

Delivering Strategies

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Report for Wessex Chamber of Commerce

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Document Approval

Primary Author: Gareth Davies

Other Author(s): David Jowsey

Reviewer(s): James Vickers

Formatted by: gd

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Executive Summary

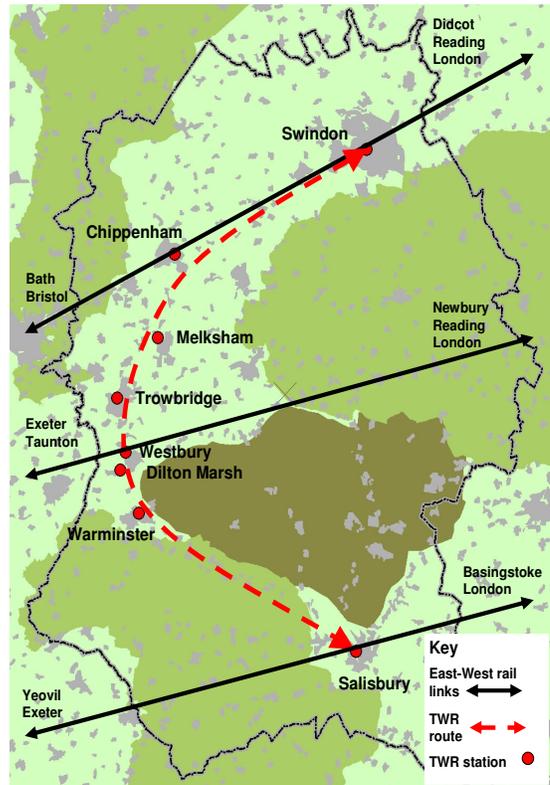
Current rail service does not meet the need

Wiltshire is predominantly a rural county containing a number of Areas of Outstanding Natural Beauty. Population is focused around Swindon and Chippenham to the north, Salisbury to the south and a number of market towns and settlements along a North-South axis in the west of the county.

Road routes provide connections for north-south movements: the A350 connects Swindon and Warminster, but is heavily congested north of Westbury, where at peak times, unpredictability far exceeds average congestion. This is because it is substantially a single carriageway route with few viable alternatives. The A36 connects Warminster and Salisbury, but is congested in and out of Salisbury.

Whilst 64% of the county's population is within reach (5km) of a railway station, the majority of services are provided on east-west routes that pass through Swindon, Westbury and Salisbury.

There is no viable rail service linking Swindon and Salisbury or linking all the western market towns, the only north-south rail connectivity is provided by Bristol to Weymouth and Bristol to Southampton services.



An improved rail service helps to deliver National and Local policy objectives

The Department of Communities and Local Government policy objectives are to:

- promote sustainable transport choices
- promote accessibility to jobs, shopping and leisure facilities by public transport
- encourage better transport provision in rural areas.

The Wiltshire Community Plan 2011-2026 and Corporate Plan 2010-14 set out Wiltshire Assembly's vision, priorities and objectives for making Wiltshire a better place to live and work. They identify three key priorities:

- **supporting the local economy:** in the past 10 years Wiltshire has been losing competitive advantage against the rest of the South West region and neighbouring economies
- **reducing disadvantage and inequalities:** areas of Salisbury, Swindon and Trowbridge are in the most deprived 20% of areas in the country
- **tackling climate change:** the county has the highest per capita CO2 emissions in the South West and is the only area to have an increase in emissions in 2005-2007.

The North, Mid and South Wiltshire Economic Partnerships all have 2009-14 strategies that have an objective to improve the economic infrastructure required for business development.

Summary

The Wiltshire Local Transport Plan (LTP) 2011-2026 seeks to deliver the higher level policy objectives by:

- increasing rail connectivity through provision of bus and rail links
- encouraging sustainable travel modes
- supporting the function of rail stations as transport hubs
- improving journey time reliability for road users by transferring traffic to rail.

TransWilts Railway (TWR) delivers an improved rail service

In addition to delivering the LTP objectives, the nine trains per day TWR service can directly contribute to achieving the Assembly objectives by:

Supporting the local economy

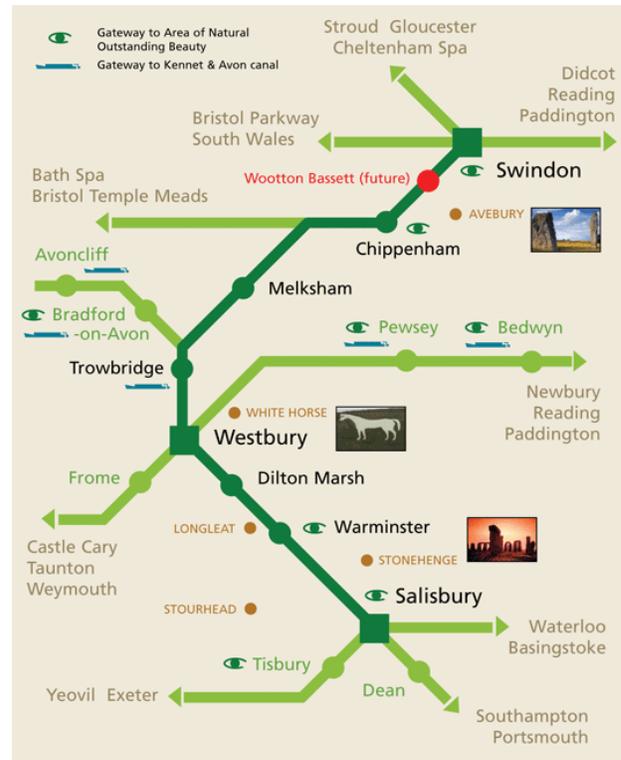
- reducing out commuting by improving access for people to work opportunities in Wiltshire
- making it easier for businesses in Wiltshire to grow by improving business connectivity
- improving people's access to leisure activity in Wiltshire, including tourism
- improving people's access to retail opportunities in Wiltshire
- longer term, supporting development of RAF Lyneham by a new station at Wotton Bassett

Reducing disadvantage and inequality

- improving social inclusion in Wiltshire by improving people's access to key services
- directly serving residents in deprived areas of Wiltshire e.g. Trowbridge and Salisbury

Assisting to tackle Climate Change

- lowering people's reliance on car by providing a regular, reliable public transport alternative
- reducing greenhouse gas emissions, improving air quality by increasing local opportunities and reducing out-commuting, especially by car.



