

Worcestershire Rail Investment Strategy 2 2022 to 2050



Draft

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Contents

Worcestershire Rail Investment Strategy 2 2022 to 2050	1
Executive Summary: Worcestershire Rail Investment Strategy 2 (WRIS-2)	2
Responding to COVID-19 (CV19).....	3
WRIS-2's Conditional Outputs.....	3
Conditional Outputs.....	5
ONE – Introduction	8
Since 2017 – A time of major change	8
TWO – Our approach to Worcestershire Rail Investment Strategy 2.....	9
Evolution from the 2017 Rail Investment Strategy.....	9
A demand-led post-COVID 19 approach for WRIS-2.....	9
THREE - The continuing challenge for Worcestershire's rail network	11
FOUR – Stations as places and the continuing challenge of access.....	13
FIVE - A growing and changing County	14
SIX - Worcestershire's ambitions	15
SEVEN - Evidence for change	18

Executive Summary: Worcestershire Rail Investment Strategy 2 (WRIS-2)

1. In 2017 Worcestershire County Council (WCC) prepared its economically evidenced Rail Investment Strategy (WRIS), measured against Gross Value Added (GVA) and new jobs.
2. This prioritised enhanced local, regional and GB-wide rail connectivity on the basis of its value to the growing economy, population and precious environments of the County.
3. These priorities included transformed connectivity to London, GB-wide services at Worcestershire Parkway and new regional Birmingham-Worcestershire-Bristol services.
4. The WRIS addressed quality, access and car park capacity improvements at County railway stations and supported rail industry schemes such as Worcester Area re-signalling.
5. The strategy has been proactively developed since 2017, with WCC-led Worcestershire Parkway and Kidderminster Station enhancements completed.
6. A compelling London services business case has been prepared by the WCC-led North Cotswold Line Task Force, and station access, car park and key masterplans progressed.

Responding to COVID-19 (CV19)

7. CV19 led to significant rail service reductions, including in Worcestershire, and changed working patterns and passenger demand now challenge industry planning and funding.
8. This WRIS-2 takes direct account of post-CV19 Department for Transport recovery forecasts and uses West Midlands Rail Executive's (WMRE) post-CV19 service demand testing.
9. This provides WCC with comprehensive analysis covering the economic value of the County's rail services and detailed 30-year forecasts of passenger demand by rail corridor.
10. In parallel preparation with WMRE's own revised 30-year strategy, WRIS-2 benefits from integration of relevant WMRE, Midlands Connect and Network Rail service propositions.
11. WMRE's work shows 'Cross City South' covering Redditch, Bromsgrove, Worcester and South-West services as the second highest regional growth corridor, growing by c. 60% by 2050.

WRIS-2's Conditional Outputs

12. WRIS-2's principal conditional outputs (page 4 over) for further WCC development are:

- **London/Oxford** - Ongoing preparation of Outline Business Case for faster, Worcester-London 2 trains per hour (tph) and direct 1 tph Kidderminster/Droitwich Spa to Oxford and London.
- **GB-wide connectivity** - Exeter-Worcestershire Parkway-Manchester and Midlands Connect Birmingham-Worcestershire Parkway-Bristol/Cardiff services.
- **Worcestershire-Bristol** - 2023 implementation of Department for Transport (DfT) options for 1 tph Worcester-Tewkesbury-Cheltenham Spa-Gloucester-Bristol service.
- **Birmingham/HS2** - Earliest restoration of Worcester, Bromsgrove, Redditch and Kidderminster-Birmingham frequencies removed during CV19, and future expansion.
- **Stations and access** - Worcester Shrub Hill and Redditch masterplans implementation, and ongoing development of car parks and enhanced access to National Rail network.
- **Industry engagement** - Securing Worcester Area Modernisation/re-signalling, King's Norton capacity (to restore Redditch/Bromsgrove-Birmingham frequency lost via COVID-19/Camp Hill scheme) and electrification of Snow Hill Lines, Birmingham-Bristol and Bromsgrove-Worcester via Network Rail, DfT and the future 'Great British Railways' (GBR).
- **Funding innovation** – Developing radically innovative Third-Party financing models given limited industry/government monies to facilitate WCC's desired changes.
- **Key national policy objectives** – Maximising the role Worcestershire's railway plays in the Levelling Up and De-carbonisation agendas.
- **Fares and ticketing** - Close engagement with GBR in a full review of fares and the means of purchasing tickets, especially as work, tourism and leisure patterns change

Conditional Outputs

Project number	Description	WRIS 1 economic output GVA £1m per annum	WRIS 1 economic output new jobs	West Midlands Rail Investment Model demand model 2022	When? Rail industry control periods (CP)
WRIS 1	Retained projects				
NCL 1	2 trains per hour between Worcester and London Paddington with 1 train per hour having a fast journey time of 1 hour 50 mins or less	19.04	421		CP7 2024-2029
NCL 2	1 train per hours between Kidderminster, Droitwich and London Paddington	13.08	273		CP7 2024-2029
NCL 3	Additional infrastructure on the North Cotswold Line to support the 2 trains per hour Worcester to London service				CP7 2024-2029
WAB 2	New direct train service between (Birmingham) Bromgrove, Worcestershire Parkway, Cheltenham Spa, Gloucester and Bristol Temple Meades	5.66	145	66%	2023
WAB 3	Support for additional infrastructure capacity and resignalling between Stoke Works, Droitwich, Worcester and Great Malvern – Hereford to support train service growth and development.				CP7 2024-2029
WPK 1	Introduction of Worcestershire Parkway calls on the hourly Exeter – Bristol – Manchester service	4.4	108	66%	CP7 2024-2029
ELC 1	Electrification of the Snowhill and Birmingham – Bristol lines to support service growth and development				CP8 2029-2034
ACS 1	Additional car park capacity at existing and new / or				CP6 2019-2024 and

