

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

**File Ref WG/REB/OBJ0270.2 – GWT/Jones**



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Llywodraeth Cymru  
Welsh Government

**Objection Ref OBJ0270**

**Response to Objector's Evidence: Professor Calvin Jones**

(Gwent Wildlife Trust)

## **1. GROUNDS FOR OBJECTION**

### **1.1. Details**

- 1.1.1. Professor Calvin Jones has submitted a Statement of Evidence dated February 2017 in relation to the draft statutory Orders associated with the Welsh Government's proposals for the M4 Corridor around Newport, which has been received via the Programme Officer.
- 1.1.2. The Welsh Government understands the evidence submitted within Professor Calvin Jones' Statement to be based on the following:
1. Considers that the proposed M4 will not improve South Wales' economic prospects.
  2. Considers that the Scheme is at odds with the Wellbeing of Future Generations Act 2015 which requires Public Sector agencies to work towards low-carbon and holistic measures of progress and development and the Cardiff City Deal which has an inclusive growth target.
  3. Considers that the Scheme is at odds with the desired modal shift away from private transport for both leisure and work and the development of the South Wales Metro.
  4. Considers that the Scheme will significantly damage the broader Welsh Government narrative that Wales is a sustainable, green country with abundant and well-managed natural resources within which to do business.
  5. Considers that there is limited support for the Black Route outside of large businesses and hauliers (and only certain sections of Welsh Government itself) and outright hostility of many parts of civic society, business and the political classes.
  6. Considers that the decision making process has been narrow and lacked evidence.
  7. Considers that Black Route Investment may exacerbate intra-regional and social disparities.

8. Considers that investment in cycling and green infrastructure can improve access to work but also health outcomes, access to other services, and environmental quality and use whilst reducing climate emissions.
9. Considers that the proposed M4 Relief Road brings limited socio-economic or environmental co-benefits
10. Considers that costs are likely to be far more than anticipated and will largely “leak” from Wales.
11. Considers that accountability on the proposed M4 Relief Road has been poor, and care should be taken that those supporting the most expensive are doing so on the basis of genuine regional rather than private/organisational/political returns.
12. Concern the impact any cost-overruns might have on Welsh Government budgets, particularly in light of Brexit (and the withdrawal of potentially supportive EU funds across a number of areas), and the concurrent funding of the South Wales Metro.
13. Construction of an M4 relief road around Newport, appears to offer little to the well-being of future generations.
14. Considers that the EAR fails to include some significant costs or dis-benefits that are likely to make the scheme poor or low value for money (VfM).
15. Considers that excluding VAT and inflation is likely to mean a significant under-estimate of the cost which in turn could significantly affect the BCR.
16. Considers that maintenance costs do not appear to be included in the BCR
17. Professor Anderson has highlighted this scheme will likely increase greenhouse gas emissions not reduce them.

## 2. REBUTTAL

### 2.1. Points Raised

2.1.1. Some of the above points have already been addressed in proofs of evidence. Others are dealt with by topic by the relevant witness in the following sections, in addition to their general proofs of evidence, to which readers should also make reference in their entirety for a full understanding of the Welsh Government's case. For ease of reference the places where the above points are addressed in this Rebuttal are listed in the table below:

Objector's point reference	Rebuttal paragraph reference	Objector's point reference	Rebuttal paragraph reference
1	2.2.1	10	2.2.4
2	2.1.2	11	2.1.2
3	2.3.1	12	2.1.2
4	2.3.2	13	2.3.3
5	2.1.2	14	2.2.5
6	2.1.2	15	2.2.6
7	2.2.2	16	2.2.7
8	2.4.1	17	2.5.1
9	2.2.3		

2.1.2. The Objector's points that have already been covered in proofs of evidence as follows:

1. **Point 2** (Considers that the Scheme is at odds with the desired modal shift away from private transport for both leisure and work and the development of the South Wales Metro) / Proof of Evidence of Matthew Jones (WG1.1.1) section 9, "Public Transport and the Metro".
2. **Point 5** (Considers that there is limited support for the Black Route outside of large businesses and hauliers (and only certain sections of Welsh Government itself) and outright hostility of many parts of civic society, business and the political classes) / WG1.1.1 section 3 "Background", section 8 "The Need for the Published Draft Orders" and section 22 "Support and Objections". In addition:

