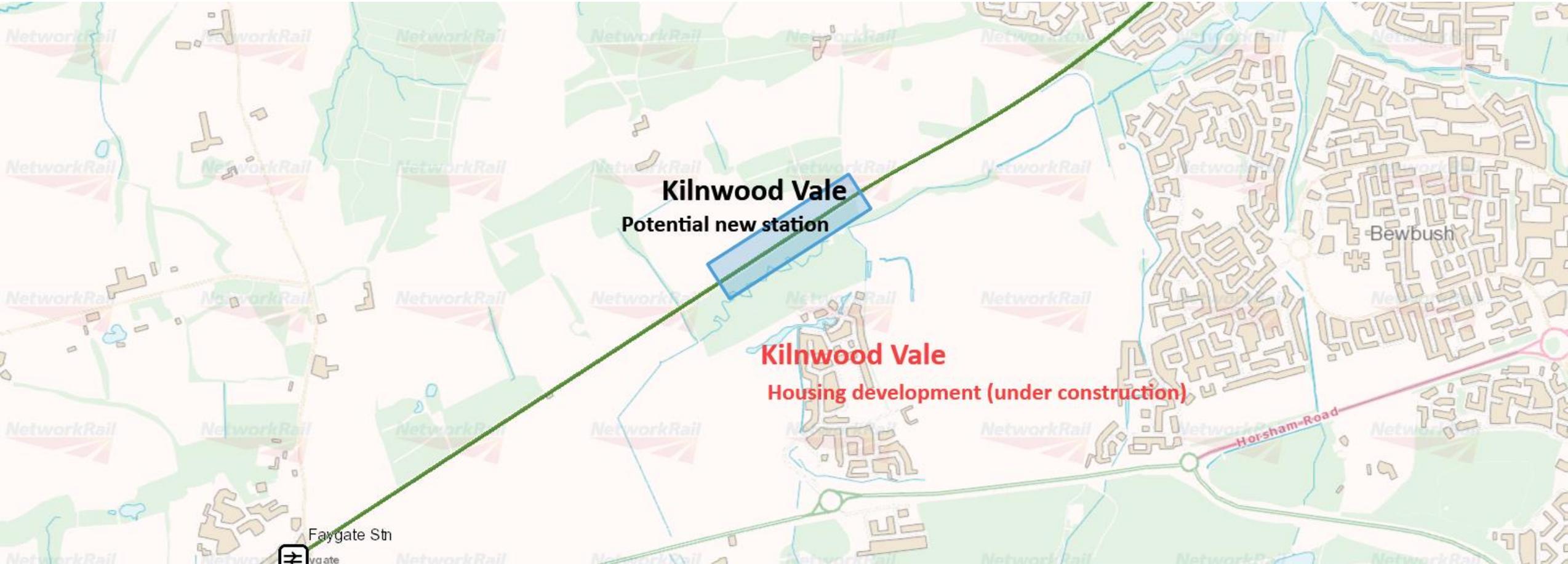
The sticky note map: Ifield



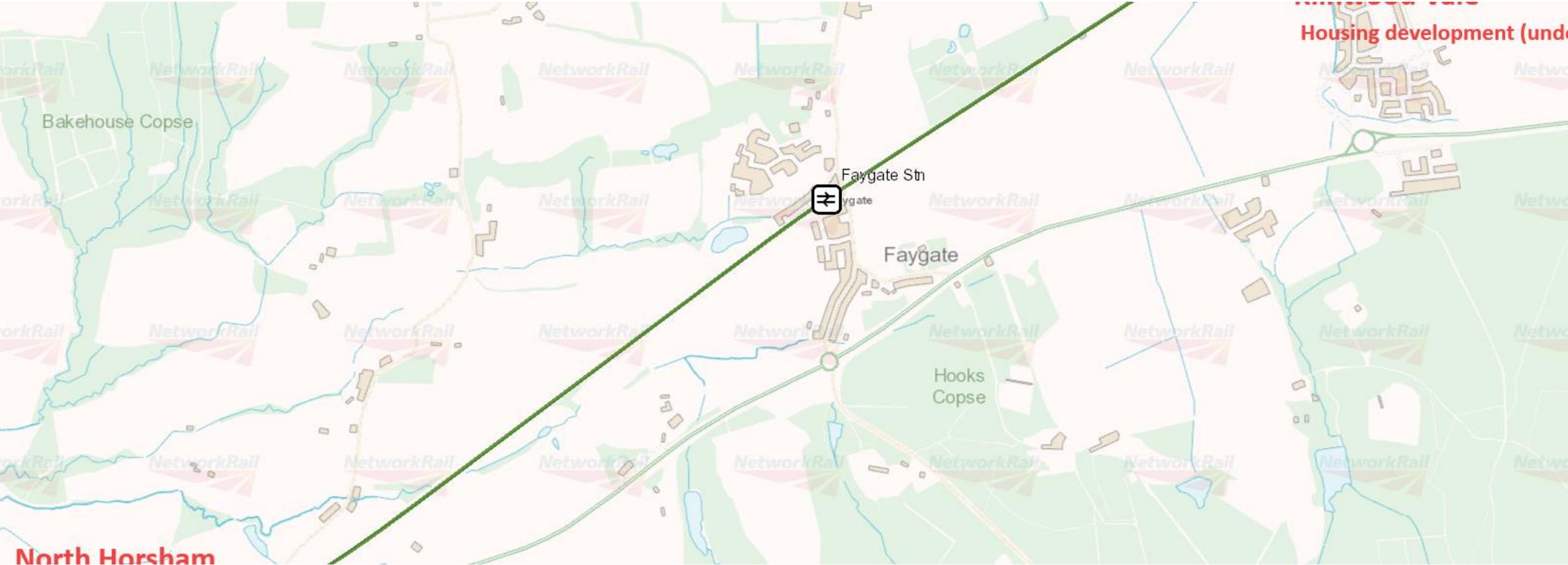
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The sticky note map: Kilnwood Vale