Key is that TWR is a regional railway service, designed to meet local peoples' needs by reliably delivering a regular service pattern that:

- connects Wiltshire's market towns
- directly links the market towns to both Swindon and Salisbury
- links the major centres in Wiltshire to major centres in nearby counties
- provides socially inclusive access to Wiltshire's business economies and key services
- provides a viable, sustainable transport alternative to the car
- encourages local community ownership in the regional railway, its stations and services
- integrates with and helps to deliver national and local priorities.

1 This Commission

1.1 This commission explains the case for the TransWilts Railway (TWR)

- 1.1.1 In February 2011 MVA Consultancy (MVA) were commissioned by Wessex Chamber of Commerce (WCC) on behalf of TransWilts Railway, to provide advice and support for TransWilts Railway's proposals for reinstating a regular train service between Salisbury and Swindon.
- 1.1.2 TWR's vision is to provide "a regular and reliable regional train service that supports the needs of people commuting to work in peak periods, whilst providing an off-peak and weekend service that supports the needs of Wiltshire's community as a whole and those of visitors to the county. The service should be accessible to all sections of the community and integrated with connecting public transport."
- 1.1.3 This report is the deliverable of the commission and it has been developed in close liaison with Wiltshire Council and other stakeholders. It consists of four chapters:
- History Behind TWR's Proposal
 - The Regeneration Case
 - The Business Case
 - Conclusions.
- 1.1.4 Two business cases are presented in Chapter 4:
- one presents a Benefit Cost Ratio (BCR) as per DfT appraisal guidance, defined as the ratio of the Present Value of Benefits over the Present Value of Costs, expressed in discounted 2002 prices and values, over a 30 year appraisal period
 - the second business case presents revenue minus cost, appraised over a 5 year period, as this fits with the potential FGW franchise extension to March 2016. This period is also long enough for marketing to impact and for the demand to stabilise.
- 1.1.5 Network Rail use the same BCR calculation as DfT to appraise schemes.
- 1.1.6 Both business cases have been developed 'bottom-up', chapter 4 sets out the key assumptions that underpin them. Where data and/ or evidence is limited or missing we have made our own assumptions, based on our best judgement and experience of the rail industry.

The two measures show:

- TWR is value for money, the DfT/Network Rail BCR is 2.4:1
- there is a revenue shortfall in years one and two.

2 The History Behind TWR's proposition

2.1 Understanding the history

- 2.1.1 This section discusses the history of services between Salisbury and Swindon, together with some lessons learnt from previous attempts to improve the service, that can help make TWR a success.

2.2 Pre-2001 only one or two services operated each way between Swindon and Salisbury

- 2.2.1 The pre-2001 service was unsuccessful for the following reasons:

- with one or two trains each way per day there were few viable journey opportunities
- the service suffered from cancellations and delay, the service was seen as the 'first train to cancel' by passengers
 - the Melksham loop section of route was used as an engineering works diversion
 - other 'higher' value trains were prioritised, as were freight trains
 - delays were compounded because there was no 'next train' to fallback on
- customer information provision was poor
 - lack of communication and information provision meant passengers on platforms often only knew that the service was delayed/ cancelled by it's failure to arrive.

2.3 In 2001 the service was increased to five trains each way

- 2.3.1 Whilst the 2001-2006 service was an improvement on the pre-2001 service there were still fundamental issues that hampered it's success:

- the timetable was still not adequate
 - five (weekday) trains each way did not provide an adequate peak service to attract commuters
 - four trains each way on a Saturday and three on a Sunday limited the opportunities to make leisure type journeys by train
 - connections involved long wait times, particularly at Westbury
- the service still suffered from cancellation and delay due to reasons outlined in 2.2.1
- the service was not well marketed
 - potential passengers were generally unaware of the existence of the service
 - due to competitive advantage and issues around integration, FGW did not market the service because it was run by another TOC, for example the FGW arrival/departure boards at Swindon did not show the services
 - the momentum of the Community Rail Partnership was not strong enough to raise awareness of the service

2 The History Behind TWR's proposition

- Wiltshire Council policy at the time was focused on road transport, the upgrade of the A350 being an example, this is partly because the Local Transport Plan did not mandate them to market specific rail services
- train operating companies and large businesses were focused on routes east-west providing connectivity to Reading and London.

2.4 The service was reduced to two trains per day each way in 2006

2.4.1 In 2005 the Strategic Rail Authority (SRA) issued an Invitation to Tender (ITT) for the remapped Greater Western franchise. At the same time the SRA published a Stakeholder Consultation Document to:

- inform stakeholders of the process for awarding the franchise
- inform stakeholders of the objectives and expectations for the franchise, including the proposed train service specification
- to provide stakeholders with an opportunity to comment on the proposals.

2.4.2 The specification consisted of two Service Level Commitments (SLC):

- SLC1: requiring the franchisee to operate the existing timetable until December 2006
- SCL2: requiring the franchisee to operate a new timetable from December 2006.

2.4.3 The specification of SLC2 included "Reduction of services on the Swindon – Westbury via Melksham route, to match demand, which is mainly for commuter travel", this was because the route was identified as being one where "demand levels no longer justify taxpayers' support for the existing level of service".¹ Figure 1 details the SLC2 timetable, which is the timetable that operates today.

Figure 1 The Post-2006 timetable offered few viable journey opportunities

Station		Weekday		Saturday		Sunday	
Salisbury	d	0604	1840	0730	1352	1628	1802
Warminster	d	0625	1901	0750	1412	1648	1822
Dilton Marsh	d	0629	-	0754	-	1653	1827
Westbury	d	0634	1909	0759	1420	1656	1831
Westbury - connection	d	0704	1932	0905	1506	1710	1936
Trowbridge	d	0710	1938	0911	1512	1716	1942
Melksham	d	0719	1947	0920	1521	1725	1952
Chippenham	d	0730	2001	0930	1529	1725	2002
Swindon	d	0748	2021	0949	1549	1752	2021
		Weekday		Saturday		Sunday	
Swindon	d	0616	1844	1522	2108	1819	-
Chippenham	d	0632	1901	1538	2124	1835	-
Melksham	d	0641	1911	1948	2134	1845	-
Trowbridge	d	0650	1920	1558	2143	1854	-
Westbury	d	0657	1927	1606	2151	1906	-
Westbury - connection	d	-	-	-	2201	1927	-
Dilton Marsh	d	0703	1943	-	2204	-	-
Warminster	d	0712	1950	1647	2208	1938	-
Salisbury	d	0736	2013	1709	2231	1959	-
Southampton	d	0809	2048	-	2302	2029	-

¹ Greater Western Franchise, Stakeholder Consultation Document, Strategic Rail Authority, June 2005

2 The History Behind TWR's proposition

2.4.4 Compared to the December 2004 timetable the change represented a reduction from five each way per day between Swindon and Westbury, to two round trips a day.

