

Buckinghamshire County Council

**East West Rail**

East West Rail Economic Case  
Refresh

Rep/JAH

Final | 28 May 2014

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**Ove Arup & Partners Ltd**

The Arup Campus  
Blythe Gate  
Blythe Valley Park  
Solihull B90 8AE  
United Kingdom  
[www.arup.com](http://www.arup.com)

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# Document Verification

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		Name	Jason Hogg	Rupert Dyer	Rupert Dyer
		Signature			
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		Name	Jason Hogg	Rupert Dyer	Rupert Dyer
		Signature			
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# Contents

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	Page	
<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Revision of previous OE findings</b>	<b>2</b>
2.1	Regional public expenditure	2
2.2	Employment	2
2.3	Contribution to public finances	3
2.4	Infrastructure investment	4
2.5	Local impacts	4
2.6	Connectivity	6
<b>3</b>	<b>Estimation of EWR's growth impacts.</b>	<b>7</b>
3.1	Summary of changes from the original report	7
3.2	Further investment impacts of East West Rail	7
3.3	Conclusion	8

# 1 Introduction

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In 2011 Oxford Economics (OE) produced a report entitled East West Rail: The Economic Case for Investment. This report describes the wider economic benefits likely to accrue from the opening of a new railway from Oxford to Bletchley and an increase of services on the onward section to Bedford.

Arup has been commissioned to update the report in the light of significant developments since the time it was published.

These changes are:

- The inclusion of East West Rail as a committed scheme in DfT's High Level Output Statement (HLOS) published in 2012 and funded as part of Network Rail's enhancement expenditure in Control Period 5 (2014 – 2019)<sup>1</sup>
- The nomination of the route as part of the 'Electric Spine', to be electrified to provide a strategic inter regional freight and passenger link between the South of England, the East Midlands and the North East.
- Adoption of the East West Rail project by Network Rail, which is now developing a full business case for the route reinstatement with linespeeds of 100 mph.<sup>2</sup>
- Publication of indicative service plans proposing that core passenger services will run from London (Paddington and Marylebone) to Milton Keynes and Bedford via both Oxford and Aylesbury. Services will be able to call at Heathrow Airport once the western rail link is completed.

As a result of this significant increase in scope, project costs have been revised. The latest publicly available forecast estimates Phase 2 costs to be £402 million, comprising DfT funding of £352 million, plus regional contributions of £50 million<sup>3</sup>.

It should be stressed however that Network Rail is currently evaluating the cost of the consolidated scheme in the light of the ORR's CP5 funding settlement. The final cost is not likely to be confirmed until 2015 when feasibility work is complete, and the cost quoted above is therefore only the latest estimate.

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<sup>1</sup> Department for Transport High level Output statement 2012: Railways Act 2005 – 16 July 2012

<sup>2</sup> Network Rail CP5 Enhancement Delivery Plan – 31 March 2014

<sup>3</sup> Parliamentary answer by Rt Hon Simon Burns MP, Minister of State for Transport, Hansard 20 May 2013. The Network Rail Strategic Business Plan figure is £352m plus £50m, due it appears to rounding differences in the calculations.

## 2 Revision of previous OE findings

Since publication of the original report, new data has become available. In particular analysis derived from the 2011 census has been published, which has allowed us to update OE findings which had to be based on the 2001 census. Other data sets published more currently have also been used to determine the changes driven by recent economic events.

### 2.1 Regional public expenditure

OE found public spending in the South East had fallen behind spending elsewhere, and was 25% below the national average on a per capita basis. Our analysis of recently released data demonstrates that this trend has worsened. In 2012 South East public spending per person employed was £15,500, compared to a national average of £18,700 and is now 27% lower than the national average. This is the lowest proportion of capital expenditure across the country. The East (which includes the Bedford end of EWR) shows a similar situation with the second lowest level of public spending (24% lower than the national average).