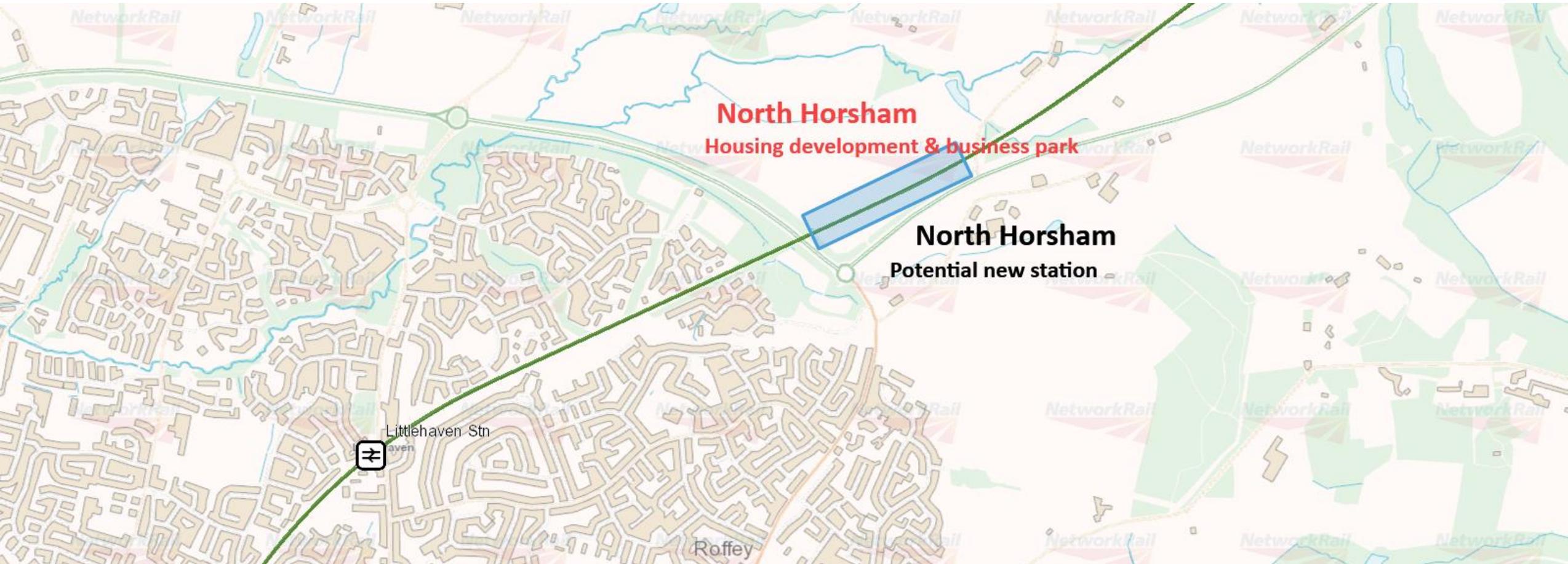
The sticky note map: Faygate



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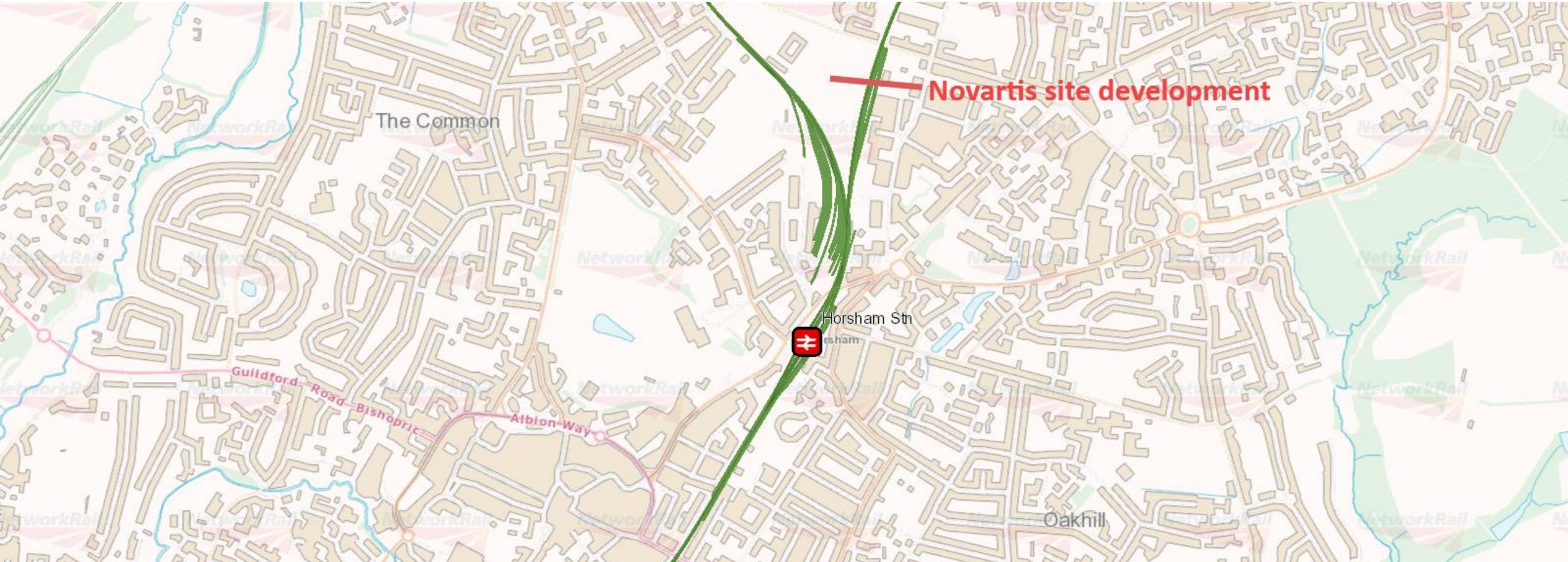
The sticky note map: North Horsham - Littlehaven



