Connecting Communities:

framework assessment of new station opportunities on Western Route

Version	Name	Role	Date	Change
V1	Oliver Grant	Strategic Planner - Western	12 July 2024	Published
V1.1	Oliver Grant	Strategic Planner – Western	04 November 2024	Minor corrections to Page 44.

Wales and Western

NetworkRail

CONTENTS

Executive summary

Many opportunities have been identified for new stations at various locations across Western Route, including through submissions to the Restoring your Railway programme.

Assessment of opportunities typically follows a bespoke process, with each opportunity reviewed in isolation. Insights emerging from the data generated for the Restoring your Railway programme provide the opportunity for a consistent and integrated approach.

This report develops a framework for assessing new station opportunities at a strategic level, and applies this framework to the largest population clusters without stations on Western Route.

The report is intended to inform future strategic advice and engagement with third parties on new station proposals. The framework created can be used to assess any new proposals to provide a high-level, comparable assessment. It does not imply Network Rail support, or lack of support, for any particular opportunity.

The largest population clusters greater than 5 kilometres from a railway station are assessed against categories resulting in a score for 'strategic case' and 'likely complexity'. A ranking for each population cluster is presented, representing the strength of the opportunities relative to one another.

Case studies are presented for each of the five highest scoring clusters:

- Plympton, Devon
- Corsham, Wiltshire
- South of Gloucester, Gloucestershire
- Royal Wootton Bassett, Wiltshire
- Bideford, Devon

The case studies describe the scoring for each of the categories, including analysis of previous development work undertaken and a description of challenges and strategic alignment. Case studies were consulted with local stakeholders to augment the information available and understand the strategic fit of any development of this work.

This report concludes this workstream, which does not include recommendation of further actions or development of specific interventions for any of the population clusters identified. Instead, this report and the framework developed is intended to inform discussions with third parties considering investment in the rail network to address strategic transport issues.

Wales and Western

NetworkRail

Purpose of this document

In January 2020 the Department for Transport (DfT) launched the Restoring your Railway (RyR) programme to reopen former stations and railways. Promoters were invited to submit ideas for funding under the programme. Submissions were assessed by the DfT-led RyR programme team using a range of quantitative and qualitative measures, which yielded a large dataset offering insight into population clusters lacking connection to the national rail network. This document makes use of that dataset and considers the 29 largest clusters on Western Route for their potential suitability for further investigation.

The document does not represent a recommendation to progress development of any of the findings and does not indicate Network Rail support for any referenced new stations. Rather, it is intended to inform discussions with third parties considering investment in the rail network to address strategic transport issues.

This document aims to:

- Create a common framework to assess new station opportunities at a high level on the basis of connectivity benefit and likely complexity
- Establish a high-level position on the relative status of the new station opportunities on Western Route identified by the RyR programme population cluster analysis
- Consider the key features of the highest-scoring new station opportunities through case studies.

This document is split into three sections:

1. An account of the method by which unconnected clusters are ranked
2. Lists of the unconnected clusters and the ranking scores
3. Case studies for the five highest ranked unconnected clusters

Introduction

There is a, now centuries-old, recognition that connection to the rail network has a role in growing prosperity and improving social mobility. Rail sits alongside other modes to deliver these agglomeration benefits and has particular advantages in the ability to travel large volumes of people long distances, at high speeds, and into urban areas.

However, railways can have higher capital and operating costs than other surface transport modes, and there are competing demands for finite system capacity, and opportunity costs associated with new services or new stops in existing services.

As such, new stations and lines must surpass revenue and economic impact thresholds, and they must be compared to the impacts of alternative options. There are many instances where a new station or line may be beneficial but is likely not efficient, where rail is not the right mode for the majority of journeys being made, or where improving existing connections to the railway is likely to provide a more beneficial outcome.

This study takes an objective approach to identify where communities that are currently unconnected, or only poorly connected to the railway network could benefit from new stations. This includes - but is not limited to - areas where stations and access to the rail network were subject to the Beeching cuts in the 1960s and subsequent closures.

Opportunities are ranked relative to each other. They are not assessed against a pre-determined threshold such as a positive benefit-cost ratio. It may be that some, few or none of these stations could deliver sufficient value for money to cover both their capital and operational costs over the relevant appraisal period.

New stations must also be affordable against funder priorities and obligations. Recent new stations have contained elements of third party funding, reflecting the benefits conferred on these third parties. The high level view of the promise the identified opportunities show will inform conversations with potential funders and provides a platform for future strategic advice to stakeholders.

Background

The RyR programme team – led by DfT and including Network Rail - created a dataset detailing 'unconnected clusters' and potential future markets for the railway to serve. A settlement or population cluster was included where the total population within a connected settlement cluster living more than 5km away from a railway station was greater than 10,000 people. This dataset included the names of towns and villages included within a cluster, population cluster size and a nationwide ranking based upon this.

Of the hundreds of clusters identified nationally 29 are on, or closest to the infrastructure of, Western Route. Five of these – Cowley Branch Line, Oxfordshire; Wellington station, Somerset; Cullompton station, Devon; Portishead Branch Line, Bristol and Tavistock station, Devon – are already subject to advanced business case development (at least Outline Business Case (OBC)) led by or involving Network Rail. A sixth – Devizes station, Wiltshire – has recently been subject to detailed industry-led business case development.

These six projects were included in the framework for reference and to help guide the weightings and percentiles calculated for each category. However, they were not considered for case studies to avoid work duplication and to ensure new information and opportunities were being identified.

Method

This work is based on the RyR programme unconnected clusters dataset, which was further developed in agreement and collaboration with the RyR programme team as follows:

1. RyR dataset filtered to Western Route populations clusters only;
2. Common assessment framework developed and applied, using data provided from previous RyR programme team Economic Analysis work, augmented by strategic analysis.
3. Potential locations of new stations identified using online data and mapping software to understand the geographic, transport, and population characteristics of the area it might serve.
4. Infrastructure and train service requirements assessed, including fit with the current network, including workshop with industry experts to review findings and yield additional insights
5. Initial scores against two summary categories of *strategic case* and *likely complexity*, with individual categories weighted;
6. Final scores and ranking of the 29 clusters after review and agreement with wider industry audience;
7. Case studies created for the five highest-scoring opportunities (that are not currently subject to business case development by Network Rail), in discussion with expert local stakeholders;
8. Final overview report completed, including case studies.

Feasibility Categories

Feasibility is considered under two principal categories. The first focuses on the strategic case for connection to the network, the second on the likely complexity of connection – in terms of provision of both required infrastructure and a train service. The strategic case assessment uses the quantitative data provided – specific to the clusters – by the RyR programme team. Both principal categories use qualitative insights provided by consulted experts.

Table 1 describes the full list of categories and how they score. Individual categories are weighted to reflect their importance to a potential station opportunity.

Category Name	Description	Rationale	Scoring
Strategic case categories			
Population	Population of the cluster identified, using ONS 2019 data	Directly influences the size of the potential market for rail	1-10 (Percentiles High-Low)
Employment	Number of people within the cluster identified who are employed, using ONS 2019 data	Influences the size of the potential commuter and business market for rail	1-10 (Percentiles High-Low)
Unemployment Rate	Unemployment rate of the population within the cluster identified, using ONS 2019 data	Influences the potential social mobility impact	1-10 (Percentiles High-Low)
Public Transport Usage	Proportion of the cluster identified who said that they use public transport to travel to work, using 2011 Travel to Work Census data	Indicates the propensity of the local population to use public transport	1-10 (Percentiles High-Low)
Index of Multiple Deprivation	The Index of Multiple Deprivation for the cluster identified, based on 2019 IMD data	Influences the potential social mobility impact	1-10 (Percentiles Low-High)
Features in Network Rail Strategic Study	Reflects if the cluster is in the same area as a new station opportunity identified in a current or previous Network Rail Strategic Study	Demonstrates strategic alignment with current rail industry strategic plans	0 – No 1 - Yes
Nationally Significant Attractor	Reflects if the cluster is in the same area as a popular attraction or tourist hotspot	Indicates a specific market for rail not apparent in other categories	0 – No 1 - Yes
Improves Access to Regional Hub	Reflects the degree of improvement to journeys to/from regional hub, based on approximations of Generalised Journey Time.	Indicates the likely desirability of a rail service	0 – No Improvement 1 – Regional hub access via interchange at station with <2tph 2 – Regional hub accessed via interchange at station with 2tph+ 3 – Direct access to regional hub

Likely complexity categories			
Service Requirements	Assumption on how the service will be provided	Recognises the operational and opportunity costs of a new service	0 – Call in current service 1 – Extension of current service 2 – New strategically recommended service 3 – New specific service
Track Requirements	Assumed scope of any new track required, multiplied by an approximation of distance	Recognises capital cost of new infrastructure, using track as a proxy for all assets	0 – No new track required 1 – Upgrade of heritage/freight line 2 – Part upgrade/part new line 3 – New line required Multiplied by: 1 - <5km 2 – 5-10km 3 – >10km
Station Requirements	Assumed scope of new stations required, multiplied by the assumed number of stations	Recognises capital cost of new stations, including delivery impact, and operational costs	0 – Upgrade of old station 1 – Simple 1 platform station 2 – 2 platform station 3 – Complex station Multiplied by: Number of stations

Table 1: Description of categories used in assessment

As an example, the population cluster around Calne, Wiltshire would require a new specific service (scoring 3), <5km of new track (scoring 3) and one simple one platform station (scoring 1). When multiplying each of these by the agreed weighting of 5 you get the likely complexity score of -35. With regards to the strategic case categories *not* provided by the RyR programme team: a station at Calne does not feature in any Network Rail Strategic Studies (scoring 0), would not serve any significant attractions or tourism hotspots (scoring 0), and would improve access to regional hubs at Bristol and Swindon by interchange at Chippenham – which has a minimum of two trains per hour to these hubs (scoring 2). When combined with the previous data this results in a strategic case score of 36 for Calne.

Clusters

The 29 largest unconnected clusters, with the high-level, untested, assumptions of service and infrastructure interventions required, on Western Route are shown in Table 2:

National cluster size ranking	Cluster name	Assumed service	Assumed infrastructure
18	Plymouth: Plympton	Stop in current Cardiff - Penzance	New 2 platform station
19	West Oxfordshire: Witney	Stop in new Oxford - Witney	New 1 platform station and new line from North Cots Line to Witney
20	Torridge: Bideford, Northam	Extension of Exeter Central – Barnstaple to Bideford	New 1 platform station and new line from Barnstaple to Bideford
37	MENDIP: Street Village, Glastonbury Town, Glastonbury West & Street South,	Stop in new Highbridge & Burnham - Glastonbury	New 1 platform station and new line from Highbridge & Burnham - Glastonbury
38	TEWKESBURY: CHELTENHAM: Bishop's Cleeve, Prestbury & Racecourse, Cleeve Hill, Gotherington & Apperley,	Extension of Maesteg - Cheltenham along GWSR	Reconnection to GWSR and upgrade of heritage line and station(s)
43	WILTSHIRE: Calne South, Derry Hill & Hilmarton, Calne North,	Stop in new Calne - Chippenham	New 1 platform station and new line from Calne to Chippenham
45	WEST OXFORDSHIRE: Carterton South, Carterton North, Burford & Brize Norton,	Stop in new Oxford – Carterton via Witney	New 1 platform station and new line from North Cots/Witney to Carterton
46	MID DEVON: Tiverton East, Tiverton North & Outer, Tiverton West,	Stop in new Tiverton - Tiverton Parkway	New 1 platform station and new line from Tiverton to Tiverton Parkway
48	STROUD: GLOUCESTER: Upton St Leonards & Hardwicke, Quedgeley North, Quedgeley South,	Stop in current Gloucester - Westbury	New 2 platform station
53	WILTSHIRE: Royal Wootton Bassett Outer & Lyneham, Royal Wootton Bassett Town,	Stop in Swindon - Westbury	New 2 platform station
54	NORTH SOMERSET: Clevedon Central, Clevedon North & Walton,	Stop in new Yatton - Clevedon	New 1 platform station and new line from Yatton to Clevedon

62	WILTSHIRE: Corsham, Bowerhill & Lacock, Box, Colerne & Rudloe,	Stop in new Bristol - Oxford	New 2 platform station
69	CORNWALL: Helston, Porthleven, Breage & Praa Sands,	Stop in new Helston - St Erth	New 1 platform station and new line from near Hayle to Helston
74	EAST BRISTOL: Mangotsfield, Pucklechurch & Westerleigh, Emersons Green, Kingswood North East, Staple Hill North,	Stop in new Mangotsfield - Bristol Temple Meads	New 1 platform station and new line from Stapleton Road to Mangotsfield
75	CORNWALL: Bude & Stratton, Poundstock & Kilkhampton,	Extension of Exeter Central – Okehampton	2 new 1 platform stations and new line from Okehampton to Bude
82	VALE OF WHITE HORSE: Wantage Town, Grove,	Extension of London - Didcot to Grove	New 2 platform station entering loops on high-speed route
85	COTSWOLD: Cirencester South, Cirencester Central, Cirencester East & Stratton,	Stop in new Kemble - Cirencester	New 1 platform station and new line from Kemble to Cirencester
88	MENDIP: Wells Town, Draycott, Westbury & Wookey,	Stop in new Yatton - Westbury	New 1 platform station and new line from Yatton to Westbury via East Somerset Railway
89	MENDIP: BATH AND NORTH EAST SOMERSET: Stratton, Holcombe & Highbury, Westfield, Midsomer Norton Redfield, Peasedown & Bathavon West, High Littleton & Paulton, Radstock, Midsomer Norton North,	Stop in new Radstock - Westbury	New 1 platform station and upgrade/extension of freight line from near Frome
105	NORTH DEVON: Woolacombe, Georgeham & Croyde, Braunton,	Stop in new Ilfracombe - Barnstaple	New 1 platform station and new line from Barnstaple to Braunton
122	SOUTH SOMERSET: South Petherton, Seavington & Kingsbury, Martock,	Stop in new Taunton - Yeovil Pen Mill	New 1 platform station and new line from Taunton to Yeovil Pen Mill

127	EAST DEVON: Sidmouth Sidford, Sidmouth Town,	Stop in new Feniton - Sidmouth	New 1 platform station and new line from Feniton to Sidmouth
134	NORTH DEVON: Ilfracombe East, Ilfracombe West,	Stop in new Ilfracombe - Barnstaple	New 1 platform station and new line from Barnstaple to Ilfracombe
	Oxford: Cowley		Cowley Plus project
	North Somerset: Portishead and surrounding area		MetroWest (Portishead) project
	TAUNTON DEANE: Wellington South, Rockwell Green & West Buckland, Wellington North,		Wellington station project
	MID DEVON: Bradninch, Silverton & Thorverton, Cullompton,		Cullompton station project
	WEST DEVON: Horrabridge & Mary Tavy, Tavistock, Bere Alston, Buckland Monachorum & Yelverton,		Tavistock Line project
	Wiltshire: Devizes		Devizes Gateway interim feasibility study

Table 2: Population clusters assessed, alongside assumed service and infrastructure

The geographic distribution of the central point of the listed population clusters is shown in Figure 1.