**Table 1 Relative levels of public spending in the English regions, 2010/11.**

	Expenditure relative to:				
	Total Expenditure 2010-11 (£ million)	Employment (£ per employee)	£ per employee (UK = 100)	GVA 2012 (UK = 100)	Income (UK = 100)
North East	25,000	21,200	113	147	168
North West	66,000	20,200	108	122	139
London	78,000	19,500	104	63	64
Yorkshire & Humber	46,000	18,800	101	118	134
West Midlands	48,000	18,800	101	118	132
East Midlands	37,000	17,200	92	112	116
South West	44,000	17,000	91	102	106
<b>East</b>	<b>46,000</b>	<b>16,200</b>	<b>87</b>	<b>97</b>	<b>80</b>
<b>South East</b>	<b>67,000</b>	<b>15,500</b>	<b>83</b>	<b>79</b>	<b>65</b>
UK	560,000	18,700	100	100	100

Source: Public Expenditure Statistical Analysis: ONS

### 2.2 Employment

In terms of employment, we find that the East and South East have continued to be less successful than almost other region in generating new jobs.

**Table 2: Analysis of employment growth 2001 - 2011**

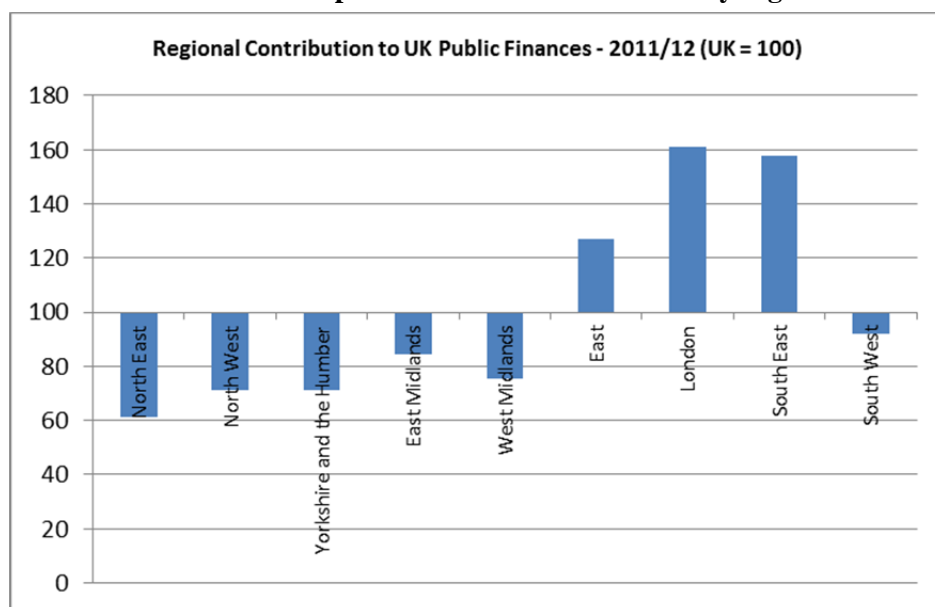
	Total % Change in Employment	Absolute change in number of jobs (000s)
London	21.2%	703
South West	12.8%	293
East Midlands	12.5%	240
North East	12.1%	125
North West	11.9%	345
Yorkshire and The Humber	11.8%	257
<b>East</b>	<b>11.2%</b>	<b>289</b>
<b>South East</b>	<b>10.3%</b>	<b>400</b>
West Midlands	9.3%	217

Source: 2001 &amp; 2011 Census

Meanwhile we have found that overall population has increased more rapidly in the last 10 years in the East (9%) and South East (8%) than anywhere outside London, emphasising the need to create more employment opportunities by improving transport links.

## 2.3 Contribution to public finances

We have revised OE's estimation of the regional value of net inputs to the UK government finances. This demonstrates that the pattern previously reported has continued despite recessionary pressures. The South East made a greater contribution to the UK public finances during 2012 than any other region except London, while the East made the only other positive contribution. This confirms that growth through investment in these two regions will produce positive benefits to the country as a whole.

**Table 3: Contributions to public finances broken down by region**

Source: Arup/PESA calculation

## 2.4 Infrastructure investment

OE found that infrastructure investment had fallen in the South East. Our analysis has confirmed that over the last 3 years this trend has continued. Averaged over 10 years period (to eliminate year on year variations) infrastructure investment has continued to fall in the South East significantly below the national average. The east by contrast has performed more strongly.

