Adran yr Economi a'r Seilwaith
Department for Economy and Infrastructure

Llywodraeth Cymru
Welsh Government

This document is an update to the 'Proof of Evidence – Economics' document. It contains an update following the addition of the Eastbound off-slip in the DRAFT SUPPLEMENTARY (NO. 2) SCHEME ORDER.

Scheme Evidence Update

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Welsh Government, Economics

Document Reference: WG 1.3.5

Contents

1. AUTHOR

1.1 My name is Stephen Bussell. I am an Associate at Ove Arup and Partners Ltd, a multi-disciplinary consultancy. My professional qualifications are set out in my main Proof of Evidence and are not repeated here.

1.2 The evidence which I have prepared and provide in this Proof of Evidence is true and I confirm that the opinions expressed are my true and professional opinions.

2. SCOPE AND PURPOSE OF THIS PROOF OF EVIDENCE

2.1 This Proof of Evidence provides updated evidence for the Welsh Government's Scheme as modified by the March 2017 draft Orders Supplement to include proposals for an eastbound off-slip road at Junction 23A.

2.2 The following sections of my main evidence are thus withdrawn to be replaced with this evidence:

Stephen Bussell Economics Proof of Evidence (WG 1.3.1)

Section 4.54 (Calculation of Scheme Costs)

Sections 4.61 (Investment Costs)

Table 1 (Scheme Budget)

Sections 4.6.5 to 4.7.2 (Economic Appraisal Results: Core Scenario, Sensitivity Analysis – Low and High Growth, Sensitivity Analysis – Severn Crossing Tolls)

Sections 6.15 to 6.41 (Objections Relating to Magor Services)

Section 7.5 to 7.8 (Conclusions – Economic Appraisal)

Appendix A (Appraisal Tables – Core Scenario)

Stephen Bussell Economics Summary Proof of Evidence (WG 1.3.2)

Sections 4.16 to 4.19 (Results of the Economic Appraisal)

Sections 6.2 and 6.3 (Conclusions)

3. SCHEME EVIDENCE UPDATE

3.1. The Eastbound Off-Slip Road

3.1.1. The Welsh Government published a supplement to the draft Orders in March 2017 to include an additional eastbound off-slip road at Junction 23A, affording a direct connection for eastbound traffic on the proposed new motorway. These supplementary proposals are described in PLI document 2.5.17.

3.1.2. The decision to include an eastbound off-slip at Junction 23a has implications for the economic appraisal of the Scheme. The M4CaN Transport Model has been updated to take account of this change and the economic appraisal of the Scheme has been updated accordingly. The updated economic appraisal is set out in more detail in the Revised Economic Appraisal Report Supplement, March 2017 (Document 2.5.3).

3.1.3. I have also updated my evidence relating to the impact of the proposed Scheme on the economic viability of Magor Services. More generally, the conclusions of the Wider Economic Impact Assessment are unchanged and no update to my Proof of Evidence on these matters is provided.

3.1.4. I am aware that the Welsh Government is in continued discussions with ABP with regards to mitigation measures at Newport Docks. The scope of mitigation measures may have economic implications and, if necessary, I will further update my evidence to reflect this.

3.2. Economic Appraisal: Scheme Costs

3.2.1. This section of my evidence sets out the Scheme costs used for the purposes of the economic appraisal of the Scheme. In 2015 prices, the total scheme cost applied in the cost benefit analysis is £1.1bn. Costs associated with VAT are excluded because the proposal is a public sector scheme, so that the VAT which is payable is regarded

as in internal Government transfer and has a neutral impact in respect of economic efficiency.

3.2.2. The Scheme costs include allowance for the costs of the eastbound off-slip. The capital cost of the inclusion of the slip road is £4.8m. This includes Optimism Bias of 44% (£1.5m) calculated in accordance with WebTAG guidance for an early stage cost estimate.

3.2.3. The overall Scheme cost remains the same as that published in the December 2016 Revised Economic Appraisal Report. The Welsh Government's Project Budget already included an allowance for changes to the layout of Junction 23a. Possible changes to this Junction formed part of the Quantified Risk Assessment for the Scheme. Therefore, the net result of this change is a reallocation of costs from the risk allowance to the construction cost, rather than a change in Scheme costs[1].