	stations to accommodate forecast passenger growth				CP7 2024-2029
WOS 1	Shrub Hill Station Masterplan to support service growth to London, Birmingham, West of England and Shrub Hill Quarter regeneration			61-66%	CP6 2019-2024 and CP7 2024-2029
TKT 1	Cross industry review of ticketing and fares structures to match new and developing train services (including Great British Railways when established)				CP7 2024-2029
WRIS 2	In development				
ACS2	Station car park development assessment at Alvechurch, Blakedown, Kidderminster and Pershore.				CP6 2019-2024 and CP7 2024-2029
DTW1	Droitwich station masterplan and car park expansion				CP6 2019-2024 and CP7 2024-2029
RED1	Redditch station masterplan development delivery and engagement with the industry to restore pre covid Cross City line frequency			39%	CP6 2019-2024 and CP7 2024-2029
RWK1	Rushwick / West of Worcester new station development			61%	CP6 2019-2024 and CP7 2024-2029
WOP1	Worcestershire Parkway access / car park expansion			66%	CP6 2019-2024 and CP7 2024-2029
FND1	Develop third part funding innovation (all schemes) in context of rail industry funding challenges				CP6 2019-2024 and CP7 2024-2029
FND2	Maximising opportunities for funding bids (all schemes) to developing government sources eg: Levelling Up				CP6 2019-2024 and CP7 2024-2029

DCB1	Adopting all rail industry best practice to support application of the decarbonisation agenda				
HON1	Assessment of incremental value of re-opened Stratford-Honeybourne line to NCL priorities 1-3				CP7 2024-2029 and CP8 2029-2034
	WCC support via WMRE and Midlands Connect Membership				
WAB1A	Support for GWR and DfT proposal for increase from 1 train per 2 hours to 1 train per hour Worcester-Cheltenham Spa-Gloucester-Bristol			66%	2023
WAB4	Support for Network Rail's Kings Norton scheme/ Cross City frequency restoration			39%	CP7 2024-2029
MRH1	Support for Midlands Connect 2 trains per hour Birmingham- Bromsgrove-Worcester-Herford			61%	CP8 2029-2034
MRH2	Support for Midlands Connect 2 trains per hours Birmingham-Worcestershire Parkway-Bristol/ Cardiff			66%	CP8 2029-2034
WMRE1	Support for WMRE / West Midlands 1 train per hour Worcester Shrub Hill to Birmingham restoration			37%	2023
WMRE 2	Support for WMRE 2 trains per hour Birmingham-Stratford to support Wythall development options				CP8 2029-2034

ONE – Introduction

In 2017 Worcestershire County Council (WCC) published its ambitious, forward-looking Worcestershire Rail Investment Strategy (WRIS) for the role of the railway over the next 30 years in supporting the County's economy, growing communities and its precious environment.

This drew upon innovative analysis of the benefits for Worcestershire's economy of better rail connectivity, prioritising service improvements, station regeneration, new stations and car park expansion via uplift in 'Gross Value Added' (GVA) and new jobs, setting a clear agenda for engagement with the complex organisations of the railway industry.

Key priorities included faster and more frequent 'North Cotswold Line' services to Oxford and London, preparing for the new opportunities made possible by Worcestershire Parkway, pressing the rail industry for Birmingham-Bristol Corridor service to call in the County, and transforming ease of access to the National Rail network for Worcestershire residents.

Since 2017 – A time of major change

This renewed Worcestershire Rail Investment Strategy 2 (WRIS-2) responds to substantial contextual change between 2017 and 2022 including:

- **Covid-19** and its multiple impacts on ways and places of work, demand for rail travel, government funding of railway services and future enhancements, and some resultant semi-permanent service reductions, including a number affecting Worcestershire.
- **Rail Industry re-organisation** with the government's proposed new integrated lead body '*Great British Railways*' due to become the 'controlling mind' of the industry in c. 2025 and with which Worcestershire will necessarily need to engage closely.
- **Government policy focus** including Levelling-Up and de-carbonisation agendas.
- **Local Plan changes** with expanded housing volumes and spatial changes in the South Worcestershire Development Plan (SWDP), Bromsgrove, Redditch and Wyre Forest Local Plans, at neighbouring authorities, and with Birmingham and the Black Country unmet housing need remaining a challenge.
- **Worcestershire County Council-led rail developments** including Worcestershire Parkway and Kidderminster's new station buildings opened in 2020, and evolving business cases for better Worcester-Oxford-London services, Worcester Shrub Hill and Redditch station Masterplans, safeguarding location(s) for a new west-of-Worcester station at Rushwick and greater car park capacity at stations.
- **Wider rail industry developments** including Midlands Connect's 'Midlands Rail Hub'¹ which offers increased Birmingham-Worcester-Hereford frequencies and new Birmingham-Worcester-Bristol/Cardiff services from the 2030s, Network Rail's parallel support for transformed Worcestershire connectivity on the Birmingham-Bristol Corridor, West Midlands Rail Executive's own wider regional Rail Investment Strategy post-Covid 19 review which is being concluded in parallel with this Worcestershire plan.