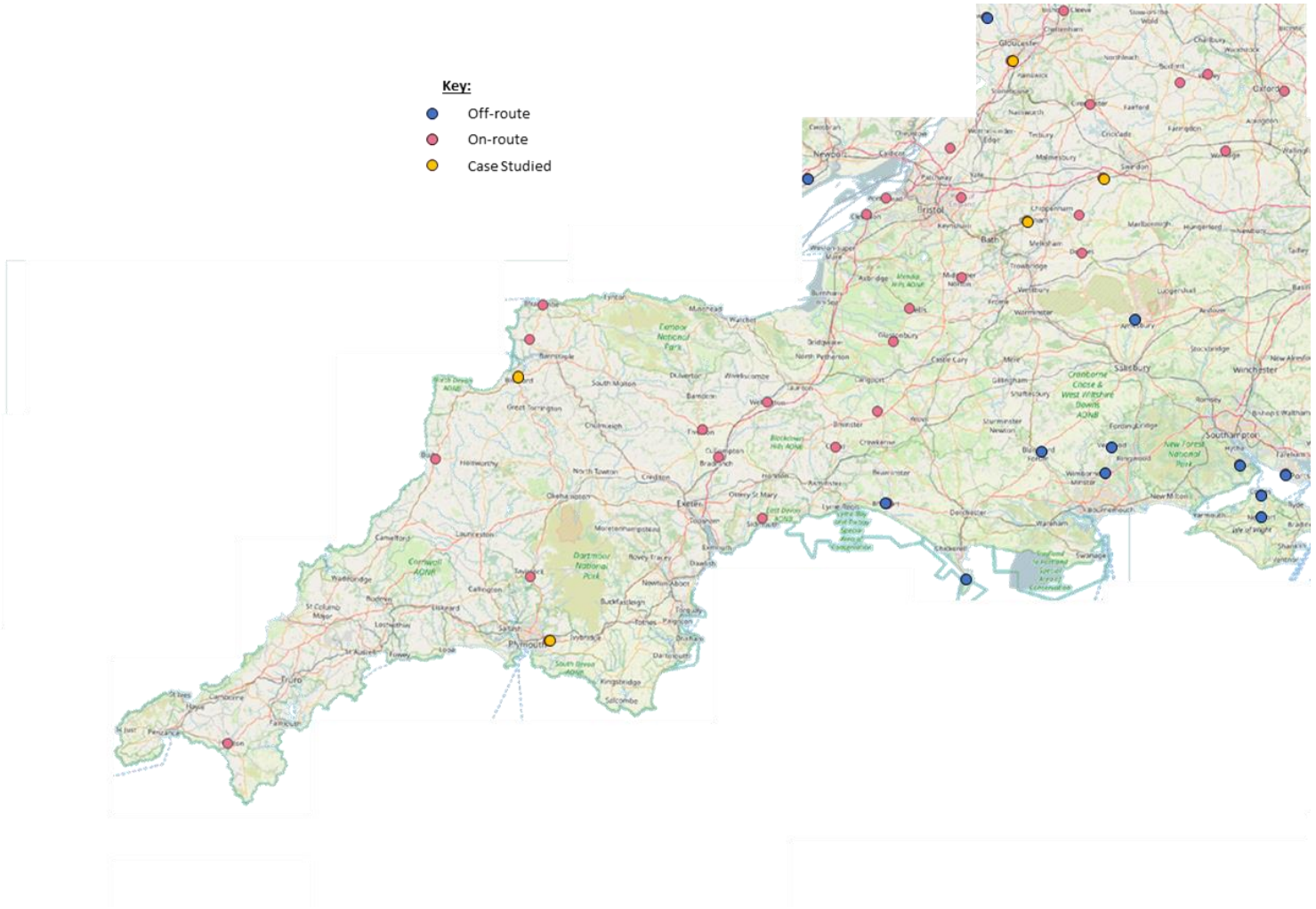

Figure 1: Distribution of population clusters across Network Rail's Western Region

Assessment

Table 3 presents the score for each population cluster against the strategic case and likely complexity analyses, and the total score. Clusters are ranked by the total score. Figure 2 plots the strategic case and likely complexity scores for each population cluster.

Rank	Cluster	Strategic Sub-Total	Complexity Sub-Total	Total
1	Plympton, Devon	56	-15	**41**
2	Corsham, Wiltshire	52	-20	**32**
3	South of Gloucester	37	-10	**27**
4	Royal Wootton Bassett, Wiltshire	48	-25	**23**
5	Bideford, Devon	52	-35	**17**
6	East of Cheltenham	31	-20	**11**
7	Tiverton, Devon	43	-35	**8**
8	Witney, Oxfordshire	46	-40	**6**
9	Wantage, Oxfordshire	26	-20	**6**
10	Calne, Wiltshire	36	-35	**1**
11	East Bristol	35	-40	**-5**
12	Woolacombe and Braunton, Devon	37	-45	**-8**
13	Helston, Cornwall	27	-35	**-8**
14	Clevedon, Somerset	31	-40	**-9**
15	Bude, Cornwall	30	-40	**-10**
16	Cirencester, Gloucestershire	20	-30	**-10**
17	Glastonbury and Street, Somerset	34	-45	**-11**
18	Ilfracombe, Devon	34	-45	**-11**
19	Martock, Somerset	31	-45	**-14**
20	Wells, Somerset	20	-35	**-15**
21	Carterton, Oxfordshire	48	-65	**-17**
22	Sidmouth, Devon	23	-45	**-22**
23	Midsomer Norton and Radstock, Somerset	19	-45	**-26**

Table 3: Overview of scoring for the clusters

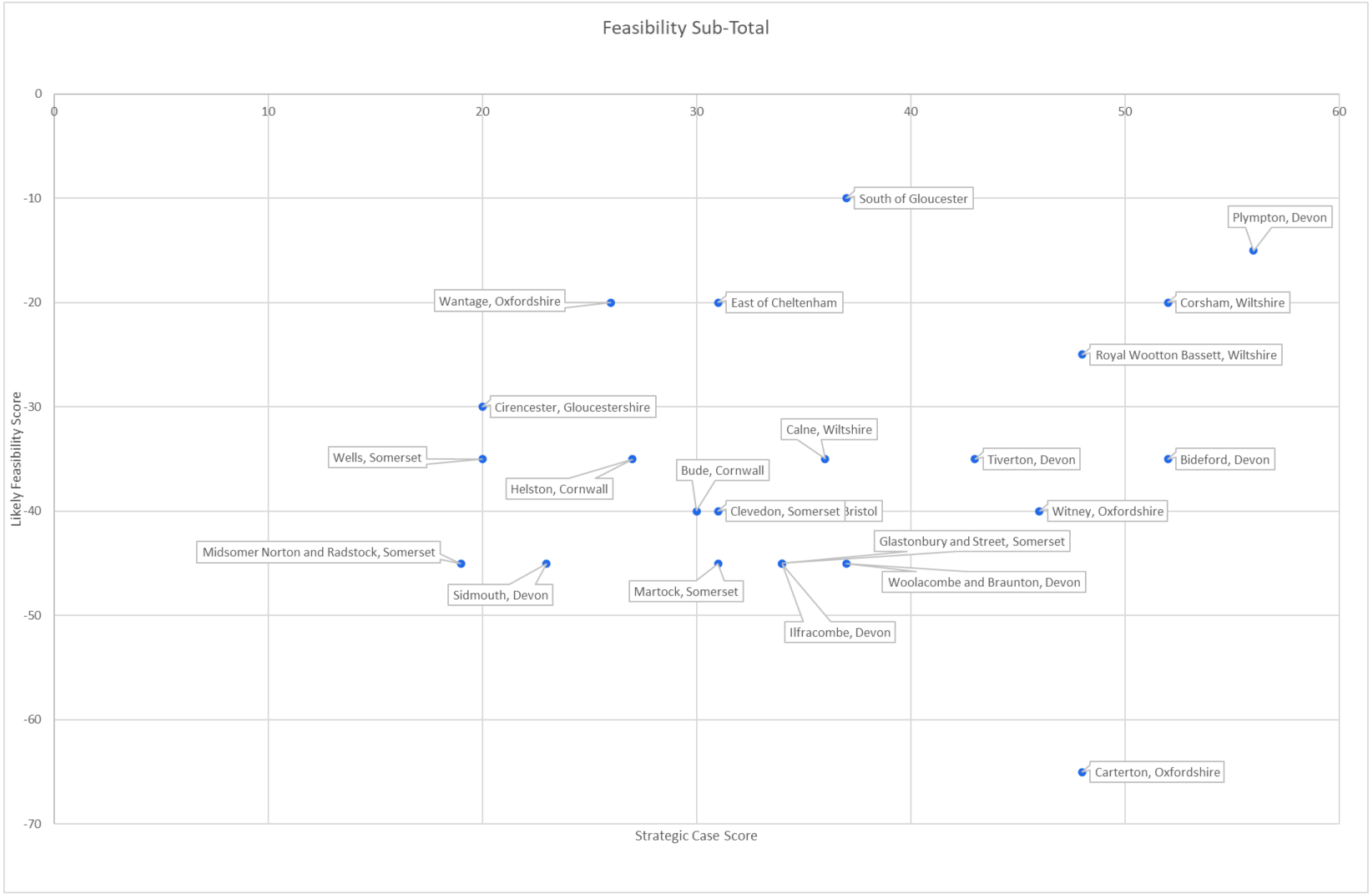

Figure 2: Scatter chart of scoring of new station opportunities

Figure 2 evidences two important and intuitive principles relating to likely complexity:

1. The need for new track significantly impacts the score. This is intuitive given the fact that capital costs for infrastructure tend to run into the tens or hundreds of millions and requiring very strong economic benefits to offset.
2. The assumption on service is significant. Where a new station would require a new service it must carry the large operational costs associated with this. Where the need for a service to provide calls aligns with established strategic recommendations in the area this impact on the scoring is reduced (e.g. Plympton).

Whilst in general there is clearly a correlation between population size (which is a close proxy for station catchment) and potential demand this is far from the only relevant factor in the strategic case score. The largest clusters, such as Plympton and Carterton, have commensurately high strategic case scores, but employment catchments, likely links to regional hubs, and demographic factors strongly influence strategic case scores.

It is notable that the large majority of the highest scoring clusters have previously been proposed or developed in some form, suggesting alignment between this framework and existing approaches to identifying new station opportunities

The population cluster with the highest scoring strategic case is Plympton, which has strong employment, population and public transport usage statistics, as well as featuring in a Network Rail Strategic Study and greatly improving access to the regional hub from the area. Relative to some of the other highest scoring opportunities, such as Corsham and Royal Wootton Bassett, Plympton scored slightly better in complexity, due to the ability to add calls in an existing service.

The next highest scoring population clusters in terms of strategic case are Corsham and Bideford. Bideford has a poorer likely complexity score due to new track and service requirements. Bideford's strategic case suitability is driven by opportunities to level up (from the Index of Multiple Deprivation) and population numbers.

The lowest scoring population clusters in terms of strategic case include Sidmouth, Wells, and Midsomer Norton and Radstock. Overarching issues for all of these opportunities include: low population, employment and public transport usage figures, as well as insignificant levels of improvement to access of the regional hub (based on the assumptions made), often due to requirements to change trains in order to access them.

Carterton, in the bottom right-hand corner of Figure 2, presents an interesting case. Its strategic case score is among the highest, but it scores lowest in likely complexity (i.e. it is the most complex of all opportunities studied). This reflects the need for a long section of new railway and a new service. It should be noted that the proposal for Carterton includes a station at Witney (a separately identified cluster) so the Carterton strategic case and likely complexity scores include Witney.

