

Dorset Connectivity Strategic Study

Summary Document



Scope Area

South West Main Line

- The South West Main Line (SWML) runs from Waterloo to Weymouth over a mixture of four, two, and single-track railway. For the purpose of this study, the scope area is focussed on Brockenhurst to Weymouth.
- Within this scope area, Bournemouth is the busiest station.
- There is limited freight traffic at present although there is a strong history of aggregates movements with the potential for traffic to be brought back to the route.

Heart of Wessex Line

- The Heart of Wessex line stretches from Bristol Temple Meads, south to Weymouth, with many services beginning in and around the Midlands. For the purposes of this study, scope covers the Westbury to Weymouth section of this route and intermediate stations.
- Westbury is a major freight hub in the region and, although no freight uses the Heart of Wessex line, the whole route is W6a gauge cleared.
- The route links with the West of England line at Yeovil Junction via a single-track link from Yeovil Pen Mill to the North of Yeovil Junction station.
- There was historically a link to the south of Yeovil Junction which allowed direct interchange.

- South West Main Line: Brockenhurst - Weymouth
- Heart of Wessex Line: Westbury - Weymouth



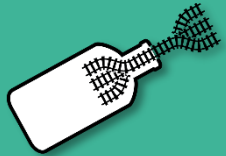
The Problem

South West Main Line



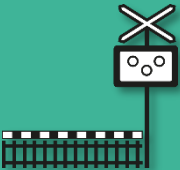
Single-line sections limit capacity

Irregular calling patterns at some stations decrease attractiveness of rail



Infrastructure capacity constraints from Southampton to London

Power supply constraints west of Poole limit the length of trains that can run



Level Crossings at Wareham, Moreton and Poole present safety risks and potential down-time issues for road users

Inconsistent and low line speeds constrain trains' capability on the route



Heart of Wessex Line



Line Speeds along the route mean that current trains are unable to utilise their maximum potential

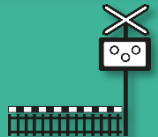
Token signalling from Yeovil Pen Mill severely reduces capacity



Single-line track south of Castle Cary provides little opportunity for services to cross



Level Crossings are likely to require upgrade or closure



Interaction with other services at Castle Cary and Westbury limits capacity

Lack of direct interchange ability with West of England services limits regional connectivity

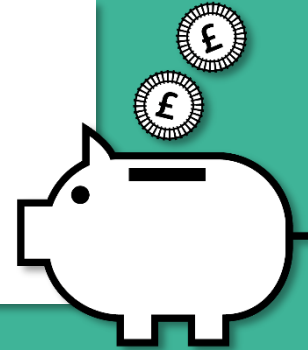


Context – Economy & Demographic

The Dorset Local plan suggests a further 30,481 dwellings are needed in Dorset – a number which may well increase. Any new/affordable housing provided should have good access to transport links in order to drive down dependency on private car usage in the area.



It is forecast that between 2018 and 2038, 11,000 jobs will be generated in the BCP area (5% growth). Western Gateway SNTB argues that attracting and retaining business within the Western Gateway area is very important in order to ensure the number of working age people increases



A 2014 holiday and day trip study by Visit England identified several locations within scope area as some of most visited locations in England:

- Bournemouth (11th)
- New Forest (12th)
- Weymouth (20th)



By 2028, the population of BCP is forecast to increase 25% to 403,000 and the Western Gateway area (including Dorset and South East Dorset City Region) set to increase by 448,000 by 2041.

East Dorset has highest car ownership levels in England and Wales whilst Bournemouth is already the 3rd most congested city in UK. Bus commuting levels are also extremely low in the central Dorset area, meaning problems of road congestion in the area will only be exacerbated with the projected population growth.