3.2.4. The updated Scheme investment cost is given in Table 1.

[1] As indicated in Table 1, £3.3m has been added to the Construction Cost of the Scheme. A further £1.5m of optimism bias is added to the Risk and Optimism Bias element of the Project Budget. The Risk allowance is then reduced by the total amount of £4.8m. The net effect is no change in the total Project Estimate.

Table 1: Scheme Investment Cost (Q4 2015 prices, £millions)

Component	Scheme Costs (December 2016 Revised Economic Appraisal Report	Eastbound off-slip net costs	Updated Scheme Costs (March 2017 Revised Economic Appraisal Report Supplement)
Preliminaries including Traffic Management	£212.0	+£1.1	£213.1
Roadworks	£268.0	+£1.2	£269.2
Structures	£297.1	+£0.1	£297.2
Landscaping and environmental works	£44.8	+£0.1	£44.9
Works by other authorities	£38.3	+£0.5	£38.3
Land and Compensation costs	£91.9	+£0.3	£92.2
Risk and Optimism Bias	£141.3	(+£1.5 less £4.8) = - £3.3	£138.0
Project Estimate excluding VAT and Inflation	**£1,093.2**	**-**	**£1,093.2**
Key Stage 4 Costs	£22.0	NA	£22.0
Reclassification and reconfiguration of Caerleon Junction**2** (including Optimism Bias)	£16.2	NA	£16.2
Total Costs	**£1,131.3**	**-**	**£1,131.3**

3.2.5. The economic appraisal takes account of the costs of maintaining both the new section of motorway and the existing M4 during the 60-year assessment period. The implications of the inclusion of an east bound off-slip for future maintenance costs are very slight and therefore maintenance cost estimates have not been updated to account for this change.

3.3. Economic Appraisal: Results

Core Scenario

[2] These costs are not being delivered as part of the contract to construct the proposed new motorway.

3.3.1. The economic appraisal results for the Scheme are given in Tables 2 and 3 for the Core Scenario which has been updated to reflect the inclusion of the east bound off-slip. The approach to updating the economic appraisal is set out in the Revised Economic Appraisal Report Supplement, March 2017 (Document 2.5.3).

3.3.2. The Core Scenario is based on the central (or most likely) traffic growth scenario and assumes half toll levels on the Severn Crossings. The results presented in Table 2 are based only on direct transport benefits and exclude Wider Impacts. As noted, the BCR calculated on this basis is referred to as the 'Initial BCR' for the Scheme.

3.3.3. The total discounted cost (PVC) of the Scheme is £0.95bn (2010 prices and values). The total discounted benefits (PVB) of the Scheme is £1.58bn (2010 prices and values). The difference between benefits and costs (the NPV for the Scheme) is £0.63bn resulting in an Initial BCR for the Scheme of 1.66. This indicates that, before wider economic benefits are considered, the Scheme represents value for money as the costs of investment will be more than offset by the improvements in transport economic efficiency, safety and carbon emissions.

Table 2: Summary of Economic Appraisal: Core Scenario (Excluding Wider Impacts)

		Results (£m) (2010 prices, discounted to 2010)
User Benefits	Consumers Business	875 711
Construction Phase Impacts	Consumers Business	-21 -14
Maintenance Impacts	Consumers Business	28 10
Accident Benefits		4
Greenhouse Gas Benefits		6
Indirect Tax Revenues		-20
Initial Present Value of Benefits, PVB		**1,579**
Present Value of Costs, PVC		**954**
Initial Net Present Value, NPV		**625**
Initial Benefit-to-Cost Ratio, BCR		**1.66**

3.3.4. Table 3 sets out the results of the appraisal if Wider Impacts are included in the analysis to give an 'Adjusted BCR' for the Scheme. The assessment of Wider Impacts is associated with a higher degree of uncertainty than the assessment of direct impacts on users. However, by excluding Wider Impacts, the Initial BCR fails to capture a range of important economic benefits of the Scheme. Therefore, the Adjusted BCR provides a better measure of the overall balance of costs and benefits and therefore the value for money of the Scheme.