Exclusions

The criteria for the RYR dataset mean that a number of opportunities will have been excluded from assessment. Just as this work does not claim to give a definitive answer on the new stations that are identified neither does it mean that opportunities for new stations that are not identified could not have a case.

The method excludes:

- Clusters with a population under 10,000 people but nonetheless a potential rail market, such as parkway stations, where the catchment is very large by design, and stations serving seasonal and leisure destinations.
- Population clusters less than 5km away from existing stations. This criterion rules out most of the Thames Valley, and suburban areas of Bristol, Exeter, Plymouth and Reading, as well as branch lines on the route. The existing network proves that, in urban areas in particular, stations may be closer than 5km and still serve a distinct and economically sustainable purpose.
- Population clusters that are within 5km of an existing station that does not have an attractive service (e.g. poor or irregular frequency, or not reflecting dominant journey flows).
- Clusters which may be expected to have a strong case for a new station in future but do not currently, for example where significant housing or employment growth is allocated or proposed.

Case Studies

To demonstrate both the value and potential limitations of the assessment framework case studies are presented for the five highest-scoring clusters:

- Plympton new station, Devon
- Corsham new station, Wiltshire
- Royal Wootton Bassett new station, Wiltshire
- New station south of Gloucester, Gloucestershire
- Bideford new station and line, Devon

The case studies examine, at a high-level, the key features of each cluster, providing further insight into the *strategic case* and *likely complexity* categories by bringing together information and insight from a range of sources. Further consideration is given to the location – both geographical and railway – of each cluster and its population characteristics, as well as the operational and infrastructure factors going into the complexity scoring. Case studies were shared with a representative local stakeholder for fact-checking and guidance on strategic alignment with local plans and policies.

Moving forward

The production of the following case studies marks the conclusion of this workstream, which does not include recommendation of further actions or development of specific interventions for any of the population clusters identified.

This document does not represent a recommendation to progress development of any of the findings and does not indicate Network Rail specific support for any referenced new stations. Instead, it is intended to inform discussions with third parties considering investment in the rail network to address strategic transport issues.

The value of this work is in developing a common framework with which to assess new station opportunities at a high level on the basis of connectivity benefit and likely complexity and establishing a high-level position on the relative merits of the new station opportunities on Western Route identified by the RyR programme population cluster analysis.

Network Rail remains committed to working with any party wishing to invest in the rail network – including on new stations – regardless of the findings set out in this document. However, we recommend using these findings as an initial basis for consideration of new station opportunities on Western Route.

Case Studies

Plympton

Location

Plympton is a suburb of the city of Plymouth in Devon, situated roughly 4 miles west of the city centre. It is close to the A38 - a key road for South West connectivity - and the Devon Mainline. From a rail perspective, Plympton is centred around the 242 mile post of the Great Western Main Line, with Tavistock Junction and Plymouth Station to the west at the 243 and 245 mile posts respectively.

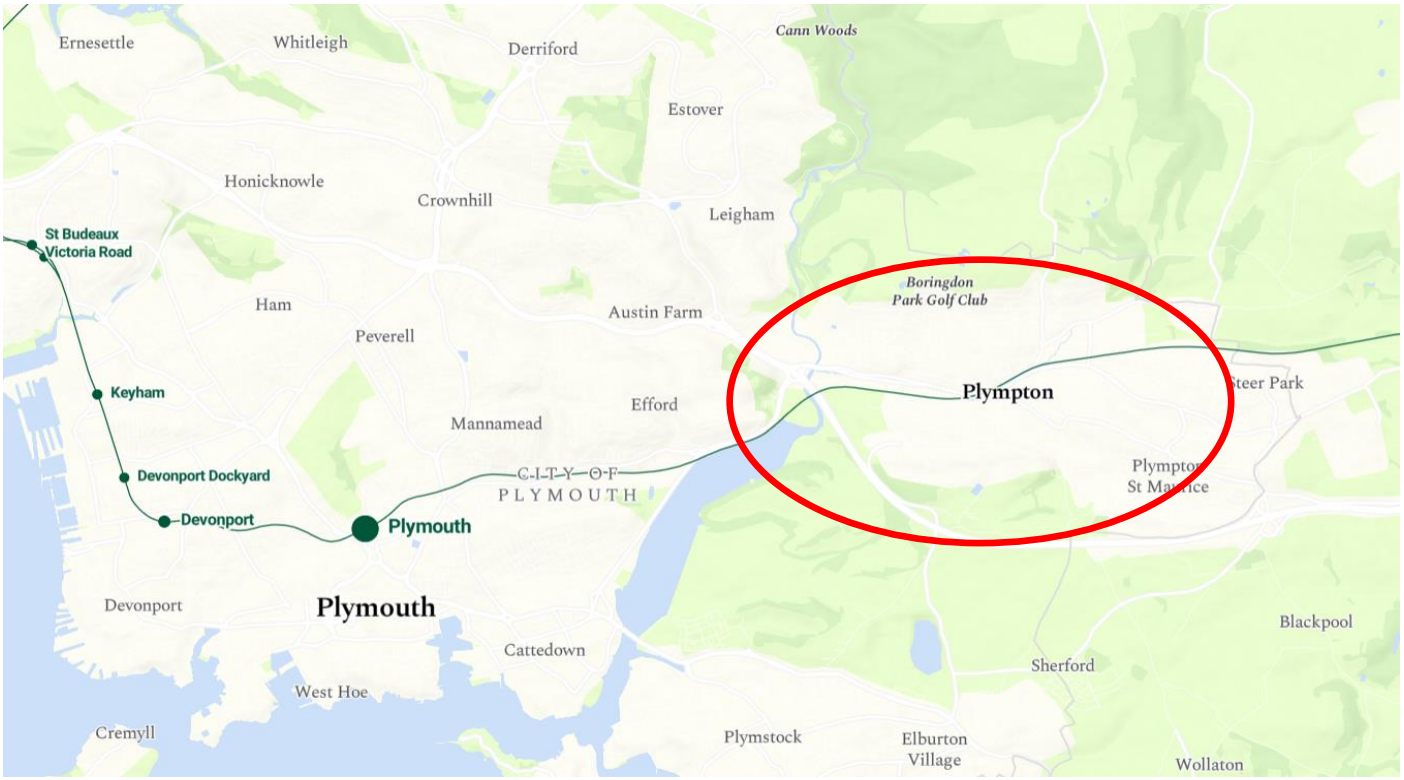

Figure 3: Map showing Plympton, Plymouth and the railway in the area. (Source: Merritt Cartographic British Railways Map)

Population

According to ONS 2019 estimates, the cluster around Plympton has a population of 34,000. There are also plans for 5,500 new homes in Sherford – less than 2 miles south of Plympton, while in the wider Plymouth area the city council are also seeking to reduce the number of empty homes by increasing council tax for owners of empty houses which could result in further population growth. The employment figure for this same cluster is 29,000 with an unemployment rate of 3%, suggesting a high proportion of working age individuals and a likely opportunity for modal shift of the commuting market.

Previous Work

No bid was submitted for a new station at Plympton to any of the Restoring Your Railway (RYR) funding rounds, however it was highlighted as the highest priority new station opportunity in the Peninsula region in the Peninsula Rail Corridor Strategic Study (Network Rail, 2022). That study highlighted it as a potential calling point for a cross-Plymouth metro service. On 19th June 2023, Plymouth City Council demonstrated their support for the scheme when they voted to form a Strategic working group to progress a railway station in the East of Plymouth to serve Plympton, Sherford and Langage - the site of the new freeport.

A report was completed for Plymouth City Council, by WSP, in 2017, looking at the possibility of improving services to Ivybridge, combined with a new station at Plympton. The report noted that capital costs and demand were not dissimilar to other recent new stations. However, it was suggested the business case struggled due to the proposition for extensive additional train services to serve the proposed new station at Plympton. Service options are looked at, in light of recent developments, in the existing rail services section of this case study.

The original Plympton Station, which closed to passengers in 1959, was located near the 241.75 mile post. Peninsula Transport have highlighted that a new station could not be opened in the same location and so a new location would need to be found, with sufficient space for any associated infrastructure. Any location is likely to be closer to Tavistock Junction freight site than the centre of Plympton itself due to land availability, albeit the aforementioned report suggested that the closer the site was to Tavistock Junction, the lower the trip rate was likely to be.

Existing Transport Options

There are regular bus services between Plympton and Plymouth, shown in Table 4. Other school and hospital specific services are in place at certain times during the day, as well as the Coypool Park and Ride services. Despite these regular services, according to 2011 travel to work data just 3.7 % of people use public transport to access employment. This means that car use is still common, and Plymouth City Council have recently submitted plans to upgrade the A374 to curb some of the traffic issues often experienced on this stretch of road.

Bus Route	Regularity	Journey Time to Plymouth (minutes)
20/20A	every 30 mins	32
21/21A	every 10 mins	30
59	every 3 hours	25

Table 4: Relevant Bus Services in Plympton

Journey Flows

Commute datashine (based on 2011 travel to work census data) shows strong commuting flows from Plympton to multiple rail-served areas within Plymouth—in particular the suburban stations of Devonport and Dockyard—which would likely experience shorter journey times than current car/bus journeys. This could also remove cars from the A38 and other local roads, improving road capacity for commuters not able to benefit from a rail link.

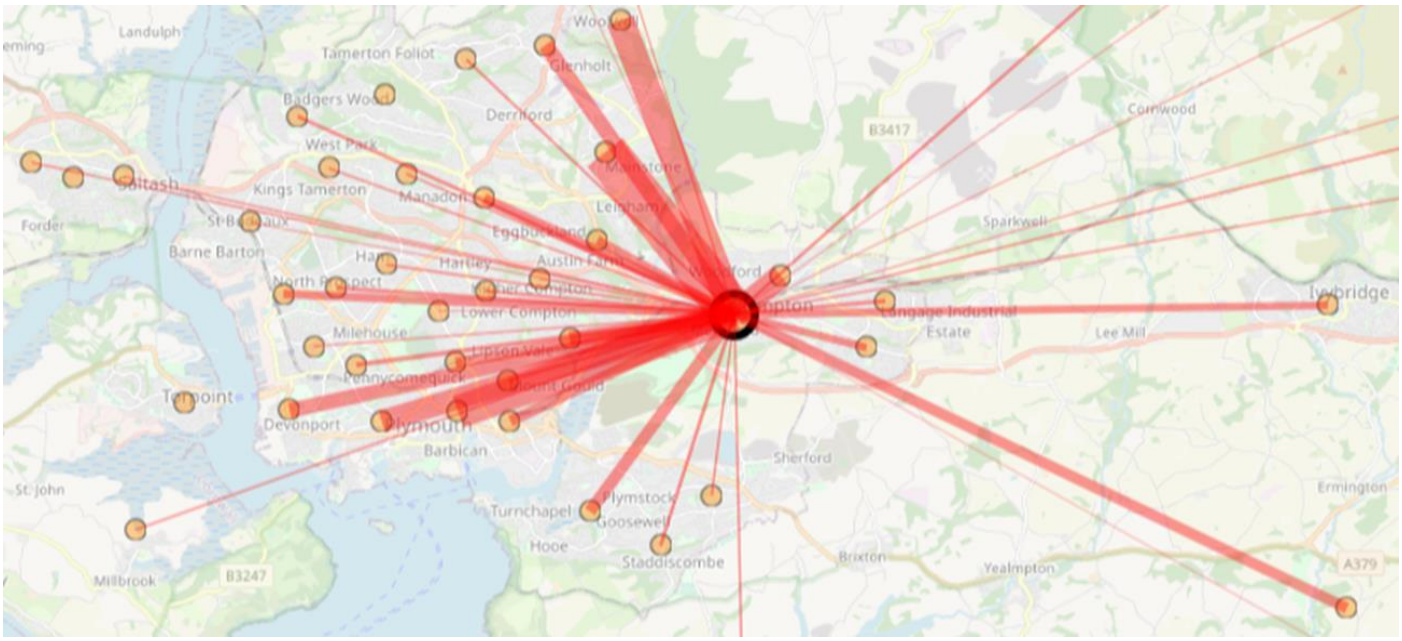

Figure 4: Map showing Travel to Work flows from the Plympton Lower Layer Super Output Area (Source: Commute Datashine)

Existing Rail Access

The closest station to Plympton is Plymouth, roughly 6 miles away by road. By car this journey typically takes around 20 minutes, however poor bus links mean the journey to Plymouth Station from the centre of Plympton can take upwards of an hour. To the East, the closest station is Ivybridge, roughly 7 miles away by road. By car, this journey typically takes around 15 minutes, while bus journeys take just under an hour. Thus, in either direction, for potential passengers without a car, accessing the railway takes at least an hour currently, significantly devaluing its offering.

Based on latest research on commute time people in the South West would on average be willing to commute 42 minutes to work.[1] Assuming the car access times to the two stations shown above, and a 5 minute changeover at the station, individuals are limited to commuting as far as Totnes in the East

[1] Jackson-Stops (2023) The reverse race for space: 38 Minutes is the new golden hour commute: Jackson-stops. Available at: https://www.jackson-stops.co.uk/articles/the-reverse-race-for-space-38-minutes-is-the-new-golden-hour-commute#:~:text=While%2038%20minutes%20was%20the,for%2015%20minutes%20or%20less./

and Saltash in the West. If a rail station and service were introduced, it could be assumed that this would widen this commuter area as far as Newton Abbot and Liskeard.