2.4.5 Subsequently, the service was reduced for two reasons:

- existing patronage was low
- analysis concluded that future demand growth was likely to be low.

2.4.6 This poses two questions:

- why was existing patronage low?
- why did analysis conclude that future demand growth was likely to be low?

2.4.7 Patronage was low because:

- the timetable was not fit-for-purpose, journey opportunities were restricted
 - there was only one off-peak service which meant the railway was unsuitable for many people undertaking business and leisure journeys
 - connections at Westbury for journeys to Newbury, Reading and London or to Taunton and Weymouth to/from Salisbury and Swindon were poor, people had to wait for long periods at Westbury, to continue their journeys
- the service was unreliable, trains were often cancelled which meant that passengers could not rely on the service
 - commuters going to work could not trust the service to get them to work on time
- station facilities were limited and access was poor, particularly at Melksham
 - there was no information at the station to alert passengers as to whether the train was running on time
- there was little marketing of the service
 - only a limited number of people actually knew that the rail service existed
 - the existing timetable was not fit-for-purpose and the service was unreliable, it was difficult to market a poor product.

If the TWR service is to be a success it must therefore:

- offer a timetable tailored to the residents of Wiltshire, providing a range of viable journey opportunities that people want
- be reliable and deliver to people's expectations. Like any successful business, delivery of the product must be consistent
- be promoted and marketed effectively.

2.4.8 Analysis concluded that future demand growth was forecast to be low, the proposal for four additional Westbury – Swindon services working in marginal time was forecast to deliver additional revenue of only £43k pa, Melksham-Swindon was the most significant flow and this was forecast to only provide £11k pa of additional revenue. The reason for the low forecasts was because:

2 The History Behind TWR's proposition

- the approach to forecasting was not suited to estimating demand for new (or reinstated) services
 - MOIRA was used to evaluate demand and revenue impacts of timetable options
 - however MOIRA was designed to forecast the impact of relatively small changes in services, it uses an elasticity approach to calculate demand changes in response to changes in generalised journey times
 - there is recognition across the industry that MOIRA is prone to underestimating growth of new markets.

To overcome the limitations in the approach to forecasting, the business case presented here for the TWR service recognises that MOIRA only provides a starting point for forecasting demand for the reinstated service (see 4.3.1).

- per annum growth in passenger numbers of between 0.7%-2.5% was used to project the demand from MOIRA forward over time, this is lower than the growth we would expect from GDP per Capita.

Key to the success of the Business Case will be that growth must be forecast using assumptions that reflect the local market.

2.5 2010 Greater Western RUS considered three options for the West Wiltshire corridor

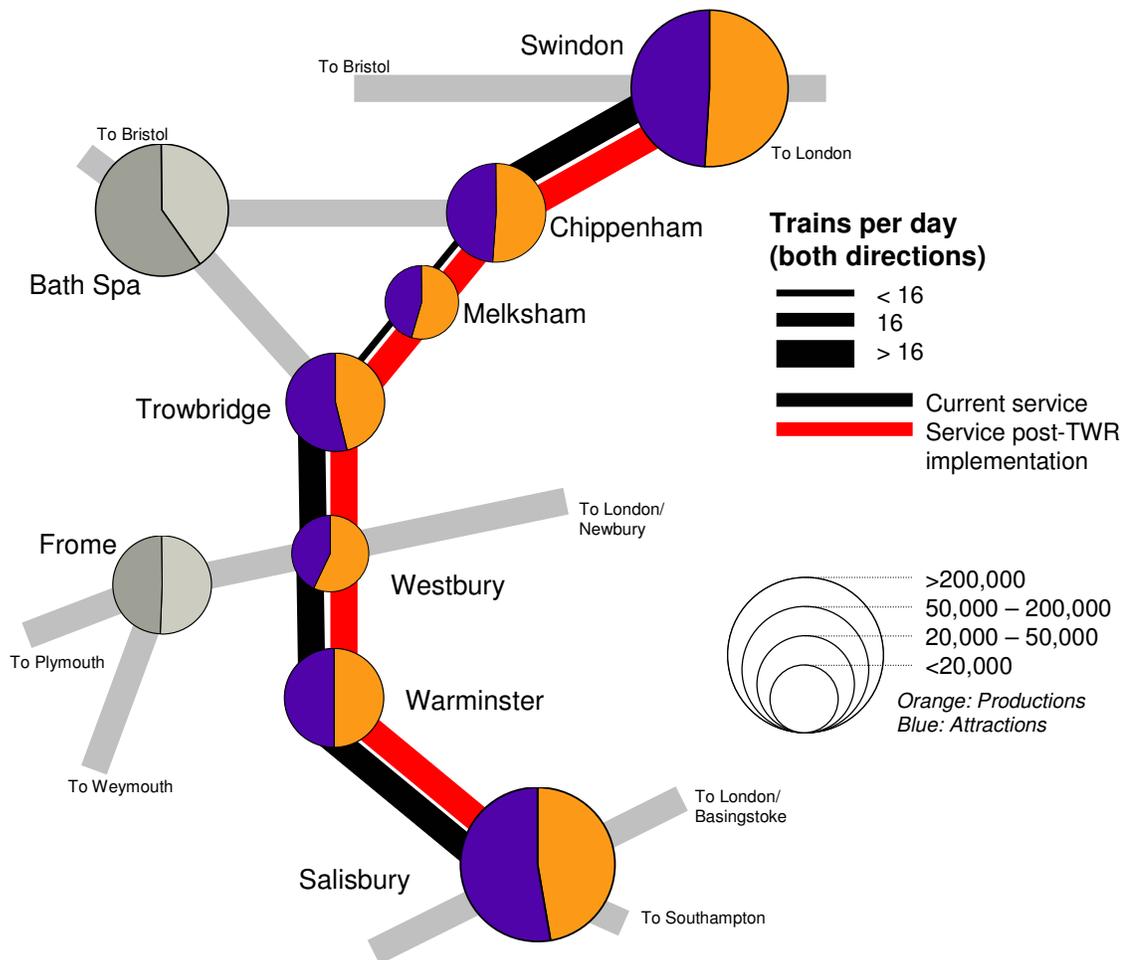
- 2.5.1 The 2010 Network Rail Greater Western Route Utilisation Strategy (RUS) sets out the strategic vision for the Greater Western network. It was developed by analysing the capacity and capability of the network against the expected future demand for travel. A Gap Analysis was undertaken to establish where future demand and capacity were likely to be mis-matched and potential interventions were assessed from both operational and economic perspectives.
- 2.5.2 From Wiltshire's perspective the RUS considered a number of options to meet the demand for travel urban centres including Bristol, Bath, Chippenham and Swindon. Three options considered were:
- hourly Salisbury – Chippenham service
 - hourly Westbury – Chippenham service
 - hourly Westbury – Swindon.
- 2.5.3 Critically, services terminating at Chippenham required a bay platform to be constructed at Chippenham, services terminating at Swindon did not require any additional infrastructure.
- 2.5.4 The Salisbury – Chippenham service achieved a Benefit Cost Ratio (BCR) of 1.5:1, which was deemed not high enough for the RUS to recommend the scheme (a BCR of 2:1 being required when investment in infrastructure is needed). See 4.1.3.
- 2.5.5 The two Westbury services both achieved BCRs which, subject to operational viability, were high enough for the RUS to recommend them. However, during later consultation the accuracy of the analysis was undermined, in particular assumptions around the base rail demand to/from Melksham.
- 2.5.6 When the analysis was updated the Westbury – Chippenham service achieved a BCR of 1.7:1, less than the 2:1 required for the RUS to recommend it. The Westbury – Swindon