¹ <https://www.midlandsconnect.uk/projects/rail/midlands-rail-hub/>

TWO – Our approach to Worcestershire Rail Investment Strategy 2

Evolution from the 2017 Rail Investment Strategy

The 2017 Worcestershire Rail Investment Strategy (WRIS)² focused on Gross Value Added (GVA) and new jobs as key indicators of the best value to the County of different types of enhanced rail connectivity, including:

- **More frequent, faster services** e.g. sub-2 hour journey times and doubled frequency to London via the North Cotswolds and Oxford.
- **New direct GB-wide services** e.g. from Worcestershire to North-West, North-East, South-West England, the East Midlands and South Wales.
- **Specific new connectivity** related to Local Plan growth supporting major areas of housing development e.g. urban regeneration such as the Shrub Hill Quarter and Redditch, west of Worcester, and the major development proposed around the now-opened Worcestershire Parkway.

This enabled a clear set of priorities for investment to be adopted within the strategy *driven by outputs rather than led by infrastructure limitations* and incorporated in parallel into Worcestershire Local Transport Plan 4³.

This economically evidenced approach was consistent with Network Rail's Long Term Planning processes and specifically with West Midlands Rail Executive's (WMRE) own 30-year strategy⁴ for the wider West Midlands region, published in 2019, which broadly supported the County's specific connectivity ambitions, and used a shared forecasting model developed by SLC Rail and SYSTRA. (Chaired by the Mayor of the West Midlands, WMRE plans strategic development of the region's rail network and co-manages the West Midlands Trains franchise with the Department for Transport; WCC is a full member of WMRE.)

A demand-led post-COVID 19 approach for WRIS-2

The collapse of rail passenger demand during the COVID lockdown from March 23rd 2020 not only required substantial funding support from government for the maintenance of services but challenged industry thinking and evidencing of future network development given its impact upon ways of working, locations of work, commuting and leisure travel, and hence of the nature of train services and connectivity that may be required in a post-COVID future.

WRIS-2 has thus been developed with its prioritisation process led by prospective passenger demand scenarios looking over a 30-year period towards 2050, taking specific account of

² https://www.worcestershire.gov.uk/info/20055/strategies_plans_and_bids/1922/worcestershire_rail_investment_strategy

³ https://www.worcestershire.gov.uk/info/20055/strategies_plans_and_bids/806/the_local_transport_plan

⁴ <https://www.wmre.org.uk/our-strategies/west-midlands-rail-investment-strategy/>

evolving post-COVID forecasting led by the Department for Transport, and again directly sharing the data and modelling developed by SLC Rail and SYSTRA and being applied in WMRE's own post-COVID update of its 2019 Rail Investment Strategy.

THREE – The continuing challenge for Worcestershire’s rail network

Many improvements in Worcestershire's rail connectivity and stations have occurred in the past 10 years, with better London frequencies, extension of the electrified Cross City Line to serve the new Bromsgrove Station, completion of Worcestershire Parkway and Kidderminster’s much expanded station, and modern, new trains on London and West Midlands local services.

However direct rail connectivity remains limited in serving the County’s 605,000 population (2021⁵) and c. 20%+ Local Plan population growth and spatial change, as shown at Figure 1 below.

Worcestershire Rail Connectivity Summary

Route	Trains per hour (2022)
Worcester-Oxford-London	1
Nottingham-Worcestershire Parkway-Cardiff	1
Worcester-Gloucester-Bristol	0.5
Worcester-Bromsgrove-Birmingham	1
Redditch-Birmingham	2
Bromsgrove-Birmingham	3
Kidderminster-Birmingham	3
Worcester-Hereford	1
Wythall-Birmingham	1
Worcester North East / North West	0
Worcester South West (past Bristol)	0
Worcester Shrub Hill – Birmingham (off peak)	0
Bromsgrove -South West	0

Services between Bromsgrove and Birmingham; Redditch and Birmingham, Kidderminster and Birmingham and Worcester Shrub Hill and Birmingham (off peak) were all reduced during the covid pandemic.