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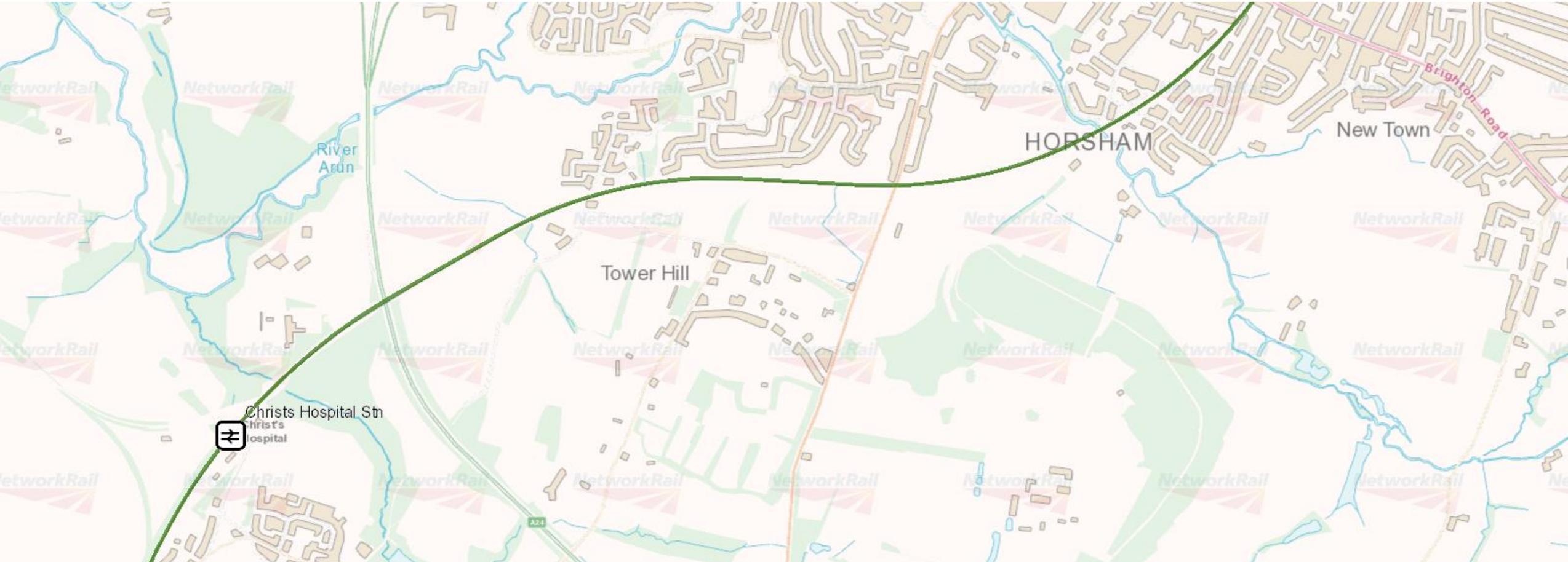
The sticky note map: Horsham



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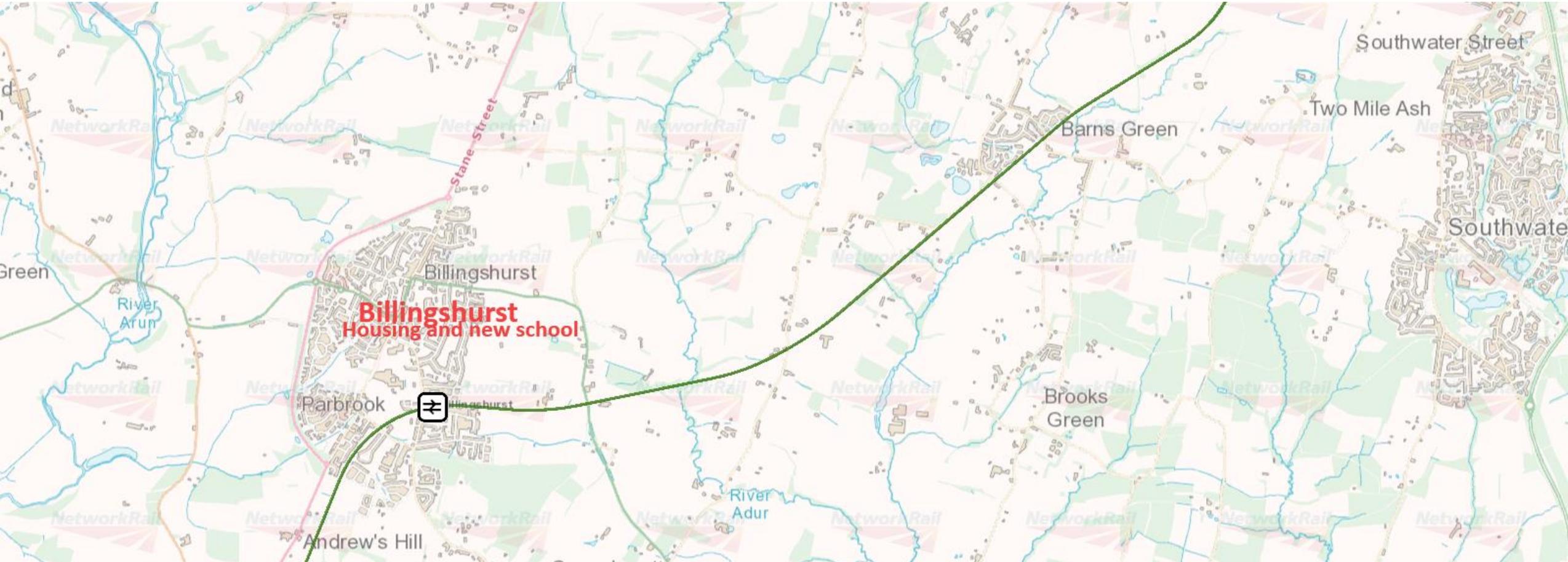
The sticky note map: Christ's Hospital