2.6.4 Analysis of freight requirements in 2030 shows that growth in freight can be accommodated. Therefore, once the trains can be validated against the paths currently available, the capacity requirements of future freight growth can be secured. In addition, Network Rail plan to look at longer term aspirations to:

- provide an hourly peak service at Melksham; using the December 2010 timetable and predicted freight growth to 2030 on the existing infrastructure
- consider the feasibility of a future station between Swindon and Chippenham for potential developments at Wootton Bassett/Lyneham
- comment on timetable linkage with future South Cotswold services from Swindon potentially the Westbury/Salisbury services, implementation is subject to the redoubling of Swindon – Kemble.

2.6.5 Network Rail will also validate whether this service is operationally feasible to provide an hourly service in the peak hours, which would require one extra vehicle in each direction.

Figure 3 Map showing improvement in services



2.6.6 Figure 3 shows how the TWR timetable will provide a step change in service provision. The black line connecting the towns represents the current service and the red line the proposed TWR service. Key to the step change is the increased number of trains running between Chippenham and Trowbridge, forming direct services between Swindon and Salisbury,

3 The Regeneration Case

3.1 The vision is that Wiltshire's market towns retain their own rural setting

3.1.1 The Wiltshire & Swindon Economic Assessment (WSEA) Report 2005/2006 provided an overview of the regions structure and challenges. It identified "Distance or travel time from economic centres such as London and other major urban areas has emerged as an important determinant of productivity levels. Large urban centres provide access to larger markets which bring scale economies, access to large pools of labour; a wide range of suppliers and subcontractors...it may, however, be possible for rural (areas) to reproduce the benefits of the urban effect through strong networks, market and information access".

3.1.2 People view Wiltshire's market towns as attractive places to live, at the heart of the appeal is that the towns provide both a sense of community in and around the town centres and easy access to the countryside. Over time each town has developed unique characteristics which any future development must recognise, town centres are concentrated around and along the riverside, which is attractive and means that most are not industrialised. The challenge is to maintain these fundamentals whilst:

- growing the local economy
- reducing disadvantage and inequality
- assisting to tackle climate change.

3.1.3 TWR will support this by:

- connecting Wiltshire's market towns
- directly linking market towns to both Swindon and Salisbury
- linking the major centres in Wiltshire to major centres in adjacent counties
- improving social inclusion
- providing a viable, sustainable transport alternative to car
- encouraging local community ownership in the regional railway.

3.2 The regular timetable proposed for TWR can support growth in the economy

3.2.1 TWR will improve connectivity between the towns and key centres, facilitating regeneration by improving access to jobs and opportunities for business travel and trips for shopping, education and leisure activities. The timetable matches commuter demand in peak and the off-peak timetable provides opportunities for business and leisure travel throughout the day, including weekends.

3.2.2 Swindon is mainly a commuter town, rather than a tourist destination, but has excellent shopping and leisure facilities (for example it has the only ice skating rink in Wiltshire). It has an Outlet shopping centre, railway village and STEAM Museum all within easy walking distance of the station. An improved service frequency will benefit Swindon as an alternative destination to Salisbury for west Wiltshire residents.

3 The Regeneration Case

3.2.3 Salisbury is an attractive tourist destination with city centre shopping, theatre and markets all accessible on foot from the station. It is currently not easily reached from the north of Wiltshire. The regular rail service timetable will benefit Salisbury as a tourist and shopping destination.

3.2.4 Better connections also support growth in journeys to/from out of county destinations

- London is already easily accessed by rail from Salisbury, Westbury and Chippenham/Swindon
- the south coast will be more easily accessed from northern Wiltshire using the TWR service
- Southampton has a rail link to the airport, this will benefit Southampton as an airport departure point. Bristol airport is only accessible by car, there is no rail link.

3.3 TWR will facilitate planned town centre regeneration

3.3.1 Chippenham in the north, Trowbridge in the west and Salisbury in the south of Wiltshire all have plans for town centre regeneration. These three towns represent the largest populations in the Wiltshire Council area.

3.3.2 The regeneration proposals include converting old factory buildings adjacent to station locations into attractive areas and improving convenient connections to Wiltshire's countryside. For regeneration to be successful people need to value and use the stations and train service provided. TWR will provide a service that can support this. As more people value and use the station and train services, so the community will feel more ownership of it.