3. Engagement on the problems, objectives and possible solutions to the M4 around Newport has been ongoing since the early 1990s, culminating in a draft Plan and associated consultation documents in September 2013.
4. Taking the responses to the 2013 draft Plan consultation into account, the Welsh Ministers decided to adopt the Plan and modified Preferred Route for the M4 Corridor around Newport in July 2014.
5. Scheme development followed that, leading to the publication of draft Orders, an Environmental Statement and other associated reporting in March 2016.
6. WG1.1.1 paragraph 22.2 in particular explains that in response to the draft Orders consultation in March 2016, 199 unique correspondence letters or emails were received that clearly express support for the Scheme. Of these, 59 appear to have been written on behalf of a company or organisation. The company/organisation responses include a range of businesses, property agents, utilities bodies and community groups.
7. Supporters include officers of Newport City Council, officers and members of Monmouthshire County Council, members of Rhondda Cynon Taf County Borough Council, officers of Caerphilly County Borough Council, CBI, South Wales Chamber of Commerce, the Institute of Directors Wales, the Institution of Civil Engineers Wales, Newport Civic Society, Tata Steel, Wales & West Utilities, the Road Haulage Association, Port of Milford Haven, Acorn, EnviroWales Limited, ECO2 Ltd, South Wales Forgemasters, Biffa, QRL Radiators, Penderyn Whiskey, Renishaw plc, St Mowden, Owens Group UK, Ffos Las Racecourse, Hicks Logistics, Welsh Football Trust, Welsh Rugby Union, Fletcher Morgan, Symmons
8. **Point 6** (Considers that the decision making process has been narrow and lacked evidence) / WG1.1.1 section 3 “Background”.

9. **Point 11** (Considers that accountability on the proposed M4 Relief Road has been poor, and care should be taken that those supporting the most expensive are doing so on the basis of genuine regional rather than private/organisational/political returns) / WG1.1.1 section 24 “Conclusions” sets out that there is a compelling case in the public interest for the Scheme to proceed.
10. **Point 12** (Concerned about the impact any cost-overruns might have on Welsh Government budgets, particularly in light of Brexit (and the withdrawal of potentially supportive EU funds across a number of areas), and the concurrent funding of the South Wales Metro) / WG1.1.1 paragraph 13.5 and 22.19 and section 9 “Public Transport and the Metro”.

2.1.3. The other points are responded to by specialist topic in turn in the sections following.

## **2.2. Stephen Bussell (Economics)**

2.2.1. Response to **Point 1** (Considers that the proposed M4 will not improve South Wales’ economic prospects).

1. Professor Jones makes the following points to support his conclusion that the proposed M4 will not improve South Wales’ economic prospects. These are summarised below:
  - a. There is no evidence that poor road connectivity has a significant downward pressure on economic or employment growth in the region;
  - b. There is little evidence that this relationship is discernible anywhere else in Europe;
  - c. Wales has had recent success in attracting inward investment and that it is difficult to imagine that a step change in performance would follow road investment;
  - d. Economic problems are related to HQs, entrepreneurship, aspirations and skills.
2. As Professor Jones points out, it is possible to identify flourishing regions with struggling transport systems and poor performing regions with well-

developed transport systems. The quality of transport and of highway infrastructure is one ingredient among many that determines economic performance. Therefore whilst such examples indicate that high quality transport networks are not sufficient for economic success, they do not tell us much about the relationship between transport and the economy or the effect of transport improvements on economic performance. Similarly, inward investment performance is dependent on a range of local factors as well as the national and global macroeconomic context. The quality of transport one aspect which contributes to the overall quality of the business environment.

3. It is acknowledged that ex-post evidence of the economic impact of highway improvements in a city or region is limited. However, this needs to be considered in the context of the challenges associated with this type of analysis.
4. These challenges are noted in the recent review of this topic, Transport Investment and Economic Performance: Implications for Project Appraisal (the TIEP review)<sup>1</sup>. The TIEP report states<sup>2</sup>:

*'The effects of transport on investment, employment and GDP – nationally and broken down by area – are also widely researched, but the literature does not supply robust answers to many of the key questions.*

*Establishing evidence is extremely demanding for two fundamental reasons. The first is that of the counterfactual; the outcome of a project is observed, but assessment of what would have happened in the absence of the project has to be inferred in some way. The second is that, even if this can be done with any accuracy for some set of completed projects, experience is only partially transferable to prospective projects.'*

5. Notwithstanding these challenges, there is empirical evidence which demonstrates the positive economic benefits that improved transport can deliver. There is empirical evidence which demonstrates the positive economic benefits that improved transport can deliver.