⁵ https://www.worcestershire.gov.uk/info/20044/research/795/population_statistics_and_projections

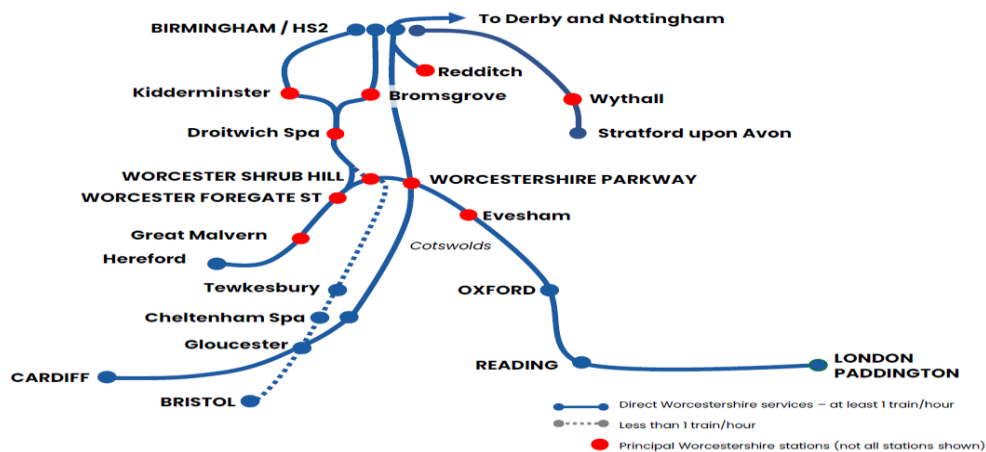


Figure 1 – Worcestershire rail connectivity 2022

Addressing these connectivity limitations is core to WCC's continuing work with the rail industry:

- **Worcestershire – Oxford – London** – WCC leads the 5-authority 'North Cotswold Line Task Force' progressing the Outline Business Case (OBC) and financing innovation options for the c. £213m route re-doubling scheme which facilitates a step change in Worcester-London service frequencies and journey times, with hourly extensions to Great Malvern and Droitwich Spa/Kidderminster.
- **Worcestershire – South-West/North-West/North-East** – Supporting (i) a prospective DfT-led increased frequency GWR 1 train per hour Worcester – Cheltenham Spa – Gloucester – Bristol service from c. 2023/24, (ii) Network Rail's 2021 Bristol-Birmingham 'Continuous Modular Planning Study' with its significant connectivity enhancement options for Worcestershire, and (iii) Midlands Connect's 'Midlands Rail Hub' proposals for 2 Birmingham – Worcester – Hereford trains per hour, and additional express Birmingham – Bristol/Cardiff services which could call at Worcestershire Parkway.
- **Restoration of frequencies reduced during COVID-19** - Redditch and Bromsgrove-Birmingham frequencies have been reduced and limited for the immediate future via infrastructure capacity between King's Norton and Birmingham being transferred during the lockdown to the Camp Hill new service scheme led by West Midlands Combined Authority; similarly all off-peak Shrub Hill-Birmingham services were removed in 2021.

FOUR – Stations as places and the continuing challenge of access

Transformed, sustainable connectivity within Worcestershire and with the wider South-West Midlands and the major economic areas of Great Britain is the core output of railway services in supporting economic growth, the major growth in housing and population within the County's several Local Plans, and the County's attraction as a place to live, work and visit.

The railway's purpose is to take people where they want to go, when they do, and with a frequency, speed and cost that works for them. As such WRIS-2's first priority is the range of train services that provide this connectivity.

In parallel the nature, location, quality and accessibility of railway stations is essential to their usefulness to passengers and how they can play a significant part in the vitality and success of town and city centres, whilst new stations can widen regional access to the National Rail Network and support the creation of new communities (e.g. the Worcestershire Parkway Strategic Growth Area).

Prior to the 2017 WRIS WCC played a key partnership role with the rail industry in delivery of the new Bromsgrove Station. Since 2017 Worcestershire Parkway and the new Kidderminster Station buildings projects have been delivered by WCC and funded by WCC and local partners.

However many journeys continue to be made by road or are via stations outside of Worcestershire (e.g. Birmingham International or Warwick Parkway) given a combination of poor train service connectivity, limited car park capacity and absence of modern standards of access for all. In 2017 the County's 17 stations had only 1,377 car park spaces, only marginally more than Warwick Parkway alone on the Chiltern Railways route; with Worcestershire Parkway opened in 2020 this increased to 1,877 but continues to offer a low ratio of spaces to passengers by comparison with neighbouring counties such as Warwickshire.

WCC established 3 key station development projects to support implementation of the 2017 WRIS. These remain continuing strong priorities under WRIS 2:

- **Worcester Shrub Hill Station Masterplan** – station, forecourt and public realm improvements as part of the wider Shrub Hill Quarter regeneration scheme, with a bid to the government's Levelling Up Fund in progress.
- **Redditch Station Masterplan** – station, forecourt and public realm improvements to create a modern, high-quality gateway to and from Redditch Town Centre.
- **Project Access** – Developing new capacity for access to stations, meeting both Local Plan growth and spatial change and existing demand suppressed by limited car park capacity, including:
 - **Car park expansion feasibility assessment** – Alvechurch; Blakedown, Droitwich Spa; Kidderminster; Pershore; Worcestershire Parkway
 - **West of Worcester New Station** – Business Case development

FIVE – A growing and changing County

The context within which the 2017 WRIS was formulated was one of extensive Local Plan growth, with over 47,000 new homes and more than 108,000 more people living in the County by 2030 (c. 19% growth), together with a c. 30%+ increase in annual Gross Value Added to its economy.

At that time the 2017 WRIS noted *“The County’s rail services will not match these ambitions without significant earlier development and investment beyond that committed by the rail industry.”*

The quantum and magnitude of housing and population growth in Local Plans has developed further and significantly since 2017. Taking account of delivery of new homes since 2017, more than 38,000 new homes are planned between 2022 and 2040 (with some differing end dates of each Local Plan – Fig. 2 below), with a 15% population growth of more than 91,000 people.