3.3.5. When Wider Impacts are included, the NPV of the Scheme increases to £1.22bn (2010 prices and values) and the BCR increases to 2.27. This result demonstrates that the benefits of the Scheme outweigh costs by a ratio in excess of two to one.

Table 3: Summary of Economic Appraisal: Core Scenario (Including Wider Impacts)

	Results (£m) (2010 prices, discounted to 2010)
Initial Present Value Benefits, PVB	1,579
Wider Impact 1: Agglomeration Impacts	516
Wider Impact 2: Increased Output in Imperfectly Competitive Markets	71
Wider Impact 3: Labour Market Impacts	5
Total Wider Impacts, PVB	592
Adjusted Present Value of Benefits, PVB	**2,171**
Present Value of Costs, PVC	**954**
Adjusted Net Present Value, NPV	**1,217**
Adjusted Benefit-to-Cost Ratio, BCR	**2.27**

Sensitivity Analysis – Low and High Growth

3.3.6. In addition to the central traffic growth forecasts, sensitivity tests were carried out for low and high growth scenarios. The derivation of these forecasts is detailed in the Revised Traffic Forecasting Report (Document 2.4.13). The results of the economic appraisal for these forecasts are summarised in Table 4.

3.3.7. Under a low traffic growth scenario, the benefits of the Scheme are reduced such that the initial BCR for the Scheme falls slightly below one to 0.96. However, if Wider Impacts are included, the low growth BCR remains above one at 1.40. The high growth BCR is 2.80 if Wider Impacts are excluded, or 3.63 including Wider Impacts. As the Adjusted BCR provides the more realistic assessment of quantifiable costs and benefits it can be seen that the Scheme provides benefits in excess of costs even under the low growth traffic scenario.

Table 4: Economic Appraisal, Low and High Growth Forecasts

		Results (£m) 2010 Prices, Discounted to 2010	
		Low Growth	**High Growth**
Direct Transport Economic Benefits	Present Value of Benefits, PVB (£000)	913	2,677
	Present Value of Costs, PVC (£000)	954	955
	Net Present Value, NPV (£000)	**-42**	**1,722**
	Benefit-to-Cost Ratio, BCR	**0.96**	**2.80**
Direct and Wider Transport Economic Benefits	Present Value of Benefits, PVB (£000)	1,333	3,472
	Present Value of Costs, PVC (£000)	954	955
	Net Present Value, NPV (£000)	**378**	**2,517**
	Benefit-to-Cost Ratio, BCR	**1.40**	**3.63**

Sensitivity Analysis – Severn Crossing Tolls

3.3.8. The future of the Severn Crossing tolls is a factor which will influence future traffic flows on the M4 corridor around Newport. As noted, the Core Scenario for the M4CaN scheme is based on a half toll scenario. A half toll scenario was adopted following the March 2016 Budget 2016, within which the Government announced its intention to retain tolls on the Severn Crossings at half their current levels. Subsequently, in January 2017, the Government published a Consultation Document on the future of the Severn Crossing Tolls. This document set out the Government's proposals for future toll levels. The proposed toll levels were not significantly different to those assumed in the M4CaN Transport Model. The Consultation period closed on 10th March 2017 and the Government is yet to report on its outcomes.

3.3.9. During the run up to the 8th June General Election, most of the major political parties in the UK have indicated an intention to remove the tolls from the Severn Crossings[3].

3.3.10. In view of the uncertainty regarding the long term future of the tolls, a sensitivity test has been undertaken which assumes that the tolls are removed. Under this scenario, the Initial BCR for the Scheme increases to 1.87. If Wider Impacts are then included, the Adjusted BCR for the Scheme would be 2.52.