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<sup>1</sup> <https://www.gov.uk/government/publications/transport-investment-and-economic-performance-tiep-report>

<sup>2</sup> Document 6.1.23 (Page 14)

6. TIEP concludes that concludes that, *[studies which look at the effects of specific projects] generally find positive effects of large transport projects on measures of economic performance such as local area employment or GDP, although effects for smaller projects are harder to tease out*.<sup>3</sup>
7. A number of econometric studies have been successful in identifying a causal relationship between transport and economic performance. For example, the Spatial Economic Research Centre (SERC) in 2012<sup>4</sup>. The SERC study finds 'strong effects' of transport improvements on area employment and on plant counts with a 10% improvement in accessibility leading to an approximately 3% increase in the number of business and employment. SERC conclude that increases in employment are a result of firm entry rather than an increase in the size of existing firms.
8. Other studies have focussed specifically on the linkages between transport and firm location and investment decisions. For example, McQuaid et al (2004) consider the influence of transport on business location decisions. They find that transport improvements are unlikely to cause firms to move but, for firms who are looking for new premises, accessibility is one of the key factors influencing their choice of a new location. Research for the US by Strauss-Kahn and Vives (2009) find that good transport links are one of the main factors attracting office headquarters to second-tier US cities.
9. There is also specific evidence linking the performance of the Welsh economy to transport and accessibility. A series of studies which have examined the factors which explain Wales' productivity performance have identified transport and accessibility as contributory factors. Most recently, echoing previous findings, research undertaken by the University of the West of England (UWE) in 2016 concluded that:  
  
*"inaccessibility clearly has major impacts on levels of productivity in Wales, including possible remoteness from major markets, specialist suppliers and services, larger pools of skilled labour or contact with other businesses and information sources."*

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<sup>3</sup> Document 6.1.23 (Page 14)

<sup>4</sup> New Road Infrastructure: the Effects on Firms (SERC, September 2012)

10. Professor Jones identifies a number of reasons which he believes explain economic problems in South Wales namely, lack of economic variety and headquartered firms, low levels of entrepreneurship, limited aspirations and poor skills and qualifications. Whilst each of these is important, this does not mean that the poor quality of South Wales' transport network is not also an important factor. Furthermore, there are synergies between transport improvements and other explanatory factors. For example, the poor level of service offered by the M4 will act as a barrier to attracting new investment in higher value functions, whilst poor transport also acts to limit the pool of labour and therefore skills available to firms.

2.2.2. Response to **Point 7** (Considers that Black Route Investment may exacerbate intra-regional and social disparities).

1. The M4 is the primary route in and out of Wales for around 70% of the country's economy. It provides access for all parts of South Wales to the South West of England, the South East and London. It is also the most heavily used transport infrastructure in Wales. Congestion on the M4 around Newport results in delays both for inter-urban or inter-regional east-west travel, but also for a range of other journeys including for commuters traversing through South Wales. In this context, whilst the direct effects of the Scheme will be felt most keenly by Newport, Monmouthshire and Cardiff, it is reasonable to expect that the benefits of the Scheme will be felt over a wide area.
2. Moreover, areas of South Wales are already highly connected and interdependent. This is demonstrated by existing commuting patterns (2011 Census) which show that 40% of jobs located in Newport are filled by those resident outside of the City. In this context, the whole of South Wales is dependent on the economic performance of the urban areas along the M4 corridor. This, in essence, is the basis for the city-region agenda which is shaping economic development policy in South Wales.
3. In respect of poverty, whilst the Scheme will not directly address entrenched social issues or directly benefit those without access to a car, it will contribute to the overall competitiveness of the South Wales economy. Addressing issues of poverty in Wales is made more difficult

because of the underperformance of the economy more generally, the product of which is more scarce employment opportunities and lower wages.

2.2.3. Response to **Point 9** (Considers that the proposed M4 Relief Road brings limited socio-economic or environmental co-benefits).