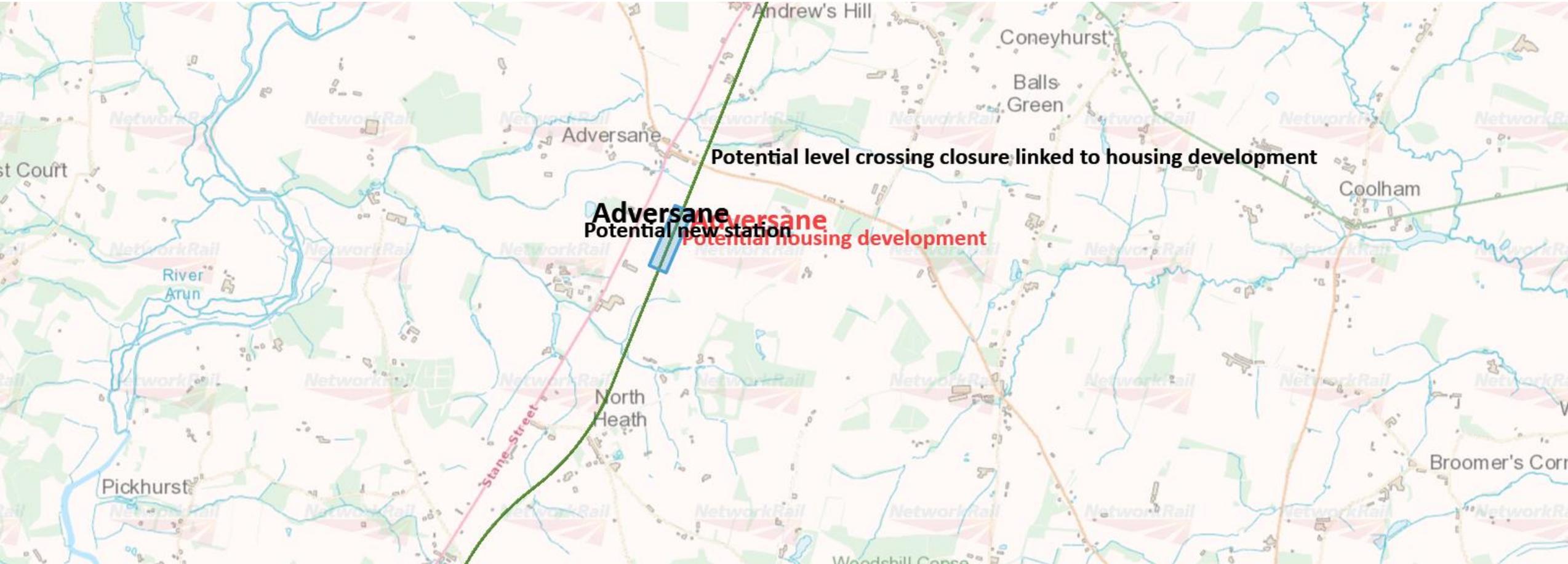
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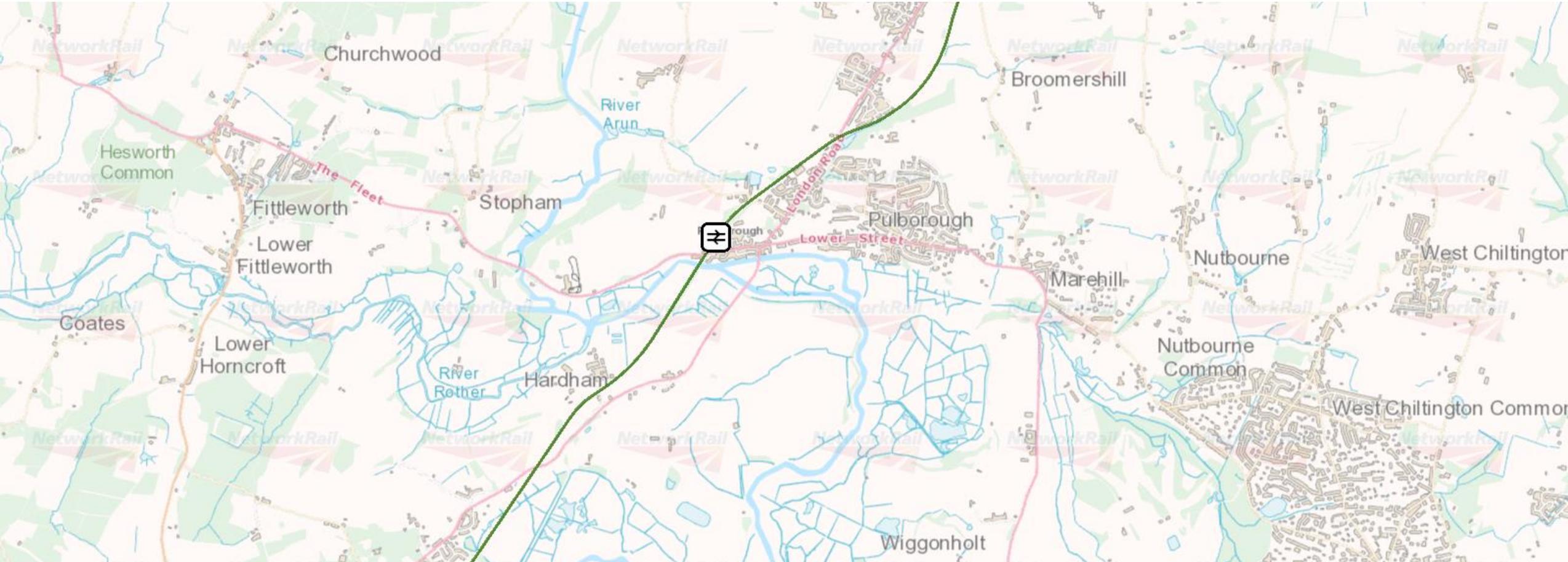
The sticky note map: Billingshurst