However, it is likely that the principal benefit of a station in Plympton would be the connectivity to Plymouth, the largest settlement and employment centre in the area. The fact that the closest current station is Plymouth is important – connectivity beyond Plymouth is likely to be less utilised than connectivity to Plymouth itself.

Existing Rail Services

Operator	Service Type	Origin	Destination	tph	tpd	Call Before	Call After
GWR	Inter-Regional	London Paddington	Plymouth/Penzance	1	17	Totnes	Plymouth
XC	Inter-Regional	North East	Plymouth/Penzance	1	14	Totnes	Plymouth
GWR	Inter-Regional	Cardiff Central	Penzance	0.5	7	Ivybridge	Plymouth

Table 5: Existing Rail Services on the section of line around Plympton

Table 5 states the number of services currently passing along the section of line between Ivybridge and Plymouth on which a new station at Plympton would be located. The majority are long-distance, limited-stop services, which are not likely to be suitable for the potential station role. The most likely service to provide calls would be the Cardiff Central to Penzance service, which is an extended service from Taunton. The established industry strategy sees this becoming an hourly service, although the timetable submitted for the Wellington and Cullompton Full Business Case, requires this service to be split at Exeter; resulting in a call at Plympton being assumed in an Exeter-Penzance service.

A new cross-Plymouth metro service would also be possibility, calling at the suburban Plymouth stations and as far as Tavistock in the north. This may be linked to the Tavistock line reinstatement programme, but a cross-Plymouth metro service need not be dependent on it.

Assuming the calls were added to the existing Exeter to Penzance service, the following speculative journey times, shown in Table 6, could be anticipated:

Destination	New Journey Time (mins)	Existing PT Journey Time (mins)
Plymouth	7	30
Exeter	60	120

Table 6: Speculative and existing journey times by public transport

Indicative Complexity

Given that Plympton is on the Devon mainline, a new two through-platform station on the mainline would be the obvious infrastructure intervention. Typically, based on evidence from recent new stations, a new two platform station may be expected to cost between 10 and 20 million pounds; however, this will depend on signalling complexity and regional differences—whilst also not accounting for recent inflation rises.

Strategic Alignment

One of Peninsula Transport's goals (from their 2021 Vision statement) is the improvement of connections between people, businesses and places through the enablement of more people accessing public transport options across the Peninsula.

Plymouth City Council's strategic principles for transport, emphasise the need to provide genuine alternative ways to travel and reduce the impact of severance from transport networks on economic prosperity.

A new station at Plympton with the provision of a service into Plymouth would provide a more efficient method of transport to access Plymouth and the rest of the country than currently exists with the current bus and rail offering from the Plympton area. This is supported in Network Rail's Peninsula Rail Corridor Study, which has been endorsed across the rail industry, as well as by local authority and sub-national transport authority partners and this support is echoed in Peninsula Transport's Rail Strategy.

Plympton falls within the new Plymouth and South Devon Freeport. According to Plymouth City Council: "The Freeport represents a unique opportunity to level up, address historical challenges and leverage exciting new opportunities to transform the economy of Plymouth and South Devon", this could align well with a new station at Plympton and a new cross-Plymouth metro service.

Now, more than ever, the importance of consensus of local support, including funding, is paramount. Parties most likely to be interested in, and benefit from, a new station at Plympton include:

- Plymouth City Council
- Devon County Council
- Peninsula Transport
- Freeport Area Developers

There may also be opportunities for land value capture, and any potential future Restoring Your Railway or specific funding schemes focussed on addressing regional disparities.

Key Challenges

Any new station proposal faces the challenges of demonstrating value for money, financial affordability, and alignment with industry strategic plans. The analysis for this case study identifies the following specific challenge for Plympton:

- Finding a suitable site

Corsham

Location

Corsham is a market town in Wiltshire, situated roughly 8 miles north-east of Bath. The A4 road runs through the town, connecting it to both Bath and Chippenham. From a railway perspective Corsham sits roughly at the 98 mile post between Thingley (96 mile) and Bathampton (104.5 mile) Junctions on the Great Western Mainline.

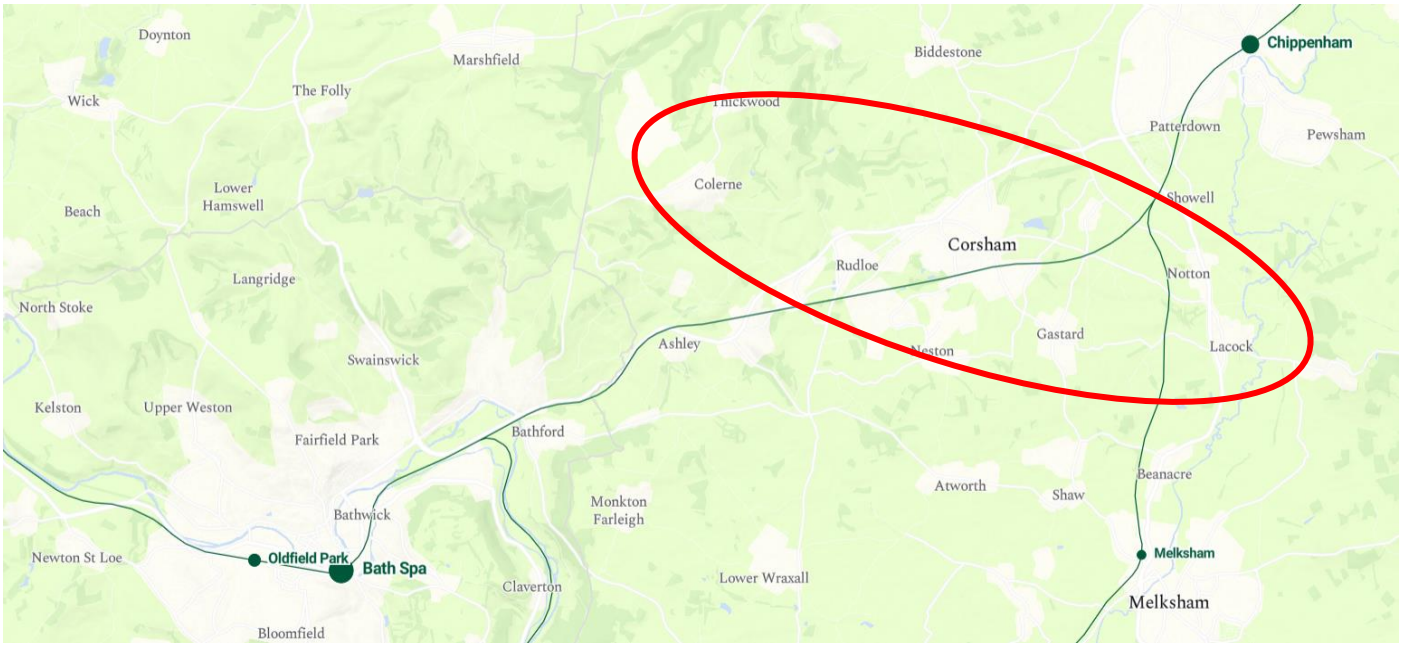

Figure 5: Map showing the location of Corsham relative to Chippenham and Bath, as well as the railway lines in the area. (Source: Merritt Cartographic British Railways Map)

Population

According to ONS 2019 estimates, the cluster around Corsham, that is greater than 5km away from the nearest mainline railway station has a population of 20,000, this includes villages such as Lacock and Colerne. Of these 20,000, roughly 50 % are in employment, while the unemployment rate is 3.7 %, suggesting a large proportion of the catchment is outside of working age and potentially a more leisure-focussed rail market.

Previous Work

In Autumn 2021 Wiltshire Council bid to the DfT as part of the Restoring Your Railway Ideas Fund, for funding to develop a feasibility study for a new station in Corsham was approved. An SOBC was developed and submitted to the department in November 2022.

This RYR submission was the latest in numerous pieces of work undertaken to establish the case for re-opening a railway station at Corsham. In 2000, a bid was put forward for the Rail Passenger Partnership fund, in 2014 service options were evaluated and financial forecasting was undertaken, while in 2016 SLC Rail were commissioned to write a report on everything that had been learned in the previous two decades. This work recognised that the core determining factor with regards to the feasibility of Corsham station was finding a suitable service and covering the operating costs of such a service without subsidy.

The original Corsham Station, which closed to passengers in 1965, was located near the 98.25 mile post. The most recent work to reopen the station so far, has assumed a new site (shown in green), slightly west of the original location (shown in blue). The land in this area continues to be safeguarded for this purpose.

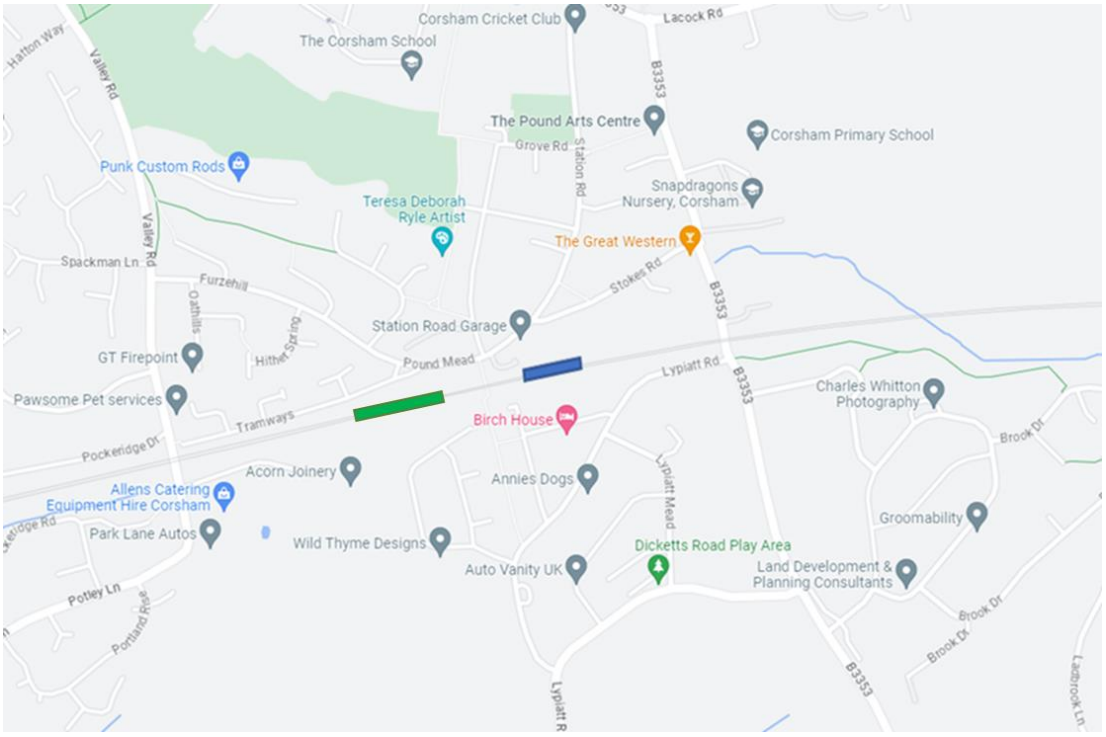

Figure 6: Location of former and proposed Corsham Station (Source: Google Maps)

Existing Transport Options

Existing bus routes between Corsham and other rail linked towns and cities are limited, with the only regular service being the X31(Table 7) which connects to Bath and Chippenham twice an hour. There are also a few services each day to Melksham and Trowbridge, which do not act as rail hubs for Corsham owing to their level of service and orientation away from the dominant east-west journey flows.

National Express coaches between London and Bath stop here, however they only provide connectivity to and from London (due to pick-up and drop-off only instructions).

The Corsham Community Area Framework notes that the bus network "lacks connectivity" and as such, car use is common and this regularly leads to traffic issues in the area, particularly on the A4 and B3109. One particular area of concern is the peak journey time by road from Corsham to Bath Spa, which nearly doubles relative to the off-peak conditions due to large-scale congestion. This has a negative impact on both the car and existing public transport users. This is reflected in the 2011 Travel to Work census data, stating that only 4.3 % of these individuals travel to work by public transport.

Bus Route	Regularity	Journey Time to Bath (minutes)	Journey Time to Chippenham (minutes)
X31	every 30 mins	40	21

Table 7: Relevant bus services in Corsham

Journey Flows

Commute datashine (based on 2011 travel to work census data) shows strong commuting flows from Corsham to both Chippenham and Bath. Whilst rail journeys to Bath would likely be competitive from a Generalised Journey Time perspective, particularly due to traffic congestion issues, Chippenham is only a 15 minute drive and so would likely not be as competitive when factoring in first and last mile travel. There are also flows to both Swindon and Bristol, for which any service that would serve Corsham would likely cater.