3.4 Tourism will benefit from a better train service

3.4.1 Tourism plays an important role in Wiltshire's economy, as a provider of jobs and attracting visitors who spend money in the county. Wiltshire has three Areas of Outstanding Natural Beauty: the Cranbourne Chase and West Wiltshire Downs, the North Wessex Downs and the Cotswolds. The Kennet & Avon canal also attracts visitors who walk and cycle along it between Hungerford and Bath. A better rail service, connecting Wiltshire, rather than simply passing through the county will help boost tourism and the economy. Little data exists on tourism in Wiltshire, but Wiltshire Council report that they forecast tourism to increase by 3% pa, this increase has been used to build the TWR business case (see 4.3.1).

3.5 The stations on the route are all in the centre of town

3.5.1 Approximately 7% of Wiltshire residents live within 800m of a railway station and approximately 58% live within 5km of a railway station. The stations in Wiltshire are all in the centre or near the centre of each town. In addition to people accessing by foot there is also significant access by car, bus or 'kiss and ride' to stations. However, there is generally a distance beyond which access by car or bus is no longer attractive and people generally complete their journey by car. Surveys (undertaken by Wiltshire Council) of passengers using the 2001-2006 service show the following:

- 59% of surveyed passengers (in 2004) at Chippenham accessed by car, 30% walked, 45% of surveyed passengers accessed from greater than 5km from the station
- 34% of surveyed passengers (in 2006) at Trowbridge accessed by car, 48% walked, only 6% of surveyed passengers accessed from greater than 5km from the station
- 58% of surveyed passengers (in 2003) at Westbury accessed by car, 30% walked, 33% of surveyed passengers accessed from greater than 5km from the station
- 49% of surveyed passengers (in 2003) at Warminster accessed by car, 38% walked, 40% of surveyed passengers accessed from greater than 5km from the station.

3.5.2 It is unlikely that the proposed TWR service will change these access characteristics, so we have assumed a 5km catchment area in developing the Business Case.

3.6 Housing and employment development will increase demand for public transport

3.6.1 Proposed housing and employment will support growth in the local economy. Wiltshire Council projections for housing and employment by 2026 are presented in Table 3.1. Developments are assumed to be realised linearly from 2016 to 2026. Note that these figures are working projections and have not formally been agreed by Wiltshire Council.

3.6.2 Lyneham MOD site will be vacated by the airforce in 2012 with 2,500 people leaving the site. The site may be used by the army in 2015, or be left vacant for redevelopment. The regeneration issues for this site are strategically important for North Wiltshire. The potential provision of a future rail station at Wootton Bassett could help provide essential infrastructure links to aid the necessary redevelopment.

Table 3.1 Regeneration opportunities

Town	Additional houses proposed	Additional employment land proposed, in ha
	By 2026	By 2026
Chippenham	6,000	39
Melksham	2,000	26
Trowbridge	6,000	51
Westbury	1,000	57
Warminster	2,000	20
Salisbury	7,000	36

3 The Regeneration Case

3.7 TWR will improve access to jobs in Wiltshire

- 3.7.1 TWR will improve people's access to jobs in Wiltshire, supporting growth in the local economy. The Wiltshire & Swindon Economic Assessment (WSEA) 2005/6 identified that in 2001 39,300 people commuted out of the county² for work whilst 27,300 commuted into the county for work.
- 3.7.2 The WSEA also found that Swindon was a key commuting destination for a further 13,000 people. The profile of business size in the WSEA shows that the average business size in Swindon in 2001 was 24.4 employees, compared to an average of 10.4 employees per business across all Wiltshire businesses.
- 3.7.3 Across Wiltshire 97.5% of businesses were categorised as small (defined as 1-50 employed) and just 2.3% medium (51-299 employed), this is very different to Swindon, where 32.5% of businesses were classified as the medium sized.
- 3.7.4 The different employment opportunities offered at Swindon compared to other Wiltshire towns means that Swindon will continue to attract commuters. The improved connectivity to Swindon from the market towns will help draw commuters from other out of county destinations.
- 3.7.5 The small size of Wiltshire's business community emphasises the need for integration and better connectivity between what is a more micro business community.

3.8 TWR will directly serve residents in more deprived areas of Wiltshire

- 3.8.1 Wiltshire is a relatively affluent county, but there are significant pockets of deprivation in areas of Salisbury, Trowbridge and Swindon, which are amongst the top 20% of the UK's most deprived areas. Access to Wiltshire Council services, which are distributed amongst its towns, is particularly difficult for people in this group, particularly because they are more reliant on public transport for work and education opportunities. A regular train service linking north-south Wiltshire towns and facilities will provide a step change to existing public transport provision (where bus is really the only viable current option) providing a faster, more convenient journey experience. Low off peak rail fares will support also support social inclusion.
- 3.8.2 The Community Rail Partnership will play an important role in the delivery of social inclusion by ensuring that timetables are easy to understand and that ticketing information is simplified for groups unfamiliar with rail travel.

3.9 Encouraging local community ownership in the regional railway

- 3.9.1 Community "adopt your station" schemes are envisaged as a way to involve the communities and increase their sense of ownership of the stations. Early approaches have been made to some major businesses adjacent or near TWR stations regarding sponsorship. The success of other partnerships in engaging the local schools has also been noted as a template for future Community Rail engagement with the community.

² Out of county excludes Swindon in this 2011 commission

3.10 TWR will provide a viable alternative to car

- 3.10.1 By providing a viable alternative to the car the TWR service will lower peoples' reliance on car remove some car journeys. This will help reduce greenhouse gas emissions and improve air quality.
- 3.10.2 The impact of reduced car journeys is quantified in the Business Case, see Chapter 4.

4 The Business Case

4.1 Building the Model and Key Assumptions

4.1.1 This chapter details the approach and key assumptions underpinning the TWR Business Case. The model outputs are forecasts, from the start of January 2012 to the end of December 2041, of the following:

- Benefits
 - Revenue
 - User benefits
 - Non user benefits
- CapEx
- OpEx
 - Staff
 - Non-staff
 - Maintenance

4.1.2 No provision has been made for capital investment because the infrastructure already exists and rolling stock is assumed to be cascaded, so no lease costs are assumed.