1. Professor Jones believes that the proposed Scheme will generate limited 'co-benefits'. In this respect, he notes that investment in cycling and green infrastructure can improve access to work but also health outcomes. Notionally, it might be considered that investment in the M4CaN delivers a narrow range of benefits given that such benefits derive from the same source (i.e. lower journey times, improved accessibility). However, demand for transport is what is known as a derived demand. People demand transport not because they benefit from it directly but because it access other services. Users of the M4 will benefit from improved journey times or improved reliability because it enables them to spend more time at leisure or to use the time more productively in work or to find a different job further afield or to access public services. The economic appraisal of the Scheme seeks to simplify this by ascribing values of time to different users. Therefore, the benefits of journey time savings and improved reliability are both economic and social.
2. In this context, whether the Scheme delivers 'co-benefits' or not is partly a question of how you define the purpose and objectives of the Scheme. If the purpose of the Scheme is to reduce congestion and improve transport conditions, then presumably the fact that it will also improve economic performance is a substantial 'co-benefit'.
3. These issues aside, it should also be noted that the economic appraisal of the Scheme takes into account the 'co-benefits' of reduced vehicle emissions and improved safety.
4. Professor Jones cites the example of fuel-poverty related domestic retro-fit that creates jobs where people live and engaged and upskill local SMEs. Delivering the M4CaN will also create employment and will also come with an investment in skills. These are also co-benefits of the

M4CaN Scheme and contractual arrangements have been put in place by the Welsh Government to ensure such benefits are maximised.

2.2.4. Response to **Point 10** (Considers that costs are likely to be far more than anticipated and will largely “leak” from Wales).

1. Professor Jones has expressed concern that the costs of the project will exceed the forecast cost. In this respect he notes the work of Bent Flyvberg and others in relation to optimism bias.
2. Optimism bias refers to the tendency for project costs to be underestimated. Flyvberg and other have sought to derive cost uplifts based on the degree to which previous infrastructure projects have, on average, underestimated costs.
3. Professor Jones states that the only interpretation of the evidence is that ‘mega project’ proponents systematically misinform parliaments and the public about likely costs and risks. In practice, the causes of optimism bias are complex and contested. Flyvberg<sup>5</sup> focuses on political-institutional factors that *‘in the past have created a climate where only few actors have had a direct interest in avoiding optimism bias’*. A major review of project procurement undertaken by Mott MacDonald concluded that optimism bias results from inadequate arrangements for identifying and managing risks<sup>6</sup>.
4. Crucially, optimism bias does not apply equally to all projects or to project at all stages of project development. Therefore, when accounting for possible optimism bias, it is necessary to apply an uplift to scheme costs which reflects the specific characteristics of the Scheme in question and its stage of development.
5. For a sample of 128 UK road projects and 44 non-UK projects, Flyvberg (2004) found that cost overruns were an average of 15% of estimated costs. For ‘fixed links’ – i.e. bridges and tunnels – average cost overruns were found to be 23% on average. Flyvberg makes clear that the level of optimism bias which may be present depends on the stage of

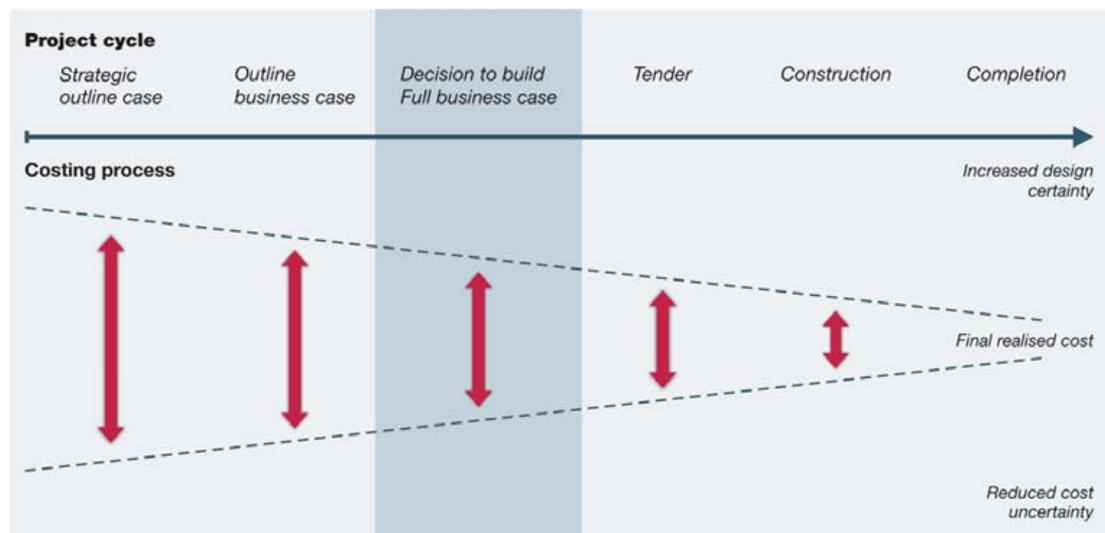
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<sup>5</sup> Procedures for Dealing with Optimism Bias in Transport Planning: Guidance Document (Bent Flyvberg in association with COWI, June 2004)