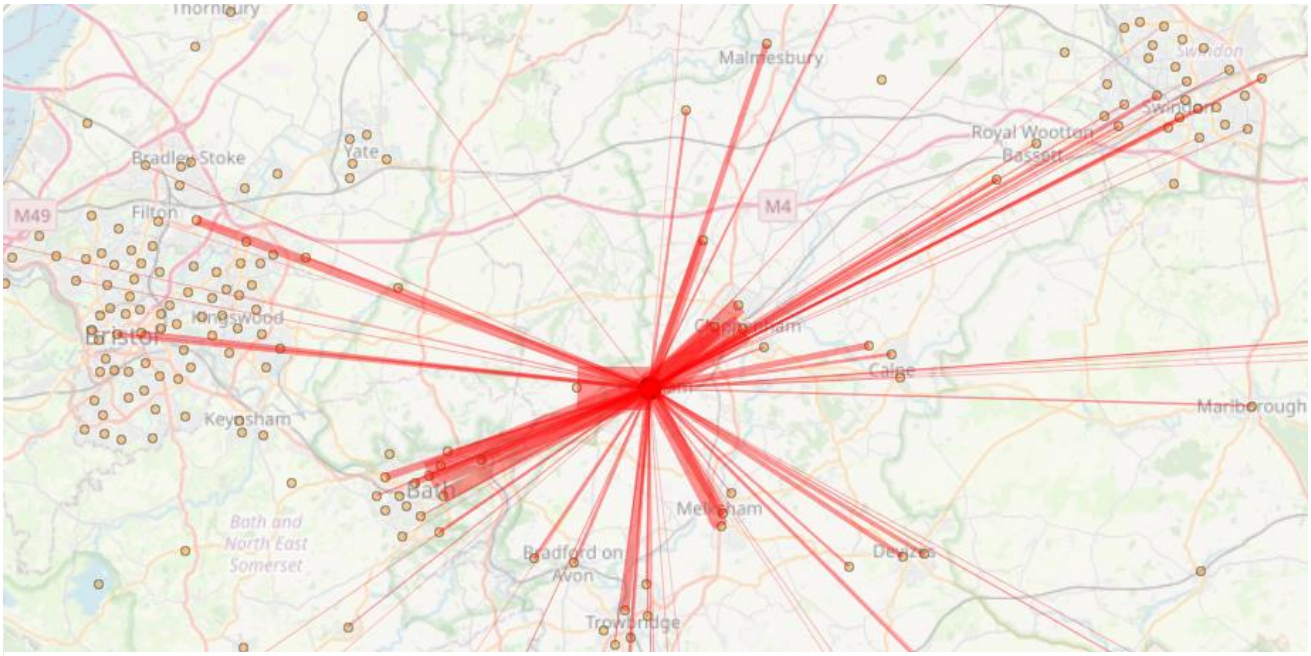

Figure 7: Map showing travel to work flows from the Lower-Level Super Output Area for Corsham (Source: Commute Datashine)

Existing Rail Access

The closest station to Corsham is Melksham, roughly 4 miles away by road. By car this journey typically takes around 10-15 minutes. There is no regular bus. Melksham, however, has a relatively low level of service - service roughly once every other hour. The closest station with a frequent service is Chippenham, roughly 5 miles away by road. By car this journey takes 15 minutes and by bus 30 minutes. It is unlikely that either of these stations would be used for accessing Bath (the main commuting flow) since they are in the opposite direction of travel and access to Chippenham station is discouraged by congestion and car parking charges. The nearest station west of Corsham is Bath Spa itself, around 10 miles or 30 minutes' drive away, which is of no use for the main journey flow.

Based, on latest research on commute time people in the UK would on average be willing to commute 38 minutes to work.[2] It could be assumed that with a new train station at Corsham, the employment centres of Bath, Bristol and Swindon could all be reached in that time, meaning rail could both be an attractive travel mode and open up new employment opportunities. If this assumption was extended to one hour, per previous research into the 'golden hour', it could be assumed that both Reading and Oxford could be accessed as well.
Corsham is also home to a number of employment opportunities, particularly in the technology and defence sectors, providing better transport links to these opportunities could see more inflows by rail, and potentially a wider labour market.

Existing Rail Services

Operator	Service Type	Origin	Destination	tph	tpd	Call Before	Call After
GWR	Inter-regional	London Paddington	Bristol Temple Meads	2	36	Swindon	Chippenham

Table 8: Existing Rail Services on the section of line around Corsham

Table 8 demonstrates that only GWR express services between London Paddington and Bristol Temple Meads traverse this section of line. Local services in the area divert from the mainline at Thingley or Bathampton junction towards Westbury. The recent SOBC concluded that these services are likely to be unsuitable to call at Corsham, since the disbenefit current passengers would experience in lengthened journey times would outweigh the connectivity benefits to new passengers at Corsham.

Previous work has assumed the station could be served by a new Bristol to Oxford service. If this service were to be introduced most of the demand would likely be more focussed on the longer distance rather than more local flows, so analysis of the benefits and disbenefits of a Corsham call would be required.

[2] Jackson-Stops (2023) The reverse race for space: 38 Minutes is the new golden hour commute: Jackson-stops. Available at: https://www.jackson-stops.co.uk/articles/the-reverse-race-for-space-38-minutes-is-the-new-golden-hour-commute#:~:text=While%2038%20minutes%20was%20the,for%2015%20minutes%20or%20less.

Assuming calls were provided by this new Bristol to Oxford service, speculative journey times to the local regional hubs could be anticipated to be:

Destination	New Journey Time (mins)	Existing PT Journey Time (mins)
Bath	7	40
Chippenham	7	21
Bristol	20	55
Swindon	22	55

Table 9: Speculative and existing journey times by public transport

Indicative Complexity

Given that Corsham is on the Great Western mainline, a new two through-platform station—with one platform on each running line - would be the obvious infrastructure intervention. Typically, based on evidence from recent new stations, a new two platform station can be expected to cost between 10 and 20 million pounds; however, this will depend on signalling complexity and regional differences—whilst also not accounting for recent inflation rises. The costs of obtaining access on an intercity mainline with high value services would also need to be accounted for.

The SOBC estimated the cost of a five-car platform suitable for Bristol-Oxford services would cost around £14m, excluding risk, uncertainty and optimism bias.[3]

Strategic Alignment

In their Strategic Transport Plan Western Gateway STB emphasise the need for improved regional connectivity in order to increase rail's market share and induce modal shift. Meanwhile, Wiltshire Council seek to increase rail connectivity through the provision of bus-rail links and assist with the implementation of some new stations, as part of their local transport strategy. A new station at Corsham would align with this both of these stakeholders' strategies since journeys from to regional hubs such as Bath and Bristol would newly be able to be made by rail.

There is potential for the station to conflict with stakeholder priorities for faster journey times to other stations in the region, due to the in-filling of capacity on key high-speed routes.

Now, more than ever, the importance of consensus on local support, including funding, is paramount. Parties most likely to be interested in, and benefit from, a new station at Corsham include:

- Western Gateway STB
- Wiltshire Council

[3] Atkins (2022). Corsham Station Strategic Outline Business Case

- Swindon and Wiltshire Local Enterprise Partnership

There may also be opportunities for land value capture and utilisation of Community Infrastructure Levy funds, as well as any potential future Restoring Your Railway style funding schemes.

Key Challenges

Any new station proposal faces the challenges of demonstrating value for money, financial affordability, and alignment with industry strategic plans. The analysis for this case study identifies the following specific challenges for Corsham:

- Providing a suitable service
- Relationship with other new station aspirations on line of route

Royal Wootton Bassett

Location

Royal Wootton Bassett is a market town in Wiltshire, situated roughly 5 miles west of Swindon. It is 1 mile west of junction 16 of the M4. From a railway perspective, Royal Wootton Bassett is situated close to the Great Western Mainline around the 83 mile post, with Swindon to the east at the 77.5 mile post and Wootton Bassett Junction (where the South Wales Mainline branches off) just slightly west at the 83.25 mile post.

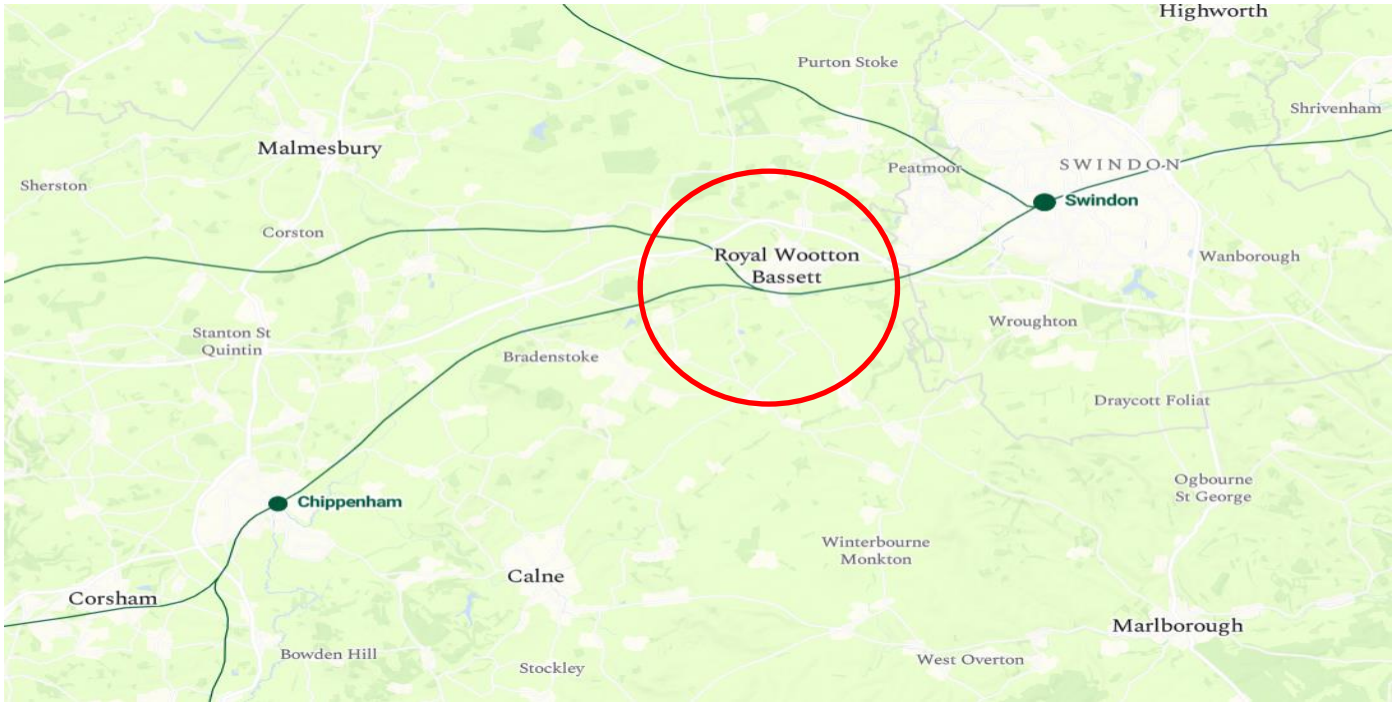

Figure 8: Map showing the locations of Royal Wootton Bassett, Swindon and Chippenham and the railway in the area. (Source: Merritt Cartographic British Railways Map)

Population

According to ONS 2019 estimates the cluster around Royal Wootton Bassett that is greater than 5km away from the nearest mainline railway station has a population of 21,000, this includes villages such as Hook and Lyneham, as well as the main population centre of Royal Wootton Bassett itself. Only 9,600 of these people are in employment, but the unemployment is just 3.7%, suggesting a large proportion of residents outside of the work force and potentially a more leisured focussed possible rail market.

Previous Work

No bid was submitted for a new station at Royal Wootton Bassett to any of the Restoring Your Railway funding rounds, however it was mentioned in the *Reintroduction of secondary services on the Great Western Mainline* bid and has been of interest previously.

Wiltshire council commissioned a consultant to look into the feasibility of a station at Royal Wootton Bassett in 2012 within a wider remit to look at improving rail services across Wiltshire. In 2016, this work was built upon by SLC Rail who produced a feasibility report on behalf of the Swindon and Wiltshire Local Enterprise Partnership. This report looked at a number of location options, with the two most suitable being the historic station location and one nearer the M4 to act as a Parkway station for Swindon in addition to its local offering to Royal Wootton Bassett residents. This work recognised that the core determining factor with regards to the feasibility of Royal Wootton Bassett station was finding a suitable service and covering the operating costs of such a service without subsidy.

The original Royal Wootton Bassett Station, which closed to passengers in 1965, was located to the east of the junction of the South Wales and Great Western Mainlines. Most of the previous work has looked at reopening the station on the original site, on the junction, since a station on either main line individually would be a fair distance from the main population cluster; however, the aforementioned SLC rail report has highlighted an alternative that could be explored.

Existing Transport Options

Existing bus services between Royal Wootton Bassett and Swindon are good, with four services an hour operating for most of the day, expanded upon in Table 10. Other irregular specific services are in place at certain times during the day. According to the 2011 Travel to Work survey just 4.3% of the population travel to work by public transport, likely reflecting the poor connectivity to employment centres other than Swindon and the relative increase in journey time and ease compared to driving.

Bus Route	Regularity	Journey Time to Swindon (minutes)
55	every 20 mins	26
99	every hour	20

Table 10: Relevant bus services in Royal Wootton Bassett

Journey Flows

Commute datashine (based on 2011 travel to work census data) shows strong commuting flows from Royal Wootton Bassett to multiple areas within Swindon, some of which would likely experience shorter journey times than current car/bus journeys. This could also remove cars from local roads, improving road capacity for commuters not able to benefit from a rail link. It should be noted however, that the feasibility of the train partially fulfilling these journeys will rely on suitable 'final mile' onwards transport options.[4] Some parts of West Swindon are actually closer to Royal Wootton Bassett than to Swindon station.