4.1.3 Two different measures are presented:

- a VfM measure: a DfT BCR, defined as the ratio of the Present Value of Benefits over Present Value of Costs, expressed as discounted 2002 prices and values, over a 30 year appraisal period
- an affordability measure: revenue minus cost, appraised over a 5 year period, in 2011 prices, since this fits with the potential FGW franchise extension to March 2016. This period is also long enough for marketing to impact and for the service to mature.

4.1.4 Two different measures are needed because

- since no infrastructure is needed, DfT require that the BCR needs to be > 1.5 .
- revenue needs to cover OpEx plus a level of profit to recompense risk if FGW are to consider TWR commercially viable.

4.2 Principles and assumptions underpinning the Business Case

4.2.1 The DfT/Network Rail BCR is compliant with latest DfT 2010 guidance. Where bespoke analysis has been carried out to capture more localised impacts around regeneration and development, these are presented as sensitivities (see 4.5.5).

4.2.2 The net position (revenue minus cost) includes the incremental revenue generated from the bespoke analysis.

4 The Business Case

- 4.2.3 Both business cases assume that the operator will require a profit in order to take on the revenue risk. We have assumed that this 'cost' is 7% of revenue.
- 4.2.4 Demand ramp-up and elasticities to population, employment and GDP per capita have been sourced from the Passenger Demand Forecasting Handbook v5.0.

4.3 Our Approach to estimating benefits

- 4.3.1 An incremental approach has been used to estimate the benefits. The first task was to estimate the demand for the service, the process used was:
 - FGW MOIRA - evaluation of existing (the 'base case') and proposed timetable (the 'do something' to derive the change in demand
 - for both the base case and do something, demand to/from each TWR station was forecast forward based on trends in population and employment projections sourced from TEMPRO v5.4.
 - for both the base case and 'do something', demand for Reduced tickets (a proxy for leisure trips) between each TWR station and other Wiltshire stations was then uplifted each year by 0.9% (calculated as 30% of 3% pa growth – see 3.4.1, based on the assumption that 30% of Reduced ticket demand is travel by tourists)
 - for both the base case and 'do something', demand to/from each TWR station was then forecast forward based on projections of changes to national GDP per capita sourced from WebTAG and assuming fares increased by RPI + 1% (expect for 3 years between 2012-2015 when inline with Government regulation fares were assumed to increase at RPI + 3%)
 - in the 'do something', where trends in population and employment sourced from TEMPRO v5.4 were lower than the projections provided by Wiltshire Council, additional growth was assumed, such that total growth was consistent with Table 3.1.
 - in the 'do something', where trips rates to/from TWR stations were lower than between other comparable stations, demand was uplifted to bring trip rates more inline with these stations
 - in the 'do something', demand on Reduced tickets between each TWR stations and other Wiltshire stations was uplift by a further 0.45% (50% of the underlying trend in tourism) pa, to reflect increased tourism due to the TWR service
- 4.3.2 Incremental revenue was calculated by multiplying the incremental demand by average yield from on MOIRA
- 4.3.3 Three user benefits have been estimated:
 - Value of time savings
 - journey time savings for existing passengers
 - total minutes saved are estimated by multiplying the number of existing users (the 'base' demand) by the change in generalised journey time
 - total minutes saved are multiplied by values of time (sourced from WebTAG) to monetise the benefit

- Value of benefits from generated trips
 - as is standard in transport scheme appraisal new users are assumed to benefit from half³ of the change in generalised journey time
 - total minutes saved are calculated by multiplying the number of new users (generated demand) by 50% of the change in generalised journey time
 - total minutes saved are multiplied by values of time (sourced from WebTAG) to monetise the benefit
- Crowding benefits have not been estimated as benefits are only accrued if the load factor (ratio of passengers to seats) is above 60%, we do not expect demand on TWR services to reach this level.

4.3.4 Two sets of non-user benefits have been estimated, both are due to car kilometres (kms) being removed from the highway network:

- some due to highway trips being abstracted from rail
- others due to people accessing the rail network closer to home, rather than driving to a station further away.

4.3.5 Car kms removed has been calculated by first of all taking the total change in rail passenger kms due to generation. To convert from increased rail passenger km to reduced car passenger km DfT WebTAG guidance has been followed which recommends a figure of 26%. This value takes into account average car occupancy. This number is then multiplied by different values (obtained from the DfT External Costs of car use spreadsheet) associated with benefits from removing one car km, to give an estimate of the economic value of reduced car travel. South West regional figures for rural areas have been used. Table 4.1 details the values used.

Table 4.1 WebTAG values for removal of one car km in 2011

	Pence per car km (2002 prices)
Congestion	13.0
Infrastructure	0.1
Accidents	2.6
Local air quality	0.8
Noise	0.2
Greenhouse gases	0.4
Indirect taxation	-0.4

4.4 Our Approach to estimating costs

4.4.1 Costs are based on values supplied to us from Network Rail, consistent with the 2010 Greater Western RUS.

³ WebTag guidance, 3.5.3

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4.4.2 Staff costs are estimated at £350,000 pa (2002 prices), based on the assumptions in Table 4.2.

Table 4.2 Staff costs (2008 prices)

	Quantity (FTE)	Salary pa	Allowance for pension, NI etc pa	Total cost pa
Drivers	4	£55k	27%	£70k
Guards	4	£30k	23%	£37k

4.4.3 These staff costs assume the following:

- Rolling stock: 2 x 1 car 153 DMU
- 1 driver and 1 conductor per train, working an 8 hour shift
- 16 hour day implies 4 drivers and 4 conductors per day
- No incremental costs are assumed for any other staff.

4.4.4 Non staff costs are estimated at £122,000 pa (2002 prices), based on the assumptions in Table 4.3.

Table 4.3 Non-staff costs

	Quantity (miles pa)	Cost per mile (these are 2008 prices)	Total cost pa
Fuel	331,056	£0.30	£99.3k
Variable track access	331,056	£0.15	£49.7k

4.4.5 Total miles is based on the following:

- 57 miles between Swindon and Salisbury
- total of 16 trains per day (both directions)
- annualisation of 363.

4.4.6 No train leasing costs have been assumed since rolling stock is assumed to be cascaded. Should this not be the case, a ballpark figure for leasing costs for a 1 car DMU is £100k pa.