<sup>6</sup> Review of Large Public Procurement in the UK (Mott MacDonald, July 2002)

development of the project. As a project develops, uncertainty reduces and estimated costs converge with actual costs. This is illustrated in the Figure below which is taken from Flyvberg 2002.

**Figure 1 - Budget Uncertainty During the Project Cycle**



Source: Flyvberg/COWI 2004

6. Similarly, Mott MacDonald found that (using a sample of 50 construction projects in the UK) '*optimism bias for a project decreases through its project life-cycle...As the project progresses, ideally the strategies for risk mitigation and management would be in place and the potential occurrence of certain project risk areas is likely to decrease with time*'. For 'standard' civil engineering projects, Mott MacDonald estimated an 'upper bound' optimism bias factor of 44% and a 'lower bound' optimism bias factor of 3% (for 'non-standard' civil engineering projects, the equivalent uplifts were 66% and 6% respectively. The differences between the upper and lower bound estimates relate to the stage of development of the Scheme.
7. Flyvberg's research on the underestimation of project costs was based on a sample of road schemes which pre-date the adoption of the Early Contractor Involvement (ECI) or Design and Build procurement models. Under a traditional procurement model, a government department would first engage a designer to design the works and an engineer to oversee the project. Once the project had secured approval, the government would then tender the works based on the design. As indicated in Figure 1, the

cost estimates used by Flyberg were taken from projects at 'full business case' stage in advance of the tender process to appoint a contractor. This is of crucial importance because many of the risks relating to project costs relate to the procurement process and the potential for a contractor to identify additional costs or risks to a project.

8. Mott MacDonald estimated levels of optimism bias both for traditionally procured projects and for PFI<sup>7</sup> / PPP<sup>8</sup> projects. Optimism bias levels for traditionally procured projects were far higher than those for PFI projects<sup>9</sup>. Two main advantages were identified for PFI projects. Firstly, for PFI projects, the project requirements are more clearly defined and a longer relationship is developed with the potential contractor and service provider, and the client, thus allowing potential problems to be resolved early. Secondly, under traditional forms of contract, substantial risks (such as design, ground conditions and weather) remain with the public sector. For such projects. Mott MacDonald found that optimism bias was partly attributed the large number of risks excluded from the contractor's price at the contract award stage. Under a PFI model, risks are shared between the contractor and the public sector. Therefore, there are strong incentives to both account for and manage risks throughout the project. Although not entirely analogous to PFI contracts, the ECI model shares these key advantages.
9. Based on the findings of the review, Mott MacDonald developed a methodology for determining an appropriate optimism bias for a large scale construction project based on project specific factors<sup>10</sup>. This methodology was subsequently adopted as Treasury Green Book supplementary guidance on optimism bias. This methodology has been adopted for the M4CaN Scheme.
10. Aside from the approach to procurement, optimism bias is influenced by a range of factors related to Scheme characteristics and the effectiveness of project management processes. Mott MacDonald identify a range of ways

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<sup>7</sup> Private Finance Initiative

<sup>8</sup> Public Private Partnership

<sup>9</sup> Whilst the sample of PFI road schemes was small (4 projects), Mott MacDonald found no overall tendency for project costs to be underestimated.

<sup>10</sup> Supplementary Green Book Guidance: Optimism Bias

in which optimism bias can be mitigated through effective risk management, greater diligence at project definition stage, partnering, more controlled cost monitoring, value management, and application of concurrent engineering.