**Table 4: Changes in real infrastructure investment by region**

Infrastructure construction output	Percentage change 2003-12 v 1991-2002	Indexed change (Great Britain 100)
Yorkshire & Humber	43%	194
North West	41%	187
West Midlands	40%	183
<b>East</b>	<b>36%</b>	<b>162</b>
London	31%	139
South West	17%	78
East Midlands	5%	25
North East	-7%	-31
<b>South East</b>	<b>-23%</b>	<b>-104</b>
Great Britain	22%	100

Source: ONS

## 2.5 Local impacts

OE found journeys to work are longer in the South East. Our analysis confirms East and South East employees travel further to work than elsewhere, showing clearly the need for stronger transport links to support employment growth.

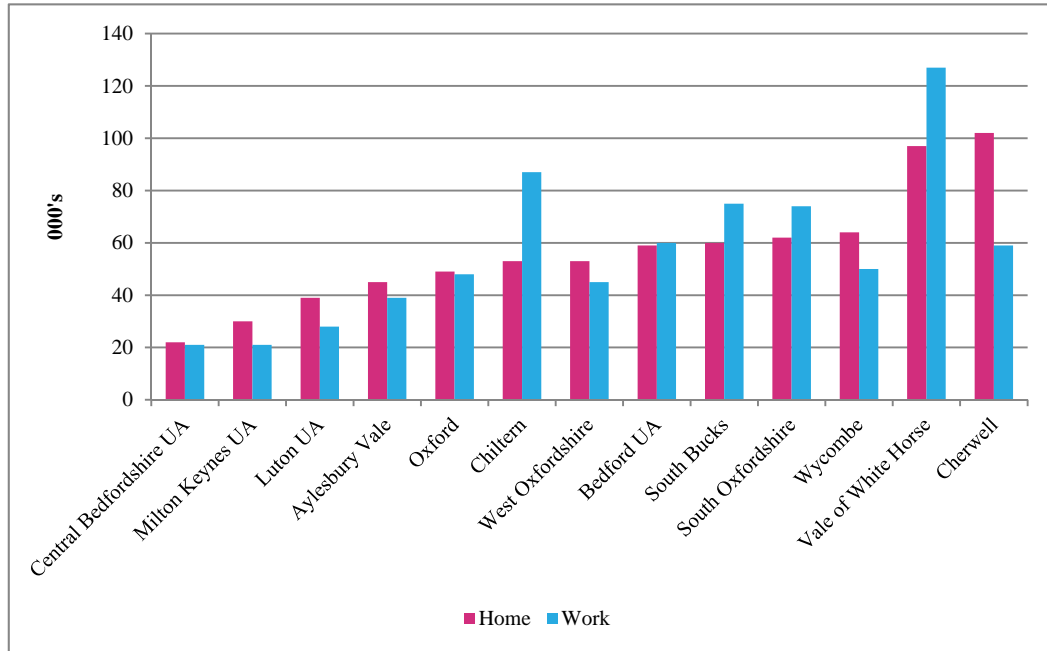
**Table 5: Distance travelled to work by region**

Region	0-20 km	21+ km
London	91.40%	8.50%
North East	87.10%	12.90%
North West	86.30%	13.60%
Yorkshire and The Humber	85.50%	14.40%
West Midlands	84.40%	15.70%
South West	83.40%	16.50%
East Midlands	81.70%	18.30%
Wales	81.40%	18.60%
<b>South East</b>	<b>76.40%</b>	<b>23.50%</b>
<b>East</b>	<b>74.00%</b>	<b>26.00%</b>
England and Wales	83.10%	16.90%

Source: ONS 2011 census data

We have also looked at the travel patterns in districts EWR serves. The graph below shows the proportion of jobs held by people who live in the area compared with those who commute into the area.