4.4.7 Maintenance costs are estimated at £190,000 pa (2002 prices), based on a cost per mile of £0.70 (this is a 2008 price).

4.4.8 No incremental station maintenance costs are assumed.

4.4.9 Optimism bias of 41% has been applied to all operating costs for the DfT appraisal. This optimism bias has been removed when assessing the net impact on the TOC.

4.5 The scheme’s value for money

4.5.1 Table 4.4 below presents the BCR, all costs and benefits are expressed in discounted 2002 prices and values, using a discount rate of 3.5%, appraised over 30 years. The following are presented:

- PVC, defined as the sum of the Present Value of staff, non-staff and maintenance costs, minus the Present Value of Revenue
- PVB, defined as the sum of Present Value user benefits, non-user benefits and changes in indirect tax
- NPV (Net Present Value), defined as PVB – PVC
- BCR, defined as the ratio of PVB (Present Value of Benefits) over PVC (Present Value of Costs).

4.5.2 This definition of the BCR is consistent with latest Webtag guidance and the approach used in the 2010 Network Rail RUS.

Table 4.4 Traditional BCR (2002 prices)

	£m
OpEx	
Staff	£6.66
Non-staff	£2.32
Maintenance	£3.62
Loss of indirect tax	-£0.71
Benefits	
Revenue	£3.53
User	£20.43
Non-user	£2.14
PVC	£9.08
PVB	£21.86
NPV	£12.78
BCR	2.41

4.5.3 The DfT/ Network Rail compliant BCR is 2.41, the VfM threshold for recommending rail schemes with no infrastructure investment is that the BCR must be greater than 1.5.

Table 4.5 Where the benefits fall (£m) 2002 prices

	Existing users	New users	Non-users	Revenue	Total	%
Market towns to/from Swindon/ Salisbury	£7.27	£3.36	£1.11	£1.59	£13.32	51%
To/from TWR out of county	£4.79	£1.54	£0.71	£1.31	£8.35	32%
Between market towns	£1.88	£0.98	£0.21	£0.44	£3.52	13%
Between Swindon and Salisbury	£0.51	£0.05	£0.11	£0.18	£0.85	3%
To/from TWR to non-TWR in county	£0.04	£0.00	£0.01	£0.01	£0.06	0%

4.5.4 Table 4.5 shows where the different benefits fall. Half the benefits accrue to journeys from the market towns to Swindon and Salisbury. The next biggest winner are journeys to/from TWR stations to/from out of the county destinations (e.g. Bath and London), which account for one third of the benefits. Journeys between the market towns account for 13% of the benefits.

4.5.5 Webtag guidance on BCR's is that they are of limited value where projects result in significant revenues such that the PVC becomes negative. Because the sensitivities below deliver additional revenue to the extent that the PVC does become negative, we assess whether the scheme offers value for money by assessing whether the NPV is finally positive.

- uplifting trips rates to/from some TWR stations were they were low in comparison to comparable flows
 - this increases the NPV to £52.82m from £12.78m
- uplifting trends in population and employment to bring planning assumptions inline with Wiltshire Councils proposals
 - this increases the NPV to £14.16m from £12.78m
- uplifting Reduced demand between each TWR stations and other Wiltshire stations to reflect greater growth in tourism
 - this increases the NPV to £13.57m from £12.78m

4.5.6 If we include all three of the above sensitivities

- this increases the NPV to £58.99 from £12.78m.

4.5.7 Within the first five years the cumulative impact of uplifted trip rates, trends in population and employment, and tourism growth on top of the 'base case' are forecast to increase revenue by £3.8m.

Table 4.6 Where the revenue falls (£m, 2011 prices)

	Revenue	%
Market towns to/from Swindon/ Salisbury	£1.94	51%
To/from TWR out of county	£1.05	27%
Between market towns	£0.78	20%
Between Swindon and Salisbury	£0.06	1%
To/from TWR to non-TWR in county	£0.00	0%
Total	£3.80	100%

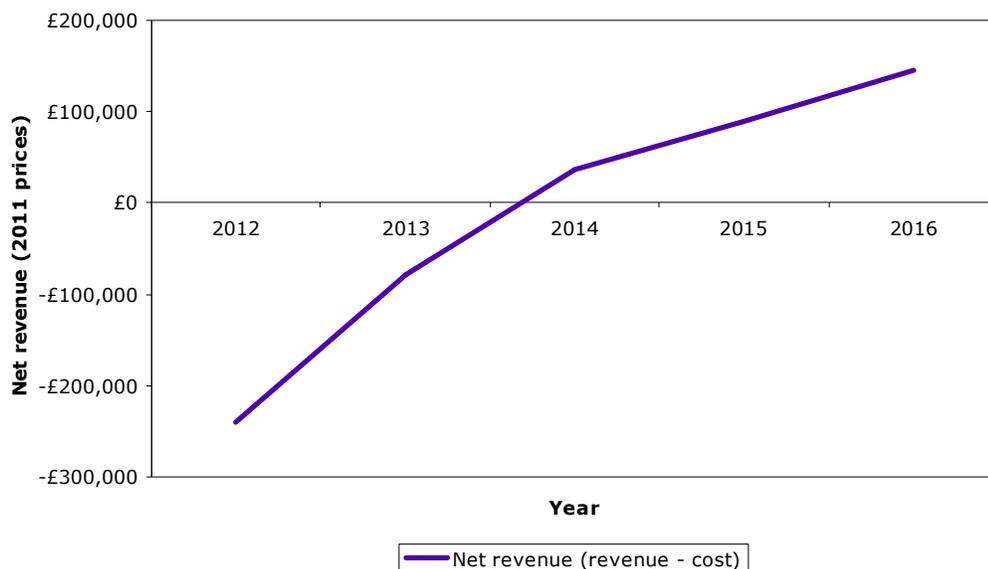
4.5.8 Table 4.6 details where FGW could expect the additional revenue to fall. The longer nature of the journeys, as is to be expected journeys between TWR stations and out of county stations have a higher yield than journeys between market towns and Swindon/ Salisbury.