11. For the purposes of the economic appraisal, an uplift to Scheme costs of approximately 5% has been applied. This level of optimism bias reflects the following aspects of the Scheme which serve to mitigate against optimism bias:

- a. The Scheme is being delivered as an ECI contract which integrates design development and construction planning. As such, the contractor has played an integral role in the Scheme design. Uncertainties relating to commercial and procurement aspects of the project are greatly reduced (relative to traditional procurement approaches);
- b. The form of ECI contract being applied is a Target Cost contract. This means that cost risks are shared between the contractor and the Welsh Government. This incentivises both parties to forecast costs accurately and to manage cost risks throughout the project;
- c. The Scheme has been designed to a relatively advanced level of detail and benefits from a long history of development. Ground conditions and environmental aspects are well understood. The Scheme costs take account of land and compensation costs which are based on a draft Compulsory Purchase Order;
- d. The project management team (both the Welsh Government and the Contractor) is technically experienced at delivering large scale highway improvements under the ECI approach;

- e. The Scheme has no novel design elements and technological requirements are well understood. A comprehensive Quantified Cost Risk Assessment has been undertaken.

12. Professor Jones also believes that the benefits from procurement will likely leak in large part from the region because of the paucity of 'Tier 1' contractors in Wales. Subject to the Key Stage gateway process – the main contractor for the Scheme (Costain-Vinci Construction Joint Venture) – has already been appointed. As noted, arrangements are already in place to maximise the benefits of the construction phase.

13. Targeted Recruitment and Training (TR&T) requirements have been identified within the works information for the project team, set by the Welsh Government as the Client organisation. As a minimum, the contractor is required to ensure that 12% of the total labour costs relate to the employment of new entrant trainees who have an apprenticeship, trainee or employment contract with the contractor or a subcontractor, and are engaged in a training programme that is accepted by the Welsh Government as being appropriate. The Construction Joint Venture has committed to achieving 20% of labour costs from new entrant trainees which will serve to maximise the economic benefits of the construction period both in the short and long term.

2.2.5. Response to **Point 14** (Considers that the EAR fails to include some significant costs or dis-benefits that are likely to make the scheme poor or low value for money (VfM)).

1. As stated in my evidence, the economic appraisal of the Scheme is a quantitative assessment of value for money. Because the economic appraisal is a quantitative assessment the analysis is focussed on, but not limited to, impacts on the economic efficiency of the transport sector. There may be other costs and benefits that cannot be quantified in monetary terms. Therefore, the economic appraisal is only one aspect of the overall case for investment and needs to be balanced against other environmental and social costs and benefits.

2. That the economic appraisal is focussed on those impacts that can be monetised does not mean that environmental and social impacts have not been taken into account in the decision making process. The economic appraisal sits alongside the Environmental Statement for the Scheme. It does not seek to summarise the Environmental Statement and attempt to equate the various impacts to the monetised economic appraisal.
  3. The UK Government uses 'value for money categories' as a means of comparing transport Schemes and options. These categories determine a Scheme's value for money rating ('poor', 'low', 'medium', 'high' or 'very high') These categories have no particular status in Wales. Notwithstanding this, it should be noted that the Department of Transport offers no systematic method for adjusting a scheme's value for money rating to account for non-monetised impacts (both positive and negative). Therefore, any attempt to determine the value for money category based on environmental impacts is likely to be highly subjective and largely spurious.
- 2.2.6. Response to **Point 15** (Considers that excluding VAT and inflation is likely to mean a significant under-estimate of the cost which in turn could significantly affect the BCR).
1. The economic appraisal is undertaken in real terms using a consistent price base (2010 prices) for both costs and benefits. It would only be necessary to adjust a scheme budget for inflation where there is an expectation that the cost of a scheme will increase in real terms (i.e. at a faster rate than general inflation). In the short run, fluctuations in the costs of labour or materials can result in construction inflation being higher or lower than general inflation. However, in the long run, construction prices (and infrastructure construction costs specifically) have risen at a similar rate to prices in the economy more generally.
  2. **I am not aware of any evidence that suggests construction inflation is running at 8-10% per annum. ONS publishes Construction Output Price Indices (OPIs). For new infrastructure work, output prices increased by 2.5% between December 2013 and December 2014, 2.2% between December 2014 and December 2015, and by 0.5%**

**between December 2015 and December 2016.** Over the three year period, infrastructure output prices rose by 4.8%. Over the same period the general price level in the economy (as measured by the GDP Deflator<sup>11</sup>) rose by 4.0%.