Table 5: Economic Appraisal, No Severn Crossing Tolls

		Results (£m) 2010 Prices, Discounted to 2010
		No Severn Crossing Tolls
Direct Transport Economic Benefits	Present Value of Benefits, PVB (£000)	1,820
	Present Value of Costs, PVC (£000)	971
	Net Present Value, NPV (£000)	**849**
	Benefit-to-Cost Ratio, BCR	**1.87**
Direct and Wider Economic Benefits	Present Value of Benefits, PVB (£000)	2,446
	Present Value of Costs, PVC (£000)	971
	Net Present Value, NPV (£000)	**1,475**
	Benefit-to-Cost Ratio, BCR	**2.52**

3.4. Objections Relating to Magor Services

3.4.1. Roadchef Limited ("Roadchef") is the leasehold owner and operator of the Motorway Service Area (MSA) at Junction 23a of the M4 at Magor. Roadchef is objecting to the Scheme on the grounds that the proposed access arrangements would discourage drivers from stopping at the service area.

[3] The Conservative Party: Verbal statement by Prime Minister Teresa May, 16th May 2017. The Labour Party: Labour Party Manifesto 2017. The Liberal Democrats: The Liberal Democrat Manifesto. UKIP – UKIP 2017 Manifesto. Plaid Cymru – Verbal statement of Plaid Cymru spokesperson, 16th May 2017.

3.4.2. Roadchef contend that the reduction in users taking a break would adversely affect the financial viability of the service area leading, ultimately, to closure and thus undermining the job security of 190 employees. They contend that this would then have a knock-on effect for the local economy, particularly for those local firms and people whose businesses/employment are indirectly linked to the MSA.

3.4.3. Rontec is the freehold owner of Magor MSA and owns and operates the petrol filling station. Rontec has similarly objected to the Scheme on the basis that, in its view, the proposed access arrangements are fundamentally flawed and will adversely affect the long term future of the services.

3.4.4. In assessing these objections, I consider three issues in turn:

a) The impact of the Scheme on customer volumes and revenues.

b) The financial viability of a Service Area at Magor.

c) Impacts on the local and regional economy.

Impacts on Service Station Revenues

3.4.5. The proposed access arrangements for the MSA at Magor are set out in the updated evidence of Mr Ben Sibert (WG 1.5.5). As described by My Sibert, traffic travelling eastbound on the proposed new motorway would access the services via the eastbound off-slip at Junction 23a. The inclusion of the slip road avoids the need for eastbound travellers to access the Service Area via Junction 23 and thereby substantially improves the ease with which users of the new motorway can access the Service Area. On departing the Service Area, eastbound traffic would exit on to the existing reclassified M4 before re-joining the motorway at Junction 23.

3.4.6. Traffic travelling west bound on the proposed motorway would be provided with a free flow link to the existing reclassified M4 and would then access the Service Area via Junction 23a as they would under the current arrangements. For west bound travellers there would be

two main options for re-joining the motorway. Firstly, users of the Service Area could join the new motorway via Junction 23 (travelling eastbound for a short distance between the Service Area and Junction 23). Alternatively (for those travelling beyond Docksway Junction), users of the Service Area could continue their journey on the existing reclassified M4. A third option – re-joining the motorway via Glan Llyn Junction – is possible but less attractive to users.

3.4.7. Future users of the reclassified M4 will be unaffected by the Scheme. Similarly, those accessing the services via the B4245/A4810 from the South would also have similar access arrangements to today. I recognise, however, that users of these routes are likely to account for a minority of MSA customers.

3.4.8. The implications of the proposed access arrangements for the journey times of potential MSA customers is described in the updated evidence of Mr Bryan Whittaker (WG 1.2.6). Mr Whittaker identifies the additional travel time added to a journey as a result of a decision to stop at the services both with and without the Scheme. In my opinion, this approach to measuring access/egress travel times most closely reflects the way travel times will be perceived by potential customers.

3.4.9. In the Do Minimum scenario (in the design year of 2037), not including the time spent at the services themselves, the additional travel time incurred to visit the service area is around 30 to 45 seconds in an eastbound direction and approximately 1 minute 20 seconds in a west bound direction.