Local Plans 2022-2041

Local Plan	Housing numbers
Wyre Forest District (2036)	4140
Redditch (2030)	3030
Bromsgrove (2040)	7142
SWDP (2041)	23883
Total	38198

Figure 2 2012-2030 Local Plans Housing growth in 2017 WRIS ; A 31% increase in scale of growth since 2017

Notwithstanding generic and specific rail connectivity limitations that the WRISs seek to address it is positive that planned growth is closely aligned geographically to the County’s rail corridors:

- **Wyre Forest District** – alongside the Worcester-Kidderminster-Stourbridge-Birmingham route, which will benefit from c. 2031 with access at Birmingham Moor Street to the immediately adjacent HS2 Curzon Street station.
- **Bromsgrove District** – adjacent both to the Bristol-Worcestershire-Birmingham Main Line and the Stratford-Wythall-Birmingham local/regional route.
- **Redditch District** – served by the Redditch-Birmingham-Lichfield ‘Cross City’ Line.
- **South Worcestershire Development Plan districts** – crossed by the Great Malvern-Worcester-Oxford-Paddington ‘North Cotswold Line’ and the national, regional and local services on the Bristol-Worcestershire-Birmingham Corridor, with direct GB-wide strategic interchange at Worcestershire Parkway, local interchange at Worcester Foregate Street, Worcester Shrub Hill and Droitwich Spa, and future potential for connectivity by any re-opened Honeybourne-Stratford-upon-Avon route.

SIX – Worcestershire’s ambitions

The central theme of WRIS-2 is continuing and expeditious progress towards transformed national, regional and local rail connectivity for Worcestershire, supported by expanded capability, capacity, accessibility and quality of the railway’s infrastructure and stations. This will be essential to:

- **Homes** - Sustainable delivery of the County’s expansive quantum of housing and population growth, maximising low-carbon travel choices for all.
- **Business** - Worcestershire as an attractive location for business and commerce, well-connected across Great Britain, with substantial, high quality employment growth.
- **West Midlands/HS2** - County access to neighbouring Birmingham, the wider West Midlands, and the opportunities that will come via HS2’s delivery in the 2030s/2040s.
- **Tourism** - Encouraging continued growth of the County’s vital tourist and visitor economy, again with maximum low-carbon travel choices for all.
- **Environment** - Protecting the County’s precious Severn, Malverns, Vale and AONB natural environments, its historic cathedral city and market townscapes, and its rural villages.
- **Place** - Contributing to the development of the County’s city and towns, such as schemes currently being developed at the Shrub Hill Quarter in Worcester and at Redditch.

Worcestershire will be a well-connected place in the West Midlands and across Great Britain with direct, frequent connectivity, as shown at Figures 3 and 4 (below/over), in particular with:

- Oxford, the Oxford-Cambridge Arc, the Thames Valley, Heathrow Airport and London.
- North-West England, Manchester and the East Midlands, together with enhanced connectivity at Birmingham to North-East England.
- South-West facing to Cheltenham Spa, Gloucester, Bristol, Cardiff and Exeter.
- To Birmingham and HS2
- Within Worcestershire itself

Worcestershire Rail Connectivity Summary 2040

Route	Trains per hour (2040)
Worcester-Oxford-London	2
Great Malvern/ Droitwich Spa/ Kidderminster-London	1
Nottingham-Worcestershire Parkway-Cardiff	1
Exeter- Bristol- Worcestershire Parkway - Manchester	1
Birmingham Moor St – HS2 – Worcestershire Parkway – Bristol / Cardiff	1
Worcester-Gloucester-Bristol	2

Bromsgrove -Bristol	1
Hereford- Worcester- Bromsgrove- Birmingham/ HS2	2
Worcester Shrub Hill -Bromsgrove-Birmingham/ HS2	2
Redditch-Birmingham / HS2	4
Bromsgrove-Birmingham /HS2	4
Kidderminster-Birmingham /HS2	4
Wythall-Birmingham /HS2	2
Worcester -Kidderminster	3