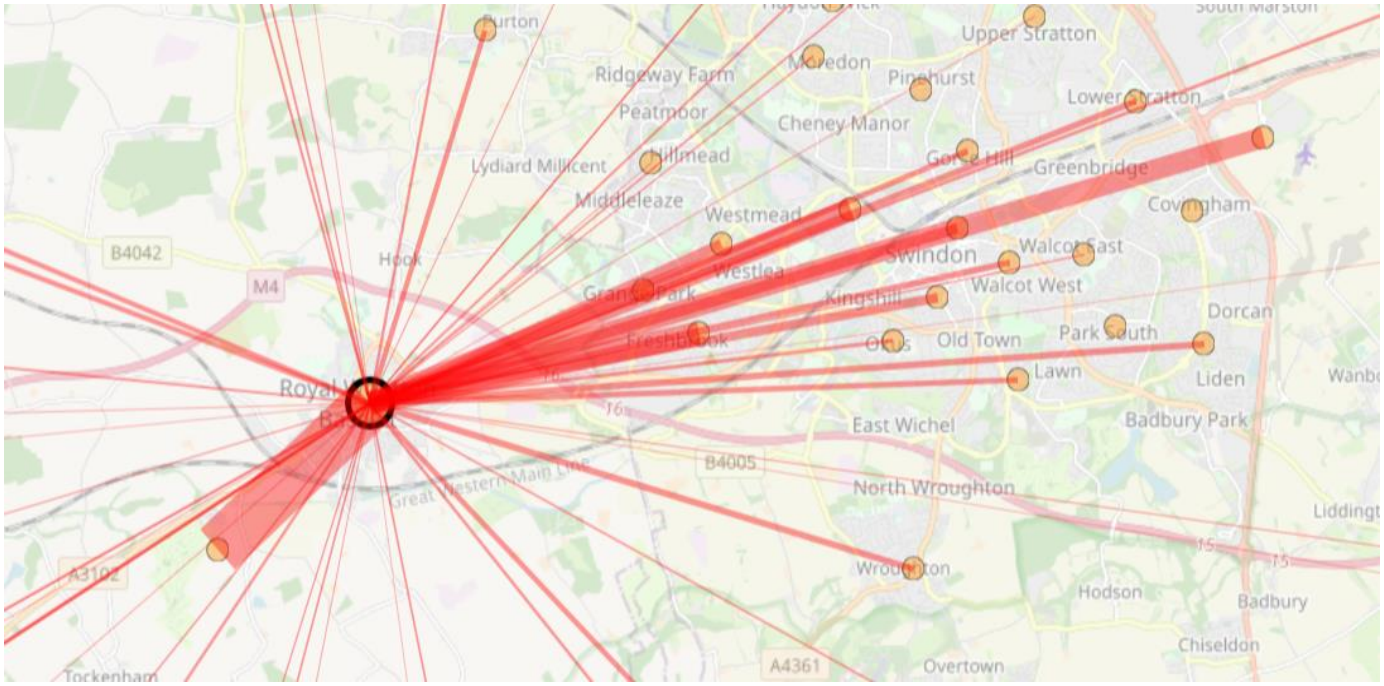

Figure 9: Map showing travel to work flows from the Lower-Level Super Output Area for Royal Wootton Bassett (Source: Commute Datashine)

Existing Rail Access

The closest station to Royal Wootton Bassett is Swindon, roughly 7 miles away by road. By car this journey typically takes around 15 minutes, while a regular bus journey takes just over 30 minutes.

Based on latest research on commute time people in the United Kingdom would on average be willing to commute 38 minutes to work.[3] Assuming the car access times to Swindon, and a 5 minute changeover at the station, individuals are limited to commuting as far as Didcot in the East and Chippenham in the West, whilst, notably, driving away from Chippenham to access the railway. If a rail

[4] Jackson-Stops (2023) The reverse race for space: 38 Minutes is the new golden hour commute: Jackson-stops. Available at: https://www.jackson-stops.co.uk/articles/the-reverse-race-for-space-38-minutes-is-the-new-golden-hour-commute#:~:text=While%2038%20minutes%20was%20the,for%2015%20minutes%20or%20less.

station and service was introduced, it could be assumed that this would widen this commutable area as far as Reading and Bath or Bristol (with a suitable service). When loosening this assumption to an hour by rail, which previous research has suggested is a suitable commute time, even more employment opportunities become available, including Oxford and potentially west London.

Existing Rail Services

Operator	Service Type	Origin	Destination	tph	tpd	Stop Before	Stop After
GWR	Inter-regional	London Paddington	Bristol Temple Meads	2	36	Swindon	Chippenham
GWR	Inter-regional	London Paddington	South Wales	2	30	Swindon	Bristol Parkway
GWR	Local	Swindon	Westbury	0.5	8	Swindon	Melksham

Table 11: Existing Rail Services on the section of line around Royal Wootton Bassett

Table 11 provides the services that currently pass along the section of line between Swindon and both Bristol Parkway and Chippenham, since a new station could be situated on either or both the Great Western and South Wales Main lines. Given the majority of services are long-distance, limited-stop services, which are not likely to be suitable for the potential station role, the most likely service to provide calls in would be the Swindon to Westbury service, which is irregular but more locally focussed. Whilst not offering direct journeys to Bath or Bristol it would provide links into the rest of Wiltshire. However, the current frequency would be unlikely to support a new station. Strategic aspirations for this service include an increase to an hourly provision, which would provide better connectivity for passengers at Royal Wootton Bassett if a station was to open, with access to other services via an interchange at Swindon and Chippenham.

Previous work has assumed the station could be served by a new Bristol to Oxford service. If this service were to be introduced most of the demand would likely be more focussed on the longer distance rather than more local flows, so analysis of the benefits and disbenefits of a Royal Wootton Bassett call would be required.

Assuming calls were provided by this new Bristol to Oxford service, speculative journey times to the local regional hubs are shown in Table 12:

Destination	New Journey Time (mins):	Existing PT Journey Time (mins)
Chippenham	8	40
Swindon	8	20
Bath	25	55
Bristol	38	70

Table 12: Speculative and existing journey times by public transport

Indicative Complexity

Given that Royal Wootton Bassett is on both main lines, a new two through-platform station on either line or east of the junction would be the obvious infrastructure interventions here; although, based on existing service patterns a station on the Great Western Mainline seems more logical. Typically, based on evidence from recent new stations, a new two platform station can be expected to cost between 10 and 20 million pounds; however, this will depend on signalling complexity and regional differences—whilst also not accounting for recent inflation rises. It should also be noted that it is likely the railway characteristics at Royal Wootton Bassett - high-speed, electrified, major junction - would add significant complexity and cost.

Strategic Alignment

In their Strategic Transport Plan, Western Gateway emphasise the need for improved regional connectivity, in order to increase rail's market share and induce modal shift. A new station at Wootton Bassett would align with this goal since journeys from Wootton Bassett to regional hubs such as Swindon and Bristol would newly be able to be made by rail and be faster than currently achievable.

In their 2018 Neighbourhood Plan, Wiltshire Council reiterated their belief that there is "overwhelming support" for a new station at Royal Wootton Bassett. However, the 2016 SLC report noted how the plans for the station would potentially clash with regional priorities for faster journey times to other stations in the region, due to the in-filling of capacity on key high-speed routes.

Now, more than ever, the importance of consensus on local support, including funding, is paramount. Parties most likely to be interested in, and benefit from, a new station at Royal Wootton Bassett include:

- Wiltshire Council
- Western Gateway
- England's Economic Heartland
- Swindon and Wiltshire Local Enterprise Partnership
- Swindon Borough Council

There may also be opportunities for land value capture and utilisation of Community Infrastructure Levy funds, as well as any potential future Restoring Your Railway style funding schemes.

Key Challenges

Any new station proposal faces the challenges of demonstrating value for money, financial affordability, and alignment with industry strategic plans. The analysis for this case study identifies the following specific challenges for Royal Wootton Bassett:

- Construction on a busy main line
- Service regularity and suitability

- Location relative to Wootton Bassett Junction
- Role alongside existing public transport provision
- Relationship with other new station aspirations along the lines of route

South of Gloucester

Location

The area referred to as 'South of Gloucester' includes the town of Quedgeley and the village of Upton St Leonards and is situated South East of central Gloucester. This area is close to the strategic road network through the A38 and M5 motorway, and Bristol and Gloucester Line runs through it and forms part of the inter-regional main line including Bristol and Birmingham.

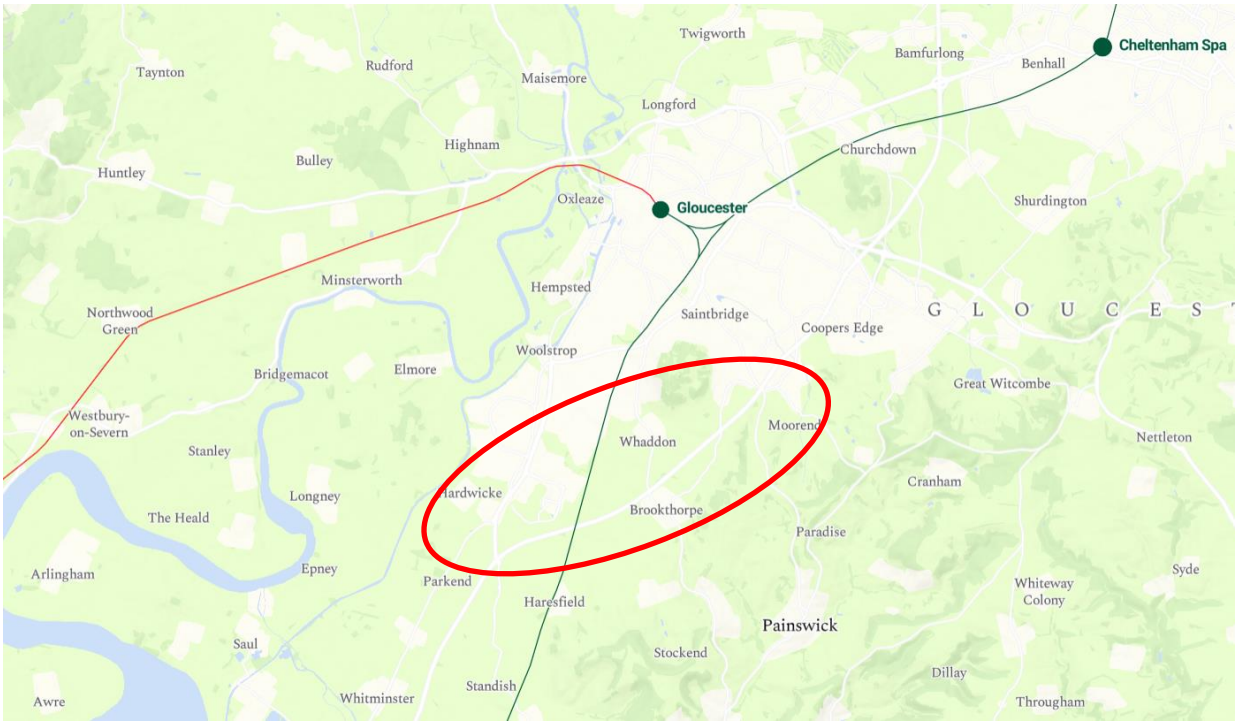

Figure 10: Map showing the area South of Gloucester, relative to Gloucester and Cheltenham, with the railway in the area. (Source: Merritt Cartographic British Railways Map)

Population

According to ONS 2019 estimates, this cluster has a population of 22,000. The number of employed people within this cluster is 6,200. The unemployment rate is also low at 2.9%, suggesting a high proportion of the population are not of working age and potentially a more leisure-focussed rail market. A possible Garden town scheme of 10,000-15,000 dwellings is being considered in the wider area South of Gloucester, however this has not yet reached the planning stage.

Previous Work

A Restoring Your Railway bid was submitted for a new station in the South of Gloucester, which was unsuccessful, however a successful bid for further funding for development work was submitted for the reopening of a station at Stonehouse Bristol Road – around 5 miles to the south on the same line of route. This included a look at alternative sites, which included the location identified in the South of Gloucester bid. Timetabling work to support this indicated that multiple interventions would be required in the Gloucester area to achieve an hourly service at any site along the route, although did also highlight that both a Stonehouse and South of Gloucester station could be served if they were to be introduced.

In 2020 a major developer expressed interest in the development of over 2500 homes in an area of land east of the railway, at Whaddon Fields. This included a proposal for a future halt on the main line, providing connectivity to Bristol, Birmingham and Gloucester, connected to a wider multi-modal transport interchange.

In Gloucester County Council's 2015 Rail Study a proposed station at nearby Hunts Grove was assessed as likely to have an economic case, but little stakeholder support at the time. Their recommendations included the safeguarding of the site and engagement with the long-term planning departments of the rail industry to ensure line capacity changes enabled the station's provision.

Journey Flows

Commute datashine (based on 2011 travel to work census data) shows strong commuting flows from the area South of Gloucester to central Gloucester, Cheltenham and Stonehouse and smaller ones to areas of Bristol. These flows would likely experience shorter journey times than the current car/bus journeys if there were a suitable train service with calls at these places provided. This could remove cars from the A38 and other local roads, potentially improving road capacity for commuters not able to benefit directly from the new rail connectivity.