3.4.10. In the Do Something scenario (with the Scheme in place), eastbound travellers using the proposed new motorway would incur an additional travel time of around 3 to 3.5 minutes as a result of using the Service Area. The additional travel time incurred by westbound travellers depends on the route they take when leaving the Service Area and re-joining the motorway. If travellers use the existing M4, the extra travel time incurred would be between 4 and 5 minutes. If travellers re-join

the motorway via Junction 23, they will incur an additional travel time of around 6 to 6.5 minutes.

3.4.11. In summary, depending on the route taken and the time of day, the additional travel time incurred by users of the proposed M4 choosing to stop at the service area would increase by approximately 2.5 to 3 minutes in an eastbound direction and by around 3 to 5 minutes in a west bound direction.

3.4.12. In practice, there may also be a psychological effect of the changes in access arrangements that need to be considered alongside changes in of journey times. The requirement for users to travel through an additional Junction (in the case of eastbound travellers), or (in the case of west bound trips) the prospect of travelling for some of their journey on the existing reclassified M4, rather than the new motorway, may act to reinforce the impact of longer journey times.

3.4.13. In my opinion, the changes in access arrangements are likely to have a detrimental impact on the Service Area as it will impose an additional time penalty on those wishing to stop at the services. To the extent that drivers will be aware of the access arrangements (bearing in mind that a proportion of those accessing the Service Area will be first time visitors), the proposed access arrangements may deter some travellers who would have otherwise chosen to stop at the services resulting in some loss of trade.

3.4.14. Whilst the change in access arrangements will result in some loss of trade, this needs to be qualified in a number of respects.

a) Firstly, competing service stations at Junction 30 (Cardiff Gate) to the west and Junction 17 (Leigh Delamere) to the east are relatively poor substitutes for Magor MSA because of the distances and travel times between the service stations. An eastbound traveller considering whether to stop at Magor would need to delay their stop by 52.9km or approximately 36 minutes if they were to choose to stop at Leigh Delamere instead. A west bound traveller would need to delay their stop by 25.7km or approximately 22 minutes.

Alternatively, travellers would have the option to use the Severn View service area located on the M48 at Aust. However, the majority of strategic traffic passing Junction 23 will use the M4 Second Severn Crossing. For these travellers, the requirement to divert from the M4 Second Severn Crossing to the M4 Severn Bridge is such that Severn View services is unlikely to be a good substitute for Magor MSA.

For some users, the location of alternative service areas will make if unfeasible for them to choose an alternative service area. For others, the added inconvenience of delaying their stop will incentivise them to continue to use Magor Services.

b) Secondly, the changed access arrangements will affect different types of customer in different ways. In general, it would be reasonable to expect that MSA customers who plan to spend a longer amount of time at the services will be less sensitive to an increase in access/egress travel times. For example, the hotel business at Magor MSA is unlikely to be significantly affected by the change in access arrangements. In this regard, it should be noted that visits to the services of a longer duration – for example, those involving purchases of hot food products – are likely to be of higher financial value to Roadchef than shorter visits. Therefore, it would be reasonable to expect that the financial impact of more indirect access arrangements will be less than proportionate to any reduction in the number of vehicles entering the Service Area.

c) Thirdly, whilst the effect of the Scheme will be to increase travel times for potential customers, when considering both the reclassified M4 and the proposed M4 motorway in combination, it will also result in a higher overall volume of traffic approaching Magor MSA. In the opening year of 2022, the total volume of traffic approaching Magor on either the existing M4 or the new motorway is forecast to increase by 7% as a result of the Scheme. In the design year of 2037, the total volume of traffic approaching Magor is forecast to increase by 14% as a result of the Scheme. This will have the effect of increasing the size of the potential market for the service area by a similar proportion.

The Financial Viability of a Service Area at Magor

3.4.15. Notwithstanding that there may be an overall negative impact on the volume of customers using the service area at Magor, from an economic perspective a key question is whether the service area is likely to remain financially viable with the Scheme in place. There are three main factors which lead me to conclude that a service area at this location would continue to be viable. These are as follows:

a) Firstly, as stated by Roadchef in correspondence, Magor MSA is the busiest service station in Wales. The service area benefits from a relatively high volume of traffic passing the services. Of the six service stations located on the M4 corridor in South Wales, only Cardiff West services (Junction 33) benefits from higher passing traffic volumes. Although outside Wales, Severn View service area at Aust continues to operate despite traffic flows on this section of the M48 being around a quarter of that passing Magor MSA. The fact that Roadchef currently has high visitor volumes suggests that there is significant scope for the services to remain profitable even if the Scheme has a negative impact on trade.