4.5.9 Table 4.7 below presents the difference between the total costs and revenue over 5 years. .

Table 4.7 Revenue v Cost (2011 prices) over 5 years

	£m
OpEx	
Staff	£2.06
Non-staff	£0.72
Maintenance	£1.12
Profit	£0.27
Total	£4.16
Revenue	£3.80
Net	-£0.36

4.5.10 Table 4.7 identifies a potential revenue shortfall of £0.36m over 5 years. Figure 4 below shows that this shortfall is caused by the demand ramp-up profile (see 4.2.4).

Figure 4 Five year cost and revenue position

5 Conclusions

5.1 TWR has a strong case

5.1.1 The business cases show that:

- long term TWR is value for money
 - the DfT/Network Rail business case shows that the benefits of TWR are high
- in the medium term TWR is affordable
 - revenue covers costs from years three
- revenue is not initially sufficient to cover operating costs
 - due to the demand ramp-up, there is a revenue shortfall in years one and two.

5.1.2 FGW will need to be convinced that TWR is financially viable, even then they may:

- not agree with our revenue forecasts
- not view forecast 'profit' to be worth the risk.

5.1.3 Until recently, DfT may have been prepared to subsidise the service because the BCR is greater than 1.5. However, given the current economic climate and drive to reduce costs across the industry, the TWR service may be viewed as unaffordable.

5.1.4 The Minister of State for Transport, Theresa Villiers, while giving her support to local rail schemes, reiterated that schemes must be affordable in her statement to Government on 28 February 2011.

"The Government's priority remains one of reducing the budget deficit and, therefore, careful consideration has to be given to any proposal which might increase the cost of the railway, either in the short or long term. However, we recognise the arguments put forward by promoters that regional and local rail services need to adapt to population, housing and economic growth in localities ... I would therefore like to announce to the House that the Government still intends to fund the provision of new or enhanced services promoted by authorities which have rail industry support, but in view of the tough financial decisions made as part of the Spending Review, no such funding will be provided prior to April 2015 (the start of the next Spending Review period) ... It is important that the promoter demonstrates that a rail scheme is the best way to address regional and local transport issues; hence promoters would still be expected to fund a new or enhanced service for the first three years to demonstrate its commitment to the service and show that it delivers value for money in the light of actual experience."

5.1.5 Taking the three conclusions in 5.1.1 together, TWR requires some form of 'pump priming'. Under the Strategic Rail Authority, TWR would have qualified for funding through Rail Passenger Partnership (RPP), the funding mechanism which was designed to encourage improvements in the rail network. The RPP provided partnership funding to support local councils and train operating companies progress schemes that whilst not demonstrating profitability in the short term, demonstrated long term value. The successful re-introduction of services between Cambridge and Norwich is an example.

5.1.6 However, the RPP no longer exists, although there maybe other funding options that could support the initial years of TWR:

- Local Sustainable Transport Fund bid, key points:
 - £350m revenue and £210m capital funding from 2011/12 to 2014/15.
 - open to local authorities (individually or in partnership)
 - proposals must support local economic development and reduce carbon emissions. Social, safety, air quality and health benefits will also be considered.
 - schemes with high levels of local funding, particularly from the private sector, will be preferred
 - packages of schemes favoured
- Regional Growth Fund, key points
 - £1.4bn fund size from 2011-14
 - open to private bodies and public private partnerships
 - intended to support projects and programmes with significant potential to create long term private sector led economic growth and employment, in particular areas and communities that are currently dependent on the public sector
 - will provide a mixture of direct support for private sector investments and support for some basic infrastructure that removes the barriers that trigger private sector led economic growth as part of a wider investment
 - deadline for round one bids has passed, process for round two to be announced.

5.2 Other potential ways forward

5.2.1 In addition, the forecast revenue shortfall could potentially be bridged in other ways if supported by FGW:

- increased demand through effective marketing
 - the Community Rail Partnership and TWR plan to actively market the service, this could increase demand above our forecast or increase the demand ramp-up
- car park revenue
 - Wiltshire Council plan to add 40 parking spaces at Melksham. Assuming full occupancy at £5 per day, annualised by 250 days, this could generate £50k pa
- dedicated fares to encourage increased usage.

5.2.2 Private funding could also be drawn from major employers who would value the improved employment pool or who may otherwise want to support their local economy.

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For more information visit www.mvaconsultancy.com

Abu Dhabi

AS Business Centre, Suite 201, Al Ain Road, Umm al
Nar, P.O. Box 129865, Abu Dhabi, UAE
T: +971 2 510 2402 F: +971 2 510 2403

Birmingham

Second Floor, 37a Waterloo Street
Birmingham B2 5TJ United Kingdom
T: +44 (0)121 233 7680 F: +44 (0)121 233 7681

Dublin

First Floor, 12/13 Exchange Place
Custom House Docks, IFSC, Dublin 1, Ireland
T: +353 (0)1 542 6000 F: +353 (0)1 542 6001

Edinburgh

Second Floor, Prospect House, 5 Thistle Street,
Edinburgh EH2 1DF United Kingdom
T: +44 (0)131 220 6966 F: +44 (0)131 220 6087

Glasgow

Seventh Floor, 78 St Vincent Street
Glasgow G2 5UB United Kingdom
T: +44 (0)141 225 4400 F: +44 (0)141 225 4401

London

Second Floor, 17 Hanover Square
London W1S 1HU United Kingdom
T: +44 (0)20 7529 6500 F: +44 (0)20 7529 6556

Lyon

11, rue de la République, 69001 Lyon, France
T: +33 (0)4 72 10 29 29 F: +33 (0)4 72 10 29 28

Manchester

25th Floor, City Tower, Piccadilly Plaza
Manchester M1 4BT United Kingdom
T: +44 (0)161 236 0282 F: +44 (0)161 236 0095

Marseille

76, rue de la République, 13002 Marseille, France
T: +33 (0)4 91 37 35 15 F: +33 (0)4 91 91 90 14

Paris

12-14, rue Jules César, 75012 Paris, France
T: +33 (0)1 53 17 36 00 F: +33 (0)1 53 17 36 01

Woking

Dukes Court, Duke Street, Woking
Surrey GU21 5BH United Kingdom
T: +44 (0)1483 728051 F: +44 (0)1483 755207

Project Sponsor

Wessex Chamber of Commerce
52 Castle Street
Trowbridge
Wiltshire
BA1 8AU

Email: info@mvaconsultancy.com

Offices also in

Bangkok, Beijing, Hong Kong, Shenzhen and Singapore

mvaconsultancy