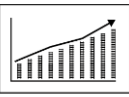


Population	795,000
GVA	£17.3bn
Businesses	31,900
Population over 60	40% (by 2025)



Objectives

Improved Public Transport and multi-modal integration can play a role in raising economic productivity and meeting targets on decarbonisation. Western Gateway SNTB have set out 5 themes in their Rail Strategy that rail improvements should follow:

Theme		Objective	Output
Choice		Make rail a realistic option for journeys to, from and within Dorset and adjacent counties.	Rail service frequency improvements on the SWML, Heart of Wessex Line West of England Line to improve journey opportunities.
Decarbonisation		Enable rail to contribute more actively towards the decarbonisation of Dorset and adjacent counties.	Rail service frequency improvements on the SWML, Heart of Wessex Line and West of England Line to encourage modal shift from the private car and integration with other public transport modes.
Social Mobility		Provide equal journey opportunities by rail for all residents of Dorset and adjacent counties.	Rail service frequency improvements on the SWML, Heart of Wessex Line and West of England Line to provide improved access to employment and education.
Productivity		Enable rail to contribute more actively to improvements in productivity across Dorset and adjacent counties.	Rail service frequency improvements on the SWML, Heart of Wessex Line and West of England Line to provide improved links to other regional economic hubs.
Growth		Enable rail to provide sustainable travel options for housing and job growth across Dorset and adjacent counties.	Rail service frequency improvements on the SWML, Heart of Wessex Line and West of England Line that align to areas of housing and employment growth providing alternative sustainable transport options to private car use.

These Outputs are designed to deliver a number of positive outcomes:

- Improved performance .
- Enhanced connectivity between Dorset's railway and enhanced bus services.
- Improved connectivity to South West England at times when GWR services are unable to use the route via Taunton.
- Enhanced transport options for mobility impaired people.
- Support economic, housing and employment and productivity growth across the Western Gateway and Peninsula SNTB areas.

Outputs

Output	Detail	Theme		
Revised Track Layouts	<ul style="list-style-type: none"> Bournemouth Brockenhurst Castle Cary Westbury Yeovil Junction – Southern Link to the Heart of Wessex Line 			
Additional Platforms	<ul style="list-style-type: none"> Westbury Yeovil Junction – Platform 3 for Heart of Wessex Line Services 			
Loop Extensions and Double-Tracking	<ul style="list-style-type: none"> Four-Track Wareham to Brockenhurst Maiden Newton Loop Extension Moreton Single Redoubling Weymouth Station Throat Redoubling 			
Accessibility	<ul style="list-style-type: none"> Footbridge at Yeovil Junction to Link New Platform 3 Improved Accessibility at all Interchange Locations 			
Interchange	<ul style="list-style-type: none"> Wareham – National Rail / Swanage Railway Yeovil Junction – Heart of Wessex Line / West of England Line with an hourly Heart of Wessex Line service 			
Infrastructure Capability	<ul style="list-style-type: none"> Level Crossing Reviews Line Speed Improvements Power Supply Improvements Reduced Signalling Headways 			
Strategic Station Plans	<ul style="list-style-type: none"> Available Land for Development Enhancements to the Operational Railway Environmental and Sustainability Improvements Public Transport and Active Travel Integration 			

Recommendations

Close Poole and Wareham Level Crossings

- Dependent upon funding availability, this should be progressed collaboratively between Network Rail, Western Gateway, Dorset Council, and BCP Council.
- Recommended that this progresses regardless of any train service changes as it provides safety benefits and mitigates against community severance.

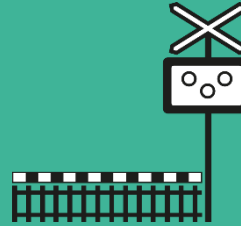


Figure 1 Poole Level Crossing

Produce SOBC to explore interventions required to achieve:

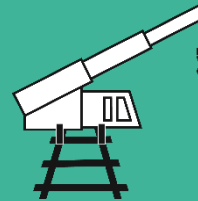
- 1tph on Heart of Wessex Line, calling at Yeovil Jn via a new link.
- +2tph service between Wareham and Brockenhurst.
- Half-hourly service interval between Weymouth and Waterloo services.



Figure 2: Wareham Level Crossing

Progress the recommendations of the West of England Line CMSP

- Integrate these recommendations to improve cross-regional connectivity.



Strategic Station Plans at:

- Brockenhurst - Bournemouth - Christchurch - Dorchester (South & West) - Moreton - Poole - Wareham - Weymouth - Wool - Yeovil Junction & Pen Mill

To consider:

- Station accessibility - Environmental issues & opportunities - Community involvement & usage - Mobility hub options - Station development opportunities
- Station facility improvements - Connectivity to tourist & leisure destinations - Third party funding opportunities - Railway operations, renewals & enhancement synergies