The sticky note map: Adversane



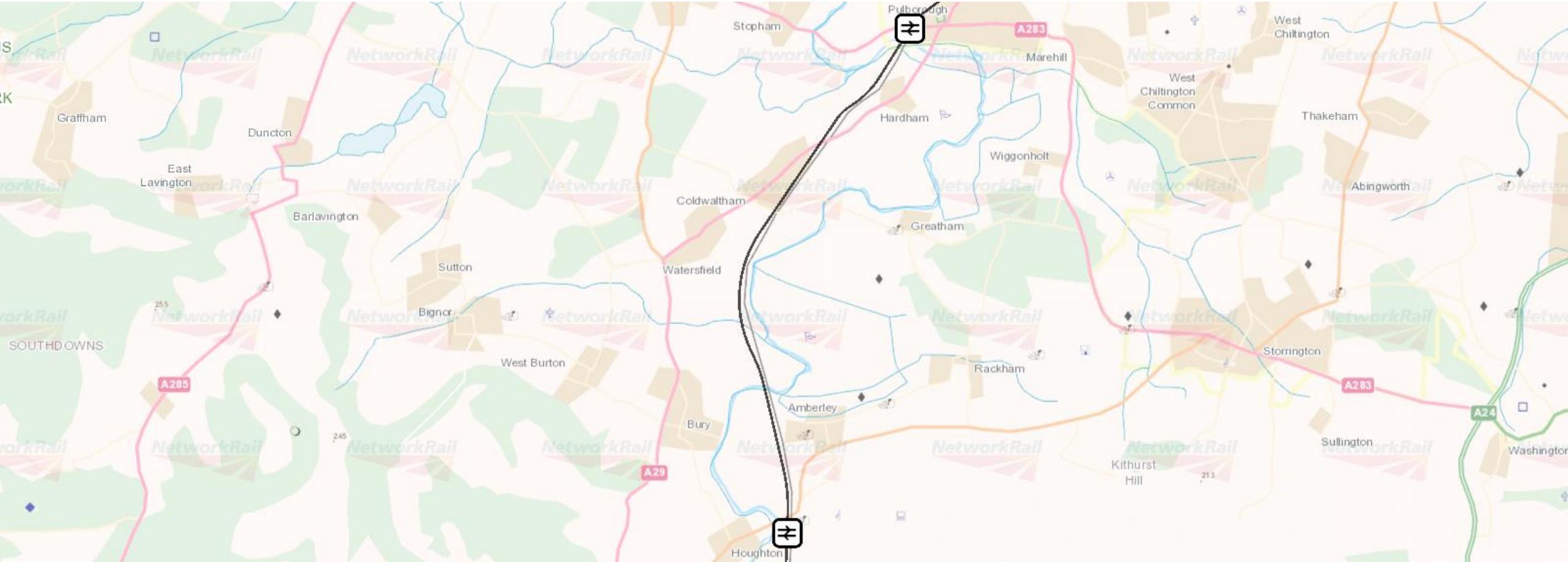
The sticky note map: Pulborough



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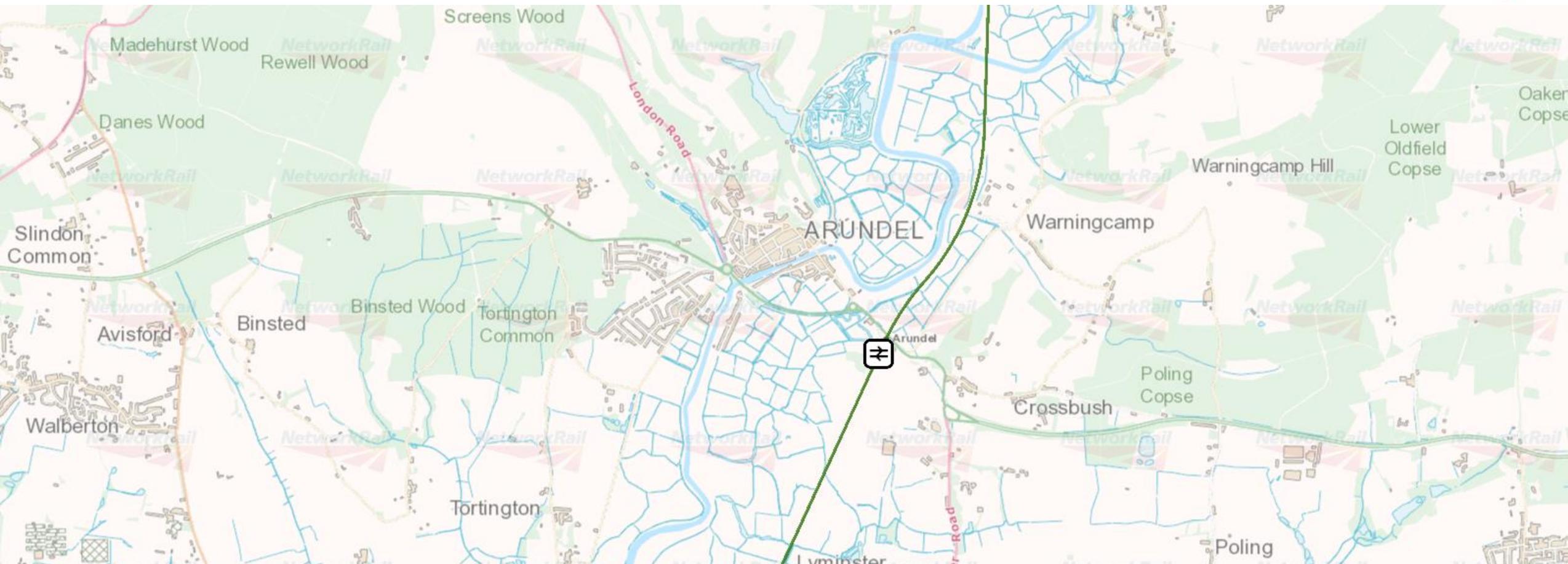