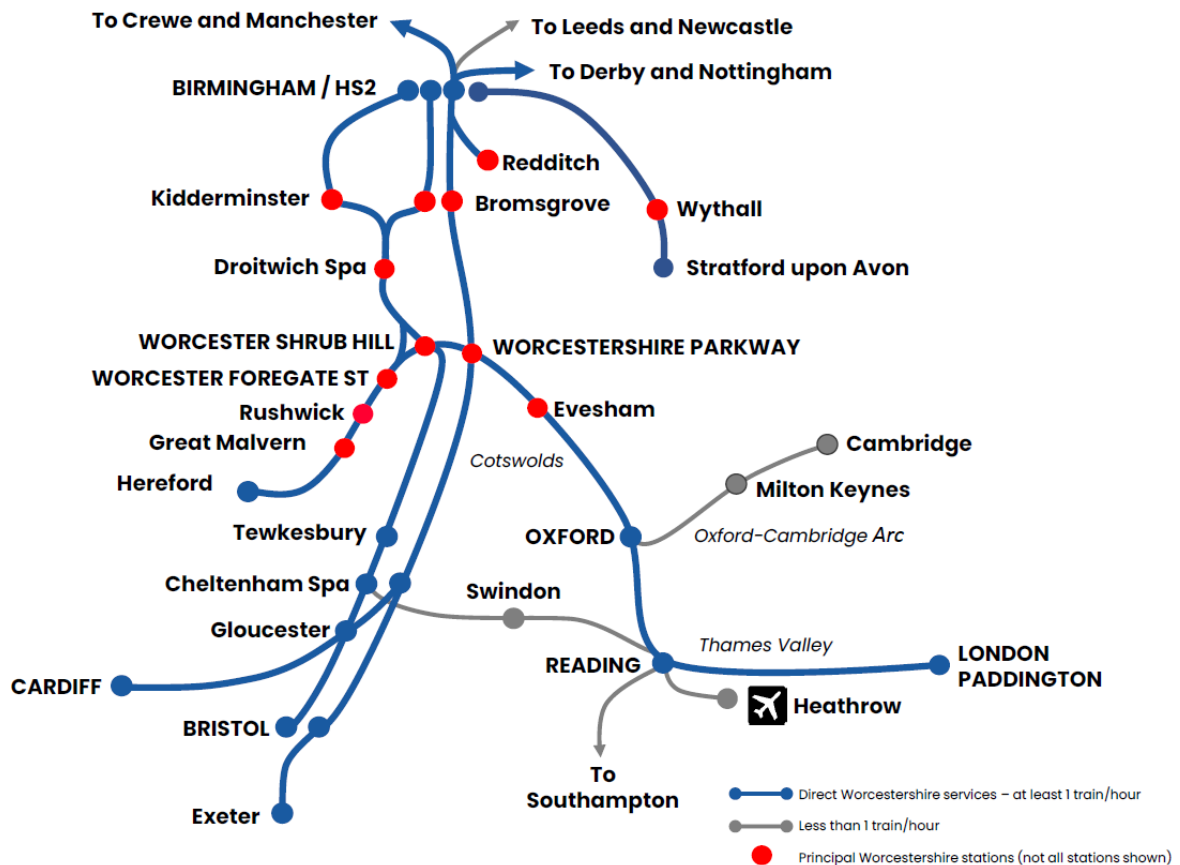


Figure 3 – Worcestershire rail connectivity 2040

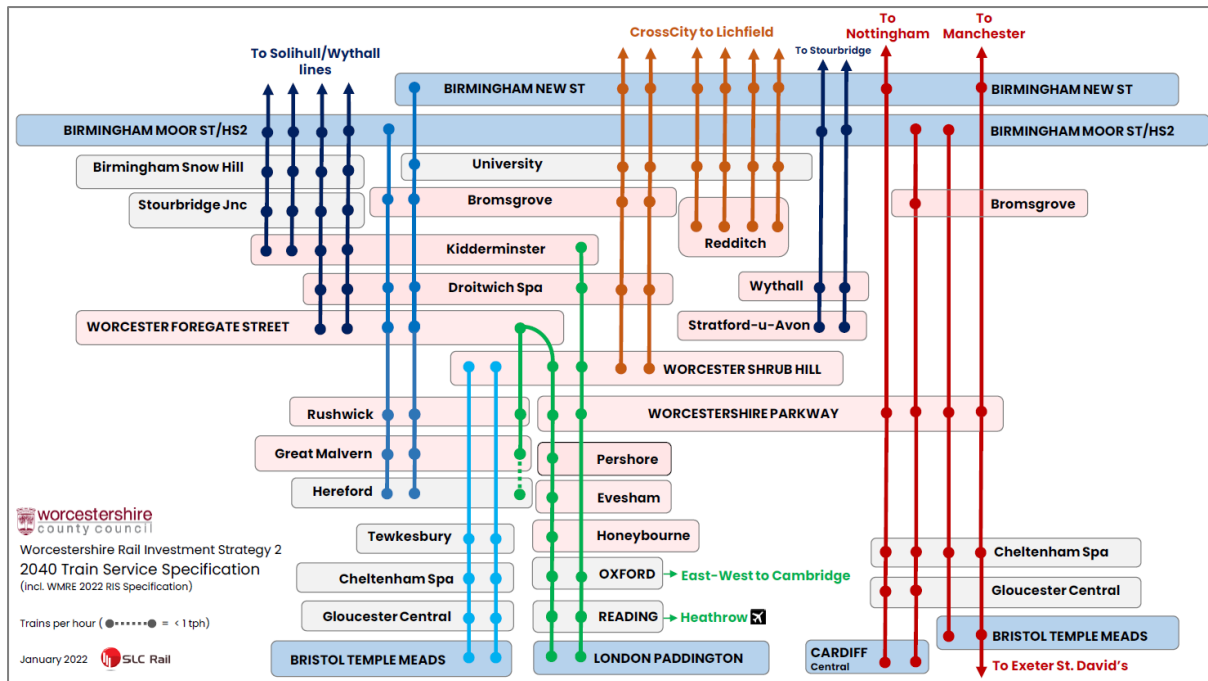


Figure 4 – Worcestershire rail connectivity 2040 – trains per hour

SEVEN – Evidence for change

WRIS-2 brings together the 2017 WRIS's economic evidence with 2021/2022 WMRE West Midlands Rail Investment Strategy (WMRIS) post-COVID demand analysis⁶.