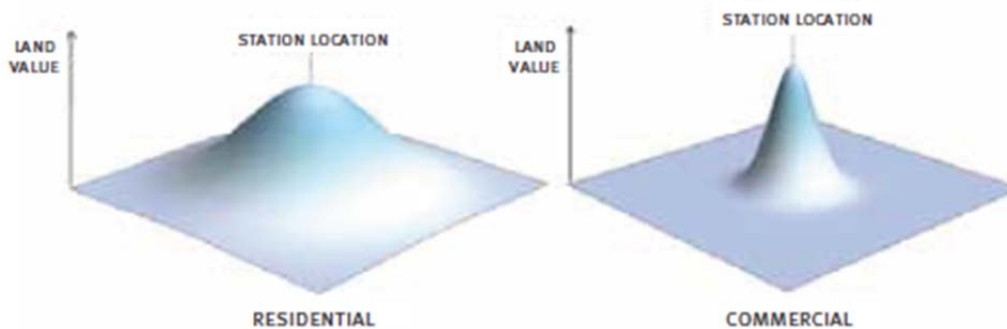
**Table 6: Work journeys by district**



Source: Annual Survey of Hours and Earnings, 2013, ONS

This suggests that areas served by EWR (Oxford, Aylesbury Vale, Milton Keynes, Cherwell and Bedford) have a lower proportion of workers travelling into the area. This will be in part due to the poorer transport links and provides further evidence that the project will address a real economic need in specific areas.

Work for Network Rail<sup>4</sup> has shown that the impact of stations on land values can be seen across a relatively wide radius of up to three miles from the station location. By contrast, the impact on commercial property appears to be perhaps half a mile of the station, although the impact tends to be greater.



Source: Network Rail; The Value of Station Investment.

<sup>4</sup> The Value of Station Investment: Research on Regenerative Impacts; November 2011: SDG for Network Rail



A case study<sup>5</sup> on the new Borders Railway from Edinburgh to Tweedbank identified that average property prices have already risen by an additional 3.2% in 2013 even though the line will not open until June 2015. This highlights the fact that a new railway line will increase local land values which indicates the growth impacts of the availability of improved local transport.

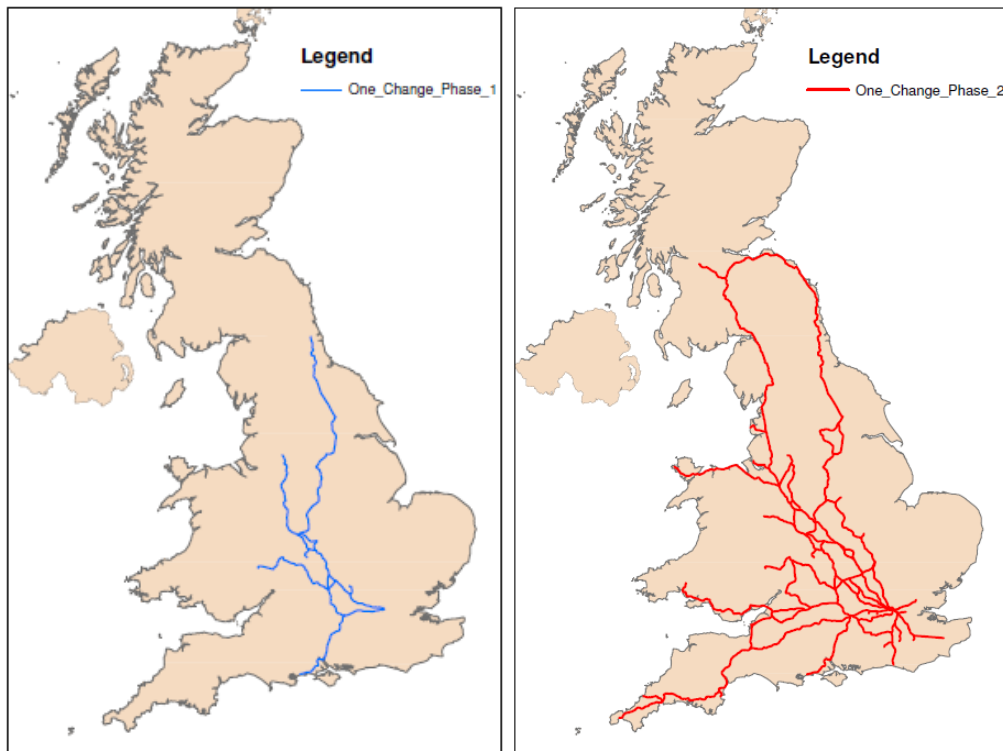
## 2.6 Connectivity

A key to understanding the economic impact that EWR will have on the local economy is to consider the rail connectivity of local communities now, and the results once the project is completed.