The sticky note map: Pulborough - Amberley



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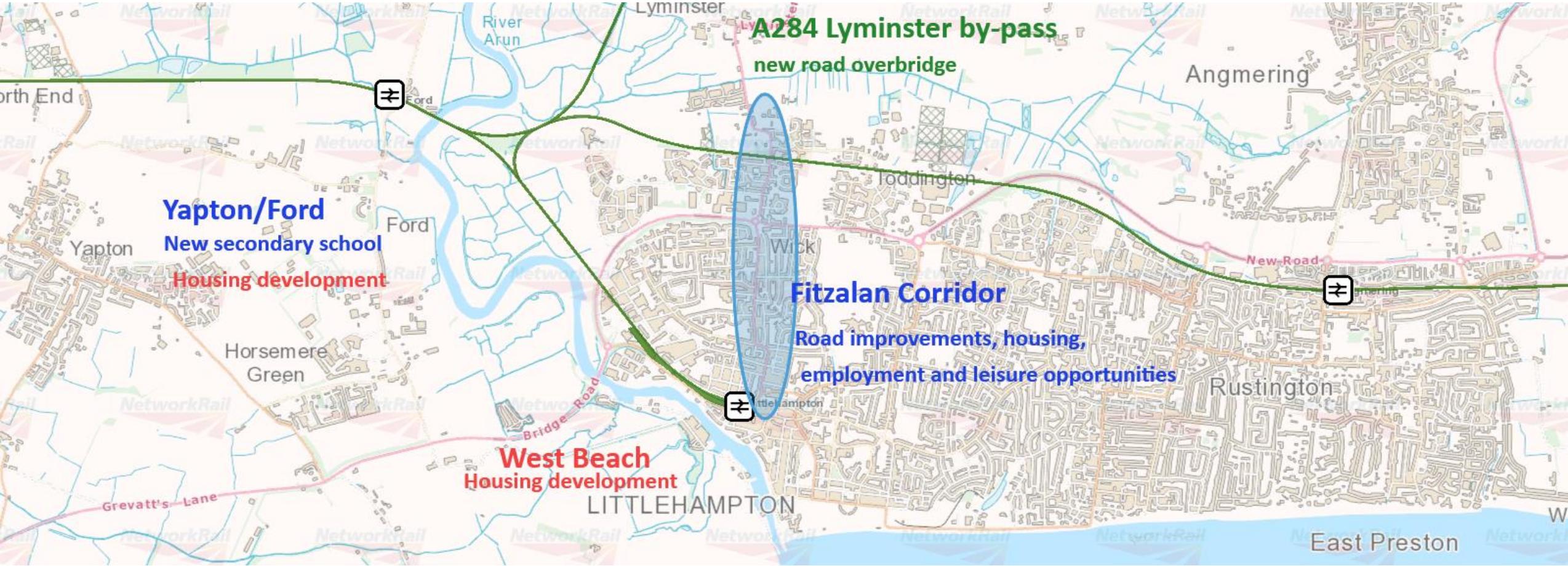
The sticky note map: Arundel