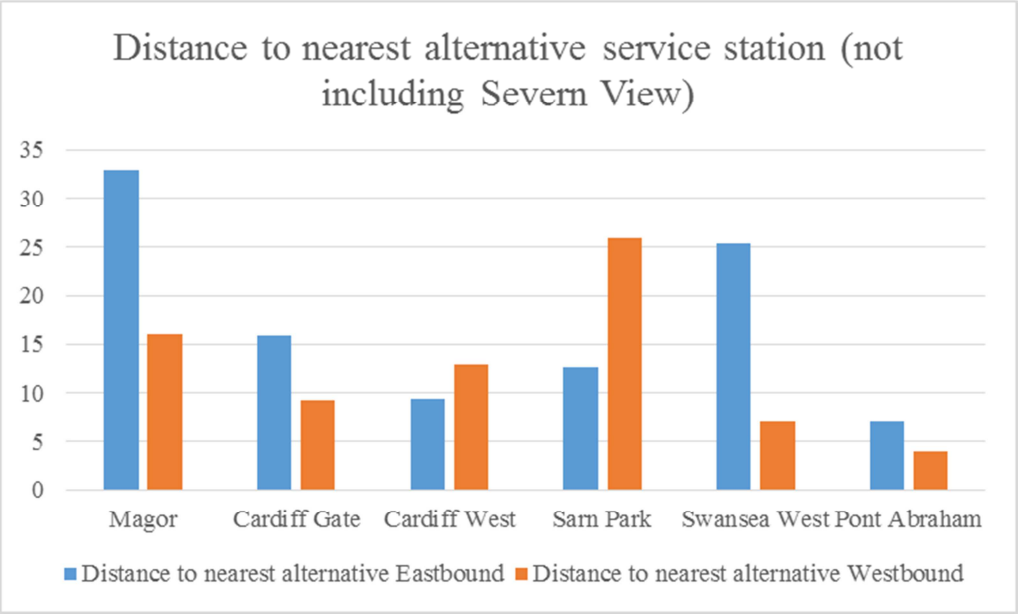
b) Relative to other services on the M4 in South Wales, Magor MSA faces a lesser degree of competition. Figure 1 shows the distance, in miles between each of the service stations on the M4 in South Wales and the nearest competing service station in either direction. The combined distance between Magor MSA and its nearest eastbound and west bound competitors is higher than for any other service station on the M4 in Wales.

c) Irrespective of the impact of the Scheme, traffic volumes passing Magor services are forecast to increase as a result of background traffic growth and the planned changes to the Severn Crossing Tolls. Based on the M4CaN traffic model, Average Annual Daily Traffic (AADT) approaching Junction 23a (in either an eastbound or west bound direction) was 70,600 in 2014. By 2022, with the Scheme in place, AADT approaching Magor (on either the existing M4 or the new motorway) is expected to increase by 32% to 93,200. By 2037, traffic volumes approaching Magor are forecast to be 70% higher than in 2014. Should the decision be taken to remove the Severn Crossing tolls altogether, this will lead

to even higher levels of traffic on this part of the M4. If the tolls are removed, it is forecast that traffic volumes will be 45% higher in 2022 and 83% higher in 2037. Rising traffic levels will strengthen the financial viability of the service area.

d) Finally, it should also be considered that, in the event of a reduction in visitor numbers, detrimental impacts on revenues at Magor MSA could be mitigated by a reduction in operating costs or an appropriate re-configuration of the customer offer at the service area.