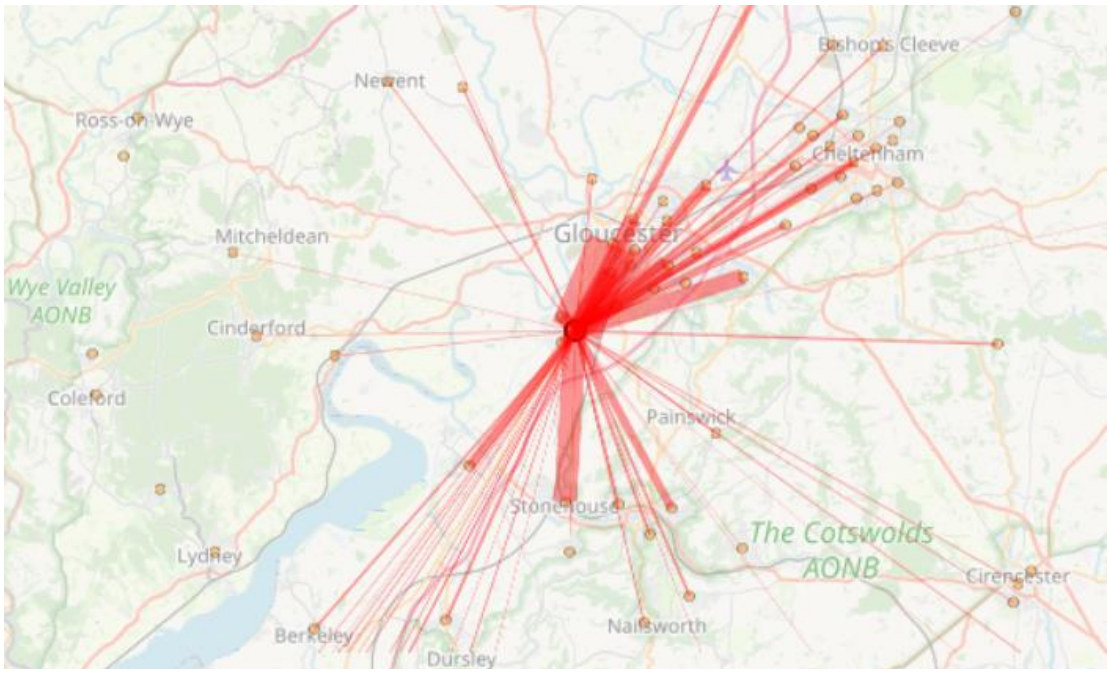

Figure 11: Map showing travel to work flows from the main Lower-Level Super Output Area within the South Gloucester population cluster. (Source: Commute Datashine)

Existing Transport Options

There is a regular bus service between Quedgeley and Gloucester City Centre, as depicted in table 16, with short intervals between services throughout the day. Despite these regular bus services, just 1.9 % of the population use public transport to travel to work. Given the proximity to both the A38 and M5 it is likely many journeys are made by car out of convenience.

Bus Route	Regularity	Journey Time to Gloucester (minutes)
8	Every 20 mins	25
12	every 20 mins	22

Table 13: Relevant bus services in the South of Gloucester area

Existing Rail Access

The closest station to this population cluster is Gloucester, roughly 4 miles north-west by road. By car this journey typically takes around 15 minutes, with a regular bus journey taking roughly 25 minutes. To the South, Cam & Dursley station is around 10 miles away by road, taking 20 minutes by car or just under an hour by bus.

Based on latest research on commute time people in the United Kingdom would on average be willing to commute 38 minutes to work.[5] Assuming the car access times to Gloucester Station and a 5 minute changeover at the station, individuals are limited to commuting to within the Cheltenham and Gloucester area. If a rail station and service were introduced, no more large economic centres could be accessed within 38 minutes, however if these assumptions were relaxed to an hour - as previous rail-focussed research has suggested is a reasonable commute by rail – Worcester and Bristol could become accessible with a suitable service.

Existing Rail Services

Operator	Origin	Destination	tph	tpd	Call Before	Call After
GWR	Cheltenham Spa	London Paddington	1	16	Gloucester	Stonehouse
XC	North East	Plymouth/Penzance	1	15	Cheltenham	Bristol Parkway
XC	Manchester Piccadilly	Bristol Temple Meads	1	11	Cheltenham	Bristol Parkway
GWR	Gloucester	Westbury	1	12	Yate	Gloucester
GWR	Gloucester/Worcester Foregate Street	Bristol Temple Meads	1	17	Cam & Dursley	Gloucester

Table 14: Existing rail services on the section of line South of Gloucester

Table 17 describes the services that currently pass along the section of line between Standish Junction and Gloucester Yard Junction - on which a new station in the area South of Gloucester would be located. The majority are long-distance, limited-stop services, which are not likely to be suitable for the potential station role. The most likely service to provide calls would be the Gloucester to Westbury or Bristol Temple Meads services – the latter of which would be the most likely due to it picking up similar calls on the route already.

The Bristol to Birmingham Rail Corridor Study proposes a major uplift in local services on this line of route, which could provide more options for services to call at a new station south of Gloucester. However, the study acknowledges that Charfield is likely to be the next new station in the corridor. Established timetable development work demonstrates that another new station would require significant additional infrastructure interventions.

Assuming the Gloucester to Bristol Temple Meads service provides calls, speculative journey times to regional hubs are shown in table 18.

[5] Jackson-Stops (2023) The reverse race for space: 38 Minutes is the new golden hour commute: Jackson-stops. Available at: https://www.jackson-stops.co.uk/articles/the-reverse-race-for-space-38-minutes-is-the-new-golden-hour-commute#:~:text=While%2038%20minutes%20was%20the,for%2015%20minutes%20or%20less.

Destination	Journey Time (mins)	Existing PT Journey Time (mins)
Gloucester	9	22
Bristol	45	90

Table 15: Speculative and existing journey times by public transport

Indicative Complexity

Given that the area South of Gloucester is on the Bristol and Gloucester line section of the inter-regional route a new two through-platform station would be the obvious infrastructure intervention here. Typically, based on evidence from recent new stations, a new two platform station can be expected to cost between 10 and 20 million pounds: not accounting for inflation.

However, previous timetable analysis has suggested additional infrastructural requirements would be needed in order to enable any calls at this station. The cost of these has not been estimated as part of this work, although the SOBC for Stonehouse Bristol Road provided rough costings for a number of different interventions – varying in cost from £0.5m to £40m.[6]

Strategic Alignment

In their Strategic Transport Plan Western Gateway STB emphasise the need for improved regional connectivity, in order to increase rail's market share and induce modal shift. Gloucestershire County Council, in their local transport plan, have set an objective of providing attractive, reliable alternatives to car journeys. A new station at Quedgeley would align with both of these goals since journeys to and from regional hubs such as Bristol and Gloucester would newly be able to be made by rail.

Gloucester County Council's adopted Local Transport Plan 2020 – 2041 sets out to explore options for a possible new station south of Gloucester. Beyond this, the council have noted that-a step change in public transport provision will need to be delivered through the introduction of a mass public transport solution on the core strategic link in the city region linking Bishop's Cleeve north of Cheltenham to Quedgeley in the south of Gloucester. Further work is required to establish the feasibility and cost efficiency of a number of solutions that could be delivered on this core public transport corridor, including a rapid transit bus system with automated shuttle services.

Noting Network Rail's Bristol to Birmingham Strategic Study recommended a new station be built at Charfield – on the same line of route – as well as the need to identify synergies between projects identified within the Gloucester Rail Study Report from 2015; there are a number of challenges and opportunities to be considerate of, if pursuing this opportunity.

Now, more than ever, the importance of consensus on local support, including funding, is paramount. Parties most likely to be interested in, and benefit from, a new station South of Gloucester include:

[6] Stroud District Council (2022) Stonehouse Bristol Road: Strategic Outline Business Case. Available at: https://www.stroud.gov.uk/media/2084872/330610599-stn-xx-zz-rp-002-bristol-road-stonehouse-ryr-sobc-v1-2.pdf

- Gloucestershire County Council
- Western Gateway STB

There may also be opportunities for land value capture, and any potential future Restoring Your Railway or specific funding schemes focussed addressing regional disparities.

Key Challenges

Any new station proposal faces the challenges of demonstrating value for money, financial affordability, and alignment with industry strategic plans. The analysis for this case study identifies the following specific challenges for a new station south of Gloucester:

- Providing a suitable service without removing capacity for other services
- Alignment with other aspirations in the area
- Relationship with other public transport provision and aspirations

Bideford

Location

Bideford is a port town on the estuary of the River Torridge in North Devon, situated roughly 8 miles south-west of Barnstaple and 35 miles north-west of Exeter. The town is at the crossroads of the A39 and A386 roads connecting it to other regional towns such as Barnstaple, Tavistock and Bude.

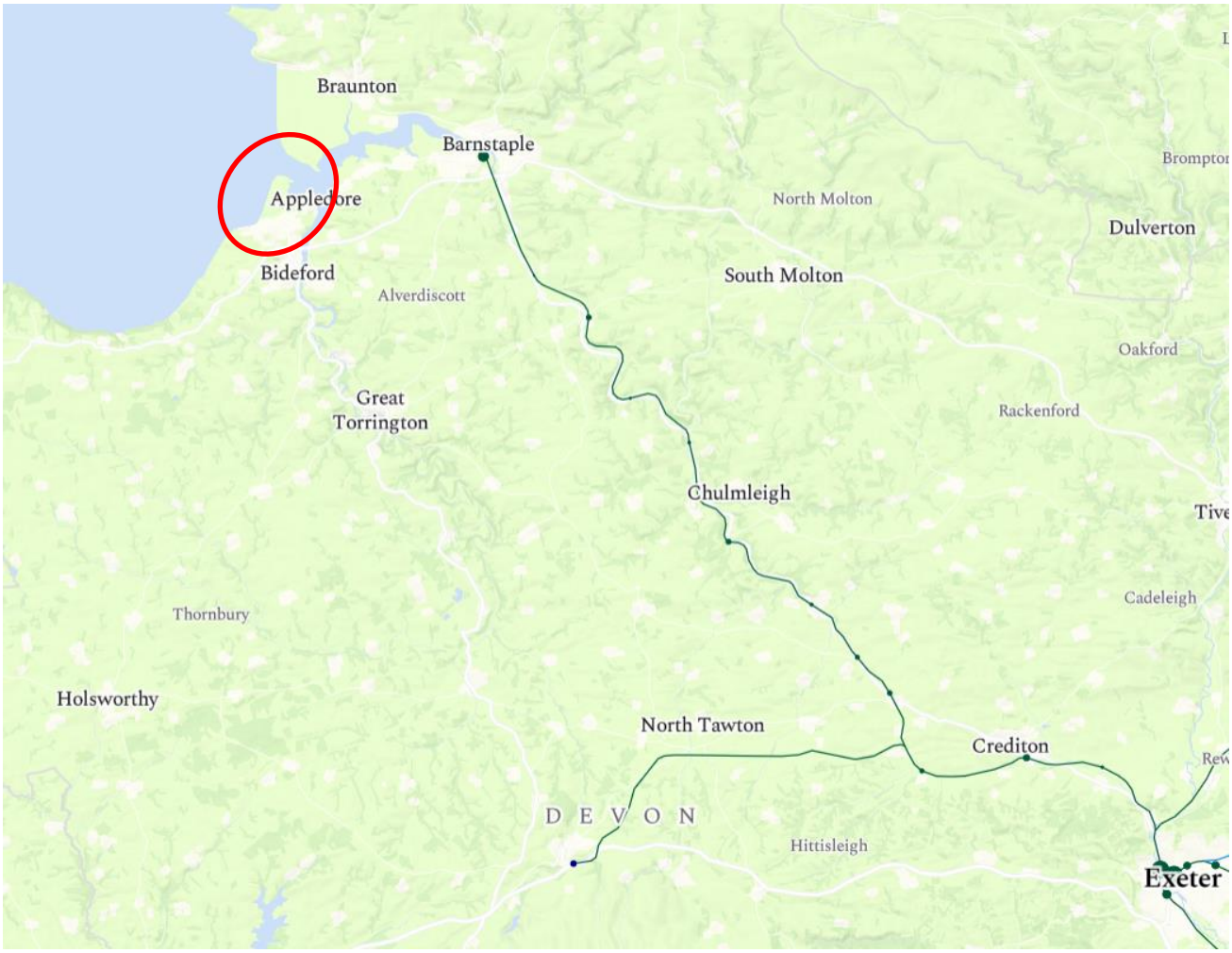

Figure 12: Map showing the location of Bideford, relative to Barnstaple and Exeter and the railway in the area. (Source: Merritt Cartographic British Railways Maps)

Population

According to ONS 2019 estimates, the cluster around Bideford that is greater than 5km away from the nearest mainline railway station has a population of 31,000. Of these, only 11,000 are in employment, with an unemployment rate of 3.1 %, suggesting a large proportion of the population are outside of working age and potentially a more leisure-focussed rail market.

Previous Work

The group ACE (Atlantic Coast to Exeter) Rail, supported by Bideford Town, Torridge District and North Devon councils has been investigating and campaigning for the reinstatement of the line and service since it was established in 2021.