The WMRIS assesses percentage and demand volume growth of incrementally enhanced train service specifications, including HS2 and Midlands Rail Hub, from the 2019 pre-COVID base to:

- 2026 with a return to pre-COVID passenger numbers.
- 2031 with the delivery of HS2 Phase 1 and Midlands Rail Hub.
- 2040 with delivery of HS2 Phase 2.
- 2050 as a broad 30-year end-date.

These are tested on 7 West Midlands corridors with 2 covering principal Worcestershire services:

- **'Stourbridge'** – including Worcester and Kidderminster to Birmingham Snow Hill/Moor St; Hagley-Kidderminster and Worcester.
- **'Cross City South'** – including Redditch and Bromsgrove to Birmingham New St; Bromsgrove-Worcester-Hereford; Worcestershire (Bromsgrove-Worcestershire Parkway-Worcester Shrub Hill/Foregate St)-Bristol/Cardiff.

The North Cotswold Line proposition for 2 trains per hour towards London is NOT included in WMRIS given it falls outside of the WMRE area but is within WRIS-2 based upon its existing 2020 Strategic Outline Business Case (footnote # 5 above) and Outline Business Case in development in 2022

The key conclusions of the WRIS 2 integrated economic GVA/jobs and demand analysis which form the basis of its Conditional Outputs (page 3 above) are:

- **WRIS 2017 priorities** – North Cotswold Line/London and Birmingham-Worcestershire-Bristol/Cardiff Corridor (2017 value £42.9m GVA p.a./947 new jobs) are retained, supported in turn by the North Cotswold Line 2020 business case (post-COVID 'high value for money' Benefit Cost Ratio) and combined 'Cross City South' WMRIS results noted below.
- **WMRE WMRIS 2040 train service specifications:**
 - The Cross City South Corridor offers the 2nd highest post-COVID percentage and demand growth to 2050 in the West Midlands, only behind the Coventry-Birmingham Corridor – 31% to 2031 and 60% to 2050 – significantly ahead of the West Midlands at 22% to 2031 and 47% to 2050.
 - This reflects both the new Camp Hill Line in Birmingham and the scale of housing and population growth in Worcestershire.
 - Worcestershire-Bristol/Cardiff Corridor grows by 38% to 2031 and 66% to 2050; whilst from a low base this is a high-fare yield corridor.

⁶ SYSTRA using DfT WebTag compliant demand forecasting. Used with permission of West Midlands Rail Executive

- Birmingham-Bromsgrove-Worcester-Hereford grows by 31% to 2031 and 61% to 2050
- Snow Hill Lines are a more mature market given high level of pre-existing services; Worcestershire growth forms an increasing proportion of route growth to 2050.
- Worcestershire's 2019 daily return passengers of more than 9,500 will grow by c. 3,100 per day by 2031 and 4,150 by 2050.

Corridor percentage and demand volume growth across the West Midlands are shown at Figures 5 and 6 below.

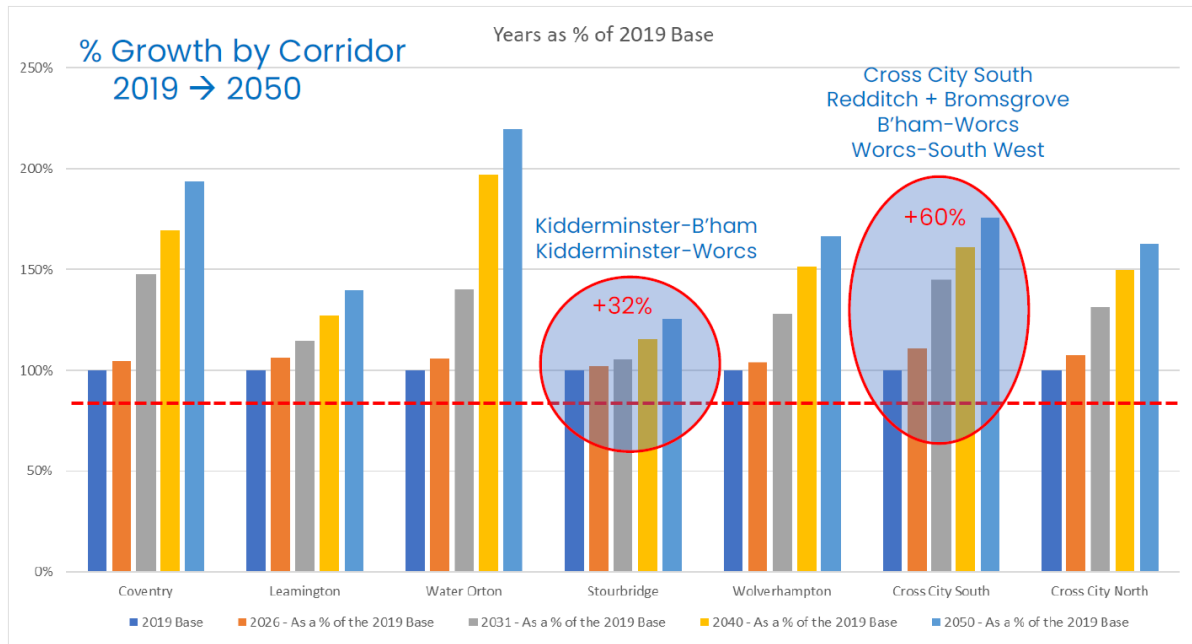


Figure 5 – Percentage growth in passenger demand – West Midlands Rail Corridors – 2019-2050 (WMRE)