Figure 1: Service Areas on the M4 in South Wales



3.4.16. In overview, whilst the proposed access arrangements are likely to deter some potential customers from using the Service Area, this needs to be considered in the context of a growing market for the Service Area. I acknowledge that the behavioural response to changes in access arrangements is difficult to predict. Therefore, it is not possible to forecast with accuracy the proportion of potential customers who will be discouraged from using the Service Area. Whilst I expect that the Scheme is likely to have an overall detrimental impact on the Service Area, it is uncertain whether the impact of the Scheme will offset the effect of rising traffic levels such that the

turnover of the Service Area will fall below current levels. In my opinion, for the Scheme to result in the MSA ceasing to be viable would require an unfeasibly large reduction in the propensity of M4 users to stop at the Service Area. In my response to the Proofs of Evidence of Roadchef I will set out a range of alternative scenarios for the future of the Service Area to demonstrate why I consider this outcome to be so unlikely.

Impacts on the Local and Regional Economy

3.4.17. Should it be the case that the impact of changes in access arrangements is a reduction in turnover below current levels, I acknowledge that this may result in lower employment at the MSA.

3.4.18. Retail businesses typically have a high turnover of staff. Therefore, it is likely that the reduction in staff numbers could be achieved through the natural turnover of staff rather than through involuntary redundancies. In the event that redundancies are required, I acknowledge that this will have a dislocating impact on individuals concerned. Whilst such impacts should not be taken lightly, it would be reasonable to expect that, over time, the majority of those affected would find alternative employment elsewhere.

3.4.19. A reduction in trade at Magor Service Area may have a consequential impact on other local businesses indirectly linked to the MSA. However, there is no evidence to suggest that local supply chain linkages in relation to the services are particularly strong or that the local economy of Magor has a high degree of dependence on the services.

3.4.20. From a broader perspective, a reduction in expenditure at Magor MSA is likely to be accounted for by an increase in expenditure elsewhere, either at another service area or in the economy more generally. It would be logical to expect Cardiff Gate services to be the primary beneficiary of a loss in trade at Magor and therefore a proportion of the reduction in expenditure would be retained in the Welsh economy.

Therefore, the total loss of income to the Welsh economy would be less than the loss of revenue to Magor MSA.

3.4.21. In my opinion, whilst the Scheme may have an overall detrimental impact on Magor MSA, the economic impacts of the changes in access arrangements will be limited in scale and scope when viewed in the context of the overall economic benefits of the Scheme.

3.5. Conclusions

Economic Appraisal

3.5.1. The core scenario for the Scheme is based on the central (or most likely) traffic growth forecasts and assumes that the tolls on the Severn Crossings are half their current level. Under this scenario, the Scheme has an initial benefit to cost ratio (Initial BCR) of 1.66. When Wider Impacts are included in the assessment, the Adjusted BCR for the Scheme is 2.27. In other words, the benefits of the Scheme outweigh its costs by a ratio of over 2 to 1.

3.5.2. The quantification of Wider Impacts is subject to a greater degree of uncertainty than the assessment of direct economic benefits relating to travel time savings and vehicle operating costs. However, by excluding Wider Impacts, the Initial BCR fails to capture a range of important economic benefits of the Scheme. Therefore, the Adjusted BCR provides the more realistic measure of overall value for money.

3.5.3. If it is assumed that the tolls on the Severn Crossings are removed, the Initial BCR for the Scheme increases to 1.87 and the Adjusted BCR for the Scheme increases to 2.52.

3.5.4. Sensitivity tests have also been undertaken which consider the effect on the economic appraisal of lower or higher than anticipated traffic growth. Between the low and high traffic growth forecasts, the Adjusted BCR for the Scheme (including Wider Impacts) ranges from 1.40 to 3.63.

3.5.5. In my opinion, the economic appraisal demonstrates that the benefits of the Scheme will substantially outweigh its costs and therefore confirms that the Scheme represents value for money.

Impacts on Magor Service Area

3.5.6. The addition of an eastbound off-slip at Junction 23a will improve access to the Service Area for eastbound users of the proposed new motorway. This serves to further reinforce my opinion that, whilst the proposed access arrangements are likely to have a detrimental impact on the MSA, the Service Area will remain financially viable with the Scheme in place. The economic impacts of the changes in access arrangements to the Service Area are likely to be of relatively minor significance.