The route was mentioned in a nationwide new stations study in 2009 by the Association of Train Operating Companies, which concluded that it was likely to have a Benefit-Cost-Ratio of less than one at the time.[7]

The original Bideford Station, which closed to passengers in 1965, was located on the current site of the Bideford Heritage Railway Centre. Most of the work to reopen the station so far has assumed the reinstatement of the line in the original location, with a new station to the north of the original, which has been retained by the Bideford Railway Heritage Centre. The former rail alignment is now part of the Tarka Trail, an important regional active travel route.

Existing Transport Options

Bus Route	Regularity	Journey Time to Barnstaple (minutes)	Journey Time to Exeter (minutes)
21	every 30 mins	32	
5B	7 per day	31	112

Table 16: Relevant bus services in Bideford

As demonstrated in Table 16, existing bus routes between Bideford and Barnstaple are reasonable, with at least two services an hour and journey times of just over half an hour. There are also other local services, to destinations that aren't connected to the rail network and for which some of the commuting flows align. However, services to Exeter are limited and slow. It should also be noted that the lack of alternative road options outside of the A39 between Barnstaple and Bideford, means buses regularly get caught up in congestion alongside cars on this key road artery. As a result, a rail service would likely offer competitive journey times compared to the bus offering.

Journey Flows

[7] Rail Delivery Group (2009) Expanding access to the rail network. Available at: https://www.raildeliverygroup.com/about-us/publications/archive/299-2009-06-connecting-communities/file.html (Accessed: 05 October 2023).

Commute datashine (based on 2011 travel to work census data) shows dominant commuting flows from Bideford to Barnstaple, with a small number of longer distance flows to Crediton and Exeter. These could all be served by a railway service, albeit with not particularly competitive journey times compared with cars. The train service would be more likely to open opportunities for employment, education and leisure activities as well.

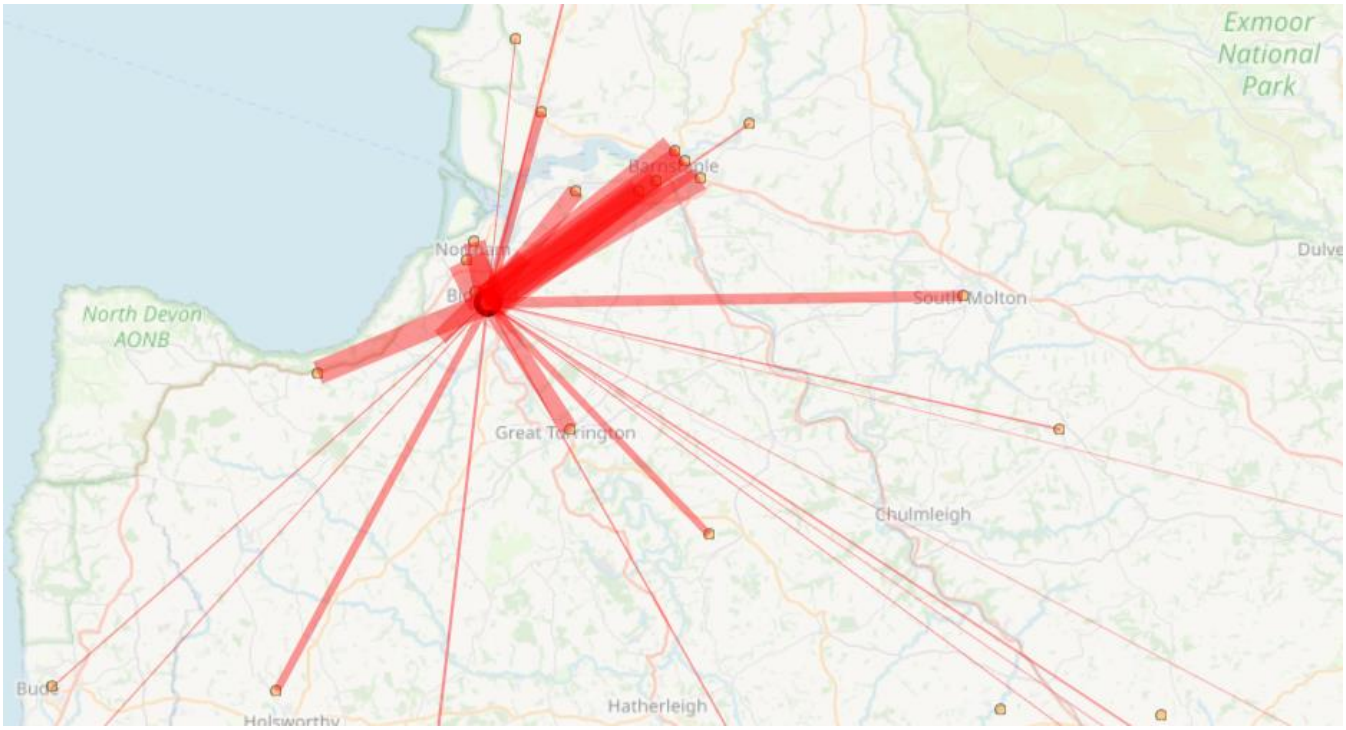

Figure 13: Map showing travel to work flows from the Bideford Lower-Level Super Output Area. (Source: Commute Datashine)

Existing Rail Access

The closest station to Bideford is Barnstaple, around 10 miles away by road. The journey takes roughly 20 mins, both by car or by bus and involves mostly following the A39 between the two.

Based on latest research on commute time, people in the South West would on average be willing to commute 42 minutes to work.[8] No other hub than Barnstaple could be reached in this time, nor even if relaxed to one hour. Barnstaple can already be reached by public transport within this threshold, which may limit the effectiveness of the reinstatement of the rail link to improving commuting opportunities.

[8] Jackson-Stops (2023) The reverse race for space: 38 Minutes is the new golden hour commute: Jackson-stops. Available at: https://www.jackson-stops.co.uk/articles/the-reverse-race-for-space-38-minutes-is-the-new-golden-hour-commute#:~:text=While%2038%20minutes%20was%20the,for%2015%20minutes%20or%20less.

Existing Rail Services

Operator	Service Type	Origin	Destination	tph	tpd	Call Before	Call After
GWR	Local	Exeter Central	Barnstaple	1	17	Terminates	Terminates

Table 17: Existing rail services on the section of line closest to Bideford

The closest line is the Barnstaple Branch, which has services between Exeter and Barnstaple, as shown in Table 17. The assumed train service to Bideford would be an extension of the current Barnstaple service from Exeter, along a new or reinstated section of line from Barnstaple. Without massive changes to infrastructure and service patterns this is likely the only option. Potential enhancements on the Barnstaple Branch could see an increased service level, potentially including extensions as far as Axminster or even London Waterloo.

Development work is currently being undertaken to understand the case for investment on the Barnstaple Branch, with the line currently suffering from poor performance and significant capacity issues at certain times of day. Extension to Bideford would result in further sections of single line which would likely not deliver acceptable performance given existing constraints.

With the assumption of an extension of the Barnstaple branch service, speculative journey times to the local and regional hubs are shown in Table 18.

Destination	New Journey Time (mins)	Existing PT Journey Time (mins)
Barnstaple	15	31
Exeter	81	112

Table 18: Speculative and existing journey times by public transport

Indicative Complexity

Given the assumed service for a new station at Bideford, a new station would be a simple one platform design, recent examples of which have cost around £3m. Whilst, much of the former station infrastructure is still in place, which could allow for a lower cost assumption, the desire to retain this means assumptions around cost do not reflect a specific site. Recent inflationary pressures would also likely see a higher cost to any scheme than previous examples.

The cost for the reinstatement of the roughly 9 miles of track has not been estimated at this stage. However, it is assumed that this, alongside any associated signalling interventions, would account for the majority of the cost of scheme to reconnect Bideford to the railway network. Any track reinstatement work would entail significant engineering to forge a new alignment from Barnstaple station under the A361 Barnstaple Western Bypass roundabout to join the previous (or a new)

alignment beyond.

In addition to the civils and railway systems costs there may be costs associated with securing all necessary land and consents, including providing replacements for current functions elsewhere.

Strategic Alignment

One of Peninsula Transport's goals (from their 2021 Vision statement) is the improvement of connections between people, businesses and places through the enablement of more people accessing public transport options across the Peninsula.

Devon County Council list one of their priorities as improving rail and bus connections from the towns into the main urban areas, a new station at Bideford with a service into Exeter via Barnstaple would provide a more efficient method of transport to access these employment and leisure centres and the rest of the country than currently exists with the current bus offering. However, it is recognised that improving the service offering on the Barnstaple branch is a key driver of this and should be prioritised over the extension of a rail service to Bideford.

As already highlighted, the former rail alignment is now occupied by a strategically important active-travel route and it should be noted that the MP for North Devon, Selaine Saxby, has emphasised the need to retain this, advocating for a new track alignment.

Now, more than ever, the importance of consensus on local support, including funding, is paramount. Parties most likely to be interested in, and benefit from, a new station at Bideford include:

- Devon County Council
- Peninsula Transport
- ACE Rail

There may also be opportunities for land value capture, and any potential future Restoring Your Railway or specific funding schemes focussed on addressing regional disparities.

Key Challenges

Any new station proposal faces the challenges of demonstrating value for money, financial affordability, and alignment with industry strategic plans. The analysis for this case study identifies the following specific challenges for Bideford:

- Costs
- Service capacity
- Role alongside existing public transport provision
- Relationship with Barnstaple Branch enhancements
- Choice of alignment including relocation of existing land use

Appendices

Simplified Framework for Station Opportunity Assessment

A copy of a slightly slimmed down final framework table is shown overleaf.

Western Ranking	Cluster name	Population	Employment Number	Unemployment Rate	PT Usage	IMD	Strategic Studies	Attractor	IoA to Hub	Service Requirements	Track Requirements	Station Requirements	Total
1	Plymouth: Plympton	9	10	6	7	4	1	0	3	1	0	2	41
2	WILTSHIRE: Corsham, Bowerhill & Lacock, Box, Colerne & Rudloe,	5	7	8	9	3	1	0	3	2	0	2	32
3	STROUD: GLOUCESTER: Upton St Leonards & Hardwicke, Quedgeley North, Quedgeley South,	6	4	5	2	5	0	0	3	0	0	2	27
4	WILTSHIRE: Royal Wootton Bassett Outer & Lyneham, Royal Wootton Bassett Town,	6	7	8	9	3	0	0	3	2	0	3	23
5	Torridge: Bideford, Northam	8	8	6	5	10	0	0	3	1	5	1	17
6	TEWKESBURY: CHELTENHAM: Bishop's Cleeve, Prestbury & Racecourse, Cleeve Hill, Gotherington & Apperley,	8	4	0	3	1	0	0	3	1	3	0	11
7	MID DEVON: Tiverton East, Tiverton North & Outer, Tiverton West,	6	7	8	3	9	0	0	2	3	3	1	8
8	West Oxfordshire: Witney	8	8	5	8	2	0	0	3	3	4	1	6
9	VALE OF WHITE HORSE: Wantage Town, Grove,	3	0	6	7	0	0	0	2	1	0	3	6
10	WILTSHIRE: Calne South, Derry Hill & Hilmarton, Calne North,	7	5	2	6	6	0	0	2	3	3	1	1
11	SOUTH GLOUCESTERSHIRE: Mangotsfield, Pucklechurch & Westerleigh, Emersons Green, Kingswood North East, Staple Hill North,	4	4	0	7	5	0	0	3	3	4	1	-5
12	NORTH DEVON: Woolacombe, Georgeham & Croyde, Braunton,	1	5	3	5	3	0	1	3	3	5	1	-8
13	CORNWALL: Helston, Porthleven, Breage & Praa Sands,	4	3	7	0	8	0	1	0	3	3	1	-8
14	NORTH SOMERSET: Clevedon Central, Clevedon North & Walton,	6	2	1	5	2	0	1	2	3	4	1	-9
15	CORNWALL: Bude & Stratton, Poundstock & Kilkhampton,	3	5	7	0	10	0	1	0	1	5	2	-10
16	COTSWOLD: Cirencester South, Cirencester Central, Cirencester East & Stratton,	2	8	0	1	4	0	0	1	3	2	1	-10
17	MENDIP: Street Village, Glastonbury Town, Glastonbury West & Street South,	8	8	4	1	8	0	1	0	3	5	1	-11
18	NORTH DEVON: Ilfracombe East, Ilfracombe West,	0	2	3	4	10	0	0	3	3	5	1	-11
19	SOUTH SOMERSET: South Petherton, Seavington & Kingsbury, Martock,	0	0	10	0	6	0	0	3	3	5	1	-14
20	MENDIP: Wells Town, Draycott, Westbury & Wookey,	2	6	4	2	6	0	0	0	3	3	1	-15
21	WEST OXFORDSHIRE: Carterton South, Carterton North, Burford & Brize Norton,	10	9	5	7	2	0	0	3	3	6	4	-17
22	EAST DEVON: Sidmouth Sidford, Sidmouth Town,	0	2	5	4	2	0	0	2	3	5	1	-22
23	MENDIP: BATH AND NORTH EAST SOMERSET: Stratton, Holcombe & Highbury, Westfield, Midsomer Norton Redfield, Peasedown & Bathavon West, High Littleton & Paulton, Radstock, Midsomer Norton North,	2	2	2	3	5	0	0	1	3	5	1	-26