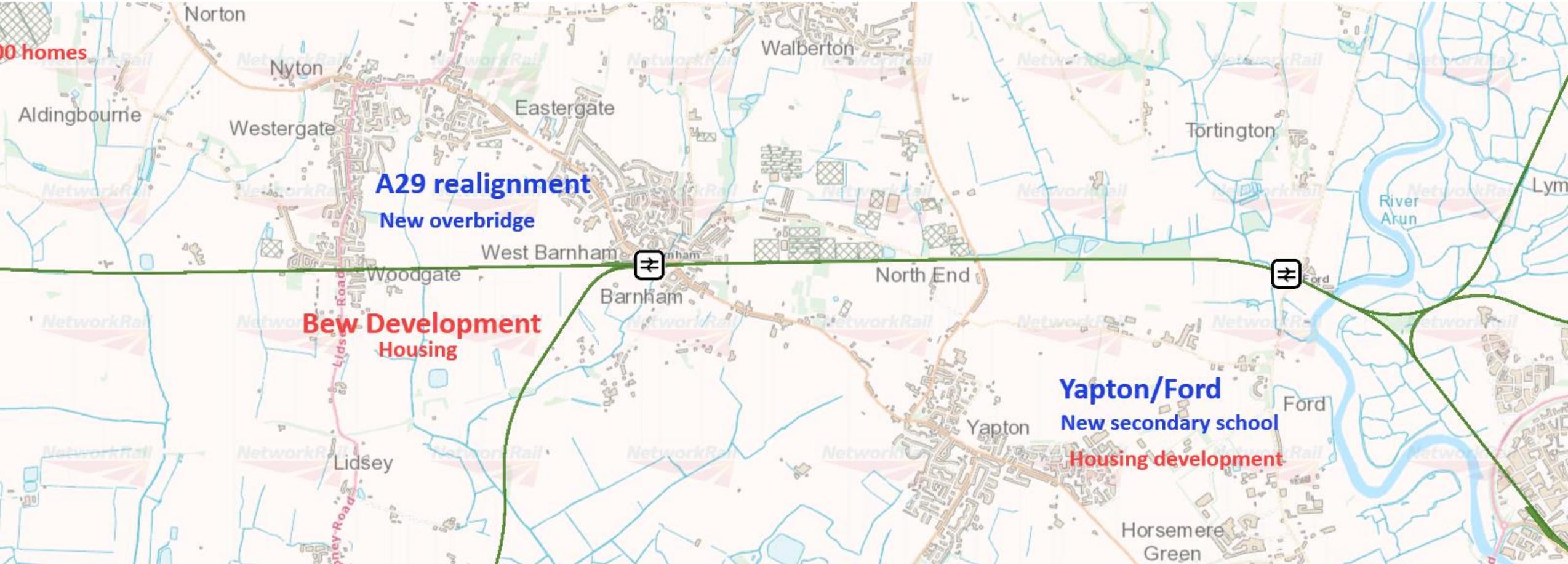
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The sticky note map: Angmering – Ford/Littlehampton



The sticky note map: Ford - Barnham



The sticky note map: Bognor Regis



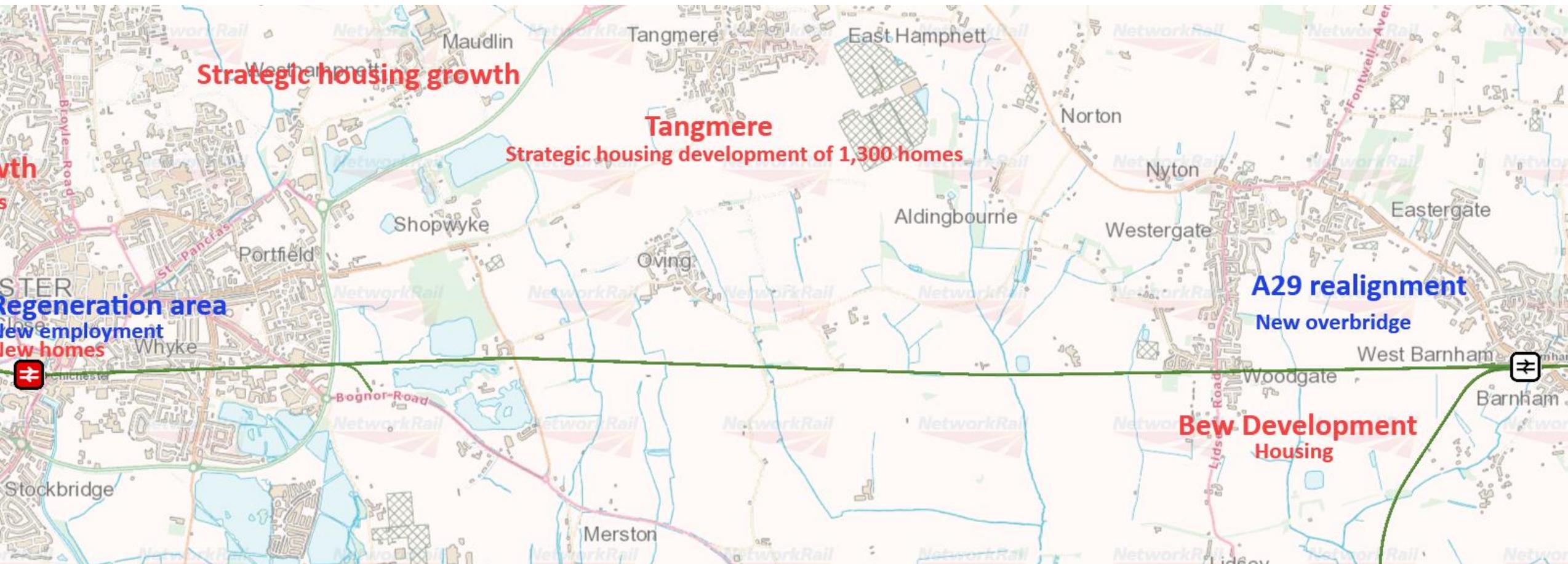
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Barnham to Havant

West Coastway (West)