The range of UK destinations reached from EWR stations with one change of train will increase dramatically once the project is complete. The diagrams contrast the post 2015 Phase 1 service with through trains between London Marylebone and Oxford via Bicester Town, and the full Phase 2 EWR service with services from Paddington and Marylebone to Milton Keynes and Bedford. Following completion the range of destinations connected to EWR stations more than doubles, and 41 out of 65 UK cities will be only one change away.

This substantial improvement in connectivity will deliver significant impacts for both business and leisure travel accessibility, which underpins much of the calculated wider economic benefits of the project

**Figure 1: UK Rail destinations accessible with one change at Phase 1 and Phase 2**



Source: Arup analysis of GBTT data

<sup>5</sup> Transport Infrastructure Investment: Capturing the Wider Benefits of Investment in Transport Infrastructure January 2014; Royal Town Planning Institute

## 3 Estimation of EWR's growth impacts.

### 3.1 Summary of changes from the original report

Our analysis has found that the conditions driving the original findings of the Oxford Economics report, with the South East continuing to suffer from lower levels of public spending and falling behind in terms of employment generation, have continued to apply over the recent years. Although not reported previously our analysis confirms that the East region also shows similar patterns for a number of the same metrics.

Our conclusion therefore is that while some of the direct project inputs have expanded, none of the factors driving the original analysis have changed. The original conclusions reached in the OE report are still valid, but the potential impacts have increased. Accordingly we can recalculate the original estimation of the GDP impacts of the investment.

Using the same basis of calculation as Oxford Economics used in the original report we calculate that the potential GDP impacts of the project have increased as follows:

**Table 7: Potential GDP Impact of EWR – refresh of Oxford Economics estimates**

	Core Network Rail scheme (£m)	Total investment including local contributions (£m)
Capital cost	£352	£402
Potential GDP uplift across Greater South East (per year)	£63.7	£72.7
Potential addition to UK tax receipts (per year)	£29.1	£33.2
Indicative payback period of investment	5.5 years	5.5 years

Source: Arup analysis based on original OE methodology

The GDP impact has nearly doubled from that previously estimated, partly because of the increased investment (in additional areas such as route electrification and improved track specifications) and partly because of the greater impacts of the revised service patterns and destinations served by direct services.

### 3.2 Further investment impacts of East West Rail

Further work has recently been completed on the impacts of key infrastructure investment projects. In 2013 a report produced by Centre for Economics and Business Research (Cebr)<sup>6</sup> sets out the impact assessment of major transport investment projects. The initial construction impacts are necessarily UK wide, as many of the materials suppliers and contractors for any given project are likely to be based in different parts of the country (though in general rail investment only involves limited direct imports of materials or jobs from overseas).

<sup>6</sup> Securing Our Economy: The Case For Infrastructure. Cebr May 2013

The continuing impacts arise mainly from the greater transport opportunities offered by EWR. Again these are split between local impacts on the areas directly served, and wider impacts generated by the running of through services (especially true in the case of freight traffic from Southampton to Midlands and northern intermodal terminals).

We have been able to calculate the proportion of the investment which is likely to generate benefits to the local economy using our own analysis.

Estimations are based on both the total terms of the additional Gross Value Added (GVA) of the project, and the overall GDP impacts. These are estimated in the table below.

**Table 8: National and local GVA and GDP impacts from EWR investment**

	National impact (£m)	Local impact (£m)
Capital cost	£352	£402
GVA impact	£1,140	£399
Direct GDP impacts	£522	£183

Source: Arup analysis based on Cebr data

### 3.3 Conclusion

The factors which underlay the original analysis by Oxford Economics remain, and in many cases have increased.

However the scope of the project has increased, as it now forms part of the nationally significant 'Electric Spine'. EWR now has greater connectivity and a higher service specification.

The regional and local GDP impacts have therefore increased substantially. Our refresh, and consideration of new research data, suggests that South East Region GDP will benefit by upwards of £70m per annum, while the overall GDP impact on the local economies served by new EWR stations will be upwards of £180m.