3. In my opinion, the evidence does not provide any clear justification to conclude that construction inflation will increase at a faster rate than general inflation and therefore I consider the treatment of costs in the economic appraisal to be appropriate.
4. That the Scheme costs used in the economic appraisal exclude VAT is in accordance with transport appraisal guidance (WebTAG)<sup>12</sup>. Expenditure on VAT represents an internal Government transfer. Any expenditure subject to VAT will result in an increase in overall Government tax receipts. Therefore, any expenditure relating to VAT does not represent an economic cost and there is no loss of welfare associated with it. It is therefore appropriate to exclude VAT from the economic appraisal.

2.2.7. Response to **Point 16** (Considers that maintenance costs do not appear to be included in the BCR).

5. Maintenance costs for the new motorway over the 60 year appraisal period have been included in the economic appraisal. This is detailed in Section 4 of my proof of evidence.

2.2.8. I confirm that the statement of truth and professional obligations to the inquiry from my main proof still applies.

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<sup>11</sup> The GDP Deflator is a broad based measure which is calculated based on the prices of goods and services that make up the UK's GDP. The GDP deflator is the primary measure of inflation applied in the economic appraisal to adjust for price changes in the economy.

<sup>12</sup> Document 6.1.9

### 2.3. John Davies (Sustainable Development)

2.3.1. Response to **Point 3** (Considers that the Scheme is at odds with the desired modal shift away from private transport for both leisure and work and the development of the South Wales Metro):

1. Paragraphs 26-48 of my evidence (WG1.23.1) deals with the sustainable development principle as set out in the Well-being of Future Generations Act 2015. The Scheme would contribute to the Welsh Government's well-being objectives and consequently to the well-being goals of the 2015 Act. Far from being at odds with the Cardiff Capital Region City Deal, the cumulative economic benefits the Scheme would be likely to bring to the South West Wales Region, as set out in the December 2016 Wider Economic Impact Assessment and the evidence presented to the Inquiry, would be fully in line with the City Deal objectives to improve economic conditions. Delivery of the City Deal is entirely independent of the new section of motorway.

2.3.2. Response to **Point 4** (Considers that the Scheme will significantly damage the broader Welsh Government narrative that Wales is a sustainable, green country with abundant and well-managed natural resources within which to do business):

1. The evidence presented to the Inquiry demonstrates that the Scheme would contribute to the Welsh Government's well-being objectives; would be carbon neutral in operation; that minimising environmental impact with specific reference to the Gwent Levels SSSIs has been at the forefront of its design; and that embedded and additional mitigation measures would in time significantly reduce the impact on the landscape and natural heritage. By improving accessibility to South Wales the Scheme would improve the image of Wales as a place to visit and do business, remedying the damage presently done to that image by the problems associated with the M4 motorway around Newport.

2.3.3. Response to **Point 13** (Considers that the construction of an M4 relief road around Newport appears to offer little to the well-being of future generations):

1. The answers to the previous points demonstrate that the Scheme is essential to the well-being of the people of Wales to address the economic, social, environmental and cultural problems caused by the existing M4 motorway.

2.3.4. I confirm that the statement of truth and professional obligations to the inquiry from my main proof still applies.

## **2.4. Matthew Jones (General)**

2.4.1. Response to **Point 8** (Considers that investment in cycling and green infrastructure can improve access to work but also health outcomes, access to other services, and environmental quality and use whilst reducing climate emissions):

1. Walking, cycling and bridleway measures seek to improve accessibility to public transport services and enhance non-motorised transport networks. Measures have been incorporated into the design of the Scheme to help ensure that there would be no significant adverse effects on all travellers, whilst some new lengths of cycleways, bridleways and footpaths seek to encourage non-motorised modes of transport for local journeys.
2. For example, five new public bridleways and one new public footpath would be created, including one providing an off-road link between National Cycle Network Route 4 and Magor. Further information relating to all travellers will be provided in the Proof of Evidence of Ms Julia Tindale (WG 1.10.1).

2.4.2. I confirm that the statement of truth and professional obligations to the inquiry from my main proof still applies.

## **2.5. Tim Chapman (Carbon)**

2.5.1. Response to **Point 17** (States that Professor Anderson has highlighted this scheme will likely increase greenhouse gas emissions not reduce them):

1. A response to Professor Anderson will be provided separately. Further information about the Scheme and carbon is provided in the evidence of Tim Chapman (WG1.13.1)

2.5.2. I confirm that the statement of truth and professional obligations to the inquiry from my main proof still applies.