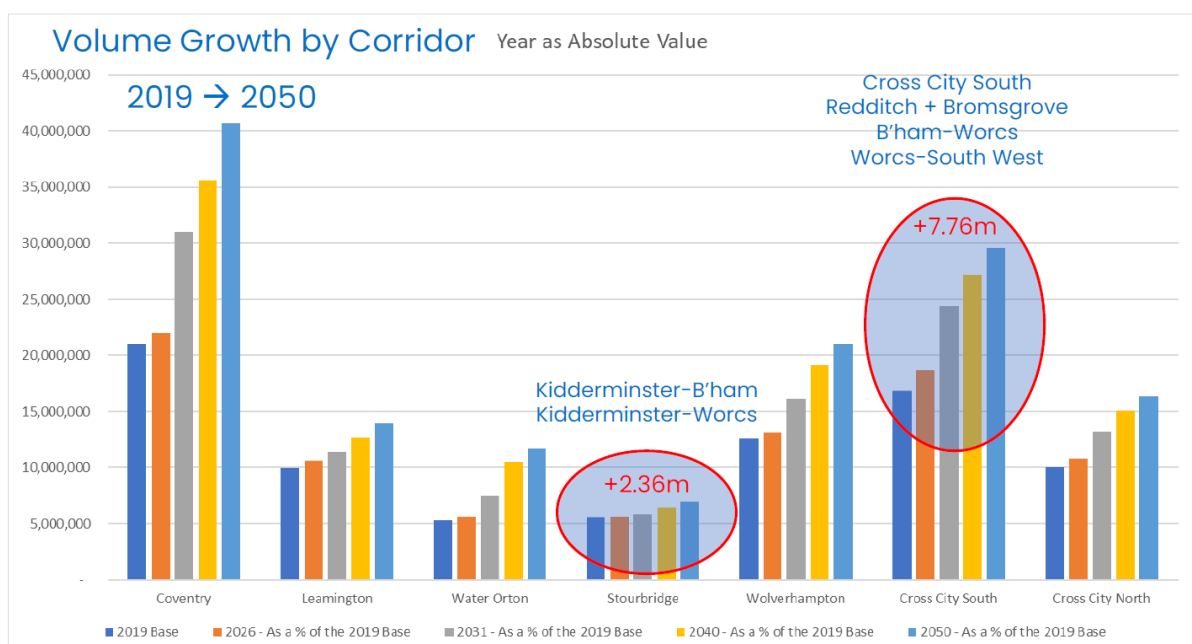


Figure 6 – Demand volume growth in passenger demand – West Midlands Rail Corridors – 2019-2050 (WMRE)

Worcestershire-specific growth broken down within these 2 core corridors is shown at Figure 7 (below).

GROWTH FROM 2019 pre-COVID BASE	2019 BASE		2031 GROWTH 2019-2031				2050 GROWTH 2019-2050			
	Total trips (m)	RTN PAX/DAY	Total trips (m)	Growth (m)	Growth %	NEW RTN PAX/DAY	Total trips (m)	Growth (m)	Growth %	NEW RTN PAX/DAY
West Midlands	67.4	104,963	82.4	15.0	22%	23,377	98.8	31.4	47%	48,927
Snow Hill Lines (west of Birmingham)	7.3	11,344	8.0	0.7	10%	1,107	9.6	2.4	32%	3,674
Hagley-Kidderminster-Worcester	0.7	1,053	0.8	0.1	22%	229	1.0	0.3	49%	512
Worcester-Birmingham	2.5	3,829	2.8	0.3	14%	520	3.4	0.9	37%	1,416
ALL WORCESTERSHIRE Snow Hill Lines	3.1	4,882	3.6	0.5	15%	1,857	4.4	1.2	40%	1,928
Worcs % of Snow Hill Lines	43%		45%				45%			
Cross City South/Bristol	12.9	20,139	17.0	4.0	31%	6,271	20.7	7.8	60%	12,086
Worcester FS/SH/Parkway-Bristol/Cardiff	0.2	282	0.3	0.1	38%	107	0.3	0.1	66%	187
Birmingham-Bromsgrove-Worcester-Hereford	0.9	1,408	1.2	0.3	31%	430	1.5	0.5	61%	855
Redditch & Bromsgrove-Birmingham	1.9	3,012	2.4	0.5	24%	715	2.7	0.8	39%	1,178
ALL WORCESTERSHIRE Cross City South	3.0	4,702	3.8	0.8	27%	1,252	4.4	1.4	47%	2,220
Worcs % of Cross City South	23%		23%				21%			
WMRIS WORCESTERSHIRE SH plus Cross City S	6.2	9,584	7.4	1.3	17%	3,109	8.8	2.7	43%	4,148

Figure 7 – Percentage growth in passenger demand – Worcestershire Rail Corridors – 2019-2050 (Adapted from WMRE data)