The sticky note map: Barnham - Chichester



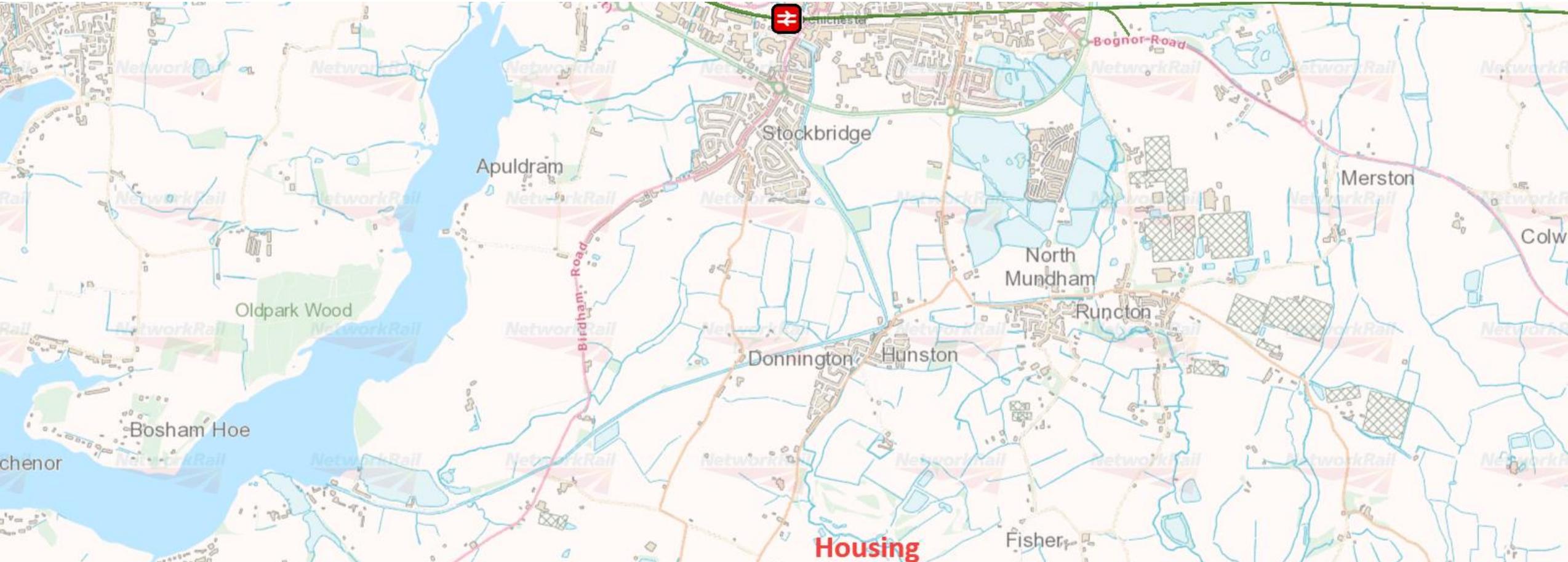
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The sticky note map: North Chichester



The sticky note map: South Chichester



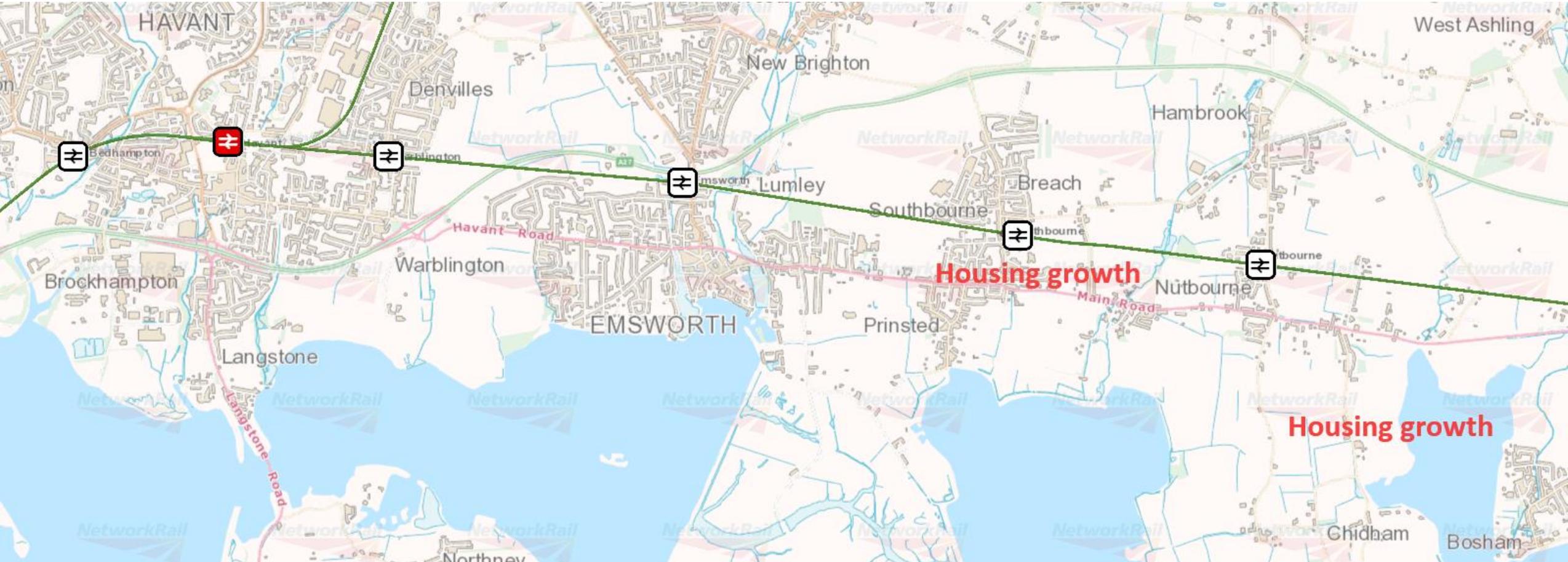
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The sticky note map: Chichester - Nutbourne



The sticky note map: Nutbourne - Havant



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